

SN Series

Features

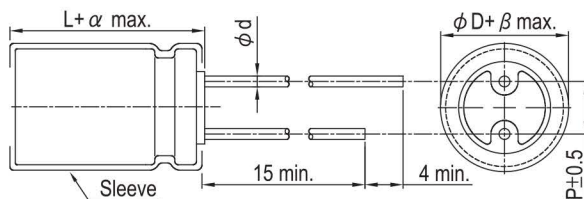
- 85°C, 1,000 hours assured, bi-polarized series with 7mm height
- Suitable for use in circuits which has a reversed or unknown polarity
- RoHS compliance
- AEC-Q200 Parts Available: Replace "S" Suffix with "KS" or "LS" Suffix



Specifications

Items	Performance																													
Category Temperature Range	-40°C ~ +85°C																													
Capacitance Tolerance	±20% (at 120 Hz, 20°C)																													
Leakage Current (at 20°C)	I = 0.05CV or 10 (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> <th>63</th> </tr> </thead> <tbody> <tr> <td>Tanδ (max)</td> <td>0.35</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.16</td> <td>0.14</td> <td>0.12</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	0.20	0.16	0.16	0.14	0.12	0.10											
Rated Voltage	4	6.3	10	16	25	35	50	63																						
Tanδ (max)	0.35	0.24	0.20	0.16	0.16	0.14	0.12	0.10																						
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 rowspan="2">Impedance Ratio</td> <td>Z(-25°C)/Z(+20°C)</td> <td>4</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>10</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	Rated Voltage		4	6.3	10	16	25	35	50	63	Impedance Ratio	Z(-25°C)/Z(+20°C)	4	4	3	2	2	2	2	2	Z(-40°C)/Z(+20°C)	10	10	8	6	4	3	3	3
Rated Voltage		4	6.3	10	16	25	35	50	63																					
Impedance Ratio	Z(-25°C)/Z(+20°C)	4	4	3	2	2	2	2	2																					
	Z(-40°C)/Z(+20°C)	10	10	8	6	4	3	3	3																					
Endurance (After application of the rated voltage at 85°C, the polarity inverted every 250 Hrs.)	<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>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 for 1,000 hours at 85°C.</p>	Test Time	1,000 Hrs	Capacitance Change	Within ±20% of initial value	Tanδ	Less than 200% of specified value	Leakage Current	Within specified value																					
Test Time	1,000 Hrs																													
Capacitance Change	Within ±20% of initial value																													
Tanδ	Less than 200% of specified value																													
Leakage Current	Within specified value																													
Shelf Life Test	Test time: 500 hours; other items are the same as those for the Endurance.																													

Diagram of Dimensions



Lead Spacing and Diameter Unit: mm

	4	5	6.3	8
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 and Permissible Ripple Current

Dimension: φD×L(mm)

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)		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
0.47	R47													4×7	6.6	4×7	7.3
1	010													4×7	9.7	4×7	10
2.2	2R2										4×7	13	4×7	14	5×7	16	
3.3	3R3									4×7	15	5×7	16	5×7	18	6.3×7	20
4.7	4R7						4×7	18	5×7	18	6.3×7	20	6.3×7	22	8×7	24	
10	100					4×7	23	5×7	27	6.3×7	28	8×7	30				
22	220			5×7	40	5×7	40	6.3×7	45	8×7	52						
33	330	5×7	40	5×7	40	6.3×7	45	8×7	52								
47	470	6.3×7	45	6.3×7	49	8×7	55										
100	101	8×7	66														

Part Numbering System

SN Series	47µF	±20%	6.3V	Bulk Package	Gas Type	6.3φ×7L
SN-	470	M	0J	BK	-	0607
Series Name	Capacitance	Capacitance Tolerance	Rated Voltage	Lead Configuration and Package	Rubber Type	Case Size
						Regional Code

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