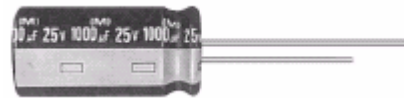


- Load life of 2000 hours at 105°C
- Downsized
- Switch power supply



■ SPECIFICATIONS

Item	Characteristics														
Operating Temperature Range (°C)	-55~+105														
Rated Voltage Range (V)	6.3~50														
Capacitance Tolerance (25°C, 120 Hz)	±20%														
Leakage Current (µA)(25°C)	0.02CV or 3 µA whichever is greater (at 25°C, after 2 minutes) C: Nominal Capacitance (µF) V: Rated Voltage (V)														
Dissipation Factor (25°C, 120 Hz)	<table border="1"> <tr> <td>WV (v)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>tan δ</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> <p>When nominal capacitance is over 1000 µF tan δ shall be added 0.02 to the listed value with increase of every 1000 µF</p>	WV (v)	6.3	10	16	25	35	50	tan δ	0.22	0.19	0.16	0.14	0.12	0.10
WV (v)	6.3	10	16	25	35	50									
tan δ	0.22	0.19	0.16	0.14	0.12	0.10									
Characteristics of Low Temperature	Impedance at -10 °C, 100Hz < 200% of initial specified value at +20°C, 100KHz														
Load Life (+105°C)	<p>After life test at condition stated in the table below, the capacitors shall meet the following requirement.</p> <table border="1"> <tr> <th>Case Size</th> <th>Test time (hours)</th> </tr> <tr> <td>Φ ≤ 8</td> <td>1000</td> </tr> <tr> <td>Φ > 8</td> <td>2000</td> </tr> </table> <p style="text-align: center;">Ripple current applied</p> <table border="1"> <tr> <td>Life Time</td> <td>2000 hours</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value</td> </tr> <tr> <td>Capacitance change</td> <td>within ±20% of the initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value</td> </tr> </table>	Case Size	Test time (hours)	Φ ≤ 8	1000	Φ > 8	2000	Life Time	2000 hours	Leakage Current	Not more than the specified value	Capacitance change	within ±20% of the initial value	Dissipation Factor	Not more than 200% of the specified value
Case Size	Test time (hours)														
Φ ≤ 8	1000														
Φ > 8	2000														
Life Time	2000 hours														
Leakage Current	Not more than the specified value														
Capacitance change	within ±20% of the initial value														
Dissipation Factor	Not more than 200% of the specified value														
Shelf Life (+105°C)	1000 hours. No voltage applied, the capacitor shall meet the specified limits for "load life" After test: (V) to be applied for 30 minutes, 24 to 48 hours before measurement														

■ DIMENSIONS

mm

ΦD	5	6.3	8	10	12.5	16	18
F	2.0	2.5	3.5	5.0		7.5	
Φd	0.5		0.6			0.8	
a	1.0			2.0			

■ MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Freq (Hz)	120	1K	10K	≥100K
Cap(µF)				
22~180	0.40	0.75	0.90	1.0
220~580	0.50	0.85	0.94	1.0
680~1800	0.60	0.87	0.95	1.0
2200~3900	0.75	0.90	0.95	1.0
4700~18000	0.85	0.95	0.98	1.0

