



EP Series

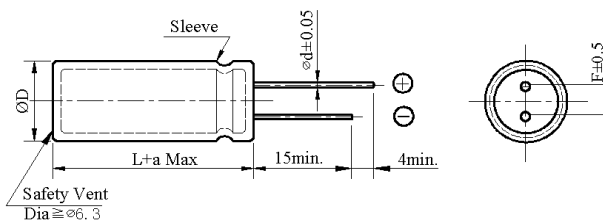
- Miniaturized, Low ESR and Low impedance
- Suitable for use in high ripple current capability
- Load life 4,000 hours at 105°C



SPECIFICATIONS

Item	Performance Characteristics												
Category Temperature Range	-40 ~ +105°C												
Working Voltage Range	10 ~ 100Vdc												
Capacitance Range	68 ~ 1,800 µF												
Capacitance Tolerance	±20% (at 25°C and 120Hz)												
Dissipation Factor (tanδ) (at 25°C, 120Hz)	<table border="1"> <tr> <td>Rated Voltage (V)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>100</td> </tr> <tr> <td>tanδ(Max)</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.08</td> </tr> </table>	Rated Voltage (V)	10	16	25	35	100	tanδ(Max)	0.19	0.16	0.14	0.12	0.08
	Rated Voltage (V)	10	16	25	35	100							
tanδ(Max)	0.19	0.16	0.14	0.12	0.08								
The above values should be increased by 0.02 for every additional 1000µF													
Leakage Current	$I = 0.01CV$ or $3\mu A$ whichever is greater I : Leakage current (µA) C : Rated capacitance (µF) V : Rated voltage (V) Impress the rated voltage for 2 minutes												
Low Temperature Characteristics Impedance Ratio(MAX)	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>100</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>6</td> <td>6</td> <td>5</td> <td>4</td> <td>3</td> </tr> </table>	Rated voltage (V)	10	16	25	35	100	Z(-40°C)/Z(+20°C)	6	6	5	4	3
	Rated voltage (V)	10	16	25	35	100							
Z(-40°C)/Z(+20°C)	6	6	5	4	3								
(at 120Hz)													
Endurance	The following requirements shall be satisfied when the capacitor are restored to 25°C after the rated voltage applied for 4,000 hours at 105°C.												
	<table border="1"> <tr> <td>Capacitance change</td> <td>≒ ±25% of the initial value</td> </tr> <tr> <td>Dissipation factor(tanδ)</td> <td>≒ 200% of the specified value</td> </tr> <tr> <td>Leakage current</td> <td>≒ specified value</td> </tr> </table>	Capacitance change	≒ ±25% of the initial value	Dissipation factor(tanδ)	≒ 200% of the specified value	Leakage current	≒ specified value						
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	Dissipation factor(tanδ)	≒ 200% of the specified value											
Leakage current	≒ specified value												
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 25°C after exposing them for 500 hours at 105°C without voltage applied.												
<table border="1"> <tr> <td>Capacitance change</td> <td>≒ ±25% of the initial value</td> </tr> <tr> <td>Dissipation factor(tanδ)</td> <td>≒ 200% of the specified value</td> </tr> <tr> <td>Leakage current</td> <td>≒ 200% of the specified value</td> </tr> </table>	Capacitance change	≒ ±25% of the initial value	Dissipation factor(tanδ)	≒ 200% of the specified value	Leakage current	≒ 200% of the specified value							
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Others	Conforms to JIS-C-5101-4 (1998), characteristic W												

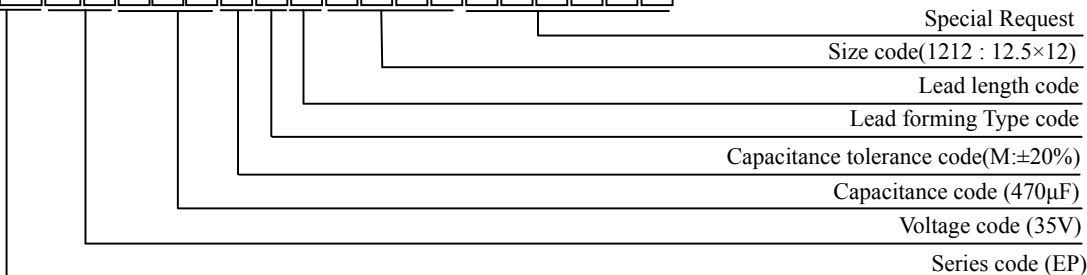
DIMENSIONS (mm)



ΦD	12.5×12
ΦD	ΦD + 0.5 Max
Φd	0.6
F	5.0
a	L + 1.0 Max

PART NUMBER SYSTEM(Example : 35V 470µF)

E P I V 4 7 I M N N I 2 I 2





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◆ **Case size & Permissible rated ripple current**

Nominal Capacitance (uF)	10V		16V		25 V	
	Case Size $\Phi D \times L$ (mm)	Max. Rated ripple current @105°C 100kHz (mA rms)	Case Size $\Phi D \times L$ (mm)	Max. Rated ripple current @105°C 100kHz (mA rms)	Case Size $\Phi D \times L$ (mm)	Max. Rated ripple current @105°C 100kHz (mA rms)
560					12.5×12	1150
680					12.5×12	1200
1000			12.5×12	1300		
1200			12.5×12	1400		
1500	12.5×12	1260				
1800	12.5×12	1300				

Nominal Capacitance (uF)	35V		100 V	
	Case Size $\Phi D \times L$ (mm)	Max. Rated ripple current @105°C 100kHz (mA rms)	Case Size $\Phi D \times L$ (mm)	Max. Rated ripple current @105°C 100kHz (mA rms)
68			12.5×12	350
82			12.5×12	420
390	12.5×12	1050		
470	12.5×12	1100		

◆ **RIPPLE CURRENT MULTIPLIERS**

Frequency Multipliers

Vdc	Cap(uF)	Frequency (Hz)			
		120	1K	10K	100K
10 ~100	≥68	0.30	0.65	0.85	1.00
	82 ~ 220	0.50	0.70	0.90	1.00
	330 ~ 820	0.60	0.75	0.95	1.00
	1000 ~ 1800	0.70	0.80	0.98	1.00