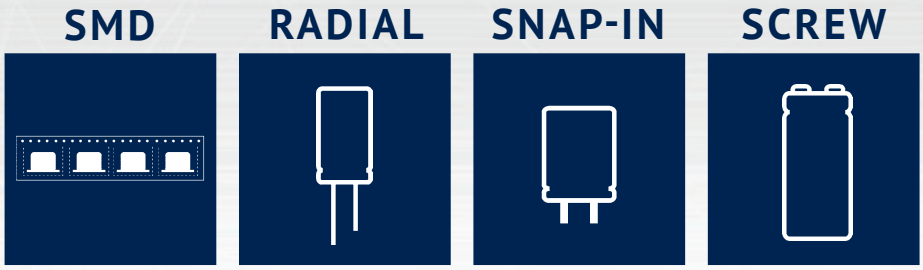
ALUMINUM ELECTROLYTIC CAPACITORS

2022/2023

ISO/TS 16949 CERTIFIED



ENGINEERED SOLUTIONS

JIANGHAI EUROPE
Electronic Components GmbH

Capacitors from Jianghai

JIANGHAI EUROPE ELECTRONIC COMPONENTS GMBH IS THE EUROPEAN SALES ORGANIZATION OF NANTONG JIANGHAI CAPACITOR CO., LTD., NANTONG (CHINA). SINCE 2004, SALES, MARKETING, TECHNICAL SUPPORT, CUSTOMER SERVICE TEAM AND WAREHOUSE OF JIANGHAI EUROPE ELECTRONIC COMPONENTS GMBH ARE LOCATED IN KREFELD AND KEMPEN (GERMANY).

» ELECTROLYTIC CAPACITORS

Jianghai has grown since its foundation in 1958 to become the largest Chinese manufacturer of aluminum capacitors generating revenues of more than 700 million USD in 2021. While Jianghai started in the beginning with the production of specialty chemicals (e.g., electrolyte solutions), it entered the production of aluminum electrolytic capacitors already in 1970.

» INTEGRATION OF PREMATERIAL

More recently, Jianghai extended its production range by integrating high and low voltage anode foil etching and forming facilities. All factories are located in mainland China: the most important ones are in Nantong (north to Shanghai), in Inner Mongolia, and in Xi'An area. Jianghai is well prepared for further expansion due to its successful entrance to the stock market in summer 2010.

» FILM CAPACITORS

In 2012, the product portfolio was complemented by a range of power film capacitors. For this new business unit, Jianghai also follows the strategy of vertical integration and thus the production will extend from the preparation of the plastic film to the assembly of the finished goods. The product portfolio of DC-Link and Snubber capacitors has been enlarged in the year 2016 by AC-film and Safety capacitors. Highly automated production facilities ensure the efficient mass production of film capacitor Modules. Driven by the thriving electric vehicle market in China, Jianghai has attained a leading position for the supply of theses customer specific components.

» POLYMER CAPACITORS

The year 2013 was marked by a major breakthrough in R&D for polymer aluminum electrolytic capacitors: the voltage proof for these ultra-low ESR products was pushed out to as much as 200V, enabling the utilization of these advanced capacitors in more applications, e.g. in white goods, industrial automation, telecom infrastructure, power supplies, and LED ballasts. Hybrid and Stacked (Chip) Polymer Capacitors were added into the product portfolio in the year 2019.

» ENERGY CAPACITORS

For energy storage applications, Jianghai has developed a range of Lithium Ion-Capacitors (Li-C) based on the well-known EDLC technology.
Li-C combine the advantage of many hundred thousand charge and discharge cycles and high energy density, allowing for a wide range of applications in energy storage and recuperation. Jianghai offers EDLC as well as Li-C in various form factors, e.g. in radial, snap-in, pouch or module shape.

» CAPACITOR COMPETENCE CENTER

Global presence of experienced sales and technical marketing experts at offices in Europe, Asia and the Americas ensure the local support of our customers based on sound know-how in all project phases. In 2014 Jianghai Europe has established an additional service for its customers in Europe: Experts for capacitors are awaiting telephone calls or emails at the CCCenter as a kind of hotline for all kind of technical requests.

» CUSTOMIZED PRODUCTS

Jianghai's particular strength as a volume manufacturer is to offer customized products. Jianghai focuses on the demanding professional industrial segment with many power electronics applications. Research and development in collaboration with several specialized university institutes as well as the access to all vital pre-materials enable Jianghai to create engineered, customized solutions to fit smoothly into a specific application. Jianghai is continuously improving processes, thereby enhancing the quality of its products and services. The list of certificates awarded to Jianghai reflects its level of achievement. In the year 2013, the Jianghai Europe sales office has become certified according to ISO9001 and ISO14001.

» CONTACT

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TABLE OF CONTENTS

Portfolio: All Aluminum Electrolytic Capacitors at a glance (Radial, Snap-In, Screw)	6
Lifetime Estimation of Aluminum Electrolytic Capacitors	9
Handling Precautions for Aluminum Electrolytic Capacitors	10

ALUMINUM ELECTROLYTIC CAPACITORS

RADIAL 13

Portfolio: All Radial Type at a glance	14
Order code	15
Technical Specifications	16

SERIES RADIAL

CD 110	PT	Radial	85°C	6,3~500V	4 000h	Standard	18
CD 11GL	GL	Radial	125°C	160~450V	6 000h	High Temperature, High Voltage	21
CD 261	LK	Radial	105°C	160~450V	14 000h	High Voltage, Long Life	23
CD 261L UPDATED	DE	Radial	105°C	160~450V	14 000h	Miniaturized	25
CD 261X	QX	Radial	105°C	160~550V	12 000h	High Voltage, Highest Currents	28
CD 263	BK	Radial	105°C	6,3~500V	3 000h	Standard	30
CD 269	PH	Radial	125°C	10~63V	4 000h	High Temperature	34
CD 269L	HL	Radial	125°C	10~100V	10 000h	High Temperature, Long Life	36
CD 281	LL	Radial	105°C	6,3~100V	12 000h	Low ESR, Long Life	38
CD 281L	LH	Radial	105°C	6,3~100V	12 000h	Low ESR, Longest Life	43
CD 282L	YL	Radial	105°C	6,3~100V	12 000h	High Current, Ultra Low ESR	48
CD 282X	EQ	Radial	105°C	6,3~100V	12 000h	High Current, Miniaturized	53
CD 284	XY	Radial	105°C	6,3~100V	10 000h	High Current, Ultra Low ESR	56
CD 284L	LY	Radial	105°C	6,3~100V	12 000h	Miniaturized	60
CD 285	HY	Radial	105°C	6,3~100V	12 000h	Highest Current	64
CD 287	GC	Radial	105°C	6,3~100V	10 000h	Low ESR	68
CD 28L	QL	Radial	105°C	6,3~63V	14 000h	Low ESR, Miniaturized	73

SNAP-IN 77

Portfolio: All Snap-In Type at a glance	78
Order code	79
Technical Specifications	80

SERIES SNAP-IN

CD 293	BZ	Snap-In	85°C	10~500V	4 000h	Standard	82
CD 294	BW	Snap-In	105°C	16~550V	4 000h	Standard	86
CD 295	BC	Snap-In	85°C	10~500V	6 000h	Long Life	90
CD 295S	BS	Snap-In	85°C (105°C)	160~500V	12 000h	12 000h, Enlarged Temperature	94
CD 296	KC	Snap-In	105°C	16~550V	5 000h	Long Life	96
CD 296L	FL	Snap-In	105°C	350~500V	6 000h	Large Size 105°C	100
CD 297	BB	Snap-In	105°C	10~500V	7000h	Longer Life, High Current	102
CD 299	PG	Snap-In	105°C	160~500V	9 000h	9 000h, High Current	106
CD 29C	QC	Snap-In	105°C	200~450V	4 000h	Miniaturized 105°C	109
CD 29D	HR	Snap-In	85°C	160~450V	7 000h	Long Life, Highest Currents	111
CD 29H	QH	Snap-In	105°C	160~450V	5 000h	Long Life, Highest Currents	113
CD 29HD	QF	Snap-In	105°C	200~450V	8 000h	Outstanding Ripple Current	116
CD 29L	QL	Snap-In	85°C	16~500V	7 000h	Long Life, Large Size	118
CD 29U	CU	Snap-In	85°C	575~630V	6 000h	575V, 600V, 630V	121
CD 29UH	UT	Snap-In	105°C	575V, 600V	6 000h	575V, 600V at 105°C	123
CD 840	ZQ	Snap-In	85°C	200~450V	10 000h	10 000h High Current	125
CD 891	ZJ	Snap-In	85°C	35~500V	4 000h	Miniaturized	127
CD 892	ZL	Snap-In	105°C	400~500V	5 000h	Miniaturized, Long Life	130
CD 895	ZK	Snap-In	85°C	16~500V	14 000h	Ultra Long Life	132

SCREW 137

Portfolio: All Screw Type at a glance & Order code	138
Technical Specifications	139

SERIES SCREW

CD 135	BP	Screw	85°C	10~500V	4 000h	Standard	141
CD 136	PK	Screw	105°C	25~450V	4 000h	Standard	144
CD 137	PX	Screw	85°C	400~550V	10 000h	Long Life, High Voltage	146
CD 137S	PR	Screw	85°C	350~500V	12 000h	Miniaturized, Prolongued Lifetime	148
CD 138	PC	Screw	85°C	350~450V	10 000h	Long Life, High Current	150
CD 138S	WP	Screw	85°C	350~500V	15 000h	Longest Life, Highest Currents	152
CD 139	BL	Screw	105°C	350~450V	9 000h	Longest Life	154
CD 139S	HC	Screw	105°C	350~450V	9 000h	Longest Life 105°C, High Current	156
CD 13H UPDATED	BH	Screw	85°C	600~650V	4 000h	600V, 650V	158
CD 838	ZT	Screw	85°C	350~450V	10 000h	Miniaturized, Long Life	160

POLYMER CAPACITORS 163

Introduction, Comparison & Lifetime Estimation	164
Handling Precautions for Solid Polymer Capacitors	165
Order code for SMD Type & Technical Specifications Solid SMD Type	166
Order code for RADIAL Type & Technical Specifications Solid RADIAL Type	168

SOLID

SMD 170

PC HVC	VC	SMD	105°C	2,5~25V	2 000h	Standard	170 ff.
PC HVF	VF	SMD	105°C	16~200V	3 000h	Full Voltage	170 ff.
PC HVG	VG	SMD	125°C	2,5~20V	1 000h	High Temperature	170 ff.
PC HVK	VK	SMD	125°C	16~80V	2 000h	Enlarged Voltage, 125°C	170 ff.
PC HVM	VM	SMD	105°C	2,5~16V	2 000h	Low ESR	170 ff.
PC HVS	SV	SMD	105°C	4~25V	5 000h	Long Life	170 ff.
PC HVX	VX	SMD	105°C	2,5~10V	2 000h	Ultra Low ESR	170 ff.

RADIAL 176

PC HCN	CN	Radial	105°C°C	2,5~25V	2 000h	Standard	176 ff.
PC HCS	CS	Radial	105°C	2,5~16V	5 000h	Longest Life	176 ff.
PC HEG	EG	Radial	105°C	16~63V	2 000h	Larger Case Sizes	176 ff.
PC HEL	EL	Radial	105°C	2,5~16V	2 000h	Ultra Low ESR	176 ff.
PC HEN	EN	Radial	105°C	2,5~25V	2 000h	Standard	176 ff.
PC HGN	GN	Radial	125°C	4~25V	1 000h	High Temperature	176 ff.
PC HPF	PF	Radial	105°C	16~200V	3 000h	Full Voltage, 125°C	176 ff.
PC HPK	PK	Radial	125°C	16~80V	2 000h	Enlarged Voltage	176 ff.
PC HPN	HN	Radial	105°C	2,5~16V	2 000h	Ultra Low ESR	176 ff.
PC HPNA	NA	Radial	105°C	2,5~16V	2 000h	Ultra Low ESR	176 ff.
PC HSN	SN	Radial	105°C	2,5~25V	2 000h	Standard	176 ff.

STACKED CHIP 183

PC HPA	PA	Stacked	105°C	2~25V	2 000h	Standard	183
PC HPS	PS	Stacked	105°C	2~10V	2 000h	Low Profile	183

HYBRID

HYBRID SMD & RADIAL 184

PH VA	VA	SMD	105°C	25~80V	5 000h	Standard	184
PH VB	VB	SMD	125°C	25~80V	4 000h	High Temperature	184
PH LA	LA	Radial	105°C	25~80V	5 000h	Standard	184
PH LB	LB	Radial	125°C	25~80V	4 000h	High Temperature	184

RADIAL 6,3V ~ 100V

TEMPERATURE RANGE & LIFETIME

85°C | 105°C | 125°C

LARGE SIZE >

< SMALL SIZE

- **CD 110 PT** 4 000h Standard **Page: 18**
- **CD 263 BK** 4 000h Standard **Page: 30**
- **CD 286 GK** 4 000h
- **CD 28XL KL** 12 000h ø5~ø8
- **CD 267 PM** 3 000h
- **CD 287 GC** 10 000h Low ESR **Page: 68**
- **CD 281 LL** 12 000h Long Life **Page: 38**
- **CD 281L LH** 12 000h Longest Life **Page: 43**
- **CD 269 PH** 4 000h High Reliability **Page: 34**
- **CD 269L HL** 10 000h Long Life **Page: 36**
- **CD 282 XX** 8 000h Ultra-Low ESR
- **CD 28L QL** 14 000h Miniaturized **Page: 73**
- **CD 284 XY** 10 000h Ultra-Low ESR **Page: 56**
- **CD 282L YL** 12 000h High Current **Page: 48**
- **CD 284L LY** 12 000h Miniaturized **Page: 60**
- **CD 282X EQ** 12 0000h Smallest Case, Longest Life **Page: 53**
- **CD 285 HY** 12 000h Smallest Case, High Current **Page: 64**

PROFESSIONAL

Other Series on request:
- Miniaturized Series
- Low Leakage Series
- Photoflash Series
- Bipolar Series
- Audio Application

Please note:

=Information on products are available on request.

RADIAL 160V ~ 550V

TEMPERATURE RANGE & LIFETIME

85°C | 105°C | 125°C

LARGE SIZE >

< SMALL SIZE

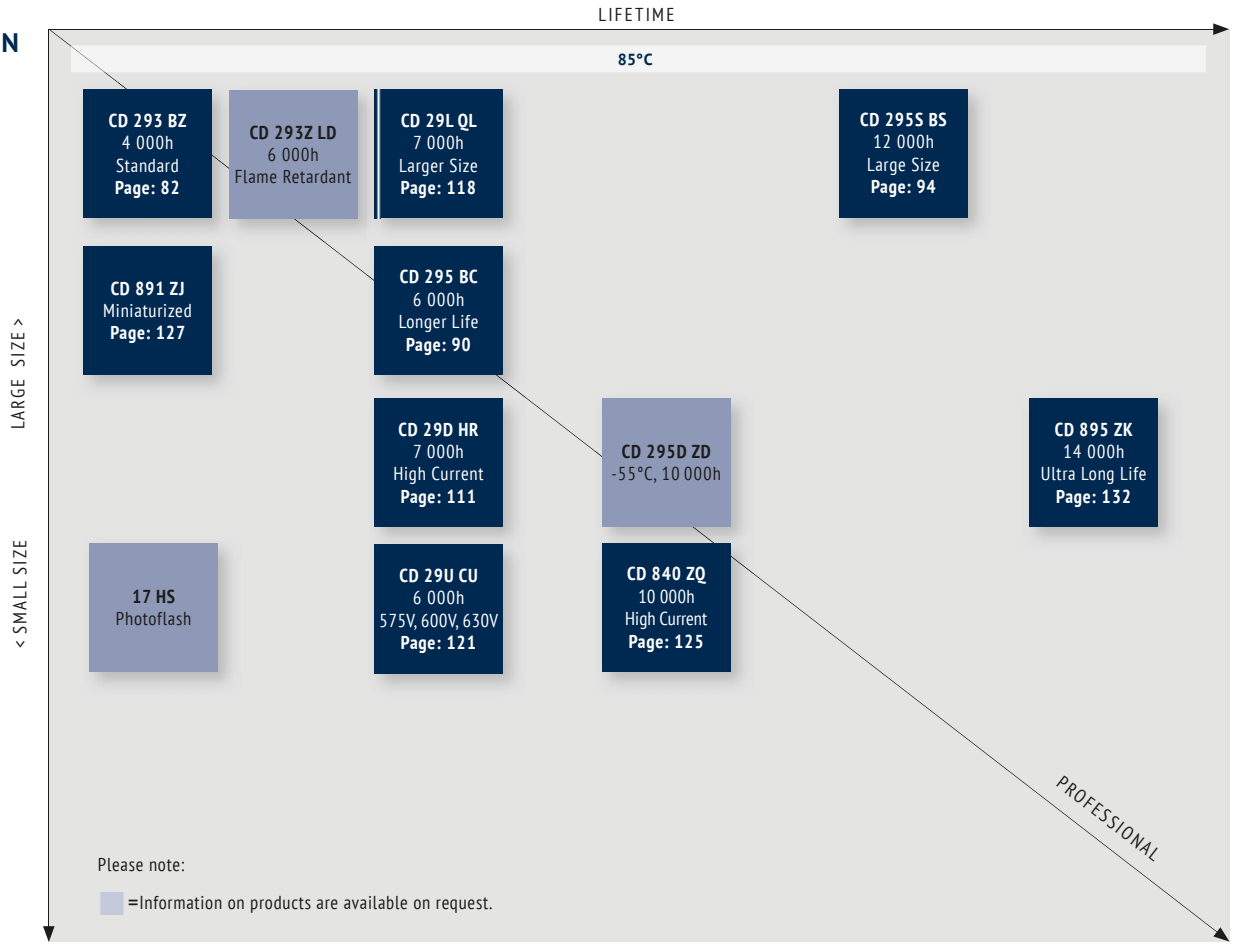
- **CD 110 PT** 4 000h Standard **Page: 18**
- **CD 264 KH** 6 000h Professional
- **CD 110Z PZ** 7 000h
- **CD 263 BK** 4 000h Standard **Page: 30**
- **CD 266 FK** 10 000h Longer Life
- **CD 261 LK** 14 000h Long Life **Page: 23**
- **CD 11G GW** 3 000h 125°C
- **CD 11GL GL** 6 000h Long Life **Page: 21**
- **CD 110L CL** 10 000h
- **CD 26A DY** 3 000h Minaturized
- **CD 261X QX** 10 000h High Current **Page: 28**
- UPDATED **CD 261L DE** 14 000h Miniaturized **Page: 25**
- **CD 26L XL** 4 000h Slim Line
- **CD 26H XH** 10 000h Slim Line
- **CD 26HS XS** 10 000h Ultra Slim

PROFESSIONAL

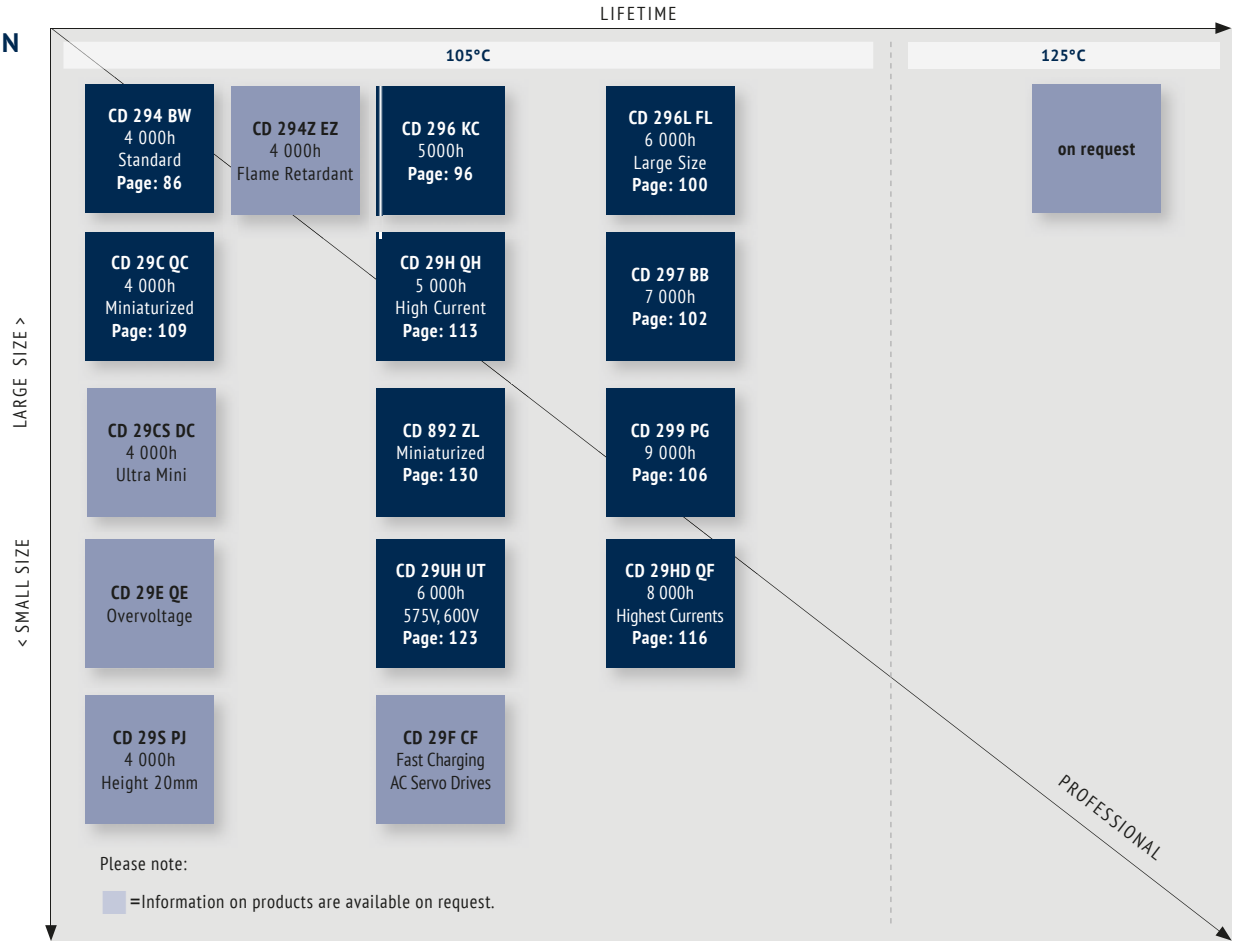
Please note:

=Information on products are available on request.

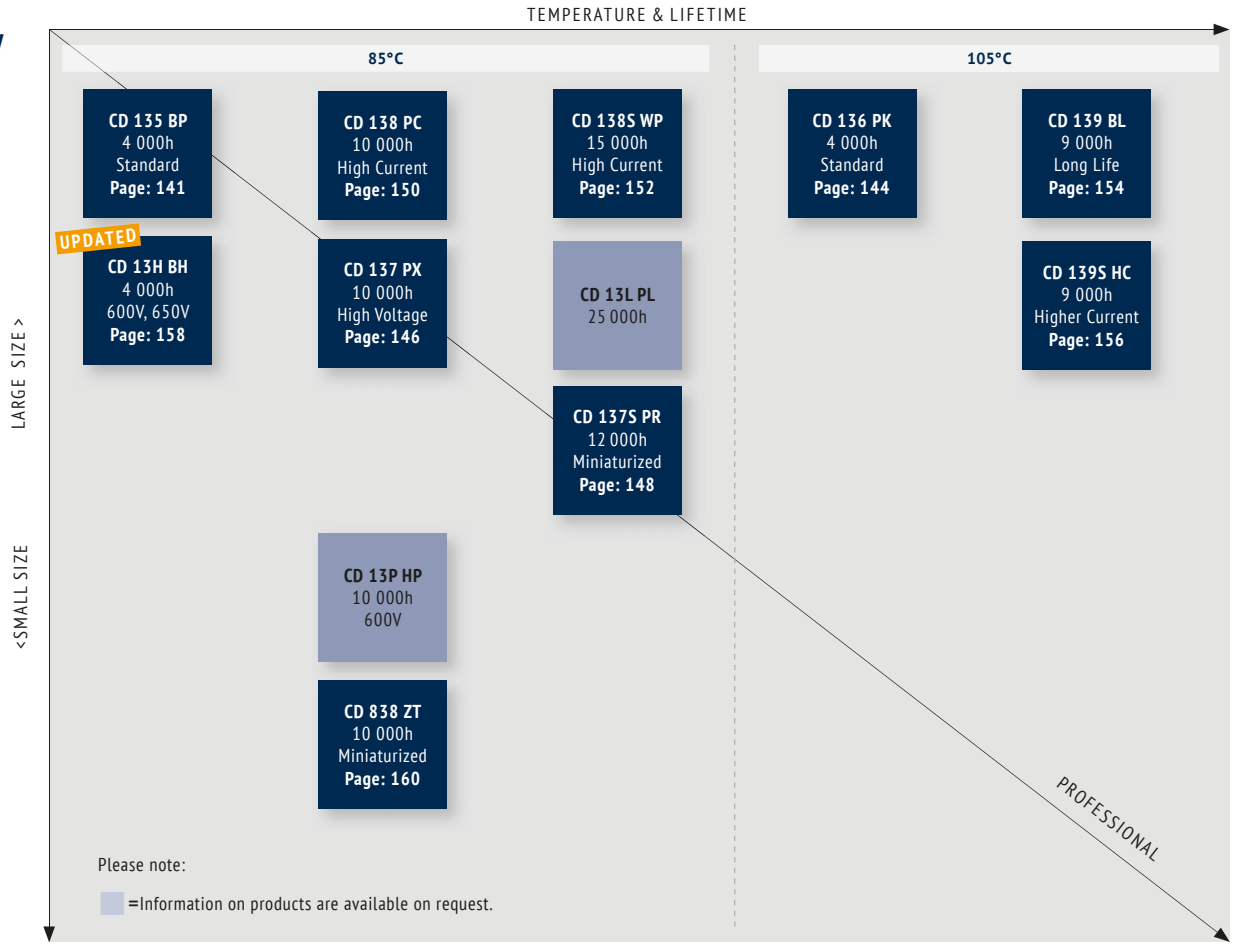
SNAP-IN 85°C



SNAP-IN 105°C/ 125°C



SCREW


TEMPERATURE & LIFETIME
85°C
105°C
CD 135 BP
4 000h
Standard
Page: 141
CD 138 PC
10 000h
High Current
Page: 150
CD 138S WP
15 000h
High Current
Page: 152
CD 136 PK
4 000h
Standard
Page: 144
CD 139 BL
9 000h
Long Life
Page: 154
UPDATED
CD 13H BH
4 000h
600V, 650V
Page: 158
CD 137 PX
10 000h
High Voltage
Page: 146
CD 13L PL
25 000h
CD 139S HC
9 000h
Higher Current
Page: 156
CD 137S PR
12 000h
Miniaturized
Page: 148
CD 13P HP
10 000h
600V
CD 838 ZT
10 000h
Miniaturized
Page: 160
LARGE SIZE >
<SMALL SIZE
PROFESSIONAL
Please note:
=Information on products are available on request.

LIFETIME ESTIMATION OF ALUMINUM ELECTROLYTIC CAPACITORS FROM JIANGHAI

To estimate the Lifetime of a non-solid Aluminum Electrolytic Capacitor from Jianghai, the following formulas can be utilized. The Lifetime depends mainly on the ambient temperature, the ripple current and, within certain limits, the operating voltage applied. Other parameters may also affect the Lifetime. Moreover, L_0 can be interpreted in many different ways, which has a fundamental influence on the numerical result. Jianghai offers a high transparency by publishing the different typical definitions of Lifetimes in each datasheet. Lifetime estimations are approximations by nature. Please let JIANGHAI EUROPE confirm any result before using it. The formulas given here do not constitute part of a contract nor of a specification. The formulas do not cover additional aging effects of certain electrolytic systems or other chemical effects. Also the dimensions of the components may have an effect. Forced cooling or other additional cooling-methods have a strong impact on the Lifetime and are not covered by the formulas as defined. For the estimation and interpretation of Lifetime, a close collaboration with JIANGHAI EUROPE is strongly advised.

STRUCTUAL FORMULA

$$L = L_0 \cdot K_T \cdot K_R \cdot K_V$$

WHERE:

- L Total Lifetime
- L_0 Lifetime under Nominal Load at Upper Category Temperature (see catalogue)
- K_T Temperature Factor
- K_R Ripple Current Factor
- K_V Voltage Factor

K_T TEMPERATURE FACTOR

Aluminum Electrolytic Capacitors follow roughly the 10 K rule of Arrhenius. It is possible to estimate the Lifetime by rule of thumb: When the operational temperature is reduced by 10 K, the Lifetime will double. The formula for **K_T** in detail is:

$$K_T = 2^{\frac{T_0 - T_A}{10K}}$$

WHERE:

- T_0 Rated Temperature
- T_A Ambient Temperature

K_R RIPPLE CURRENT FACTOR

To estimate the influence of ripple current on lifetime, Jianghai uses a safety factor K_i. Under certain conditions this value can be set to K_i=2, which is prolonging the lifetime. Please contact Jianghai Europe for details and approval.

$$K_R = K_i^{A \frac{\Delta T_0}{10K}}$$

WITH:

$$A = 1 - \left(\frac{I_A}{I_R}\right)^2$$

WHERE:

- I_A Actual Rated Ripple Current
- I_R Ripple Current at Upper Category Temperature (databook value)
- ΔT_0 Core Temperature Rise of the capacitor (typically 3,5 ~ 5 K for T_0 = 105°C and 3,5 ~ 10K for T_0= 85°C, see databook value)
- K_i Basis, typically defined as

T_0 = 105°C	$I_A > I_R$:	K_i=4
	$I_A \leq I_R$:	K_i=2
T_0 = 85°C		K_i=2

Remark: Safety Factor K_i may be set as K_i=2 under certain defined conditions. Please contact Jianghai Europe for approval.

K_V VOLTAGE FACTOR

For Radial Electrolytic Capacitors, this part of the formula has no impact (K_V = 1). But for some bigger capacitors like Snap-In and Screw-Terminal types with rated voltages above 160V, the operating voltage will affect their Lifetime. It is expressed as follows:

FOR:

$$0{,}6 \leq \frac{U_A}{U_R} \leq 1$$

$$K_V = \left(\frac{U_A}{U_R}\right)^{-2{,}5}$$

WHERE:

- U_A Actual Operating Voltage
- U_R Rated Voltage

FOR:

$$0 < \frac{U_A}{U_R} < 0{,}6$$

$$K_V = 3{,}59$$

FOR:

$$\frac{U_A}{U_R} > 1 \textit{ not allowed}$$

$$K_V = 1$$

FOR: Radial Capacitors or $U_R \leqslant 160V$

$$K_V = 1$$

FREQUENCY CORRECTION FACTORS:

If the actual Ripple Currents are not given at the same frequency like I_0, correction factors need to be applied.

$$I_A = \sqrt{\left(\frac{I_{f1}}{F_{f1}}\right)^2 + \left(\frac{I_{f2}}{F_{f2}}\right)^2 + \ldots \left(\frac{I_{fn}}{F_{fn}}\right)^2}$$

JIANGHAI ELECTROLYTIC CAPACITOR LIFETIME ESTIMATION FORMULA (incl. Safety Factors):

$$L = L_0 \cdot 2^{\frac{T_0 - T_A}{10K}} \cdot K_i^{\left[1 - \left(\frac{I_A}{I_R}\right)^2\right] \cdot \frac{\Delta T_0}{10K}} \cdot \underbrace{\left(\frac{U_A}{U_R}\right)^{-n}}_{K_V}$$

WITH TYPICAL VALUES:

T_0 = 105°C	$I_A > I_R$:	K_i=4
	$I_A \leqslant I_R$:	K_i=2
T_0 = 85°C		K_i=2

ΔT_0= depending on the series: 3,5~10K, see databook value

$$0{,}6 \leq \frac{U_A}{U_R} \leq 1 \rightarrow n = 2{,}5$$

$$0 < \frac{U_A}{U_R} < 0{,}6 \rightarrow K_V = \left(\frac{U_A}{U_R}\right)^{-n} = 3{,}59$$

For $U_R \leqslant 160V$, Radial and

$$\frac{U_A}{U_R} > 1 \rightarrow K_V = 1$$

HANDLING PRECAUTIONS FOR ALUMINUM ELECTROLYTIC CAPACITORS FROM JIANGHAI

WARNING

JIANGHAI is not liable for any extent of possible injuries or damages to persons or things, of any kind, caused by the improper application of and/or operating conditions harmful to electrolytic capacitors. Misapplications which may cause failures include, but are not limited to: ripple current or peak current or voltage above specification, operating voltage above surge voltage specified, temperature exposure outside the specified operating temperature range. Examples of harmful operating conditions comprise, but are not limited to: unusual storage or transport temperatures, excessive and/or rapid changes of ambient temperature or humidity, heavy mechanical shock or vibration, corrosive and abrasive particles in the ambient (cooling) air, conducting dust in the ambient (cooling) air, oil or water vapor or corrosive substances, explosive gas or dust, operation under extremely high or low ambient pressure conditions (below or above sea level), superimposed radio frequency voltages, radioactivity. In case of doubt about the impact of operating conditions on capacitor performance, please contact JIANGHAI.

PERSONAL SAFETY

Electrical or mechanical misapplication of electrolytic capacitors may be hazardous. Personal injury or property damage may result from explosion of a capacitor or from the expulsion of electrolyte due to mechanical disruption or the release of a safety vent of a capacitor. In case of injury or skin or eye exposure to electrolyte, immediately seek professional medical advice. Before using electrolytic capacitors in any application, please read these Handling Precautions, familiarizing thoroughly with the information contained herein. Please check before using any of our electrolytic capacitors if these components fulfill the requirements of your application and that warnings and instructions for use are followed.

WARRANTY

The information contained in this catalogue does not form part of any quotation or contract, is believed to be accurate, reliable and up to date. Quality data are based on the statistical evaluations of a large quantity of parts and do not constitute a guarantee in a legal sense. However, agreement on these specifications does mean that the customer may claim for replacement of individual defective capacitors within the terms of delivery. We will not assume any liability beyond the replacement of defective components. This applies in particular to any consequential damage caused by component failure. Furthermore it must be taken into consideration that the figures stated for lifetime, failure rates and outlier percentages refer to the average production status and are therefore to be understood as mean values (statistic expectations) for a large number of delivery lots of identical capacitors. These figures are based on application experience and data obtained from preceding tests under normal conditions, or – for purpose of accelerated aging – more severe conditions. JIANGHAI reserves the right to change these specifications without prior notice. Any application information given is advisory and does not form part of any specification. The products are not primarily designed for use in life support applications, devices or systems where malfunction of these products can reasonably be expected to result in personal injury. JIANGHAI customers using or selling these products for use in such applications without prior written consent of JIANGHAI do so at their own risk and agree fully to indemnify JIANGHAI for any damage resulting from such improper use or sale. This version of the catalogue supersedes all previous versions. Latest versions of datasheets can be found on our homepage: www.jianghai-europe.com. For more details on precautions and guidelines for aluminum electrolytic capacitors, please refer to CENELEC Technical Report CLC/TR 50454:2008 E, "Guide for the application of aluminum electrolytic capacitors".

POLARITY

Electrolytic capacitors are polar and shall never be used with incorrect polarity, as there is a possible danger of shorting or destruction.

RATED VOLTAGE U_R

The rated voltage is marked on the capacitor and defined in the datasheets as U_R. This voltage should never be exceeded and is the maximum peak voltage including any ripple voltages allowed to avoid a shortening of the lifetime or damage of the capacitor. When a ripple current is applied to the capacitor, the sum of the peak ripple voltage and bias DC voltage shall never exceed the rated voltage. It might be necessary to lower the maximum allowed bias DC voltage, when certain ripple currents are applied to the capacitor.

SURGE VOLTAGE

Maximum voltage, which may be applied to the capacitor for short periods of time: max. 1000 cycles of 30 sec. per 6 min., max. 5 pulses per hour. Capacitance drift +/- 15% max.

REVERSE VOLTAGE

Reverse voltages or voltages < 0V are not allowed.

RECOVERY VOLTAGE

Electric potential between the positive and negative terminal may exist as a result of dielectric absorption. Please take action that this load does not damage other devices or scare workers during the production process (sparks possible). If needed please discharge the capacitor through a 1kΩ resistor.

TEMPERATURE RANGE

Use electrolytic capacitors only within the specified operating temperature range.

OVER-CURRENT

Currents exceeding the rated ripple currents should be avoided.

RIPPLE CURRENT/VOLTAGE

The combined value of DC voltage and peak AC voltage (due to ripple current) shall not exceed the rated voltage and shall never be < 0V. Use of aluminum electrolytic capacitors under ripple current with wide amplitudes is equivalent to rapid charge-discharge operation.

RAPID CHARGING/DISCHARGING

Rapid charging/discharging generates severe heat and gas may be emitted which may lead to explosion. Consult JIANGHAI about specially designed capacitors suitable for such kind of applications. Example: Servo Drive Application

BALANCING RESISTORS

Balancing resistors should be utilized if capacitors are used in serial connection. Please choose low-tolerance resistors to limit voltage drift.

CHARGE-DISCHARGE PROOF

JIANGHAI capacitors are charge-discharge proof, which means that 10^6 switching cycles will cause capacitance reduction of less than 10%.

LIFETIME

There are many different lifetime definitions known without any true standard definition. Take special care when capacitors are compared that the capacitors fulfill the needed requirements. JIANGHAI publishes all conditions to be as transparent as possible. In the case of lifetime tests with additional ripple currents, the bias DC voltage must be reduced, so that the sum of bias DC voltage and the peak of the ripple voltage does not exceed the Rated Voltage U_R.

Load life: Period of time, during which the technical parameters of all capacitors stay within the given limits. JIANGHAI defines this without allowing for outliers.

Useful life: Defined like load life, but with a lager range of parameter change.

Endurance test: IEC 60384-4 defines the acceptable drift criteria of electrical parameters after the endurance tests (continuous voltage test).

Shelf Life: Definition of time with acceptable drift of capacitor parameters after storage at upper category temperature without load.

VIBRATION AND MECHANICAL STRESS

Capacitors are sensitive to vibration and mechanical forces applied on the leads. Do not use capacitors, which have been dropped onto a rigid surface.

INSULATION

If any defect of the sleeve is visible, the component should not be used – the same holds for any kind of visible damage. A capacitor should be electrically isolated from the following parts: aluminum case, cathode lead wire, anode lead wire and circuit pattern, and auxiliary terminal of snap-in type. The sleeve is not recognized as an isolator and therefore the standard capacitor should not be used in a place where insulation function is needed. Please contact JIANGHAI if a higher grade of insulation is required.

ENVIRONMENTAL CONDITIONS

Avoid direct contact with water, salt solution, oil, dewing conditions. Halogens generally, especially fumigation treatment with bromides and flame retardant agents containing halogens must be avoided. Avoid exposing to direct sunshine, ozone, ultraviolet rays and x-ray radiation. Air Pressure: Max. 150kPa, min. 8kPa. For usage >2000m altitude above sea level current deratings might be necessary. No heavy air pressure changes are allowed. Do not use or store in an environment containing any hazardous gas (e.g., hydrogen sulphide, sulphurous acid, nitrous acid, chlorine, ammonia, bromine, methyl bromide, other halogens) or acidic or alkaline solutions.

STORAGE

Temperature 5 to 35°C, relative humidity below 75%. Electrolytic capacitors may accumulate charge naturally during storage. In this case discharge through a 1kOhm resistor before use (Recovery voltage). Leakage current may be increased after long storage time. In this case the capacitor should be subjected to the rated voltage treatment through a 1kOhm resistor before use for 1 hour, then it should be discharged through a resistor of about 1 Ohm/Volt. Storage times above 1 year should be avoided or rated voltage treatment may be necessary. In accordance to IEC 60384-4 electrolytic capacitors are subject to a reforming process before acceptance testing. Rated voltage is applied via a series resistance (100Ω: $U_R \leq 100$VDC, 1kΩ: $U_R > 100$VDC).

SOLDERING

Soldering conditions (temperature, times) should be within specified conditions, especially for SMD components. Avoid high soldering temperatures as this may reduce lifetime or damage the capacitor. Do never dip the capacitor body into molten solder. Flux should not be adhered to the capacitor's body but only to its terminals. For details and different methods please contact us.

GLUEING, CLEANING AND COATING

Do not use fixing agents or cleaning substances containing halogens. Do not use coating and moulding components that completely seal the capacitor from the environment. Also, never use solvents containing: halogenated hydrocarbons, alkali, petroleum, trichloroethylene/-ethane, xylene, acetones, trichlorotrifluoroethane, tetrachloroethylene, methylenechloride, chloroform, acetates, ketones, esters, chlorides and bromides.

MOUNTING

Other devices, which are mounted near the capacitor, should not touch the capacitor. Additional heat coming from other components near the capacitor may reduce the lifetime of the capacitor. Do never bend or twist the capacitor after soldering to avoid stress on the leads. Radial capacitors are not protected against mechanical forces on the leads. Forces on the pins might damage the capacitor. No printed circuit board tracks are allowed between the lead pads of the capacitor. Screw Terminal capacitors should only be mounted in an upright position.

TRANSPORT

Avoid fumigation and spraying insecticides (especially with bromides) in the import or export procedures which can cause corrosion. This applies also to the finished devices.

MAINTENANCE

Periodical inspection should be carried out for the capacitor: visual inspection to check pressure relief open or leakage of electrolyte, electrical characteristics as leakage current, capacitance, and dissipation factor.

ELECTROLYTE AND SEPARATOR PAPER

Electrolyte and separator paper used in aluminum capacitors may be flammable. Also, electrolyte is electrically conductive. Therefore, in case electrolyte gets in contact with PC board it may cause corrosion of circuit pattern or cause short circuit between patterns, and may lead to smoke generation or ignition in worst case.

CAUTION DURING USE OF CAPACITORS

Do not touch the terminals of capacitors. Keep the capacitor free from conductive solution, such as acids, alkali and so on. Ensure that the operating environment of the equipment into which the capacitor has been built is within the specified conditions mentioned in the catalogue or specification sheets.

SAFETY VENT

The safety vent needs some free space to open properly. Allow for free headroom of at least 2mm for diameter ≤16mm, more than 3mm for diameter 18-35mm, more than 5mm for case diameter 40mm and larger.

EMERGENCY ACTIONS

When the pressure relief vent is open and some gas blows out from the capacitor, please turn the main switch of the equipment off or pull out the plug from the power outlet immediately. During safety vent operation, extremely hot gas (>100°C) may blow out of the capacitors. Do not stand close to the capacitors. In case of eye contact, rinse the open eye(s) with clean water immediately. In case of ingestion, gargle with water immediately, do not swallow. Do not touch electrolyte but wash skin with soap and water in case of skin contact.

DEFINITION OF ELECTRICAL PARAMETERS

Separate documents as application notes, equivalent circuit diagrams and so on are available on request.

PACKAGING

Please refer to the data book for details. Further information is available on request.

DISPOSAL

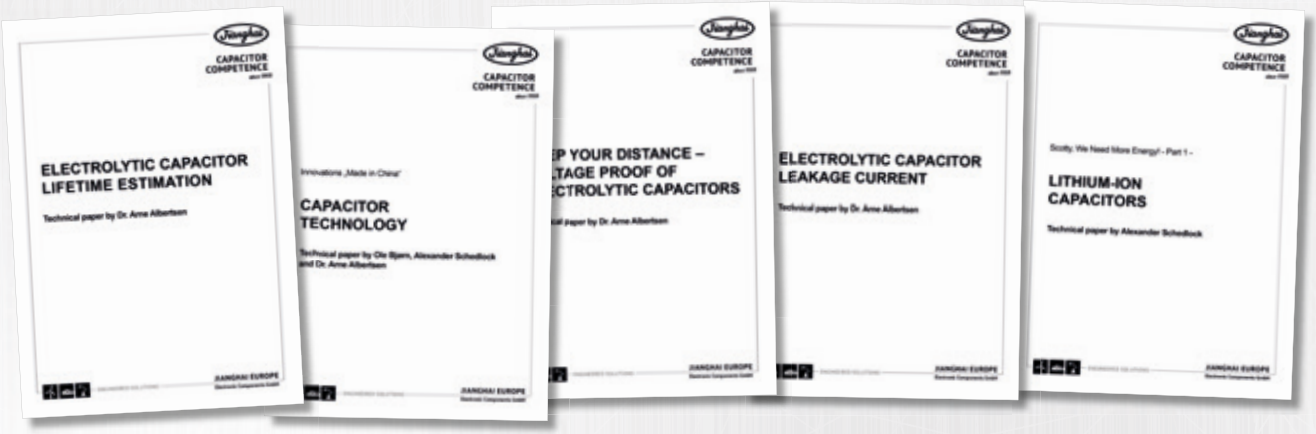
Scrapped capacitors are classified as scrapped metal. For disposal they are handled as controllable industrial waste because of the nature of the contents (electrolyte). Most of the material is aluminum and cannot be completely burned.

Jianghai Europe Electronic Components GmbH

VERSION 10/2021

In addition to Electrolytic and Polymer Capacitors our product and catalogue portfolio includes Film Capacitors and Energy Capacitors:

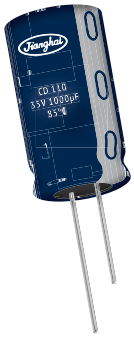
Complementary you will find numerous advanced Technical Papers and Technical Memos on our website: www.jianghai-europe.com



If you need further information please contact

info@jianghai-europe.com

We look forward to hearing from you!



ELECTROLYTIC CAPACITORS

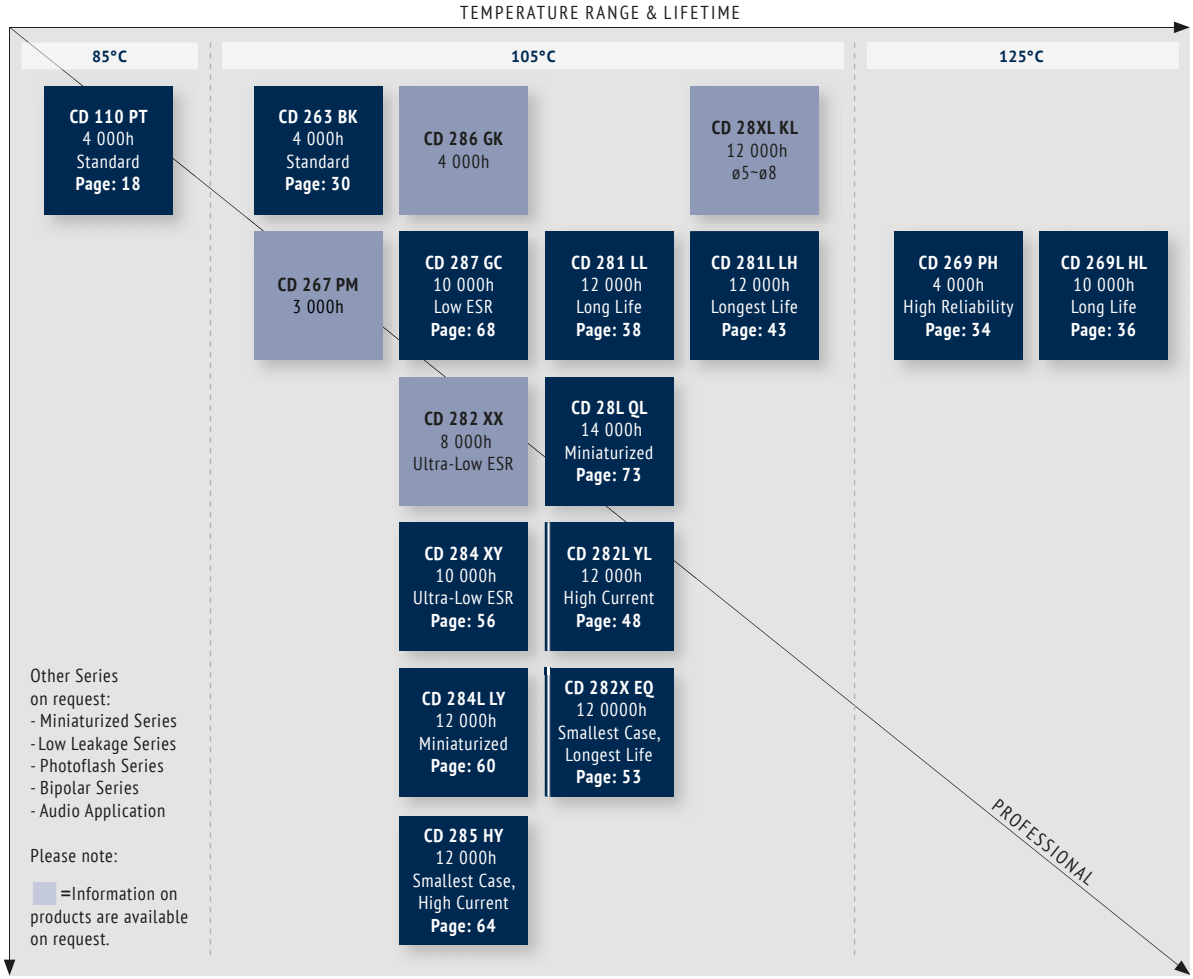
Radial Type

OVERVIEW RADIAL

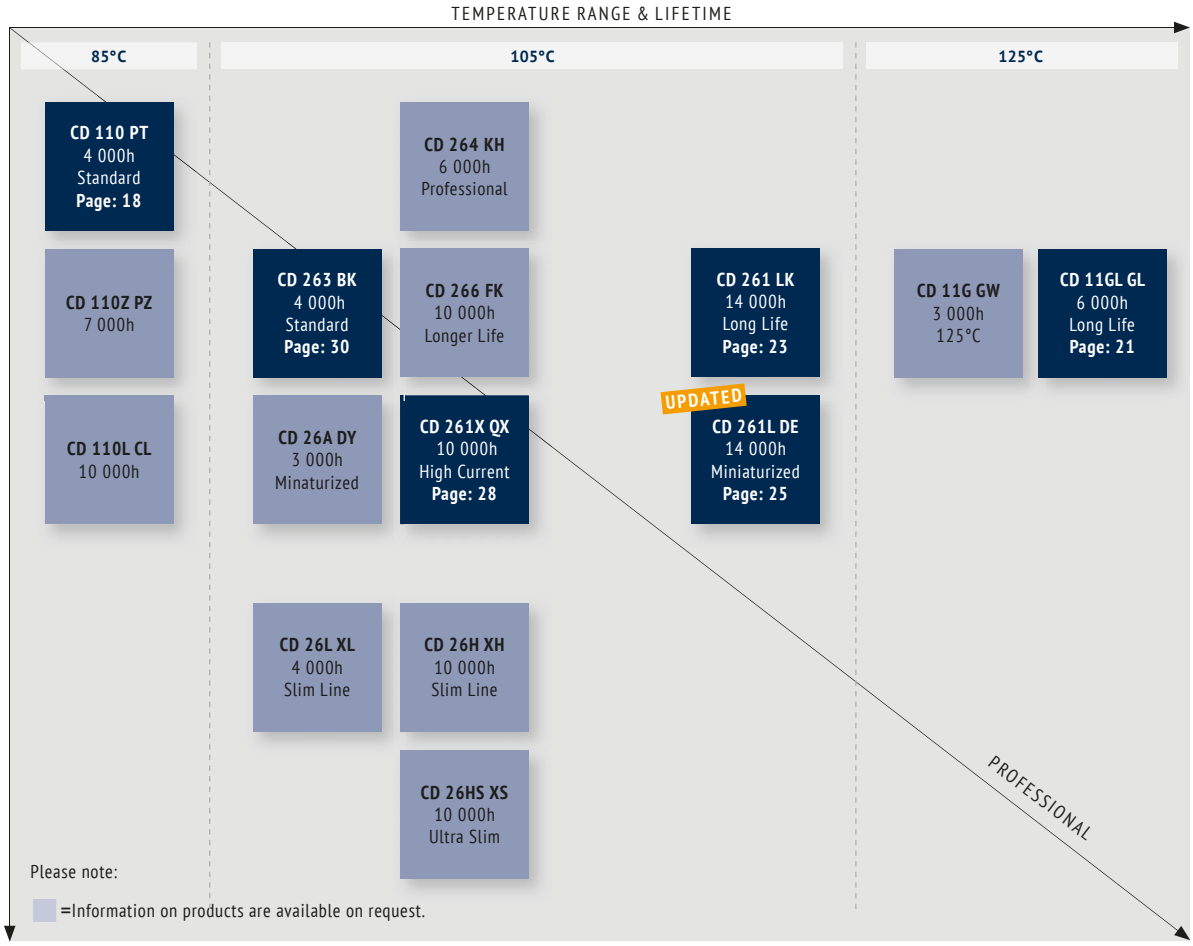
All Radial Type at a glance	14
Order code	15
Technical Specifications	16

SERIES RADIAL	Code	Type	Temperature	Voltage	Lifetime	Info	
CD 110	PT	Radial	85°C	6,3~500V	4 000h	Standard	18
CD 11GL	GL	Radial	125°C	160~450V	6 000h	High Temperature, High Voltage	21
CD 261	LK	Radial	105°C	160~450V	14 000h	High Voltage, Long Life	23
CD 261L UPDATED	DE	Radial	105°C	160~450V	14 000h	Miniaturized	25
CD 261X	QX	Radial	105°C	160~550V	12 000h	High Voltage, Highest Currents	28
CD 263	BK	Radial	105°C	6,3~500V	3 000h	Standard	30
CD 269	PH	Radial	125°C	10~63V	4 000h	High Temperature	34
CD 269L	HL	Radial	125°C	10~100V	10 000h	High Temperature, Long Life	36
CD 281	LL	Radial	105°C	6,3~100V	12 000h	Low ESR, Long Life	38
CD 281L	LH	Radial	105°C	6,3~100V	12 000h	Low ESR, Longest Life	43
CD 282L	YL	Radial	105°C	6,3~100V	12 000h	High Current, Ultra Low ESR	48
CD 282X	EQ	Radial	105°C	6,3~100V	12 000h	High Current, Miniaturized	53
CD 284	XY	Radial	105°C	6,3~100V	10 000h	High Current, Ultra Low ESR	56
CD 284L	LY	Radial	105°C	6,3~100V	12 000h	Miniaturized	60
CD 285	HY	Radial	105°C	6,3~100V	12 000h	Highest Current	64
CD 287	GC	Radial	105°C	6,3~100V	10 000h	Low ESR	68
CD 28L	QL	Radial	105°C	6,3~63V	14 000h	Low ESR, Miniaturized	73

RADIAL 6,3V ~ 100V



RADIAL 160V ~ 550V



ORDER CODE FOR RADIAL CAPACITORS

EC	R	2G	QX	221	M	LL	50	1012	-	-	JExxxxx
Techno-logy	Terminal Type	Rated Voltage Code	Series Code	Capacitance Code	Capacitance Tolerance	Terminal Style	Terminal / Pitch	Dimension (mm)	Material Code	Rubber Type	for Specials only
EC Electrolytric Capacitor	Radial R	6,3V 0J	CD 110 PT	0,1 0R1	±20% M	Taped FF	2,0mm 20	4x7 0407	Standard -	Standard -	
		10V 1A	CD 11GL GL	0,47 R47	±10% K	Long Lead LL	2,5mm 25	5x11,5 0511	PVC V	Flat Rubber F	
		16V 1C	CD 261 LK	1,0 010	+30 / -10% Q	Cut 5,0mm CB	3,5mm 35	10x20 1020	PET E	Stand-Off S	
		20V 1D	CD 261L DE	2,2 2R2	+20 / -0% R	Cut 4,5mm CC	5,0mm 50	12,5x25 1225			
		25V 1E	CD 261X QX	100 101	±15% L	Cut 4,0mm CD	7,5mm 75				
		35V 1V	CD 263 BK	1 000 102	+20 / -10% V	Cut 3,5mm CE	10,0mm 10				
		40V 1G	CD 269 PH	10 000 103	■ = preferred	Cut 3,0mm CF	12,5mm 12				
		50V 1H	CD 269L HL								
		63V 1J	CD 281 LL								
		80V 1K	CD 281L LH								
		100V 2A	CD 282L YL								
		125V 2B	CD 282X EQ								
		160V 2C	CD 284 XY								
		180V 2K	CD 284L LY								
		200V 2D	CD 285 HY								
		250V 2E	CD 287 GC								
		350V 2V	CD 28L QL								
		385V 2J									
		400V 2G									
		415V 2P									
		420V 2X									
		450V 2W									
		500V 2H									
		550V 2Y									
		575V 2Z									
		600V 2S									
		630V J2									

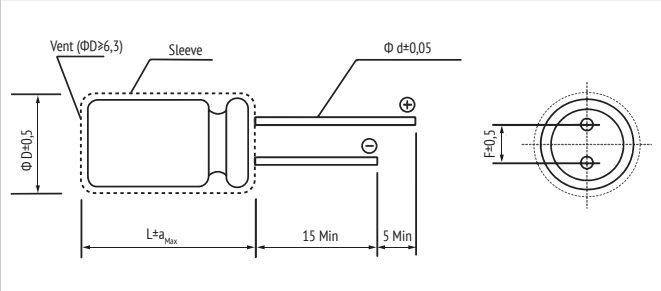
On request:
Alternative lead forms
(keyed polarity, 90° bended, others)

Packaging:
Taped: ammopack
Long lead & cut: bulk

RADIAL

DIMENSIONS FOR LOOSE, LONG-LEAD TYPE (BULK)

· ORDER CODE: LL



L	L ≤ 7					L ≥ 11									
Ø D	3	4	5	6,3	8	5	6,3	8	10	12,5	16	18	20	22	25
F	1,0	1,5	2,0	2,5	3,5	2,0	2,5	3,5	5,0		7,5			10,0	12,5
Ø d	0,4	0,45				0,5		0,6			0,8			1,0	
a_{Max}	1,0					2,0							2,5		

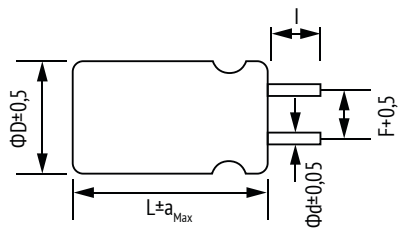
For diameter 20 pitch 7,5 or 10.

in mm

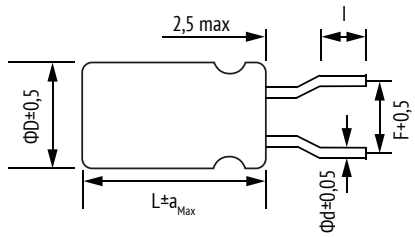
DIMENSIONS FOR LOOSE, SHORT CUT LEADS (BULK)

· ORDER CODE: CC (CB, CD, CE, CF)

STRAIGHT LEAD



BENDED LEAD



Code	CB	CC	CD	CE	CF
l	5,0 ± 0,5	**4,5 ± 0,5**	4,0 ± 0,5	3,5 ± 0,5	3,0 ± 0,5

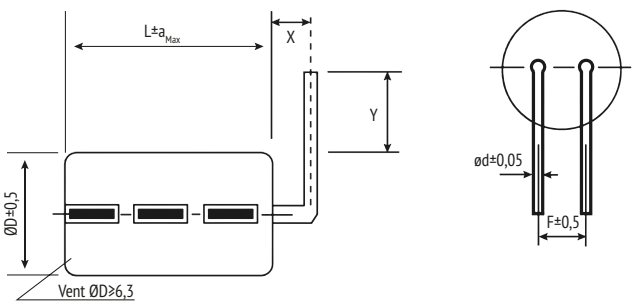
■ = preferred

in mm

EXAMPLE OF ALTERNATIVE BENDINGS

· ORDER CODE: WS

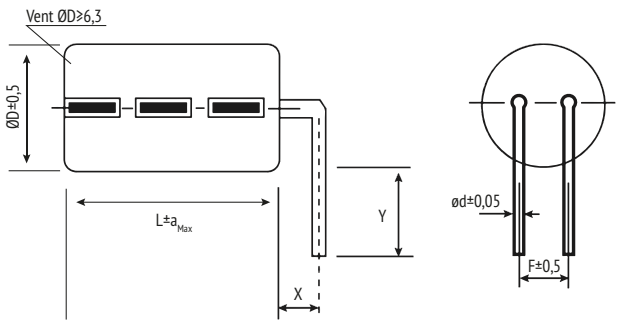
90° LEADS UP



X: 3,0±0,5
Y: 3,7±0,3

· ORDER CODE: WX

90° LEADS DOWN



X: 3,0±0,5
Y: 3,7±0,3

DIMENSIONS FOR AMMOPACK TAPING FOR ELECTROLYTIC CAPACITORS

· ORDER CODE: FF (FD)

Fig 1

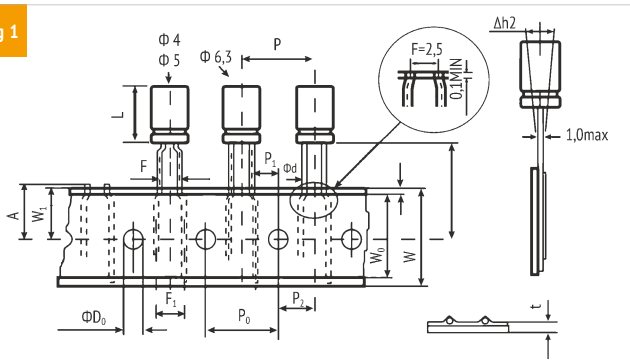


Fig 2

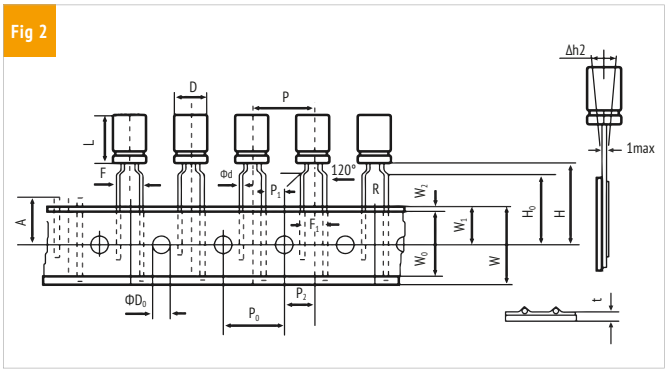


Fig 3a

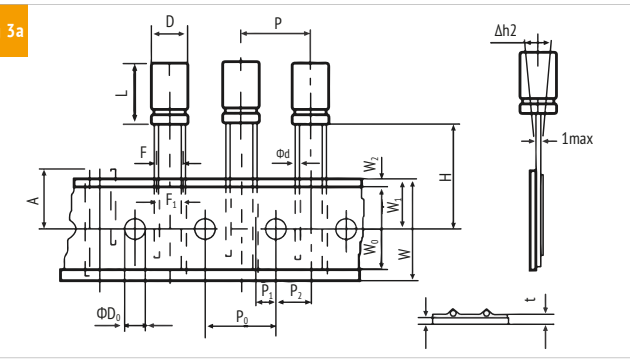


Fig 3b

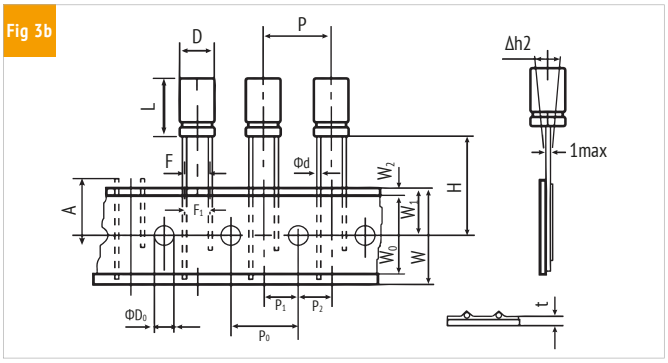
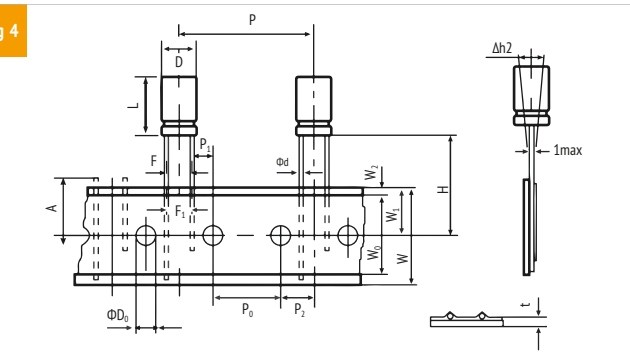


Fig 4



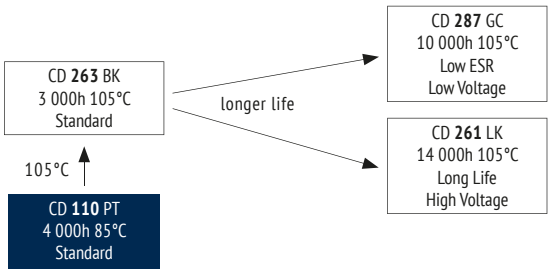
OTHER TAPING STYLES AVAILABLE ON REQUEST.

ITEM	D	L	Ød	P	P_0	P_1	P_2	F	F_1	W	W_0	W_1	W_2	H	H_0	A	$ØD_0$	$Δh_2$	t	Fig.	Taping Code
Tol.	± 0,5	± 2,0	± 0,05	± 1,0	± 0,2	± 0,5	± 1,0	+ 0,8 - 0,2	± 1,0	± 0,5	min	± 0,5	max	+ 0,75 - 0,5	± 0,5	max	± 0,5	max	± 0,2		
Nominal	4	7	0,45	12,7	12,7	5,1	6,35	2,5	3,5	18,0	10,0	9,0	1,5	18,5	-	11,0	4,0	1,0	0,7	1	FF
						3,85		5	5					17,5	16,0					2	FF
	5	7	0,45	12,7	12,7	5,1	6,35	2,5	3,5	18,0	10,0	9,0	1,5	18,5	-	11,0	4,0	1,0	0,7	1	FF
						3,85		5	5					17,5	16,0					2	FF
		11,5~15	0,5	12,7	12,7	5,1	6,35	2,5	3,5	18,0	10,0	9,0	1,5	18,5	-	11,0	4,0	1,0	0,7	1	FF
						3,85		5	5						16,0					2	FF
	6,3	7	0,45	12,7	12,7	5,1	6,35	2,5	3,5	18,0	10,0	9,0	1,5	18,5	-	11,0	4,0	1,0	0,7	1	FF
						3,85		5	5					17,5	16,0					2	FF
		11,5~15	0,5	12,7	12,7	5,1	6,35	2,5	3,5	18,0	10,0	9,0	1,5	18,5	-	11,0	4,0	1,0	0,7	1	FF
						3,85		5	5						16,0					2	FF
	8	11,5~20	0,6	12,7	12,7	4,6	6,35	3,5	3,5	18,0	10,0	9,0	1,5	18,5	-	11,0	4,0	1,0	0,7	3a	FF
						3,85		5	5					20,0	16,0					2	FF
	10	12,5~36	0,6	12,7	12,7	3,85	6,35	5	5	18,0	10,0	9,0	1,5	18,5	-	11,0	4,0	1,0	0,7	3b	FF
	12,5	15~36	0,6	15	15	5,0	7,5	5	5	18,0	12,0	9,0	1,5	18,5	-	11,0	4,0	1,0	0,7	3b	FF
				25,4	12,7	3,85	6,35													4	FD
	16	15~31,5	0,8	30	15	3,75	7,5	7,5	7,5	18,0	12,0	9,0	1,5	18,5	-	11,0	4,0	1,0	0,7	4	FD
	18	15~25,5	0,8	30	15	3,75	7,5	7,5	7,5	18,0	12,0	9,0	1,5	18,5	-	11,0	4,0	1,0	0,7	4	FD
	Other taping styles available on request																				

in mm

3 000-4 000h at 85°C

· Standard 85°C



RADIAL

ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +85	-25 ~ +85
Voltage Range (V)	6,3 ~ 250	350 ~ 500
Capacitance Range (µF)	0,1 ~ 22 000	
Capacitance Tolerance (20°C, 120Hz)	± 20%	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Leakage Current	Rated Voltage (V)	6,3 ~ 100	160 ~ 500
	$I_{Leakage}$	After 1 minute at 20°C application of rated voltage, leakage current is not more than specified in table.	After 2 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	6,3	10	16	25	35	50	63	100	160	200	250	350	400	450	500
	$Z_{-25°C} / Z_{+20°C}$	4	3	2						3			6			
	$Z_{-40°C} / Z_{+20°C}$	8	6	4	3					8			-			

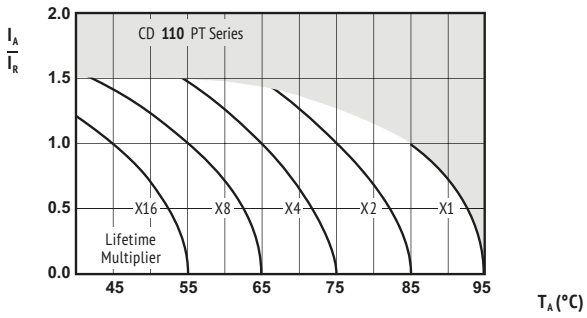
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	Ø ≤ 8 : 3 000h Ø ≥ 10 : 4 000h	Ø ≤ 8 : 35 000h Ø ≥ 10 : 50 000h	2 000h	2 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 50% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 150% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,4 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Rated Voltage (V)	Frequency / CV (µFV)	50Hz	120Hz	1kHz	10kHz	100kHz
6,3 ~ 16	-	0,80	1,00	1,10	1,20	1,20
25 ~ 35	**≤ 1 000**	0,80	1,00	1,50	1,70	1,70
	> 1 000	0,80	1,00	1,20	1,30	1,30
50 ~ 100	**≤ 1 000**	0,80	1,00	1,60	1,90	1,90
	> 1 000	0,80	1,00	1,20	1,30	1,30
160 ~ 500	-	0,80	1,00	1,30	1,50	1,60

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 85°C 120Hz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
6,3 (7,2) 0J	33	8,9	0,22	3	60	5 x 11,5	ECR0JPT330M◊◊ΔΔ0511
	47	6,3	0,22	3	70	5 x 11,5	ECR0JPT470M◊◊ΔΔ0511
	100	3,0	0,22	7	100	5 x 11,5	ECR0JPT101M◊◊ΔΔ0511
	220	1,4	0,22	14	200	5 x 11,5	ECR0JPT221M◊◊ΔΔ0511
	330	0,88	0,22	21	270	6,3 x 11,5	ECR0JPT331M◊◊ΔΔ0611
	470	0,62	0,22	30	322	6,3 x 11,5	ECR0JPT471M◊◊ΔΔ0611
		0,62	0,22	30	300	8 x 11,5	ECR0JPT471M◊◊ΔΔ0811
	1 000	0,29	0,22	63	546	8 x 11,5	ECR0JPT102M◊◊ΔΔ0811
		0,29	0,22	63	530	10 x 12,5	ECR0JPT102M◊◊ΔΔ1012
	2 200	0,14	0,24	139	1010	10 x 20	ECR0JPT222M◊◊ΔΔ1020
	3 300	0,10	0,26	208	1230	10 x 20	ECR0JPT332M◊◊ΔΔ1020
	4 700	0,080	0,28	297	1710	12,5 x 20	ECR0JPT472M◊◊ΔΔ1220
		0,080	0,28	297	1700	16 x 25	ECR0JPT472M◊◊ΔΔ1625
	6 800	0,063	0,32	429	1930	12,5 x 25	ECR0JPT682M◊◊ΔΔ1225
		0,063	0,32	429	1900	16 x 25	ECR0JPT682M◊◊ΔΔ1625
	10 000	0,054	0,40	630	2450	16 x 25	ECR0JPT103M◊◊ΔΔ1625
	15 000	0,045	0,50	945	2860	16 x 35,5	ECR0JPT153M◊◊ΔΔ1635
		0,045	0,50	945	2900	18 x 35,5	ECR0JPT153M◊◊ΔΔ1835
	22 000	0,040	0,64	1386	3340	18 x 40	ECR0JPT223M◊◊ΔΔ1840
10 (13) 1A	33	7,7	0,19	4	65	5 x 11,5	ECR1APT330M◊◊ΔΔ0511
	47	5,4	0,19	5	99	5 x 11,5	ECR1APT470M◊◊ΔΔ0511
	100	2,6	0,19	10	146	5 x 11,5	ECR1APT101M◊◊ΔΔ0511
	220	1,2	0,19	22	240	6,3 x 11,5	ECR1APT221M◊◊ΔΔ0611
	330	0,77	0,19	33	290	6,3 x 11,5	ECR1APT331M◊◊ΔΔ0611
	330	0,77	0,19	33	270	8 x 11,5	ECR1APT331M◊◊ΔΔ0811
	470	0,54	0,19	47	417	8 x 11,5	ECR1APT471M◊◊ΔΔ0811
	1 000	0,25	0,19	100	650	10 x 12,5	ECR1APT102M◊◊ΔΔ1012
	2 200	0,13	0,21	220	1080	10 x 20	ECR1APT222M◊◊ΔΔ1020
	3 300	0,10	0,23	330	1430	12,5 x 20	ECR1APT332M◊◊ΔΔ1220
	4 700	0,071	0,25	470	1780	12,5 x 25	ECR1APT472M◊◊ΔΔ1225
		0,071	0,25	470	1800	16 x 25	ECR1APT472M◊◊ΔΔ1625
	6 800	0,060	0,29	680	2220	16 x 25	ECR1APT682M◊◊ΔΔ1625
	10 000	0,050	0,37	1000	2700	16 x 35,5	ECR1APT103M◊◊ΔΔ1635
		0,050	0,37	1000	2750	18 x 35,5	ECR1APT103M◊◊ΔΔ1835
	15 000	0,042	0,47	1500	3100	18 x 35,5	ECR1APT153M◊◊ΔΔ1835
16 (20) 1C	10	21,2	0,16	3	50	5 x 11,5	ECR1CPT100M◊◊ΔΔ0511
	22	9,7	0,16	4	75	5 x 11,5	ECR1CPT220M◊◊ΔΔ0511
	33	6,5	0,16	6	92	5 x 11,5	ECR1CPT330M◊◊ΔΔ0511
	47	4,6	0,16	8	110	5 x 11,5	ECR1CPT470M◊◊ΔΔ0511
	100	2,2	0,16	16	160	5 x 11,5	ECR1CPT101M◊◊ΔΔ0511
	220	0,97	0,16	36	264	6,3 x 11,5	ECR1CPT221M◊◊ΔΔ0611
		0,97	0,16	36	240	8 x 11,5	ECR1CPT221M◊◊ΔΔ0811
	330	0,64	0,16	53	383	8 x 11,5	ECR1CPT331M◊◊ΔΔ0811
	470	0,45	0,16	76	457	8 x 11,5	ECR1CPT471M◊◊ΔΔ0811
	470	0,46	0,16	76	420	10 x 12,5	ECR1CPT471M◊◊ΔΔ1012
	1 000	0,21	0,16	160	791	10 x 16	ECR1CPT102M◊◊ΔΔ1016
	2 200	0,11	0,18	352	1350	12,5 x 20	ECR1CPT222M◊◊ΔΔ1220
	3 300	0,081	0,20	528	1690	12,5 x 25	ECR1CPT332M◊◊ΔΔ1225
		0,081	0,20	528	1650	16 x 25	ECR1CPT332M◊◊ΔΔ1625
	4 700	0,063	0,22	752	2100	16 x 25	ECR1CPT472M◊◊ΔΔ1625
	6 800	0,051	0,26	1088	2580	16 x 35,5	ECR1CPT682M◊◊ΔΔ1635
		0,051	0,26	1088	2600	18 x 35,5	ECR1CPT682M◊◊ΔΔ1835
	10 000	0,050	0,34	1600	3130	18 x 35,5	ECR1CPT103M◊◊ΔΔ1835
25 (32) 1E	4,7	39,5	0,14	3	38	5 x 11,5	ECR1EPT4R7M◊◊ΔΔ0511
	10	18,6	0,14	3	55	5 x 11,5	ECR1EPT100M◊◊ΔΔ0511
	22	8,5	0,14	6	82	5 x 11,5	ECR1EPT220M◊◊ΔΔ0511
	33	5,7	0,14	9	100	5 x 11,5	ECR1EPT330M◊◊ΔΔ0511
	47	4,0	0,14	12	118	5 x 11,5	ECR1EPT470M◊◊ΔΔ0511
	100	1,9	0,14	25	199	6,3 x 11,5	ECR1EPT101M◊◊ΔΔ0611
	220	0,84	0,14	55	349	8 x 11,5	ECR1EPT221M◊◊ΔΔ0811
	330	0,56	0,14	83	510	10 x 12,5	ECR1EPT331M◊◊ΔΔ1012
	470	0,40	0,14	118	545	10 x 12,5	ECR1EPT471M◊◊ΔΔ1012
	1 000	0,19	0,14	250	996	10 x 20	ECR1EPT102M◊◊ΔΔ1020
	2 200	0,10	0,16	550	1660	12,5 x 25	ECR1EPT222M◊◊ΔΔ1225
		0,10	0,16	550	1500	16 x 25	ECR1EPT222M◊◊ΔΔ1625

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 85°C 120Hz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
25 (32) 1E	3 300	0,070	0,18	825	2030	16 x 25	ECR1EPT332M◊◊ΔΔ1625
	4 700	0,060	0,20	1175	2650	16 x 31,5	ECR1EPT472M◊◊ΔΔ1631
	6 800	0,050	0,24	1700	3290	18 x 35,5	ECR1EPT682M◊◊ΔΔ1835
35 (44) 1V	4,7	33,9	0,12	3	40	5 x 11,5	ECR1VPT4R7M◊◊ΔΔ0511
	10	15,9	0,12	4	59	5 x 11,5	ECR1VPT100M◊◊ΔΔ0511
	22	7,3	0,12	8	87	5 x 11,5	ECR1VPT220M◊◊ΔΔ0511
	33	4,9	0,12	12	107	5 x 11,5	ECR1VPT330M◊◊ΔΔ0511
	47	3,4	0,12	17	130	5 x 11,5	ECR1VPT470M◊◊ΔΔ0511
	100	1,6	0,12	35	214	6,3 x 11,5	ECR1VPT101M◊◊ΔΔ6011
		1,6	0,12	35	190	8 x 11,5	ECR1VPT101M◊◊ΔΔ0811
	220	0,72	0,12	77	443	8 x 11,5	ECR1VPT221M◊◊ΔΔ0811
		0,72	0,12	77	440	10 x 12,5	ECR1VPT221M◊◊ΔΔ1012
	330	0,48	0,12	116	542	10 x 12,5	ECR1VPT331M◊◊ΔΔ1012
	470	0,34	0,12	165	664	10 x 16	ECR1VPT471M◊◊ΔΔ1016
	1 000	0,16	0,12	350	1210	12,5 x 20	ECR1VPT102M◊◊ΔΔ1220
	2 200	0,080	0,14	770	1950	16 x 25	ECR1VPT222M◊◊ΔΔ1625
	3 300	0,060	0,16	1155	2510	16 x 35,5	ECR1VPT332M◊◊ΔΔ1635
	4 700	0,050	0,18	1645	2990	18 x 35,5	ECR1VPT472M◊◊ΔΔ1835
50 (63) 1H	0,10	1327	0,10	3	3	5 x 11,5	ECR1HPT0R1M◊◊ΔΔ0511
	0,22	603	0,10	3	6	5 x 11,5	ECR1HPTR22M◊◊ΔΔ0511
	0,33	402	0,10	3	9	5 x 11,5	ECR1HPTR33M◊◊ΔΔ0511
	0,47	282	0,10	3	13	5 x 11,5	ECR1HPTR47M◊◊ΔΔ0511
	1,0	133	0,10	3	21	5 x 11,5	ECR1HPT010M◊◊ΔΔ0511
	2,2	60,3	0,10	3	31	5 x 11,5	ECR1HPT2R2M◊◊ΔΔ0511
	3,3	40,2	0,10	3	38	5 x 11,5	ECR1HPT3R3M◊◊ΔΔ0511
	4,7	28,2	0,10	3	45	5 x 11,5	ECR1HPT4R7M◊◊ΔΔ0511
	10	13,3	0,10	5	66	5 x 11,5	ECR1HPT100M◊◊ΔΔ0511
	22	6,1	0,10	11	98	5 x 11,5	ECR1HPT220M◊◊ΔΔ0511
	33	4,1	0,10	17	126	5 x 11,5	ECR1HPT330M◊◊ΔΔ0511
	47	2,9	0,10	24	155	6,3 x 11,5	ECR1HPT470M◊◊ΔΔ0611
	100	1,4	0,10	50	260	8 x 11,5	ECR1HPT101M◊◊ΔΔ0811
	220	0,60	0,10	110	443	10 x 12,5	ECR1HPT221M◊◊ΔΔ1012
	330	0,40	0,10	165	595	10 x 16	ECR1HPT331M◊◊ΔΔ1016
	470	0,28	0,10	235	887	12,5 x 20	ECR1HPT471M◊◊ΔΔ1220
	1 000	0,13	0,10	500	1400	16 x 25	ECR1HPT102M◊◊ΔΔ1625
	2 200	0,070	0,12	1100	2340	16 x 35,5	ECR1HPT222M◊◊ΔΔ1635
	3 300	0,060	0,14	1650	2810	18 x 35,5	ECR1HPT332M◊◊ΔΔ1835
63 (79) 1J	4,7	25,4	0,09	3	45	5 x 11,5	ECR1JPT4R7M◊◊ΔΔ0511
	10	11,9	0,09	7	66	5 x 11,5	ECR1JPT100M◊◊ΔΔ0511
	22	5,5	0,09	14	100	5 x 11,5	ECR1JPT220M◊◊ΔΔ0511
	33	3,7	0,09	21	140	6,3 x 11,5	ECR1JPT330M◊◊ΔΔ0611
	47	2,6	0,09	30	170	6,3 x 11,5	ECR1JPT470M◊◊ΔΔ0611
		2,6	0,09	30	150	8 x 11,5	ECR1JPT470M◊◊ΔΔ0811
	100	1,2	0,09	63	300	10 x 12,5	ECR1JPT101M◊◊ΔΔ1012
	220	0,54	0,09	139	470	10 x 16	ECR1JPT221M◊◊ΔΔ1016
	330	0,36	0,09	208	710	10 x 20	ECR1JPT331M◊◊ΔΔ1020
	470	0,25	0,09	297	900	12,5 x 20	ECR1JPT471M◊◊ΔΔ1220
	1 000	0,12	0,09	630	1300	16 x 25	ECR1JPT102M◊◊ΔΔ1625
		0,12	0,09	630	1550	16 x 31,5	ECR1JPT102M◊◊ΔΔ1631
100 (125) 2A	0,10	1 062	0,08	3	2,1	5 x 11,5	ECR2APT0R1M◊◊ΔΔ0511
	0,22	483	0,08	3	4,7	5 x 11,5	ECR2APTR22M◊◊ΔΔ0511
	0,33	322	0,08	3	7	5 x 11,5	ECR2APTR33M◊◊ΔΔ0511
	0,47	226	0,08	3	10	5 x 11,5	ECR2APTR47M◊◊ΔΔ0511
	1,0	106	0,08	3	21	5 x 11,5	ECR2APT010M◊◊ΔΔ0511
	2,2	48,3	0,08	3	30	5 x 11,5	ECR2APT2R2M◊◊ΔΔ0511
	3,3	32,2	0,08	4	40	5 x 11,5	ECR2APT3R3M◊◊ΔΔ0511
	4,7	22,6	0,08	5	45	5 x 11,5	ECR2APT4R7M◊◊ΔΔ0511
	10	10,6	0,08	10	75	6,3 x 11,5	ECR2APT100M◊◊ΔΔ0611
	22	4,83	0,08	22	130	6,3 x 11,5	ECR2APT220M◊◊ΔΔ0611
		4,83	0,08	22	110	8 x 11,5	ECR2APT220M◊◊ΔΔ0811
	33	3,22	0,08	33	180	8 x 11,5	ECR2APT330M◊◊ΔΔ0811
		3,22	0,08	33	160	10 x 12,5	ECR2APT330M◊◊ΔΔ1012
	47	2,26	0,08	47	230	10 x 12,5	ECR2APT470M◊◊ΔΔ1012

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RADIAL

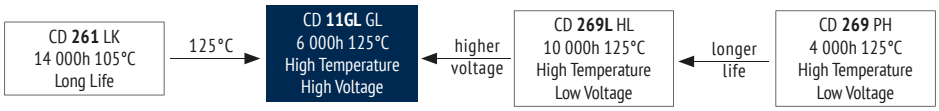
RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 85°C 120Hz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
100 (125) 2A	100	1,06	0,08	100	370	10 x 20	ECR2APT101M◊◊ΔΔ1020
		1,06	0,08	100	380	12,5 x 20	ECR2APT101M◊◊ΔΔ1220
	220	0,48	0,08	220	620	12,5 x 25	ECR2APT221M◊◊ΔΔ1225
		0,48	0,08	220	720	16 x 25	ECR2APT221M◊◊ΔΔ1625
	330	0,32	0,08	330	760	16 x 25	ECR2APT331M◊◊ΔΔ1625
	470	0,23	0,08	470	1000	16 x 25	ECR2APT471M◊◊ΔΔ1625
		0,23	0,08	470	1150	16 x 31,5	ECR2APT471M◊◊ΔΔ1631
	1 000	0,11	0,08	1000	1380	18 x 40	ECR2APT102M◊◊ΔΔ1840
160 (200) 2C	0,47	339	0,12	13	15	6,3 x 11,5	ECR2CPTR47M◊◊ΔΔ0611
	1,0	159	0,12	15	22	6,3 x 11,5	ECR2CPT010M◊◊ΔΔ0611
	2,2	72,4	0,12	21	32	6,3 x 11,5	ECR2CPT2R2M◊◊ΔΔ0611
	3,3	48,3	0,12	26	40	6,3 x 11,5	ECR2CPT3R3M◊◊ΔΔ0611
		48,3	0,12	26	35	8 x 11,5	ECR2CPT3R3M◊◊ΔΔ0811
	4,7	33,9	0,12	33	48	6,3 x 11,5	ECR2CPT4R7M◊◊ΔΔ0611
		33,9	0,12	33	40	8 x 11,5	ECR2CPT4R7M◊◊ΔΔ0811
	10	15,9	0,12	58	81	8 x 11,5	ECR2CPT100M◊◊ΔΔ0811
		15,9	0,12	58	70	10 x 12,5	ECR2CPT100M◊◊ΔΔ1012
	22	7,24	0,12	116	151	10 x 16	ECR2CPT220M◊◊ΔΔ1016
	33	4,83	0,12	169	202	10 x 20	ECR2CPT330M◊◊ΔΔ1020
	47	3,39	0,12	236	266	12,5 x 20	ECR2CPT470M◊◊ΔΔ1220
	100	1,59	0,12	490	422	12,5 x 25	ECR2CPT101M◊◊ΔΔ1225
		1,59	0,12	490	400	16 x 25	ECR2CPT101M◊◊ΔΔ1625
	220	0,72	0,12	1066	783	16 x 31,5	ECR2CPT221M◊◊ΔΔ1631
	330	0,48	0,12	1594	1080	18 x 31,5	ECR2CPT331M◊◊ΔΔ1831
200 (250) 2D	0,47	339	0,12	13	15	6,3 x 11,5	ECR2DPTR47M◊◊ΔΔ0611
	1,0	159	0,12	16	22	6,3 x 11,5	ECR2DPT010M◊◊ΔΔ0611
	2,2	72,4	0,12	24	32	6,3 x 11,5	ECR2DPT2R2M◊◊ΔΔ0611
	3,3	48,3	0,12	30	40	6,3 x 11,5	ECR2DPT3R3M◊◊ΔΔ0611
		48,3	0,12	30	35	8 x 11,5	ECR2DPT3R3M◊◊ΔΔ0811
	4,7	33,9	0,12	39	56	8 x 11,5	ECR2DPT4R7M◊◊ΔΔ0811
		33,9	0,12	39	50	10 x 12,5	ECR2DPT4R7M◊◊ΔΔ1012
	10	15,9	0,12	70	94	8 x 11,5	ECR2DPT100M◊◊ΔΔ0811
		15,9	0,12	70	94	10 x 12,5	ECR2DPT100M◊◊ΔΔ1012
	22	7,24	0,12	142	170	10 x 20	ECR2DPT220M◊◊ΔΔ1020
	33	4,83	0,12	208	223	12,5 x 20	ECR2DPT330M◊◊ΔΔ1220
	47	3,39	0,12	292	265	12,5 x 20	ECR2DPT470M◊◊ΔΔ1220
	100	1,59	0,12	610	483	16 x 25,5	ECR2DPT101M◊◊ΔΔ1625
	220	0,72	0,12	1330	882	18 x 36	ECR2DPT221M◊◊ΔΔ1836
250 (300) 2E	0,47	423	0,15	14	15	6,3 x 11,5	ECR2EPTR47M◊◊ΔΔ0611
	1,0	199	0,15	18	22	6,3 x 11,5	ECR2EPT010M◊◊ΔΔ0611
	2,2	90,5	0,15	27	32	6,3 x 11,5	ECR2EPT2R2M◊◊ΔΔ0611
	3,3	60,3	0,15	35	48	8 x 11,5	ECR2EPT3R3M◊◊ΔΔ0811
		60,3	0,15	35	35	10 x 12,5	ECR2EPT3R3M◊◊ΔΔ1012
	4,7	42,3	0,15	46	56	8 x 11,5	ECR2EPT4R7M◊◊ΔΔ0811
		42,3	0,15	46	40	10 x 12,5	ECR2EPT4R7M◊◊ΔΔ1012
	10	19,9	0,15	85	101	10 x 12,5	ECR2EPT100M◊◊ΔΔ1012
	22	9,05	0,15	175	182	10 x 20	ECR2EPT220M◊◊ΔΔ1020
	33	6,03	0,15	258	243	12,5 x 20	ECR2EPT330M◊◊ΔΔ1220
	47	4,23	0,15	363	295	12,5 x 25	ECR2EPT470M◊◊ΔΔ1225
		4,23	0,15	363	240	16 x 25,5	ECR2EPT470M◊◊ΔΔ1625
	100	1,99	0,15	760	528	16 x 31,5	ECR2EPT101M◊◊ΔΔ1631
350 (400) 2V	0,47	424	0,15	15	15	6,3 x 11,5	ECR2VPTR47M◊◊ΔΔ0611
	1,0	199	0,15	21	22	6,3 x 11,5	ECR2VPT010M◊◊ΔΔ0611
		199	0,15	21	15	8 x 11,5	ECR2VPT010M◊◊ΔΔ0811
	2,2	90,5	0,15	34	38	6,3 x 11,5	ECR2VPT2R2M◊◊ΔΔ0611
		90,5	0,15	34	38	8 x 11,5	ECR2VPT2R2M◊◊ΔΔ0811
		90,5	0,15	34	30	10 x 12,5	ECR2VPT2R2M◊◊ΔΔ1012
	3,3	60,3	0,15	45	53	8 x 11,5	ECR2VPT3R3M◊◊ΔΔ0811
		60,3	0,15	45	53	10 x 12,5	ECR2VPT3R3M◊◊ΔΔ1012
	4,7	42,3	0,15	60	65	10 x 12,5	ECR2VPT4R7M◊◊ΔΔ1012
	10	19,9	0,15	115	115	10 x 20	ECR2VPT100M◊◊ΔΔ1020
	22	9,05	0,15	241	197	12,5 x 20	ECR2VPT220M◊◊ΔΔ1220
	33	6,03	0,15	357	277	12,5 x 25	ECR2VPT330M◊◊ΔΔ1225
		6,03	0,15	357	277	16 x 25,5	ECR2VPT330M◊◊ΔΔ1625
	47	4,23	0,15	504	330	16 x 25,5	ECR2VPT470M◊◊ΔΔ1625
	100	1,99	0,15	1060	507	18 x 31,5	ECR2VPT101M◊◊ΔΔ1831

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 85°C 120Hz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
400 (250) 2G	0,47	565	0,20	16	15	6,3 x 11,5	ECR2GPTR47M◊◊ΔΔ0611
	1,0	265	0,20	22	22	6,3 x 11,5	ECR2GPT010M◊◊ΔΔ0611
		265	0,20	22	15	8 x 11,5	ECR2GPT010M◊◊ΔΔ0811
	2,2	121	0,20	37	38	8 x 11,5	ECR2GPT2R2M◊◊ΔΔ0811
		121	0,20	37	20	10 x 12,5	ECR2GPT2R2M◊◊ΔΔ1012
	3,3	80,4	0,20	50	54	10 x 12,5	ECR2GPT3R3M◊◊ΔΔ1012
	4,7	56,5	0,20	67	71	10 x 12,5	ECR2GPT4R7M◊◊ΔΔ1012
	10	26,5	0,20	130	123	10 x 20	ECR2GPT100M◊◊ΔΔ1020
	22	12,1	0,20	274	197	12,5 x 25	ECR2GPT220M◊◊ΔΔ1225
		12,1	0,20	274	140	16 x 25,5	ECR2GPT220M◊◊ΔΔ1625
	33	8,04	0,20	406	277	16 x 25,5	ECR2GPT330M◊◊ΔΔ1625
	47	5,65	0,20	574	361	16 x 25,5	ECR2GPT470M◊◊ΔΔ1625
	68	3,9	0,20	826	423	18 x 25,5	ECR2GPT680M◊◊ΔΔ1825
	82	3,2	0,20	994	509	18 x 31,5	ECR2GPT820M◊◊ΔΔ1831
	100	2,7	0,20	1210	595	18 x 36	ECR2GPT101M◊◊ΔΔ1836
450 (500) 2W	0,47	649	0,23	17	18	6,3 x 11,5	ECR2WPTR47M◊◊ΔΔ0611
	1,0	305	0,23	24	25	6,3 x 11,5	ECR2WPT010M◊◊ΔΔ0611
	2,2	139	0,23	40	43	8 x 11,5	ECR2WPT2R2M◊◊ΔΔ0811
	3,3	92,5	0,23	55	59	10 x 12,5	ECR2WPT3R3M◊◊ΔΔ1012
	4,7	64,9	0,23	74	76	10 x 16	ECR2WPT4R7M◊◊ΔΔ1016
	10	30,5	0,23	145	123	10 x 20	ECR2WPT100M◊◊ΔΔ1020
	22	13,9	0,23	307	226	12,5 x 25	ECR2WPT220M◊◊ΔΔ1225
		13,9	0,23	307	226	16 x 25,5	ECR2WPT220M◊◊ΔΔ1625
	33	9,20	0,23	456	304	16 x 25,5	ECR2WPT330M◊◊ΔΔ1625
	47	6,5	0,23	645	380	16 x 31,5	ECR2WPT470M◊◊ΔΔ1631
	68	4,5	0,23	928	436	18 x 25,5	ECR2WPT680M◊◊ΔΔ1825
	82	3,7	0,23	1117	530	18 x 31,5	ECR2WPT820M◊◊ΔΔ1831
	100	2,6	0,23	1360	610	18 x 36	ECR2WPT101M◊◊ΔΔ1836
500 (550) 2H	1,0	305	0,23	25	35	10 x 12,5	ECR2HPT010M◊◊ΔΔ1012
	2,2	139	0,23	43	45	10 x 16	ECR2HPT2R2M◊◊ΔΔ1016
	3,3	92,5	0,23	60	75	10 x 20	ECR2HPT3R3M◊◊ΔΔ1020
	4,7	64,9	0,23	81	100	12,5 x 20	ECR2HPT4R7M◊◊ΔΔ1220
	10	30,5	0,23	160	165	12,5 x 25	ECR2HPT100M◊◊ΔΔ1225

6 000 at 125°C

- Suited for ballast and energy-saved lamp application of which high temperature and high reliability are required



ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +125	-25 ~ +125
Voltage Range (V)	160 ~ 250	350 ~ 450
Capacitance Range (µF)	2,2 ~ 330	
Capacitance Tolerance (20°C, 120Hz)	± 20%	
Leakage Current	After 1 minute at 20°C application of rated voltage, leakage current is not more than specified in table.	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

RADIAL

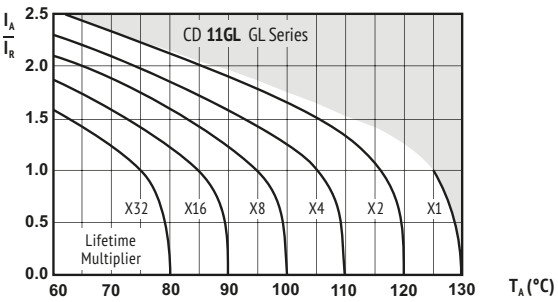
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	6 000h	80 000h	Ø 10 : 4 000h Ø 12,5 ~18 : 5 000h	6 000h	500h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 25% of initial value	Within ± 25% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 300% of specified value	Not more than 300% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 125°C	U_R 1,5 x I_R 75°C	U_R I_R 125°C	U_R I_R = 0 125°C IEC 60384	U_R = 0 I_R = 0 125°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	500Hz	1kHz	>10kHz
Coefficient	0,80	1,0	1,2	1,3	1,5

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 125°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

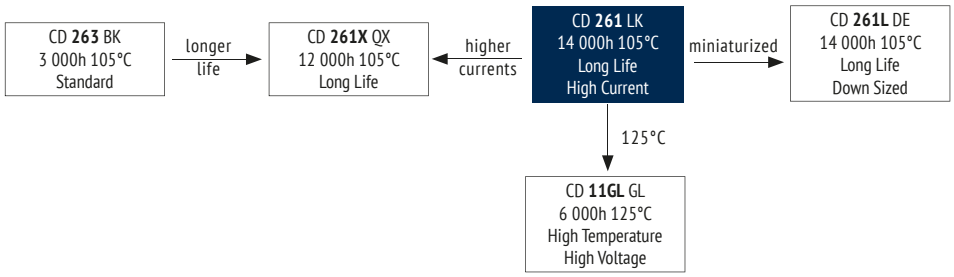
This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 125°C 120Hz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
160 (200) 2C	10	15,9	8,0	0,12	118	62	10 x 16	ECR2CGL100M◊◊ΔΔ1016
	22	7,2	3,6	0,12	176	101	10 x 20	ECR2CGL220M◊◊ΔΔ1020
	33	4,8	2,4	0,12	228	139	12,5 x 20	ECR2CGL330M◊◊ΔΔ1220
	47	3,4	1,7	0,12	296	165	12,5 x 20	ECR2CGL470M◊◊ΔΔ1220
	100	1,6	0,80	0,12	550	302	16 x 25	ECR2CGL101M◊◊ΔΔ1625
	220	0,70	0,40	0,12	1126	514	18 x 31,5	ECR2CGL221M◊◊ΔΔ1831
	330	0,50	0,20	0,12	1654	673	18 x 36	ECR2CGL331M◊◊ΔΔ1836
200 (250) 2D	10	15,9	8,0	0,12	130	62	10 x 16	ECR2DGL100M◊◊ΔΔ1016
	22	7,2	3,6	0,12	202	101	10 x 20	ECR2DGL220M◊◊ΔΔ1020
	33	4,8	2,4	0,12	268	139	12,5 x 20	ECR2DGL330M◊◊ΔΔ1220
	47	3,4	1,7	0,12	352	165	12,5 x 20	ECR2DGL470M◊◊ΔΔ1220
	100	1,6	0,80	0,12	670	302	16 x 25	ECR2DGL101M◊◊ΔΔ1625
	220	0,70	0,40	0,12	1390	514	18 x 31,5	ECR2DGL221M◊◊ΔΔ1831
	330	0,50	0,20	0,12	2050	673	18 x 36	ECR2DGL331M◊◊ΔΔ1836
250 (300) 2E	4,7	33,9	16,9	0,12	105	42	10 x 16	ECR2EGL4R7M◊◊ΔΔ1016
	6,8	23,4	11,7	0,12	121	51	10 x 16	ECR2EGL6R8M◊◊ΔΔ1016
	10	15,9	8,0	0,12	145	68	10 x 20	ECR2EGL100M◊◊ΔΔ1020
	22	7,2	3,6	0,12	235	113	12,5 x 20	ECR2EGL220M◊◊ΔΔ1220
	33	4,8	2,4	0,12	318	153	12,5 x 25	ECR2EGL330M◊◊ΔΔ1225
	47	3,4	1,7	0,12	423	207	16 x 25	ECR2EGL470M◊◊ΔΔ1625
	100	1,6	0,80	0,12	820	346	18 x 31,5	ECR2EGL101M◊◊ΔΔ1831
	220	0,70	0,40	0,12	1720	550	18 x 36	ECR2EGL221M◊◊ΔΔ1836
350 (400) 2V	2,2	90,5	36,2	0,15	93	26	10 x 16	ECR2VGL2R2M◊◊ΔΔ1016
	3,3	60,3	24,1	0,15	105	32	10 x 16	ECR2VGL3R3M◊◊ΔΔ1016
	4,7	42,3	16,9	0,15	119	42	10 x 20	ECR2VGL4R7M◊◊ΔΔ1020
	5,6	35,5	14,2	0,15	129	46	10 x 20	ECR2VGL5R6M◊◊ΔΔ1020
	6,8	29,3	11,7	0,15	141	56	12,5 x 20	ECR2VGL6R8M◊◊ΔΔ1220
	10	19,9	8,0	0,15	175	68	12,5 x 20	ECR2VGL100M◊◊ΔΔ1220
	22	9,0	3,6	0,15	301	112	12,5 x 25	ECR2VGL220M◊◊ΔΔ1225
	33	6,0	2,4	0,15	417	155	16 x 25	ECR2VGL330M◊◊ΔΔ1625
	47	4,2	1,7	0,15	564	201	16 x 31,5	ECR2VGL470M◊◊ΔΔ1631
400 (450) 2G	2,2	90,5	36,2	0,15	96	26	10 x 16	ECR2GGL2R2M◊◊ΔΔ1016
	3,3	60,3	24,1	0,15	110	32	10 x 16	ECR2GGL3R3M◊◊ΔΔ1016
	4,7	42,3	16,9	0,15	126	42	10 x 20	ECR2GGL4R7M◊◊ΔΔ1020
	5,6	35,5	14,2	0,15	137	46	10 x 20	ECR2GGL5R6M◊◊ΔΔ1020
	6,8	29,3	11,7	0,15	152	56	12,5 x 20	ECR2GGL6R8M◊◊ΔΔ1220
	10	19,9	8,0	0,15	190	68	12,5 x 20	ECR2GGL100M◊◊ΔΔ1220
	22	9,0	3,6	0,15	334	112	12,5 x 25	ECR2GGL220M◊◊ΔΔ1225
	33	6,0	2,4	0,15	466	155	16 x 25	ECR2GGL330M◊◊ΔΔ1625
	47	4,2	1,7	0,15	634	201	16 x 31,5	ECR2GGL470M◊◊ΔΔ1631
450 (500) 2W	2,2	90,5	36,2	0,15	100	26	10 x 16	ECR2WGL2R2M◊◊ΔΔ1016
	3,3	60,3	24,1	0,15	115	32	10 x 16	ECR2WGL3R3M◊◊ΔΔ1016
	4,7	42,3	16,9	0,15	133	42	10 x 20	ECR2WGL4R7M◊◊ΔΔ1020
	5,6	35,5	14,2	0,15	146	51	12,5 x 20	ECR2WGL5R6M◊◊ΔΔ1220
	6,8	29,3	11,7	0,15	162	56	12,5 x 20	ECR2WGL6R8M◊◊ΔΔ1220
	10	19,9	8,0	0,15	205	75	12,5 x 25	ECR2WGL100M◊◊ΔΔ1225
	22	9,0	3,6	0,15	367	127	16 x 25	ECR2WGL220M◊◊ΔΔ1625
	33	6,0	2,4	0,15	516	168	16 x 31,5	ECR2WGL330M◊◊ΔΔ1631
	47	4,2	1,7	0,15	705	212	18 x 31,5	ECR2WGL470M◊◊ΔΔ1831

12 000 - 14 000h at 105°C

- High Reliability at High Voltage
- Power Supplies
- Electronic Lightning Ballast
- General Industry



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +105
Voltage Range (V)	160 ~ 450
Capacitance Range (µF)	6,8 ~ 220
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 1 minute at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	160	200	250	350	400	450
	$Z_{-25°C} / Z_{+20°C}$	3		4	6		
	$Z_{-40°C} / Z_{+20°C}$	6			8		

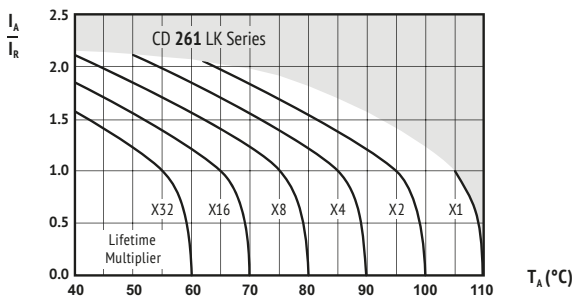
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	Ø ≤ 10 : 12 000h Ø ≥ 12,5 : 14 000h	> 100 000h	Ø ≤ 10 : 10 000h Ø ≥ 12,5 : 12 000h	Ø ≤ 10 : 10 000h Ø ≥ 12,5 : 12 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 60°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency		120Hz	1kHz	10kHz	100kHz
Coefficient	6,8 ~ 82µF	0,40	0,60	0,84	1,00
	100 ~ 220µF	0,44	0,67	0,89	1,00

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

RADIAL

RADIAL

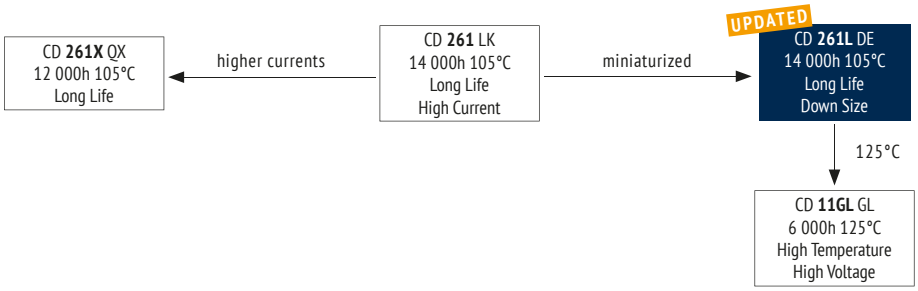
U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
160 (220) 2C	10	7,3	0,15	164	250	10 x 16	ECR2CLK100M◊◊ΔΔ1016
	22	3,3	0,15	241	500	10 x 20	ECR2CLK220M◊◊ΔΔ1020
	33	2,2	0,15	312	500	10 x 20	ECR2CLK330M◊◊ΔΔ1020
	47	1,6	0,15	401	660	10 x 30	ECR2CLK470M◊◊ΔΔ1030
		1,6	0,15	401	660	12,5 x 20	ECR2CLK470M◊◊ΔΔ1220
	68	1,1	0,15	536	760	10 x 35	ECR2CLK680M◊◊ΔΔ1035
		1,1	0,15	536	760	12,5 x 25	ECR2CLK680M◊◊ΔΔ1225
		1,1	0,15	536	760	16 x 20	ECR2CLK680M◊◊ΔΔ1620
	100	0,70	0,15	740	1080	10 x 40	ECR2CLK101M◊◊ΔΔ1040
		0,70	0,15	740	1080	12,5 x 30	ECR2CLK101M◊◊ΔΔ1230
		0,70	0,15	740	1120	16 x 25,5	ECR2CLK101M◊◊ΔΔ1625
		0,70	0,15	740	1120	18 x 20,5	ECR2CLK101M◊◊ΔΔ1820
	150	0,50	0,15	1060	1360	12,5 x 40	ECR2CLK151M◊◊ΔΔ1240
		0,50	0,15	1060	1360	16 x 31,5	ECR2CLK151M◊◊ΔΔ1631
		0,50	0,15	1060	1360	18 x 25,5	ECR2CLK151M◊◊ΔΔ1825
	220	0,30	0,15	1508	1400	12,5 x 50	ECR2CLK221M◊◊ΔΔ1250
		0,30	0,15	1508	1400	16 x 31,5	ECR2CLK221M◊◊ΔΔ1631
		0,30	0,15	1508	1400	18 x 25,5	ECR2CLK221M◊◊ΔΔ1825
200 (250) 2D	10	7,3	0,15	180	250	10 x 16	ECR2DLK100M◊◊ΔΔ1016
	22	3,3	0,15	276	500	10 x 20	ECR2DLK220M◊◊ΔΔ1020
	33	2,2	0,15	364	600	10 x 20	ECR2DLK330M◊◊ΔΔ1020
	47	1,6	0,15	476	660	10 x 30	ECR2DLK470M◊◊ΔΔ1030
		1,6	0,15	476	660	12,5 x 20	ECR2DLK470M◊◊ΔΔ1220
	68	1,1	0,15	644	760	10 x 40	ECR2DLK680M◊◊ΔΔ1040
		1,1	0,15	644	760	12,5 x 25	ECR2DLK680M◊◊ΔΔ1225
		1,1	0,15	644	760	16 x 20	ECR2DLK680M◊◊ΔΔ1620
	100	0,70	0,15	900	1120	10 x 45	ECR2DLK101M◊◊ΔΔ1045
		0,70	0,15	900	1120	12,5 x 36	ECR2DLK101M◊◊ΔΔ1236
		0,70	0,15	900	1120	16 x 25,5	ECR2DLK101M◊◊ΔΔ1625
		0,70	0,15	900	1120	18 x 20,5	ECR2DLK101M◊◊ΔΔ1820
	150	0,50	0,15	1300	1360	12,5 x 45	ECR2DLK151M◊◊ΔΔ1245
		0,50	0,15	1300	1360	16 x 31,5	ECR2DLK151M◊◊ΔΔ1631
		0,50	0,15	1300	1360	18 x 25,5	ECR2DLK151M◊◊ΔΔ1825
	220	0,30	0,15	1860	1700	16 x 40	ECR2DLK221M◊◊ΔΔ1640
		0,30	0,15	1860	1700	18 x 31,5	ECR2DLK221M◊◊ΔΔ1831
250 (300) 2E	10	7,3	0,15	200	280	10 x 20	ECR2ELK100M◊◊ΔΔ1020
	22	3,3	0,15	320	600	12,5 x 20	ECR2ELK220M◊◊ΔΔ1220
	33	2,2	0,15	430	600	12,5 x 20	ECR2ELK330M◊◊ΔΔ1220
	47	1,6	0,15	570	720	10 x 35	ECR2ELK470M◊◊ΔΔ1035
		1,6	0,15	570	720	12,5 x 25	ECR2ELK470M◊◊ΔΔ1225
		1,6	0,15	570	720	16 x 20	ECR2ELK470M◊◊ΔΔ1620
	68	1,1	0,15	780	920	10 x 45	ECR2ELK680M◊◊ΔΔ1045
		1,1	0,15	780	920	12,5 x 36	ECR2ELK680M◊◊ΔΔ1236
		1,1	0,15	780	920	16 x 25,5	ECR2ELK680M◊◊ΔΔ1625
		1,1	0,15	780	920	18 x 20,5	ECR2ELK680M◊◊ΔΔ1820
	100	0,70	0,15	1100	1200	12,5 x 45	ECR2ELK101M◊◊ΔΔ1245
		0,70	0,15	1100	1200	16 x 31,5	ECR2ELK101M◊◊ΔΔ1631
		0,70	0,15	1100	1200	18 x 25,5	ECR2ELK101M◊◊ΔΔ1825
	150	0,50	0,15	1600	1500	18 x 31,5	ECR2ELK151M◊◊ΔΔ1831
350 (400) 2V	6,8	10,7	0,20	196	220	10 x 16	ECR2VLK6R8M◊◊ΔΔ1016
	10	7,3	0,20	240	280	10 x 20	ECR2VLK100M◊◊ΔΔ1020
	22	3,3	0,20	408	350	12,5 x 20	ECR2VLK220M◊◊ΔΔ1220
	33	2,2	0,20	562	500	10 x 35	ECR2VLK330M◊◊ΔΔ1035
		2,2	0,20	562	500	12,5 x 25	ECR2VLK330M◊◊ΔΔ1225
		2,2	0,20	562	500	16 x 20	ECR2VLK330M◊◊ΔΔ1620
	47	1,6	0,20	758	660	10 x 45	ECR2VLK470M◊◊ΔΔ1045
		1,6	0,20	758	660	12,5 x 36	ECR2VLK470M◊◊ΔΔ1236
		1,6	0,20	758	660	16 x 25	ECR2VLK470M◊◊ΔΔ1625
		1,6	0,20	758	660	18 x 20,5	ECR2VLK470M◊◊ΔΔ1820
	68	1,1	0,20	1052	850	12,5 x 45	ECR2VLK680M◊◊ΔΔ1245
		1,1	0,20	1052	850	16 x 31,5	ECR2VLK680M◊◊ΔΔ1631
		1,1	0,20	1052	850	18 x 25,5	ECR2VLK680M◊◊ΔΔ1825

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
400 (450) 2G	6,8	10,9	0,20	209	220	10 x 16	ECR2GLK6R8M◊◊ΔΔ1016
	10	7,3	0,20	260	280	10 x 20	ECR2GLK100M◊◊ΔΔ1020
	22	3,3	0,20	452	430	10 x 35	ECR2GLK220M◊◊ΔΔ1035
		3,3	0,20	452	430	12,5 x 25	ECR2GLK220M◊◊ΔΔ1225
		3,3	0,20	452	430	16 x 20	ECR2GLK220M◊◊ΔΔ1620
	33	2,2	0,20	628	640	10 x 45	ECR2GLK330M◊◊ΔΔ1045
		2,2	0,20	628	640	12,5 x 36	ECR2GLK330M◊◊ΔΔ1236
		2,2	0,20	628	640	16 x 25,5	ECR2GLK330M◊◊ΔΔ1625
		2,2	0,20	628	640	18 x 20,5	ECR2GLK330M◊◊ΔΔ1820
	47	1,6	0,20	852	840	12,5 x 40	ECR2GLK470M◊◊ΔΔ1240
		1,6	0,20	852	840	16 x 31,5	ECR2GLK470M◊◊ΔΔ1631
		1,6	0,20	852	840	18 x 25,5	ECR2GLK470M◊◊ΔΔ1825
	68	1,3	0,20	1188	1000	12,5 x 50	ECR2GLK680M◊◊ΔΔ1250
		1,3	0,20	1188	1000	18 x 25,5	ECR2GLK680M◊◊ΔΔ1825
	82	0,90	0,20	1412	1100	12,5 x 61	ECR2GLK820M◊◊ΔΔ1261
		0,90	0,20	1412	1100	18 x 31,5	ECR2GLK820M◊◊ΔΔ1831
	100	0,70	0,20	1700	1280	18 x 36	ECR2GLK101M◊◊ΔΔ1836
	120	0,60	0,20	2020	1480	18 x 40	ECR2GLK121M◊◊ΔΔ1840
	150	0,50	0,20	2500	1770	20 x 41	ECR2GLK151M◊◊ΔΔ2041
450 (500) 2W	6,8	12,9	0,20	223	150	10 x 20	ECR2WLK6R8M◊◊ΔΔ1020
	10	8,8	0,20	280	320	10 x 30	ECR2WLK100M◊◊ΔΔ1030
		8,8	0,20	280	320	12,5 x 20	ECR2WLK100M◊◊ΔΔ1220
	22	4,0	0,20	496	560	10 x 40	ECR2WLK220M◊◊ΔΔ1040
		4,0	0,20	496	430	12,5 x 25	ECR2WLK220M◊◊ΔΔ1225
		4,0	0,20	496	560	16 x 25,5	ECR2WLK220M◊◊ΔΔ1625
		4,0	0,20	496	560	18 x 20,5	ECR2WLK220M◊◊ΔΔ1820
	33	2,7	0,20	694	700	10 x 50	ECR2WLK330M◊◊ΔΔ1050
		2,7	0,20	694	700	16 x 25,5	ECR2WLK330M◊◊ΔΔ1625
		2,7	0,20	694	700	18 x 25,5	ECR2WLK330M◊◊ΔΔ1825
	47	1,9	0,20	946	880	12,5 x 45	ECR2WLK470M◊◊ΔΔ1245
		1,9	0,20	946	880	16 x 31,5	ECR2WLK470M◊◊ΔΔ1631
		1,9	0,20	946	880	18 x 31,5	ECR2WLK470M◊◊ΔΔ1831
	68	1,3	0,20	1324	1130	12,5 x 50	ECR2WLK680M◊◊ΔΔ1250
		1,3	0,20	1324	1130	18 x 31,5	ECR2WLK680M◊◊ΔΔ1831
	82	1,1	0,20	1576	1160	12,5 x 61	ECR2WLK820M◊◊ΔΔ1261
		1,1	0,20	1576	1160	18 x 36	ECR2WLK820M◊◊ΔΔ1836
	100	0,90	0,20	1900	1360	18 x 40	ECR2WLK101M◊◊ΔΔ1840
	120	0,75	0,20	2260	1560	18 x 46	ECR2WLK121M◊◊ΔΔ1846
	150	0,60	0,20	2800	1880	22 x 41	ECR2WLK151M◊◊ΔΔ2241

Customer specific products and adaptions on request.