Temperature coefficient

Temperature (°C)	+70	+85	+105
Rate Voltage (V)			
Factor	2.0	1.7	1.0

■ STANDARD RATINGS

WV(v) ΦDxL(mm)	6.3				10				16			
	Nominal Capacitance μ F	Max Impedance		Ripple Current (mArms)	Nominal Capacitance μ F	Max Impedance		Ripple Current (mArms)	Nominal Capacitance μ F	Max Impedance		Ripple Current (mArms)
		20°C 100KHz (Ω)	-10°C 100KHz (Ω)			20°C 100KHz (Ω)	-10°C 100KHz (Ω)			20°C 100KHz (Ω)	-10°C 100KHz (Ω)	
5x11.5	150	0.5	1.0	175	100	0.5	1.0	175	47	0.5	1.0	175
6.3x11.5	330	0.25	0.50	290	220	0.25	0.50	290	100	0.25	0.50	290
6.3x15	470	0.18	0.36	400	330	0.18	0.36	400	220	0.18	0.36	400
8x12	680	0.12	0.24	555	470	0.12	0.24	555	330	0.12	0.24	555
8x16	1000	0.090	0.18	730	680	0.090	0.18	730	470	0.090	0.18	730
8x20	1200	0.080	0.16	810	1000	0.080	0.16	810	560	0.080	0.16	810
10x12.5	820	0.090	0.18	760	680	0.090	0.18	760	470	0.090	0.18	760
10x16	1200	0.068	0.136	1050	1000	0.068	0.136	1050	680	0.068	0.136	1050
10x20	1500	0.052	0.104	1220	1200	0.052	0.104	1220	1000	0.052	0.104	1220
10x25	2200	0.045	0.090	1440	1500	0.045	0.090	1440	1200	0.045	0.090	1440
10x30	2700	0.037	0.074	1690	1800	0.037	0.074	1690	1500	0.037	0.074	1690
12.5x20	3300	0.038	0.076	1660	2200	0.038	0.076	1690	1500	0.038	0.076	1660
12.5x25	3900	0.030	0.060	1950	3300	0.030	0.060	1950	2200	0.030	0.060	1950
12.5x30	4700	0.025	0.050	2310	3900	0.025	0.050	2310	2700	0.025	0.050	2310
12.5x35	5600	0.022	0.044	2510	4700	0.022	0.044	2510	3300	0.022	0.044	2510
12.5x40	6800	0.017	0.034	2870	5600	0.017	0.034	2870	3900	0.017	0.034	2870
16x20	5600	0.029	0.058	2210	3900	0.029	0.058	2210	2700	0.029	0.058	2210
16x25	6800	0.022	0.044	2560	5600	0.022	0.044	2560	3900	0.022	0.044	2560
16x30	8200	0.019	0.038	3010	6800	0.019	0.038	3010	4700	0.019	0.038	3010
16x35	10000	0.017	0.034	3150	8200	0.017	0.034	3150	5600	0.017	0.034	3150
16x40	12000	0.015	0.030	3710	10000	0.015	0.030	3710	6800	0.015	0.030	3710
18x20	6800	0.028	0.056	2490	5600	0.028	0.056	2490	3900	0.028	0.056	2490
18x25	10000	0.020	0.040	2740	6800	0.020	0.040	2740	4700	0.020	0.040	2740
18x30	12000	0.018	0.036	3330	8200	0.018	0.036	3330	5600	0.018	0.036	3330
18x35	15000	0.016	0.032	3680	10000	0.016	0.032	3680	8200	0.016	0.032	3680
18x40	18000	0.015	0.030	3800	12000	0.015	0.030	3800	10000	0.015	0.030	3800

Ripple Current: 105°C, 100KHz

■ STANDARD RATINGS

WV (v) ΦDxL(mm)	25				35				50			
	Nominal Capacitance μ F	Max Impedance		Ripple Current (mArms)	Nominal Capacitance μ F	Max Impedance		Ripple Current (mArms)	Nominal Capacitance μ F	Max Impedance		Ripple Current (mArms)
		20°C 100KHz (Ω)	-10°C 100KHz (Ω)			20°C 100KHz (Ω)	-10°C 100KHz (Ω)			20°C 100KHz (Ω)	-10°C 100KHz (Ω)	
5x11.5	47	0.5	1.0	175	33	0.5	1.0	175	22	0.90	1.8	155
6.3x11.5	100	0.25	0.50	290	56	0.25	0.50	290	47	0.45	0.90	260
6.3x15	150	0.18	0.36	400	100	0.18	0.36	400	68	0.31	0.62	360
8x12	220	0.12	0.24	555	150	0.12	0.24	555	100	0.22	0.44	485
8x16	330	0.090	0.18	730	220	0.090	0.18	730	120	0.16	0.32	635
8x20	390	0.080	0.16	810	270	0.080	0.16	810	180	0.12	0.24	730
10x12.5	330	0.090	0.18	760	220	0.090	0.18	760	220	0.16	0.32	620
10x16	470	0.068	0.136	1050	330	0.068	0.136	1050	330	0.13	0.26	850
10x20	680	0.052	0.104	1220	470	0.052	0.104	1220	390	0.088	0.18	1010
10x25	820	0.045	0.090	1440	560	0.045	0.090	1440	390	0.073	0.15	1250
10x30	1000	0.037	0.074	1690	680	0.037	0.074	1690	560	0.054	0.11	1500
12.5x20	1000	0.038	0.076	1660	680	0.038	0.076	1660	680	0.059	0.12	1480
12.5x25	1500	0.030	0.060	1950	1000	0.030	0.060	1950	820	0.044	0.088	1840
12.5x30	1800	0.025	0.050	2310	1200	0.025	0.050	2310	1000	0.039	0.078	2220
12.5x35	2200	0.022	0.044	2510	1500	0.022	0.044	2510	680	0.033	0.066	2290
12.5x40	2700	0.017	0.034	2870	1800	0.017	0.034	2870	1000	0.029	0.058	2500
16x20	1800	0.029	0.058	2210	1200	0.029	0.058	2210	680	0.048	0.096	1840
16x25	2700	0.022	0.044	2560	1800	0.022	0.044	2560	1000	0.034	0.068	2240
16x30	3300	0.019	0.038	3010	2200	0.019	0.038	3010	1200	0.028	0.056	2700
16x35	3900	0.017	0.034	3150	2700	0.017	0.034	3150	1500	0.025	0.050	2800
16x40	4700	0.015	0.030	3710	3300	0.015	0.030	3710	1800	0.021	0.042	3200
18x20	2200	0.028	0.056	2490	1800	0.028	0.056	2490	8200	0.042	0.084	1980
18x25	3300	0.020	0.040	2740	2200	0.020	0.040	2740	1200	0.029	0.058	2610
18x30	3900	0.018	0.036	3330	2700	0.018	0.036	3330	1800	0.025	0.050	3000
18x35	4700	0.016	0.032	3680	3300	0.016	0.032	3680	2200	0.023	0.046	3100
18x40	5600	0.015	0.030	3800	3900	0.015	0.030	3800	2700	0.020	0.040	3400

