

FEATURES

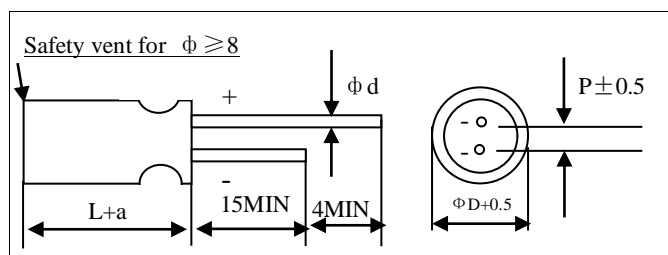
1. Low impedance at 100KHz
2. Enabled high ripple current by a reduction of ESR at high frequency range
2. Load life 2000 hour at 105°C.

SPECIFICATIONS

Item	Performance Characteristics														
Operating Temperature Range	-40 to +105°C														
Rated Working voltage Range	6.3 to 16V														
Nominal Capacitance Range	470 ~4700(uF)														
Capacitance Tolerance	±20% (120Hz, +20°C) (M)														
Leakage Current	$I \leq 0.01CV$ (uA) after 2 minutes Whichever is greater measured with rated working voltage at +20°C														
Dissipation Factor $\tan \delta$ (120Hz+20°C)	<table border="1"> <tr> <td>Working voltage(V)</td> <td>6.3</td> <td>10</td> <td>16</td> </tr> <tr> <td>$\tan \delta$ (max.)</td> <td>0.22</td> <td>0.18</td> <td>0.14</td> </tr> </table> <p>For capacitance value >1000uF add 0.02per another 1000uF</p>	Working voltage(V)	6.3	10	16	$\tan \delta$ (max.)	0.22	0.18	0.14						
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Low Temperature Characteristics	<p>Impedance ratio max. at 120Hz</p> <table border="1"> <tr> <td>Working voltage(V)</td> <td>6.3</td> <td>10</td> <td>16</td> </tr> <tr> <td>Z-25°C/Z+20°C</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C/Z+20°C</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	Working voltage(V)	6.3	10	16	Z-25°C/Z+20°C	2	2	2	Z-40°C/Z+20°C	3	3	3		
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Multiplier for Ripple Current vs. Temperature	<table border="1"> <tr> <td>Temperature °C</td> <td>45</td> <td>60</td> <td>70</td> <td>85</td> <td>95</td> <td>105</td> </tr> <tr> <td>Multiplier</td> <td>2.1</td> <td>1.9</td> <td>1.65</td> <td>1.4</td> <td>1.25</td> <td>1.00</td> </tr> </table>	Temperature °C	45	60	70	85	95	105	Multiplier	2.1	1.9	1.65	1.4	1.25	1.00
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Multiplier	2.1	1.9	1.65	1.4	1.25	1.00									
High temperature Loading	<p>Test conditions</p> <p>Duration : 2000hrs Ambient temperature : +105°C Applied voltage : Rated DC working voltage Post test requirements at +20°C</p> <p>Leakage current : ≤ Initial specified value Capacitance change : ≤ ±25% of initial measured value $\tan \delta$: ≤200% of initial specified value</p>														
Shelf life	<p>Test conditions</p> <p>Duration : 1000hours Ambient temperature : +105°C Applied voltage : (None)</p> <p>Post test requirements at +20°C Same Limits for high temperature loading</p>														
Others	JIS C-5141 JIS C-5102														

CASE SIZE TABLE

Unit:mm



D φ	8	8	10	13
P	3.5	3.5	5.0	5.0
d φ (±0.05)	0.5		0.6	

aMAX	(L<20)1.5
	(L≥20)2.0



Miniature Aluminum Electrolytic Capacitors

Multiplier for Ripple Current vs. Frequency

CAP (uF) \ Hz		50(60)	120	400	1k	10k	50-100K
Multiplier	100 < CAP ≤ 1000	0.58	0.75	0.88	0.92	0.98	1
	1000 ≤ CAP	0.63	0.89	0.91	0.93	0.98	1

STANDARD RATINGS

Voltage Item Cap.(uF) Code		6.3V(0J)			
		Case size φ D×L(mm)	Impedance(Ω MAX.)	Allowable ripple(mA rms)	
			20°C/100KHZ	105°C/100KHz	105°C/120Hz
820	827	8×12	0.041	1038	777
1000	108	8×12	0.040	1192	893
1200	128	8×16	0.033	1358	1206
		8×20	0.025	1705	1517
1500	158	8×20	0.023	1700	1513
		10×13	0.029	1405	1250
2200	228	10×20	0.016	2320	2065
3300	338	10×25	0.014	2546	2266
4700	478	10×30	0.013	2755	2452

Voltage Item Cap.(uF) Code		10V(1A)			
		Case size φ D×L(mm)	Impedance(Ω MAX.)	Allowable ripple(mA rms)	
			20°C/100KHZ	105°C/100KHz	105°C/120Hz
470	477	8×12	0.056	962	720
680	687	8×16	0.045	1038	780
820	827	8×14	0.038	1212	910
1000	108	8×16	0.035	1358	1019
		10×13	0.033	1402	1052
1200	128	10×17	0.030	1525	1357
1500	158	8×20	0.027	1703	1516
		10×17	0.024	1820	1620
2200	228	10×25	0.018	2548	2268
3300	338	10×30	0.015	2756	2453

Voltage Item Cap.(uF) Code		16V(1C)			
		Case size φ D×L(mm)	Impedance(Ω MAX.)	Allowable ripple(mA rms)	
			20°C/100KHZ	105°C/100KHz	105°C/120Hz
470	477	8×12	0.041	1036	777
680	687	10×13	0.030	1405	1054
820	827	10×17	0.026	1608	1206
1000	108	10×17	0.022	1820	1365
1200	128	10×20	0.019	2147	1911



Miniature Aluminum Electrolytic Capacitors

1500	158	10×20	0.016	2320	2065
2200	228	13×25	0.013	2982	2654