

EP series

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- High temperature, low ESR, High ripple current capability
- Rated voltage :6.3~35V
- Endurance:2,000hours at 125°C
- Applications: Lamps Power, LED Power, Service Equipment.
- ROHS compliant
- Halogen Free compliant



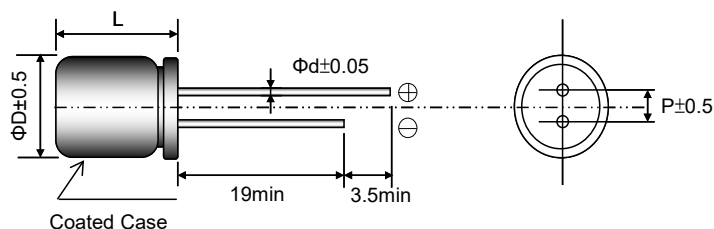
SPECIFICATIONS

Items	Conditions	Characteristics	
Category Temperature Range	—	-55 to +125°C	
Rated Voltage Range	—	6.3 ~ 35V	
Capacitance Tolerance	at 20°C, 120Hz	±20%(M)	
Surge Voltage	at 125°C	Rated voltage ×1.15V	
Leakage Current	at 20°C after 2 minutes	$I \leq 0.2CV$ or $300(\mu A)$ Whichever is greater measured, after 2 minutes application of rated working voltage at +20°C. Please see the attached characteristics list	
Dissipation Factor ($\tan \delta$)	at 20°C, 120Hz	Please see the attached characteristics list	
Low Temperature Characteristics (Max. Impedance Ratio)	at -55°C, 100kHz	$Z(-55^\circ C)/Z(+20^\circ C)$	≤ 1.25
	at -25°C, 100kHz	$Z(-25^\circ C)/Z(+20^\circ C)$	≤ 1.15
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2,000 hours at 125°C.	Appearance	No significant damage.
		Capacitance change	$\leq \pm 20\%$ of the initial value.
		DF($\tan \delta$)	$\leq 150\%$ of the initial specified value.
		ESR	$\leq 150\%$ of the initial specified value.
		Leakage current	$\leq$ The initial specified value.
Damp Heag (Steady State)	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to store at 60°C, 90 to 95% RH for 1,000 hours ,without DC applied.	Appearance	No significant damage.
		Capacitance change	$\leq \pm 20\%$ of the initial value.
		DF($\tan \delta$)	$\leq 150\%$ of the initial specified value.
		ESR	$\leq 150\%$ of the initial specified value.
		Leakage current	$\leq$ The initial specified value.
Surge Voltage	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltages specified at 105°C for 30 seconds through a protective resistor ($R=1k\Omega$) and discharge for 5 minutes 30 seconds	Appearance	No significant damage.
		Capacitance change	$\leq \pm 20\%$ of the initial value.
		DF($\tan \delta$)	$\leq 150\%$ of the initial specified value.
		ESR	$\leq 150\%$ of the initial specified value.
		Leakage current	$\leq$ The initial specified value.

※ Note: If any doubt arises, measure the leakage current after following voltage treatment.
 Voltage treatment : DC rated voltage are applied to the capacitors for 120 minutes at 125°C.

MARKING AND DIMENSIONS

Polarity Marking (Cathode) — Series Code
 Rated Capacitance
 Rated Voltage



(Unit:mm)

Size	6.3x8	8x8	8x11.5	10x10	10x11.5
ΦD	6.3	8.0	8.0	10.0	10.0
L	L+1.5 max	L+1.5 max	L+1.5 max	L+1.0 max	L+1.5 max
Φd	0.5	0.6	0.6	0.6	0.6
P	2.5	3.5	3.5	5.0	5.0

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STANDARD RATINGS

Rated Voltage (S.V.)	Cap (μ F)	Size Code DxL	Leakage current (μ A) max.	ESR (m Ω) max. 100k to 300kHz / 20°C	Rated Ripple Current (mA rms)		D.F. (tan δ) max. 120Hz / 20°C
					105°C 100kHz	125°C 100kHz	
6.3 (7.2)	470	6.3x8	592	25	3800	1267	0.12
	680	8x8	857	25	4000	1333	0.12
	1000	8x11.5	1260	20	4200	1400	0.12
	1200	10x10	1512	25	5500	1833	0.12
	1800	10x11.5	2268	20	6100	2033	0.12
10 (11.5)	330	6.3x8	660	25	3700	1233	0.12
	560	8x8	1120	25	4000	1333	0.12
	680	8x11.5	1360	20	4500	1300	0.12
	820	10x10	1640	25	4200	1400	0.12
	1000	10x10	2000	25	4500	1500	0.12
	1200	10x11.5	2400	20	5600	1867	0.12
16 (18.4)	220	6.3x8	704	25	2850	950	0.12
	330	8x8	1056	25	4000	1333	0.12
	470	8x11.5	1504	20	4500	1500	0.12
	680	10x10	2176	25	5100	1700	0.12
	820	10x11.5	2624	20	5600	1867	0.12
20 (23.0)	120	6.3x8	480	25	2510	837	0.12
	220	8x8	880	25	2750	917	0.12
	270	8x11.5	1080	20	2950	983	0.12
	330	10x10	1320	25	4700	1567	0.12
	470	10x11.5	1880	20	5950	1983	0.12
25 (28.8)	100	6.3x8	500	40	2380	793	0.12
	180	8x8	900	30	2900	967	0.12
	220	8x11.5	1100	28	3500	1167	0.12
	330	10x10	1650	30	4250	1417	0.12
	470	10x11.5	2350	28	4500	1500	0.12
35 (40.3)	56	6.3x8	392	60	2300	767	0.12
	100	8x8	700	50	2500	833	0.12
	120	8x11.5	840	30	2950	983	0.12
	150	10x10	1050	30	2950	983	0.12
	220	10x11.5	1540	28	3400	1133	0.12

FREQUENCY COEFFICIENT FOR RIPPLE CURRENT

Frequency	120Hz $\leq$ f < 1kHz	1kHz $\leq$ f < 10kHz	10kHz $\leq$ f < 100kHz	100kHz $\leq$ f < 500kHz
Coefficient	0.05	0.3	0.7	1.0