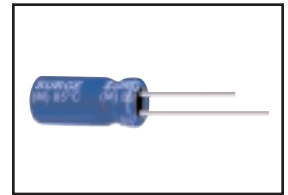




**ALUMINUM ELECTROLYTIC CAPACITORS  
NON-POLARIZED TYPE**

**FEATURES**

- STANDARD SIZED COMPONENTS
- DESIGNED TO PERFORM RELIABLY IN DC VOLTAGE APPLICATIONS WHERE POLARITY REVERSALS ARE FREQUENT

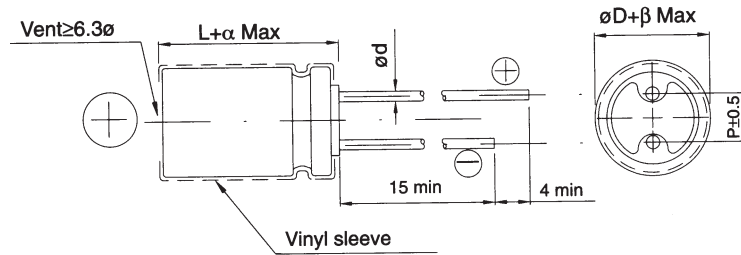


**SPECIFICATIONS**

Items	Performance																																				
<b>Operating Temperature Range</b>	-40°C~+85°C																																				
<b>Capacitance Tolerance</b>	±20% (at 120Hz, 20°C)																																				
<b>Leakage Current (at 20 °C)</b>	I = 0.03CV or 4(μA) whichever is greater (after 2 minutes) Where, C = rated capacitance in μF. V = rated DC working voltage in V.																																				
<b>Dissipation Factor (Tan δ at 120 Hz, 20 °C)</b>	<table border="1" style="margin-left: auto; margin-right: auto;"> <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> <td>160</td> <td>200</td> <td>250</td> </tr> <tr> <td>Tan δ (max)</td> <td>0.25</td> <td>0.22</td> <td>0.18</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.15</td> <td>0.15</td> <td>0.20</td> </tr> </table> <p>When the capacitance exceeds 1000μF, 0.02 shall be added every 1000 μF increase.</p>	Rated Voltage	6.3	10	16	25	35	50	63	100	160	200	250	Tan δ (max)	0.25	0.22	0.18	0.16	0.14	0.12	0.10	0.09	0.15	0.15	0.20												
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<b>Low Temperature Characteristics (at 120 Hz)</b>	<p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <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> <td>160</td> <td>200</td> <td>250</td> </tr> <tr> <td>Impedance Ratio</td> <td>Z(-25°C)/Z(+20°C)</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> </tr> <tr> <td></td> <td>Z(-40°C)/Z(+20°C)</td> <td>8</td> <td>6</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>4</td> <td>6</td> </tr> </table>	Rated Voltage	6.3	10	16	25	35	50	63	100	160	200	250	Impedance Ratio	Z(-25°C)/Z(+20°C)	4	3	3	2	2	2	2	2	2	3		Z(-40°C)/Z(+20°C)	8	6	6	4	4	3	3	3	4	6
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<b>Load Life Test (after application of the rated voltage at 85 °C, the polarity inverted every 250hrs.)</b>	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Test Time</td> <td>2000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>≤ ± 20%</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> <p>*The above specifications shall be satisfied when the capacitors are restored to 20 °C after the rated voltage applied for 2000 hrs at 85°C.</p>	Test Time	2000 Hrs	Capacitance Change	≤ ± 20%	Dissipation Factor	Less than 200% of specified value	Leakage Current	Within specified value																												
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<b>Shelf Life Test</b>	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Test Time</td> <td>1000 Hrs</td> </tr> <tr> <td>Capacitance Change</td> <td>≤ ± 20%</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> <p>*The above specifications shall be satisfied when the capacitors are restored to 20 °C after exposing them for 1000 hrs at 85 °C without voltage applied.</p>	Test Time	1000 Hrs	Capacitance Change	≤ ± 20%	Dissipation Factor	Less than 200% of specified value	Leakage Current	Within specified value																												
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<b>Standards</b>	Satisfies Characteristic W of JIS C 5141																																				



