

## NPM7 Series Non-Polarized Miniaturized 7mm height 85°C 超小型品

1. 本體之高度縮短至 7m/m,適用於輕薄小型化之電子產品。  
Developed short body length to 7m/m, for the demand of smaller and thinner electronic equipment.
4. 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.
3. 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 +85°C																											
2	定格電壓範圍 Rated Working Voltage Range	6.3-50V.DC																											
3	靜電容量範圍 Capacitance Tolerance	0.1-220μF																											
4	靜電容量容許差 Capacitance Tolerance	±20%(at+20 °C,120Hz)																											
5	洩漏電流 Leakage Current	After 2 minutes application of rated voltage $I \leq 0.05CV$ or $10\mu A$ minimum at $20^{\circ}C$																											
6	損失角 Dissipation Factor( $\tan \delta$ ) ( 120Hz +20°C )	<table border="1"> <tr> <td>Working Voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td><math>\tan \delta</math> max.</td> <td>0.26</td> <td>0.22</td> <td>0.20</td> <td>0.17</td> <td>0.15</td> <td>0.15</td> </tr> </table>							Working Voltage (V)	6.3	10	16	25	35	50	$\tan \delta$ max.	0.26	0.22	0.20	0.17	0.15	0.15							
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7	溫度特性 ( at 120 Hz) Characteristics at low temperature ( Impedance ratio at 120Hz )	<table border="1"> <tr> <td>Working Voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Z-25°C/+20°C</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C/+20°C</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>4</td> </tr> </table>							Working Voltage (V)	6.3	10	16	25	35	50	Z-25°C/+20°C	4	3	3	2	2	2	Z-40°C/+20°C	10	8	6	4	4	4
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8	高溫負荷特性 High Temperature Loading	After 1000hrs. application of DC rated working voltage at $+85^{\circ}C$ ,with the polarity inverted every 250hrs, capacitors meet the characteristic of following requirements.																											
		<table border="1"> <tr> <td>Leakage current</td> <td><math>\leq</math> the Initial specified value</td> </tr> <tr> <td>Capacitance change</td> <td><math>\leq \pm 25\%</math> of initial measured value</td> </tr> <tr> <td>Dissipation Factor(<math>\tan \delta</math>)</td> <td><math>\leq 200\%</math> of initial specified value</td> </tr> </table>							Leakage current	$\leq$ the Initial specified value	Capacitance change	$\leq \pm 25\%$ of initial measured value	Dissipation Factor( $\tan \delta$ )	$\leq 200\%$ of initial specified value															
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9	高溫無負荷特性 Shelf Life	The following specification shall be satisfied when the capacitors are stored to $20^{\circ}C$ after exposing them for 1000hrs at $+85^{\circ}C$ without voltage applied, the capacitors meet the specified value for load life characteristic listed above.																											

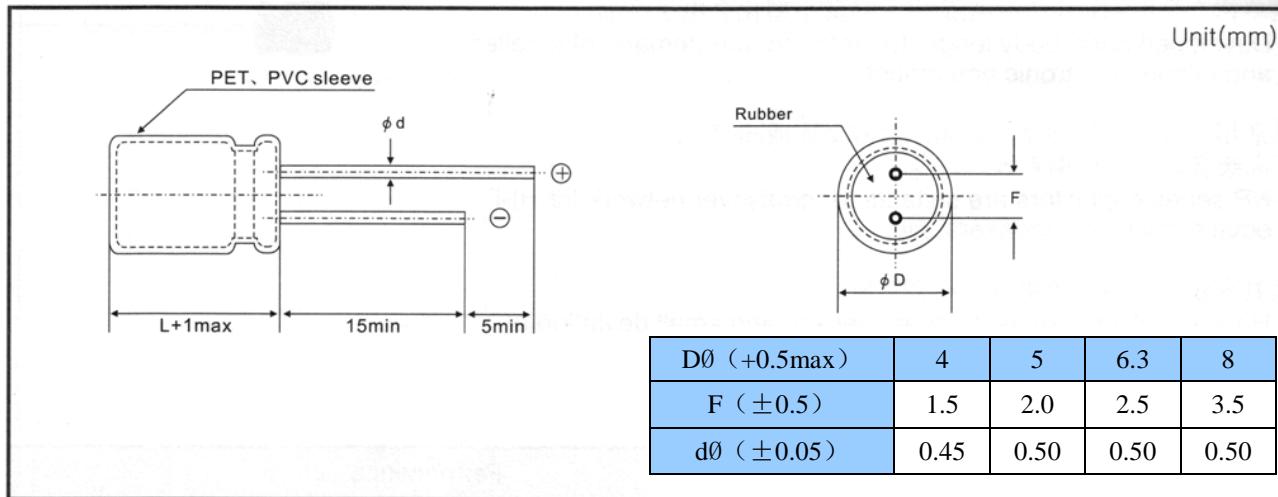
Multiplier for ripple current 紋波電流補正係數

Frequency Coefficient 周波數係數

μF	Frequency	60 (50) Hz	120 Hz	400 Hz	1K Hz	$\geq 10K$ Hz
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 Coefficient 周圍溫度係數

Coefficient	temperature (°C)	85	70	$\leq 50$
coefficient		1.0	1.6	2.0

**NPM7 Series****Diagram of Dimensions**

尺寸一覽表

Case Size Table

 $\phi D \times L(\text{mm})$ 

W.V. (SV) $\mu\text{F}$	6.3 (8)		10 (13)		16 (20)		25 (32)		35 (44)		50 (63)	
0.1											$4 \times 7$	1
0.22											$4 \times 7$	2
0.33											$4 \times 7$	3
0.47											$4 \times 7$	5
0.68											$4 \times 7$	8
1											$4 \times 7$	10
2.2									$4 \times 7$	10	$5 \times 7$	14
3.3							$4 \times 7$	15	$5 \times 7$	16	$5 \times 7$	19
4.7					$4 \times 7$	15	$5 \times 7$	20	$5 \times 7$	20	$6.3 \times 7$	26
6.8					$5 \times 7$	20	$6.3 \times 7$	25	$6.3 \times 7$	30	$8 \times 7$	33
10			$4 \times 7$	20	$5 \times 7$	25	$6.3 \times 7$	35	$6.3 \times 7$	35	$8 \times 7$	44
15			$5 \times 7$	25	$6.3 \times 7$	30	$6.3 \times 7$	40	$8 \times 7$	45	$8 \times 7$	50
22	$5 \times 7$	30	$5 \times 7$	35	$6.3 \times 7$	45	$6.3 \times 7$	50	$8 \times 7$	60	$8 \times 7$	65
33	$5 \times 7$	40	$6.3 \times 7$	45	$6.3 \times 7$	60	$8 \times 7$	70	$8 \times 7$	75		
47	$6.3 \times 7$	55	$6.3 \times 7$	65	$6.3 \times 7$	65	$8 \times 7$	85				
100	$8 \times 7$	90	$8 \times 7$	100	$8 \times 7$	120						
220	$8 \times 7$	130										

→ 額定紋波電流 Rated ripple current (mA) at 85°C, 120Hz