12 000 - 14 000h at 105°C

- High Reliability at High Voltage
- Power Supplies
- Electronic Lightning Ballast
- General Industry
- Miniaturized



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +105
Voltage Range (V)	160 ~ 450
Capacitance Range (µF)	10 ~ 820
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 1 minute at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	160	200	250	350	400	420	450
	$Z_{-25°C} / Z_{+20°C}$	3		4	6			
	$Z_{-40°C} / Z_{+20°C}$	6			8			

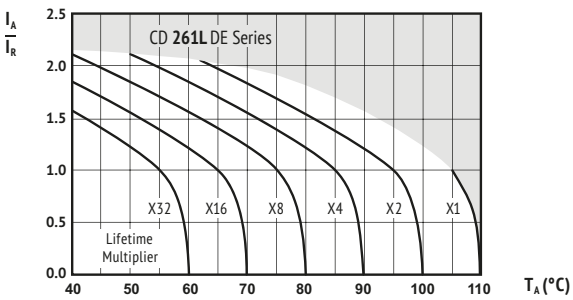
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	L ≤ 20,5 : 12 000h L ≥ 25 : 14 000h	> 100 000h	L ≤ 20,5 : 10 000h L ≥ 25 : 12 000h	L ≤ 20,5: 10 000h L ≥ 25 : 12 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 60°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Capacitance (µF) \ Frequency	50/60Hz	120Hz	500Hz	1kHz	10kHz	100kHz
10 ~ 82	0,32	0,40	0,52	0,60	0,84	1,00
100 ~ 220	0,36	0,44	0,58	0,67	0,93	1,00
270 ~ 820	0,40	0,50	0,65	0,75	0,95	1,00

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

RADIAL

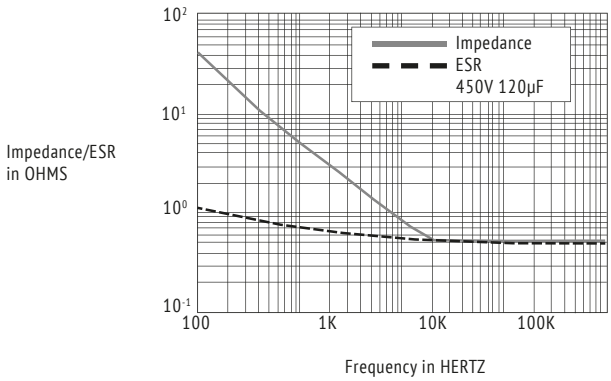
RADIAL

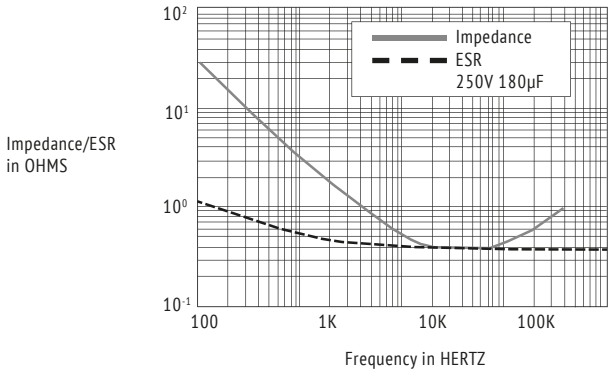
U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
160 (200) 2C	47	1,69	0,15	401	650	10 x 16	ECR2CDE470M◊◊ΔΔ1016
	68	1,17	0,15	536	800	10 x 20	ECR2CDE680M◊◊ΔΔ1020
	82	0,970	0,15	625	1038	10 x 25	ECR2CDE820M◊◊ΔΔ1025
	100	0,800	0,15	740	1193	10 x 30	ECR2CDE101M◊◊ΔΔ1030
		0,800	0,15	740	1350	12,5 x 20	ECR2CDE101M◊◊ΔΔ1220
	120	0,660	0,15	868	1395	10 x 35	ECR2CDE121M◊◊ΔΔ1035
	150	0,530	0,15	1060	1575	10 x 40	ECR2CDE151M◊◊ΔΔ1040
		0,530	0,15	1060	1643	12,5 x 25	ECR2CDE151M◊◊ΔΔ1225
	180	0,440	0,15	1252	1800	10 x 50	ECR2CDE181M◊◊ΔΔ1050
		0,440	0,15	1252	1958	12,5 x 30	ECR2CDE181M◊◊ΔΔ1230
		0,440	0,15	1252	1800	16 x 20	ECR2CDE181M◊◊ΔΔ1620
	220	0,360	0,15	1508	2250	12,5 x 35	ECR2CDE221M◊◊ΔΔ1235
		0,360	0,15	1508	2250	16 x 25,5	ECR2CDE221M◊◊ΔΔ1625
		0,360	0,15	1508	2228	18 x 20,5	ECR2CDE221M◊◊ΔΔ1820
	270	0,290	0,15	1828	2240	12,5 x 40	ECR2CDE271M◊◊ΔΔ1240
		0,290	0,15	1828	2420	16 x 31,5	ECR2CDE271M◊◊ΔΔ1631
	330	0,240	0,15	2212	2800	12,5 x 50	ECR2CDE331M◊◊ΔΔ1250
		0,240	0,15	2212	2700	16 x 31,5	ECR2CDE331M◊◊ΔΔ1631
		0,240	0,15	2212	2360	18 x 25,5	ECR2CDE331M◊◊ΔΔ1825
	390	0,200	0,15	2596	2760	16 x 36	ECR2CDE391M◊◊ΔΔ1636
	470	0,170	0,15	3108	3100	16 x 40	ECR2CDE471M◊◊ΔΔ1640
		0,170	0,15	3108	3100	18 x 31,5	ECR2CDE471M◊◊ΔΔ1831
	560	0,140	0,15	3684	3720	16 x 50	ECR2CDE561M◊◊ΔΔ1650
		0,140	0,15	3684	3680	18 x 40	ECR2CDE561M◊◊ΔΔ1840
	680	0,120	0,15	4452	4260	18 x 45	ECR2CDE681M◊◊ΔΔ1845
	820	0,100	0,15	5348	4460	18 x 50	ECR2CDE821M◊◊ΔΔ1850
200 (250) 2D	33	2,41	0,15	364	650	10 x 16	ECR2DDE330M◊◊ΔΔ1016
	47	1,69	0,15	476	800	10 x 20	ECR2DDE470M◊◊ΔΔ1020
	56	1,42	0,15	548	1038	10 x 25	ECR2DDE560M◊◊ΔΔ1025
	68	1,17	0,15	644	1075	10 x 25	ECR2DDE680M◊◊ΔΔ1025
		1,17	0,15	644	1350	12,5 x 20	ECR2DDE680M◊◊ΔΔ1220
	82	0,970	0,15	756	1250	10 x 30	ECR2DDE820M◊◊ΔΔ1030
	100	0,800	0,15	900	1440	10 x 35	ECR2DDE101M◊◊ΔΔ1035
	120	0,664	0,15	1060	1665	10 x 40	ECR2DDE121M◊◊ΔΔ1040
		0,664	0,15	1060	1631	12,5 x 30	ECR2DDE121M◊◊ΔΔ1230
		0,664	0,15	1060	1800	16 x 20	ECR2DDE121M◊◊ΔΔ1620
	150	0,532	0,15	1300	1755	10 x 45	ECR2DDE151M◊◊ΔΔ1045
		0,532	0,15	1300	1800	12,5 x 35	ECR2DDE151M◊◊ΔΔ1235
	180	0,444	0,15	1540	2070	12,5 x 35	ECR2DDE181M◊◊ΔΔ1235
		0,444	0,15	1540	2025	16 x 25,5	ECR2DDE181M◊◊ΔΔ1625
		0,444	0,15	1540	2250	18 x 20,5	ECR2DDE181M◊◊ΔΔ1820
	220	0,360	0,15	1860	2263	12,5 x 45	ECR2DDE221M◊◊ΔΔ1245
		0,360	0,15	1860	2430	16 x 31,5	ECR2DDE221M◊◊ΔΔ1631
	270	0,290	0,15	2260	2520	12,5 x 50	ECR2DDE271M◊◊ΔΔ1250
		0,290	0,15	2260	2360	16 x 31,5	ECR2DDE271M◊◊ΔΔ1631
		0,290	0,15	2260	2200	18 x 25,5	ECR2DDE271M◊◊ΔΔ1825
	330	0,240	0,15	2740	2860	16 x 40	ECR2DDE331M◊◊ΔΔ1640
		0,240	0,15	2740	2600	18 x 31,5	ECR2DDE331M◊◊ΔΔ1831
	390	0,204	0,15	3220	3100	16 x 45	ECR2DDE391M◊◊ΔΔ1645
		0,204	0,15	3220	2860	18 x 36	ECR2DDE391M◊◊ΔΔ1836
	470	0,168	0,15	3860	3360	16 x 50	ECR2DDE471M◊◊ΔΔ1650
		0,168	0,15	3860	3240	18 x 40	ECR2DDE471M◊◊ΔΔ1840
	560	0,144	0,15	4580	3540	18 x 45	ECR2DDE561M◊◊ΔΔ1845
250 (300) 2E	22	3,62	0,15	320	650	10 x 16	ECR2EDE220M◊◊ΔΔ1016
	33	2,41	0,15	430	800	10 x 20	ECR2EDE330M◊◊ΔΔ1020
	47	1,69	0,15	570	975	10 x 25	ECR2EDE470M◊◊ΔΔ1025
		1,69	0,15	570	1100	10 x 30	ECR2EDE470M◊◊ΔΔ1030
	56	1,42	0,15	660	1350	12,5 x 20	ECR2EDE560M◊◊ΔΔ1220
	68	1,17	0,15	780	1250	10 x 35	ECR2EDE680M◊◊ΔΔ1035
	82	0,972	0,15	920	1425	10 x 40	ECR2EDE820M◊◊ΔΔ1040
		0,972	0,15	920	1425	12,5 x 25	ECR2EDE820M◊◊ΔΔ1225
	100	0,796	0,15	1100	1620	10 x 45	ECR2EDE101M◊◊ΔΔ1045
		0,796	0,15	1100	1553	12,5 x 30	ECR2EDE101M◊◊ΔΔ1230
		0,796	0,15	1100	1800	16 x 20	ECR2EDE101M◊◊ΔΔ1620

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
250 (300) 2E	120	0,664	0,15	1300	1755	10 x 50	ECR2EDE121M◊◊ΔΔ1050
		0,664	0,15	1300	1778	12,5 x 35	ECR2EDE121M◊◊ΔΔ1235
		0,664	0,15	1300	2250	18 x 20,5	ECR2EDE121M◊◊ΔΔ1820
	150	0,532	0,15	1600	2070	12,5 x 40	ECR2EDE151M◊◊ΔΔ1240
		0,532	0,15	1600	1958	16 x 31,5	ECR2EDE151M◊◊ΔΔ1631
	180	0,444	0,15	1900	2183	12,5 x 50	ECR2EDE181M◊◊ΔΔ1250
		0,444	0,15	1900	2138	16 x 31,5	ECR2EDE181M◊◊ΔΔ1631
		0,444	0,15	1900	2070	18 x 25,5	ECR2EDE181M◊◊ΔΔ1825
	220	0,360	0,15	2300	2475	16 x 36	ECR2EDE221M◊◊ΔΔ1636
		0,360	0,15	2300	2475	18 x 31,5	ECR2EDE221M◊◊ΔΔ1831
	270	0,290	0,15	2800	2540	16 x 40	ECR2EDE271M◊◊ΔΔ1640
		0,290	0,15	2800	2520	18 x 36	ECR2EDE271M◊◊ΔΔ1836
	330	0,240	0,15	3400	2960	16 x 50	ECR2EDE331M◊◊ΔΔ1650
		0,240	0,15	3400	2900	18 x 40	ECR2EDE331M◊◊ΔΔ1840
	390	0,204	0,15	4000	3180	18 x 45	ECR2EDE391M◊◊ΔΔ1845
	470	0,168	0,15	4800	3660	18 x 50	ECR2EDE471M◊◊ΔΔ1850
350 (400) 2V	12	6,63	0,20	268	338	10 x 16	ECR2VDE120M◊◊ΔΔ1016
	22	3,62	0,20	308	500	10 x 20	ECR2VDE220M◊◊ΔΔ1020
	27	2,95	0,20	478	775	10 x 25	ECR2VDE270M◊◊ΔΔ1025
	33	2,41	0,20	562	825	10 x 30	ECR2VDE330M◊◊ΔΔ1030
		2,41	0,20	562	850	12,5 x 20	ECR2VDE330M◊◊ΔΔ1220
	39	2,04	0,20	646	975	10 x 35	ECR2VDE390M◊◊ΔΔ1035
	47	1,69	0,20	758	1125	10 x 40	ECR2VDE470M◊◊ΔΔ1040
		1,69	0,20	758	1125	12,5 x 25	ECR2VDE470M◊◊ΔΔ1225
	56	1,42	0,20	884	1300	10 x 45	ECR2VDE560M◊◊ΔΔ1045
		1,42	0,20	884	1375	12,5 x 30	ECR2VDE560M◊◊ΔΔ1230
		1,42	0,20	884	1200	16 x 20	ECR2VDE560M◊◊ΔΔ1620
	68	1,17	0,20	1052	1500	10 x 50	ECR2VDE680M◊◊ΔΔ1050
		1,17	0,20	1052	1525	12,5 x 35	ECR2VDE680M◊◊ΔΔ1235
	82	0,969	0,20	1248	1775	12,5 x 40	ECR2VDE820M◊◊ΔΔ1240
		0,969	0,20	1248	1625	16 x 25,5	ECR2VDE820M◊◊ΔΔ1625
	100	0,795	0,20	1500	1778	12,5 x 45	ECR2VDE101M◊◊ΔΔ1245
		0,795	0,20	1500	1733	16 x 31,5	ECR2VDE101M◊◊ΔΔ1631
		0,795	0,20	1500	1710	18 x 25,5	ECR2VDE101M◊◊ΔΔ1825
	120	0,663	0,20	1780	1913	12,5 x 50	ECR2VDE121M◊◊ΔΔ1250
		0,663	0,20	1780	2003	16 x 36	ECR2VDE121M◊◊ΔΔ1636
	150	0,531	0,20	2200	2250	16 x 40	ECR2VDE151M◊◊ΔΔ1640
		0,531	0,20	2200	2025	18 x 31,5	ECR2VDE151M◊◊ΔΔ1831
	180	0,441	0,20	2620	2520	16 x 50	ECR2VDE181M◊◊ΔΔ1650
		0,441	0,20	2620	2340	18 x 40	ECR2VDE181M◊◊ΔΔ1840
	220	0,363	0,20	3180	2700	18 x 45	ECR2VDE221M◊◊ΔΔ1845
	270	0,294	0,20	3880	2800	18 x 50	ECR2VDE271M◊◊ΔΔ1850
400 (450) 2G	10	7,96	0,20	260	313	10 x 16	ECR2GDE100M◊◊ΔΔ1016
	18	4,42	0,20	388	550	10 x 20	ECR2GDE180M◊◊ΔΔ1020
	22	3,62	0,20	452	600	10 x 25	ECR2GDE220M◊◊ΔΔ1025
	27	2,95	0,20	532	725	10 x 30	ECR2GDE270M◊◊ΔΔ1030
		2,95	0,20	532	850	12,5 x 20	ECR2GDE270M◊◊ΔΔ1220
	33	2,41	0,20	628	850	10 x 35	ECR2GDE330M◊◊ΔΔ1035
	39	2,04	0,20	724	975	10 x 40	ECR2GDE390M◊◊ΔΔ1040
		2,04	0,20	724	975	12,5 x 25	ECR2GDE390M◊◊ΔΔ1225
	47	1,69	0,20	852	1100	10 x 45	ECR2GDE470M◊◊ΔΔ1045
		1,69	0,20	852	1138	12,5 x 30	ECR2GDE470M◊◊ΔΔ1230
		1,69	0,20	852	1175	16 x 20	ECR2GDE470M◊◊ΔΔ1620
	56	1,42	0,20	996	1250	10 x 50	ECR2GDE560M◊◊ΔΔ1050
		1,42	0,20	996	1313	12,5 x 35	ECR2GDE560M◊◊ΔΔ1235
		1,42	0,20	996	1300	18 x 20,5	ECR2GDE560M◊◊ΔΔ1820
	68	1,17	0,20	1188	1500	12,5 x 40	ECR2GDE680M◊◊ΔΔ1240
		1,17	0,20	1188	1425	16 x 25,5	ECR2GDE680M◊◊ΔΔ1625
	82	0,969	0,20	1412	1700	12,5 x 45	ECR2GDE820M◊◊ΔΔ1245
		0,969	0,20	1412	1675	16 x 31,5	ECR2GDE820M◊◊ΔΔ1631
		0,969	0,20	1412	1600	18 x 25,5	ECR2GDE820M◊◊ΔΔ1825
	100	0,795	0,20	1700	1710	12,5 x 50	ECR2GDE101M◊◊ΔΔ1250
		0,795	0,20	1700	1710	16 x 36	ECR2GDE101M◊◊ΔΔ1636
		0,795	0,20	1700	1598	18 x 31,5	ECR2GDE101M◊◊ΔΔ1831

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
400 (450) 2G	120	0,663	0,20	2020	1935	16 x 40	ECR2GDE121M◊◊ΔΔ1640
		0,663	0,20	2020	1890	18 x 31,5	ECR2GDE121M◊◊ΔΔ1831
		0,663	0,20	2020	1958	18 x 36	ECR2GDE121M◊◊ΔΔ1836
	150	0,531	0,20	2500	2239	16 x 50	ECR2GDE151M◊◊ΔΔ1650
		0,531	0,20	2500	2216	18 x 40	ECR2GDE151M◊◊ΔΔ1840
	180	0,441	0,20	2980	2464	18 x 45	ECR2GDE181M◊◊ΔΔ1845
	220	0,363	0,20	3620	2745	18 x 50	ECR2GDE221M◊◊ΔΔ1850
420 (470) 2X	15	5,31	0,20	352	475	10 x 20	ECR2XDE150M◊◊ΔΔ1020
	18	4,42	0,20	403	575	10 x 25	ECR2XDE180M◊◊ΔΔ1025
	22	3,62	0,20	470	625	10 x 25	ECR2XDE220M◊◊ΔΔ1025
	27	2,95	0,20	554	725	10 x 30	ECR2XDE270M◊◊ΔΔ1030
		2,95	0,20	554	750	12,5 x 20	ECR2XDE270M◊◊ΔΔ1220
		2,95	0,20	554	850	12,5 x 25	ECR2XDE270M◊◊ΔΔ1225
	33	2,41	0,20	655	850	10 x 35	ECR2XDE330M◊◊ΔΔ1035
		2,41	0,20	655	875	12,5 x 25	ECR2XDE330M◊◊ΔΔ1225
		2,41	0,20	655	1000	12,5 x 30	ECR2XDE330M◊◊ΔΔ1230
	39	2,04	0,20	756	975	10 x 40	ECR2XDE390M◊◊ΔΔ1040
		2,04	0,20	756	1000	16 x 20	ECR2XDE390M◊◊ΔΔ1620
	47	1,69	0,20	890	1100	10 x 45	ECR2XDE470M◊◊ΔΔ1045
		1,69	0,20	890	1100	12,5 x 30	ECR2XDE470M◊◊ΔΔ1230
		1,69	0,20	890	1263	12,5 x 35	ECR2XDE470M◊◊ΔΔ1235
		1,69	0,20	890	1100	16 x 25,5	ECR2XDE470M◊◊ΔΔ1625
	56	1,42	0,20	1041	1275	12,5 x 35	ECR2XDE560M◊◊ΔΔ1235
		1,42	0,20	1041	1425	12,5 x 40	ECR2XDE560M◊◊ΔΔ1240
		1,42	0,20	1041	1275	16 x 25,5	ECR2XDE560M◊◊ΔΔ1625
		1,42	0,20	1041	1200	18 x 20,5	ECR2XDE560M◊◊ΔΔ1820
	68	1,17	0,20	1243	1500	12,5 x 45	ECR2XDE680M◊◊ΔΔ1245
		1,17	0,20	1243	1675	12,5 x 50	ECR2XDE680M◊◊ΔΔ1250
		1,17	0,20	1243	1400	16 x 31,5	ECR2XDE680M◊◊ΔΔ1631
		1,17	0,20	1243	1538	18 x 25,5	ECR2XDE680M◊◊ΔΔ1825
	82	0,969	0,20	1478	1725	12,5 x 50	ECR2XDE820M◊◊ΔΔ1250
		0,969	0,20	1478	1600	16 x 31,5	ECR2XDE820M◊◊ΔΔ1631
		0,969	0,20	1478	1725	16 x 36	ECR2XDE820M◊◊ΔΔ1636
		0,969	0,20	1478	1600	18 x 25,5	ECR2XDE820M◊◊ΔΔ1825
		0,969	0,20	1478	1825	18 x 31,5	ECR2XDE820M◊◊ΔΔ1831
	100	0,795	0,20	1780	1800	16 x 40	ECR2XDE101M◊◊ΔΔ1640
		0,795	0,20	1780	1755	18 x 31,5	ECR2XDE101M◊◊ΔΔ1831
		0,795	0,20	1780	1879	18 x 36	ECR2XDE101M◊◊ΔΔ1836
	120	0,663	0,20	2116	2070	16 x 45	ECR2XDE121M◊◊ΔΔ1645
		0,663	0,20	2116	1913	18 x 36	ECR2XDE121M◊◊ΔΔ1836
		0,663	0,20	2116	2093	18 x 40	ECR2XDE121M◊◊ΔΔ1840
	150	0,531	0,20	2620	2115	16 x 50	ECR2XDE151M◊◊ΔΔ1650
		0,531	0,20	2620	2385	18 x 45	ECR2XDE151M◊◊ΔΔ1845
	180	0,441	0,20	3124	2475	18 x 50	ECR2XDE181M◊◊ΔΔ1850
450 (500) 2W	10	7,96	0,20	280	325	10 x 16	ECR2WDE100M◊◊ΔΔ1016
	15	5,31	0,20	370	475	10 x 20	ECR2WDE150M◊◊ΔΔ1020
		5,31	0,20	370	525	10 x 25	ECR2WDE150M◊◊ΔΔ1025
	18	4,42	0,20	424	575	10 x 25	ECR2WDE180M◊◊ΔΔ1025
	22	3,62	0,20	496	675	10 x 30	ECR2WDE220M◊◊ΔΔ1030
		3,62	0,20	496	700	12,5 x 20	ECR2WDE220M◊◊ΔΔ1220
	27	2,95	0,20	586	800	10 x 35	ECR2WDE270M◊◊ΔΔ1035
		2,95	0,20	586	850	12,5 x 25	ECR2WDE270M◊◊ΔΔ1225
	33	2,41	0,20	694	900	10 x 40	ECR2WDE330M◊◊ΔΔ1040
		2,41	0,20	694	1000	12,5 x 30	ECR2WDE330M◊◊ΔΔ1230
		2,41	0,20	694	900	16 x 20	ECR2WDE330M◊◊ΔΔ1620
	39	2,04	0,20	802	1025	10 x 50	ECR2WDE390M◊◊ΔΔ1050
		2,04	0,20	802	1075	12,5 x 30	ECR2WDE390M◊◊ΔΔ1230
		2,04	0,20	802	1150	12,5 x 35	ECR2WDE390M◊◊ΔΔ1235
		2,04	0,20	802	1000	16 x 25,5	ECR2WDE390M◊◊ΔΔ1625
	47	1,69	0,20	946	1200	12,5 x 35	ECR2WDE470M◊◊ΔΔ1235
		1,69	0,20	946	1313	12,5 x 40	ECR2WDE470M◊◊ΔΔ1240
		1,69	0,20	946	1250	16 x 25,5	ECR2WDE470M◊◊ΔΔ1625
		1,69	0,20	946	1150	18 x 20,5	ECR2WDE470M◊◊ΔΔ1820
450 (500) 2W	56	1,42	0,20	1108	1350	12,5 x 40	ECR2WDE560M◊◊ΔΔ1240
		1,42	0,20	1108	1475	12,5 x 45	ECR2WDE560M◊◊ΔΔ1245
		1,42	0,20	1108	1463	16 x 31,5	ECR2WDE560M◊◊ΔΔ1631
		1,42	0,20	1108	1400	18 x 25,5	ECR2WDE560M◊◊ΔΔ1825
	68	1,17	0,20	1324	1675	12,5 x 50	ECR2WDE680M◊◊ΔΔ1250
		1,17	0,20	1324	1525	16 x 31,5	ECR2WDE680M◊◊ΔΔ1631
		1,17	0,20	1324	1650	16 x 36	ECR2WDE680M◊◊ΔΔ1636
		1,17	0,20	1324	1525	18 x 25,5	ECR2WDE680M◊◊ΔΔ1825
	82	0,969	0,20	1576	1875	16 x 40	ECR2WDE820M◊◊ΔΔ1640
		0,969	0,20	1576	1825	18 x 31,5	ECR2WDE820M◊◊ΔΔ1831
	100	0,795	0,20	1900	1890	16 x 45	ECR2WDE101M◊◊ΔΔ1645
		0,795	0,20	1900	1879	18 x 36	ECR2WDE101M◊◊ΔΔ1836
	120	0,663	0,20	2260	2093	18 x 40	ECR2WDE121M◊◊ΔΔ1840
		0,663	0,20	2260	2126	18 x 45	ECR2WDE121M◊◊ΔΔ1845
	150	0,531	0,20	2800	2385	18 x 50	ECR2WDE151M◊◊ΔΔ1850

TYPICAL CURVES

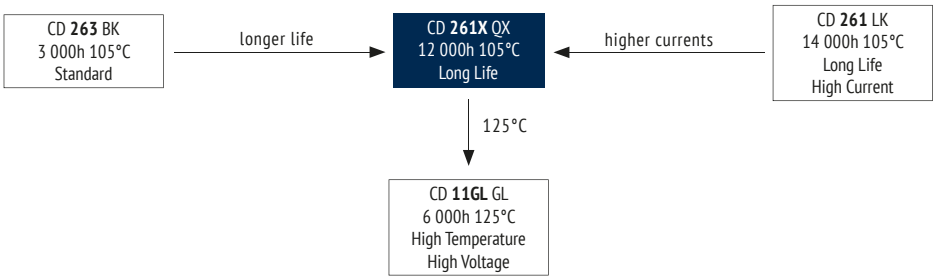




RADIAL

7 000 - 12 000h at 105°C

- Extra high Ripple Current
- Down sized
- Electronic Ballast, Lighting



RADIAL

ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +105 (for 550V: -25 ~ +105)
Voltage Range (V)	160 ~ 550
Capacitance Range (µF)	1 ~ 220
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 1 minute at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	160	200	250	350	400	450	500	550
	$Z_{-25°C} / Z_{+20°C}$	3			6				
	$Z_{-40°C} / Z_{+20°C}$	6			8			10	-

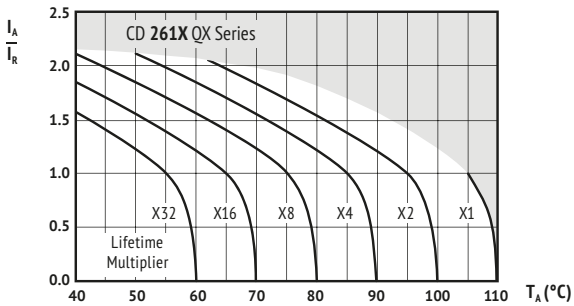
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	Ø 6,3 : 7 000h Ø 8~10 : 10 000h Ø ≥ 12,5 : 12 000h	> 100 000h	Ø 6,3 : 5 000h Ø 8~10 : 8 000h Ø ≥ 12,5 : 10 000h	Ø 6,3 : 7 000h Ø 8~10 : 10 000h Ø ≥ 12,5 : 12 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,6 x I_R 50°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Capacitance (µF) \ Frequency	120Hz	1kHz	10kHz	100kHz
1 ~ 5,6	0,20	0,40	0,80	1,00
6,8 ~ 15	0,30	0,60	0,90	1,00
22 ~ 82	0,40	0,70	0,90	1,00
100 ~ 220	0,45	0,75	0,90	1,00

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

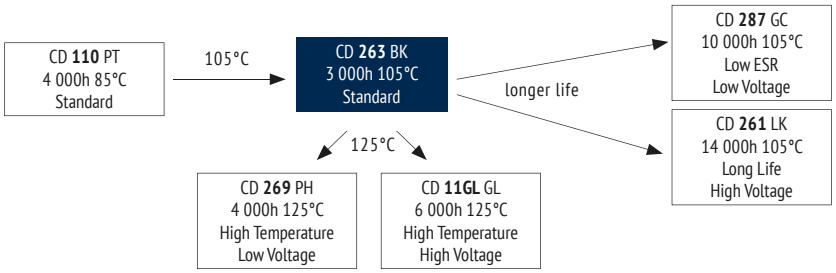
This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
160 (200) 2C	10	8,0	0,15	164	320	10 x 16	ECR2CQX100M◊◊ΔΔ1016
	22	3,6	0,15	241	500	10 x 20	ECR2CQX220M◊◊ΔΔ1020
	33	2,4	0,15	312	650	10 x 20	ECR2CQX330M◊◊ΔΔ1020
	47	1,7	0,15	401	750	10 x 20	ECR2CQX470M◊◊ΔΔ1020
	68	1,2	0,15	536	1180	12,5 x 20	ECR2CQX680M◊◊ΔΔ1220
		1,2	0,15	536	1180	16 x 20	ECR2CQX680M◊◊ΔΔ1620
	100	0,80	0,15	740	1420	12,5 x 25	ECR2CQX101M◊◊ΔΔ1225
		0,80	0,15	740	1420	16 x 20	ECR2CQX101M◊◊ΔΔ1620
	150	0,50	0,15	1060	1890	16 x 25,5	ECR2CQX151M◊◊ΔΔ1625
	220	0,40	0,15	1508	2370	18 x 25,5	ECR2CQX221M◊◊ΔΔ1825
200 (250) 2D	4,7	16,9	0,15	138	160	8 x 11,5	ECR2DQX4R7M◊◊ΔΔ0811
		16,9	0,15	138	200	10 x 12,5	ECR2DQX4R7M◊◊ΔΔ1012
	6,8	11,7	0,15	155	220	10 x 16	ECR2DQX6R8M◊◊ΔΔ1016
	10	8,0	0,15	180	320	10 x 16	ECR2DQX100M◊◊ΔΔ1016
	22	3,6	0,15	276	500	10 x 20	ECR2DQX220M◊◊ΔΔ1020
	33	2,4	0,15	364	650	10 x 20	ECR2DQX330M◊◊ΔΔ1020
	47	1,7	0,15	476	980	12,5 x 20	ECR2DQX470M◊◊ΔΔ1220
	68	1,2	0,15	644	1300	12,5 x 25	ECR2DQX680M◊◊ΔΔ1225
		1,2	0,15	644	1300	16 x 20	ECR2DQX680M◊◊ΔΔ1620
	100	0,80	0,15	900	1420	16 x 20	ECR2DQX101M◊◊ΔΔ1620
	150	0,50	0,15	1300	1890	16 x 25,5	ECR2DQX151M◊◊ΔΔ1625
250 (300) 2E	4,7	16,9	0,15	147	160	8 x 11,5	ECR2EQX4R7M◊◊ΔΔ0811
		16,9	0,15	147	200	10 x 12,5	ECR2EQX4R7M◊◊ΔΔ1012
	6,8	11,7	0,15	168	250	10 x 12,5	ECR2EQX6R8M◊◊ΔΔ1012
	10	8,0	0,15	200	320	10 x 16	ECR2EQX100M◊◊ΔΔ1016
	22	3,6	0,15	320	470	10 x 16	ECR2EQX220M◊◊ΔΔ1016
		3,6	0,15	320	500	10 x 20	ECR2EQX220M◊◊ΔΔ1020
	33	2,4	0,15	430	760	12,5 x 16	ECR2EQX330M◊◊ΔΔ1216
		2,4	0,15	430	800	12,5 x 20	ECR2EQX330M◊◊ΔΔ1220
	47	1,7	0,15	570	980	12,5 x 20	ECR2EQX470M◊◊ΔΔ1220
	68	1,2	0,15	780	1300	12,5 x 25	ECR2EQX680M◊◊ΔΔ1225
		1,2	0,15	780	1300	16 x 20	ECR2EQX680M◊◊ΔΔ1620
	100	0,80	0,15	1100	1530	16 x 25,5	ECR2EQX101M◊◊ΔΔ1625
		0,80	0,15	1100	1440	18 x 20,5	ECR2EQX101M◊◊ΔΔ1820
	150	0,50	0,15	1600	1960	18 x 25,5	ECR2EQX151M◊◊ΔΔ1825
350 (400) 2V	1,5	53,1	0,20	121	80	6,3 x 11,5	ECR2VQX1R5M◊◊ΔΔ0611
		53,1	0,20	121	90	8 x 11,5	ECR2VQX1R5M◊◊ΔΔ0811
		53,1	0,20	121	100	10 x 12,5	ECR2VQX1R5M◊◊ΔΔ1012
	2,2	36,2	0,20	131	120	8 x 11,5	ECR2VQX2R2M◊◊ΔΔ0811
		36,2	0,20	131	140	10 x 12,5	ECR2VQX2R2M◊◊ΔΔ1012
	3,3	24,1	0,20	147	150	8 x 11,5	ECR2VQX3R3M◊◊ΔΔ0811
		24,1	0,20	147	180	10 x 12,5	ECR2VQX3R3M◊◊ΔΔ1012
	4,7	16,9	0,20	166	150	10 x 12,5	ECR2VQX4R7M◊◊ΔΔ1012
		16,9	0,20	166	220	10 x 16	ECR2VQX4R7M◊◊ΔΔ1016
	5,6	14,2	0,20	179	180	10 x 12,5	ECR2VQX5R6M◊◊ΔΔ1012
		14,2	0,20	179	250	10 x 16	ECR2VQX5R6M◊◊ΔΔ1016
	6,8	11,7	0,20	196	280	10 x 16	ECR2VQX6R8M◊◊ΔΔ1016
	10	8,0	0,20	240	350	10 x 20	ECR2VQX100M◊◊ΔΔ1020
	22	3,6	0,20	408	650	12,5 x 20	ECR2VQX220M◊◊ΔΔ1220
	33	2,4	0,20	562	900	16 x 20	ECR2VQX330M◊◊ΔΔ1620
	47	1,7	0,20	758	1080	16 x 20	ECR2VQX470M◊◊ΔΔ1620
	68	1,2	0,20	1052	1470	18 x 25,5	ECR2VQX680M◊◊ΔΔ1825
	82	1,0	0,20	1248	1530	18 x 25,5	ECR2VQX820M◊◊ΔΔ1825
400 (450) 2G	1,0	80,0	0,20	116	50	6,3 x 11,5	ECR2GQX010M◊◊ΔΔ0611
		80,0	0,20	116	60	8 x 11,5	ECR2GQX010M◊◊ΔΔ0811
		80,0	0,20	116	70	10 x 12,5	ECR2GQX010M◊◊ΔΔ1012
	1,5	53,1	0,20	124	70	6,3 x 11,5	ECR2GQX1R5M◊◊ΔΔ0611
		53,1	0,20	124	80	8 x 11,5	ECR2GQX1R5M◊◊ΔΔ0811
		53,1	0,20	124	100	10 x 12,5	ECR2GQX1R5M◊◊ΔΔ1012
	2,2	36,2	0,20	136	95	8 x 11,5	ECR2GQX2R2M◊◊ΔΔ0811
		36,2	0,20	136	140	10 x 12,5	ECR2GQX2R2M◊◊ΔΔ1012
	3,3	24,1	0,20	153	150	10 x 12,5	ECR2GQX3R3M◊◊ΔΔ1012
		24,1	0,20	153	180	10 x 16	ECR2GQX3R3M◊◊ΔΔ1016
	4,7	16,9	0,20	176	220	10 x 16	ECR2GQX4R7M◊◊ΔΔ1016
	5,6	14,2	0,20	190	250	10 x 20	ECR2GQX5R6M◊◊ΔΔ1020

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
400 (450) 2G	6,8	11,7	0,20	209	280	10 x 20	ECR2GQX6R8M◊◊ΔΔ1020
	10	8,0	0,20	260	350	10 x 20	ECR2GQX100M◊◊ΔΔ1020
	15	5,3	0,20	340	550	12,5 x 20	ECR2GQX150M◊◊ΔΔ1220
	22	3,6	0,20	452	760	12,5 x 25	ECR2GQX220M◊◊ΔΔ1225
		3,6	0,20	452	760	16 x 20	ECR2GQX220M◊◊ΔΔ1620
	33	2,4	0,20	628	900	16 x 20	ECR2GQX330M◊◊ΔΔ1620
	47	1,7	0,20	852	1180	16 x 25,5	ECR2GQX470M◊◊ΔΔ1625
		1,7	0,20	852	1180	18 x 20,5	ECR2GQX470M◊◊ΔΔ1820
	68	1,2	0,20	1188	1470	18 x 25,5	ECR2GQX680M◊◊ΔΔ1825
	82	1,0	0,20	1412	1600	18 x 31,5	ECR2GQX820M◊◊ΔΔ1831
	100	0,80	0,20	1700	1780	18 x 36	ECR2GQX101M◊◊ΔΔ1836
450 (500) 2W	2,2	36,2	0,20	140	90	8 x 11,5	ECR2WQX2R2M◊◊ΔΔ0811
		36,2	0,20	140	150	10 x 12,5	ECR2WQX2R2M◊◊ΔΔ1012
	3,3	24,1	0,20	160	180	10 x 12,5	ECR2WQX3R3M◊◊ΔΔ1012
		24,1	0,20	160	190	10 x 16	ECR2WQX3R3M◊◊ΔΔ1016
	4,7	16,9	0,20	185	212	10 x 16	ECR2WQX4R7M◊◊ΔΔ1016
		16,9	0,20	185	220	10 x 20	ECR2WQX4R7M◊◊ΔΔ1020
	5,6	14,2	0,20	201	200	10 x 16	ECR2WQX5R6M◊◊ΔΔ1016
		14,2	0,20	201	250	10 x 20	ECR2WQX5R6M◊◊ΔΔ1020
	6,8	11,7	0,20	223	230	10 x 16	ECR2WQX6R8M◊◊ΔΔ1016
		11,7	0,20	223	280	10 x 20	ECR2WQX6R8M◊◊ΔΔ1020
	10	8,0	0,20	280	300	10 x 20	ECR2WQX100M◊◊ΔΔ1020
		8,0	0,20	280	450	12,5 x 20	ECR2WQX100M◊◊ΔΔ1220
	15	5,3	0,20	370	450	12,5 x 20	ECR2WQX150M◊◊ΔΔ1220
		5,3	0,20	370	600	12,5 x 25	ECR2WQX150M◊◊ΔΔ1225
	22	3,6	0,20	496	600	12,5 x 25	ECR2WQX220M◊◊ΔΔ1225
		3,6	0,20	496	730	16 x 20	ECR2WQX220M◊◊ΔΔ1620
	33	2,4	0,20	694	980	16 x 25,5	ECR2WQX330M◊◊ΔΔ1625
	47	1,7	0,20	946	1200	18 x 25,5	ECR2WQX470M◊◊ΔΔ1825
	68	1,2	0,20	1324	1575	18 x 31,5	ECR2WQX680M◊◊ΔΔ1831
	82	1,0	0,20	1576	1675	18 x 36	ECR2WQX820M◊◊ΔΔ1836
	100	0,80	0,20	1900	1730	18 x 36	ECR2WQX101M◊◊ΔΔ1836
	120	0,70	0,20	2260	1820	18 x 40	ECR2WQX121M◊◊ΔΔ1840
500 (550) 2H	10	9,3	0,20	300	360	12,5 x 20	ECR2HQX100M◊◊ΔΔ1220
	15	6,2	0,20	400	480	12,5 x 25	ECR2HQX150M◊◊ΔΔ1225
	22	4,2	0,20	540	580	16 x 25,5	ECR2HQX220M◊◊ΔΔ1625
	33	2,8	0,20	760	720	16 x 31,5	ECR2HQX330M◊◊ΔΔ1631
	47	2,0	0,20	1040	900	18 x 31,5	ECR2HQX470M◊◊ΔΔ1831
	68	1,4	0,20	1460	1250	18 x 36	ECR2HQX680M◊◊ΔΔ1836
	82	1,1	0,20	1740	1380	20 x 41	ECR2HQX820M◊◊ΔΔ2041
	100	0,90	0,20	2100	1450	20 x 41	ECR2HQX101M◊◊ΔΔ2041
	120	0,77	0,20	2500	950	22 x 41	ECR2HQX121M◊◊ΔΔ2241
550 (600) 2Y	4,7	16,9	0,25	204	220	12,5 x 20	ECR2YQX4R7M◊◊ΔΔ1220
	22	7,5	0,25	584	210	16 x 25,5	ECR2YQX220M◊◊ΔΔ1625
	47	3,4	0,25	1134	330	18 x 36	ECR2YQX470M◊◊ΔΔ1836
	56	2,9	0,25	1332	450	18 x 45	ECR2YQX560M◊◊ΔΔ1845
	68	2,4	0,25	1596	550	18 x 50	ECR2YQX680M◊◊ΔΔ1850

2 000 - 3 000h at 105°C

· Standard 105°C



RADIAL

ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +105	-25 ~ +105
Voltage Range (V)	6,3 ~ 250	350 ~ 500
Capacitance Range (µF)	0,1 ~ 15 000	
Capacitance Tolerance (20°C, 120Hz)	± 20%	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Leakage Current	Rated Voltage (V)	6,3 ~ 100	160 ~ 500
	$I_{LEAKAGE}$	After 2 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.	After 1 minute at 20°C application of rated voltage, leakage current is not more than specified in table.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	6,3	10	16	25	35	50	63	100	160	200	250	350	400	420	450	500
	$Z_{-25°C} / Z_{+20°C}$	4	3	2						3							6
	$Z_{-40°C} / Z_{+20°C}$	8	6	4	3					-			-				-

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	Ø ≤ 8 : 2 000h Ø ≥ 10 : 3 000h	> 100 000h	Ø ≤ 8 : 1 000h Ø ≥ 10 : 2 000h	2 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 150% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 40°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

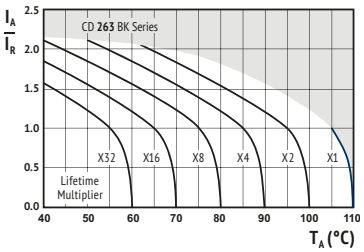
MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Rated Voltage (V)	Capacitance (µF) \ Frequency	50Hz	120Hz	1kHz	10kHz	100kHz
6,3 ~ 100	0,47 ~ 4,7	0,32	0,40	0,70	0,80	1,00
	10 ~ 47	0,40	0,50	0,80	0,90	1,00
	100 ~ 220	0,56	0,70	0,90	0,90	1,00
	330 ~ 1 000	0,64	0,80	0,90	1,00	1,00
	2 200 ~ 15 000	0,72	0,90	1,00	1,00	1,00
160 ~ 500	0,47 ~ 10	0,80	1,00	1,75	2,00	2,50
	22 ~ 56	0,80	1,00	1,60	1,80	2,00
	68 ~ 220	0,80	1,00	1,30	1,40	1,65

Multipliers for typical operating conditions.

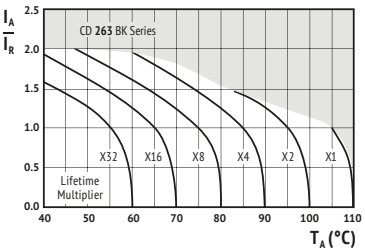
MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)

LIFETIME DIAGRAM 6,3 ~ 100V



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

LIFETIME DIAGRAM 160 ~ 500V



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
6,3 (7,2) 0J	33	8,9	2,5	0,22	3	105	5x11,5	ECR0JBK330M◊◊ΔΔ0511
	47	6,3	1,5	0,22	3	120	5x11,5	ECR0JBK470M◊◊ΔΔ0511
	100	3,0	1,2	0,22	7	130	5x11,5	ECR0JBK101M◊◊ΔΔ0511
	220	1,4	1,2	0,22	14	180	5x11,5	ECR0JBK221M◊◊ΔΔ0511
		1,4	0,87	0,22	14	180	6,3x11,5	ECR0JBK221M◊◊ΔΔ0611
	330	0,89	0,58	0,22	21	220	6,3x11,5	ECR0JBK331M◊◊ΔΔ0611
	470	0,63	0,55	0,22	30	250	6,3x11,5	ECR0JBK471M◊◊ΔΔ0611
		0,63	0,39	0,22	30	315	8x11,5	ECR0JBK471M◊◊ΔΔ0811
	1 000	0,30	0,37	0,22	63	435	8x11,5	ECR0JBK102M◊◊ΔΔ0811
		0,30	0,23	0,22	63	500	10x12,5	ECR0JBK102M◊◊ΔΔ1012
	2 200	0,15	0,095	0,24	139	765	10x20	ECR0JBK222M◊◊ΔΔ1020
		0,15	0,095	0,24	139	1000	12,5x20	ECR0JBK222M◊◊ΔΔ1220
	3 300	0,11	0,12	0,26	208	882	10x20	ECR0JBK332M◊◊ΔΔ1020
		0,11	0,090	0,26	208	1050	12,5x20	ECR0JBK332M◊◊ΔΔ1220
	4 700	0,080	0,090	0,28	297	1120	12,5x20	ECR0JBK472M◊◊ΔΔ1220
		0,080	0,061	0,28	297	1670	16x25	ECR0JBK472M◊◊ΔΔ1625
	6 800	0,063	0,090	0,32	429	1380	12,5x20	ECR0JBK682M◊◊ΔΔ1220
		0,063	0,056	0,32	429	1740	16x25	ECR0JBK682M◊◊ΔΔ1625
	10 000	0,054	0,045	0,40	630	2110	16x31,5	ECR0JBK103M◊◊ΔΔ1631
		0,054	0,061	0,40	630	1750	16x25	ECR0JBK103M◊◊ΔΔ1625
	15 000	0,045	0,042	0,50	945	2040	16x35,5	ECR0JBK153M◊◊ΔΔ1635
		0,045	0,036	0,50	945	2580	18x35,5	ECR0JBK153M◊◊ΔΔ1835
10 (13) 1A	22	11,5	2,5	0,19	3	92	5x11,5	ECR1ABK220M◊◊ΔΔ0511
	33	7,7	1,9	0,19	4	105	5x11,5	ECR1ABK330M◊◊ΔΔ0511
	47	5,4	1,5	0,19	5	120	5x11,5	ECR1ABK470M◊◊ΔΔ0511
	100	2,6	1,2	0,19	10	130	5x11,5	ECR1ABK101M◊◊ΔΔ0511
	220	1,2	0,58	0,19	22	220	6,3x11,5	ECR1ABK221M◊◊ΔΔ0611
	330	0,77	0,54	0,19	33	230	6,3x11,5	ECR1ABK331M◊◊ΔΔ0611
		0,77	0,47	0,19	33	265	8x11,5	ECR1ABK331M◊◊ΔΔ0811
	470	0,54	0,39	0,19	47	315	8x11,5	ECR1ABK471M◊◊ΔΔ0811
	1 000	0,25	0,25	0,19	100	500	10x12,5	ECR1ABK102M◊◊ΔΔ1012
		0,25	0,18	0,19	100	615	10x16	ECR1ABK102M◊◊ΔΔ1016
	2 200	0,13	0,17	0,21	220	761	10x20	ECR1ABK222M◊◊ΔΔ1020
		0,13	0,090	0,21	220	1050	12,5x20	ECR1ABK222M◊◊ΔΔ1220
	3 300	0,10	0,086	0,23	330	1010	12,5x20	ECR1ABK332M◊◊ΔΔ1220
		0,10	0,068	0,23	330	1300	12,5x25	ECR1ABK332M◊◊ΔΔ1225
	4 700	0,071	0,068	0,25	470	1250	12,5x25	ECR1ABK472M◊◊ΔΔ1225
		0,071	0,056	0,25	470	1740	16x25	ECR1ABK472M◊◊ΔΔ1625
	6 800	0,057	0,056	0,29	680	1570	16x25	ECR1ABK682M◊◊ΔΔ1625
		0,057	0,045	0,29	680	2110	16x31,5	ECR1ABK682M◊◊ΔΔ1631
	10 000	0,050	0,042	0,37	1000	1910	16x35,5	ECR1ABK103M◊◊ΔΔ1635
		0,050	0,036	0,37	1000	2580	18x35,5	ECR1ABK103M◊◊ΔΔ1835
16 (20) 1C	10	21,3	2,5	0,16	3	92	5x11,5	ECR1CBK100M◊◊ΔΔ0511
	22	9,7	1,9	0,16	4	105	5x11,5	ECR1CBK220M◊◊ΔΔ0511
	33	6,5	1,5	0,16	6	120	5x11,5	ECR1CBK330M◊◊ΔΔ0511
	47	4,6	1,2	0,16	8	130	5x11,5	ECR1CBK470M◊◊ΔΔ0511
	100	2,2	1,2	0,16	16	150	5x11,5	ECR1CBK101M◊◊ΔΔ0511
		2,2	0,58	0,16	16	220	6,3x11,5	ECR1CBK101M◊◊ΔΔ0611
	220	1,0	0,54	0,16	36	250	6,3x11,5	ECR1CBK221M◊◊ΔΔ0611
		1,0	0,47	0,16	36	290	8x11,5	ECR1CBK221M◊◊ΔΔ0811
	330	0,65	0,39	0,16	53	315	8x11,5	ECR1CBK331M◊◊ΔΔ0811
	470	0,46	0,66	0,16	76	350	8x11,5	ECR1CBK471M◊◊ΔΔ0811
		0,46	0,23	0,16	76	500	10x12,5	ECR1CBK471M◊◊ΔΔ1012
	1 000	0,22	0,21	0,16	160	610	10x16	ECR1CBK102M◊◊ΔΔ1016
		0,22	0,12	0,16	160	825	10x20	ECR1CBK102M◊◊ΔΔ1020
	2 200	0,11	0,095	0,18	352	961	12,5x20	ECR1CBK222M◊◊ΔΔ1220
		0,11	0,068	0,18	352	1300	12,5x25	ECR1CBK222M◊◊ΔΔ1225
	3 300	0,081	0,068	0,20	528	1 200	12,5x25	ECR1CBK332M◊◊ΔΔ1225
		0,081	0,056	0,20	528	1740	16x25	ECR1CBK332M◊◊ΔΔ1625
	4 700	0,063	0,052	0,22	752	1490	16x25	ECR1CBK472M◊◊ΔΔ1625
		0,063	0,045	0,22	752	2110	16x31,5	ECR1CBK472M◊◊ΔΔ1631
	6 800	0,051	0,042	0,26	1088	1830	16x35,5	ECR1CBK682M◊◊ΔΔ1635
		0,051	0,036	0,26	1088	2580	18x35,5	ECR1CBK682M◊◊ΔΔ1835

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
25 (32) 1E	4,7	39,6	3,0	0,14	3	85	5x11,5	ECR1EBK4R7M◊◊ΔΔ0511
	10	18,6	2,5	0,14	3	92	5x11,5	ECR1EBK100M◊◊ΔΔ0511
	22	8,5	1,9	0,14	6	105	5x11,5	ECR1EBK220M◊◊ΔΔ0511
	33	5,7	1,5	0,14	9	120	5x11,5	ECR1EBK330M◊◊ΔΔ0511
	47	4,0	1,2	0,14	12	130	5x11,5	ECR1EBK470M◊◊ΔΔ0511
	100	1,9	0,58	0,14	25	220	6,3x11,5	ECR1EBK101M◊◊ΔΔ0611
	220	0,85	0,39	0,14	55	315	8x11,5	ECR1EBK221M◊◊ΔΔ0811
	330	0,57	0,23	0,14	83	500	10x12,5	ECR1EBK331M◊◊ΔΔ1012
	470	0,40	0,21	0,14	118	429	10x12,5	ECR1EBK471M◊◊ΔΔ1012
		0,40	0,18	0,14	118	615	10x16	ECR1EBK471M◊◊ΔΔ1016
	1 000	0,19	0,12	0,14	250	705	10x20	ECR1EBK102M◊◊ΔΔ1020
		0,19	0,090	0,14	250	1050	12,5x20	ECR1EBK102M◊◊ΔΔ1220
	2 200	0,10	0,056	0,16	550	1740	16x25	ECR1EBK222M◊◊ΔΔ1625
	3 300	0,073	0,056	0,18	825	1440	16x25	ECR1EBK332M◊◊ΔΔ1625
		0,073	0,045	0,18	825	2110	16x31,5	ECR1EBK332M◊◊ΔΔ1631
	4 700	0,057	0,050	0,20	1175	1880	16x31,5	ECR1EBK472M◊◊ΔΔ1631
		0,057	0,036	0,20	1175	2580	18x35,5	ECR1EBK472M◊◊ΔΔ1835
35 (44) 1V	4,7	33,9	2,5	0,12	3	92	5x11,5	ECR1VBK4R7M◊◊ΔΔ0511
	10	16,0	1,8	0,12	4	105	5x11,5	ECR1VBK100M◊◊ΔΔ0511
	22	7,3	1,5	0,12	8	120	5x11,5	ECR1VBK220M◊◊ΔΔ0511
	33	4,9	1,5	0,12	12	130	5x11,5	ECR1VBK330M◊◊ΔΔ0511
	47	3,4	1,7	0,12	17	90	5x11,5	ECR1VBK470M◊◊ΔΔ0511
		3,4	0,58	0,12	17	220	6,3x11,5	ECR1VBK470M◊◊ΔΔ0611
	100	1,6	0,80	0,12	35	151	6,3x11,5	ECR1VBK101M◊◊ΔΔ0611
		1,6	0,39	0,12	35	315	8x11,5	ECR1VBK101M◊◊ΔΔ0811
	220	0,73	0,23	0,12	77	500	10x12,5	ECR1VBK221M◊◊ΔΔ1012
	330	0,49	0,25	0,12	116	384	10x12,5	ECR1VBK331M◊◊ΔΔ1012
		0,49	0,18	0,12	116	615	10x16	ECR1VBK331M◊◊ΔΔ1016
	470	0,34	0,21	0,12	165	470	10x16	ECR1VBK471M◊◊ΔΔ1016
		0,34	0,12	0,12	165	825	10x20	ECR1VBK471M◊◊ΔΔ1020
	1 000	0,16	0,095	0,12	350	857	12,5x20	ECR1VBK102M◊◊ΔΔ1220
		0,16	0,068	0,12	350	1300	12,5x25	ECR1VBK102M◊◊ΔΔ1225
	2 200	0,085	0,056	0,14	770	1380	16x25	ECR1VBK222M◊◊ΔΔ1625
		0,085	0,045	0,14	770	2110	16x31,5	ECR1VBK222M◊◊ΔΔ1631
	3 300	0,065	0,042	0,16	1155	1780	16x35,5	ECR1VBK332M◊◊ΔΔ1635
		0,065	0,036	0,16	1155	2580	18x35,5	ECR1VBK332M◊◊ΔΔ1835
	4 700	0,051	0,036	0,18	1645	2120	18x35,5	ECR1VBK472M◊◊ΔΔ1835
50 (63) 1H	0,10	1.327	18,0	0,10	3	10	5x11,5	ECR1HBK0R1M◊◊ΔΔ0511
	0,22	603	13,0	0,10	3	15	5x11,5	ECR1HBKR22M◊◊ΔΔ0511
	0,33	402	10,0	0,10	3	18	5x11,5	ECR1HBKR33M◊◊ΔΔ0511
	0,47	283	7,0	0,10	3	23	5x11,5	ECR1HBKR47M◊◊ΔΔ0511
	1,0	133	4,9	0,10	3	35	5x11,5	ECR1HBK010M◊◊ΔΔ0511
	2,2	60,3	4,2	0,10	3	53	5x11,5	ECR1HBK2R2M◊◊ΔΔ0511
	3,3	40,2	3,9	0,10	3	65	5x11,5	ECR1HBK3R3M◊◊ΔΔ0511
	4,7	28,3	3,6	0,10	3	82	5x11,5	ECR1HBK4R7M◊◊ΔΔ0511
	10	13,3	2,7	0,10	5	100	5x11,5	ECR1HBK100M◊◊ΔΔ0511
	22	6,1	1,9	0,10	11	125	5x11,5	ECR1HBK220M◊◊ΔΔ0511
	33	4,1	1,9	0,10	17	90	5x11,5	ECR1HBK330M◊◊ΔΔ0511
		4,1	1,1	0,10	17	195	6,3x11,5	ECR1HBK330M◊◊ΔΔ0611
	47	2,9	0,90	0,10	24	245	6,3x11,5	ECR1HBK470M◊◊ΔΔ0611
	100	1,4	0,50	0,10	50	385	8x11,5	ECR1HBK101M◊◊ΔΔ0811
	220	0,61	0,38	0,10	110	314	10x12,5	ECR1HBK221M◊◊ΔΔ1012
		0,61	0,27	0,10	110	505	10x16	ECR1HBK221M◊◊ΔΔ1016
	330	0,41	0,27	0,10	165	421	10x16	ECR1HBK331M◊◊ΔΔ1016
		0,41	0,18	0,10	165	675	10x20	ECR1HBK331M◊◊ΔΔ1020
	470	0,29	0,12	0,10	235	895	12,5x20	ECR1HBK471M◊◊ΔΔ1220
	1 000	0,14	0,076	0,10	500	1495	16x25	ECR1HBK102M◊◊ΔΔ1625
	2 200	0,073	0,065	0,12	1100	1660	16x35,5	ECR1HBK222M◊◊ΔΔ1635
		0,073	0,050	0,12	1100	2190	18x35,5	ECR1HBK222M◊◊ΔΔ1835

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RADIAL

RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
63 (79) 1J	4,7	25,4	5,8	0,09	3	74	5x11,5	ECR1JBK4R7M◊◊ΔΔ0511
	10	12,0	3,6	0,09	7	95	5x11,5	ECR1JBK100M◊◊ΔΔ0511
	22	5,5	2,1	0,09	14	130	6,3x11,5	ECR1JBK220M◊◊ΔΔ0611
	33	3,7	1,7	0,09	21	160	6,3x11,5	ECR1JBK330M◊◊ΔΔ0611
	47	2,6	1,8	0,09	30	120	6,3x11,5	ECR1JBK470M◊◊ΔΔ0611
		2,6	1,2	0,09	30	305	8x11,5	ECR1JBK470M◊◊ΔΔ0811
	100	1,2	0,65	0,09	63	395	10x12,5	ECR1JBK101M◊◊ΔΔ1012
	220	0,55	0,48	0,09	139	335	10x16	ECR1JBK221M◊◊ΔΔ1016
		0,55	0,32	0,09	139	505	10x20	ECR1JBK221M◊◊ΔΔ1020
	330	0,37	0,32	0,09	208	510	10x20	ECR1JBK331M◊◊ΔΔ1020
		0,37	0,22	0,09	208	660	12,5x20	ECR1JBK331M◊◊ΔΔ1220
	470	0,26	0,16	0,09	297	640	12,5x20	ECR1JBK471M◊◊ΔΔ1220
		0,26	0,16	0,09	297	850	12,5x25	ECR1JBK471M◊◊ΔΔ1225
	1 000	0,12	0,13	0,09	630	930	16x25	ECR1JBK102M◊◊ΔΔ1625
		0,12	0,098	0,09	630	1430	16x31,5	ECR1JBK102M◊◊ΔΔ1631
100 (125) 2A	0,47	226	13,0	0,08	3	30	5x11,5	ECR2ABKR47M◊◊ΔΔ0511
	1,0	107	11,0	0,08	3	45	5x11,5	ECR2ABK010M◊◊ΔΔ0511
		48,3	9,2	0,08	3	60	5x11,5	ECR2ABK2R2M◊◊ΔΔ0511
	3,3	32,2	7,2	0,08	4	67	5x11,5	ECR2ABK3R3M◊◊ΔΔ0511
	4,7	22,6	6,3	0,08	5	75	5x11,5	ECR2ABK4R7M◊◊ΔΔ0511
	10	10,7	3,3	0,08	10	110	6,3x11,5	ECR2ABK100M◊◊ΔΔ0611
	22	4,9	3,5	0,08	22	93	6,3x11,5	ECR2ABK220M◊◊ΔΔ0611
		4,9	1,4	0,08	22	165	8x11,5	ECR2ABK220M◊◊ΔΔ0811
	33	3,3	1,5	0,08	33	130	8x11,5	ECR2ABK330M◊◊ΔΔ0811
		3,3	0,94	0,08	33	305	10x12,5	ECR2ABK330M◊◊ΔΔ1012
	47	2,3	1,1	0,08	47	165	10x12,5	ECR2ABK470M◊◊ΔΔ1012
		2,3	0,68	0,08	47	320	10x16	ECR2ABK470M◊◊ΔΔ1016
	100	1,1	0,50	0,08	100	265	10x20	ECR2ABK101M◊◊ΔΔ1020
		1,1	0,28	0,08	100	585	12,5x20	ECR2ABK101M◊◊ΔΔ1220
	220	0,49	0,22	0,08	220	440	12,5x25	ECR2ABK221M◊◊ΔΔ1225
		0,49	0,16	0,08	220	1120	16x25	ECR2ABK221M◊◊ΔΔ1625
	330	0,33	0,13	0,08	330	1290	16x25	ECR2ABK331M◊◊ΔΔ1625
	470	0,23	0,11	0,08	470	1350	16x31,5	ECR2ABK471M◊◊ΔΔ1631

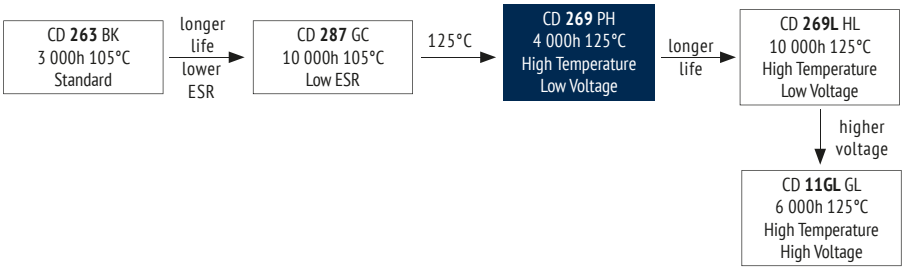
U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 120Hz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
160 (200) 2C	0,47	424	-	0,15	48	12	6,3x11,5	ECR2CBKR47M◊◊ΔΔ0611
	1,0	199	-	0,15	56	18	6,3x11,5	ECR2CBK010M◊◊ΔΔ0611
	2,2	90,5	-	0,15	76	26	6,3x11,5	ECR2CBK2R2M◊◊ΔΔ0611
	3,3	60,3	-	0,15	93	28	6,3x11,5	ECR2CBK3R3M◊◊ΔΔ0611
		60,3	-	0,15	93	37	8x11,5	ECR2CBK3R3M◊◊ΔΔ0811
	4,7	42,4	-	0,15	116	34	6,3x11,5	ECR2CBK4R7M◊◊ΔΔ0611
		42,4	-	0,15	116	44	8x11,5	ECR2CBK4R7M◊◊ΔΔ0811
	10	19,9	-	0,15	164	58	8x11,5	ECR2CBK100M◊◊ΔΔ0811
		19,9	-	0,15	164	75	10x12,5	ECR2CBK100M◊◊ΔΔ1012
	22	9,1	-	0,15	241	135	10x16	ECR2CBK220M◊◊ΔΔ1016
	33	6,1	-	0,15	312	175	10x20	ECR2CBK330M◊◊ΔΔ1020
	47	4,3	-	0,15	401	230	12,5x20	ECR2CBK470M◊◊ΔΔ1220
	100	2,0	-	0,15	740	299	12,5x25	ECR2CBK101M◊◊ΔΔ1225
		2,0	-	0,15	740	330	16x25,5	ECR2CBK101M◊◊ΔΔ1625
	220	1,0	-	0,15	1508	500	16x35,5	ECR2CBK221M◊◊ΔΔ1635
	330	0,61	-	0,15	2212	764	18x36	ECR2CBK331M◊◊ΔΔ1836
200 (250) 2D	0,47	424	-	0,15	50	12	6,3x11,5	ECR2DBKR47M◊◊ΔΔ0611
	1,0	199	-	0,15	60	18	6,3x11,5	ECR2DBK010M◊◊ΔΔ0611
	2,2	90,5	-	0,15	84	26	6,3x11,5	ECR2DBK2R2M◊◊ΔΔ0611
	3,3	60,3	-	0,15	106	28	6,3x11,5	ECR2DBK3R3M◊◊ΔΔ0611
		60,3	-	0,15	106	37	8x11,5	ECR2DBK3R3M◊◊ΔΔ0811
	4,7	42,4	-	0,15	134	40	8x11,5	ECR2DBK4R7M◊◊ΔΔ0811
		42,4	-	0,15	134	50	10x12,5	ECR2DBK4R7M◊◊ΔΔ1012
	10	19,9	-	0,15	180	66	10x12,5	ECR2DBK100M◊◊ΔΔ1012
		19,9	-	0,15	180	80	10x16	ECR2DBK100M◊◊ΔΔ1016
	22	9,1	-	0,15	276	135	10x20	ECR2DBK220M◊◊ΔΔ1020
	33	6,1	-	0,15	364	190	12,5x20	ECR2DBK330M◊◊ΔΔ1220
	47	4,3	-	0,15	476	230	12,5x25	ECR2DBK470M◊◊ΔΔ1225
	100	2,0	-	0,15	900	360	16x25,5	ECR2DBK101M◊◊ΔΔ1625
	220	1,0	-	0,15	1860	525	18x31,5	ECR2DBK221M◊◊ΔΔ1831
250 (300) 2E	0,47	424	-	0,15	52	12	6,3x11,5	ECR2EBKR47M◊◊ΔΔ0611
	1,0	199	-	0,15	65	18	6,3x11,5	ECR2EBK010M◊◊ΔΔ0611
	2,2	90,5	-	0,15	95	23	6,3x11,5	ECR2EBK2R2M◊◊ΔΔ0611
		90,5	-	0,15	95	30	8x11,5	ECR2EBK2R2M◊◊ΔΔ0811
	3,3	60,3	-	0,15	123	43	8x11,5	ECR2EBK3R3M◊◊ΔΔ0811
		60,3	-	0,15	123	43	10x12,5	ECR2EBK3R3M◊◊ΔΔ1012
	4,7	42,4	-	0,15	147	40	8x11,5	ECR2EBK4R7M◊◊ΔΔ0811
		42,4	-	0,15	147	50	10x12,5	ECR2EBK4R7M◊◊ΔΔ1012
	10	19,9	-	0,15	200	90	10x16	ECR2EBK100M◊◊ΔΔ1016
	22	9,1	-	0,15	320	155	12,5x20	ECR2EBK220M◊◊ΔΔ1220
	33	6,1	-	0,15	430	190	12,5x25	ECR2EBK330M◊◊ΔΔ1225
	47	4,3	-	0,15	570	205	12,5x25	ECR2EBK470M◊◊ΔΔ1225
		4,3	-	0,15	570	225	16x25,5	ECR2EBK470M◊◊ΔΔ1625
	100	2,0	-	0,15	1100	340	16x31,5	ECR2EBK101M◊◊ΔΔ1631
	150	1,3	-	0,15	1600	405	18x25,5	ECR2EBK151M◊◊ΔΔ1825
	220	0,90	-	0,15	2300	570	18x36	ECR2EBK221M◊◊ΔΔ1836
350 (400) 2V	0,47	565	-	0,20	57	11	6,3x11,5	ECR2VBKR47M◊◊ΔΔ0611
	1,0	266	-	0,20	75	18	8x11,5	ECR2VBK010M◊◊ΔΔ0811
	2,2	121	-	0,20	117	30	8x11,5	ECR2VBK2R2M◊◊ΔΔ0811
	2,2	121	-	0,20	117	30	10x12,5	ECR2VBK2R2M◊◊ΔΔ1012
	3,3	80,4	-	0,20	147	36	10x12,5	ECR2VBK3R3M◊◊ΔΔ1012
	4,7	56,5	-	0,20	166	45	10x12,5	ECR2VBK4R7M◊◊ΔΔ1012
		56,5	-	0,20	166	47	10x16	ECR2VBK4R7M◊◊ΔΔ1016
	10	26,6	-	0,20	240	95	10x20	ECR2VBK100M◊◊ΔΔ1020
	22	12,1	-	0,20	408	130	12,5x20	ECR2VBK220M◊◊ΔΔ1220
	33	8,0	-	0,20	562	180	12,5x25	ECR2VBK330M◊◊ΔΔ1225
		8,0	-	0,20	562	160	16x25,5	ECR2VBK330M◊◊ΔΔ1625
	47	5,7	-	0,20	758	330	16x25,5	ECR2VBK470M◊◊ΔΔ1625
	100	3,0	-	0,20	1500	620	18x31,5	ECR2VBK101M◊◊ΔΔ1831

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 120Hz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
400 (450) 2G	1,0	266	-	0,20	80	16	6,3x11,5	ECR2GBK010M◊◊ΔΔ0611
		266	-	0,20	80	18	8x11,5	ECR2GBK010M◊◊ΔΔ0811
	2,2	121	-	0,20	128	25	8x11,5	ECR2GBK2R2M◊◊ΔΔ0811
		121	-	0,20	128	30	10x12,5	ECR2GBK2R2M◊◊ΔΔ1012
	3,3	80,4	-	0,20	153	35	10x12,5	ECR2GBK3R3M◊◊ΔΔ1012
		80,4	-	0,20	153	40	10x16	ECR2GBK3R3M◊◊ΔΔ1016
	4,7	56,5	-	0,20	176	47	10x12,5	ECR2GBK4R7M◊◊ΔΔ1012
		56,5	-	0,20	176	52	10x16	ECR2GBK4R7M◊◊ΔΔ1016
	10	26,6	-	0,20	260	80	10x16	ECR2GBK100M◊◊ΔΔ1016
		26,6	-	0,20	260	95	10x20	ECR2GBK100M◊◊ΔΔ1020
		26,6	-	0,20	260	120	12,5x20	ECR2GBK100M◊◊ΔΔ1220
	22	12,1	-	0,20	452	150	12,5x25,5	ECR2GBK220M◊◊ΔΔ1225
		12,1	-	0,20	452	150	16x25,5	ECR2GBK220M◊◊ΔΔ1625
	33	8,1	-	0,20	628	180	12,5x25	ECR2GBK330M◊◊ΔΔ1225
		8,1	-	0,20	628	180	16x20	ECR2GBK330M◊◊ΔΔ1620
		8,1	-	0,20	628	215	16x25,5	ECR2GBK330M◊◊ΔΔ1625
	47	5,7	-	0,20	852	360	16x25,5	ECR2GBK470M◊◊ΔΔ1625
	68	3,9	-	0,20	1188	470	18x25,5	ECR2GBK680M◊◊ΔΔ1825
	82	3,2	-	0,20	1412	575	18x31,5	ECR2GBK820M◊◊ΔΔ1831
	100	2,7	-	0,20	1700	675	18x36	ECR2GBK101M◊◊ΔΔ1836
	120	2,2	-	0,20	2020	735	18x40	ECR2GBK121M◊◊ΔΔ1840
	150	1,8	-	0,20	2500	825	20x41	ECR2GBK151M◊◊ΔΔ2041
420 (470) 2X	1,0	266	-	0,20	82	16	8x11,5	ECR2XBK010M◊◊ΔΔ0811
		266	-	0,20	82	19	10x12,5	ECR2XBK010M◊◊ΔΔ1012
	2,2	121	-	0,20	133	24	8x11,5	ECR2XBK2R2M◊◊ΔΔ0811
		121	-	0,20	133	29	10x12,5	ECR2XBK2R2M◊◊ΔΔ1012
	3,3	80,4	-	0,20	156	34	10x12,5	ECR2XBK3R3M◊◊ΔΔ1012
		80,4	-	0,20	156	38	10x16	ECR2XBK3R3M◊◊ΔΔ1016
	4,7	56,5	-	0,20	179	46	10x16	ECR2XBK4R7M◊◊ΔΔ1016
		56,5	-	0,20	179	52	10x20	ECR2XBK4R7M◊◊ΔΔ1020
	10	26,5	-	0,20	268	100	10x20	ECR2XBK100M◊◊ΔΔ1020
		26,5	-	0,20	268	116	12,5x20	ECR2XBK100M◊◊ΔΔ1220
	22	12,1	-	0,20	470	162	12,5x25	ECR2XBK220M◊◊ΔΔ1225
	33	8,0	-	0,20	655	204	16x20	ECR2XBK330M◊◊ΔΔ1620
		8,0	-	0,20	655	228	16x25,5	ECR2XBK330M◊◊ΔΔ1625
	47	5,6	-	0,20	890	380	16x31,5	ECR2XBK470M◊◊ΔΔ1631
	56	4,7	-	0,20	1041	420	16x31,5	ECR2XBK560M◊◊ΔΔ1631
		4,7	-	0,20	1041	420	18x25,5	ECR2XBK560M◊◊ΔΔ1825
	68	3,9	-	0,20	1243	542	16x36	ECR2XBK680M◊◊ΔΔ1636
		3,9	-	0,20	1243	542	18x31,5	ECR2XBK680M◊◊ΔΔ1831
	82	3,2	-	0,20	1478	608	16x40	ECR2XBK820M◊◊ΔΔ1640
		3,2	-	0,20	1478	608	18x31,5	ECR2XBK820M◊◊ΔΔ1831
	100	2,7	-	0,20	1780	713	16x45	ECR2XBK101M◊◊ΔΔ1645
		2,7	-	0,20	1780	713	18x36	ECR2XBK101M◊◊ΔΔ1836
	120	2,2	-	0,20	2116	779	16x50	ECR2XBK121M◊◊ΔΔ1650
		2,2	-	0,20	2116	779	18x40	ECR2XBK121M◊◊ΔΔ1840
	150	1,8	-	0,20	2620	874	16x60	ECR2XBK151M◊◊ΔΔ1660
		1,8	-	0,20	2620	874	20x41	ECR2XBK151M◊◊ΔΔ2041
450 (500) 2W	1,0	266	-	0,20	85	16	8x11,5	ECR2WBK010M◊◊ΔΔ0811
		266	-	0,20	85	19	10x12,5	ECR2WBK010M◊◊ΔΔ1012
	2,2	121	-	0,20	139	26	10x12,5	ECR2WBK2R2M◊◊ΔΔ1012
		121	-	0,20	139	29	10x16	ECR2WBK2R2M◊◊ΔΔ1016
	3,3	80,4	-	0,20	160	38	10x16	ECR2WBK3R3M◊◊ΔΔ1016
		80,4	-	0,20	160	42	10x20	ECR2WBK3R3M◊◊ΔΔ1020
	4,7	56,5	-	0,20	185	49	10x16	ECR2WBK4R7M◊◊ΔΔ1016
		56,5	-	0,20	185	54	10x20	ECR2WBK4R7M◊◊ΔΔ1020
	10	26,6	-	0,20	280	120	10x20	ECR2WBK100M◊◊ΔΔ1020
	22	12,1	-	0,20	496	170	12,5x25	ECR2WBK220M◊◊ΔΔ1225
	33	8,1	-	0,20	694	240	16x25,5	ECR2WBK330M◊◊ΔΔ1625
	47	5,6	-	0,20	946	400	16x31,5	ECR2WBK470M◊◊ΔΔ1631
	56	4,7	-	0,20	1108	440	16x31,5	ECR2WBK560M◊◊ΔΔ1631
		4,7	-	0,20	1108	440	18x25,5	ECR2WBK560M◊◊ΔΔ1825
	68	4,0	-	0,20	1324	490	16x36	ECR2WBK680M◊◊ΔΔ1636
		4,0	-	0,20	1324	570	18x31,5	ECR2WBK680M◊◊ΔΔ1831
	82	3,2	-	0,20	1576	640	16x40	ECR2WBK820M◊◊ΔΔ1640
		3,2	-	0,20	1576	640	18x31,5	ECR2WBK820M◊◊ΔΔ1831

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 120Hz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
450 (500) 2W	100	2,7	-	0,20	1900	750	16x45	ECR2WBK101M◊◊ΔΔ1645
		2,7	-	0,20	1900	750	18x36	ECR2WBK101M◊◊ΔΔ1836
	120	2,2	-	0,20	2260	820	16x50	ECR2WBK121M◊◊ΔΔ1650
		2,2	-	0,20	2260	820	18x40	ECR2WBK121M◊◊ΔΔ1840
	150	1,8	-	0,20	2800	920	16x60	ECR2WBK151M◊◊ΔΔ1660
		1,8	-	0,20	2800	920	18x46	ECR2WBK151M◊◊ΔΔ1846
		1,8	-	0,20	2800	920	20x41	ECR2WBK151M◊◊ΔΔ2041
	180	1,5	-	0,20	3340	1100	22x41	ECR2WBK181M◊◊ΔΔ2241
500 (550) 2H	1,0	266	-	0,20	90	21	10x12,5	ECR2HBK010M◊◊ΔΔ1012
	2,2	121	-	0,20	144	35	10x16	ECR2HBK2R2M◊◊ΔΔ1016
	3,3	80,4	-	0,20	166	48	10x20	ECR2HBK3R3M◊◊ΔΔ1020
	4,7	56,5	-	0,20	194	63	12,5x20	ECR2HBK4R7M◊◊ΔΔ1220
	10	26,6	-	0,20	300	120	12,5x25	ECR2HBK100M◊◊ΔΔ1225
	22	12,1	-	0,20	540	180	16x25,5	ECR2HBK220M◊◊ΔΔ1625
	33	8,0	-	0,20	760	240	16x31,5	ECR2HBK330M◊◊ΔΔ1631
	47	5,6	-	0,20	1040	405	18x31,5	ECR2HBK470M◊◊ΔΔ1831
	56	4,7	-	0,20	1220	450	16x40	ECR2HBK560M◊◊ΔΔ1640
		4,7	-	0,20	1220	450	18x31,5	ECR2HBK560M◊◊ΔΔ1831
	68	3,9	-	0,20	1460	560	16x45	ECR2HBK680M◊◊ΔΔ1645
		3,9	-	0,20	1460	560	18x36	ECR2HBK680M◊◊ΔΔ1836
	82	3,2	-	0,20	1740	640	16x55	ECR2HBK820M◊◊ΔΔ1655
		3,2	-	0,20	1740	640	18x40	ECR2HBK820M◊◊ΔΔ1840
	100	2,7	-	0,20	2100	800	16x60	ECR2HBK101M◊◊ΔΔ1660
		2,7	-	0,20	2100	800	18x46	ECR2HBK101M◊◊ΔΔ1846
		2,7	-	0,20	2100	800	20x41	ECR2HBK101M◊◊ΔΔ2041
	120	2,2	-	0,20	2500	840	22x45	ECR2HBK121M◊◊ΔΔ2245
	150	1,8	-	0,20	3100	890	22x45	ECR2HBK151M◊◊ΔΔ2245

4 000 at 125°C

- High Reliability at High Temperature
- Automotive
- Professional Long-Life Applications



RADIAL

ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +125
Voltage Range (V)	10 ~ 63
Capacitance Range (µF)	47 ~ 3 300
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 2 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

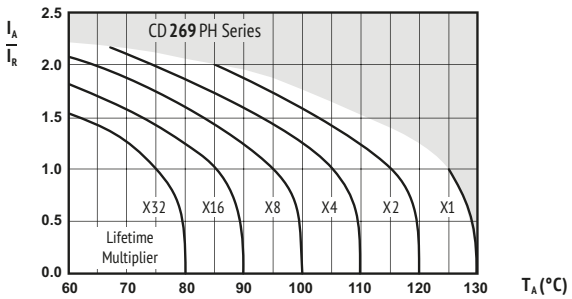
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	4 000h	> 200 000h	2 000h	3 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 50% of initial value		Within ± 30% of initial value	Within ± 30% of initial value	Within ± 30% of initial value	
Dissipation Factor	Not more than 500% of specified value		Not more than 300% of specified value	Not more than 300% of specified value	Not more than 300% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 125°C	U_R 1,4 x I_R 50°C	U_R I_R 125°C	U_R I_R = 0 125°C IEC 60384	U_R = 0 I_R = 0 125°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Capacitance (µF) \ Frequency	120Hz	1kHz	10kHz	100kHz
47 ~ 100	0,40	0,75	0,90	1,00
220 ~ 330	0,50	0,85	0,95	1,00
470 ~ 1 000	0,60	0,88	0,96	1,00
2 200 ~ 3 300	0,75	0,90	0,98	1,00

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 125°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

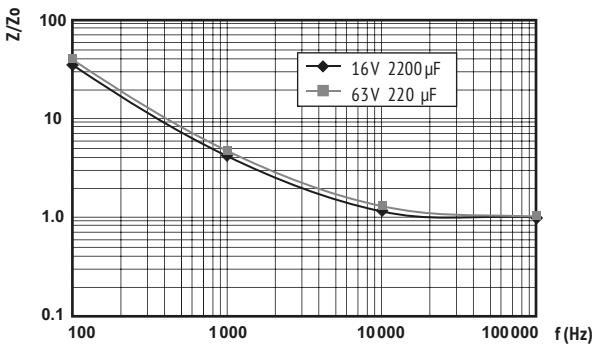
SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 125°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
10 (13) 1A	330	0,80	0,33	0,66	0,20	132	340	8 x 11,5	ECR1APH331M◊◊ΔΔ0811
	470	0,57	0,24	0,48	0,20	188	500	10 x 12,5	ECR1APH471M◊◊ΔΔ1012
	1 000	0,27	0,12	0,24	0,20	400	770	10 x 20	ECR1APH102M◊◊ΔΔ1020
	2 200	0,14	0,061	0,13	0,22	880	1250	12,5 x 25	ECR1APH222M◊◊ΔΔ1225
	3 300	0,10	0,050	0,10	0,24	1320	1380	16 x 25	ECR1APH332M◊◊ΔΔ1625
16 (20) 1C	220	0,97	0,33	0,66	0,16	141	340	8 x 11,5	ECR1CPH221M◊◊ΔΔ0811
	330	0,65	0,24	0,48	0,16	212	500	10 x 12,5	ECR1CPH331M◊◊ΔΔ1012
	470	0,46	0,20	0,40	0,16	301	630	10 x 16	ECR1CPH471M◊◊ΔΔ1016
	1 000	0,22	0,077	0,16	0,16	640	920	12,5 x 20	ECR1CPH102M◊◊ΔΔ1220
	2 200	0,11	0,050	0,10	0,18	1408	1380	16 x 25	ECR1CPH222M◊◊ΔΔ1625
25 (32) 1E	220	0,85	0,23	0,46	0,14	220	480	8 x 16	ECR1EPH221M◊◊ΔΔ0816
	330	0,57	0,20	0,40	0,14	330	630	10 x 16	ECR1EPH331M◊◊ΔΔ1016
	470	0,40	0,12	0,24	0,14	470	770	10 x 20	ECR1EPH471M◊◊ΔΔ1020
	1 000	0,19	0,061	0,13	0,14	1000	1250	12,5 x 25	ECR1EPH102M◊◊ΔΔ1225
35 (44) 1V	100	1,60	0,33	0,66	0,12	140	340	8 x 11,5	ECR1VPH101M◊◊ΔΔ0811
	220	0,73	0,20	0,40	0,12	308	630	10 x 16	ECR1VPH221M◊◊ΔΔ1016
	330	0,49	0,12	0,24	0,12	462	770	10 x 20	ECR1VPH331M◊◊ΔΔ1020
	470	0,34	0,077	0,16	0,12	658	920	12,5 x 20	ECR1VPH471M◊◊ΔΔ1220
	1 000	0,16	0,050	0,10	0,12	1400	1380	16 x 25	ECR1VPH102M◊◊ΔΔ1625
50 (63) 1H	100	1,33	0,36	0,72	0,10	200	420	10 x 12,5	ECR1HPH101M◊◊ΔΔ1012
	220	0,61	0,20	0,40	0,10	440	655	10 x 20	ECR1HPH221M◊◊ΔΔ1020
	330	0,41	0,12	0,24	0,10	660	780	12,5 x 20	ECR1HPH331M◊◊ΔΔ1220
	470	0,29	0,10	0,20	0,10	940	1060	12,5 x 25	ECR1HPH471M◊◊ΔΔ1225
63 (79) 1J	47	2,55	0,68	2,10	0,09	119	245	8 x 11,5	ECR1JPH470M◊◊ΔΔ0811
	100	1,20	0,38	1,20	0,09	252	425	10 x 16	ECR1JPH101M◊◊ΔΔ1016
	220	0,55	0,18	0,54	0,09	555	665	12,5 x 20	ECR1JPH221M◊◊ΔΔ1220
	330	0,37	0,14	0,42	0,09	832	900	12,5 x 25	ECR1JPH331M◊◊ΔΔ1225

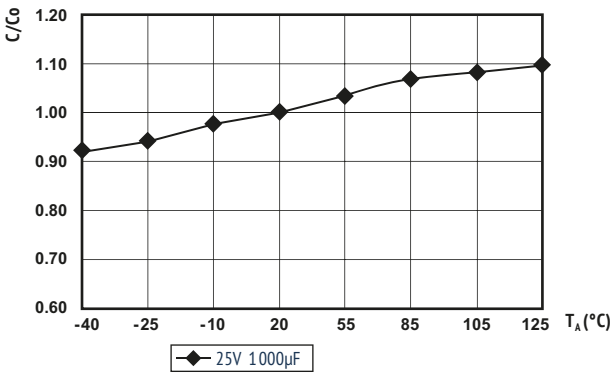
RADIAL

IMPEDANCE RATIO



Z = actual impedance of each frequency at 20°C,
Zo = Impedance at 100kHz, 20°C
Impedance Ratio as a function of frequency

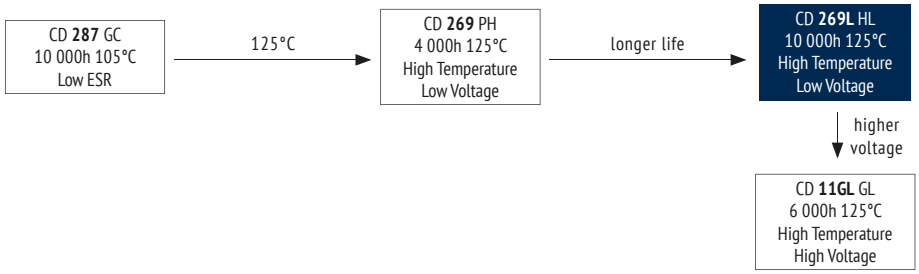
CAPACITANCE RATIO



C = actual capacitance of each temperature at 100Hz,
Co = Capacitance at 20°C, 100Hz
Capacitance Ratio as a function of temperature (typical curve)

4 000 - 10 000h at 125°C

- High Reliability at High Temperature
- Automotive
- Professional Long-Life Applications



RADIAL

ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +125
Voltage Range (V)	10 ~ 100
Capacitance Range (µF)	1 ~ 4 700
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 1 minute at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	10	16	25	35	50	53	100
	$Z_{-25°C} / Z_{+20°C}$	3	2					
	$Z_{-40°C} / Z_{+20°C}$	6	4					

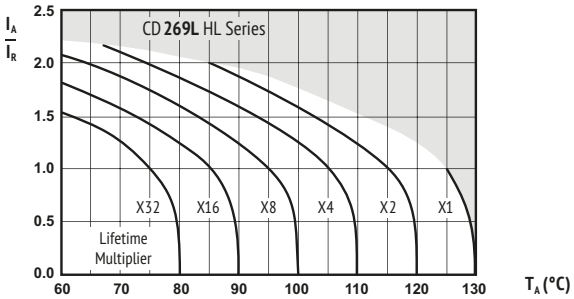
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	Ø 8 : 4 000h Ø 10 : 6 000h Ø ≥ 12,5 : 10 000h	> 200 000h	Ø 8 : 2 000h Ø 10 : 3 000h Ø ≥ 12,5 : 5 000h	Ø 8 : 3 000h Ø 10 : 5 000h Ø ≥ 12,5 : 7 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 50% of initial value		Within ± 30% of initial value	Within ± 30% of initial value	Within ± 30% of initial value	
Dissipation Factor	Not more than 500% of specified value		Not more than 300% of specified value	Not more than 300% of specified value	Not more than 300% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 125°C	U_R 1,4 x I_R 50°C	U_R I_R 125°C	U_R I_R = 0 125°C IEC 60384	U_R = 0 I_R = 0 125°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Capacitance (µF) \ Frequency	50/60Hz	120Hz	1kHz	10kHz	100kHz
1 ~ 4,7	0,35	0,42	0,60	0,80	1,00
10 ~ 33	0,45	0,55	0,75	0,90	1,00
47 ~ 330	0,60	0,70	0,85	0,95	1,00
470 ~ 1 500	0,65	0,75	0,90	0,98	1,00
2 200 ~ 4 700	0,75	0,80	0,95	1,00	1,00

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 125°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

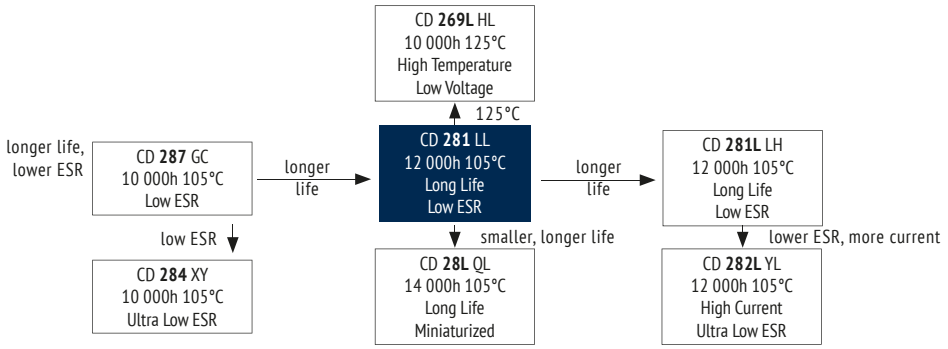
SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 125°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
10 (13) 1A	330	0,804	0,22	0,44	0,20	99	360	8 x 11,5	ECR1AHL331M◊◊ΔΔ0811
	470	0,565	0,15	0,30	0,20	141	620	10 x 12,5	ECR1AHL471M◊◊ΔΔ1012
	1 000	0,265	0,073	0,15	0,20	300	960	10 x 20	ECR1AHL102M◊◊ΔΔ1020
	2 200	0,133	0,040	0,080	0,22	660	1430	12,5 x 25	ECR1AHL222M◊◊ΔΔ1225
	3 300	0,097	0,038	0,076	0,24	990	1900	16 x 25	ECR1AHL332M◊◊ΔΔ1625
	4 700	0,073	0,034	0,068	0,26	1410	2300	16 x 31,5	ECR1AHL472M◊◊ΔΔ1631
16 (20) 1C	330	0,643	0,22	0,44	0,16	158	360	8 x 11,5	ECR1CHL331M◊◊ΔΔ0811
	470	0,452	0,15	0,30	0,16	226	620	10 x 12,5	ECR1CHL471M◊◊ΔΔ1012
	1 000	0,212	0,073	0,15	0,16	480	960	10 x 20	ECR1CHL102M◊◊ΔΔ1020
	2 200	0,109	0,040	0,080	0,18	1056	1430	12,5 x 25	ECR1CHL222M◊◊ΔΔ1225
	3 300	0,080	0,034	0,068	0,20	1584	2300	16 x 31,5	ECR1CHL332M◊◊ΔΔ1631
	4 700	0,062	0,031	0,062	0,22	2256	2550	16 x 35,5	ECR1CHL472M◊◊ΔΔ1635
25 (32) 1E	220	0,844	0,22	0,44	0,14	165	360	8 x 11,5	ECR1EHL221M◊◊ΔΔ0811
	330	0,563	0,15	0,30	0,14	248	620	10 x 12,5	ECR1EHL331M◊◊ΔΔ1012
	470	0,395	0,10	0,20	0,14	353	800	10 x 16	ECR1EHL471M◊◊ΔΔ1016
	1 000	0,186	0,055	0,11	0,14	750	1100	12,5 x 20	ECR1EHL102M◊◊ΔΔ1220
	2 200	0,097	0,034	0,068	0,16	1650	2300	16 x 31,5	ECR1EHL222M◊◊ΔΔ1631
	3 300	0,072	0,031	0,062	0,18	2475	2550	16 x 35,5	ECR1EHL332M◊◊ΔΔ1635
35 (44) 1V	100	1,592	0,22	0,44	0,12	105	360	8 x 11,5	ECR1VHL101M◊◊ΔΔ0811
	220	0,724	0,15	0,30	0,12	231	620	10 x 12,5	ECR1VHL221M◊◊ΔΔ1012
	330	0,483	0,10	0,20	0,12	347	800	10 x 16	ECR1VHL331M◊◊ΔΔ1016
	470	0,339	0,073	0,15	0,12	494	960	10 x 20	ECR1VHL471M◊◊ΔΔ1020
	1 000	0,159	0,040	0,080	0,12	1050	1430	12,5 x 25	ECR1VHL102M◊◊ΔΔ1225
	2 200	0,084	0,031	0,062	0,14	2310	2550	16 x 35,5	ECR1VHL222M◊◊ΔΔ1635
	3 300	0,064	0,028	0,056	0,16	3465	2800	18 x 36	ECR1VHL332M◊◊ΔΔ1836
50 (63) 1H	1,0	133	2,5	5,0	0,10	4	35	8 x 11,5	ECR1HHL010M◊◊ΔΔ0811
	2,2	61,0	1,8	3,6	0,10	4	50	8 x 11,5	ECR1HHL2R2M◊◊ΔΔ0811
	3,3	41,0	1,3	2,6	0,10	5	70	8 x 11,5	ECR1HHL3R3M◊◊ΔΔ0811
	4,7	28,3	0,85	1,7	0,10	7	100	8 x 11,5	ECR1HHL4R7M◊◊ΔΔ0811
	10	13,3	0,60	1,2	0,10	15	200	8 x 11,5	ECR1HHL100M◊◊ΔΔ0811
	22	6,10	0,35	0,70	0,10	33	260	8 x 11,5	ECR1HHL220M◊◊ΔΔ0811
	33	4,10	0,28	0,56	0,10	50	300	8 x 11,5	ECR1HHL330M◊◊ΔΔ0811
	47	2,90	0,28	0,56	0,10	71	300	8 x 11,5	ECR1HHL470M◊◊ΔΔ0811
	100	1,33	0,18	0,36	0,10	150	520	10 x 12,5	ECR1HHL101M◊◊ΔΔ1012
	220	0,603	0,082	0,17	0,10	330	890	10 x 20	ECR1HHL221M◊◊ΔΔ1020
	330	0,402	0,065	0,13	0,10	495	1000	12,5 x 20	ECR1HHL331M◊◊ΔΔ1220
	470	0,282	0,051	0,11	0,10	705	1200	12,5 x 25	ECR1HHL471M◊◊ΔΔ1225
	1 000	0,133	0,037	0,074	0,10	1500	2180	16 x 31,5	ECR1HHL102M◊◊ΔΔ1631
	2 200	0,072	0,029	0,058	0,12	3300	2800	18 x 40	ECR1HHL222M◊◊ΔΔ1840
63 (79) 1J	33	3,62	0,40	1,2	0,09	62	250	8 x 11,5	ECR1JHL330M◊◊ΔΔ0811
	47	2,55	0,27	0,81	0,09	89	400	10 x 12,5	ECR1JHL470M◊◊ΔΔ1012
	100	1,20	0,20	0,60	0,09	189	450	10 x 16	ECR1JHL101M◊◊ΔΔ1016
	220	0,543	0,10	0,30	0,09	416	820	12,5 x 20	ECR1JHL221M◊◊ΔΔ1220
	330	0,362	0,072	0,22	0,09	624	1000	12,5 x 25	ECR1JHL331M◊◊ΔΔ1225
	470	0,254	0,069	0,21	0,09	888	1500	16 x 25	ECR1JHL471M◊◊ΔΔ1625
	1 000	0,119	0,056	0,17	0,09	1890	1850	16 x 31,5	ECR1JHL102M◊◊ΔΔ1631
	1 500	0,080	0,043	0,13	0,09	2835	2350	18 x 40	ECR1JHL152M◊◊ΔΔ1840
100 (125) 2A	4,7	22,6	1,3	5,2	0,08	14	100	8 x 11,5	ECR2AHL4R7M◊◊ΔΔ0811
	10	10,7	1,0	4,0	0,08	30	200	8 x 11,5	ECR2AHL100M◊◊ΔΔ0811
	22	4,90	0,67	2,7	0,08	66	220	8 x 11,5	ECR2AHL220M◊◊ΔΔ0811
	33	3,30	0,45	1,8	0,08	99	260	10 x 12,5	ECR2AHL330M◊◊ΔΔ1012
	47	2,30	0,33	1,33	0,08	141	330	10 x 16	ECR2AHL470M◊◊ΔΔ1016
	100	1,07	0,17	0,68	0,08	300	670	12,5 x 20	ECR2AHL101M◊◊ΔΔ1220
	220	0,483	0,13	0,52	0,08	660	1100	16 x 25	ECR2AHL221M◊◊ΔΔ1625
	330	0,322	0,10	0,40	0,08	990	1300	16 x 31,5	ECR2AHL331M◊◊ΔΔ1631
	470	0,226	0,092	0,37	0,08	1410	1600	18 x 31,5	ECR2AHL471M◊◊ΔΔ1831

3 000 - 12 000h at 105°C

- Longest Lifetime 105°C
- Low Impedance
- Power Supplies
- Smoothing, Buffering, Filtering



RADIAL

ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-55 ~ +105
Voltage Range (V)	6,3 ~ 100
Capacitance Range (µF)	0,47 ~ 15 000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 2 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	6,3 ~ 100
	$Z_{-55°C} / Z_{+20°C}$	3

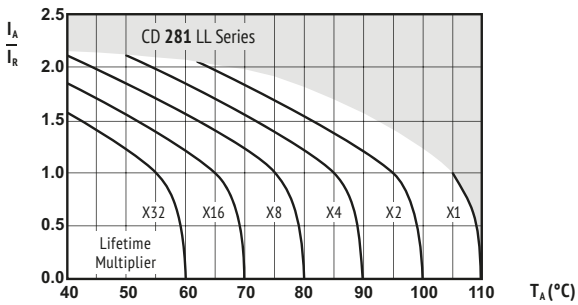
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	Ø 5 : 3 000h Ø 6,3~8: 5 000h Ø 10 : 7 000h Ø 12,5 : 10 000h Ø ≥ 16 : 12 000h	Ø ≥ 6,3 : > 250 000h	Ø 5 : 2 000h Ø 6,3~8: 3 000h Ø 10 : 5 000h Ø 12,5 : 7 000h Ø ≥ 16 : 8 000h	Ø 5 : 3 000h Ø 6,3~8: 4 000h Ø 10 : 6 000h Ø 12,5 : 8 000h Ø ≥ 16 : 10 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 40°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Capacitance (µF) \ Frequency	120Hz	1kHz	10kHz	100kHz
0,47 ~ 4,7	0,40	0,68	0,83	1,00
5,6 ~ 47	0,50	0,76	0,87	1,00
56 ~ 270	0,70	0,85	0,93	1,00
330 ~ 1 000	0,80	0,93	0,98	1,00
1 200 ~ 15 000	0,90	0,95	1,00	1,00

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
6,3 (7,2) 0J	100	2,92	0,650	1,30	0,22	13	175	5 x 11,5	ECR0JLL101M◊◊ΔΔ0511
	150	1,95	0,460	0,920	0,22	19	235	5 x 15	ECR0JLL151M◊◊ΔΔ0515
	220	1,33	0,300	0, 600	0,22	28	290	6,3 x 11,5	ECR0JLL221M◊◊ΔΔ0611
	330	0,885	0, 200	0,400	0,22	42	400	6,3 x 15	ECR0JLL331M◊◊ΔΔ0615
	470	0,621	0,170	0,340	0,22	60	488	8 x 11,5	ECR0JLL471M◊◊ΔΔ0811
	680	0,429	0,130	0,260	0,22	86	617	8 x 16	ECR0JLL681M◊◊ΔΔ0816
		0,429	0,120	0,240	0,22	86	613	10 x 12,5	ECR0JLL681M◊◊ΔΔ1012
	820	0,356	0,095	0,190	0,22	104	734	10 x 16	ECR0JLL821M◊◊ΔΔ1016
	1 000	0,292	0,095	0,190	0,22	126	800	8 x 20	ECR0JLL102M◊◊ΔΔ0820
	1 200	0,243	0,065	0,130	0,22	152	1010	10 x 20	ECR0JLL122M◊◊ΔΔ1020
		0,243	0,065	0,130	0,22	152	1010	12,5 x 15	ECR0JLL122M◊◊ΔΔ1215
	1 500	0,195	0,055	0,110	0,22	189	1190	10 x 25	ECR0JLL152M◊◊ΔΔ1025
	2 200	0,145	0,045	0,090	0,24	278	1440	10 x 30	ECR0JLL222M◊◊ΔΔ1030
		0,145	0,042	0,084	0,24	278	1400	12,5 x 20	ECR0JLL222M◊◊ΔΔ1220
	2 700	0,118	0,038	0,076	0,24	341	1690	12,5 x 25	ECR0JLL272M◊◊ΔΔ1225
		0,118	0,046	0,092	0,24	341	1310	16 x 15	ECR0JLL272M◊◊ΔΔ1615
	3 300	0,105	0,043	0,086	0,26	416	1460	18 x 15	ECR0JLL332M◊◊ΔΔ1815
	3 900	0,088	0,032	0,064	0,26	492	1950	12,5 x 30	ECR0JLL392M◊◊ΔΔ1230
	4 700	0,079	0,028	0,056	0,28	593	2220	12,5 x 35	ECR0JLL472M◊◊ΔΔ1235
		0,079	0,034	0,068	0,28	593	1660	16 x 20	ECR0JLL472M◊◊ΔΔ1620
	5 600	0,071	0,026	0,052	0,30	706	2390	12,5 x 40	ECR0JLL562M◊◊ΔΔ1240
		0,071	0,028	0,056	0,30	706	2070	16 x 25	ECR0JLL562M◊◊ΔΔ1625
		0,071	0,030	0,060	0,30	706	1850	18 x 20	ECR0JLL562M◊◊ΔΔ1820
	6 800	0,062	0,025	0,050	0,32	857	2350	16 x 31,5	ECR0JLL682M◊◊ΔΔ1631
		0,062	0,027	0,054	0,32	857	2120	18 x 25	ECR0JLL682M◊◊ΔΔ1825
	8 200	0,058	0,022	0,044	0,36	1034	2550	16 x 35,5	ECR0JLL822M◊◊ΔΔ1635
	10 000	0,053	0,023	0,046	0,40	1260	2410	18 x 31,5	ECR0JLL103M◊◊ΔΔ1831
	12 000	0,049	0,020	0,040	0,44	1512	2970	16 x 40	ECR0JLL123M◊◊ΔΔ1640
		0,049	0,020	0,040	0,44	1512	2680	18 x 35,5	ECR0JLL123M◊◊ΔΔ1835
	15 000	0,044	0,019	0,038	0,50	1890	3010	18 x 40	ECR0JLL153M◊◊ΔΔ1840
10 (13) 1A	82	3,08	0,650	1,30	0,19	17	175	5 x 11,5	ECR1ALL820M◊◊ΔΔ0511
	100	2,53	0,460	0,920	0,19	20	235	5 x 15	ECR1ALL101M◊◊ΔΔ0515
	180	1,40	0,300	0, 600	0,19	36	290	6,3 x 11,5	ECR1ALL181M◊◊ΔΔ0611
	220	1,15	0, 200	0,400	0,19	44	400	6,3 x 15	ECR1ALL221M◊◊ΔΔ0615
	330	0,764	0,170	0,340	0,19	66	488	8 x 11,5	ECR1ALL331M◊◊ΔΔ0811
	470	0,536	0,130	0,260	0,19	94	617	8 x 16	ECR1ALL471M◊◊ΔΔ0816
		0,536	0,120	0,240	0,19	94	613	10 x 12,5	ECR1ALL471M◊◊ΔΔ1012
	560	0,450	0,095	0,190	0,19	112	734	10 x 16	ECR1ALL561M◊◊ΔΔ1016
	680	0,371	0,095	0,190	0,19	136	800	8 x 20	ECR1ALL681M◊◊ΔΔ0820
	1 000	0,252	0,065	0,130	0,19	200	1010	10 x 20	ECR1ALL102M◊◊ΔΔ1020
		0,252	0,065	0,130	0,19	200	1010	12,5 x 15	ECR1ALL102M◊◊ΔΔ1215
	1 200	0,210	0,055	0,110	0,19	240	1190	10 x 25	ECR1ALL122M◊◊ΔΔ1025
	1 500	0,168	0,045	0,090	0,19	300	1440	10 x 30	ECR1ALL152M◊◊ΔΔ1030
	1 800	0,140	0,042	0,084	0,19	360	1400	12,5 x 20	ECR1ALL182M◊◊ΔΔ1220
		0,140	0,046	0,092	0,19	360	1310	16 x 15	ECR1ALL182M◊◊ΔΔ1615
	2 200	0,127	0,038	0,076	0,21	440	1690	12,5 x 25	ECR1ALL222M◊◊ΔΔ1225
		0,127	0,043	0,086	0,21	440	1460	18 x 15	ECR1ALL222M◊◊ΔΔ1815
	2 700	0,103	0,032	0,064	0,21	540	1950	12,5 x 30	ECR1ALL272M◊◊ΔΔ1230
	3 300	0,092	0,028	0,056	0,23	660	2220	12,5 x 35	ECR1ALL332M◊◊ΔΔ1235
		0,092	0,034	0,068	0,23	660	1660	16 x 20	ECR1ALL332M◊◊ΔΔ1620
	3 900	0,078	0,026	0,052	0,23	780	2390	12,5 x 40	ECR1ALL392M◊◊ΔΔ1240
		0,078	0,028	0,056	0,23	780	2070	16 x 25	ECR1ALL392M◊◊ΔΔ1625
		0,078	0,030	0,060	0,23	780	1850	18 x 20	ECR1ALL392M◊◊ΔΔ1820
	4 700	0,071	0,027	0,054	0,25	940	2120	18 x 25	ECR1ALL472M◊◊ΔΔ1825
	5 600	0,064	0,025	0,050	0,27	1120	2350	16 x 31,5	ECR1ALL562M◊◊ΔΔ1631
	6 800	0,057	0,022	0,044	0,29	1360	2550	16 x 35,5	ECR1ALL682M◊◊ΔΔ1635
		0,057	0,023	0,046	0,29	1360	2410	18 x 31,5	ECR1ALL682M◊◊ΔΔ1831
	8 200	0,053	0,020	0,040	0,33	1640	2970	16 x 40	ECR1ALL822M◊◊ΔΔ1640
		0,053	0,020	0,040	0,33	1640	2680	18 x 35,5	ECR1ALL822M◊◊ΔΔ1835
	10 000	0,049	0,019	0,038	0,37	2000	3010	18 x 40	ECR1ALL103M◊◊ΔΔ1840
16 (20) 1C	56	3,80	0,650	1,30	0,16	18	175	5 x 11,5	ECR1CLL560M◊◊ΔΔ0511
	82	2,59	0,460	0,920	0,16	27	235	5 x 15	ECR1CLL820M◊◊ΔΔ0515
	120	1,77	0,300	0, 600	0,16	39	290	6,3 x 11,5	ECR1CLL121M◊◊ΔΔ0611
	180	1,18	0, 200	0,400	0,16	58	400	6,3 x 15	ECR1CLL181M◊◊ΔΔ0615
	270	0,786	0,170	0,340	0,16	87	501	8 x 11,5	ECR1CLL271M◊◊ΔΔ0811
	330	0,643	0,130	0,260	0,16	106	575	8 x 16	ECR1CLL331M◊◊ΔΔ0816

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RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
16 (20) 1C	330	0,643	0,120	0,240	0,16	106	625	10 x 12,5	ECR1CLL331M◊◊ΔΔ1012
	390	0,544	0,095	0,190	0,16	125	795	10 x 16	ECR1CLL391M◊◊ΔΔ1016
	470	0,452	0,095	0,190	0,16	151	760	8 x 20	ECR1CLL471M◊◊ΔΔ0820
	680	0,312	0,065	0,130	0,16	218	1010	10 x 20	ECR1CLL681M◊◊ΔΔ1020
		0,312	0,065	0,130	0,16	218	1010	12,5 x 15	ECR1CLL681M◊◊ΔΔ1215
	820	0,259	0,055	0,110	0,16	263	1190	10 x 25	ECR1CLL821M◊◊ΔΔ1025
	1 200	0,177	0,045	0,090	0,16	384	1430	10 x 30	ECR1CLL122M◊◊ΔΔ1030
		0,177	0,042	0,084	0,16	384	1400	12,5 x 20	ECR1CLL122M◊◊ΔΔ1220
	1 500	0,142	0,038	0,076	0,16	480	1690	12,5 x 25	ECR1CLL152M◊◊ΔΔ1225
		0,142	0,046	0,092	0,16	480	1340	16 x 15	ECR1CLL152M◊◊ΔΔ1615
		0,142	0,043	0,086	0,16	480	1490	18 x 15	ECR1CLL152M◊◊ΔΔ1815
	2 200	0,109	0,032	0,064	0,18	704	1950	12,5 x 30	ECR1CLL222M◊◊ΔΔ1230
		0,109	0,034	0,068	0,18	704	1730	16 x 20	ECR1CLL222M◊◊ΔΔ1620
	2 700	0,088	0,028	0,056	0,18	864	2 200	12,5 x 35	ECR1CLL272M◊◊ΔΔ1235
		0,088	0,028	0,056	0,18	864	2070	16 x 25	ECR1CLL272M◊◊ΔΔ1625
		0,088	0,030	0,060	0,18	864	1870	18 x 20	ECR1CLL272M◊◊ΔΔ1820
	3 300	0,080	0,026	0,052	0,20	1056	2390	12,5 x 40	ECR1CLL332M◊◊ΔΔ1240
	3 900	0,068	0,025	0,050	0,20	1248	2350	16 x 31,5	ECR1CLL392M◊◊ΔΔ1631
		0,068	0,027	0,054	0,20	1248	2160	18 x 25	ECR1CLL392M◊◊ΔΔ1825
	4 700	0,062	0,022	0,044	0,22	1504	2550	16 x 35,5	ECR1CLL472M◊◊ΔΔ1635
		0,062	0,023	0,046	0,22	1504	2450	18 x 31,5	ECR1CLL472M◊◊ΔΔ1831
	5 600	0,057	0,020	0,040	0,24	1792	2 900	16 x 40	ECR1CLL562M◊◊ΔΔ1640
	6 800	0,051	0,020	0,040	0,26	2176	2730	18 x 35,5	ECR1CLL682M◊◊ΔΔ1835
	8 200	0,049	0,019	0,038	0,30	2624	3060	18 x 40	ECR1CLL822M◊◊ΔΔ1840
25 (32) 1E	39	4,77	0,650	1,30	0,14	20	175	5 x 11,5	ECR1ELL390M◊◊ΔΔ0511
	56	3,32	0,460	0,920	0,14	28	235	5 x 15	ECR1ELL560M◊◊ΔΔ0515
	82	2,27	0,300	0, 600	0,14	41	290	6,3 x 11,5	ECR1ELL820M◊◊ΔΔ0611
	120	1,55	0, 200	0,400	0,14	60	400	6,3 x 15	ECR1ELL121M◊◊ΔΔ0615
	180	1,04	0,170	0,340	0,14	90	503	8 x 11,5	ECR1ELL181M◊◊ΔΔ0811
	220	0,844	0,130	0,260	0,14	110	575	8 x 16	ECR1ELL221M◊◊ΔΔ0816
		0,844	0,120	0,240	0,14	110	629	10 x 12,5	ECR1ELL221M◊◊ΔΔ1012
	270	0,688	0,095	0,190	0,14	135	795	10 x 16	ECR1ELL271M◊◊ΔΔ1016
	330	0,563	0,095	0,190	0,14	165	751	8 x 20	ECR1ELL331M◊◊ΔΔ0820
	470	0,395	0,065	0,130	0,14	235	1010	10 x 20	ECR1ELL471M◊◊ΔΔ1020
		0,395	0,065	0,130	0,14	235	1010	12,5 x 15	ECR1ELL471M◊◊ΔΔ1215
	560	0,332	0,055	0,110	0,14	280	1190	10 x 25	ECR1ELL561M◊◊ΔΔ1025
	820	0,227	0,045	0,090	0,14	410	1440	10 x 30	ECR1ELL821M◊◊ΔΔ1030
		0,227	0,042	0,084	0,14	410	1400	12,5 x 20	ECR1ELL821M◊◊ΔΔ1220
		0,227	0,046	0,092	0,14	410	1360	16 x 15	ECR1ELL821M◊◊ΔΔ1615
	1 000	0,186	0,038	0,076	0,14	500	1690	12,5 x 25	ECR1ELL102M◊◊ΔΔ1225
	1 200	0,155	0,043	0,086	0,14	600	1500	18 x 15	ECR1ELL122M◊◊ΔΔ1815
	1 500	0,124	0,032	0,064	0,14	750	1950	12,5 x 30	ECR1ELL152M◊◊ΔΔ1230
		0,124	0,034	0,068	0,14	750	1730	16 x 20	ECR1ELL152M◊◊ΔΔ1620
	1 800	0,103	0,028	0,056	0,14	900	2 200	12,5 x 35	ECR1ELL182M◊◊ΔΔ1235
		0,103	0,028	0,056	0,14	900	2070	16 x 25	ECR1ELL182M◊◊ΔΔ1625
		0,103	0,030	0,060	0,14	900	1890	18 x 20	ECR1ELL182M◊◊ΔΔ1820
	2 200	0,097	0,026	0,052	0,16	1100	2390	12,5 x 40	ECR1ELL222M◊◊ΔΔ1240
	2 700	0,079	0,025	0,050	0,16	1350	2350	16 x 31,5	ECR1ELL272M◊◊ΔΔ1631
		0,079	0,027	0,054	0,16	1350	2180	18 x 25	ECR1ELL272M◊◊ΔΔ1825
	3 300	0,072	0,022	0,044	0,18	1650	2550	16 x 35,5	ECR1ELL332M◊◊ΔΔ1635
		0,072	0,023	0,046	0,18	1650	2470	18 x 31,5	ECR1ELL332M◊◊ΔΔ1831
	3 900	0,061	0,020	0,040	0,18	1950	2 900	16 x 40	ECR1ELL392M◊◊ΔΔ1640
		0,061	0,020	0,040	0,18	1950	2740	18 x 35,5	ECR1ELL392M◊◊ΔΔ1835
	4 700	0,056	0,019	0,038	0,20	2350	3070	18 x 40	ECR1ELL472M◊◊ΔΔ1840
35 (44) 1V	27	5,90	0,650	1,30	0,12	19	175	5 x 11,5	ECR1VLL270M◊◊ΔΔ0511
	39	4,09	0,460	0,920	0,12	28	235	5 x 15	ECR1VLL390M◊◊ΔΔ0515
	56	2,85	0,300	0, 600	0,12	40	290	6,3 x 11,5	ECR1VLL560M◊◊ΔΔ0611
	82	1,95	0, 200	0,400	0,12	58	400	6,3 x 15	ECR1VLL820M◊◊ΔΔ0615
	120	1,33	0,170	0,340	0,12	84	501	8 x 11,5	ECR1VLL121M◊◊ΔΔ0811
	150	1,07	0,120	0,240	0,12	105	625	10 x 12,5	ECR1VLL151M◊◊ΔΔ1012
	180	0,885	0,130	0,260	0,12	126	575	8 x 16	ECR1VLL181M◊◊ΔΔ0816
		0,885	0,095	0,190	0,12	126	795	10 x 16	ECR1VLL181M◊◊ΔΔ1016
	220	0,724	0,095	0,190	0,12	154	760	8 x 20	ECR1VLL221M◊◊ΔΔ0820
	330	0,483	0,065	0,130	0,12	231	1010	10 x 20	ECR1VLL331M◊◊ΔΔ1020
		0,483	0,065	0,130	0,12	231	1010	12,5 x 15	ECR1VLL331M◊◊ΔΔ1215
	390	0,408	0,055	0,110	0,12	273	1190	10 x 25	ECR1VLL391M◊◊ΔΔ1025

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
35 (44) 1V	560	0,284	0,045	0,090	0,12	392	1450	10 x 30	ECR1VLL561M◊◊ΔΔ1030
		0,284	0,042	0,084	0,12	392	1400	12,5 x 20	ECR1VLL561M◊◊ΔΔ1220
		0,284	0,046	0,092	0,12	392	1360	16 x 15	ECR1VLL561M◊◊ΔΔ1615
	680	0,234	0,038	0,076	0,12	476	1690	12,5 x 25	ECR1VLL681M◊◊ΔΔ1225
		0,234	0,043	0,086	0,12	476	1520	18 x 15	ECR1VLL681M◊◊ΔΔ1815
	1 000	0,159	0,032	0,064	0,12	700	1950	12,5 x 30	ECR1VLL102M◊◊ΔΔ1230
		0,159	0,034	0,068	0,12	700	1730	16 x 20	ECR1VLL102M◊◊ΔΔ1620
	1 200	0,133	0,028	0,056	0,12	840	2 200	12,5 x 35	ECR1VLL122M◊◊ΔΔ1235
		0,133	0,028	0,056	0,12	840	2070	16 x 25	ECR1VLL122M◊◊ΔΔ1625
		0,133	0,030	0,060	0,12	840	1 900	18 x 20	ECR1VLL122M◊◊ΔΔ1820
	1 500	0,106	0,026	0,052	0,12	1050	2390	12,5 x 40	ECR1VLL152M◊◊ΔΔ1240
	1 800	0,088	0,025	0,050	0,12	1260	2350	16 x 31,5	ECR1VLL182M◊◊ΔΔ1631
		0,088	0,027	0,054	0,12	1260	2 200	18 x 25	ECR1VLL182M◊◊ΔΔ1825
	2 200	0,084	0,022	0,044	0,14	1540	2550	16 x 35,5	ECR1VLL222M◊◊ΔΔ1635
		0,084	0,023	0,046	0,14	1540	2490	18 x 31,5	ECR1VLL222M◊◊ΔΔ1831
	2 700	0,069	0,020	0,040	0,14	1890	2 900	16 x 40	ECR1VLL272M◊◊ΔΔ1640
		0,069	0,020	0,040	0,14	1890	2770	18 x 35,5	ECR1VLL272M◊◊ΔΔ1835
	3 300	0,064	0,019	0,038	0,16	2310	3110	18 x 40	ECR1VLL332M◊◊ΔΔ1840
50 (63) 1H	0,47	283	3,90	7,80	0,10	3	22	5 x 11,5	ECR1HLLR47M◊◊ΔΔ0511
	1,0	133	3,50	7,00	0,10	3	36	5 x 11,5	ECR1HLL010M◊◊ΔΔ0511
	2,2	60,4	3,00	6,00	0,10	3	54	5 x 11,5	ECR1HLL2R2M◊◊ΔΔ0511
	3,3	40,2	2,60	5,20	0,10	4	63	5 x 11,5	ECR1HLL3R3M◊◊ΔΔ0511
	4,7	28,3	2,20	4,40	0,10	5	75	5 x 11,5	ECR1HLL4R7M◊◊ΔΔ0511
	10	13,3	1,40	2,80	0,10	10	110	5 x 11,5	ECR1HLL100M◊◊ΔΔ0511
	18	7,38	0,950	1,90	0,10	18	120	5 x 11,5	ECR1HLL180M◊◊ΔΔ0511
	27	4,92	0,550	1,10	0,10	27	135	5 x 15	ECR1HLL270M◊◊ΔΔ0515
	39	3,41	0,360	0,720	0,10	39	148	6,3 x 11,5	ECR1HLL390M◊◊ΔΔ0611
	56	2,37	0,280	0,560	0,10	56	153	6,3 x 15	ECR1HLL560M◊◊ΔΔ0615
	68	1,96	0, 200	0,400	0,10	68	360	8 x 11,5	ECR1HLL680M◊◊ΔΔ0811
	82	1,62	0,180	0,360	0,10	82	460	8 x 16	ECR1HLL820M◊◊ΔΔ0816
		1,62	0,180	0,360	0,10	82	443	10 x 12,5	ECR1HLL820M◊◊ΔΔ1012
	100	1,33	0,150	0,300	0,10	100	553	10 x 16	ECR1HLL101Q◊◊ΔΔ1016
		1,33	0,150	0,300	0,10	100	553	10 x 16	ECR1HLL101M◊◊ΔΔ1016
	120	1,11	0,130	0,260	0,10	120	670	8 x 20	ECR1HLL121M◊◊ΔΔ0820
	180	0,737	0,095	0,190	0,10	180	676	10 x 20	ECR1HLL181M◊◊ΔΔ1020
		0,737	0,105	0,210	0,10	180	745	12,5 x 15	ECR1HLL181M◊◊ΔΔ1215
	220	0,603	0,080	0,160	0,10	220	876	10 x 25	ECR1HLL221M◊◊ΔΔ1025
	330	0,402	0,065	0,130	0,10	330	1010	10 x 30	ECR1HLL331M◊◊ΔΔ1030
		0,402	0,070	0,140	0,10	330	979	12,5 x 20	ECR1HLL331M◊◊ΔΔ1220
		0,402	0,075	0,150	0,10	330	982	16 x 15	ECR1HLL331M◊◊ΔΔ1615
	470	0,282	0,054	0,108	0,10	470	1180	12,5 x 25	ECR1HLL471M◊◊ΔΔ1225
		0,282	0,058	0,116	0,10	470	1180	18 x 15	ECR1HLL471M◊◊ΔΔ1815
	560	0,237	0,050	0,100	0,10	560	1310	12,5 x 30	ECR1HLL561M◊◊ΔΔ1230
	680	0,195	0,046	0,092	0,10	680	1470	12,5 x 35	ECR1HLL681M◊◊ΔΔ1235
		0,195	0,050	0,100	0,10	680	1210	16 x 20	ECR1HLL681M◊◊ΔΔ1620
	820	0,162	0,044	0,088	0,10	820	1590	12,5 x 40	ECR1HLL821M◊◊ΔΔ1240
		0,162	0,048	0,096	0,10	820	1490	16 x 25	ECR1HLL821M◊◊ΔΔ1625
		0,162	0,046	0,092	0,10	820	1450	18 x 20	ECR1HLL821M◊◊ΔΔ1820
	1 000	0,133	0,040	0,080	0,10	1000	1890	16 x 31,5	ECR1HLL102M◊◊ΔΔ1631
		0,133	0,040	0,080	0,10	1000	1720	18 x 25	ECR1HLL102M◊◊ΔΔ1825
	1 200	0,111	0,032	0,064	0,10	1 200	2140	16 x 35,5	ECR1HLL122M◊◊ΔΔ1635
	1 500	0,088	0,026	0,052	0,10	1500	2410	16 x 40	ECR1HLL152M◊◊ΔΔ1640
		0,088	0,026	0,052	0,10	1500	1970	18 x 31,5	ECR1HLL152M◊◊ΔΔ1831
	1 800	0,074	0,025	0,050	0,10	1800	2310	18 x 35,5	ECR1HLL182M◊◊ΔΔ1835
	2 200	0,072	0,024	0,048	0,12	2 200	2530	18 x 40	ECR1HLL222M◊◊ΔΔ1840
63 (79) 1J	12	9,96	1,20	3,60	0,09	16	120	5 x 11,5	ECR1JLL120M◊◊ΔΔ0511
	18	6,64	0,850	2,60	0,09	23	135	5 x 15	ECR1JLL180M◊◊ΔΔ0515
	27	4,43	0,550	1,70	0,09	34	148	6,3 x 11,5	ECR1JLL270M◊◊ΔΔ0611
	39	3,07	0,380	1,10	0,09	50	153	6,3 x 15	ECR1JLL390M◊◊ΔΔ0615
	47	2,55	0,320	0,960	0,09	60	360	8 x 11,5	ECR1JLL470M◊◊ΔΔ0811
	56	2,14	0,230	0,690	0,09	71	448	10 x 12,5	ECR1JLL560M◊◊ΔΔ1012
	68	1,76	0,240	0,720	0,09	86	469	8 x 16	ECR1JLL680M◊◊ΔΔ0816
		1,76	0,170	0,510	0,09	86	553	10 x 16	ECR1JLL680M◊◊ΔΔ1016
	82	1,46	0,170	0,510	0,09	104	682	8 x 20	ECR1JLL820M◊◊ΔΔ0820
	120	0,995	0,120	0,360	0,09	152	676	10 x 20	ECR1JLL121M◊◊ΔΔ1020

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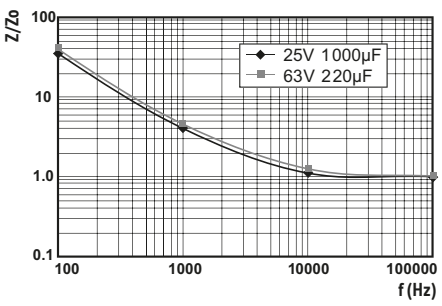
RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
63 (79) 1J	150	0,796	0,100	0,300	0,09	189	876	10 x 25	ECR1JLL151M◊◊ΔΔ1025
		0,796	0,110	0,330	0,09	189	745	12,5 x 15	ECR1JLL151M◊◊ΔΔ1215
		0,796	0,110	0,330	0,09	189	745	12,5 x 15	ECR1JLL151K◊◊ΔΔ1215
	180	0,663	0,085	0,260	0,09	227	1020	10 x 30	ECR1JLL181M◊◊ΔΔ1030
	220	0,543	0,075	0,230	0,09	278	979	12,5 x 20	ECR1JLL221M◊◊ΔΔ1220
		0,543	0,080	0,240	0,09	278	928	16 x 15	ECR1JLL221M◊◊ΔΔ1615
	270	0,442	0,065	0, 200	0,09	341	1180	12,5 x 25	ECR1JLL271M◊◊ΔΔ1225
	330	0,362	0,065	0, 200	0,09	416	1 200	18 x 15	ECR1JLL331M◊◊ΔΔ1815
	390	0,306	0,055	0,170	0,09	492	1310	12,5 x 30	ECR1JLL391M◊◊ΔΔ1230
		0,306	0,057	0,170	0,09	492	1210	16 x 20	ECR1JLL391M◊◊ΔΔ1620
	470	0,254	0,048	0,140	0,09	593	1470	12,5 x 35	ECR1JLL471M◊◊ΔΔ1235
		0,254	0,052	0,160	0,09	593	1490	16 x 25	ECR1JLL471M◊◊ΔΔ1625
		0,254	0,058	0,170	0,09	593	1460	18 x 20	ECR1JLL471M◊◊ΔΔ1820
	560	0,213	0,042	0,130	0,09	706	1590	12,5 x 40	ECR1JLL561M◊◊ΔΔ1240
	680	0,176	0,042	0,130	0,09	857	1890	16 x 31,5	ECR1JLL681M◊◊ΔΔ1631
		0,176	0,050	0,150	0,09	857	1740	18 x 25	ECR1JLL681M◊◊ΔΔ1825
	820	0,146	0,036	0,110	0,09	1034	2140	16 x 35,5	ECR1JLL821M◊◊ΔΔ1635
		0,146	0,042	0,130	0,09	1034	1990	18 x 31,5	ECR1JLL821M◊◊ΔΔ1831
	1 000	0,119	0,032	0,096	0,09	1260	2410	16 x 40	ECR1JLL102M◊◊ΔΔ1640
		0,119	0,035	0,110	0,09	1260	2340	18 x 35,5	ECR1JLL102M◊◊ΔΔ1835
	1 200	0,100	0,032	0,096	0,09	1512	2560	18 x 40	ECR1JLL122M◊◊ΔΔ1840
100 (125) 2A	5,6	19,0	1,90	7,60	0,08	12	57	5 x 11,5	ECR2ALL5R6M◊◊ΔΔ0511
	8,2	13,0	1,30	5,20	0,08	17	74	5 x 15	ECR2ALL8R2M◊◊ΔΔ0515
	12	8,85	1,10	4,40	0,08	24	78	6,3 x 11,5	ECR2ALL120M◊◊ΔΔ0611
	18	5,90	0,620	2,50	0,08	36	85	6,3 x 15	ECR2ALL180M◊◊ΔΔ0615
	22	4,83	0,530	2,10	0,08	44	275	8 x 11,5	ECR2ALL220M◊◊ΔΔ0811
	27	3,94	0,470	1,90	0,08	54	319	10 x 12,5	ECR2ALL270M◊◊ΔΔ1012
	33	3,22	0,350	1,40	0,08	66	360	8 x 16	ECR2ALL330M◊◊ΔΔ0816
		3,22	0,320	1,30	0,08	66	424	10 x 16	ECR2ALL330M◊◊ΔΔ1016
	39	2,73	0,270	1,10	0,08	78	490	8 x 20	ECR2ALL390M◊◊ΔΔ0820
	56	1,90	0,250	1,00	0,08	112	499	10 x 20	ECR2ALL560M◊◊ΔΔ1020
	68	1,57	0,180	0,720	0,08	136	634	10 x 25	ECR2ALL680M◊◊ΔΔ1025
		1,57	0, 200	0,800	0,08	136	613	12,5 x 15	ECR2ALL680M◊◊ΔΔ1215
	100	1,07	0,150	0, 600	0,08	200	739	10 x 30	ECR2ALL101M◊◊ΔΔ1030
		1,07	0,130	0,520	0,08	200	805	12,5 x 20	ECR2ALL101M◊◊ΔΔ1220
	120	0,885	0,110	0,440	0,08	240	857	12,5 x 25	ECR2ALL121M◊◊ΔΔ1225
		0,885	0,130	0,500	0,08	240	706	16 x 15	ECR2ALL121M◊◊ΔΔ1615
	150	0,708	0,120	0,480	0,08	300	871	18 x 15	ECR2ALL151M◊◊ΔΔ1815
	180	0,590	0,090	0,360	0,08	360	1120	12,5 x 30	ECR2ALL181M◊◊ΔΔ1230
		0,590	0,110	0,440	0,08	360	916	16 x 20	ECR2ALL181M◊◊ΔΔ1620
	220	0,483	0,075	0,300	0,08	440	1240	12,5 x 35	ECR2ALL221M◊◊ΔΔ1235
		0,483	0,081	0,320	0,08	440	1290	16 x 25	ECR2ALL221M◊◊ΔΔ1625
	270	0,393	0,060	0,240	0,08	540	1330	12,5 x 40	ECR2ALL271M◊◊ΔΔ1240
		0,393	0,085	0,340	0,08	540	1170	18 x 20	ECR2ALL271M◊◊ΔΔ1820
	330	0,322	0,059	0,230	0,08	660	1630	16 x 31,5	ECR2ALL331M◊◊ΔΔ1631
		0,322	0,071	0,280	0,08	660	1500	18 x 25	ECR2ALL331M◊◊ΔΔ1825
	390	0,272	0,052	0,210	0,08	780	1750	16 x 35,5	ECR2ALL391M◊◊ΔΔ1635
		0,272	0,058	0,230	0,08	780	1630	18 x 31,5	ECR2ALL391M◊◊ΔΔ1831
	470	0,226	0,045	0,180	0,08	940	1920	16 x 40	ECR2ALL471M◊◊ΔΔ1640
	560	0,190	0,054	0,220	0,08	1120	1920	18 x 35,5	ECR2ALL561M◊◊ΔΔ1835
	680	0,156	0,041	0,160	0,08	1360	2100	18 x 40	ECR2ALL681M◊◊ΔΔ1840

IMPEDANCE RATIO

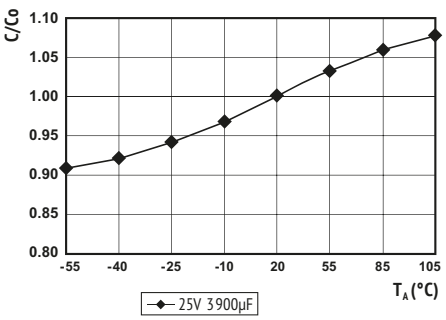


Z = actual impedance of each frequency at 20°C

Zo = Impedance at 100kHz, 20°C

Impedance Ratio as a function of frequency

CAPACITANCE RATIO



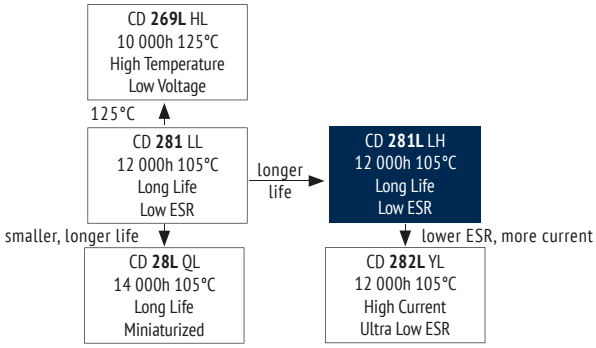
C = actual capacitance of each temperature at 100Hz,

Co = Capacitance at 20°C, 100Hz

Capacitance Ratio as a function of temperature (typical curve)

6 000 - 12 000h at 105°C

- Low impedance
- Switching Power Supplies
- Excellent ripple current capability
- High reliability at high temperature



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-55 ~ +105
Voltage Range (V)	6,3 ~ 100
Capacitance Range (µF)	0,47 ~ 15 000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 2 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	6,3 ~ 100
	$Z_{-55°C} / Z_{+20°C}$	3

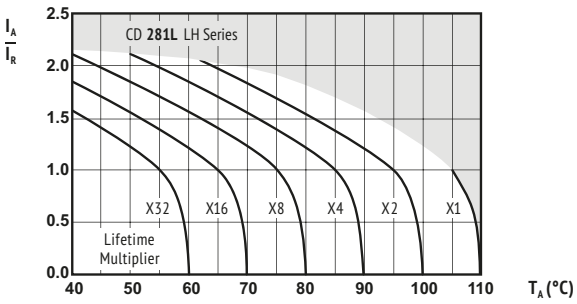
ITEM		USEFUL LIFE			LOAD LIFE		ENDURANCE TEST		SHELF LIFE	
Lifetime		6,3~10V:	16~100V:	> 200 000h	6,3~10V:	16~100V:	6,3~10V:	16~100V:	1 000h	
	Ø 5~6,3:	6 000h	7 000h		4 000h	5 000h	4 000h	5 000h		
	Ø 8~10:	8 000h	9 000h		6 000h	7 000h	6 000h	7 000h		
	Ø 12,5~18:	10 000h	12 000h		8 000h	10 000h	8 000h	10 000h		
Leakage Current		Not more than specified value			Not more than specified value		Not more than specified value		Not more than specified value	
Capacitance Change		Within ± 40% of initial value			Within ± 25% of initial value		Within ± 25% of initial value		Within ± 20% of initial value	
Dissipation Factor		Not more than 300% of specified value			Not more than 200% of specified value		Not more than 200% of specified value		Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature		U_R I_R 105°C		U_R 1,4 x I_R 40°C	U_R I_R 105°C		U_R I_R = 0 105°C IEC 60384		U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Capacitance (µF) \ Frequency	120Hz	1kHz	10kHz	100kHz
0,47 ~ 4,7	0,40	0,68	0,78	1,00
5,6 ~ 47	0,50	0,76	0,87	1,00
56 ~ 270	0,70	0,85	0,93	1,00
330 ~ 1 000	0,80	0,93	0,98	1,00
1 200 ~ 15 000	0,90	0,95	1,00	1,00

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

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U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
6,3 (7,2) 0J	100	2,92	0,650	1,30	0,22	13	175	5 x 11,5	ECR0JLH101M◊◊ΔΔ0511
	150	1,95	0,460	0,920	0,22	19	235	5 x 15	ECR0JLH151M◊◊ΔΔ0515
	220	1,33	0,300	0,600	0,22	28	290	6,3 x 11,5	ECR0JLH221M◊◊ΔΔ0611
	330	0,885	0,200	0,400	0,22	42	400	6,3 x 15	ECR0JLH331M◊◊ΔΔ0615
	470	0,621	0,170	0,340	0,22	60	488	8 x 11,5	ECR0JLH471M◊◊ΔΔ0811
	680	0,429	0,130	0,260	0,22	86	617	8 x 16	ECR0JLH681M◊◊ΔΔ0816
		0,429	0,120	0,240	0,22	86	613	10 x 12,5	ECR0JLH681M◊◊ΔΔ1012
	820	0,356	0,095	0,190	0,22	104	734	10 x 16	ECR0JLH821M◊◊ΔΔ1016
	1 000	0,292	0,095	0,190	0,22	126	800	8 x 20	ECR0JLH102M◊◊ΔΔ0820
	1 200	0,243	0,065	0,130	0,22	152	1010	10 x 20	ECR0JLH122M◊◊ΔΔ1020
		0,243	0,065	0,130	0,22	152	1010	12,5 x 15	ECR0JLH122M◊◊ΔΔ1215
	1 500	0,195	0,055	0,110	0,22	189	1190	10 x 25	ECR0JLH152M◊◊ΔΔ1025
	2 200	0,145	0,045	0,090	0,24	278	1440	10 x 30	ECR0JLH222M◊◊ΔΔ1030
		0,145	0,042	0,084	0,24	278	1400	12,5 x 20	ECR0JLH222M◊◊ΔΔ1220
	2 700	0,118	0,038	0,076	0,24	341	1690	12,5 x 25	ECR0JLH272M◊◊ΔΔ1225
		0,118	0,046	0,092	0,24	341	1310	16 x 15	ECR0JLH272M◊◊ΔΔ1615
	3 300	0,105	0,043	0,086	0,26	416	1460	18 x 15	ECR0JLH332M◊◊ΔΔ1815
	3 900	0,088	0,032	0,064	0,26	492	1950	12,5 x 30	ECR0JLH392M◊◊ΔΔ1230
	4 700	0,079	0,028	0,056	0,28	593	2220	12,5 x 35	ECR0JLH472M◊◊ΔΔ1235
		0,079	0,034	0,068	0,28	593	1660	16 x 20	ECR0JLH472M◊◊ΔΔ1620
	5 600	0,071	0,026	0,052	0,30	706	2390	12,5 x 40	ECR0JLH562M◊◊ΔΔ1240
		0,071	0,028	0,056	0,30	706	2070	16 x 25	ECR0JLH562M◊◊ΔΔ1625
		0,071	0,030	0,060	0,30	706	1850	18 x 20	ECR0JLH562M◊◊ΔΔ1820
	6 800	0,062	0,025	0,050	0,32	857	2350	16 x 31,5	ECR0JLH682M◊◊ΔΔ1631
		0,062	0,027	0,054	0,32	857	2120	18 x 25	ECR0JLH682M◊◊ΔΔ1825
	8 200	0,058	0,022	0,044	0,36	1034	2550	16 x 35,5	ECR0JLH822M◊◊ΔΔ1635
	10 000	0,053	0,023	0,046	0,40	1260	2410	18 x 31,5	ECR0JLH103M◊◊ΔΔ1831
	12 000	0,049	0,020	0,040	0,44	1512	2970	16 x 40	ECR0JLH123M◊◊ΔΔ1640
		0,049	0,020	0,040	0,44	1512	2680	18 x 35,5	ECR0JLH123M◊◊ΔΔ1835
	15 000	0,044	0,019	0,038	0,50	1890	3010	18 x 40	ECR0JLH153M◊◊ΔΔ1840
10 (13) A	82	3,08	0,650	1,30	0,19	17	175	5 x 11,5	ECR1ALH820M◊◊ΔΔ0511
	100	2,53	0,460	0,920	0,19	20	235	5 x 15	ECR1ALH101M◊◊ΔΔ0515
	180	1,41	0,300	0,600	0,19	36	290	6,3 x 11,5	ECR1ALH181M◊◊ΔΔ0611
	220	1,15	0,200	0,400	0,19	44	400	6,3 x 15	ECR1ALH221M◊◊ΔΔ0615
	330	0,764	0,170	0,340	0,19	66	488	8 x 11,5	ECR1ALH331M◊◊ΔΔ0811
	470	0,536	0,130	0,260	0,19	94	617	8 x 16	ECR1ALH471M◊◊ΔΔ0816
		0,536	0,120	0,240	0,19	94	613	10 x 12,5	ECR1ALH471M◊◊ΔΔ1012
	560	0,450	0,095	0,190	0,19	112	734	10 x 16	ECR1ALH561M◊◊ΔΔ1016
	680	0,374	0,095	0,190	0,19	136	800	8 x 20	ECR1ALH681M◊◊ΔΔ0820
	1 000	0,252	0,065	0,130	0,19	200	1010	10 x 20	ECR1ALH102M◊◊ΔΔ1020
		0,252	0,065	0,130	0,19	200	1010	12,5 x 15	ECR1ALH102M◊◊ΔΔ1215
	1 200	0,210	0,055	0,110	0,19	240	1190	10 x 25	ECR1ALH122M◊◊ΔΔ1025
	1 500	0,168	0,045	0,090	0,19	300	1440	10 x 30	ECR1ALH152M◊◊ΔΔ1030
	1 800	0,140	0,042	0,084	0,19	360	1400	12,5 x 20	ECR1ALH182M◊◊ΔΔ1220
		0,140	0,046	0,092	0,19	360	1310	16 x 15	ECR1ALH182M◊◊ΔΔ1615
	2 200	0,127	0,038	0,076	0,21	440	1690	12,5 x 25	ECR1ALH222M◊◊ΔΔ1225
		0,127	0,043	0,086	0,21	440	1460	18 x 15	ECR1ALH222M◊◊ΔΔ1815
	2 700	0,103	0,032	0,064	0,21	540	1950	12,5 x 30	ECR1ALH272M◊◊ΔΔ1230
	3 300	0,092	0,028	0,056	0,23	660	2220	12,5 x 35	ECR1ALH332M◊◊ΔΔ1235
		0,092	0,034	0,068	0,23	660	1660	16 x 20	ECR1ALH332M◊◊ΔΔ1620
	3 800	0,078	0,026	0,052	0,23	760	2390	12,5 x 40	ECR1ALH382M◊◊ΔΔ1240
		0,078	0,028	0,056	0,23	760	2070	16 x 25	ECR1ALH382M◊◊ΔΔ1625
		0,078	0,030	0,060	0,23	760	1850	18 x 20	ECR1ALH382M◊◊ΔΔ1820
	4 700	0,071	0,027	0,054	0,25	940	2120	18 x 25	ECR1ALH472M◊◊ΔΔ1825
	5 600	0,064	0,025	0,050	0,27	1120	2350	16 x 31,5	ECR1ALH562M◊◊ΔΔ1631
	6 800	0,057	0,022	0,044	0,29	1360	2550	16 x 35,5	ECR1ALH682M◊◊ΔΔ1635
		0,057	0,023	0,046	0,29	1360	2410	18 x 31,5	ECR1ALH682M◊◊ΔΔ1831
	8 200	0,053	0,020	0,040	0,33	1640	2970	16 x 40	ECR1ALH822M◊◊ΔΔ1640
		0,053	0,020	0,040	0,33	1640	2680	18 x 35,5	ECR1ALH822M◊◊ΔΔ1835
	10 000	0,049	0,019	0,038	0,37	2000	3010	18 x 40	ECR1ALH103M◊◊ΔΔ1840
16 (20) 1C	56	3,80	0,650	1,30	0,16	18	175	5 x 11,5	ECR1CLH560M◊◊ΔΔ0511
	82	2,59	0,460	0,920	0,16	27	235	5 x 15	ECR1CLH820M◊◊ΔΔ0515
	120	1,77	0,300	0,600	0,16	39	290	6,3 x 11,5	ECR1CLH121M◊◊ΔΔ0611
	180	1,18	0,200	0,400	0,16	58	400	6,3 x 15	ECR1CLH181M◊◊ΔΔ0615
	270	0,786	0,170	0,340	0,16	87	501	8 x 11,5	ECR1CLH271M◊◊ΔΔ0811

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
16 (20) 1C	330	0,643	0,130	0,260	0,16	106	575	8 x 16	ECR1CLH331M◊◊ΔΔ0816
		0,643	0,120	0,240	0,16	106	625	10 x 12,5	ECR1CLH331M◊◊ΔΔ1012
	390	0,544	0,095	0,190	0,16	125	795	10 x 16	ECR1CLH391M◊◊ΔΔ1016
	470	0,452	0,095	0,190	0,16	151	760	8 x 20	ECR1CLH471M◊◊ΔΔ0820
	680	0,312	0,065	0,130	0,16	218	1010	10 x 20	ECR1CLH681M◊◊ΔΔ1020
		0,312	0,065	0,130	0,16	218	1010	12,5 x 15	ECR1CLH681M◊◊ΔΔ1215
	820	0,259	0,055	0,110	0,16	263	1190	10 x 25	ECR1CLH821M◊◊ΔΔ1025
	1 200	0,177	0,045	0,090	0,16	384	1430	10 x 30	ECR1CLH122M◊◊ΔΔ1030
		0,177	0,042	0,084	0,16	384	1400	12,5 x 20	ECR1CLH122M◊◊ΔΔ1220
	1 500	0,142	0,038	0,076	0,16	480	1690	12,5 x 25	ECR1CLH152M◊◊ΔΔ1225
		0,142	0,046	0,092	0,16	480	1340	16 x 15	ECR1CLH152M◊◊ΔΔ1615
		0,142	0,043	0,086	0,16	480	1490	18 x 15	ECR1CLH152M◊◊ΔΔ1815
	2 200	0,109	0,032	0,064	0,18	704	1950	12,5 x 30	ECR1CLH222M◊◊ΔΔ1230
		0,109	0,034	0,068	0,18	704	1730	16 x 20	ECR1CLH222M◊◊ΔΔ1620
	2 700	0,088	0,028	0,056	0,18	864	2200	12,5 x 35	ECR1CLH272M◊◊ΔΔ1235
		0,088	0,028	0,056	0,18	864	2070	16 x 25	ECR1CLH272M◊◊ΔΔ1625
		0,088	0,030	0,060	0,18	864	1870	18 x 20	ECR1CLH272M◊◊ΔΔ1820
	3 300	0,080	0,026	0,052	0,20	1056	2390	12,5 x 40	ECR1CLH332M◊◊ΔΔ1240
	3 900	0,068	0,025	0,050	0,20	1248	2350	16 x 31,5	ECR1CLH392M◊◊ΔΔ1631
		0,068	0,027	0,054	0,20	1248	2160	18 x 25	ECR1CLH392M◊◊ΔΔ1825
	4 700	0,062	0,022	0,044	0,22	1504	2550	16 x 35,5	ECR1CLH472M◊◊ΔΔ1635
		0,062	0,023	0,046	0,22	1504	2450	18 x 31,5	ECR1CLH472M◊◊ΔΔ1831
	5 600	0,057	0,020	0,040	0,24	1792	2900	16 x 40	ECR1CLH562M◊◊ΔΔ1640
	6 800	0,051	0,020	0,040	0,26	2176	2730	18 x 35,5	ECR1CLH682M◊◊ΔΔ1835
	8 200	0,049	0,019	0,038	0,30	2624	3060	18 x 40	ECR1CLH822M◊◊ΔΔ1840
25 (32) 1E	39	4,77	0,650	1,30	0,14	20	175	5 x 11,5	ECR1ELH390M◊◊ΔΔ0511
	56	3,32	0,460	0,920	0,14	28	235	5 x 15	ECR1ELH560M◊◊ΔΔ0515
	82	2,27	0,300	0,600	0,14	41	290	6,3 x 11,5	ECR1ELH820M◊◊ΔΔ0611
	120	1,55	0,200	0,400	0,14	60	400	6,3 x 15	ECR1ELH121M◊◊ΔΔ0615
	180	1,04	0,170	0,340	0,14	90	503	8 x 11,5	ECR1ELH181M◊◊ΔΔ0811
	220	0,844	0,130	0,260	0,14	110	575	8 x 16	ECR1ELH221M◊◊ΔΔ0816
		0,844	0,120	0,240	0,14	110	629	10 x 12,5	ECR1ELH221M◊◊ΔΔ1012
	270	0,688	0,095	0,190	0,14	135	795	10 x 16	ECR1ELH271M◊◊ΔΔ1016
	330	0,563	0,095	0,190	0,14	165	751	8 x 20	ECR1ELH331M◊◊ΔΔ0820
	470	0,395	0,065	0,130	0,14	235	1010	10 x 20	ECR1ELH471M◊◊ΔΔ1020
		0,395	0,065	0,130	0,14	235	1010	12,5 x 15	ECR1ELH471M◊◊ΔΔ1215
	560	0,332	0,055	0,110	0,14	280	1190	10 x 25	ECR1ELH561M◊◊ΔΔ1025
	820	0,227	0,045	0,090	0,14	410	1440	10 x 30	ECR1ELH821M◊◊ΔΔ1030
		0,227	0,042	0,084	0,14	410	1400	12,5 x 20	ECR1ELH821M◊◊ΔΔ1220
		0,227	0,046	0,092	0,14	410	1360	16 x 15	ECR1ELH821M◊◊ΔΔ1615
	1 000	0,186	0,038	0,076	0,14	500	1690	12,5 x 25	ECR1ELH102M◊◊ΔΔ1225
	1 200	0,155	0,043	0,086	0,14	600	1500	18 x 15	ECR1ELH122M◊◊ΔΔ1815
	1 500	0,124	0,032	0,064	0,14	750	1950	12,5 x 30	ECR1ELH152M◊◊ΔΔ1230
		0,124	0,034	0,068	0,14	750	1730	16 x 20	ECR1ELH152M◊◊ΔΔ1620
	1 800	0,103	0,028	0,056	0,14	900	2200	12,5 x 35	ECR1ELH182M◊◊ΔΔ1235
		0,103	0,028	0,056	0,14	900	2070	16 x 25	ECR1ELH182M◊◊ΔΔ1625
		0,103	0,030	0,060	0,14	900	1890	18 x 20	ECR1ELH182M◊◊ΔΔ1820
	2 200	0,097	0,026	0,052	0,16	1100	2390	12,5 x 40	ECR1ELH222M◊◊ΔΔ1240
	2 700	0,079	0,025	0,050	0,16	1350	2350	16 x 31,5	ECR1ELH272M◊◊ΔΔ1631
		0,079	0,027	0,054	0,16	1350	2180	18 x 25	ECR1ELH272M◊◊ΔΔ1825
	3 300	0,072	0,022	0,044	0,18	1650	2550	16 x 35,5	ECR1ELH332M◊◊ΔΔ1635
		0,072	0,023	0,046	0,18	1650	2470	18 x 31,5	ECR1ELH332M◊◊ΔΔ1831
	3 900	0,061	0,020	0,040	0,18	1950	2900	16 x 40	ECR1ELH392M◊◊ΔΔ1640
		0,061	0,020	0,040	0,18	1950	2740	18 x 35,5	ECR1ELH392M◊◊ΔΔ1835
	4 700	0,056	0,019	0,038	0,20	2350	3070	18 x 40	ECR1ELH472M◊◊ΔΔ1840
35 (44) 1V	27	5,90	0,650	1,30	0,12	19	175	5 x 11,5	ECR1VLH270M◊◊ΔΔ0511
	39	4,09	0,460	0,920	0,12	28	235	5 x 15	ECR1VLH390M◊◊ΔΔ0515
	56	2,85	0,300	0,600	0,12	40	290	6,3 x 11,5	ECR1VLH560M◊◊ΔΔ0611
	82	1,95	0,200	0,400	0,12	58	400	6,3 x 15	ECR1VLH820M◊◊ΔΔ0615
	120	1,33	0,170	0,340	0,12	84	501	8 x 11,5	ECR1VLH121M◊◊ΔΔ0811
	150	1,07	0,120	0,240	0,12	105	625	10 x 12,5	ECR1VLH151M◊◊ΔΔ1012
	180	0,885	0,130	0,260	0,12	126	575	8 x 16	ECR1VLH181M◊◊ΔΔ0816
		0,885	0,095	0,190	0,12	126	795	10 x 16	ECR1VLH181M◊◊ΔΔ1016
	220	0,724	0,095	0,190	0,12	154	760	8 x 20	ECR1VLH221M◊◊ΔΔ0820
	330	0,483	0,065	0,130	0,12	231	1010	10 x 20	ECR1VLH331M◊◊ΔΔ1020
		0,483	0,065	0,130	0,12	231	1010	12,5 x 15	ECR1VLH331M◊◊ΔΔ1215

