



NPH series Non-Polarized+105°C wide temperature range standard 無極性+105°C 寬溫度品

- 適用於極性反轉回路，例如：信號交連或 HI-FI 高級音響設備如喇叭等。
NP series capacitors are suitable for crossover network for HI-FI equipment's and speakers, etc.
- 具容量誤差小，頻率回應高之特質。
Have excellent frequency characteristic and small deviation of Capacitance.



Specifications

No	Item	Performance																											
1	使用溫度範圍 Operating Temperature Range	-40 to +105 ⁰ C																											
2	定格電壓範圍 Rated Working Voltage Range	6.3-100V.DC																											
3	靜電容量範圍 Capacitance Tolerance	0.1-1000µF																											
4	靜電容量容許差 Capacitance Tolerance	±20%(at+20 ⁰ C,120Hz)																											
5	洩漏電流 Leakage Current	After 5minutes application of rated voltage I≤0.03CV or 3 µ A minimum at 20 ⁰ C																											
6	損失角 Dissipation Factor(tan δ) (120Hz+20 ⁰ C)	<table border="1"> <thead> <tr> <th>Working 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 max.</td> <td>0.25</td> <td>0.25</td> <td>0.20</td> <td>0.20</td> <td>0.15</td> <td>0.15</td> <td>0.12</td> <td>0.10</td> </tr> </tbody> </table>	Working Voltage (V)	6.3	10	16	25	35	50	63	100	tan δ max.	0.25	0.25	0.20	0.20	0.15	0.15	0.12	0.10									
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7	溫度特性 (at 120 Hz) Characteristics at low temperature (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th>Working 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>Z-25⁰C/+20⁰C</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>Z-40⁰C/+20⁰C</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>4</td> <td>4</td> <td>4</td> <td>3</td> </tr> </tbody> </table>	Working Voltage (V)	6.3	10	16	25	35	50	63	100	Z-25 ⁰ C/+20 ⁰ C	4	3	2	2	2	2	2	2	Z-40 ⁰ C/+20 ⁰ C	8	6	4	4	4	4	4	3
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8	高溫負荷特性 High Temperature Loading	After 1000hrs. application of DC rated working voltage at +105 ⁰ C,with the polarity inverted every 250hrs,capacitors meet the characteristic of following requirements. <table border="1"> <tbody> <tr> <td>Leakage current</td> <td>≤ the Initial specified value</td> </tr> <tr> <td>Capacitance change</td> <td>≤±25% of initial measured value</td> </tr> <tr> <td>Dissipation Factor(tan δ)</td> <td>≤200% of initial specified value</td> </tr> </tbody> </table>	Leakage current	≤ the Initial specified value	Capacitance change	≤±25% of initial measured value	Dissipation Factor(tan δ)	≤200% of initial specified value																					
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9	高溫無負荷特性 Shelf Life	After 1000hrs. Application of DC no rated working voltage at +105 ⁰ C,The capacitor shall meet the following limits: Post test requirements at +20 ⁰ C <table border="1"> <tbody> <tr> <td>Leakage current</td> <td>≤200% of initial specified value</td> </tr> <tr> <td>Capacitance change</td> <td>≤±20% of initial measured value</td> </tr> <tr> <td>Dissipation Factor(tanδ)</td> <td>≤200% of initial specified value</td> </tr> </tbody> </table>	Leakage current	≤200% of initial specified value	Capacitance change	≤±20% of initial measured value	Dissipation Factor(tanδ)	≤200% of initial specified value																					
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Multiplier for ripple current 紋波電流補正係數

Frequency Coefficient 周波數係數

µF	Frequency	60 (50) Hz	120 H z	400 H z	1K H z	≥10K H z
0.1~47		0.75	1.00	1.30	1.55	2.00
100~470		0.80	1.00	1.20	1.30	1.50
1000		0.85	1.00	1.10	1.10	1.15

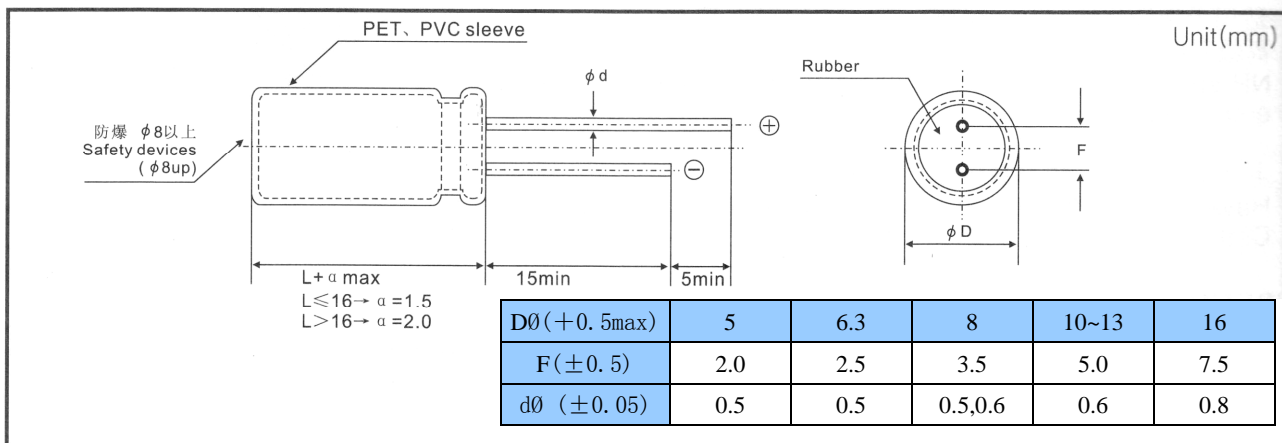
Temperature Coefficient 周圍溫度係數

Coefficient	temperature (°C)	105	85	≤ 65
coefficient		1.0	1.6	2.0



NPH Series

Diagram of Dimensions



DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT 規格尺寸及最大允許紋波電流

WV (SV) uF	6.3 (8)		10 (13)		16 (20)		25 (32)		35 (44)		50 (63)		63 (79)		100 (125)	
	SIZE	RC	SIZE	RC	SIZE	RC	SIZE	RC	SIZE	RC	SIZE	RC	SIZE	RC	SIZE	RC
0.1															5×11	1
0.22															5×11	2
0.33															5×11	4
0.47											5×11	8			5×11	10
1											5×11	10			5×11	15
2.2											5×11	18	6.3×11	25	6.3×11	20
3.3											5×11	20	6.3×11	30	8×12	30
4.7							5×11	20	5×11	25	6.3×11	28	8×12	52	8×12	35
10					5×11	30	5×11	34	6.3×11	40	8×12	50	10×16	90	10×13	60
22			5×11	40	6.3×11	50	6.3×11	55	8×12	65	10×13	80	10×20	120	10×20	110
33	5×11	45	6.3×11	55	6.3×11	60	8×12	75	10×13	85	10×16	100	10×20	150	13×20	160
47	6.3×11	60	6.3×11	65	8×12	85	10×13	90	10×16	100	10×20	140	13×25	270	13×25	200
100	8×12	100	10×13	120	10×13	130	10×16	150	10×20	190	13×25	260	16×32	480	16×25	300
220	10×13	160	10×16	200	10×20	270	13×20	300	13×25	350	16×25	440				
330	10×16	220	10×20	270	13×20	340	13×25	400	16×25	480	16×32	580				
470	10×20	300	13×20	360	13×25	450	16×25	520	16×25	570						
1000	13×25	540	16×25	650	16×25	730	16×32	860								

Case size ØD×L (mm); Ripple current (mA rms) at 105°C, 120Hz