

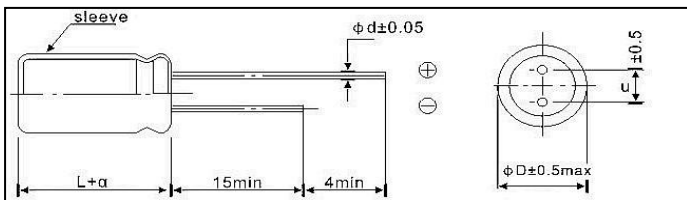
NP series Non-Polar Type

- Non-polar capacitors are designed for circuits with reversing polarity
- Units of $\Phi 6.3$ or more are furnished with safety case vents.
- Solvent proof.

■ SPECIFICATIONS

Item	Performance Characteristics																														
Operating Temperature Range	-40°C~105°C																														
Rated Voltage Range	6.3~100V																														
Capacitance Range	0.47~6800uF																														
Capacitance Tolerance	±20% at 120Hz,20°C																														
Leakage Current (MAX)	After 5 minutes application of rated voltage.leakage current is not more than 0.05CV or 0.7(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"> <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> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>Tan δ</td> <td>0.26</td> <td>0.22</td> <td>0.18</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.08</td> </tr> </tbody> </table>	Rated voltage(V)	6.3	10	16	25	35	50	63	100	Tan δ	0.26	0.22	0.18	0.16	0.14	0.12	0.10	0.08												
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Low Temperature Stability Impedance Ratio	Measurement frequency:120Hz <table border="1"> <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> <th>63</th> <th>100</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> <td>2</td> <td>2</td> </tr> <tr> <td>ZT/Z20 (MAX)</td> <td>Z(-40°C) / Z (+20°C)</td> <td>10</td> <td>8</td> <td>6</td> <td>5</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	63	100	Impedance ratio	Z(-25°C) / Z (+20°C)	4	3	2	2	2	2	2	2	ZT/Z20 (MAX)	Z(-40°C) / Z (+20°C)	10	8	6	5	4	4	3	3
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Load Life	After 2000 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"> <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 1000hours 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																														

■ DIMENSIONS(mm)



ΦD	5	6.3	8	10	13	16	18
Φd	0.5		0.6		0.8		
F	2.0	2.5	3.5	5.0	7.5		
α	L≤16 : $\alpha=1.5$			L≥16 : $\alpha=2.0$			

NP series Non-Polar Type

STANDARD SIZE PERMISSIBLE RIPPLE CURRENT

Size $\Phi D \times L$ (mm)Ripple Current(mA 105°C,120Hz)r.m.s

W.V Cap(uF)	6.3		10		16		25		35		50		63		100	
	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple	SIZE	Ripple
0.47											5×11	11			5×11	14
1											5×11	17			5×11	21
2.2											5×11	25			5×11 6.3×12	27 34
3.3											5×11	27	5×11	28	6.3×12	39
4.7							5×11	34	5×11	34	5×11	34	6.3×12	34	6.3×12	47
6.8											5×11	40				
10					5×11	42	5×11	45	5×11	43	6.3×12	52	6.3×12	57	8×12	71
22			5×11	57	5×11	57	5×11 6.3×12	55 65	6.3×12	73	8×12	89	8×12	95	10×16	135
33	5×11	64	5×11	67	5×11	70	6.3×12	80	8×12	100	8×12	105	10×13	135	13×21	220
47	5×11	76	5×11	80	6.3×12	95	6.3×12	100	8×12	120	8×12 10×13	130 150	10×16	180	13×21	240
68											10×13	160				
82											10×16	245				
100	6.3×11	125	6.3×12	140	8×12	160	8×12	160	10×16	230	10×20	265	13×21	320	16×25	425
220	8×12	215	8×12	230	10×13	275	10×16	305	13×21	410	13×25	480	16×25	575	18×35	720
330	8×12	265	10×13	345	10×16	375	13×21	450	13×21	505	16×25	650	16×31	655		
470	10×13	370	10×16	410	10×20	485	13×21	540	13×25	655	16×31	835	18×35	965		
1000	10×20	650	13×21	720	13×25	855	16×25	950	16×31	1140						
2200	13×25	1160	16×25	1280	16×31	1510	18×35	1620								
3300	16×25	1570	16×31	1690	18×35	1980										
4700	16×31	2020	18×35	2160												
6800	18×35	2600														

※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

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

W.V Cap(uF)	Frequency(Hz)	60(50)	120	500	1k	10k~
	0.1~47					
6.3~100	0.1~47	0.80	1.00	1.35	1.57	2.00
	100~470	0.80	1.00	1.23	1.34	1.50
	1000~6800	0.80	1.00	1.10	1.13	1.15

Temperature coefficient

Temperature	45°C	60°C	70°C	85°C	105°C
Coefficient	2.10	1.90	1.65	1.40	1.00