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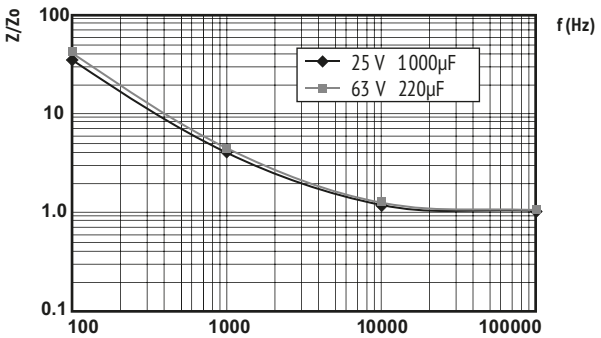
RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
35 (44) 1V	390	0,408	0,055	0,110	0,12	273	1190	10 x 25	ECR1VLH391M◊◊ΔΔ1025
	560	0,284	0,045	0,090	0,12	392	1450	10 x 30	ECR1VLH561M◊◊ΔΔ1030
		0,284	0,042	0,084	0,12	392	1400	12,5 x 20	ECR1VLH561M◊◊ΔΔ1220
		0,284	0,046	0,092	0,12	392	1360	16 x 15	ECR1VLH561M◊◊ΔΔ1615
	680	0,234	0,038	0,076	0,12	476	1690	12,5 x 25	ECR1VLH681M◊◊ΔΔ1225
		0,234	0,043	0,086	0,12	476	1520	18 x 15	ECR1VLH681M◊◊ΔΔ1815
	1 000	0,159	0,032	0,064	0,12	700	1950	12,5 x 30	ECR1VLH102M◊◊ΔΔ1230
		0,159	0,034	0,068	0,12	700	1730	16 x 20	ECR1VLH102M◊◊ΔΔ1620
	1 200	0,133	0,028	0,056	0,12	840	2200	12,5 x 35	ECR1VLH122M◊◊ΔΔ1235
		0,133	0,028	0,056	0,12	840	2070	16 x 25	ECR1VLH122M◊◊ΔΔ1625
		0,133	0,030	0,060	0,12	840	1900	18 x 20	ECR1VLH122M◊◊ΔΔ1820
	1 500	0,106	0,026	0,052	0,12	1050	2390	12,5 x 40	ECR1VLH152M◊◊ΔΔ1240
	1 800	0,088	0,025	0,050	0,12	1260	2350	16 x 31,5	ECR1VLH182M◊◊ΔΔ1631
		0,088	0,027	0,054	0,12	1260	2200	18 x 25	ECR1VLH182M◊◊ΔΔ1825
	2 200	0,084	0,022	0,044	0,14	1540	2550	16 x 35,5	ECR1VLH222M◊◊ΔΔ1635
		0,084	0,023	0,046	0,14	1540	2490	18 x 31,5	ECR1VLH222M◊◊ΔΔ1831
	2 700	0,069	0,020	0,040	0,14	1890	2900	16 x 40	ECR1VLH272M◊◊ΔΔ1640
		0,069	0,020	0,040	0,14	1890	2770	18 x 35,5	ECR1VLH272M◊◊ΔΔ1835
	3 300	0,064	0,019	0,038	0,16	2310	3110	18 x 40	ECR1VLH332M◊◊ΔΔ1840
50 (63) 1H	0,47	283	3,90	7,80	0,10	3	22	5 x 11,5	ECR1HLHR47M◊◊ΔΔ0511
	1,0	133	3,50	7,00	0,10	3	36	5 x 11,5	ECR1HLH010M◊◊ΔΔ0511
	2,2	60,3	3,00	6,00	0,10	3	54	5 x 11,5	ECR1HLH2R2M◊◊ΔΔ0511
	3,3	40,2	2,60	5,20	0,10	4	63	5 x 11,5	ECR1HLH3R3M◊◊ΔΔ0511
	4,7	28,3	2,20	4,40	0,10	5	75	5 x 11,5	ECR1HLH4R7M◊◊ΔΔ0511
	10	13,3	1,40	2,80	0,10	10	110	5 x 11,5	ECR1HLH100M◊◊ΔΔ0511
	18	7,38	0,950	1,90	0,10	18	120	5 x 11,5	ECR1HLH180M◊◊ΔΔ0511
	27	4,92	0,550	1,10	0,10	27	135	5 x 15	ECR1HLH270M◊◊ΔΔ0515
	39	3,41	0,360	0,720	0,10	39	148	6,3 x 11,5	ECR1HLH390M◊◊ΔΔ0611
	56	2,37	0,280	0,560	0,10	56	153	6,3 x 15	ECR1HLH560M◊◊ΔΔ0615
	68	1,96	0,200	0,400	0,10	68	360	8 x 11,5	ECR1HLH680M◊◊ΔΔ0811
	82	1,62	0,180	0,360	0,10	82	460	8 x 16	ECR1HLH820M◊◊ΔΔ0816
		1,62	0,180	0,360	0,10	82	443	10 x 12,5	ECR1HLH820M◊◊ΔΔ1012
	100	1,33	0,150	0,300	0,10	100	553	10 x 16	ECR1HLH101M◊◊ΔΔ1016
	120	1,11	0,130	0,260	0,10	120	670	8 x 20	ECR1HLH121M◊◊ΔΔ0820
	180	0,737	0,095	0,190	0,10	180	676	10 x 20	ECR1HLH181M◊◊ΔΔ1020
		0,737	0,105	0,210	0,10	180	745	12,5 x 15	ECR1HLH181M◊◊ΔΔ1215
	220	0,603	0,080	0,160	0,10	220	876	10 x 25	ECR1HLH221M◊◊ΔΔ1025
	330	0,402	0,065	0,130	0,10	330	1010	10 x 30	ECR1HLH331M◊◊ΔΔ1030
		0,402	0,070	0,140	0,10	330	979	12,5 x 20	ECR1HLH331M◊◊ΔΔ1220
		0,402	0,075	0,150	0,10	330	982	16 x 15	ECR1HLH331M◊◊ΔΔ1615
	470	0,282	0,054	0,108	0,10	470	1180	12,5 x 25	ECR1HLH471M◊◊ΔΔ1225
		0,282	0,058	0,116	0,10	470	1180	18 x 15	ECR1HLH471M◊◊ΔΔ1815
	560	0,237	0,050	0,100	0,10	560	1310	12,5 x 30	ECR1HLH561M◊◊ΔΔ1230
	680	0,195	0,046	0,092	0,10	680	1470	12,5 x 35	ECR1HLH681M◊◊ΔΔ1235
		0,195	0,050	0,100	0,10	680	1210	16 x 20	ECR1HLH681M◊◊ΔΔ1620
	820	0,162	0,044	0,088	0,10	820	1590	12,5 x 40	ECR1HLH821M◊◊ΔΔ1240
		0,162	0,048	0,096	0,10	820	1490	16 x 25	ECR1HLH821M◊◊ΔΔ1625
		0,162	0,046	0,092	0,10	820	1450	18 x 20	ECR1HLH821M◊◊ΔΔ1820
	1 000	0,133	0,040	0,080	0,10	1000	1890	16 x 31,5	ECR1HLH102M◊◊ΔΔ1631
		0,133	0,040	0,080	0,10	1000	1720	18 x 25	ECR1HLH102M◊◊ΔΔ1825
	1 200	0,111	0,032	0,064	0,10	1200	2140	16 x 35,5	ECR1HLH122M◊◊ΔΔ1635
	1 500	0,088	0,026	0,052	0,10	1500	2410	16 x 40	ECR1HLH152M◊◊ΔΔ1640
		0,088	0,026	0,052	0,10	1500	1970	18 x 31,5	ECR1HLH152M◊◊ΔΔ1831
	1 800	0,074	0,025	0,050	0,10	1800	2310	18 x 35,5	ECR1HLH182M◊◊ΔΔ1835
	2 200	0,072	0,024	0,048	0,12	2200	2530	18 x 40	ECR1HLH222M◊◊ΔΔ1840
63 (79) 1J	12	9,96	1,20	3,60	0,09	16	120	5 x 11,5	ECR1JLH120M◊◊ΔΔ0511
	18	6,64	0,850	2,60	0,09	23	135	5 x 15	ECR1JLH180M◊◊ΔΔ0515
	27	4,43	0,550	1,70	0,09	34	148	6,3 x 11,5	ECR1JLH270M◊◊ΔΔ0611
	39	3,07	0,380	1,10	0,09	50	153	6,3 x 15	ECR1JLH390M◊◊ΔΔ0615
	47	2,55	0,320	0,960	0,09	60	360	8 x 11,5	ECR1JLH470M◊◊ΔΔ0811
	56	2,14	0,230	0,690	0,09	71	448	10 x 12,5	ECR1JLH560M◊◊ΔΔ1012
	68	1,76	0,240	0,720	0,09	86	469	8 x 16	ECR1JLH680M◊◊ΔΔ0816
		1,76	0,170	0,510	0,09	86	553	10 x 16	ECR1JLH680M◊◊ΔΔ1016
	82	1,46	0,170	0,510	0,09	104	682	8 x 20	ECR1JLH820M◊◊ΔΔ0820
	120	0,995	0,120	0,360	0,09	152	676	10 x 20	ECR1JLH121M◊◊ΔΔ1020

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
63 (79) 1J	150	0,796	0,100	0,300	0,09	189	876	10 x 25	ECR1JLH151M◊◊ΔΔ1025
		0,796	0,110	0,330	0,09	189	745	12,5 x 15	ECR1JLH151M◊◊ΔΔ1215
	180	0,663	0,085	0,260	0,09	227	1020	10 x 30	ECR1JLH181M◊◊ΔΔ1030
	220	0,543	0,075	0,230	0,09	278	979	12,5 x 20	ECR1JLH221M◊◊ΔΔ1220
		0,543	0,080	0,240	0,09	278	928	16 x 15	ECR1JLH221M◊◊ΔΔ1615
	270	0,442	0,065	0,200	0,09	341	1180	12,5 x 25	ECR1JLH271M◊◊ΔΔ1225
	330	0,362	0,065	0,200	0,09	416	1200	18 x 15	ECR1JLH331M◊◊ΔΔ1815
	390	0,306	0,055	0,170	0,09	492	1310	12,5 x 30	ECR1JLH391M◊◊ΔΔ1230
		0,306	0,057	0,170	0,09	492	1210	16 x 20	ECR1JLH391M◊◊ΔΔ1620
	470	0,254	0,048	0,140	0,09	593	1470	12,5 x 35	ECR1JLH471M◊◊ΔΔ1235
		0,254	0,052	0,160	0,09	593	1490	16 x 25	ECR1JLH471M◊◊ΔΔ1625
		0,254	0,058	0,170	0,09	593	1460	18 x 20	ECR1JLH471M◊◊ΔΔ1820
	560	0,213	0,042	0,130	0,09	706	1590	12,5 x 40	ECR1JLH561M◊◊ΔΔ1240
	680	0,176	0,042	0,130	0,09	857	1890	16 x 31,5	ECR1JLH681M◊◊ΔΔ1631
		0,176	0,050	0,150	0,09	857	1740	18 x 25	ECR1JLH681M◊◊ΔΔ1825
	820	0,146	0,036	0,110	0,09	1034	2140	16 x 35,5	ECR1JLH821M◊◊ΔΔ1635
		0,146	0,042	0,130	0,09	1034	1990	18 x 31,5	ECR1JLH821M◊◊ΔΔ1831
	1 000	0,119	0,032	0,096	0,09	1260	2410	16 x 40	ECR1JLH102M◊◊ΔΔ1640
		0,119	0,035	0,110	0,09	1260	2340	18 x 35,5	ECR1JLH102M◊◊ΔΔ1835
	1 200	0,100	0,032	0,096	0,09	1512	2560	18 x 40	ECR1JLH122M◊◊ΔΔ1840
100 (125) 2A	5,6	19,0	1,90	7,60	0,08	12	57	5 x 11,5	ECR2ALH5R6M◊◊ΔΔ0511
	8,2	13,0	1,30	5,20	0,08	17	74	5 x 15	ECR2ALH8R2M◊◊ΔΔ0515
	12	8,85	1,10	4,40	0,08	24	78	6,3 x 11,5	ECR2ALH120M◊◊ΔΔ0611
	18	5,90	0,620	2,50	0,08	36	85	6,3 x 15	ECR2ALH180M◊◊ΔΔ0615
	22	4,83	0,530	2,10	0,08	44	275	8 x 11,5	ECR2ALH220M◊◊ΔΔ0811
	27	3,94	0,470	1,90	0,08	54	319	10 x 12,5	ECR2ALH270M◊◊ΔΔ1012
	33	3,22	0,350	1,40	0,08	66	360	8 x 16	ECR2ALH330M◊◊ΔΔ0816
		3,22	0,320	1,30	0,08	66	424	10 x 16	ECR2ALH330M◊◊ΔΔ1016
	39	2,73	0,270	1,10	0,08	78	490	8 x 20	ECR2ALH390M◊◊ΔΔ0820
	56	1,90	0,250	1,00	0,08	112	499	10 x 20	ECR2ALH560M◊◊ΔΔ1020
	68	1,57	0,180	0,720	0,08	136	634	10 x 25	ECR2ALH680M◊◊ΔΔ1025
		1,57	0,200	0,800	0,08	136	613	12,5 x 15	ECR2ALH680M◊◊ΔΔ1215
	100	1,07	0,150	0,600	0,08	200	739	10 x 30	ECR2ALH101M◊◊ΔΔ1030
		1,07	0,130	0,520	0,08	200	805	12,5 x 20	ECR2ALH101M◊◊ΔΔ1220
	120	0,885	0,110	0,440	0,08	240	857	12,5 x 25	ECR2ALH121M◊◊ΔΔ1225
		0,885	0,130	0,500	0,08	240	706	16 x 15	ECR2ALH121M◊◊ΔΔ1615
	150	0,708	0,120	0,480	0,08	300	871	18 x 15	ECR2ALH151M◊◊ΔΔ1815
	180	0,590	0,090	0,360	0,08	360	1120	12,5 x 30	ECR2ALH181M◊◊ΔΔ1230
		0,590	0,110	0,440	0,08	360	916	16 x 20	ECR2ALH181M◊◊ΔΔ1620
	220	0,483	0,075	0,300	0,08	440	1240	12,5 x 35	ECR2ALH221M◊◊ΔΔ1235
		0,483	0,081	0,320	0,08	440	1290	16 x 25	ECR2ALH221M◊◊ΔΔ1625
	270	0,393	0,060	0,240	0,08	540	1330	12,5 x 40	ECR2ALH271M◊◊ΔΔ1240
		0,393	0,085	0,340	0,08	540	1170	18 x 20	ECR2ALH271M◊◊ΔΔ1820
	330	0,322	0,059	0,230	0,08	660	1630	16 x 31,5	ECR2ALH331M◊◊ΔΔ1631
		0,322	0,071	0,280	0,08	660	1500	18 x 25	ECR2ALH331M◊◊ΔΔ1825
	390	0,272	0,052	0,210	0,08	780	1750	16 x 35,5	ECR2ALH391M◊◊ΔΔ1635
		0,272	0,058	0,230	0,08	780	1630	18 x 31,5	ECR2ALH391M◊◊ΔΔ1831
	470	0,226	0,045	0,180	0,08	940	1920	16 x 40	ECR2ALH471M◊◊ΔΔ1640
	560	0,190	0,054	0,220	0,08	1120	1920	18 x 35,5	ECR2ALH561M◊◊ΔΔ1835
	680	0,156	0,041	0,160	0,08	1360	2100	18 x 40	ECR2ALH681M◊◊ΔΔ1840

RADIAL

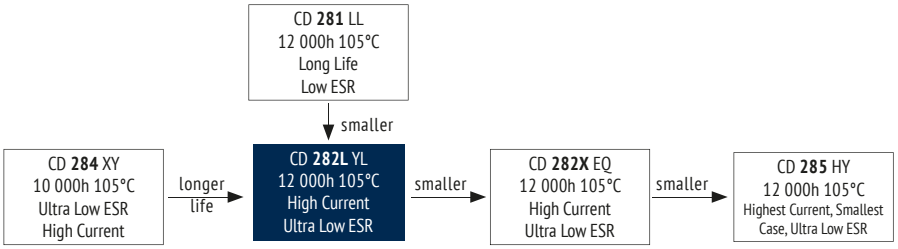
IMPEDANCE RATIO



Z = actual impedance of each frequency at 20°C,
Zo = Impedance at 100kHz, 20°C
Impedance Ratio as a function of frequency

4 000 - 10 000h at 105°C

- Ultra Low Impedance
- High Ripple Current
- Switching Power Supplies



RADIAL

ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +105
Voltage Range (V)	6,3 ~ 100
Capacitance Range (µF)	6,8 ~ 18 000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 2 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	6,3	10	16	25	35	50	63	100
	$Z_{-25°C} / Z_{+20°C}$	4	3	2					
	$Z_{-40°C} / Z_{+20°C}$	8	6	4	3				

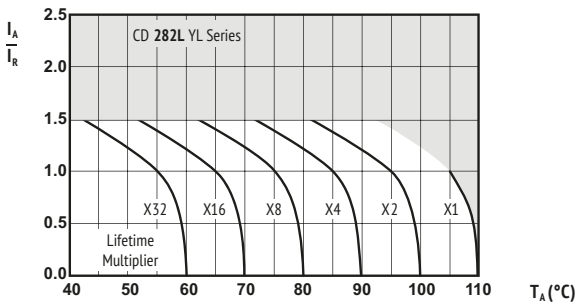
ITEM	USEFUL LIFE			LOAD LIFE		ENDURANCE TEST		SHELF LIFE	
Lifetime		**6,3~10V:**	**16~100V:**		**6,3~10V:**	**16~100V:**	**6,3~10V:**	**16~100V:**	1 000h	
	Ø 5~6,3:	6 000h	7 000h	> 250 000h	4 000h	5 000h	6 000h	7 000h		
	Ø 8~10:	8 000h	9 000h		6 000h	7 000h	8 000h	9 000h		
	Ø 12,5~18:	10 000h	12 000h		8 000h	10 000h	10 000h	12 000h		
Leakage Current		Not more than specified value			Not more than specified value		Not more than specified value		Not more than specified value	
Capacitance Change		Within ± 40% of initial value			Within ± 25% of initial value		Within ± 25% of initial value		Within ± 20% of initial value	
Dissipation Factor		Not more than 300% of specified value			Not more than 200% of specified value		Not more than 200% of specified value		Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature		U_R I_R 105°C		U_R 1,4 x I_R 40°C	U_R I_R 105°C		U_R I_R = 0 105°C IEC 60384		U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Capacitance (µF) \ Frequency	120Hz	1kHz	10kHz	100kHz
6,8 ~ 33	0,42	0,70	0,90	1,00
39 ~ 270	0,50	0,73	0,92	1,00
330 ~ 680	0,55	0,77	0,94	1,00
820 ~ 1 800	0,60	0,80	0,96	1,00
2 200 ~ 18 000	0,70	0,85	0,98	1,00

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
6,3 (7,2) 0J	150	1,95	0,580	2,30	0,22	10	210	5 x 11,5	ECR0JYL151M◊◊ΔΔ0511
	330	0,884	0,220	0,870	0,22	21	340	6,3 x 11,5	ECR0JYL331M◊◊ΔΔ0611
	680	0,429	0,130	0,520	0,22	43	640	8 x 11,5	ECR0JYL681M◊◊ΔΔ0811
	820	0,356	0,080	0,320	0,22	52	865	10 x 12,5	ECR0JYL821M◊◊ΔΔ1012
	1 000	0,292	0,087	0,350	0,22	63	840	8 x 16	ECR0JYL102M◊◊ΔΔ0816
	1 200	0,243	0,069	0,270	0,22	76	1050	8 x 20	ECR0JYL122M◊◊ΔΔ0820
		0,243	0,060	0,240	0,22	76	1210	10 x 16	ECR0JYL122M◊◊ΔΔ1016
	1 500	0,195	0,046	0,180	0,22	95	1400	10 x 20	ECR0JYL152M◊◊ΔΔ1020
	1 800	0,162	0,049	0,160	0,22	114	1450	12,5 x 16	ECR0JYL182M◊◊ΔΔ1216
	2 200	0,145	0,042	0,170	0,24	139	1650	10 x 25	ECR0JYL222M◊◊ΔΔ1025
	2 700	0,118	0,031	0,120	0,24	171	1910	10 x 30	ECR0JYL272M◊◊ΔΔ1030
		0,118	0,042	0,120	0,24	171	1940	16 x 16	ECR0JYL272M◊◊ΔΔ1616
	3 300	0,104	0,035	0,120	0,26	208	1900	12,5 x 20	ECR0JYL332M◊◊ΔΔ1220
	3 900	0,088	0,027	0,089	0,26	246	2230	12,5 x 25	ECR0JYL392M◊◊ΔΔ1225
		0,088	0,043	0,110	0,26	246	2210	18 x 16	ECR0JYL392M◊◊ΔΔ1816
	4 700	0,079	0,024	0,078	0,28	297	2650	12,5 x 30	ECR0JYL472M◊◊ΔΔ1230
	5 600	0,071	0,020	0,065	0,30	353	2880	12,5 x 35	ECR0JYL562M◊◊ΔΔ1235
		0,071	0,027	0,078	0,30	353	2530	16 x 20	ECR0JYL562M◊◊ΔΔ1620
	6 800	0,062	0,017	0,056	0,32	429	3350	12,5 x 40	ECR0JYL682M◊◊ΔΔ1240
		0,062	0,021	0,060	0,32	429	2930	16 x 25	ECR0JYL682M◊◊ΔΔ1625
		0,062	0,026	0,067	0,32	429	2860	18 x 20	ECR0JYL682M◊◊ΔΔ1820
	8 200	0,058	0,017	0,050	0,36	517	3450	16 x 31,5	ECR0JYL822M◊◊ΔΔ1631
	10 000	0,053	0,015	0,044	0,40	630	3610	16 x 35,5	ECR0JYL103M◊◊ΔΔ1635
		0,053	0,019	0,049	0,40	630	3140	18 x 25	ECR0JYL103M◊◊ΔΔ1825
	12 000	0,049	0,013	0,038	0,44	756	4080	16 x 40	ECR0JYL123M◊◊ΔΔ1640
		0,049	0,015	0,040	0,44	756	4170	18 x 31,5	ECR0JYL123M◊◊ΔΔ1831
	15 000	0,044	0,014	0,038	0,50	945	4220	18 x 35,5	ECR0JYL153M◊◊ΔΔ1835
	18 000	0,041	0,012	0,032	0,56	1.134	4280	18 x 40	ECR0JYL183M◊◊ΔΔ1840
10 (13) 1A	100	2,52	0,580	2,30	0,19	10	210	5 x 11,5	ECR1AYL101M◊◊ΔΔ0511
	220	1,15	0,220	0,870	0,19	22	340	6,3 x 11,5	ECR1AYL221M◊◊ΔΔ0611
	470	0,536	0,130	0,520	0,19	47	640	8 x 11,5	ECR1AYL471M◊◊ΔΔ0811
	680	0,371	0,087	0,350	0,19	68	840	8 x 16	ECR1AYL681M◊◊ΔΔ0816
		0,371	0,080	0,320	0,19	68	865	10 x 12,5	ECR1AYL681M◊◊ΔΔ1012
	1 000	0,252	0,069	0,270	0,19	100	1050	8 x 20	ECR1AYL102M◊◊ΔΔ0820
		0,252	0,060	0,240	0,19	100	1210	10 x 16	ECR1AYL102M◊◊ΔΔ1016
	1 200	0,210	0,460	0,180	0,19	120	1400	10 x 20	ECR1AYL122M◊◊ΔΔ1020
	1 500	0,168	0,042	0,170	0,19	150	1650	10 x 25	ECR1AYL152M◊◊ΔΔ1025
		0,168	0,049	0,160	0,19	150	1450	12,5 x 16	ECR1AYL152M◊◊ΔΔ1216
	2 200	0,127	0,031	0,120	0,21	220	1910	10 x 30	ECR1AYL222M◊◊ΔΔ1030
		0,127	0,035	0,120	0,21	220	1900	12,5 x 20	ECR1AYL222M◊◊ΔΔ1220
		0,127	0,042	0,120	0,21	220	1940	16 x 16	ECR1AYL222M◊◊ΔΔ1616
	2 700	0,103	0,043	0,110	0,21	270	2210	18 x 16	ECR1AYL272M◊◊ΔΔ1816
	3 300	0,092	0,027	0,089	0,23	330	2230	12,5 x 25	ECR1AYL332M◊◊ΔΔ1225
	3 900	0,078	0,024	0,078	0,23	390	2650	12,5 x 30	ECR1AYL392M◊◊ΔΔ1230
		0,078	0,027	0,078	0,23	390	2530	16 x 20	ECR1AYL392M◊◊ΔΔ1620
	4 700	0,071	0,020	0,065	0,25	470	2880	12,5 x 35	ECR1AYL472M◊◊ΔΔ1235
	5 600	0,064	0,017	0,056	0,27	560	3350	12,5 x 40	ECR1AYL562M◊◊ΔΔ1240
		0,064	0,021	0,060	0,27	560	2930	16 x 25	ECR1AYL562M◊◊ΔΔ1625
		0,064	0,026	0,067	0,27	560	2860	18 x 20	ECR1AYL562M◊◊ΔΔ1820
	6 800	0,057	0,017	0,050	0,29	680	3450	16 x 31,5	ECR1AYL682M◊◊ΔΔ1631
		0,057	0,019	0,049	0,29	680	3140	18 x 25	ECR1AYL682M◊◊ΔΔ1825
	8 200	0,053	0,015	0,044	0,33	820	3610	16 x 35,5	ECR1AYL822M◊◊ΔΔ1635
		0,053	0,015	0,040	0,33	820	4170	18 x 31,5	ECR1AYL822M◊◊ΔΔ1831
	10 000	0,049	0,013	0,038	0,37	1.000	4080	16 x 40	ECR1AYL103M◊◊ΔΔ1640
		0,049	0,014	0,038	0,37	1.000	4220	18 x 35,5	ECR1AYL103M◊◊ΔΔ1835
	12 000	0,045	0,012	0,032	0,41	1.200	4280	18 x 40	ECR1AYL123M◊◊ΔΔ1840
16 (20) 1C	56	3,79	0,580	2,30	0,16	9	210	5 x 11,5	ECR1CYL560M◊◊ΔΔ0511
	120	1,77	0,220	0,870	0,16	20	340	6,3 x 11,5	ECR1CYL121M◊◊ΔΔ0611
	330	0,643	0,130	0,520	0,16	53	640	8 x 11,5	ECR1CYL331M◊◊ΔΔ0811
	470	0,452	0,087	0,350	0,16	76	840	8 x 16	ECR1CYL471M◊◊ΔΔ0816
		0,452	0,080	0,320	0,16	76	865	10 x 12,5	ECR1CYL471M◊◊ΔΔ1012
	680	0,312	0,069	0,270	0,16	109	1050	8 x 20	ECR1CYL681M◊◊ΔΔ0820
		0,312	0,060	0,240	0,16	109	1210	10 x 16	ECR1CYL681M◊◊ΔΔ1016

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RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
16 (20) 1C	1 000	0,212	0,046	0,180	0,16	160	1400	10 x 20	ECR1CYL102M◊◊ΔΔ1020
		0,212	0,049	0,160	0,16	160	1450	12,5 x 16	ECR1CYL102M◊◊ΔΔ1216
	1 200	0,177	0,042	0,170	0,16	192	1650	10 x 25	ECR1CYL122M◊◊ΔΔ1025
	1 500	0,141	0,031	0,120	0,16	240	1910	10 x 30	ECR1CYL152M◊◊ΔΔ1030
		0,141	0,035	0,120	0,16	240	1900	12,5 x 20	ECR1CYL152M◊◊ΔΔ1220
		0,141	0,042	0,120	0,16	240	1940	16 x 16	ECR1CYL152M◊◊ΔΔ1616
	2 200	0,109	0,027	0,089	0,18	352	2230	12,5 x 25	ECR1CYL222M◊◊ΔΔ1225
		0,107	0,043	0,110	0,18	352	2210	18 x 16	ECR1CYL222M◊◊ΔΔ1816
	2 700	0,088	0,024	0,078	0,18	432	2650	12,5 x 30	ECR1CYL272M◊◊ΔΔ1230
		0,088	0,027	0,078	0,18	432	2530	16 x 20	ECR1CYL272M◊◊ΔΔ1620
	3 300	0,080	0,020	0,065	0,20	528	2880	12,5 x 35	ECR1CYL332M◊◊ΔΔ1235
	3 900	0,068	0,017	0,056	0,20	624	3350	12,5 x 40	ECR1CYL392M◊◊ΔΔ1240
		0,068	0,021	0,060	0,20	624	2930	16 x 25	ECR1CYL392M◊◊ΔΔ1625
		0,068	0,026	0,037	0,20	624	2860	18 x 20	ECR1CYL392M◊◊ΔΔ1820
	4 700	0,062	0,017	0,050	0,22	752	3450	16 x 31,5	ECR1CYL472M◊◊ΔΔ1631
		0,062	0,019	0,049	0,22	752	3140	18 x 25	ECR1CYL472M◊◊ΔΔ1825
	5 600	0,057	0,015	0,044	0,24	896	3610	16 x 35,5	ECR1CYL562M◊◊ΔΔ1635
		0,057	0,015	0,040	0,24	896	4170	18 x 31,5	ECR1CYL562M◊◊ΔΔ1831
	6 800	0,051	0,013	0,038	0,26	1.088	4080	16 x 40	ECR1CYL682M◊◊ΔΔ1640
	8 200	0,049	0,014	0,038	0,30	1.312	4220	18 x 35,5	ECR1CYL822M◊◊ΔΔ1835
	10 000	0,045	0,012	0,033	0,34	1.600	4280	18 x 40	ECR1CYL103M◊◊ΔΔ1840
25 (32) 1E	47	3,96	0,580	2,30	0,14	12	210	5 x 11,5	ECR1EYL470M◊◊ΔΔ0511
	100	1,86	0,220	0,870	0,14	25	340	6,3 x 11,5	ECR1EYL101M◊◊ΔΔ0611
	220	0,844	0,130	0,520	0,14	55	640	8 x 11,5	ECR1EYL221M◊◊ΔΔ0811
	330	0,563	0,087	0,350	0,14	83	840	8 x 16	ECR1EYL331M◊◊ΔΔ0816
		0,563	0,080	0,320	0,14	83	865	10 x 12,5	ECR1EYL331M◊◊ΔΔ1012
	470	0,395	0,069	0,270	0,14	118	1050	8 x 20	ECR1EYL471M◊◊ΔΔ0820
		0,395	0,060	0,240	0,14	118	1210	10 x 16	ECR1EYL471M◊◊ΔΔ1016
	680	0,273	0,046	0,180	0,14	170	1400	10 x 20	ECR1EYL681M◊◊ΔΔ1020
		0,273	0,049	0,160	0,14	170	1450	12,5 x 16	ECR1EYL681M◊◊ΔΔ1216
	820	0,226	0,042	0,170	0,14	205	1650	10 x 25	ECR1EYL821M◊◊ΔΔ1025
	1 000	0,186	0,031	0,120	0,14	250	1910	10 x 30	ECR1EYL102M◊◊ΔΔ1030
		0,186	0,035	0,120	0,14	250	1900	12,5 x 20	ECR1EYL102M◊◊ΔΔ1220
		0,186	0,042	0,120	0,14	250	1940	16 x 16	ECR1EYL102M◊◊ΔΔ1616
	1 200	0,155	0,043	0,110	0,14	300	2210	18 x 16	ECR1EYL122M◊◊ΔΔ1816
	1 500	0,124	0,027	0,089	0,14	375	2230	12,5 x 25	ECR1EYL152M◊◊ΔΔ1225
	1 800	0,103	0,024	0,078	0,14	450	2650	12,5 x 30	ECR1EYL182M◊◊ΔΔ1230
		0,103	0,027	0,078	0,14	450	2530	16 x 20	ECR1EYL182M◊◊ΔΔ1620
	2 200	0,096	0,020	0,065	0,16	550	2880	12,5 x 35	ECR1EYL222M◊◊ΔΔ1235
		0,096	0,026	0,067	0,16	550	2860	18 x 20	ECR1EYL222M◊◊ΔΔ1820
	2 700	0,079	0,017	0,056	0,16	675	3350	12,5 x 40	ECR1EYL272M◊◊ΔΔ1240
		0,079	0,021	0,060	0,16	675	2930	16 x 25	ECR1EYL272M◊◊ΔΔ1625
	3 300	0,072	0,017	0,050	0,18	825	3450	16 x 31,5	ECR1EYL332M◊◊ΔΔ1631
		0,072	0,019	0,049	0,18	825	3140	18 x 25	ECR1EYL332M◊◊ΔΔ1825
	3 900	0,061	0,015	0,044	0,18	975	3610	16 x 35,5	ECR1EYL392M◊◊ΔΔ1635
		0,061	0,015	0,040	0,18	975	4170	18 x 31,5	ECR1EYL392M◊◊ΔΔ1831
	4 700	0,056	0,013	0,038	0,20	1.175	4080	16 x 40	ECR1EYL472M◊◊ΔΔ1640
		0,056	0,014	0,038	0,20	1.175	4220	18 x 35,5	ECR1EYL472M◊◊ΔΔ1835
	5 600	0,052	0,012	0,032	0,22	1.400	4280	18 x 40	ECR1EYL562M◊◊ΔΔ1840
35 (44) 1V	33	4,83	0,580	2,30	0,12	12	210	5 x 11,5	ECR1VYL330M◊◊ΔΔ0511
	56	2,85	0,220	0,870	0,12	20	340	6,3 x 11,5	ECR1VYL560M◊◊ΔΔ0611
	150	1,07	0,130	0,520	0,12	53	640	8 x 11,5	ECR1VYL151M◊◊ΔΔ0811
	220	0,723	0,087	0,350	0,12	77	840	8 x 16	ECR1VYL221M◊◊ΔΔ0816
		0,723	0,080	0,320	0,12	77	865	10 x 12,5	ECR1VYL221M◊◊ΔΔ1012
	270	0,589	0,069	0,270	0,12	95	1050	8 x 20	ECR1VYL271M◊◊ΔΔ0820
	330	0,482	0,060	0,240	0,12	116	1210	10 x 16	ECR1VYL331M◊◊ΔΔ1016
	470	0,339	0,046	0,180	0,12	165	1400	10 x 20	ECR1VYL471M◊◊ΔΔ1020
		0,339	0,049	0,160	0,12	165	1450	12,5 x 16	ECR1VYL471M◊◊ΔΔ1216
	560	0,284	0,042	0,170	0,12	196	1650	10 x 25	ECR1VYL561M◊◊ΔΔ1025
	680	0,234	0,031	0,120	0,12	238	1910	10 x 30	ECR1VYL681M◊◊ΔΔ1030
		0,234	0,035	0,120	0,12	238	1900	12,5 x 20	ECR1VYL681M◊◊ΔΔ1220
		0,234	0,042	0,120	0,12	238	1940	16 x 16	ECR1VYL681M◊◊ΔΔ1616
	1 000	0,159	0,027	0,089	0,12	350	2230	12,5 x 25	ECR1VYL102M◊◊ΔΔ1225
		0,159	0,043	0,110	0,12	350	2210	18 x 16	ECR1VYL102M◊◊ΔΔ1816
	1 200	0,133	0,024	0,078	0,12	420	2650	12,5 x 30	ECR1VYL122M◊◊ΔΔ1230
		0,133	0,027	0,078	0,12	420	2530	16 x 20	ECR1VYL122M◊◊ΔΔ1620

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
35 (44) 1V	1 500	0,106	0,020	0,065	0,12	525	2880	12,5 x 35	ECR1VYL152M◊◊ΔΔ1235
	1 800	0,088	0,017	0,056	0,12	630	3350	12,5 x 40	ECR1VYL182M◊◊ΔΔ1240
		0,088	0,024	0,060	0,12	630	2930	16 x 25	ECR1VYL182M◊◊ΔΔ1625
		0,088	0,026	0,067	0,12	630	2860	18 x 20	ECR1VYL182M◊◊ΔΔ1820
	2 200	0,084	0,017	0,050	0,14	770	3450	16 x 31,5	ECR1VYL222M◊◊ΔΔ1631
		0,084	0,019	0,049	0,14	770	3140	18 x 25	ECR1VYL222M◊◊ΔΔ1825
	2 700	0,069	0,015	0,044	0,14	945	3610	16 x 35,5	ECR1VYL272M◊◊ΔΔ1635
		0,069	0,015	0,040	0,14	945	4170	18 x 31,5	ECR1VYL272M◊◊ΔΔ1831
	3 300	0,064	0,013	0,038	0,16	1.155	4080	16 x 40	ECR1VYL332M◊◊ΔΔ1640
		0,064	0,014	0,038	0,16	1.155	4220	18 x 35,5	ECR1VYL332M◊◊ΔΔ1835
	3 900	0,054	0,012	0,032	0,16	1.365	4280	18 x 40	ECR1VYL392M◊◊ΔΔ1840
50 (63) 1H	22	6,03	0,700	2,80	0,10	11	180	5 x 11,5	ECR1HYL220M◊◊ΔΔ0511
	56	2,37	0,300	1,20	0,10	28	295	6,3 x 11,5	ECR1HYL560M◊◊ΔΔ0611
	100	1,33	0,170	0,680	0,10	50	555	8 x 11,5	ECR1HYL101M◊◊ΔΔ0811
	120	1,11	0,120	0,480	0,10	60	730	8 x 16	ECR1HYL121M◊◊ΔΔ0816
	150	0,884	0,120	0,480	0,10	75	760	10 x 12,5	ECR1HYL151M◊◊ΔΔ1012
	180	0,737	0,091	0,360	0,10	90	910	8 x 20	ECR1HYL181M◊◊ΔΔ0820
	220	0,603	0,084	0,340	0,10	110	1050	10 x 16	ECR1HYL221M◊◊ΔΔ016E
	270	0,491	0,060	0,240	0,10	135	1220	10 x 20	ECR1HYL271M◊◊ΔΔ1020
		0,491	0,061	0,200	0,10	135	1260	12,5 x 16	ECR1HYL271M◊◊ΔΔ1216
	330	0,402	0,055	0,220	0,10	165	1440	10 x 25	ECR1HYL331M◊◊ΔΔ1025
	470	0,282	0,043	0,170	0,10	235	1690	10 x 30	ECR1HYL471M◊◊ΔΔ1030
		0,282	0,045	0,150	0,10	235	1660	12,5 x 20	ECR1HYL471M◊◊ΔΔ1220
		0,282	0,055	0,170	0,10	235	1690	16 x 16	ECR1HYL471M◊◊ΔΔ1616
	560	0,237	0,034	0,110	0,10	280	1950	12,5 x 25	ECR1HYL561M◊◊ΔΔ1225
		0,237	0,054	0,150	0,10	280	1930	18 x 16	ECR1HYL561M◊◊ΔΔ1816
	680	0,195	0,030	0,100	0,10	340	2310	12,5 x 30	ECR1HYL681M◊◊ΔΔ1230
	820	0,162	0,025	0,083	0,10	410	2510	12,5 x 35	ECR1HYL821M◊◊ΔΔ1235
		0,162	0,034	0,100	0,10	410	2210	16 x 20	ECR1HYL821M◊◊ΔΔ1620
	1 000	0,133	0,021	0,069	0,10	500	2920	12,5 x 40	ECR1HYL102M◊◊ΔΔ1240
		0,133	0,025	0,075	0,10	500	2555	16 x 25	ECR1HYL102M◊◊ΔΔ1625
		0,133	0,036	0,097	0,10	500	2490	18 x 20	ECR1HYL102M◊◊ΔΔ1820
	1 200	0,111	0,022	0,066	0,10	600	3010	16 x 31,5	ECR1HYL122M◊◊ΔΔ1631
		0,111	0,026	0,070	0,10	600	2740	18 x 25	ECR1HYL122M◊◊ΔΔ1825
	1 500	0,088	0,019	0,057	0,10	750	3150	16 x 35,5	ECR1HYL152M◊◊ΔΔ1635
	1 800	0,074	0,016	0,048	0,10	900	3710	16 x 40	ECR1HYL182M◊◊ΔΔ1640
		0,074	0,021	0,057	0,10	900	3635	18 x 31,5	ECR1HYL182M◊◊ΔΔ1831
	2 200	0,072	0,017	0,046	0,12	1.100	3680	18 x 35,5	ECR1HYL222M◊◊ΔΔ1835
	2 700	0,059	0,014	0,038	0,12	1.350	3880	18 x 40	ECR1HYL272M◊◊ΔΔ1840
	3 300	0,056	0,014	0,038	0,14	1.650	3800	18 x 40	ECR1HYL332M◊◊ΔΔ1840
63 (79) 1J	15	7,96	1,80	7,30	0,09	10	61	5 x 11,5	ECR1JYL150M◊◊ΔΔ0511
	33	3,62	1,00	4,10	0,09	21	126	6,3 x 11,5	ECR1JYL330M◊◊ΔΔ0611
	56	2,14	0, 500	2,20	0,09	36	260	8 x 11,5	ECR1JYL560M◊◊ΔΔ0811
	82	1,46	0,360	1,70	0,09	52	335	8 x 16	ECR1JYL820M◊◊ΔΔ0816
		1,46	0,340	1,40	0,09	52	325	10 x 12,5	ECR1JYL820M◊◊ΔΔ1012
	120	0,995	0,260	1,30	0,09	76	408	8 x 20	ECR1JYL121M◊◊ΔΔ0820
		0,995	0,250	1,20	0,09	76	400	10 x 16	ECR1JYL121M◊◊ΔΔ1016
	180	0,663	0,170	0,760	0,09	114	518	10 x 20	ECR1JYL181M◊◊ΔΔ1020
		0,663	0,180	0,860	0,09	114	527	12,5 x 16	ECR1JYL181M◊◊ΔΔ1216
	220	0,543	0,160	0,670	0,09	139	595	10 x 25	ECR1JYL221M◊◊ΔΔ1025
	270	0,442	0,120	0,570	0,09	171	740	10 x 30	ECR1JYL271M◊◊ΔΔ1030
		0,442	0,130	0,520	0,09	171	765	12,5 x 20	ECR1JYL271M◊◊ΔΔ1220
		0,442	0,110	0,520	0,09	171	895	16 x 16	ECR1JYL271M◊◊ΔΔ1616
	330	0,362	0,096	0,360	0,09	208	875	12,5 x 25	ECR1JYL331M◊◊ΔΔ1225
	390	0,306	0,096	0,400	0,09	246	1030	18 x 16	ECR1JYL391M◊◊ΔΔ1816
	470	0,254	0,080	0,340	0,09	297	1010	12,5 x 30	ECR1JYL471M◊◊ΔΔ1230
		0,254	0,077	0,320	0,09	297	1130	16 x 20	ECR1JYL471M◊◊ΔΔ1620
	560	0,213	0,070	0,300	0,09	353	1140	12,5 x 35	ECR1JYL561M◊◊ΔΔ1235
	680	0,176	0,060	0,250	0,09	429	1280	12,5 x 40	ECR1JYL681M◊◊ΔΔ1240
		0,176	0,062	0,230	0,09	429	1350	16 x 25	ECR1JYL681M◊◊ΔΔ1625
		0,176	0,072	0,270	0,09	429	1300	18 x 20	ECR1JYL681M◊◊ΔΔ1820
	820	0,146	0,049	0,180	0,09	517	1650	16 x 31,5	ECR1JYL821M◊◊ΔΔ1631
		0,146	0,052	0,190	0,09	517	1560	18 x 25	ECR1JYL821M◊◊ΔΔ1825
	1 000	0,119	0,040	0,150	0,09	630	1900	16 x 35,5	ECR1JYL102M◊◊ΔΔ1635
		0,119	0,042	0,150	0,09	630	1720	18 x 31,5	ECR1JYL102M◊◊ΔΔ1831

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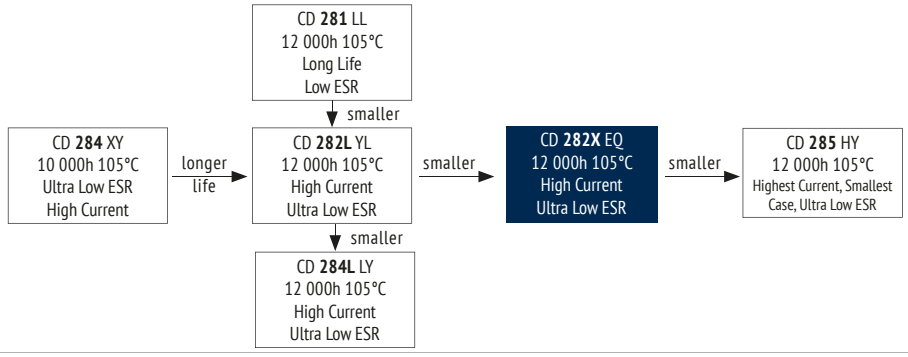
RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
63 (79) 1J	1 200	0,099	0,036	0,130	0,09	756	2130	16 x 40	ECR1JYL122M◊◊ΔΔ1640
		0,099	0,036	0,130	0,09	756	1890	18 x 35,5	ECR1JYL122M◊◊ΔΔ1835
	1 500	0,080	0,032	0,120	0,09	945	2470	18 x 40	ECR1JYL152M◊◊ΔΔ1840
100 (125) 2A	6,8	15,6	1,80	7,30	0,08	7	62	5 x 11,5	ECR2AYL6R8M◊◊ΔΔ0511
	15	7,08	1,00	4,10	0,08	15	126	6,3 x 11,5	ECR2AYL150M◊◊ΔΔ0611
	27	3,93	0, 500	2,20	0,08	27	260	8 x 11,5	ECR2AYL270M◊◊ΔΔ0811
	39	2,73	0,360	1,70	0,08	39	335	8 x 16	ECR2AYL390M◊◊ΔΔ0816
	47	2,26	0,340	1,40	0,08	47	325	10 x 12,5	ECR2AYL470M◊◊ΔΔ1012
	56	1,90	0,260	1,30	0,08	56	408	8 x 20	ECR2AYL560M◊◊ΔΔ0820
	68	1,56	0,250	1,20	0,08	68	400	10 x 16	ECR2AYL680M◊◊ΔΔ1016
	82	1,30	0,170	0,760	0,08	82	518	10 x 20	ECR2AYL820M◊◊ΔΔ1020
		1,30	0,180	0,860	0,08	82	527	12,5 x 16	ECR2AYL820M◊◊ΔΔ1216
	100	1,07	0,160	0,670	0,08	100	595	10 x 25	ECR2AYL101M◊◊ΔΔ1025
	120	0,884	0,120	0,570	0,08	120	740	10 x 30	ECR2AYL121M◊◊ΔΔ1030
		0,884	0,130	0,520	0,08	120	765	12,5 x 20	ECR2AYL121M◊◊ΔΔ1220
	150	0,707	0,110	0,520	0,08	150	895	16 x 16	ECR2AYL151M◊◊ΔΔ1616
	180	0,589	0,096	0,360	0,08	180	875	12,5 x 25	ECR2AYL181M◊◊ΔΔ1225
		0,589	0,096	0,400	0,08	180	1030	18 x 16	ECR2AYL181M◊◊ΔΔ1816
	220	0,482	0,080	0,340	0,08	220	1010	12,5 x 30	ECR2AYL221M◊◊ΔΔ1230
		0,482	0,077	0,320	0,08	220	1130	16 x 20	ECR2AYL221M◊◊ΔΔ1620
	270	0,393	0,070	0,300	0,08	270	1140	12,5 x 35	ECR2AYL271M◊◊ΔΔ1235
		0,393	0,062	0,230	0,08	270	1350	16 x 25	ECR2AYL271M◊◊ΔΔ1625
	330	0,322	0,060	0,250	0,08	330	1280	12,5 x 40	ECR2AYL331M◊◊ΔΔ1240
		0,322	0,072	0,270	0,08	330	1300	18 x 20	ECR2AYL331M◊◊ΔΔ1820
	390	0,272	0,049	0,180	0,08	390	1650	16 x 31,5	ECR2AYL391M◊◊ΔΔ1631
		0,272	0,052	0,190	0,08	390	1560	18 x 25	ECR2AYL391M◊◊ΔΔ1825
	470	0,226	0,040	0,150	0,08	470	1900	16 x 35,5	ECR2AYL471M◊◊ΔΔ1635
		0,226	0,042	0,150	0,08	470	1720	18 x 31,5	ECR2AYL471M◊◊ΔΔ1831
	560	0,189	0,036	0,130	0,08	560	2130	16 x 40	ECR2AYL561M◊◊ΔΔ1640
	680	0,156	0,036	0,130	0,08	680	1890	18 x 35,5	ECR2AYL681M◊◊ΔΔ1835
	820	0,129	0,032	0,120	0,08	820	2470	18 x 40	ECR2AYL821M◊◊ΔΔ1840

4 000 - 10 000h at 105°C

- Miniaturized
- Ultra Low Impedance
- High Ripple Current
- Switching Power Supplies



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +105
Voltage Range (V)	6,3 ~ 100
Capacitance Range (µF)	1 ~ 15 000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 2 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	6,3	10	16	25	35	50	63	100
	$Z_{-25°C} / Z_{+20°C}$	4	3	2					
	$Z_{-40°C} / Z_{+20°C}$	8	6	4	3				

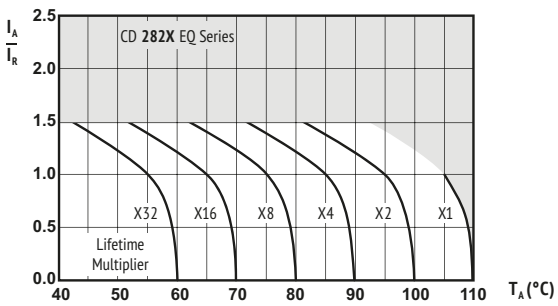
ITEM	USEFUL LIFE			LOAD LIFE		ENDURANCE TEST		SHELF LIFE	
Lifetime		**6,3~10V:**	**16~100V:**	**6,3~10V:**	**16~100V:**	**6,3~10V:**	**16~100V:**	1 000h	
	Ø 5:	6 000h	7 000h	4 000h	5 000h	6 000h	7 000h		
	Ø 6,3~8:	8 000h	9 000h	6 000h	7 000h	8 000h	9 000h		
	Ø 10~18:	10 000h	12 000h	8 000h	10 000h	10 000h	12 000h		
			> 250 000h						
Leakage Current	Not more than specified value			Not more than specified value		Not more than specified value		Not more than specified value	
Capacitance Change	Within ± 40% of initial value			Within ± 25% of initial value		Within ± 25% of initial value		Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value			Not more than 200% of specified value		Not more than 200% of specified value		Not more than 200% of specified value	
Condition: Applied Voltage, Applied Current, Applied Temperature	U_R, I_R, 105°C		U_R, 1,4 x I_R, 40°C	U_R, I_R, 105°C		U_R, I_R = 0, 105°C, IEC 60384		U_R = 0, I_R = 0, 105°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Capacitance (µF) \ Frequency	120Hz	1kHz	10kHz	100kHz
1	0,35	0,60	0,80	1,00
2,2 ~ 10	0,42	0,60	0,80	1,00
22 ~ 47	0,55	0,75	0,90	1,00
100 ~ 330	0,70	0,85	0,95	1,00
470 ~ 1 000	0,75	0,90	0,98	1,00
2 200 ~ 15 000	0,80	0,95	1,00	1,00

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

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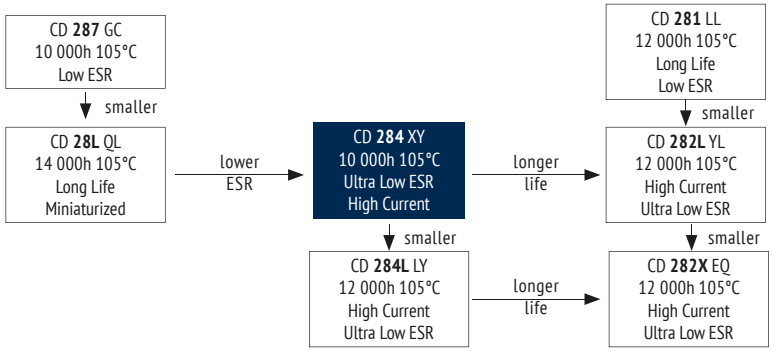
U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
6,3 (7,2) 0J	100	2,92	0,900	3,60	0,22	7	150	5 x 11,5	ECR0JEQ101M◊◊ΔΔ0511
	220	1,33	0,400	1,20	0,22	14	250	5 x 11,5	ECR0JEQ221M◊◊ΔΔ0511
	330	0,884	0,220	0,870	0,22	21	340	6,3 x 11,5	ECR0JEQ331M◊◊ΔΔ0611
	470	0,621	0,220	0,870	0,22	30	400	6,3 x 11,5	ECR0JEQ471M◊◊ΔΔ0611
	1 000	0,292	0,130	0,520	0,22	63	640	8 x 11,5	ECR0JEQ102M◊◊ΔΔ0811
	2 200	0,145	0,062	0,250	0,24	139	1300	10 x 16	ECR0JEQ222M◊◊ΔΔ1016
	3 300	0,104	0,046	0,180	0,26	208	1400	10 x 20	ECR0JEQ332M◊◊ΔΔ1020
	4 700	0,079	0,032	0,110	0,28	297	2230	12,5 x 25	ECR0JEQ472M◊◊ΔΔ1225
	6 800	0,062	0,032	0,110	0,32	429	2230	12,5 x 25	ECR0JEQ682M◊◊ΔΔ1225
	10 000	0,053	0,021	0,060	0,40	630	2930	16 x 25	ECR0JEQ103M◊◊ΔΔ1625
	15 000	0,044	0,015	0,044	0,50	945	3610	16 x 35,5	ECR0JEQ153M◊◊ΔΔ1635
10 (13) 1A	100	2,52	0,900	3,60	0,19	10	150	5 x 11,5	ECR1AEQ101M◊◊ΔΔ0511
	220	1,15	0,400	1,20	0,19	22	250	5 x 11,5	ECR1AEQ221M◊◊ΔΔ0511
	330	0,764	0,220	0,870	0,19	33	400	6,3 x 11,5	ECR1AEQ331M◊◊ΔΔ0611
	470	0,536	0,220	0,870	0,19	47	400	6,3 x 11,5	ECR1AEQ471M◊◊ΔΔ0611
	1 000	0,252	0,080	0,320	0,19	100	865	10 x 12,5	ECR1AEQ102M◊◊ΔΔ1012
	2 200	0,127	0,046	0,180	0,21	220	1400	10 x 20	ECR1AEQ222M◊◊ΔΔ1020
	3 300	0,092	0,041	0,140	0,23	330	1900	12,5 x 20	ECR1AEQ332M◊◊ΔΔ1220
	4 700	0,071	0,032	0,110	0,25	470	2230	12,5 x 25	ECR1AEQ472M◊◊ΔΔ1225
	6 800	0,057	0,021	0,060	0,29	680	2930	16 x 25	ECR1AEQ682M◊◊ΔΔ1625
	10 000	0,049	0,019	0,056	0,37	1000	3450	16 x 31,5	ECR1AEQ103M◊◊ΔΔ1631
16 (20) 1C	47	4,52	0,400	1,20	0,16	8	250	5 x 11,5	ECR1CEQ470M◊◊ΔΔ0511
	100	2,13	0,400	1,20	0,16	16	250	5 x 11,5	ECR1CEQ101M◊◊ΔΔ0511
	220	0,965	0,220	0,870	0,16	36	400	6,3 x 11,5	ECR1CEQ221M◊◊ΔΔ0611
	330	0,643	0,220	0,870	0,16	53	400	6,3 x 11,5	ECR1CEQ331M◊◊ΔΔ0611
	470	0,452	0,130	0,520	0,16	76	640	8 x 11,5	ECR1CEQ471M◊◊ΔΔ0811
	1 000	0,212	0,062	0,250	0,16	160	1210	10 x 16	ECR1CEQ102M◊◊ΔΔ1016
	2 200	0,109	0,041	0,140	0,18	352	1900	12,5 x 20	ECR1CEQ222M◊◊ΔΔ1220
	3 300	0,080	0,032	0,110	0,20	528	2230	12,5 x 25	ECR1CEQ332M◊◊ΔΔ1225
	4 700	0,062	0,021	0,060	0,22	752	2930	16 x 25	ECR1CEQ472M◊◊ΔΔ1625
	6 800	0,051	0,019	0,056	0,26	1088	3450	16 x 31,5	ECR1CEQ682M◊◊ΔΔ1631
25 (32) 1E	33	5,63	0,400	1,20	0,14	9	250	5 x 11,5	ECR1EEQ330M◊◊ΔΔ0511
	47	3,96	0,400	1,20	0,14	12	250	5 x 11,5	ECR1EEQ470M◊◊ΔΔ0511
	100	1,86	0,400	1,20	0,14	25	250	5 x 11,5	ECR1EEQ101M◊◊ΔΔ0511
	220	0,844	0,220	0,870	0,14	55	400	6,3 x 11,5	ECR1EEQ221M◊◊ΔΔ0611
	330	0,563	0,130	0,520	0,14	83	640	8 x 11,5	ECR1EEQ331M◊◊ΔΔ0811
	470	0,395	0,080	0,320	0,14	118	865	10 x 12,5	ECR1EEQ471M◊◊ΔΔ1012
	1 000	0,186	0,046	0,180	0,14	250	1400	10 x 20	ECR1EEQ102M◊◊ΔΔ1020
	2 200	0,096	0,032	0,110	0,16	550	2230	12,5 x 25	ECR1EEQ222M◊◊ΔΔ1225
	3 300	0,072	0,021	0,060	0,18	825	2930	16 x 25	ECR1EEQ332M◊◊ΔΔ1625
	4 700	0,056	0,019	0,056	0,20	1175	3450	16 x 31,5	ECR1EEQ472M◊◊ΔΔ1631
35 (44) 1V	33	4,83	0,400	1,20	0,12	12	250	5 x 11,5	ECR1VEQ330M◊◊ΔΔ0511
	47	3,39	0,400	1,20	0,12	17	250	5 x 11,5	ECR1VEQ470M◊◊ΔΔ0511
	100	1,60	0,220	0,870	0,12	35	400	6,3 x 11,5	ECR1VEQ101M◊◊ΔΔ0611
	220	0,723	0,130	0,520	0,12	77	640	8 x 11,5	ECR1VEQ221M◊◊ΔΔ0811
	330	0,482	0,080	0,320	0,12	116	865	10 x 12,5	ECR1VEQ331M◊◊ΔΔ1012
	470	0,339	0,062	0,250	0,12	165	1210	10 x 16	ECR1VEQ471M◊◊ΔΔ1016
	1 000	0,159	0,041	0,140	0,12	350	1900	12,5 x 20	ECR1VEQ102M◊◊ΔΔ1220
	2 200	0,084	0,021	0,060	0,14	770	2930	16 x 25	ECR1VEQ222M◊◊ΔΔ1625
	3 300	0,064	0,019	0,056	0,16	1155	3450	16 x 31,5	ECR1VEQ332M◊◊ΔΔ1631
50 (63) 1H	1,0	132	4,00	8,00	0,10	3	30	5 x 11,5	ECR1HEQ010M◊◊ΔΔ0511
	2,2	60,3	2,50	6,00	0,10	3	43	5 x 11,5	ECR1HEQ2R2M◊◊ΔΔ0511
	3,3	40,2	2,20	5,60	0,10	3	53	5 x 11,5	ECR1HEQ3R3M◊◊ΔΔ0511
	4,7	28,3	1,90	5,00	0,10	3	88	5 x 11,5	ECR1HEQ4R7M◊◊ΔΔ0511
	10	13,3	1,50	4,00	0,10	5	100	5 x 11,5	ECR1HEQ100M◊◊ΔΔ0511
	22	6,03	0,700	2,80	0,10	11	180	5 x 11,5	ECR1HEQ220M◊◊ΔΔ0511
	33	4,02	0,700	2,80	0,10	17	250	5 x 11,5	ECR1HEQ330M◊◊ΔΔ0511
	44	3,02	0,300	1,20	0,10	22	295	6,3 x 11,5	ECR1HEQ470M◊◊ΔΔ0611
	100	1,33	0,170	0,680	0,10	50	555	8 x 11,5	ECR1HEQ101M◊◊ΔΔ0811
	220	0,603	0,084	0,340	0,10	110	1050	10 x 16	ECR1HEQ221M◊◊ΔΔ1016

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
50 (63) 1H	330	0,402	0,060	0,240	0,10	165	1220	10 x 20	ECR1HEQ331M◊◊ΔΔ1020
	470	0,282	0,045	0,150	0,10	235	1660	12,5 x 20	ECR1HEQ471M◊◊ΔΔ1220
	1 000	0,133	0,032	0,096	0,10	500	2730	16 x 25	ECR1HEQ102M◊◊ΔΔ1625
	2 200	0,072	0,019	0,057	0,12	1100	3150	16 x 35,5	ECR1HEQ222M◊◊ΔΔ1635
63 (79) 1J	10	12,0	0,880	3,50	0,09	7	173	5 x 11,5	ECR1JEQ100M◊◊ΔΔ0511
	22	5,43	0,880	3,50	0,09	14	173	5 x 11,5	ECR1JEQ220M◊◊ΔΔ0511
	33	3,62	0,350	1,40	0,09	21	278	6,3 x 11,5	ECR1JEQ330M◊◊ΔΔ0611
	47	2,54	0,350	1,40	0,09	30	278	6,3 x 11,5	ECR1JEQ470M◊◊ΔΔ0611
	100	1,20	0,150	0,600	0,09	63	725	10 x 12,5	ECR1JEQ101M◊◊ΔΔ1012
	220	0,543	0,078	0,310	0,09	139	1200	10 x 20	ECR1JEQ221M◊◊ΔΔ1020
	330	0,362	0,060	0,190	0,09	208	1570	12,5 x 20	ECR1JEQ331M◊◊ΔΔ1220
	470	0,254	0,043	0,140	0,09	297	1990	12,5 x 25	ECR1JEQ471M◊◊ΔΔ1225
	1 000	0,119	0,032	0,096	0,09	630	2730	16 x 25	ECR1JEQ102M◊◊ΔΔ1625
100 (125) 2A	1,0	106	4,50	15,0	0,08	3	20	5 x 11,5	ECR2AEQ010M◊◊ΔΔ0511
	2,2	48,3	3,00	13,0	0,08	3	30	5 x 11,5	ECR2AEQ2R2M◊◊ΔΔ0511
	3,3	32,2	2,70	11,0	0,08	4	40	5 x 11,5	ECR2AEQ3R3M◊◊ΔΔ0511
	4,7	22,6	2,50	10,0	0,08	5	65	5 x 11,5	ECR2AEQ4R7M◊◊ΔΔ0511
	10	10,7	0,570	2,30	0,08	10	267	6,3 x 11,5	ECR2AEQ100M◊◊ΔΔ0611
	22	4,83	0,570	2,30	0,08	22	267	6,3 x 11,5	ECR2AEQ220M◊◊ΔΔ0611
	33	3,22	0,360	1,40	0,08	33	462	8 x 11,5	ECR2AEQ330M◊◊ΔΔ0811
	47	2,26	0,250	1,00	0,08	47	585	8 x 16	ECR2AEQ470M◊◊ΔΔ0816
	100	1,07	0,120	0,520	0,08	100	1040	10 x 20	ECR2AEQ101M◊◊ΔΔ1020
	220	0,482	0,060	0,230	0,08	220	1620	12,5 x 25	ECR2AEQ221M◊◊ΔΔ1225
	330	0,322	0,044	0,160	0,08	330	2210	16 x 25	ECR2AEQ331M◊◊ΔΔ1625

4 000 - 10 000h at 105°C

- Lowest Impedance
- High Ripple Current
- Switching Power Supplies



RADIAL

ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +105
Voltage Range (V)	6,3 ~ 100
Capacitance Range (µF)	6,8 ~ 6 800
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 2 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	6,3	10	16	25	35	50	63	100
	$Z_{-25°C} / Z_{+20°C}$	4	3	2					
	$Z_{-40°C} / Z_{+20°C}$	12	10	8	6	4	3		

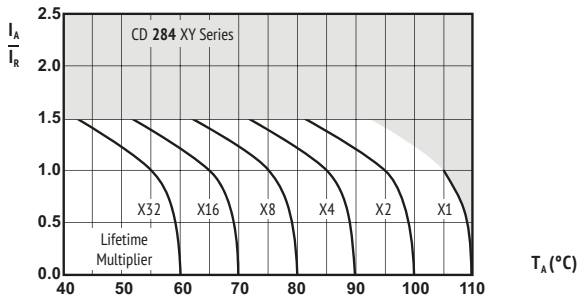
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	Ø ≤ 6,3 : 4 000h Ø 8 : 6 000h Ø 10 : 8 000h Ø ≥ 12,5 : 10 000h	Ø ≥ 8 : > 250 000h	Ø ≤ 6,3 : 2 000h Ø 8 : 3 000h Ø 10 : 4 000h Ø ≥ 12,5 : 5 000h	Ø ≤ 6,3 : 2 500h Ø 8 : 3 500h Ø 10 : 5 000h Ø ≥ 12,5 : 6 000h	1000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 50% of initial value		Within ± 25% of initial value	Within ± 25% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 40°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Capacitance (µF) \ Frequency	120Hz	1kHz	10kHz	100kHz
6,8 ~ 33	0,42	0,70	0,90	1,00
39 ~ 270	0,50	0,73	0,92	1,00
330 ~ 680	0,55	0,88	0,98	1,00
820 ~ 1 800	0,66	0,90	0,99	1,00
2 200 ~ 16 800	0,70	0,92	1,00	1,00

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
6,3 (7,2) 0J	150	1,95	0,300	1,00	0,22	10	250	5 x 11,5	ECR0JXY151M◊◊ΔΔ0511
	330	0,885	0,130	0,410	0,22	21	405	6,3 x 11,5	ECR0JXY331M◊◊ΔΔ0611
	560	0,522	0,072	0,220	0,22	36	760	8 x 11,5	ECR0JXY561M◊◊ΔΔ0811
	820	0,356	0,056	0,170	0,22	52	995	8 x 16	ECR0JXY821M◊◊ΔΔ0816
	1 000	0,292	0,053	0,160	0,22	63	1030	10 x 12,5	ECR0JXY102M◊◊ΔΔ1012
	1 200	0,244	0,041	0,130	0,22	76	1250	8 x 20	ECR0JXY122M◊◊ΔΔ0820
		0,244	0,038	0,120	0,22	76	1430	10 x 16	ECR0JXY122M◊◊ΔΔ1016
	1 500	0,195	0,023	0,069	0,22	95	1820	10 x 20	ECR0JXY152M◊◊ΔΔ1020
	2 200	0,145	0,022	0,066	0,24	139	2150	10 x 25	ECR0JXY222M◊◊ΔΔ1025
	3 300	0,105	0,021	0,053	0,26	208	2360	12,5 x 20	ECR0JXY332M◊◊ΔΔ1220
	3 900	0,089	0,018	0,045	0,26	246	2770	12,5 x 25	ECR0JXY392M◊◊ΔΔ1225
	4 700	0,080	0,016	0,041	0,28	297	3290	12,5 x 30	ECR0JXY472M◊◊ΔΔ1230
	5 600	0,072	0,015	0,039	0,30	353	3400	12,5 x 35	ECR0JXY562M◊◊ΔΔ1235
		0,072	0,018	0,045	0,30	353	3140	16 x 20	ECR0JXY562M◊◊ΔΔ1620
	6 800	0,063	0,016	0,043	0,32	429	3460	16 x 25	ECR0JXY682M◊◊ΔΔ1625
10 (13) 1A	100	2,52	0,300	1,00	0,19	10	250	5 x 11,5	ECR1AXY101M◊◊ΔΔ0511
	220	1,15	0,130	0,410	0,19	22	405	6,3 x 11,5	ECR1AXY221M◊◊ΔΔ0611
	470	0,537	0,072	0,220	0,19	47	760	8 x 11,5	ECR1AXY471M◊◊ΔΔ0811
	680	0,371	0,056	0,170	0,19	68	995	8 x 16	ECR1AXY681M◊◊ΔΔ0816
		0,371	0,053	0,160	0,19	68	1030	10 x 12,5	ECR1AXY681M◊◊ΔΔ1012
	1 000	0,252	0,041	0,130	0,19	100	1250	8 x 20	ECR1AXY102M◊◊ΔΔ0820
		0,252	0,038	0,120	0,19	100	1430	10 x 16	ECR1AXY102M◊◊ΔΔ1016
	1 200	0,210	0,023	0,069	0,19	120	1820	10 x 20	ECR1AXY122M◊◊ΔΔ1020
	1 500	0,168	0,022	0,066	0,19	150	2150	10 x 25	ECR1AXY152M◊◊ΔΔ1025
	2 200	0,127	0,021	0,053	0,21	220	2360	12,5 x 20	ECR1AXY222M◊◊ΔΔ1220
	3 300	0,093	0,018	0,045	0,23	330	2770	12,5 x 25	ECR1AXY332M◊◊ΔΔ1225
	3 900	0,079	0,016	0,041	0,23	390	3290	12,5 x 30	ECR1AXY392M◊◊ΔΔ1230
		0,079	0,018	0,045	0,23	390	3140	16 x 20	ECR1AXY392M◊◊ΔΔ1620
	4 700	0,071	0,015	0,039	0,25	470	3400	12,5 x 35	ECR1AXY472M◊◊ΔΔ1235
	5 600	0,064	0,016	0,043	0,27	560	3460	16 x 25	ECR1AXY562M◊◊ΔΔ1625
16 (20) 1C	56	3,79	0,300	1,00	0,16	9	250	5 x 11,5	ECR1CXY560M◊◊ΔΔ0511
	120	1,77	0,130	0,410	0,16	20	405	6,3 x 11,5	ECR1CXY121M◊◊ΔΔ0611
	330	0,644	0,072	0,220	0,16	53	760	8 x 11,5	ECR1CXY331M◊◊ΔΔ0811
	470	0,452	0,056	0,170	0,16	76	995	8 x 16	ECR1CXY471M◊◊ΔΔ0816
		0,452	0,053	0,160	0,16	76	1030	10 x 12,5	ECR1CXY471M◊◊ΔΔ1012
	680	0,313	0,041	0,130	0,16	109	1250	8 x 20	ECR1CXY681M◊◊ΔΔ0820
		0,313	0,038	0,120	0,16	109	1430	10 x 16	ECR1CXY681M◊◊ΔΔ1016
	1 000	0,213	0,023	0,069	0,16	160	1820	10 x 20	ECR1CXY102M◊◊ΔΔ1020
	1 200	0,177	0,022	0,066	0,16	192	2150	10 x 25	ECR1CXY122M◊◊ΔΔ1025
	1 500	0,142	0,021	0,053	0,16	240	2360	12,5 x 20	ECR1CXY152M◊◊ΔΔ1220
	2 200	0,109	0,018	0,045	0,18	352	2770	12,5 x 25	ECR1CXY222M◊◊ΔΔ1225
	2 700	0,089	0,016	0,041	0,18	432	3290	12,5 x 30	ECR1CXY272M◊◊ΔΔ1230
		0,089	0,018	0,045	0,18	432	3140	16 x 20	ECR1CXY272M◊◊ΔΔ1620
	3 300	0,081	0,015	0,039	0,20	528	3400	12,5 x 35	ECR1CXY332M◊◊ΔΔ1235
	3 900	0,069	0,016	0,043	0,20	624	3460	16 x 25	ECR1CXY392M◊◊ΔΔ1625
25 (32) 1E	47	3,96	0,300	1,00	0,14	12	250	5 x 11,5	ECR1EXY470M◊◊ΔΔ0511
	100	1,86	0,130	0,410	0,14	25	405	6,3 x 11,5	ECR1EXY101M◊◊ΔΔ0611
	220	0,845	0,072	0,220	0,14	55	760	8 x 11,5	ECR1EXY221M◊◊ΔΔ0811
		0,845	0,072	0,220	0,14	55	760	8 x 11,5	ECR1EXY221M◊◊ΔΔ0811
	330	0,563	0,056	0,170	0,14	83	995	8 x 16	ECR1EXY331M◊◊ΔΔ0816
		0,563	0,053	0,160	0,14	83	1030	10 x 12,5	ECR1EXY331M◊◊ΔΔ1012
	470	0,396	0,041	0,130	0,14	118	1250	8 x 20	ECR1EXY471M◊◊ΔΔ0820
		0,396	0,041	0,130	0,14	118	1250	8 x 20	ECR1EXY471M◊◊ΔΔ0820
		0,396	0,038	0,120	0,14	118	1430	10 x 16	ECR1EXY471M◊◊ΔΔ1016
	680	0,274	0,023	0,069	0,14	170	1820	10 x 20	ECR1EXY681M◊◊ΔΔ1020
	820	0,227	0,022	0,066	0,14	205	2150	10 x 25	ECR1EXY821M◊◊ΔΔ1025
	1 000	0,186	0,021	0,053	0,14	250	2360	12,5 x 20	ECR1EXY102M◊◊ΔΔ1220
	1 500	0,124	0,018	0,045	0,14	375	2770	12,5 x 25	ECR1EXY152M◊◊ΔΔ1225
	1 800	0,104	0,016	0,041	0,14	450	3290	12,5 x 30	ECR1EXY182M◊◊ΔΔ1230
		0,104	0,018	0,045	0,14	450	3140	16 x 20	ECR1EXY182M◊◊ΔΔ1620
	2 200	0,097	0,015	0,039	0,16	550	3400	12,5 x 35	ECR1EXY222M◊◊ΔΔ1235
	2 700	0,079	0,016	0,043	0,16	675	3460	16 x 25	ECR1EXY272M◊◊ΔΔ1625

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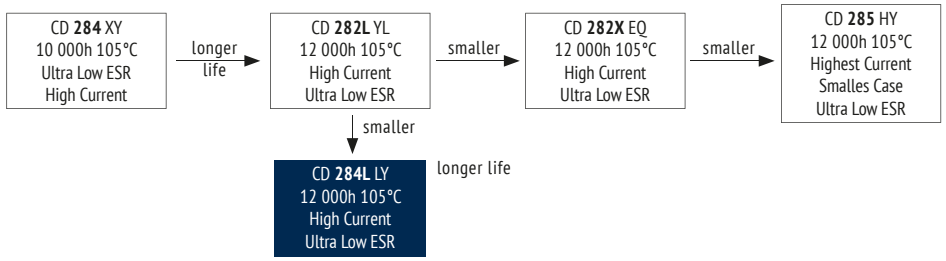
RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
35 (44) 1V	33	4,82	0,300	1,00	0,12	12	250	5 x 11,5	ECR1VXY330M◊◊ΔΔ0511
	56	2,85	0,130	0,410	0,12	20	405	6,3 x 11,5	ECR1VXY560M◊◊ΔΔ0611
	150	1,07	0,072	0,220	0,12	53	760	8 x 11,5	ECR1VXY151M◊◊ΔΔ0811
	220	0,724	0,056	0,170	0,12	77	995	8 x 16	ECR1VXY221M◊◊ΔΔ0816
		0,724	0,053	0,160	0,12	77	1030	10 x 12,5	ECR1VXY221M◊◊ΔΔ1012
	270	0,590	0,041	0,130	0,12	95	1250	8 x 20	ECR1VXY271M◊◊ΔΔ0820
	330	0,483	0,038	0,120	0,12	116	1430	10 x 16	ECR1VXY331M◊◊ΔΔ1016
	470	0,339	0,023	0,069	0,12	165	1820	10 x 20	ECR1VXY471M◊◊ΔΔ1020
	560	0,285	0,022	0,066	0,12	196	2150	10 x 25	ECR1VXY561M◊◊ΔΔ1025
	680	0,235	0,021	0,053	0,12	238	2360	12,5 x 20	ECR1VXY681M◊◊ΔΔ1220
	1 000	0,160	0,018	0,045	0,12	350	2770	12,5 x 25	ECR1VXY102M◊◊ΔΔ1225
	1 200	0,133	0,016	0,041	0,12	420	3290	12,5 x 30	ECR1VXY122M◊◊ΔΔ1230
		0,133	0,018	0,045	0,12	420	3140	16 x 20	ECR1VXY122M◊◊ΔΔ1620
	1 500	0,107	0,015	0,039	0,12	525	3400	12,5 x 35	ECR1VXY152M◊◊ΔΔ1235
	1 800	0,089	0,016	0,043	0,12	630	3460	16 x 25	ECR1VXY182M◊◊ΔΔ1625
50 (63) 1H	22	6,3	0,340	1,18	0,10	11	238	5 x 11,5	ECR1HXY220M◊◊ΔΔ0511
	56	2,37	0,140	0,500	0,10	28	385	6,3 x 11,5	ECR1HXY560M◊◊ΔΔ0611
	100	1,33	0,074	0,220	0,10	50	724	8 x 11,5	ECR1HXY101M◊◊ΔΔ0811
	120	1,11	0,061	0,180	0,10	60	950	8 x 16	ECR1HXY121M◊◊ΔΔ0816
	150	0,885	0,061	0,180	0,10	75	979	10 x 12,5	ECR1HXY151M◊◊ΔΔ1012
	180	0,737	0,046	0,140	0,10	90	1190	8 x 20	ECR1HXY181M◊◊ΔΔ0820
	220	0,603	0,042	0,120	0,10	110	1370	10 x 16	ECR1HXY221M◊◊ΔΔ1016
	270	0,492	0,030	0,090	0,10	135	1580	10 x 20	ECR1HXY271M◊◊ΔΔ1020
	330	0,402	0,028	0,085	0,10	165	1870	10 x 25	ECR1HXY331M◊◊ΔΔ1025
	560	0,237	0,023	0,059	0,10	280	2410	12,5 x 25	ECR1HXY561M◊◊ΔΔ1225
	680	0,196	0,021	0,052	0,10	340	2860	12,5 x 30	ECR1HXY681M◊◊ΔΔ1230
	820	0,162	0,019	0,051	0,10	410	2960	12,5 x 35	ECR1HXY821M◊◊ΔΔ1235
		0,162	0,023	0,059	0,10	410	2730	16 x 20	ECR1HXY821M◊◊ΔΔ1620
	1 000	0,133	0,021	0,056	0,10	500	3010	16 x 25	ECR1HXY102M◊◊ΔΔ1625
63 (79) 1J	15	7,96	0,880	3,50	0,09	10	165	5 x 11,5	ECR1JXY150M◊◊ΔΔ0511
	33	3,62	0,350	1,40	0,09	21	265	6,3 x 11,5	ECR1JXY330M◊◊ΔΔ0611
	56	2,14	0,220	0,880	0,09	36	500	8 x 11,5	ECR1JXY560M◊◊ΔΔ0811
	82	1,46	0,160	0,640	0,09	52	665	8 x 16	ECR1JXY820M◊◊ΔΔ0816
		1,46	0,150	0,600	0,09	52	685	10 x 12,5	ECR1JXY820M◊◊ΔΔ1012
	120	0,995	0,120	0,480	0,09	76	820	8 x 20	ECR1JXY121M◊◊ΔΔ0820
		0,995	0,110	0,440	0,09	76	945	10 x 16	ECR1JXY121M◊◊ΔΔ1016
	180	0,664	0,080	0,320	0,09	114	1100	10 x 20	ECR1JXY181M◊◊ΔΔ1020
		0,664	0,082	0,270	0,09	114	1135	12,5 x 16	ECR1JXY181M◊◊ΔΔ1216
	220	0,543	0,073	0,290	0,09	139	1300	10 x 25	ECR1JXY221M◊◊ΔΔ1025
	270	0,443	0,060	0,200	0,09	171	1495	12,5 x 20	ECR1JXY271M◊◊ΔΔ1220
	330	0,362	0,043	0,140	0,09	208	1850	12,5 x 25	ECR1JXY331M◊◊ΔΔ1225
	470	0,254	0,039	0,130	0,09	297	2250	12,5 x 30	ECR1JXY471M◊◊ΔΔ1230
		0,254	0,045	0,140	0,09	297	1990	16 x 20	ECR1JXY471M◊◊ΔΔ1620
	560	0,214	0,033	0,110	0,09	353	2450	12,5 x 35	ECR1JXY561M◊◊ΔΔ1235
		0,214	0,032	0,096	0,09	353	2550	16 x 25	ECR1JXY561M◊◊ΔΔ1625
	680	0,176	0,029	0,096	0,09	429	2780	12,5 x 40	ECR1JXY681M◊◊ΔΔ1240
		0,176	0,038	0,100	0,09	429	2450	18 x 20	ECR1JXY681M◊◊ΔΔ1820
	820	0,146	0,026	0,078	0,09	517	2810	16 x 31,5	ECR1JXY821M◊◊ΔΔ1631
		0,146	0,031	0,084	0,09	517	2780	18 x 25	ECR1JXY821M◊◊ΔΔ1825
	1 000	0,120	0,021	0,063	0,09	630	2835	16 x 35,5	ECR1JXY102M◊◊ΔΔ1635
		0,120	0,025	0,068	0,09	630	3270	18 x 31,5	ECR1JXY102M◊◊ΔΔ1831
	1 200	0,100	0,019	0,057	0,09	756	3340	16 x 40	ECR1JXY122M◊◊ΔΔ1640
		0,100	0,020	0,054	0,09	756	3310	18 x 35,5	ECR1JXY122M◊◊ΔΔ1835
	1 500	0,080	0,018	0,049	0,09	945	3420	18 x 40	ECR1JXY152M◊◊ΔΔ1840
100 (125) 2A	6,8	16,6	1,40	5,60	0,08	7	125	5 x 11,5	ECR2AXY6R8M◊◊ΔΔ0511
	15	7,08	0,570	2,30	0,08	15	205	6,3 x 11,5	ECR2AXY150M◊◊ΔΔ0611
	27	3,93	0,360	1,40	0,08	27	355	8 x 11,5	ECR2AXY270M◊◊ΔΔ0811
	39	2,73	0,250	1,00	0,08	39	450	8 x 16	ECR2AXY390M◊◊ΔΔ0816
	47	2,26	0,240	0,960	0,08	47	450	10 x 12,5	ECR2AXY470M◊◊ΔΔ1012
	56	1,90	0,190	0,760	0,08	56	565	8 x 20	ECR2AXY560M◊◊ΔΔ0820
	68	1,57	0,180	0,720	0,08	68	580	10 x 16	ECR2AXY680M◊◊ΔΔ1016
	82	1,30	0,130	0,520	0,08	82	750	10 x 20	ECR2AXY820M◊◊ΔΔ1020
		1,30	0,130	0,430	0,08	82	735	12,5 x 16	ECR2AXY820M◊◊ΔΔ1216
	100	1,07	0,120	0,480	0,08	100	880	10 x 25	ECR2AXY101M◊◊ΔΔ1025

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
100 (125) 2A	120	0,885	0,094	0,310	0,08	120	1045	12,5 x 20	ECR2AXY121M◊◊ΔΔ1220
	180	0,590	0,071	0,230	0,08	180	1195	12,5 x 25	ECR2AXY181M◊◊ΔΔ1225
	220	0,483	0,063	0,210	0,08	220	1410	12,5 x 30	ECR2AXY221M◊◊ΔΔ1230
		0,483	0,071	0,210	0,08	220	1295	16 x 20	ECR2AXY221M◊◊ΔΔ1620
	270	0,393	0,052	0,170	0,08	270	1560	12,5 x 35	ECR2AXY271M◊◊ΔΔ1235
		0,393	0,053	0,160	0,08	270	1600	16 x 25	ECR2AXY271M◊◊ΔΔ1625
		0,393	0,069	0,190	0,08	270	1470	18 x 20	ECR2AXY271M◊◊ΔΔ1820
	330	0,322	0,046	0,150	0,08	330	1700	12,5 x 40	ECR2AXY331M◊◊ΔΔ1240
	390	0,273	0,041	0,120	0,08	390	1750	16 x 31,5	ECR2AXY391M◊◊ΔΔ1631
		0,273	0,049	0,130	0,08	390	1620	18 x 25	ECR2AXY391M◊◊ΔΔ1825
	470	0,226	0,033	0,100	0,08	470	1890	16 x 35,5	ECR2AXY471M◊◊ΔΔ1635
		0,226	0,039	0,110	0,08	470	1775	18 x 31,5	ECR2AXY471M◊◊ΔΔ1831
	560	0,190	0,030	0,090	0,08	560	2080	16 x 40	ECR2AXY561M◊◊ΔΔ1640
		0,190	0,031	0,084	0,08	560	2060	18 x 35,5	ECR2AXY561M◊◊ΔΔ1835
	680	0,157	0,028	0,076	0,08	680	2570	18 x 40	ECR2AXY681M◊◊ΔΔ1840

8 000 - 12 000h at 105°C

- Miniaturized
- Ultra Low ESR



RADIAL

ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +105
Voltage Range (V)	6,3 ~ 100
Capacitance Range (µF)	8,2 ~ 8 200
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 2 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	6,3	10	16	25	35	50	63	80	100
	$Z_{-25°C} / Z_{+20°C}$	4	3	2						
	$Z_{-40°C} / Z_{+20°C}$	12	10	8	6	4	3			

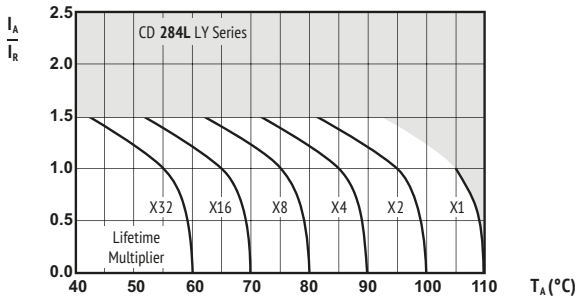
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	Ø ≤ 6,3 : 8 000h Ø = 8 : 10 000h Ø ≥ 10 : 12 000h	Ø ≥ 8 : > 100 000h	Ø ≤ 6,3 : 6 000h Ø = 8 : 8 000h Ø ≥ 10 : 10 000h	Ø ≤ 6,3 : 7 000h Ø = 8 : 10 000h Ø ≥ 10 : 12 000h	500h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value (6,3V, 10V, ± 40%)		Within ± 25% of initial value (6,3V, 10V, ± 30%)	Within ± 25% of initial value (6,3V, 10V, ± 30%)	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value (6,3V, 10V, 400%)		Not more than 200% of specified value (6,3V, 10V, 300%)	Not more than 200% of specified value (6,3V, 10V, 300%)	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 60°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Capacitance (µF) \ Frequency	120Hz	1kHz	10kHz	100kHz
8,2 ~ 33	0,42	0,70	0,90	1,00
47 ~ 270	0,50	0,73	0,92	1,00
330 ~ 680	0,55	0,77	0,94	1,00
820 ~ 1 800	0,60	0,80	0,96	1,00
2 200 ~ 6 800	0,70	0,85	0,98	1,00

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
6,3 (7,2) 0J	220	1,33	0,220	0,800	0,22	14	345	5 x 11,5	ECR0JLY221M◊◊ΔΔ0511
	470	0,621	0,094	0,350	0,22	30	540	6,3 x 11,5	ECR0JLY471M◊◊ΔΔ0611
	820	0,356	0,056	0,190	0,22	52	945	8 x 11,5	ECR0JLY821M◊◊ΔΔ0811
	1 200	0,243	0,045	0,150	0,22	76	1250	8 x 16	ECR0JLY122M◊◊ΔΔ0816
		0,243	0,039	0,140	0,22	76	1330	10 x 12,5	ECR0JLY122M◊◊ΔΔ1012
	1 500	0,195	0,029	0,110	0,22	95	1500	8 x 20	ECR0JLY152M◊◊ΔΔ0820
	1 800	0,162	0,028	0,100	0,22	114	1760	10 x 16	ECR0JLY182M◊◊ΔΔ1016
	2 200	0,145	0,020	0,060	0,24	139	1960	10 x 20	ECR0JLY222M◊◊ΔΔ1020
	2 700	0,118	0,018	0,054	0,24	171	2250	10 x 25	ECR0JLY272M◊◊ΔΔ1025
	3 900	0,088	0,017	0,043	0,26	246	2480	12,5 x 20	ECR0JLY392M◊◊ΔΔ1220
	4 700	0,079	0,015	0,038	0,28	297	2900	12,5 x 25	ECR0JLY472M◊◊ΔΔ1225
	5 600	0,071	0,013	0,033	0,30	353	3450	12,5 x 30	ECR0JLY562M◊◊ΔΔ1230
	6 800	0,062	0,012	0,031	0,32	429	3570	12,5 x 35	ECR0JLY682M◊◊ΔΔ1235
		0,062	0,015	0,038	0,32	429	3250	16 x 20	ECR0JLY682M◊◊ΔΔ1620
	8 200	0,058	0,013	0,035	0,36	517	3630	16 x 25	ECR0JLY822M◊◊ΔΔ1625
10 (13) 1A	150	1,68	0,220	0,800	0,19	15	345	5 x 11,5	ECR1ALY151M◊◊ΔΔ0511
	330	0,764	0,094	0,350	0,19	33	540	6,3 x 11,5	ECR1ALY331M◊◊ΔΔ0611
	680	0,371	0,056	0,190	0,19	68	945	8 x 11,5	ECR1ALY681M◊◊ΔΔ0811
	1 000	0,252	0,045	0,150	0,19	100	1250	8 x 16	ECR1ALY102M◊◊ΔΔ0816
		0,252	0,039	0,140	0,19	100	1330	10 x 12,5	ECR1ALY102M◊◊ΔΔ1012
	1 500	0,168	0,029	0,110	0,19	150	1500	8 x 20	ECR1ALY152M◊◊ΔΔ0820
		0,168	0,028	0,100	0,19	150	1760	10 x 16	ECR1ALY152M◊◊ΔΔ1016
	1 800	0,140	0,020	0,060	0,19	180	1960	10 x 20	ECR1ALY182M◊◊ΔΔ1020
	2 200	0,127	0,018	0,054	0,21	220	2250	10 x 25	ECR1ALY222M◊◊ΔΔ1025
	3 300	0,092	0,017	0,043	0,23	330	2480	12,5 x 20	ECR1ALY332M◊◊ΔΔ1220
	3 900	0,078	0,015	0,038	0,23	390	2900	12,5 x 25	ECR1ALY392M◊◊ΔΔ1225
	4 700	0,071	0,013	0,033	0,25	470	3450	12,5 x 30	ECR1ALY472M◊◊ΔΔ1230
		0,071	0,015	0,038	0,25	470	3250	16 x 20	ECR1ALY472M◊◊ΔΔ1620
	5 600	0,064	0,012	0,031	0,27	560	3570	12,5 x 35	ECR1ALY562M◊◊ΔΔ1235
	6 800	0,057	0,013	0,035	0,29	680	3630	16 x 25	ECR1ALY682M◊◊ΔΔ1625
16 (20) 1C	100	2,13	0,220	0,800	0,16	16	345	5 x 11,5	ECR1CLY101M◊◊ΔΔ0511
	220	0,965	0,094	0,350	0,16	36	540	6,3 x 11,5	ECR1CLY221M◊◊ΔΔ0611
	470	0,452	0,056	0,190	0,16	76	945	8 x 11,5	ECR1CLY471M◊◊ΔΔ0811
	680	0,312	0,045	0,150	0,16	109	1250	8 x 16	ECR1CLY681M◊◊ΔΔ0816
		0,312	0,039	0,140	0,16	109	1330	10 x 12,5	ECR1CLY681M◊◊ΔΔ1012
	1 000	0,212	0,029	0,110	0,16	160	1500	8 x 20	ECR1CLY102M◊◊ΔΔ0820
		0,212	0,028	0,100	0,16	160	1760	10 x 16	ECR1CLY102M◊◊ΔΔ1016
	1 500	0,141	0,020	0,060	0,16	240	1960	10 x 20	ECR1CLY152M◊◊ΔΔ1020
	1 800	0,118	0,018	0,054	0,16	288	2250	10 x 25	ECR1CLY182M◊◊ΔΔ1025
	2 200	0,109	0,017	0,043	0,18	352	2480	12,5 x 20	ECR1CLY222M◊◊ΔΔ1220
	2 700	0,088	0,015	0,038	0,18	432	2900	12,5 x 25	ECR1CLY272M◊◊ΔΔ1225
	3 300	0,080	0,013	0,033	0,20	528	3450	12,5 x 30	ECR1CLY332M◊◊ΔΔ1230
		0,080	0,015	0,038	0,20	528	3250	16 x 20	ECR1CLY332M◊◊ΔΔ1620
	3 900	0,068	0,012	0,031	0,20	624	3570	12,5 x 35	ECR1CLY392M◊◊ΔΔ1235
	4 700	0,062	0,013	0,035	0,22	752	3630	16 x 25	ECR1CLY472M◊◊ΔΔ1625
25 (32) 1E	68	2,74	0,220	0,800	0,14	17	345	5 x 11,5	ECR1ELY680M◊◊ΔΔ0511
	150	1,24	0,094	0,350	0,14	38	540	6,3 x 11,5	ECR1ELY151M◊◊ΔΔ0611
	330	0,563	0,056	0,190	0,14	83	945	8 x 11,5	ECR1ELY331M◊◊ΔΔ0811
	390	0,476	0,045	0,150	0,14	98	1250	8 x 16	ECR1ELY391M◊◊ΔΔ0816
	470	0,395	0,039	0,140	0,14	118	1330	10 x 12,5	ECR1ELY471M◊◊ΔΔ1012
	560	0,332	0,029	0,110	0,14	140	1500	8 x 20	ECR1ELY561M◊◊ΔΔ0820
	680	0,273	0,028	0,100	0,14	170	1760	10 x 16	ECR1ELY681M◊◊ΔΔ1016
	820	0,226	0,020	0,060	0,14	205	1960	10 x 20	ECR1ELY821M◊◊ΔΔ1020
	1 000	0,186	0,018	0,054	0,14	250	2250	10 x 25	ECR1ELY102M◊◊ΔΔ1025
	1 500	0,124	0,017	0,043	0,14	375	2480	12,5 x 20	ECR1ELY152M◊◊ΔΔ1220
	1 800	0,103	0,015	0,038	0,14	450	2900	12,5 x 25	ECR1ELY182M◊◊ΔΔ1225
	2 200	0,096	0,013	0,033	0,16	550	3450	12,5 x 30	ECR1ELY222M◊◊ΔΔ1230
		0,096	0,015	0,038	0,16	550	3250	16 x 20	ECR1ELY222M◊◊ΔΔ1620
	2 700	0,079	0,012	0,031	0,16	675	3570	12,5 x 35	ECR1ELY272M◊◊ΔΔ1235
	3 300	0,072	0,013	0,035	0,18	825	3630	16 x 25	ECR1ELY332M◊◊ΔΔ1625

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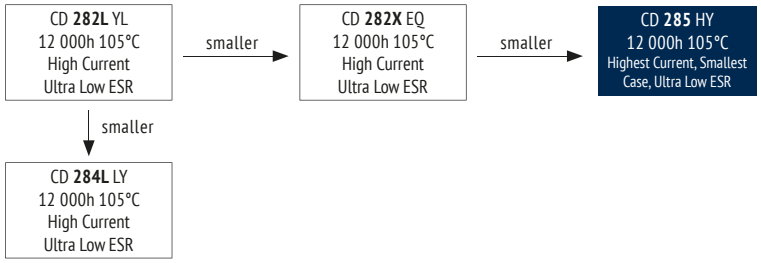
RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
35 (44) 1V	47	3,39	0,220	0,800	0,12	17	345	5 x 11,5	ECR1VLY470M◊◊ΔΔ0511
	100	1,60	0,094	0,350	0,12	35	540	6,3 x 11,5	ECR1VLY101M◊◊ΔΔ0611
	220	0,723	0,056	0,190	0,12	77	945	8 x 11,5	ECR1VLY221M◊◊ΔΔ0811
	270	0,589	0,045	0,150	0,12	95	1250	8 x 16	ECR1VLY271M◊◊ΔΔ0816
	330	0,482	0,039	0,140	0,12	116	1330	10 x 12,5	ECR1VLY331M◊◊ΔΔ1012
	390	0,408	0,029	0,110	0,12	137	1500	8 x 20	ECR1VLY391M◊◊ΔΔ0820
	470	0,339	0,028	0,100	0,12	165	1760	10 x 16	ECR1VLY471M◊◊ΔΔ1016
	560	0,284	0,020	0,060	0,12	196	1960	10 x 20	ECR1VLY561M◊◊ΔΔ1020
	680	0,234	0,018	0,054	0,12	238	2250	10 x 25	ECR1VLY681M◊◊ΔΔ1025
	1 000	0,159	0,017	0,043	0,12	350	2480	12,5 x 20	ECR1VLY102M◊◊ΔΔ1220
	1 200	0,133	0,015	0,038	0,12	420	2900	12,5 x 25	ECR1VLY122M◊◊ΔΔ1225
	1 500	0,106	0,013	0,033	0,12	525	3450	12,5 x 30	ECR1VLY152M◊◊ΔΔ1230
		0,106	0,015	0,038	0,12	525	3250	16 x 20	ECR1VLY152M◊◊ΔΔ1620
	1 800	0,088	0,012	0,031	0,12	630	3570	12,5 x 35	ECR1VLY182M◊◊ΔΔ1235
	2 200	0,084	0,013	0,035	0,14	770	3630	16 x 25	ECR1VLY222M◊◊ΔΔ1625
50 (63) 1H	27	4,92	0,340	1,18	0,10	14	238	5 x 11,5	ECR1HLY270M◊◊ΔΔ0511
	56	2,37	0,140	0,500	0,10	28	385	6,3 x 11,5	ECR1HLY560M◊◊ΔΔ0611
	100	1,33	0,074	0,220	0,10	50	724	8 x 11,5	ECR1HLY101M◊◊ΔΔ0811
	120	1,11	0,061	0,180	0,10	60	950	8 x 16	ECR1HLY121M◊◊ΔΔ0816
	150	0,884	0,061	0,180	0,10	75	979	10 x 12,5	ECR1HLY151M◊◊ΔΔ1012
	180	0,737	0,046	0,140	0,10	90	1190	8 x 20	ECR1HLY181M◊◊ΔΔ0820
	220	0,603	0,042	0,120	0,10	110	1370	10 x 16	ECR1HLY221M◊◊ΔΔ1016
	270	0,491	0,030	0,090	0,10	135	1580	10 x 20	ECR1HLY271M◊◊ΔΔ1020
	330	0,402	0,028	0,085	0,10	165	1870	10 x 25	ECR1HLY331M◊◊ΔΔ1025
	470	0,282	0,027	0,068	0,10	235	2050	12,5 x 20	ECR1HLY471M◊◊ΔΔ1220
	560	0,237	0,023	0,059	0,10	280	2410	12,5 x 25	ECR1HLY561M◊◊ΔΔ1225
	680	0,195	0,021	0,052	0,10	340	2860	12,5 x 30	ECR1HLY681M◊◊ΔΔ1230
	820	0,162	0,019	0,050	0,10	410	2960	12,5 x 35	ECR1HLY821M◊◊ΔΔ1235
		0,162	0,023	0,059	0,10	410	2730	16 x 20	ECR1HLY821M◊◊ΔΔ1620
	1 000	0,133	0,021	0,056	0,10	500	3010	16 x 25	ECR1HLY102M◊◊ΔΔ1625
63 (79) 1J	15	7,96	0,880	3,50	0,09	10	173	5 x 11,5	ECR1JLY150M◊◊ΔΔ0511
	33	3,62	0,350	1,40	0,09	21	278	6,3 x 11,5	ECR1JLY330M◊◊ΔΔ0611
	82	1,45	0,220	0,880	0,09	52	525	8 x 11,5	ECR1JLY820M◊◊ΔΔ0811
	100	1,20	0,160	0,640	0,09	63	688	8 x 16	ECR1JLY101M◊◊ΔΔ0816
	120	0,995	0,150	0,600	0,09	76	725	10 x 12,5	ECR1JLY121M◊◊ΔΔ1012
	150	0,796	0,120	0,480	0,09	95	861	8 x 20	ECR1JLY151M◊◊ΔΔ0820
	180	0,663	0,110	0,440	0,09	114	998	10 x 16	ECR1JLY181M◊◊ΔΔ1016
	220	0,543	0,078	0,310	0,09	139	1200	10 x 20	ECR1JLY221M◊◊ΔΔ1020
	330	0,362	0,069	0,280	0,09	208	1410	10 x 25	ECR1JLY331M◊◊ΔΔ1025
	390	0,306	0,060	0,190	0,09	246	1570	12,5 x 20	ECR1JLY391M◊◊ΔΔ1220
	470	0,254	0,043	0,140	0,09	297	1990	12,5 x 25	ECR1JLY471M◊◊ΔΔ1225
	560	0,213	0,035	0,130	0,09	353	2410	12,5 x 30	ECR1JLY561M◊◊ΔΔ1230
		0,213	0,043	0,140	0,09	353	2100	16 x 20	ECR1JLY561M◊◊ΔΔ1620
	680	0,176	0,033	0,110	0,09	429	2620	12,5 x 35	ECR1JLY681M◊◊ΔΔ1235
	820	0,146	0,027	0,090	0,09	517	2940	12,5 x 40	ECR1JLY821M◊◊ΔΔ1240
		0,146	0,032	0,096	0,09	517	2730	16 x 25	ECR1JLY821M◊◊ΔΔ1625
		0,146	0,038	0,100	0,09	517	2500	18 x 20	ECR1JLY821M◊◊ΔΔ1820
	1 200	0,099	0,024	0,068	0,09	756	2990	16 x 31,5	ECR1JLY122M◊◊ΔΔ1631
		0,099	0,031	0,084	0,09	756	2800	18 x 25	ECR1JLY122M◊◊ΔΔ1825
	1 500	0,080	0,021	0,057	0,09	945	3040	16 x 35,5	ECR1JLY152M◊◊ΔΔ1635
		0,080	0,025	0,068	0,09	945	3300	18 x 31,5	ECR1JLY152M◊◊ΔΔ1831
	1 800	0,066	0,020	0,054	0,09	1134	3570	18 x 35,5	ECR1JLY182M◊◊ΔΔ1835
	2 200	0,066	0,018	0,049	0,11	1386	3670	18 x 40	ECR1JLY222M◊◊ΔΔ1840
80 (100) 1K	12	8,85	1,40	5,60	0,08	10	163	5 x 11,5	ECR1KLY120M◊◊ΔΔ0511
	33	3,22	0,570	2,30	0,08	27	267	6,3 x 11,5	ECR1KLY330M◊◊ΔΔ0611
	56	1,90	0,360	1,40	0,08	45	462	8 x 11,5	ECR1KLY560M◊◊ΔΔ0811
	68	1,56	0,250	1,00	0,08	55	585	8 x 16	ECR1KLY680M◊◊ΔΔ0816
	82	1,30	0,230	0,960	0,08	66	624	10 x 12,5	ECR1KLY820M◊◊ΔΔ1012
	100	1,07	0,190	0,760	0,08	80	735	8 x 20	ECR1KLY101M◊◊ΔΔ0820
	120	0,884	0,170	0,720	0,08	96	780	10 x 16	ECR1KLY121M◊◊ΔΔ1016
	180	0,589	0,120	0,520	0,08	144	1040	10 x 20	ECR1KLY181M◊◊ΔΔ1020
	220	0,482	0,110	0,470	0,08	176	1170	10 x 25	ECR1KLY221M◊◊ΔΔ1025
	270	0,393	0,085	0,310	0,08	216	1430	12,5 x 20	ECR1KLY271M◊◊ΔΔ1220

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
80 (100) 1K	330	0,322	0,060	0,230	0,08	264	1620	12,5 x 25	ECR1KLY331M◊◊ΔΔ1225
	390	0,272	0,051	0,210	0,08	312	1950	12,5 x 30	ECR1KLY391M◊◊ΔΔ1230
		0,272	0,058	0,210	0,08	312	1750	16 x 20	ECR1KLY391M◊◊ΔΔ1620
	470	0,226	0,043	0,170	0,08	376	2140	12,5 x 35	ECR1KLY471M◊◊ΔΔ1235
	560	0,189	0,036	0,150	0,08	448	2340	12,5 x 40	ECR1KLY561M◊◊ΔΔ1240
		0,189	0,044	0,160	0,08	448	2210	16 x 25	ECR1KLY561M◊◊ΔΔ1625
		0,189	0,054	0,180	0,08	448	1950	18 x 20	ECR1KLY561M◊◊ΔΔ1820
	680	0,156	0,033	0,120	0,08	544	2400	16 x 31,5	ECR1KLY681M◊◊ΔΔ1631
	820	0,129	0,029	0,100	0,08	656	2600	16 x 35,5	ECR1KLY821M◊◊ΔΔ1635
		0,129	0,038	0,130	0,08	656	2270	18 x 25	ECR1KLY821M◊◊ΔΔ1825
	1 000	0,106	0,027	0,090	0,08	800	2860	16 x 40	ECR1KLY102M◊◊ΔΔ1640
		0,106	0,031	0,110	0,08	800	2470	18 x 31,5	ECR1KLY102M◊◊ΔΔ1831
	1 200	0,088	0,027	0,084	0,08	960	2860	18 x 35,5	ECR1KLY122M◊◊ΔΔ1835
	1 500	0,071	0,026	0,076	0,08	1200	3510	18 x 40	ECR1KLY152M◊◊ΔΔ1840
100 (125) 2A	8,2	13,0	1,40	5,60	0,08	9	163	5 x 11,5	ECR2ALY8R2M◊◊ΔΔ0511
	18	5,90	0,570	2,30	0,08	18	267	6,3 x 11,5	ECR2ALY180M◊◊ΔΔ0611
	33	3,22	0,360	1,40	0,08	33	462	8 x 11,5	ECR2ALY330M◊◊ΔΔ0811
	47	2,26	0,250	1,00	0,08	47	585	8 x 16	ECR2ALY470M◊◊ΔΔ0816
	56	1,90	0,230	0,960	0,08	56	624	10 x 12,5	ECR2ALY560M◊◊ΔΔ1012
	68	1,56	0,190	0,760	0,08	68	735	8 x 20	ECR2ALY680M◊◊ΔΔ0820
	82	1,30	0,170	0,720	0,08	82	780	10 x 16	ECR2ALY820M◊◊ΔΔ1016
	100	1,07	0,120	0,520	0,08	100	1040	10 x 20	ECR2ALY101M◊◊ΔΔ1020
	120	0,884	0,110	0,470	0,08	120	1170	10 x 25	ECR2ALY121M◊◊ΔΔ1025
	150	0,707	0,085	0,310	0,08	150	1430	12,5 x 20	ECR2ALY151M◊◊ΔΔ1220
	220	0,482	0,060	0,230	0,08	220	1620	12,5 x 25	ECR2ALY221M◊◊ΔΔ1225
	270	0,393	0,051	0,210	0,08	270	1950	12,5 x 30	ECR2ALY271M◊◊ΔΔ1230
		0,393	0,058	0,210	0,08	270	1750	16 x 20	ECR2ALY271M◊◊ΔΔ1620
	330	0,322	0,043	0,170	0,08	330	2140	12,5 x 35	ECR2ALY331M◊◊ΔΔ1235
	390	0,272	0,036	0,150	0,08	390	2340	12,5 x 40	ECR2ALY391M◊◊ΔΔ1240
		0,272	0,044	0,160	0,08	390	2210	16 x 25	ECR2ALY391M◊◊ΔΔ1625
		0,272	0,054	0,180	0,08	390	1950	18 x 20	ECR2ALY391M◊◊ΔΔ1820
	470	0,226	0,033	0,120	0,08	470	2400	16 x 31,5	ECR2ALY471M◊◊ΔΔ1631
		0,226	0,038	0,113	0,08	470	2270	18 x 25	ECR2ALY471M◊◊ΔΔ1825
	560	0,189	0,029	0,100	0,08	560	2600	16 x 35,5	ECR2ALY561M◊◊ΔΔ1635
		0,189	0,031	0,110	0,08	560	2470	18 x 31,5	ECR2ALY561M◊◊ΔΔ1831
	680	0,156	0,027	0,090	0,08	680	2860	16 x 40	ECR2ALY681M◊◊ΔΔ1640
		0,156	0,027	0,084	0,08	680	2860	18 x 35,5	ECR2ALY681M◊◊ΔΔ1835
	820	0,129	0,026	0,076	0,08	820	3510	18 x 40	ECR2ALY821M◊◊ΔΔ1840

8 000 - 12 000h at 105°C

- Lowest ESR
- Smallest Can Size
- Long Life



RADIAL

ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +105
Voltage Range (V)	6,3 ~ 100
Capacitance Range (µF)	8,2 ~ 8 200
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 2 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	6,3	10	16	25	35	50	63	80	100
	$Z_{-25°C} / Z_{+20°C}$	4	3	2						
	$Z_{-40°C} / Z_{+20°C}$	12	10	8	6	4	3			

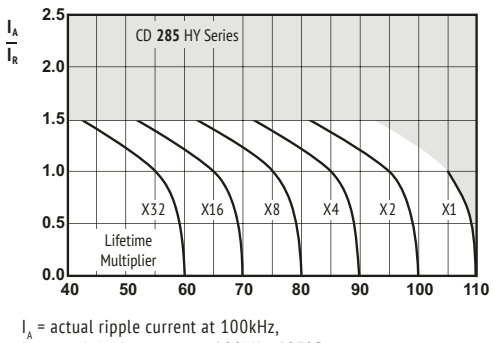
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	Ø ≤ 6,3 : 8 000h Ø = 8 : 10 000h Ø ≥ 10 : 12 000h	Ø ≥ 8 : > 100 000h	Ø ≤ 6,3 : 6 000h Ø = 8 : 8 000h Ø ≥ 10 : 10 000h	Ø ≤ 6,3 : 7 000h Ø = 8 : 10 000h Ø ≥ 10 : 12 000h	500h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value (6,3V, 10V, ± 40%)		Within ± 25% of initial value (6,3V, 10V, ± 30%)	Within ± 25% of initial value (6,3V, 10V, ± 30%)	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value (6,3V, 10V, 400%)		Not more than 200% of specified value (6,3V, 10V, 300%)	Not more than 200% of specified value (6,3V, 10V, 300%)	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 60°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Capacitance (µF) \ Frequency	120Hz	1kHz	10kHz	100kHz
8,2 ~ 33	0,42	0,70	0,90	1,00
47 ~ 270	0,50	0,73	0,92	1,00
330 ~ 680	0,55	0,77	0,94	1,00
820 ~ 1 800	0,60	0,80	0,96	1,00
2 200 ~ 8 200	0,70	0,85	0,98	1,00

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
6,3 (7,2) 0J	220	1,33	0,400	1,20	0,22	14	345	5 x 11,5	ECR0JHY221M◊◊ΔΔ0511
	470	0,621	0,170	0,510	0,22	30	540	6,3 x 11,5	ECR0JHY471M◊◊ΔΔ0611
	820	0,356	0,075	0,230	0,22	52	945	8 x 11,5	ECR0JHY821M◊◊ΔΔ0811
	1 000	0,292	0,059	0,180	0,22	63	1250	8 x 16	ECR0JHY102M◊◊ΔΔ0816
	1 200	0,243	0,053	0,160	0,22	76	1330	10 x 12,5	ECR0JHY122M◊◊ΔΔ1012
	1 500	0,195	0,041	0,130	0,22	95	1500	8 x 20	ECR0JHY152M◊◊ΔΔ0820
	1 800	0,162	0,038	0,120	0,22	114	1760	10 x 16	ECR0JHY182M◊◊ΔΔ1016
	2 700	0,118	0,028	0,084	0,24	171	1960	10 x 20	ECR0JHY272M◊◊ΔΔ1020
	3 300	0,104	0,024	0,072	0,26	208	2250	10 x 25	ECR0JHY332M◊◊ΔΔ1025
	3 900	0,088	0,025	0,075	0,26	246	2480	12,5 x 20	ECR0JHY392M◊◊ΔΔ1220
	4 700	0,079	0,019	0,057	0,28	297	2900	12,5 x 25	ECR0JHY472M◊◊ΔΔ1225
	5 600	0,071	0,018	0,054	0,30	353	3450	12,5 x 30	ECR0JHY562M◊◊ΔΔ1230
	6 800	0,062	0,016	0,048	0,32	429	3570	12,5 x 35	ECR0JHY682M◊◊ΔΔ1235
		0,062	0,021	0,063	0,32	429	3250	16 x 20	ECR0JHY682M◊◊ΔΔ1620
	8 200	0,058	0,017	0,051	0,36	517	3630	16 x 25	ECR0JHY822M◊◊ΔΔ1625
10 (13) 1A	150	1,68	0,400	1,20	0,19	15	450	5 x 11,5	ECR1AHY151M◊◊ΔΔ0511
	330	0,764	0,170	0,510	0,19	33	700	6,3 x 11,5	ECR1AHY331M◊◊ΔΔ0611
	560	0,450	0,075	0,230	0,19	56	1200	8 x 11,5	ECR1AHY561M◊◊ΔΔ0811
	680	0,371	0,059	0,180	0,19	68	1600	8 x 16	ECR1AHY681M◊◊ΔΔ0816
	820	0,307	0,053	0,160	0,19	82	1700	10 x 12,5	ECR1AHY821M◊◊ΔΔ1012
	1 000	0,252	0,041	0,130	0,19	100	1960	8 x 20	ECR1AHY102M◊◊ΔΔ0820
	1 200	0,210	0,038	0,120	0,19	120	2000	10 x 16	ECR1AHY122M◊◊ΔΔ1016
	1 800	0,140	0,028	0,084	0,19	180	2500	10 x 20	ECR1AHY182M◊◊ΔΔ1020
	2 200	0,127	0,024	0,072	0,21	220	2900	10 x 25	ECR1AHY222M◊◊ΔΔ1025
	2 700	0,103	0,025	0,075	0,21	270	2600	12,5 x 20	ECR1AHY272M◊◊ΔΔ1220
	3 300	0,092	0,019	0,057	0,23	330	3200	12,5 x 25	ECR1AHY332M◊◊ΔΔ1225
	4 700	0,071	0,018	0,054	0,25	470	3660	12,5 x 30	ECR1AHY472M◊◊ΔΔ1230
		0,071	0,021	0,063	0,25	470	3330	16 x 20	ECR1AHY472M◊◊ΔΔ1620
	5 600	0,064	0,016	0,048	0,27	560	4120	12,5 x 35	ECR1AHY562M◊◊ΔΔ1235
		0,064	0,017	0,051	0,27	560	3810	16 x 25	ECR1AHY562M◊◊ΔΔ1625
16 (20) 1C	120	1,77	0,400	1,20	0,16	20	450	5 x 11,5	ECR1CHY121M◊◊ΔΔ0511
	270	0,786	0,170	0,510	0,16	44	700	6,3 x 11,5	ECR1CHY271M◊◊ΔΔ0611
	470	0,452	0,075	0,230	0,16	76	1200	8 x 11,5	ECR1CHY471M◊◊ΔΔ0811
	560	0,379	0,059	0,180	0,16	90	1600	8 x 16	ECR1CHY561M◊◊ΔΔ0816
	680	0,312	0,053	0,160	0,16	109	1700	10 x 12,5	ECR1CHY681M◊◊ΔΔ1012
	820	0,259	0,041	0,130	0,16	132	1960	8 x 20	ECR1CHY821M◊◊ΔΔ0820
	1 000	0,212	0,038	0,120	0,16	160	2000	10 x 16	ECR1CHY102M◊◊ΔΔ1016
	1 500	0,141	0,028	0,084	0,16	240	2500	10 x 20	ECR1CHY152M◊◊ΔΔ1020
	1 800	0,118	0,024	0,072	0,16	288	2900	10 x 25	ECR1CHY182M◊◊ΔΔ1025
	2 200	0,109	0,025	0,075	0,18	352	2600	12,5 x 20	ECR1CHY222M◊◊ΔΔ1220
	2 700	0,088	0,019	0,057	0,18	432	3200	12,5 x 25	ECR1CHY272M◊◊ΔΔ1225
	3 300	0,080	0,018	0,054	0,20	528	3660	12,5 x 30	ECR1CHY332M◊◊ΔΔ1230
		0,080	0,021	0,063	0,20	528	3330	16 x 20	ECR1CHY332M◊◊ΔΔ1620
	3 900	0,068	0,016	0,048	0,20	624	4120	12,5 x 35	ECR1CHY392M◊◊ΔΔ1235
	4 700	0,062	0,017	0,051	0,22	752	3810	16 x 25	ECR1CHY472M◊◊ΔΔ1625
25 (32) 1E	68	2,74	0,400	1,20	0,14	17	450	5 x 11,5	ECR1EHY680M◊◊ΔΔ0511
	150	1,24	0,170	0,510	0,14	38	700	6,3 x 11,5	ECR1EHY151M◊◊ΔΔ0611
	330	0,563	0,075	0,230	0,14	83	1200	8 x 11,5	ECR1EHY331M◊◊ΔΔ0811
	390	0,476	0,059	0,180	0,14	98	1600	8 x 16	ECR1EHY391M◊◊ΔΔ0816
	470	0,395	0,053	0,160	0,14	118	1700	10 x 12,5	ECR1EHY471M◊◊ΔΔ1012
	560	0,332	0,041	0,130	0,14	140	1960	8 x 20	ECR1EHY561M◊◊ΔΔ0820
	680	0,273	0,038	0,120	0,14	170	2000	10 x 16	ECR1EHY681M◊◊ΔΔ1016
	1 000	0,186	0,028	0,084	0,14	250	2500	10 x 20	ECR1EHY102M◊◊ΔΔ1020
	1 200	0,155	0,024	0,072	0,14	300	2900	10 x 25	ECR1EHY122M◊◊ΔΔ1025
	1 500	0,124	0,025	0,075	0,14	375	2600	12,5 x 20	ECR1EHY152M◊◊ΔΔ1220
	1 800	0,103	0,019	0,057	0,14	450	3200	12,5 x 25	ECR1EHY182M◊◊ΔΔ1225
	2 200	0,096	0,018	0,054	0,16	550	3660	12,5 x 30	ECR1EHY222M◊◊ΔΔ1230
		0,096	0,021	0,063	0,16	550	3330	16 x 20	ECR1EHY222M◊◊ΔΔ1620
	2 700	0,079	0,016	0,048	0,16	675	4120	12,5 x 35	ECR1EHY272M◊◊ΔΔ1235
	3 300	0,072	0,017	0,051	0,18	825	3810	16 x 25	ECR1EHY332M◊◊ΔΔ1625
35 (44) 1V	47	3,39	0,400	1,20	0,12	17	450	5 x 11,5	ECR1VHY470M◊◊ΔΔ0511
	100	1,60	0,170	0,510	0,12	35	700	6,3 x 11,5	ECR1VHY101M◊◊ΔΔ0611
	180	0,884	0,075	0,230	0,12	63	1200	8 x 11,5	ECR1VHY181M◊◊ΔΔ0811
	220	0,723	0,059	0,180	0,12	77	1600	8 x 16	ECR1VHY221M◊◊ΔΔ0816
	270	0,589	0,053	0,160	0,12	95	1700	10 x 12,5	ECR1VHY271M◊◊ΔΔ1012

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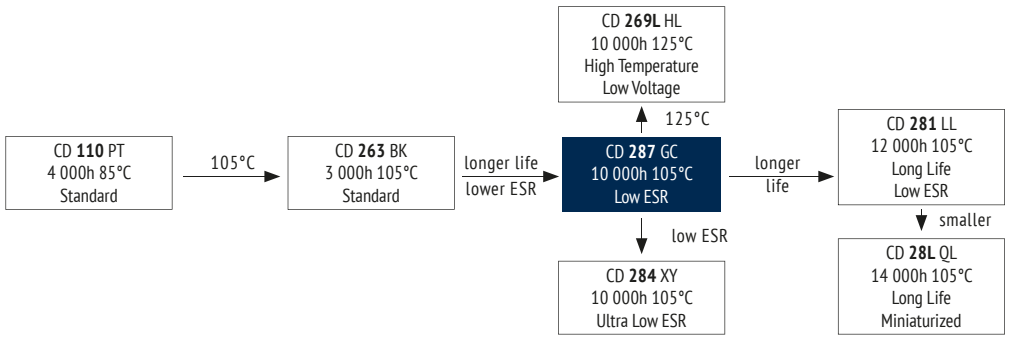
RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
35 (44) 1V	330	0,482	0,041	0,130	0,12	116	1960	8 x 20	ECR1VHY331M◊◊ΔΔ0820
	390	0,408	0,038	0,120	0,12	137	2000	10 x 16	ECR1VHY391M◊◊ΔΔ1016
	470	0,339	0,038	0,120	0,12	165	2000	10 x 16	ECR1VHY471M◊◊ΔΔ1016
	560	0,284	0,028	0,084	0,12	196	2500	10 x 20	ECR1VHY561M◊◊ΔΔ1020
	680	0,234	0,024	0,072	0,12	238	2900	10 x 25	ECR1VHY681M◊◊ΔΔ1025
	820	0,194	0,025	0,075	0,12	287	2600	12,5 x 20	ECR1VHY821M◊◊ΔΔ1220
	1 000	0,159	0,025	0,075	0,12	350	2600	12,5 x 20	ECR1VHY102M◊◊ΔΔ1220
	1 200	0,133	0,019	0,057	0,12	420	3200	12,5 x 25	ECR1VHY122M◊◊ΔΔ1225
	1 500	0,106	0,018	0,054	0,12	525	3660	12,5 x 30	ECR1VHY152M◊◊ΔΔ1230
		0,106	0,021	0,063	0,12	525	3330	16 x 20	ECR1VHY152M◊◊ΔΔ1620
	1 800	0,088	0,016	0,048	0,12	630	4120	12,5 x 35	ECR1VHY182M◊◊ΔΔ1235
		0,088	0,017	0,051	0,12	630	3810	16 x 25	ECR1VHY182M◊◊ΔΔ1625
50 (63) 1H	27	4,92	0,480	1,50	0,10	14	310	5 x 11,5	ECR1HHY270M◊◊ΔΔ0511
	56	2,37	0,220	0,660	0,10	28	500	6,3 x 11,5	ECR1HHY560M◊◊ΔΔ0611
	100	1,33	0,120	0,360	0,10	50	950	8 x 11,5	ECR1HHY101M◊◊ΔΔ0811
	120	1,106	0,110	0,330	0,10	60	950	8 x 11,5	ECR1HHY121M◊◊ΔΔ0811
		1,11	0,082	0,250	0,10	60	1230	8 x 16	ECR1HHY121M◊◊ΔΔ0816
	150	0,884	0,073	0,220	0,10	75	1280	10 x 12,5	ECR1HHY151M◊◊ΔΔ1012
	180	0,737	0,081	0,240	0,10	90	1700	8 x 16	ECR1HHY181M◊◊ΔΔ0816
	220	0,603	0,071	0,210	0,10	110	1700	10 x 12,5	ECR1HHY221M◊◊ΔΔ1012
	270	0,493	0,058	0,170	0,10	135	2100	8 x 20	ECR1HHY271M◊◊ΔΔ0820
	330	0,402	0,052	0,160	0,10	165	2100	10 x 16	ECR1HHY331M◊◊ΔΔ1016
	390	0,340	0,032	0,100	0,10	195	2420	10 x 25	ECR1HHY391M◊◊ΔΔ1025
	470	0,282	0,037	0,110	0,10	235	1500	10 x 20	ECR1HHY471M◊◊ΔΔ1020
		0,282	0,040	0,120	0,10	235	2200	12,5 x 16	ECR1HHY471M◊◊ΔΔ1216
		0,282	0,032	0,100	0,10	235	2300	12,5 x 20	ECR1HHY471M◊◊ΔΔ1220
	560	0,238	0,031	0,093	0,10	280	2900	10 x 25	ECR1HHY561M◊◊ΔΔ1025
	680	0,195	0,029	0,087	0,10	340	2700	12,5 x 20	ECR1HHY681M◊◊ΔΔ1220
		0,195	0,025	0,080	0,10	340	2800	12,5 x 25	ECR1HHY681M◊◊ΔΔ1225
	820	0,162	0,023	0,074	0,10	410	3370	12,5 x 30	ECR1HHY821M◊◊ΔΔ1230
		0,162	0,026	0,084	0,10	410	3070	16 x 20	ECR1HHY821M◊◊ΔΔ1620
	1 000	0,133	0,022	0,066	0,10	500	3000	12,5 x 25	ECR1HHY102M◊◊ΔΔ1225
		0,133	0,020	0,060	0,10	500	3500	12,5 x 30	ECR1HHY102M◊◊ΔΔ1230
		0,133	0,021	0,067	0,10	500	3810	12,5 x 35	ECR1HHY102M◊◊ΔΔ1235
		0,133	0,022	0,070	0,10	500	3510	16 x 25	ECR1HHY102M◊◊ΔΔ1625
	1 200	0,111	0,017	0,051	0,10	600	4000	12,5 x 35	ECR1HHY122M◊◊ΔΔ1235
		0,111	0,023	0,069	0,10	600	3100	16 x 20	ECR1HHY122M◊◊ΔΔ1620
	1 500	0,089	0,019	0,057	0,10	750	4500	12,5 x 40	ECR1HHY152M◊◊ΔΔ1240
		0,089	0,018	0,054	0,10	750	3600	16 x 25	ECR1HHY152M◊◊ΔΔ1625
		0,089	0,029	0,087	0,10	750	3200	18 x 20	ECR1HHY152M◊◊ΔΔ1820
	2 200	0,073	0,018	0,054	0,12	1100	4100	16 x 31,5	ECR1HHY222M◊◊ΔΔ1631
		0,073	0,022	0,066	0,12	1100	3700	18 x 25	ECR1HHY222M◊◊ΔΔ1825
	2 700	0,059	0,016	0,048	0,12	1350	4400	16 x 35,5	ECR1HHY272M◊◊ΔΔ1635
		0,059	0,014	0,042	0,12	1350	4800	16 x 40	ECR1HHY272M◊◊ΔΔ1640
		0,059	0,019	0,057	0,12	1350	4200	18 x 31,5	ECR1HHY272M◊◊ΔΔ1831
	3 300	0,057	0,016	0,048	0,14	1650	4600	18 x 35,5	ECR1HHY332M◊◊ΔΔ1835
	3 900	0,048	0,014	0,042	0,14	1950	5000	18 x 40	ECR1HHY392M◊◊ΔΔ1840
63 (79) 1J	18	6,64	0,710	3,20	0,09	12	240	5 x 11,5	ECR1JHY180M◊◊ΔΔ0511
	47	2,54	0,280	1,30	0,09	30	420	6,3 x 11,5	ECR1JHY470M◊◊ΔΔ0611
	82	1,46	0,180	0,790	0,09	52	720	8 x 11,5	ECR1JHY820M◊◊ΔΔ0811
	100	1,20	0,130	0,580	0,09	63	1000	8 x 11,5	ECR1JHY101M◊◊ΔΔ0811
	120	0,995	0,095	0,290	0,09	76	1300	8 x 16	ECR1JHY121M◊◊ΔΔ0816
		0,995	0,110	0,440	0,09	76	990	10 x 12,5	ECR1JHY121M◊◊ΔΔ1012
	150	0,796	0,096	0,430	0,09	95	1200	8 x 20	ECR1JHY151M◊◊ΔΔ0820
		0,796	0,080	0,240	0,09	95	1300	10 x 12,5	ECR1JHY151M◊◊ΔΔ1012
	180	0,663	0,069	0,210	0,09	114	1600	8 x 20	ECR1JHY181M◊◊ΔΔ0820
		0,663	0,076	0,310	0,09	114	1200	10 x 16	ECR1JHY181M◊◊ΔΔ1016
	220	0,543	0,058	0,170	0,09	139	1700	10 x 16	ECR1JHY221M◊◊ΔΔ1016
	270	0,442	0,056	0,230	0,09	171	1570	10 x 20	ECR1JHY271M◊◊ΔΔ1020
		0,442	0,072	0,270	0,09	171	1570	12,5 x 16	ECR1JHY271M◊◊ΔΔ1216
	330	0,362	0,042	0,130	0,09	208	2000	10 x 20	ECR1JHY331M◊◊ΔΔ1020
		0,362	0,045	0,140	0,09	208	1900	12,5 x 16	ECR1JHY331M◊◊ΔΔ1216
	390	0,306	0,035	0,110	0,09	246	2400	10 x 25	ECR1JHY391M◊◊ΔΔ1025
		0,306	0,041	0,130	0,09	246	1990	12,5 x 20	ECR1JHY391M◊◊ΔΔ1220
	470	0,254	0,033	0,099	0,09	297	2400	12,5 x 20	ECR1JHY471M◊◊ΔΔ1220
		0,254	0,031	0,093	0,09	297	2460	12,5 x 25	ECR1JHY471M◊◊ΔΔ1225

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
63 (79) 1J	560	0,213	0,028	0,084	0,09	353	2760	12,5 x 30	ECR1JHY561M◊◊ΔΔ1230
		0,213	0,032	0,096	0,09	353	2380	16 x 20	ECR1JHY561M◊◊ΔΔ1620
	680	0,176	0,025	0,075	0,09	429	2800	12,5 x 25	ECR1JHY681M◊◊ΔΔ1225
		0,176	0,024	0,072	0,09	429	3040	12,5 x 35	ECR1JHY681M◊◊ΔΔ1235
	820	0,146	0,022	0,066	0,09	517	3200	12,5 x 30	ECR1JHY821M◊◊ΔΔ1230
		0,146	0,025	0,075	0,09	517	2900	16 x 20	ECR1JHY821M◊◊ΔΔ1620
	1 000	0,120	0,018	0,054	0,09	630	3500	12,5 x 35	ECR1JHY102M◊◊ΔΔ1235
		0,120	0,020	0,060	0,09	630	3200	16 x 25	ECR1JHY102M◊◊ΔΔ1625
	1 200	0,100	0,021	0,063	0,09	756	3800	12,5 x 40	ECR1JHY122M◊◊ΔΔ1240
		0,100	0,032	0,096	0,09	756	3000	18 x 20	ECR1JHY122M◊◊ΔΔ1820
	1 500	0,080	0,020	0,060	0,09	945	3500	16 x 31,5	ECR1JHY152M◊◊ΔΔ1631
		0,080	0,024	0,072	0,09	945	3200	18 x 25	ECR1JHY152M◊◊ΔΔ1825
	1 800	0,067	0,017	0,051	0,09	1134	3800	16 x 35,5	ECR1JHY182M◊◊ΔΔ1635
		0,067	0,020	0,060	0,09	1134	3700	18 x 31,5	ECR1JHY182M◊◊ΔΔ1831
	2 200	0,067	0,015	0,045	0,11	1386	4100	16 x 40	ECR1JHY222M◊◊ΔΔ1640
		0,067	0,017	0,051	0,11	1386	3900	18 x 35,5	ECR1JHY222M◊◊ΔΔ1835
	2 700	0,054	0,015	0,045	0,11	1701	4300	18 x 40	ECR1JHY272M◊◊ΔΔ1840
80 (100) 1K	12	8,84	1,200	5,40	0,08	10	220	5 x 11,5	ECR1KHY120M◊◊ΔΔ0511
	27	3,93	0,460	2,10	0,08	22	370	6,3 x 11,5	ECR1KHY270M◊◊ΔΔ0611
	47	2,26	0,290	1,30	0,08	38	620	8 x 11,5	ECR1KHY470M◊◊ΔΔ0811
	56	1,90	0,200	0,900	0,08	45	780	8 x 16	ECR1KHY560M◊◊ΔΔ0816
	68	1,56	0,170	0,660	0,08	55	780	10 x 12,5	ECR1KHY680M◊◊ΔΔ1012
	82	1,30	0,160	0,660	0,08	66	1040	8 x 20	ECR1KHY820M◊◊ΔΔ0820
	100	1,07	0,110	0,470	0,08	80	1040	10 x 16	ECR1KHY101M◊◊ΔΔ1016
	150	0,707	0,084	0,340	0,08	120	1430	10 x 20	ECR1KHY151M◊◊ΔΔ1020
		0,707	0,110	0,340	0,08	120	1430	12,5 x 16	ECR1KHY151M◊◊ΔΔ1216
	180	0,589	0,069	0,280	0,08	144	1620	10 x 25	ECR1KHY181M◊◊ΔΔ1025
	220	0,482	0,062	0,180	0,08	176	1750	12,5 x 20	ECR1KHY221M◊◊ΔΔ1220
	270	0,393	0,047	0,140	0,08	216	2210	12,5 x 25	ECR1KHY271M◊◊ΔΔ1225
	330	0,322	0,042	0,130	0,08	264	2400	12,5 x 30	ECR1KHY331M◊◊ΔΔ1230
		0,322	0,048	0,150	0,08	264	1950	16 x 20	ECR1KHY331M◊◊ΔΔ1620
	390	0,272	0,036	0,110	0,08	312	2600	12,5 x 35	ECR1KHY391M◊◊ΔΔ1235
	470	0,226	0,032	0,095	0,08	376	2860	12,5 x 40	ECR1KHY471M◊◊ΔΔ1240
		0,226	0,038	0,120	0,08	376	2430	16 x 25	ECR1KHY471M◊◊ΔΔ1625
		0,226	0,045	0,140	0,08	376	2270	18 x 20	ECR1KHY471M◊◊ΔΔ1820
	560	0,189	0,032	0,095	0,08	448	2640	16 x 31,5	ECR1KHY561M◊◊ΔΔ1631
	680	0,156	0,029	0,086	0,08	544	2860	16 x 35,5	ECR1KHY681M◊◊ΔΔ1635
		0,156	0,036	0,110	0,08	544	2500	18 x 25	ECR1KHY681M◊◊ΔΔ1825
	820	0,129	0,027	0,081	0,08	656	3510	16 x 40	ECR1KHY821M◊◊ΔΔ1640
		0,129	0,030	0,090	0,08	656	2860	18 x 31,5	ECR1KHY821M◊◊ΔΔ1831
	1 000	0,106	0,027	0,081	0,08	800	3510	18 x 35,5	ECR1KHY102M◊◊ΔΔ1835
	1 200	0,088	0,026	0,076	0,08	960	3860	18 x 40	ECR1KHY122M◊◊ΔΔ1840
100 (125) 2A	8,2	13,0	1,20	5,40	0,08	9	220	5 x 11,5	ECR2AHY8R2M◊◊ΔΔ0511
	18	5,90	0,460	2,10	0,08	18	370	6,3 x 11,5	ECR2AHY180M◊◊ΔΔ0611
	33	3,22	0,290	1,30	0,08	33	620	8 x 11,5	ECR2AHY330M◊◊ΔΔ0811
	47	2,26	0,200	0,900	0,08	47	780	8 x 16	ECR2AHY470M◊◊ΔΔ0816
	56	1,90	0,170	0,660	0,08	56	780	10 x 12,5	ECR2AHY560M◊◊ΔΔ1012
	68	1,56	0,160	0,660	0,08	68	1040	8 x 20	ECR2AHY680M◊◊ΔΔ0820
	82	1,30	0,110	0,470	0,08	82	1040	10 x 16	ECR2AHY820M◊◊ΔΔ1016
	100	1,07	0,084	0,340	0,08	100	1430	10 x 20	ECR2AHY101M◊◊ΔΔ1020
		1,07	0,110	0,340	0,08	100	1430	12,5 x 16	ECR2AHY101M◊◊ΔΔ1216
	120	0,884	0,069	0,280	0,08	120	1620	10 x 25	ECR2AHY121M◊◊ΔΔ1025
	150	0,707	0,062	0,180	0,08	150	1750	12,5 x 20	ECR2AHY151M◊◊ΔΔ1220
	220	0,482	0,047	0,140	0,08	220	2210	12,5 x 25	ECR2AHY221M◊◊ΔΔ1225
	270	0,393	0,042	0,130	0,08	270	2400	12,5 x 30	ECR2AHY271M◊◊ΔΔ1230
		0,393	0,048	0,150	0,08	270	1950	16 x 20	ECR2AHY271M◊◊ΔΔ1620
	330	0,322	0,036	0,110	0,08	330	2600	12,5 x 35	ECR2AHY331M◊◊ΔΔ1235
	390	0,272	0,032	0,095	0,08	390	2860	12,5 x 40	ECR2AHY391M◊◊ΔΔ1240
		0,272	0,038	0,120	0,08	390	2430	16 x 25	ECR2AHY391M◊◊ΔΔ1625
		0,272	0,045	0,140	0,08	390	2270	18 x 20	ECR2AHY391M◊◊ΔΔ1820
	470	0,226	0,032	0,095	0,08	470	2640	16 x 31,5	ECR2AHY471M◊◊ΔΔ1631
		0,226	0,036	0,110	0,08	470	2500	18 x 25	ECR2AHY471M◊◊ΔΔ1825
	560	0,189	0,029	0,086	0,08	560	2860	16 x 35,5	ECR2AHY561M◊◊ΔΔ1635
		0,189	0,030	0,090	0,08	560	2860	18 x 31,5	ECR2AHY561M◊◊ΔΔ1831
	680	0,156	0,027	0,081	0,08	680	3510	16 x 40	ECR2AHY681M◊◊ΔΔ1640
		0,156	0,027	0,081	0,08	680	3510	18 x 35,5	ECR2AHY681M◊◊ΔΔ1835
	820	0,129	0,026	0,076	0,08	820	3860	18 x 40	ECR2AHY821M◊◊ΔΔ1840

