

RJ Series 85°C

Features

Long useful life

Applications

- ◆ Professional power supplies
- ◆ Frequency converters
- ◆ Uninterruptible power supplies

Features

- ◆ Long useful life
- ◆ High reliability
- ◆ All-welded construction ensures reliable electrical contact
- ◆ Version with low-inductance design available
- ◆ Self-extinguishing electrolyte
- ◆ RoHS-compatible

Construction

- ◆ Charge-discharge proof, polar
- ◆ Aluminum case with insulating sleeve
- ◆ Poles with screw terminal connections
- ◆ Mounting with ring clips, clamps or threaded stud

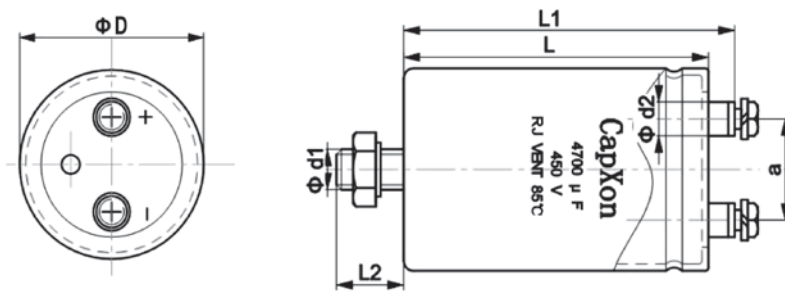


Specifications

Item	Performance Characteristics					
Rated voltage V_R	350... 450 V DC					
Surge voltage V_S	1.15 V_R (for $V_R \leq 315$ V) or 1.10 V_R (for $V_R > 315$ V)					
Rated capacitance C_R	1500 ... 22000 μ F					
Capacitance tolerance	$\pm 20\%$					
tan δ (at 20°C · 120Hz)	Less than the value under table(%)					
	ΦD	35	51	63.5	76.2	89
	WV	15	15	20	20	20
		20	20	25	25	25
Leakage Current I_{leak} (20 °C, 5 min)	$I_{leak} \leq 0.3\mu A * (C * V)^{0.7} + 4\mu A$					
Self-inductance ESL	d = 51 mm: approx. 17 nH					
	d \geq 63.5 mm: approx. 20 nH					
	Capacitors with low-inductance design: d \geq 63.5 mm: approx. 15 nH					
Useful life 85 °C; V_R, I_{AC}^R	> 10000 h	Requirements: $\Delta C/C \leq \pm 50\%$ of initial value ESR \leq 5 times initial specified limit $I_{leak} \leq$ initial specified limit				
Voltage Endurance test 85 °C; V_R	2000 h	Post test requirements: $\Delta C/C \leq \pm 20\%$ of initial value ESR \leq 2 times initial specified limit $I_{leak} \leq$ initial specified limit				
Vibration Resistance test	To IEC 60068-2-6, test Fc:					
	Displacement amplitude 0.75 mm, frequency range 10 ... 55 Hz, acceleration max. 10 g, duration 3X2 h. Capacitor mounted by its body which is rigidly clamped to the work surface.					
Low Temperature Characteristics	Max. impedance ratio at 120 Hz					
	V_R	≤ 400 V	≥ 450 V			
	$Z_{-25^\circ C} / Z_{20^\circ C}$	4	3			
	$Z_{-40^\circ C} / Z_{20^\circ C}$	16	12			
Sectional specification	IEC 60384-4 and JIS-C-5101					

Dimensional drawings

Ring clip/clamp mounting:



M5:Min.reach of screw = 8mm
M6:Min.reach of screw = 12mm

Dimensions

Terminal	Dimensions(mm) with insulating sleeve						
	$D \pm 2$	$L \pm 3$	$L_1 \pm 3$	$L_2 \pm 1$	d_1	$d_2 \text{ max.}$	$a \pm 0.5$
M5	63.5	80~140	86.5~146.5	16	M12	10.3	28.6
M5/M6	76.2/89	100~240	106.4~246.5	16	M12	10.3	31.8
M5/M6	76.2/89	100~240	106.4~246.5	16	M12	17.5	31.8

Packing

Diameter D(mm)	Length L(mm)	Packing (pcs.)
63.5	all	24
76.2	all	15
89	all	12

Accessories

The following items are included in the delivery package, but are not fastened to the capacitors.

	Thread	Maximum torque
For terminal	M5	2 Nm
	M6	2.5 Nm

Case Size

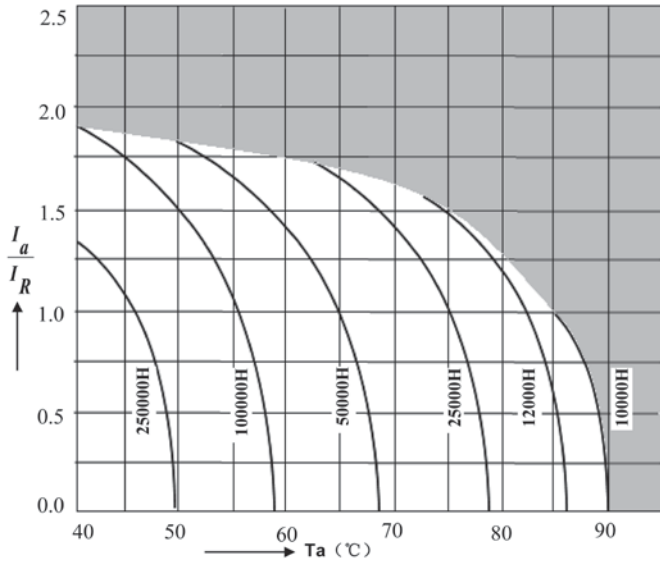
φ DxL(mm)

