



SA Series

Features

- 105°C, 1,000 hours assured, 7mm height with low leakage current
- Use in very compact high temperature industrial equipment
- RoHS Compliance

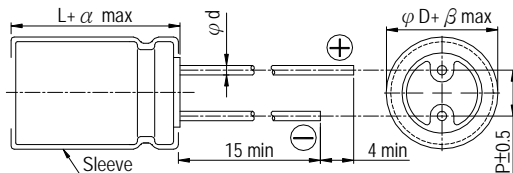


Sleeve & Marking Color: Purple & Black

Specifications

Items	Performance																														
Category Temperature Range	-40°C ~ +105°C																														
Capacitance Tolerance	±20% (at 120Hz, 20°C)																														
Leakage Current (at 20°C)	I = 0.002CV or 0.4 (µA) whichever is greater (after 2 minutes) Where, C = rated capacitance in µF V = rated DC working voltage in V																														
Dissipation Factor (Tanδ at 120Hz, 20°C)	<table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> </tr> </thead> <tbody> <tr> <td>Tanδ (max)</td> <td>0.35</td> <td>0.24</td> <td>0.21</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> </tr> </tbody> </table>	Rated Voltage	4	6.3	10	16	25	35	50	63	Tanδ (max)	0.35	0.24	0.21	0.16	0.14	0.12	0.10	0.10												
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Low Temperature Characteristics (at 120 Hz)	<p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <thead> <tr> <th colspan="2">Rated Voltage</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> </tr> </thead> <tbody> <tr> <td>Impedance</td> <td>Z(-25°C)/Z(+20°C)</td> <td>6</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>Ratio</td> <td>Z(-40°C)/Z(+20°C)</td> <td>12</td> <td>10</td> <td>8</td> <td>6</td> <td>5</td> <td>4</td> <td>4</td> <td>3</td> </tr> </tbody> </table>	Rated Voltage		4	6.3	10	16	25	35	50	63	Impedance	Z(-25°C)/Z(+20°C)	6	4	3	3	2	2	2	2	Ratio	Z(-40°C)/Z(+20°C)	12	10	8	6	5	4	4	3
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Endurance	<table border="1"> <thead> <tr> <th>Test Time</th> <th>1,000 Hrs</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>* The above Specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied with rated ripple current for 1,000 hours at 105°C.</p>	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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Shelf Life Test	Test time: 500 hours; other items are the same as those for the Endurance.																														
Ripple Current & Frequency Multipliers	<table border="1"> <thead> <tr> <th rowspan="2">Cap.(µF)</th> <th colspan="6">Freq.(Hz)</th> </tr> <tr> <th>60 (50)</th> <th>120</th> <th>500</th> <th>1k</th> <th>10k up</th> </tr> </thead> <tbody> <tr> <td>Under 47</td> <td>0.70</td> <td>1.00</td> <td>1.20</td> <td>1.30</td> <td>1.45</td> </tr> <tr> <td>100</td> <td>0.80</td> <td>1.00</td> <td>1.10</td> <td>1.15</td> <td>1.20</td> </tr> </tbody> </table>	Cap.(µF)	Freq.(Hz)						60 (50)	120	500	1k	10k up	Under 47	0.70	1.00	1.20	1.30	1.45	100	0.80	1.00	1.10	1.15	1.20						
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Diagram of Dimensions



Lead Spacing and Diameter

Unit: mm

φD	4	5	6.3	8
P	1.5	2.0	2.5	3.5
φd	0.45	0.5		
α	1.0			
β	0.5			

Dimension: φD × L(mm)

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

Dimension & Permissible Ripple Current

µF	V. DC Contents	4V (0G)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)		63V (1J)	
		φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA
1	010													4×7	10	4×7	10
2.2	2R2													4×7	16	5×7	19
3.3	3R3											4×7	18	4×7	20	6.3×7	29
4.7	4R7									4×7	19	5×7	21	6.3×7	24	6.3×7	36
10	100							4×7	27	5×7	29	6.3×7	32	8×7	40		
22	220					4×7	36	4×7	40	6.3×7	44	6.3×7	49				
33	330	4×7	33	4×7	41	5×7	44	5×7	50	6.3×7	55	8×7	67				
47	470	4×7	39	5×7	49	6.3×7	54	6.3×7	62	8×7	74						
100	101	6.3×7	59	6.3×7	75	8×7	90										