4 000 - 10 000h at 105°C

- Low Impedance
- High Ripple Current
- SMPS, UPS



RADIAL

ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-55 ~ +105
Voltage Range (V)	6,3 ~ 100
Capacitance Range (µF)	0,47 ~ 15 000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 2 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	6,3 ~ 100
	$Z_{-55°C} / Z_{+20°C}$	3

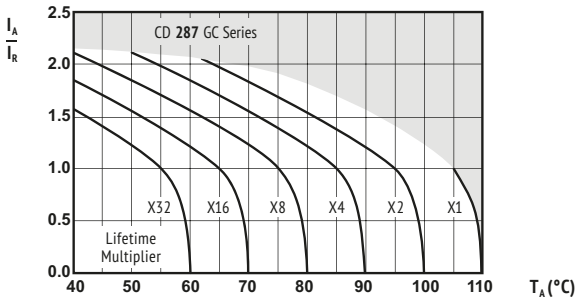
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	Ø ⩽ 6,3 : 4 000h Ø 8~10 : 6 000h Ø ⩾ 12,5 : 10 000h	Ø ⩾ 8 : > 250 000h	Ø ⩽ 6,3 : 2 000h Ø 8~10 : 3 000h Ø ⩾ 12,5 : 5 000h	Ø ⩽ 6,3 : 3 000h Ø 8~10 : 5 000h Ø ⩾ 12,5 : 7 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 40°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Capacitance (µF) \ Frequency	120Hz	1kHz	10kHz	100kHz
0,47 ~ 4,7	0,40	0,68	0,83	1,00
5,6 ~ 47	0,50	0,76	0,87	1,00
56 ~ 270	0,70	0,85	0,93	1,00
330 ~ 1 000	0,80	0,93	0,98	1,00
1 200 ~ 15 000	0,90	0,95	1,00	1,00

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
6,3 (7,2) 0J	100	2,92	0,650	1,30	0,22	13	175	5 x 11,5	ECR0JGC101M◊◊ΔΔ0511
	150	1,95	0,460	0,920	0,22	19	235	5 x 15	ECR0JGC151M◊◊ΔΔ0515
	220	1,33	0,300	0,600	0,22	28	290	6,3 x 11,5	ECR0JGC221M◊◊ΔΔ0611
	330	0,885	0,200	0,400	0,22	42	400	6,3 x 15	ECR0JGC331M◊◊ΔΔ0615
	470	0,621	0,170	0,340	0,22	60	488	8 x 11,5	ECR0JGC471M◊◊ΔΔ0811
	680	0,430	0,130	0,260	0,22	86	617	8 x 16	ECR0JGC681M◊◊ΔΔ0816
		0,430	0,120	0,240	0,22	86	613	10 x 12,5	ECR0JGC681M◊◊ΔΔ1012
	820	0,356	0,095	0,190	0,22	104	734	10 x 16	ECR0JGC821M◊◊ΔΔ1016
	1 000	0,292	0,095	0,190	0,22	126	800	8 x 20	ECR0JGC102M◊◊ΔΔ0820
	1 200	0,244	0,065	0,130	0,22	152	1010	10 x 20	ECR0JGC122M◊◊ΔΔ1020
		0,244	0,065	0,130	0,22	152	1010	12,5 x 15	ECR0JGC122M◊◊ΔΔ1215
	1 500	0,195	0,055	0,110	0,22	189	1190	10 x 25	ECR0JGC152M◊◊ΔΔ1025
	2 200	0,145	0,045	0,090	0,24	278	1440	10 x 30	ECR0JGC222M◊◊ΔΔ1030
		0,145	0,042	0,084	0,24	278	1400	12,5 x 20	ECR0JGC222M◊◊ΔΔ1220
	2 700	0,118	0,038	0,076	0,24	341	1690	12,5 x 25	ECR0JGC272M◊◊ΔΔ1225
		0,118	0,046	0,092	0,24	341	1310	16 x 15	ECR0JGC272M◊◊ΔΔ1615
	3 300	0,105	0,043	0,086	0,26	416	1460	18 x 15	ECR0JGC332M◊◊ΔΔ1815
	3 900	0,089	0,032	0,064	0,26	492	1950	12,5 x 30	ECR0JGC392M◊◊ΔΔ1230
	4 700	0,080	0,028	0,056	0,28	593	2220	12,5 x 35	ECR0JGC472M◊◊ΔΔ1235
		0,080	0,034	0,068	0,28	593	1660	16 x 20	ECR0JGC472M◊◊ΔΔ1620
	5 600	0,072	0,026	0,052	0,30	706	2390	12,5 x 40	ECR0JGC562M◊◊ΔΔ1240
		0,072	0,028	0,056	0,30	706	2070	16 x 25	ECR0JGC562M◊◊ΔΔ1625
		0,072	0,030	0,060	0,30	706	1850	18 x 20	ECR0JGC562M◊◊ΔΔ1820
	6 800	0,063	0,025	0,050	0,32	857	2350	16 x 31,5	ECR0JGC682M◊◊ΔΔ1631
		0,063	0,027	0,054	0,32	857	2120	18 x 25	ECR0JGC682M◊◊ΔΔ1825
	8 200	0,059	0,022	0,044	0,36	1034	2550	16 x 35,5	ECR0JGC822M◊◊ΔΔ1635
	10 000	0,054	0,023	0,046	0,40	1260	2410	18 x 31,5	ECR0JGC103M◊◊ΔΔ1831
	12 000	0,049	0,020	0,040	0,44	1512	2970	16 x 40	ECR0JGC123M◊◊ΔΔ1640
		0,049	0,020	0,040	0,44	1512	2680	18 x 35,5	ECR0JGC123M◊◊ΔΔ1835
	15 000	0,045	0,019	0,038	0,50	1890	3010	18 x 40	ECR0JGC153M◊◊ΔΔ1840
10 (13) 1A	82	3,08	0,650	1,30	0,19	17	175	5 x 11,5	ECR1AGC820M◊◊ΔΔ0511
	100	2,53	0,460	0,920	0,19	20	235	5 x 15	ECR1AGC101M◊◊ΔΔ0515
	180	1,41	0,300	0,600	0,19	36	290	6,3 x 11,5	ECR1AGC181M◊◊ΔΔ0611
	220	1,15	0,200	0,400	0,19	44	400	6,3 x 15	ECR1AGC221M◊◊ΔΔ0615
	330	0,764	0,170	0,340	0,19	66	488	8 x 11,5	ECR1AGC331M◊◊ΔΔ0811
	470	0,537	0,130	0,260	0,19	94	617	8 x 16	ECR1AGC471M◊◊ΔΔ0816
		0,537	0,120	0,240	0,19	94	613	10 x 12,5	ECR1AGC471M◊◊ΔΔ1012
	560	0,450	0,095	0,190	0,19	112	734	10 x 16	ECR1AGC561M◊◊ΔΔ1016
	680	0,371	0,095	0,190	0,19	136	800	8 x 20	ECR1AGC681M◊◊ΔΔ0820
	1 000	0,252	0,065	0,130	0,19	200	1010	10 x 20	ECR1AGC102M◊◊ΔΔ1020
		0,252	0,065	0,130	0,19	200	1010	12,5 x 15	ECR1AGC102M◊◊ΔΔ1215
	1 200	0,210	0,055	0,110	0,19	240	1190	10 x 25	ECR1AGC122M◊◊ΔΔ1025
	1 500	0,168	0,045	0,090	0,19	300	1440	10 x 30	ECR1AGC152M◊◊ΔΔ1030
	1 800	0,140	0,042	0,084	0,19	360	1400	12,5 x 20	ECR1AGC182M◊◊ΔΔ1220
		0,140	0,046	0,092	0,19	360	1310	16 x 15	ECR1AGC182M◊◊ΔΔ1615
	2 200	0,127	0,038	0,076	0,21	440	1690	12,5 x 25	ECR1AGC222M◊◊ΔΔ1225
		0,127	0,043	0,086	0,21	440	1460	18 x 15	ECR1AGC222M◊◊ΔΔ1815
	2 700	0,104	0,032	0,064	0,21	540	1950	12,5 x 30	ECR1AGC272M◊◊ΔΔ1230
	3 300	0,093	0,028	0,056	0,23	660	2220	12,5 x 35	ECR1AGC332M◊◊ΔΔ1235
		0,093	0,034	0,068	0,23	660	1660	16 x 20	ECR1AGC332M◊◊ΔΔ1620
	3 900	0,079	0,026	0,052	0,23	780	2390	12,5 x 40	ECR1AGC392M◊◊ΔΔ1240
		0,079	0,028	0,056	0,23	780	2070	16 x 25	ECR1AGC392M◊◊ΔΔ1625
		0,079	0,030	0,060	0,23	780	1850	18 x 20	ECR1AGC392M◊◊ΔΔ1820
	4 700	0,071	0,027	0,054	0,25	940	2120	18 x 25	ECR1AGC472M◊◊ΔΔ1825
	5 600	0,064	0,025	0,050	0,27	1120	2350	16 x 31,5	ECR1AGC562M◊◊ΔΔ1631
	6 800	0,057	0,022	0,044	0,29	1360	2550	16 x 35,5	ECR1AGC682M◊◊ΔΔ1635
		0,057	0,023	0,046	0,29	1360	2410	18 x 31,5	ECR1AGC682M◊◊ΔΔ1831
	8 200	0,054	0,020	0,040	0,33	1640	2970	16 x 40	ECR1AGC822M◊◊ΔΔ1640
		0,054	0,020	0,040	0,33	1640	2680	18 x 35,5	ECR1AGC822M◊◊ΔΔ1835
	10 000	0,050	0,019	0,038	0,37	2000	3010	18 x 40	ECR1AGC103M◊◊ΔΔ1840
16 (20) 1C	56	3,80	0,650	1,30	0,16	18	175	5 x 11,5	ECR1CGC560M◊◊ΔΔ0511
	82	2,59	0,460	0,920	0,16	27	235	5 x 15	ECR1CGC820M◊◊ΔΔ0515
	120	1,77	0,300	0,600	0,16	39	290	6,3 x 11,5	ECR1CGC121M◊◊ΔΔ0611
	180	1,18	0,200	0,400	0,16	58	400	6,3 x 15	ECR1CGC181M◊◊ΔΔ0615
	270	0,786	0,170	0,340	0,16	87	501	8 x 11,5	ECR1CGC271M◊◊ΔΔ0811

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RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
16 (20) 1C	330	0,644	0,130	0,260	0,16	106	575	8 x 16	ECR1CGC331M◊◊ΔΔ0816
		0,644	0,120	0,240	0,16	106	625	10 x 12,5	ECR1CGC331M◊◊ΔΔ1012
	390	0,545	0,095	0,190	0,16	125	795	10 x 16	ECR1CGC391M◊◊ΔΔ1016
	470	0,452	0,095	0,190	0,16	151	760	8 x 20	ECR1CGC471M◊◊ΔΔ0820
	680	0,313	0,065	0,130	0,16	218	1010	10 x 20	ECR1CGC681M◊◊ΔΔ1020
		0,313	0,065	0,130	0,16	218	1010	12,5 x 15	ECR1CGC681M◊◊ΔΔ1215
	820	0,259	0,055	0,110	0,16	263	1190	10 x 25	ECR1CGC821M◊◊ΔΔ1025
	1 200	0,177	0,045	0,090	0,16	384	1430	10 x 30	ECR1CGC122M◊◊ΔΔ1030
		0,177	0,042	0,084	0,16	384	1400	12,5 x 20	ECR1CGC122M◊◊ΔΔ1220
	1 500	0,142	0,038	0,076	0,16	480	1690	12,5 x 25	ECR1CGC152M◊◊ΔΔ1225
		0,142	0,046	0,092	0,16	480	1340	16 x 15	ECR1CGC152M◊◊ΔΔ1615
		0,142	0,043	0,086	0,16	480	1490	18 x 15	ECR1CGC152M◊◊ΔΔ1815
	2 200	0,109	0,032	0,064	0,18	704	1950	12,5 x 30	ECR1CGC222M◊◊ΔΔ1230
		0,109	0,034	0,068	0,18	704	1730	16 x 20	ECR1CGC222M◊◊ΔΔ1620
	2 700	0,089	0,028	0,056	0,18	864	2200	12,5 x 35	ECR1CGC272M◊◊ΔΔ1235
		0,089	0,028	0,056	0,18	864	2070	16 x 25	ECR1CGC272M◊◊ΔΔ1625
		0,089	0,030	0,060	0,18	864	1870	18 x 20	ECR1CGC272M◊◊ΔΔ1820
	3 300	0,081	0,026	0,052	0,20	1056	2390	12,5 x 40	ECR1CGC332M◊◊ΔΔ1240
	3 900	0,069	0,025	0,050	0,20	1248	2350	16 x 31,5	ECR1CGC392M◊◊ΔΔ1631
		0,069	0,027	0,054	0,20	1248	2160	18 x 25	ECR1CGC392M◊◊ΔΔ1825
	4 700	0,063	0,022	0,044	0,22	1504	2550	16 x 35,5	ECR1CGC472M◊◊ΔΔ1635
		0,063	0,023	0,046	0,22	1504	2450	18 x 31,5	ECR1CGC472M◊◊ΔΔ1831
	5 600	0,057	0,020	0,040	0,24	1792	2900	16 x 40	ECR1CGC562M◊◊ΔΔ1640
	6 800	0,051	0,020	0,040	0,26	2176	2730	18 x 35,5	ECR1CGC682M◊◊ΔΔ1835
	8 200	0,049	0,019	0,038	0,30	2624	3060	18 x 40	ECR1CGC822M◊◊ΔΔ1840
25 (32) 1E	39	4,77	0,650	1,30	0,14	20	175	5 x 11,5	ECR1EGC390M◊◊ΔΔ0511
	56	3,32	0,460	0,920	0,14	28	235	5 x 15	ECR1EGC560M◊◊ΔΔ0515
	82	2,27	0,300	0,600	0,14	41	290	6,3 x 11,5	ECR1EGC820M◊◊ΔΔ0611
	120	1,55	0,200	0,400	0,14	60	400	6,3 x 15	ECR1EGC121M◊◊ΔΔ0615
	180	1,04	0,170	0,340	0,14	90	503	8 x 11,5	ECR1EGC181M◊◊ΔΔ0811
	220	0,845	0,130	0,260	0,14	110	575	8 x 16	ECR1EGC221M◊◊ΔΔ0816
		0,845	0,120	0,240	0,14	110	629	10 x 12,5	ECR1EGC221M◊◊ΔΔ1012
	270	0,688	0,095	0,190	0,14	135	795	10 x 16	ECR1EGC271M◊◊ΔΔ1016
	330	0,563	0,095	0,190	0,14	165	751	8 x 20	ECR1EGC331M◊◊ΔΔ0820
	470	0,396	0,065	0,130	0,14	235	1010	10 x 20	ECR1EGC471M◊◊ΔΔ1020
		0,396	0,065	0,130	0,14	235	1010	12,5 x 15	ECR1EGC471M◊◊ΔΔ1215
	560	0,332	0,055	0,110	0,14	280	1190	10 x 25	ECR1EGC561M◊◊ΔΔ1025
	820	0,227	0,045	0,090	0,14	410	1440	10 x 30	ECR1EGC821M◊◊ΔΔ1030
		0,227	0,042	0,084	0,14	410	1400	12,5 x 20	ECR1EGC821M◊◊ΔΔ1220
		0,227	0,046	0,092	0,14	410	1360	16 x 15	ECR1EGC821M◊◊ΔΔ1615
	1 000	0,186	0,038	0,076	0,14	500	1690	12,5 x 25	ECR1EGC102M◊◊ΔΔ1225
	1 200	0,155	0,043	0,086	0,14	600	1500	18 x 15	ECR1EGC122M◊◊ΔΔ1815
	1 500	0,124	0,032	0,064	0,14	750	1950	12,5 x 30	ECR1EGC152M◊◊ΔΔ1230
		0,124	0,034	0,068	0,14	750	1730	16 x 20	ECR1EGC152M◊◊ΔΔ1620
	1 800	0,104	0,028	0,056	0,14	900	2200	12,5 x 35	ECR1EGC182M◊◊ΔΔ1235
		0,104	0,028	0,056	0,14	900	2070	16 x 25	ECR1EGC182M◊◊ΔΔ1625
		0,104	0,030	0,060	0,14	900	1890	18 x 20	ECR1EGC182M◊◊ΔΔ1820
	2 200	0,097	0,026	0,052	0,16	1100	2390	12,5 x 40	ECR1EGC222M◊◊ΔΔ1240
	2 700	0,079	0,025	0,050	0,16	1350	2350	16 x 31,5	ECR1EGC272M◊◊ΔΔ1631
		0,079	0,027	0,054	0,16	1350	2180	18 x 25	ECR1EGC272M◊◊ΔΔ1825
	3 300	0,073	0,022	0,044	0,18	1650	2550	16 x 35,5	ECR1EGC332M◊◊ΔΔ1635
		0,073	0,023	0,046	0,18	1650	2470	18 x 31,5	ECR1EGC332M◊◊ΔΔ1831
	3 900	0,062	0,020	0,040	0,18	1950	2900	16 x 40	ECR1EGC392M◊◊ΔΔ1640
		0,062	0,020	0,040	0,18	1950	2740	18 x 35,5	ECR1EGC392M◊◊ΔΔ1835
	4 700	0,057	0,019	0,038	0,20	2350	3070	18 x 40	ECR1EGC472M◊◊ΔΔ1840
35 (44) 1V	27	5,90	0,650	1,30	0,12	19	175	5 x 11,5	ECR1VGC270M◊◊ΔΔ0511
	39	4,09	0,460	0,920	0,12	28	235	5 x 15	ECR1VGC390M◊◊ΔΔ0515
	56	2,85	0,300	0,600	0,12	40	290	6,3 x 11,5	ECR1VGC560M◊◊ΔΔ0611
	82	1,95	0,200	0,400	0,12	58	400	6,3 x 15	ECR1VGC820M◊◊ΔΔ0615
	120	1,33	0,170	0,340	0,12	84	501	8 x 11,5	ECR1VGC121M◊◊ΔΔ0811
	150	1,07	0,120	0,240	0,12	105	625	10 x 12,5	ECR1VGC151M◊◊ΔΔ1012
	180	0,885	0,130	0,260	0,12	126	575	8 x 16	ECR1VGC181M◊◊ΔΔ0816
		0,885	0,095	0,190	0,12	126	795	10 x 16	ECR1VGC181M◊◊ΔΔ1016
	220	0,724	0,095	0,190	0,12	154	760	8 x 20	ECR1VGC221M◊◊ΔΔ0820
	330	0,483	0,065	0,130	0,12	231	1010	10 x 20	ECR1VGC331M◊◊ΔΔ1020
		0,483	0,065	0,130	0,12	231	1010	12,5 x 15	ECR1VGC331M◊◊ΔΔ1215

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
35 (44) 1V	390	0,409	0,055	0,110	0,12	273	1190	10 x 25	ECR1VGC391M◊◊ΔΔ1025
	560	0,285	0,045	0,090	0,12	392	1450	10 x 30	ECR1VGC561M◊◊ΔΔ1030
		0,285	0,042	0,084	0,12	392	1400	12,5 x 20	ECR1VGC561M◊◊ΔΔ1220
		0,285	0,046	0,092	0,12	392	1360	16 x 15	ECR1VGC561M◊◊ΔΔ1615
	680	0,235	0,038	0,076	0,12	476	1690	12,5 x 25	ECR1VGC681M◊◊ΔΔ1225
		0,235	0,043	0,086	0,12	476	1520	18 x 15	ECR1VGC681M◊◊ΔΔ1815
	1 000	0,160	0,032	0,064	0,12	700	1950	12,5 x 30	ECR1VGC102M◊◊ΔΔ1230
		0,160	0,034	0,068	0,12	700	1730	16 x 20	ECR1VGC102M◊◊ΔΔ1620
	1 200	0,133	0,028	0,056	0,12	840	2200	12,5 x 35	ECR1VGC122M◊◊ΔΔ1235
		0,133	0,028	0,056	0,12	840	2070	16 x 25	ECR1VGC122M◊◊ΔΔ1625
		0,133	0,030	0,060	0,12	840	1900	18 x 20	ECR1VGC122M◊◊ΔΔ1820
	1 500	0,107	0,026	0,052	0,12	1050	2390	12,5 x 40	ECR1VGC152M◊◊ΔΔ1240
	1 800	0,089	0,025	0,050	0,12	1260	2350	16 x 31,5	ECR1VGC182M◊◊ΔΔ1631
		0,089	0,027	0,054	0,12	1260	2200	18 x 25	ECR1VGC182M◊◊ΔΔ1825
	2 200	0,085	0,022	0,044	0,14	1540	2550	16 x 35,5	ECR1VGC222M◊◊ΔΔ1635
		0,085	0,023	0,046	0,14	1540	2490	18 x 31,5	ECR1VGC222M◊◊ΔΔ1831
	2 700	0,069	0,020	0,040	0,14	1890	2900	16 x 40	ECR1VGC272M◊◊ΔΔ1640
		0,069	0,020	0,040	0,14	1890	2770	18 x 35,5	ECR1VGC272M◊◊ΔΔ1835
	3 300	0,065	0,019	0,038	0,16	2310	3110	18 x 40	ECR1VGC332M◊◊ΔΔ1840
50 (63) 1H	0,47	283	3,90	7,80	0,10	3	22	5 x 11,5	ECR1HGCR47M◊◊ΔΔ0511
	1,0	133	3,50	7,00	0,10	3	36	5 x 11,5	ECR1HGC010M◊◊ΔΔ0511
	2,2	60,4	3,00	6,00	0,10	3	54	5 x 11,5	ECR1HGC2R2M◊◊ΔΔ0511
	3,3	40,3	2,60	5,20	0,10	4	63	5 x 11,5	ECR1HGC3R3M◊◊ΔΔ0511
	4,7	28,3	2,20	4,40	0,10	5	75	5 x 11,5	ECR1HGC4R7M◊◊ΔΔ0511
	10	13,3	1,40	2,80	0,10	10	110	5 x 11,5	ECR1HGC100M◊◊ΔΔ0511
	18	7,38	0,950	1,90	0,10	18	120	5 x 11,5	ECR1HGC180M◊◊ΔΔ0511
	27	4,92	0,550	1,10	0,10	27	135	5 x 15	ECR1HGC270M◊◊ΔΔ0515
	39	3,41	0,360	0,720	0,10	39	148	6,3 x 11,5	ECR1HGC390M◊◊ΔΔ0611
	56	2,37	0,280	0,560	0,10	56	153	6,3 x 15	ECR1HGC560M◊◊ΔΔ0615
	68	1,96	0,200	0,400	0,10	68	360	8 x 11,5	ECR1HGC680M◊◊ΔΔ0811
	82	1,62	0,180	0,360	0,10	82	460	8 x 16	ECR1HGC820M◊◊ΔΔ0816
		1,62	0,180	0,360	0,10	82	443	10 x 12,5	ECR1HGC820M◊◊ΔΔ1012
	100	1,33	0,150	0,300	0,10	100	553	10 x 16	ECR1HGC101M◊◊ΔΔ1016
	120	1,11	0,130	0,260	0,10	120	670	8 x 20	ECR1HGC121M◊◊ΔΔ0820
	180	0,737	0,095	0,190	0,10	180	676	10 x 20	ECR1HGC181M◊◊ΔΔ1020
		0,737	0,105	0,210	0,10	180	745	12,5 x 15	ECR1HGC181M◊◊ΔΔ1215
	220	0,603	0,080	0,160	0,10	220	876	10 x 25	ECR1HGC221M◊◊ΔΔ1025
	330	0,402	0,065	0,130	0,10	330	1010	10 x 30	ECR1HGC331M◊◊ΔΔ1030
		0,402	0,070	0,140	0,10	330	979	12,5 x 20	ECR1HGC331M◊◊ΔΔ1220
		0,402	0,075	0,150	0,10	330	982	16 x 15	ECR1HGC331M◊◊ΔΔ1615
	470	0,283	0,054	0,108	0,10	470	1180	12,5 x 25	ECR1HGC471M◊◊ΔΔ1225
		0,283	0,058	0,116	0,10	470	1180	18 x 15	ECR1HGC471M◊◊ΔΔ1815
	560	0,237	0,050	0,100	0,10	560	1310	12,5 x 30	ECR1HGC561M◊◊ΔΔ1230
	680	0,196	0,046	0,092	0,10	680	1470	12,5 x 35	ECR1HGC681M◊◊ΔΔ1235
		0,196	0,050	0,100	0,10	680	1210	16 x 20	ECR1HGC681M◊◊ΔΔ1620
	820	0,162	0,044	0,088	0,10	820	1590	12,5 x 40	ECR1HGC821M◊◊ΔΔ1240
		0,162	0,048	0,096	0,10	820	1490	16 x 25	ECR1HGC821M◊◊ΔΔ1625
		0,162	0,046	0,092	0,10	820	1450	18 x 20	ECR1HGC821M◊◊ΔΔ1820
	1 000	0,133	0,040	0,080	0,10	1000	1890	16 x 31,5	ECR1HGC102M◊◊ΔΔ1631
		0,133	0,040	0,080	0,10	1000	1720	18 x 25	ECR1HGC102M◊◊ΔΔ1825
	1 200	0,111	0,032	0,064	0,10	1200	2140	16 x 35,5	ECR1HGC122M◊◊ΔΔ1635
	1 500	0,089	0,026	0,052	0,10	1500	2410	16 x 40	ECR1HGC152M◊◊ΔΔ1640
		0,089	0,026	0,052	0,10	1500	1970	18 x 31,5	ECR1HGC152M◊◊ΔΔ1831
	1 800	0,074	0,025	0,050	0,10	1800	2310	18 x 35,5	ECR1HGC182M◊◊ΔΔ1835
	2 200	0,073	0,024	0,048	0,12	2200	2530	18 x 40	ECR1HGC222M◊◊ΔΔ1840
63 (79) 1J	12	9,96	1,20	3,60	0,09	16	120	5 x 11,5	ECR1JGC120M◊◊ΔΔ0511
	18	6,64	0,850	2,60	0,09	23	135	5 x 15	ECR1JGC180M◊◊ΔΔ0515
	27	4,43	0,550	1,70	0,09	34	148	6,3 x 11,5	ECR1JGC270M◊◊ΔΔ0611
	39	3,07	0,380	1,10	0,09	50	153	6,3 x 15	ECR1JGC390M◊◊ΔΔ0615
	47	2,55	0,320	0,960	0,09	60	360	8 x 11,5	ECR1JGC470M◊◊ΔΔ0811
	56	2,14	0,230	0,690	0,09	71	448	10 x 12,5	ECR1JGC560M◊◊ΔΔ1012
	68	1,76	0,240	0,720	0,09	86	469	8 x 16	ECR1JGC680M◊◊ΔΔ0816
		1,76	0,170	0,510	0,09	86	553	10 x 16	ECR1JGC680M◊◊ΔΔ1016
	82	1,46	0,170	0,510	0,09	104	682	8 x 20	ECR1JGC820M◊◊ΔΔ0820
	120	0,995	0,120	0,360	0,09	152	676	10 x 20	ECR1JGC121M◊◊ΔΔ1020

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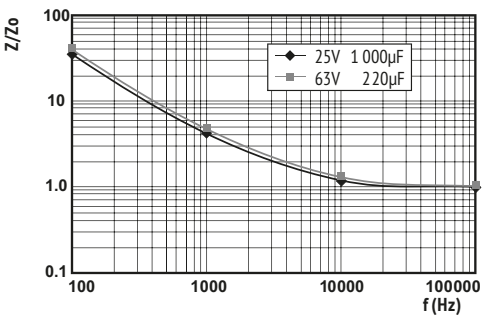
RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
63 (79) 1J	150	0,796	0,100	0,300	0,09	189	876	10 x 25	ECR1JGC151M◊◊ΔΔ1025
		0,796	0,110	0,330	0,09	189	745	12,5 x 15	ECR1JGC151M◊◊ΔΔ1215
	180	0,664	0,085	0,260	0,09	227	1020	10 x 30	ECR1JGC181M◊◊ΔΔ1030
	220	0,543	0,075	0,230	0,09	278	979	12,5 x 20	ECR1JGC221M◊◊ΔΔ1220
		0,543	0,080	0,240	0,09	278	982	16 x 15	ECR1JGC221M◊◊ΔΔ1615
	270	0,443	0,065	0,200	0,09	341	1180	12,5 x 25	ECR1JGC271M◊◊ΔΔ1225
	330	0,362	0,065	0,200	0,09	416	1200	18 x 15	ECR1JGC331M◊◊ΔΔ1815
	390	0,307	0,055	0,170	0,09	492	1310	12,5 x 30	ECR1JGC391M◊◊ΔΔ1230
		0,307	0,057	0,170	0,09	492	1210	16 x 20	ECR1JGC391M◊◊ΔΔ1620
	470	0,254	0,048	0,140	0,09	593	1470	12,5 x 35	ECR1JGC471M◊◊ΔΔ1235
		0,254	0,052	0,160	0,09	593	1490	16 x 25	ECR1JGC471M◊◊ΔΔ1625
		0,254	0,058	0,170	0,09	593	1460	18 x 20	ECR1JGC471M◊◊ΔΔ1820
	560	0,214	0,042	0,130	0,09	706	1590	12,5 x 40	ECR1JGC561M◊◊ΔΔ1240
	680	0,176	0,042	0,130	0,09	857	1890	16 x 31,5	ECR1JGC681M◊◊ΔΔ1631
		0,176	0,050	0,150	0,09	857	1740	18 x 25	ECR1JGC681M◊◊ΔΔ1825
	820	0,146	0,036	0,110	0,09	1034	2140	16 x 35,5	ECR1JGC821M◊◊ΔΔ1635
		0,146	0,042	0,130	0,09	1034	1990	18 x 31,5	ECR1JGC821M◊◊ΔΔ1831
	1 000	0,120	0,032	0,096	0,09	1260	2410	16 x 40	ECR1JGC102M◊◊ΔΔ1640
		0,120	0,035	0,110	0,09	1260	2340	18 x 35,5	ECR1JGC102M◊◊ΔΔ1835
	1 200	0,100	0,032	0,096	0,09	1512	2560	18 x 40	ECR1JGC122M◊◊ΔΔ1840
100 (125) 2A	5,6	19,0	1,90	7,60	0,08	12	57	5 x 11,5	ECR2AGC5R6M◊◊ΔΔ0511
	8,2	13,0	1,30	5,20	0,08	17	74	5 x 15	ECR2AGC8R2M◊◊ΔΔ0515
	12	8,85	1,10	4,40	0,08	24	78	6,3 x 11,5	ECR2AGC120M◊◊ΔΔ0611
	18	5,90	0,620	2,50	0,08	36	85	6,3 x 15	ECR2AGC180M◊◊ΔΔ0615
	22	4,83	0,530	2,10	0,08	44	275	8 x 11,5	ECR2AGC220M◊◊ΔΔ0811
	27	3,94	0,470	1,90	0,08	54	319	10 x 12,5	ECR2AGC270M◊◊ΔΔ1012
	33	3,22	0,350	1,40	0,08	66	360	8 x 16	ECR2AGC330M◊◊ΔΔ0816
		3,22	0,320	1,30	0,08	66	424	10 x 16	ECR2AGC330M◊◊ΔΔ1016
	39	2,73	0,270	1,10	0,08	78	490	8 x 20	ECR2AGC390M◊◊ΔΔ0820
	56	1,90	0,250	1,00	0,08	112	499	10 x 20	ECR2AGC560M◊◊ΔΔ1020
	68	1,57	0,180	0,720	0,08	136	634	10 x 25	ECR2AGC680M◊◊ΔΔ1025
		1,57	0,200	0,800	0,08	136	613	12,5 x 15	ECR2AGC680M◊◊ΔΔ1215
	100	1,07	0,150	0,600	0,08	200	739	10 x 30	ECR2AGC101M◊◊ΔΔ1030
		1,07	0,130	0,520	0,08	200	805	12,5 x 20	ECR2AGC101M◊◊ΔΔ1220
	120	0,885	0,110	0,440	0,08	240	857	12,5 x 25	ECR2AGC121M◊◊ΔΔ1225
		0,885	0,130	0,500	0,08	240	706	16 x 15	ECR2AGC121M◊◊ΔΔ1615
	150	0,708	0,120	0,480	0,08	300	871	18 x 15	ECR2AGC151M◊◊ΔΔ1815
	180	0,590	0,090	0,360	0,08	360	1120	12,5 x 30	ECR2AGC181M◊◊ΔΔ1230
		0,590	0,110	0,440	0,08	360	916	16 x 20	ECR2AGC181M◊◊ΔΔ1620
	220	0,483	0,075	0,300	0,08	440	1240	12,5 x 35	ECR2AGC221M◊◊ΔΔ1235
		0,483	0,081	0,320	0,08	440	1290	16 x 25	ECR2AGC221M◊◊ΔΔ1625
	270	0,393	0,060	0,240	0,08	540	1330	12,5 x 40	ECR2AGC271M◊◊ΔΔ1240
		0,393	0,085	0,340	0,08	540	1170	18 x 20	ECR2AGC271M◊◊ΔΔ1820
	330	0,322	0,059	0,230	0,08	660	1630	16 x 31,5	ECR2AGC331M◊◊ΔΔ1631
		0,322	0,071	0,280	0,08	660	1500	18 x 25	ECR2AGC331M◊◊ΔΔ1825
	390	0,273	0,052	0,210	0,08	780	1750	16 x 35,5	ECR2AGC391M◊◊ΔΔ1635
		0,273	0,058	0,230	0,08	780	1630	18 x 31,5	ECR2AGC391M◊◊ΔΔ1831
	470	0,226	0,045	0,180	0,08	940	1920	16 x 40	ECR2AGC471M◊◊ΔΔ1640
	560	0,190	0,054	0,220	0,08	1120	1920	18 x 35,5	ECR2AGC561M◊◊ΔΔ1835
	680	0,157	0,041	0,160	0,08	1360	2100	18 x 40	ECR2AGC681M◊◊ΔΔ1840

IMPEDANCE RATIO

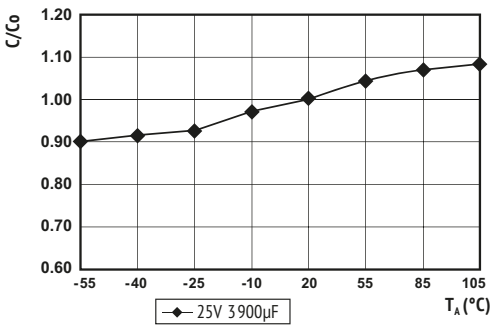


Z = actual impedance of each frequency at 20°C,

Zo = Impedance at 100kHz, 20°C

Impedance Ratio as a function of frequency

CAPACITANCE RATIO



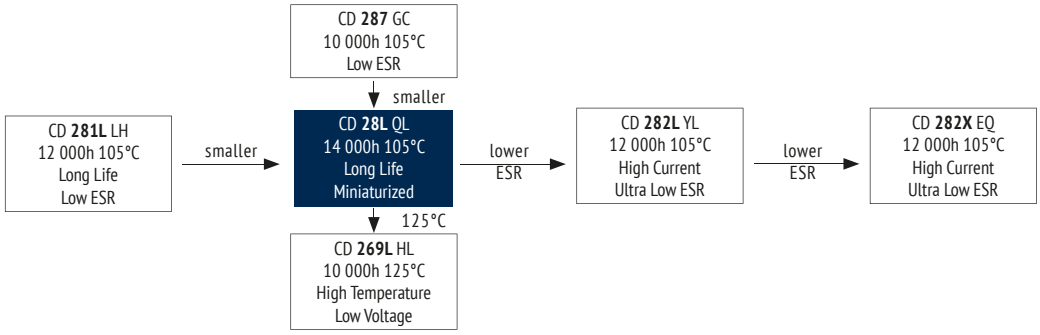
C = actual capacitance of each temperature at 100Hz,

Co = Capacitance at 20°C, 100Hz

Capacitance Ratio as a function of temperature (typical curve)

4 000 - 14 000h at 105°C

- Miniaturized
- Low Impedance, High Current
- Switching Power Supply
- Standard 85°C



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-55 ~ +105
Voltage Range (V)	6,3 ~ 63
Capacitance Range (µF)	12 ~ 18 000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current (µA)	After 2 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	6,3 ~ 63
	$Z_{-55°C} / Z_{+20°C}$	3

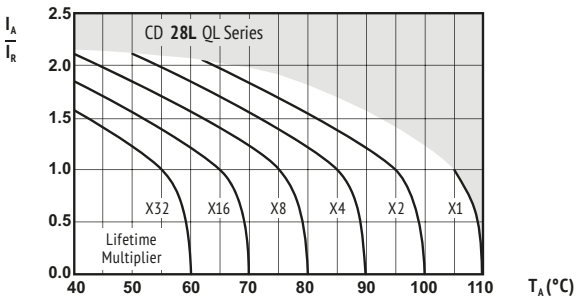
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	Ø ≤ 6,3 : 4 000h Ø 8 : 6 000h Ø 10 : 10 000h Ø 12,5 : 12 000h Ø ≥ 16 : 14 000h	Ø ≥ 8 : > 250 000h	Ø ≤ 6,3 : 2 000h Ø 8 : 3 000h Ø 10 : 5 000h Ø 12,5 : 7 000h Ø ≥ 16 : 8 000h	Ø ≤ 6,3 : 3 000h Ø 8 : 5 000h Ø 10 : 7 000h Ø 12,5 : 9 000h Ø ≥ 16 : 10 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 40°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Capacitance (µF) \ Frequency	120Hz	1kHz	10kHz	100kHz
12 ~ 180	0,40	0,75	0,90	1,00
220 ~ 560	0,50	0,83	0,93	1,00
680 ~ 1 800	0,60	0,86	0,95	1,00
2 200 ~ 3 900	0,75	0,90	0,97	1,00
4 700 ~ 18 000	0,85	0,95	0,98	1,00

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 100kHz,
I_R = rated ripple current at 100kHz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

RADIAL

RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
6,3 (7,2) 0J	150	1,95	0,500	1,00	0,22	10	175	5 x 11,5	ECR0JQL151M◊◊ΔΔ0511
	330	0,885	0,250	0,500	0,22	21	290	6,3 x 11,5	ECR0JQL331M◊◊ΔΔ0611
	470	0,621	0,180	0,360	0,22	30	400	6,3 x 15	ECR0JQL471M◊◊ΔΔ0615
	680	0,430	0,120	0,240	0,22	43	555	8 x 11,5	ECR0JQL681M◊◊ΔΔ0811
	820	0,356	0,090	0,180	0,22	52	760	10 x 12,5	ECR0JQL821M◊◊ΔΔ1012
	1 000	0,292	0,090	0,180	0,22	63	730	8 x 16	ECR0JQL102M◊◊ΔΔ0816
	1 200	0,244	0,080	0,160	0,22	76	810	8 x 20	ECR0JQL122M◊◊ΔΔ0820
		0,244	0,068	0,136	0,22	76	1050	10 x 16	ECR0JQL122M◊◊ΔΔ1016
	1 500	0,195	0,052	0,104	0,22	95	1220	10 x 20	ECR0JQL152M◊◊ΔΔ1020
	2 200	0,145	0,045	0,090	0,24	139	1440	10 x 25	ECR0JQL222M◊◊ΔΔ1025
	2 700	0,118	0,037	0,074	0,24	171	1690	10 x 30	ECR0JQL272M◊◊ΔΔ1030
	3 300	0,105	0,038	0,076	0,26	208	1660	12,5 x 20	ECR0JQL332M◊◊ΔΔ1220
	3 900	0,089	0,030	0,060	0,26	246	1950	12,5 x 25	ECR0JQL392M◊◊ΔΔ1225
	4 700	0,080	0,025	0,050	0,28	297	2310	12,5 x 30	ECR0JQL472M◊◊ΔΔ1230
	5 600	0,072	0,022	0,044	0,30	353	2510	12,5 x 35	ECR0JQL562M◊◊ΔΔ1235
		0,072	0,029	0,058	0,30	353	2210	16 x 20	ECR0JQL562M◊◊ΔΔ1620
	6 800	0,063	0,017	0,034	0,32	429	2870	12,5 x 40	ECR0JQL682M◊◊ΔΔ1240
		0,063	0,022	0,044	0,32	429	2560	16 x 25	ECR0JQL682M◊◊ΔΔ1625
		0,063	0,028	0,056	0,32	429	2490	18 x 20	ECR0JQL682M◊◊ΔΔ1820
	8 200	0,059	0,019	0,038	0,36	517	3010	16 x 31,5	ECR0JQL822M◊◊ΔΔ1631
	10 000	0,054	0,017	0,034	0,40	630	3150	16 x 35,5	ECR0JQL103M◊◊ΔΔ1635
		0,054	0,020	0,040	0,40	630	2740	18 x 25	ECR0JQL103M◊◊ΔΔ1825
	12 000	0,049	0,015	0,030	0,44	756	3710	16 x 40	ECR0JQL123M◊◊ΔΔ1640
		0,049	0,018	0,036	0,44	756	3330	18 x 31,5	ECR0JQL123M◊◊ΔΔ1831
	15 000	0,045	0,016	0,032	0,50	945	3680	18 x 35,5	ECR0JQL153M◊◊ΔΔ1835
	18 000	0,042	0,015	0,030	0,56	1134	3800	18 x 40	ECR0JQL183M◊◊ΔΔ1840
10 (13) 1A	100	2,53	0,500	1,00	0,19	10	175	5 x 11,5	ECR1AQL101M◊◊ΔΔ0511
	220	1,15	0,250	0,500	0,19	22	290	6,3 x 11,5	ECR1AQL221M◊◊ΔΔ0611
	330	0,764	0,180	0,360	0,19	33	400	6,3 x 15	ECR1AQL331M◊◊ΔΔ0615
	470	0,537	0,120	0,240	0,19	47	555	8 x 11,5	ECR1AQL471M◊◊ΔΔ0811
	680	0,371	0,090	0,180	0,19	68	730	8 x 16	ECR1AQL681M◊◊ΔΔ0816
		0,371	0,090	0,180	0,19	68	730	8 x 16	ECR1AQL681M◊◊ΔΔ0816
		0,371	0,090	0,180	0,19	68	760	10 x 12,5	ECR1AQL681M◊◊ΔΔ1012
	1 000	0,252	0,080	0,160	0,19	100	810	8 x 20	ECR1AQL102M◊◊ΔΔ0820
		0,252	0,068	0,136	0,19	100	1050	10 x 16	ECR1AQL102M◊◊ΔΔ1016
	1 200	0,210	0,052	0,104	0,19	120	1220	10 x 20	ECR1AQL122M◊◊ΔΔ1020
	1 500	0,168	0,045	0,090	0,19	150	1440	10 x 25	ECR1AQL152M◊◊ΔΔ1025
	1 800	0,140	0,037	0,074	0,19	180	1690	10 x 30	ECR1AQL182M◊◊ΔΔ1030
	2 200	0,127	0,038	0,076	0,21	220	1660	12,5 x 20	ECR1AQL222M◊◊ΔΔ1220
	3 300	0,093	0,030	0,060	0,23	330	1950	12,5 x 25	ECR1AQL332M◊◊ΔΔ1225
	3 900	0,079	0,025	0,050	0,23	390	2310	12,5 x 30	ECR1AQL392M◊◊ΔΔ1230
		0,079	0,029	0,058	0,23	390	2210	16 x 20	ECR1AQL392M◊◊ΔΔ1620
	4 700	0,071	0,022	0,044	0,25	470	2510	12,5 x 35	ECR1AQL472M◊◊ΔΔ1235
	5 600	0,064	0,017	0,034	0,27	560	2870	12,5 x 40	ECR1AQL562M◊◊ΔΔ1240
		0,064	0,022	0,044	0,27	560	2560	16 x 25	ECR1AQL562M◊◊ΔΔ1625
		0,064	0,028	0,056	0,27	560	2490	18 x 20	ECR1AQL562M◊◊ΔΔ1820
	6 800	0,057	0,019	0,038	0,29	680	3010	16 x 31,5	ECR1AQL682M◊◊ΔΔ1631
		0,057	0,020	0,040	0,29	680	2740	18 x 25	ECR1AQL682M◊◊ΔΔ1825
	8 200	0,054	0,017	0,034	0,33	820	3150	16 x 35,5	ECR1AQL822M◊◊ΔΔ1635
		0,054	0,018	0,036	0,33	820	3330	18 x 31,5	ECR1AQL822M◊◊ΔΔ1831
	10 000	0,050	0,015	0,030	0,37	1000	3710	16 x 40	ECR1AQL103M◊◊ΔΔ1640
		0,050	0,016	0,032	0,37	1000	3680	18 x 35,5	ECR1AQL103M◊◊ΔΔ1835
	12 000	0,046	0,015	0,030	0,41	1200	3800	18 x 40	ECR1AQL123M◊◊ΔΔ1840
16 (20) 1C	47	4,52	0,500	1,00	0,16	8	175	5 x 11,5	ECR1CQL470M◊◊ΔΔ0511
	100	2,13	0,250	0,500	0,16	16	290	6,3 x 11,5	ECR1CQL101M◊◊ΔΔ0611
	220	0,965	0,180	0,360	0,16	36	400	6,3 x 15	ECR1CQL221M◊◊ΔΔ0615
	330	0,644	0,120	0,240	0,16	53	555	8 x 11,5	ECR1CQL331M◊◊ΔΔ0811
	470	0,452	0,090	0,180	0,16	76	730	8 x 16	ECR1CQL471M◊◊ΔΔ0816
		0,452	0,090	0,180	0,16	76	760	10 x 12,5	ECR1CQL471M◊◊ΔΔ1012
	560	0,379	0,080	0,160	0,16	90	810	8 x 20	ECR1CQL561M◊◊ΔΔ0820
	680	0,313	0,068	0,136	0,16	109	1050	10 x 16	ECR1CQL681M◊◊ΔΔ1016
	1 000	0,213	0,052	0,104	0,16	160	1220	10 x 20	ECR1CQL102M◊◊ΔΔ1020
	1 200	0,177	0,045	0,090	0,16	192	1440	10 x 25	ECR1CQL122M◊◊ΔΔ1025
	1 500	0,142	0,037	0,074	0,16	240	1690	10 x 30	ECR1CQL152M◊◊ΔΔ1030
		0,142	0,038	0,076	0,16	240	1660	12,5 x 20	ECR1CQL152M◊◊ΔΔ1220
	2 200	0,109	0,030	0,060	0,18	352	1950	12,5 x 25	ECR1CQL222M◊◊ΔΔ1225

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
16 (20) 1C	2 700	0,089	0,025	0,050	0,18	432	2310	12,5 x 30	ECR1CQL272M◊◊ΔΔ1230
		0,089	0,029	0,058	0,18	432	2210	16 x 20	ECR1CQL272M◊◊ΔΔ1620
	3 300	0,081	0,022	0,044	0,20	528	2510	12,5 x 35	ECR1CQL332M◊◊ΔΔ1235
	3 900	0,069	0,017	0,034	0,20	624	2870	12,5 x 40	ECR1CQL392M◊◊ΔΔ1240
		0,069	0,022	0,044	0,20	624	2560	16 x 25	ECR1CQL392M◊◊ΔΔ1625
		0,069	0,028	0,056	0,20	624	2490	18 x 20	ECR1CQL392M◊◊ΔΔ1820
	4 700	0,063	0,019	0,038	0,22	752	3010	16 x 31,5	ECR1CQL472M◊◊ΔΔ1631
		0,063	0,020	0,040	0,22	752	2740	18 x 25	ECR1CQL472M◊◊ΔΔ1825
	5 600	0,057	0,017	0,034	0,24	896	3150	16 x 35,5	ECR1CQL562M◊◊ΔΔ1635
		0,057	0,018	0,036	0,24	896	3330	18 x 31,5	ECR1CQL562M◊◊ΔΔ1831
	6 800	0,051	0,015	0,030	0,26	1088	3710	16 x 40	ECR1CQL682M◊◊ΔΔ1640
	8 200	0,049	0,016	0,032	0,30	1312	3680	18 x 35,5	ECR1CQL822M◊◊ΔΔ1835
	10 000	0,046	0,015	0,030	0,34	1600	3800	18 x 40	ECR1CQL103M◊◊ΔΔ1840
25 (32) 1E	47	3,96	0,500	1,00	0,14	12	175	5 x 11,5	ECR1EQL470M◊◊ΔΔ0511
	100	1,86	0,250	0,500	0,14	25	290	6,3 x 11,5	ECR1EQL101M◊◊ΔΔ0611
	150	1,24	0,180	0,360	0,14	38	400	6,3 x 15	ECR1EQL151M◊◊ΔΔ0615
	220	0,845	0,120	0,240	0,14	55	555	8 x 11,5	ECR1EQL221M◊◊ΔΔ0811
	330	0,563	0,090	0,180	0,14	83	730	8 x 16	ECR1EQL331M◊◊ΔΔ0816
		0,563	0,090	0,180	0,14	83	760	10 x 12,5	ECR1EQL331M◊◊ΔΔ1012
	390	0,477	0,080	0,160	0,14	98	810	8 x 20	ECR1EQL391M◊◊ΔΔ0820
	470	0,396	0,068	0,136	0,14	118	1050	10 x 16	ECR1EQL471M◊◊ΔΔ1016
	680	0,274	0,052	0,104	0,14	170	1220	10 x 20	ECR1EQL681M◊◊ΔΔ1020
	820	0,227	0,045	0,090	0,14	205	1440	10 x 25	ECR1EQL821M◊◊ΔΔ1025
	1 000	0,186	0,037	0,074	0,14	250	1690	10 x 30	ECR1EQL102M◊◊ΔΔ1030
		0,186	0,038	0,076	0,14	250	1660	12,5 x 20	ECR1EQL102M◊◊ΔΔ1220
	1 500	0,124	0,030	0,060	0,14	375	1950	12,5 x 25	ECR1EQL152M◊◊ΔΔ1225
	1 800	0,104	0,025	0,050	0,14	450	2310	12,5 x 30	ECR1EQL182M◊◊ΔΔ1230
		0,104	0,029	0,058	0,14	450	2210	16 x 20	ECR1EQL182M◊◊ΔΔ1620
	2 200	0,097	0,022	0,044	0,16	550	2510	12,5 x 35	ECR1EQL222M◊◊ΔΔ1235
		0,097	0,028	0,056	0,16	550	2490	18 x 20	ECR1EQL222M◊◊ΔΔ1820
	2 700	0,079	0,017	0,034	0,16	675	2870	12,5 x 40	ECR1EQL272M◊◊ΔΔ1240
		0,079	0,022	0,044	0,16	675	2560	16 x 25	ECR1EQL272M◊◊ΔΔ1625
	3 300	0,073	0,019	0,038	0,18	825	3010	16 x 31,5	ECR1EQL332M◊◊ΔΔ1631
		0,073	0,020	0,040	0,18	825	2740	18 x 25	ECR1EQL332M◊◊ΔΔ1825
	3 900	0,062	0,017	0,034	0,18	975	3150	16 x 35,5	ECR1EQL392M◊◊ΔΔ1635
		0,062	0,018	0,036	0,18	975	3330	18 x 31,5	ECR1EQL392M◊◊ΔΔ1831
	4 700	0,057	0,015	0,030	0,20	1175	3710	16 x 40	ECR1EQL472M◊◊ΔΔ1640
		0,057	0,016	0,032	0,20	1175	3680	18 x 35,5	ECR1EQL472M◊◊ΔΔ1835
	5 600	0,053	0,015	0,030	0,22	1400	3800	18 x 40	ECR1EQL562M◊◊ΔΔ1840
35 (44) 1V	33	4,83	0,500	1,00	0,12	12	175	5 x 11,5	ECR1VQL330M◊◊ΔΔ0511
	56	2,85	0,250	0,500	0,12	20	290	6,3 x 11,5	ECR1VQL560M◊◊ΔΔ0611
	100	1,60	0,180	0,360	0,12	35	400	6,3 x 15	ECR1VQL101M◊◊ΔΔ0615
	150	1,07	0,120	0,240	0,12	53	555	8 x 11,5	ECR1VQL151M◊◊ΔΔ0811
	220	0,724	0,090	0,180	0,12	77	730	8 x 16	ECR1VQL221M◊◊ΔΔ0816
		0,724	0,090	0,180	0,12	77	760	10 x 12,5	ECR1VQL221M◊◊ΔΔ1012
	270	0,590	0,080	0,160	0,12	95	810	8 x 20	ECR1VQL271M◊◊ΔΔ0820
	330	0,483	0,068	0,136	0,12	116	1050	10 x 16	ECR1VQL331M◊◊ΔΔ1016
	470	0,339	0,052	0,104	0,12	165	1220	10 x 20	ECR1VQL471M◊◊ΔΔ1020
	560	0,285	0,045	0,090	0,12	196	1440	10 x 25	ECR1VQL561M◊◊ΔΔ1025
	680	0,235	0,037	0,074	0,12	238	1690	10 x 30	ECR1VQL681M◊◊ΔΔ1030
		0,235	0,038	0,076	0,12	238	1660	12,5 x 20	ECR1VQL681M◊◊ΔΔ1220
	1 000	0,160	0,030	0,060	0,12	350	1950	12,5 x 25	ECR1VQL102M◊◊ΔΔ1225
	1 200	0,133	0,025	0,050	0,12	420	2310	12,5 x 30	ECR1VQL122M◊◊ΔΔ1230
		0,133	0,029	0,058	0,12	420	2210	16 x 20	ECR1VQL122M◊◊ΔΔ1620
	1 500	0,107	0,022	0,044	0,12	525	2510	12,5 x 35	ECR1VQL152M◊◊ΔΔ1235
	1 800	0,089	0,017	0,034	0,12	630	2870	12,5 x 40	ECR1VQL182M◊◊ΔΔ1240
		0,089	0,022	0,044	0,12	630	2560	16 x 25	ECR1VQL182M◊◊ΔΔ1625
		0,089	0,028	0,056	0,12	630	2490	18 x 20	ECR1VQL182M◊◊ΔΔ1820
	2 200	0,085	0,019	0,038	0,14	770	3010	16 x 31,5	ECR1VQL222M◊◊ΔΔ1631
		0,085	0,020	0,040	0,14	770	2740	18 x 25	ECR1VQL222M◊◊ΔΔ1825
	2 700	0,069	0,017	0,034	0,14	945	3150	16 x 35,5	ECR1VQL272M◊◊ΔΔ1635
		0,069	0,018	0,036	0,14	945	3330	18 x 31,5	ECR1VQL272M◊◊ΔΔ1831
	3 300	0,065	0,015	0,030	0,16	1155	3710	16 x 40	ECR1VQL332M◊◊ΔΔ1640
		0,065	0,016	0,032	0,16	1155	3680	18 x 35,5	ECR1VQL332M◊◊ΔΔ1835
	3 900	0,055	0,015	0,030	0,16	1365	3800	18 x 40	ECR1VQL392M◊◊ΔΔ1840

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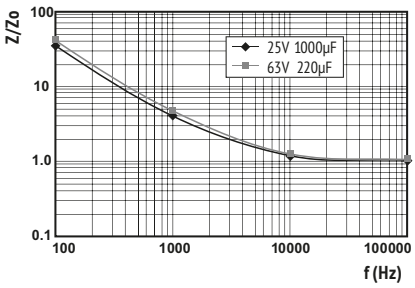
RADIAL

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (Ω)	Z_{max} Max Impedance 20°C 100kHz (Ω)	Z_{max} Max Impedance -10°C 100kHz (Ω)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (µA)	I_{RAC} Rated Ripple Current 105°C 100kHz (mArms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pitch code Details: Page 15
50 (63) 1H	22	6,04	0,900	1,80	0,10	11	155	5 x 11,5	ECR1HQL220M◊◊ΔΔ0511
	47	2,83	0,450	0,900	0,10	24	260	6,3 x 11,5	ECR1HQL470M◊◊ΔΔ0611
	68	1,96	0,310	0,620	0,10	34	360	6,3 x 15	ECR1HQL680M◊◊ΔΔ0615
	100	1,33	0,220	0,440	0,10	50	485	8 x 11,5	ECR1HQL101M◊◊ΔΔ0811
	120	1,11	0,160	0,320	0,10	60	635	8 x 16	ECR1HQL121M◊◊ΔΔ0816
		1,11	0,160	0,320	0,10	60	620	10 x 12,5	ECR1HQL121M◊◊ΔΔ1012
	180	0,737	0,120	0,240	0,10	90	730	8 x 20	ECR1HQL181M◊◊ΔΔ0820
		0,737	0,130	0,260	0,10	90	850	10 x 16	ECR1HQL181M◊◊ΔΔ1016
	220	0,603	0,088	0,180	0,10	110	1050	10 x 20	ECR1HQL221M◊◊ΔΔ1020
	330	0,402	0,080	0,160	0,10	165	1250	10 x 25	ECR1HQL331M◊◊ΔΔ1025
	390	0,341	0,065	0,130	0,10	195	1500	10 x 30	ECR1HQL391M◊◊ΔΔ1030
		0,341	0,070	0,140	0,10	195	1480	12,5 x 20	ECR1HQL391M◊◊ΔΔ1220
	560	0,237	0,054	0,108	0,10	280	1840	12,5 x 25	ECR1HQL561M◊◊ΔΔ1225
	680	0,196	0,044	0,088	0,10	340	2220	12,5 x 30	ECR1HQL681M◊◊ΔΔ1230
		0,196	0,048	0,096	0,10	340	1840	16 x 20	ECR1HQL681M◊◊ΔΔ1620
	820	0,162	0,033	0,066	0,10	410	2290	12,5 x 35	ECR1HQL821M◊◊ΔΔ1235
		0,162	0,042	0,084	0,10	410	1980	18 x 20	ECR1HQL821M◊◊ΔΔ1820
	1 000	0,133	0,029	0,058	0,10	500	2500	12,5 x 40	ECR1HQL102M◊◊ΔΔ1240
		0,133	0,034	0,068	0,10	500	2240	16 x 25	ECR1HQL102M◊◊ΔΔ1625
	1 200	0,111	0,028	0,056	0,10	600	2700	16 x 31,5	ECR1HQL122M◊◊ΔΔ1631
		0,111	0,029	0,058	0,10	600	2610	18 x 25	ECR1HQL122M◊◊ΔΔ1825
	1 500	0,089	0,025	0,050	0,10	750	2800	16 x 35,5	ECR1HQL152M◊◊ΔΔ1635
	1 800	0,074	0,021	0,042	0,10	900	3200	16 x 40	ECR1HQL182M◊◊ΔΔ1640
		0,074	0,025	0,050	0,10	900	3000	18 x 31,5	ECR1HQL182M◊◊ΔΔ1831
	2 200	0,073	0,023	0,046	0,12	1100	3100	18 x 35,5	ECR1HQL222M◊◊ΔΔ1835
	2 700	0,059	0,022	0,044	0,12	1350	3400	18 x 40	ECR1HQL272M◊◊ΔΔ1840
63 (79) 1J	12	8,85	1,90	4,000	0,08	8	145	5 x 11,5	ECR1JQL120M◊◊ΔΔ0511
	22	4,83	1,00	2,000	0,08	14	240	6,3 x 11,5	ECR1JQL220M◊◊ΔΔ0611
	39	2,73	0,610	1,400	0,08	25	330	6,3 x 15	ECR1JQL390M◊◊ΔΔ0615
	68	1,57	0,340	0,750	0,08	43	405	8 x 11,5	ECR1JQL680M◊◊ΔΔ0811
	100	1,07	0,270	0,650	0,08	63	535	8 x 16	ECR1JQL101M◊◊ΔΔ0816
		1,07	0,255	0,510	0,08	63	540	10 x 12,5	ECR1JQL101M◊◊ΔΔ1012
	120	0,885	0,190	0,380	0,08	76	600	10 x 16	ECR1JQL121M◊◊ΔΔ1016
	150	0,708	0,210	0,520	0,08	95	690	8 x 20	ECR1JQL151M◊◊ΔΔ0820
	180	0,590	0,145	0,290	0,08	114	890	10 x 20	ECR1JQL181M◊◊ΔΔ1020
	220	0,483	0,130	0,260	0,08	139	1050	10 x 25	ECR1JQL221M◊◊ΔΔ1025
	330	0,322	0,090	0,180	0,08	208	1300	10 x 30	ECR1JQL331M◊◊ΔΔ1030
		0,322	0,085	0,170	0,08	208	1290	12,5 x 20	ECR1JQL331M◊◊ΔΔ1220
	390	0,273	0,070	0,140	0,08	246	1720	12,5 x 25	ECR1JQL391M◊◊ΔΔ1225
	470	0,226	0,055	0,110	0,08	297	2090	12,5 x 30	ECR1JQL471M◊◊ΔΔ1230
		0,226	0,059	0,120	0,08	297	1770	16 x 20	ECR1JQL471M◊◊ΔΔ1620
	680	0,157	0,047	0,094	0,08	429	2270	12,5 x 35	ECR1JQL681M◊◊ΔΔ1235
		0,157	0,050	0,100	0,08	429	2160	16 x 25	ECR1JQL681M◊◊ΔΔ1625
		0,157	0,055	0,110	0,08	429	2290	18 x 20	ECR1JQL681M◊◊ΔΔ1820
	820	0,130	0,042	0,084	0,08	517	2560	12,5 x 40	ECR1JQL821M◊◊ΔΔ1240
		0,130	0,043	0,086	0,08	517	2670	16 x 31,5	ECR1JQL821M◊◊ΔΔ1631
		0,130	0,043	0,086	0,08	517	2590	18 x 25	ECR1JQL821M◊◊ΔΔ1825
	1 000	0,107	0,036	0,072	0,08	630	2770	16 x 35,5	ECR1JQL102M◊◊ΔΔ1635
	1 200	0,089	0,030	0,060	0,08	756	2850	16 x 40	ECR1JQL122M◊◊ΔΔ1640
		0,089	0,032	0,064	0,08	756	2950	18 x 31,5	ECR1JQL122M◊◊ΔΔ1831
	1 500	0,071	0,030	0,060	0,08	945	3100	18 x 35,5	ECR1JQL152M◊◊ΔΔ1835
	1 800	0,059	0,025	0,050	0,08	1134	3210	18 x 40	ECR1JQL182M◊◊ΔΔ1840

IMPEDANCE RATIO

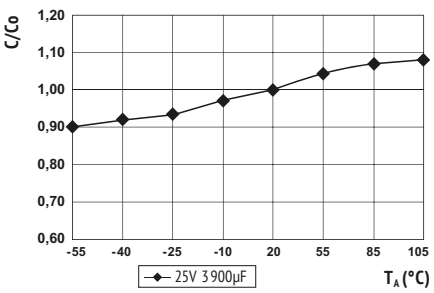


Z = actual impedance of each frequency at 20°C,

Zo = Impedance at 100kHz, 20°C

Impedance Ratio as a function of frequency

CAPACITANCE RATIO



C = actual capacitance of each temperature at 100Hz,

Co = Capacitance at 20°C, 100Hz

Capacitance Ratio as a function of temperature (typical curve)

ELECTROLYTIC CAPACITORS

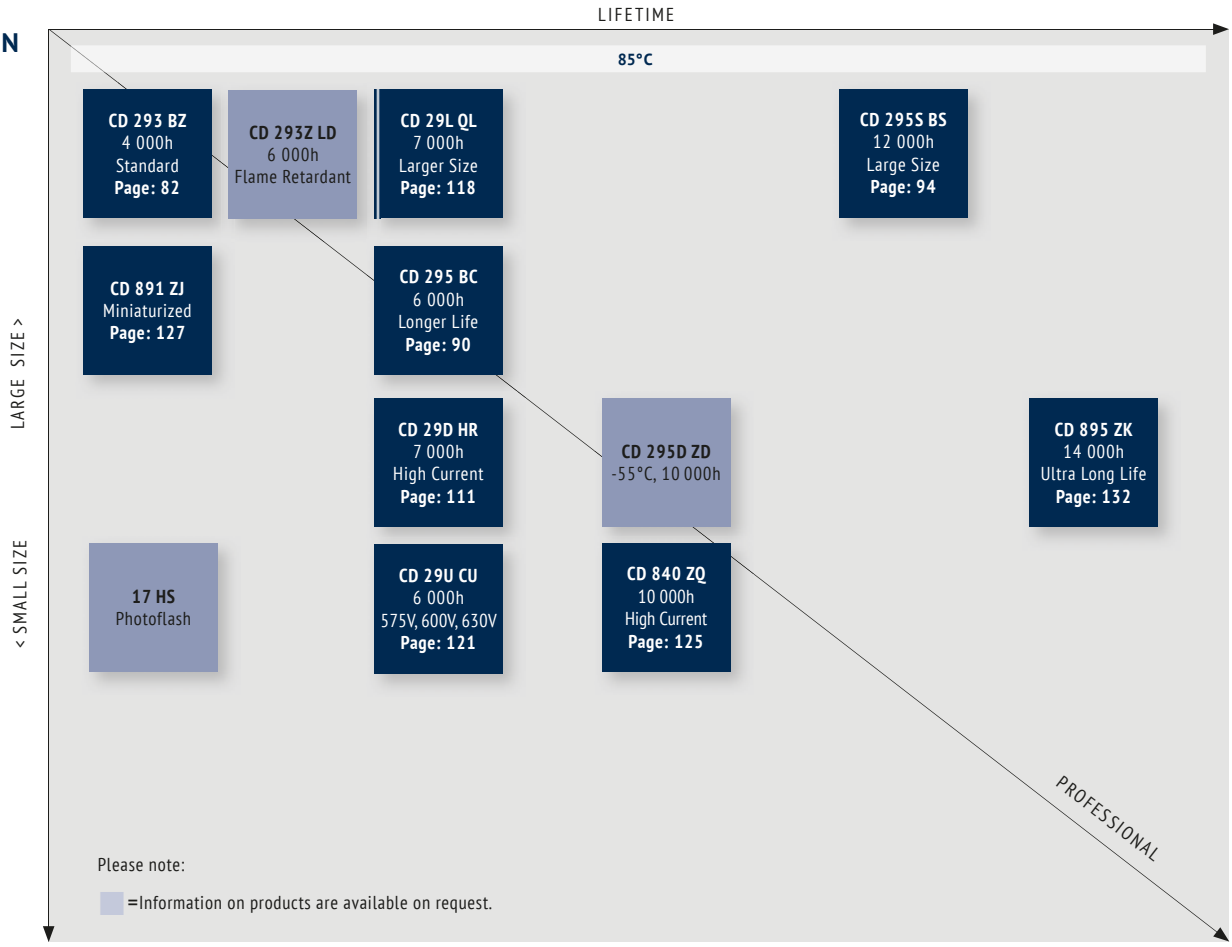
Snap-In Type

OVERVIEW SNAP-IN

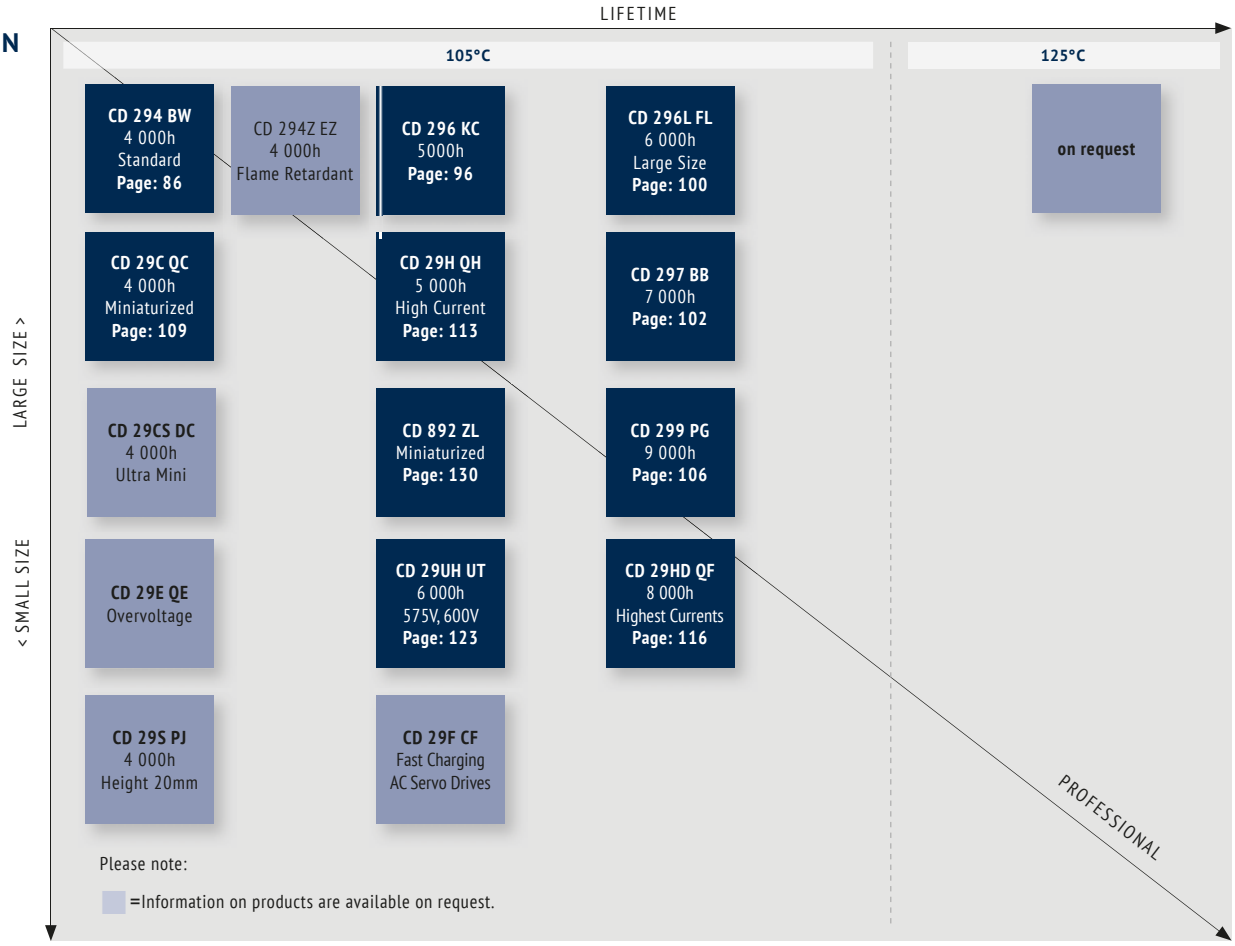
Portfolio: All Snap-In Type at a glance	78
Order code	79
Technical Specifications	80

SERIES SNAP-IN	Code	Type	Temperature	Voltage	Lifetime	Info	
CD 293	BZ	Snap-In	85°C	10~500V	4 000h	Standard	82
CD 294	BW	Snap-In	105°C	16~550V	4 000h	Standard	86
CD 295	BC	Snap-In	85°C	10~500V	6 000h	Long Life	90
CD 295S	BS	Snap-In	85°C (105°C)	160~500V	12 000h	12 000h, Enlarged Temperature	94
CD 296	KC	Snap-In	105°C	16~550V	5 000h	Long Life	96
CD 296L	FL	Snap-In	105°C	350~500V	6 000h	Large Size 105°C	100
CD 297	BB	Snap-In	105°C	10~500V	7 000h	Longer Life, High Current	102
CD 299	PG	Snap-In	105°C	160~500V	9 000h	9 000h, High Current	106
CD 29C	QC	Snap-In	105°C	200~450V	4 000h	Miniaturized 105°C	109
CD 29D	HR	Snap-In	85°C	160~450V	7 000h	Long Life, Highest Currents	111
CD 29H	QH	Snap-In	105°C	160~450V	5 000h	Long Life, Highest Currents	113
CD 29HD	QF	Snap-In	105°C	200~450V	8 000h	Outstanding Ripple Current	116
CD 29L	QL	Snap-In	85°C	16~500V	7 000h	Long Life, Large Size	118
CD 29U	CU	Snap-In	85°C	575~630V	6 000h	575V, 600V, 630V	121
CD 29UH	UT	Snap-In	105°C	575V, 600V	6 000h	575V, 600V at 105°C	123
CD 840	ZQ	Snap-In	85°C	200~450V	10 000h	10 000h High Current	125
CD 891	ZJ	Snap-In	85°C	35~500V	4 000h	Miniaturized	127
CD 892	ZL	Snap-In	105°C	400~500V	5 000h	Miniaturized, Long Life	130
CD 895	ZK	Snap-In	85°C	16~500V	14 000h	Ultra Long Life	132

SNAP-IN 85°C



SNAP-IN 105°C/ 125°C

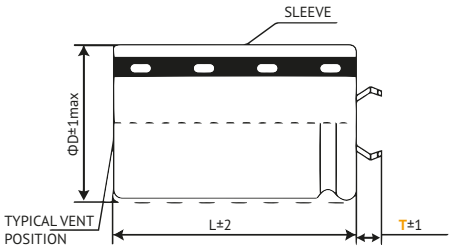


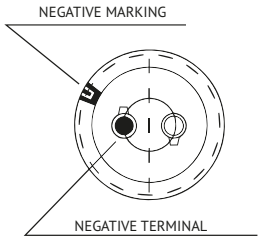
ORDER CODE SNAP-IN TYPE

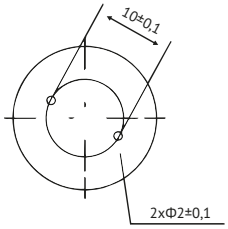
EC	S	2G	QC	221	M	T6	P2	2535	-	JExxxxx
Techno-logy	Terminal Type	Rated Voltage Code	Series Code	Capacitance Code	Capacitance Tolerance	Terminal Style	Terminal / Pitch	Dimension (mm)	Material Code	for Specials only
EC = Electrolytric Capacitor	Snap-In S	6,3V 0J	CD 293 BZ	0,1 0R1	±20% M	4,0mm Pin Length T/L4	2 Pin P2	22x40 2240	Standard -	
		10V 1A	CD 294 BW	0,47 R47	±10% K	6,3mm Pin Length T/L6	3 Pin P3	30x45 3045	PVC V	
		16V 1C	CD 295 BC	1,0 010	+30/-10% Q	Soldering Pin S4	4 Pin P4	35x80 3580	PET E	
		20V 1D	CD 295S BS	2,2 2R2	+20/-0% R	on request: alternative pin types	5 Pin P5	45x100 45100		
		25V 1E	CD 296 KC	100 101	±15% L		6 Pin P6	50x105 50105		
		35V 1V	CD 296L FL	1 000 102	+20/-10% V	■ = preferred				
		40V 1G	CD 297 BB	10 000 103						
		50V 1H	CD 299 PG							
		63V 1J	CD 29C QC							
		80V 1K	CD 29D HR							
		100V 2A	CD 29H QH							
		125V 2B	CD 29HD QF							
		160V 2C	CD 29L QL							
		180V 2K	CD 29U CU							
		200V 2D	CD 29UH UT							
		250V 2E	CD 840 ZQ							
		315V 2F	CD 891 ZJ							
		350V 2V	CD 892 ZL							
		385V 2J	CD 895 ZK							
		400V 2G								
		415V 2P								
		420V 2X								
		450V 2W								
		500V 2H								
		550V 2Y								
		575V 2Z								
		600V 2S								
		630V J2								

SNAP-IN

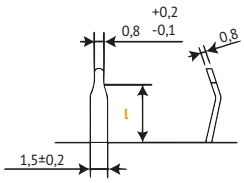
2 PIN TYPE: T6P2 / T4P2 STANDARD







MOUNTING HOLES



TERMINAL DIMENSIONS

Standard Version: Self-Lock Terminal. Other terminal types and styles on request.
For diameter øD ≥ 45mm the safety vent is typically placed at the side of the housing.

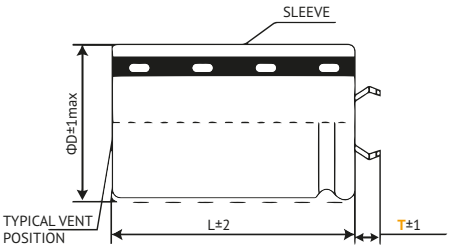
Terminal	T6 (preferred)	T4
Pin Length T	6,3 mm	4,0 mm
Pin Detail l	3,5 mm	2,5 mm

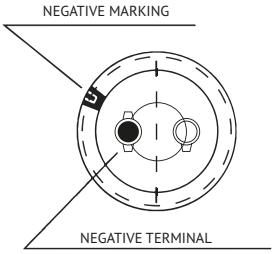
Max. Current Snap-In Terminal: 15A
For more current please ask for Lug-Terminals.

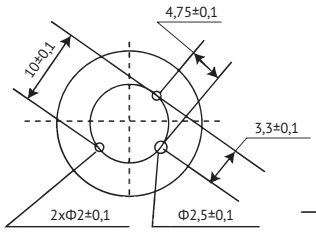
in mm

SNAP-IN

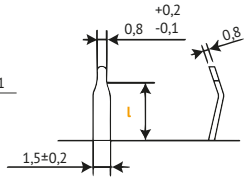
3 PIN TYPE: T4P3







MOUNTING HOLES



TERMINAL DIMENSIONS

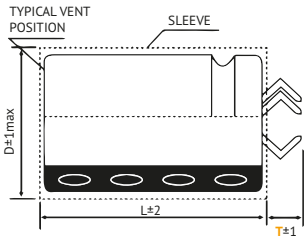
For diameter øD ≥ 45mm the safety vent is typically placed at the side of the housing.

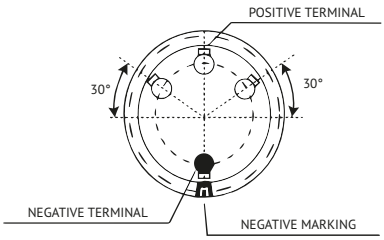
Terminal	T6	T4
Pin Length T	-	4,0 mm
Pin Detail l	-	2,5 mm

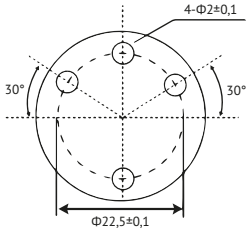
Max. Current Snap-In Terminal: 15A
For more current please ask for Lug-Terminals.

in mm

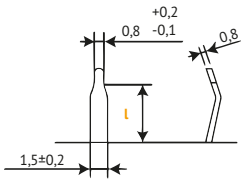
4 PIN TYPE: T6P4/T4P4 STANDARD







MOUNTING HOLES



TERMINAL DIMENSIONS

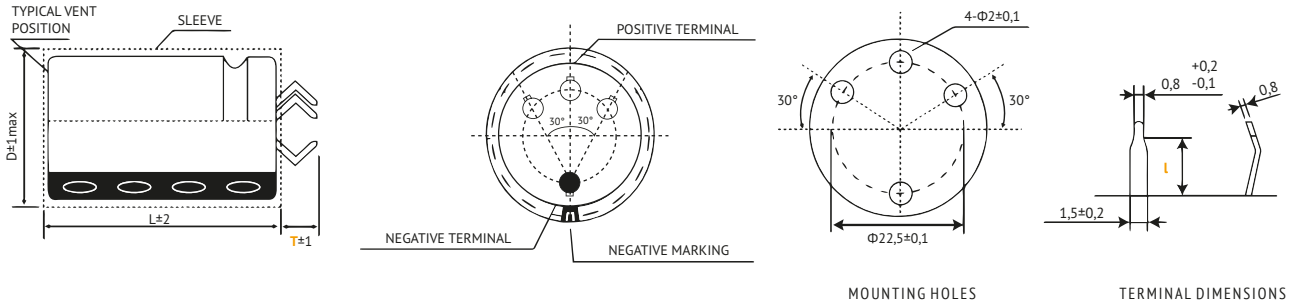
Standard Version: Non-Lock-Terminal. Other terminal types and styles on request.
For øD ≥ 30mm only.
For diameter øD ≥ 45mm the safety vent is typically placed at the side of the housing.

Terminal	T6 (preferred)	T4
Pin Length T	6,3 mm	4,0 mm
Pin Detail l	3,5 mm	2,5 mm

Max. Current Snap-In Terminal: 15A
For more current please ask for Lug-Terminals.

in mm

4 PIN TYPE: L6P4/L4P4 SELF-LOCK TERMINAL



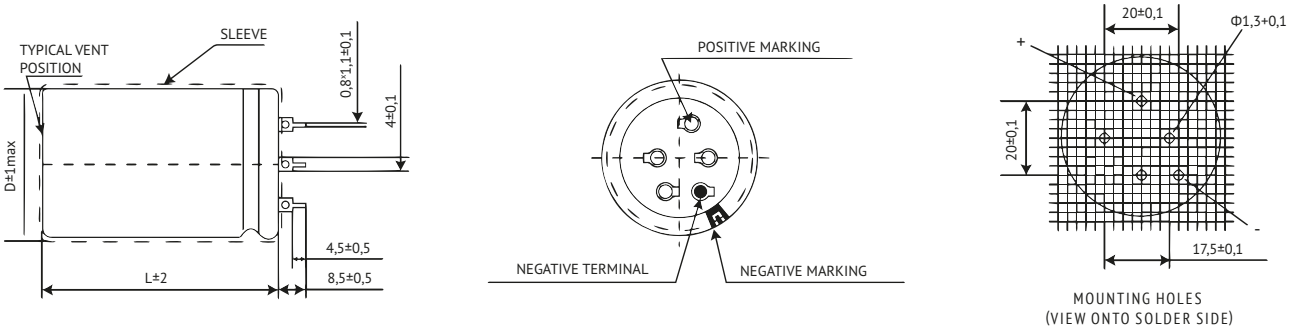
For øD ≥ 30mm only. Other terminal types and styles on request.
For diameter øD ≥ 45mm the safety vent is typically placed at the side of the housing.

Terminal	T6 (preferred)	T4
Pin Length T	6,3 mm	4,0 mm
Pin Detail l	3,5 mm	2,5 mm

Max. Current Snap-In Terminal: 15A
For more current please ask for Lug-Terminals.

in mm

5 PIN TYPE: S4P5 SOLDERING PIN

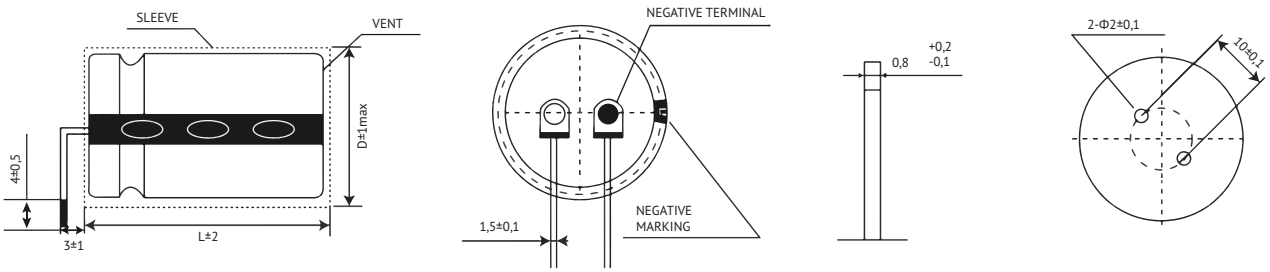


For øD ≥ 30mm only.
For diameter øD ≥ 45mm the safety vent is typically placed at the side of the housing.

Max. Current Snap-In Terminal: 15A
For more current please ask for Lug-Terminals.

in mm

EXAMPLE: AXIAL MOUNTING



For øD ≥ 25mm only.
Available also for high vibration usage.

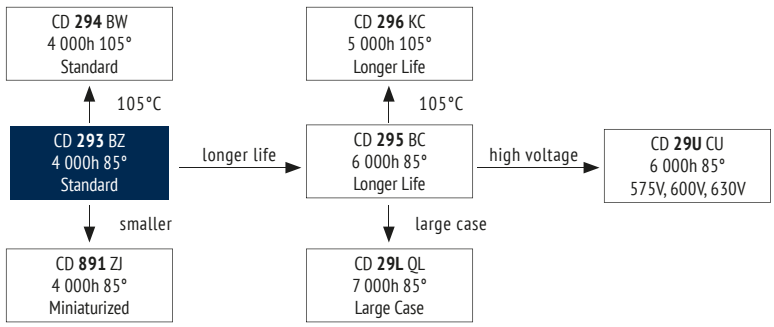
Max. Current Snap-In Terminal: 15A
For more current please ask for Lug-Terminals.

in mm

Other Terminal Styles on request.

4 000h at 85°C

· Standard 85°C



ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +85	-25 ~ +85
Voltage Range (V)	10 ~ 400	420 ~ 500
Capacitance Range (µF)	68 ~ 82 000	
Capacitance Tolerance (20°C, 120Hz)	± 20%	
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	10	16~35	50~100	160~200	250~400	420~500
	$Z_{-25°C} / Z_{+20°C}$	5	4	3		4	
	$Z_{-40°C} / Z_{+20°C}$	18	15	10	6	8	-
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**						

SNAP-IN

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	4 000h	> 65 000h	2 000h	3 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 15% of initial value	Within ± 20% of initial value	Within ± 15% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 150% of specified value	Not more than 200% of specified value	Not more than 150% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,2 x I_R 40°C	U_R I_R 85°C	U_R $I_R = 0$ 85°C IEC 60384	$U_R = 0$ $I_R = 0$ 85°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

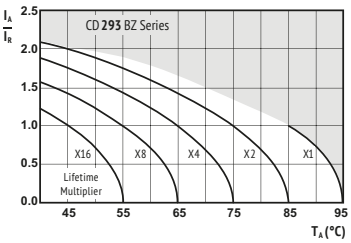
Rated Voltage (V) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	100kHz
≤ 50	0,88	1,00	1,07	1,15	1,15	1,15
63 ~ 100	0,80	1,00	1,17	1,32	1,45	1,50
≥ 160	0,80	1,00	1,16	1,30	1,41	1,43

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

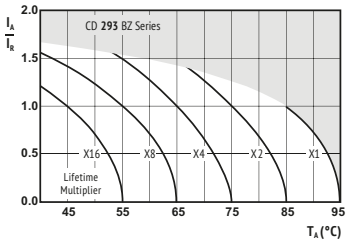
MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)

U_R < 160V



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

U_R ≥ 160V



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/ lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
10 (13) 1A	10 000	54	43	0,40	1,0	2,5	22 x 25	ECS1ABZ103M◊◊ΔΔ2225
	12 000	45	36	0,40	1,2	2,9	22 x 25	ECS1ABZ123M◊◊ΔΔ2225
	15 000	36	29	0,40	1,5	3,2	22 x 30	ECS1ABZ153M◊◊ΔΔ2230
		36	29	0,40	1,5	3,1	25 x 25	ECS1ABZ153M◊◊ΔΔ2525
	18 000	30	24	0,40	1,5	3,6	22 x 35	ECS1ABZ183M◊◊ΔΔ2235
		30	24	0,40	1,5	3,6	25 x 30	ECS1ABZ183M◊◊ΔΔ2530
	22 000	25	20	0,40	1,5	4,0	22 x 40	ECS1ABZ223M◊◊ΔΔ2240
		25	20	0,40	1,5	4,1	25 x 35	ECS1ABZ223M◊◊ΔΔ2535
		25	20	0,40	1,5	4,1	30 x 25	ECS1ABZ223M◊◊ΔΔ3025
	33 000	17	13	0,40	1,5	4,6	25 x 40	ECS1ABZ333M◊◊ΔΔ2540
		17	13	0,40	1,5	4,8	30 x 30	ECS1ABZ333M◊◊ΔΔ3030
		17	13	0,40	1,5	4,8	35 x 25	ECS1ABZ333M◊◊ΔΔ3525
	39 000	14	10,9	0,40	1,5	5,2	25 x 45	ECS1ABZ393M◊◊ΔΔ2545
		14	10,9	0,40	1,5	5,3	30 x 35	ECS1ABZ393M◊◊ΔΔ3035
	47 000	12	9,1	0,40	1,5	5,8	25 x 50	ECS1ABZ473M◊◊ΔΔ2550
		12	9,1	0,40	1,5	6,0	30 x 40	ECS1ABZ473M◊◊ΔΔ3040
		12	9,1	0,40	1,5	6,0	35 x 30	ECS1ABZ473M◊◊ΔΔ3530
	56 000	9,5	7,6	0,40	1,5	6,7	30 x 45	ECS1ABZ563M◊◊ΔΔ3045
		9,5	7,6	0,40	1,5	6,8	35 x 35	ECS1ABZ563M◊◊ΔΔ3535
	68 000	7,9	6,3	0,40	1,5	7,5	30 x 50	ECS1ABZ683M◊◊ΔΔ3050
		7,9	6,3	0,40	1,5	7,7	35 x 40	ECS1ABZ683M◊◊ΔΔ3540
	82 000	6,5	5,2	0,40	1,5	8,7	35 x 45	ECS1ABZ823M◊◊ΔΔ3545
16 (20) 1C	8 200	65	52	0,40	1,3	2,2	22 x 25	ECS1CBZ822M◊◊ΔΔ2225
	10 000	54	43	0,40	1,5	2,6	22 x 30	ECS1CBZ103M◊◊ΔΔ2230
		54	43	0,40	1,5	2,6	25 x 25	ECS1CBZ103M◊◊ΔΔ2525
	12 000	45	36	0,40	1,5	2,9	22 x 35	ECS1CBZ123M◊◊ΔΔ2235
	15 000	36	29	0,40	1,5	3,3	22 x 40	ECS1CBZ153M◊◊ΔΔ2240
		36	29	0,40	1,5	3,3	25 x 30	ECS1CBZ153M◊◊ΔΔ2530
		36	29	0,40	1,5	3,4	30 x 25	ECS1CBZ153M◊◊ΔΔ3025
	18 000	30	24	0,40	1,5	3,8	22 x 45	ECS1CBZ183M◊◊ΔΔ2245
		30	24	0,40	1,5	3,7	25 x 35	ECS1CBZ183M◊◊ΔΔ2535
	22 000	25	20	0,40	1,5	4,2	22 x 50	ECS1CBZ223M◊◊ΔΔ2250
		25	20	0,40	1,5	4,2	25 x 40	ECS1CBZ223M◊◊ΔΔ2540
		25	20	0,40	1,5	4,2	30 x 30	ECS1CBZ223M◊◊ΔΔ3030
		25	20	0,40	1,5	4,2	35 x 25	ECS1CBZ223M◊◊ΔΔ3525
	27 000	20	16	0,40	1,5	5,0	25 x 45	ECS1CBZ273M◊◊ΔΔ2545
		20	16	0,40	1,5	5,0	30 x 35	ECS1CBZ273M◊◊ΔΔ3035
	33 000	17	13	0,40	1,5	5,6	30 x 40	ECS1CBZ333M◊◊ΔΔ3040
		17	13	0,40	1,5	5,6	35 x 30	ECS1CBZ333M◊◊ΔΔ3530
	39 000	14	11	0,40	1,5	6,2	30 x 45	ECS1CBZ393M◊◊ΔΔ3045
		14	11	0,40	1,5	6,3	35 x 35	ECS1CBZ393M◊◊ΔΔ3535
	47 000	12	9,1	0,40	1,5	7,0	30 x 50	ECS1CBZ473M◊◊ΔΔ3050
		12	9,1	0,40	1,5	7,2	35 x 40	ECS1CBZ473M◊◊ΔΔ3540
	56 000	9,5	7,6	0,40	1,5	8,0	35 x 45	ECS1CBZ563M◊◊ΔΔ3545
25 (32) 1E	5 600	83	67	0,35	1,4	2,0	22 x 25	ECS1EBZ562M◊◊ΔΔ2225
	6 800	69	55	0,35	1,5	2,3	22 x 30	ECS1EBZ682M◊◊ΔΔ2230
		69	55	0,35	1,5	2,3	25 x 25	ECS1EBZ682M◊◊ΔΔ2525
	8 200	57	46	0,35	1,5	2,6	22 x 35	ECS1EBZ822M◊◊ΔΔ2235
	10 000	47	38	0,35	1,5	2,9	22 x 40	ECS1EBZ103M◊◊ΔΔ2240
		47	38	0,35	1,5	2,8	25 x 30	ECS1EBZ103M◊◊ΔΔ2530
		47	38	0,35	1,5	3,0	30 x 25	ECS1EBZ103M◊◊ΔΔ3025
	12 000	39	31	0,35	1,5	3,3	22 x 45	ECS1EBZ123M◊◊ΔΔ2245
		39	31	0,35	1,5	3,2	25 x 35	ECS1EBZ123M◊◊ΔΔ2535
		39	31	0,35	1,5	3,4	30 x 30	ECS1EBZ123M◊◊ΔΔ3030
	15 000	31	25	0,35	1,5	3,7	25 x 40	ECS1EBZ153M◊◊ΔΔ2540
		31	25	0,35	1,5	3,9	35 x 25	ECS1EBZ153M◊◊ΔΔ3525
	18 000	26	21	0,35	1,5	4,3	25 x 50	ECS1EBZ183M◊◊ΔΔ2550
		26	21	0,35	1,5	4,2	30 x 35	ECS1EBZ183M◊◊ΔΔ3035
		26	21	0,35	1,5	4,4	35 x 30	ECS1EBZ183M◊◊ΔΔ3530
	22 000	22	17	0,35	1,5	4,8	30 x 40	ECS1EBZ223M◊◊ΔΔ3040
		22	17	0,35	1,5	5,0	35 x 35	ECS1EBZ223M◊◊ΔΔ3535
	33 000	15	12	0,35	1,5	6,5	35 x 40	ECS1EBZ333M◊◊ΔΔ3540
	39 000	12	10	0,35	1,5	7,5	35 x 45	ECS1EBZ393M◊◊ΔΔ3545
	47 000	10	8,0	0,35	1,5	8,8	35 x 50	ECS1EBZ473M◊◊ΔΔ3550

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
35 (44) 1V	3 300	101	81	0,25	1,2	1,8	22 x 25	ECS1VBZ332M◊◊ΔΔ2225
	3 900	86	69	0,25	1,4	2,1	22 x 30	ECS1VBZ392M◊◊ΔΔ2230
	4 700	71	57	0,25	1,5	2,2	25 x 25	ECS1VBZ472M◊◊ΔΔ2525
	5 600	72	57	0,30	1,5	2,3	22 x 35	ECS1VBZ562M◊◊ΔΔ2235
		72	57	0,30	1,5	2,3	25 x 30	ECS1VBZ562M◊◊ΔΔ2530
	6 800	59	47	0,30	1,5	2,9	22 x 40	ECS1VBZ682M◊◊ΔΔ2240
		59	47	0,30	1,5	2,6	25 x 35	ECS1VBZ682M◊◊ΔΔ2535
		59	47	0,30	1,5	2,7	30 x 25	ECS1VBZ682M◊◊ΔΔ3025
	8 200	57	46	0,35	1,5	2,8	22 x 50	ECS1VBZ822M◊◊ΔΔ2250
		57	46	0,35	1,5	2,8	25 x 40	ECS1VBZ822M◊◊ΔΔ2540
		57	46	0,35	1,5	2,8	30 x 30	ECS1VBZ822M◊◊ΔΔ3030
		57	46	0,35	1,5	2,9	35 x 25	ECS1VBZ822M◊◊ΔΔ3525
	10 000	47	38	0,35	1,5	3,1	25 x 45	ECS1VBZ103M◊◊ΔΔ2545
		47	38	0,35	1,5	3,2	30 x 35	ECS1VBZ103M◊◊ΔΔ3035
	12 000	39	31	0,35	1,5	3,5	25 x 50	ECS1VBZ123M◊◊ΔΔ2550
		39	31	0,35	1,5	3,5	30 x 40	ECS1VBZ123M◊◊ΔΔ3040
		39	31	0,35	1,5	3,6	35 x 30	ECS1VBZ123M◊◊ΔΔ3530
	15 000	31	25	0,35	1,5	4,1	30 x 45	ECS1VBZ153M◊◊ΔΔ3045
		31	25	0,35	1,5	4,1	35 x 35	ECS1VBZ153M◊◊ΔΔ3535
	18 000	26	21	0,35	1,5	4,6	30 x 50	ECS1VBZ183M◊◊ΔΔ3050
		26	21	0,35	1,5	4,7	35 x 40	ECS1VBZ183M◊◊ΔΔ3540
	22 000	22	17	0,35	1,5	5,3	35 x 45	ECS1VBZ223M◊◊ΔΔ3545
	27 000	18	14	0,35	1,5	7,0	35 x 50	ECS1VBZ273M◊◊ΔΔ3550
50 (63) 1H	2 200	120	97	0,20	1,1	1,7	22 x 25	ECS1HBZ222M◊◊ΔΔ2225
	2 700	99	79	0,20	1,4	1,9	22 x 30	ECS1HBZ272M◊◊ΔΔ2230
		99	79	0,20	1,4	1,9	25 x 25	ECS1HBZ272M◊◊ΔΔ2525
	3 300	100	81	0,25	1,5	2,0	22 x 35	ECS1HBZ332M◊◊ΔΔ2235
	3 900	86	69	0,25	1,5	2,1	22 x 35	ECS1HBZ392M◊◊ΔΔ2235
		86	69	0,25	1,5	2,1	25 x 30	ECS1HBZ392M◊◊ΔΔ2530
		86	69	0,25	1,5	2,4	30 x 25	ECS1HBZ392M◊◊ΔΔ3025
	4 700	71	57	0,25	1,5	2,4	22 x 40	ECS1HBZ472M◊◊ΔΔ2240
		71	57	0,25	1,5	2,4	25 x 35	ECS1HBZ472M◊◊ΔΔ2535
		71	57	0,25	1,5	2,4	30 x 30	ECS1HBZ472M◊◊ΔΔ3030
	5 600	72	57	0,30	1,5	2,5	22 x 50	ECS1HBZ562M◊◊ΔΔ2250
		72	57	0,30	1,5	2,5	25 x 40	ECS1HBZ562M◊◊ΔΔ2540
		72	57	0,30	1,5	2,5	30 x 30	ECS1HBZ562M◊◊ΔΔ3030
		72	57	0,30	1,5	2,6	35 x 25	ECS1HBZ562M◊◊ΔΔ3525
	6 800	59	47	0,30	1,5	2,8	25 x 45	ECS1HBZ682M◊◊ΔΔ2545
		59	47	0,30	1,5	2,8	30 x 35	ECS1HBZ682M◊◊ΔΔ3035
	8 200	57	46	0,35	1,5	3,2	25 x 50	ECS1HBZ822M◊◊ΔΔ2550
		57	46	0,35	1,5	3,0	30 x 40	ECS1HBZ822M◊◊ΔΔ3040
		57	46	0,35	1,5	3,0	35 x 30	ECS1HBZ822M◊◊ΔΔ3530
	10 000	47	38	0,35	1,5	3,4	30 x 45	ECS1HBZ103M◊◊ΔΔ3045
		47	38	0,35	1,5	3,4	35 x 35	ECS1HBZ103M◊◊ΔΔ3535
	12 000	39	31	0,35	1,5	3,8	30 x 50	ECS1HBZ123M◊◊ΔΔ3050
		39	31	0,35	1,5	3,8	35 x 40	ECS1HBZ123M◊◊ΔΔ3540
	15 000	31	25	0,35	1,5	4,5	35 x 50	ECS1HBZ153M◊◊ΔΔ3550
63 (79) 1J	1500	135	107	0,15	0,9	1,6	22 x 25	ECS1JBZ152M◊◊ΔΔ2225
	1 800	110	89	0,15	1,1	1,8	22 x 30	ECS1JBZ182M◊◊ΔΔ2230
	2 200	91	73	0,15	1,4	2,0	22 x 30	ECS1JBZ222M◊◊ΔΔ2230
		91	73	0,15	1,4	2,0	25 x 25	ECS1JBZ222M◊◊ΔΔ2525
	2 700	74	59	0,15	1,5	2,2	22 x 35	ECS1JBZ272M◊◊ΔΔ2235
		74	59	0,15	1,5	2,3	25 x 30	ECS1JBZ272M◊◊ΔΔ2530
	3 300	81	65	0,20	1,5	2,3	22 x 40	ECS1JBZ332M◊◊ΔΔ2240
		81	65	0,20	1,5	2,3	25 x 35	ECS1JBZ332M◊◊ΔΔ2535
		81	65	0,20	1,5	2,3	30 x 25	ECS1JBZ332M◊◊ΔΔ3025
	3 900	69	55	0,20	1,5	2,5	22 x 45	ECS1JBZ392M◊◊ΔΔ2245
		69	55	0,20	1,5	2,6	25 x 40	ECS1JBZ392M◊◊ΔΔ2540
		69	55	0,20	1,5	2,6	30 x 30	ECS1JBZ392M◊◊ΔΔ3030
		69	55	0,20	1,5	2,7	35 x 25	ECS1JBZ392M◊◊ΔΔ3525
	4 700	56	45	0,20	1,5	3,0	25 x 45	ECS1JBZ472M◊◊ΔΔ2545
		57	45	0,20	1,5	2,8	30 x 30	ECS1JBZ472M◊◊ΔΔ3030
	5 600	48	38	0,20	1,5	3,1	25 x 45	ECS1JBZ562M◊◊ΔΔ2545
		48	38	0,20	1,5	3,2	30 x 35	ECS1JBZ562M◊◊ΔΔ3035
		48	38	0,20	1,5	3,3	35 x 30	ECS1JBZ562M◊◊ΔΔ3530

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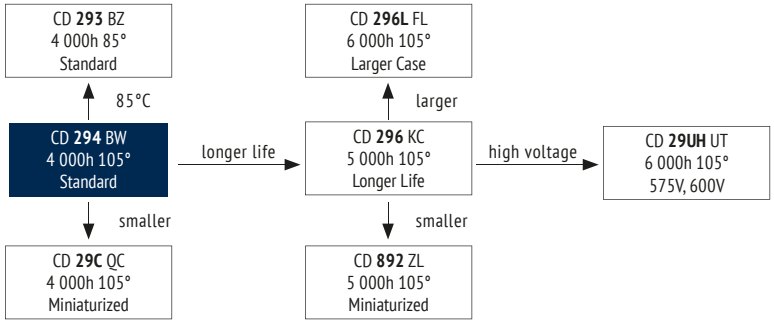
U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
63 (79) 1J	6 800	40	32	0,20	1,5	3,6	30 x 40	ECS1JBZ682M◊◊ΔΔ3040
		40	32	0,20	1,5	3,7	35 x 35	ECS1JBZ682M◊◊ΔΔ3535
	8 200	41	33	0,25	1,5	3,7	30 x 50	ECS1JBZ822M◊◊ΔΔ3050
		41	33	0,25	1,5	3,8	35 x 40	ECS1JBZ822M◊◊ΔΔ3540
	10 000	34	27	0,25	1,5	4,3	35 x 45	ECS1JBZ103M◊◊ΔΔ3545
	12 000	28	23	0,25	1,5	4,8	35 x 50	ECS1JBZ123M◊◊ΔΔ3550
80 (100) 1K	1 000	199	160	0,15	0,8	1,3	22 x 25	ECS1KBZ102M◊◊ΔΔ2225
	1 200	166	133	0,15	1,0	1,5	22 x 30	ECS1KBZ122M◊◊ΔΔ2230
	1 500	133	107	0,15	1,2	1,7	25 x 25	ECS1KBZ152M◊◊ΔΔ2525
	1 800	111	89	0,15	1,4	1,9	22 x 35	ECS1KBZ182M◊◊ΔΔ2235
		111	89	0,15	1,4	1,9	25 x 30	ECS1KBZ182M◊◊ΔΔ2530
	2 200	91	73	0,15	1,5	2,1	22 x 40	ECS1KBZ222M◊◊ΔΔ2240
		91	73	0,15	1,5	2,2	25 x 35	ECS1KBZ222M◊◊ΔΔ2535
		91	73	0,15	1,5	2,2	30 x 25	ECS1KBZ222M◊◊ΔΔ3025
	2 700	74	59	0,15	1,5	2,5	22 x 50	ECS1KBZ272M◊◊ΔΔ2250
		74	59	0,15	1,5	2,5	25 x 40	ECS1KBZ272M◊◊ΔΔ2540
		74	59	0,15	1,5	2,5	30 x 30	ECS1KBZ272M◊◊ΔΔ3030
		74	59	0,15	1,5	2,5	35 x 25	ECS1KBZ272M◊◊ΔΔ3525
	3 300	61	49	0,15	1,5	2,8	25 x 45	ECS1KBZ332M◊◊ΔΔ2545
		61	49	0,15	1,5	2,8	30 x 35	ECS1KBZ332M◊◊ΔΔ3035
	3 900	52	41	0,15	1,5	3,1	25 x 50	ECS1KBZ392M◊◊ΔΔ2550
		52	41	0,15	1,5	3,2	30 x 40	ECS1KBZ392M◊◊ΔΔ3040
		52	41	0,15	1,5	3,2	35 x 30	ECS1KBZ392M◊◊ΔΔ3530
	4 700	43	34	0,15	1,5	3,6	30 x 45	ECS1KBZ472M◊◊ΔΔ3045
		43	34	0,15	1,5	3,6	35 x 35	ECS1KBZ472M◊◊ΔΔ3535
	5 600	48	38	0,20	1,5	4,1	30 x 50	ECS1KBZ562M◊◊ΔΔ3050
		48	38	0,20	1,5	4,1	35 x 40	ECS1KBZ562M◊◊ΔΔ3540
	6 800	40	32	0,20	1,5	4,1	35 x 45	ECS1KBZ682M◊◊ΔΔ3545
	8 200	41	33	0,20	1,5	4,7	35 x 50	ECS1KBZ822M◊◊ΔΔ3550
	10 000	34	27	0,25	1,5	5,2	35 x 50	ECS1KBZ103M◊◊ΔΔ3550
	12 000	28	23	0,25	1,5	5,8	35 x 55	ECS1KBZ123M◊◊ΔΔ3555
100 (125) 2A	680	293	235	0,15	0,7	1,1	22 x 25	ECS2ABZ681M◊◊ΔΔ2225
	820	243	195	0,15	0,8	1,2	22 x 30	ECS2ABZ821M◊◊ΔΔ2230
	1 000	200	160	0,15	1,0	1,4	25 x 25	ECS2ABZ102M◊◊ΔΔ2525
	1 200	166	133	0,15	1,2	1,6	22 x 35	ECS2ABZ122M◊◊ΔΔ2235
		166	133	0,15	1,2	1,6	25 x 30	ECS2ABZ122M◊◊ΔΔ2530
	1 500	133	107	0,15	1,5	1,8	22 x 40	ECS2ABZ152M◊◊ΔΔ2240
		133	107	0,15	1,5	1,7	25 x 35	ECS2ABZ152M◊◊ΔΔ2535
		133	107	0,15	1,5	1,8	30 x 25	ECS2ABZ152M◊◊ΔΔ3025
	1 800	111	89	0,15	1,5	2,1	22 x 50	ECS2ABZ182M◊◊ΔΔ2250
		111	89	0,15	1,5	2,0	25 x 40	ECS2ABZ182M◊◊ΔΔ2540
		111	89	0,15	1,5	2,1	30 x 30	ECS2ABZ182M◊◊ΔΔ3030
		111	89	0,15	1,5	2,2	35 x 25	ECS2ABZ182M◊◊ΔΔ3525
	2 200	91	73	0,15	1,5	2,2	25 x 45	ECS2ABZ222M◊◊ΔΔ2545
		91	73	0,15	1,5	2,3	30 x 35	ECS2ABZ222M◊◊ΔΔ3035
		91	73	0,15	1,5	2,5	35 x 30	ECS2ABZ222M◊◊ΔΔ3530
	2 700	74	59	0,15	1,5	2,6	25 x 50	ECS2ABZ272M◊◊ΔΔ2550
		74	59	0,15	1,5	2,7	30 x 40	ECS2ABZ272M◊◊ΔΔ3040
	3 300	61	49	0,15	1,5	3,0	30 x 45	ECS2ABZ332M◊◊ΔΔ3045
		61	49	0,15	1,5	3,1	35 x 35	ECS2ABZ332M◊◊ΔΔ3535
	3 900	52	41	0,15	1,5	3,4	30 x 50	ECS2ABZ392M◊◊ΔΔ3050
		52	41	0,15	1,5	3,4	35 x 40	ECS2ABZ392M◊◊ΔΔ3540
	4 700	43	34	0,15	1,5	4,0	35 x 50	ECS2ABZ472M◊◊ΔΔ3550
160 (200) 2C	220	603	483	0,10	0,4	1,1	22 x 25	ECS2CBZ221M◊◊ΔΔ2225
	270	492	393	0,10	0,4	1,2	22 x 25	ECS2CBZ271M◊◊ΔΔ2225
	330	402	322	0,10	0,5	1,3	22 x 25	ECS2CBZ331M◊◊ΔΔ2225
	390	341	273	0,10	0,6	1,5	22 x 30	ECS2CBZ391M◊◊ΔΔ2230
		341	273	0,10	0,6	1,5	25 x 25	ECS2CBZ391M◊◊ΔΔ2525
	470	283	226	0,10	0,8	1,6	25 x 30	ECS2CBZ471M◊◊ΔΔ2530
	560	237	190	0,10	0,9	1,9	22 x 35	ECS2CBZ561M◊◊ΔΔ2235
		237	190	0,10	0,9	1,9	25 x 30	ECS2CBZ561M◊◊ΔΔ2530
		237	190	0,10	0,9	2,0	30 x 25	ECS2CBZ561M◊◊ΔΔ3025
	680	196	157	0,10	1,1	2,1	22 x 40	ECS2CBZ681M◊◊ΔΔ2240
		196	157	0,10	1,1	2,2	25 x 35	ECS2CBZ681M◊◊ΔΔ2535
160 (200) 2C	820	162	130	0,10	1,3	2,5	22 x 50	ECS2CBZ821M◊◊ΔΔ2250
		162	130	0,10	1,3	2,4	25 x 40	ECS2CBZ821M◊◊ΔΔ2540
		162	130	0,10	1,3	2,5	30 x 30	ECS2CBZ821M◊◊ΔΔ3030
		162	130	0,12	1,3	2,4	35 x 25	ECS2CBZ821M◊◊ΔΔ3525
	1 000	133	107	0,10	1,5	2,7	25 x 45	ECS2CBZ102M◊◊ΔΔ2545
		133	107	0,10	1,5	2,8	30 x 35	ECS2CBZ102M◊◊ΔΔ3035
		160	128	0,12	1,5	2,7	35 x 30	ECS2CBZ102M◊◊ΔΔ3530
	1 200	111	89	0,10	1,5	3,1	25 x 50	ECS2CBZ122M◊◊ΔΔ2550
		111	89	0,10	1,5	3,2	30 x 40	ECS2CBZ122M◊◊ΔΔ3040
		133	107	0,12	1,5	3,0	35 x 35	ECS2CBZ122M◊◊ΔΔ3535
	1 500	89	71	0,10	1,5	3,7	30 x 45	ECS2CBZ152M◊◊ΔΔ3045
		107	85	0,12	1,5	3,5	35 x 40	ECS2CBZ152M◊◊ΔΔ3540
	1 800	89	71	0,12	1,5	3,9	35 x 45	ECS2CBZ182M◊◊ΔΔ3545
	2 200	73	58	0,12	1,5	4,5	35 x 50	ECS2CBZ222M◊◊ΔΔ3550
200 (250) 2D	220	603	483	0,10	0,4	1,1	22 x 25	ECS2DBZ221M◊◊ΔΔ2225
	270	492	393	0,10	0,5	1,2	22 x 30	ECS2DBZ271M◊◊ΔΔ2230
	330	402	322	0,10	0,7	1,4	22 x 30	ECS2DBZ331M◊◊ΔΔ2230
		402	322	0,10	0,7	1,4	25 x 25	ECS2DBZ331M◊◊ΔΔ2525
	390	341	273	0,10	0,8	1,6	22 x 35	ECS2DBZ391M◊◊ΔΔ2235
		341	273	0,10	0,8	1,6	25 x 30	ECS2DBZ391M◊◊ΔΔ2530
	470	283	226	0,10	0,9	1,8	22 x 40	ECS2DBZ471M◊◊ΔΔ2240
		283	226	0,10	0,9	1,9	30 x 25	ECS2DBZ471M◊◊ΔΔ3025
	560	237	190	0,10	1,1	2,0	22 x 45	ECS2DBZ561M◊◊ΔΔ2245
		237	190	0,10	1,1	2,0	25 x 35	ECS2DBZ561M◊◊ΔΔ2535
		237	190	0,10	1,1	2,1	30 x 30	ECS2DBZ561M◊◊ΔΔ3030
		285	228	0,12	1,1	2,0	35 x 25	ECS2DBZ561M◊◊ΔΔ3525
	680	196	157	0,10	1,4	2,3	25 x 40	ECS2DBZ681M◊◊ΔΔ2540
		196	157	0,10	1,4	2,4	30 x 35	ECS2DBZ681M◊◊ΔΔ3035
	820	162	130	0,10	1,5	2,6	25 x 50	ECS2DBZ821M◊◊ΔΔ2550
		162	130	0,10	1,5	2,7	30 x 40	ECS2DBZ821M◊◊ΔΔ3040
		195	156	0,12	1,5	2,5	35 x 30	ECS2DBZ821M◊◊ΔΔ3530
	1 000	133	107	0,10	1,5	3,1	30 x 45	ECS2DBZ102M◊◊ΔΔ3045
		160	128	0,12	1,5	2,8	35 x 35	ECS2DBZ102M◊◊ΔΔ3535
	1 200	111	89	0,10	1,5	3,4	30 x 50	ECS2DBZ122M◊◊ΔΔ3050
		133	107	0,12	1,5	3,2	35 x 40	ECS2DBZ122M◊◊ΔΔ3540
	1 500	107	85	0,12	1,5	3,8	35 x 50	ECS2DBZ152M◊◊ΔΔ3550
250 (300) 2E	100	1 990	1 592	0,15	0,3	0,68	22 x 25	ECS2EBZ101M◊◊ΔΔ2225
	180	1 106	885	0,15	0,5	0,94	22 x 25	ECS2EBZ181M◊◊ΔΔ2225
	220	905	724	0,15	0,6	1,1	22 x 30	ECS2EBZ221M◊◊ΔΔ2230
		905	724	0,15	0,6	1,1	25 x 25	ECS2EBZ221M◊◊ΔΔ2525
	270	737	590	0,15	0,7	1,2	22 x 35	ECS2EBZ271M◊◊ΔΔ2235
	330	603	483	0,15	0,8	1,4	22 x 40	ECS2EBZ331M◊◊ΔΔ2240
		603	483	0,15	0,8	1,4	25 x 30	ECS2EBZ331M◊◊ΔΔ2530
		603	483	0,15	0,8	1,5	30 x 25	ECS2EBZ331M◊◊ΔΔ3025
	390	511	409	0,15	1,0	1,6	22 x 45	ECS2EBZ391M◊◊ΔΔ2245
		511	409	0,15	1,0	1,6	25 x 35	ECS2EBZ391M◊◊ΔΔ2535
	470	424	339	0,15	1,2	1,8	22 x 50	ECS2EBZ471M◊◊ΔΔ2250
		424	339	0,15	1,2	1,8	25 x 40	ECS2EBZ471M◊◊ΔΔ2540
		424	339	0,15	1,2	1,8	30 x 30	ECS2EBZ471M◊◊ΔΔ3030
		424	339	0,15	1,2	2,4	35 x 25	ECS2EBZ471M◊◊ΔΔ3525
	560	356	285	0,15	1,4	2,0	25 x 45	ECS2EBZ561M◊◊ΔΔ2545
		356	285	0,15	1,4	2,0	30 x 35	ECS2EBZ561M◊◊ΔΔ3035
	680	293	235	0,15	1,5	2,3	30 x 40	ECS2EBZ681M◊◊ΔΔ3040
		293	235	0,15	1,5	2,6	35 x 30	ECS2EBZ681M◊◊ΔΔ3530
	820	243	195	0,15	1,5	2,6	30 x 45	ECS2EBZ821M◊◊ΔΔ3045
		243	195	0,15	1,5	2,6	35 x 35	ECS2EBZ821M◊◊ΔΔ3535
	1 000	199	160	0,15	1,5	3,0	35 x 40	ECS2EBZ102M◊◊ΔΔ3540
	1 200	166	133	0,15	1,5	3,4	35 x 45	ECS2EBZ122M◊◊ΔΔ3545
315 (365) 2F	100	1 990	1 592	0,15	0,3	0,67	22 x 25	ECS2FBZ101M◊◊ΔΔ2225
	150	1 327	1 062	0,15	0,5	0,85	22 x 30	ECS2FBZ151M◊◊ΔΔ2230
		1 327	1 062	0,15	0,5	0,85	25 x 25	ECS2FBZ151M◊◊ΔΔ2525
	180	1 106	885	0,15	0,6	0,96	22 x 35	ECS2FBZ181M◊◊ΔΔ2235
		1 106	885	0,15	0,6	0,96	25 x 30	ECS2FBZ181M◊◊ΔΔ2530
	220	905	724	0,15	0,7	1,1	22 x 40	ECS2FBZ221M◊◊ΔΔ2240
		905	724	0,15	0,7	1,1	25 x 35	ECS2FBZ221M◊◊ΔΔ2535
		905	724	0,15	0,7	1,1	30 x 25	ECS2FBZ221M◊◊ΔΔ3025

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
315 (365) 2F	270	737	590	0,15	0,9	1,2	22 x 45	ECS2FBZ271M◊◊ΔΔ2245
		737	590	0,15	0,9	1,3	25 x 40	ECS2FBZ271M◊◊ΔΔ2540
		737	590	0,15	0,9	1,3	30 x 30	ECS2FBZ271M◊◊ΔΔ3030
		737	590	0,15	0,9	1,3	35 x 25	ECS2FBZ271M◊◊ΔΔ3525
	330	603	483	0,15	1,0	1,4	25 x 45	ECS2FBZ331M◊◊ΔΔ2545
		603	483	0,15	1,0	1,4	30 x 35	ECS2FBZ331M◊◊ΔΔ3035
	390	511	409	0,15	1,2	1,6	25 x 50	ECS2FBZ391M◊◊ΔΔ2550
		511	409	0,15	1,2	1,6	30 x 40	ECS2FBZ391M◊◊ΔΔ3040
		511	409	0,15	1,2	1,6	35 x 30	ECS2FBZ391M◊◊ΔΔ3530
	470	424	339	0,15	1,5	1,8	30 x 45	ECS2FBZ471M◊◊ΔΔ3045
		424	339	0,15	1,5	1,8	35 x 35	ECS2FBZ471M◊◊ΔΔ3535
	560	356	285	0,15	1,5	2,0	30 x 50	ECS2FBZ561M◊◊ΔΔ3050
		356	285	0,15	1,5	2,0	35 x 40	ECS2FBZ561M◊◊ΔΔ3540
	680	293	235	0,15	1,5	2,3	35 x 45	ECS2FBZ681M◊◊ΔΔ3545
350 (400) 2V	82	2 427	1 941	0,15	0,3	0,60	22 x 25	ECS2VBZ820M◊◊ΔΔ2225
	100	1 990	1 592	0,15	0,4	0,80	22 x 25	ECS2VBZ101M◊◊ΔΔ2225
	120	1 658	1 327	0,15	0,4	0,82	22 x 30	ECS2VBZ121M◊◊ΔΔ2230
		1 658	1 327	0,15	0,4	0,81	25 x 25	ECS2VBZ121M◊◊ΔΔ2525
	150	1 327	1 062	0,15	0,5	0,94	22 x 35	ECS2VBZ151M◊◊ΔΔ2235
		1 327	1 062	0,15	0,5	0,94	25 x 30	ECS2VBZ151M◊◊ΔΔ2530
	180	1 106	885	0,15	0,6	1,1	22 x 40	ECS2VBZ181M◊◊ΔΔ2240
		1 106	885	0,15	0,6	1,1	30 x 25	ECS2VBZ181M◊◊ΔΔ3025
	220	905	724	0,15	0,8	1,2	22 x 45	ECS2VBZ221M◊◊ΔΔ2245
		905	724	0,15	0,8	1,2	25 x 35	ECS2VBZ221M◊◊ΔΔ2535
		905	724	0,15	0,8	1,2	30 x 30	ECS2VBZ221M◊◊ΔΔ3030
		905	724	0,15	0,8	1,3	35 x 25	ECS2VBZ221M◊◊ΔΔ3525
	270	737	590	0,15	0,9	1,4	25 x 45	ECS2VBZ271M◊◊ΔΔ2545
		737	590	0,15	0,9	1,4	30 x 35	ECS2VBZ271M◊◊ΔΔ3035
	330	603	483	0,15	1,2	1,6	25 x 50	ECS2VBZ331M◊◊ΔΔ2550
		603	483	0,15	1,2	1,6	35 x 30	ECS2VBZ331M◊◊ΔΔ3530
	390	511	409	0,15	1,4	1,7	30 x 40	ECS2VBZ391M◊◊ΔΔ3040
		511	409	0,15	1,4	1,8	35 x 35	ECS2VBZ391M◊◊ΔΔ3535
	470	424	339	0,15	1,5	2,0	30 x 45	ECS2VBZ471M◊◊ΔΔ3045
		424	339	0,15	1,5	2,0	35 x 40	ECS2VBZ471M◊◊ΔΔ3540
	560	356	285	0,15	1,5	2,3	35 x 45	ECS2VBZ561M◊◊ΔΔ3545
	680	293	235	0,15	1,5	2,6	35 x 50	ECS2VBZ681M◊◊ΔΔ3550
	820	243	195	0,15	1,5	2,8	35 x 60	ECS2VBZ821M◊◊ΔΔ3560
400 (450) 2G	68	2 926	2 341	0,15	0,3	0,55	22 x 25	ECS2GBZ680M◊◊ΔΔ2225
	82	2 427	1 941	0,15	0,3	0,65	22 x 25	ECS2GBZ820M◊◊ΔΔ2225
	100	1 990	1 592	0,15	0,4	0,70	22 x 30	ECS2GBZ101M◊◊ΔΔ2230
		1 990	1 592	0,15	0,4	0,70	25 x 25	ECS2GBZ101M◊◊ΔΔ2525
	120	1 658	1 327	0,15	0,5	0,79	22 x 35	ECS2GBZ121M◊◊ΔΔ2235
	150	1 327	1 062	0,15	0,6	0,90	22 x 35	ECS2GBZ151M◊◊ΔΔ2235
		1 327	1 062	0,15	0,6	0,89	25 x 30	ECS2GBZ151M◊◊ΔΔ2530
	180	1 106	885	0,15	0,7	1,0	22 x 40	ECS2GBZ181M◊◊ΔΔ2240
		1 106	885	0,15	0,7	1,0	25 x 30	ECS2GBZ181M◊◊ΔΔ2530
	220	905	724	0,15	0,9	1,1	22 x 50	ECS2GBZ221M◊◊ΔΔ2250
		905	724	0,15	0,9	1,2	25 x 40	ECS2GBZ221M◊◊ΔΔ2540
	270	737	590	0,15	1,1	1,3	25 x 45	ECS2GBZ271M◊◊ΔΔ2545
		737	590	0,15	1,1	1,5	30 x 30	ECS2GBZ271M◊◊ΔΔ3030
	330	603	483	0,15	1,3	1,6	25 x 45	ECS2GBZ331M◊◊ΔΔ2545
		603	483	0,15	1,3	1,7	30 x 35	ECS2GBZ331M◊◊ΔΔ3035
	390	511	409	0,15	1,5	1,9	30 x 40	ECS2GBZ391M◊◊ΔΔ3040
		511	409	0,15	1,5	1,8	35 x 30	ECS2GBZ391M◊◊ΔΔ3530
	470	424	339	0,15	1,5	2,1	35 x 35	ECS2GBZ471M◊◊ΔΔ3535
	560	356	285	0,15	1,5	2,3	35 x 40	ECS2GBZ561M◊◊ΔΔ3540
	680	293	235	0,15	1,5	2,7	35 x 45	ECS2GBZ681M◊◊ΔΔ3545
	820	243	194	0,15	1,5	3,1	35 x 50	ECS2GBZ821M◊◊ΔΔ3550
	1 000	133	107	0,15	1,5	3,7	35 x 60	ECS2GBZ102M◊◊ΔΔ3560
420 (470) 2X	100	1 990	1 592	0,15	0,4	0,71	22 x 30	ECS2XBZ101M◊◊ΔΔ2230
		1 990	1 592	0,15	0,4	0,72	25 x 25	ECS2XBZ101M◊◊ΔΔ2525
	120	1 658	1 327	0,15	0,5	0,81	22 x 35	ECS2XBZ121M◊◊ΔΔ2235
		1 658	1 327	0,15	0,5	0,82	25 x 30	ECS2XBZ121M◊◊ΔΔ2530
	150	1 327	1 062	0,15	0,6	0,96	25 x 30	ECS2XBZ151M◊◊ΔΔ2530

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
420 (470) 2X	180	1 106	885	0,15	0,8	1,1	25 x 35	ECS2XBZ181M◊◊ΔΔ2535
		1 106	885	0,15	0,8	1,2	30 x 30	ECS2XBZ181M◊◊ΔΔ3030
	220	905	724	0,15	0,9	1,2	25 x 40	ECS2XBZ221M◊◊ΔΔ2540
		905	724	0,15	0,9	1,3	30 x 30	ECS2XBZ221M◊◊ΔΔ3030
	270	737	590	0,15	1,1	1,3	25 x 45	ECS2XBZ271M◊◊ΔΔ2545
		737	590	0,15	1,1	1,4	30 x 35	ECS2XBZ271M◊◊ΔΔ3035
	330	603	483	0,15	1,4	1,7	30 x 40	ECS2XBZ331M◊◊ΔΔ3040
	390	511	409	0,15	1,5	1,8	30 x 45	ECS2XBZ391M◊◊ΔΔ3045
		511	409	0,15	1,5	1,9	35 x 35	ECS2XBZ391M◊◊ΔΔ3535
	470	424	339	0,15	1,5	2,1	30 x 50	ECS2XBZ471M◊◊ΔΔ3050
		424	339	0,15	1,5	2,2	35 x 40	ECS2XBZ471M◊◊ΔΔ3540
	560	356	285	0,15	1,5	2,4	35 x 45	ECS2XBZ561M◊◊ΔΔ3545
	680	293	235	0,15	1,5	2,8	35 x 50	ECS2XBZ681M◊◊ΔΔ3550
	820	243	194	0,15	1,5	3,2	35 x 60	ECS2XBZ821M◊◊ΔΔ3560
	1 000	199	107	0,15	1,5	4,0	40 x 60	ECS2XBZ102M◊◊ΔΔ4060
450 (500) 2W	68	2 926	2 341	0,15	0,3	0,57	22 x 25	ECS2WBZ680M◊◊ΔΔ2225
	82	2 427	1 941	0,15	0,4	0,68	22 x 30	ECS2WBZ820M◊◊ΔΔ2230
	100	1 990	1 592	0,15	0,5	0,73	25 x 25	ECS2WBZ101M◊◊ΔΔ2525
	120	1 658	1 327	0,15	0,5	0,80	22 x 35	ECS2WBZ121M◊◊ΔΔ2235
		1 658	1 327	0,15	0,5	0,83	25 x 30	ECS2WBZ121M◊◊ΔΔ2530
	150	1 327	1 062	0,15	0,7	0,95	22 x 45	ECS2WBZ151M◊◊ΔΔ2245
		1 327	1 062	0,15	0,7	0,95	25 x 35	ECS2WBZ151M◊◊ΔΔ2535
	180	1 106	885	0,15	0,8	1,1	25 x 40	ECS2WBZ181M◊◊ΔΔ2540
		1 106	885	0,15	0,8	1,1	30 x 30	ECS2WBZ181M◊◊ΔΔ3030
	220	905	724	0,15	1,0	1,2	25 x 45	ECS2WBZ221M◊◊ΔΔ2545
		905	724	0,15	1,0	1,3	30 x 35	ECS2WBZ221M◊◊ΔΔ3035
	270	737	590	0,15	1,2	1,5	30 x 40	ECS2WBZ271M◊◊ΔΔ3040
	330	603	480	0,15	1,5	1,7	30 x 45	ECS2WBZ331M◊◊ΔΔ3045
	390	511	409	0,15	1,5	1,9	35 x 40	ECS2WBZ391M◊◊ΔΔ3540
	470	424	339	0,15	1,5	2,2	30 x 50	ECS2WBZ471M◊◊ΔΔ3050
	560	356	285	0,15	1,5	2,4	35 x 50	ECS2WBZ561M◊◊ΔΔ3550
	680	293	235	0,15	1,5	2,8	35 x 55	ECS2WBZ681M◊◊ΔΔ3555
	820	243	194	0,15	1,5	3,2	35 x 60	ECS2WBZ821M◊◊ΔΔ3560
	1 000	133	107	0,15	1,5	4,2	35 x 70	ECS2WBZ102M◊◊ΔΔ3570
500 (550) 2H	100	1 990	1 592	0,15	0,5	0,90	25 x 30	ECS2HBZ101M◊◊ΔΔ2530
	120	1 658	1 327	0,15	0,6	1,0	25 x 35	ECS2HBZ121M◊◊ΔΔ2535
	150	1 327	1 062	0,15	0,8	1,2	30 x 30	ECS2HBZ151M◊◊ΔΔ3030
	180	1 106	885	0,15	0,9	1,4	25 x 45	ECS2HBZ181M◊◊ΔΔ2545
		1 106	885	0,15	0,9	1,4	30 x 35	ECS2HBZ181M◊◊ΔΔ3035
	220	905	724	0,15	1,1	1,6	25 x 50	ECS2HBZ221M◊◊ΔΔ2550
		905	724	0,15	1,1	1,6	30 x 40	ECS2HBZ221M◊◊ΔΔ3040
	270	737	590	0,15	1,4	1,8	30 x 45	ECS2HBZ271M◊◊ΔΔ3045
	330	603	483	0,15	1,5	2,0	35 x 35	ECS2HBZ331M◊◊ΔΔ3535
	390	511	409	0,15	1,5	2,3	35 x 40	ECS2HBZ391M◊◊ΔΔ3540
	470	424	339	0,15	1,5	2,6	35 x 50	ECS2HBZ471M◊◊ΔΔ3550
	560	356	285	0,15	1,5	2,9	35 x 55	ECS2HBZ561M◊◊ΔΔ3555
	680	293	235	0,15	1,5	3,2	35 x 65	ECS2HBZ681M◊◊ΔΔ3565

4 000h at 105°C

- Standard 105°C
- Genereal Industry



ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +105	-25 ~ +105
Voltage Range (V)	16 ~ 100	160 ~ 550
Capacitance Range (µF)	39 ~ 47 000	
Capacitance Tolerance (20°C, 120Hz)	± 20%	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.			
Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	16 ~ 100	160 ~ 200	250 ~ 550
	$Z_{-25°C} / Z_{+20°C}$	4		
	$Z_{-40°C} / Z_{+20°C}$	15	-	
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**			

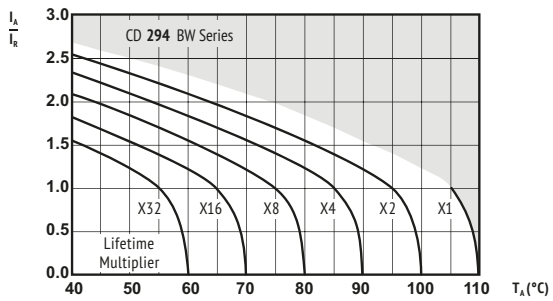
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	4 000h	> 180 000h	2 000h	3 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 40°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Rated Voltage (V) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	≥ 50 kHz
≤ 100	0,95	1,00	1,07	1,13	1,19	1,20
160 ~ 250	0,87	1,00	1,17	1,32	1,45	1,50
≥ 315	0,80	1,00	1,16	1,30	1,41	1,43

