

SP series 105°C 7mmL, NON-POLAR TYPE

- Specially designed for polarity inversion circuits
- The series offers excellent frequency characteristics and minimal capacitance deviation with frequency.
- Solvent proof

■ SPECIFICATIONS

Item	Performance Characteristics																								
Operating Temperature Range	-40°C~105°C																								
Rated Voltage Range	6.3~50V																								
Capacitance Range	0.41~220uF																								
Capacitance Tolerance	±20% at 120Hz,20°C																								
Leakage Current (MAX)	After 2 minutes application of rated voltage.leakage current is not more than 0.05CV or 10(uA),whichever is greater																								
Dissipation Factor (tan δ)	For capacitance of more than 1000uF, added 0.02 for every increase of 1000 uF,Measurement frequency:120Hz, Temperature:20°C <table border="1" data-bbox="432 1086 1109 1164"> <thead> <tr> <th>Rated voltage(V)</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>Tan δ</td> <td>0.26</td> <td>0.24</td> <td>0.22</td> <td>0.20</td> <td>0.18</td> <td>0.16</td> </tr> </tbody> </table>	Rated voltage(V)	6.3	10	16	25	35	50	Tan δ	0.26	0.24	0.22	0.20	0.18	0.16										
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Low Temperature Stability Impedance Ratio	Measurement frequency:120Hz <table border="1" data-bbox="432 1220 1305 1326"> <thead> <tr> <th colspan="2">Rated voltage(V)</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>Impedance ratio</td> <td>Z(-25°C) / Z(+20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>ZT/Z20 (MAX)</td> <td>Z(-40°C) / Z(+20°C)</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	Rated voltage(V)		6.3	10	16	25	35	50	Impedance ratio	Z(-25°C) / Z(+20°C)	4	3	2	2	2	2	ZT/Z20 (MAX)	Z(-40°C) / Z(+20°C)	8	6	4	4	3	3
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Load Life	After 1000 hours application of rated voltage at 105°C with the polarity inverted every 250 hours,capacitors meet the characteristics requirements listed at right. <table border="1" data-bbox="432 1438 983 1541"> <tbody> <tr> <td>Leakage Current</td> <td>Specified value or less</td> </tr> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>200% or less of specified value</td> </tr> </tbody> </table>	Leakage Current	Specified value or less	Capacitance Change	Within ±20% of initial value	Dissipation Factor	200% or less of specified value																		
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Shelf Life	After leaving capacitors under no load at 105°C for 500hours and applying voltage according to JIS C-5102 4-3,they meet the specified value for load life characteristics listed above.																								
Standard	According to JIS C-5141																								

■ MULTIPLIER FOR RIPPLE CURRENT

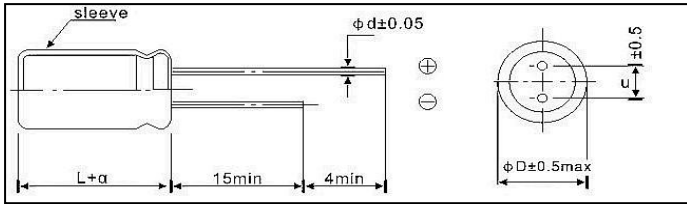
Frequency coefficient

W.V	Frequency(Hz)					
	Cap(uF)	60(50)	120	300	1k	10k~
6.3~50	0.1~47	0.80	1.00	1.20	1.30	1.50
	100~220	0.80	1.00	1.10	1.15	1.20

Temperature	45°C	70°C	85°C	105°C
Coefficient	1.80	1.35	1.10	1.00

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■DIMENSIONS(mm)



ΦD	4	5	6.3	8
Φd	0.45	0.5		
F	1.5	2.0	2.5	3.5
α	1.0			

■STANDARD SIZE PERMISSIBLE RIPPLE CURRENT

Size ΦD×L(mm)Ripple Current(mA 105°C,120Hz)r.m.s

W.V Cap(μF)	6.3		10		16		25		35		50	
	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple
0.1											4×7	1
0.22											4×7	2.3
0.33											4×7	3.5
0.47											4×7	5.0
1											4×7	10
2.2									4×7	10	4×7	14
3.3									4×7	16	4×7	20
4.7					4×7	18	5×7	21	5×7	22	6.3×7	27
10			4×7	24	5×7	30	6.3×7	35	6.3×7	37	8×7	44
22			5×7	40	4×7 6.3×7	50 51	6.3×7	58	8×7	62	8×7	65
33	5×7	42	6.3×7	56	6.3×7	63	8×7	73	8×7	76		
47	6.3×7	58	6.3×7	67	6.3×7	75	8×7	87				
100	8×7	95	8×7	110	8×7	125						
220	8×7	140										

※以上最大体积为标准尺寸，其他为体积缩小品，寿命相应缩短