



SS Series

Features

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



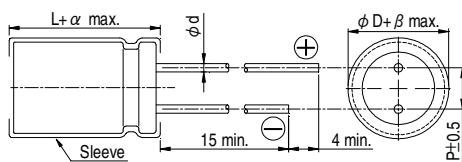
Sleeve & Marking Color: Black & White

Specifications

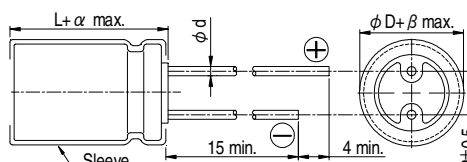
Items	Performance																																						
Category Temperature Range	-40℃ ~ +85℃																																						
Capacitance Tolerance	±20% (at 120Hz, 20℃)																																						
Leakage Current (at 20℃)	I = 0.01CV or 3 (μA) whichever is greater (after 2 minutes) Where, C = rated capacitance in μF, V = rated DC working voltage in V																																						
Tanδ (at 120Hz, 20℃)	<table><tr><td>Rated Voltage</td><td>4</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr><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></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 120Hz)	Impedance ratio shall not exceed the values given in the table below. <table><tr><td colspan="2">Rated Voltage</td><td>4</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td></tr><tr><td rowspan="2">Impedance Ratio</td><td>Z(-25℃)/Z(+20℃)</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℃)/Z(+20℃)</td><td>15</td><td>12</td><td>8</td><td>6</td><td>4</td><td>4</td><td>4</td></tr></table>							Rated Voltage		4	6.3	10	16	25	35	50	Impedance Ratio	Z(-25℃)/Z(+20℃)	7	6	4	3	2	2	2	Z(-40℃)/Z(+20℃)	15	12	8	6	4	4	4						
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Endurance	<table><tr><td>Test Time</td><td colspan="7">1,000 Hrs</td></tr><tr><td>Capacitance Change</td><td colspan="7">Within ±30% of initial value for 4 ~ 6.3V; Within ±25% of initial value for 10 ~ 50V</td></tr><tr><td>Tanδ</td><td colspan="7">Less than 200% of specified value</td></tr><tr><td>Leakage Current</td><td colspan="7">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 1,000 hours at 85℃.							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><tr><td>Freq.(Hz) Cap.(μF)</td><td>60 (50)</td><td>120</td><td>500</td><td>1k</td><td>10k up</td></tr><tr><td>Under 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 to 330</td><td>0.80</td><td>1.00</td><td>1.08</td><td>1.20</td><td>1.30</td></tr></table>							Freq.(Hz) Cap.(μF)	60 (50)	120	500	1k	10k up	Under 47	0.75	1.00	1.15	1.34	1.50	100 to 330	0.80	1.00	1.08	1.20	1.30														
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Diagram of Dimensions

1. $\phi D = 3mm$



2. $\phi D \geq 4mm$



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	0.4	0.45			
α	1.0				
β	0.5				

Dimension and Permissible Ripple Current

Dimension: $\phi D \times L(mm)$

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

V _{DC}	4V (0G)	6.3V (0J)	10V (1A)	16V (1C)	25V (1E)	35V (1V)	50V (1H)
μF	Contents	φD×L	mA	φD×L	mA	φD×L	mA
0.33	R33						3×5
0.47	R47						3×5
1	010						4×5(3×5)
2.2	2R2					4×5(3×5)	8.7(7)
3.3	3R3					4×5	12
4.7	4R7				4×5(3×5)	11(10)	17
10	100			4×5(3×5)	17(13)	4×5	27
22	220		4×5(3×5)	22(18)	5×5	30	35
33	330	4×5	27	4×5	34	5×5	41
47	470	4×5	34	5×5	37	6.3×5	50
100	101	5×5	55	6.3×5	62	6.3×5	70
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	8 φ × 5L	Pb-free and PET sleeve
SS-	331	M	0J	BK	-	0805	
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Lead Configuration & 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.