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
16 (20) 1C	6 800	98	68	0,50	1,1	1,60	22 x 25	ECS1CBW682M◊◊ΔΔ2225
	10 000	67	46	0,50	1,5	1,99	22 x 30	ECS1CBW103M◊◊ΔΔ2230
		67	46	0,50	1,5	1,99	25 x 25	ECS1CBW103M◊◊ΔΔ2525
	12 000	56	39	0,50	1,5	2,28	22 x 35	ECS1CBW123M◊◊ΔΔ2235
		56	39	0,50	1,5	2,30	25 x 30	ECS1CBW123M◊◊ΔΔ2530
		56	39	0,50	1,5	2,38	30 x 25	ECS1CBW123M◊◊ΔΔ3025
	15 000	45	31	0,50	1,5	2,64	22 x 40	ECS1CBW153M◊◊ΔΔ2240
		45	31	0,50	1,5	2,68	25 x 35	ECS1CBW153M◊◊ΔΔ2535
	18 000	37	26	0,50	1,5	2,98	22 x 45	ECS1CBW183M◊◊ΔΔ2245
		37	26	0,50	1,5	3,04	25 x 40	ECS1CBW183M◊◊ΔΔ2540
		37	26	0,50	1,5	3,00	30 x 30	ECS1CBW183M◊◊ΔΔ3030
		37	26	0,50	1,5	3,10	35 x 25	ECS1CBW183M◊◊ΔΔ3525
	22 000	31	21	0,50	1,5	3,40	25 x 45	ECS1CBW223M◊◊ΔΔ2545
		31	21	0,50	1,5	3,39	30 x 35	ECS1CBW223M◊◊ΔΔ3035
	27 000	25	17	0,50	1,5	3,81	25 x 50	ECS1CBW273M◊◊ΔΔ2550
		25	17	0,50	1,5	3,83	30 x 40	ECS1CBW273M◊◊ΔΔ3040
		25	17	0,50	1,5	3,74	35 x 30	ECS1CBW273M◊◊ΔΔ3530
	33 000	21	14	0,50	1,5	4,30	30 x 45	ECS1CBW333M◊◊ΔΔ3045
		21	14	0,50	1,5	4,24	35 x 35	ECS1CBW333M◊◊ΔΔ3535
	39 000	18	12	0,50	1,5	4,74	30 x 50	ECS1CBW393M◊◊ΔΔ3050
		18	12	0,50	1,5	4,72	35 x 40	ECS1CBW393M◊◊ΔΔ3540
	47 000	15	10	0,50	1,5	5,27	35 x 45	ECS1CBW473M◊◊ΔΔ3545
25 (32) 1E	4 700	113	79	0,40	1,2	1,55	22 x 25	ECS1EBW472M◊◊ΔΔ2225
	6 800	79	55	0,40	1,5	1,91	22 x 30	ECS1EBW682M◊◊ΔΔ2230
		79	55	0,40	1,5	1,91	25 x 25	ECS1EBW682M◊◊ΔΔ2525
	8 200	65	45	0,40	1,5	2,14	22 x 35	ECS1EBW822M◊◊ΔΔ2235
		65	45	0,40	1,5	2,16	25 x 30	ECS1EBW822M◊◊ΔΔ2530
		65	45	0,40	1,5	2,25	30 x 25	ECS1EBW822M◊◊ΔΔ3025
	10 000	54	37	0,40	1,5	2,40	22 x 40	ECS1EBW103M◊◊ΔΔ2240
		54	37	0,40	1,5	2,44	25 x 35	ECS1EBW103M◊◊ΔΔ2535
	12 000	45	31	0,40	1,5	2,69	22 x 45	ECS1EBW123M◊◊ΔΔ2245
		45	31	0,40	1,5	2,74	25 x 40	ECS1EBW123M◊◊ΔΔ2540
		45	31	0,40	1,5	2,70	30 x 30	ECS1EBW123M◊◊ΔΔ3030
		45	31	0,40	1,5	2,80	35 x 25	ECS1EBW123M◊◊ΔΔ3525
	15 000	36	25	0,40	1,5	3,15	25 x 45	ECS1EBW153M◊◊ΔΔ2545
		36	25	0,40	1,5	3,13	30 x 35	ECS1EBW153M◊◊ΔΔ3035
		36	25	0,40	1,5	3,22	35 x 30	ECS1EBW153M◊◊ΔΔ3530
	18 000	30	21	0,40	1,5	3,54	25 x 50	ECS1EBW183M◊◊ΔΔ2550
		30	21	0,40	1,5	3,54	30 x 40	ECS1EBW183M◊◊ΔΔ3040
	22 000	25	17	0,40	1,5	4,24	30 x 45	ECS1EBW223M◊◊ΔΔ3045
		25	17	0,40	1,5	3,96	35 x 35	ECS1EBW223M◊◊ΔΔ3535
	27 000	20	14	0,40	1,5	4,75	35 x 45	ECS1EBW273M◊◊ΔΔ3545
	33 000	17	11	0,40	1,5	5,39	35 x 50	ECS1EBW333M◊◊ΔΔ3550
35 (44) 1V	3 300	141	99	0,35	1,2	1,43	22 x 25	ECS1VBW332M◊◊ΔΔ2225
	3 900	120	83	0,35	1,4	1,65	22 x 30	ECS1VBW392M◊◊ΔΔ2230
	4 700	99	69	0,35	1,5	1,78	25 x 25	ECS1VBW472M◊◊ΔΔ2525
	5 600	83	58	0,35	1,5	2,02	22 x 35	ECS1VBW562M◊◊ΔΔ2235
		83	58	0,35	1,5	2,04	25 x 30	ECS1VBW562M◊◊ΔΔ2530
		83	58	0,35	1,5	2,12	30 x 25	ECS1VBW562M◊◊ΔΔ3025
	6 800	69	48	0,35	1,5	2,28	22 x 40	ECS1VBW682M◊◊ΔΔ2240
		69	48	0,35	1,5	2,31	25 x 35	ECS1VBW682M◊◊ΔΔ2535
	8 200	57	40	0,35	1,5	2,67	22 x 50	ECS1VBW822M◊◊ΔΔ2250
		57	40	0,35	1,5	2,60	25 x 40	ECS1VBW822M◊◊ΔΔ2540
		57	40	0,35	1,5	2,56	30 x 30	ECS1VBW822M◊◊ΔΔ3030
		57	40	0,35	1,5	2,78	35 x 25	ECS1VBW822M◊◊ΔΔ3525
	10 000	47	33	0,35	1,5	2,92	25 x 45	ECS1VBW103M◊◊ΔΔ2545
		47	33	0,35	1,5	2,92	30 x 35	ECS1VBW103M◊◊ΔΔ3035
	12 000	39	27	0,35	1,5	3,26	25 x 50	ECS1VBW123M◊◊ΔΔ2550
		39	27	0,35	1,5	3,28	30 x 40	ECS1VBW123M◊◊ΔΔ3040
		39	27	0,35	1,5	3,20	35 x 30	ECS1VBW123M◊◊ΔΔ3530
	15 000	31	22	0,35	1,5	3,74	30 x 45	ECS1VBW153M◊◊ΔΔ3045
		31	22	0,35	1,5	3,69	35 x 35	ECS1VBW153M◊◊ΔΔ3535
	18 000	26	18	0,35	1,5	4,16	35 x 40	ECS1VBW183M◊◊ΔΔ3540
	22 000	22	15	0,35	1,5	4,92	35 x 50	ECS1VBW223M◊◊ΔΔ3550

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
50 (63) 1H	1 800	222	155	0,30	0,9	1,31	22 x 25	ECS1HBW182M◊◊ΔΔ2225
	2 200	181	127	0,30	1,1	1,45	22 x 30	ECS1HBW222M◊◊ΔΔ2230
	2 700	148	103	0,30	1,4	1,70	22 x 30	ECS1HBW272M◊◊ΔΔ2230
		148	103	0,30	1,4	1,70	25 x 25	ECS1HBW272M◊◊ΔΔ2525
	3 300	121	84	0,30	1,5	1,98	22 x 35	ECS1HBW332M◊◊ΔΔ2235
		121	84	0,30	1,5	2,00	25 x 30	ECS1HBW332M◊◊ΔΔ2530
	3 900	103	72	0,30	1,5	2,25	22 x 40	ECS1HBW392M◊◊ΔΔ2240
		103	72	0,30	1,5	2,28	25 x 35	ECS1HBW392M◊◊ΔΔ2535
		103	72	0,30	1,5	2,22	30 x 25	ECS1HBW392M◊◊ΔΔ3025
	4 700	85	59	0,30	1,5	2,56	22 x 45	ECS1HBW472M◊◊ΔΔ2245
		85	59	0,30	1,5	2,58	30 x 30	ECS1HBW472M◊◊ΔΔ3030
		85	59	0,30	1,5	2,67	35 x 25	ECS1HBW472M◊◊ΔΔ3525
	5 600	72	50	0,30	1,5	2,89	22 x 50	ECS1HBW562M◊◊ΔΔ2250
		72	50	0,30	1,5	2,81	25 x 40	ECS1HBW562M◊◊ΔΔ2540
		72	50	0,30	1,5	2,95	30 x 35	ECS1HBW562M◊◊ΔΔ3035
	6 800	59	41	0,30	1,5	3,37	25 x 50	ECS1HBW682M◊◊ΔΔ2550
		59	41	0,30	1,5	3,39	30 x 40	ECS1HBW682M◊◊ΔΔ3040
		59	41	0,30	1,5	3,31	35 x 30	ECS1HBW682M◊◊ΔΔ3530
	8 200	49	34	0,30	1,5	3,71	30 x 45	ECS1HBW822M◊◊ΔΔ3045
		49	34	0,30	1,5	3,66	35 x 35	ECS1HBW822M◊◊ΔΔ3535
	10 000	40	28	0,30	1,5	4,09	30 x 50	ECS1HBW103M◊◊ΔΔ3050
		40	28	0,30	1,5	4,07	35 x 40	ECS1HBW103M◊◊ΔΔ3540
	12 000	34	23	0,30	1,5	4,50	35 x 45	ECS1HBW123M◊◊ΔΔ3545
63 (79) 1J	1 200	222	155	0,20	0,8	1,25	22 x 25	ECS1JBW122M◊◊ΔΔ2225
	1 800	148	103	0,20	1,1	1,52	22 x 30	ECS1JBW182M◊◊ΔΔ2230
		148	103	0,20	1,1	1,52	25 x 25	ECS1JBW182M◊◊ΔΔ2525
	2 200	121	84	0,20	1,4	1,73	22 x 35	ECS1JBW222M◊◊ΔΔ2235
		121	84	0,20	1,4	1,75	25 x 30	ECS1JBW222M◊◊ΔΔ2530
	2 700	99	69	0,20	1,5	1,97	22 x 40	ECS1JBW272M◊◊ΔΔ2240
		99	69	0,20	1,5	1,99	25 x 35	ECS1JBW272M◊◊ΔΔ2535
		99	69	0,20	1,5	1,93	30 x 25	ECS1JBW272M◊◊ΔΔ3025
	3 300	81	56	0,20	1,5	2,32	22 x 50	ECS1JBW332M◊◊ΔΔ2250
		81	56	0,20	1,5	2,27	25 x 40	ECS1JBW332M◊◊ΔΔ2540
		81	56	0,20	1,5	2,24	30 x 30	ECS1JBW332M◊◊ΔΔ3030
		81	56	0,20	1,5	2,41	35 x 25	ECS1JBW332M◊◊ΔΔ3525
	3 900	69	48	0,20	1,5	2,54	25 x 45	ECS1JBW392M◊◊ΔΔ2545
		69	48	0,20	1,5	2,55	30 x 35	ECS1JBW392M◊◊ΔΔ3035
	4 700	57	40	0,20	1,5	2,88	25 x 50	ECS1JBW472M◊◊ΔΔ2550
		57	40	0,20	1,5	2,90	30 x 40	ECS1JBW472M◊◊ΔΔ3040
		57	40	0,20	1,5	2,83	35 x 30	ECS1JBW472M◊◊ΔΔ3530
	5 600	48	33	0,20	1,5	3,28	30 x 45	ECS1JBW562M◊◊ΔΔ3045
		48	33	0,20	1,5	3,24	35 x 35	ECS1JBW562M◊◊ΔΔ3535
	6 800	40	27	0,20	1,5	3,73	30 x 50	ECS1JBW682M◊◊ΔΔ3050
		40	27	0,20	1,5	3,71	35 x 40	ECS1JBW682M◊◊ΔΔ3540
	8 200	33	23	0,20	1,5	4,16	35 x 45	ECS1JBW822M◊◊ΔΔ3545
	10 000	27	19	0,20	1,5	4,69	35 x 50	ECS1JBW103M◊◊ΔΔ3550
80 (100) 1K	820	324	227	0,20	0,7	1,11	22 x 25	ECS1KBW821M◊◊ΔΔ2225
	1 000	266	186	0,20	0,8	1,25	22 x 25	ECS1KBW102M◊◊ΔΔ2225
	1 200	222	155	0,20	1,0	1,39	22 x 30	ECS1KBW122M◊◊ΔΔ2230
		222	155	0,20	1,0	1,39	25 x 25	ECS1KBW122M◊◊ΔΔ2525
	1 500	177	124	0,20	1,2	1,61	22 x 35	ECS1KBW152M◊◊ΔΔ2235
		177	124	0,20	1,2	1,62	25 x 30	ECS1KBW152M◊◊ΔΔ2530
	1 800	148	103	0,20	1,4	1,83	22 x 40	ECS1KBW182M◊◊ΔΔ2240
		148	103	0,20	1,4	1,81	30 x 25	ECS1KBW182M◊◊ΔΔ3025
	2 200	121	84	0,20	1,5	2,09	22 x 45	ECS1KBW222M◊◊ΔΔ2245
		121	84	0,20	1,5	2,01	25 x 35	ECS1KBW222M◊◊ΔΔ2535
		121	84	0,20	1,5	2,10	30 x 30	ECS1KBW222M◊◊ΔΔ3030
		121	84	0,20	1,5	2,17	35 x 25	ECS1KBW222M◊◊ΔΔ3525
	2 700	99	69	0,20	1,5	2,43	25 x 45	ECS1KBW272M◊◊ΔΔ2545
		99	69	0,20	1,5	2,43	30 x 35	ECS1KBW272M◊◊ΔΔ3035
	3 300	81	56	0,20	1,5	2,76	25 x 50	ECS1KBW332M◊◊ΔΔ2550
		81	56	0,20	1,5	2,78	30 x 40	ECS1KBW332M◊◊ΔΔ3040
		81	56	0,20	1,5	2,71	35 x 30	ECS1KBW332M◊◊ΔΔ3530

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U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
80 (100) 1K	3 900	69	48	0,20	1,5	3,12	30 x 45	ECS1KBW392M◊◊ΔΔ3045
		69	48	0,20	1,5	3,07	35 x 35	ECS1KBW392M◊◊ΔΔ3535
	4 700	57	40	0,20	1,5	3,56	30 x 50	ECS1KBW472M◊◊ΔΔ3050
		57	40	0,20	1,5	3,50	35 x 40	ECS1KBW472M◊◊ΔΔ3540
	5 600	48	33	0,20	1,5	3,87	35 x 45	ECS1KBW562M◊◊ΔΔ3545
	6 800	40	27	0,20	1,5	4,19	35 x 50	ECS1KBW682M◊◊ΔΔ3550
100 (125) 2A	560	474	332	0,20	0,6	1,07	22 x 25	ECS2ABW561M◊◊ΔΔ2225
	820	324	227	0,20	0,8	1,35	22 x 30	ECS2ABW821M◊◊ΔΔ2230
	820	324	227	0,20	0,8	1,35	25 x 25	ECS2ABW821M◊◊ΔΔ2525
	1 000	266	186	0,20	1,0	1,54	22 x 35	ECS2ABW102M◊◊ΔΔ2235
		266	186	0,20	1,0	1,56	25 x 30	ECS2ABW102M◊◊ΔΔ2530
	1 200	221	155	0,20	1,2	1,74	22 x 40	ECS2ABW122M◊◊ΔΔ2240
		222	155	0,20	1,2	1,76	25 x 35	ECS2ABW122M◊◊ΔΔ2535
		222	155	0,20	1,2	1,71	30 x 25	ECS2ABW122M◊◊ΔΔ3025
	1 500	177	124	0,20	1,5	1,99	22 x 45	ECS2ABW152M◊◊ΔΔ2245
		177	124	0,20	1,5	2,03	25 x 40	ECS2ABW152M◊◊ΔΔ2540
		177	124	0,20	1,5	2,00	30 x 30	ECS2ABW152M◊◊ΔΔ3030
		177	124	0,20	1,5	2,07	35 x 25	ECS2ABW152M◊◊ΔΔ3525
	1 800	148	103	0,20	1,5	2,28	25 x 45	ECS2ABW182M◊◊ΔΔ2545
		148	103	0,20	1,5	2,27	30 x 35	ECS2ABW182M◊◊ΔΔ3035
	2 200	121	84	0,20	1,5	2,57	25 x 50	ECS2ABW222M◊◊ΔΔ2550
		121	84	0,20	1,5	2,59	30 x 40	ECS2ABW222M◊◊ΔΔ3040
		121	84	0,20	1,5	2,52	35 x 30	ECS2ABW222M◊◊ΔΔ3530
	2 700	99	69	0,20	1,5	2,94	30 x 45	ECS2ABW272M◊◊ΔΔ3045
		99	69	0,20	1,5	2,90	35 x 35	ECS2ABW272M◊◊ΔΔ3535
	3 300	81	56	0,20	1,5	3,32	30 x 50	ECS2ABW332M◊◊ΔΔ3050
		81	56	0,20	1,5	3,31	35 x 40	ECS2ABW332M◊◊ΔΔ3540
	3 900	69	48	0,20	1,5	3,69	35 x 45	ECS2ABW392M◊◊ΔΔ3545
	4 700	57	40	0,20	1,5	4,14	35 x 50	ECS2ABW472M◊◊ΔΔ3550
160 (200) 2C	330	603	422	0,15	0,5	1,16	22 x 25	ECS2CBW331M◊◊ΔΔ2225
	390	511	357	0,15	0,6	1,43	22 x 30	ECS2CBW391M◊◊ΔΔ2230
	470	424	296	0,15	0,8	1,52	22 x 35	ECS2CBW471M◊◊ΔΔ2235
		424	296	0,15	0,8	1,55	25 x 25	ECS2CBW471M◊◊ΔΔ2525
	560	356	249	0,15	0,9	1,62	22 x 40	ECS2CBW561M◊◊ΔΔ2240
		356	249	0,15	0,9	1,73	25 x 30	ECS2CBW561M◊◊ΔΔ2530
	680	293	205	0,15	1,1	1,70	22 x 45	ECS2CBW681M◊◊ΔΔ2245
		293	205	0,15	1,1	1,81	25 x 35	ECS2CBW681M◊◊ΔΔ2535
		293	205	0,15	1,1	1,82	30 x 25	ECS2CBW681M◊◊ΔΔ3025
	820	243	170	0,15	1,3	1,81	22 x 50	ECS2CBW821M◊◊ΔΔ2250
		243	170	0,15	1,3	1,98	25 x 40	ECS2CBW821M◊◊ΔΔ2540
		243	170	0,15	1,3	1,98	30 x 30	ECS2CBW821M◊◊ΔΔ3030
		243	170	0,15	1,3	1,93	35 x 25	ECS2CBW821M◊◊ΔΔ3525
	1 000	199	139	0,15	1,5	2,04	25 x 45	ECS2CBW102M◊◊ΔΔ2545
		199	139	0,15	1,5	2,14	30 x 35	ECS2CBW102M◊◊ΔΔ3035
	1 200	166	116	0,15	1,5	2,12	25 x 50	ECS2CBW122M◊◊ΔΔ2550
		166	116	0,15	1,5	2,22	30 x 40	ECS2CBW122M◊◊ΔΔ3040
		166	116	0,15	1,5	2,40	35 x 30	ECS2CBW122M◊◊ΔΔ3530
	1 500	133	93	0,15	1,5	2,46	30 x 45	ECS2CBW152M◊◊ΔΔ3045
		133	93	0,15	1,5	2,53	35 x 35	ECS2CBW152M◊◊ΔΔ3535
	1 800	111	77	0,15	1,5	2,98	35 x 45	ECS2CBW182M◊◊ΔΔ3545
	2 200	91	63	0,15	1,5	3,10	35 x 50	ECS2CBW222M◊◊ΔΔ3550
	2 700	74	51	0,15	1,5	3,77	35 x 55	ECS2CBW272M◊◊ΔΔ3555
	3 300	61	42	0,15	1,5	4,33	35 x 60	ECS2CBW332M◊◊ΔΔ3560
200 (250) 2D	220	905	633	0,15	0,4	1,08	22 x 25	ECS2DBW221M◊◊ΔΔ2225
	270	737	516	0,15	0,5	1,20	22 x 30	ECS2DBW271M◊◊ΔΔ2230
	330	603	422	0,15	0,7	1,30	22 x 30	ECS2DBW331M◊◊ΔΔ2230
		603	422	0,15	0,7	1,35	25 x 25	ECS2DBW331M◊◊ΔΔ2525
	390	511	357	0,15	0,8	1,41	22 x 35	ECS2DBW391M◊◊ΔΔ2235
	470	424	296	0,15	0,9	1,50	22 x 40	ECS2DBW471M◊◊ΔΔ2240
		424	296	0,15	0,9	1,47	25 x 30	ECS2DBW471M◊◊ΔΔ2530
		424	296	0,15	0,9	1,56	30 x 25	ECS2DBW471M◊◊ΔΔ3025
	560	356	249	0,15	1,1	1,58	22 x 45	ECS2DBW561M◊◊ΔΔ2245
		356	249	0,15	1,1	1,65	25 x 35	ECS2DBW561M◊◊ΔΔ2535
	680	293	205	0,15	1,4	1,68	22 x 50	ECS2DBW681M◊◊ΔΔ2250
		293	205	0,15	1,4	1,80	25 x 40	ECS2DBW681M◊◊ΔΔ2540
		293	205	0,15	1,4	1,82	30 x 30	ECS2DBW681M◊◊ΔΔ3030
		293	205	0,15	1,4	1,96	35 x 25	ECS2DBW681M◊◊ΔΔ3525

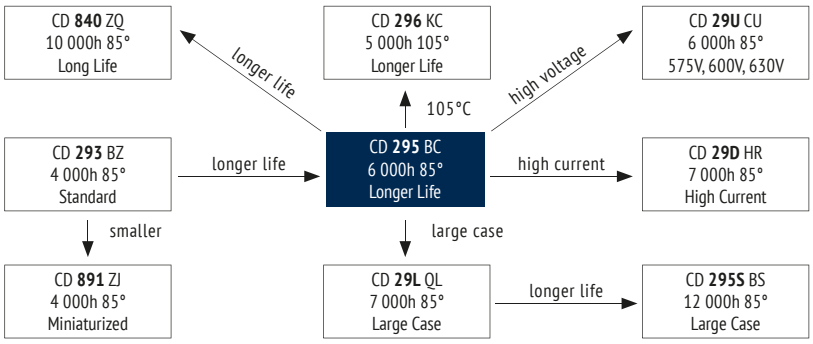
U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
200 (250) 2D	820	243	170	0,15	1,5	1,87	25 x 50	ECS2DBW821M◊◊ΔΔ2550
		243	170	0,15	1,5	1,99	30 x 35	ECS2DBW821M◊◊ΔΔ3035
		243	170	0,15	1,5	2,07	35 x 30	ECS2DBW821M◊◊ΔΔ3530
	1 000	199	139	0,15	1,5	2,17	30 x 45	ECS2DBW102M◊◊ΔΔ3045
		199	139	0,15	1,5	2,22	35 x 35	ECS2DBW102M◊◊ΔΔ3535
	1 200	166	116	0,15	1,5	2,22	30 x 50	ECS2DBW122M◊◊ΔΔ3050
		166	116	0,15	1,5	2,42	35 x 40	ECS2DBW122M◊◊ΔΔ3540
	1 500	133	93	0,15	1,5	2,59	35 x 45	ECS2DBW152M◊◊ΔΔ3545
	1 800	111	77	0,15	1,5	2,70	35 x 50	ECS2DBW182M◊◊ΔΔ3550
	2 200	91	63	0,15	1,5	3,23	35 x 60	ECS2DBW222M◊◊ΔΔ3560
250 (300) 2E	180	1 106	774	0,15	0,5	0,94	22 x 25	ECS2EBW181M◊◊ΔΔ2225
	220	905	633	0,15	0,6	1,10	22 x 30	ECS2EBW221M◊◊ΔΔ2230
		905	633	0,15	0,6	1,15	25 x 25	ECS2EBW221M◊◊ΔΔ2525
	270	737	516	0,15	0,7	1,13	22 x 35	ECS2EBW271M◊◊ΔΔ2235
	330	603	422	0,15	0,8	1,20	22 x 40	ECS2EBW331M◊◊ΔΔ2240
		603	422	0,15	0,8	1,30	25 x 30	ECS2EBW331M◊◊ΔΔ2530
		603	422	0,15	0,8	1,35	30 x 25	ECS2EBW331M◊◊ΔΔ3025
	390	511	357	0,15	1,0	1,26	22 x 45	ECS2EBW391M◊◊ΔΔ2245
		511	357	0,15	1,0	1,41	25 x 35	ECS2EBW391M◊◊ΔΔ2535
	470	424	296	0,15	1,2	1,37	22 x 50	ECS2EBW471M◊◊ΔΔ2250
		424	296	0,15	1,2	1,52	25 x 40	ECS2EBW471M◊◊ΔΔ2540
		424	296	0,15	1,2	1,36	30 x 30	ECS2EBW471M◊◊ΔΔ3030
		424	296	0,15	1,2	1,40	35 x 25	ECS2EBW471M◊◊ΔΔ3525
	560	356	249	0,15	1,4	1,59	25 x 45	ECS2EBW561M◊◊ΔΔ2545
		356	249	0,15	1,4	1,57	30 x 35	ECS2EBW561M◊◊ΔΔ3035
		356	249	0,15	1,4	1,56	35 x 30	ECS2EBW561M◊◊ΔΔ3530
	680	293	205	0,15	1,5	1,66	25 x 50	ECS2EBW681M◊◊ΔΔ2550
		293	205	0,15	1,5	1,76	30 x 40	ECS2EBW681M◊◊ΔΔ3040
	820	243	170	0,15	1,5	1,83	30 x 45	ECS2EBW821M◊◊ΔΔ3045
		243	170	0,15	1,5	1,82	35 x 35	ECS2EBW821M◊◊ΔΔ3535
	1 000	199	139	0,15	1,5	1,87	30 x 50	ECS2EBW102M◊◊ΔΔ3050
		199	139	0,15	1,5	1,99	35 x 40	ECS2EBW102M◊◊ΔΔ3540
	1 200	166	116	0,15	1,5	2,10	35 x 45	ECS2EBW122M◊◊ΔΔ3545
	1 500	133	93	0,15	1,5	2,70	35 x 50	ECS2EBW152M◊◊ΔΔ3550
	1 800	111	77	0,15	1,5	2,92	35 x 60	ECS2EBW182M◊◊ΔΔ3560
315 (365) 2F	100	1 990	1 095	0,15	0,3	0,61	22 x 25	ECS2FBW101M◊◊ΔΔ2225
	120	1 659	912	0,15	0,4	0,68	22 x 30	ECS2FBW121M◊◊ΔΔ2230
	150	1 327	730	0,15	0,5	0,76	22 x 35	ECS2FBW151M◊◊ΔΔ2235
		1 327	730	0,15	0,5	0,78	25 x 25	ECS2FBW151M◊◊ΔΔ2525
	180	1 106	608	0,15	0,6	0,78	22 x 40	ECS2FBW181M◊◊ΔΔ2240
		1 106	608	0,15	0,6	0,85	25 x 30	ECS2FBW181M◊◊ΔΔ2530
	220	905	498	0,15	0,7	0,91	22 x 45	ECS2FBW221M◊◊ΔΔ2245
		905	498	0,15	0,7	0,94	25 x 35	ECS2FBW221M◊◊ΔΔ2535
		905	498	0,15	0,7	0,95	30 x 30	ECS2FBW221M◊◊ΔΔ3030
	270	737	406	0,15	0,9	0,98	22 x 50	ECS2FBW271M◊◊ΔΔ2250
		737	406	0,15	0,9	1,00	25 x 40	ECS2FBW271M◊◊ΔΔ2540
		737	406	0,15	0,9	0,98	30 x 35	ECS2FBW271M◊◊ΔΔ3035
	330	603	332	0,15	1,0	1,13	25 x 45	ECS2FBW331M◊◊ΔΔ2545
		603	332	0,15	1,0	1,13	30 x 40	ECS2FBW331M◊◊ΔΔ3040
	390	511	281	0,15	1,2	1,20	30 x 45	ECS2FBW391M◊◊ΔΔ3045
		510	281	0,15	1,2	1,20	35 x 30	ECS2FBW391M◊◊ΔΔ3530
	470	424	233	0,15	1,5	1,28	35 x 35	ECS2FBW471M◊◊ΔΔ3535
	560	355	196	0,15	1,5	1,46	35 x 40	ECS2FBW561M◊◊ΔΔ3540
	680	293	161	0,15	1,5	1,85	35 x 45	ECS2FBW681M◊◊ΔΔ3545
	820	242	133	0,15	1,5	2,10	35 x 50	ECS2FBW821M◊◊ΔΔ3550
	1 000	199	109	0,15	1,5	2,42	35 x 55	ECS2FBW102M◊◊ΔΔ3555
350 (400) 2V	68	2 926	1 610	0,15	0,2	0,56	22 x 25	ECS2VBW680M◊◊ΔΔ2225
	82	2 427	1 262	0,15	0,3	0,68	22 x 25	ECS2VBW820M◊◊ΔΔ2225
	100	1 990	1 095	0,15	0,4	0,70	22 x 30	ECS2VBW101M◊◊ΔΔ2230
		1 990	1 095	0,15	0,4	0,70	25 x 25	ECS2VBW101M◊◊ΔΔ2525
	120	1 658	912	0,15	0,4	0,73	22 x 35	ECS2VBW121M◊◊ΔΔ2235
	150	1 327	730	0,15	0,5	0,79	22 x 40	ECS2VBW151M◊◊ΔΔ2240
		1 327	730	0,15	0,5	0,82	25 x 30	ECS2VBW151M◊◊ΔΔ2530
		1 327	730	0,15	0,5	0,82	30 x 25	ECS2VBW151M◊◊ΔΔ3025

SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
350 (400) 2V	180	1 106	608	0,15	0,6	0,81	22 x 45	ECS2VBW181M◊◊ΔΔ2245
		1 106	608	0,15	0,6	0,89	25 x 35	ECS2VBW181M◊◊ΔΔ2535
		1 106	608	0,15	0,6	0,90	30 x 30	ECS2VBW181M◊◊ΔΔ3030
	220	905	498	0,15	0,8	0,93	22 x 50	ECS2VBW221M◊◊ΔΔ2250
		905	498	0,15	0,8	0,97	25 x 40	ECS2VBW221M◊◊ΔΔ2540
		905	498	0,15	0,8	0,98	35 x 25	ECS2VBW221M◊◊ΔΔ3525
	270	737	406	0,15	0,9	1,01	25 x 50	ECS2VBW271M◊◊ΔΔ2550
		737	406	0,15	0,9	1,05	30 x 35	ECS2VBW271M◊◊ΔΔ3035
		737	406	0,15	0,9	1,01	35 x 30	ECS2VBW271M◊◊ΔΔ3530
	330	603	332	0,15	1,2	1,16	30 x 45	ECS2VBW331M◊◊ΔΔ3045
		603	332	0,15	1,2	1,16	35 x 35	ECS2VBW331M◊◊ΔΔ3535
	390	511	281	0,15	1,4	1,26	30 x 50	ECS2VBW391M◊◊ΔΔ3050
		511	281	0,15	1,4	1,26	35 x 40	ECS2VBW391M◊◊ΔΔ3540
	470	424	233	0,15	1,5	1,35	35 x 45	ECS2VBW471M◊◊ΔΔ3545
		424	233	0,15	1,5	1,35	35 x 45	ECS2VBW471M◊◊ΔΔ3545
	560	356	196	0,15	1,5	1,51	35 x 50	ECS2VBW561M◊◊ΔΔ3550
	680	293	161	0,15	1,5	1,92	35 x 55	ECS2VBW681M◊◊ΔΔ3555
	820	243	133	0,15	1,5	2,25	35 x 60	ECS2VBW821M◊◊ΔΔ3560
	1 000	199	139	0,15	1,5	2,50	35 x 60	ECS2VBW102M◊◊ΔΔ3560
400 (450) 2G	68	2 926	1 522	0,15	0,3	0,47	22 x 25	ECS2GBW680M◊◊ΔΔ2225
	82	2 427	1 262	0,15	0,3	0,56	22 x 25	ECS2GBW820M◊◊ΔΔ2225
	100	1 990	1 035	0,15	0,4	0,60	22 x 30	ECS2GBW101M◊◊ΔΔ2230
	120	1 658	863	0,15	0,5	0,64	22 x 35	ECS2GBW121M◊◊ΔΔ2235
		1 658	863	0,15	0,5	0,70	25 x 25	ECS2GBW121M◊◊ΔΔ2525
	150	1 327	690	0,15	0,6	0,70	22 x 40	ECS2GBW151M◊◊ΔΔ2240
		1 327	690	0,15	0,6	0,73	25 x 30	ECS2GBW151M◊◊ΔΔ2530
	180	1 106	575	0,15	0,7	0,78	22 x 45	ECS2GBW181M◊◊ΔΔ2245
		1 106	575	0,15	0,7	0,82	25 x 35	ECS2GBW181M◊◊ΔΔ2535
	220	905	471	0,15	0,9	0,87	25 x 40	ECS2GBW221M◊◊ΔΔ2540
		905	471	0,15	0,9	0,86	30 x 30	ECS2GBW221M◊◊ΔΔ3030
	270	737	383	0,15	1,1	0,94	25 x 45	ECS2GBW271M◊◊ΔΔ2545
		737	383	0,15	1,1	0,95	30 x 35	ECS2GBW271M◊◊ΔΔ3035
	330	603	314	0,15	1,3	1,11	30 x 40	ECS2GBW331M◊◊ΔΔ3040
		603	314	0,15	1,3	1,13	35 x 30	ECS2GBW331M◊◊ΔΔ3530
	390	511	265	0,15	1,5	1,15	30 x 45	ECS2GBW391M◊◊ΔΔ3045
		511	265	0,15	1,5	1,26	35 x 35	ECS2GBW391M◊◊ΔΔ3535
	470	424	220	0,15	1,5	1,31	35 x 40	ECS2GBW471M◊◊ΔΔ3540
	560	356	185	0,15	1,5	1,50	35 x 45	ECS2GBW561M◊◊ΔΔ3545
	680	293	153	0,15	1,5	1,90	35 x 50	ECS2GBW681M◊◊ΔΔ3550
	820	243	126	0,15	1,5	2,20	35 x 60	ECS2GBW821M◊◊ΔΔ3560
		243	126	0,15	1,5	2,20	40 x 50	ECS2GBW821M◊◊ΔΔ4050
	1 000	199	139	0,15	1,5	2,60	35 x 65	ECS2GBW102M◊◊ΔΔ3565
420 (470) 2X	68	3 901	1 951	0,20	0,3	0,50	22 x 25	ECS2XBW680M◊◊ΔΔ2225
	82	3 235	1 618	0,20	0,3	0,60	22 x 30	ECS2XBW820M◊◊ΔΔ2230
	100	2 653	1 327	0,20	0,4	0,65	22 x 35	ECS2XBW101M◊◊ΔΔ2235
	120	2 211	1 106	0,20	0,5	0,70	22 x 40	ECS2XBW121M◊◊ΔΔ2240
		2 211	1 106	0,20	0,5	0,72	25 x 30	ECS2XBW121M◊◊ΔΔ2530
	150	1 769	885	0,20	0,6	0,75	22 x 45	ECS2XBW151M◊◊ΔΔ2245
		1 769	885	0,20	0,6	0,80	25 x 35	ECS2XBW151M◊◊ΔΔ2535
	180	1 474	737	0,20	0,8	0,85	25 x 40	ECS2XBW181M◊◊ΔΔ2540
		1 474	737	0,20	0,8	0,85	30 x 30	ECS2XBW181M◊◊ΔΔ3030
	220	1 206	603	0,20	0,9	0,90	25 x 45	ECS2XBW221M◊◊ΔΔ2545
		1 206	603	0,20	0,9	0,96	30 x 35	ECS2XBW221M◊◊ΔΔ3035
	270	983	492	0,20	1,1	1,05	25 x 50	ECS2XBW271M◊◊ΔΔ2550
		983	492	0,20	1,1	1,06	30 x 40	ECS2XBW271M◊◊ΔΔ3040
	330	804	402	0,20	1,4	1,14	30 x 45	ECS2XBW331M◊◊ΔΔ3045
		804	402	0,20	1,4	1,20	35 x 35	ECS2XBW331M◊◊ΔΔ3535
	390	681	340	0,20	1,5	1,25	30 x 50	ECS2XBW391M◊◊ΔΔ3050
		681	340	0,20	1,5	1,26	35 x 40	ECS2XBW391M◊◊ΔΔ3540
	470	565	282	0,20	1,5	1,31	35 x 45	ECS2XBW471M◊◊ΔΔ3545
	560	474	237	0,20	1,5	1,50	35 x 50	ECS2XBW561M◊◊ΔΔ3550
	680	391	196	0,20	1,5	1,90	35 x 55	ECS2XBW681M◊◊ΔΔ3555
	820	324	162	0,20	1,5	2,20	35 x 60	ECS2XBW821M◊◊ΔΔ3560
450 (500) 2W	56	4 737	2 370	0,20	0,3	0,47	22 x 25	ECS2WBW560M◊◊ΔΔ2225
	68	3 901	1 951	0,20	0,3	0,56	22 x 30	ECS2WBW680M◊◊ΔΔ2230
		3 901	1 951	0,20	0,3	0,56	25 x 25	ECS2WBW680M◊◊ΔΔ2525
	82	3 235	1 618	0,20	0,4	0,65	22 x 35	ECS2WBW820M◊◊ΔΔ2235
	100	2 653	1 327	0,20	0,5	0,70	22 x 40	ECS2WBW101M◊◊ΔΔ2240
		2 653	1 327	0,20	0,5	0,70	25 x 30	ECS2WBW101M◊◊ΔΔ2530
	120	2 211	1 106	0,20	0,5	0,73	22 x 45	ECS2WBW121M◊◊ΔΔ2245
		2 211	1 106	0,20	0,5	0,73	25 x 35	ECS2WBW121M◊◊ΔΔ2535
	150	1 769	885	0,20	0,7	0,78	22 x 50	ECS2WBW151M◊◊ΔΔ2250
		1 769	885	0,20	0,7	0,82	25 x 40	ECS2WBW151M◊◊ΔΔ2540
		1 769	885	0,20	0,7	0,83	30 x 30	ECS2WBW151M◊◊ΔΔ3030
	180	1 474	737	0,20	0,8	0,87	25 x 45	ECS2WBW181M◊◊ΔΔ2545
		1 474	737	0,20	0,8	0,86	30 x 35	ECS2WBW181M◊◊ΔΔ3035
	220	1 206	603	0,20	1,0	0,94	25 x 50	ECS2WBW221M◊◊ΔΔ2550
		1 206	603	0,20	1,0	0,95	30 x 40	ECS2WBW221M◊◊ΔΔ3040
		1 206	603	0,20	1,0	0,91	35 x 30	ECS2WBW221M◊◊ΔΔ3530
	270	983	492	0,20	1,2	1,11	30 x 45	ECS2WBW271M◊◊ΔΔ3045
		983	492	0,20	1,2	1,13	35 x 35	ECS2WBW271M◊◊ΔΔ3535
	330	804	402	0,20	1,5	1,15	30 x 50	ECS2WBW331M◊◊ΔΔ3050
		804	402	0,20	1,5	1,26	35 x 40	ECS2WBW331M◊◊ΔΔ3540
	390	681	340	0,20	1,5	1,31	35 x 45	ECS2WBW391M◊◊ΔΔ3545
	470	565	282	0,20	1,5	1,50	35 x 50	ECS2WBW471M◊◊ΔΔ3550
	560	474	237	0,20	1,5	1,70	35 x 55	ECS2WBW561M◊◊ΔΔ3555
	680	391	196	0,20	1,5	2,00	35 x 60	ECS2WBW681M◊◊ΔΔ3560
		391	196	0,20	1,5	2,00	40 x 50	ECS2WBW681M◊◊ΔΔ4050
	820	324	162	0,20	1,5	2,20	35 x 65	ECS2WBW821M◊◊ΔΔ3565
		324	162	0,20	1,5	2,30	40 x 60	ECS2WBW821M◊◊ΔΔ4060
	1 000	265	139	0,20	1,5	2,60	35 x 70	ECS2WBW102M◊◊ΔΔ3570
500 (550) 2H	39	6 802	3 401	0,20	0,2	0,35	22 x 25	ECS2HBW390M◊◊ΔΔ2225
	47	5 644	2 822	0,20	0,2	0,41	22 x 30	ECS2HBW470M◊◊ΔΔ2230
	56	4 739	2 370	0,20	0,3	0,47	22 x 35	ECS2HBW560M◊◊ΔΔ2235
	68	3 901	1 951	0,20	0,3	0,54	22 x 40	ECS2HBW680M◊◊ΔΔ2240
	82	3 237	1 618	0,20	0,4	0,62	25 x 30	ECS2HBW820M◊◊ΔΔ2530
	100	2 653	1 327	0,20	0,5	0,67	25 x 35	ECS2HBW101M◊◊ΔΔ2535
	120	2 211	1 106	0,20	0,6	0,77	25 x 40	ECS2HBW121M◊◊ΔΔ2540
		2 211	1 106	0,20	0,6	0,72	30 x 30	ECS2HBW121M◊◊ΔΔ3030
	150	1 769	885	0,20	0,8	0,85	30 x 40	ECS2HBW151M◊◊ΔΔ3040
	180	1 474	737	0,20	0,9	1,01	30 x 45	ECS2HBW181M◊◊ΔΔ3045
	220	1 206	603	0,20	1,1	1,12	35 x 35	ECS2HBW221M◊◊ΔΔ3535
	270	983	472	0,20	1,4	1,29	35 x 40	ECS2HBW271M◊◊ΔΔ3540
	330	804	402	0,20	1,5	1,40	35 x 45	ECS2HBW331M◊◊ΔΔ3545
	390	681	340	0,20	1,5	1,60	35 x 50	ECS2HBW391M◊◊ΔΔ3550
	470	565	282	0,20	1,5	1,80	35 x 60	ECS2HBW471M◊◊ΔΔ3560
	560	474	237	0,20	1,5	1,90	35 x 65	ECS2HBW561M◊◊ΔΔ3565
	680	391	196	0,20	1,5	2,20	35 x 70	ECS2HBW681M◊◊ΔΔ3570
550 (600) 2Y	180	1 474	737	0,20	1,0	1,06	30 x 50	ECS2YBW181M◊◊ΔΔ3050
		1 474	737	0,20	1,0	1,06	35 x 35	ECS2YBW181M◊◊ΔΔ3535
	220	1 206	603	0,20	1,2	1,18	30 x 55	ECS2YBW221M◊◊ΔΔ3055
		1 206	603	0,20	1,2	1,18	35 x 40	ECS2YBW221M◊◊ΔΔ3540
	270	983	492	0,20	1,5	1,31	35 x 45	ECS2YBW271M◊◊ΔΔ3545
	330	804	402	0,20	1,5	1,50	35 x 50	ECS2YBW331M◊◊ΔΔ3550
	390	681	340	0,20	1,5	1,67	35 x 60	ECS2YBW391M◊◊ΔΔ3560
	470	565	282	0,20	1,5	1,95	35 x 70	ECS2YBW471M◊◊ΔΔ3570
	560	474	237	0,20	1,5	2,10	35 x 80	ECS2YBW561M◊◊ΔΔ3580
		474	237	0,20	1,5	2,10	40 x 70	ECS2YBW561M◊◊ΔΔ4070

6 000h at 85°C

- Long Life at 85°C
- High Ripple Current
- Long Life General Industrial Electronics



ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +85	-25 ~ +85
Voltage Range (V)	10 ~ 400	420 ~ 500
Capacitance Range (µF)	68 ~ 22 000	
Capacitance Tolerance (20°C, 120Hz)	± 20%	
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval. Additionally please ask for series CD 295D ZD with temperature range -55°C ~ +85°C and 10 000h useful life.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	10	16 ~ 35	50 ~ 100	160 ~ 200	250 ~ 400	420 ~ 500
	$Z_{-25°C} / Z_{+20°C}$	5	4	3		4	
	$Z_{-40°C} / Z_{+20°C}$	18	15	10	6	8	-

Fast Charge-Discharge: **Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**

SNAP-IN

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	6 000h	> 100 000h	5 000h	5 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,2 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

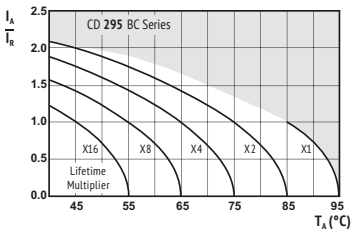
Rated Voltage (V) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	100kHz
≤ 50	0,88	1,00	1,07	1,15	1,15	1,15
63 ~ 100	0,80	1,00	1,17	1,32	1,45	1,50
≥ 160	0,80	1,00	1,16	1,30	1,41	1,43

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

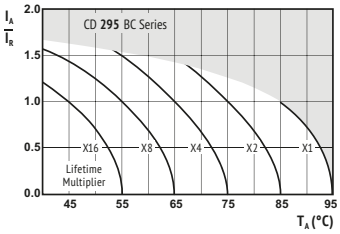
MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)

U_R < 160V



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

U_R ≥ 160V



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/ lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
10 (13) 1A	10 000	107	74	0,80	1,0	2,5	22 x 25	ECS1ABC103M◊◊ΔΔ2225
	12 000	89	62	0,80	1,2	2,7	22 x 25	ECS1ABC123M◊◊ΔΔ2225
	15 000	71	50	0,80	1,5	3,2	22 x 30	ECS1ABC153M◊◊ΔΔ2230
		71	50	0,80	1,5	3,1	25 x 25	ECS1ABC153M◊◊ΔΔ2525
	18 000	59	41	0,80	1,5	3,6	22 x 35	ECS1ABC183M◊◊ΔΔ2235
		59	41	0,80	1,5	3,6	25 x 30	ECS1ABC183M◊◊ΔΔ2530
	22 000	49	34	0,80	1,5	4,0	22 x 40	ECS1ABC223M◊◊ΔΔ2240
		49	34	0,80	1,5	4,1	25 x 35	ECS1ABC223M◊◊ΔΔ2535
		49	34	0,80	1,5	4,1	30 x 25	ECS1ABC223M◊◊ΔΔ3025
16 (20) 1C	8 200	98	68	0,60	1,3	2,2	22 x 25	ECS1CBC822M◊◊ΔΔ2225
	10 000	80	56	0,60	1,5	2,6	22 x 30	ECS1CBC103M◊◊ΔΔ2230
		80	56	0,60	1,5	2,6	25 x 25	ECS1CBC103M◊◊ΔΔ2525
	12 000	67	46	0,60	1,5	2,9	22 x 35	ECS1CBC123M◊◊ΔΔ2235
	15 000	54	37	0,60	1,5	3,3	22 x 40	ECS1CBC153M◊◊ΔΔ2240
		54	37	0,60	1,5	3,3	25 x 30	ECS1CBC153M◊◊ΔΔ2530
		54	37	0,60	1,5	3,4	30 x 25	ECS1CBC153M◊◊ΔΔ3025
	18 000	45	31	0,60	1,5	3,8	22 x 45	ECS1CBC183M◊◊ΔΔ2245
		45	31	0,60	1,5	3,7	25 x 35	ECS1CBC183M◊◊ΔΔ2535
	22 000	37	25	0,60	1,5	4,2	22 x 50	ECS1CBC223M◊◊ΔΔ2250
		37	25	0,60	1,5	4,2	25 x 40	ECS1CBC223M◊◊ΔΔ2540
		37	25	0,60	1,5	4,2	30 x 30	ECS1CBC223M◊◊ΔΔ3030
		37	25	0,60	1,5	4,4	35 x 25	ECS1CBC223M◊◊ΔΔ3525
25 (32) 1E	5 600	119	83	0,50	1,4	2,0	22 x 25	ECS1EBC562M◊◊ΔΔ2225
	6 800	98	68	0,50	1,5	2,3	22 x 30	ECS1EBC682M◊◊ΔΔ2230
		98	68	0,50	1,5	2,3	25 x 25	ECS1EBC682M◊◊ΔΔ2525
	8 200	81	57	0,50	1,5	2,6	22 x 35	ECS1EBC822M◊◊ΔΔ2235
	10 000	67	46	0,50	1,5	2,9	22 x 40	ECS1EBC103M◊◊ΔΔ2240
		67	46	0,50	1,5	2,8	25 x 30	ECS1EBC103M◊◊ΔΔ2530
		67	46	0,50	1,5	3,0	30 x 25	ECS1EBC103M◊◊ΔΔ3025
	12 000	56	39	0,50	1,5	3,3	22 x 45	ECS1EBC123M◊◊ΔΔ2245
		56	39	0,50	1,5	3,2	25 x 35	ECS1EBC123M◊◊ΔΔ2535
		56	39	0,50	1,5	3,4	30 x 30	ECS1EBC123M◊◊ΔΔ3030
	15 000	45	31	0,50	1,5	3,7	25 x 40	ECS1EBC153M◊◊ΔΔ2540
		45	31	0,50	1,5	3,9	35 x 25	ECS1EBC153M◊◊ΔΔ3525
	18 000	37	26	0,50	1,5	4,3	25 x 50	ECS1EBC183M◊◊ΔΔ2550
		37	26	0,50	1,5	4,2	30 x 35	ECS1EBC183M◊◊ΔΔ3035
		37	26	0,50	1,5	4,4	35 x 30	ECS1EBC183M◊◊ΔΔ3530
	22 000	31	21	0,50	1,5	4,8	30 x 40	ECS1EBC223M◊◊ΔΔ3040
		31	21	0,50	1,5	5,0	35 x 35	ECS1EBC223M◊◊ΔΔ3535
35 (44) 1V	3 300	161	113	0,40	1,2	1,8	22 x 25	ECS1VBC332M◊◊ΔΔ2225
	3 900	137	95	0,40	1,4	2,1	22 x 30	ECS1VBC392M◊◊ΔΔ2230
	4 700	113	79	0,40	1,5	2,2	25 x 25	ECS1VBC472M◊◊ΔΔ2525
	5 600	95	66	0,40	1,5	2,3	22 x 35	ECS1VBC562M◊◊ΔΔ2235
		95	66	0,40	1,5	2,3	25 x 30	ECS1VBC562M◊◊ΔΔ2530
	6 800	79	55	0,40	1,5	2,9	22 x 40	ECS1VBC682M◊◊ΔΔ2240
		79	55	0,40	1,5	2,6	25 x 35	ECS1VBC682M◊◊ΔΔ2535
		79	55	0,40	1,5	2,7	30 x 25	ECS1VBC682M◊◊ΔΔ3025
	8 200	65	45	0,40	1,5	2,8	22 x 50	ECS1VBC822M◊◊ΔΔ2250
		65	45	0,40	1,5	2,8	25 x 40	ECS1VBC822M◊◊ΔΔ2540
		65	45	0,40	1,5	2,8	30 x 30	ECS1VBC822M◊◊ΔΔ3030
		65	45	0,40	1,5	2,9	35 x 25	ECS1VBC822M◊◊ΔΔ3525
	10 000	54	37	0,40	1,5	3,1	25 x 45	ECS1VBC103M◊◊ΔΔ2545
		54	37	0,40	1,5	3,2	30 x 35	ECS1VBC103M◊◊ΔΔ3035
	12 000	45	31	0,40	1,5	3,5	25 x 50	ECS1VBC123M◊◊ΔΔ2550
		45	31	0,40	1,5	3,5	30 x 40	ECS1VBC123M◊◊ΔΔ3040
		45	31	0,40	1,5	3,6	35 x 30	ECS1VBC123M◊◊ΔΔ3530
	15 000	36	25	0,40	1,5	4,1	30 x 45	ECS1VBC153M◊◊ΔΔ3045
		36	25	0,40	1,5	4,1	35 x 35	ECS1VBC153M◊◊ΔΔ3535
	18 000	30	21	0,40	1,5	4,6	30 x 50	ECS1VBC183M◊◊ΔΔ3050
		30	21	0,40	1,5	4,7	35 x 40	ECS1VBC183M◊◊ΔΔ3540
	22 000	25	17	0,40	1,5	5,3	35 x 45	ECS1VBC223M◊◊ΔΔ3545
50 (63) 1H	2 200	181	127	0,30	1,1	1,7	22 x 25	ECS1HBC222M◊◊ΔΔ2225
	2 700	148	103	0,30	1,4	1,9	22 x 30	ECS1HBC272M◊◊ΔΔ2230
		148	103	0,30	1,4	1,9	25 x 25	ECS1HBC272M◊◊ΔΔ2525

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
50 (63) 1H	3 300	121	85	0,30	1,5	2,0	22 x 30	ECS1HBC332M◊◊ΔΔ2230
	3 900	103	72	0,30	1,5	2,1	22 x 35	ECS1HBC392M◊◊ΔΔ2235
		103	72	0,30	1,5	2,1	25 x 30	ECS1HBC392M◊◊ΔΔ2530
		103	72	0,30	1,5	2,4	30 x 25	ECS1HBC392M◊◊ΔΔ3025
	4 700	85	59	0,30	1,5	2,4	22 x 40	ECS1HBC472M◊◊ΔΔ2240
		85	59	0,30	1,5	2,4	25 x 35	ECS1HBC472M◊◊ΔΔ2535
	5 600	72	50	0,30	1,5	2,5	22 x 50	ECS1HBC562M◊◊ΔΔ2250
		72	50	0,30	1,5	2,5	25 x 40	ECS1HBC562M◊◊ΔΔ2540
		72	50	0,30	1,5	2,5	30 x 30	ECS1HBC562M◊◊ΔΔ3030
		72	50	0,30	1,5	2,6	35 x 25	ECS1HBC562M◊◊ΔΔ3525
	6 800	59	41	0,30	1,5	2,8	25 x 45	ECS1HBC682M◊◊ΔΔ2545
		59	41	0,30	1,5	2,8	30 x 35	ECS1HBC682M◊◊ΔΔ3035
	8 200	49	34	0,30	1,5	3,2	25 x 50	ECS1HBC822M◊◊ΔΔ2550
		49	34	0,30	1,5	3,0	30 x 40	ECS1HBC822M◊◊ΔΔ3040
		49	34	0,30	1,5	3,0	35 x 30	ECS1HBC822M◊◊ΔΔ3530
	10 000	40	28	0,30	1,5	3,4	30 x 45	ECS1HBC103M◊◊ΔΔ3045
		40	28	0,30	1,5	3,4	35 x 35	ECS1HBC103M◊◊ΔΔ3535
	12 000	34	23	0,30	1,5	3,8	30 x 50	ECS1HBC123M◊◊ΔΔ3050
		34	23	0,30	1,5	3,8	35 x 40	ECS1HBC123M◊◊ΔΔ3540
	15 000	27	15	0,30	1,5	4,5	35 x 50	ECS1HBC153M◊◊ΔΔ3550
63 (79) 1J	1 500	177	124	0,20	0,9	1,6	22 x 25	ECS1JBC152M◊◊ΔΔ2225
	1 800	148	103	0,20	1,1	1,8	22 x 25	ECS1JBC182M◊◊ΔΔ2225
	2 200	121	84	0,20	1,4	2,0	22 x 30	ECS1JBC222M◊◊ΔΔ2230
		121	84	0,20	1,4	2,0	25 x 25	ECS1JBC222M◊◊ΔΔ2525
	2 700	99	69	0,20	1,5	2,2	22 x 35	ECS1JBC272M◊◊ΔΔ2235
		99	69	0,20	1,5	2,3	25 x 30	ECS1JBC272M◊◊ΔΔ2530
	3 300	81	56	0,20	1,5	2,3	22 x 40	ECS1JBC332M◊◊ΔΔ2240
		81	56	0,20	1,5	2,3	25 x 35	ECS1JBC332M◊◊ΔΔ2535
		81	56	0,20	1,5	2,3	30 x 25	ECS1JBC332M◊◊ΔΔ3025
	3 900	69	48	0,20	1,5	2,5	22 x 45	ECS1JBC392M◊◊ΔΔ2245
		69	48	0,20	1,5	2,6	25 x 40	ECS1JBC392M◊◊ΔΔ2540
		69	48	0,20	1,5	2,6	30 x 30	ECS1JBC392M◊◊ΔΔ3030
		69	48	0,20	1,5	2,7	35 x 25	ECS1JBC392M◊◊ΔΔ3525
	4 700	57	40	0,20	1,5	2,9	30 x 30	ECS1JBC472M◊◊ΔΔ3030
	5 600	48	33	0,20	1,5	3,1	25 x 45	ECS1JBC562M◊◊ΔΔ2545
		48	33	0,20	1,5	3,2	30 x 35	ECS1JBC562M◊◊ΔΔ3035
		48	33	0,20	1,5	3,3	35 x 30	ECS1JBC562M◊◊ΔΔ3530
	6 800	40	27	0,20	1,5	3,6	30 x 40	ECS1JBC682M◊◊ΔΔ3040
		40	27	0,20	1,5	3,7	35 x 35	ECS1JBC682M◊◊ΔΔ3535
	8 200	33	23	0,20	1,5	3,7	30 x 50	ECS1JBC822M◊◊ΔΔ3050
		33	23	0,20	1,5	3,8	35 x 40	ECS1JBC822M◊◊ΔΔ3540
	10 000	27	19	0,20	1,5	4,3	35 x 45	ECS1JBC103M◊◊ΔΔ3545
	12 000	23	16	0,20	1,5	4,8	35 x 50	ECS1JBC123M◊◊ΔΔ3550
80 (100) 1K	1 000	266	186	0,20	0,8	1,3	22 x 25	ECS1KBC102M◊◊ΔΔ2225
	1 200	222	155	0,20	1,0	1,5	22 x 30	ECS1KBC122M◊◊ΔΔ2230
	1 500	177	124	0,20	1,2	1,7	25 x 25	ECS1KBC152M◊◊ΔΔ2525
	1 800	148	103	0,20	1,4	1,9	22 x 35	ECS1KBC182M◊◊ΔΔ2235
		148	103	0,20	1,4	1,9	25 x 30	ECS1KBC182M◊◊ΔΔ2530
	2 200	121	84	0,20	1,5	2,1	22 x 40	ECS1KBC222M◊◊ΔΔ2240
		121	84	0,20	1,5	2,2	25 x 35	ECS1KBC222M◊◊ΔΔ2535
		121	84	0,20	1,5	2,2	30 x 25	ECS1KBC222M◊◊ΔΔ3025
	2 700	99	69	0,20	1,5	2,5	22 x 50	ECS1KBC272M◊◊ΔΔ2250
		99	69	0,20	1,5	2,5	25 x 40	ECS1KBC272M◊◊ΔΔ2540
		99	69	0,20	1,5	2,5	30 x 30	ECS1KBC272M◊◊ΔΔ3030
		99	69	0,20	1,5	2,5	35 x 25	ECS1KBC272M◊◊ΔΔ3525
	3 300	81	56	0,20	1,5	2,8	25 x 45	ECS1KBC332M◊◊ΔΔ2545
		81	56	0,20	1,5	2,8	30 x 35	ECS1KBC332M◊◊ΔΔ3035
	3 900	69	48	0,20	1,5	3,1	25 x 50	ECS1KBC392M◊◊ΔΔ2550
		69	48	0,20	1,5	3,2	30 x 40	ECS1KBC392M◊◊ΔΔ3040
		69	48	0,20	1,5	3,2	35 x 30	ECS1KBC392M◊◊ΔΔ3530
	4 700	57	40	0,20	1,5	3,6	30 x 45	ECS1KBC472M◊◊ΔΔ3045
		57	40	0,20	1,5	3,6	35 x 35	ECS1KBC472M◊◊ΔΔ3535
	5 600	48	33	0,20	1,5	3,8	30 x 50	ECS1KBC562M◊◊ΔΔ3050
		48	33	0,20	1,5	3,8	35 x 40	ECS1KBC562M◊◊ΔΔ3540
	6 800	40	27	0,20	1,5	4,1	35 x 50	ECS1KBC682M◊◊ΔΔ3550

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SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
100 (125) 2A	680	391	273	0,20	0,7	1,1	22 x 25	ECS2ABC681M◊◊ΔΔ2225
	820	324	227	0,20	0,8	1,2	22 x 30	ECS2ABC821M◊◊ΔΔ2230
	1 000	266	186	0,20	1,0	1,4	25 x 25	ECS2ABC102M◊◊ΔΔ2525
	1 200	222	155	0,20	1,2	1,6	22 x 35	ECS2ABC122M◊◊ΔΔ2235
		222	155	0,20	1,2	1,6	25 x 30	ECS2ABC122M◊◊ΔΔ2530
	1 500	177	124	0,20	1,5	1,8	22 x 40	ECS2ABC152M◊◊ΔΔ2240
		177	124	0,20	1,5	1,7	25 x 35	ECS2ABC152M◊◊ΔΔ2535
		177	124	0,20	1,5	1,8	30 x 25	ECS2ABC152M◊◊ΔΔ3025
	1 800	148	103	0,20	1,5	2,1	22 x 50	ECS2ABC182M◊◊ΔΔ2250
		148	103	0,20	1,5	2,0	25 x 40	ECS2ABC182M◊◊ΔΔ2540
		148	103	0,20	1,5	2,1	30 x 30	ECS2ABC182M◊◊ΔΔ3030
		148	103	0,20	1,5	2,2	35 x 25	ECS2ABC182M◊◊ΔΔ3525
	2 200	121	84	0,20	1,5	2,2	25 x 45	ECS2ABC222M◊◊ΔΔ2545
		121	84	0,20	1,5	2,3	30 x 35	ECS2ABC222M◊◊ΔΔ3035
		121	84	0,20	1,5	2,5	35 x 30	ECS2ABC222M◊◊ΔΔ3530
	2 700	99	69	0,20	1,5	2,6	25 x 50	ECS2ABC272M◊◊ΔΔ2550
		99	69	0,20	1,5	2,7	30 x 40	ECS2ABC272M◊◊ΔΔ3040
	3 300	81	56	0,20	1,5	3,0	30 x 45	ECS2ABC332M◊◊ΔΔ3045
		81	56	0,20	1,5	3,1	35 x 35	ECS2ABC332M◊◊ΔΔ3535
	3 900	69	48	0,20	1,5	3,4	30 x 50	ECS2ABC392M◊◊ΔΔ3050
		69	48	0,20	1,5	3,4	35 x 40	ECS2ABC392M◊◊ΔΔ3540
	4 700	57	40	0,20	1,5	4,0	35 x 50	ECS2ABC472M◊◊ΔΔ3550
160 (200) 2C	220	905	633	0,15	0,4	1,0	22 x 25	ECS2CBC221M◊◊ΔΔ2225
	270	737	516	0,15	0,4	1,1	22 x 25	ECS2CBC271M◊◊ΔΔ2225
	330	603	422	0,15	0,5	1,3	22 x 25	ECS2CBC331M◊◊ΔΔ2225
	390	511	357	0,15	0,6	1,5	22 x 30	ECS2CBC391M◊◊ΔΔ2230
		511	357	0,15	0,6	1,5	25 x 25	ECS2CBC391M◊◊ΔΔ2525
	470	424	297	0,15	0,8	1,7	25 x 25	ECS2CBC471M◊◊ΔΔ2525
	560	356	249	0,15	0,9	1,9	22 x 35	ECS2CBC561M◊◊ΔΔ2235
		356	249	0,15	0,9	1,9	25 x 30	ECS2CBC561M◊◊ΔΔ2530
		356	249	0,15	0,9	2,0	30 x 25	ECS2CBC561M◊◊ΔΔ3025
	680	293	205	0,15	1,1	2,1	22 x 40	ECS2CBC681M◊◊ΔΔ2240
		293	205	0,15	1,1	2,2	25 x 35	ECS2CBC681M◊◊ΔΔ2535
	820	243	170	0,15	1,3	2,5	22 x 50	ECS2CBC821M◊◊ΔΔ2250
		243	170	0,15	1,3	2,4	25 x 40	ECS2CBC821M◊◊ΔΔ2540
		243	170	0,15	1,3	2,5	30 x 30	ECS2CBC821M◊◊ΔΔ3030
		243	170	0,15	1,3	2,4	35 x 25	ECS2CBC821M◊◊ΔΔ3525
	1 000	199	139	0,15	1,5	2,7	25 x 45	ECS2CBC102M◊◊ΔΔ2545
		199	139	0,15	1,5	2,8	30 x 35	ECS2CBC102M◊◊ΔΔ3035
		199	139	0,15	1,5	2,7	35 x 30	ECS2CBC102M◊◊ΔΔ3530
	1 200	166	116	0,15	1,5	3,1	25 x 50	ECS2CBC122M◊◊ΔΔ2550
		166	116	0,15	1,5	3,2	30 x 40	ECS2CBC122M◊◊ΔΔ3040
		166	116	0,15	1,5	3,0	35 x 35	ECS2CBC122M◊◊ΔΔ3535
	1 500	133	93	0,15	1,5	3,7	30 x 45	ECS2CBC152M◊◊ΔΔ3045
		133	93	0,15	1,5	3,5	35 x 40	ECS2CBC152M◊◊ΔΔ3540
	1 800	111	77	0,15	1,5	3,9	35 x 45	ECS2CBC182M◊◊ΔΔ3545
	2 200	91	63	0,15	1,5	4,5	35 x 50	ECS2CBC222M◊◊ΔΔ3550
180 (225) 2K	270	737	516	0,15	0,5	1,2	22 x 25	ECS2KBC271M◊◊ΔΔ2225
	330	603	422	0,15	0,6	1,4	22 x 30	ECS2KBC331M◊◊ΔΔ2230
	390	511	357	0,15	0,7	1,5	25 x 25	ECS2KBC391M◊◊ΔΔ2525
	470	424	296	0,15	0,8	1,7	22 x 35	ECS2KBC471M◊◊ΔΔ2235
		424	296	0,15	0,8	1,7	25 x 30	ECS2KBC471M◊◊ΔΔ2530
		424	296	0,15	0,8	1,8	30 x 25	ECS2KBC471M◊◊ΔΔ3025
	560	356	249	0,15	1,0	1,9	22 x 40	ECS2KBC561M◊◊ΔΔ2240
		356	249	0,15	1,0	2,0	25 x 35	ECS2KBC561M◊◊ΔΔ2535
	680	293	205	0,15	1,2	2,3	22 x 50	ECS2KBC681M◊◊ΔΔ2250
		293	205	0,15	1,2	2,2	25 x 40	ECS2KBC681M◊◊ΔΔ2540
		293	205	0,15	1,2	2,3	30 x 30	ECS2KBC681M◊◊ΔΔ3030
		293	205	0,15	1,2	2,2	35 x 25	ECS2KBC681M◊◊ΔΔ3525
	820	243	170	0,15	1,5	2,5	25 x 45	ECS2KBC821M◊◊ΔΔ2545
		243	170	0,15	1,5	2,6	30 x 35	ECS2KBC821M◊◊ΔΔ3035
		243	170	0,15	1,5	2,5	35 x 30	ECS2KBC821M◊◊ΔΔ3530
	1 000	199	139	0,15	1,5	2,9	25 x 50	ECS2KBC102M◊◊ΔΔ2550
		199	139	0,15	1,5	2,9	30 x 40	ECS2KBC102M◊◊ΔΔ3040
	1 200	166	116	0,15	1,5	3,3	30 x 45	ECS2KBC122M◊◊ΔΔ3045
		166	116	0,15	1,5	3,1	35 x 35	ECS2KBC122M◊◊ΔΔ3535
	1 500	133	93	0,15	1,5	3,6	35 x 45	ECS2KBC152M◊◊ΔΔ3545
	1 800	111	77	0,15	1,5	4,1	35 x 50	ECS2KBC182M◊◊ΔΔ3550

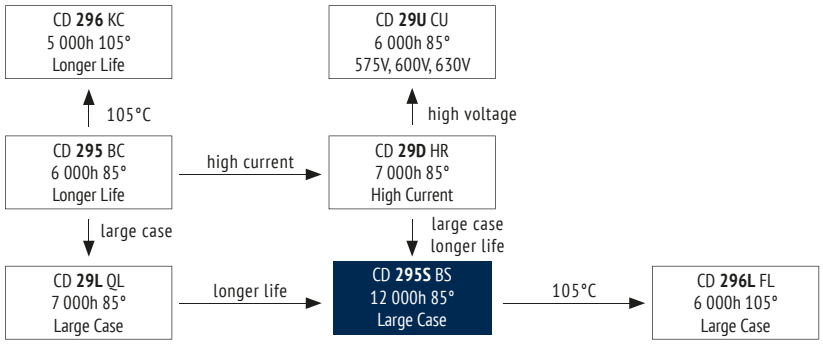
U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
200 (250) 2D	220	905	633	0,15	0,4	1,1	22 x 25	ECS2DBC221M◊◊ΔΔ2225
	270	737	516	0,15	0,5	1,2	22 x 25	ECS2DBC271M◊◊ΔΔ2225
	330	603	422	0,15	0,7	1,4	22 x 30	ECS2DBC331M◊◊ΔΔ2230
		603	422	0,15	0,7	1,4	25 x 25	ECS2DBC331M◊◊ΔΔ2525
	390	511	357	0,15	0,8	1,6	22 x 35	ECS2DBC391M◊◊ΔΔ2235
		511	357	0,15	0,8	1,6	25 x 30	ECS2DBC391M◊◊ΔΔ2530
	470	424	296	0,15	0,9	1,8	22 x 40	ECS2DBC471M◊◊ΔΔ2240
		424	296	0,15	0,9	1,9	30 x 25	ECS2DBC471M◊◊ΔΔ3025
	560	356	249	0,15	1,1	2,0	22 x 45	ECS2DBC561M◊◊ΔΔ2245
		356	249	0,15	1,1	2,0	25 x 35	ECS2DBC561M◊◊ΔΔ2535
		356	249	0,15	1,1	2,1	30 x 30	ECS2DBC561M◊◊ΔΔ3030
		356	249	0,15	1,1	2,0	35 x 25	ECS2DBC561M◊◊ΔΔ3525
	680	293	205	0,15	1,4	2,3	25 x 40	ECS2DBC681M◊◊ΔΔ2540
		293	205	0,15	1,4	2,4	30 x 35	ECS2DBC681M◊◊ΔΔ3035
	820	243	170	0,15	1,5	2,6	25 x 50	ECS2DBC821M◊◊ΔΔ2550
		243	170	0,15	1,5	2,7	30 x 40	ECS2DBC821M◊◊ΔΔ3040
		243	170	0,15	1,5	2,5	35 x 30	ECS2DBC821M◊◊ΔΔ3530
	1 000	199	139	0,15	1,5	3,1	30 x 45	ECS2DBC102M◊◊ΔΔ3045
		199	139	0,15	1,5	2,8	35 x 35	ECS2DBC102M◊◊ΔΔ3535
	1 200	166	116	0,15	1,5	3,4	30 x 50	ECS2DBC122M◊◊ΔΔ3050
		166	116	0,15	1,5	3,2	35 x 40	ECS2DBC122M◊◊ΔΔ3540
	1 500	133	93	0,15	1,5	3,8	35 x 50	ECS2DBC152M◊◊ΔΔ3550
250 (300) 2E	100	1990	1393	0,15	0,3	0,72	22 x 25	ECS2EBC101M◊◊ΔΔ2225
	180	1106	774	0,15	0,5	0,94	22 x 25	ECS2EBC181M◊◊ΔΔ2225
	220	905	633	0,15	0,6	1,1	22 x 30	ECS2EBC221M◊◊ΔΔ2230
		905	633	0,15	0,6	1,1	25 x 25	ECS2EBC221M◊◊ΔΔ2525
	270	737	516	0,15	0,7	1,2	22 x 35	ECS2EBC271M◊◊ΔΔ2235
	330	603	422	0,15	0,8	1,4	22 x 40	ECS2EBC331M◊◊ΔΔ2240
		603	422	0,15	0,8	1,4	25 x 30	ECS2EBC331M◊◊ΔΔ2530
		603	422	0,15	0,8	1,5	30 x 25	ECS2EBC331M◊◊ΔΔ3025
	390	511	357	0,15	1,0	1,6	22 x 45	ECS2EBC391M◊◊ΔΔ2245
		511	357	0,15	1,0	1,6	25 x 35	ECS2EBC391M◊◊ΔΔ2535
	470	424	296	0,15	1,2	1,8	22 x 50	ECS2EBC471M◊◊ΔΔ2250
		424	296	0,15	1,2	1,8	25 x 40	ECS2EBC471M◊◊ΔΔ2540
		424	296	0,15	1,2	1,8	30 x 30	ECS2EBC471M◊◊ΔΔ3030
		424	296	0,15	1,2	1,9	35 x 25	ECS2EBC471M◊◊ΔΔ3525
	560	356	249	0,15	1,4	2,0	25 x 45	ECS2EBC561M◊◊ΔΔ2545
		356	249	0,15	1,4	2,0	30 x 35	ECS2EBC561M◊◊ΔΔ3035
	680	293	205	0,15	1,5	2,3	30 x 40	ECS2EBC681M◊◊ΔΔ3040
		293	205	0,15	1,5	2,4	35 x 30	ECS2EBC681M◊◊ΔΔ3530
	820	243	170	0,15	1,5	2,6	30 x 45	ECS2EBC821M◊◊ΔΔ3045
		243	170	0,15	1,5	2,6	35 x 35	ECS2EBC821M◊◊ΔΔ3535
	1 000	199	139	0,15	1,5	3,0	35 x 40	ECS2EBC102M◊◊ΔΔ3540
	1 200	166	116	0,15	1,5	3,4	35 x 45	ECS2EBC122M◊◊ΔΔ3545
315 (365) 2F	100	1990	1393	0,15	0,3	0,67	22 x 25	ECS2FBC101M◊◊ΔΔ2225
	120	1658	1161	0,15	0,4	0,75	22 x 30	ECS2FBC121M◊◊ΔΔ2230
	150	1327	929	0,15	0,5	0,85	22 x 30	ECS2FBC151M◊◊ΔΔ2230
		1327	292	0,15	0,5	0,85	25 x 25	ECS2FBC151M◊◊ΔΔ2525
	180	1106	774	0,15	0,6	0,96	22 x 35	ECS2FBC181M◊◊ΔΔ2235
		1106	774	0,15	0,6	0,96	25 x 30	ECS2FBC181M◊◊ΔΔ2530
	220	905	633	0,15	0,7	1,1	22 x 40	ECS2FBC221M◊◊ΔΔ2240
		905	633	0,15	0,7	1,1	25 x 35	ECS2FBC221M◊◊ΔΔ2535
		905	633	0,15	0,7	1,1	30 x 25	ECS2FBC221M◊◊ΔΔ3025
	270	737	516	0,15	0,9	1,2	22 x 45	ECS2FBC271M◊◊ΔΔ2245
		737	516	0,15	0,9	1,3	25 x 40	ECS2FBC271M◊◊ΔΔ2540
		737	516	0,15	0,9	1,3	30 x 30	ECS2FBC271M◊◊ΔΔ3030
		737	516	0,15	0,9	1,3	35 x 25	ECS2FBC271M◊◊ΔΔ3525
	330	603	422	0,15	1,0	1,4	25 x 45	ECS2FBC331M◊◊ΔΔ2545
		603	422	0,15	1,0	1,4	30 x 35	ECS2FBC331M◊◊ΔΔ3035
	390	511	357	0,15	1,2	1,6	25 x 50	ECS2FBC391M◊◊ΔΔ2550
		511	357	0,15	1,2	1,6	30 x 40	ECS2FBC391M◊◊ΔΔ3040
		511	357	0,15	1,2	1,6	35 x 30	ECS2FBC391M◊◊ΔΔ3530
	470	424	296	0,15	1,5	1,8	30 x 45	ECS2FBC471M◊◊ΔΔ3045
		424	296	0,15	1,5	1,8	35 x 35	ECS2FBC471M◊◊ΔΔ3535
	560	356	249	0,15	1,5	2,0	30 x 50	ECS2FBC561M◊◊ΔΔ3050
		356	249	0,15	1,5	2,0	35 x 40	ECS2FBC561M◊◊ΔΔ3540
	680	293	205	0,15	1,5	2,3	35 x 45	ECS2FBC681M◊◊ΔΔ3545

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
350 (400) 2V	82	2427	1699	0,15	0,3	0,64	22 x 25	ECS2VBC820M◊◊ΔΔ2225
	100	1990	1393	0,15	0,4	0,72	22 x 25	ECS2VBC101M◊◊ΔΔ2225
	120	1658	1161	0,15	0,4	0,82	22 x 30	ECS2VBC121M◊◊ΔΔ2230
		1658	1161	0,15	0,4	0,81	25 x 25	ECS2VBC121M◊◊ΔΔ2525
	150	1327	929	0,15	0,5	0,94	22 x 35	ECS2VBC151M◊◊ΔΔ2235
		1327	929	0,15	0,5	0,94	25 x 30	ECS2VBC151M◊◊ΔΔ2530
	180	1106	774	0,15	0,6	1,1	22 x 40	ECS2VBC181M◊◊ΔΔ2240
		1106	774	0,15	0,6	1,1	30 x 25	ECS2VBC181M◊◊ΔΔ3025
	220	905	633	0,15	0,8	1,2	22 x 45	ECS2VBC221M◊◊ΔΔ2245
		905	633	0,15	0,8	1,2	25 x 35	ECS2VBC221M◊◊ΔΔ2535
		905	633	0,15	0,8	1,2	30 x 30	ECS2VBC221M◊◊ΔΔ3030
		905	633	0,15	0,8	1,3	35 x 25	ECS2VBC221M◊◊ΔΔ3525
	270	737	516	0,15	0,9	1,4	25 x 45	ECS2VBC271M◊◊ΔΔ2545
		737	516	0,15	0,9	1,4	30 x 35	ECS2VBC271M◊◊ΔΔ3035
	330	603	422	0,15	1,2	1,6	25 x 50	ECS2VBC331M◊◊ΔΔ2550
		603	422	0,15	1,2	1,6	35 x 30	ECS2VBC331M◊◊ΔΔ3530
	390	511	357	0,15	1,4	1,7	30 x 40	ECS2VBC391M◊◊ΔΔ3040
		511	357	0,15	1,4	1,8	35 x 35	ECS2VBC391M◊◊ΔΔ3535
	470	424	296	0,15	1,5	2,0	30 x 45	ECS2VBC471M◊◊ΔΔ3045
		424	296	0,15	1,5	2,0	35 x 40	ECS2VBC471M◊◊ΔΔ3540
	560	356	249	0,15	1,5	2,3	35 x 45	ECS2VBC561M◊◊ΔΔ3545
	680	293	205	0,15	1,5	2,6	35 x 50	ECS2VBC681M◊◊ΔΔ3550
400 (450) 2G	68	2926	2049	0,15	0,3	0,55	22 x 25	ECS2GBC680M◊◊ΔΔ2225
	82	2427	1699	0,15	0,3	0,60	22 x 25	ECS2GBC820M◊◊ΔΔ2225
	100	1990	1393	0,15	0,4	0,70	22 x 30	ECS2GBC101M◊◊ΔΔ2230
		1990	1393	0,15	0,4	0,70	25 x 25	ECS2GBC101M◊◊ΔΔ2525
	120	1658	1161	0,15	0,5	0,79	22 x 35	ECS2GBC121M◊◊ΔΔ2235
	150	1327	929	0,15	0,6	0,90	22 x 40	ECS2GBC151M◊◊ΔΔ2240
		1327	929	0,15	0,6	0,89	25 x 30	ECS2GBC151M◊◊ΔΔ2530
		1327	929	0,15	0,6	0,95	30 x 25	ECS2GBC151M◊◊ΔΔ3025
	180	1106	774	0,15	0,7	1,0	22 x 45	ECS2GBC181M◊◊ΔΔ2245
		1106	774	0,15	0,7	1,0	25 x 35	ECS2GBC181M◊◊ΔΔ2535
		1106	774	0,15	0,7	1,1	30 x 30	ECS2GBC181M◊◊ΔΔ3030
		1106	774	0,15	0,7	1,2	35 x 25	ECS2GBC181M◊◊ΔΔ3525
	220	905	633	0,15	0,9	1,1	22 x 50	ECS2GBC221M◊◊ΔΔ2250
		905	633	0,15	0,9	1,2	25 x 40	ECS2GBC221M◊◊ΔΔ2540
		905	633	0,15	0,9	1,2	30 x 35	ECS2GBC221M◊◊ΔΔ3035
	270	737	516	0,15	1,1	1,3	25 x 45	ECS2GBC271M◊◊ΔΔ2545
		737	516	0,15	1,1	1,4	30 x 40	ECS2GBC271M◊◊ΔΔ3040
		737	516	0,15	1,1	1,6	35 x 30	ECS2GBC271M◊◊ΔΔ3530
	330	603	422	0,15	1,3	1,6	30 x 45	ECS2GBC331M◊◊ΔΔ3045
		603	422	0,15	1,3	1,7	35 x 35	ECS2GBC331M◊◊ΔΔ3535
	390	511	357	0,15	1,5	1,8	30 x 50	ECS2GBC391M◊◊ΔΔ3050
		511	357	0,15	1,5	1,8	35 x 40	ECS2GBC391M◊◊ΔΔ3540
	470	424	296	0,15	1,5	2,1	35 x 45	ECS2GBC471M◊◊ΔΔ3545
	560	356	249	0,15	1,5	2,3	35 x 50	ECS2GBC561M◊◊ΔΔ3550
	680	293	235	0,15	1,5	2,7	35 x 55	ECS2GBC681M◊◊ΔΔ3555
	820	243	194	0,15	1,5	3,1	35 x 60	ECS2GBC821M◊◊ΔΔ3560
		243	194	0,15	1,5	3,1	40 x 50	ECS2GBC821M◊◊ΔΔ4050
	1 000	199	139	0,15	1,5	3,8	35 x 70	ECS2GBC102M◊◊ΔΔ3570
420 (470) 2X	68	2926	1522	0,15	0,3	0,56	22 x 25	ECS2XBC680M◊◊ΔΔ2225
	82	2427	1262	0,15	0,3	0,62	22 x 30	ECS2XBC820M◊◊ΔΔ2230
	100	1990	1035	0,15	0,4	0,71	22 x 35	ECS2XBC101M◊◊ΔΔ2235
	120	1658	863	0,15	0,5	0,80	22 x 40	ECS2XBC121M◊◊ΔΔ2240
		1658	863	0,15	0,5	0,81	25 x 30	ECS2XBC121M◊◊ΔΔ2530
	150	1327	690	0,15	0,6	0,92	22 x 45	ECS2XBC151M◊◊ΔΔ2245
		1327	690	0,15	0,6	0,93	25 x 35	ECS2XBC151M◊◊ΔΔ2535
	180	1106	575	0,15	0,8	1,1	25 x 40	ECS2XBC181M◊◊ΔΔ2540
		1106	575	0,15	0,8	1,1	30 x 30	ECS2XBC181M◊◊ΔΔ3030
	220	905	471	0,15	0,9	1,2	25 x 45	ECS2XBC221M◊◊ΔΔ2545
		905	471	0,15	0,9	1,3	30 x 35	ECS2XBC221M◊◊ΔΔ3035
	270	737	383	0,15	1,1	1,3	25 x 50	ECS2XBC271M◊◊ΔΔ2550
		737	383	0,15	1,1	1,4	30 x 40	ECS2XBC271M◊◊ΔΔ3040
	330	603	314	0,15	1,4	1,6	30 x 45	ECS2XBC331M◊◊ΔΔ3045
		603	314	0,15	1,4	1,6	35 x 35	ECS2XBC331M◊◊ΔΔ3535
	390	511	265	0,15	1,5	1,9	30 x 50	ECS2XBC391M◊◊ΔΔ3050

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
420 (470) 2X	470	424	220	0,15	1,5	2,2	35 x 45	ECS2XBC471M◊◊ΔΔ3545
	560	356	185	0,15	1,5	2,4	35 x 50	ECS2XBC561M◊◊ΔΔ3550
	680	293	153	0,15	1,5	2,8	35 x 55	ECS2XBC681M◊◊ΔΔ3555
	820	243	126	0,15	1,5	3,2	35 x 60	ECS2XBC821M◊◊ΔΔ3560
450 (500) 2W	68	2926	2049	0,15	0,3	0,6	22 x 30	ECS2WBC680M◊◊ΔΔ2230
	82	2427	1699	0,15	0,4	0,6	22 x 35	ECS2WBC820M◊◊ΔΔ2235
	100	1990	1393	0,15	0,5	0,7	22 x 35	ECS2WBC101M◊◊ΔΔ2235
		1990	1393	0,15	0,5	0,7	25 x 30	ECS2WBC101M◊◊ΔΔ2530
	120	1658	1161	0,15	0,5	0,8	22 x 40	ECS2WBC121M◊◊ΔΔ2240
		1658	1161	0,15	0,5	0,8	25 x 35	ECS2WBC121M◊◊ΔΔ2535
	150	1327	929	0,15	0,7	1,0	22 x 50	ECS2WBC151M◊◊ΔΔ2250
		1327	929	0,15	0,7	1,0	25 x 40	ECS2WBC151M◊◊ΔΔ2540
		1327	929	0,15	0,7	1,0	30 x 30	ECS2WBC151M◊◊ΔΔ3030
	180	1106	774	0,15	0,8	1,1	25 x 45	ECS2WBC181M◊◊ΔΔ2545
		1106	774	0,15	0,8	1,1	30 x 35	ECS2WBC181M◊◊ΔΔ3035
		1106	774	0,15	0,8	1,2	35 x 25	ECS2WBC181M◊◊ΔΔ3525
	220	905	633	0,15	1,0	1,2	25 x 50	ECS2WBC221M◊◊ΔΔ2550
		905	633	0,15	1,0	1,3	30 x 40	ECS2WBC221M◊◊ΔΔ3040
		905	633	0,15	1,0	1,3	35 x 30	ECS2WBC221M◊◊ΔΔ3530
	270	737	516	0,15	1,2	1,4	30 x 45	ECS2WBC271M◊◊ΔΔ3045
		737	516	0,15	1,2	1,5	35 x 35	ECS2WBC271M◊◊ΔΔ3535
	330	603	423	0,15	1,5	1,7	30 x 50	ECS2WBC331M◊◊ΔΔ3050
	390	511	357	0,15	1,5	1,9	35 x 45	ECS2WBC391M◊◊ΔΔ3545
	470	424	296	0,15	1,5	2,2	35 x 50	ECS2WBC471M◊◊ΔΔ3550
	560	356	285	0,15	1,5	2,4	35 x 55	ECS2WBC561M◊◊ΔΔ3555
	680	293	235	0,15	1,5	2,8	35 x 60	ECS2WBC681M◊◊ΔΔ3560
		293	235	0,15	1,5	2,8	40 x 50	ECS2WBC681M◊◊ΔΔ4050
	820	243	194	0,15	1,5	3,2	35 x 65	ECS2WBC821M◊◊ΔΔ3565
		243	194	0,15	1,5	3,3	40 x 60	ECS2WBC821M◊◊ΔΔ4060
	1 000	199	139	0,15	1,5	3,9	35 x 75	ECS2WBC102M◊◊ΔΔ3575
500 (550) 2H	100	1990	1592	0,15	0,5	0,90	25 x 30	ECS2HBC101M◊◊ΔΔ2530
		1990	1592	0,15	0,5	0,88	30 x 25	ECS2HBC101M◊◊ΔΔ3025
	120	1658	1327	0,15	0,6	1,0	25 x 35	ECS2HBC121M◊◊ΔΔ2535
		1658	1327	0,15	0,6	1,0	30 x 30	ECS2HBC121M◊◊ΔΔ3030
		1658	1327	0,15	0,6	0,95	35 x 25	ECS2HBC121M◊◊ΔΔ3525
	150	1327	1062	0,15	0,8	1,2	25 x 40	ECS2HBC151M◊◊ΔΔ2540
		1327	1062	0,15	0,8	1,2	30 x 35	ECS2HBC151M◊◊ΔΔ3035
	180	1106	885	0,15	0,9	1,4	30 x 40	ECS2HBC181M◊◊ΔΔ3040
		1106	885	0,15	0,9	1,3	35 x 30	ECS2HBC181M◊◊ΔΔ3530
	220	905	724	0,15	1,1	1,6	30 x 45	ECS2HBC221M◊◊ΔΔ3045
		905	724	0,15	1,1	1,5	35 x 35	ECS2HBC221M◊◊ΔΔ3535
	270	737	590	0,15	1,4	1,8	30 x 50	ECS2HBC271M◊◊ΔΔ3050
		737	590	0,15	1,4	1,7	35 x 40	ECS2HBC271M◊◊ΔΔ3540
	330	603	483	0,15	1,5	2,0	30 x 50	ECS2HBC331M◊◊ΔΔ3050
		603	483	0,15	1,5	1,9	35 x 45	ECS2HBC331M◊◊ΔΔ3545
	390	511	409	0,15	1,5	2,3	35 x 50	ECS2HBC391M◊◊ΔΔ3550
	470	424	339	0,15	1,5	2,5	35 x 60	ECS2HBC471M◊◊ΔΔ3560
	560	356	285	0,15	1,5	2,8	35 x 65	ECS2HBC561M◊◊ΔΔ3565
	680	293	235	0,15	1,5	3,2	35 x 70	ECS2HBC681M◊◊ΔΔ3570

12 000h at 85°C (105°C)

- Extreme Long Useful Life at 85°C
- Large Case Size
- High Currents
- Enlarged Temperature (105°C) Range during Voltage Derating



ITEM	CHARACTERISTICS		
Operating Temperature Range (°C)	-40 ~ +85	-25 ~ +85	The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval. Additionally please ask for series CD 295D ZD with temperature range -55°C ~ +85°C and 10 000h useful life.
Voltage Range (V)	160 ~ 400	450 ~ 500	
Capacitance Range (µF)	390 ~ 4 700		
Capacitance Tolerance (20°C, 120Hz)	± 20%		
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.		
Enlarged Temperature Range	The maximum temperature at hotspot of 105°C is allowed, if the maximum voltage is limited to 0,93*U_R (Voltage Derating)		

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	160 ~ 200	250 ~ 400	450 ~ 500
	$Z_{-25°C} / Z_{+20°C}$	3	4	
	$Z_{-40°C} / Z_{+20°C}$	6	8	-

Fast Charge-Discharge: Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray

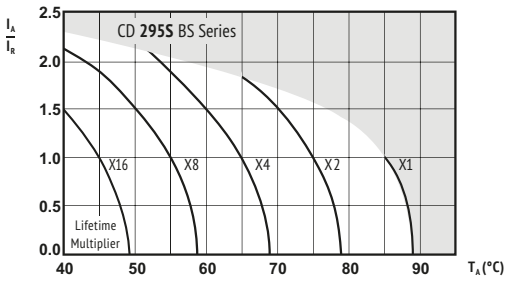
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	12 000h	> 100 000h	5 000h	7 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,2 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	≥ 50 kHz
Factor	0,80	1,00	1,16	1,30	1,41	1,43

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

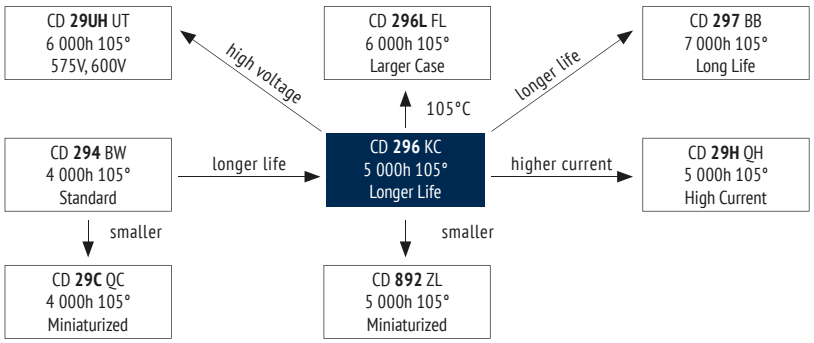
SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
160 (200) 2C	2 200	91	63	0,15	1,5	4,9	35 x 45	ECS2CBS222M◊◊ΔΔ3545
	2 700	74	52	0,15	1,5	5,3	35 x 50	ECS2CBS272M◊◊ΔΔ3550
	3 300	61	42	0,15	1,5	5,5	35 x 70	ECS2CBS332M◊◊ΔΔ3570
		61	42	0,15	1,5	5,5	40 x 60	ECS2CBS332M◊◊ΔΔ4060
	3 900	52	36	0,15	1,5	5,9	35 x 80	ECS2CBS392M◊◊ΔΔ3580
	4 700	43	30	0,15	1,5	7,3	40 x 80	ECS2CBS472M◊◊ΔΔ4080
200 (250) 2D	1 500	133	93	0,15	1,5	4,3	35 x 40	ECS2DBS152M◊◊ΔΔ3540
	1 800	111	77	0,15	1,5	4,7	35 x 45	ECS2DBS182M◊◊ΔΔ3545
	2 200	91	63	0,15	1,5	5,4	35 x 50	ECS2DBS222M◊◊ΔΔ3550
		91	63	0,15	1,5	5,4	40 x 40	ECS2DBS222M◊◊ΔΔ4040
	2 700	74	52	0,15	1,5	5,9	35 x 60	ECS2DBS272M◊◊ΔΔ3560
		74	52	0,15	1,5	5,9	40 x 50	ECS2DBS272M◊◊ΔΔ4050
	3 300	61	42	0,15	1,5	6,5	35 x 80	ECS2DBS332M◊◊ΔΔ3580
		61	42	0,15	1,5	6,5	40 x 60	ECS2DBS332M◊◊ΔΔ4060
	3 900	52	36	0,15	1,5	7,0	40 x 80	ECS2DBS392M◊◊ΔΔ4080
	4 700	43	30	0,15	1,5	9,2	40 x 90	ECS2DBS472M◊◊ΔΔ4090
250 (300) 2E	1 000	199	139	0,15	1,5	3,7	35 x 40	ECS2EBS102M◊◊ΔΔ3540
	1 200	166	116	0,15	1,5	3,8	35 x 45	ECS2EBS122M◊◊ΔΔ3545
	1 500	133	93	0,15	1,5	4,4	35 x 50	ECS2EBS152M◊◊ΔΔ3550
		133	93	0,15	1,5	4,5	40 x 40	ECS2EBS152M◊◊ΔΔ4040
	1 800	111	77	0,15	1,5	5,0	35 x 70	ECS2EBS182M◊◊ΔΔ3570
		111	77	0,15	1,5	5,0	40 x 50	ECS2EBS182M◊◊ΔΔ4050
	2 200	91	63	0,15	1,5	5,4	35 x 70	ECS2EBS222M◊◊ΔΔ3570
	2 700	74	52	0,15	1,5	6,9	40 x 80	ECS2EBS272M◊◊ΔΔ4080
350 (400) 2V	680	293	205	0,15	1,5	3,6	35 x 45	ECS2VBS681M◊◊ΔΔ3545
		293	205	0,15	1,5	3,6	40 x 40	ECS2VBS681M◊◊ΔΔ4040
	820	243	170	0,15	1,5	4,5	35 x 60	ECS2VBS821M◊◊ΔΔ3560
		243	170	0,15	1,5	4,5	40 x 50	ECS2VBS821M◊◊ΔΔ4050
	1 000	199	139	0,15	1,5	5,2	35 x 70	ECS2VBS102M◊◊ΔΔ3570
		199	139	0,15	1,5	4,9	40 x 60	ECS2VBS102M◊◊ΔΔ4060
	1 200	166	116	0,15	1,5	5,5	35 x 80	ECS2VBS122M◊◊ΔΔ3580
		166	116	0,15	1,5	5,6	40 x 70	ECS2VBS122M◊◊ΔΔ4070
	1 500	133	93	0,15	1,5	6,5	40 x 80	ECS2VBS152M◊◊ΔΔ4080
		133	93	0,15	1,5	6,2	45 x 70	ECS2VBS152M◊◊ΔΔ4570
	1 800	111	77	0,15	1,5	7,9	40 x 100	ECS2VBS182M◊◊ΔΔ40100
		111	77	0,15	1,5	7,1	45 x 70	ECS2VBS182M◊◊ΔΔ4570
	2 200	91	63	0,15	1,5	8,7	40 x 100	ECS2VBS222M◊◊ΔΔ40100
400 (450) 2G	560	356	249	0,15	1,5	3,2	35 x 50	ECS2GBS561M◊◊ΔΔ3550
		356	249	0,15	1,5	2,8	40 x 40	ECS2GBS561M◊◊ΔΔ4040
	680	293	205	0,15	1,5	3,7	35 x 60	ECS2GBS681M◊◊ΔΔ3560
		293	205	0,15	1,5	3,8	40 x 50	ECS2GBS681M◊◊ΔΔ4050
	820	243	170	0,15	1,5	4,2	35 x 60	ECS2GBS821M◊◊ΔΔ3560
		243	170	0,15	1,5	4,1	40 x 50	ECS2GBS821M◊◊ΔΔ4050
	1 000	199	139	0,15	1,5	4,9	35 x 70	ECS2GBS102M◊◊ΔΔ3570
		199	139	0,15	1,5	4,8	40 x 60	ECS2GBS102M◊◊ΔΔ4060
		199	139	0,15	1,5	4,6	45 x 50	ECS2GBS102M◊◊ΔΔ4550
	1 200	166	116	0,15	1,5	5,8	35 x 80	ECS2GBS122M◊◊ΔΔ3580
		166	116	0,15	1,5	5,5	40 x 70	ECS2GBS122M◊◊ΔΔ4070
	1 500	133	93	0,15	1,5	6,6	40 x 80	ECS2GBS152M◊◊ΔΔ4080
		133	93	0,15	1,5	6,6	45 x 70	ECS2GBS152M◊◊ΔΔ4570
		133	93	0,15	1,5	6,8	45 x 80	ECS2GBS152M◊◊ΔΔ4580
	1 800	111	77	0,15	1,5	7,9	40 x 90	ECS2GBS182M◊◊ΔΔ4090
		111	77	0,15	1,5	7,3	45 x 80	ECS2GBS182M◊◊ΔΔ4580
450 (500) 2W	470	424	296	0,15	1,5	3,0	35 x 50	ECS2WBS471M◊◊ΔΔ3550
		424	296	0,15	1,5	3,0	40 x 40	ECS2WBS471M◊◊ΔΔ4040
	560	356	249	0,15	1,5	3,1	35 x 50	ECS2WBS561M◊◊ΔΔ3550
		356	249	0,15	1,5	3,3	35 x 60	ECS2WBS561M◊◊ΔΔ3560
		356	249	0,15	1,5	3,4	40 x 50	ECS2WBS561M◊◊ΔΔ4050
	680	293	205	0,15	1,5	3,5	35 x 60	ECS2WBS681M◊◊ΔΔ3560
		293	205	0,15	1,5	3,8	35 x 70	ECS2WBS681M◊◊ΔΔ3570
		293	205	0,15	1,5	3,8	40 x 60	ECS2WBS681M◊◊ΔΔ4060
	820	243	170	0,15	1,5	4,6	35 x 80	ECS2WBS821M◊◊ΔΔ3580
		243	170	0,15	1,5	4,4	40 x 60	ECS2WBS821M◊◊ΔΔ4060
450 (500) 2W	1 000	199	139	0,15	1,5	5,7	35 x 80	ECS2WBS102M◊◊ΔΔ3580
		199	139	0,15	1,5	5,2	40 x 60	ECS2WBS102M◊◊ΔΔ4060
	1 200	166	116	0,15	1,5	5,9	40 x 70	ECS2WBS122M◊◊ΔΔ4070
		166	116	0,15	1,5	6,2	45 x 70	ECS2WBS122M◊◊ΔΔ4570
	1 500	133	93	0,15	1,5	7,3	40 x 100	ECS2WBS152M◊◊ΔΔ40100
		133	93	0,15	1,5	7,0	45 x 80	ECS2WBS152M◊◊ΔΔ4580
	1 800	111	77	0,15	1,5	7,9	45 x 100	ECS2WBS182M◊◊ΔΔ45100
500 (550) 2H	390	511	357	0,15	1,5	1,9	35 x 50	ECS2HBS391M◊◊ΔΔ3550
	470	424	296	0,15	1,5	2,3	35 x 60	ECS2HBS471M◊◊ΔΔ3560
	560	356	249	0,15	1,5	2,5	35 x 60	ECS2HBS561M◊◊ΔΔ3560
		356	249	0,15	1,5	2,7	40 x 60	ECS2HBS561M◊◊ΔΔ4060
	680	293	205	0,15	1,5	3,1	35 x 80	ECS2HBS681M◊◊ΔΔ3580
		293	205	0,15	1,5	2,8	40 x 70	ECS2HBS681M◊◊ΔΔ4070
	820	243	170	0,15	1,5	3,4	35 x 90	ECS2HBS821M◊◊ΔΔ3590
		243	170	0,15	1,5	3,3	40 x 70	ECS2HBS821M◊◊ΔΔ4070
	1 000	199	139	0,15	1,5	3,9	40 x 80	ECS2HBS102M◊◊ΔΔ4080
		199	139	0,15	1,5	3,9	45 x 70	ECS2HBS102M◊◊ΔΔ4570
	1 200	166	116	0,15	1,5	4,3	40 x 90	ECS2HBS122M◊◊ΔΔ4090
	1 500	133	93	0,15	1,5	4,8	45 x 100	ECS2HBS152M◊◊ΔΔ45100

SNAP-IN

5 000h at 105°C

- Long Life at High Temperature
- High Ripple Currents
- Professional Power Supplies



ITEM — CHARACTERISTICS

Operating Temperature Range (°C)	-40 ~ +105	-25 ~ +105
Voltage Range (V)	16 ~ 100	160 ~ 550
Capacitance Range (µF)	47 ~ 47 000	
Capacitance Tolerance (20°C, 120Hz)	± 20%	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	16 ~ 100	160 ~ 200	250 ~ 550
	$Z_{-25°C} / Z_{+20°C}$	4		
	$Z_{-40°C} / Z_{+20°C}$	15	-	

Fast Charge-Discharge: **Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	5 000h	> 200 000h	3 000h	4 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 40°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

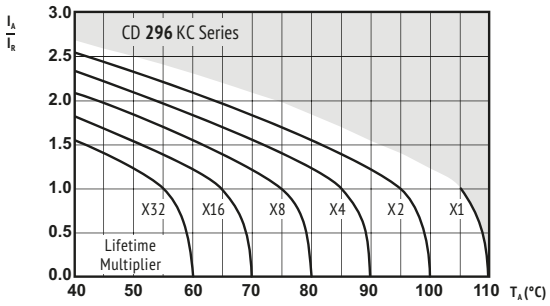
MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Rated Voltage (V) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	≥ 50 kHz
≤ 100	0,95	1,00	1,07	1,13	1,19	1,20
160 ~ 250	0,87	1,00	1,17	1,32	1,45	1,50
≥ 315	0,80	1,00	1,16	1,30	1,41	1,43

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
	6 800	98	68	0,50	1,1	1,60	22 x 25	ECS1CKC682M◊◊ΔΔ2225
	8 200	81	57	0,50	1,3	1,80	25 x 25	ECS1CKC822M◊◊ΔΔ2525
	10 000	67	46	0,50	1,5	1,99	22 x 30	ECS1CKC103M◊◊ΔΔ2230
		67	46	0,50	1,5	1,99	25 x 25	ECS1CKC103M◊◊ΔΔ2525
	12 000	56	39	0,50	1,5	2,28	22 x 35	ECS1CKC123M◊◊ΔΔ2235
		56	39	0,50	1,5	2,30	25 x 30	ECS1CKC123M◊◊ΔΔ2530
		56	39	0,50	1,5	2,38	30 x 25	ECS1CKC123M◊◊ΔΔ3025
	15 000	45	31	0,50	1,5	2,64	22 x 40	ECS1CKC153M◊◊ΔΔ2240
		45	31	0,50	1,5	2,68	25 x 35	ECS1CKC153M◊◊ΔΔ2535
	18 000	37	26	0,50	1,5	2,98	22 x 45	ECS1CKC183M◊◊ΔΔ2245
		37	26	0,50	1,5	3,04	25 x 40	ECS1CKC183M◊◊ΔΔ2540
		37	26	0,50	1,5	3,00	30 x 30	ECS1CKC183M◊◊ΔΔ3030
		37	26	0,50	1,5	3,10	35 x 25	ECS1CKC183M◊◊ΔΔ3525
	22 000	31	21	0,50	1,5	3,40	25 x 45	ECS1CKC223M◊◊ΔΔ2545
		31	21	0,50	1,5	3,39	30 x 35	ECS1CKC223M◊◊ΔΔ3035
	27 000	25	17	0,50	1,5	3,81	25 x 50	ECS1CKC273M◊◊ΔΔ2550
		25	17	0,50	1,5	3,83	30 x 40	ECS1CKC273M◊◊ΔΔ3040
		25	17	0,50	1,5	3,74	35 x 30	ECS1CKC273M◊◊ΔΔ3530
	33 000	21	14	0,50	1,5	4,30	30 x 45	ECS1CKC333M◊◊ΔΔ3045
		21	14	0,50	1,5	4,24	35 x 35	ECS1CKC333M◊◊ΔΔ3535
	39 000	18	12	0,50	1,5	4,74	30 x 50	ECS1CKC393M◊◊ΔΔ3050
		18	12	0,50	1,5	4,72	35 x 40	ECS1CKC393M◊◊ΔΔ3540
	47 000	15	10	0,50	1,5	5,27	35 x 45	ECS1CKC473M◊◊ΔΔ3545
	4 700	113	79	0,40	1,2	1,55	22 x 25	ECS1EKC472M◊◊ΔΔ2225
	5 600	95	66	0,40	1,4	1,70	25 x 25	ECS1EKC562M◊◊ΔΔ2525
	6 800	79	55	0,40	1,5	1,91	22 x 30	ECS1EKC682M◊◊ΔΔ2230
		79	55	0,40	1,5	1,91	25 x 25	ECS1EKC682M◊◊ΔΔ2525
	8 200	65	45	0,40	1,5	2,14	22 x 35	ECS1EKC822M◊◊ΔΔ2235
		65	45	0,40	1,5	2,16	25 x 30	ECS1EKC822M◊◊ΔΔ2530
		65	45	0,40	1,5	2,25	30 x 25	ECS1EKC822M◊◊ΔΔ3025
	10 000	54	37	0,40	1,5	2,40	22 x 40	ECS1EKC103M◊◊ΔΔ2240
		54	37	0,40	1,5	2,44	25 x 35	ECS1EKC103M◊◊ΔΔ2535
	12 000	45	31	0,40	1,5	2,69	22 x 45	ECS1EKC123M◊◊ΔΔ2245
		45	31	0,40	1,5	2,74	25 x 40	ECS1EKC123M◊◊ΔΔ2540
		45	31	0,40	1,5	2,70	30 x 30	ECS1EKC123M◊◊ΔΔ3030
		45	31	0,40	1,5	2,80	35 x 25	ECS1EKC123M◊◊ΔΔ3525
	15 000	36	25	0,40	1,5	3,15	25 x 45	ECS1EKC153M◊◊ΔΔ2545
		36	25	0,40	1,5	3,13	30 x 35	ECS1EKC153M◊◊ΔΔ3035
		36	25	0,40	1,5	3,22	35 x 30	ECS1EKC153M◊◊ΔΔ3530
	18 000	30	21	0,40	1,5	3,54	25 x 50	ECS1EKC183M◊◊ΔΔ2550
		30	21	0,40	1,5	3,54	30 x 40	ECS1EKC183M◊◊ΔΔ3040
	22 000	25	17	0,40	1,5	4,24	30 x 45	ECS1EKC223M◊◊ΔΔ3045
		25	17	0,40	1,5	3,96	35 x 35	ECS1EKC223M◊◊ΔΔ3535
	27 000	20	14	0,40	1,5	4,75	35 x 45	ECS1EKC273M◊◊ΔΔ3545
	33 000	17	11	0,40	1,5	5,39	35 x 50	ECS1EKC333M◊◊ΔΔ3550
	3 300	141	99	0,35	1,2	1,43	22 x 25	ECS1VKC332M◊◊ΔΔ2225
	3 900	120	83	0,35	1,4	1,65	22 x 30	ECS1VKC392M◊◊ΔΔ2230
	4 700	99	69	0,35	1,5	1,78	25 x 25	ECS1VKC472M◊◊ΔΔ2525
	5 600	83	58	0,35	1,5	2,02	22 x 35	ECS1VKC562M◊◊ΔΔ2235
		83	58	0,35	1,5	2,04	25 x 30	ECS1VKC562M◊◊ΔΔ2530
		83	58	0,35	1,5	2,12	30 x 25	ECS1VKC562M◊◊ΔΔ3025
	6 800	69	48	0,35	1,5	2,28	22 x 40	ECS1VKC682M◊◊ΔΔ2240
		69	48	0,35	1,5	2,31	25 x 35	ECS1VKC682M◊◊ΔΔ2535
	8 200	57	40	0,35	1,5	2,67	22 x 50	ECS1VKC822M◊◊ΔΔ2250
		57	40	0,35	1,5	2,60	25 x 40	ECS1VKC822M◊◊ΔΔ2540
		57	40	0,35	1,5	2,56	30 x 30	ECS1VKC822M◊◊ΔΔ3030
		57	40	0,35	1,5	2,78	35 x 25	ECS1VKC822M◊◊ΔΔ3525
	10 000	47	33	0,35	1,5	2,92	25 x 45	ECS1VKC103M◊◊ΔΔ2545
		47	33	0,35	1,5	2,92	30 x 35	ECS1VKC103M◊◊ΔΔ3035
	12 000	39	27	0,35	1,5	3,26	25 x 50	ECS1VKC123M◊◊ΔΔ2550
		39	27	0,35	1,5	3,28	30 x 40	ECS1VKC123M◊◊ΔΔ3040
		39	27	0,35	1,5	3,20	35 x 30	ECS1VKC123M◊◊ΔΔ3530
	15 000	31	22	0,35	1,5	3,74	30 x 45	ECS1VKC153M◊◊ΔΔ3045
		31	22	0,35	1,5	3,69	35 x 35	ECS1VKC153M◊◊ΔΔ3535
	18 000	26	18	0,35	1,5	4,16	35 x 40	ECS1VKC183M◊◊ΔΔ3540
	22 000	22	15	0,35	1,5	4,92	35 x 50	ECS1VKC223M◊◊ΔΔ3550

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
	1 800	222	155	0,30	0,9	1,31	22 x 25	ECS1HKC182M◊◊ΔΔ2225
	2 200	181	127	0,30	1,1	1,45	22 x 30	ECS1HKC222M◊◊ΔΔ2230
	2 700	148	103	0,30	1,4	1,70	22 x 30	ECS1HKC272M◊◊ΔΔ2230
		148	103	0,30	1,4	1,70	25 x 25	ECS1HKC272M◊◊ΔΔ2525
	3 300	121	84	0,30	1,5	1,98	22 x 35	ECS1HKC332M◊◊ΔΔ2235
		121	84	0,30	1,5	2,00	25 x 30	ECS1HKC332M◊◊ΔΔ2530
	3 900	103	72	0,30	1,5	2,25	22 x 40	ECS1HKC392M◊◊ΔΔ2240
		103	72	0,30	1,5	2,28	25 x 35	ECS1HKC392M◊◊ΔΔ2535
		103	72	0,30	1,5	2,22	30 x 25	ECS1HKC392M◊◊ΔΔ3025
	4 700	85	59	0,30	1,5	2,56	22 x 45	ECS1HKC472M◊◊ΔΔ2245
		85	59	0,30	1,5	2,58	30 x 30	ECS1HKC472M◊◊ΔΔ3030
		85	59	0,30	1,5	2,67	35 x 25	ECS1HKC472M◊◊ΔΔ3525
	5 600	72	50	0,30	1,5	2,89	22 x 50	ECS1HKC562M◊◊ΔΔ2250
		72	50	0,30	1,5	2,81	25 x 40	ECS1HKC562M◊◊ΔΔ2540
		72	50	0,30	1,5	2,95	30 x 35	ECS1HKC562M◊◊ΔΔ3035
	6 800	59	41	0,30	1,5	3,37	25 x 50	ECS1HKC682M◊◊ΔΔ2550
		59	41	0,30	1,5	3,39	30 x 40	ECS1HKC682M◊◊ΔΔ3040
		59	41	0,30	1,5	3,31	35 x 30	ECS1HKC682M◊◊ΔΔ3530
	8 200	49	34	0,30	1,5	3,71	30 x 45	ECS1HKC822M◊◊ΔΔ3045
		49	34	0,30	1,5	3,66	35 x 35	ECS1HKC822M◊◊ΔΔ3535
	10 000	40	28	0,30	1,5	4,09	30 x 50	ECS1HKC103M◊◊ΔΔ3050
		40	28	0,30	1,5	4,07	35 x 40	ECS1HKC103M◊◊ΔΔ3540
	12 000	34	23	0,30	1,5	4,50	35 x 45	ECS1HKC123M◊◊ΔΔ3545
	1 200	222	155	0,20	0,8	1,39	22 x 25	ECS1JKC122M◊◊ΔΔ2225
	1 500	177	124	0,20	0,9	1,52	22 x 30	ECS1JKC152M◊◊ΔΔ2230
	1 800	148	103	0,20	1,1	1,52	22 x 30	ECS1JKC182M◊◊ΔΔ2230
		148	103	0,20	1,1	1,52	25 x 25	ECS1JKC182M◊◊ΔΔ2525
	2 200	121	84	0,20	1,4	1,73	22 x 35	ECS1JKC222M◊◊ΔΔ2235
		121	84	0,20	1,4	1,75	25 x 30	ECS1JKC222M◊◊ΔΔ2530
	2 700	99	69	0,20	1,5	1,97	22 x 40	ECS1JKC272M◊◊ΔΔ2240
		99	69	0,20	1,5	1,99	25 x 35	ECS1JKC272M◊◊ΔΔ2535
		99	69	0,20	1,5	1,93	30 x 25	ECS1JKC272M◊◊ΔΔ3025
	3 300	81	56	0,20	1,5	2,32	22 x 50	ECS1JKC332M◊◊ΔΔ2250
		81	56	0,20	1,5	2,27	25 x 40	ECS1JKC332M◊◊ΔΔ2540
		81	56	0,20	1,5	2,24	30 x 30	ECS1JKC332M◊◊ΔΔ3030
		81	56	0,20	1,5	2,41	35 x 25	ECS1JKC332M◊◊ΔΔ3525
	3 900	69	48	0,20	1,5	2,54	25 x 45	ECS1JKC392M◊◊ΔΔ2545
		69	48	0,20	1,5	2,55	30 x 35	ECS1JKC392M◊◊ΔΔ3035
	4 700	57	40	0,20	1,5	2,88	25 x 50	ECS1JKC472M◊◊ΔΔ2550
		57	40	0,20	1,5	2,90	30 x 40	ECS1JKC472M◊◊ΔΔ3040
		57	40	0,20	1,5	2,83	35 x 30	ECS1JKC472M◊◊ΔΔ3530
	5 600	48	33	0,20	1,5	3,28	30 x 45	ECS1JKC562M◊◊ΔΔ3045
		48	33	0,20	1,5	3,24	35 x 35	ECS1JKC562M◊◊ΔΔ3535
	6 800	40	27	0,20	1,5	3,73	30 x 50	ECS1JKC682M◊◊ΔΔ3050
		40	27	0,20	1,5	3,71	35 x 40	ECS1JKC682M◊◊ΔΔ3540
	8 200	33	23	0,20	1,5	4,16	35 x 45	ECS1JKC822M◊◊ΔΔ3545
	10 000	27	19	0,20	1,5	4,69	35 x 50	ECS1JKC103M◊◊ΔΔ3550
	820	324	227	0,20	0,7	1,11	22 x 25	ECS1KKC821M◊◊ΔΔ2225
	1 000	266	186	0,20	0,8	1,25	22 x 25	ECS1KKC102M◊◊ΔΔ2225
	1 200	222	155	0,20	1,0	1,39	22 x 30	ECS1KKC122M◊◊ΔΔ2230
		222	155	0,20	1,0	1,39	25 x 25	ECS1KKC122M◊◊ΔΔ2525
	1 500	177	124	0,20	1,2	1,61	22 x 35	ECS1KKC152M◊◊ΔΔ2235
		177	124	0,20	1,2	1,62	25 x 30	ECS1KKC152M◊◊ΔΔ2530
	1 800	148	103	0,20	1,4	1,83	22 x 40	ECS1KKC182M◊◊ΔΔ2240
		148	103	0,20	1,4	1,81	30 x 25	ECS1KKC182M◊◊ΔΔ3025
	2 200	121	84	0,20	1,5	2,09	22 x 45	ECS1KKC222M◊◊ΔΔ2245
		121	84	0,20	1,5	2,01	25 x 35	ECS1KKC222M◊◊ΔΔ2535
		121	84	0,20	1,5	2,10	30 x 30	ECS1KKC222M◊◊ΔΔ3030
		121	84	0,20	1,5	2,17	35 x 25	ECS1KKC222M◊◊ΔΔ3525
	2 700	99	69	0,20	1,5	2,43	25 x 45	ECS1KKC272M◊◊ΔΔ2545
		99	69	0,20	1,5	2,43	30 x 35	ECS1KKC272M◊◊ΔΔ3035
	3 300	81	56	0,20	1,5	2,76	25 x 50	ECS1KKC332M◊◊ΔΔ2550
		81	56	0,20	1,5	2,78	30 x 40	ECS1KKC332M◊◊ΔΔ3040
		81	56	0,20	1,5	2,71	35 x 30	ECS1KKC332M◊◊ΔΔ3530
	3 900	69	48	0,20	1,5	3,12	30 x 45	ECS1KKC392M◊◊ΔΔ3045
		69	48	0,20	1,5	3,07	35 x 35	ECS1KKC392M◊◊ΔΔ3535

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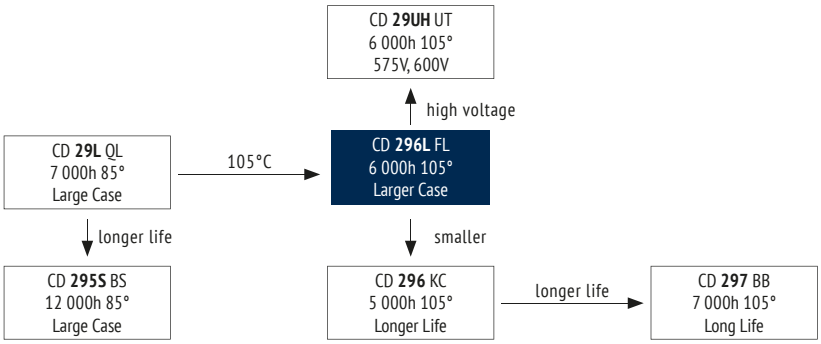
U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
	4 700	57	40	0,20	1,5	3,56	30 x 50	ECS1KKC472M◊◊ΔΔ3050
		57	40	0,20	1,5	3,50	35 x 40	ECS1KKC472M◊◊ΔΔ3540
	5 600	48	33	0,20	1,5	3,87	35 x 45	ECS1KKC562M◊◊ΔΔ3545
	6 800	40	27	0,20	1,5	4,19	35 x 50	ECS1KKC682M◊◊ΔΔ3550
	560	474	332	0,20	0,6	1,07	22 x 25	ECS2AKC561M◊◊ΔΔ2225
	680	391	274	0,20	0,7	1,20	22 x 30	ECS2AKC681M◊◊ΔΔ2230
	820	324	227	0,20	0,8	1,35	22 x 30	ECS2AKC821M◊◊ΔΔ2230
		324	227	0,20	0,8	1,35	25 x 25	ECS2AKC821M◊◊ΔΔ2525
	1 000	266	186	0,20	1,0	1,54	22 x 35	ECS2AKC102M◊◊ΔΔ2235
		266	186	0,20	1,0	1,56	25 x 30	ECS2AKC102M◊◊ΔΔ2530
	1 200	222	155	0,20	1,2	1,74	22 x 40	ECS2AKC122M◊◊ΔΔ2240
		222	155	0,20	1,2	1,76	25 x 35	ECS2AKC122M◊◊ΔΔ2535
		222	155	0,20	1,2	1,71	30 x 25	ECS2AKC122M◊◊ΔΔ3025
	1 500	177	124	0,20	1,5	1,99	22 x 45	ECS2AKC152M◊◊ΔΔ2245
		177	124	0,20	1,5	2,03	25 x 40	ECS2AKC152M◊◊ΔΔ2540
		177	124	0,20	1,5	2,00	30 x 30	ECS2AKC152M◊◊ΔΔ3030
		177	124	0,20	1,5	2,07	35 x 25	ECS2AKC152M◊◊ΔΔ3525
	1 800	148	103	0,20	1,5	2,28	25 x 45	ECS2AKC182M◊◊ΔΔ2545
		148	103	0,20	1,5	2,27	30 x 35	ECS2AKC182M◊◊ΔΔ3035
	2 200	121	84	0,20	1,5	2,57	25 x 50	ECS2AKC222M◊◊ΔΔ2550
		121	84	0,20	1,5	2,59	30 x 40	ECS2AKC222M◊◊ΔΔ3040
		121	84	0,20	1,5	2,52	35 x 30	ECS2AKC222M◊◊ΔΔ3530
	2 700	99	69	0,20	1,5	2,94	30 x 45	ECS2AKC272M◊◊ΔΔ3045
		99	69	0,20	1,5	2,90	35 x 35	ECS2AKC272M◊◊ΔΔ3535
	3 300	81	56	0,20	1,5	3,32	30 x 50	ECS2AKC332M◊◊ΔΔ3050
		81	56	0,20	1,5	3,31	35 x 40	ECS2AKC332M◊◊ΔΔ3540
	3 900	69	48	0,20	1,5	3,69	35 x 45	ECS2AKC392M◊◊ΔΔ3545
	4 700	57	40	0,20	1,5	4,14	35 x 50	ECS2AKC472M◊◊ΔΔ3550
	330	603	422	0,15	0,5	1,16	22 x 25	ECS2CKC331M◊◊ΔΔ2225
	390	511	357	0,15	0,6	1,43	22 x 30	ECS2CKC391M◊◊ΔΔ2230
	470	424	296	0,15	0,8	1,52	22 x 35	ECS2CKC471M◊◊ΔΔ2235
		424	296	0,15	0,8	1,55	25 x 25	ECS2CKC471M◊◊ΔΔ2525
	560	356	249	0,15	0,9	1,62	22 x 40	ECS2CKC561M◊◊ΔΔ2240
		356	249	0,15	0,9	1,73	25 x 30	ECS2CKC561M◊◊ΔΔ2530
	680	293	205	0,15	1,1	1,70	22 x 45	ECS2CKC681M◊◊ΔΔ2245
		293	205	0,15	1,1	1,81	25 x 35	ECS2CKC681M◊◊ΔΔ2535
		293	205	0,15	1,1	1,82	30 x 25	ECS2CKC681M◊◊ΔΔ3025
	820	243	170	0,15	1,3	1,91	22 x 50	ECS2CKC821M◊◊ΔΔ2250
		243	170	0,15	1,3	1,98	25 x 40	ECS2CKC821M◊◊ΔΔ2540
		243	170	0,15	1,3	1,98	30 x 30	ECS2CKC821M◊◊ΔΔ3030
		243	170	0,15	1,3	1,93	35 x 25	ECS2CKC821M◊◊ΔΔ3525
	1 000	199	139	0,15	1,5	2,04	25 x 45	ECS2CKC102M◊◊ΔΔ2545
		199	139	0,15	1,5	2,14	30 x 35	ECS2CKC102M◊◊ΔΔ3035
	1 200	166	116	0,15	1,5	2,12	25 x 50	ECS2CKC122M◊◊ΔΔ2550
		166	116	0,15	1,5	2,22	30 x 40	ECS2CKC122M◊◊ΔΔ3040
		166	116	0,15	1,5	2,40	35 x 30	ECS2CKC122M◊◊ΔΔ3530
	1 500	133	93	0,15	1,5	2,46	30 x 45	ECS2CKC152M◊◊ΔΔ3045
		133	93	0,15	1,5	2,53	35 x 35	ECS2CKC152M◊◊ΔΔ3535
	1 800	111	77	0,15	1,5	2,98	35 x 45	ECS2CKC182M◊◊ΔΔ3545
	2 200	91	66	0,15	1,5	3,10	35 x 50	ECS2CKC222M◊◊ΔΔ3550
	2 700	74	51	0,15	1,5	3,92	35 x 60	ECS2CKC272M◊◊ΔΔ3560
	3 300	61	42	0,15	1,5	4,63	35 x 70	ECS2CKC332M◊◊ΔΔ3570
	220	905	633	0,15	0,4	1,08	22 x 25	ECS2DKC221M◊◊ΔΔ2225
	330	603	422	0,15	0,7	1,30	22 x 30	ECS2DKC331M◊◊ΔΔ2230
		603	422	0,15	0,7	1,35	25 x 25	ECS2DKC331M◊◊ΔΔ2525
	390	511	357	0,15	0,8	1,41	22 x 35	ECS2DKC391M◊◊ΔΔ2235
	470	424	296	0,15	0,9	1,50	22 x 40	ECS2DKC471M◊◊ΔΔ2240
		424	296	0,15	0,9	1,47	25 x 30	ECS2DKC471M◊◊ΔΔ2530
		424	296	0,15	0,9	1,56	30 x 25	ECS2DKC471M◊◊ΔΔ3025
	560	356	249	0,15	1,1	1,58	22 x 45	ECS2DKC561M◊◊ΔΔ2245
		356	249	0,15	1,1	1,60	25 x 35	ECS2DKC561M◊◊ΔΔ2535
	680	293	205	0,15	1,4	1,78	22 x 50	ECS2DKC681M◊◊ΔΔ2250
		293	205	0,15	1,4	1,80	25 x 40	ECS2DKC681M◊◊ΔΔ2540
		293	205	0,15	1,4	1,82	30 x 30	ECS2DKC681M◊◊ΔΔ3030
		293	205	0,15	1,4	1,86	35 x 25	ECS2DKC681M◊◊ΔΔ3525
	820	243	170	0,15	1,5	1,97	25 x 50	ECS2DKC821M◊◊ΔΔ2550
		243	170	0,15	1,5	1,99	30 x 35	ECS2DKC821M◊◊ΔΔ3035
		243	170	0,15	1,5	2,07	35 x 30	ECS2DKC821M◊◊ΔΔ3530
	1 000	199	139	0,15	1,5	2,17	30 x 45	ECS2DKC102M◊◊ΔΔ3045
		199	139	0,15	1,5	2,22	35 x 35	ECS2DKC102M◊◊ΔΔ3535
	1 200	166	116	0,15	1,5	2,32	30 x 50	ECS2DKC122M◊◊ΔΔ3050
		166	116	0,15	1,5	2,42	35 x 40	ECS2DKC122M◊◊ΔΔ3540
	1 500	133	93	0,15	1,5	2,59	35 x 45	ECS2DKC152M◊◊ΔΔ3545
	1 800	111	77	0,15	1,5	2,70	35 x 50	ECS2DKC182M◊◊ΔΔ3550
	2 200	91	63	0,15	1,5	3,23	35 x 60	ECS2DKC222M◊◊ΔΔ3560
	180	1106	774	0,15	0,5	0,94	22 x 25	ECS2EKC181M◊◊ΔΔ2225
	220	905	633	0,15	0,6	1,10	22 x 30	ECS2EKC221M◊◊ΔΔ2230
		905	633	0,15	0,6	1,15	25 x 25	ECS2EKC221M◊◊ΔΔ2525
	270	737	516	0,15	0,7	1,13	22 x 35	ECS2EKC271M◊◊ΔΔ2235
	330	603	422	0,15	0,8	1,20	22 x 40	ECS2EKC331M◊◊ΔΔ2240
		603	422	0,15	0,8	1,30	25 x 30	ECS2EKC331M◊◊ΔΔ2530
		603	422	0,15	0,8	1,30	30 x 25	ECS2EKC331M◊◊ΔΔ3025
	390	511	357	0,15	1,0	1,41	22 x 45	ECS2EKC391M◊◊ΔΔ2245
		511	357	0,15	1,0	1,42	25 x 35	ECS2EKC391M◊◊ΔΔ2535
	470	424	296	0,15	1,2	1,48	22 x 50	ECS2EKC471M◊◊ΔΔ2250
		424	296	0,15	1,2	1,47	25 x 40	ECS2EKC471M◊◊ΔΔ2540
		424	296	0,15	1,2	1,51	30 x 30	ECS2EKC471M◊◊ΔΔ3030
		424	296	0,15	1,2	1,50	35 x 25	ECS2EKC471M◊◊ΔΔ3525
	560	356	249	0,15	1,4	1,59	25 x 45	ECS2EKC561M◊◊ΔΔ2545
		356	249	0,15	1,4	1,57	30 x 35	ECS2EKC561M◊◊ΔΔ3035
		356	249	0,15	1,4	1,56	35 x 30	ECS2EKC561M◊◊ΔΔ3530
	680	293	205	0,15	1,5	1,66	25 x 50	ECS2EKC681M◊◊ΔΔ2550
		293	205	0,15	1,5	1,68	30 x 40	ECS2EKC681M◊◊ΔΔ3040
	820	243	170	0,15	1,5	1,83	30 x 45	ECS2EKC821M◊◊ΔΔ3045
		243	170	0,15	1,5	1,82	35 x 35	ECS2EKC821M◊◊ΔΔ3535
	1 000	199	139	0,15	1,5	1,87	30 x 50	ECS2EKC102M◊◊ΔΔ3050
		199	139	0,15	1,5	1,99	35 x 40	ECS2EKC102M◊◊ΔΔ3540
	1 200	166	116	0,15	1,5	2,10	35 x 45	ECS2EKC122M◊◊ΔΔ3545
	1 500	133	93	0,15	1,5	2,70	35 x 50	ECS2EKC152M◊◊ΔΔ3550
	1 800	111	77	0,15	1,5	2,92	35 x 60	ECS2EKC182M◊◊ΔΔ3560
	100	1190	1095	0,15	0,3	0,61	22 x 25	ECS2FKC101M◊◊ΔΔ2225
	120	1659	912	0,15	0,4	0,68	22 x 30	ECS2FKC121M◊◊ΔΔ2230
	150	1327	730	0,15	0,5	0,76	22 x 35	ECS2FKC151M◊◊ΔΔ2235
		1327	730	0,15	0,5	0,78	25 x 25	ECS2FKC151M◊◊ΔΔ2525
	180	1106	608	0,15	0,6	0,78	22 x 40	ECS2FKC181M◊◊ΔΔ2240
		1106	608	0,15	0,6	0,85	25 x 30	ECS2FKC181M◊◊ΔΔ2530
	220	905	498	0,15	0,7	0,91	22 x 45	ECS2FKC221M◊◊ΔΔ2245
		905	498	0,15	0,7	0,94	25 x 35	ECS2FKC221M◊◊ΔΔ2535
		905	498	0,15	0,7	0,95	30 x 30	ECS2FKC221M◊◊ΔΔ3030
	270	737	406	0,15	0,9	0,98	22 x 50	ECS2FKC271M◊◊ΔΔ2250
		737	406	0,15	0,9	1,00	25 x 40	ECS2FKC271M◊◊ΔΔ2540
		737	406	0,15	0,9	0,98	30 x 35	ECS2FKC271M◊◊ΔΔ3035
	330	603	332	0,15	1,0	1,13	25 x 45	ECS2FKC331M◊◊ΔΔ2545
		603	332	0,15	1,0	1,13	30 x 40	ECS2FKC331M◊◊ΔΔ3040
	390	510	281	0,15	1,2	1,20	30 x 45	ECS2FKC391M◊◊ΔΔ3045
		510	281	0,15	1,2	1,20	35 x 30	ECS2FKC391M◊◊ΔΔ3530
	470	424	233	0,15	1,5	1,28	35 x 35	ECS2FKC471M◊◊ΔΔ3535
	560	355	196	0,15	1,5	1,46	35 x 40	ECS2FKC561M◊◊ΔΔ3540
	680	293	161	0,15	1,5	1,85	35 x 45	ECS2FKC681M◊◊ΔΔ3545
	820	242	133	0,15	1,5	2,10	35 x 50	ECS2FKC821M◊◊ΔΔ3550
	1 000	199	109	0,15	1,5	2,42	35 x 55	ECS2FKC102M◊◊ΔΔ3555
	68	2926	1610	0,15	0,2	0,56	22 x 25	ECS2VKC680M◊◊ΔΔ2225
	82	2427	1262	0,15	0,3	0,62	22 x 25	ECS2VKC820M◊◊ΔΔ2225
	100	1990	1095	0,15	0,4	0,70	22 x 30	ECS2VKC101M◊◊ΔΔ2230
		1990	1095	0,15	0,4	0,70	25 x 25	ECS2VKC101M◊◊ΔΔ2525
	120	1658	912	0,15	0,4	0,73	22 x 35	ECS2VKC121M◊◊ΔΔ2235
	150	1327	730	0,15	0,5	0,79	22 x 40	ECS2VKC151M◊◊ΔΔ2240
		1327	730	0,15	0,5	0,82	25 x 30	ECS2VKC151M◊◊ΔΔ2530
		1327	730	0,15	0,5	0,82	30 x 25	ECS2VKC151M◊◊ΔΔ3025
	180	1106	608	0,15	0,6	0,81	22 x 45	ECS2VKC181M◊◊ΔΔ2245

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
	180	1106	608	0,15	0,6	0,89	25 x 35	ECS2VKC181M◊◊ΔΔ2535
		1106	608	0,15	0,6	0,90	30 x 30	ECS2VKC181M◊◊ΔΔ3030
	220	905	498	0,15	0,8	0,93	22 x 50	ECS2VKC221M◊◊ΔΔ2250
		905	498	0,15	0,8	0,97	25 x 40	ECS2VKC221M◊◊ΔΔ2540
		905	498	0,15	0,8	0,98	35 x 25	ECS2VKC221M◊◊ΔΔ3525
	270	737	406	0,15	0,9	1,01	25 x 50	ECS2VKC271M◊◊ΔΔ2550
		737	406	0,15	0,9	1,05	30 x 35	ECS2VKC271M◊◊ΔΔ3035
		737	406	0,15	0,9	1,01	35 x 30	ECS2VKC271M◊◊ΔΔ3530
	330	603	332	0,15	1,2	1,16	30 x 45	ECS2VKC331M◊◊ΔΔ3045
		603	332	0,15	1,2	1,16	35 x 35	ECS2VKC331M◊◊ΔΔ3535
	390	511	281	0,15	1,4	1,26	30 x 50	ECS2VKC391M◊◊ΔΔ3050
		511	281	0,15	1,4	1,26	35 x 40	ECS2VKC391M◊◊ΔΔ3540
	470	424	233	0,15	1,5	1,35	35 x 45	ECS2VKC471M◊◊ΔΔ3545
	560	356	196	0,15	1,5	1,51	35 x 50	ECS2VKC561M◊◊ΔΔ3550
	680	293	161	0,15	1,5	1,92	35 x 55	ECS2VKC681M◊◊ΔΔ3555
	820	243	133	0,15	1,5	2,25	35 x 60	ECS2VKC821M◊◊ΔΔ3560
	1 000	199	139	0,15	1,5	2,50	35 x 60	ECS2VKC102M◊◊ΔΔ3560
	68	2926	1522	0,15	0,3	0,47	22 x 25	ECS2GKC680M◊◊ΔΔ2225
	82	2427	1262	0,15	0,3	0,56	22 x 30	ECS2GKC820M◊◊ΔΔ2230
	82	2427	1262	0,15	0,3	0,56	25 x 25	ECS2GKC820M◊◊ΔΔ2525
	100	1990	1035	0,15	0,4	0,62	22 x 30	ECS2GKC101M◊◊ΔΔ2230
	120	1658	863	0,15	0,5	0,66	22 x 35	ECS2GKC121M◊◊ΔΔ2235
		1658	863	0,15	0,5	0,68	25 x 30	ECS2GKC121M◊◊ΔΔ2530
		1658	863	0,15	0,5	0,70	30 x 25	ECS2GKC121M◊◊ΔΔ3025
	150	1327	690	0,15	0,6	0,73	22 x 40	ECS2GKC151M◊◊ΔΔ2240
		1327	690	0,15	0,6	0,73	25 x 35	ECS2GKC151M◊◊ΔΔ2535
	180	1106	575	0,15	0,7	0,78	22 x 45	ECS2GKC181M◊◊ΔΔ2245
		1106	575	0,15	0,7	0,82	25 x 40	ECS2GKC181M◊◊ΔΔ2540
		1106	575	0,15	0,7	0,83	30 x 30	ECS2GKC181M◊◊ΔΔ3030
	220	905	471	0,15	0,9	0,87	25 x 45	ECS2GKC221M◊◊ΔΔ2545
		905	471	0,15	0,9	0,88	30 x 35	ECS2GKC221M◊◊ΔΔ3035
	270	737	383	0,15	1,1	0,94	25 x 50	ECS2GKC271M◊◊ΔΔ2550
		737	383	0,15	1,1	0,95	30 x 40	ECS2GKC271M◊◊ΔΔ3040
		737	383	0,15	1,1	0,91	35 x 30	ECS2GKC271M◊◊ΔΔ3530
	330	603	314	0,15	1,3	1,11	30 x 45	ECS2GKC331M◊◊ΔΔ3045
		603	314	0,15	1,3	1,13	35 x 35	ECS2GKC331M◊◊ΔΔ3535
	390	511	265	0,15	1,5	1,15	30 x 50	ECS2GKC391M◊◊ΔΔ3050
		511	265	0,15	1,5	1,26	35 x 40	ECS2GKC391M◊◊ΔΔ3540
	470	424	220	0,15	1,5	1,31	35 x 45	ECS2GKC471M◊◊ΔΔ3545
	560	356	185	0,15	1,5	1,50	35 x 50	ECS2GKC561M◊◊ΔΔ3550
	680	293	153	0,15	1,5	1,90	35 x 55	ECS2GKC681M◊◊ΔΔ3555
	820	243	126	0,15	1,5	2,20	35 x 60	ECS2GKC821M◊◊ΔΔ3560
		243	126	0,15	1,5	2,20	40 x 50	ECS2GKC821M◊◊ΔΔ4050
	1 000	199	139	0,15	1,5	2,60	35 x 75	ECS2GKC102M◊◊ΔΔ3575
		199	139	0,15	1,5	2,60	40 x 60	ECS2GKC102M◊◊ΔΔ4060
	68	3901	1951	0,20	0,3	0,50	22 x 25	ECS2XKC680M◊◊ΔΔ2225
	82	3235	1618	0,20	0,3	0,60	22 x 30	ECS2XKC820M◊◊ΔΔ2230
	100	2653	1327	0,20	0,4	0,65	22 x 35	ECS2XKC101M◊◊ΔΔ2235
	120	2211	1106	0,20	0,5	0,70	22 x 40	ECS2XKC121M◊◊ΔΔ2240
		2211	1106	0,20	0,5	0,72	25 x 30	ECS2XKC121M◊◊ΔΔ2530
	150	1769	885	0,20	0,6	0,75	22 x 45	ECS2XKC151M◊◊ΔΔ2245
		1769	885	0,20	0,6	0,80	25 x 35	ECS2XKC151M◊◊ΔΔ2535
	180	1474	737	0,20	0,8	0,85	25 x 40	ECS2XKC181M◊◊ΔΔ2540
		1474	737	0,20	0,8	0,85	30 x 30	ECS2XKC181M◊◊ΔΔ3030
	220	1206	603	0,20	0,9	0,90	25 x 45	ECS2XKC221M◊◊ΔΔ2545
		1206	603	0,20	0,9	0,96	30 x 35	ECS2XKC221M◊◊ΔΔ3035
	270	983	492	0,20	1,1	1,05	25 x 50	ECS2XKC271M◊◊ΔΔ2550
		983	492	0,20	1,1	1,06	30 x 40	ECS2XKC271M◊◊ΔΔ3040
	330	804	402	0,20	1,4	1,14	30 x 45	ECS2XKC331M◊◊ΔΔ3045
		804	402	0,20	1,4	1,20	35 x 35	ECS2XKC331M◊◊ΔΔ3535
	390	681	340	0,20	1,5	1,25	30 x 50	ECS2XKC391M◊◊ΔΔ3050
		681	340	0,20	1,5	1,26	35 x 40	ECS2XKC391M◊◊ΔΔ3540
	470	565	282	0,20	1,5	1,31	35 x 45	ECS2XKC471M◊◊ΔΔ3545
	560	474	237	0,20	1,5	1,50	35 x 50	ECS2XKC561M◊◊ΔΔ3550
	680	391	196	0,20	1,5	1,90	35 x 55	ECS2XKC681M◊◊ΔΔ3555
	820	324	162	0,20	1,5	2,20	35 x 60	ECS2XKC821M◊◊ΔΔ3560

