

# Features

- 105°C, 10000 hours, extra low impedance, high ripple current.
- Suit for use in switching power supplies, LCD TV, LED, special control power supply and smart meter.

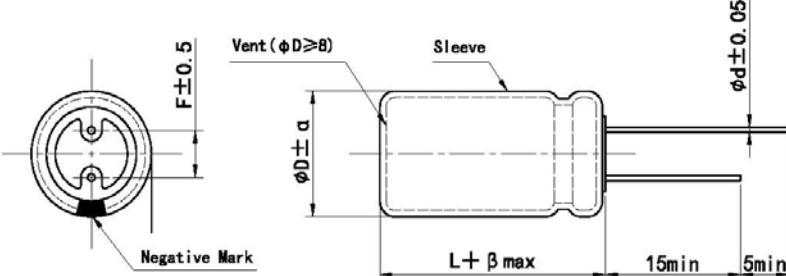


## Specifications

Items	Characteristics																						
Rated Voltage Range	6.3~50V.DC																						
Operating Temperature Range	−40°C~+105°C																						
Capacitance Tolerance	$\pm 20\% (M)$ (25°C, 100 or 120Hz)																						
Leakage Current	$I \leq 0.01CV$ or $3(\mu A)$ Where, I:Max.leakage current( $\mu A$ ), C:Nominal capacitance( $\mu F$ ), V:Rated voltage(V) After 2 minutes at 25°C.																						
Dissipation Factor (tanδ)	(25°C, 100 or 120Hz) <table border="1"> <tr> <td>Rated voltage(<math>V_{dc}</math>)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>tanδ(Max.)</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> </tr> </table> When nominal capacitance exceeds 1000 $\mu F$ , add 0.02 to the value above for each 1000 $\mu F$ increase.							Rated voltage( $V_{dc}$ )	6.3	10	16	25	35	50	tanδ(Max.)	0.22	0.19	0.16	0.14	0.12	0.10		
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Low Temperature Characteristics (Max.Impedance Ratio)	Impedance ratio at 100Hz or 120Hz shall not exceed the values given in the below table. <table border="1"> <tr> <td><math>Z_{25^\circ C}/Z_{+20^\circ C}</math></td> <td><math>\leq 2</math></td> </tr> <tr> <td><math>Z_{40^\circ C}/Z_{+20^\circ C}</math></td> <td><math>\leq 3</math></td> </tr> </table>							$Z_{25^\circ C}/Z_{+20^\circ C}$	$\leq 2$	$Z_{40^\circ C}/Z_{+20^\circ C}$	$\leq 3$												
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Shelf Life	After storage at 105°C for 1000 hours, the capacitors shall meet the following requirements. <table border="1"> <tr> <td>Capacitance Change</td> <td><math>\leq \pm 25\%</math> of the initial value</td> </tr> <tr> <td>D.F. (tanδ)</td> <td><math>\leq 200\%</math> of the initial specified value</td> </tr> <tr> <td>Leakage Current</td> <td><math>\leq</math>the initial specified value</td> </tr> </table>							Capacitance Change	$\leq \pm 25\%$ of the initial value	D.F. (tanδ)	$\leq 200\%$ of the initial specified value	Leakage Current	$\leq$ the initial specified value										
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Load Life	After application of rated voltage with rated ripple current for the specified period of time at +105°C, the following specification shall be satisfied. <table border="1"> <tr> <td>Capacitance Change</td> <td><math>\leq \pm 25\%</math> of the initial value</td> <td>Dia.(mm)</td> <td>Life Time</td> </tr> <tr> <td>D.F. (tanδ)</td> <td><math>\leq 250\%</math> of the initial specified value</td> <td>5~6.3</td> <td>6000 hours</td> </tr> <tr> <td>Leakage Current</td> <td><math>\leq</math>the initial specified value</td> <td>8</td> <td>8000 hours</td> </tr> <tr> <td></td> <td></td> <td>10~18</td> <td>10000 hours</td> </tr> </table>							Capacitance Change	$\leq \pm 25\%$ of the initial value	Dia.(mm)	Life Time	D.F. (tanδ)	$\leq 250\%$ of the initial specified value	5~6.3	6000 hours	Leakage Current	$\leq$ the initial specified value	8	8000 hours			10~18	10000 hours
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Others	Meet Q/RME 128—2010																						

## ◆ Dimensions

mm



D	5	6.3	8	10	13	16	18		
d	0.5			0.6	0.6 (0.8)	0.8			
F	2.0	2.5	3.5	5.0	5.0	7.5			
α	0.5								
β	1.0	2.0							

**Size, Max Ripple Current And Impedance**

Voltage (V)	Cap. (μF)	Size ΦD×L (mm)	tanδ	Z (Ω, 25°C, 100KHz)	I <sub>R</sub> (mAmps, 105°C, 100KHz)
6.3	220	5×11	0.22	0.22	345
	470	6.3×11	0.22	0.094	540
	820	8×12	0.22	0.056	945
	1200	8×16	0.22	0.045	1250
	1200	10×12	0.22	0.039	1330
	1500	8×20	0.22	0.029	1500
	1800	10×16	0.22	0.028	1760
	2200	10×20	0.24	0.020	1960
	2700	10×25	0.24	0.018	2250
	3900	13×20	0.26	0.017	2480
	4700	13×25	0.26	0.015	2900
	5600	13×30	0.28	0.013	3450
	6800	13×35	0.28	0.012	3570
	6800	16×20	0.28	0.015	3250
	8200	16×25	0.30	0.013	3630
	10000	18×25	0.32	0.012	3650
	150	5×11	0.19	0.22	345
	330	6.3×11	0.19	0.094	540
	680	8×12	0.19	0.056	945
10	1000	8×16	0.19	0.045	1250
	1000	10×12	0.19	0.039	1330
	1500	8×20	0.19	0.029	1500
	1500	10×16	0.19	0.028	1760
	1800	10×20	0.19	0.020	1960
	2200	10×25	0.21	0.018	2250
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	150	6.3×11	0.14	0.094	540
	330	8×12	0.14	0.056	945
	470	10×12	0.14	0.039	1330
	560	8×20	0.14	0.029	1500
	680	10×16	0.14	0.028	1760
	820	10×20	0.14	0.020	1960
	1000	10×20	0.14	0.018	2250
35	1500	13×20	0.14	0.017	2480
	1800	13×25	0.14	0.015	2900
	2200	13×30	0.16	0.013	3450
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	2700	18×25	0.14	0.012	3650

**◆ Ripple Current Multiplier**

Frequency Coefficient

Frequency (Hz)	100/120	1K	10K	100K
47~180μF	0.40	0.75	0.90	1.00
220~560μF	0.50	0.85	0.94	1.00
680~1800μF	0.60	0.87	0.95	1.00
2200~3900μF	0.75	0.90	0.95	1.00
4700~10000μF	0.85	0.95	0.98	1.00