



Aluminum Electrolytic Capacitors

RJA

Features

- 105°C, wide temperature range
- Suitable for high reliability products
- RoHS Compliance

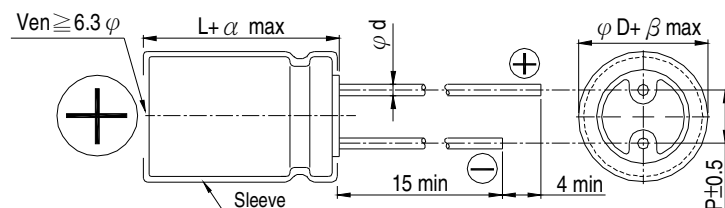


Sleeve & Marking Color: Deep Purple & White

SPECIFICATIONS

Items	Performance																																															
Category Temperature Range	-55℃ ~ +105℃																																															
Capacitance Tolerance	±20% (at 120Hz, 20℃)																																															
Leakage Current (at 20℃)	I = 0.01CV or 3 (μ A) whichever is greater (after 2 minutes) Where, C = rated capacitance in μ F V = rated DC working voltage in V																																															
Dissipation Factor (Tan δ at 120 Hz, 20℃)	<table><tr><td>Rated Voltage</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td></tr><tr><td>Tan δ (max)</td><td>0.23</td><td>0.20</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.09</td><td>0.08</td></tr></table> When the capacitance exceeds 1,000 μ F, 0.02 shall be added every 1,000 μ F increase.	Rated Voltage	6.3	10	16	25	35	50	63	100	Tan δ (max)	0.23	0.20	0.16	0.14	0.12	0.10	0.09	0.08																													
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Low Temperature Characteristics (at 120Hz)	Impedance ratio shall not exceed the values given in the table below. <table><tr><td colspan="2">Rated Voltage</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td></tr><tr><td rowspan="4">Impedance Ratio</td><td>Z(-25℃)</td><td>φ D < 16</td><td>4</td><td>3</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td></tr><tr><td>/Z(+20℃)</td><td>φ D ≥ 16</td><td>5</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>3</td></tr><tr><td>Z(-40℃)</td><td>φ D < 16</td><td>8</td><td>6</td><td>4</td><td>4</td><td>4</td><td>3</td><td>3</td></tr><tr><td>/Z(+20℃)</td><td>φ D ≥ 16</td><td>12</td><td>8</td><td>6</td><td>4</td><td>3</td><td>3</td><td>6</td></tr></table>	Rated Voltage		6.3	10	16	25	35	50	63	100	Impedance Ratio	Z(-25℃)	φ D < 16	4	3	3	2	2	2	2	/Z(+20℃)	φ D ≥ 16	5	4	3	2	2	2	3	Z(-40℃)	φ D < 16	8	6	4	4	4	3	3	/Z(+20℃)	φ D ≥ 16	12	8	6	4	3	3	6
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	/Z(+20℃)	φ D ≥ 16	5	4	3	2	2	2	3																																							
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Endurance	<table><tr><td>Test Time</td><td>2,000 Hrs</td></tr><tr><td>Capacitance Change</td><td>Within ±20%of initial value</td></tr><tr><td>Dissipation Factor</td><td>Less than 200% of specified value</td></tr><tr><td>Leakage Current</td><td>Within specified value</td></tr></table> * The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied with rated ripple current for 2,000 hours at 105℃.	Test Time	2,000 Hrs	Capacitance Change	Within ±20%of initial value	Dissipation Factor	Less than 200% of specified value	Leakage Current	Within specified value																																							
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Shelf Life Test	<table><tr><td>Test Time</td><td>1,000 Hrs</td></tr><tr><td>Capacitance Change</td><td>Within ±20%of initial value</td></tr><tr><td>Dissipation Factor</td><td>Less than 200% of specified value</td></tr><tr><td>Leakage Current</td><td>Within specified value</td></tr></table> * The above specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 105℃ without voltage applied.	Test Time	1,000 Hrs	Capacitance Change	Within ±20%of initial value	Dissipation Factor	Less than 200% of specified value	Leakage Current	Within specified value																																							
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Ripple Current & Frequency Multipliers	<table><tr><td>Freq.(Hz) Cap.(μ F)</td><td>60 (50)</td><td>120</td><td>500</td><td>1k</td><td>10k up</td></tr><tr><td>Under 100</td><td>0.70</td><td>1.00</td><td>1.30</td><td>1.40</td><td>1.50</td></tr><tr><td>100 < C ≤ 1,000</td><td>0.75</td><td>1.00</td><td>1.20</td><td>1.30</td><td>1.35</td></tr><tr><td>1,000 up above</td><td>0.80</td><td>1.00</td><td>1.10</td><td>1.12</td><td>1.15</td></tr></table>	Freq.(Hz) Cap.(μ F)	60 (50)	120	500	1k	10k up	Under 100	0.70	1.00	1.30	1.40	1.50	100 < C ≤ 1,000	0.75	1.00	1.20	1.30	1.35	1,000 up above	0.80	1.00	1.10	1.12	1.15																							
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DIAGRAM OF DIMENSIONS