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
	56	4737	2370	0,20	0,3	0,47	22 x 25	ECS2WKC560M◊◊ΔΔ2225
	68	3901	1951	0,20	0,3	0,56	22 x 30	ECS2WKC680M◊◊ΔΔ2230
		3901	1951	0,20	0,3	0,56	25 x 25	ECS2WKC680M◊◊ΔΔ2525
	82	3235	1618	0,20	0,4	0,64	22 x 35	ECS2WKC820M◊◊ΔΔ2235
	100	2653	1327	0,20	0,5	0,70	22 x 40	ECS2WKC101M◊◊ΔΔ2240
		2653	1327	0,20	0,5	0,70	25 x 30	ECS2WKC101M◊◊ΔΔ2530
	120	2211	1106	0,20	0,5	0,73	22 x 45	ECS2WKC121M◊◊ΔΔ2245
		2211	1106	0,20	0,5	0,73	25 x 35	ECS2WKC121M◊◊ΔΔ2535
	150	1769	885	0,20	0,7	0,80	22 x 50	ECS2WKC151M◊◊ΔΔ2250
		1769	885	0,20	0,7	0,82	25 x 40	ECS2WKC151M◊◊ΔΔ2540
		1769	885	0,20	0,7	0,83	30 x 30	ECS2WKC151M◊◊ΔΔ3030
	180	1474	737	0,20	0,8	0,87	25 x 45	ECS2WKC181M◊◊ΔΔ2545
		1474	737	0,20	0,8	0,86	30 x 35	ECS2WKC181M◊◊ΔΔ3035
	220	1206	603	0,20	1,0	0,94	25 x 50	ECS2WKC221M◊◊ΔΔ2550
		1206	603	0,20	1,0	0,95	30 x 40	ECS2WKC221M◊◊ΔΔ3040
		1206	603	0,20	1,0	0,91	35 x 30	ECS2WKC221M◊◊ΔΔ3530
	270	983	492	0,20	1,2	1,11	30 x 45	ECS2WKC271M◊◊ΔΔ3045
		983	492	0,20	1,2	1,13	35 x 35	ECS2WKC271M◊◊ΔΔ3535
	330	804	402	0,20	1,5	1,15	30 x 50	ECS2WKC331M◊◊ΔΔ3050
		804	402	0,20	1,5	1,16	35 x 40	ECS2WKC331M◊◊ΔΔ3540
	390	681	340	0,20	1,5	1,31	35 x 45	ECS2WKC391M◊◊ΔΔ3545
	470	565	282	0,20	1,5	1,50	35 x 50	ECS2WKC471M◊◊ΔΔ3550
	560	474	237	0,20	1,5	1,70	35 x 55	ECS2WKC561M◊◊ΔΔ3555
	680	391	196	0,20	1,5	2,00	35 x 60	ECS2WKC681M◊◊ΔΔ3560
		391	196	0,20	1,5	2,00	40 x 50	ECS2WKC681M◊◊ΔΔ4050
	820	324	162	0,20	1,5	2,20	35 x 65	ECS2WKC821M◊◊ΔΔ3565
		324	162	0,20	1,5	2,30	40 x 60	ECS2WKC821M◊◊ΔΔ4060
	1 000	265	139	0,20	1,5	2,60	35 x 75	ECS2WKC102M◊◊ΔΔ3575
	47	5644	2823	0,20	0,2	0,41	22 x 30	ECS2HKC470M◊◊ΔΔ2230
	56	4737	2370	0,20	0,3	0,47	22 x 30	ECS2HKC560M◊◊ΔΔ2230
	68	3901	1951	0,20	0,3	0,54	22 x 35	ECS2HKC680M◊◊ΔΔ2235
	82	3235	1618	0,20	0,4	0,62	22 x 40	ECS2HKC820M◊◊ΔΔ2240
		3235	1618	0,20	0,4	0,62	25 x 30	ECS2HKC820M◊◊ΔΔ2530
	100	2653	1327	0,20	0,5	0,67	22 x 45	ECS2HKC101M◊◊ΔΔ2245
		2653	1327	0,20	0,5	0,67	25 x 35	ECS2HKC101M◊◊ΔΔ2535
	120	2211	1106	0,20	0,6	0,77	22 x 50	ECS2HKC121M◊◊ΔΔ2250
		2211	1106	0,20	0,6	0,77	25 x 40	ECS2HKC121M◊◊ΔΔ2540
		2211	1106	0,20	0,6	0,77	30 x 30	ECS2HKC121M◊◊ΔΔ3030
	150	1769	885	0,20	0,8	0,82	25 x 45	ECS2HKC151M◊◊ΔΔ2545
		1769	885	0,20	0,8	0,85	30 x 40	ECS2HKC151M◊◊ΔΔ3040
		1769	885	0,20	0,8	0,85	35 x 35	ECS2HKC151M◊◊ΔΔ3535
	180	1474	737	0,20	0,9	0,98	25 x 50	ECS2HKC181M◊◊ΔΔ2550
		1474	737	0,20	0,9	1,01	30 x 45	ECS2HKC181M◊◊ΔΔ3045
	220	1206	603	0,20	1,1	1,12	30 x 50	ECS2HKC221M◊◊ΔΔ3050
		1206	603	0,20	1,1	1,12	35 x 35	ECS2HKC221M◊◊ΔΔ3535
	270	983	492	0,20	1,4	1,25	30 x 50	ECS2HKC271M◊◊ΔΔ3050
		983	492	0,20	1,4	1,25	35 x 40	ECS2HKC271M◊◊ΔΔ3540
	330	804	402	0,20	1,5	1,36	35 x 45	ECS2HKC331M◊◊ΔΔ3545
	390	681	340	0,20	1,5	1,54	35 x 50	ECS2HKC391M◊◊ΔΔ3550
	470	565	282	0,20	1,5	1,69	35 x 60	ECS2HKC471M◊◊ΔΔ3560
	560	474	237	0,20	1,5	1,90	35 x 65	ECS2HKC561M◊◊ΔΔ3565
	680	391	196	0,20	1,5	2,20	35 x 70	ECS2HKC681M◊◊ΔΔ3570
	180	1474	737	0,20	1,0	1,06	30 x 50	ECS2YKC181M◊◊ΔΔ3050
		1474	737	0,20	1,0	1,06	35 x 35	ECS2YKC181M◊◊ΔΔ3535
	220	1206	603	0,20	1,2	1,18	30 x 55	ECS2YKC221M◊◊ΔΔ3055
		1206	603	0,20	1,2	1,18	35 x 40	ECS2YKC221M◊◊ΔΔ3540
	270	983	492	0,20	1,5	1,31	35 x 45	ECS2YKC271M◊◊ΔΔ3545
	330	804	402	0,20	1,5	1,50	35 x 50	ECS2YKC331M◊◊ΔΔ3550
	390	681	340	0,20	1,5	1,67	35 x 60	ECS2YKC391M◊◊ΔΔ3560
	470	565	282	0,20	1,5	1,95	35 x 70	ECS2YKC471M◊◊ΔΔ3570
	560	474	237	0,20	1,5	2,10	35 x 80	ECS2YKC561M◊◊ΔΔ3580
		474	237	0,20	1,5	2,10	40 x 70	ECS2YKC561M◊◊ΔΔ4070

6 000h at 105°C

- Long Life at High Temperature
- Large Case Sizes
- High Currents



SNAP-IN

ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +105	-25 ~ +105
Voltage Range (V)	350 ~ 420	450 ~ 550
Capacitance Range (µF)	390 ~ 3 000	
Capacitance Tolerance (20°C, 120Hz)	± 20%	
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	350 ~ 420	450 ~ 500
	$Z_{-25°C} / Z_{+20°C}$	4	7
	$Z_{-40°C} / Z_{+20°C}$	7	-
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**		

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	6 000h	> 200 000h	3 000h	4 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,2 x I_R 40°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

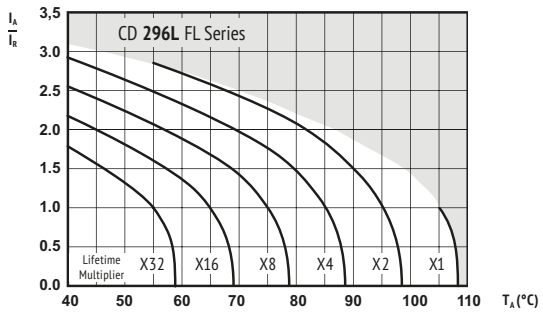
MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	≥ 50 kHz
Factor	0,80	1,00	1,16	1,30	1,41	1,43

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

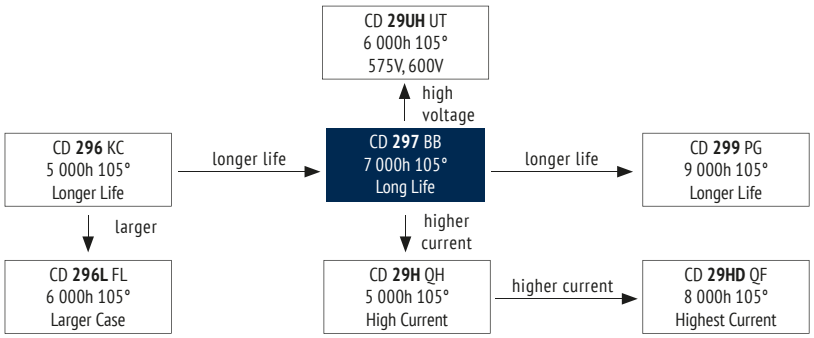
U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
350 (400) 2V	560	356	178	0,15	1,5	2,30	30 x 55	ECS2VFL561M◊◊ΔΔ3055
		356	178	0,15	1,5	2,33	35 x 40	ECS2VFL561M◊◊ΔΔ3540
	680	293	146	0,15	1,5	2,73	35 x 50	ECS2VFL681M◊◊ΔΔ3550
		293	146	0,15	1,5	2,68	40 x 40	ECS2VFL681M◊◊ΔΔ4040
	820	243	121	0,15	1,5	2,99	35 x 60	ECS2VFL821M◊◊ΔΔ3560
		243	121	0,15	1,5	3,05	40 x 45	ECS2VFL821M◊◊ΔΔ4045
		243	121	0,15	1,5	2,85	45 x 40	ECS2VFL821M◊◊ΔΔ4540
	1 000	199	100	0,15	1,5	3,50	35 x 65	ECS2VFL102M◊◊ΔΔ3565
		199	100	0,15	1,5	3,37	40 x 55	ECS2VFL102M◊◊ΔΔ4055
		199	100	0,15	1,5	3,06	45 x 45	ECS2VFL102M◊◊ΔΔ4545
	1 200	166	83	0,15	1,5	3,81	35 x 75	ECS2VFL122M◊◊ΔΔ3575
		166	83	0,15	1,5	3,81	40 x 65	ECS2VFL122M◊◊ΔΔ4065
		166	83	0,15	1,5	3,47	45 x 50	ECS2VFL122M◊◊ΔΔ4550
	1 500	133	66	0,15	1,5	4,62	40 x 80	ECS2VFL152M◊◊ΔΔ4080
		133	66	0,15	1,5	4,27	45 x 65	ECS2VFL152M◊◊ΔΔ4565
	1 800	111	55	0,15	1,5	5,43	40 x 95	ECS2VFL182M◊◊ΔΔ4095
		111	55	0,15	1,5	5,10	45 x 75	ECS2VFL182M◊◊ΔΔ4575
	2 200	91	45	0,15	1,5	5,86	45 x 90	ECS2VFL222M◊◊ΔΔ4590
		91	45	0,15	1,5	5,86	50 x 75	ECS2VFL222M◊◊ΔΔ5075
	2 700	74	37	0,15	1,5	6,77	45 x 100	ECS2VFL272M◊◊ΔΔ45100
		74	37	0,15	1,5	6,77	50 x 90	ECS2VFL272M◊◊ΔΔ5090
	3 300	61	30	0,15	1,5	6,77	50 x 105	ECS2VFL332M◊◊ΔΔ50105
400 (450) 2G	470	424	169	0,15	1,5	2,11	35 x 45	ECS2GFL471M◊◊ΔΔ3545
		424	169	0,15	1,5	2,14	40 x 40	ECS2GFL471M◊◊ΔΔ4040
	560	356	142	0,15	1,5	2,48	35 x 50	ECS2GFL561M◊◊ΔΔ3550
		356	142	0,15	1,5	2,43	40 x 45	ECS2GFL561M◊◊ΔΔ4045
		356	142	0,15	1,5	2,35	45 x 40	ECS2GFL561M◊◊ΔΔ4540
	680	293	117	0,15	1,5	2,73	35 x 60	ECS2GFL681M◊◊ΔΔ3560
		293	117	0,15	1,5	2,78	40 x 50	ECS2GFL681M◊◊ΔΔ4050
		293	117	0,15	1,5	2,59	45 x 40	ECS2GFL681M◊◊ΔΔ4540
	820	243	97	0,15	1,5	3,17	35 x 65	ECS2GFL821M◊◊ΔΔ3565
		243	97	0,15	1,5	3,05	40 x 55	ECS2GFL821M◊◊ΔΔ4055
		243	97	0,15	1,5	2,77	45 x 45	ECS2GFL821M◊◊ΔΔ4545
	1 000	199	80	0,15	1,5	3,48	35 x 80	ECS2GFL102M◊◊ΔΔ3580
		199	80	0,15	1,5	3,48	40 x 65	ECS2GFL102M◊◊ΔΔ4065
		199	80	0,15	1,5	3,17	45 x 55	ECS2GFL102M◊◊ΔΔ4555
	1 200	166	66	0,15	1,5	4,13	35 x 90	ECS2GFL122M◊◊ΔΔ3590
		166	66	0,15	1,5	4,13	40 x 80	ECS2GFL122M◊◊ΔΔ4080
		166	66	0,15	1,5	3,70	45 x 60	ECS2GFL122M◊◊ΔΔ4560
	1 500	133	53	0,15	1,5	4,39	40 x 90	ECS2GFL152M◊◊ΔΔ4090
		133	53	0,15	1,5	4,39	45 x 75	ECS2GFL152M◊◊ΔΔ4575
		133	53	0,15	1,5	4,39	50 x 70	ECS2GFL152M◊◊ΔΔ5070
	1 800	111	44	0,15	1,5	5,30	45 x 90	ECS2GFL182M◊◊ΔΔ4590
		111	44	0,15	1,5	5,30	50 x 80	ECS2GFL182M◊◊ΔΔ5080
	2 200	91	36	0,15	1,5	5,90	50 x 90	ECS2GFL222M◊◊ΔΔ5090
	2 700	74	29	0,15	1,5	6,50	50 x 105	ECS2GFL272M◊◊ΔΔ50105
420 (470) 2X	390	511	203	0,15	1,5	1,92	35 x 40	ECS2XFL391M◊◊ΔΔ3540
		511	203	0,15	1,5	1,95	40 x 35	ECS2XFL391M◊◊ΔΔ4035
	470	424	169	0,15	1,5	2,27	35 x 45	ECS2XFL471M◊◊ΔΔ3545
		424	169	0,15	1,5	2,23	40 x 40	ECS2XFL471M◊◊ΔΔ4040
	560	356	142	0,15	1,5	2,56	35 x 50	ECS2XFL561M◊◊ΔΔ3550
		356	142	0,15	1,5	2,52	40 x 45	ECS2XFL561M◊◊ΔΔ4045
		356	142	0,15	1,5	2,35	45 x 40	ECS2XFL561M◊◊ΔΔ4540
	680	293	117	0,15	1,5	2,81	35 x 60	ECS2XFL681M◊◊ΔΔ3560
		293	117	0,15	1,5	2,78	40 x 50	ECS2XFL681M◊◊ΔΔ4050
		293	117	0,15	1,5	2,52	45 x 45	ECS2XFL681M◊◊ΔΔ4545
	820	243	97	0,15	1,5	3,26	35 x 70	ECS2XFL821M◊◊ΔΔ3570
		243	97	0,15	1,5	3,05	40 x 60	ECS2XFL821M◊◊ΔΔ4060
		243	97	0,15	1,5	2,87	45 x 50	ECS2XFL821M◊◊ΔΔ4550
	1 000	199	80	0,15	1,5	3,67	35 x 80	ECS2XFL102M◊◊ΔΔ3580
		199	80	0,15	1,5	3,67	40 x 70	ECS2XFL102M◊◊ΔΔ4070
		199	80	0,15	1,5	3,38	45 x 60	ECS2XFL102M◊◊ΔΔ4560
	1 200	166	66	0,15	1,5	4,33	40 x 80	ECS2XFL122M◊◊ΔΔ4080
		166	66	0,15	1,5	3,92	45 x 65	ECS2XFL122M◊◊ΔΔ4565
	1 500	133	53	0,15	1,5	4,62	45 x 80	ECS2XFL152M◊◊ΔΔ4580
		133	53	0,15	1,5	4,62	50 x 75	ECS2XFL152M◊◊ΔΔ5075

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
420 (470) 2X	1 800	111	44	0,15	1,5	5,42	45 x 95	ECS2XFL182M◊◊ΔΔ4595
		111	44	0,15	1,5	5,42	50 x 85	ECS2XFL182M◊◊ΔΔ5085
	2 200	91	36	0,15	1,5	6,00	50 x 100	ECS2XFL222M◊◊ΔΔ50100
450 (500) 2W	390	511	225	0,15	1,5	2,00	35 x 40	ECS2WFL391M◊◊ΔΔ3540
	470	424	186	0,15	1,5	2,27	35 x 45	ECS2WFL471M◊◊ΔΔ3545
		424	186	0,15	1,5	2,23	40 x 40	ECS2WFL471M◊◊ΔΔ4040
		424	186	0,15	1,5	2,15	45 x 35	ECS2WFL471M◊◊ΔΔ4535
	560	356	156	0,15	1,5	2,47	35 x 55	ECS2WFL561M◊◊ΔΔ3555
		356	156	0,15	1,5	2,52	40 x 50	ECS2WFL561M◊◊ΔΔ4050
		356	156	0,15	1,5	2,35	45 x 40	ECS2WFL561M◊◊ΔΔ4540
	680	293	129	0,15	1,5	2,89	35 x 65	ECS2WFL681M◊◊ΔΔ3565
		293	129	0,15	1,5	2,78	40 x 60	ECS2WFL681M◊◊ΔΔ4060
		293	129	0,15	1,5	2,61	45 x 50	ECS2WFL681M◊◊ΔΔ4550
	820	243	107	0,15	1,5	3,24	35 x 75	ECS2WFL821M◊◊ΔΔ3575
		243	107	0,15	1,5	3,24	40 x 65	ECS2WFL821M◊◊ΔΔ4065
		243	107	0,15	1,5	3,10	45 x 50	ECS2WFL821M◊◊ΔΔ4550
	1 000	199	88	0,15	1,5	3,77	35 x 90	ECS2WFL102M◊◊ΔΔ3590
		199	88	0,15	1,5	3,77	40 x 80	ECS2WFL102M◊◊ΔΔ4080
		199	88	0,15	1,5	3,68	45 x 65	ECS2WFL102M◊◊ΔΔ4565
	1 200	166	73	0,15	1,5	4,43	40 x 95	ECS2WFL122M◊◊ΔΔ4095
		166	73	0,15	1,5	4,23	45 x 75	ECS2WFL122M◊◊ΔΔ4575
		166	73	0,15	1,5	4,23	50 x 65	ECS2WFL122M◊◊ΔΔ5065
	1 500	133	58	0,15	1,5	4,84	40 x 100	ECS2WFL152M◊◊ΔΔ40100
		133	58	0,15	1,5	4,84	45 x 90	ECS2WFL152M◊◊ΔΔ4590
		133	58	0,15	1,5	4,84	50 x 80	ECS2WFL152M◊◊ΔΔ5080
	1 800	111	49	0,15	1,5	5,30	45 x 105	ECS2WFL182M◊◊ΔΔ45105
		111	49	0,15	1,5	5,30	50 x 95	ECS2WFL182M◊◊ΔΔ5095
500 (550) 2H	390	511	225	0,15	1,5	1,80	35 x 50	ECS2HFL391M◊◊ΔΔ3550
		511	225	0,15	1,5	1,80	40 x 45	ECS2HFL391M◊◊ΔΔ4045
	470	424	186	0,15	1,5	2,00	35 x 55	ECS2HFL471M◊◊ΔΔ3555
		424	186	0,15	1,5	2,00	40 x 50	ECS2HFL471M◊◊ΔΔ4050
		424	186	0,15	1,5	2,00	45 x 40	ECS2HFL471M◊◊ΔΔ4540
	560	356	156	0,15	1,5	2,25	35 x 65	ECS2HFL561M◊◊ΔΔ3565
		356	156	0,15	1,5	2,25	40 x 55	ECS2HFL561M◊◊ΔΔ4055
		356	156	0,15	1,5	2,25	45 x 50	ECS2HFL561M◊◊ΔΔ4550
	680	293	129	0,15	1,5	2,60	35 x 75	ECS2HFL681M◊◊ΔΔ3575
		293	129	0,15	1,5	2,60	40 x 70	ECS2HFL681M◊◊ΔΔ4070
		293	129	0,15	1,5	2,60	45 x 55	ECS2HFL681M◊◊ΔΔ4555
	820	243	107	0,15	1,5	2,85	40 x 75	ECS2HFL821M◊◊ΔΔ4075
		243	107	0,15	1,5	2,85	45 x 60	ECS2HFL821M◊◊ΔΔ4560
	1 000	199	88	0,15	1,5	3,30	40 x 90	ECS2HFL102M◊◊ΔΔ4090
		199	88	0,15	1,5	3,30	45 x 75	ECS2HFL102M◊◊ΔΔ4575
	1 200	166	73	0,15	1,5	4,00	40 x 100	ECS2HFL122M◊◊ΔΔ40100
		166	73	0,15	1,5	4,00	45 x 85	ECS2HFL122M◊◊ΔΔ4585
		166	73	0,15	1,5	4,00	50 x 80	ECS2HFL122M◊◊ΔΔ5080
	1 500	133	58	0,15	1,5	4,45	45 x 100	ECS2HFL152M◊◊ΔΔ45100
		133	58	0,15	1,5	4,45	50 x 95	ECS2HFL152M◊◊ΔΔ5095
	1 800	111	49	0,15	1,5	4,85	50 x 105	ECS2HFL182M◊◊ΔΔ50105

SNAP-IN

7 000h at 105°C

- Extended Lifetime at 105°C
- High Ripple Current
- High Professional Switch Mode Power Supplies
- Frequency Converters



ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +105	-25 ~ +105
Voltage Range (V)	10 ~ 100	160 ~ 550
Capacitance Range (µF)	47 ~ 56 000	
Capacitance Tolerance (20°C, 120Hz)	± 20%	
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	10 ~ 100	160 ~ 250	315 ~ 550
	$Z_{-25°C} / Z_{+20°C}$	4	3	8
	$Z_{-40°C} / Z_{+20°C}$	15	-	-
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**			

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	7 000h	> 200 000h	5 000h	5 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,6 x I_R 40°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

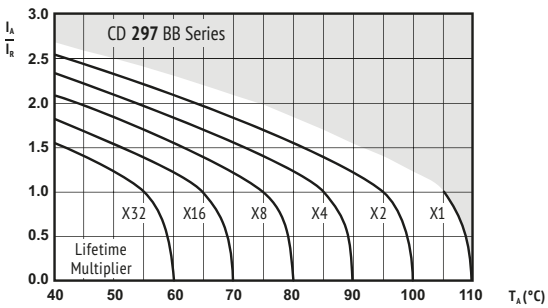
MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Rated Voltage (V) \ Frequency	50Hz	120Hz	500Hz	1kHz	10kHz	≥ 40 kHz
10 ~ 100	0,90	1,00	1,10	1,15	1,15	1,15
160 ~ 250	0,80	1,00	1,20	1,30	1,45	1,50
≥ 315	0,80	1,00	1,20	1,30	1,42	1,45

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
10 (13) 1A	8 200	89	62	0,55	0,8	1,36	22 x 25	ECS1ABB822M◊◊ΔΔ2225
	10 000	73	51	0,55	1,0	1,65	22 x 30	ECS1ABB103M◊◊ΔΔ2230
	12 000	61	43	0,55	1,2	1,85	22 x 35	ECS1ABB123M◊◊ΔΔ2235
		61	43	0,55	1,2	1,82	25 x 25	ECS1ABB123M◊◊ΔΔ2525
	15 000	49	34	0,55	1,5	2,12	22 x 40	ECS1ABB153M◊◊ΔΔ2240
		49	34	0,55	1,5	2,11	25 x 30	ECS1ABB153M◊◊ΔΔ2530
		49	34	0,55	1,5	2,14	30 x 25	ECS1ABB153M◊◊ΔΔ3025
	18 000	41	28	0,55	1,5	2,40	22 x 45	ECS1ABB183M◊◊ΔΔ2245
		41	28	0,55	1,5	2,32	25 x 35	ECS1ABB183M◊◊ΔΔ2535
	22 000	34	23	0,55	1,5	2,59	25 x 40	ECS1ABB223M◊◊ΔΔ2540
		34	23	0,55	1,5	2,73	30 x 30	ECS1ABB223M◊◊ΔΔ3030
	27 000	28	19	0,55	1,5	3,01	25 x 45	ECS1ABB273M◊◊ΔΔ2545
		33	23	0,55	1,5	3,13	30 x 35	ECS1ABB273M◊◊ΔΔ3035
		28	19	0,55	1,5	3,05	35 x 30	ECS1ABB273M◊◊ΔΔ3530
	33 000	23	16	0,55	1,5	3,43	25 x 50	ECS1ABB333M◊◊ΔΔ2550
		23	16	0,55	1,5	3,53	30 x 40	ECS1ABB333M◊◊ΔΔ3040
		23	16	0,55	1,5	3,49	35 x 35	ECS1ABB333M◊◊ΔΔ3535
	39 000	19	13	0,55	1,5	3,78	30 x 45	ECS1ABB393M◊◊ΔΔ3045
		19	13	0,55	1,5	3,96	35 x 40	ECS1ABB393M◊◊ΔΔ3540
	47 000	16	11	0,55	1,5	4,58	30 x 50	ECS1ABB473M◊◊ΔΔ3050
		16	11	0,55	1,5	4,60	35 x 45	ECS1ABB473M◊◊ΔΔ3545
	56 000	14	9	0,55	1,5	5,06	35 x 50	ECS1ABB563M◊◊ΔΔ3550
16 (20) 1C	5 600	119	83	0,50	0,9	1,44	22 x 25	ECS1CBB562M◊◊ΔΔ2225
	6 800	98	68	0,50	1,1	1,66	22 x 30	ECS1CBB682M◊◊ΔΔ2230
	8 200	81	57	0,50	1,3	1,67	25 x 25	ECS1CBB822M◊◊ΔΔ2525
	10 000	67	46	0,50	1,5	2,08	22 x 35	ECS1CBB103M◊◊ΔΔ2235
		67	46	0,50	1,5	2,07	25 x 30	ECS1CBB103M◊◊ΔΔ2530
	12 000	56	39	0,50	1,5	2,36	22 x 40	ECS1CBB123M◊◊ΔΔ2240
		56	39	0,50	1,5	2,37	25 x 35	ECS1CBB123M◊◊ΔΔ2535
		56	39	0,50	1,5	2,33	30 x 25	ECS1CBB123M◊◊ΔΔ3025
	15 000	45	31	0,50	1,5	2,69	22 x 45	ECS1CBB153M◊◊ΔΔ2245
		45	31	0,50	1,5	2,72	25 x 40	ECS1CBB153M◊◊ΔΔ2540
		45	31	0,50	1,5	2,54	30 x 30	ECS1CBB153M◊◊ΔΔ3030
	18 000	37	26	0,50	1,5	3,06	25 x 45	ECS1CBB183M◊◊ΔΔ2545
		37	26	0,50	1,5	3,02	30 x 35	ECS1CBB183M◊◊ΔΔ3035
		37	26	0,50	1,5	3,09	35 x 30	ECS1CBB183M◊◊ΔΔ3530
	22 000	31	21	0,50	1,5	3,39	25 x 50	ECS1CBB223M◊◊ΔΔ2550
		31	21	0,50	1,5	3,46	30 x 40	ECS1CBB223M◊◊ΔΔ3040
	27 000	25	17	0,50	1,5	3,88	30 x 45	ECS1CBB273M◊◊ΔΔ3045
		25	17	0,50	1,5	3,85	35 x 35	ECS1CBB273M◊◊ΔΔ3535
	33 000	21	14	0,50	1,5	4,33	30 x 50	ECS1CBB333M◊◊ΔΔ3050
		21	14	0,50	1,5	4,33	35 x 40	ECS1CBB333M◊◊ΔΔ3540
	39 000	18	12	0,50	1,5	4,96	35 x 45	ECS1CBB393M◊◊ΔΔ3545
	47 000	15	10	0,50	1,5	5,49	35 x 50	ECS1CBB473M◊◊ΔΔ3550
25 (32) 1E	3 900	154	107	0,45	1,0	1,31	22 x 25	ECS1EBB392M◊◊ΔΔ2225
	4 700	127	89	0,45	1,2	1,55	22 x 30	ECS1EBB472M◊◊ΔΔ2230
	5 600	107	75	0,45	1,4	1,77	22 x 35	ECS1EBB562M◊◊ΔΔ2235
		107	75	0,45	1,4	1,76	25 x 25	ECS1EBB562M◊◊ΔΔ2525
	6 800	88	62	0,45	1,5	2,02	22 x 40	ECS1EBB682M◊◊ΔΔ2240
		88	62	0,45	1,5	1,88	25 x 30	ECS1EBB682M◊◊ΔΔ2530
	8 200	73	51	0,45	1,5	2,27	22 x 45	ECS1EBB822M◊◊ΔΔ2245
		73	51	0,45	1,5	2,18	25 x 35	ECS1EBB822M◊◊ΔΔ2535
		73	51	0,45	1,5	2,19	30 x 25	ECS1EBB822M◊◊ΔΔ3025
	10 000	60	42	0,45	1,5	2,56	22 x 50	ECS1EBB103M◊◊ΔΔ2250
		60	42	0,45	1,5	2,53	25 x 40	ECS1EBB103M◊◊ΔΔ2540
		60	42	0,45	1,5	2,38	30 x 30	ECS1EBB103M◊◊ΔΔ3030
	12 000	50	35	0,45	1,5	2,79	25 x 45	ECS1EBB123M◊◊ΔΔ2545
		50	35	0,45	1,5	2,70	30 x 35	ECS1EBB123M◊◊ΔΔ3035
		50	35	0,45	1,5	2,76	35 x 30	ECS1EBB123M◊◊ΔΔ3530
	15 000	40	28	0,45	1,5	3,13	30 x 40	ECS1EBB153M◊◊ΔΔ3040
	18 000	34	23	0,45	1,5	3,52	30 x 45	ECS1EBB183M◊◊ΔΔ3045
		34	23	0,45	1,5	3,50	35 x 35	ECS1EBB183M◊◊ΔΔ3535
	22 000	28	19	0,45	1,5	3,92	30 x 50	ECS1EBB223M◊◊ΔΔ3050
		28	19	0,45	1,5	3,95	35 x 40	ECS1EBB223M◊◊ΔΔ3540
	27 000	23	16	0,45	1,5	4,72	35 x 50	ECS1EBB273M◊◊ΔΔ3550

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
35 (44) 1V	2 700	197	138	0,40	0,9	1,29	22 x 25	ECS1VBB272M◊◊ΔΔ2225
	3 300	161	113	0,40	1,2	1,54	22 x 30	ECS1VBB332M◊◊ΔΔ2230
	3 900	137	95	0,40	1,4	1,77	22 x 35	ECS1VBB392M◊◊ΔΔ2235
		137	95	0,40	1,4	1,75	25 x 25	ECS1VBB392M◊◊ΔΔ2525
	4 700	113	79	0,40	1,5	2,01	22 x 40	ECS1VBB472M◊◊ΔΔ2240
		113	79	0,40	1,5	1,97	25 x 30	ECS1VBB472M◊◊ΔΔ2530
	5 600	95	66	0,40	1,5	2,25	22 x 45	ECS1VBB562M◊◊ΔΔ2245
		95	66	0,40	1,5	2,18	25 x 35	ECS1VBB562M◊◊ΔΔ2535
		95	66	0,40	1,5	2,08	30 x 25	ECS1VBB562M◊◊ΔΔ3025
	6 800	79	55	0,40	1,5	2,49	22 x 50	ECS1VBB682M◊◊ΔΔ2250
		79	55	0,40	1,5	2,45	25 x 40	ECS1VBB682M◊◊ΔΔ2540
		79	55	0,40	1,5	2,28	30 x 30	ECS1VBB682M◊◊ΔΔ3030
	8 200	65	45	0,40	1,5	2,80	25 x 45	ECS1VBB822M◊◊ΔΔ2545
		65	45	0,40	1,5	2,69	30 x 35	ECS1VBB822M◊◊ΔΔ3035
	10 000	54	37	0,40	1,5	3,04	30 x 40	ECS1VBB103M◊◊ΔΔ3040
		54	37	0,40	1,5	2,78	35 x 30	ECS1VBB103M◊◊ΔΔ3530
	12 000	45	31	0,40	1,5	3,38	30 x 45	ECS1VBB123M◊◊ΔΔ3045
		45	31	0,40	1,5	3,30	35 x 35	ECS1VBB123M◊◊ΔΔ3535
	15 000	36	25	0,40	1,5	3,98	35 x 40	ECS1VBB153M◊◊ΔΔ3540
	18 000	30	21	0,40	1,5	4,40	35 x 45	ECS1VBB183M◊◊ΔΔ3545
50 (63) 1H	1 500	310	217	0,35	0,8	1,21	22 x 25	ECS1HBB152M◊◊ΔΔ2225
	2 200	212	148	0,35	1,1	1,52	22 x 30	ECS1HBB222M◊◊ΔΔ2230
		212	148	0,35	1,1	1,46	25 x 25	ECS1HBB222M◊◊ΔΔ2525
	2 700	172	120	0,35	1,4	1,77	22 x 35	ECS1HBB272M◊◊ΔΔ2235
		172	120	0,35	1,4	1,76	25 x 30	ECS1HBB272M◊◊ΔΔ2530
	3 300	141	99	0,35	1,5	2,02	22 x 40	ECS1HBB332M◊◊ΔΔ2240
		141	99	0,35	1,5	1,92	30 x 25	ECS1HBB332M◊◊ΔΔ3025
	3 900	120	83	0,35	1,5	2,27	22 x 45	ECS1HBB392M◊◊ΔΔ2245
		120	83	0,35	1,5	2,20	25 x 35	ECS1HBB392M◊◊ΔΔ2535
		120	83	0,35	1,5	2,19	30 x 30	ECS1HBB392M◊◊ΔΔ3030
	4 700	99	69	0,35	1,5	2,43	25 x 40	ECS1HBB472M◊◊ΔΔ2540
	5 600	83	58	0,35	1,5	2,72	25 x 45	ECS1HBB562M◊◊ΔΔ2545
		83	58	0,35	1,5	2,58	30 x 35	ECS1HBB562M◊◊ΔΔ3035
		83	58	0,35	1,5	2,35	35 x 30	ECS1HBB562M◊◊ΔΔ3530
	6 800	69	48	0,35	1,5	3,01	30 x 40	ECS1HBB682M◊◊ΔΔ3040
		69	48	0,35	1,5	2,91	35 x 35	ECS1HBB682M◊◊ΔΔ3535
	8 200	57	40	0,35	1,5	3,63	30 x 50	ECS1HBB822M◊◊ΔΔ3050
		57	40	0,35	1,5	3,36	35 x 40	ECS1HBB822M◊◊ΔΔ3540
	10 000	47	33	0,35	1,5	3,79	35 x 45	ECS1HBB103M◊◊ΔΔ3545
	12 000	39	27	0,35	1,5	4,06	35 x 50	ECS1HBB123M◊◊ΔΔ3550
63 (79) 1J	1 000	398	279	0,30	0,6	1,10	22 x 25	ECS1JBB102M◊◊ΔΔ2225
	1 500	266	186	0,30	0,9	1,41	22 x 30	ECS1JBB152M◊◊ΔΔ2230
		266	186	0,30	0,9	1,38	25 x 25	ECS1JBB152M◊◊ΔΔ2525
	1 800	222	155	0,30	1,1	1,62	22 x 35	ECS1JBB182M◊◊ΔΔ2235
		222	155	0,30	1,1	1,63	25 x 30	ECS1JBB182M◊◊ΔΔ2530
	2 200	181	127	0,30	1,4	1,85	22 x 40	ECS1JBB222M◊◊ΔΔ2240
		181	127	0,30	1,4	1,80	30 x 25	ECS1JBB222M◊◊ΔΔ3025
	2 700	148	103	0,30	1,5	2,10	22 x 45	ECS1JBB272M◊◊ΔΔ2245
		148	103	0,30	1,5	2,03	25 x 35	ECS1JBB272M◊◊ΔΔ2535
		148	103	0,30	1,5	2,01	30 x 30	ECS1JBB272M◊◊ΔΔ3030
	3 300	121	84	0,30	1,5	2,33	25 x 40	ECS1JBB332M◊◊ΔΔ2540
	3 900	103	72	0,30	1,5	2,58	25 x 45	ECS1JBB392M◊◊ΔΔ2545
		103	72	0,30	1,5	2,46	30 x 35	ECS1JBB392M◊◊ΔΔ3035
		103	72	0,30	1,5	2,31	35 x 30	ECS1JBB392M◊◊ΔΔ3530
	4 700	85	59	0,30	1,5	2,82	30 x 40	ECS1JBB472M◊◊ΔΔ3040
		85	59	0,30	1,5	2,77	35 x 35	ECS1JBB472M◊◊ΔΔ3535
	5 600	72	50	0,30	1,5	3,22	30 x 45	ECS1JBB562M◊◊ΔΔ3045
		72	50	0,30	1,5	3,20	35 x 40	ECS1JBB562M◊◊ΔΔ3540
	6 800	59	41	0,30	1,5	3,61	35 x 45	ECS1JBB682M◊◊ΔΔ3545
	8 200	49	34	0,30	1,5	3,94	35 x 50	ECS1JBB822M◊◊ΔΔ3550
100 (125) 2A	560	474	332	0,20	0,6	1,01	22 x 25	ECS2ABB561M◊◊ΔΔ2225
	680	391	273	0,20	0,7	1,19	22 x 30	ECS2ABB681M◊◊ΔΔ2230
	820	324	227	0,20	0,8	1,33	22 x 35	ECS2ABB821M◊◊ΔΔ2235
		324	227	0,20	0,8	1,26	25 x 25	ECS2ABB821M◊◊ΔΔ2525

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SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
100 (125) 2A	1 000	266	186	0,20	1,0	1,56	22 x 40	ECS2ABB102M◊◊ΔΔ2240
		266	186	0,20	1,0	1,52	25 x 30	ECS2ABB102M◊◊ΔΔ2530
		266	186	0,20	1,0	1,47	30 x 25	ECS2ABB102M◊◊ΔΔ3025
	1 200	222	155	0,20	1,2	1,76	22 x 45	ECS2ABB122M◊◊ΔΔ2245
		222	155	0,20	1,2	1,76	25 x 35	ECS2ABB122M◊◊ΔΔ2535
		222	155	0,20	1,2	1,76	30 x 30	ECS2ABB122M◊◊ΔΔ3030
	1 500	177	124	0,20	1,5	2,00	22 x 50	ECS2ABB152M◊◊ΔΔ2250
		177	124	0,20	1,5	2,03	25 x 40	ECS2ABB152M◊◊ΔΔ2540
	1 800	148	103	0,20	1,5	2,29	25 x 45	ECS2ABB182M◊◊ΔΔ2545
		148	103	0,20	1,5	2,19	30 x 35	ECS2ABB182M◊◊ΔΔ3035
		148	103	0,20	1,5	2,15	35 x 30	ECS2ABB182M◊◊ΔΔ3530
	2 200	121	84	0,20	1,5	2,52	30 x 40	ECS2ABB222M◊◊ΔΔ3040
		121	84	0,20	1,5	2,48	35 x 35	ECS2ABB222M◊◊ΔΔ3535
	2 700	99	69	0,20	1,5	2,86	30 x 45	ECS2ABB272M◊◊ΔΔ3045
		99	69	0,20	1,5	2,87	35 x 40	ECS2ABB272M◊◊ΔΔ3540
	3 300	81	56	0,20	1,5	3,25	35 x 45	ECS2ABB332M◊◊ΔΔ3545
	3 900	69	48	0,20	1,5	3,56	35 x 50	ECS2ABB392M◊◊ΔΔ3550
160 (200) 2C	220	905	633	0,15	0,4	0,63	22 x 25	ECS2CBB221M◊◊ΔΔ2225
	270	737	516	0,15	0,4	0,76	22 x 30	ECS2CBB271M◊◊ΔΔ2230
	330	603	422	0,15	0,5	0,90	22 x 35	ECS2CBB331M◊◊ΔΔ2235
		603	422	0,15	0,5	0,84	25 x 25	ECS2CBB331M◊◊ΔΔ2525
	390	511	357	0,15	0,6	0,97	25 x 30	ECS2CBB391M◊◊ΔΔ2530
		511	357	0,15	0,6	1,00	30 x 25	ECS2CBB391M◊◊ΔΔ3025
	470	424	296	0,15	0,8	1,11	22 x 40	ECS2CBB471M◊◊ΔΔ2240
		424	296	0,15	0,8	1,14	25 x 35	ECS2CBB471M◊◊ΔΔ2535
		424	296	0,15	0,8	1,17	30 x 30	ECS2CBB471M◊◊ΔΔ3030
	560	356	249	0,15	0,9	1,26	22 x 45	ECS2CBB561M◊◊ΔΔ2245
	680	293	205	0,15	1,1	1,44	22 x 50	ECS2CBB681M◊◊ΔΔ2250
		293	205	0,15	1,1	1,43	25 x 40	ECS2CBB681M◊◊ΔΔ2540
		293	205	0,15	1,1	1,50	30 x 35	ECS2CBB681M◊◊ΔΔ3035
	820	243	170	0,15	1,3	1,63	25 x 45	ECS2CBB821M◊◊ΔΔ2545
		243	170	0,15	1,3	1,66	30 x 40	ECS2CBB821M◊◊ΔΔ3040
		243	170	0,15	1,3	1,63	35 x 30	ECS2CBB821M◊◊ΔΔ3530
	1 000	199	139	0,15	1,5	1,89	30 x 45	ECS2CBB102M◊◊ΔΔ3045
		199	139	0,15	1,5	1,89	35 x 35	ECS2CBB102M◊◊ΔΔ3535
	1 200	166	116	0,15	1,5	2,16	30 x 50	ECS2CBB122M◊◊ΔΔ3050
		166	116	0,15	1,5	2,23	35 x 40	ECS2CBB122M◊◊ΔΔ3540
	1 500	133	93	0,15	1,5	2,61	35 x 45	ECS2CBB152M◊◊ΔΔ3545
	1 800	111	77	0,15	1,5	2,97	35 x 50	ECS2CBB182M◊◊ΔΔ3550
200 (250) 2D	180	1106	774	0,15	0,4	0,57	22 x 25	ECS2DBB181M◊◊ΔΔ2225
	220	905	633	0,15	0,4	0,70	22 x 30	ECS2DBB221M◊◊ΔΔ2230
	270	737	516	0,15	0,5	0,83	22 x 35	ECS2DBB271M◊◊ΔΔ2235
		737	516	0,15	0,5	0,76	25 x 25	ECS2DBB271M◊◊ΔΔ2525
	330	603	422	0,15	0,7	0,96	22 x 40	ECS2DBB331M◊◊ΔΔ2240
		603	422	0,15	0,7	0,90	25 x 30	ECS2DBB331M◊◊ΔΔ2530
	390	511	357	0,15	0,8	1,06	25 x 35	ECS2DBB391M◊◊ΔΔ2535
		511	357	0,15	0,8	1,02	30 x 25	ECS2DBB391M◊◊ΔΔ3025
	470	424	296	0,15	0,9	1,17	22 x 45	ECS2DBB471M◊◊ΔΔ2245
		424	296	0,15	0,9	1,22	25 x 40	ECS2DBB471M◊◊ΔΔ2540
		424	296	0,15	0,9	1,17	30 x 30	ECS2DBB471M◊◊ΔΔ3030
	560	356	249	0,15	1,1	1,39	25 x 45	ECS2DBB561M◊◊ΔΔ2545
		356	249	0,15	1,1	1,38	30 x 35	ECS2DBB561M◊◊ΔΔ3035
	680	293	205	0,15	1,4	1,58	25 x 50	ECS2DBB681M◊◊ΔΔ2550
		293	205	0,15	1,4	1,61	30 x 40	ECS2DBB681M◊◊ΔΔ3040
		293	205	0,15	1,4	1,49	35 x 30	ECS2DBB681M◊◊ΔΔ3530
	820	243	170	0,15	1,5	1,85	30 x 45	ECS2DBB821M◊◊ΔΔ3045
		243	170	0,15	1,5	1,75	35 x 35	ECS2DBB821M◊◊ΔΔ3535
	1 000	199	139	0,15	1,5	2,11	30 x 50	ECS2DBB102M◊◊ΔΔ3050
		199	139	0,15	1,5	2,07	35 x 40	ECS2DBB102M◊◊ΔΔ3540
	1 200	166	116	0,15	1,5	2,38	35 x 45	ECS2DBB122M◊◊ΔΔ3545
	1 500	133	93	0,15	1,5	2,76	35 x 50	ECS2DBB152M◊◊ΔΔ3550
250 (300) 2E	150	1327	929	0,15	0,4	0,52	22 x 25	ECS2EBB151M◊◊ΔΔ2225
	180	1106	774	0,15	0,5	0,64	22 x 30	ECS2EBB181M◊◊ΔΔ2230
		1106	774	0,15	0,5	0,62	25 x 25	ECS2EBB181M◊◊ΔΔ2525
	220	905	633	0,15	0,6	0,76	22 x 35	ECS2EBB221M◊◊ΔΔ2235
250 (300) 2E	220	905	633	0,15	0,6	0,76	25 x 30	ECS2EBB221M◊◊ΔΔ2530
	270	737	516	0,15	0,7	0,88	22 x 40	ECS2EBB271M◊◊ΔΔ2240
		737	516	0,15	0,7	0,90	25 x 35	ECS2EBB271M◊◊ΔΔ2535
		737	516	0,15	0,7	0,85	30 x 25	ECS2EBB271M◊◊ΔΔ3025
	330	603	422	0,15	0,8	1,01	22 x 45	ECS2EBB331M◊◊ΔΔ2245
		603	422	0,15	0,8	1,00	30 x 30	ECS2EBB331M◊◊ΔΔ3030
	390	511	357	0,15	1,0	1,13	22 x 50	ECS2EBB391M◊◊ΔΔ2250
		511	357	0,15	1,0	1,13	25 x 40	ECS2EBB391M◊◊ΔΔ2540
		511	357	0,15	1,0	1,15	30 x 35	ECS2EBB391M◊◊ΔΔ3035
	470	424	296	0,15	1,2	1,29	25 x 45	ECS2EBB471M◊◊ΔΔ2545
		424	296	0,15	1,2	1,24	35 x 30	ECS2EBB471M◊◊ΔΔ3530
	560	356	249	0,15	1,4	1,45	25 x 50	ECS2EBB561M◊◊ΔΔ2550
		356	249	0,15	1,4	1,48	30 x 40	ECS2EBB561M◊◊ΔΔ3040
		356	249	0,15	1,4	1,49	35 x 35	ECS2EBB561M◊◊ΔΔ3535
	680	293	205	0,15	1,5	1,71	30 x 45	ECS2EBB681M◊◊ΔΔ3045
		293	205	0,15	1,5	1,74	35 x 40	ECS2EBB681M◊◊ΔΔ3540
	820	243	170	0,15	1,5	1,94	30 x 50	ECS2EBB821M◊◊ΔΔ3050
	1 000	199	139	0,15	1,5	2,20	35 x 45	ECS2EBB102M◊◊ΔΔ3545
315 (365) 2F	68	2926	1610	0,15	0,2	0,32	22 x 25	ECS2FBB680M◊◊ΔΔ2225
	82	2427	1334	0,15	0,3	0,38	22 x 30	ECS2FBB820M◊◊ΔΔ2230
	100	1990	1095	0,15	0,3	0,41	25 x 25	ECS2FBB101M◊◊ΔΔ2525
	120	1658	912	0,15	0,4	0,48	22 x 35	ECS2FBB121M◊◊ΔΔ2235
		1658	912	0,15	0,4	0,49	25 x 30	ECS2FBB121M◊◊ΔΔ2530
	150	1327	730	0,15	0,5	0,56	22 x 40	ECS2FBB151M◊◊ΔΔ2240
		1327	730	0,15	0,5	0,51	30 x 25	ECS2FBB151M◊◊ΔΔ3025
	180	1106	608	0,15	0,6	0,63	22 x 45	ECS2FBB181M◊◊ΔΔ2245
		1106	608	0,15	0,6	0,62	25 x 35	ECS2FBB181M◊◊ΔΔ2535
		1106	608	0,15	0,6	0,63	30 x 30	ECS2FBB181M◊◊ΔΔ3030
	220	905	498	0,15	0,7	0,72	22 x 50	ECS2FBB221M◊◊ΔΔ2250
		905	498	0,15	0,7	0,71	25 x 40	ECS2FBB221M◊◊ΔΔ2540
		905	498	0,15	0,7	0,74	30 x 35	ECS2FBB221M◊◊ΔΔ3035
	270	737	406	0,15	0,9	0,81	25 x 45	ECS2FBB271M◊◊ΔΔ2545
		737	406	0,15	0,9	0,85	30 x 40	ECS2FBB271M◊◊ΔΔ3040
		737	406	0,15	0,9	0,82	35 x 30	ECS2FBB271M◊◊ΔΔ3530
	330	603	332	0,15	1,0	0,92	25 x 50	ECS2FBB331M◊◊ΔΔ2550
		603	332	0,15	1,0	0,90	35 x 35	ECS2FBB331M◊◊ΔΔ3535
	390	511	281	0,15	1,2	1,04	30 x 45	ECS2FBB391M◊◊ΔΔ3045
		511	281	0,15	1,2	1,05	35 x 40	ECS2FBB391M◊◊ΔΔ3540
	470	424	233	0,15	1,5	1,15	30 x 50	ECS2FBB471M◊◊ΔΔ3050
		424	233	0,15	1,5	1,18	35 x 45	ECS2FBB471M◊◊ΔΔ3545
	560	356	196	0,15	1,5	1,34	35 x 50	ECS2FBB561M◊◊ΔΔ3550
350 (400) 2V	68	2926	1610	0,15	0,2	0,34	22 x 25	ECS2VBB680M◊◊ΔΔ2225
	82	2427	1334	0,15	0,3	0,40	22 x 30	ECS2VBB820M◊◊ΔΔ2230
	100	1990	1095	0,15	0,4	0,47	25 x 25	ECS2VBB101M◊◊ΔΔ2525
	120	1658	912	0,15	0,4	0,52	22 x 35	ECS2VBB121M◊◊ΔΔ2235
		1658	912	0,15	0,4	0,53	25 x 30	ECS2VBB121M◊◊ΔΔ2530
		1658	912	0,15	0,4	0,53	30 x 25	ECS2VBB121M◊◊ΔΔ3025
	150	1327	730	0,15	0,5	0,59	22 x 40	ECS2VBB151M◊◊ΔΔ2240
		1327	730	0,15	0,5	0,60	25 x 35	ECS2VBB151M◊◊ΔΔ2535
	180	1106	608	0,15	0,6	0,68	22 x 45	ECS2VBB181M◊◊ΔΔ2245
		1106	608	0,15	0,6	0,70	25 x 40	ECS2VBB181M◊◊ΔΔ2540
		1106	680	0,15	0,6	0,71	30 x 30	ECS2VBB181M◊◊ΔΔ3030
	220	905	498	0,15	0,8	0,78	22 x 50	ECS2VBB221M◊◊ΔΔ2250
		905	498	0,15	0,8	0,82	25 x 45	ECS2VBB221M◊◊ΔΔ2545
		905	498	0,15	0,8	0,82	30 x 35	ECS2VBB221M◊◊ΔΔ3035
	270	737	406	0,15	0,9	0,94	25 x 50	ECS2VBB271M◊◊ΔΔ2550
		737	406	0,15	0,9	0,93	30 x 40	ECS2VBB271M◊◊ΔΔ3040
		737	406	0,15	0,9	0,90	35 x 30	ECS2VBB271M◊◊ΔΔ3530
	330	603	332	0,15	1,2	1,05	30 x 45	ECS2VBB331M◊◊ΔΔ3045
		603	332	0,15	1,2	1,01	35 x 35	ECS2VBB331M◊◊ΔΔ3535
	390	511	281	0,15	1,4	1,18	30 x 50	ECS2VBB391M◊◊ΔΔ3050
		511	281	0,15	1,4	1,13	35 x 40	ECS2VBB391M◊◊ΔΔ3540
	470	424	233	0,15	1,5	1,26	35 x 45	ECS2VBB471M◊◊ΔΔ3545
	560	356	196	0,15	1,5	1,39	35 x 50	ECS2VBB561M◊◊ΔΔ3550

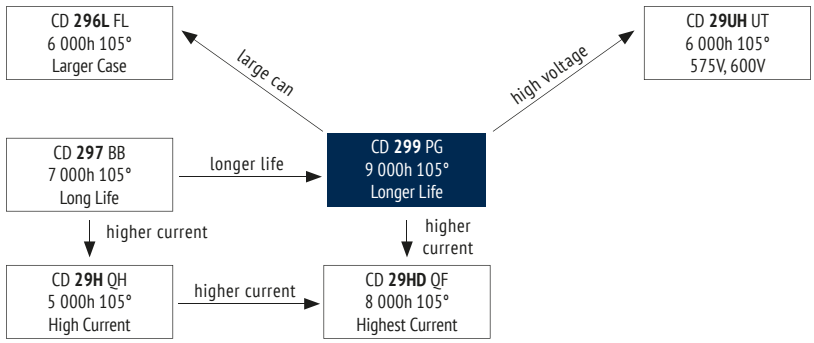
U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
400 (450) 2G	68	2926	1522	0,15	0,3	0,38	22 x 30	ECS2GBB680M◊◊ΔΔ2230
	82	2427	1262	0,15	0,3	0,41	25 x 25	ECS2GBB820M◊◊ΔΔ2525
	100	1990	1035	0,15	0,4	0,46	22 x 35	ECS2GBB101M◊◊ΔΔ2235
		1990	1035	0,15	0,4	0,48	25 x 30	ECS2GBB101M◊◊ΔΔ2530
		1990	1035	0,15	0,4	0,48	30 x 25	ECS2GBB101M◊◊ΔΔ3025
	120	1658	863	0,15	0,5	0,53	22 x 40	ECS2GBB121M◊◊ΔΔ2240
		1658	863	0,15	0,5	0,55	25 x 35	ECS2GBB121M◊◊ΔΔ2535
		1658	863	0,15	0,5	0,56	30 x 30	ECS2GBB121M◊◊ΔΔ3030
	150	1327	690	0,15	0,6	0,63	22 x 50	ECS2GBB151M◊◊ΔΔ2250
		1327	690	0,15	0,6	0,65	25 x 40	ECS2GBB151M◊◊ΔΔ2540
	180	1106	575	0,15	0,7	0,72	25 x 45	ECS2GBB181M◊◊ΔΔ2545
		1106	575	0,15	0,7	0,74	30 x 35	ECS2GBB181M◊◊ΔΔ3035
	220	905	471	0,15	0,9	0,79	25 x 50	ECS2GBB221M◊◊ΔΔ2550
		905	471	0,15	0,9	0,85	30 x 40	ECS2GBB221M◊◊ΔΔ3040
		905	471	0,15	0,9	0,89	35 x 30	ECS2GBB221M◊◊ΔΔ3530
	270	737	383	0,15	1,1	0,98	30 x 45	ECS2GBB271M◊◊ΔΔ3045
		737	383	0,15	1,1	0,96	35 x 35	ECS2GBB271M◊◊ΔΔ3535
	330	603	314	0,15	1,3	1,12	30 x 50	ECS2GBB331M◊◊ΔΔ3050
		603	314	0,15	1,3	1,12	35 x 40	ECS2GBB331M◊◊ΔΔ3540
	390	511	265	0,15	1,5	1,27	35 x 45	ECS2GBB391M◊◊ΔΔ3545
	470	424	220	0,15	1,5	1,33	35 x 50	ECS2GBB471M◊◊ΔΔ3550
450 (500) 2W	68	3901	1951	0,20	0,3	0,38	22 x 30	ECS2WBB680M◊◊ΔΔ2230
	82	3235	1618	0,20	0,4	0,44	22 x 35	ECS2WBB820M◊◊ΔΔ2235
		3235	1618	0,20	0,4	0,45	25 x 30	ECS2WBB820M◊◊ΔΔ2530
		3235	1618	0,20	0,4	0,46	30 x 25	ECS2WBB820M◊◊ΔΔ3025
	100	2653	1327	0,20	0,5	0,50	22 x 40	ECS2WBB101M◊◊ΔΔ2240
		2653	1327	0,20	0,5	0,52	25 x 35	ECS2WBB101M◊◊ΔΔ2535
	120	2211	1106	0,20	0,5	0,58	22 x 50	ECS2WBB121M◊◊ΔΔ2250
		2211	1106	0,20	0,5	0,58	25 x 40	ECS2WBB121M◊◊ΔΔ2540
		2211	1106	0,20	0,5	0,58	30 x 30	ECS2WBB121M◊◊ΔΔ3030
	150	1769	884	0,20	0,7	0,66	25 x 45	ECS2WBB151M◊◊ΔΔ2545
		1769	884	0,20	0,7	0,68	30 x 35	ECS2WBB151M◊◊ΔΔ3035
	180	1474	737	0,20	0,8	0,74	25 x 50	ECS2WBB181M◊◊ΔΔ2550
		1474	737	0,20	0,8	0,77	30 x 40	ECS2WBB181M◊◊ΔΔ3040
		1474	737	0,20	0,8	0,77	35 x 30	ECS2WBB181M◊◊ΔΔ3530
	220	1206	603	0,20	1,0	0,88	30 x 45	ECS2WBB221M◊◊ΔΔ3045
		1206	603	0,20	1,0	0,88	35 x 35	ECS2WBB221M◊◊ΔΔ3535
	270	983	491	0,20	1,2	0,99	30 x 50	ECS2WBB271M◊◊ΔΔ3050
		983	491	0,20	1,2	1,01	35 x 40	ECS2WBB271M◊◊ΔΔ3540
	330	804	402	0,20	1,5	1,15	35 x 45	ECS2WBB331M◊◊ΔΔ3545
	390	681	340	0,20	1,5	1,28	35 x 50	ECS2WBB391M◊◊ΔΔ3550
	470	565	282	0,20	1,5	1,50	35 x 55	ECS2WBB471M◊◊ΔΔ3555
500 (550) 2H	47	5644	2823	0,20	0,2	0,41	22 x 30	ECS2HBB470M◊◊ΔΔ2230
	56	4737	2370	0,20	0,3	0,47	22 x 30	ECS2HBB560M◊◊ΔΔ2230
	68	3901	1951	0,20	0,3	0,54	22 x 35	ECS2HBB680M◊◊ΔΔ2235
		3901	1951	0,20	0,3	0,54	25 x 30	ECS2HBB680M◊◊ΔΔ2530
	82	3235	1618	0,20	0,4	0,62	22 x 40	ECS2HBB820M◊◊ΔΔ2240
		3235	1618	0,20	0,4	0,62	25 x 35	ECS2HBB820M◊◊ΔΔ2535
	100	2653	1327	0,20	0,5	0,67	22 x 45	ECS2HBB101M◊◊ΔΔ2245
		2653	1327	0,20	0,5	0,67	25 x 40	ECS2HBB101M◊◊ΔΔ2540
		2653	1327	0,20	0,5	0,67	30 x 30	ECS2HBB101M◊◊ΔΔ3030
	120	2211	1106	0,20	0,6	0,77	22 x 50	ECS2HBB121M◊◊ΔΔ2250
		2211	1106	0,20	0,6	0,74	25 x 40	ECS2HBB121M◊◊ΔΔ2540
		2211	1106	0,20	0,6	0,77	30 x 35	ECS2HBB121M◊◊ΔΔ3035
		2211	1106	0,20	0,6	0,80	35 x 30	ECS2HBB121M◊◊ΔΔ3530
	150	1769	885	0,20	0,8	0,82	25 x 45	ECS2HBB151M◊◊ΔΔ2545
		1769	885	0,20	0,8	0,85	30 x 40	ECS2HBB151M◊◊ΔΔ3040
		1769	885	0,20	0,8	0,67	35 x 30	ECS2HBB151M◊◊ΔΔ3530
		1769	885	0,20	0,8	0,85	35 x 35	ECS2HBB151M◊◊ΔΔ3535
	180	1474	737	0,20	0,9	0,98	25 x 50	ECS2HBB181M◊◊ΔΔ2550
		1474	737	0,20	0,9	1,01	30 x 45	ECS2HBB181M◊◊ΔΔ3045
	220	1206	603	0,20	1,1	1,12	30 x 50	ECS2HBB221M◊◊ΔΔ3050
		1206	603	0,20	1,1	0,94	35 x 35	ECS2HBB221M◊◊ΔΔ3535
		1206	603	0,20	1,1	1,12	35 x 40	ECS2HBB221M◊◊ΔΔ3540
	270	983	492	0,20	1,4	1,25	30 x 50	ECS2HBB271M◊◊ΔΔ3050
		983	492	0,20	1,4	1,25	35 x 40	ECS2HBB271M◊◊ΔΔ3540

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
500 (550) 2H	330	804	402	0,20	1,5	1,36	35 x 45	ECS2HBB331M◊◊ΔΔ3545
	390	681	340	0,20	1,5	1,54	35 x 50	ECS2HBB391M◊◊ΔΔ3550
	470	565	282	0,20	1,5	1,69	35 x 60	ECS2HBB471M◊◊ΔΔ3560
550 (600) 2Y	150	1769	885	0,20	0,8	0,92	30 x 40	ECS2YBB151M◊◊ΔΔ3040
	180	1474	737	0,20	1,0	1,03	30 x 50	ECS2YBB181M◊◊ΔΔ3050
		1474	737	0,20	1,0	1,03	35 x 35	ECS2YBB181M◊◊ΔΔ3535
	220	1206	603	0,20	1,2	1,15	30 x 55	ECS2YBB221M◊◊ΔΔ3055
		1206	603	0,20	1,2	1,15	35 x 40	ECS2YBB221M◊◊ΔΔ3540
	270	983	492	0,20	1,5	1,30	35 x 45	ECS2YBB271M◊◊ΔΔ3545
	330	804	402	0,20	1,5	1,48	35 x 50	ECS2YBB331M◊◊ΔΔ3550
	390	681	340	0,20	1,5	1,65	35 x 60	ECS2YBB391M◊◊ΔΔ3560
	470	565	282	0,20	1,5	1,92	35 x 70	ECS2YBB471M◊◊ΔΔ3570
	560	473	237	0,20	1,5	2,05	35 x 80	ECS2YBB561M◊◊ΔΔ3580
		473	237	0,20	1,5	2,05	40 x 70	ECS2YBB561M◊◊ΔΔ4070

SNAP-IN

9 000h at 105°C

- Extended Lifetime at 105°C
- High Ripple Current
- High Professional Switch Mode Power Supplies



SNAP-IN

ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +105	-25 ~ +105
Voltage Range (V)	160 ~ 250	315 ~ 500
Capacitance Range (µF)	39 ~ 2 200	
Capacitance Tolerance (20°C, 120Hz)	± 20%	
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	⩽ 250	315 ~ 500
	$Z_{-25°C} / Z_{+20°C}$	3	8
	$Z_{-40°C} / Z_{+20°C}$	12	-

Fast Charge-Discharge: **Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**

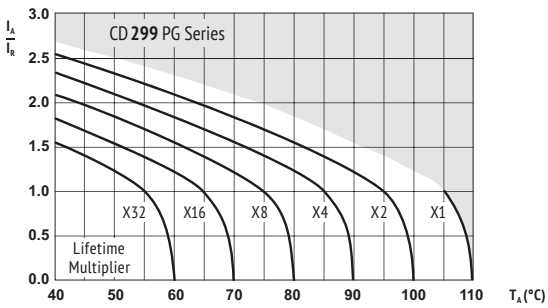
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	9 000h	> 200 000h	7 000h	7 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 50°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Rated Voltage (V) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	⩾ 40 kHz
160 ~ 250	0,80	1,00	1,17	1,30	1,45	1,50
⩾ 315	0,80	1,00	1,16	1,30	1,43	1,45

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
160 (200) 2C	270	737	516	0,15	0,4	1,10	22 x 25	ECS2CPG271M◊◊ΔΔ2225
	330	603	422	0,15	0,5	1,20	22 x 30	ECS2CPG331M◊◊ΔΔ2230
	390	511	357	0,15	0,6	1,30	25 x 25	ECS2CPG391M◊◊ΔΔ2525
	470	424	296	0,15	0,8	1,40	22 x 35	ECS2CPG471M◊◊ΔΔ2235
		424	296	0,15	0,8	1,40	25 x 30	ECS2CPG471M◊◊ΔΔ2530
	560	356	249	0,15	0,9	1,50	22 x 40	ECS2CPG561M◊◊ΔΔ2240
		356	249	0,15	0,9	1,50	30 x 25	ECS2CPG561M◊◊ΔΔ3025
	680	293	205	0,15	1,1	1,70	22 x 45	ECS2CPG681M◊◊ΔΔ2245
		293	205	0,15	1,1	1,70	25 x 35	ECS2CPG681M◊◊ΔΔ2535
		293	205	0,15	1,1	1,70	30 x 30	ECS2CPG681M◊◊ΔΔ3030
	820	243	170	0,15	1,3	2,00	25 x 40	ECS2CPG821M◊◊ΔΔ2540
	1 000	199	139	0,15	1,5	2,20	25 x 45	ECS2CPG102M◊◊ΔΔ2545
		199	139	0,15	1,5	2,20	30 x 35	ECS2CPG102M◊◊ΔΔ3035
	1 200	166	116	0,15	1,5	2,30	25 x 50	ECS2CPG122M◊◊ΔΔ2550
		166	116	0,15	1,5	2,30	30 x 40	ECS2CPG122M◊◊ΔΔ3040
		166	116	0,15	1,5	2,30	35 x 35	ECS2CPG122M◊◊ΔΔ3535
	1 500	133	93	0,15	1,5	2,50	30 x 45	ECS2CPG152M◊◊ΔΔ3045
		133	93	0,15	1,5	2,50	35 x 40	ECS2CPG152M◊◊ΔΔ3540
	1 800	111	77	0,15	1,5	2,70	30 x 50	ECS2CPG182M◊◊ΔΔ3050
		111	77	0,15	1,5	2,70	35 x 45	ECS2CPG182M◊◊ΔΔ3545
	2 200	91	63	0,15	1,5	2,90	35 x 50	ECS2CPG222M◊◊ΔΔ3550
200 (250) 2D	220	905	633	0,15	0,4	1,00	22 x 25	ECS2DPG221M◊◊ΔΔ2225
	270	737	516	0,15	0,5	1,10	22 x 30	ECS2DPG271M◊◊ΔΔ2230
		737	516	0,15	0,5	1,10	25 x 25	ECS2DPG271M◊◊ΔΔ2525
	390	511	357	0,15	0,8	1,30	22 x 35	ECS2DPG391M◊◊ΔΔ2235
		511	357	0,15	0,8	1,30	25 x 30	ECS2DPG391M◊◊ΔΔ2530
		511	357	0,15	0,8	1,30	30 x 25	ECS2DPG391M◊◊ΔΔ3025
	470	424	296	0,15	0,9	1,40	22 x 40	ECS2DPG471M◊◊ΔΔ2240
		424	296	0,15	0,9	1,40	25 x 35	ECS2DPG471M◊◊ΔΔ2535
		424	296	0,15	0,9	1,40	30 x 30	ECS2DPG471M◊◊ΔΔ3030
	560	356	249	0,15	1,1	1,50	22 x 45	ECS2DPG561M◊◊ΔΔ2245
	680	293	205	0,15	1,4	1,70	25 x 40	ECS2DPG681M◊◊ΔΔ2540
		293	205	0,15	1,4	1,70	30 x 35	ECS2DPG681M◊◊ΔΔ3035
	820	243	170	0,15	1,5	2,00	25 x 50	ECS2DPG821M◊◊ΔΔ2550
		243	170	0,15	1,5	2,00	30 x 40	ECS2DPG821M◊◊ΔΔ3040
		243	170	0,15	1,5	2,00	35 x 30	ECS2DPG821M◊◊ΔΔ3530
	1 000	199	139	0,15	1,5	2,20	30 x 45	ECS2DPG102M◊◊ΔΔ3045
		199	139	0,15	1,5	2,20	35 x 35	ECS2DPG102M◊◊ΔΔ3535
	1 200	166	116	0,15	1,5	2,30	30 x 50	ECS2DPG122M◊◊ΔΔ3050
		166	116	0,15	1,5	2,30	35 x 40	ECS2DPG122M◊◊ΔΔ3540
	1 500	133	93	0,15	1,5	2,50	35 x 50	ECS2DPG152M◊◊ΔΔ3550
250 (300) 2E	180	1106	774	0,15	0,5	0,90	22 x 30	ECS2EPG181M◊◊ΔΔ2230
	220	905	633	0,15	0,6	1,00	25 x 25	ECS2EPG221M◊◊ΔΔ2525
	270	737	516	0,15	0,7	1,10	22 x 35	ECS2EPG271M◊◊ΔΔ2235
		737	516	0,15	0,7	1,10	25 x 30	ECS2EPG271M◊◊ΔΔ2530
		737	516	0,15	0,7	1,10	30 x 25	ECS2EPG271M◊◊ΔΔ3025
	330	603	422	0,15	0,8	1,20	22 x 40	ECS2EPG331M◊◊ΔΔ2240
		603	422	0,15	0,8	1,20	25 x 35	ECS2EPG331M◊◊ΔΔ2535
	390	511	357	0,15	1,0	1,30	22 x 45	ECS2EPG391M◊◊ΔΔ2245
		511	357	0,15	1,0	1,30	25 x 40	ECS2EPG391M◊◊ΔΔ2540
		511	357	0,15	1,0	1,30	30 x 30	ECS2EPG391M◊◊ΔΔ3030
	470	424	296	0,15	1,2	1,40	25 x 45	ECS2EPG471M◊◊ΔΔ2545
		424	296	0,15	1,2	1,40	30 x 35	ECS2EPG471M◊◊ΔΔ3035
		424	296	0,15	1,2	1,40	35 x 30	ECS2EPG471M◊◊ΔΔ3530
	560	356	249	0,15	1,4	1,50	25 x 50	ECS2EPG561M◊◊ΔΔ2550
	680	293	205	0,15	1,5	1,70	30 x 45	ECS2EPG681M◊◊ΔΔ3045
		293	205	0,15	1,5	1,70	35 x 35	ECS2EPG681M◊◊ΔΔ3535
	820	243	170	0,15	1,5	2,00	30 x 50	ECS2EPG821M◊◊ΔΔ3050
		243	170	0,15	1,5	2,00	35 x 40	ECS2EPG821M◊◊ΔΔ3540
	1 000	199	139	0,15	1,5	2,20	35 x 45	ECS2EPG102M◊◊ΔΔ3545
	1 200	166	116	0,15	1,5	2,30	35 x 50	ECS2EPG122M◊◊ΔΔ3550

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
315 (365) 2F	82	2427	1335	0,15	0,3	0,64	22 x 25	ECS2FPG820M◊◊ΔΔ2225
	100	1990	1095	0,15	0,3	0,69	22 x 30	ECS2FPG101M◊◊ΔΔ2230
	120	1658	912	0,15	0,4	0,75	25 x 25	ECS2FPG121M◊◊ΔΔ2525
	150	1327	730	0,15	0,5	0,82	22 x 35	ECS2FPG151M◊◊ΔΔ2235
		1327	730	0,15	0,5	0,82	25 x 30	ECS2FPG151M◊◊ΔΔ2530
		1327	730	0,15	0,5	0,82	30 x 25	ECS2FPG151M◊◊ΔΔ3025
	180	1106	608	0,15	0,6	0,90	22 x 40	ECS2FPG181M◊◊ΔΔ2240
		1106	608	0,15	0,6	0,90	25 x 35	ECS2FPG181M◊◊ΔΔ2535
	220	905	498	0,15	0,7	1,00	22 x 45	ECS2FPG221M◊◊ΔΔ2245
		905	498	0,15	0,7	1,00	25 x 40	ECS2FPG221M◊◊ΔΔ2540
		905	498	0,15	0,7	1,00	30 x 30	ECS2FPG221M◊◊ΔΔ3030
	270	737	406	0,15	0,9	1,10	25 x 45	ECS2FPG271M◊◊ΔΔ2545
		737	406	0,15	0,9	1,10	30 x 35	ECS2FPG271M◊◊ΔΔ3035
		737	406	0,15	0,9	1,10	35 x 30	ECS2FPG271M◊◊ΔΔ3530
	330	603	332	0,15	1,0	1,20	25 x 50	ECS2FPG331M◊◊ΔΔ2550
		603	332	0,15	1,0	1,20	30 x 40	ECS2FPG331M◊◊ΔΔ3040
	390	511	281	0,15	1,2	1,30	30 x 45	ECS2FPG391M◊◊ΔΔ3045
		511	281	0,15	1,2	1,30	35 x 35	ECS2FPG391M◊◊ΔΔ3535
	470	424	233	0,15	1,5	1,40	30 x 50	ECS2FPG471M◊◊ΔΔ3050
		424	233	0,15	1,5	1,40	35 x 40	ECS2FPG471M◊◊ΔΔ3540
	560	356	196	0,15	1,5	1,50	35 x 45	ECS2FPG561M◊◊ΔΔ3545
	680	293	161	0,15	1,5	1,70	35 x 50	ECS2FPG681M◊◊ΔΔ3550
350 (400) 2V	82	2427	1335	0,15	0,3	0,64	22 x 25	ECS2VPG820M◊◊ΔΔ2225
	100	1990	1095	0,15	0,4	0,69	22 x 30	ECS2VPG101M◊◊ΔΔ2230
		1990	1095	0,15	0,4	0,69	25 x 25	ECS2VPG101M◊◊ΔΔ2525
	120	1658	912	0,15	0,4	0,75	22 x 35	ECS2VPG121M◊◊ΔΔ2235
		1658	912	0,15	0,4	0,75	25 x 30	ECS2VPG121M◊◊ΔΔ2530
	150	1327	730	0,15	0,5	0,82	22 x 40	ECS2VPG151M◊◊ΔΔ2240
		1327	730	0,15	0,5	0,82	30 x 25	ECS2VPG151M◊◊ΔΔ3025
	180	1106	608	0,15	0,6	0,90	22 x 45	ECS2VPG181M◊◊ΔΔ2245
		1106	608	0,15	0,6	0,90	25 x 35	ECS2VPG181M◊◊ΔΔ2535
		1106	608	0,15	0,6	0,90	30 x 30	ECS2VPG181M◊◊ΔΔ3030
	220	905	498	0,15	0,8	1,00	22 x 50	ECS2VPG221M◊◊ΔΔ2250
		905	498	0,15	0,8	1,00	25 x 40	ECS2VPG221M◊◊ΔΔ2540
	270	737	406	0,15	0,9	1,10	25 x 50	ECS2VPG271M◊◊ΔΔ2550
		737	406	0,15	0,9	1,10	30 x 35	ECS2VPG271M◊◊ΔΔ3035
		737	406	0,15	0,9	1,10	35 x 30	ECS2VPG271M◊◊ΔΔ3530
	330	603	332	0,15	1,2	1,20	30 x 45	ECS2VPG331M◊◊ΔΔ3045
		603	332	0,15	1,2	1,20	35 x 35	ECS2VPG331M◊◊ΔΔ3535
	390	511	281	0,15	1,4	1,30	30 x 50	ECS2VPG391M◊◊ΔΔ3050
		511	281	0,15	1,4	1,30	35 x 40	ECS2VPG391M◊◊ΔΔ3540
	560	356	196	0,15	1,5	1,50	35 x 50	ECS2VPG561M◊◊ΔΔ3550
400 (450) 2G	56	3553	1955	0,15	0,2	0,51	22 x 25	ECS2GPG560M◊◊ΔΔ2225
	68	2926	1610	0,15	0,3	0,56	22 x 30	ECS2GPG680M◊◊ΔΔ2230
		2926	1610	0,15	0,3	0,56	25 x 25	ECS2GPG680M◊◊ΔΔ2525
	82	2427	1335	0,15	0,3	0,64	22 x 35	ECS2GPG820M◊◊ΔΔ2235
	100	1990	1095	0,15	0,4	0,69	25 x 30	ECS2GPG101M◊◊ΔΔ2530
	120	1658	912	0,15	0,5	0,75	22 x 40	ECS2GPG121M◊◊ΔΔ2240
		1658	912	0,15	0,5	0,75	25 x 35	ECS2GPG121M◊◊ΔΔ2535
		1658	912	0,15	0,5	0,75	30 x 25	ECS2GPG121M◊◊ΔΔ3025
	150	1327	730	0,15	0,6	0,82	22 x 50	ECS2GPG151M◊◊ΔΔ2250
		1327	730	0,15	0,6	0,82	25 x 40	ECS2GPG151M◊◊ΔΔ2540
		1327	730	0,15	0,6	0,82	30 x 30	ECS2GPG151M◊◊ΔΔ3030
	180	1106	608	0,15	0,7	0,90	25 x 45	ECS2GPG181M◊◊ΔΔ2545
		1106	608	0,15	0,7	0,90	30 x 35	ECS2GPG181M◊◊ΔΔ3035
		1106	608	0,15	0,7	0,90	35 x 25	ECS2GPG181M◊◊ΔΔ3525
	220	905	498	0,15	0,9	1,00	25 x 50	ECS2GPG221M◊◊ΔΔ2550
		905	498	0,15	0,9	1,00	30 x 40	ECS2GPG221M◊◊ΔΔ3040
		905	498	0,15	0,9	1,00	35 x 30	ECS2GPG221M◊◊ΔΔ3530
	270	737	406	0,15	1,1	1,10	30 x 45	ECS2GPG271M◊◊ΔΔ3045
		737	406	0,15	1,1	1,10	35 x 35	ECS2GPG271M◊◊ΔΔ3535
	330	603	332	0,15	1,3	1,20	30 x 50	ECS2GPG331M◊◊ΔΔ3050
		603	332	0,15	1,3	1,20	35 x 40	ECS2GPG331M◊◊ΔΔ3540
	390	511	281	0,15	1,5	1,30	35 x 45	ECS2GPG391M◊◊ΔΔ3545
	470	424	233	0,15	1,5	1,40	35 x 50	ECS2GPG471M◊◊ΔΔ3550

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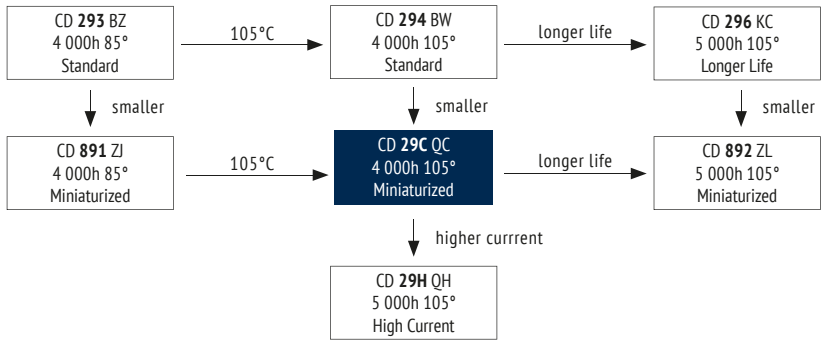
SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
450 (500) 2W	39	6802	3062	0,20	0,2	0,37	22 x 25	ECS2WPG390M◊◊ΔΔ2225
	47	5644	2541	0,20	0,2	0,40	22 x 30	ECS2WPG470M◊◊ΔΔ2230
	56	4737	2133	0,20	0,3	0,47	22 x 35	ECS2WPG560M◊◊ΔΔ2235
		4737	2133	0,20	0,3	0,47	25 x 25	ECS2WPG560M◊◊ΔΔ2525
	68	3901	1756	0,20	0,3	0,53	22 x 40	ECS2WPG680M◊◊ΔΔ2240
		3901	1756	0,20	0,3	0,53	25 x 30	ECS2WPG680M◊◊ΔΔ2530
	82	3235	1456	0,20	0,4	0,56	22 x 45	ECS2WPG820M◊◊ΔΔ2245
		3235	1456	0,20	0,4	0,56	25 x 35	ECS2WPG820M◊◊ΔΔ2535
		3235	1456	0,20	0,4	0,56	30 x 25	ECS2WPG820M◊◊ΔΔ3025
	100	2653	1194	0,20	0,5	0,64	22 x 50	ECS2WPG101M◊◊ΔΔ2250
		2653	1194	0,20	0,5	0,64	25 x 40	ECS2WPG101M◊◊ΔΔ2540
		2653	1194	0,20	0,5	0,64	30 x 30	ECS2WPG101M◊◊ΔΔ3030
	120	2211	995	0,20	0,5	0,72	25 x 45	ECS2WPG121M◊◊ΔΔ2545
	150	1769	796	0,20	0,7	0,79	25 x 50	ECS2WPG151M◊◊ΔΔ2550
		1769	796	0,20	0,7	0,79	30 x 40	ECS2WPG151M◊◊ΔΔ3040
		1769	796	0,20	0,7	0,79	35 x 30	ECS2WPG151M◊◊ΔΔ3530
	180	1474	664	0,20	0,8	0,87	30 x 45	ECS2WPG181M◊◊ΔΔ3045
		1474	664	0,20	0,8	0,87	35 x 35	ECS2WPG181M◊◊ΔΔ3535
	220	1206	543	0,20	1,0	1,00	30 x 50	ECS2WPG221M◊◊ΔΔ3050
		1206	543	0,20	1,0	1,00	35 x 40	ECS2WPG221M◊◊ΔΔ3540
	270	983	442	0,20	1,2	1,19	35 x 45	ECS2WPG271M◊◊ΔΔ3545
	330	804	362	0,20	1,5	1,38	35 x 50	ECS2WPG331M◊◊ΔΔ3550
500 (550) 2H	47	5644	2823	0,20	0,2	0,41	22 x 30	ECS2HPG470M◊◊ΔΔ2230
	56	4737	2370	0,20	0,3	0,47	22 x 30	ECS2HPG560M◊◊ΔΔ2230
	68	3901	1951	0,20	0,3	0,54	22 x 35	ECS2HPG680M◊◊ΔΔ2235
		3901	1951	0,20	0,3	0,54	25 x 30	ECS2HPG680M◊◊ΔΔ2530
	82	3235	1618	0,20	0,4	0,62	22 x 40	ECS2HPG820M◊◊ΔΔ2240
		3235	1618	0,20	0,4	0,62	25 x 35	ECS2HPG820M◊◊ΔΔ2535
	100	2653	1327	0,20	0,5	0,67	22 x 45	ECS2HPG101M◊◊ΔΔ2245
		2653	1327	0,20	0,5	0,67	25 x 40	ECS2HPG101M◊◊ΔΔ2540
		2653	1327	0,20	0,5	0,67	30 x 30	ECS2HPG101M◊◊ΔΔ3030
	120	2211	1106	0,20	0,6	0,77	22 x 50	ECS2HPG121M◊◊ΔΔ2250
		2211	1106	0,20	0,6	0,74	25 x 40	ECS2HPG121M◊◊ΔΔ2540
		2211	1106	0,20	0,6	0,77	30 x 35	ECS2HPG121M◊◊ΔΔ3035
		2211	1106	0,20	0,6	0,80	35 x 30	ECS2HPG121M◊◊ΔΔ3530
	150	1769	885	0,20	0,8	0,82	25 x 45	ECS2HPG151M◊◊ΔΔ2545
		1769	885	0,20	0,8	0,85	30 x 40	ECS2HPG151M◊◊ΔΔ3040
		1769	885	0,20	0,8	0,85	35 x 35	ECS2HPG151M◊◊ΔΔ3535
	180	1474	737	0,20	0,9	0,98	25 x 50	ECS2HPG181M◊◊ΔΔ2550
		1474	737	0,20	0,9	1,01	30 x 45	ECS2HPG181M◊◊ΔΔ3045
	220	1206	603	0,20	1,1	1,12	30 x 50	ECS2HPG221M◊◊ΔΔ3050
		1206	603	0,20	1,1	1,12	35 x 40	ECS2HPG221M◊◊ΔΔ3540
	270	983	492	0,20	1,4	1,25	30 x 50	ECS2HPG271M◊◊ΔΔ3050
		983	492	0,20	1,4	1,25	35 x 45	ECS2HPG271M◊◊ΔΔ3545
	330	804	402	0,20	1,5	1,36	35 x 50	ECS2HPG331M◊◊ΔΔ3550

4 000h at 105°C

- Miniaturized 105°C Series
- High Currents



ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +105	-25 ~ +105
Voltage Range (V)	200 ~ 250	400 ~ 450
Capacitance Range (µF)	100 ~ 2 700	
Capacitance Tolerance (20°C, 120Hz)	± 20%	
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)		200	250	400	450
	Impedance Ratio	$Z_{-25°C} / Z_{+20°C}$	4		8	
		$Z_{-40°C} / Z_{+20°C}$	12		-	
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**					

SNAP-IN

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	4 000h	> 180 000h	2 000h	3 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 40°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

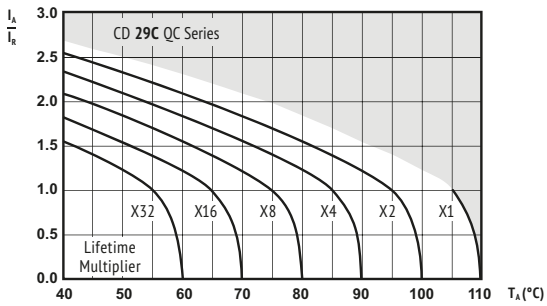
MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Rated Voltage (V) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	≥ 50 kHz
200 ~ 250	0,80	1,00	1,17	1,32	1,45	1,50
400 ~ 450	0,80	1,00	1,16	1,30	1,41	1,43

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

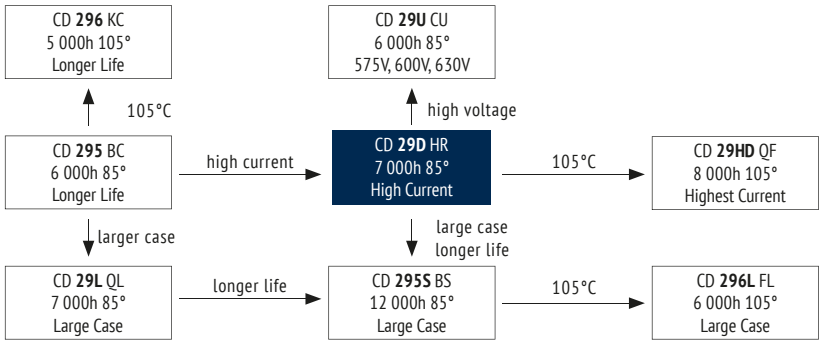
SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
200 (250) 2D	330	603	422	0,15	0,7	1,01	22 x 25	ECS2DQC331M◊◊ΔΔ2225
	390	511	357	0,15	0,8	1,10	22 x 30	ECS2DQC391M◊◊ΔΔ2230
	470	424	296	0,15	0,9	1,20	22 x 30	ECS2DQC471M◊◊ΔΔ2230
		424	296	0,15	0,9	1,20	25 x 25	ECS2DQC471M◊◊ΔΔ2525
	560	356	248	0,15	1,1	1,48	22 x 35	ECS2DQC561M◊◊ΔΔ2235
		355	248	0,15	1,1	1,48	25 x 30	ECS2DQC561M◊◊ΔΔ2530
	680	293	204	0,15	1,4	1,62	22 x 40	ECS2DQC681M◊◊ΔΔ2240
		293	204	0,15	1,4	1,60	25 x 30	ECS2DQC681M◊◊ΔΔ2530
		293	204	0,15	1,4	1,60	30 x 25	ECS2DQC681M◊◊ΔΔ3025
	820	243	169	0,15	1,5	1,75	22 x 45	ECS2DQC821M◊◊ΔΔ2245
		243	169	0,15	1,5	1,75	25 x 35	ECS2DQC821M◊◊ΔΔ2535
		243	169	0,15	1,5	1,75	30 x 30	ECS2DQC821M◊◊ΔΔ3030
	1 000	199	139	0,15	1,5	2,04	22 x 50	ECS2DQC102M◊◊ΔΔ2250
		199	139	0,15	1,5	2,04	25 x 40	ECS2DQC102M◊◊ΔΔ2540
		199	139	0,15	1,5	2,04	30 x 35	ECS2DQC102M◊◊ΔΔ3035
		199	139	0,15	1,5	2,04	35 x 25	ECS2DQC102M◊◊ΔΔ3525
	1 200	166	116	0,15	1,5	2,30	25 x 45	ECS2DQC122M◊◊ΔΔ2545
		166	116	0,15	1,5	2,30	30 x 35	ECS2DQC122M◊◊ΔΔ3035
	1 500	133	92	0,15	1,5	2,57	30 x 40	ECS2DQC152M◊◊ΔΔ3040
		133	92	0,15	1,5	2,57	35 x 30	ECS2DQC152M◊◊ΔΔ3530
	1 800	111	77	0,15	1,5	2,68	30 x 50	ECS2DQC182M◊◊ΔΔ3050
		111	77	0,15	1,5	2,68	35 x 35	ECS2DQC182M◊◊ΔΔ3535
	2 200	91	63	0,15	1,5	2,92	35 x 45	ECS2DQC222M◊◊ΔΔ3545
	2 700	74	51	0,15	1,5	3,30	35 x 50	ECS2DQC272M◊◊ΔΔ3550
250 (300) 2E	220	905	633	0,15	0,6	0,95	22 x 25	ECS2EQC221M◊◊ΔΔ2225
	270	737	516	0,15	0,7	1,12	22 x 25	ECS2EQC271M◊◊ΔΔ2225
	330	603	422	0,15	0,8	1,21	22 x 30	ECS2EQC331M◊◊ΔΔ2230
		603	422	0,15	0,8	1,21	25 x 25	ECS2EQC331M◊◊ΔΔ2525
	390	511	357	0,15	1,0	1,38	22 x 35	ECS2EQC391M◊◊ΔΔ2235
		511	357	0,15	1,0	1,38	25 x 25	ECS2EQC391M◊◊ΔΔ2525
	470	424	296	0,15	1,2	1,56	22 x 40	ECS2EQC471M◊◊ΔΔ2240
		424	296	0,15	1,2	1,56	25 x 30	ECS2EQC471M◊◊ΔΔ2530
	560	356	248	0,15	1,4	1,74	22 x 45	ECS2EQC561M◊◊ΔΔ2245
		356	248	0,15	1,4	1,74	25 x 35	ECS2EQC561M◊◊ΔΔ2535
	680	293	204	0,15	1,5	1,92	22 x 50	ECS2EQC681M◊◊ΔΔ2250
		293	204	0,15	1,5	1,92	25 x 40	ECS2EQC681M◊◊ΔΔ2540
		293	204	0,15	1,5	1,92	30 x 30	ECS2EQC681M◊◊ΔΔ3030
	820	243	169	0,15	1,5	2,13	25 x 45	ECS2EQC821M◊◊ΔΔ2545
		243	169	0,15	1,5	2,13	30 x 35	ECS2EQC821M◊◊ΔΔ3035
	1 000	199	139	0,15	1,5	2,40	25 x 50	ECS2EQC102M◊◊ΔΔ2550
		199	139	0,15	1,5	2,40	30 x 40	ECS2EQC102M◊◊ΔΔ3040
		199	139	0,15	1,5	2,40	35 x 30	ECS2EQC102M◊◊ΔΔ3530
	1 200	166	139	0,15	1,5	2,55	30 x 40	ECS2EQC122M◊◊ΔΔ3040
	1 500	133	92	0,15	1,5	2,73	30 x 50	ECS2EQC152M◊◊ΔΔ3050
		133	92	0,15	1,5	2,73	35 x 40	ECS2EQC152M◊◊ΔΔ3540
	1 800	111	77	0,15	1,5	2,82	35 x 45	ECS2EQC182M◊◊ΔΔ3545
	2 200	91	63	0,15	1,5	2,95	35 x 50	ECS2EQC222M◊◊ΔΔ3550
400 (450) 2G	120	1658	1161	0,15	0,5	0,65	22 x 25	ECS2GQC121M◊◊ΔΔ2225
	150	1327	930	0,15	0,6	0,73	22 x 30	ECS2GQC151M◊◊ΔΔ2230
	180	1106	774	0,15	0,7	0,73	25 x 25	ECS2GQC181M◊◊ΔΔ2525
	220	905	633	0,15	0,9	0,82	22 x 35	ECS2GQC221M◊◊ΔΔ2235
		905	633	0,15	0,9	0,87	25 x 30	ECS2GQC221M◊◊ΔΔ2530
	270	737	516	0,15	1,1	0,93	22 x 40	ECS2GQC271M◊◊ΔΔ2240
		737	516	0,15	1,1	1,05	25 x 35	ECS2GQC271M◊◊ΔΔ2535
		737	516	0,15	1,1	1,02	30 x 25	ECS2GQC271M◊◊ΔΔ3025
	330	603	422	0,15	1,3	1,16	22 x 50	ECS2GQC331M◊◊ΔΔ2250
		603	422	0,15	1,3	1,14	25 x 40	ECS2GQC331M◊◊ΔΔ2540
		603	422	0,15	1,3	1,14	30 x 30	ECS2GQC331M◊◊ΔΔ3030
		603	422	0,15	1,3	1,13	35 x 25	ECS2GQC331M◊◊ΔΔ3525
	390	511	357	0,15	1,5	1,45	25 x 45	ECS2GQC391M◊◊ΔΔ2545
		511	357	0,15	1,5	1,47	30 x 35	ECS2GQC391M◊◊ΔΔ3035
		511	357	0,15	1,5	1,50	35 x 30	ECS2GQC391M◊◊ΔΔ3530
	470	424	296	0,15	1,5	1,54	25 x 50	ECS2GQC471M◊◊ΔΔ2550
		424	296	0,15	1,5	1,61	30 x 40	ECS2GQC471M◊◊ΔΔ3040
		424	296	0,15	1,5	1,50	35 x 30	ECS2GQC471M◊◊ΔΔ3530

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
400 (450) 2G	560	356	248	0,15	1,5	1,70	30 x 45	ECS2GQC561M◊◊ΔΔ3045
		356	248	0,15	1,5	1,67	35 x 35	ECS2GQC561M◊◊ΔΔ3535
	680	293	204	0,15	1,5	1,82	30 x 50	ECS2GQC681M◊◊ΔΔ3050
		293	204	0,15	1,5	1,87	35 x 40	ECS2GQC681M◊◊ΔΔ3540
	820	243	169	0,15	1,5	2,08	35 x 45	ECS2GQC821M◊◊ΔΔ3545
		243	169	0,15	1,5	2,14	35 x 50	ECS2GQC821M◊◊ΔΔ3550
450 (500) 2W	100	2653	1393	0,20	0,5	0,67	22 x 25	ECS2WQC101M◊◊ΔΔ2225
	120	2211	1161	0,20	0,5	0,71	22 x 30	ECS2WQC121M◊◊ΔΔ2230
		2211	1161	0,20	0,5	0,72	25 x 25	ECS2WQC121M◊◊ΔΔ2525
	150	1769	928	0,20	0,7	0,75	22 x 30	ECS2WQC151M◊◊ΔΔ2230
		1769	928	0,20	0,7	0,77	22 x 45	ECS2WQC151M◊◊ΔΔ2245
	180	1474	774	0,20	0,8	0,79	22 x 40	ECS2WQC181M◊◊ΔΔ2240
		1474	774	0,20	0,8	0,79	25 x 30	ECS2WQC181M◊◊ΔΔ2530
	220	1206	633	0,20	1,0	0,85	22 x 45	ECS2WQC221M◊◊ΔΔ2245
		1206	633	0,20	1,0	0,87	25 x 35	ECS2WQC221M◊◊ΔΔ2535
		1206	633	0,20	1,0	0,89	30 x 30	ECS2WQC221M◊◊ΔΔ3030
	270	983	516	0,20	1,2	1,00	22 x 50	ECS2WQC271M◊◊ΔΔ2250
		983	516	0,20	1,2	1,10	25 x 40	ECS2WQC271M◊◊ΔΔ2540
		983	516	0,20	1,2	1,01	30 x 30	ECS2WQC271M◊◊ΔΔ3030
		983	516	0,20	1,2	1,00	35 x 25	ECS2WQC271M◊◊ΔΔ3525
	330	804	422	0,20	1,5	1,28	25 x 50	ECS2WQC331M◊◊ΔΔ2550
		804	422	0,20	1,5	1,31	30 x 35	ECS2WQC331M◊◊ΔΔ3035
		804	422	0,20	1,5	1,25	35 x 30	ECS2WQC331M◊◊ΔΔ3530
	390	681	357	0,20	1,5	1,41	30 x 40	ECS2WQC391M◊◊ΔΔ3040
		681	357	0,20	1,5	1,45	35 x 35	ECS2WQC391M◊◊ΔΔ3535
	470	565	296	0,20	1,5	1,52	30 x 45	ECS2WQC471M◊◊ΔΔ3045
		565	296	0,20	1,5	1,61	35 x 40	ECS2WQC471M◊◊ΔΔ3540
	560	474	248	0,20	1,5	1,75	35 x 45	ECS2WQC561M◊◊ΔΔ3545
	680	391	204	0,20	1,5	1,93	35 x 50	ECS2WQC681M◊◊ΔΔ3550

7 000h at 85°C

- Small Size
- Long Useful Life
- High Ripple Current
- Industrial Power Supplies and Inverters



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +85
Voltage Range (V)	160 ~ 450
Capacitance Range (µF)	47 ~ 2 200
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	160 ~ 450
	$Z_{-40°C} / Z_{+20°C}$	4
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**	

SNAP-IN

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	7 000h	> 100 000h	5 000h	5 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,2 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement

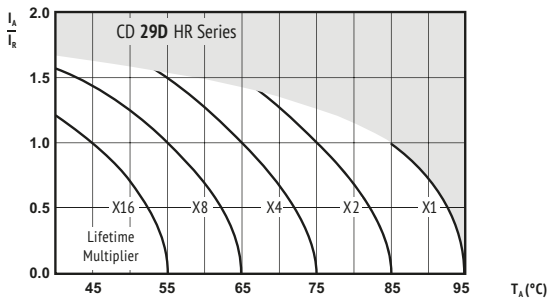
MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	⩾ 50 kHz
Coefficient	0,80	1,00	1,16	1,30	1,41	1,43

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

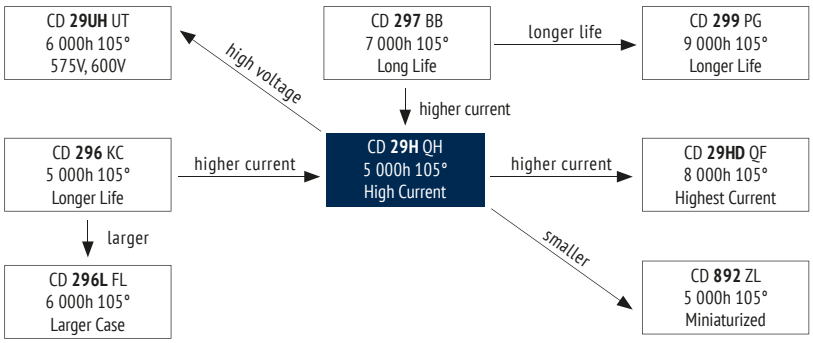
SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
160 (200) 2C	330	603	355	0,15	0,5	1,50	22 x 25	ECS2CHR331M◊◊ΔΔ2225
	390	511	300	0,15	0,6	1,60	25 x 25	ECS2CHR391M◊◊ΔΔ2525
	470	424	245	0,15	0,8	1,80	22 x 35	ECS2CHR471M◊◊ΔΔ2235
	560	356	215	0,15	0,9	2,10	22 x 35	ECS2CHR561M◊◊ΔΔ2235
		356	215	0,15	0,9	2,20	25 x 30	ECS2CHR561M◊◊ΔΔ2530
		356	215	0,15	0,9	2,10	30 x 25	ECS2CHR561M◊◊ΔΔ3025
	680	293	178	0,15	1,1	2,60	22 x 40	ECS2CHR681M◊◊ΔΔ2240
		293	178	0,15	1,1	2,50	25 x 35	ECS2CHR681M◊◊ΔΔ2535
	820	243	145	0,15	1,3	2,80	22 x 50	ECS2CHR821M◊◊ΔΔ2250
		243	145	0,15	1,3	2,70	25 x 40	ECS2CHR821M◊◊ΔΔ2540
		243	145	0,15	1,3	2,90	30 x 30	ECS2CHR821M◊◊ΔΔ3030
		243	145	0,15	1,3	2,80	35 x 25	ECS2CHR821M◊◊ΔΔ3525
	1 000	199	115	0,15	1,5	3,30	25 x 45	ECS2CHR102M◊◊ΔΔ2545
		199	115	0,15	1,5	3,40	30 x 35	ECS2CHR102M◊◊ΔΔ3035
		199	115	0,15	1,5	3,30	35 x 30	ECS2CHR102M◊◊ΔΔ3530
	1 200	166	95	0,15	1,5	3,70	25 x 50	ECS2CHR122M◊◊ΔΔ2550
		166	95	0,15	1,5	3,80	30 x 40	ECS2CHR122M◊◊ΔΔ3040
		166	95	0,15	1,5	3,60	35 x 35	ECS2CHR122M◊◊ΔΔ3535
	1 500	133	75	0,15	1,5	4,40	30 x 45	ECS2CHR152M◊◊ΔΔ3045
		133	75	0,15	1,5	4,30	35 x 40	ECS2CHR152M◊◊ΔΔ3540
	1 800	111	70	0,15	1,5	4,40	35 x 45	ECS2CHR182M◊◊ΔΔ3545
	2 200	91	58	0,15	1,5	4,90	35 x 50	ECS2CHR222M◊◊ΔΔ3550
200 (250) 2D	220	905	375	0,15	0,4	1,20	22 x 25	ECS2DHR221M◊◊ΔΔ2225
	330	603	258	0,15	0,7	1,50	22 x 30	ECS2DHR331M◊◊ΔΔ2230
		603	258	0,15	0,7	1,60	25 x 25	ECS2DHR331M◊◊ΔΔ2525
	390	511	221	0,15	0,8	1,80	22 x 35	ECS2DHR391M◊◊ΔΔ2235
		511	221	0,15	0,8	1,80	25 x 30	ECS2DHR391M◊◊ΔΔ2530
	470	424	175	0,15	0,9	2,00	22 x 40	ECS2DHR471M◊◊ΔΔ2240
		424	175	0,15	0,9	2,10	30 x 25	ECS2DHR471M◊◊ΔΔ3025
	560	356	150	0,15	1,1	2,20	22 x 45	ECS2DHR561M◊◊ΔΔ2245
		356	150	0,15	1,1	2,20	25 x 35	ECS2DHR561M◊◊ΔΔ2535
		356	150	0,15	1,1	2,30	30 x 30	ECS2DHR561M◊◊ΔΔ3030
		356	150	0,15	1,1	2,20	35 x 25	ECS2DHR561M◊◊ΔΔ3525
	680	293	128	0,15	1,4	2,60	25 x 40	ECS2DHR681M◊◊ΔΔ2540
		293	128	0,15	1,4	2,40	30 x 30	ECS2DHR681M◊◊ΔΔ3030
	820	243	105	0,15	1,5	2,70	25 x 50	ECS2DHR821M◊◊ΔΔ2550
		243	105	0,15	1,5	2,80	30 x 40	ECS2DHR821M◊◊ΔΔ3040
		243	105	0,15	1,5	2,60	35 x 30	ECS2DHR821M◊◊ΔΔ3530
	1 000	199	80	0,15	1,5	3,40	30 x 40	ECS2DHR102M◊◊ΔΔ3040
		199	80	0,15	1,5	3,60	35 x 35	ECS2DHR102M◊◊ΔΔ3535
	1 200	166	70	0,15	1,5	3,80	30 x 50	ECS2DHR122M◊◊ΔΔ3050
		166	70	0,15	1,5	3,70	35 x 40	ECS2DHR122M◊◊ΔΔ3540
	1 500	133	55	0,15	1,5	4,20	35 x 50	ECS2DHR152M◊◊ΔΔ3550
250 (300) 2E	150	1327	550	0,15	0,4	0,92	22 x 25	ECS2EHR151M◊◊ΔΔ2225
	180	1106	470	0,15	0,5	0,98	22 x 25	ECS2EHR181M◊◊ΔΔ2225
	220	905	370	0,15	0,6	1,25	22 x 30	ECS2EHR221M◊◊ΔΔ2230
		905	370	0,15	0,6	1,25	25 x 25	ECS2EHR221M◊◊ΔΔ2525
	270	737	305	0,15	0,7	1,25	22 x 35	ECS2EHR271M◊◊ΔΔ2235
	330	603	250	0,15	0,8	1,64	22 x 40	ECS2EHR331M◊◊ΔΔ2240
		603	250	0,15	0,8	1,64	25 x 30	ECS2EHR331M◊◊ΔΔ2530
		603	250	0,15	0,8	1,64	30 x 25	ECS2EHR331M◊◊ΔΔ3025
	390	511	221	0,15	1,0	1,90	22 x 45	ECS2EHR391M◊◊ΔΔ2245
		511	221	0,15	1,0	1,90	25 x 35	ECS2EHR391M◊◊ΔΔ2535
	470	424	175	0,15	1,2	2,20	22 x 50	ECS2EHR471M◊◊ΔΔ2250
		424	175	0,15	1,2	2,20	25 x 40	ECS2EHR471M◊◊ΔΔ2540
		424	175	0,15	1,2	2,20	30 x 30	ECS2EHR471M◊◊ΔΔ3030
		424	175	0,15	1,2	2,20	35 x 25	ECS2EHR471M◊◊ΔΔ3525
	560	356	150	0,15	1,4	2,40	25 x 45	ECS2EHR561M◊◊ΔΔ2545
		356	150	0,15	1,4	2,40	30 x 35	ECS2EHR561M◊◊ΔΔ3035
	680	293	123	0,15	1,5	2,80	30 x 40	ECS2EHR681M◊◊ΔΔ3040
		293	123	0,15	1,5	2,80	35 x 30	ECS2EHR681M◊◊ΔΔ3530
	820	243	105	0,15	1,5	3,20	30 x 45	ECS2EHR821M◊◊ΔΔ3045
		243	105	0,15	1,5	3,20	35 x 35	ECS2EHR821M◊◊ΔΔ3535
	1 000	199	80	0,15	1,5	3,70	35 x 40	ECS2EHR102M◊◊ΔΔ3540
	1 200	166	70	0,15	1,5	4,10	35 x 45	ECS2EHR122M◊◊ΔΔ3545
	1 500	133	60	0,15	1,5	4,60	35 x 50	ECS2EHR152M◊◊ΔΔ3550

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
400 (450) 2G	68	2341	960	0,12	0,3	0,62	22 x 25	ECS2GHR680M◊◊ΔΔ2225
	100	1592	600	0,12	0,4	0,81	22 x 30	ECS2GHR101M◊◊ΔΔ2230
		1592	600	0,12	0,4	0,83	25 x 25	ECS2GHR101M◊◊ΔΔ2525
	120	1327	550	0,12	0,5	0,93	22 x 35	ECS2GHR121M◊◊ΔΔ2235
	150	1062	440	0,12	0,6	1,20	22 x 40	ECS2GHR151M◊◊ΔΔ2240
		1062	440	0,12	0,6	1,20	25 x 30	ECS2GHR151M◊◊ΔΔ2530
		1062	440	0,12	0,6	1,20	30 x 25	ECS2GHR151M◊◊ΔΔ3025
	180	885	360	0,12	0,7	1,30	22 x 45	ECS2GHR181M◊◊ΔΔ2245
		885	360	0,12	0,7	1,30	25 x 35	ECS2GHR181M◊◊ΔΔ2535
		885	360	0,12	0,7	1,30	30 x 30	ECS2GHR181M◊◊ΔΔ3030
		885	360	0,12	0,7	1,30	35 x 25	ECS2GHR181M◊◊ΔΔ3525
	220	724	300	0,12	0,9	1,50	22 x 50	ECS2GHR221M◊◊ΔΔ2250
		724	300	0,12	0,9	1,50	25 x 40	ECS2GHR221M◊◊ΔΔ2540
		724	300	0,12	0,9	1,50	30 x 35	ECS2GHR221M◊◊ΔΔ3035
	270	590	240	0,12	1,1	1,70	25 x 45	ECS2GHR271M◊◊ΔΔ2545
		590	240	0,12	1,1	1,70	30 x 40	ECS2GHR271M◊◊ΔΔ3040
		590	240	0,12	1,1	1,70	35 x 30	ECS2GHR271M◊◊ΔΔ3530
	330	483	200	0,12	1,3	2,10	30 x 45	ECS2GHR331M◊◊ΔΔ3045
		483	200	0,12	1,3	2,10	35 x 35	ECS2GHR331M◊◊ΔΔ3535
	390	409	170	0,12	1,5	2,30	30 x 50	ECS2GHR391M◊◊ΔΔ3050
		409	170	0,12	1,5	2,30	35 x 40	ECS2GHR391M◊◊ΔΔ3540
	470	339	140	0,12	1,5	2,70	35 x 45	ECS2GHR471M◊◊ΔΔ3545
	560	285	110	0,12	1,5	3,00	35 x 50	ECS2GHR561M◊◊ΔΔ3550
450 (500) 2W	47	3387	2800	0,12	0,2	0,52	22 x 25	ECS2WHR470M◊◊ΔΔ2225
	68	2341	1940	0,12	0,3	0,66	22 x 30	ECS2WHR680M◊◊ΔΔ2230
	68	2341	1940	0,12	0,3	0,66	25 x 25	ECS2WHR680M◊◊ΔΔ2525
	100	1592	1310	0,12	0,5	0,90	22 x 35	ECS2WHR101M◊◊ΔΔ2235
		1592	1310	0,12	0,5	0,90	25 x 30	ECS2WHR101M◊◊ΔΔ2530
		1592	1310	0,12	0,5	0,90	30 x 25	ECS2WHR101M◊◊ΔΔ3025
	120	1327	910	0,12	0,5	1,10	22 x 40	ECS2WHR121M◊◊ΔΔ2240
		1327	910	0,12	0,5	1,10	25 x 35	ECS2WHR121M◊◊ΔΔ2535
	150	1062	880	0,12	0,7	1,30	22 x 50	ECS2WHR151M◊◊ΔΔ2250
		1062	880	0,12	0,7	1,30	25 x 40	ECS2WHR151M◊◊ΔΔ2540
		1062	880	0,12	0,7	1,30	30 x 30	ECS2WHR151M◊◊ΔΔ3030
	180	885	740	0,12	0,8	1,40	25 x 45	ECS2WHR181M◊◊ΔΔ2545
		885	740	0,12	0,8	1,40	30 x 35	ECS2WHR181M◊◊ΔΔ3035
		885	740	0,12	0,8	1,40	35 x 25	ECS2WHR181M◊◊ΔΔ3525
	220	724	590	0,12	1,0	1,60	25 x 50	ECS2WHR221M◊◊ΔΔ2550
		724	590	0,12	1,0	1,60	30 x 40	ECS2WHR221M◊◊ΔΔ3040
		724	590	0,12	1,0	1,60	35 x 30	ECS2WHR221M◊◊ΔΔ3530
	270	590	490	0,12	1,2	1,90	30 x 45	ECS2WHR271M◊◊ΔΔ3045
		590	490	0,12	1,2	1,90	35 x 35	ECS2WHR271M◊◊ΔΔ3535
	330	483	395	0,12	1,5	2,20	35 x 40	ECS2WHR331M◊◊ΔΔ3540
	390	409	300	0,12	1,5	2,40	35 x 45	ECS2WHR391M◊◊ΔΔ3545
	470	339	280	0,12	1,5	2,80	35 x 50	ECS2WHR471M◊◊ΔΔ3550

5 000h at 105°C

- Long Useful Life
- High Ripple Current
- Miniaturized
- Industrial Power Supplies and Inverters



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +105
Voltage Range (V)	160 ~ 450
Capacitance Range (µF)	47 ~ 2 200
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	160 ~ 450
	$Z_{-40°C} / Z_{+20°C}$	4
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**	

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	5 000h	> 100 000h	3 000h	3 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 50°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

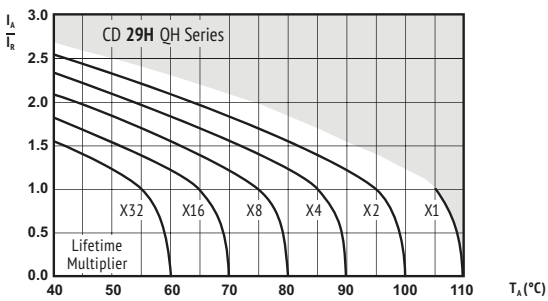
MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	≥ 50 kHz
Coefficient	0,80	1,00	1,16	1,30	1,41	1,45

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

SNAP-IN

SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
160 (200) 2C	330	603	355	0,15	0,5	1,42	22 x 25	ECS2CQH331M◊◊ΔΔ2225
	390	511	300	0,15	0,6	1,45	25 x 25	ECS2CQH391M◊◊ΔΔ2525
	470	424	245	0,15	0,8	1,63	22 x 35	ECS2CQH471M◊◊ΔΔ2235
	560	356	215	0,15	0,9	1,75	22 x 35	ECS2CQH561M◊◊ΔΔ2235
		356	215	0,15	0,9	1,75	25 x 30	ECS2CQH561M◊◊ΔΔ2530
		356	215	0,15	0,9	1,75	30 x 25	ECS2CQH561M◊◊ΔΔ3025
	680	293	178	0,15	1,1	1,98	22 x 40	ECS2CQH681M◊◊ΔΔ2240
		293	178	0,15	1,1	1,98	25 x 35	ECS2CQH681M◊◊ΔΔ2535
	820	243	145	0,15	1,3	2,35	22 x 50	ECS2CQH821M◊◊ΔΔ2250
		243	145	0,15	1,3	2,35	25 x 40	ECS2CQH821M◊◊ΔΔ2540
		243	145	0,15	1,3	2,35	30 x 30	ECS2CQH821M◊◊ΔΔ3030
		243	145	0,15	1,3	2,35	35 x 25	ECS2CQH821M◊◊ΔΔ3525
	1 000	199	115	0,15	1,5	2,50	25 x 45	ECS2CQH102M◊◊ΔΔ2545
		199	115	0,15	1,5	2,50	30 x 35	ECS2CQH102M◊◊ΔΔ3035
		199	115	0,15	1,5	2,50	35 x 30	ECS2CQH102M◊◊ΔΔ3530
	1 200	166	95	0,15	1,5	2,87	25 x 50	ECS2CQH122M◊◊ΔΔ2550
		166	95	0,15	1,5	2,87	30 x 40	ECS2CQH122M◊◊ΔΔ3040
		166	95	0,15	1,5	2,87	35 x 35	ECS2CQH122M◊◊ΔΔ3535
	1 500	133	75	0,15	1,5	3,57	30 x 45	ECS2CQH152M◊◊ΔΔ3045
		133	75	0,15	1,5	3,60	35 x 40	ECS2CQH152M◊◊ΔΔ3540
	1 800	111	68	0,15	1,5	4,15	35 x 45	ECS2CQH182M◊◊ΔΔ3545
	2 200	91	58	0,15	1,5	4,65	35 x 50	ECS2CQH222M◊◊ΔΔ3550
200 (250) 2D	220	905	550	0,15	0,4	1,10	22 x 25	ECS2DQH221M◊◊ΔΔ2225
	270	737	460	0,15	0,5	1,17	22 x 25	ECS2DQH271M◊◊ΔΔ2225
	330	603	370	0,15	0,7	1,40	22 x 30	ECS2DQH331M◊◊ΔΔ2230
		603	370	0,15	0,7	1,40	25 x 25	ECS2DQH331M◊◊ΔΔ2525
	390	511	310	0,15	0,8	1,45	22 x 30	ECS2DQH391M◊◊ΔΔ2230
	470	424	260	0,15	0,9	1,55	22 x 35	ECS2DQH471M◊◊ΔΔ2235
		424	260	0,15	0,9	1,55	25 x 30	ECS2DQH471M◊◊ΔΔ2530
		424	260	0,15	0,9	1,60	30 x 25	ECS2DQH471M◊◊ΔΔ3025
	560	356	220	0,15	1,1	1,65	22 x 45	ECS2DQH561M◊◊ΔΔ2245
		356	220	0,15	1,1	1,65	25 x 35	ECS2DQH561M◊◊ΔΔ2535
	680	293	180	0,15	1,4	1,68	22 x 50	ECS2DQH681M◊◊ΔΔ2250
		293	180	0,15	1,4	1,92	25 x 40	ECS2DQH681M◊◊ΔΔ2540
		293	180	0,15	1,4	1,92	30 x 30	ECS2DQH681M◊◊ΔΔ3030
		293	180	0,15	1,4	2,20	35 x 25	ECS2DQH681M◊◊ΔΔ3525
	820	243	150	0,15	1,5	2,20	25 x 45	ECS2DQH821M◊◊ΔΔ2545
		243	150	0,15	1,5	2,20	30 x 35	ECS2DQH821M◊◊ΔΔ3035
		243	150	0,15	1,5	2,40	35 x 30	ECS2DQH821M◊◊ΔΔ3530
	1 000	199	120	0,15	1,5	2,40	30 x 40	ECS2DQH102M◊◊ΔΔ3040
		199	120	0,15	1,5	2,40	35 x 35	ECS2DQH102M◊◊ΔΔ3535
	1 200	166	100	0,15	1,5	2,75	30 x 45	ECS2DQH122M◊◊ΔΔ3045
		166	100	0,15	1,5	2,75	35 x 40	ECS2DQH122M◊◊ΔΔ3540
	1 500	133	80	0,15	1,5	3,45	35 x 40	ECS2DQH152M◊◊ΔΔ3540
	1 800	111	68	0,15	1,5	4,00	35 x 45	ECS2DQH182M◊◊ΔΔ3545
	2 200	91	56	0,15	1,5	4,50	35 x 50	ECS2DQH222M◊◊ΔΔ3550
250 (300) 2E	180	1106	620	0,15	0,5	1,00	22 x 25	ECS2EQH181M◊◊ΔΔ2225
	220	905	570	0,15	0,6	1,20	22 x 30	ECS2EQH221M◊◊ΔΔ2230
		905	570	0,15	0,6	1,20	25 x 25	ECS2EQH221M◊◊ΔΔ2525
	270	737	470	0,15	0,7	1,25	22 x 35	ECS2EQH271M◊◊ΔΔ2235
	330	603	380	0,15	0,8	1,30	22 x 40	ECS2EQH331M◊◊ΔΔ2240
		603	380	0,15	0,8	1,35	25 x 30	ECS2EQH331M◊◊ΔΔ2530
		603	380	0,15	0,8	1,35	30 x 25	ECS2EQH331M◊◊ΔΔ3025
	390	511	325	0,15	1,0	1,40	22 x 45	ECS2EQH391M◊◊ΔΔ2245
		511	325	0,15	1,0	1,45	25 x 35	ECS2EQH391M◊◊ΔΔ2535
	470	424	268	0,15	1,2	1,65	22 x 50	ECS2EQH471M◊◊ΔΔ2250
		424	268	0,15	1,2	1,65	30 x 30	ECS2EQH471M◊◊ΔΔ3030
		424	268	0,15	1,2	1,65	35 x 25	ECS2EQH471M◊◊ΔΔ3525
	560	356	225	0,15	1,4	1,85	25 x 45	ECS2EQH561M◊◊ΔΔ2545
		356	225	0,15	1,4	1,85	30 x 35	ECS2EQH561M◊◊ΔΔ3035
		356	225	0,15	1,4	1,85	35 x 30	ECS2EQH561M◊◊ΔΔ3530
	680	293	185	0,15	1,5	2,20	25 x 50	ECS2EQH681M◊◊ΔΔ2550
		293	185	0,15	1,5	2,20	30 x 40	ECS2EQH681M◊◊ΔΔ3040

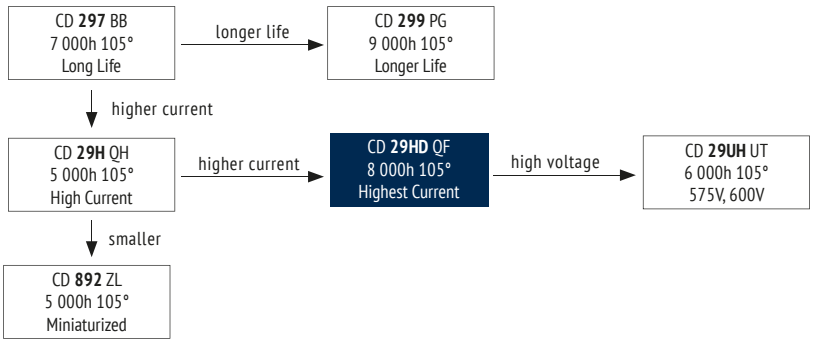
U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
250 (300) 2E	820	243	153	0,15	1,5	2,50	30 x 45	ECS2EQH821M◊◊ΔΔ3045
		243	153	0,15	1,5	2,50	30 x 50	ECS2EQH821M◊◊ΔΔ3050
	1 000	199	125	0,15	1,5	2,90	30 x 50	ECS2EQH102M◊◊ΔΔ3050
		199	125	0,15	1,5	2,90	35 x 40	ECS2EQH102M◊◊ΔΔ3540
	1 200	166	105	0,15	1,5	3,30	35 x 45	ECS2EQH122M◊◊ΔΔ3545
	1 500	133	85	0,15	1,5	3,80	35 x 50	ECS2EQH152M◊◊ΔΔ3550
350 (400) 2V	68	2926	1280	0,15	0,2	0,70	22 x 25	ECS2VQH680M◊◊ΔΔ2225
	100	1990	1060	0,15	0,4	0,87	22 x 30	ECS2VQH101M◊◊ΔΔ2230
		1990	1060	0,15	0,4	0,87	25 x 25	ECS2VQH101M◊◊ΔΔ2525
	120	1658	880	0,15	0,4	0,90	22 x 35	ECS2VQH121M◊◊ΔΔ2235
	150	1327	700	0,15	0,5	0,98	22 x 40	ECS2VQH151M◊◊ΔΔ2240
		1327	700	0,15	0,5	1,02	25 x 30	ECS2VQH151M◊◊ΔΔ2530
		1327	700	0,15	0,5	1,02	30 x 25	ECS2VQH151M◊◊ΔΔ3025
	180	1106	580	0,15	0,6	1,11	22 x 45	ECS2VQH181M◊◊ΔΔ2245
		1106	580	0,15	0,6	1,11	25 x 35	ECS2VQH181M◊◊ΔΔ2535
		1106	580	0,15	0,6	1,12	30 x 30	ECS2VQH181M◊◊ΔΔ3030
	220	905	470	0,15	0,8	1,16	22 x 50	ECS2VQH221M◊◊ΔΔ2250
		905	480	0,15	0,8	1,20	25 x 40	ECS2VQH221M◊◊ΔΔ2540
		905	480	0,15	0,8	1,20	35 x 25	ECS2VQH221M◊◊ΔΔ3525
	270	737	390	0,15	0,9	1,26	25 x 50	ECS2VQH271M◊◊ΔΔ2550
		737	390	0,15	0,9	1,31	30 x 35	ECS2VQH271M◊◊ΔΔ3035
		737	390	0,15	0,9	1,26	35 x 30	ECS2VQH271M◊◊ΔΔ3530
	330	603	320	0,15	1,2	1,45	30 x 45	ECS2VQH331M◊◊ΔΔ3045
		603	320	0,15	1,2	1,45	35 x 35	ECS2VQH331M◊◊ΔΔ3535
	390	511	270	0,15	1,4	1,58	30 x 50	ECS2VQH391M◊◊ΔΔ3050
		511	270	0,15	1,4	1,58	35 x 40	ECS2VQH391M◊◊ΔΔ3540
	470	424	228	0,15	1,5	1,69	35 x 45	ECS2VQH471M◊◊ΔΔ3545
	560	356	190	0,15	1,5	1,89	35 x 50	ECS2VQH561M◊◊ΔΔ3550
400 (450) 2G	68	2341	1260	0,12	0,3	0,48	22 x 25	ECS2GQH680M◊◊ΔΔ2225
	82	1941	1050	0,12	0,3	0,57	22 x 30	ECS2GQH820M◊◊ΔΔ2230
		1941	1050	0,12	0,3	0,56	25 x 25	ECS2GQH820M◊◊ΔΔ2525
	100	1592	860	0,12	0,4	0,65	22 x 35	ECS2GQH101M◊◊ΔΔ2235
		1592	860	0,12	0,4	0,65	25 x 25	ECS2GQH101M◊◊ΔΔ2525
	120	1327	718	0,12	0,5	0,71	22 x 35	ECS2GQH121M◊◊ΔΔ2235
		1327	718	0,12	0,5	0,71	25 x 30	ECS2GQH121M◊◊ΔΔ2530
		1327	718	0,12	0,5	0,71	30 x 25	ECS2GQH121M◊◊ΔΔ3025
	150	1062	575	0,12	0,6	0,85	22 x 40	ECS2GQH151M◊◊ΔΔ2240
		1062	575	0,12	0,6	0,85	25 x 35	ECS2GQH151M◊◊ΔΔ2535
		1062	575	0,12	0,6	0,85	30 x 25	ECS2GQH151M◊◊ΔΔ3025
	180	885	479	0,12	0,7	1,00	22 x 50	ECS2GQH181M◊◊ΔΔ2250
		885	479	0,12	0,7	1,00	25 x 40	ECS2GQH181M◊◊ΔΔ2540
		885	479	0,12	0,7	1,00	30 x 30	ECS2GQH181M◊◊ΔΔ3030
		885	479	0,12	0,7	1,00	35 x 25	ECS2GQH181M◊◊ΔΔ3525
	220	724	292	0,12	0,9	1,20	25 x 45	ECS2GQH221M◊◊ΔΔ2545
		724	292	0,12	0,9	1,20	30 x 35	ECS2GQH221M◊◊ΔΔ3035
		724	292	0,12	0,9	1,20	35 x 30	ECS2GQH221M◊◊ΔΔ3530
	270	590	319	0,12	1,1	1,35	25 x 50	ECS2GQH271M◊◊ΔΔ2550
		590	319	0,12	1,1	1,35	30 x 40	ECS2GQH271M◊◊ΔΔ3040
		590	319	0,12	1,1	1,35	35 x 30	ECS2GQH271M◊◊ΔΔ3530
	330	483	260	0,12	1,3	1,60	30 x 45	ECS2GQH331M◊◊ΔΔ3045
		483	260	0,12	1,3	1,60	35 x 35	ECS2GQH331M◊◊ΔΔ3535
	390	409	220	0,12	1,5	1,80	30 x 50	ECS2GQH391M◊◊ΔΔ3050
		409	220	0,12	1,5	1,80	35 x 40	ECS2GQH391M◊◊ΔΔ3540
	470	339	183	0,12	1,5	2,10	35 x 45	ECS2GQH471M◊◊ΔΔ3545
	560	285	154	0,12	1,5	2,30	35 x 50	ECS2GQH561M◊◊ΔΔ3550
450 (500) 2W	56	2843	1360	0,12	0,3	0,50	22 x 25	ECS2WQH560M◊◊ΔΔ2225
	68	2341	1170	0,12	0,3	0,60	22 x 30	ECS2WQH680M◊◊ΔΔ2230
	82	1941	970	0,12	0,4	0,65	22 x 35	ECS2WQH820M◊◊ΔΔ2235
	100	1592	790	0,12	0,5	0,72	22 x 35	ECS2WQH101M◊◊ΔΔ2235
		1592	790	0,12	0,5	0,72	25 x 30	ECS2WQH101M◊◊ΔΔ2530
		1592	790	0,12	0,5	0,72	30 x 25	ECS2WQH101M◊◊ΔΔ3025
	120	1327	660	0,12	0,5	0,80	22 x 45	ECS2WQH121M◊◊ΔΔ2245
		1327	660	0,12	0,5	0,80	25 x 35	ECS2WQH121M◊◊ΔΔ2535

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
450 (500) 2W	150	1062	530	0,12	0,7	0,95	22 x 50	ECS2WQH151M◊◊ΔΔ2250
		1062	530	0,12	0,7	0,95	25 x 40	ECS2WQH151M◊◊ΔΔ2540
		1062	530	0,12	0,7	0,95	30 x 30	ECS2WQH151M◊◊ΔΔ3030
		1062	530	0,12	0,7	0,95	35 x 25	ECS2WQH151M◊◊ΔΔ3525
	180	885	530	0,12	0,8	1,05	25 x 45	ECS2WQH181M◊◊ΔΔ2545
		885	530	0,12	0,8	1,05	30 x 35	ECS2WQH181M◊◊ΔΔ3035
	220	724	360	0,12	1,0	1,30	25 x 50	ECS2WQH221M◊◊ΔΔ2550
		724	360	0,12	1,0	1,30	30 x 40	ECS2WQH221M◊◊ΔΔ3040
		724	360	0,12	1,0	1,30	35 x 30	ECS2WQH221M◊◊ΔΔ3530
	270	590	295	0,12	1,2	1,50	30 x 45	ECS2WQH271M◊◊ΔΔ3045
		590	295	0,12	1,2	1,50	35 x 35	ECS2WQH271M◊◊ΔΔ3535
	330	483	240	0,12	1,5	1,90	30 x 50	ECS2WQH331M◊◊ΔΔ3050
		483	240	0,12	1,5	1,90	35 x 40	ECS2WQH331M◊◊ΔΔ3540
	390	409	205	0,12	1,5	1,90	35 x 45	ECS2WQH391M◊◊ΔΔ3545
	470	339	170	0,12	1,5	2,20	35 x 50	ECS2WQH471M◊◊ΔΔ3550

SNAP-IN

8 000h at 105°C

- Long Life at High Temperature
- Outstanding Ripple Current
- Improved Performance at high frequencies



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +105
Voltage Range (V)	200 ~ 450
Capacitance Range (µF)	220 ~ 3 900
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	200 ~ 400	450
	$Z_{-25°C} / Z_{+20°C}$	3	7
	$Z_{-40°C} / Z_{+20°C}$	7	12

Fast Charge-Discharge: **Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	8 000h	> 200 000h	3 000h	4 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 130% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,35 x I_R 40°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

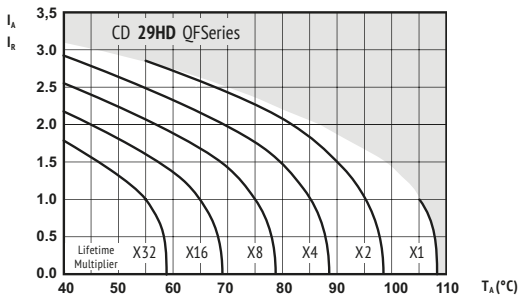
MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Rated Voltage (V) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	≥50kHz
200 ~ 350	0,80	1,00	1,35	1,50	1,59	1,60
400	0,80	1,00	1,35	1,60	1,72	1,72
450	0,80	1,00	1,32	1,50	1,62	1,63