Ripple Current: 105°C, 100KHz

TYPICAL CURVES

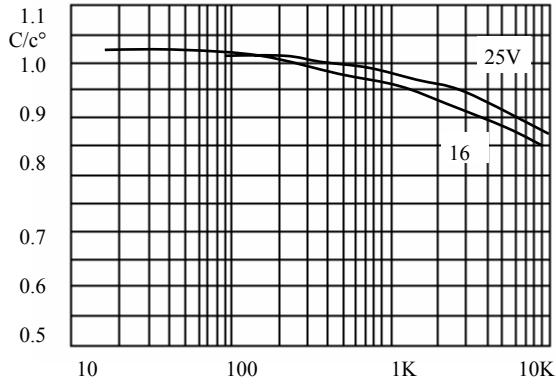


Fig.1 Typical multiplier of capacitance as a function of frequency
 C° = Capacitance at 20° C, 100 Hz

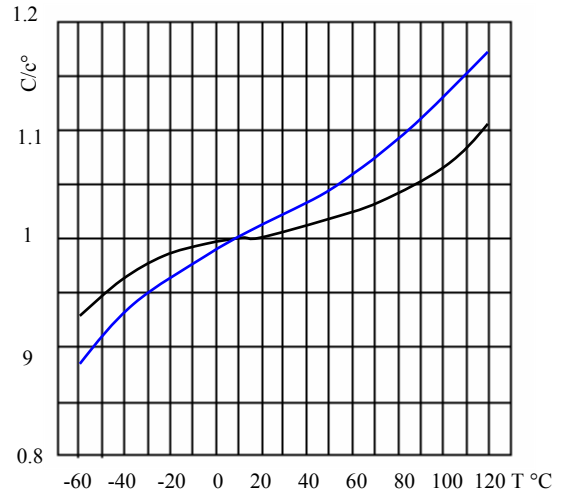


Fig. 2 Typical multiplier of capacitance as a function of temperature
 C° = Capacitance at 20° C, 120 Hz

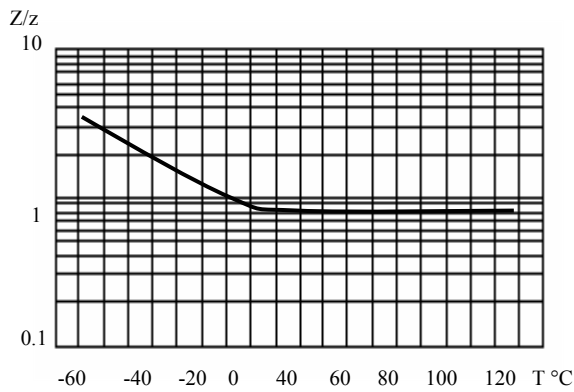


Fig. 3 Typical multiplier of impedance as a function of ambient temperature.
 Z = typical impedance at 20° C, 100KHz

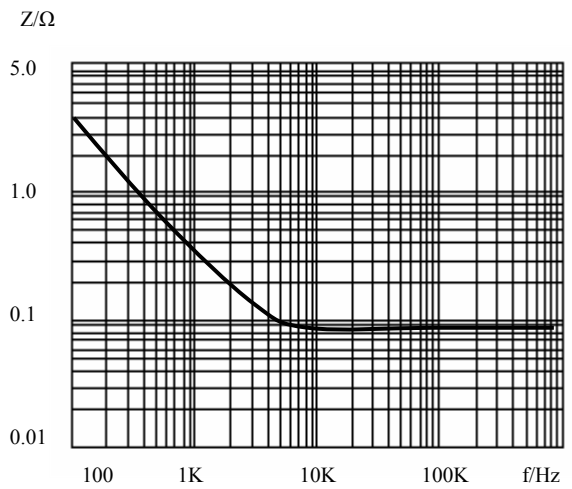


Fig. 4 Typical impedance as a function of frequency