LEAD SPACING AND DIAMETER

Unit: mm

ϕD	5	6.3	8	10	12.5	16	18	22
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10
ϕd	0.5		0.6			0.8		1.0
α	1.0			1.5				2.0
β	0.5							



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Dimension: $\phi D \times L(\text{mm})$

Ripple Current: mA/rms at 120 Hz, 105°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V. DC		6.3V (0J)				10V (1A)				16V (1C)				25V (1E)			
μF	Contents	$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA
10	100									5×11	36			5×11	40		
22	220									5×11	58			5×11	68		
33	330									5×11	71			5×11	78		
47	470					5×11	76			5×11	90			5×11	97		
100	101	5×11	103			5×11	105			6.3×11	133	5×11	110	6.3×11	142		
220	221	6.3×11	160	5×11	140	6.3×11	175	5×11	150	8×11.5	215	6.3×11	180	8×11.5	236		
330	331	8×11.5	219	6.3×11	190	8×11.5	245	6.3×11	200	8×11.5	260			10×12.5	335	8×11.5	330
470	471	8×11.5	261	6.3×11	230	8×11.5	290	6.3×11	250	10×12.5	370	8×11.5	310	10×16	440	10×12.5	380
1,000	102	10×12.5	455	8×11.5	380	10×16	550	10×12.5	460	10×20	640	10×16	560	12.5×20	770	10×20	680
2,200	222	10×20	750			12.5×20	860	10×20	760	12.5×25	1,000	12.5×20	920	16×25	1,170	12.5×25	1,090
3,300	332	12.5×20	920	10×20	840	12.5×20	1,100			16×25	1,300	12.5×25	1,170	16×31.5	1,460	16×25	1,400
4,700	472	16×25	1,330	12.5×20	1,090	16×25	1,400	12.5×25	1,260	16×31.5	1,600	16×25	1,480	18×35.5	1,780	16×31.5	1,710

V. DC		35V (1V)				50V (1H)				63V (1J)				100V (2A)			
μF	Contents	$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA
0.1	0R1					5×11	1.3			5×11	2.1			5×11	2.4		
0.22	R22					5×11	2.9			5×11	3.2			5×11	3.8		
0.33	R33					5×11	4.3			5×11	5.4			5×11	5.8		
0.47	R47					5×11	7.1			5×11	7.1			5×11	7.1		
1	010					5×11	13			5×11	15			5×11	15		
2.2	2R2					5×11	20			5×11	30			5×11	26		
3.3	3R3					5×11	30			5×11	31			5×11	31		
4.7	4R7					5×11	33			5×11	36			6.3×11	40		
10	100	5×11	45			5×11	50			5×11	54			8×11.5	66	6.3×11	54
22	220	5×11	71			5×11	78			6.3×11	86			8×11.5	111	6.3×11	93
33	330	6.3×11	90	5×11	85	6.3×11	96	5×11	90	8×11.5	141	6.3×11	100	10×12.5	183	8×11.5	144
47	470	6.3×11	105	5×11	90	8×11.5	130	6.3×11	117	8×11.5	151	6.3×11	129	10×16	193	10×12.5	204
100	101	8×11.5	170	6.3×11	150	8×11.5	188			10×12.5	235			12.5×20	320	10×20	285
220	221	10×12.5	300	8×11.5	270	10×20	355	10×16	335	10×20	400	10×16	360	16×25	507	13×25	440
330	331	10×16	400	10×12.5	350	10×20	460	10×16	410	12.5×20	520	10×20	490	16×31.5	674	16×25	478
470	471	10×20	520	10×16	460	12.5×25	610	10×20	530	12.5×25	720	12.5×20	665	18×35.5	880	16×31.5	688
1,000	102	12.5×25	920	12.5×20	830	16×25	1,080	12.5×25	980	16×31.5	1,260	16×25	1,190				
2,200	222	16×31.5	1,340	16×25	1,260	18×35.5	1,530	16×35.5	1,470								
3,300	332	18×35.5	1,650	16×35.5	1,610	22×40	1,707	18×35.5	1,650								
4,700	472	18×40	1,900	18×35.5	1,900												