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

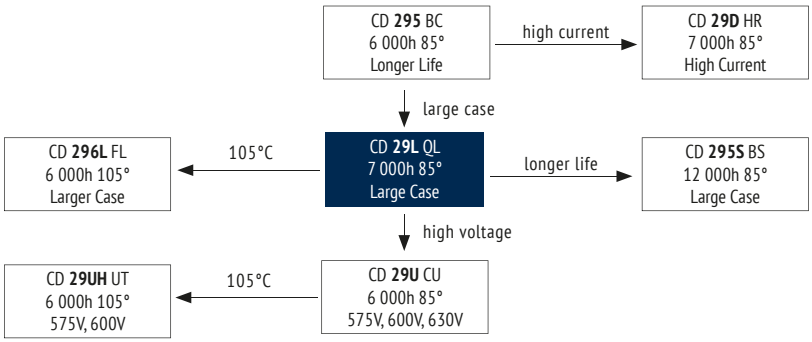
SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
200 (250) 2D	1 000	199	80	0,15	1,5	3,20	30 x 35	ECS2DQF102M◊◊ΔΔ3035
	1 200	166	66	0,15	1,5	3,70	30 x 40	ECS2DQF122M◊◊ΔΔ3040
	1 500	133	53	0,15	1,5	4,36	30 x 50	ECS2DQF152M◊◊ΔΔ3050
		133	53	0,15	1,5	4,32	35 x 40	ECS2DQF152M◊◊ΔΔ3540
	1 800	111	48	0,15	1,5	4,58	30 x 55	ECS2DQF182M◊◊ΔΔ3055
		111	48	0,15	1,5	4,67	35 x 45	ECS2DQF182M◊◊ΔΔ3545
		111	48	0,15	1,5	4,35	40 x 35	ECS2DQF182M◊◊ΔΔ4035
	2 200	91	42	0,15	1,5	5,46	35 x 50	ECS2DQF222M◊◊ΔΔ3550
		91	42	0,15	1,5	5,38	40 x 40	ECS2DQF222M◊◊ΔΔ4040
	2 700	74	34	0,15	1,5	5,95	35 x 55	ECS2DQF272M◊◊ΔΔ3555
		74	34	0,15	1,5	6,05	40 x 50	ECS2DQF272M◊◊ΔΔ4050
	3 300	61	30	0,15	1,5	6,41	35 x 65	ECS2DQF332M◊◊ΔΔ3565
		61	30	0,15	1,5	6,52	40 x 55	ECS2DQF332M◊◊ΔΔ4055
	3 900	52	26	0,15	1,5	7,15	40 x 65	ECS2DQF392M◊◊ΔΔ4065
250 (300) 2E	680	293	117	0,15	1,5	2,65	30 x 35	ECS2EQF681M◊◊ΔΔ3035
	820	243	97	0,15	1,5	3,00	30 x 40	ECS2EQF821M◊◊ΔΔ3040
		243	97	0,15	1,5	3,05	35 x 35	ECS2EQF821M◊◊ΔΔ3535
	1 000	199	80	0,15	1,5	3,56	30 x 50	ECS2EQF102M◊◊ΔΔ3050
		199	80	0,15	1,5	3,52	35 x 40	ECS2EQF102M◊◊ΔΔ3540
	1 200	166	66	0,15	1,5	3,93	30 x 55	ECS2EQF122M◊◊ΔΔ3055
		166	66	0,15	1,5	3,87	35 x 40	ECS2EQF122M◊◊ΔΔ3540
	1 500	133	62	0,15	1,5	4,30	30 x 60	ECS2EQF152M◊◊ΔΔ3060
		133	62	0,15	1,5	4,38	35 x 50	ECS2EQF152M◊◊ΔΔ3550
	1 800	111	55	0,15	1,5	4,70	35 x 55	ECS2EQF182M◊◊ΔΔ3555
		111	55	0,15	1,5	4,85	40 x 45	ECS2EQF182M◊◊ΔΔ4045
	2 200	91	45	0,15	1,5	5,15	35 x 65	ECS2EQF222M◊◊ΔΔ3565
		91	45	0,15	1,5	5,35	40 x 50	ECS2EQF222M◊◊ΔΔ4050
	2 700	74	37	0,15	1,5	5,92	40 x 60	ECS2EQF272M◊◊ΔΔ4060
350 (400) 2V	330	603	241	0,15	1,2	2,12	30 x 35	ECS2VQF331M◊◊ΔΔ3035
	390	511	204	0,15	1,4	2,36	30 x 40	ECS2VQF391M◊◊ΔΔ3040
	470	424	169	0,15	1,5	2,60	30 x 45	ECS2VQF471M◊◊ΔΔ3045
		424	169	0,15	1,5	2,53	35 x 35	ECS2VQF471M◊◊ΔΔ3535
	560	356	142	0,15	1,5	2,86	30 x 50	ECS2VQF561M◊◊ΔΔ3050
		356	142	0,15	1,5	2,83	35 x 40	ECS2VQF561M◊◊ΔΔ3540
	680	293	117	0,15	1,5	3,06	30 x 55	ECS2VQF681M◊◊ΔΔ3055
		293	117	0,15	1,5	3,10	35 x 45	ECS2VQF681M◊◊ΔΔ3545
		293	117	0,15	1,5	3,20	40 x 40	ECS2VQF681M◊◊ΔΔ4040
	820	243	97	0,15	1,5	3,40	30 x 65	ECS2VQF821M◊◊ΔΔ3065
		243	97	0,15	1,5	3,23	35 x 50	ECS2VQF821M◊◊ΔΔ3550
		243	97	0,15	1,5	3,46	40 x 45	ECS2VQF821M◊◊ΔΔ4045
	1 000	199	80	0,15	1,5	3,82	35 x 60	ECS2VQF102M◊◊ΔΔ3560
		199	80	0,15	1,5	3,80	40 x 50	ECS2VQF102M◊◊ΔΔ4050
	1 200	166	66	0,15	1,5	4,25	40 x 55	ECS2VQF122M◊◊ΔΔ4055
	1 500	133	53	0,15	1,5	4,72	40 x 65	ECS2VQF152M◊◊ΔΔ4065
400 (450) 2G	270	737	270	0,15	1,1	1,62	30 x 35	ECS2GQF271M◊◊ΔΔ3035
	330	603	221	0,15	1,3	2,10	30 x 35	ECS2GQF331M◊◊ΔΔ3035
	390	511	187	0,15	1,5	2,20	30 x 40	ECS2GQF391M◊◊ΔΔ3040
		511	187	0,15	1,5	2,31	35 x 35	ECS2GQF391M◊◊ΔΔ3535
	470	424	155	0,15	1,5	2,70	30 x 50	ECS2GQF471M◊◊ΔΔ3050
		424	155	0,15	1,5	2,60	35 x 40	ECS2GQF471M◊◊ΔΔ3540
		424	155	0,15	1,5	2,75	40 x 35	ECS2GQF471M◊◊ΔΔ4035
	560	356	130	0,15	1,5	2,90	30 x 55	ECS2GQF561M◊◊ΔΔ3055
		356	130	0,15	1,5	2,95	35 x 45	ECS2GQF561M◊◊ΔΔ3545
		356	130	0,15	1,5	3,01	40 x 40	ECS2GQF561M◊◊ΔΔ4040
	680	293	107	0,15	1,5	3,25	35 x 50	ECS2GQF681M◊◊ΔΔ3550
		293	107	0,15	1,5	3,45	40 x 45	ECS2GQF681M◊◊ΔΔ4045
	820	243	89	0,15	1,5	3,81	35 x 55	ECS2GQF821M◊◊ΔΔ3555
		243	89	0,15	1,5	3,92	40 x 50	ECS2GQF821M◊◊ΔΔ4050
	1 000	199	73	0,15	1,5	4,30	35 x 65	ECS2GQF102M◊◊ΔΔ3565
		199	73	0,15	1,5	4,35	40 x 55	ECS2GQF102M◊◊ΔΔ4055
	1 200	166	61	0,15	1,5	4,80	40 x 65	ECS2GQF122M◊◊ΔΔ4065

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
450 (500) 2W	220	1206	362	0,20	1,0	1,67	30 x 35	ECS2WQF221M◊◊ΔΔ3035
	270	983	295	0,20	1,2	1,88	30 x 40	ECS2WQF271M◊◊ΔΔ3040
	330	804	241	0,20	1,5	2,18	30 x 45	ECS2WQF331M◊◊ΔΔ3045
		804	241	0,20	1,5	2,09	35 x 35	ECS2WQF331M◊◊ΔΔ3535
	390	681	204	0,20	1,5	2,45	30 x 50	ECS2WQF391M◊◊ΔΔ3050
		681	204	0,20	1,5	2,43	35 x 40	ECS2WQF391M◊◊ΔΔ3540
	470	565	169	0,20	1,5	2,79	30 x 55	ECS2WQF471M◊◊ΔΔ3055
		565	169	0,20	1,5	2,83	35 x 45	ECS2WQF471M◊◊ΔΔ3545
		565	169	0,20	1,5	2,70	40 x 35	ECS2WQF471M◊◊ΔΔ4035
	560	474	142	0,20	1,5	3,15	30 x 60	ECS2WQF561M◊◊ΔΔ3060
		474	142	0,20	1,5	3,20	35 x 50	ECS2WQF561M◊◊ΔΔ3550
		474	142	0,20	1,5	3,00	40 x 40	ECS2WQF561M◊◊ΔΔ4040
	680	391	117	0,20	1,5	3,53	35 x 55	ECS2WQF681M◊◊ΔΔ3555
		391	117	0,20	1,5	3,40	40 x 45	ECS2WQF681M◊◊ΔΔ4045
	820	324	97	0,20	1,5	3,85	35 x 65	ECS2WQF821M◊◊ΔΔ3565
		324	97	0,20	1,5	3,88	40 x 55	ECS2WQF821M◊◊ΔΔ4055
	1 000	266	80	0,20	1,5	4,26	40 x 65	ECS2WQF102M◊◊ΔΔ4065

7 000h at 85°C

- Larger Size Components
- Long Useful Life
- High Ripple Current
- Industrial Power Supplies



ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +85	-25 ~ +85
Voltage Range (V)	16 ~ 400	450 ~ 500
Capacitance Range (µF)	390 ~ 120 000	
Capacitance Tolerance (20°C, 120Hz)	± 20%	
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	16 ~ 35	50 ~ 100	160 ~ 200	250 ~ 400	450	500
	$Z_{-25°C} / Z_{+20°C}$	4	3		4		
	$Z_{-40°C} / Z_{+20°C}$	15	10	6	8	-	

Fast Charge-Discharge: **Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	7 000h	> 100 000h	5 000h	5 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,2 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

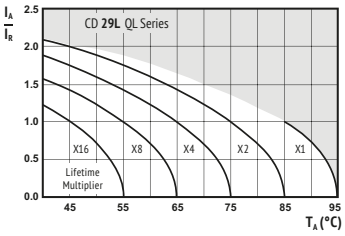
Rated Voltage (V) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	≥50kHz
≤ 50	0,90	1,00	1,07	1,15	1,15	1,15
63 ~ 100	0,90	1,00	1,17	1,32	1,45	1,50
≥ 160	0,80	1,00	1,16	1,30	1,41	1,45

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

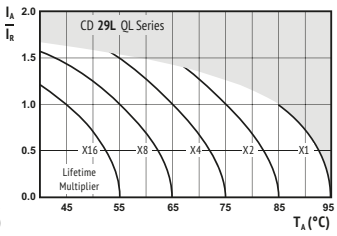
MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)

U_R < 160V



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

U_R ≥ 160V



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/ lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
16 (20) 1C	56 000	15	10	0,60	1,5	10,4	30 x 45	ECS1CQL563M◊◊ΔΔ3045
		15	10	0,60	1,5	9,8	40 x 40	ECS1CQL563M◊◊ΔΔ4040
	68 000	12	8,0	0,60	1,5	10,8	35 x 50	ECS1CQL683M◊◊ΔΔ3550
		12	8,0	0,60	1,5	11,5	40 x 50	ECS1CQL683M◊◊ΔΔ4050
	82 000	9,8	7,0	0,60	1,5	11,8	35 x 60	ECS1CQL823M◊◊ΔΔ3560
		9,8	7,0	0,60	1,5	11,8	40 x 50	ECS1CQL823M◊◊ΔΔ4050
	100 000	8,0	6,0	0,60	1,5	13,2	35 x 80	ECS1CQL104M◊◊ΔΔ3580
		8,0	6,0	0,60	1,5	13,5	40 x 60	ECS1CQL104M◊◊ΔΔ4060
	120 000	6,7	5,0	0,60	1,5	15,0	35 x 105	ECS1CQL124M◊◊ΔΔ35105
		6,7	5,0	0,60	1,5	14,8	40 x 80	ECS1CQL124M◊◊ΔΔ4080
25 (32) 1E	33 000	21	14	0,50	1,5	8,1	35 x 40	ECS1EQL333M◊◊ΔΔ3540
		21	14	0,50	1,5	8,7	40 x 40	ECS1EQL333M◊◊ΔΔ4040
	39 000	18	12	0,50	1,5	9,0	35 x 45	ECS1EQL393M◊◊ΔΔ3545
		18	12	0,50	1,5	9,6	40 x 40	ECS1EQL393M◊◊ΔΔ4040
	47 000	15	10	0,50	1,5	9,6	35 x 50	ECS1EQL473M◊◊ΔΔ3550
	56 000	12	8,0	0,50	1,5	10,3	35 x 60	ECS1EQL563M◊◊ΔΔ3560
		12	8,0	0,50	1,5	10,8	40 x 50	ECS1EQL563M◊◊ΔΔ4050
	68 000	9,8	7,0	0,50	1,5	11,3	35 x 80	ECS1EQL683M◊◊ΔΔ3580
		9,8	7,0	0,50	1,5	11,8	40 x 60	ECS1EQL683M◊◊ΔΔ4060
	82 000	8,1	6,0	0,50	1,5	13,5	40 x 80	ECS1EQL823M◊◊ΔΔ4080
35 (44) 1V	27 000	20	14	0,40	1,5	8,2	35 x 45	ECS1VQL273M◊◊ΔΔ3545
		20	14	0,40	1,5	8,0	40 x 40	ECS1VQL273M◊◊ΔΔ4040
	33 000	17	11	0,40	1,5	8,7	35 x 50	ECS1VQL333M◊◊ΔΔ3550
	39 000	14	10	0,40	1,5	10,3	35 x 60	ECS1VQL393M◊◊ΔΔ3560
		14	10	0,40	1,5	9,6	40 x 50	ECS1VQL393M◊◊ΔΔ4050
	47 000	12	8,0	0,40	1,5	11,4	35 x 80	ECS1VQL473M◊◊ΔΔ3580
		12	8,0	0,40	1,5	10,8	40 x 60	ECS1VQL473M◊◊ΔΔ4060
	56 000	9,5	7,0	0,40	1,5	12,1	40 x 70	ECS1VQL563M◊◊ΔΔ4070
	68 000	7,9	6,0	0,40	1,5	14,2	40 x 80	ECS1VQL683M◊◊ΔΔ4080
50 (63) 1H	15 000	27	19	0,30	1,5	7,7	35 x 40	ECS1HQL153M◊◊ΔΔ3540
		27	19	0,30	1,5	8,1	40 x 40	ECS1HQL153M◊◊ΔΔ4040
	18 000	23	16	0,30	1,5	8,3	35 x 45	ECS1HQL183M◊◊ΔΔ3545
		23	16	0,30	1,5	8,3	40 x 40	ECS1HQL183M◊◊ΔΔ4040
	22 000	19	13	0,30	1,5	9,1	35 x 50	ECS1HQL223M◊◊ΔΔ3550
		19	13	0,30	1,5	9,4	40 x 50	ECS1HQL223M◊◊ΔΔ4050
	27 000	15	10	0,30	1,5	11,2	35 x 80	ECS1HQL273M◊◊ΔΔ3580
		15	10	0,30	1,5	10,8	40 x 60	ECS1HQL273M◊◊ΔΔ4060
	33 000	13	8,0	0,30	1,5	13,4	35 x 80	ECS1HQL333M◊◊ΔΔ3580
		13	8,0	0,30	1,5	13,4	40 x 70	ECS1HQL333M◊◊ΔΔ4070
	39 000	11	7,0	0,30	1,5	15,0	40 x 80	ECS1HQL393M◊◊ΔΔ4080
63 (79) 1J	12 000	23	16	0,20	1,5	8,7	35 x 50	ECS1JQL123M◊◊ΔΔ3550
		23	16	0,20	1,5	8,6	40 x 40	ECS1JQL123M◊◊ΔΔ4040
	15 000	18	12	0,20	1,5	10,2	35 x 70	ECS1JQL153M◊◊ΔΔ3570
		18	12	0,20	1,5	9,5	40 x 50	ECS1JQL153M◊◊ΔΔ4050
	18 000	15	10	0,20	1,5	11,2	35 x 80	ECS1JQL183M◊◊ΔΔ3580
		15	10	0,20	1,5	10,7	40 x 60	ECS1JQL183M◊◊ΔΔ4060
	27 000	9,9	7,0	0,20	1,5	12,7	40 x 80	ECS1JQL273M◊◊ΔΔ4080
80 (100) 1K	8 200	33	23	0,20	1,5	6,9	35 x 50	ECS1KQL822M◊◊ΔΔ3550
	10 000	27	19	0,20	1,5	8,7	35 x 60	ECS1KQL103M◊◊ΔΔ3560
	12 000	23	16	0,20	1,5	9,7	35 x 70	ECS1KQL123M◊◊ΔΔ3570
		23	16	0,20	1,5	9,0	40 x 50	ECS1KQL123M◊◊ΔΔ4050
	15 000	18	12	0,20	1,5	10,5	35 x 80	ECS1KQL153M◊◊ΔΔ3580
		18	12	0,20	1,5	10,2	40 x 60	ECS1KQL153M◊◊ΔΔ4060
	18 000	15	10	0,20	1,5	12,3	40 x 80	ECS1KQL183M◊◊ΔΔ4080
100 (125) 2A	5 600	48	33	0,20	1,5	7,0	35 x 45	ECS2AQL562M◊◊ΔΔ3545
		48	33	0,20	1,5	7,4	40 x 40	ECS2AQL562M◊◊ΔΔ4040
	6 800	40	27	0,20	1,5	8,0	35 x 50	ECS2AQL682M◊◊ΔΔ3550
		40	27	0,20	1,5	8,9	40 x 50	ECS2AQL682M◊◊ΔΔ4050
	8 200	33	23	0,20	1,5	9,6	35 x 70	ECS2AQL822M◊◊ΔΔ3570
		33	23	0,20	1,5	9,6	40 x 60	ECS2AQL822M◊◊ΔΔ4060
	10 000	27	19	0,20	1,5	10,4	35 x 80	ECS2AQL103M◊◊ΔΔ3580
		27	19	0,20	1,5	10,2	40 x 60	ECS2AQL103M◊◊ΔΔ4060
	12 000	23	16	0,20	1,5	12,3	40 x 80	ECS2AQL123M◊◊ΔΔ4080

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
160 (200) 2C	2 200	91	63	0,15	1,5	4,9	35 x 45	ECS2CQL222M◊◊ΔΔ3545
	2 700	74	52	0,15	1,5	5,3	35 x 50	ECS2CQL272M◊◊ΔΔ3550
	3 300	61	42	0,15	1,5	5,5	35 x 70	ECS2CQL332M◊◊ΔΔ3570
		61	42	0,15	1,5	5,5	40 x 60	ECS2CQL332M◊◊ΔΔ4060
	3 900	52	36	0,15	1,5	5,9	35 x 80	ECS2CQL392M◊◊ΔΔ3580
	4 700	43	30	0,15	1,5	7,3	40 x 80	ECS2CQL472M◊◊ΔΔ4080
200 (250) 2D	1 500	133	93	0,15	1,5	4,3	35 x 40	ECS2DQL152M◊◊ΔΔ3540
	1 800	111	77	0,15	1,5	4,7	35 x 45	ECS2DQL182M◊◊ΔΔ3545
	2 200	91	63	0,15	1,5	5,4	35 x 50	ECS2DQL222M◊◊ΔΔ3550
		91	63	0,15	1,5	5,4	40 x 40	ECS2DQL222M◊◊ΔΔ4040
	2 700	74	52	0,15	1,5	5,9	35 x 60	ECS2DQL272M◊◊ΔΔ3560
		74	52	0,15	1,5	5,9	40 x 50	ECS2DQL272M◊◊ΔΔ4050
	3 300	61	42	0,15	1,5	6,5	35 x 80	ECS2DQL332M◊◊ΔΔ3580
		61	42	0,15	1,5	6,5	40 x 60	ECS2DQL332M◊◊ΔΔ4060
	3 900	52	36	0,15	1,5	7,0	40 x 80	ECS2DQL392M◊◊ΔΔ4080
	4 700	43	30	0,15	1,5	9,2	40 x 90	ECS2DQL472M◊◊ΔΔ4090
250 (300) 2E	1 000	199	139	0,15	1,5	3,7	35 x 40	ECS2EQL102M◊◊ΔΔ3540
	1 200	166	116	0,15	1,5	3,8	35 x 45	ECS2EQL122M◊◊ΔΔ3545
	1 500	133	93	0,15	1,5	4,4	35 x 50	ECS2EQL152M◊◊ΔΔ3550
		133	93	0,15	1,5	4,5	40 x 40	ECS2EQL152M◊◊ΔΔ4040
	1 800	111	77	0,15	1,5	5,0	35 x 70	ECS2EQL182M◊◊ΔΔ3570
		111	77	0,15	1,5	5,0	40 x 50	ECS2EQL182M◊◊ΔΔ4050
	2 200	91	63	0,15	1,5	5,4	35 x 70	ECS2EQL222M◊◊ΔΔ3570
	2 700	74	52	0,15	1,5	6,9	40 x 80	ECS2EQL272M◊◊ΔΔ4080
350 (400) 2V	680	293	205	0,15	1,5	3,6	35 x 45	ECS2VQL681M◊◊ΔΔ3545
		293	205	0,15	1,5	3,6	40 x 40	ECS2VQL681M◊◊ΔΔ4040
	820	243	170	0,15	1,5	4,5	35 x 60	ECS2VQL821M◊◊ΔΔ3560
		243	170	0,15	1,5	4,3	40 x 50	ECS2VQL821M◊◊ΔΔ4050
	1 000	199	139	0,15	1,5	5,2	35 x 70	ECS2VQL102M◊◊ΔΔ3570
		199	139	0,15	1,5	4,9	40 x 60	ECS2VQL102M◊◊ΔΔ4060
	1 200	166	116	0,15	1,5	5,5	35 x 80	ECS2VQL122M◊◊ΔΔ3580
		166	116	0,15	1,5	5,6	40 x 70	ECS2VQL122M◊◊ΔΔ4070
	1 500	133	93	0,15	1,5	6,5	40 x 80	ECS2VQL152M◊◊ΔΔ4080
		133	93	0,15	1,5	6,2	45 x 70	ECS2VQL152M◊◊ΔΔ4570
	1 800	111	77	0,15	1,5	7,9	40 x 100	ECS2VQL182M◊◊ΔΔ40100
		111	77	0,15	1,5	7,1	45 x 70	ECS2VQL182M◊◊ΔΔ4570
	2 200	91	63	0,15	1,5	8,7	40 x 100	ECS2VQL222M◊◊ΔΔ40100
400 (450) 2G	560	356	249	0,15	1,5	3,2	35 x 50	ECS2GQL561M◊◊ΔΔ3550
		356	249	0,15	1,5	2,8	40 x 40	ECS2GQL561M◊◊ΔΔ4040
	680	293	205	0,15	1,5	3,7	35 x 60	ECS2GQL681M◊◊ΔΔ3560
		293	205	0,15	1,5	3,8	40 x 50	ECS2GQL681M◊◊ΔΔ4050
	820	243	170	0,15	1,5	4,2	35 x 60	ECS2GQL821M◊◊ΔΔ3560
		243	170	0,15	1,5	4,1	40 x 50	ECS2GQL821M◊◊ΔΔ4050
	1 000	199	139	0,15	1,5	4,9	35 x 70	ECS2GQL102M◊◊ΔΔ3570
		199	139	0,15	1,5	4,8	40 x 60	ECS2GQL102M◊◊ΔΔ4060
		199	139	0,15	1,5	4,6	45 x 50	ECS2GQL102M◊◊ΔΔ4550
	1 200	166	116	0,15	1,5	5,8	35 x 80	ECS2GQL122M◊◊ΔΔ3580
		166	116	0,15	1,5	5,5	40 x 60	ECS2GQL122M◊◊ΔΔ4060
	1 500	133	93	0,15	1,5	6,9	40 x 90	ECS2GQL152M◊◊ΔΔ4090
		133	93	0,15	1,5	6,8	45 x 80	ECS2GQL152M◊◊ΔΔ4580
	1 800	111	77	0,15	1,5	7,9	40 x 100	ECS2GQL182M◊◊ΔΔ40100
		111	77	0,15	1,5	7,3	45 x 80	ECS2GQL182M◊◊ΔΔ4580
	2 200	91	63	0,15	1,5	8,8	40 x 110	ECS2GQL222M◊◊ΔΔ40110
		91	63	0,15	1,5	8,3	45 x 90	ECS2GQL222M◊◊ΔΔ4590
450 (500) 2W	470	424	296	0,15	1,5	3,0	35 x 50	ECS2WQL471M◊◊ΔΔ3550
		424	296	0,15	1,5	3,0	40 x 40	ECS2WQL471M◊◊ΔΔ4040
	560	356	249	0,15	1,5	3,1	35 x 50	ECS2WQL561M◊◊ΔΔ3550
		356	249	0,15	1,5	3,3	35 x 60	ECS2WQL561M◊◊ΔΔ3560
		356	249	0,15	1,5	3,4	40 x 50	ECS2WQL561M◊◊ΔΔ4050
	680	293	205	0,15	1,5	3,5	35 x 60	ECS2WQL681M◊◊ΔΔ3560
		293	205	0,15	1,5	3,8	35 x 70	ECS2WQL681M◊◊ΔΔ3570
		293	205	0,15	1,5	3,8	40 x 60	ECS2WQL681M◊◊ΔΔ4060
	820	243	170	0,15	1,5	4,6	35 x 80	ECS2WQL821M◊◊ΔΔ3580
		243	170	0,15	1,5	4,4	40 x 60	ECS2WQL821M◊◊ΔΔ4060

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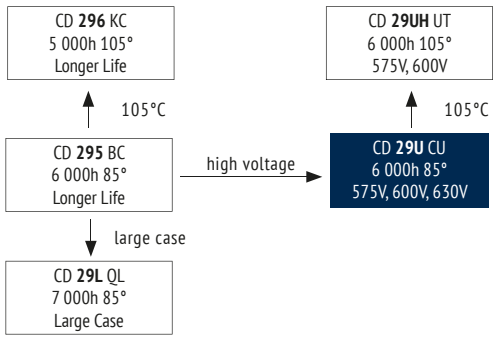
SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
450 (500) 2W	1 000	199	139	0,15	1,5	5,7	35 x 80	ECS2WQL102M◊◊ΔΔ3580
		199	139	0,15	1,5	5,2	40 x 60	ECS2WQL102M◊◊ΔΔ4060
	1 200	166	116	0,15	1,5	5,9	40 x 70	ECS2WQL122M◊◊ΔΔ4070
		166	116	0,15	1,5	6,2	45 x 70	ECS2WQL122M◊◊ΔΔ4570
	1 500	133	93	0,15	1,5	7,3	40 x 100	ECS2WQL152M◊◊ΔΔ40100
		133	93	0,15	1,5	7,0	45 x 80	ECS2WQL152M◊◊ΔΔ4580
	1 800	111	77	0,15	1,5	7,9	45 x 100	ECS2WQL182M◊◊ΔΔ45100
500 (550) 2H	390	511	357	0,15	1,5	1,9	35 x 50	ECS2HQL391M◊◊ΔΔ3550
	470	424	296	0,15	1,5	2,3	35 x 60	ECS2HQL471M◊◊ΔΔ3560
	560	356	249	0,15	1,5	2,5	35 x 60	ECS2HQL561M◊◊ΔΔ3560
		356	249	0,15	1,5	2,7	40 x 60	ECS2HQL561M◊◊ΔΔ4060
	680	293	205	0,15	1,5	3,1	35 x 80	ECS2HQL681M◊◊ΔΔ3580
		293	205	0,15	1,5	2,8	40 x 70	ECS2HQL681M◊◊ΔΔ4070
	820	243	170	0,15	1,5	3,4	35 x 90	ECS2HQL821M◊◊ΔΔ3590
		243	170	0,15	1,5	3,3	40 x 70	ECS2HQL821M◊◊ΔΔ4070
	1 000	199	139	0,15	1,5	3,9	40 x 80	ECS2HQL102M◊◊ΔΔ4080
		199	139	0,15	1,5	3,9	45 x 70	ECS2HQL102M◊◊ΔΔ4570
	1 200	166	116	0,15	1,5	4,3	40 x 90	ECS2HQL122M◊◊ΔΔ4090
	1 500	133	93	0,15	1,5	4,8	40 x 100	ECS2HQL152M◊◊ΔΔ40100

6 000h at 85°C

- Ultra High Voltages
- High Currents



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-25 ~ +85
Voltage Range (V)	575, 600, 630
Capacitance Range (µF)	150 ~ 1 500
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	575	600	630
	$Z_{-25°C} / Z_{+20°C}$	12		

Fast Charge-Discharge: **Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**

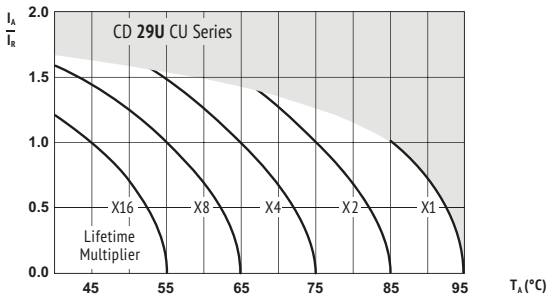
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	6 000h	> 100 000h	3 000h	3 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,2 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	≥ 50 kHz
Coefficient	0,80	1,00	1,16	1,30	1,41	1,45

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

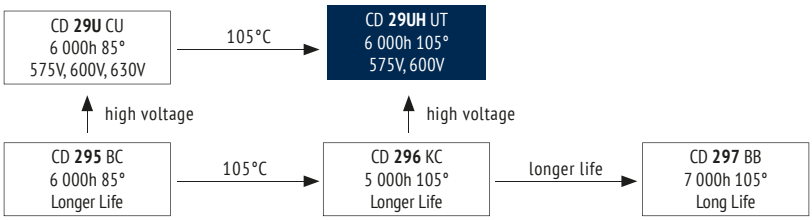
SNAP-IN

SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
575 (625) 2Z	180	1 106	627	0,2	1,0	1,15	30 x 45	ECS2ZCU181M◊◊ΔΔ3045
	220	905	513	0,2	1,3	1,30	30 x 50	ECS2ZCU221M◊◊ΔΔ3050
	270	737	418	0,2	1,5	1,55	30 x 60	ECS2ZCU271M◊◊ΔΔ3060
		737	418	0,2	1,5	1,55	35 x 45	ECS2ZCU271M◊◊ΔΔ3545
	330	603	342	0,2	1,5	1,75	30 x 70	ECS2ZCU331M◊◊ΔΔ3070
		603	342	0,2	1,5	1,75	35 x 50	ECS2ZCU331M◊◊ΔΔ3550
		603	342	0,2	1,5	1,75	40 x 45	ECS2ZCU331M◊◊ΔΔ4045
	390	510	289	0,2	1,5	1,95	30 x 85	ECS2ZCU391M◊◊ΔΔ3085
		510	289	0,2	1,5	1,95	35 x 60	ECS2ZCU391M◊◊ΔΔ3560
		510	289	0,2	1,5	1,95	40 x 55	ECS2ZCU391M◊◊ΔΔ4055
	470	423	240	0,2	1,5	2,15	35 x 70	ECS2ZCU471M◊◊ΔΔ3570
		423	240	0,2	1,5	2,15	40 x 60	ECS2ZCU471M◊◊ΔΔ4060
		423	240	0,2	1,5	2,15	45 x 50	ECS2ZCU471M◊◊ΔΔ4550
	560	355	201	0,2	1,5	2,40	35 x 80	ECS2ZCU561M◊◊ΔΔ3580
		355	201	0,2	1,5	2,40	40 x 70	ECS2ZCU561M◊◊ΔΔ4070
		355	201	0,2	1,5	2,40	45 x 55	ECS2ZCU561M◊◊ΔΔ4555
	680	293	166	0,2	1,5	2,72	35 x 95	ECS2ZCU681M◊◊ΔΔ3595
		293	166	0,2	1,5	2,72	40 x 80	ECS2ZCU681M◊◊ΔΔ4080
		293	166	0,2	1,5	2,72	45 x 65	ECS2ZCU681M◊◊ΔΔ4565
	820	243	138	0,2	1,5	3,05	40 x 100	ECS2ZCU821M◊◊ΔΔ40100
		243	138	0,2	1,5	3,05	45 x 75	ECS2ZCU821M◊◊ΔΔ4575
	1 000	199	113	0,2	1,5	3,20	45 x 90	ECS2ZCU102M◊◊ΔΔ4590
		199	113	0,2	1,5	3,20	50 x 75	ECS2ZCU102M◊◊ΔΔ5075
	1 200	166	94	0,2	1,5	3,35	45 x 105	ECS2ZCU122M◊◊ΔΔ45105
		166	94	0,2	1,5	3,35	50 x 85	ECS2ZCU122M◊◊ΔΔ5085
	1 500	133	75	0,2	1,5	3,50	50 x 100	ECS2ZCU152M◊◊ΔΔ50100
600 (650) 2S	150	1 327	752	0,2	0,9	0,95	30 x 45	ECS2SCU151M◊◊ΔΔ3045
	180	1 106	627	0,2	1,1	1,10	30 x 50	ECS2SCU181M◊◊ΔΔ3050
	220	905	495	0,2	1,3	1,22	30 x 60	ECS2SCU221M◊◊ΔΔ3060
	270	737	403	0,2	1,5	1,25	30 x 70	ECS2SCU271M◊◊ΔΔ3070
	330	603	330	0,2	1,5	1,35	30 x 80	ECS2SCU331M◊◊ΔΔ3080
		603	330	0,2	1,5	1,35	40 x 50	ECS2SCU331M◊◊ΔΔ4050
	390	510	279	0,2	1,5	1,48	40 x 60	ECS2SCU391M◊◊ΔΔ4060
	470	423	232	0,2	1,5	1,65	40 x 70	ECS2SCU471M◊◊ΔΔ4070
		423	232	0,2	1,5	1,65	45 x 55	ECS2SCU471M◊◊ΔΔ4555
	560	355	194	0,2	1,5	1,75	40 x 80	ECS2SCU561M◊◊ΔΔ4080
		355	194	0,2	1,5	1,75	45 x 60	ECS2SCU561M◊◊ΔΔ4560
	680	293	160	0,2	1,5	1,83	40 x 90	ECS2SCU681M◊◊ΔΔ4090
		293	160	0,2	1,5	1,83	45 x 70	ECS2SCU681M◊◊ΔΔ4570
	820	243	133	0,2	1,5	2,00	45 x 85	ECS2SCU821M◊◊ΔΔ4585
		243	133	0,2	1,5	2,00	50 x 70	ECS2SCU821M◊◊ΔΔ5070
	1 000	199	109	0,2	1,5	2,25	45 x 100	ECS2SCU102M◊◊ΔΔ45100
		199	109	0,2	1,5	2,25	50 x 80	ECS2SCU102M◊◊ΔΔ5080
	1 200	166	91	0,2	1,5	2,45	50 x 95	ECS2SCU122M◊◊ΔΔ5095
630 (680) J2	150	1 327	708	0,2	0,9	0,93	30 x 45	ECSJ2CU151M◊◊ΔΔ3045
	180	1 106	590	0,2	1,1	1,00	30 x 50	ECSJ2CU181M◊◊ΔΔ3050
	220	905	483	0,2	1,4	1,10	30 x 60	ECSJ2CU221M◊◊ΔΔ3060
	270	737	393	0,2	1,5	1,20	30 x 70	ECSJ2CU271M◊◊ΔΔ3070
	330	603	322	0,2	1,5	1,32	30 x 85	ECSJ2CU331M◊◊ΔΔ3085
		603	322	0,2	1,5	1,32	40 x 50	ECSJ2CU331M◊◊ΔΔ4050
	390	510	272	0,2	1,5	1,45	40 x 60	ECSJ2CU391M◊◊ΔΔ4060
	470	423	226	0,2	1,5	1,60	40 x 70	ECSJ2CU471M◊◊ΔΔ4070
		423	226	0,2	1,5	1,60	45 x 55	ECSJ2CU471M◊◊ΔΔ4555
	560	355	190	0,2	1,5	1,70	40 x 80	ECSJ2CU561M◊◊ΔΔ4080
		355	190	0,2	1,5	1,70	45 x 65	ECSJ2CU561M◊◊ΔΔ4565
	680	293	156	0,2	1,5	1,80	40 x 95	ECSJ2CU681M◊◊ΔΔ4095
		293	156	0,2	1,5	1,80	45 x 75	ECSJ2CU681M◊◊ΔΔ4575
	820	243	129	0,2	1,5	1,95	45 x 90	ECSJ2CU821M◊◊ΔΔ4590
		243	129	0,2	1,5	1,95	50 x 75	ECSJ2CU821M◊◊ΔΔ5075
	1 000	199	106	0,2	1,5	2,18	45 x 105	ECSJ2CU102M◊◊ΔΔ45105
		199	106	0,2	1,5	2,18	50 x 85	ECSJ2CU102M◊◊ΔΔ5085
	1 200	166	88	0,2	1,5	2,35	50 x 105	ECSJ2CU122M◊◊ΔΔ50105

6 000h at 105°C

- Ultra High Voltage
- Long Life at High Temperature
- High Ripple Current



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-25 ~ +105
Voltage Range (V)	575 ~ 600
Capacitance Range (µF)	56 ~ 390
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	575	600
	$Z_{-25°C} / Z_{+20°C}$	8	

Fast Charge-Discharge: **Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	6 000h	> 200 000h	3 000h	3 000h	500h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 40°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

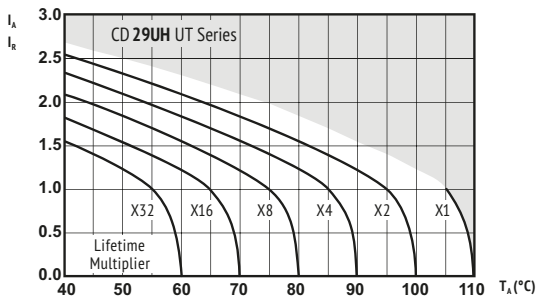
MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	≥ 50 kHz
Coefficient	0,75	1,00	1,16	1,30	1,41	1,45

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

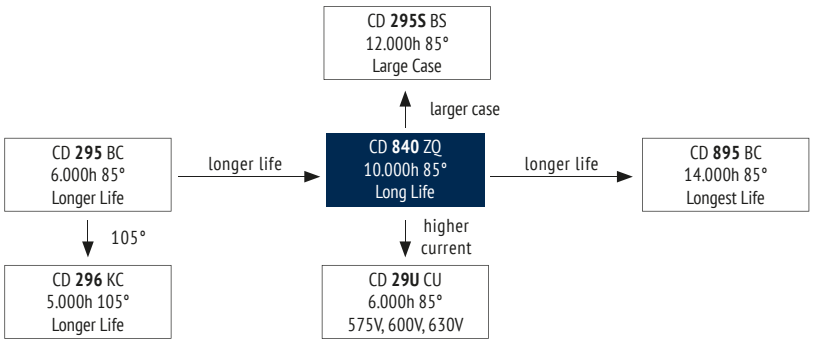
This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ODER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
575 (625) 2Z	68	3903	1659	0,20	0,4	0,52	30 x 25	ECS2ZUT680M◊◊ΔΔ3025
	82	3236	1376	0,20	0,5	0,58	30 x 30	ECS2ZUT820M◊◊ΔΔ3030
	100	2654	1128	0,20	0,6	0,63	30 x 35	ECS2ZUT101M◊◊ΔΔ3035
	120	2212	940	0,20	0,7	0,70	30 x 40	ECS2ZUT121M◊◊ΔΔ3040
	150	1769	752	0,20	0,9	0,81	30 x 45	ECS2ZUT151M◊◊ΔΔ3045
	180	1474	627	0,20	1,0	0,89	30 x 50	ECS2ZUT181M◊◊ΔΔ3050
	220	1206	513	0,20	1,3	1,01	30 x 60	ECS2ZUT221M◊◊ΔΔ3060
	270	983	418	0,20	1,5	1,12	30 x 70	ECS2ZUT271M◊◊ΔΔ3070
		983	418	0,20	1,5	1,12	35 x 55	ECS2ZUT271M◊◊ΔΔ3555
	330	804	342	0,20	1,5	1,21	30 x 85	ECS2ZUT331M◊◊ΔΔ3085
		804	342	0,20	1,5	1,21	35 x 60	ECS2ZUT331M◊◊ΔΔ3560
		804	342	0,20	1,5	1,21	40 x 50	ECS2ZUT331M◊◊ΔΔ4050
	390	680	289	0,20	1,5	1,30	35 x 65	ECS2ZUT391M◊◊ΔΔ3565
		680	289	0,20	1,5	1,30	40 x 60	ECS2ZUT391M◊◊ΔΔ4060
600 (650) 2S	56	4739	2014	0,20	0,3	0,50	30 x 25	ECS2SUT560M◊◊ΔΔ3025
	68	3903	1659	0,20	0,4	0,56	30 x 30	ECS2SUT680M◊◊ΔΔ3030
	82	3236	1376	0,20	0,5	0,61	30 x 35	ECS2SUT820M◊◊ΔΔ3035
		3236	1376	0,20	0,5	0,61	35 x 25	ECS2SUT820M◊◊ΔΔ3525
	100	2654	1128	0,20	0,6	0,67	30 x 40	ECS2SUT101M◊◊ΔΔ3040
		2654	1128	0,20	0,6	0,67	35 x 30	ECS2SUT101M◊◊ΔΔ3530
	120	2212	940	0,20	0,7	0,74	30 x 45	ECS2SUT121M◊◊ΔΔ3045
		2212	940	0,20	0,7	0,74	35 x 35	ECS2SUT121M◊◊ΔΔ3535
	150	1769	752	0,20	0,9	0,83	30 x 50	ECS2SUT151M◊◊ΔΔ3050
		1769	752	0,20	0,9	0,83	35 x 40	ECS2SUT151M◊◊ΔΔ3540
	180	1474	627	0,20	1,1	0,91	30 x 55	ECS2SUT181M◊◊ΔΔ3055
		1474	627	0,20	1,1	0,91	35 x 45	ECS2SUT181M◊◊ΔΔ3545
	220	1206	513	0,20	1,3	1,05	30 x 60	ECS2SUT221M◊◊ΔΔ3060
		1206	513	0,20	1,3	1,05	35 x 50	ECS2SUT221M◊◊ΔΔ3550
	270	983	418	0,20	1,5	1,17	35 x 55	ECS2SUT271M◊◊ΔΔ3555
	330	804	342	0,20	1,5	1,27	35 x 65	ECS2SUT331M◊◊ΔΔ3565

10 000h at 85°C

- Long Useful Life at 85°C
- Outstanding Ripple Current
- Inverter of highest grade



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +85
Voltage Range (V)	200 ~ 450
Capacitance Range (µF)	68 ~ 2 200
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	200 ~ 450
	$Z_{-25°C} / Z_{+20°C}$	4
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**	

SNAP-IN

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	10 000h	> 100 000h	5 000h	5 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 15% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 150% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,5 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement

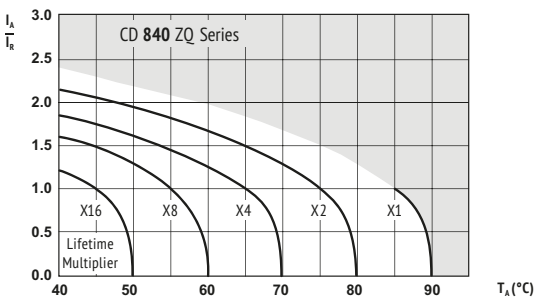
MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Rated Voltage (V) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	≥ 50 kHz
200 ~ 250	0,87	1,00	1,17	1,32	1,45	1,50
400 ~ 500	0,80	1,00	1,16	1,30	1,41	1,45

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

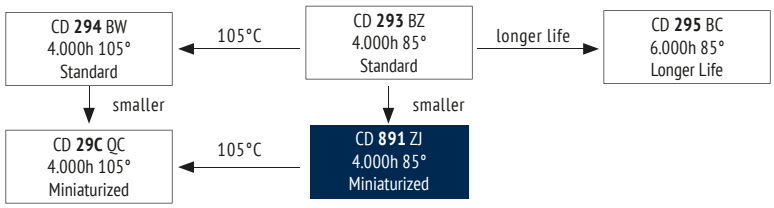
SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
200 (250) 2D	330	603	423	0,15	0,7	1,59	25 x 25	ECS2DZQ331M◊◊ΔΔ2525
	390	511	358	0,15	0,8	1,81	25 x 30	ECS2DZQ391M◊◊ΔΔ2530
		511	358	0,15	0,8	1,88	30 x 25	ECS2DZQ391M◊◊ΔΔ3025
	470	424	297	0,15	0,9	1,99	25 x 30	ECS2DZQ471M◊◊ΔΔ2530
		424	297	0,15	0,9	2,06	30 x 25	ECS2DZQ471M◊◊ΔΔ3025
	560	356	249	0,15	1,1	2,26	25 x 35	ECS2DZQ561M◊◊ΔΔ2535
		356	249	0,15	1,1	2,36	30 x 30	ECS2DZQ561M◊◊ΔΔ3030
	680	293	205	0,15	1,4	2,58	25 x 40	ECS2DZQ681M◊◊ΔΔ2540
		293	205	0,15	1,4	2,60	30 x 30	ECS2DZQ681M◊◊ΔΔ3030
		293	205	0,15	1,4	2,58	35 x 25	ECS2DZQ681M◊◊ΔΔ3525
	820	243	170	0,15	1,5	2,92	25 x 45	ECS2DZQ821M◊◊ΔΔ2545
		243	170	0,15	1,5	2,97	30 x 35	ECS2DZQ821M◊◊ΔΔ3035
		243	170	0,15	1,5	3,22	35 x 30	ECS2DZQ821M◊◊ΔΔ3530
	1 000	199	140	0,15	1,5	3,32	25 x 50	ECS2DZQ102M◊◊ΔΔ2550
		199	140	0,15	1,5	3,69	30 x 40	ECS2DZQ102M◊◊ΔΔ3040
		199	140	0,15	1,5	3,70	35 x 35	ECS2DZQ102M◊◊ΔΔ3535
	1 200	166	117	0,15	1,5	4,17	30 x 45	ECS2DZQ122M◊◊ΔΔ3045
		166	117	0,15	1,5	4,05	35 x 35	ECS2DZQ122M◊◊ΔΔ3535
	1 500	133	93	0,15	1,5	4,80	30 x 50	ECS2DZQ152M◊◊ΔΔ3050
		133	93	0,15	1,5	4,69	35 x 40	ECS2DZQ152M◊◊ΔΔ3540
	1 800	111	78	0,15	1,5	5,30	35 x 45	ECS2DZQ182M◊◊ΔΔ3545
	2 200	91	63	0,15	1,5	6,17	35 x 55	ECS2DZQ222M◊◊ΔΔ3555
250 (300) 2E	270	737	516	0,15	0,7	1,52	25 x 25	ECS2EZQ271M◊◊ΔΔ2525
	330	603	423	0,15	0,8	1,76	25 x 30	ECS2EZQ331M◊◊ΔΔ2530
	390	511	358	0,15	1,0	2,00	25 x 35	ECS2EZQ391M◊◊ΔΔ2535
		511	358	0,15	1,0	1,99	30 x 25	ECS2EZQ391M◊◊ΔΔ3025
	470	424	297	0,15	1,2	2,19	25 x 35	ECS2EZQ471M◊◊ΔΔ2535
		424	297	0,15	1,2	2,29	30 x 30	ECS2EZQ471M◊◊ΔΔ3030
	560	356	249	0,15	1,4	2,48	25 x 40	ECS2EZQ561M◊◊ΔΔ2540
		356	249	0,15	1,4	2,50	30 x 30	ECS2EZQ561M◊◊ΔΔ3030
		356	249	0,15	1,4	2,52	35 x 25	ECS2EZQ561M◊◊ΔΔ3525
	680	293	205	0,15	1,5	2,82	25 x 45	ECS2EZQ681M◊◊ΔΔ2545
		293	205	0,15	1,5	2,87	30 x 35	ECS2EZQ681M◊◊ΔΔ3035
		293	205	0,15	1,5	3,10	35 x 30	ECS2EZQ681M◊◊ΔΔ3530
	820	243	170	0,15	1,5	3,27	25 x 55	ECS2EZQ821M◊◊ΔΔ2555
		243	170	0,15	1,5	3,47	30 x 40	ECS2EZQ821M◊◊ΔΔ3040
		243	170	0,15	1,5	3,54	35 x 35	ECS2EZQ821M◊◊ΔΔ3535
	1 000	199	140	0,15	1,5	3,96	30 x 45	ECS2EZQ102M◊◊ΔΔ3045
		199	140	0,15	1,5	3,90	35 x 35	ECS2EZQ102M◊◊ΔΔ3535
	1 200	166	117	0,15	1,5	4,58	30 x 55	ECS2EZQ122M◊◊ΔΔ3055
		166	117	0,15	1,5	4,43	35 x 40	ECS2EZQ122M◊◊ΔΔ3540
	1 500	133	94	0,15	1,5	5,25	35 x 50	ECS2EZQ152M◊◊ΔΔ3550
	1 800	111	78	0,15	1,5	5,89	35 x 55	ECS2EZQ182M◊◊ΔΔ3555
400 (450) 2G	100	1990	1035	0,15	0,4	1,04	25 x 25	ECS2GZQ101M◊◊ΔΔ2525
	120	1658	863	0,15	0,5	1,19	25 x 30	ECS2GZQ121M◊◊ΔΔ2530
	150	1327	690	0,15	0,6	1,39	25 x 35	ECS2GZQ151M◊◊ΔΔ2535
		1327	690	0,15	0,6	1,39	30 x 25	ECS2GZQ151M◊◊ΔΔ3025
	180	1106	575	0,15	0,7	1,58	25 x 40	ECS2GZQ181M◊◊ΔΔ2540
		1106	575	0,15	0,7	1,59	30 x 30	ECS2GZQ181M◊◊ΔΔ3030
		1106	575	0,15	0,7	1,60	35 x 25	ECS2GZQ181M◊◊ΔΔ3525
	220	905	471	0,15	0,9	1,75	25 x 40	ECS2GZQ221M◊◊ΔΔ2540
		905	471	0,15	0,9	1,76	30 x 30	ECS2GZQ221M◊◊ΔΔ3030
		905	471	0,15	0,9	1,97	35 x 30	ECS2GZQ221M◊◊ΔΔ3530
	270	737	384	0,15	1,1	2,00	25 x 45	ECS2GZQ271M◊◊ΔΔ2545
		737	384	0,15	1,1	2,03	30 x 35	ECS2GZQ271M◊◊ΔΔ3035
		737	384	0,15	1,1	2,18	35 x 30	ECS2GZQ271M◊◊ΔΔ3530
	330	603	314	0,15	1,3	2,33	25 x 55	ECS2GZQ331M◊◊ΔΔ2555
		603	314	0,15	1,3	2,55	30 x 45	ECS2GZQ331M◊◊ΔΔ3045
		603	314	0,15	1,3	2,51	35 x 35	ECS2GZQ331M◊◊ΔΔ3535
	390	511	266	0,15	1,5	2,78	30 x 45	ECS2GZQ391M◊◊ΔΔ3045
		511	266	0,15	1,5	2,72	35 x 35	ECS2GZQ391M◊◊ΔΔ3535
	470	424	221	0,15	1,5	3,14	30 x 50	ECS2GZQ471M◊◊ΔΔ3050
		424	221	0,15	1,5	3,19	35 x 45	ECS2GZQ471M◊◊ΔΔ3545
	560	356	185	0,15	1,5	3,58	35 x 50	ECS2GZQ561M◊◊ΔΔ3550
	680	293	147	0,15	1,5	4,05	35 x 55	ECS2GZQ681M◊◊ΔΔ3555

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
450 (500) 2W	68	3901	1951	0,20	0,3	0,80	25 x 25	ECS2WZQ680M◊◊ΔΔ2525
	82	3235	1618	0,20	0,4	0,92	25 x 30	ECS2WZQ820M◊◊ΔΔ2530
	100	2653	1327	0,20	0,5	1,01	25 x 30	ECS2WZQ101M◊◊ΔΔ2530
		2653	1327	0,20	0,5	1,05	30 x 25	ECS2WZQ101M◊◊ΔΔ3025
	120	2211	1106	0,20	0,5	1,16	25 x 35	ECS2WZQ121M◊◊ΔΔ2535
		2211	1106	0,20	0,5	1,21	30 x 30	ECS2WZQ121M◊◊ΔΔ3030
	150	1769	885	0,20	0,7	1,29	25 x 35	ECS2WZQ151M◊◊ΔΔ2535
		1769	885	0,20	0,7	1,35	30 x 30	ECS2WZQ151M◊◊ΔΔ3030
		1769	885	0,20	0,7	1,36	35 x 25	ECS2WZQ151M◊◊ΔΔ3525
	180	1474	737	0,20	0,8	1,51	25 x 45	ECS2WZQ181M◊◊ΔΔ2545
		1474	737	0,20	0,8	1,54	30 x 35	ECS2WZQ181M◊◊ΔΔ3035
		1474	737	0,20	0,8	1,69	35 x 30	ECS2WZQ181M◊◊ΔΔ3530
	220	1206	603	0,20	1,0	1,72	25 x 50	ECS2WZQ221M◊◊ΔΔ2550
		1206	603	0,20	1,0	1,92	30 x 40	ECS2WZQ221M◊◊ΔΔ3040
		1206	603	0,20	1,0	1,87	35 x 30	ECS2WZQ221M◊◊ΔΔ3530
	270	983	492	0,20	1,2	1,96	25 x 55	ECS2WZQ271M◊◊ΔΔ2555
		983	492	0,20	1,2	2,12	30 x 40	ECS2WZQ271M◊◊ΔΔ3040
		983	492	0,20	1,2	2,16	35 x 35	ECS2WZQ271M◊◊ΔΔ3535
	330	804	402	0,20	1,5	2,49	30 x 50	ECS2WZQ331M◊◊ΔΔ3050
		804	402	0,20	1,5	2,47	35 x 40	ECS2WZQ331M◊◊ΔΔ3540
	390	681	341	0,20	1,5	2,78	30 x 55	ECS2WZQ391M◊◊ΔΔ3055
		681	341	0,20	1,5	2,77	35 x 45	ECS2WZQ391M◊◊ΔΔ3545
	470	565	283	0,20	1,5	3,15	35 x 50	ECS2WZQ471M◊◊ΔΔ3550
	560	474	238	0,20	1,5	3,50	35 x 55	ECS2WZQ561M◊◊ΔΔ3555

4 000h at 85°C

- Miniaturized 85°C



ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +85	-25 ~ +85
Voltage Range (V)	35 ~ 400	420 ~ 500
Capacitance Range (µF)	68 ~ 18 000	
Capacitance Tolerance (20°C, 120Hz)	± 20%	
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	35	50~100	160~200	250~400	420~500
	$Z_{-25°C} / Z_{+20°C}$	4	3		4	
	$Z_{-40°C} / Z_{+20°C}$	15	10	6	8	-

Fast Charge-Discharge: **Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	4 000h	> 65 000h	2 000h	3 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 15% of initial value	Within ± 20% of initial value	Within ± 15% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 150% of specified value	Not more than 200% of specified value	Not more than 150% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,2 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

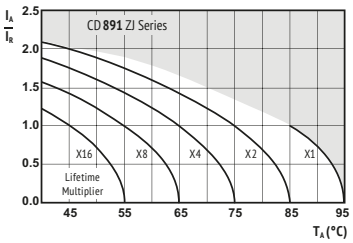
Rated Voltage (V) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	100kHz
⩽ 50	0,88	1,00	1,07	1,15	1,15	1,15
63 ~ 100	0,80	1,00	1,17	1,32	1,45	1,50
⩾ 160	0,80	1,00	1,16	1,30	1,41	1,43

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

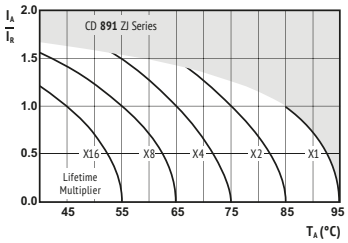
MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)

U_R < 160V



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

U_R ⩾ 160V



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/ lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

SNAP-IN

SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
35 (44) 1V	4 700	71	57	0,25	1,5	2,2	22 x 30	ECS1VZJ472M◊◊ΔΔ2230
	5 600	72	60	0,30	1,5	2,3	22 x 30	ECS1VZJ562M◊◊ΔΔ2230
	6 800	59	47	0,30	1,5	2,6	25 x 30	ECS1VZJ682M◊◊ΔΔ2530
	10 000	47	38	0,35	1,5	3,0	25 x 35	ECS1VZJ103M◊◊ΔΔ2535
		47	38	0,35	1,5	3,2	30 x 30	ECS1VZJ103M◊◊ΔΔ3030
		47	38	0,35	1,5	3,3	35 x 20	ECS1VZJ103M◊◊ΔΔ3520
	12 000	39	30	0,35	1,5	3,6	35 x 25	ECS1VZJ123M◊◊ΔΔ3525
	15 000	31	25	0,35	1,5	3,3	30 x 35	ECS1VZJ153M◊◊ΔΔ3035
	18 000	26	21	0,35	1,5	4,7	40 x 30	ECS1VZJ183M◊◊ΔΔ4030
50 (63) 1H	2 200	121	97	0,20	1,1	1,6	20 x 25	ECS1HZJ222M◊◊ΔΔ2025
	3 300	101	81	0,25	1,5	2,0	22 x 30	ECS1HZJ332M◊◊ΔΔ2230
		101	81	0,25	1,5	2,0	25 x 25	ECS1HZJ332M◊◊ΔΔ2525
	4 700	71	57	0,25	1,5	3,0	25 x 30	ECS1HZJ472M◊◊ΔΔ2530
		71	57	0,25	1,5	2,8	30 x 25	ECS1HZJ472M◊◊ΔΔ3025
	10 000	47	38	0,35	1,5	3,2	25 x 50	ECS1HZJ103M◊◊ΔΔ2550
		47	38	0,35	1,5	3,0	30 x 40	ECS1HZJ103M◊◊ΔΔ3040
		47	38	0,35	1,5	4,0	30 x 45	ECS1HZJ103M◊◊ΔΔ3045
63 (79) 1J	3 300	81	65	0,20	1,5	2,6	25 x 30	ECS1JZJ332M◊◊ΔΔ2530
		81	65	0,20	1,5	3,0	30 x 25	ECS1JZJ332M◊◊ΔΔ3025
	4 700	57	46	0,20	1,5	2,6	22 x 50	ECS1JZJ472M◊◊ΔΔ2250
		57	46	0,20	1,5	2,6	25 x 35	ECS1JZJ472M◊◊ΔΔ2535
	5 600	48	38	0,20	1,5	2,7	25 x 40	ECS1JZJ562M◊◊ΔΔ2540
	6 800	40	32	0,20	1,5	2,9	25 x 50	ECS1JZJ682M◊◊ΔΔ2550
		40	32	0,20	1,5	3,4	30 x 35	ECS1JZJ682M◊◊ΔΔ3035
	8 200	41	33	0,25	1,5	3,5	35 x 35	ECS1JZJ822M◊◊ΔΔ3535
	10 000	34	27	0,25	1,5	4,3	30 x 45	ECS1JZJ103M◊◊ΔΔ3045
		34	27	0,25	1,5	4,0	35 x 40	ECS1JZJ103M◊◊ΔΔ3540
	12 000	28	23	0,25	1,5	6,7	35 x 45	ECS1JZJ123M◊◊ΔΔ3545
	15 000	23	18	0,25	1,5	4,4	35 x 50	ECS1JZJ153M◊◊ΔΔ3550
80 (100) 1K	1 800	111	89	0,15	1,4	1,9	22 x 30	ECS1KZJ182M◊◊ΔΔ2230
	2 200	91	75	0,15	1,5	2,0	25 x 30	ECS1KZJ222M◊◊ΔΔ2530
	2 700	74	59	0,15	1,5	2,6	25 x 35	ECS1KZJ272M◊◊ΔΔ2535
	3 300	61	49	0,15	1,5	2,7	22 x 45	ECS1KZJ332M◊◊ΔΔ2245
	4 700	43	34	0,15	1,5	3,3	25 x 55	ECS1KZJ472M◊◊ΔΔ2555
	8 200	41	25	0,25	1,5	4,2	35 x 50	ECS1KZJ822M◊◊ΔΔ3550
	10 000	34	22	0,25	1,5	4,5	35 x 50	ECS1KZJ103M◊◊ΔΔ3550
100 (125) 2A	1 000	199	160	0,15	1,0	1,5	22 x 30	ECS2AZJ102M◊◊ΔΔ2230
	1 200	166	133	0,15	1,2	1,8	22 x 30	ECS2AZJ122M◊◊ΔΔ2230
	2 200	91	73	0,15	1,5	2,2	22 x 55	ECS2AZJ222M◊◊ΔΔ2255
		91	73	0,15	1,5	2,2	25 x 40	ECS2AZJ222M◊◊ΔΔ2540
		91	73	0,15	1,5	2,2	30 x 30	ECS2AZJ222M◊◊ΔΔ3030
	4 700	43	34	0,15	1,5	3,4	30 x 50	ECS2AZJ472M◊◊ΔΔ3050
200 (250) 2D	120	1106	800	0,10	0,2	1,0	22 x 25	ECS2DZJ121M◊◊ΔΔ2225
	470	283	226	0,10	0,9	1,7	25 x 30	ECS2DZJ471M◊◊ΔΔ2530
	560	237	190	0,10	1,1	2,0	30 x 25	ECS2DZJ561M◊◊ΔΔ3025
	680	196	157	0,10	1,4	1,9	22 x 35	ECS2DZJ681M◊◊ΔΔ2235
		196	157	0,10	1,4	2,3	22 x 45	ECS2DZJ681M◊◊ΔΔ2245
		196	157	0,10	1,4	2,3	25 x 30	ECS2DZJ681M◊◊ΔΔ2530
	820	162	135	0,10	1,5	2,2	22 x 40	ECS2DZJ821M◊◊ΔΔ2240
	1 000	133	128	0,10	1,5	2,6	25 x 40	ECS2DZJ102M◊◊ΔΔ2540
		133	128	0,10	1,5	3,1	30 x 40	ECS2DZJ102M◊◊ΔΔ3040
	1 500	120	108	0,10	1,5	3,7	25 x 50	ECS2DZJ152M◊◊ΔΔ2550
		120	108	0,10	1,5	3,8	30 x 50	ECS2DZJ152M◊◊ΔΔ3050
	1 800	120	108	0,12	1,5	3,8	35 x 40	ECS2DZJ182M◊◊ΔΔ3540
		120	108	0,12	1,5	4,0	35 x 45	ECS2DZJ182M◊◊ΔΔ3545
	2 200	90	80	0,12	1,5	4,5	35 x 45	ECS2DZJ222M◊◊ΔΔ3545
	2 700	85	70	0,12	1,5	4,0	35 x 55	ECS2DZJ272M◊◊ΔΔ3555
	3 300	70	50	0,12	1,5	4,2	35 x 60	ECS2DZJ332M◊◊ΔΔ3560

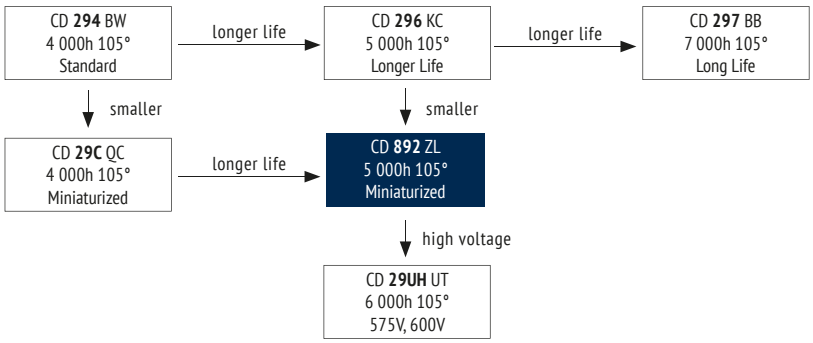
U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
250 (300) 2E	220	905	724	0,15	0,6	1,0	22 x 25	ECS2EZJ221M◊◊ΔΔ2225
	330	603	483	0,15	0,8	1,3	22 x 30	ECS2EZJ331M◊◊ΔΔ2230
	680	293	135	0,15	1,5	2,3	25 x 50	ECS2EZJ681M◊◊ΔΔ2550
		293	135	0,15	1,5	2,3	30 x 30	ECS2EZJ681M◊◊ΔΔ3030
	1 000	199	160	0,15	1,5	3,0	30 x 40	ECS2EZJ102M◊◊ΔΔ3040
	1 500	133	110	0,15	1,5	3,8	30 x 50	ECS2EZJ152M◊◊ΔΔ3050
	1 800	111	90	0,15	1,5	4,4	35 x 45	ECS2EZJ182M◊◊ΔΔ3545
	2 200	91	75	0,15	1,5	4,6	35 x 50	ECS2EZJ222M◊◊ΔΔ3550
		91	75	0,15	1,5	5,0	40 x 60	ECS2EZJ222M◊◊ΔΔ4060
350 (400) 2V	820	243	198	0,15	1,5	2,0	35 x 50	ECS2VZJ821M◊◊ΔΔ3550
	1 500	133	110	0,15	1,5	5,0	40 x 60	ECS2VZJ152M◊◊ΔΔ4060
	1 800	111	90	0,15	1,5	6,5	40 x 100	ECS2VZJ182M◊◊ΔΔ40100
	2 200	91	75	0,15	1,5	7,2	40 x 100	ECS2VZJ222M◊◊ΔΔ40100
400 (450) 2G	68	2926	2341	0,15	0,3	0,6	22 x 20	ECS2GZJ680M◊◊ΔΔ2220
	100	1990	1592	0,15	0,4	0,7	25 x 20	ECS2GZJ101M◊◊ΔΔ2520
		1990	1592	0,15	0,4	0,9	25 x 25	ECS2GZJ101M◊◊ΔΔ2525
	120	1658	1327	0,15	0,5	0,9	25 x 25	ECS2GZJ121M◊◊ΔΔ2525
	150	1327	1062	0,15	0,6	0,9	22 x 30	ECS2GZJ151M◊◊ΔΔ2230
	220	905	724	0,15	0,9	1,2	25 x 35	ECS2GZJ221M◊◊ΔΔ2535
		905	724	0,15	0,9	1,1	30 x 30	ECS2GZJ221M◊◊ΔΔ3030
		905	724	0,15	0,9	1,5	30 x 35	ECS2GZJ221M◊◊ΔΔ3035
	270	737	590	0,15	1,1	1,3	25 x 40	ECS2GZJ271M◊◊ΔΔ2540
	330	603	483	0,15	1,3	1,6	22 x 50	ECS2GZJ331M◊◊ΔΔ2250
		603	483	0,15	1,3	1,8	30 x 40	ECS2GZJ331M◊◊ΔΔ3040
		603	483	0,15	1,3	1,6	35 x 25	ECS2GZJ331M◊◊ΔΔ3525
	390	511	409	0,15	1,5	2,1	25 x 45	ECS2GZJ391M◊◊ΔΔ2545
		511	409	0,15	1,5	1,8	30 x 40	ECS2GZJ391M◊◊ΔΔ3040
		511	409	0,15	1,5	2,0	30 x 45	ECS2GZJ391M◊◊ΔΔ3045
		511	409	0,15	1,5	1,8	35 x 30	ECS2GZJ391M◊◊ΔΔ3530
	470	424	339	0,15	1,5	1,8	30 x 45	ECS2GZJ471M◊◊ΔΔ3045
		424	339	0,15	1,5	2,4	30 x 50	ECS2GZJ471M◊◊ΔΔ3050
		424	339	0,15	1,5	2,1	35 x 30	ECS2GZJ471M◊◊ΔΔ3530
		424	339	0,15	1,5	2,5	35 x 35	ECS2GZJ471M◊◊ΔΔ3535
	560	356	285	0,15	1,5	2,0	30 x 50	ECS2GZJ561M◊◊ΔΔ3050
		356	285	0,15	1,5	2,3	35 x 35	ECS2GZJ561M◊◊ΔΔ3535
		356	285	0,15	1,5	2,7	35 x 40	ECS2GZJ561M◊◊ΔΔ3540
	680	293	240	0,15	1,5	2,5	30 x 50	ECS2GZJ681M◊◊ΔΔ3050
		293	240	0,15	1,5	2,7	30 x 55	ECS2GZJ681M◊◊ΔΔ3055
		293	240	0,15	1,5	2,5	35 x 40	ECS2GZJ681M◊◊ΔΔ3540
		293	240	0,15	1,5	3,0	35 x 50	ECS2GZJ681M◊◊ΔΔ3550
		293	240	0,15	1,5	3,9	40 x 60	ECS2GZJ681M◊◊ΔΔ4060
	820	243	200	0,15	1,5	2,7	30 x 70	ECS2GZJ821M◊◊ΔΔ3070
		243	200	0,15	1,5	2,6	35 x 50	ECS2GZJ821M◊◊ΔΔ3550
	1 000	199	160	0,15	1,5	3,3	35 x 50	ECS2GZJ102M◊◊ΔΔ3550
		199	160	0,15	1,5	4,7	35 x 60	ECS2GZJ102M◊◊ΔΔ3560
		199	160	0,15	1,5	3,6	40 x 55	ECS2GZJ102M◊◊ΔΔ4055
		199	160	0,15	1,5	5,0	40 x 80	ECS2GZJ102M◊◊ΔΔ4080
	1 200	166	135	0,15	1,5	3,5	35 x 80	ECS2GZJ122M◊◊ΔΔ3580
	1 500	133	120	0,15	1,5	6,5	40 x 80	ECS2GZJ152M◊◊ΔΔ4080
	2 700	74	50	0,15	1,5	11,0	50 x 105	ECS2GZJ272M◊◊ΔΔ50105
420 (470) 2X	100	1990	1592	0,15	0,4	0,7	22 x 35	ECS2XZJ101M◊◊ΔΔ2235
		1990	1592	0,15	0,4	0,7	25 x 30	ECS2XZJ101M◊◊ΔΔ2530
	150	1327	1062	0,15	0,6	1,2	25 x 30	ECS2XZJ151M◊◊ΔΔ2530
	180	1106	885	0,15	0,8	1,0	25 x 40	ECS2XZJ181M◊◊ΔΔ2540
		1106	885	0,15	0,8	1,0	30 x 35	ECS2XZJ181M◊◊ΔΔ3035
		1106	885	0,15	0,8	1,0	35 x 25	ECS2XZJ181M◊◊ΔΔ3525
	220	905	724	0,15	0,9	1,1	25 x 45	ECS2XZJ221M◊◊ΔΔ2545
		905	724	0,15	0,9	1,1	30 x 40	ECS2XZJ221M◊◊ΔΔ3040
		905	724	0,15	0,9	1,1	35 x 30	ECS2XZJ221M◊◊ΔΔ3530
	270	737	590	0,15	1,1	1,4	30 x 30	ECS2XZJ271M◊◊ΔΔ3030
	330	603	483	0,15	1,4	1,7	25 x 50	ECS2XZJ331M◊◊ΔΔ2550
		603	483	0,15	1,4	1,7	30 x 45	ECS2XZJ331M◊◊ΔΔ3045
		603	483	0,15	1,4	1,7	35 x 35	ECS2XZJ331M◊◊ΔΔ3535
	390	511	409	0,15	1,5	1,9	30 x 45	ECS2XZJ391M◊◊ΔΔ3045

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
420 (470) 2X	470	424	339	0,15	1,5	2,1	30 x 50	ECS2XZJ471M◊◊ΔΔ3050
		424	339	0,15	1,5	2,1	35 x 45	ECS2XZJ471M◊◊ΔΔ3545
	560	356	285	0,15	1,5	2,5	35 x 45	ECS2XZJ561M◊◊ΔΔ3545
	680	293	235	0,15	1,5	2,5	35 x 50	ECS2XZJ681M◊◊ΔΔ3550
	820	243	194	0,15	1,5	3,2	35 x 50	ECS2XZJ821M◊◊ΔΔ3550
	1 000	199	160	0,15	1,5	3,2	35 x 70	ECS2XZJ102M◊◊ΔΔ3570
	1 500	133	120	0,15	1,5	6,5	40 x 100	ECS2XZJ152M◊◊ΔΔ40100
450 (500) 2W	100	1990	1592	0,15	0,5	0,7	22 x 30	ECS2WZJ101M◊◊ΔΔ2230
	120	1658	1350	0,15	0,5	0,8	22 x 35	ECS2WZJ121M◊◊ΔΔ2235
	150	1327	1062	0,15	0,7	1,2	22 x 30	ECS2WZJ151M◊◊ΔΔ2230
		1327	1062	0,15	0,7	0,9	25 x 35	ECS2WZJ151M◊◊ΔΔ2535
		1327	1062	0,15	0,7	0,95	30 x 25	ECS2WZJ151M◊◊ΔΔ3025
	220	905	724	0,15	1,0	1,1	22 x 40	ECS2WZJ221M◊◊ΔΔ2240
		905	724	0,15	1,0	1,1	25 x 45	ECS2WZJ221M◊◊ΔΔ2545
		905	724	0,15	1,0	1,3	30 x 25	ECS2WZJ221M◊◊ΔΔ3025
		905	724	0,15	1,0	1,3	30 x 30	ECS2WZJ221M◊◊ΔΔ3030
		905	724	0,15	1,0	1,3	35 x 20	ECS2WZJ271M◊◊ΔΔ3520
	270	737	590	0,15	1,2	1,5	35 x 30	ECS2WZJ271M◊◊ΔΔ3530
	330	603	483	0,15	1,5	1,6	25 x 60	ECS2WZJ331M◊◊ΔΔ2560
		603	483	0,15	1,5	1,7	30 x 35	ECS2WZJ331M◊◊ΔΔ3035
		603	483	0,15	1,5	1,8	35 x 35	ECS2WZJ331M◊◊ΔΔ3535
	390	511	409	0,15	1,5	1,8	25 x 55	ECS2WZJ391M◊◊ΔΔ2555
		511	409	0,15	1,5	1,8	30 x 45	ECS2WZJ391M◊◊ΔΔ3045
		511	409	0,15	1,5	1,7	35 x 35	ECS2WZJ391M◊◊ΔΔ3535
		511	409	0,15	1,5	1,9	35 x 40	ECS2WZJ391M◊◊ΔΔ3540
	470	424	339	0,15	1,5	2,2	30 x 50	ECS2WZJ471M◊◊ΔΔ3050
		424	339	0,15	1,5	2,4	35 x 40	ECS2WZJ471M◊◊ΔΔ3540
	560	356	285	0,15	1,5	3,0	30 x 55	ECS2WZJ561M◊◊ΔΔ3055
		356	285	0,15	1,5	2,3	35 x 50	ECS2WZJ561M◊◊ΔΔ3550
	680	293	234	0,15	1,5	2,3	35 x 50	ECS2WZJ681M◊◊ΔΔ3550
	820	243	195	0,15	1,5	3,6	35 x 55	ECS2WZJ821M◊◊ΔΔ3555
	1 000	199	160	0,15	1,5	4,2	35 x 55	ECS2WZJ102M◊◊ΔΔ3555
		199	160	0,15	1,5	4,5	35 x 75	ECS2WZJ102M◊◊ΔΔ3575
		199	160	0,15	1,5	5,0	40 x 70	ECS2WZJ102M◊◊ΔΔ4070
	1 200	166	135	0,15	1,5	4,6	35 x 60	ECS2WZJ122M◊◊ΔΔ3560
		166	135	0,15	1,5	5,0	40 x 100	ECS2WZJ122M◊◊ΔΔ40100
	1 500	133	120	0,15	1,5	6,4	40 x 100	ECS2WZJ152M◊◊ΔΔ40100
		133	120	0,15	1,5	6,7	45 x 75	ECS2WZJ152M◊◊ΔΔ4575
	1 800	111	100	0,15	1,5	5,9	45 x 100	ECS2WZJ182M◊◊ΔΔ45100
	2 200	91	75	0,15	1,5	7,0	45 x 100	ECS2WZJ222M◊◊ΔΔ45100
	2 700	74	50	0,15	1,5	10,0	55 x 105	ECS2WZJ272M◊◊ΔΔ55105
500 (550) 2H	470	424	340	0,15	1,5	2,3	35 x 55	ECS2HZJ471M◊◊ΔΔ3555
	560	356	320	0,15	1,5	2,4	35 x 60	ECS2HZJ561M◊◊ΔΔ3560
	680	293	234	0,15	1,5	2,5	35 x 70	ECS2HZJ681M◊◊ΔΔ3570

SNAP-IN

5 000h at 105°C

- Long Life at High Temperature
- High Ripple Current
- Professional Power Supplies
- Miniaturized



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-25 ~ +105
Voltage Range (V)	400 ~ 500
Capacitance Range (µF)	47 ~ 18 000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	400 ~ 500
	$Z_{-25°C} / Z_{+20°C}$	4
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**	

SNAP-IN

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	5 000h	> 200 000h	3 000h	4 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 40°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

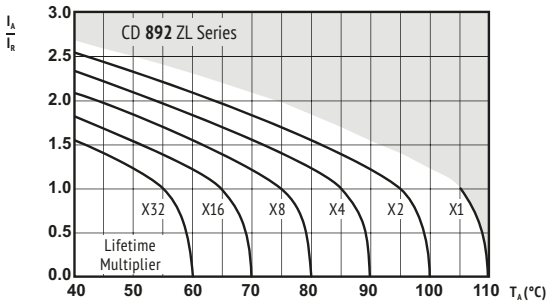
MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	≥ 50 kHz
Coefficient	0,80	1,00	1,16	1,30	1,41	1,43

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

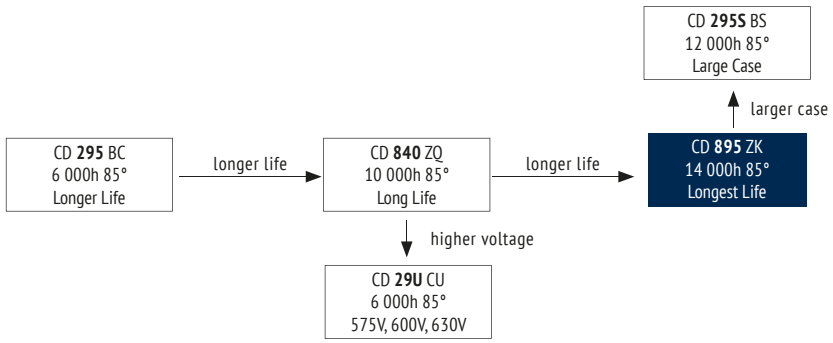
This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
400 (450) 2G	47	4233	2350	0,15	0,2	0,39	22 x 20	ECS2GZL470M◊◊ΔΔ2220
	82	2427	1340	0,15	0,3	0,56	22 x 25	ECS2GZL820M◊◊ΔΔ2225
	100	1990	1035	0,15	0,4	0,65	22 x 25	ECS2GZL101M◊◊ΔΔ2225
		1990	1035	0,15	0,4	0,70	22 x 30	ECS2GZL101M◊◊ΔΔ2230
		1990	1035	0,15	0,4	0,58	25 x 25	ECS2GZL101M◊◊ΔΔ2525
		1990	1035	0,15	0,4	0,72	25 x 30	ECS2GZL101M◊◊ΔΔ2530
	150	1327	690	0,15	0,6	0,88	25 x 30	ECS2GZL151M◊◊ΔΔ2530
		1106	575	0,15	0,7	0,70	22 x 45	ECS2GZL181M◊◊ΔΔ2245
		1106	575	0,15	0,7	0,95	22 x 50	ECS2GZL181M◊◊ΔΔ2250
		1106	575	0,15	0,7	0,82	25 x 35	ECS2GZL181M◊◊ΔΔ2535
		1106	575	0,15	0,7	0,78	35 x 20	ECS2GZL181M◊◊ΔΔ3520
	220	905	471	0,15	0,9	1,00	25 x 45	ECS2GZL221M◊◊ΔΔ2545
		905	471	0,15	0,9	0,86	30 x 30	ECS2GZL221M◊◊ΔΔ3030
		905	471	0,15	0,9	1,10	35 x 25	ECS2GZL221M◊◊ΔΔ3525
		905	471	0,15	0,9	1,30	35 x 30	ECS2GZL221M◊◊ΔΔ3530
	270	737	385	0,15	1,1	1,35	25 x 45	ECS2GZL271M◊◊ΔΔ2545
		737	385	0,15	1,1	1,48	30 x 30	ECS2GZL271M◊◊ΔΔ3030
		737	385	0,15	1,1	1,58	30 x 40	ECS2GZL271M◊◊ΔΔ3040
	330	603	314	0,15	1,3	1,50	25 x 50	ECS2GZL331M◊◊ΔΔ2550
		603	314	0,15	1,3	1,11	30 x 40	ECS2GZL331M◊◊ΔΔ3040
		603	314	0,15	1,3	1,10	35 x 30	ECS2GZL331M◊◊ΔΔ3530
		603	314	0,15	1,3	1,70	35 x 40	ECS2GZL331M◊◊ΔΔ3540
	390	511	266	0,15	1,5	1,15	30 x 45	ECS2GZL391M◊◊ΔΔ3045
		511	266	0,15	1,5	1,26	35 x 35	ECS2GZL391M◊◊ΔΔ3535
	470	424	221	0,15	1,5	1,31	30 x 50	ECS2GZL471M◊◊ΔΔ3050
		424	221	0,15	1,5	1,50	35 x 35	ECS2GZL471M◊◊ΔΔ3535
		424	221	0,15	1,5	2,30	35 x 40	ECS2GZL471M◊◊ΔΔ3540
		424	221	0,15	1,5	1,65	40 x 40	ECS2GZL471M◊◊ΔΔ4040
		424	221	0,15	1,5	3,30	45 x 50	ECS2GZL471M◊◊ΔΔ4550
	560	356	185	0,15	1,5	1,90	30 x 45	ECS2GZL561M◊◊ΔΔ3045
		356	185	0,15	1,5	1,75	35 x 45	ECS2GZL561M◊◊ΔΔ3545
	680	293	153	0,15	1,5	2,20	30 x 55	ECS2GZL681M◊◊ΔΔ3055
		293	153	0,15	1,5	2,10	35 x 45	ECS2GZL681M◊◊ΔΔ3545
		293	153	0,15	1,5	2,50	35 x 50	ECS2GZL681M◊◊ΔΔ3550
		293	153	0,15	1,5	2,15	40 x 40	ECS2GZL681M◊◊ΔΔ4040
	820	243	145	0,15	1,5	3,50	35 x 55	ECS2GZL821M◊◊ΔΔ3555
	1 000	199	130	0,15	1,5	2,80	35 x 55	ECS2GZL102M◊◊ΔΔ3555
		199	130	0,15	1,5	3,30	35 x 100	ECS2GZL102M◊◊ΔΔ35100
		199	130	0,15	1,5	3,50	40 x 70	ECS2GZL102M◊◊ΔΔ4070
		199	130	0,15	1,5	3,80	40 x 80	ECS2GZL102M◊◊ΔΔ4080
	1 200	166	108	0,15	1,5	3,80	35 x 80	ECS2GZL122M◊◊ΔΔ3580
		166	108	0,15	1,5	4,50	35 x 100	ECS2GZL122M◊◊ΔΔ35100
		166	108	0,15	1,5	4,50	40 x 75	ECS2GZL122M◊◊ΔΔ4075
	1 500	133	90	0,15	1,5	4,25	40 x 100	ECS2GZL152M◊◊ΔΔ40100
	1 800	111	72	0,15	1,5	6,10	40 x 100	ECS2GZL182M◊◊ΔΔ40100
420 (470) 2X	100	2653	1300	0,20	0,4	0,70	22 x 30	ECS2XZL101M◊◊ΔΔ2230
		2653	1300	0,20	0,4	0,60	25 x 25	ECS2XZL101M◊◊ΔΔ2525
		2653	1300	0,20	0,4	0,60	30 x 20	ECS2XZL101M◊◊ΔΔ3020
	120	2211	1100	0,20	0,5	0,71	25 x 30	ECS2XZL121M◊◊ΔΔ2530
	150	1769	890	0,20	0,6	0,78	22 x 40	ECS2XZL151M◊◊ΔΔ2240
		1769	890	0,20	0,6	0,72	25 x 35	ECS2XZL151M◊◊ΔΔ2535
		1769	890	0,20	0,6	0,72	30 x 25	ECS2XZL151M◊◊ΔΔ3025
		1769	890	0,20	0,6	0,72	35 x 30	ECS2XZL151M◊◊ΔΔ3530
	180	1474	737	0,20	0,8	0,81	25 x 30	ECS2XZL181M◊◊ΔΔ2530
	220	1206	603	0,20	0,9	0,90	25 x 40	ECS2XZL221M◊◊ΔΔ2540
		1206	603	0,20	0,9	0,85	30 x 35	ECS2XZL221M◊◊ΔΔ3035
		1206	603	0,20	0,9	0,85	35 x 25	ECS2XZL221M◊◊ΔΔ3525
	270	983	492	0,20	1,1	0,90	25 x 45	ECS2XZL271M◊◊ΔΔ2545
		983	492	0,20	1,1	1,10	25 x 50	ECS2XZL271M◊◊ΔΔ2550
	330	804	402	0,20	1,4	1,20	30 x 45	ECS2XZL331M◊◊ΔΔ3045
		804	402	0,20	1,4	1,20	35 x 35	ECS2XZL331M◊◊ΔΔ3535
	390	681	340	0,20	1,5	1,30	30 x 50	ECS2XZL391M◊◊ΔΔ3050
	470	565	282	0,20	1,5	1,60	30 x 55	ECS2XZL471M◊◊ΔΔ3055
		565	282	0,20	1,5	1,40	35 x 45	ECS2XZL471M◊◊ΔΔ3545
	560	474	237	0,20	1,5	1,70	30 x 60	ECS2XZL561M◊◊ΔΔ3060
		474	237	0,20	1,5	1,80	35 x 55	ECS2XZL561M◊◊ΔΔ3555
	680	391	196	0,20	1,5	2,50	35 x 50	ECS2XZL681M◊◊ΔΔ3550
		391	196	0,20	1,5	3,30	35 x 55	ECS2XZL681M◊◊ΔΔ3555

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
450 (500) 2W	47	5644	2890	0,20	0,2	0,35	20 x 25	ECS2WZL470M◊◊ΔΔ2025
		5644	2890	0,20	0,2	0,42	22 x 25	ECS2WZL470M◊◊ΔΔ2225
	68	3901	1951	0,20	0,3	0,55	22 x 25	ECS2WZL680M◊◊ΔΔ2225
	82	3235	1618	0,20	0,4	0,50	22 x 25	ECS2WZL820M◊◊ΔΔ2225
	100	2653	1327	0,20	0,5	0,60	22 x 30	ECS2WZL101M◊◊ΔΔ2230
		2653	1327	0,20	0,5	0,64	22 x 35	ECS2WZL101M◊◊ΔΔ2235
		2653	1327	0,20	0,5	0,70	25 x 25	ECS2WZL101M◊◊ΔΔ2525
		2653	1327	0,20	0,5	0,80	25 x 30	ECS2WZL101M◊◊ΔΔ2530
	120	2211	1106	0,20	0,5	1,00	22 x 35	ECS2WZL121M◊◊ΔΔ2235
		2211	1106	0,20	0,5	0,70	25 x 30	ECS2WZL121M◊◊ΔΔ2530
		2211	1106	0,20	0,5	0,70	30 x 25	ECS2WZL121M◊◊ΔΔ3025
	150	1769	885	0,20	0,7	0,90	22 x 30	ECS2WZL151M◊◊ΔΔ2230
		1769	885	0,20	0,7	0,80	25 x 30	ECS2WZL151M◊◊ΔΔ2530
		1769	885	0,20	0,7	0,73	30 x 25	ECS2WZL151M◊◊ΔΔ3025
	180	1474	737	0,20	0,8	1,00	22 x 40	ECS2WZL181M◊◊ΔΔ2240
		1474	737	0,20	0,8	1,00	30 x 30	ECS2WZL181M◊◊ΔΔ3030
		1474	737	0,20	0,8	1,00	35 x 25	ECS2WZL181M◊◊ΔΔ3525
	220	1206	603	0,20	1,0	1,10	25 x 40	ECS2WZL221M◊◊ΔΔ2540
		1206	603	0,20	1,0	1,10	30 x 30	ECS2WZL221M◊◊ΔΔ3030
	270	983	492	0,20	1,2	0,97	25 x 50	ECS2WZL271M◊◊ΔΔ2550
		983	492	0,20	1,2	0,97	30 x 40	ECS2WZL271M◊◊ΔΔ3040
		983	492	0,20	1,2	1,30	30 x 60	ECS2WZL271M◊◊ΔΔ3060
		983	492	0,20	1,2	1,50	35 x 30	ECS2WZL271M◊◊ΔΔ3530
	330	804	402	0,20	1,5	1,30	25 x 55	ECS2WZL331M◊◊ΔΔ2555
		804	402	0,20	1,5	1,10	30 x 45	ECS2WZL331M◊◊ΔΔ3045
		804	402	0,20	1,5	1,18	35 x 30	ECS2WZL331M◊◊ΔΔ3530
		804	402	0,20	1,5	1,80	35 x 35	ECS2WZL331M◊◊ΔΔ3535
	390	681	340	0,20	1,5	1,31	30 x 45	ECS2WZL391M◊◊ΔΔ3045
		681	340	0,20	1,5	1,70	35 x 35	ECS2WZL391M◊◊ΔΔ3535
		681	340	0,20	1,5	2,00	35 x 40	ECS2WZL391M◊◊ΔΔ3540
	470	565	282	0,20	1,5	2,00	30 x 50	ECS2WZL471M◊◊ΔΔ3050
		565	282	0,20	1,5	1,60	35 x 40	ECS2WZL471M◊◊ΔΔ3540
		565	282	0,20	1,5	2,00	35 x 45	ECS2WZL471M◊◊ΔΔ3545
		565	282	0,20	1,5	2,20	35 x 50	ECS2WZL471M◊◊ΔΔ3550
		565	282	0,20	1,5	1,50	40 x 40	ECS2WZL471M◊◊ΔΔ4040
	560	474	237	0,20	1,5	2,10	35 x 50	ECS2WZL561M◊◊ΔΔ3550
		474	237	0,20	1,5	2,10	40 x 50	ECS2WZL561M◊◊ΔΔ4050
	680	391	196	0,20	1,5	2,50	35 x 60	ECS2WZL681M◊◊ΔΔ3560
		391	196	0,20	1,5	2,40	40 x 55	ECS2WZL681M◊◊ΔΔ4055
	820	324	162	0,20	1,5	2,70	35 x 70	ECS2WZL821M◊◊ΔΔ3570
		324	162	0,20	1,5	2,80	40 x 70	ECS2WZL821M◊◊ΔΔ4070
		324	162	0,20	1,5	3,00	45 x 45	ECS2WZL821M◊◊ΔΔ4545
	1 000	266	139	0,20	1,5	3,40	35 x 105	ECS2WZL102M◊◊ΔΔ35105
		266	139	0,20	1,5	4,00	40 x 80	ECS2WZL102M◊◊ΔΔ4080
	1 200	222	114	0,20	1,5	3,50	40 x 90	ECS2WZL122M◊◊ΔΔ4090
		222	114	0,20	1,5	4,50	40 x 100	ECS2WZL122M◊◊ΔΔ40100
	1 500	177	100	0,20	1,5	3,80	40 x 100	ECS2WZL152M◊◊ΔΔ40100
500 (550) 2H	180	1474	737	0,20	0,9	1,10	35 x 30	ECS2HZL181M◊◊ΔΔ3530
	330	804	402	0,20	1,5	1,30	30 x 50	ECS2HZL331M◊◊ΔΔ3050
	390	681	341	0,20	1,5	1,70	35 x 50	ECS2HZL391M◊◊ΔΔ3550
	470	565	286	0,20	1,5	1,70	35 x 50	ECS2HZL471M◊◊ΔΔ3550
		565	286	0,20	1,5	1,80	35 x 55	ECS2HZL471M◊◊ΔΔ3555
		565	286	0,20	1,5	2,00	35 x 60	ECS2HZL471M◊◊ΔΔ3560
	560	474	241	0,20	1,5	1,80	35 x 60	ECS2HZL561M◊◊ΔΔ3560
		474	241	0,20	1,5	2,20	40 x 60	ECS2HZL561M◊◊ΔΔ4060
	680	391	200	0,20	1,5	2,50	35 x 80	ECS2HZL681M◊◊ΔΔ3580
	820	324	165	0,20	1,5	2,70	35 x 90	ECS2HZL821M◊◊ΔΔ3590

14 000h at 85°C

- Ultra Long Life at 85°C



ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +85	-25 ~ +85
Voltage Range (V)	16 ~ 100	160 ~ 500
Capacitance Range (µF)	39 ~ 47 000	
Capacitance Tolerance (20°C, 120Hz)	± 20%	
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	16~100	160~200	250~500
	$Z_{-25°C} / Z_{+20°C}$	4		
	$Z_{-40°C} / Z_{+20°C}$	15	-	

Fast Charge-Discharge: **Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	14 000h	> 150 000h	6 000h	9 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 15% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 150% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,5 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement

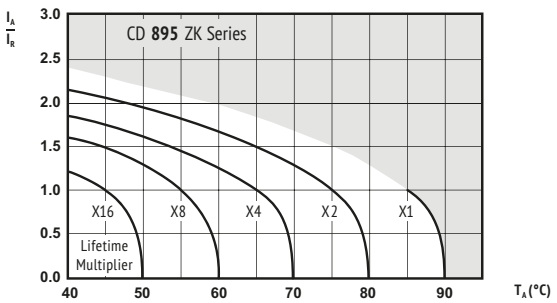
MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Rated Voltage (V) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz	≥50kHz
≤ 100	0,95	1,00	1,07	1,13	1,19	1,20
160 ~ 250	0,87	1,00	1,17	1,32	1,45	1,50
≥ 350	0,80	1,00	1,16	1,30	1,41	1,43

Multipliers for typical operating conditions.

Max. Current Snap-In Terminal: 15A. For more current use Lug-Terminals.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/ lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
16 (20) 1C	6 800	98	69	0,50	1,1	1,68	22 x 25	ECS1CZK682M◊◊ΔΔ2225
	10 000	67	47	0,50	1,5	2,09	22 x 30	ECS1CZK103M◊◊ΔΔ2230
		67	47	0,50	1,5	2,09	25 x 25	ECS1CZK103M◊◊ΔΔ2525
	12 000	56	39	0,50	1,5	2,39	22 x 35	ECS1CZK123M◊◊ΔΔ2235
		56	39	0,50	1,5	2,41	25 x 30	ECS1CZK123M◊◊ΔΔ2530
		56	39	0,50	1,5	2,50	30 x 25	ECS1CZK123M◊◊ΔΔ3025
	15 000	45	31	0,50	1,5	2,77	22 x 40	ECS1CZK153M◊◊ΔΔ2240
		45	31	0,50	1,5	2,81	25 x 35	ECS1CZK153M◊◊ΔΔ2535
	18 000	37	26	0,50	1,5	3,13	22 x 45	ECS1CZK183M◊◊ΔΔ2245
		37	26	0,50	1,5	3,19	25 x 40	ECS1CZK183M◊◊ΔΔ2540
		37	26	0,50	1,5	3,15	30 x 30	ECS1CZK183M◊◊ΔΔ3030
		37	26	0,50	1,5	3,26	35 x 25	ECS1CZK183M◊◊ΔΔ3525
	22 000	31	22	0,50	1,5	3,57	25 x 45	ECS1CZK223M◊◊ΔΔ2545
		31	22	0,50	1,5	3,56	30 x 35	ECS1CZK223M◊◊ΔΔ3035
	27 000	25	18	0,50	1,5	4,00	25 x 50	ECS1CZK273M◊◊ΔΔ2550
		25	18	0,50	1,5	4,02	30 x 40	ECS1CZK273M◊◊ΔΔ3040
		25	18	0,50	1,5	3,92	35 x 30	ECS1CZK273M◊◊ΔΔ3530
	33 000	21	15	0,50	1,5	4,52	30 x 45	ECS1CZK333M◊◊ΔΔ3045
		21	15	0,50	1,5	4,45	35 x 35	ECS1CZK333M◊◊ΔΔ3535
	39 000	18	12	0,50	1,5	4,98	30 x 50	ECS1CZK393M◊◊ΔΔ3050
		18	12	0,50	1,5	4,96	35 x 40	ECS1CZK393M◊◊ΔΔ3540
	47 000	15	10	0,50	1,5	5,53	35 x 45	ECS1CZK473M◊◊ΔΔ3545
25 (32) 1E	4 700	113	80	0,40	1,2	1,63	22 x 25	ECS1EZK472M◊◊ΔΔ2225
	6 800	79	55	0,40	1,5	2,01	22 x 30	ECS1EZK682M◊◊ΔΔ2230
		79	55	0,40	1,5	2,01	25 x 25	ECS1EZK682M◊◊ΔΔ2525
	8 200	65	46	0,40	1,5	2,25	22 x 35	ECS1EZK822M◊◊ΔΔ2235
		65	46	0,40	1,5	2,27	25 x 30	ECS1EZK822M◊◊ΔΔ2530
		65	46	0,40	1,5	2,36	30 x 25	ECS1EZK822M◊◊ΔΔ3025
	10 000	54	38	0,40	1,5	2,52	22 x 40	ECS1EZK103M◊◊ΔΔ2240
		54	38	0,40	1,5	2,56	25 x 35	ECS1EZK103M◊◊ΔΔ2535
	12 000	45	31	0,40	1,5	2,83	22 x 45	ECS1EZK123M◊◊ΔΔ2245
		45	31	0,40	1,5	2,88	25 x 40	ECS1EZK123M◊◊ΔΔ2540
		45	31	0,40	1,5	2,84	30 x 30	ECS1EZK123M◊◊ΔΔ3030
		45	31	0,40	1,5	2,94	35 x 25	ECS1EZK123M◊◊ΔΔ3525
	15 000	36	25	0,40	1,5	3,31	25 x 45	ECS1EZK153M◊◊ΔΔ2545
		36	25	0,40	1,5	3,29	30 x 35	ECS1EZK153M◊◊ΔΔ3035
		36	25	0,40	1,5	3,38	35 x 30	ECS1EZK153M◊◊ΔΔ3530
	18 000	30	21	0,40	1,5	3,72	25 x 50	ECS1EZK183M◊◊ΔΔ2550
		30	21	0,40	1,5	3,72	30 x 40	ECS1EZK183M◊◊ΔΔ3040
	22 000	25	17	0,40	1,5	4,45	30 x 45	ECS1EZK223M◊◊ΔΔ3045
		25	17	0,40	1,5	4,16	35 x 35	ECS1EZK223M◊◊ΔΔ3535
	27 000	20	14	0,40	1,5	4,99	35 x 45	ECS1EZK273M◊◊ΔΔ3545
	33 000	17	12	0,40	1,5	5,66	35 x 50	ECS1EZK333M◊◊ΔΔ3550
35 (44) 1V	3 300	141	99	0,35	1,2	1,50	22 x 25	ECS1VZK332M◊◊ΔΔ2225
	3 900	120	84	0,35	1,4	1,73	22 x 30	ECS1VZK392M◊◊ΔΔ2230
	4 700	99	70	0,35	1,5	1,87	25 x 25	ECS1VZK472M◊◊ΔΔ2525
	5 600	83	59	0,35	1,5	2,12	22 x 35	ECS1VZK562M◊◊ΔΔ2235
		83	59	0,35	1,5	2,14	25 x 30	ECS1VZK562M◊◊ΔΔ2530
		83	59	0,35	1,5	2,22	30 x 25	ECS1VZK562M◊◊ΔΔ3025
	6 800	69	48	0,35	1,5	2,39	22 x 40	ECS1VZK682M◊◊ΔΔ2240
		69	48	0,35	1,5	2,43	25 x 35	ECS1VZK682M◊◊ΔΔ2535
	8 200	57	40	0,35	1,5	2,80	22 x 50	ECS1VZK822M◊◊ΔΔ2250
		57	40	0,35	1,5	2,73	25 x 40	ECS1VZK822M◊◊ΔΔ2540
		57	40	0,35	1,5	2,69	30 x 30	ECS1VZK822M◊◊ΔΔ3030
		57	40	0,35	1,5	2,92	35 x 25	ECS1VZK822M◊◊ΔΔ3525
	10 000	47	33	0,35	1,5	3,07	25 x 45	ECS1VZK103M◊◊ΔΔ2545
		47	33	0,35	1,5	3,07	30 x 35	ECS1VZK103M◊◊ΔΔ3035
	12 000	39	28	0,35	1,5	3,42	25 x 50	ECS1VZK123M◊◊ΔΔ2550
		39	28	0,35	1,5	3,44	30 x 40	ECS1VZK123M◊◊ΔΔ3040
		39	28	0,35	1,5	3,36	35 x 30	ECS1VZK123M◊◊ΔΔ3530
	15 000	31	22	0,35	1,5	3,93	30 x 45	ECS1VZK153M◊◊ΔΔ3045
		31	22	0,35	1,5	3,88	35 x 35	ECS1VZK153M◊◊ΔΔ3535
	18 000	26	19	0,35	1,5	4,37	35 x 40	ECS1VZK183M◊◊ΔΔ3540
	22 000	22	15	0,35	1,5	5,17	35 x 50	ECS1VZK223M◊◊ΔΔ3550

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
50 (63) 1H	1 800	222	155	0,30	0,9	1,37	22 x 25	ECS1HZK182M◊◊ΔΔ2225
	2 200	181	127	0,30	1,1	1,53	22 x 30	ECS1HZK222M◊◊ΔΔ2230
	2 700	148	104	0,30	1,4	1,79	22 x 30	ECS1HZK272M◊◊ΔΔ2230
		148	104	0,30	1,4	1,79	25 x 25	ECS1HZK272M◊◊ΔΔ2525
	3 300	121	85	0,30	1,5	2,05	22 x 35	ECS1HZK332M◊◊ΔΔ2235
		121	85	0,30	1,5	2,10	25 x 30	ECS1HZK332M◊◊ΔΔ2530
	3 900	103	72	0,30	1,5	2,36	22 x 40	ECS1HZK392M◊◊ΔΔ2240
		103	72	0,30	1,5	2,39	25 x 35	ECS1HZK392M◊◊ΔΔ2535
		103	72	0,30	1,5	2,33	30 x 25	ECS1HZK392M◊◊ΔΔ3025
	4 700	85	60	0,30	1,5	2,69	22 x 45	ECS1HZK472M◊◊ΔΔ2245
		85	60	0,30	1,5	2,71	30 x 30	ECS1HZK472M◊◊ΔΔ3030
		85	60	0,30	1,5	2,80	35 x 25	ECS1HZK472M◊◊ΔΔ3525
	5 600	72	50	0,30	1,5	3,03	22 x 50	ECS1HZK562M◊◊ΔΔ2250
		72	50	0,30	1,5	2,95	25 x 40	ECS1HZK562M◊◊ΔΔ2540
		72	50	0,30	1,5	3,10	30 x 35	ECS1HZK562M◊◊ΔΔ3035
	6 800	59	41	0,30	1,5	3,54	25 x 50	ECS1HZK682M◊◊ΔΔ2550
		59	41	0,30	1,5	3,56	30 x 40	ECS1HZK682M◊◊ΔΔ3040
		59	41	0,30	1,5	3,48	35 x 30	ECS1HZK682M◊◊ΔΔ3530
	8 200	49	34	0,30	1,5	3,90	30 x 45	ECS1HZK822M◊◊ΔΔ3045
		49	34	0,30	1,5	3,84	35 x 35	ECS1HZK822M◊◊ΔΔ3535
	10 000	40	28	0,30	1,5	4,29	30 x 50	ECS1HZK103M◊◊ΔΔ3050
		40	28	0,30	1,5	4,27	35 x 40	ECS1HZK103M◊◊ΔΔ3540
	12 000	34	24	0,30	1,5	4,73	35 x 45	ECS1HZK123M◊◊ΔΔ3545
63 (79) 1J	1 200	222	155	0,20	0,8	1,31	22 x 25	ECS1JZK122M◊◊ΔΔ2225
	1 800	148	104	0,20	1,1	1,60	22 x 30	ECS1JZK182M◊◊ΔΔ2230
		148	104	0,20	1,1	1,60	25 x 25	ECS1JZK182M◊◊ΔΔ2525
	2 200	121	85	0,20	1,4	1,82	22 x 35	ECS1JZK222M◊◊ΔΔ2235
		121	85	0,20	1,4	1,84	25 x 30	ECS1JZK222M◊◊ΔΔ2530
	2 700	99	69	0,20	1,5	2,07	22 x 40	ECS1JZK272M◊◊ΔΔ2240
		99	69	0,20	1,5	2,09	25 x 35	ECS1JZK272M◊◊ΔΔ2535
		99	69	0,20	1,5	2,03	30 x 25	ECS1JZK272M◊◊ΔΔ3025
	3 300	81	57	0,20	1,5	2,44	22 x 50	ECS1JZK332M◊◊ΔΔ2250
		81	57	0,20	1,5	2,38	25 x 40	ECS1JZK332M◊◊ΔΔ2540
		81	57	0,20	1,5	2,35	30 x 30	ECS1JZK332M◊◊ΔΔ3030
		81	57	0,20	1,5	2,53	35 x 25	ECS1JZK332M◊◊ΔΔ3525
	3 900	69	48	0,20	1,5	2,67	25 x 45	ECS1JZK392M◊◊ΔΔ2545
		69	48	0,20	1,5	2,68	30 x 35	ECS1JZK392M◊◊ΔΔ3035
	4 700	57	40	0,20	1,5	3,02	25 x 50	ECS1JZK472M◊◊ΔΔ2550
		57	40	0,20	1,5	3,05	30 x 40	ECS1JZK472M◊◊ΔΔ3040
		57	40	0,20	1,5	2,97	35 x 30	ECS1JZK472M◊◊ΔΔ3530
	5 600	48	34	0,20	1,5	3,44	30 x 45	ECS1JZK562M◊◊ΔΔ3045
		48	34	0,20	1,5	3,40	35 x 35	ECS1JZK562M◊◊ΔΔ3535
	6 800	40	28	0,20	1,5	3,92	30 x 50	ECS1JZK682M◊◊ΔΔ3050
		40	28	0,20	1,5	3,90	35 x 40	ECS1JZK682M◊◊ΔΔ3540
	8 200	33	23	0,20	1,5	4,37	35 x 45	ECS1JZK822M◊◊ΔΔ3545
	10 000	27	19	0,20	1,5	4,92	35 x 50	ECS1JZK103M◊◊ΔΔ3550
80 (100) 1K	820	324	227	0,20	0,7	1,17	22 x 25	ECS1KZK821M◊◊ΔΔ2225
	1 000	266	186	0,20	0,8	1,31	22 x 25	ECS1KZK102M◊◊ΔΔ2225
	1 200	222	155	0,20	1,0	1,46	22 x 30	ECS1KZK122M◊◊ΔΔ2230
		222	155	0,20	1,0	1,46	25 x 25	ECS1KZK122M◊◊ΔΔ2525
	1 500	177	124	0,20	1,2	1,69	22 x 35	ECS1KZK152M◊◊ΔΔ2235
		177	124	0,20	1,2	1,70	25 x 30	ECS1KZK152M◊◊ΔΔ2530
	1 800	148	104	0,20	1,4	1,92	22 x 40	ECS1KZK182M◊◊ΔΔ2240
		148	104	0,20	1,4	1,90	30 x 25	ECS1KZK182M◊◊ΔΔ3025
	2 200	121	85	0,20	1,5	2,19	22 x 45	ECS1KZK222M◊◊ΔΔ2245
		121	85	0,20	1,5	2,11	25 x 35	ECS1KZK222M◊◊ΔΔ2535
		121	85	0,20	1,5	2,20	30 x 30	ECS1KZK222M◊◊ΔΔ3030
		121	85	0,20	1,5	2,28	35 x 25	ECS1KZK222M◊◊ΔΔ3525
	2 700	99	69	0,20	1,5	2,55	25 x 45	ECS1KZK272M◊◊ΔΔ2545
		99	69	0,20	1,5	2,55	30 x 35	ECS1KZK272M◊◊ΔΔ3035
	3 300	81	57	0,20	1,5	2,90	25 x 50	ECS1KZK332M◊◊ΔΔ2550
		81	57	0,20	1,5	2,92	30 x 40	ECS1KZK332M◊◊ΔΔ3040
		81	57	0,20	1,5	2,85	35 x 30	ECS1KZK332M◊◊ΔΔ3530
	3 900	69	48	0,20	1,5	3,28	30 x 45	ECS1KZK392M◊◊ΔΔ3045
		69	48	0,20	1,5	3,22	35 x 35	ECS1KZK392M◊◊ΔΔ3535

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SNAP-IN

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
80 (100) 1K	4 700	57	40	0,20	1,5	3,74	30 x 50	ECS1KZK472M◊◊ΔΔ3050
		57	40	0,20	1,5	3,68	35 x 40	ECS1KZK472M◊◊ΔΔ3540
	5 600	48	34	0,20	1,5	4,06	35 x 45	ECS1KZK562M◊◊ΔΔ3545
	6 800	40	28	0,20	1,5	4,40	35 x 50	ECS1KZK682M◊◊ΔΔ3550
100 (125) 2A	560	474	332	0,20	0,6	1,12	22 x 25	ECS2AZK561M◊◊ΔΔ2225
	820	324	227	0,20	0,8	1,42	22 x 30	ECS2AZK821M◊◊ΔΔ2230
		324	227	0,20	0,8	1,42	25 x 25	ECS2AZK821M◊◊ΔΔ2525
	1 000	266	186	0,20	1,0	1,62	22 x 35	ECS2AZK102M◊◊ΔΔ2235
		266	186	0,20	1,0	1,64	25 x 30	ECS2AZK102M◊◊ΔΔ2530
	1 200	222	155	0,20	1,2	1,83	22 x 40	ECS2AZK122M◊◊ΔΔ2240
		222	155	0,20	1,2	1,85	25 x 35	ECS2AZK122M◊◊ΔΔ2535
		222	155	0,20	1,2	1,80	30 x 25	ECS2AZK122M◊◊ΔΔ3025
	1 500	177	124	0,20	1,5	2,09	22 x 45	ECS2AZK152M◊◊ΔΔ2245
		177	124	0,20	1,5	2,13	25 x 40	ECS2AZK152M◊◊ΔΔ2540
		177	124	0,20	1,5	2,10	30 x 30	ECS2AZK152M◊◊ΔΔ3030
		177	124	0,20	1,5	2,17	35 x 25	ECS2AZK152M◊◊ΔΔ3525
	1 800	148	104	0,20	1,5	2,39	25 x 45	ECS2AZK182M◊◊ΔΔ2545
		148	104	0,20	1,5	2,38	30 x 35	ECS2AZK182M◊◊ΔΔ3035
	2 200	121	85	0,20	1,5	2,70	25 x 50	ECS2AZK222M◊◊ΔΔ2550
		121	85	0,20	1,5	2,72	30 x 40	ECS2AZK222M◊◊ΔΔ3040
		121	85	0,20	1,5	2,65	35 x 30	ECS2AZK222M◊◊ΔΔ3530
	2 700	99	69	0,20	1,5	3,09	30 x 45	ECS2AZK272M◊◊ΔΔ3045
		99	69	0,20	1,5	3,05	35 x 35	ECS2AZK272M◊◊ΔΔ3535
	3 300	81	57	0,20	1,5	3,49	30 x 50	ECS2AZK332M◊◊ΔΔ3050
		81	57	0,20	1,5	3,48	35 x 40	ECS2AZK332M◊◊ΔΔ3540
	3 900	69	48	0,20	1,5	3,88	35 x 45	ECS2AZK392M◊◊ΔΔ3545
	4 700	57	40	0,20	1,5	4,35	35 x 50	ECS2AZK472M◊◊ΔΔ3550
160 (200) 2C	330	603	423	0,15	0,5	1,22	22 x 25	ECS2CZK331M◊◊ΔΔ2225
	390	511	358	0,15	0,6	1,50	22 x 30	ECS2CZK391M◊◊ΔΔ2230
	470	424	297	0,15	0,8	1,60	22 x 35	ECS2CZK471M◊◊ΔΔ2235
		424	297	0,15	0,8	1,63	25 x 25	ECS2CZK471M◊◊ΔΔ2525
	560	356	249	0,15	0,9	1,70	22 x 40	ECS2CZK561M◊◊ΔΔ2240
		356	249	0,15	0,9	1,82	25 x 30	ECS2CZK561M◊◊ΔΔ2530
	680	293	205	0,15	1,1	1,79	22 x 45	ECS2CZK681M◊◊ΔΔ2245
		293	205	0,15	1,1	1,90	25 x 35	ECS2CZK681M◊◊ΔΔ2535
		293	205	0,15	1,1	1,91	30 x 25	ECS2CZK681M◊◊ΔΔ3025
	820	243	170	0,15	1,3	1,90	22 x 50	ECS2CZK821M◊◊ΔΔ2250
		243	170	0,15	1,3	2,08	25 x 40	ECS2CZK821M◊◊ΔΔ2540
		243	170	0,15	1,3	2,08	30 x 30	ECS2CZK821M◊◊ΔΔ3030
		243	170	0,15	1,3	2,03	35 x 25	ECS2CZK821M◊◊ΔΔ3525
	1 000	199	140	0,15	1,5	2,14	25 x 45	ECS2CZK102M◊◊ΔΔ2545
		199	140	0,15	1,5	2,25	30 x 35	ECS2CZK102M◊◊ΔΔ3035
	1 200	166	117	0,15	1,5	2,23	25 x 50	ECS2CZK122M◊◊ΔΔ2550
		166	117	0,15	1,5	2,33	30 x 40	ECS2CZK122M◊◊ΔΔ3040
		166	117	0,15	1,5	2,52	35 x 30	ECS2CZK122M◊◊ΔΔ3530
	1 500	133	93	0,15	1,5	2,58	30 x 45	ECS2CZK152M◊◊ΔΔ3045
		133	93	0,15	1,5	2,66	35 x 35	ECS2CZK152M◊◊ΔΔ3535
	1 800	111	78	0,15	1,5	3,13	35 x 45	ECS2CZK182M◊◊ΔΔ3545
	2 200	91	64	0,15	1,5	3,26	35 x 50	ECS2CZK222M◊◊ΔΔ3550
200 (250) 2D	220	905	634	0,15	0,4	1,13	22 x 25	ECS2DZK221M◊◊ΔΔ2225
	270	737	516	0,15	0,5	1,26	22 x 30	ECS2DZK271M◊◊ΔΔ2230
	330	603	423	0,15	0,7	1,36	22 x 30	ECS2DZK331M◊◊ΔΔ2230
		603	423	0,15	0,7	1,42	25 x 25	ECS2DZK331M◊◊ΔΔ2525
	390	511	358	0,15	0,8	1,48	22 x 35	ECS2DZK391M◊◊ΔΔ2235
	470	424	297	0,15	0,9	1,58	22 x 40	ECS2DZK471M◊◊ΔΔ2240
		424	297	0,15	0,9	1,54	25 x 30	ECS2DZK471M◊◊ΔΔ2530
		424	297	0,15	0,9	1,64	30 x 25	ECS2DZK471M◊◊ΔΔ3025
	560	356	249	0,15	1,1	1,66	22 x 45	ECS2DZK561M◊◊ΔΔ2245
		356	249	0,15	1,1	1,73	25 x 35	ECS2DZK561M◊◊ΔΔ2535
	680	293	205	0,15	1,4	1,76	22 x 50	ECS2DZK681M◊◊ΔΔ2250
		293	205	0,15	1,4	1,89	25 x 40	ECS2DZK681M◊◊ΔΔ2540
		293	205	0,15	1,4	1,91	30 x 30	ECS2DZK681M◊◊ΔΔ3030
		293	205	0,15	1,4	2,06	35 x 25	ECS2DZK681M◊◊ΔΔ3525

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
200 (250) 2D	820	243	170	0,15	1,5	1,96	25 x 50	ECS2DZK821M◊◊ΔΔ2550
		243	170	0,15	1,5	2,09	30 x 35	ECS2DZK821M◊◊ΔΔ3035
		243	170	0,15	1,5	2,17	35 x 30	ECS2DZK821M◊◊ΔΔ3530
	1 000	199	140	0,15	1,5	2,28	30 x 45	ECS2DZK102M◊◊ΔΔ3045
		199	140	0,15	1,5	2,33	35 x 35	ECS2DZK102M◊◊ΔΔ3535
	1 200	166	117	0,15	1,5	2,33	30 x 50	ECS2DZK122M◊◊ΔΔ3050
		166	117	0,15	1,5	2,54	35 x 40	ECS2DZK122M◊◊ΔΔ3540
	1 500	133	93	0,15	1,5	2,72	35 x 45	ECS2DZK152M◊◊ΔΔ3545
	1 800	111	78	0,15	1,5	2,84	35 x 50	ECS2DZK182M◊◊ΔΔ3550
250 (300) 2E	180	1106	774	0,15	0,5	0,99	22 x 25	ECS2EZK181M◊◊ΔΔ2225
	220	905	634	0,15	0,6	1,15	22 x 30	ECS2EZK221M◊◊ΔΔ2230
		905	634	0,15	0,6	1,21	25 x 25	ECS2EZK221M◊◊ΔΔ2525
	270	737	516	0,15	0,7	1,19	22 x 35	ECS2EZK271M◊◊ΔΔ2235
	330	603	423	0,15	0,8	1,26	22 x 40	ECS2EZK331M◊◊ΔΔ2240
		603	423	0,15	0,8	1,37	25 x 30	ECS2EZK331M◊◊ΔΔ2530
		603	423	0,15	0,8	1,37	30 x 25	ECS2EZK331M◊◊ΔΔ3025
	390	511	358	0,15	1,0	1,32	22 x 45	ECS2EZK391M◊◊ΔΔ2245
		511	358	0,15	1,0	1,48	25 x 35	ECS2EZK391M◊◊ΔΔ2535
	470	424	297	0,15	1,2	1,44	22 x 50	ECS2EZK471M◊◊ΔΔ2250
		424	297	0,15	1,2	1,60	25 x 40	ECS2EZK471M◊◊ΔΔ2540
		424	297	0,15	1,2	1,43	30 x 30	ECS2EZK471M◊◊ΔΔ3030
		424	297	0,15	1,2	1,47	35 x 25	ECS2EZK471M◊◊ΔΔ3525
	560	356	249	0,15	1,4	1,67	25 x 45	ECS2EZK561M◊◊ΔΔ2545
		356	249	0,15	1,4	1,65	30 x 35	ECS2EZK561M◊◊ΔΔ3035
		356	249	0,15	1,4	1,64	35 x 30	ECS2EZK561M◊◊ΔΔ3530
	680	293	205	0,15	1,5	1,85	25 x 50	ECS2EZK681M◊◊ΔΔ2550
		293	205	0,15	1,5	1,85	30 x 40	ECS2EZK681M◊◊ΔΔ3040
	820	243	170	0,15	1,5	1,92	30 x 45	ECS2EZK821M◊◊ΔΔ3045
		243	170	0,15	1,5	1,91	35 x 35	ECS2EZK821M◊◊ΔΔ3535
	1 000	199	140	0,15	1,5	1,96	30 x 50	ECS2EZK102M◊◊ΔΔ3050
		199	140	0,15	1,5	2,09	35 x 40	ECS2EZK102M◊◊ΔΔ3540
	1 200	166	117	0,15	1,5	2,20	35 x 45	ECS2EZK122M◊◊ΔΔ3545
350 (400) 2V	68	2926	1610	0,15	0,2	0,59	22 x 25	ECS2VZK680M◊◊ΔΔ2225
	100	1990	1095	0,15	0,4	0,74	22 x 30	ECS2VZK101M◊◊ΔΔ2230
		1990	1950	0,15	0,4	0,74	25 x 25	ECS2VZK101M◊◊ΔΔ2525
	120	1658	912	0,15	0,4	0,77	22 x 35	ECS2VZK121M◊◊ΔΔ2235
	150	1327	730	0,15	0,5	0,83	22 x 40	ECS2VZK151M◊◊ΔΔ2240
		1327	730	0,15	0,5	0,86	25 x 30	ECS2VZK151M◊◊ΔΔ2530
		1327	730	0,15	0,5	0,86	30 x 25	ECS2VZK151M◊◊ΔΔ3025
	180	1106	608	0,15	0,6	0,85	22 x 45	ECS2VZK181M◊◊ΔΔ2245
		1106	608	0,15	0,6	0,93	25 x 35	ECS2VZK181M◊◊ΔΔ2535
		1106	608	0,15	0,6	0,95	30 x 30	ECS2VZK181M◊◊ΔΔ3030
	220	905	498	0,15	0,8	0,98	22 x 50	ECS2VZK221M◊◊ΔΔ2250
		905	498	0,15	0,8	1,01	25 x 40	ECS2VZK221M◊◊ΔΔ2540
		905	498	0,15	0,8	1,03	35 x 25	ECS2VZK221M◊◊ΔΔ3525
	270	737	406	0,15	0,9	1,06	25 x 50	ECS2VZK271M◊◊ΔΔ2550
		737	406	0,15	0,9	1,10	30 x 35	ECS2VZK271M◊◊ΔΔ3035
		737	406	0,15	0,9	1,06	35 x 30	ECS2VZK271M◊◊ΔΔ3530
	330	603	332	0,15	1,2	1,22	30 x 45	ECS2VZK331M◊◊ΔΔ3045
		603	332	0,15	1,2	1,22	35 x 35	ECS2VZK331M◊◊ΔΔ3535
	390	511	281	0,15	1,4	1,32	30 x 50	ECS2VZK391M◊◊ΔΔ3050
		511	281	0,15	1,4	1,32	35 x 40	ECS2VZK391M◊◊ΔΔ3540
	470	424	233	0,15	1,5	1,42	35 x 45	ECS2VZK471M◊◊ΔΔ3545
	560	356	196	0,15	1,5	1,59	35 x 50	ECS2VZK561M◊◊ΔΔ3550
400 (450) 2G	68	2926	1522	0,15	0,3	0,49	22 x 25	ECS2GZK680M◊◊ΔΔ2225
	82	2427	1262	0,15	0,3	0,59	22 x 30	ECS2GZK820M◊◊ΔΔ2230
		2427	1262	0,15	0,3	0,68	25 x 25	ECS2GZK820M◊◊ΔΔ2525
	100	1990	1035	0,15	0,4	0,63	22 x 30	ECS2GZK101M◊◊ΔΔ2230
	120	1658	863	0,15	0,5	0,67	22 x 35	ECS2GZK121M◊◊ΔΔ2235
		1658	863	0,15	0,5	0,74	25 x 30	ECS2GZK121M◊◊ΔΔ2530
		1658	863	0,15	0,5	0,82	30 x 25	ECS2GZK121M◊◊ΔΔ3025
	150	1327	690	0,15	0,6	0,74	22 x 40	ECS2GZK151M◊◊ΔΔ2240
		1327	690	0,15	0,6	0,77	25 x 35	ECS2GZK151M◊◊ΔΔ2535

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊◊ = pin style & length ΔΔ = pin number Details: Page 79
400 (450) 2G	180	1106	575	0,15	0,7	0,82	22 x 50	ECS2GZK181M◊◊ΔΔ2250
		1106	575	0,15	0,7	0,86	25 x 40	ECS2GZK181M◊◊ΔΔ2540
		1106	575	0,15	0,7	0,87	30 x 30	ECS2GZK181M◊◊ΔΔ3030
		1106	575	0,15	0,7	0,90	35 x 25	ECS2GZK181M◊◊ΔΔ3525
	220	905	471	0,15	0,9	0,91	25 x 45	ECS2GZK221M◊◊ΔΔ2545
		905	471	0,15	0,9	0,90	30 x 35	ECS2GZK221M◊◊ΔΔ3035
	270	737	384	0,15	1,1	0,99	25 x 50	ECS2GZK271M◊◊ΔΔ2550
		737	384	0,15	1,1	1,00	30 x 40	ECS2GZK271M◊◊ΔΔ3040
		737	384	0,15	1,1	0,96	35 x 30	ECS2GZK271M◊◊ΔΔ3530
	330	603	314	0,15	1,3	1,17	30 x 45	ECS2GZK331M◊◊ΔΔ3045
		603	314	0,15	1,3	1,19	35 x 35	ECS2GZK331M◊◊ΔΔ3535
	390	511	266	0,15	1,5	1,21	30 x 50	ECS2GZK391M◊◊ΔΔ3050
		511	266	0,15	1,5	1,32	35 x 40	ECS2GZK391M◊◊ΔΔ3540
	470	424	221	0,15	1,5	1,38	35 x 45	ECS2GZK471M◊◊ΔΔ3545
	560	356	185	0,15	1,5	1,58	35 x 50	ECS2GZK561M◊◊ΔΔ3550
450 (500) 2W	56	4737	2369	0,20	0,3	0,49	22 x 25	ECS2WZK560M◊◊ΔΔ2225
	68	3901	1951	0,20	0,3	0,59	22 x 30	ECS2WZK680M◊◊ΔΔ2230
		3901	1951	0,20	0,3	0,63	25 x 25	ECS2WZK680M◊◊ΔΔ2525
	82	3235	1618	0,20	0,4	0,67	22 x 35	ECS2WZK820M◊◊ΔΔ2235
	100	2653	1327	0,20	0,5	0,74	22 x 40	ECS2WZK101M◊◊ΔΔ2240
		2653	1327	0,20	0,5	0,74	25 x 30	ECS2WZK101M◊◊ΔΔ2530
		2653	1327	0,20	0,5	0,82	30 x 25	ECS2WZK101M◊◊ΔΔ3025
	120	2211	1106	0,20	0,5	0,77	22 x 45	ECS2WZK121M◊◊ΔΔ2245
		2211	1106	0,20	0,5	0,77	25 x 35	ECS2WZK121M◊◊ΔΔ2535
	150	1769	885	0,20	0,7	0,82	22 x 50	ECS2WZK151M◊◊ΔΔ2250
		1769	885	0,20	0,7	0,86	25 x 40	ECS2WZK151M◊◊ΔΔ2540
		1769	885	0,20	0,7	0,87	30 x 30	ECS2WZK151M◊◊ΔΔ3030
		1769	885	0,20	0,7	0,90	35 x 25	ECS2WZK151M◊◊ΔΔ3525
	180	1474	737	0,20	0,8	0,91	25 x 45	ECS2WZK181M◊◊ΔΔ2545
		1474	737	0,20	0,8	0,90	30 x 35	ECS2WZK181M◊◊ΔΔ3035
	220	1206	603	0,20	1,0	0,99	25 x 50	ECS2WZK221M◊◊ΔΔ2550
		1206	603	0,20	1,0	1,00	30 x 40	ECS2WZK221M◊◊ΔΔ3040
		1206	603	0,20	1,0	0,96	35 x 30	ECS2WZK221M◊◊ΔΔ3530
	270	983	492	0,20	1,2	1,17	30 x 45	ECS2WZK271M◊◊ΔΔ3045
		983	492	0,20	1,2	1,19	35 x 35	ECS2WZK271M◊◊ΔΔ3535
	330	804	402	0,20	1,5	1,21	30 x 50	ECS2WZK331M◊◊ΔΔ3050
		804	402	0,20	1,5	1,32	35 x 40	ECS2WZK331M◊◊ΔΔ3540
	390	681	341	0,20	1,5	1,38	35 x 45	ECS2WZK391M◊◊ΔΔ3545
	470	565	283	0,20	1,5	1,58	35 x 50	ECS2WZK471M◊◊ΔΔ3550
500 (550) 2H	39	6802	3401	0,20	0,2	0,37	22 x 30	ECS2HZK390M◊◊ΔΔ2230
	47	5644	2822	0,20	0,2	0,43	22 x 35	ECS2HZK470M◊◊ΔΔ2235
	56	4737	2369	0,20	0,3	0,49	22 x 40	ECS2HZK560M◊◊ΔΔ2240
	68	3901	1951	0,20	0,3	0,57	22 x 45	ECS2HZK680M◊◊ΔΔ2245
	82	3235	1618	0,20	0,4	0,65	25 x 40	ECS2HZK820M◊◊ΔΔ2540
	100	2653	1327	0,20	0,5	0,70	25 x 45	ECS2HZK101M◊◊ΔΔ2545
	120	2211	1106	0,20	0,6	0,81	25 x 50	ECS2HZK121M◊◊ΔΔ2550
		2211	1106	0,20	0,6	0,76	35 x 30	ECS2HZK121M◊◊ΔΔ3530
	150	1769	885	0,20	0,8	0,89	30 x 40	ECS2HZK151M◊◊ΔΔ3040
	180	1474	737	0,20	0,9	1,06	30 x 50	ECS2HZK181M◊◊ΔΔ3050
	220	1206	603	0,20	1,1	1,18	35 x 45	ECS2HZK221M◊◊ΔΔ3545
	270	983	492	0,20	1,4	1,35	35 x 50	ECS2HZK271M◊◊ΔΔ3550

4LW4YS B3 YOURS3LF.

UNL3SS YOU C4N B3
4 D3V3LOPM3N7 SP3C14L1S7.

7H3N 4LW4YS B3 4
D3V3LOPM3N7 SP3C14L1S7.

Capacitor Competence Center: ccc@jianghai-europe.com

ELECTROLYTIC CAPACITORS

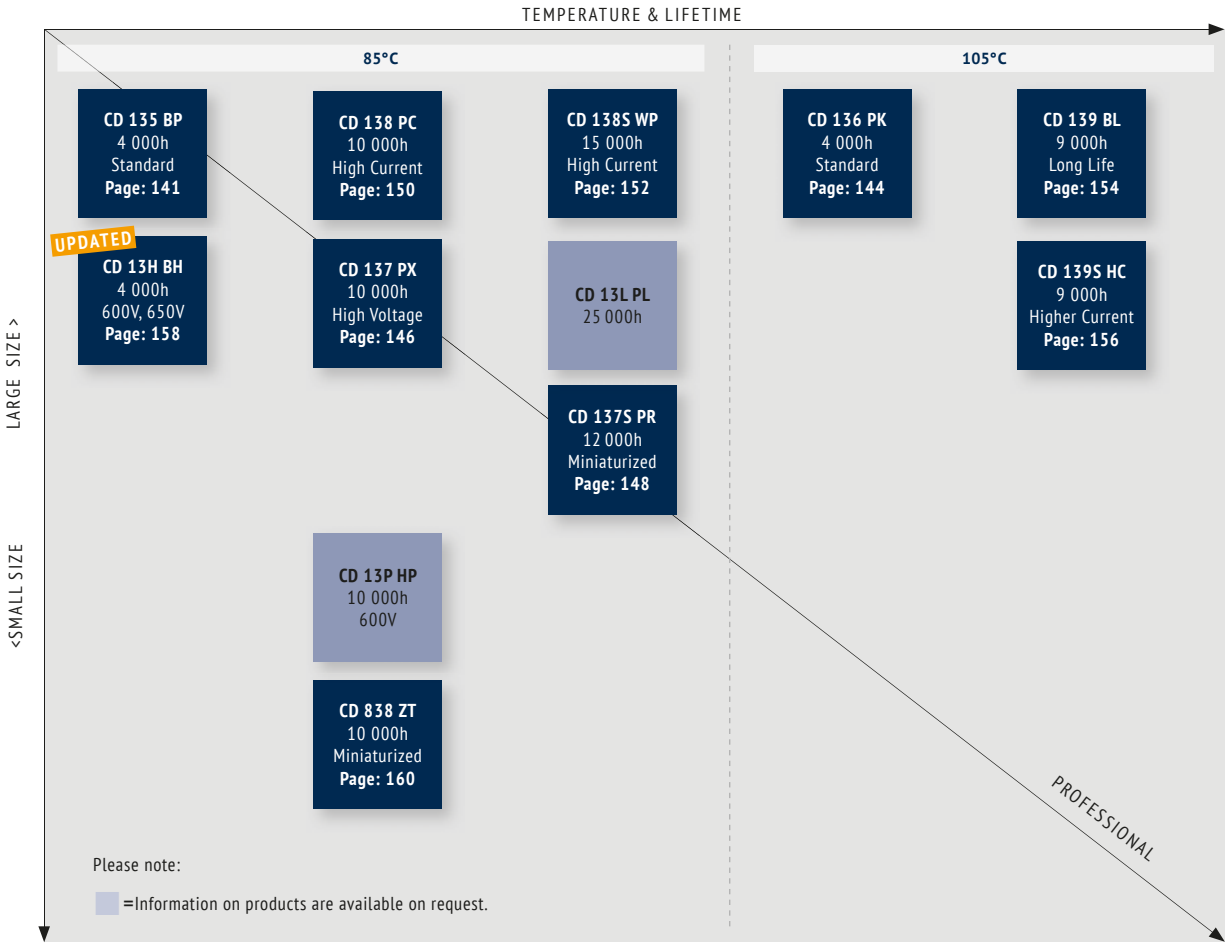
Screw Type

OVERVIEW SCREW

Portfolio: All Screw Type at a glance & Order code	138
Technical Specifications	139

SERIES SCREW	Code	Type	Temperature	Voltage	Lifetime	Info	
CD 135	BP	Screw	85°C	10~500V	4 000h	Standard	141
CD 136	PK	Screw	105°C	25~450V	4 000h	Standard	144
CD 137	PX	Screw	85°C	400~550V	10 000h	Long Life, High Voltage	146
CD 137S	PR	Screw	85°C	350~500V	12 000h	Miniaturized, Prolongued Lifetime	148
CD 138	PC	Screw	85°C	350~450V	10 000h	Long Life, High Current	150
CD 138S	WP	Screw	85°C	350~500V	15 000h	Longest Life, Highest Currents	152
CD 139	BL	Screw	105°C	350~450V	9 000h	Longest Life	154
CD 139S	HC	Screw	105°C	350~450V	9 000h	Longest Life 105°C, High Current	156
CD 13H UPDATED	BH	Screw	85°C	600~650V	4 000h	600V, 650V	158
CD 838	ZT	Screw	85°C	350~450V	10 000h	Miniaturized, Long Life	160

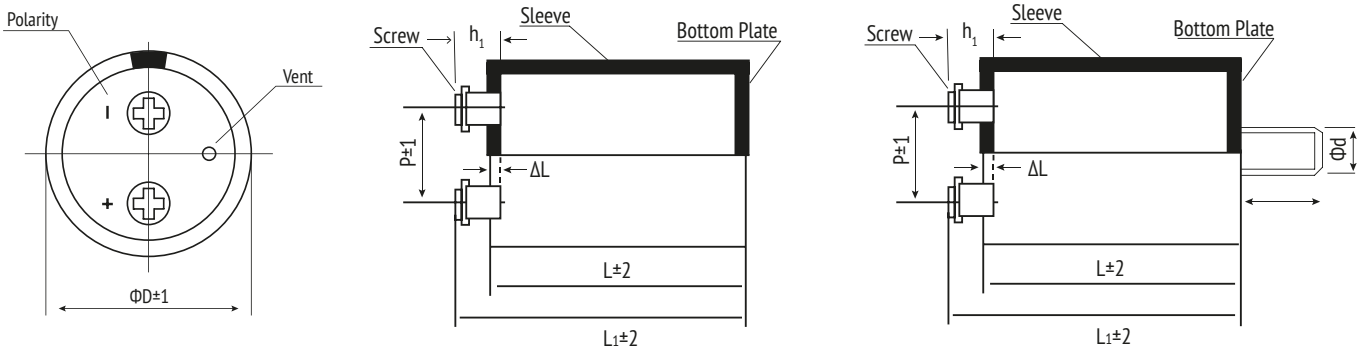
SCREW TYPE



ORDER CODE SCREW TYPE

EC	G	2G	BP	102	M	B	E	160	A771	-	JExxxxx
Techno-logy	Terminal Type	Rated Voltage Code	Series Code	Capacitance Code	Capacitance Tolerance	Mounting	Diameter	Length	For Terminal Code see tables on the right	Material Code	for Specials only
EC = Electrolytric Capacitor	Screw G	10 1A	CD 135 BP	100 101	±20% M	Bolt B	36 A	53 053		- -	
		16 1C	CD 136 PK	1 000 102	±10% K	Flat bottom, no bracket, single sleeve N	40 B	65 065		PVC V	
		25 1E	CD 137 PX	10 000 103	+30/-10% Q	Flat bottom, no bracket, full double sleeve D	51 C	96 096		PET E	
		35 1V	CD 137S PR		+20/-0% R	Flat bottom incl. 2 stoppers bracket I	64 D	100 100		Polyolefin O	
		40 1G	CD 138 PC		+20/-10% V	Flat bottom incl. 3 stoppers bracket Y	77 E	115 115		Standard: PVC Sleeve	
		50 1H	CD 138S WP		+50/-10% T	Details of Sleeving see table on the right	90 F	236 236			
		63 1J	CD 139 BL		= preferred		101 G				
		80 1K	CD 139S HC								
		100 2A	CD 13H BH								
		200 2D	CD 838 ZT								
		250 2E									
		350 2V									
		400 2G									
		420 2X									
		450 2W									
		500 2H									
		550 2Y									
		575 2Z									
		600 2S									
		650 S6									

TECHNICAL SPECIFICATION



in mm

LENGTH

$L_1 = L + h_1 - \Delta L$
L_1 = Total Capacitor Length
L = Capacitor Case Length (see Capacitor Table)
h_1 = Terminal Length (see Terminal Code)
ΔL = Housing Correction (see Case & Mounting Style)

CASE & MOUNTING STYLE

Order Code	Mounting Style	Sleeving Style (typical design)	Housing Correction ΔL (in mm)
B	Bolt	Single Sleeve	0,8
N	Flat bottom, no bracket	Single Sleeve	0,8
D	Flat bottom, no bracket	Full length Double Sleeve	0,4
I	I-Type Bracket	**Diameter 36:** Single Sleeve **Diameter 51-101:** Ur < 350V: ½ length Double Sleeve Ur ≥ 350V: full length Double Sleeve Other Sleeve Versions on request	0,8 0,6 0,4
Y	Y-Type Bracket	**Ur < 350V:** ½ length Double Sleeve **Ur ≥ 350V:** full length Double Sleeve Other Sleeve Versions on request	0,6 0,4

Bolt:	Ø D	Ø d	l (mm)	Max. Torque (Nm)
	Ø 36	M8	12	4
	≥ Ø 51	M12	16	12,5

SCREW TERMINAL (Hexagon Head)

Dimension	Min. Thread Depth (mm)	Max. Torque (Nm)	Max. Ripple Current (A)
M5 x 10	8,5	3	60
M6 x 12	8,5	4	100
M8 x 16	8,5	6	100

CAPACITOR POSITION

Screw capacitors need to be mounted into an upright position.
If a horizontal position is needed please ensure the safety vent is located on the highest position (12 o'clock).