**DIAGRAM OF DIMENSIONS**



Unit: mm

**LEAD SPACING AND DIAMETER**

ø	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
ø d	0.5		0.6		0.8		
α	1.0			1.5			
β	0.5						

**DIMENSION & PERMISSIBLE RIPPLE CURRENT**

Dimension: ø D x L(mm)  
Ripple Current: mA/rms at 120 Hz, 85 °C

μF	code	6.3V (0J)		10V (1A)		16V (1C)		25V (1V)		35V (1V)		50V (1H)		63V (1J)		100V (2A)	
		ø D x L	mA	ø D x L	mA	ø D x L	mA	ø D x L	mA	ø D x L	mA	ø D x L	mA	ø D x L	mA	ø D x L	mA
0.1	0R1											5 x 11	4	5 x 11	5	5 x 11	5
0.22	R22											5 x 11	7	5 x 11	8	5 x 11	8
0.33	R33											5 x 11	8	5 x 11	10	5 x 11	10
0.47	R47											5 x 11	10	5 x 11	12	5 x 11	12
1	010											5 x 11	15	5 x 11	18	6.3 x 11	23
2.2	2R2											5 x 11	23	5 x 11	25	6.3 x 11	26
3.3	3R3											5 x 11	28	5 x 11	31	6.3 x 11	32
4.7	4R7											5 x 11	33	6.3 x 11	37	8 x 11.5	44
10	100					5 x 11	40	5 x 11	42	6.3 x 11	46	8 x 11.5	55	8 x 11.5	61	8 x 11.5	66
22	220	5 x 11	50	5 x 11	56	5 x 11	59	6.3 x 11	63	8 x 11.5	76	8 x 11.5	82	10 x 12.5	108	10 x 16	118
33	330	5 x 11	62	5 x 11	69	6.3 x 11	73	6.3 x 11	78	8 x 11.5	94	8 x 11.5	104	10 x 16	137	10 x 20	152
47	470	5 x 11	74	6.3 x 11	83	6.3 x 11	88	8 x 11.5	105	8 x 11.5	115	10 x 16	150	10 x 20	172	13 x 20	193
100	101	6.3 x 11	108	8 x 11.5	137	8 x 11.5	149	10 x 12.5	182	10 x 16	202	10 x 20	229	13 x 20	267	16 x 25	315
220	221	8 x 11.5	181	10 x 12.5	242	10 x 16	265	10 x 16	294	13 x 20	335	13 x 25	378	16 x 25	443	16 x 35.5	498
330	331	8 x 11.5	236	10 x 16	308	10 x 20	340	13 x 20	384	13 x 25	429	16 x 25	496	16 x 31.5	653		
470	471	10 x 16	329	10 x 20	385	13 x 20	432	13 x 25	479	16 x 25	548	16 x 31.5	614	18 x 40	787		
1000	102	10 x 20	502	13 x 20	598	13 x 25	659	16 x 31.5	775	16 x 35.5	852	18 x 40	1048				
2200	222	13 x 25	829	16 x 25	992	16 x 35.5	1114	18 x 40	1347								

μF	code	160V (2C)		200V (2D)		250V (2E)	
		ø D x L	mA	ø D x L	mA	ø D x L	mA
0.47	R47	5 x 11	10	6.3 x 11	10	6.3 x 11	12
1	010	6.3 x 11	14	8 x 11.5	16	8 x 11.5	16
2.2	2R2	8 x 11.5	23	8 x 11.5	28	10 x 12.5	32
3.3	3R3	8 x 11.5	33	10 x 12.5	33	10 x 16	46
4.7	4R7	10 x 12.5	39	10 x 16	46	10 x 20	62
10	100	10 x 16	75	10 x 20	83	10 x 20	99
22	220	13 x 20	146	13 x 20	146	13 x 25	172
33	330	13 x 20	179	13 x 25	197	16 x 25	211
47	470	13 x 25	235				