WV(V) Cap(μF)	350		400		450	
	Size	Ripple	Size	Ripple	Size	Ripple
1500					63.5x80	11.4
2200					63.5x100	12.5
					63.5x105	12.8
					63.5x120	13.5
2700	63.5x80	12.8	63.5x105	10.8	76.2x105	14.6
3300					63.5x120	15.0
	63.5x100	14.2	63.5x100	11.0	63.5x140	16.0
			63.5x120	12.0	76.2x120	17.7
3900	63.5x105	14.6	76.2x100	14.0	76.2x120	18.0
			76.2x105	14.3	76.2x140	19.0
4700	63.5x120	15.0	76.2x100	15.7	76.2x120	18.3
	63.5x140	15.5	76.2x120	17.0	76.2x140	19.6
	76.2x100	19.7			76.2x160	20.5
5600	63.5x140	21.5	76.2x140	18.8	76.2x160	21.0
6800	76.2x120	22.5	76.2x140	22.0	76.2x160	22.0
	76.2x140	24.0	76.2x160	23.0		
	89x100	23.0				
8200	76.2x160	26.0	76.2x160	23.5	76.2x220	25.6
10000	76.2x160	27.5	76.2x160	24.0	76.2x220	26.0
	89x120	26.0	89x130	25.0	89x170	26.0
12000	76.2x180	29.0	89x160	25.5		
	76.2x220	32.0	89x220	28.5		
15000	89x160	34.0	76.2x230	33.0		
	89x220	39.0	89x180	32.0		
			89x220	35.0		
18000	89x220	40.0	89x240	38.0		
22000	89x230	42.0				

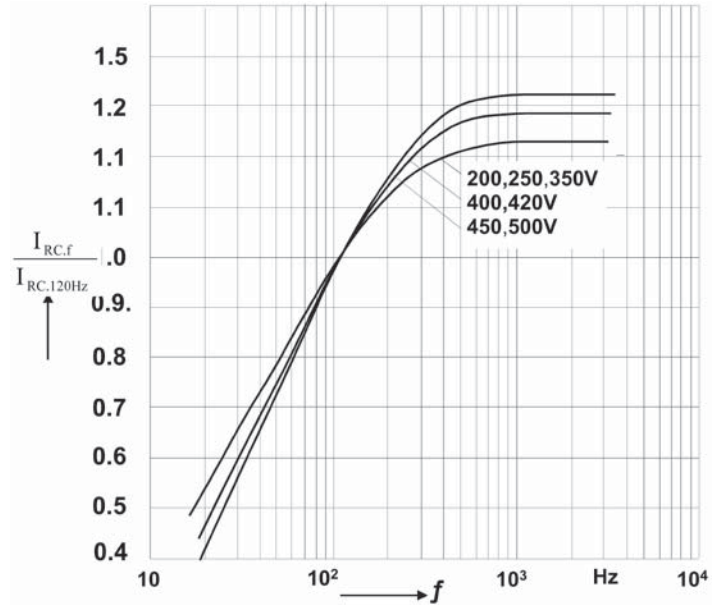
Ripple Current(A,rms) at 85°C 120Hz

Useful life

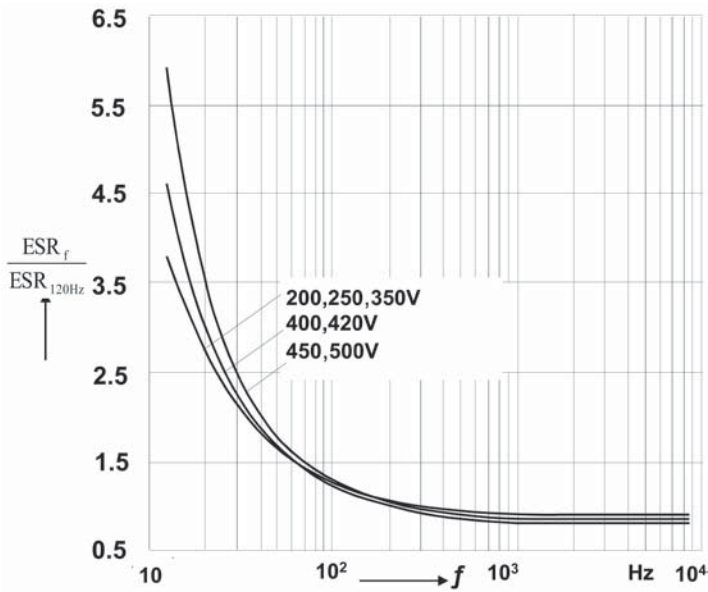
depending on ambient temperature T_a versus under ripple current operating conditions



Frequency factor of permissible ripple current I_{RC} versus frequency f



Frequency characteristics of ESR Typical behavior



Impedance Z versus frequency f