TERMINAL CODE

Terminal Code (cont. page 140)	ØD	Screw	Pitch P	d_1	d_2	h_1	h_2
A361	36	M5	12,7	8	11	6,8	1,8
A511	51	M5	21,8	10	13,0	6,8	1,8
D511	51	M5	21,8	10	13	5,5	0
A512	51	M5	21,8	10	13	7,14	0
A641	64	M5	28,2	10	15,5	7,3	2,3
C641	64	M5	28,5	13	0	7,2	0
C642	64	M6	28,6	13	0	5,5	0
D641	64	M5	28,2	13	15	6,4	0
D642	64	M6	28,2	13	15	6,4	0
E641/E642	64	M5	28,2	10	15,5	6,3	1,3
A771	77	M5	31,4	10	15,5	6,3	1,3
A772	77	M6	31,4	10	15,5	6,3	1,3
B771	77	M6	31,4	17,2	0	3,17	0
B772	77	M6	31,4	17,2	0	6,4	0
B774/B776	77	M5	31,4	17,2	0	6,4	0
C771	77	M5	31,4	17,2	0	3,5	0
C772	77	M6	31,4	17,2	0	3,5	0
C774	**77**	**M5**	**31,4**	**17,2**	**0**	**6,4**	**0**
C775	**77**	**M6**	**31,4**	**17,2**	**0**	**6,4**	**0**
C779	77	M6	31,4	13	0	5,5	0
D771	77	M5	31,4	13	15	6,4	0
E772	77	M5	31,4	10	15,5	6,3	1,3
E774	77	M5	31,4	13	17,5	5,5	3,5
F771	77	M6	31,4	13	15	6,4	0
F772	77	M5	31,4	13	15	6,4	0
A901	90	M5	31,4	10	15,5	6,3	1,3
B901	90	M6	31,4	17,2	0	6,4	0
B902	90	M5	31,4	17,2	0	6,4	0
C901/C905	**90**	**M5**	**31,4**	**17,2**	**0**	**6,4**	**0**
C902	**90**	**M6**	**31,4**	**17,2**	**0**	**6,4**	**0**
C904	90	M8	31,4	17,2	0	6,4	0
D902	90	M5	31,4	13	15	6,4	0
D903	90	M6	31,4	13	15	6,4	0
E901	90	M6	31,4	15	20	8,6	2,4
E902	90	M5	31,4	10	15,5	6,3	1,3
F901	90	M6	31,4	13	15	6,4	0
A101	**101**	**M8**	**41,5**	**17,2**	**21,5**	**11**	**6**

= preferred

Other forms on request, especially non-symmetrical layout, watercooling or laser welded terminals.

Terminal A101 = A991

Terminal A, B and F include a potting mass filling, Terminal C, D and E use a middle pin fixation without glue.

Extended Cathode designs only available with Terminal C, D and E.

Some series of the catalogue might only be available with Terminal C,D and E.

TERMINAL FORM (C, D, E preferred; other designs on request)

Terminal A
Order Code: AXXX

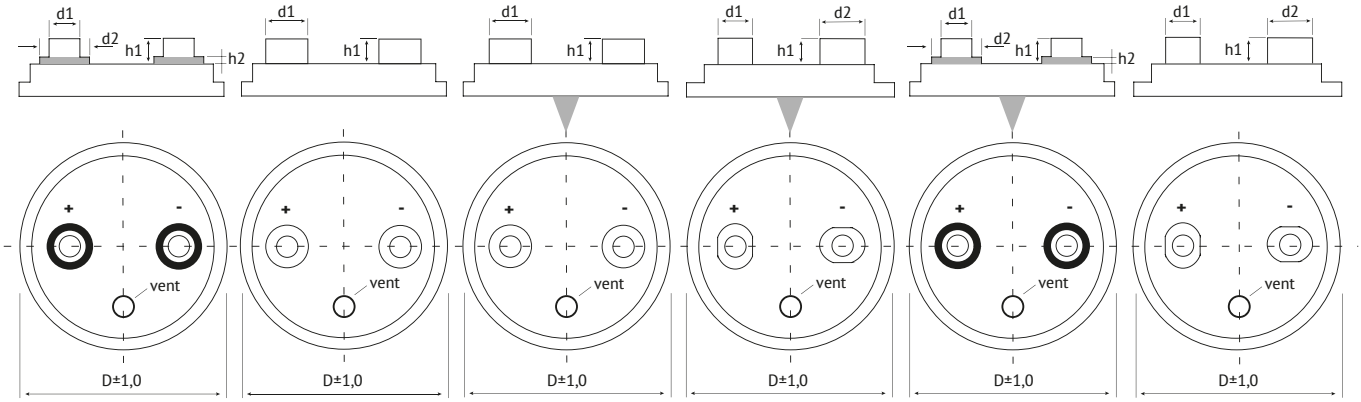
Terminal B
Order Code: BXXX

Terminal C
Order Code: CXXX

Terminal D
Order Code: DXXX

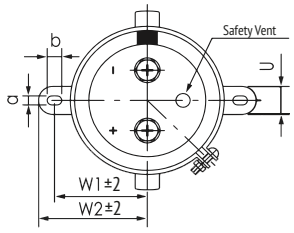
Terminal E
Order Code: EXXX

Terminal F
Order Code: FXXX

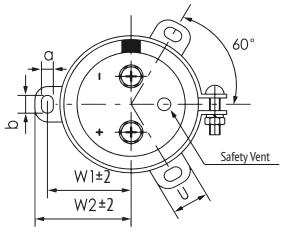


BRACKET MOUNTING

I -Type
Ø D 36-90



Y-Type
Ø D 51-101



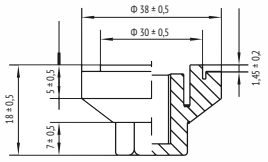
	I-bracket						Y-bracket					
øD	**w_1**	**w_2**	**a**	**b**	**U**	**h**	**w_1**	**w_2**	**a**	**b**	**U**	**h**
36	**24**	**29**	**3,8**	**7**	**10**	**15**	-	-	-	-	-	-
51	34	40	5	7	14	30	**31,8**	**36,5**	**5**	**7**	**14**	**30**
64	40,5	46,5	5	7	14	30	**38,1**	**42,6**	**5**	**7**	**14**	**30**
77	46,8	53	5	7	14	30	**44,5**	**49,2**	**5**	**7**	**14**	**30**
90	54	60,3	5	7	14	30	**50,8**	**55,6**	**5**	**7**	**14**	**30**
101	-	-	-	-	-	-	**57,5**	**63,5**	**5,5**	**8**	**20**	**35**

= preferred
h = Height of brackets

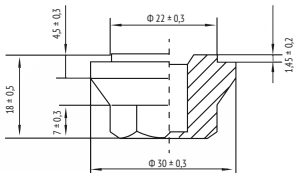
in mm

ACCESSORIES FOR BOLT MOUNTING (Other accessories on request)

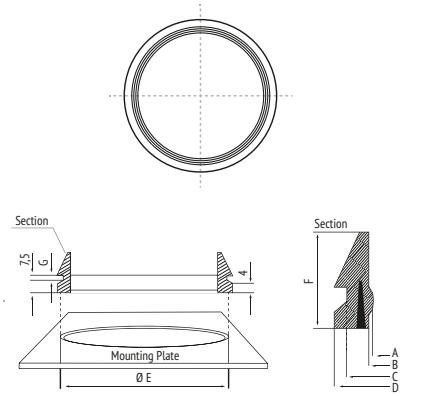
Cap Nut
Order Code: ACCNUT3038M12
For Screw Capacitors with M12 Bolt



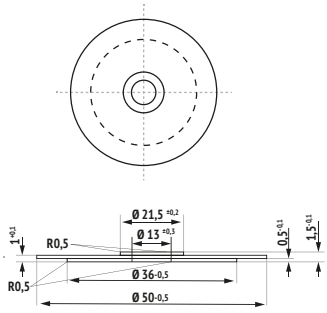
Cap Nut
Order Code: ACCNUT2230M12
For Screw Capacitors with M12 Bolt



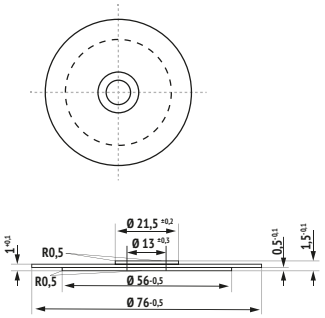
Press Ring



Insulation Washer
Order Code: ACCISO5113
For Screw Capacitors
with Diameter 51 and 64



Insulation Washer
Order Code: ACCISO7713
For Screw Capacitors
with Diameter 77 and 90

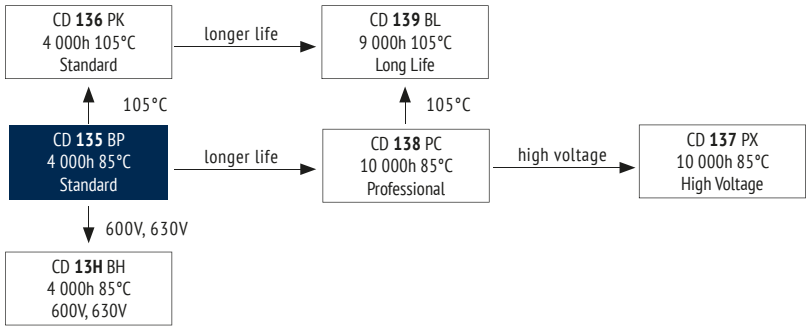


Ø Capacitor	**64**	**77**	**90**
A +0,3	62,3	74,8	88,0
B +0,3	64,1	77,0	90,0
C +0,3	70,5	84,5	97,9
D +0,3	74,5	88,6	102,0
E +0,2	71,2	85,5	98,6
F +0,2	18,0	20,0	23,5
G -0,25	3,0	2,4	3,0
Product Code Agree with RoHS	ACC PR164	ACC PR177	ACC PR190
Product Code Agree with RoHS and UL-94-V0	ACC PR464	ACC PR477	ACC PR490

All dimensions in mm

4 000h at 85°C

- Standard at 85°C
- High Ripple Current
- Power Supplies



ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +85	-25 ~ +85
Voltage Range (V)	10 ~ 250	350 ~ 500
Capacitance Range (µF)	270 ~ 820 000	
Capacitance Tolerance (20°C, 120Hz)	± 20%	
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.	
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	4 000h	> 65 000h	2 000h	2 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 10% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,2 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement
Terminal and Construction	The terminal version has an impact on the current capability and mechanical behavior (vibration). For high current applications the terminals C,D and E are preferred, see page 139.					
Optional	Self-extinguishing Electrolyte on request					

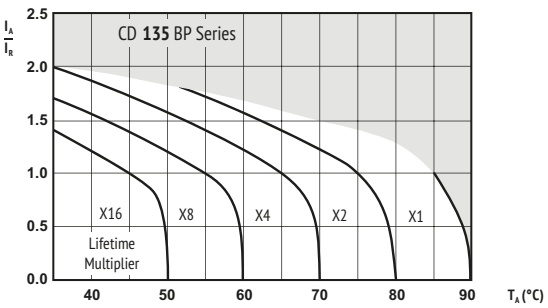
SCREW

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Rated Voltage (V) \ Frequency	50Hz	120Hz	300Hz	1kHz	3kHz	5kHz	≥ 10 kHz
10 ~ 50	0,95	1,00	1,04	1,10	1,12	1,13	1,15
63 ~ 100	0,95	1,00	1,06	1,16	1,22	1,26	1,30
160 ~ 500	0,80	1,00	1,10	1,25	1,35	1,40	1,50

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

SCREW

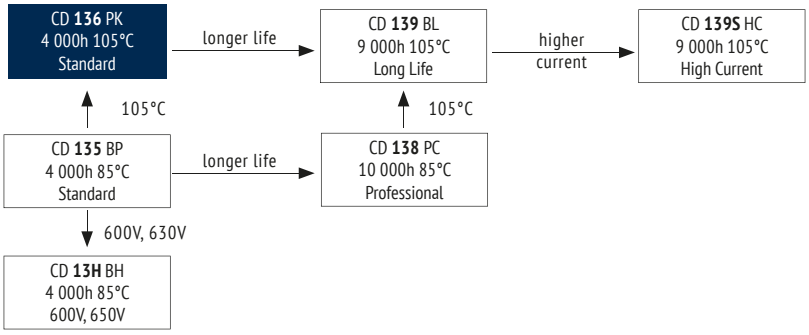
U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 138
10 (13) 1A	33 000	33	21	0,80	3,3	4,3	36 x 53	ECG1ABP333M◊A053ΔΔΔΔ
	39 000	28	18	0,80	3,9	4,7	36 x 53	ECG1ABP393M◊A053ΔΔΔΔ
	47 000	23	15	0,80	4,7	5,2	36 x 65	ECG1ABP473M◊A065ΔΔΔΔ
	56 000	19	13	0,80	5,0	6,1	36 x 83	ECG1ABP563M◊A083ΔΔΔΔ
	68 000	16	10	0,80	5,0	6,7	36 x 83	ECG1ABP683M◊A083ΔΔΔΔ
	82 000	13	9,0	0,80	5,0	7,7	36 x 100	ECG1ABP823M◊A100ΔΔΔΔ
	100 000	11	8,0	0,80	5,0	8,8	36 x 100	ECG1ABP104M◊A100ΔΔΔΔ
	120 000	8,9	7,0	0,80	5,0	10,0	36 x 121	ECG1ABP124M◊A121ΔΔΔΔ
	150 000	8,9	7,0	1,00	5,0	10,8	36 x 121	ECG1ABP154M◊A121ΔΔΔΔ
	180 000	7,4	6,0	1,00	5,0	12,0	51 x 96	ECG1ABP184M◊C096ΔΔΔΔ
	220 000	9,1	5,0	1,50	5,0	11,2	51 x 121	ECG1ABP224M◊C121ΔΔΔΔ
	270 000	7,4	4,0	1,50	5,0	12,8	51 x 121	ECG1ABP274M◊C121ΔΔΔΔ
	330 000	6,1	4,0	1,50	5,0	15,3	64 x 96	ECG1ABP334M◊D096ΔΔΔΔ
	390 000	5,2	3,0	1,50	5,0	17,3	64 x 115	ECG1ABP394M◊D115ΔΔΔΔ
	470 000	5,7	3,0	2,00	5,0	16,7	64 x 130	ECG1ABP474M◊D130ΔΔΔΔ
	560 000	4,8	3,0	2,00	5,0	19,0	77 x 115	ECG1ABP564M◊E115ΔΔΔΔ
	680 000	4,0	3,0	2,00	5,0	21,7	77 x 130	ECG1ABP684M◊E130ΔΔΔΔ
	820 000	3,3	2,0	2,00	5,0	24,7	77 x 155	ECG1ABP824M◊E155ΔΔΔΔ
16 (20) 1C	22 000	37	22	0,60	3,5	4,1	36 x 53	ECG1CBP223M◊A053ΔΔΔΔ
	27 000	30	19	0,60	4,3	4,5	36 x 53	ECG1CBP273M◊A053ΔΔΔΔ
	33 000	25	16	0,60	5,0	5,0	36 x 53	ECG1CBP333M◊A053ΔΔΔΔ
	39 000	21	13	0,60	5,0	5,9	36 x 65	ECG1CBP393M◊A065ΔΔΔΔ
	47 000	17	11	0,60	5,0	6,4	36 x 83	ECG1CBP473M◊A083ΔΔΔΔ
	56 000	15	10	0,60	5,0	7,3	36 x 83	ECG1CBP563M◊A083ΔΔΔΔ
	68 000	12	8,0	0,60	5,0	8,4	36 x 100	ECG1CBP683M◊A100ΔΔΔΔ
	82 000	13	7,0	0,80	5,0	8,3	36 x 100	ECG1CBP823M◊A100ΔΔΔΔ
	100 000	11	6,0	0,80	5,0	9,5	36 x 121	ECG1CBP104M◊A121ΔΔΔΔ
	120 000	8,9	5,0	0,80	5,0	10,9	36 x 121	ECG1CBP124M◊A121ΔΔΔΔ
	150 000	8,9	4,0	1,00	5,0	11,3	51 x 96	ECG1CBP154M◊C096ΔΔΔΔ
	180 000	7,4	3,0	1,00	5,0	12,8	51 x 115	ECG1CBP184M◊C115ΔΔΔΔ
	220 000	6,1	3,0	1,00	5,0	15,3	51 x 130	ECG1CBP224M◊C130ΔΔΔΔ
	270 000	5,0	3,0	1,00	5,0	17,6	64 x 96	ECG1CBP274M◊D096ΔΔΔΔ
	330 000	6,1	3,0	1,50	5,0	16,8	64 x 115	ECG1CBP334M◊D115ΔΔΔΔ
	390 000	5,2	3,0	1,50	5,0	18,3	64 x 130	ECG1CBP394M◊D130ΔΔΔΔ
	470 000	4,3	2,0	1,50	5,0	21,3	77 x 115	ECG1CBP474M◊E115ΔΔΔΔ
	560 000	3,6	2,0	1,50	5,0	23,6	77 x 130	ECG1CBP564M◊E130ΔΔΔΔ
	680 000	3,0	2,0	1,50	5,0	27,6	77 x 155	ECG1CBP684M◊E155ΔΔΔΔ
	820 000	3,3	2,0	2,00	5,0	27,1	90 x 157	ECG1CBP824M◊F157ΔΔΔΔ
25 (32) 1E	15 000	45	22	0,50	3,8	3,7	36 x 53	ECG1EBP153M◊A053ΔΔΔΔ
	18 000	37	18	0,50	4,5	4,1	36 x 53	ECG1EBP183M◊A053ΔΔΔΔ
	22 000	31	16	0,50	5,0	4,5	36 x 53	ECG1EBP223M◊A053ΔΔΔΔ
	27 000	25	13	0,50	5,0	5,0	36 x 65	ECG1EBP273M◊A065ΔΔΔΔ
	33 000	21	11	0,50	5,0	5,9	36 x 83	ECG1EBP333M◊A083ΔΔΔΔ
	39 000	18	9,0	0,50	5,0	6,7	36 x 83	ECG1EBP393M◊A083ΔΔΔΔ
	47 000	15	8,0	0,50	5,0	7,7	36 x 100	ECG1EBP473M◊A100ΔΔΔΔ
	56 000	15	7,0	0,60	5,0	7,9	36 x 100	ECG1EBP563M◊A100ΔΔΔΔ
	68 000	12	6,0	0,60	5,0	9,1	36 x 121	ECG1EBP683M◊A121ΔΔΔΔ
	82 000	9,8	5,0	0,60	5,0	10,4	36 x 121	ECG1EBP823M◊A121ΔΔΔΔ
	100 000	11	4,0	0,80	5,0	10,3	51 x 96	ECG1EBP104M◊C096ΔΔΔΔ
	120 000	8,9	4,0	0,80	5,0	11,7	51 x 115	ECG1EBP124M◊C115ΔΔΔΔ
	150 000	7,1	3,0	0,80	5,0	14,1	51 x 130	ECG1EBP154M◊C130ΔΔΔΔ
	180 000	5,9	3,0	0,80	5,0	15,7	64 x 96	ECG1EBP184M◊D096ΔΔΔΔ
	220 000	6,1	3,0	1,00	5,0	16,1	64 x 115	ECG1EBP224M◊D115ΔΔΔΔ
	270 000	5,0	3,0	1,00	5,0	18,6	64 x 130	ECG1EBP274M◊D130ΔΔΔΔ
	330 000	4,1	3,0	1,00	5,0	21,9	64 x 155	ECG1EBP334M◊D155ΔΔΔΔ
	390 000	4,1	2,0	1,20	5,0	22,0	77 x 115	ECG1EBP394M◊E115ΔΔΔΔ
	470 000	3,4	2,0	1,20	5,0	25,6	77 x 155	ECG1EBP474M◊E155ΔΔΔΔ
	560 000	2,9	2,0	1,20	5,0	27,9	90 x 131	ECG1EBP564M◊F131ΔΔΔΔ
	680 000	2,4	2,0	1,20	5,0	32,5	90 x 157	ECG1EBP684M◊F157ΔΔΔΔ
35 (44) 1V	10 000	54	24	0,40	3,5	3,4	36 x 53	ECG1VBP103M◊A053ΔΔΔΔ
	12 000	45	20	0,40	4,2	3,7	36 x 53	ECG1VBP123M◊A053ΔΔΔΔ
	15 000	36	17	0,40	5,0	4,2	36 x 65	ECG1VBP153M◊A065ΔΔΔΔ
	18 000	30	14	0,40	5,0	4,7	36 x 83	ECG1VBP183M◊A083ΔΔΔΔ
	22 000	25	12	0,40	5,0	5,7	36 x 83	ECG1VBP223M◊A083ΔΔΔΔ
	27 000	20	9,0	0,40	5,0	6,3	36 x 100	ECG1VBP273M◊A100ΔΔΔΔ
	33 000	17	9,0	0,40	5,0	7,2	36 x 100	ECG1VBP333M◊A100ΔΔΔΔ
35 (44) 1V	39 000	18	8,0	0,50	5,0	8,3	36 x 121	ECG1VBP393M◊A121ΔΔΔΔ
	47 000	15	8,0	0,50	5,0	8,7	51 x 96	ECG1VBP473M◊C096ΔΔΔΔ
	56 000	15	8,0	0,60	5,0	8,6	51 x 96	ECG1VBP563M◊C096ΔΔΔΔ
	68 000	12	6,0	0,60	5,0	9,8	51 x 115	ECG1VBP683M◊C115ΔΔΔΔ
	82 000	9,8	5,0	0,60	5,0	11,6	64 x 96	ECG1VBP823M◊D096ΔΔΔΔ
	100 000	8,0	4,0	0,60	5,0	13,3	64 x 115	ECG1VBP104M◊D115ΔΔΔΔ
	120 000	6,7	4,0	0,60	5,0	14,8	64 x 121	ECG1VBP124M◊D121ΔΔΔΔ
	150 000	7,1	4,0	0,80	5,0	14,9	64 x 130	ECG1VBP154M◊D130ΔΔΔΔ
	180 000	5,9	3,0	0,80	5,0	17,0	77 x 115	ECG1VBP184M◊E115ΔΔΔΔ
	220 000	4,9	3,0	0,80	5,0	20,0	77 x 130	ECG1VBP224M◊E130ΔΔΔΔ
	270 000	5,0	3,0	1,00	5,0	20,3	77 x 155	ECG1VBP274M◊E155ΔΔΔΔ
	330 000	4,1	2,0	1,00	5,0	23,5	90 x 131	ECG1VBP334M◊F131ΔΔΔΔ
	390 000	3,5	2,0	1,00	5,0	26,4	90 x 157	ECG1VBP394M◊F157ΔΔΔΔ
	470 000	2,9	2,0	1,00	5,0	29,6	90 x 157	ECG1VBP474M◊F157ΔΔΔΔ
50 (63) 1H	5 600	72	46	0,30	2,8	3,0	36 x 53	ECG1HBP562M◊A053ΔΔΔΔ
	6 800	59	38	0,30	3,4	3,3	36 x 53	ECG1HBP682M◊A053ΔΔΔΔ
	8 200	49	31	0,30	4,1	3,6	36 x 53	ECG1HBP822M◊A053ΔΔΔΔ
	10 000	40	26	0,30	5,0	4,0	36 x 65	ECG1HBP103M◊A065ΔΔΔΔ
	12 000	34	22	0,30	5,0	4,7	36 x 83	ECG1HBP123M◊A083ΔΔΔΔ
	15 000	27	15	0,30	5,0	5,5	36 x 83	ECG1HBP153M◊A083ΔΔΔΔ
	18 000	23	12	0,30	5,0	6,2	36 x 100	ECG1HBP183M◊A100ΔΔΔΔ
	22 000	25	11	0,40	5,0	6,3	36 x 121	ECG1HBP223M◊A121ΔΔΔΔ
	27 000	20	10	0,40	5,0	7,1	36 x 121	ECG1HBP273M◊A121ΔΔΔΔ
	33 000	17	9,0	0,40	5,0	8,2	51 x 96	ECG1HBP333M◊C096ΔΔΔΔ
	39 000	18	8,0	0,50	5,0	8,1	51 x 96	ECG1HBP393M◊C096ΔΔΔΔ
	47 000	15	8,0	0,50	5,0	9,3	51 x 115	ECG1HBP473M◊C115ΔΔΔΔ
	56 000	12	6,0	0,50	5,0	10,5	64 x 96	ECG1HBP563M◊D096ΔΔΔΔ
	68 000	9,8	5,0	0,50	5,0	12,0	64 x 96	ECG1HBP683M◊D096ΔΔΔΔ
	82 000	8,1	4,0	0,50	5,0	13,7	64 x 115	ECG1HBP823M◊D115ΔΔΔΔ
	100 000	8,0	4,0	0,60	5,0	14,7	77 x 115	ECG1HBP104M◊E115ΔΔΔΔ
	120 000	6,7	3,0	0,60	5,0	16,7	77 x 115	ECG1HBP124M◊E115ΔΔΔΔ
	150 000	5,4	3,0	0,60	5,0	19,3	77 x 130	ECG1HBP154M◊E130ΔΔΔΔ
	180 000	4,5	3,0	0,60	5,0	21,9	77 x 155	ECG1HBP184M◊E155ΔΔΔΔ
	220 000	3,7	2,0	0,60	5,0	21,4	90 x 131	ECG1HBP224M◊F131ΔΔΔΔ
	270 000	3,0	2,0	0,60	5,0	24,6	90 x 157	ECG1HBP274M◊F157ΔΔΔΔ
63 (79) 1J	3 900	86	47	0,25	2,5	2,7	36 x 53	ECG1JBP392M◊A053ΔΔΔΔ
	4 700	71	39	0,25	3,0	3,0	36 x 53	ECG1JBP472M◊A053ΔΔΔΔ
	5 600	60	38	0,25	3,5	3,3	36 x 53	ECG1JBP562M◊A053ΔΔΔΔ
	6 800	49	32	0,25	4,3	3,6	36 x 65	ECG1JBP682M◊A065ΔΔΔΔ
	8 200	41	26	0,25	5,0	4,3	36 x 83	ECG1JBP822M◊A083ΔΔΔΔ
	10 000	34	23	0,25	5,0	4,9	36 x 83	ECG1JBP103M◊A083ΔΔΔΔ
	12 000	28	18	0,25	5,0	5,6	36 x 100	ECG1JBP123M◊A100ΔΔΔΔ
	15 000	27	16	0,30	5,0	5,9	36 x 100	ECG1JBP153M◊A100ΔΔΔΔ
	18 000	23	15	0,30	5,0	6,7	36 x 121	ECG1JBP183M◊A121ΔΔΔΔ
	22 000	19	13	0,30	5,0	7,8	36 x 121	ECG1JBP223M◊A121ΔΔΔΔ
	27 000	20	12	0,40	5,0	7,4	51 x 96	ECG1JBP273M◊C096ΔΔΔΔ
	33 000	17	8,0	0,40	5,0	8,4	51 x 96	ECG1JBP333M◊C096ΔΔΔΔ
	39 000	14	7,0	0,40	5,0	9,5	51 x 115	ECG1JBP393M◊C115ΔΔΔΔ
	47 000	12	6,0	0,40	5,0	11,3	51 x 130	ECG1JBP473M◊C130ΔΔΔΔ
	56 000	9,5	6,0	0,40	5,0	12,8	64 x 115	ECG1JBP563M◊D115ΔΔΔΔ
	68 000	9,8	5,0	0,50	5,0	12,7	64 x 121	ECG1JBP683M◊D121ΔΔΔΔ
	82 000	8,1	4,0	0,50	5,0	14,5	64 x 130	ECG1JBP823M◊D130ΔΔΔΔ
	100 000	6,7	4,0	0,50	5,0	16,7	77 x 115	ECG1JBP104M◊E115ΔΔΔΔ
	120 000	5,6	3,0	0,50	5,0	18,9	77 x 130	ECG1JBP124M◊E130ΔΔΔΔ
	150 000	4,5	2,0	0,50	5,0	22,4	77 x 155	ECG1JBP154M◊E155ΔΔΔΔ
	180 000	4,5	2,0	0,60	5,0	22,4	90 x 131	ECG1JBP184M◊F131ΔΔΔΔ
	220 000	3,7	2,0	0,60	5,0	26,2	90 x 157	ECG1JBP224M◊F157ΔΔΔΔ
80 (100) 1K	3 300	101	54	0,25	2,6	2,5	36 x 53	ECG1KBP332M◊A053ΔΔΔΔ
	3 900	86	46	0,25	3,1	2,8	36 x 53	ECG1KBP392M◊A053ΔΔΔΔ
	4 700	71	38	0,25	3,8	3,0	36 x 65	ECG1KBP472M◊A065ΔΔΔΔ
	5 600	60	32	0,25	4,5	3,6	36 x 83	ECG1KBP562M◊A083ΔΔΔΔ
	6 800	49	26	0,25	5,0	3,9	36 x 83	ECG1KBP682M◊A083ΔΔΔΔ
	8 200	41	22	0,25	5,0	4,5	36 x 83	ECG1KBP822M◊A083ΔΔΔΔ
	10 000	34	17	0,25	5,0	5,2	36 x 100	ECG1KBP103M◊A100ΔΔΔΔ
	12 000	28	15	0,25	5,0	5,9	36 x 100	ECG1KBP123M◊A100ΔΔΔΔ
	15 000	23	12	0,25	5,0	6,8	36 x 121	ECG1KBP153M◊A121ΔΔΔΔ

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 138
80 (100) 1K	18 000	19	10	0,25	5,0	7,8	36 x 121	ECG1KBP183M◊A121ΔΔΔΔ
	22 000	19	10	0,30	5,0	8,0	51 x 96	ECG1KBP223M◊C096ΔΔΔΔ
	27 000	15	8,0	0,30	5,0	9,2	51 x 96	ECG1KBP273M◊C096ΔΔΔΔ
	33 000	13	7,0	0,30	5,0	10,5	51 x 115	ECG1KBP333M◊C115ΔΔΔΔ
	39 000	11	6,0	0,30	5,0	12,0	51 x 130	ECG1KBP393M◊C130ΔΔΔΔ
	47 000	8,5	5,0	0,30	5,0	13,6	64 x 115	ECG1KBP473M◊D115ΔΔΔΔ
	56 000	9,5	4,0	0,40	5,0	13,4	64 x 130	ECG1KBP563M◊D130ΔΔΔΔ
	68 000	7,9	4,0	0,40	5,0	15,4	77 x 115	ECG1KBP683M◊E115ΔΔΔΔ
	82 000	6,5	4,0	0,40	5,0	17,5	77 x 130	ECG1KBP823M◊E130ΔΔΔΔ
	100 000	5,4	3,0	0,40	5,0	20,5	77 x 155	ECG1KBP104M◊E155ΔΔΔΔ
	120 000	4,5	2,0	0,40	5,0	22,4	90 x 131	ECG1KBP124M◊F131ΔΔΔΔ
	150 000	3,6	2,0	0,40	5,0	26,5	90 x 157	ECG1KBP154M◊F157ΔΔΔΔ
100 (125) 2A	1 800	185	48	0,25	1,8	1,9	36 x 53	ECG2ABP182M◊A053ΔΔΔΔ
	2 200	151	44	0,25	2,2	2,1	36 x 53	ECG2ABP222M◊A053ΔΔΔΔ
	2 700	123	39	0,25	2,7	2,3	36 x 53	ECG2ABP272M◊A053ΔΔΔΔ
	3 300	101	35	0,25	3,3	2,6	36 x 65	ECG2ABP332M◊A065ΔΔΔΔ
	3 900	86	28	0,25	3,9	3,0	36 x 83	ECG2ABP392M◊A083ΔΔΔΔ
	4 700	71	26	0,25	4,7	3,5	36 x 83	ECG2ABP472M◊A083ΔΔΔΔ
	5 600	60	23	0,25	5,0	3,9	36 x 100	ECG2ABP562M◊A100ΔΔΔΔ
	6 800	49	22	0,25	5,0	4,5	36 x 100	ECG2ABP682M◊A100ΔΔΔΔ
	8 200	41	20	0,25	5,0	5,1	36 x 121	ECG2ABP822M◊A121ΔΔΔΔ
	10 000	34	19	0,25	5,0	5,9	36 x 121	ECG2ABP103M◊A121ΔΔΔΔ
	12 000	28	16	0,25	5,0	6,4	51 x 75	ECG2ABP123M◊C075ΔΔΔΔ
	15 000	23	12	0,25	5,0	7,0	51 x 96	ECG2ABP153M◊C096ΔΔΔΔ
	18 000	19	10	0,25	5,0	8,3	51 x 115	ECG2ABP183M◊C115ΔΔΔΔ
	22 000	16	8,0	0,25	5,0	10,0	51 x 130	ECG2ABP223M◊C130ΔΔΔΔ
	27 000	13	7,0	0,25	5,0	11,5	64 x 115	ECG2ABP273M◊D115ΔΔΔΔ
	33 000	11	6,0	0,25	5,0	11,9	64 x 130	ECG2ABP333M◊D130ΔΔΔΔ
	39 000	8,6	5,0	0,25	5,0	13,4	77 x 115	ECG2ABP393M◊E115ΔΔΔΔ
	47 000	9,9	5,0	0,35	5,0	14,2	77 x 130	ECG2ABP473M◊E130ΔΔΔΔ
	56 000	8,3	4,0	0,35	5,0	16,0	77 x 155	ECG2ABP563M◊E155ΔΔΔΔ
	68 000	6,9	3,0	0,35	5,0	18,8	90 x 131	ECG2ABP683M◊F131ΔΔΔΔ
	82 000	5,7	3,0	0,35	5,0	20,5	90 x 157	ECG2ABP823M◊F157ΔΔΔΔ
	100 000	4,7	3,0	0,35	5,0	24,0	90 x 171	ECG2ABP104M◊F171ΔΔΔΔ
160 (200) 2C	3 300	101	31	0,25	5,0	5,2	36 x 121	ECG2CBP332M◊A121ΔΔΔΔ
	4 700	71	21	0,25	5,0	5,9	51 x 75	ECG2CBP472M◊C075ΔΔΔΔ
	5 600	60	19	0,25	5,0	7,0	51 x 96	ECG2CBP562M◊C096ΔΔΔΔ
	6 800	49	16	0,25	5,0	7,8	51 x 96	ECG2CBP682M◊C096ΔΔΔΔ
	10 000	34	13	0,25	5,0	10,4	64 x 96	ECG2CBP103M◊D096ΔΔΔΔ
	12 000	28	10	0,25	5,0	11,3	51 x 120	ECG2CBP123M◊C120ΔΔΔΔ
	15 000	23	9,0	0,25	5,0	14,3	64 x 130	ECG2CBP153M◊D130ΔΔΔΔ
	18 000	19	8,0	0,25	5,0	15,6	64 x 130	ECG2CBP183M◊D130ΔΔΔΔ
	22 000	16	6,0	0,25	5,0	18,3	77 x 130	ECG2CBP223M◊E130ΔΔΔΔ
	33 000	11	4,0	0,25	5,0	23,8	90 x 131	ECG2CBP333M◊F131ΔΔΔΔ
	39 000	8,6	2,0	0,25	5,0	27,9	90 x 157	ECG2CBP393M◊F157ΔΔΔΔ
200 (250) 2D	2 200	151	38	0,25	4,4	3,9	36 x 100	ECG2DBP222M◊A100ΔΔΔΔ
	3 300	101	24	0,25	5,0	4,9	51 x 75	ECG2DBP332M◊C075ΔΔΔΔ
	4 700	71	20	0,25	5,0	6,4	51 x 96	ECG2DBP472M◊C096ΔΔΔΔ
	5 600	60	18	0,25	5,0	7,6	51 x 115	ECG2DBP562M◊C115ΔΔΔΔ
	6 800	49	14	0,25	5,0	8,8	51 x 130	ECG2DBP682M◊C130ΔΔΔΔ
	8 200	41	11	0,25	5,0	9,4	64 x 96	ECG2DBP822M◊D096ΔΔΔΔ
	10 000	34	9,0	0,25	5,0	10,4	64 x 96	ECG2DBP103M◊D096ΔΔΔΔ
	15 000	23	7,0	0,25	5,0	14,4	77 x 96	ECG2DBP153M◊E096ΔΔΔΔ
	18 000	19	6,0	0,25	5,0	16,5	77 x 130	ECG2DBP183M◊E130ΔΔΔΔ
	22 000	16	4,0	0,25	5,0	19,6	77 x 155	ECG2DBP223M◊E155ΔΔΔΔ
	33 000	11	3,0	0,25	5,0	25,3	90 x 157	ECG2DBP333M◊F157ΔΔΔΔ
250 (300) 2E	1 500	222	49	0,25	3,8	3,2	36 x 100	ECG2EBP152M◊A100ΔΔΔΔ
	2 200	151	33	0,25	5,0	4,0	51 x 75	ECG2EBP222M◊C075ΔΔΔΔ
	3 300	101	23	0,25	5,0	5,4	51 x 96	ECG2EBP332M◊C096ΔΔΔΔ
	3 900	86	17	0,25	5,0	6,3	51 x 115	ECG2EBP392M◊C115ΔΔΔΔ
	4 700	71	17	0,25	5,0	7,1	64 x 96	ECG2EBP472M◊D096ΔΔΔΔ
	6 800	49	12	0,25	5,0	9,1	64 x 115	ECG2EBP682M◊D115ΔΔΔΔ
	8 200	41	11	0,25	5,0	10,0	64 x 115	ECG2EBP822M◊D115ΔΔΔΔ
	10 000	34	11	0,25	5,0	11,7	64 x 130	ECG2EBP103M◊D130ΔΔΔΔ
250 (300) 2E	15 000	23	7,0	0,25	5,0	15,1	77 x 130	ECG2EBP153M◊E130ΔΔΔΔ
	18 000	19	6,0	0,25	5,0	17,7	77 x 155	ECG2EBP183M◊E155ΔΔΔΔ
	22 000	16	3,0	0,25	5,0	20,9	90 x 157	ECG2EBP223M◊F157ΔΔΔΔ
350 (400) 2V	470	565	228	0,20	1,6	2,2	36 x 83	ECG2VBP471M◊A083ΔΔΔΔ
	680	391	152	0,20	2,4	2,6	36 x 83	ECG2VBP681M◊A083ΔΔΔΔ
	820	324	104	0,20	2,9	3,1	36 x 100	ECG2VBP821M◊A100ΔΔΔΔ
	1 500	177	72	0,20	5,0	4,3	51 x 75	ECG2VBP152M◊C075ΔΔΔΔ
	1 800	148	58	0,20	5,0	5,1	51 x 96	ECG2VBP182M◊C096ΔΔΔΔ
	2 200	121	48	0,20	5,0	5,7	51 x 96	ECG2VBP222M◊C096ΔΔΔΔ
	2 700	99	39	0,20	5,0	7,1	51 x 130	ECG2VBP272M◊C130ΔΔΔΔ
	3 300	81	32	0,20	5,0	7,9	51 x 130	ECG2VBP332M◊C130ΔΔΔΔ
	3 900	69	28	0,20	5,0	9,0	64 x 115	ECG2VBP392M◊D115ΔΔΔΔ
	4 700	57	25	0,20	5,0	10,3	64 x 130	ECG2VBP472M◊D130ΔΔΔΔ
	5 600	48	22	0,20	5,0	11,4	77 x 115	ECG2VBP562M◊E115ΔΔΔΔ
	6 800	40	17	0,20	5,0	13,1	77 x 130	ECG2VBP682M◊E130ΔΔΔΔ
	8 200	33	14	0,20	5,0	15,4	77 x 155	ECG2VBP822M◊E155ΔΔΔΔ
	10 000	27	12	0,20	5,0	18,1	90 x 157	ECG2VBP103M◊F157ΔΔΔΔ
	12 000	23	10	0,20	5,0	20,0	90 x 157	ECG2VBP123M◊F157ΔΔΔΔ
	15 000	18	8,0	0,20	5,0	24,5	90 x 196	ECG2VBP153M◊F196ΔΔΔΔ
	18 000	15	6,0	0,20	5,0	28,8	90 x 236	ECG2VBP183M◊F236ΔΔΔΔ
400 (450) 2G	470	565	178	0,20	1,9	2,2	36 x 83	ECG2GBP471M◊A083ΔΔΔΔ
	680	391	119	0,20	2,7	2,8	36 x 100	ECG2GBP681M◊A100ΔΔΔΔ
	1 000	266	82	0,20	4,0	3,5	51 x 75	ECG2GBP102M◊C075ΔΔΔΔ
	1 200	222	68	0,20	4,8	3,8	51 x 75	ECG2GBP122M◊C075ΔΔΔΔ
	1 500	177	58	0,20	5,0	4,7	51 x 96	ECG2GBP152M◊C096ΔΔΔΔ
	1 800	148	47	0,20	5,0	5,2	51 x 96	ECG2GBP182M◊C096ΔΔΔΔ
	2 200	121	35	0,20	5,0	6,4	51 x 120	ECG2GBP222M◊C120ΔΔΔΔ
	2 700	99	33	0,20	5,0	7,0	64 x 96	ECG2GBP272M◊D096ΔΔΔΔ
	3 300	81	31	0,20	5,0	8,2	64 x 115	ECG2GBP332M◊D115ΔΔΔΔ
	3 900	69	25	0,20	5,0	9,4	64 x 130	ECG2GBP392M◊D130ΔΔΔΔ
	4 700	57	24	0,20	5,0	10,4	77 x 115	ECG2GBP472M◊E115ΔΔΔΔ
	5 600	48	19	0,20	5,0	11,9	77 x 130	ECG2GBP562M◊E130ΔΔΔΔ
	6 800	40	16	0,20	5,0	14,1	77 x 155	ECG2GBP682M◊E155ΔΔΔΔ
	8 200	33	14	0,20	5,0	16,4	90 x 157	ECG2GBP822M◊F157ΔΔΔΔ
	10 000	27	11	0,20	5,0	18,3	90 x 157	ECG2GBP103M◊F157ΔΔΔΔ
	12 000	23	10	0,20	5,0	21,8	90 x 196	ECG2GBP123M◊F196ΔΔΔΔ
	15 000	18	8,0	0,20	5,0	26,3	90 x 236	ECG2GBP153M◊F236ΔΔΔΔ
450 (500) 2W	470	565	200	0,20	2,1	2,2	36 x 83	ECG2WBP471M◊A083ΔΔΔΔ
	680	391	140	0,20	3,1	2,8	36 x 100	ECG2WBP681M◊A100ΔΔΔΔ
	820	324	96	0,20	3,7	3,2	51 x 75	ECG2WBP821M◊C075ΔΔΔΔ
	1 000	266	82	0,20	4,5	3,5	51 x 75	ECG2WBP102M◊C075ΔΔΔΔ
	1 200	222	72	0,20	5,0	4,2	51 x 96	ECG2WBP122M◊C096ΔΔΔΔ
	1 500	177	58	0,20	5,0	5,1	51 x 115	ECG2WBP152M◊C115ΔΔΔΔ
	1 800	148	46	0,20	5,0	5,9	51 x 130	ECG2WBP182M◊C130ΔΔΔΔ
	2 200	121	33	0,20	5,0	6,3	64 x 96	ECG2WBP222M◊D096ΔΔΔΔ
	2 700	99	32	0,20	5,0	7,5	64 x 115	ECG2WBP272M◊D115ΔΔΔΔ
	3 300	81	30	0,20	5,0	8,7	64 x 130	ECG2WBP332M◊D130ΔΔΔΔ
	3 900	69	29	0,20	5,0	9,5	77 x 115	ECG2WBP392M◊E115ΔΔΔΔ
	4 700	57	24	0,20	5,0	10,9	77 x 130	ECG2WBP472M◊E130ΔΔΔΔ
	5 600	48	16	0,20	5,0	12,8	77 x 155	ECG2WBP562M◊E155ΔΔΔΔ
	6 800	40	14	0,20	5,0	15,0	90 x 157	ECG2WBP682M◊F157ΔΔΔΔ
	8 200	33	12	0,20	5,0	16,5	90 x 157	ECG2WBP822M◊F157ΔΔΔΔ
	10 000	27	10	0,20	5,0	20,0	90 x 196	ECG2WBP103M◊F196ΔΔΔΔ
	12 000	23	8,0	0,20	5,0	23,6	90 x 236	ECG2WBP123M◊F236ΔΔΔΔ
500 (550) 2H	1 000	332	85	0,25	5,0	4,6	51 x 115	ECG2HBP102M◊C115ΔΔΔΔ
	1 500	222	60	0,25	5,0	5,7	64 x 96	ECG2HBP152M◊D096ΔΔΔΔ
	2 200	151	41	0,25	5,0	6,9	64 x 130	ECG2HBP222M◊D130ΔΔΔΔ
	2 700	123	36	0,25	5,0	8,1	77 x 115	ECG2HBP272M◊E115ΔΔΔΔ
	3 300	101	32	0,25	5,0	9,6	77 x 130	ECG2HBP332M◊E130ΔΔΔΔ
	3 900	86	30	0,25	5,0	10,8	77 x 130	ECG2HBP392M◊E130ΔΔΔΔ
	4 700	71	27	0,25	5,0	12,1	77 x 155	ECG2HBP472M◊E155ΔΔΔΔ
	5 600	60	21	0,25	5,0	13,8	90 x 157	ECG2HBP562M◊F157ΔΔΔΔ
	6 800	49	18	0,25	5,0	15,8	90 x 171	ECG2HBP682M◊F171ΔΔΔΔ
	8 200	41	14	0,25	5,0	17,2	77 x 220	ECG2HBP822M◊E220ΔΔΔΔ
	10 000	34	10	0,25	5,0	22,1	90 x 236	ECG2HBP103M◊F236ΔΔΔΔ

SCREW

4 000h at 105°C

- Standard at 105°C
- Professional Power Supplies & Inverters



ITEM	CHARACTERISTICS	
Operating Temperature Range (°C)	-40 ~ +105	-25 ~ +105
Voltage Range (V)	25 ~ 100	160 ~ 450
Capacitance Range (µF)	220 ~ 330 200	
Capacitance Tolerance (20°C, 120Hz)	± 20%	

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	4 000h	> 200 000h	2 000h	2 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 10% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 130% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,2 x I_R 40°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement

Terminal and Construction	The terminal version has an impact on the current capability and mechanical behavior (vibration). For high current applications the terminals C,D and E are preferred, see page 139.

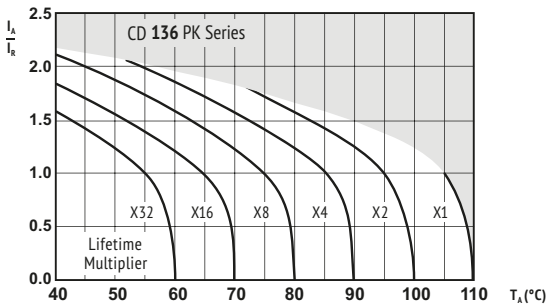
SCREW

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Rated Voltage (V) \ Frequency	50Hz	120Hz	300Hz	1kHz	≥ 10 kHz
25 ~ 100	0,95	1,00	1,04	1,10	1,15
160 ~ 250	0,95	1,00	1,08	1,15	1,20
350 ~ 450	0,80	1,00	1,18	1,35	1,40

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

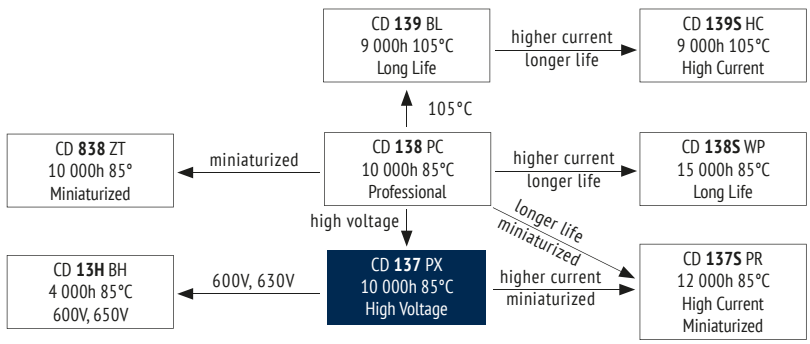
This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 138
25 (32) 1E	10 000	47	25	0,35	2,5	2,9	36 x 53	ECG1EPK103M◊A053ΔΔΔΔ
	15 000	31	20	0,35	3,8	4,2	36 x 83	ECG1EPK153M◊A083ΔΔΔΔ
	22 000	25	13	0,40	5,0	5,1	36 x 83	ECG1EPK223M◊A083ΔΔΔΔ
	33 000	17	10	0,40	5,0	6,3	36 x 100	ECG1EPK333M◊A100ΔΔΔΔ
	47 000	12	4,0	0,40	5,0	8,0	51 x 75	ECG1EPK473M◊C075ΔΔΔΔ
	68 000	9,8	6,0	0,50	5,0	10,0	51 x 115	ECG1EPK683M◊C115ΔΔΔΔ
	100 000	8,0	5,0	0,60	5,0	11,3	64 x 96	ECG1EPK104M◊D096ΔΔΔΔ
	150 000	7,1	4,0	0,80	5,0	12,9	64 x 115	ECG1EPK154M◊D115ΔΔΔΔ
	220 000	6,1	3,0	1,00	5,0	14,8	77 x 115	ECG1EPK224M◊E115ΔΔΔΔ
	330 000	4,1	2,0	1,00	5,0	19,9	90 x 131	ECG1EPK334M◊F131ΔΔΔΔ
35 (44) 1V	6 800	59	25	0,30	2,4	2,6	36 x 53	ECG1VPK682M◊A053ΔΔΔΔ
	10 000	40	20	0,30	3,5	3,7	36 x 83	ECG1VPK103M◊A083ΔΔΔΔ
	15 000	27	13	0,30	5,0	4,5	36 x 83	ECG1VPK153M◊A083ΔΔΔΔ
	22 000	22	10	0,35	5,0	5,5	36 x 100	ECG1VPK223M◊A100ΔΔΔΔ
	33 000	17	7,0	0,40	5,0	6,7	51 x 75	ECG1VPK333M◊C075ΔΔΔΔ
	47 000	13	6,0	0,45	5,0	8,1	51 x 96	ECG1VPK473M◊C096ΔΔΔΔ
	68 000	9,8	5,0	0,50	5,0	10,0	51 x 115	ECG1VPK683M◊C115ΔΔΔΔ
	100 000	8,0	4,0	0,60	5,0	12,1	64 x 115	ECG1VPK104M◊D115ΔΔΔΔ
	150 000	6,2	3,0	0,70	5,0	13,8	77 x 115	ECG1VPK154M◊E115ΔΔΔΔ
	220 000	4,3	2,0	0,70	5,0	17,6	90 x 131	ECG1VPK224M◊F131ΔΔΔΔ
50 (63) 1H	3 300	81	50	0,20	1,7	2,2	36 x 53	ECG1HPK332M◊A053ΔΔΔΔ
	4 700	71	36	0,25	2,4	3,3	36 x 53	ECG1HPK472M◊A053ΔΔΔΔ
	6 800	49	32	0,25	3,4	3,4	36 x 83	ECG1HPK682M◊A083ΔΔΔΔ
	10 000	34	22	0,25	5,0	4,1	36 x 83	ECG1HPK103M◊A083ΔΔΔΔ
	15 000	27	14	0,30	5,0	4,9	36 x 100	ECG1HPK153M◊A100ΔΔΔΔ
	22 000	22	10	0,35	5,0	5,9	51 x 75	ECG1HPK223M◊C075ΔΔΔΔ
	33 000	17	7,0	0,40	5,0	7,8	51 x 115	ECG1HPK333M◊C115ΔΔΔΔ
	47 000	12	6,0	0,40	5,0	9,5	64 x 96	ECG1HPK473M◊D096ΔΔΔΔ
	68 000	8,8	5,0	0,45	5,0	11,6	64 x 115	ECG1HPK683M◊D115ΔΔΔΔ
	100 000	6,7	4,0	0,50	5,0	14,1	77 x 115	ECG1HPK104M◊E115ΔΔΔΔ
	150 000	4,5	3,0	0,50	5,0	18,9	90 x 131	ECG1HPK154M◊F131ΔΔΔΔ
63 (79) 1J	2 200	91	70	0,15	1,4	2,1	36 x 53	ECG1JPK222M◊A053ΔΔΔΔ
	3 300	81	50	0,20	2,1	2,2	36 x 53	ECG1JPK332M◊A053ΔΔΔΔ
	4 700	57	36	0,20	3,0	3,1	36 x 83	ECG1JPK472M◊A083ΔΔΔΔ
	6 800	40	25	0,20	4,3	3,7	36 x 83	ECG1JPK682M◊A083ΔΔΔΔ
	10 000	34	20	0,25	5,0	4,4	36 x 100	ECG1JPK103M◊A100ΔΔΔΔ
	15 000	23	14	0,25	5,0	5,7	51 x 75	ECG1JPK153M◊C075ΔΔΔΔ
	22 000	19	10	0,30	5,0	6,8	51 x 96	ECG1JPK223M◊C096ΔΔΔΔ
	33 000	13	7,0	0,30	5,0	9,2	64 x 96	ECG1JPK333M◊D096ΔΔΔΔ
	47 000	9,9	6,0	0,35	5,0	10,9	64 x 115	ECG1JPK473M◊D115ΔΔΔΔ
	68 000	7,9	5,0	0,40	5,0	13,0	77 x 115	ECG1JPK683M◊E115ΔΔΔΔ
	100 000	5,4	4,0	0,40	5,0	17,2	90 x 131	ECG1JPK104M◊F131ΔΔΔΔ
80 (100) 1K	2 200	91	57	0,15	1,8	2,1	36 x 53	ECG1KPK222M◊A053ΔΔΔΔ
	3 300	61	38	0,15	2,6	3,0	36 x 83	ECG1KPK332M◊A083ΔΔΔΔ
	4 700	43	27	0,15	3,8	3,6	36 x 83	ECG1KPK472M◊A083ΔΔΔΔ
	6 800	40	19	0,20	5,0	4,0	36 x 100	ECG1KPK682M◊A100ΔΔΔΔ
	10 000	27	17	0,20	5,0	5,2	51 x 75	ECG1KPK103M◊C075ΔΔΔΔ
	15 000	23	11	0,25	5,0	6,2	51 x 96	ECG1KPK153M◊C096ΔΔΔΔ
	22 000	16	8,0	0,25	5,0	8,2	64 x 96	ECG1KPK223M◊D096ΔΔΔΔ
	33 000	13	7,0	0,30	5,0	9,7	77 x 96	ECG1KPK333M◊E096ΔΔΔΔ
	47 000	8,5	6,0	0,30	5,0	12,5	77 x 115	ECG1KPK473M◊E115ΔΔΔΔ
	68 000	5,9	5,0	0,30	5,0	16,4	90 x 131	ECG1KPK683M◊F131ΔΔΔΔ
100 (125) 2A	1 000	199	70	0,15	1,0	1,4	36 x 53	ECG2APK102M◊A053ΔΔΔΔ
	1 500	133	55	0,15	1,5	1,7	36 x 53	ECG2APK152M◊A053ΔΔΔΔ
	2 200	91	38	0,15	2,2	2,5	36 x 83	ECG2APK222M◊A083ΔΔΔΔ
	3 300	61	25	0,15	3,3	3,0	36 x 83	ECG2APK332M◊A083ΔΔΔΔ
	4 700	43	21	0,15	4,7	3,9	36 x 100	ECG2APK472M◊A100ΔΔΔΔ
	6 800	30	19	0,15	5,0	5,0	51 x 75	ECG2APK682M◊C075ΔΔΔΔ
	10 000	20	13	0,15	5,0	6,5	51 x 96	ECG2APK103M◊C096ΔΔΔΔ
	15 000	18	9,0	0,20	5,0	7,6	64 x 96	ECG2APK153M◊D096ΔΔΔΔ
	22 000	13	7,0	0,20	5,0	9,7	77 x 96	ECG2APK223M◊E096ΔΔΔΔ
	33 000	11	6,0	0,25	5,0	11,8	77 x 130	ECG2APK333M◊E130ΔΔΔΔ
	47 000	7,1	5,0	0,25	5,0	15,0	90 x 131	ECG2APK473M◊F131ΔΔΔΔ

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 138
160 (200) 2C	470	424	265	0,15	0,8	1,0	36 x 53	ECG2CPK471M◊A053ΔΔΔΔ
	680	293	186	0,15	1,1	1,1	36 x 53	ECG2CPK681M◊A053ΔΔΔΔ
	1 000	199	125	0,15	1,6	1,7	36 x 83	ECG2CPK102M◊A083ΔΔΔΔ
	1 500	133	85	0,15	2,4	2,0	36 x 83	ECG2CPK152M◊A083ΔΔΔΔ
	2 200	91	55	0,15	3,5	2,7	36 x 100	ECG2CPK222M◊A100ΔΔΔΔ
	3 300	61	38	0,15	5,0	3,5	51 x 83	ECG2CPK332M◊C083ΔΔΔΔ
	4 700	43	35	0,15	5,0	4,4	51 x 96	ECG2CPK472M◊C096ΔΔΔΔ
	6 800	30	25	0,15	5,0	5,9	64 x 96	ECG2CPK682M◊D096ΔΔΔΔ
	10 000	20	15	0,15	5,0	7,6	77 x 96	ECG2CPK103M◊E096ΔΔΔΔ
	15 000	14	11	0,15	5,0	10,3	77 x 130	ECG2CPK153M◊E130ΔΔΔΔ
	22 000	9,1	6,0	0,15	5,0	13,2	90 x 131	ECG2CPK223M◊F131ΔΔΔΔ
200 (250) 2D	330	603	375	0,15	0,7	0,8	36 x 53	ECG2DPK331M◊A053ΔΔΔΔ
	470	424	262	0,15	0,9	1,0	36 x 53	ECG2DPK471M◊A053ΔΔΔΔ
	680	293	180	0,15	1,4	1,1	36 x 53	ECG2DPK681M◊A053ΔΔΔΔ
	1 000	199	125	0,15	2,0	1,7	36 x 83	ECG2DPK102M◊A083ΔΔΔΔ
	1 500	133	75	0,15	3,0	2,2	36 x 100	ECG2DPK152M◊A100ΔΔΔΔ
	2 200	91	50	0,15	4,4	2,8	51 x 75	ECG2DPK222M◊C075ΔΔΔΔ
	3 300	61	36	0,15	5,0	3,7	51 x 96	ECG2DPK332M◊C096ΔΔΔΔ
	4 700	43	24	0,15	5,0	4,9	64 x 96	ECG2DPK472M◊D096ΔΔΔΔ
	6 800	30	16	0,15	5,0	6,3	64 x 115	ECG2DPK682M◊D115ΔΔΔΔ
	10 000	20	12	0,15	5,0	8,1	77 x 115	ECG2DPK103M◊E115ΔΔΔΔ
	15 000	14	6,0	0,15	5,0	10,9	90 x 131	ECG2DPK153M◊F131ΔΔΔΔ
250 (300) 2E	330	603	160	0,15	0,8	0,8	36 x 53	ECG2EPK331M◊A053ΔΔΔΔ
	470	424	120	0,15	1,2	1,0	36 x 53	ECG2EPK471M◊A053ΔΔΔΔ
	680	293	85	0,15	1,7	1,4	36 x 83	ECG2EPK681M◊A083ΔΔΔΔ
	1 000	199	55	0,15	2,5	1,9	36 x 100	ECG2EPK102M◊A100ΔΔΔΔ
	1 500	133	40	0,15	3,8	2,3	51 x 75	ECG2EPK152M◊C075ΔΔΔΔ
	2 200	91	28	0,15	5,0	3,1	51 x 96	ECG2EPK222M◊C096ΔΔΔΔ
	3 300	61	20	0,15	5,0	4,2	64 x 96	ECG2EPK332M◊D096ΔΔΔΔ
	4 700	43	15	0,15	5,0	5,4	64 x 115	ECG2EPK472M◊D115ΔΔΔΔ
	6 800	30	10	0,15	5,0	6,9	77 x 115	ECG2EPK682M◊E115ΔΔΔΔ
	10 000	20	8,0	0,15	5,0	9,3	77 x 155	ECG2EPK103M◊E155ΔΔΔΔ
	15 000	14	6,0	0,15	5,0	12,2	90 x 157	ECG2EPK153M◊F157ΔΔΔΔ
400 (450) 2G	1 000	199	82	0,15	4,0	2,5	51 x 75	ECG2GPK102M◊C075ΔΔΔΔ
	1 200	166	70	0,15	4,8	3,0	51 x 96	ECG2GPK122M◊C096ΔΔΔΔ
	1 500	133	49	0,15	5,0	3,6	51 x 115	ECG2GPK152M◊C115ΔΔΔΔ
	1 800	111	39	0,15	5,0	4,1	51 x 130	ECG2GPK182M◊C130ΔΔΔΔ
	2 200	91	30	0,15	5,0	4,5	64 x 96	ECG2GPK222M◊D096ΔΔΔΔ
	2 700	74	22	0,15	5,0	5,3	64 x 115	ECG2GPK272M◊D115ΔΔΔΔ
	3 300	61	20	0,15	5,0	6,2	64 x 130	ECG2GPK332M◊D130ΔΔΔΔ
	3 900	52	18	0,15	5,0	7,2	64 x 155	ECG2GPK392M◊D155ΔΔΔΔ
		52	18	0,15	5,0	6,8	77 x 115	ECG2GPK392M◊E115ΔΔΔΔ
	4 700	43	13	0,15	5,0	8,7	64 x 195	ECG2GPK472M◊D195ΔΔΔΔ
		43	13	0,15	5,0	7,8	77 x 130	ECG2GPK472M◊E130ΔΔΔΔ
	5 600	36	12	0,15	5,0	9,6	64 x 195	ECG2GPK562M◊D195ΔΔΔΔ
		36	12	0,15	5,0	9,2	77 x 155	ECG2GPK562M◊E155ΔΔΔΔ
	6 800	30	11	0,15	5,0	10,7	90 x 157	ECG2GPK682M◊F157ΔΔΔΔ
	8 200	25	10	0,15	5,0	11,8	90 x 157	ECG2GPK822M◊F157ΔΔΔΔ
	10 000	20	9,0	0,15	5,0	14,1	90 x 196	ECG2GPK103M◊F196ΔΔΔΔ
450 (500) 2W	220	905	415	0,15	1,0	1,1	36 x 53	ECG2WPK221M◊A053ΔΔΔΔ
	330	603	277	0,15	1,5	1,5	36 x 100	ECG2WPK331M◊A100ΔΔΔΔ
	470	424	195	0,15	2,1	2,1	51 x 83	ECG2WPK471M◊C083ΔΔΔΔ
	680	293	135	0,15	3,1	2,7	51 x 96	ECG2WPK681K◊C096ΔΔΔΔ
	1 000	199	90	0,15	4,5	4,2	51 x 100	ECG2WPK102M◊C100ΔΔΔΔ
	1 500	133	54	0,15	5,0	5,7	51 x 130	ECG2WPK152M◊C130ΔΔΔΔ
	2 200	91	33	0,15	5,0	7,3	64 x 115	ECG2WPK222M◊D115ΔΔΔΔ
	3 300	61	22	0,15	5,0	10,1	77 x 130	ECG2WPK332M◊E130ΔΔΔΔ
	4 700	43	15	0,15	5,0	12,6	77 x 155	ECG2WPK472M◊E155ΔΔΔΔ
	5 600	36	11	0,15	5,0	15,8	90 x 157	ECG2WPK562M◊F157ΔΔΔΔ

10 000h at 85°C

- High Reliability at High Voltage
- Long Life at Compact Size



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +85
Voltage Range (V)	400 ~ 550
Capacitance Range (µF)	1 000 ~ 22 200
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	10 000h	> 100 000h	5 000h	5 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 10% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,4 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement
Terminal and Construction	The terminal version has an impact on the current capability and mechanical behavior (vibration). For high current applications the terminals C,D and E are preferred, see page 139.					
Optional	Self-extinguishing Electrolyte on request					

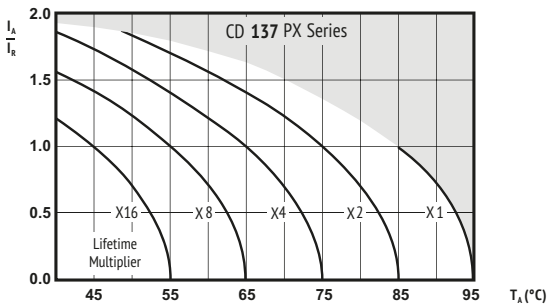
SCREW

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	≥ 10 kHz
Coefficient	0,80	1,00	1,10	1,30	1,40

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

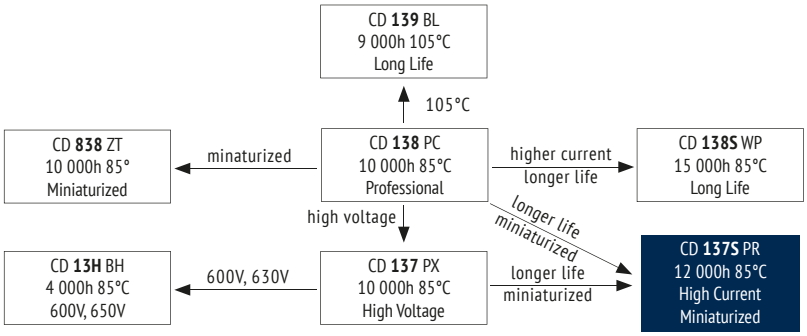
SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 138
400 (450) 2G	2 200	98	28	0,15	5,0	8,8	51 x 115	ECG2GPX222M◊C115ΔΔΔΔ
	2 700	80	24	0,15	5,0	10,2	51 x 130	ECG2GPX272M◊C130ΔΔΔΔ
	3 300	65	21	0,15	5,0	11,0	64 x 96	ECG2GPX332M◊D096ΔΔΔΔ
	3 900	55	19	0,15	5,0	12,8	64 x 115	ECG2GPX392M◊D115ΔΔΔΔ
	4 700	46	15	0,15	5,0	14,8	64 x 130	ECG2GPX472M◊D130ΔΔΔΔ
	5 600	38	14	0,15	5,0	16,2	77 x 115	ECG2GPX562M◊E115ΔΔΔΔ
	6 800	32	13	0,15	5,0	18,7	77 x 130	ECG2GPX682M◊E130ΔΔΔΔ
	8 200	26	12	0,15	5,0	22,0	77 x 155	ECG2GPX822M◊E155ΔΔΔΔ
	10 000	22	10	0,15	5,0	26,7	77 x 195	ECG2GPX103M◊E195ΔΔΔΔ
		22	10	0,15	5,0	24,2	90 x 131	ECG2GPX103M◊F131ΔΔΔΔ
	12 000	18	8	0,15	5,0	28,5	90 x 157	ECG2GPX123M◊F157ΔΔΔΔ
	15 000	14	6	0,15	5,0	34,8	90 x 196	ECG2GPX153M◊F196ΔΔΔΔ
	18 000	12	5	0,15	5,0	41,2	90 x 236	ECG2GPX183M◊F236ΔΔΔΔ
	22 000	10	5	0,15	5,0	47,0	101 x 237	ECG2GPX223M◊G237ΔΔΔΔ
450 (500) 2W	1 800	119	45	0,15	5,0	7,6	51 x 115	ECG2WPX182M◊C115ΔΔΔΔ
	2 200	98	35	0,15	5,0	8,8	51 x 130	ECG2WPX222M◊C130ΔΔΔΔ
	2 700	80	30	0,15	5,0	9,5	64 x 96	ECG2WPX272M◊D096ΔΔΔΔ
	3 300	65	24	0,15	5,0	11,2	64 x 115	ECG2WPX332M◊D115ΔΔΔΔ
	3 900	55	20	0,15	5,0	12,8	64 x 130	ECG2WPX392M◊D130ΔΔΔΔ
	4 700	46	16	0,15	5,0	14,1	77 x 115	ECG2WPX472M◊E115ΔΔΔΔ
	5 600	38	13	0,15	5,0	16,2	77 x 130	ECG2WPX562M◊E130ΔΔΔΔ
	6 800	32	11	0,15	5,0	19,1	77 x 155	ECG2WPX682M◊E155ΔΔΔΔ
	8 200	26	10	0,15	5,0	23,0	77 x 195	ECG2WPX822M◊E195ΔΔΔΔ
		26	10	0,15	5,0	21,0	90 x 131	ECG2WPX822M◊F131ΔΔΔΔ
	10 000	22	9	0,15	5,0	25,7	90 x 171	ECG2WPX103M◊F171ΔΔΔΔ
	12 000	18	8	0,15	5,0	29,7	90 x 196	ECG2WPX123M◊F196ΔΔΔΔ
	15 000	14	7	0,15	5,0	35,9	90 x 236	ECG2WPX153M◊F236ΔΔΔΔ
		14	7	0,15	5,0	34,2	101 x 195	ECG2WPX153M◊G195ΔΔΔΔ
	18 000	12	6	0,15	5,0	40,5	101 x 237	ECG2WPX183M◊G237ΔΔΔΔ
500 (550) 2H	1 200	215	94	0,20	5,0	6,2	51 x 115	ECG2HPX122M◊C115ΔΔΔΔ
		215	94	0,20	5,0	6,3	64 x 96	ECG2HPX122M◊D096ΔΔΔΔ
	1500	172	72	0,20	5,0	7,3	51 x 130	ECG2HPX152M◊C130ΔΔΔΔ
		172	72	0,20	5,0	7,1	64 x 96	ECG2HPX152M◊D096ΔΔΔΔ
	1 800	143	51	0,20	5,0	8,3	64 x 115	ECG2HPX182M◊D115ΔΔΔΔ
	2 200	117	40	0,20	5,0	9,6	64 x 130	ECG2HPX222M◊D130ΔΔΔΔ
	2 700	96	35	0,20	5,0	10,7	77 x 115	ECG2HPX272M◊E115ΔΔΔΔ
	3 300	78	30	0,20	5,0	12,4	77 x 130	ECG2HPX332M◊E130ΔΔΔΔ
	3 900	66	25	0,20	5,0	14,4	77 x 155	ECG2HPX392M◊E155ΔΔΔΔ
	4 700	55	24	0,20	5,0	16,5	77 x 171	ECG2HPX472M◊E171ΔΔΔΔ
		55	24	0,20	5,0	15,8	90 x 131	ECG2HPX472M◊F131ΔΔΔΔ
	5 600	46	22	0,20	5,0	19,0	77 x 195	ECG2HPX562M◊E195ΔΔΔΔ
		46	22	0,20	5,0	18,6	90 x 157	ECG2HPX562M◊F157ΔΔΔΔ
	6 800	38	19	0,20	5,0	21,2	90 x 171	ECG2HPX682M◊F171ΔΔΔΔ
	8 200	31	14	0,20	5,0	24,5	90 x 196	ECG2HPX822M◊F196ΔΔΔΔ
		31	14	0,20	5,0	24,2	101 x 175	ECG2HPX822M◊G175ΔΔΔΔ
	10 000	26	12	0,20	5,0	29,3	90 x 236	ECG2HPX103M◊F236ΔΔΔΔ
		26	12	0,20	5,0	27,9	101 x 195	ECG2HPX103M◊G195ΔΔΔΔ
	12 000	22	11	0,20	5,0	33,1	101 x 237	ECG2HPX123M◊G237ΔΔΔΔ
550 (600) 2Y	1 000	258	110	0,20	5,0	5,9	51 x 130	ECG2YPX102M◊C130ΔΔΔΔ
	1 200	215	95	0,20	5,0	6,8	64 x 115	ECG2YPX122M◊D115ΔΔΔΔ
	1 500	172	74	0,20	5,0	8,0	64 x 130	ECG2YPX152M◊D130ΔΔΔΔ
	1 800	143	72	0,20	5,0	8,7	77 x 115	ECG2YPX182M◊E115ΔΔΔΔ
	2 200	117	50	0,20	5,0	10,1	77 x 130	ECG2YPX222M◊E130ΔΔΔΔ
	2 700	96	40	0,20	5,0	12,0	77 x 155	ECG2YPX272M◊E155ΔΔΔΔ
	3 300	78	36	0,20	5,0	13,3	77 x 155	ECG2YPX332M◊E155ΔΔΔΔ
	3 900	66	30	0,20	5,0	15,5	90 x 157	ECG2YPX392M◊F157ΔΔΔΔ
	4 700	55	24	0,20	5,0	17,6	90 x 171	ECG2YPX472M◊F171ΔΔΔΔ
	5 600	46	20	0,20	5,0	20,3	90 x 196	ECG2YPX562M◊F196ΔΔΔΔ
	6 800	38	16	0,20	5,0	24,1	90 x 236	ECG2YPX682M◊F236ΔΔΔΔ
	8 200	31	14	0,20	5,0	27,3	101 x 237	ECG2YPX822M◊G237ΔΔΔΔ

12 000h at 85°C

- Long Life
- High Reliability
- High Currents for High Professional Applications and High Power Inverter



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +85
Voltage Range (V)	350 ~ 500
Capacitance Range (µF)	1 000 ~ 22 000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.
Stability at Low Temperature (Capacitance Ratio at 120Hz)	$C_{-25°C} / C_{+20°C} \geq 0{,}7$
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	12 000h	> 150 000h	5 000h	5 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 20% of initial value		Within ± 15% of initial value	Within ± 10% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 200% of specified value		Not more than 175% of specified value	Not more than 130% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,4 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement
Terminal and Construction	only Terminal C, D, E available, see page 139					

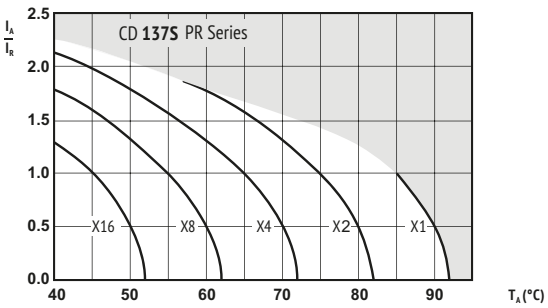
SCREW

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	≥ 10 kHz
Coefficient	0,80	1,00	1,18	1,30	1,40

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

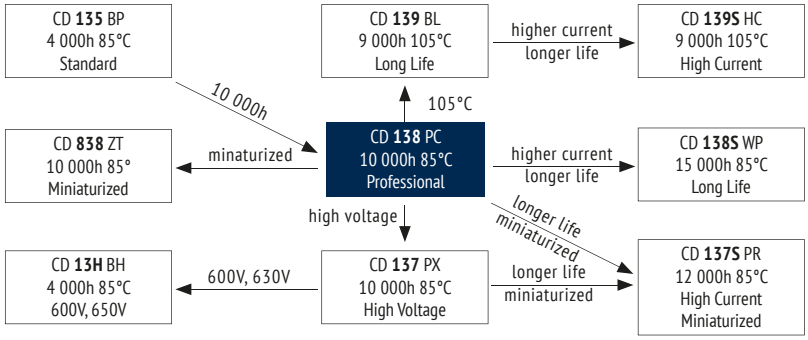
U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 138
350 (400) 2V	2 200	56	28	0,15	5,0	8,4	51 x 80	ECG2VPR222M◊C080ΔΔΔΔ
	2 700	46	23	0,15	5,0	9,9	51 x 96	ECG2VPR272M◊C096ΔΔΔΔ
	3 300	40	20	0,15	5,0	11,0	51 x 105	ECG2VPR332M◊C105ΔΔΔΔ
		40	20	0,15	5,0	11,4	64 x 80	ECG2VPR332M◊D080ΔΔΔΔ
	3 900	34	17	0,15	5,0	12,7	51 x 117	ECG2VPR392M◊C117ΔΔΔΔ
		34	17	0,15	5,0	13,2	64 x 96	ECG2VPR392M◊D096ΔΔΔΔ
	4 700	28	14	0,15	5,0	14,4	64 x 96	ECG2VPR472M◊D096ΔΔΔΔ
	5 600	24	12	0,15	5,0	16,8	64 x 115	ECG2VPR562M◊D115ΔΔΔΔ
		24	12	0,15	5,0	17,2	77 x 96	ECG2VPR562M◊E096ΔΔΔΔ
	6 800	20	10	0,15	5,0	18,8	64 x 130	ECG2VPR682M◊D130ΔΔΔΔ
		20	10	0,15	5,0	19,5	77 x 105	ECG2VPR682M◊E105ΔΔΔΔ
	8 200	18	9	0,15	5,0	22,3	77 x 117	ECG2VPR822M◊E117ΔΔΔΔ
	10 000	14	7	0,15	5,0	28,3	90 x 115	ECG2VPR103M◊F115ΔΔΔΔ
	12 000	12	6	0,15	5,0	29,8	77 x 155	ECG2VPR123M◊E155ΔΔΔΔ
		12	6	0,15	5,0	32,0	90 x 130	ECG2VPR123M◊F130ΔΔΔΔ
	15 000	10	5	0,15	5,0	36,0	90 x 145	ECG2VPR153M◊F145ΔΔΔΔ
	18 000	9	4,5	0,15	5,0	40,4	90 x 171	ECG2VPR183M◊F171ΔΔΔΔ
	22 000	7	3,5	0,15	5,0	46,9	90 x 196	ECG2VPR223M◊F196ΔΔΔΔ
400 (450) 2G	1 800	68	34	0,15	5,0	7,6	51 x 80	ECG2GPR182M◊C080ΔΔΔΔ
	2 200	45	28	0,15	5,0	9,1	51 x 96	ECG2GPR222M◊C096ΔΔΔΔ
	2 700	46	23	0,15	5,0	10,4	51 x 105	ECG2GPR272M◊C105ΔΔΔΔ
		46	23	0,15	5,0	10,5	64 x 80	ECG2GPR272M◊D080ΔΔΔΔ
	3 300	38	19	0,15	5,0	12,5	51 x 130	ECG2GPR332M◊C130ΔΔΔΔ
		38	19	0,15	5,0	12,4	64 x 96	ECG2GPR332M◊D096ΔΔΔΔ
	3 900	32	16	0,15	5,0	13,3	64 x 96	ECG2GPR392M◊D096ΔΔΔΔ
	4 700	28	14	0,15	5,0	15,2	64 x 115	ECG2GPR472M◊D115ΔΔΔΔ
		28	14	0,15	5,0	16,3	77 x 96	ECG2GPR472M◊E096ΔΔΔΔ
	5 600	24	12	0,15	5,0	17,1	64 x 130	ECG2GPR562M◊D130ΔΔΔΔ
		24	12	0,15	5,0	18,2	77 x 105	ECG2GPR562M◊E105ΔΔΔΔ
	6 800	20	10	0,15	5,0	20,5	77 x 117	ECG2GPR682M◊E117ΔΔΔΔ
	8 200	18	9	0,15	5,0	23,3	77 x 130	ECG2GPR822M◊E130ΔΔΔΔ
	10 000	14	7	0,15	5,0	27,0	77 x 155	ECG2GPR103M◊E155ΔΔΔΔ
		14	7	0,15	5,0	29,1	90 x 130	ECG2GPR103M◊F130ΔΔΔΔ
	12 000	12	6	0,15	5,0	31,5	77 x 190	ECG2GPR123M◊E190ΔΔΔΔ
		12	6	0,15	5,0	32,5	90 x 145	ECG2GPR123M◊F145ΔΔΔΔ
	15 000	10	5	0,15	5,0	37,2	77 x 220	ECG2GPR153M◊E220ΔΔΔΔ
		10	5	0,15	5,0	38,3	90 x 170	ECG2GPR153M◊F170ΔΔΔΔ
	18 000	9	4,5	0,15	5,0	42,4	90 x 196	ECG2GPR183M◊F196ΔΔΔΔ
450 (500) 2W	1 500	112	56	0,15	5,0	7,1	51 x 80	ECG2WPR152M◊C080ΔΔΔΔ
	1 800	94	57	0,15	5,0	8,0	51 x 96	ECG2WPR182M◊C096ΔΔΔΔ
	2 200	78	39	0,15	5,0	9,2	51 x 105	ECG2WPR222M◊C105ΔΔΔΔ
		78	39	0,15	5,0	9,7	64 x 80	ECG2WPR222M◊D080ΔΔΔΔ
	2 700	66	33	0,15	5,0	10,5	51 x 117	ECG2WPR272M◊C117ΔΔΔΔ
		66	33	0,15	5,0	10,9	64 x 96	ECG2WPR272M◊D096ΔΔΔΔ
	3 300	56	28	0,15	5,0	12,1	64 x 100	ECG2WPR332M◊D100ΔΔΔΔ
	3 900	48	24	0,15	5,0	13,9	64 x 115	ECG2WPR392M◊D115ΔΔΔΔ
		48	24	0,15	5,0	15,2	77 x 96	ECG2WPR392M◊E096ΔΔΔΔ
	4 700	40	20	0,15	5,0	15,5	64 x 130	ECG2WPR472M◊D130ΔΔΔΔ
		40	20	0,15	5,0	16,9	77 x 105	ECG2WPR472M◊E105ΔΔΔΔ
	5 600	34	17	0,15	5,0	18,2	64 x 155	ECG2WPR562M◊D155ΔΔΔΔ
		34	17	0,15	5,0	19,4	77 x 117	ECG2WPR562M◊E117ΔΔΔΔ
	6 800	28	14	0,15	5,0	21,5	77 x 130	ECG2WPR682M◊E130ΔΔΔΔ
		28	14	0,15	5,0	24,3	90 x 115	ECG2WPR682M◊F115ΔΔΔΔ
	8 200	24	12	0,15	5,0	24,5	77 x 155	ECG2WPR822M◊E155ΔΔΔΔ
		24	12	0,15	5,0	27,5	90 x 130	ECG2WPR822M◊F130ΔΔΔΔ
	10 000	20	10	0,15	5,0	29,2	77 x 190	ECG2WPR103M◊E190ΔΔΔΔ
		20	10	0,15	5,0	30,3	90 x 145	ECG2WPR103M◊F145ΔΔΔΔ
	12 000	17	8,5	0,15	5,0	33,4	77 x 220	ECG2WPR123M◊E220ΔΔΔΔ
		17	8,5	0,15	5,0	34,6	90 x 170	ECG2WPR123M◊F170ΔΔΔΔ
	15 000	14	6,8	0,15	5,0	39,8	90 x 196	ECG2WPR153M◊F196ΔΔΔΔ

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 138
500 (550) 2H	1 000	176	88	0,15	5,0	6,1	51 x 80	ECG2HPR102M◊C080ΔΔΔΔ
	1 200	146	73	0,15	5,0	7,0	51 x 92	ECG2HPR122M◊C092ΔΔΔΔ
	1 500	120	60	0,15	5,0	8,0	51 x 105	ECG2HPR152M◊C105ΔΔΔΔ
		120	60	0,15	5,0	8,1	64 x 80	ECG2HPR152M◊D080ΔΔΔΔ
	1 800	102	51	0,15	5,0	9,2	51 x 117	ECG2HPR182M◊C117ΔΔΔΔ
	2 200	86	43	0,15	5,0	10,6	64 x 100	ECG2HPR222M◊D100ΔΔΔΔ
		86	43	0,15	5,0	11,0	77 x 85	ECG2HPR222M◊E085ΔΔΔΔ
	2 700	72	36	0,15	5,0	12,2	64 x 115	ECG2HPR272M◊D115ΔΔΔΔ
	3 300	60	30	0,15	5,0	14,1	77 x 105	ECG2HPR332M◊E105ΔΔΔΔ
	3 900	52	26	0,15	5,0	16,5	77 x 130	ECG2HPR392M◊E130ΔΔΔΔ
	4 700	42	21	0,15	5,0	18,8	77 x 143	ECG2HPR472M◊E143ΔΔΔΔ
		42	21	0,15	5,0	19,2	90 x 115	ECG2HPR472M◊F115ΔΔΔΔ
	5 600	38	19	0,15	5,0	21,4	90 x 130	ECG2HPR562M◊F130ΔΔΔΔ
	6 800	32	16	0,15	5,0	24,6	90 x 145	ECG2HPR682M◊F145ΔΔΔΔ
	8 200	26	13	0,15	5,0	18,5	90 x 170	ECG2HPR822M◊F170ΔΔΔΔ
	10 000	22	11	0,15	5,0	32,9	90 x 196	ECG2HPR103M◊F196ΔΔΔΔ
	12 000	20	10	0,15	5,0	34,7	90 x 220	ECG2HPR123M◊F220ΔΔΔΔ

SCREW

10 000h at 85°C

- Long Life
- High Reliability
- High Currents for High Professional Applications and High Power Inverter



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +85
Voltage Range (V)	350 ~ 450
Capacitance Range (µF)	1 000 ~ 18 000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.
Stability at Low Temperature (Capacitance Ratio at 120Hz)	$C_{-25°C} / C_{+20°C} \geq 0,7$
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

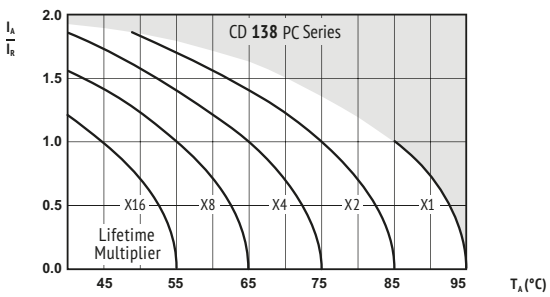
ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	10 000h	> 100 000h	5 000h	5 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 10% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 130% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,4 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement
Terminal and Construction	The terminal version has an impact on the current capability and mechanical behavior (vibration). For high current applications the terminals C,D and E are preferred, see page 139.					
Optional	Self-extinguishing Electrolyte on request					

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	≥ 10 kHz
Coefficient	0,80	1,00	1,10	1,30	1,40

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

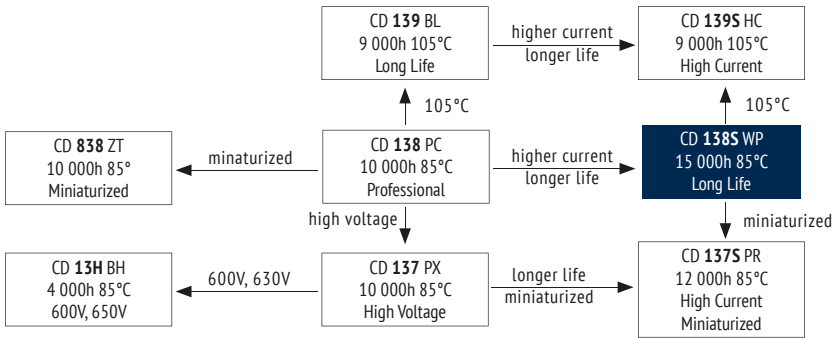
This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

SCREW

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 138
350 (400) 2V	1 200	215	67	0,15	4,2	5,5	51 x 83	ECG2VPC122M◊C083ΔΔΔΔ
	1 500	172	55	0,15	5,0	6,1	51 x 83	ECG2VPC152M◊C083ΔΔΔΔ
	1 800	143	43	0,15	5,0	7,4	51 x 96	ECG2VPC182M◊C096ΔΔΔΔ
	2 200	117	30	0,15	5,0	8,2	51 x 96	ECG2VPC222M◊C096ΔΔΔΔ
	3 300	78	23	0,15	5,0	11,3	51 x 130	ECG2VPC332M◊C130ΔΔΔΔ
	3 900	66	19	0,15	5,0	12,8	64 x 115	ECG2VPC392M◊D115ΔΔΔΔ
	4 700	55	16	0,15	5,0	14,8	64 x 130	ECG2VPC472M◊D130ΔΔΔΔ
	5 600	46	14	0,15	5,0	16,3	77 x 115	ECG2VPC562M◊E115ΔΔΔΔ
	6 800	38	13	0,15	5,0	18,8	77 x 130	ECG2VPC682M◊E130ΔΔΔΔ
	8 200	31	11	0,15	5,0	22,1	77 x 155	ECG2VPC822M◊E155ΔΔΔΔ
	10 000	26	10	0,15	5,0	25,9	90 x 157	ECG2VPC103M◊F157ΔΔΔΔ
	12 000	22	8	0,15	5,0	28,4	90 x 157	ECG2VPC123M◊F157ΔΔΔΔ
	15 000	17	6	0,15	5,0	34,6	90 x 196	ECG2VPC153M◊F196ΔΔΔΔ
	18 000	14	4	0,15	5,0	41,4	90 x 236	ECG2VPC183M◊F236ΔΔΔΔ
400 (450) 2G	1 000	215	82	0,15	4,0	5,0	51 x 83	ECG2GPC102M◊C083ΔΔΔΔ
	1 200	179	70	0,15	4,8	5,5	51 x 83	ECG2GPC122M◊C083ΔΔΔΔ
	1 500	143	50	0,15	5,0	6,7	51 x 96	ECG2GPC152M◊C096ΔΔΔΔ
	1 800	119	40	0,15	5,0	7,4	51 x 96	ECG2GPC182M◊C096ΔΔΔΔ
	2 200	98	28	0,15	5,0	9,2	51 x 130	ECG2GPC222M◊C130ΔΔΔΔ
	2 700	80	23	0,15	5,0	9,9	64 x 96	ECG2GPC272M◊D096ΔΔΔΔ
	3 300	65	21	0,15	5,0	11,8	64 x 115	ECG2GPC332M◊D115ΔΔΔΔ
	3 900	55	19	0,15	5,0	13,5	64 x 130	ECG2GPC392M◊D130ΔΔΔΔ
	4 700	46	15	0,15	5,0	14,9	77 x 115	ECG2GPC472M◊E115ΔΔΔΔ
	5 600	39	14	0,15	5,0	17,0	77 x 130	ECG2GPC562M◊E130ΔΔΔΔ
	6 800	32	13	0,15	5,0	20,2	77 x 155	ECG2GPC682M◊E155ΔΔΔΔ
	8 200	26	12	0,15	5,0	23,5	90 x 157	ECG2GPC822M◊F157ΔΔΔΔ
	10 000	22	10	0,15	5,0	25,9	90 x 157	ECG2GPC103M◊F157ΔΔΔΔ
	12 000	18	8	0,15	5,0	31,0	90 x 196	ECG2GPC123M◊F196ΔΔΔΔ
	15 000	14	6	0,15	5,0	37,5	90 x 236	ECG2GPC153M◊F236ΔΔΔΔ
450 (500) 2W	1 000	215	93	0,15	4,5	5,0	51 x 83	ECG2WPC102M◊C083ΔΔΔΔ
	1 200	179	69	0,15	5,0	6,0	51 x 96	ECG2WPC122M◊C096ΔΔΔΔ
	1 500	143	56	0,15	5,0	7,2	51 x 115	ECG2WPC152M◊C115ΔΔΔΔ
	1 800	119	45	0,15	5,0	8,3	51 x 130	ECG2WPC182M◊C130ΔΔΔΔ
	2 200	98	35	0,15	5,0	9,0	64 x 93	ECG2WPC222M◊D093ΔΔΔΔ
	2 700	80	30	0,15	5,0	10,7	64 x 115	ECG2WPC272M◊D115ΔΔΔΔ
	3 300	65	24	0,15	5,0	12,4	64 x 130	ECG2WPC332M◊D130ΔΔΔΔ
	3 900	55	20	0,15	5,0	13,6	77 x 115	ECG2WPC392M◊E115ΔΔΔΔ
	4 700	46	16	0,15	5,0	15,6	77 x 130	ECG2WPC472M◊E130ΔΔΔΔ
	5 600	38	13	0,15	5,0	18,3	77 x 155	ECG2WPC562M◊E155ΔΔΔΔ
	6 800	32	11	0,15	5,0	21,4	90 x 157	ECG2WPC682M◊F157ΔΔΔΔ
	8 200	26	10	0,15	5,0	23,5	90 x 157	ECG2WPC822M◊F157ΔΔΔΔ
	10 000	22	9	0,15	5,0	28,3	90 x 196	ECG2WPC103M◊F196ΔΔΔΔ
	12 000	18	8	0,15	5,0	33,6	90 x 236	ECG2WPC123M◊F236ΔΔΔΔ

15 000h at 85°C

- Longest Life
- High Reliability
- High Ripple Current
- For High Power Inverter



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +85
Voltage Range (V)	350 ~ 500
Capacitance Range (µF)	1 500 ~ 12 000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.
Stability at Low Temperature (Capacitance Ratio at 120Hz)	$C_{-25°C} / C_{+20°C} \geq 0,7$
Fast Charge-Discharge	Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	15 000h	> 150 000h	10 000h	12 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 10% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 130% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,4 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement
Terminal and Construction	The terminal version has an impact on the current capability and mechanical behavior (vibration). For high current applications the terminals C,D and E are preferred, see page 139.					
Optional	Self-extinguishing Electrolyte on request					

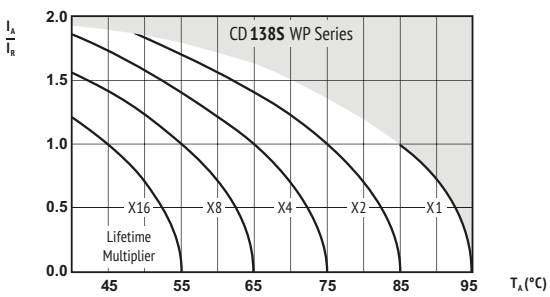
SCREW

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	≥ 10 kHz
Coefficient	0,80	1,00	1,10	1,30	1,40

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

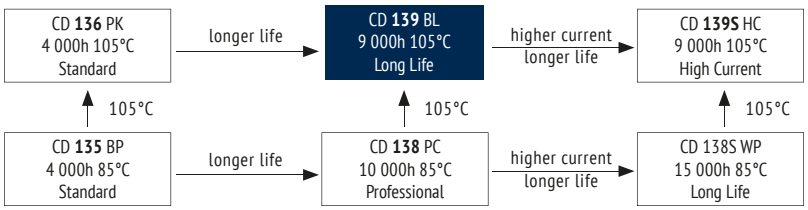
SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 138
350 (400) 2V	3 900	50	25	0,15	5,0	14,6	64 x 96	ECG2VWP392M◊D096ΔΔΔΔ
	4 700	40	20	0,15	5,0	16,9	64 x 115	ECG2VWP472M◊D115ΔΔΔΔ
	5 600	34	17	0,15	5,0	19,8	64 x 130	ECG2VWP562M◊D130ΔΔΔΔ
		34	17	0,15	5,0	21,6	77 x 115	ECG2VWP562M◊E115ΔΔΔΔ
	6 800	28	14	0,15	5,0	25,0	77 x 143	ECG2VWP682M◊E143ΔΔΔΔ
		28	14	0,15	5,0	26,2	90 x 105	ECG2VWP682M◊F105ΔΔΔΔ
	8 200	24	12	0,15	5,0	29,3	77 x 143	ECG2VWP822M◊E143ΔΔΔΔ
		24	12	0,15	5,0	30,1	77 x 155	ECG2VWP822M◊E155ΔΔΔΔ
	10 000	18	9	0,15	5,0	35,7	90 x 157	ECG2VWP103M◊F157ΔΔΔΔ
	12 000	16	8	0,15	5,0	39,1	90 x 157	ECG2VWP123M◊F157ΔΔΔΔ
400 (450) 2G	2 700	76	38	0,15	5,0	11,5	64 x 96	ECG2GWP272M◊D096ΔΔΔΔ
	3 300	60	30	0,15	5,0	14,2	64 x 115	ECG2GWP332M◊D115ΔΔΔΔ
	3 900	52	26	0,15	5,0	16,5	64 x 115	ECG2GWP392M◊D115ΔΔΔΔ
		52	26	0,15	5,0	17,2	77 x 105	ECG2GWP392M◊E105ΔΔΔΔ
	4 700	42	21	0,15	5,0	18,1	64 x 130	ECG2GWP472M◊D130ΔΔΔΔ
		42	21	0,15	5,0	20,8	77 x 115	ECG2GWP472M◊E115ΔΔΔΔ
	5 600	36	18	0,15	5,0	22,7	77 x 130	ECG2GWP562M◊E130ΔΔΔΔ
		36	18	0,15	5,0	23,8	90 x 105	ECG2GWP562M◊F105ΔΔΔΔ
	6 800	30	15	0,15	5,0	26,6	77 x 155	ECG2GWP682M◊E155ΔΔΔΔ
		30	15	0,15	5,0	27,4	90 x 130	ECG2GWP682M◊F130ΔΔΔΔ
	8 200	24	12	0,15	5,0	32,2	90 x 157	ECG2GWP822M◊F157ΔΔΔΔ
	10 000	20	10	0,15	5,0	35,7	90 x 157	ECG2GWP103M◊F157ΔΔΔΔ
450 (500) 2W	2 200	92	46	0,15	5,0	10,4	64 x 96	ECG2WWP222M◊D096ΔΔΔΔ
		92	46	0,15	5,0	11,5	77 x 80	ECG2WWP222M◊E080ΔΔΔΔ
	2 700	76	38	0,15	5,0	12,8	64 x 115	ECG2WWP272M◊D115ΔΔΔΔ
	3 300	60	30	0,15	5,0	15,2	64 x 130	ECG2WWP332M◊D130ΔΔΔΔ
		60	30	0,15	5,0	15,8	77 x 105	ECG2WWP332M◊E105ΔΔΔΔ
	3 900	54	27	0,15	5,0	16,5	64 x 130	ECG2WWP392M◊D130ΔΔΔΔ
		54	27	0,15	5,0	18,0	77 x 115	ECG2WWP392M◊E115ΔΔΔΔ
	4 700	42	21	0,15	5,0	20,8	77 x 143	ECG2WWP472M◊E143ΔΔΔΔ
		42	21	0,15	5,0	21,8	90 x 105	ECG2WWP472M◊F105ΔΔΔΔ
	5 600	36	18	0,15	5,0	24,2	77 x 143	ECG2WWP562M◊E143ΔΔΔΔ
		36	18	0,15	5,0	24,9	90 x 130	ECG2WWP562M◊F130ΔΔΔΔ
	6 800	30	15	0,15	5,0	29,4	90 x 157	ECG2WWP682M◊F157ΔΔΔΔ
	8 200	24	12	0,15	5,0	32,2	90 x 157	ECG2WWP822M◊F157ΔΔΔΔ
	10 000	20	10	0,15	5,0	36,9	90 x 171	ECG2WWP103M◊F171ΔΔΔΔ
500 (550) 2H	1 500	148	74	0,15	5,0	8,6	64 x 96	ECG2HWP152M◊D096ΔΔΔΔ
	1 800	132	62	0,15	5,0	10,0	64 x 115	ECG2HWP182M◊D115ΔΔΔΔ
	2 200	102	51	0,15	5,0	11,7	64 x 130	ECG2HWP222M◊D130ΔΔΔΔ
	2 700	82	41	0,15	5,0	15,0	77 x 115	ECG2HWP272M◊E115ΔΔΔΔ
	3 300	68	34	0,15	5,0	17,5	77 x 130	ECG2HWP332M◊E130ΔΔΔΔ
	3 900	58	29	0,15	5,0	20,2	77 x 143	ECG2HWP392M◊E143ΔΔΔΔ
	4 700	48	24	0,15	5,0	21,8	90 x 130	ECG2HWP472M◊F130ΔΔΔΔ
	5 600	40	20	0,15	5,0	25,3	90 x 157	ECG2HWP562M◊F157ΔΔΔΔ
	6 800	32	16	0,15	5,0	29,0	90 x 171	ECG2HWP682M◊F171ΔΔΔΔ

9 000h at 105°C

- Longer Life at 105°C
- Highest Professional Power Application



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +105
Voltage Range (V)	350 ~ 450
Capacitance Range (µF)	1 000 ~ 15 000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.
Stability at Low Temperature (Capacitance Ratio at 120Hz)	$C_{-25°C} / C_{+20°C} \geq 0,7$
Fast Charge-Discharge	Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	9 000h	> 200 000h	5 000h	5 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 10% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 130% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 50°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement
Terminal and Construction	The terminal version has an impact on the current capability and mechanical behavior (vibration). For high current applications the terminals C,D and E are preferred, see page 139.					

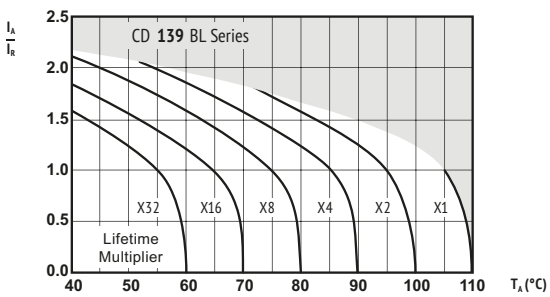
SCREW

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	≥ 10 kHz
Coefficient	0,80	1,00	1,10	1,30	1,40

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

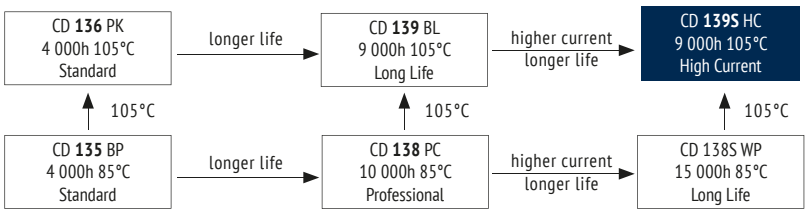
SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 138
350 (400) 2V	1 000	259	69	0,15	3,5	3,9	51 x 75	ECG2VBL102M◊C075ΔΔΔΔ
	1 200	215	65	0,15	4,2	4,2	51 x 75	ECG2VBL122M◊C075ΔΔΔΔ
	1 500	172	55	0,15	5,0	5,2	51 x 96	ECG2VBL152M◊C096ΔΔΔΔ
	1 800	143	43	0,15	5,0	5,7	51 x 96	ECG2VBL182M◊C096ΔΔΔΔ
	2 200	117	30	0,15	5,0	7,1	51 x 130	ECG2VBL222M◊C130ΔΔΔΔ
	2 700	96	27	0,15	5,0	7,7	64 x 96	ECG2VBL272M◊D096ΔΔΔΔ
	3 300	78	23	0,15	5,0	9,1	64 x 115	ECG2VBL332M◊D115ΔΔΔΔ
	3 900	66	19	0,15	5,0	10,4	64 x 130	ECG2VBL392M◊D130ΔΔΔΔ
	4 700	55	15	0,15	5,0	12,2	64 x 155	ECG2VBL472M◊D155ΔΔΔΔ
		55	16	0,15	5,0	11,5	77 x 115	ECG2VBL472M◊E115ΔΔΔΔ
	5 600	46	13	0,15	5,0	14,6	64 x 195	ECG2VBL562M◊D195ΔΔΔΔ
		46	14	0,15	5,0	13,1	77 x 130	ECG2VBL562M◊E130ΔΔΔΔ
	6 800	38	13	0,15	5,0	15,5	77 x 155	ECG2VBL682M◊E155ΔΔΔΔ
	8 200	31	11	0,15	5,0	18,1	90 x 157	ECG2VBL822M◊F157ΔΔΔΔ
	10 000	26	10	0,15	5,0	19,9	90 x 157	ECG2VBL103M◊F157ΔΔΔΔ
	12 000	22	8	0,15	5,0	23,8	90 x 196	ECG2VBL123M◊F196ΔΔΔΔ
	15 000	17	6	0,15	5,0	28,8	90 x 236	ECG2VBL153M◊F236ΔΔΔΔ
400 (450) 2G	1 000	215	70	0,15	4,0	3,9	51 x 75	ECG2GBL102M◊C075ΔΔΔΔ
	1 200	179	64	0,15	4,8	4,6	51 x 96	ECG2GBL122M◊C096ΔΔΔΔ
	1 500	143	54	0,15	5,0	5,6	51 x 115	ECG2GBL152M◊C115ΔΔΔΔ
		143	54	0,15	5,0	5,6	51 x 115	ECG2GBL152M◊C115ΔΔΔΔ
	1 800	119	43	0,15	5,0	6,4	51 x 130	ECG2GBL182M◊C130ΔΔΔΔ
	2 200	98	41	0,15	5,0	6,9	64 x 96	ECG2GBL222M◊D096ΔΔΔΔ
	2 700	80	38	0,15	5,0	8,2	64 x 115	ECG2GBL272M◊D115ΔΔΔΔ
	3 300	65	29	0,15	5,0	9,5	64 x 130	ECG2GBL332M◊D130ΔΔΔΔ
	3 900	55	26	0,15	5,0	11,1	64 x 155	ECG2GBL392M◊D155ΔΔΔΔ
		55	28	0,15	5,0	10,4	77 x 115	ECG2GBL392M◊E115ΔΔΔΔ
	4 700	46	22	0,15	5,0	13,4	64 x 195	ECG2GBL472M◊D195ΔΔΔΔ
		46	22	0,15	5,0	12,0	77 x 130	ECG2GBL472M◊E130ΔΔΔΔ
	5 600	39	19	0,15	5,0	14,6	64 x 195	ECG2GBL562M◊D195ΔΔΔΔ
		39	19	0,15	5,0	14,0	77 x 155	ECG2GBL562M◊E155ΔΔΔΔ
	6 800	32	17	0,15	5,0	16,5	90 x 157	ECG2GBL682M◊F157ΔΔΔΔ
	8 200	26	15	0,15	5,0	18,1	90 x 157	ECG2GBL822M◊F157ΔΔΔΔ
	10 000	22	12	0,15	5,0	21,7	90 x 196	ECG2GBL103M◊F196ΔΔΔΔ
	12 000	18	8	0,15	5,0	25,8	90 x 236	ECG2GBL123M◊F236ΔΔΔΔ
450 (500) 2W	1 000	215	70	0,15	4,5	4,2	51 x 96	ECG2WBL102M◊C096ΔΔΔΔ
	1 200	179	66	0,15	5,0	5,0	51 x 115	ECG2WBL122M◊C115ΔΔΔΔ
	1 500	143	54	0,15	5,0	5,9	51 x 130	ECG2WBL152M◊C130ΔΔΔΔ
	1 800	119	44	0,15	5,0	6,3	64 x 96	ECG2WBL182M◊D096ΔΔΔΔ
	2 200	98	42	0,15	5,0	7,4	64 x 115	ECG2WBL222M◊D115ΔΔΔΔ
	2 700	80	40	0,15	5,0	8,6	64 x 130	ECG2WBL272M◊D130ΔΔΔΔ
		80	42	0,15	5,0	8,7	77 x 115	ECG2WBL272M◊E115ΔΔΔΔ
	3 300	65	31	0,15	5,0	10,2	64 x 155	ECG2WBL332M◊D155ΔΔΔΔ
		65	35	0,15	5,0	10,1	77 x 130	ECG2WBL332M◊E130ΔΔΔΔ
	3 900	55	28	0,15	5,0	12,3	64 x 195	ECG2WBL392M◊D195ΔΔΔΔ
	4 700	46	25	0,15	5,0	12,9	77 x 155	ECG2WBL472M◊E155ΔΔΔΔ
	5 600	38	22	0,15	5,0	15,4	77 x 195	ECG2WBL562M◊E195ΔΔΔΔ
		38	24	0,15	5,0	14,9	90 x 157	ECG2WBL562M◊F157ΔΔΔΔ
	6 800	32	21	0,15	5,0	18,0	90 x 196	ECG2WBL682M◊F196ΔΔΔΔ
	8 200	27	18	0,15	5,0	19,8	90 x 196	ECG2WBL822M◊F196ΔΔΔΔ
	10 000	22	16	0,15	5,0	23,6	90 x 236	ECG2WBL103M◊F236ΔΔΔΔ

9 000h at 105°C

- Longer Life at 105°C for Professional Industry Application
- Improved Current Capability



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +105
Voltage Range (V)	350 ~ 450
Capacitance Range (µF)	1 000 ~ 15 000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.
Stability at Low Temperature (Capacitance Ratio at 120Hz)	$C_{-25°C} / C_{+20°C} \geq 0,7$
Fast Charge-Discharge	Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	9 000h	> 200 000h	5 000h	5 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 10% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 130% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R 1,4 x I_R 50°C	U_R I_R 105°C	U_R I_R = 0 105°C IEC 60384	U_R = 0 I_R = 0 105°C	After test: U_R to be applied for 30 min > 24h before measurement
Terminal and Construction	The terminal version has an impact on the current capability and mechanical behavior (vibration). For high current applications the terminals C,D and E are preferred, see page 139.					

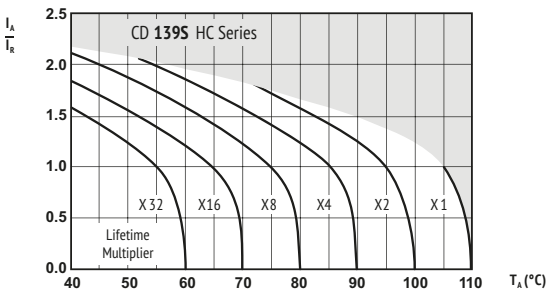
SCREW

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	≥ 10 kHz
Coefficient	0,80	1,00	1,10	1,30	1,40

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

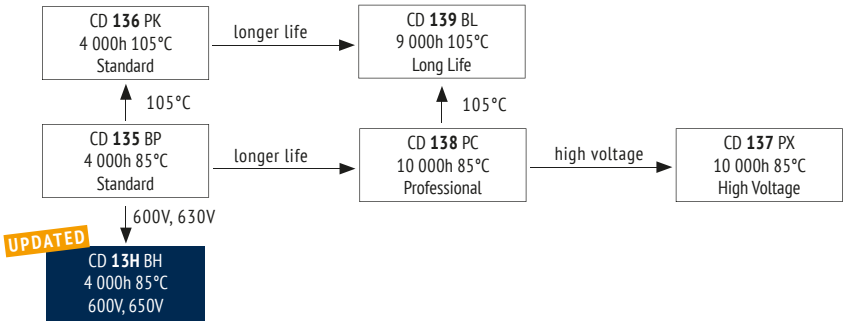
SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 105°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 138
350 (400) 2V	3 300	55	23	0,15	5,0	14,4	64 x 115	ECG2VHC332M◊D115ΔΔΔΔ
	3 900	46	19	0,15	5,0	16,6	64 x 130	ECG2VHC392M◊D130ΔΔΔΔ
	4 700	39	17	0,15	5,0	19,8	64 x 155	ECG2VHC472M◊D155ΔΔΔΔ
		39	17	0,15	5,0	19,1	77 x 115	ECG2VHC472M◊E115ΔΔΔΔ
	5 600	32	14	0,15	5,0	21,9	77 x 130	ECG2VHC562M◊E130ΔΔΔΔ
	6 800	27	12	0,15	5,0	26,2	77 x 155	ECG2VHC682M◊E155ΔΔΔΔ
	8 200	22	11	0,15	5,0	29,3	90 x 157	ECG2VHC822M◊F157ΔΔΔΔ
	10 000	18	10	0,15	5,0	32,3	90 x 157	ECG2VHC103M◊F157ΔΔΔΔ
	12 000	15	8	0,15	5,0	39,0	90 x 196	ECG2VHC123M◊F196ΔΔΔΔ
400 (450) 2G	2 700	56	28	0,15	5,0	13,1	64 x 115	ECG2GHC272M◊D115ΔΔΔΔ
	3 300	46	23	0,15	5,0	15,2	64 x 130	ECG2GHC332M◊D130ΔΔΔΔ
	3 900	39	21	0,15	5,0	17,9	64 x 155	ECG2GHC392M◊D155ΔΔΔΔ
		39	21	0,15	5,0	18,2	77 x 115	ECG2GHC392M◊E115ΔΔΔΔ
	4 700	32	17	0,15	5,0	20,1	77 x 130	ECG2GHC472M◊E130ΔΔΔΔ
	5 600	27	15	0,15	5,0	23,8	77 x 155	ECG2GHC562M◊E155ΔΔΔΔ
	6 800	22	13	0,15	5,0	26,7	90 x 157	ECG2GHC682M◊F157ΔΔΔΔ
	8 200	18	11	0,15	5,0	29,3	90 x 157	ECG2GHC822M◊F157ΔΔΔΔ
	10 000	15	9	0,15	5,0	35,6	90 x 196	ECG2GHC103M◊F196ΔΔΔΔ
450 (500) 2W	2 200	69	38	0,15	5,0	11,8	64 x 115	ECG2WHC222M◊D115ΔΔΔΔ
	2 700	56	31	0,15	5,0	13,7	64 x 130	ECG2WHC272M◊D130ΔΔΔΔ
		56	31	0,15	5,0	14,5	77 x 115	ECG2WHC272M◊E115ΔΔΔΔ
	3 300	46	23	0,15	5,0	16,5	64 x 155	ECG2WHC332M◊D155ΔΔΔΔ
		46	25	0,15	5,0	16,9	77 x 130	ECG2WHC332M◊E130ΔΔΔΔ
	4 700	32	18	0,15	5,0	21,7	77 x 155	ECG2WHC472M◊E155ΔΔΔΔ
	5 600	27	16	0,15	5,0	26,4	77 x 195	ECG2WHC562M◊E195ΔΔΔΔ
		27	16	0,15	5,0	24,2	90 x 157	ECG2WHC562M◊F157ΔΔΔΔ
	6 800	22	14	0,15	5,0	29,5	90 x 196	ECG2WHC682M◊F196ΔΔΔΔ
	8 200	19	12	0,15	5,0	32,4	90 x 196	ECG2WHC822M◊F196ΔΔΔΔ

4 000h at 85°C

- Extreme High Voltage
- High Ripple Current
- Power Supplies & Inverters



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-25 ~ +85
Voltage Range (V)	600, 650
Capacitance Range (µF)	1 000 ~ 5 600
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.
Fast Charge-Discharge	Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	4 000h	> 65 000h	2 000h	2 000h	500h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 10% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 130% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,2 x I_R 40°C	U_R I_R 85°C	U_R I_R = 0 85°C IEC 60384	U_R = 0 I_R = 0 85°C	After test: U_R to be applied for 30 min > 24h before measurement

Terminal and Construction	The terminal version has an impact on the current capability and mechanical behavior (vibration). For high current applications the terminals C,D and E are preferred, see page 139.
Optional	Longer Lifetimes available on request (Series CD **13P** HP)

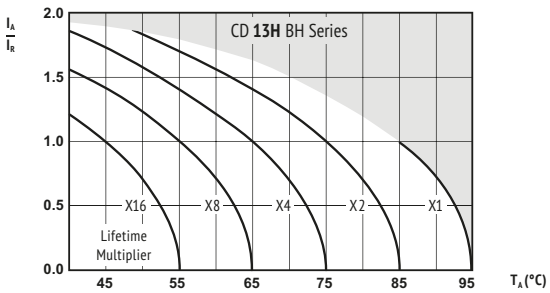
SCREW

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	≥ 10 kHz
Coefficient	0,80	1,00	1,10	1,30	1,40

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

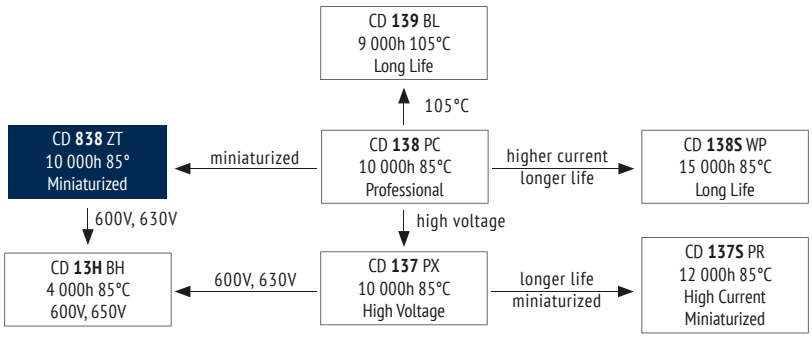
This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 138
600 (650) 2S	1 200	242	121	0,25	5,0	7,7	64 x 96	ECG2SBH122M◊D096ΔΔΔΔ
	1 500	224	112	0,25	5,0	9,3	64 x 115	ECG2SBH152M◊D115ΔΔΔΔ
	1 800	194	97	0,25	5,0	10,1	77 x 96	ECG2SBH182M◊E096ΔΔΔΔ
	2 200	162	81	0,25	5,0	12,0	77 x 115	ECG2SBH222M◊E115ΔΔΔΔ
	2 700	132	66	0,25	5,0	14,0	77 x 130	ECG2SBH272M◊E130ΔΔΔΔ
	3 300	88	44	0,25	5,0	16,4	77 x 155	ECG2SBH332M◊E155ΔΔΔΔ
		88	44	0,25	5,0	16,4	90 x 131	ECG2SBH332M◊F131ΔΔΔΔ
	3 900	74	37	0,25	5,0	17,8	90 x 131	ECG2SBH392M◊F131ΔΔΔΔ
	4 700	62	31	0,25	5,0	21,0	90 x 157	ECG2SBH472M◊F157ΔΔΔΔ
	5 600	56	28	0,25	5,0	24,5	90 x 196	ECG2SBH562M◊F196ΔΔΔΔ
650 (700) S6	1 000	300	150	0,30	5,0	6,0	64 x 130	ECGS6BH102M◊D130ΔΔΔΔ
	1 200	266	133	0,30	5,0	6,7	77 x 115	ECGS6BH122M◊E115ΔΔΔΔ
	1 500	212	106	0,30	5,0	8,1	77 x 130	ECGS6BH152M◊E130ΔΔΔΔ
	1 800	176	88	0,30	5,0	9,8	77 x 155	ECGS6BH182M◊E155ΔΔΔΔ
	2 200	144	72	0,30	5,0	10,7	90 x 131	ECGS6BH222M◊F131ΔΔΔΔ
	2 700	128	64	0,30	5,0	12,8	90 x 157	ECGS6BH272M◊F157ΔΔΔΔ
	3 300	106	53	0,30	5,0	14,7	90 x 171	ECGS6BH332M◊F171ΔΔΔΔ
	3 900	94	47	0,30	5,0	17,9	90 x 196	ECGS6BH392M◊F196ΔΔΔΔ
	4 700	78	39	0,30	5,0	21,6	90 x 196	ECGS6BH472M◊F196ΔΔΔΔ
	5 600	70	35	0,30	5,0	24,9	101 x 220	ECGS6BH562M◊G220ΔΔΔΔ

SCREW

10 000h at 85°C

- Long Life
- High Reliability
- High Currents for High Professional Applications and High Power Inverter
- Miniaturized



ITEM	CHARACTERISTICS
Operating Temperature Range (°C)	-40 ~ +85
Voltage Range (V)	350 ~ 450
Capacitance Range (µF)	470 ~ 15 000
Capacitance Tolerance (20°C, 120Hz)	± 20%
Leakage Current	After 5 minutes at 20°C application of rated voltage, leakage current is not more than specified in table.
Stability at Low Temperature (Capacitance Ratio at 120Hz)	$C_{-25°C} / C_{+20°C} \geq 0{,}7$
Fast Charge-Discharge	**Please contact Jianghai for an appropriate choice of the capacitor or possible technical adaptions, esp. for applications like: Welding, Photoflash, Servo motors, X-Ray**

The usage at lower temperatures than indicated may be possible. Please contact the Jianghai Europe sales office for approval.

ITEM	USEFUL LIFE		LOAD LIFE	ENDURANCE TEST	SHELF LIFE	
Lifetime	10 000h	> 100 000h	5 000h	5 000h	1 000h	
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value	
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 10% of initial value	Within ± 20% of initial value	
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 130% of specified value	Not more than 200% of specified value	
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R 1,4 x I_R 40°C	U_R I_R 85°C	U_R $I_R = 0$ 85°C IEC 60384	$U_R = 0$ $I_R = 0$ 85°C	After test: U_R to be applied for 30 min > 24h before measurement

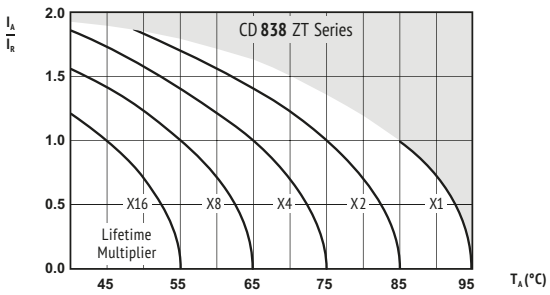
Terminal and Construction	The terminal version has an impact on the current capability and mechanical behavior (vibration). For high current applications the terminals C,D and E are preferred, see page 139.
Optional	Self-extinguishing Electrolyte on request

MULTIPLIER FOR RIPPLE CURRENT (FREQUENCY COEFFICIENT)

Frequency	50Hz	120Hz	300Hz	1kHz	≥ 10 kHz
Coefficient	0,80	1,00	1,10	1,30	1,40

Multipliers for typical operating conditions.

MULTIPLIER FOR LIFETIME (LIFETIME DIAGRAM)



I_A = actual ripple current at 120Hz,
I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature & ripple current load

ENVIRONMENTAL

The products are RoHS, WEEE and REACh compliant. The detailed version please see seperate "Environmental Certificates" document or www.jianghai-europe.com

SAFETY FACTOR

This diagram includes a safety margin. In many cases the allowed current capability/lifetime may be increased. For details and approvals please contact the Jianghai Europe sales office.

SCREW

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 138
350 (400) 2V	1 000	199	120	0,15	3,5	5,6	51 x 80	ECG2VZT102M◊C080ΔΔΔΔ
	1 500	133	55	0,15	5,0	8,5	64 x 105	ECG2VZT152M◊D105ΔΔΔΔ
	2 200	91	30	0,15	5,0	9,1	51 x 96	ECG2VZT222M◊C096ΔΔΔΔ
		91	30	0,15	5,0	9,4	64 x 105	ECG2VZT222M◊D105ΔΔΔΔ
	3 300	61	23	0,15	5,0	13,0	64 x 130	ECG2VZT332M◊D130ΔΔΔΔ
		61	23	0,15	5,0	11,0	77 x 105	ECG2VZT332M◊E105ΔΔΔΔ
	4 700	43	16	0,15	5,0	14,0	77 x 105	ECG2VZT472M◊E105ΔΔΔΔ
		43	16	0,15	5,0	18,0	77 x 143	ECG2VZT472M◊E143ΔΔΔΔ
	6 800	30	13	0,15	5,0	20,0	77 x 143	ECG2VZT682M◊E143ΔΔΔΔ
	10 000	20	10	0,15	5,0	21,4	77 x 143	ECG2VZT103M◊E143ΔΔΔΔ
		20	10	0,15	5,0	27,0	77 x 220	ECG2VZT103M◊E220ΔΔΔΔ
		20	9	0,15	5,0	20,5	90 x 105	ECG2VZT103M◊F105ΔΔΔΔ
	15 000	14	10	0,15	5,0	24,9	77 x 145	ECG2VZT153M◊E145ΔΔΔΔ
		14	6	0,15	5,0	35,0	90 x 220	ECG2VZT153M◊F220ΔΔΔΔ
	18 000	12	6	0,15	5,0	28,7	77 x 220	ECG2VZT183M◊E222ΔΔΔΔ
400 (450) 2G	1 000	199	82	0,15	4,0	5,0	51 x 80	ECG2GZT102M◊C080ΔΔΔΔ
	1 500	133	50	0,15	5,0	6,7	51 x 80	ECG2GZT152M◊C080ΔΔΔΔ
	2 200	91	28	0,15	5,0	8,0	51 x 105	ECG2GZT222M◊C105ΔΔΔΔ
		91	28	0,15	5,0	9,2	64 x 96	ECG2GZT222M◊D096ΔΔΔΔ
		91	28	0,15	5,0	9,5	64 x 105	ECG2GZT222M◊D105ΔΔΔΔ
		91	28	0,15	5,0	10,0	77 x 105	ECG2GZT222M◊E105ΔΔΔΔ
	3 300	61	21	0,15	5,0	12,2	64 x 105	ECG2GZT332M◊D105ΔΔΔΔ
		61	21	0,15	5,0	14,5	64 x 115	ECG2GZT332M◊D115ΔΔΔΔ
		61	21	0,15	5,0	11,8	77 x 100	ECG2GZT332M◊E100ΔΔΔΔ
		61	21	0,15	5,0	13,5	77 x 105	ECG2GZT332M◊E105ΔΔΔΔ
		61	21	0,15	5,0	15,0	77 x 143	ECG2GZT332M◊E143ΔΔΔΔ
	3 900	52	19	0,15	5,0	20,7	77 x 121	ECG2GZT392M◊E121ΔΔΔΔ
	4 700	43	15	0,15	5,0	14,5	77 x 105	ECG2GZT472M◊E105ΔΔΔΔ
		43	15	0,15	5,0	18,4	77 x 143	ECG2GZT472M◊E143ΔΔΔΔ
	5 600	36	14	0,15	5,0	21,0	77 x 116	ECG2GZT562M◊E116ΔΔΔΔ
		36	18	0,15	5,0	19,0	90 x 105	ECG2GZT562M◊F105ΔΔΔΔ
	6 800	30	13	0,15	5,0	19,4	77 x 143	ECG2GZT682M◊E143ΔΔΔΔ
		30	13	0,15	5,0	29,0	90 x 145	ECG2GZT682M◊F145ΔΔΔΔ
	8 200	25	12	0,15	5,0	20,0	77 x 143	ECG2GZT822M◊E143ΔΔΔΔ
		25	12	0,15	5,0	25,0	77 x 170	ECG2GZT822M◊E170ΔΔΔΔ
	10 000	20	10	0,15	5,0	17,8	77 x 143	ECG2GZT103M◊E143ΔΔΔΔ
		20	10	0,15	5,0	26,0	77 x 195	ECG2GZT103M◊E195ΔΔΔΔ
		20	10	0,15	5,0	26,7	77 x 220	ECG2GZT103M◊E220ΔΔΔΔ
		20	10	0,15	5,0	35,7	90 x 220	ECG2GZT103M◊F220ΔΔΔΔ
	12 000	17	8	0,15	5,0	31,0	77 x 220	ECG2GZT123M◊E220ΔΔΔΔ
	15 000	14	6	0,15	5,0	36,0	90 x 220	ECG2GZT153M◊F220ΔΔΔΔ
	18 000	9	5	0,15	5,0	38,5	90 x 196	ECG2GZT183M◊F196ΔΔΔΔ
420 (470) 2X	3 300	61	21	0,15	5,0	12,4	64 x 105	ECG2XZT332M◊D105ΔΔΔΔ
		61	21	0,15	5,0	14,5	64 x 115	ECG2XZT332M◊D115ΔΔΔΔ
		61	21	0,15	5,0	13,5	77 x 105	ECG2XZT332M◊E105ΔΔΔΔ
	3 900	52	19	0,15	5,0	20,7	77 x 121	ECG2XZT392M◊E121ΔΔΔΔ
	4 700	43	16	0,15	5,0	18,0	77 x 105	ECG2XZT472M◊E105ΔΔΔΔ
		43	16	0,15	5,0	18,0	77 x 143	ECG2XZT472M◊E143ΔΔΔΔ
	10 000	20	10	0,15	5,0	28,0	77 x 220	ECG2XZT103M◊E220ΔΔΔΔ

U_{RDC} (Surge Voltage) Code (V)	C_R Rated Capacitance (µF)	ESR_{max} Equivalent Series Resistance 20°C 120Hz (mΩ)	ESR_{typ} Equivalent Series Resistance 20°C 120Hz (mΩ)	tanδ Dissipation Factor 20°C 120Hz	I_{leak} Leakage Current (mA)	I_{RAC} Rated Ripple Current 85°C 120Hz (Arms)	Size øD x L (mm)	ORDER CODE ◊ = mounting style (stud) ΔΔΔΔ = terminal style Details: Page 138
450 (500) 2W	470	424	250	0,15	2,1	4,5	51 x 75	ECG2WZT471M◊C075ΔΔΔΔ
	680	293	185	0,15	3,1	4,9	51 x 80	ECG2WZT681M◊C080ΔΔΔΔ
	1 000	199	93	0,15	4,5	6,4	51 x 105	ECG2WZT102M◊C105ΔΔΔΔ
	1 500	133	56	0,15	5,0	7,1	51 x 105	ECG2WZT152M◊C105ΔΔΔΔ
		133	56	0,15	5,0	10,0	51 x 115	ECG2WZT152M◊C115ΔΔΔΔ
	1 800	111	45	0,15	5,0	8,5	64 x 105	ECG2WZT182M◊D105ΔΔΔΔ
	2 200	91	35	0,15	5,0	9,0	64 x 96	ECG2WZT222M◊D096ΔΔΔΔ
		91	35	0,15	5,0	12,0	64 x 130	ECG2WZT222M◊D130ΔΔΔΔ
		91	35	0,15	5,0	13,1	77 x 143	ECG2WZT222M◊E143ΔΔΔΔ
	2 700	74	30	0,15	5,0	12,7	64 x 130	ECG2WZT272M◊D130ΔΔΔΔ
	3 300	61	30	0,15	5,0	14,0	64 x 130	ECG2WZT332M◊D130ΔΔΔΔ
		61	30	0,15	5,0	13,2	77 x 105	ECG2WZT332M◊E105ΔΔΔΔ
		61	30	0,15	5,0	13,8	77 x 115	ECG2WZT332M◊E115ΔΔΔΔ
		61	30	0,15	5,0	16,1	77 x 143	ECG2WZT332M◊E143ΔΔΔΔ
	3 900	52	20	0,15	5,0	13,3	64 x 140	ECG2WZT392M◊D140ΔΔΔΔ
	4 700	43	16	0,15	5,0	14,0	64 x 143	ECG2WZT472M◊D143ΔΔΔΔ
		43	16	0,15	5,0	17,0	64 x 195	ECG2WZT472M◊D195ΔΔΔΔ
		43	16	0,15	5,0	15,0	77 x 115	ECG2WZT472M◊E115ΔΔΔΔ
		43	16	0,15	5,0	21,0	77 x 143	ECG2WZT472M◊E143ΔΔΔΔ
		43	16	0,15	5,0	21,0	77 x 143	ECG2WZT472M◊E143ΔΔΔΔ
	5 600	36	13	0,15	5,0	16,0	77 x 130	ECG2WZT562M◊E130ΔΔΔΔ
		36	13	0,15	5,0	17,5	77 x 143	ECG2WZT562M◊E143ΔΔΔΔ
	6 800	30	11	0,15	5,0	18,0	77 x 143	ECG2WZT682M◊E143ΔΔΔΔ
		30	11	0,15	5,0	19,1	77 x 155	ECG2WZT682M◊E155ΔΔΔΔ
		30	11	0,15	5,0	21,0	77 x 220	ECG2WZT682M◊E220ΔΔΔΔ
		30	11	0,15	5,0	20,0	90 x 145	ECG2WZT682M◊F145ΔΔΔΔ
	8 200	25	12	0,15	5,0	28,2	77 x 170	ECG2WZT822M◊E170ΔΔΔΔ
		25	12	0,15	5,0	28,5	90 x 157	ECG2WZT822M◊F157ΔΔΔΔ
	10 000	20	9	0,15	5,0	26,0	77 x 220	ECG2WZT103M◊E220ΔΔΔΔ
		20	9	0,15	5,0	28,0	90 x 171	ECG2WZT103M◊F171ΔΔΔΔ
	12 000	17	8	0,15	5,0	33,0	90 x 170	ECG2WZT123M◊F170ΔΔΔΔ
		17	8	0,15	5,0	34,0	90 x 220	ECG2WZT123M◊F220ΔΔΔΔ
	15 000	14	7	0,15	5,0	34,0	90 x 220	ECG2WZT153M◊F220ΔΔΔΔ
		14	6	0,15	5,0	36,0	90 x 236	ECG2WZT153M◊F236ΔΔΔΔ
	18 000	14	9	0,15	5,0	36,5	90 x 180	ECG2WZT183M◊F180ΔΔΔΔ
	22 000	9,1	6	0,15	5,0	21,0	90 x 236	ECG2WZT223M◊F236ΔΔΔΔ

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SCREW

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