

SS Series

Features

- 85°C, 1,000 hours assured
- Standard micro miniature size with 5mm height
- RoHS compliance



Specifications

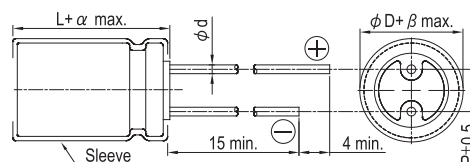
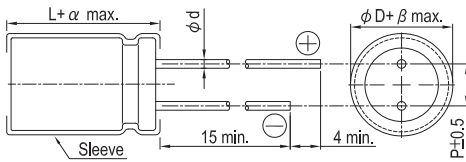
Items	Performance																										
Category Temperature Range	-40°C ~ +85°C																										
Capacitance Tolerance	±20% (at 120 Hz, 20°C)																										
Leakage Current (at 20°C)	I = 0.01CV or 3 (µA) whichever is greater (after 2 minutes) Where, C = rated capacitance in µF, V = rated DC working voltage in V																										
Tanδ (at 120 Hz, 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> </tr> </thead> <tbody> <tr> <td>Tanδ (max)</td> <td>0.35</td> <td>0.25</td> <td>0.20</td> <td>0.17</td> <td>0.15</td> <td>0.13</td> <td>0.10</td> </tr> </tbody> </table>	Rated Voltage	4	6.3	10	16	25	35	50	Tanδ (max)	0.35	0.25	0.20	0.17	0.15	0.13	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> </tr> </thead> <tbody> <tr> <td rowspan="2">Impedance Ratio</td> <td>Z(-25°C)/Z(+20°C)</td> <td>7</td> <td>6</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>15</td> <td>12</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>4</td> </tr> </tbody> </table>	Rated Voltage		4	6.3	10	16	25	35	50	Impedance Ratio	Z(-25°C)/Z(+20°C)	7	6	4	3	2	2	2	Z(-40°C)/Z(+20°C)	15	12	8	6	4	4	4
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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 ±30% of initial value for 4 ~ 6.3V; Within ±25% of initial value for 10 ~ 50V</td> </tr> <tr> <td>Tanδ</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 85°C.</p>	Test Time	1,000 Hrs	Capacitance Change	Within ±30% of initial value for 4 ~ 6.3V; Within ±25% of initial value for 10 ~ 50V	Tanδ	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 and Frequency Multipliers	<table border="1"> <thead> <tr> <th colspan="2">Freq.(Hz)</th> <th>60 (50)</th> <th>120</th> <th>500</th> <th>1k</th> <th>10k up</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Cap.(µF)</td> <td>≤ 47</td> <td>0.75</td> <td>1.00</td> <td>1.15</td> <td>1.34</td> <td>1.50</td> </tr> <tr> <td>100 ~ 330</td> <td>0.80</td> <td>1.00</td> <td>1.08</td> <td>1.20</td> <td>1.30</td> </tr> </tbody> </table>	Freq.(Hz)		60 (50)	120	500	1k	10k up	Cap.(µF)	≤ 47	0.75	1.00	1.15	1.34	1.50	100 ~ 330	0.80	1.00	1.08	1.20	1.30						
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Diagram of Dimensions

1. φD = 3mm

2. φD ≥ 4mm

Unit: mm



Lead Spacing and Diameter

φD	3	4	5	6.3	8
P	1.0	1.5	2.0	2.5	2.5
φd	0.45				
α	1.0				
β	0.5				

Dimension: φD × L(mm)

Dimension and Permissible Ripple Current

Ripple Current: mA/rms at 120 Hz, 85°C

Rated Volt. (V _{DC})	Contents	4V (0G)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)	
		φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA	φD×L	mA
0.33	R33													3×5	2.8
0.47	R47													3×5	4
1	010													4×5(3×5)	8.7(7)
2.2	2R2											4×5(3×5)	8.7(7)	4×5(3×5)	10(9)
3.3	3R3									4×5(3×5)	11(10)	4×5	12	4×5	13
4.7	4R7							4×5(3×5)	14(11)	4×5	14	4×5	17	5×5	20
10	100					4×5(3×5)	17(13)	4×5	23	5×5	27	5×5	27	6.3×5	31
22	220			4×5(3×5)	22(18)	5×5	30	5×5	35	6.3×5	42	6.3×5	46	6.3×5	46
33	330	4×5	27	4×5	34	5×5	41	5×5	49	6.3×5	52	6.3×5	52	8×5	66
47	470	4×5	34	5×5	37	6.3×5	50	6.3×5	58	6.3×5	58	8×5	72	8×5	80
100	101	5×5	55	6.3×5	62	6.3×5	70	8×5	99	8×5	99				
220	221	6.3×5	74	8×5	104	8×5	120								
330	331	8×5	105	8×5	120										

Part Numbering System

SS Series	330µF	±20%	6.3V	Bulk Package	Gas Type	8φ×5L	Pb-free and PET sleeve
SS-	331	M	0J	BK	-	0805	
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Lead Configuration and Package	Rubber Type	Case Size	Lead Wire and Sleeve type

Note: For more details, please refer to "Part Numbering System (Radial Type)" on page 13.