

NPCAP™-PSE Series

- Super low ESR, high ripple current capability
- Endurance : 20,000 hours at 105°C
- Rated voltage range : 2.5 to 6.3V<sub>dc</sub>
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant
- Halogen Free

PSE

↑ Longer life  
Downsized  
PSC



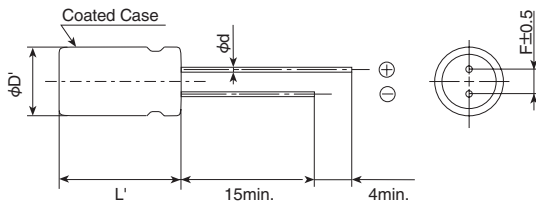
◆ SPECIFICATIONS

Items	Characteristics																		
<b>Category</b>	-55 to +105°C																		
<b>Temperature Range</b>																			
<b>Rated Voltage Range</b>	2.5 to 6.3V <sub>dc</sub>																		
<b>Capacitance Tolerance</b>	±20% (M) (at 20°C, 120Hz)																		
<b>Leakage Current</b> *Note	I=0.2CV or 500μA, whichever is greater Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)																		
<b>Dissipation Factor (tan δ)</b>	0.10 max. (at 20°C, 120Hz)																		
<b>Low Temperature Characteristics (Max.Impedance Ratio)</b>	Z(-25°C)/Z(+20°C) ≤ 1.15 Z(-55°C)/Z(+20°C) ≤ 1.25 (at 100kHz)																		
<b>Endurance</b>	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 20,000 hours at 105°C. <table border="1"> <tr><td>Appearance</td><td>No significant damage</td></tr> <tr><td>Capacitance change</td><td>≤ ±20% of the initial value</td></tr> <tr><td>D.F. (tan δ)</td><td>≤ 150% of the initial specified value</td></tr> <tr><td>ESR</td><td>≤ 200% of the initial specified value</td></tr> <tr><td>Leakage current</td><td>≤ The initial specified value</td></tr> </table>	Appearance	No significant damage	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ 150% of the initial specified value	ESR	≤ 200% of the initial specified value	Leakage current	≤ The initial specified value								
Appearance	No significant damage																		
Capacitance change	≤ ±20% of the initial value																		
D.F. (tan δ)	≤ 150% of the initial specified value																		
ESR	≤ 200% of the initial specified value																		
Leakage current	≤ The initial specified value																		
<b>Bias Humidity Test</b>	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to DC voltage at 60°C, 90 to 95% RH for 1,000 hours. <table border="1"> <tr><td>Appearance</td><td>No significant damage</td></tr> <tr><td>Capacitance change</td><td>≤ ±20% of the initial value</td></tr> <tr><td>D.F. (tan δ)</td><td>≤ The initial specified value</td></tr> <tr><td>ESR</td><td>≤ The initial specified value</td></tr> <tr><td>Leakage current</td><td>≤ The initial specified value</td></tr> </table>	Appearance	No significant damage	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ The initial specified value	ESR	≤ The initial specified value	Leakage current	≤ The initial specified value								
Appearance	No significant damage																		
Capacitance change	≤ ±20% of the initial value																		
D.F. (tan δ)	≤ The initial specified value																		
ESR	≤ The initial specified value																		
Leakage current	≤ The initial specified value																		
<b>Surge Voltage Test</b>	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltage specified at 105°C for 30 seconds through a protective resistor(R=1kΩ) and discharge for 5 minutes 30 seconds. <table border="1"> <tr><td>Rated voltage (V<sub>dc</sub>)</td><td>2.5</td><td>4.0</td><td>6.3</td></tr> <tr><td>Surge voltage (V<sub>dc</sub>)</td><td>2.9</td><td>4.6</td><td>7.2</td></tr> </table> <table border="1"> <tr><td>Appearance</td><td>No significant damage</td></tr> <tr><td>Capacitance change</td><td>≤ ±20% of the initial value</td></tr> <tr><td>D.F. (tan δ)</td><td>≤ The initial specified value</td></tr> <tr><td>ESR</td><td>≤ The initial specified value</td></tr> <tr><td>Leakage current</td><td>≤ The initial specified value</td></tr> </table>	Rated voltage (V <sub>dc</sub> )	2.5	4.0	6.3	Surge voltage (V <sub>dc</sub> )	2.9	4.6	7.2	Appearance	No significant damage	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ The initial specified value	ESR	≤ The initial specified value	Leakage current	≤ The initial specified value
Rated voltage (V <sub>dc</sub> )	2.5	4.0	6.3																
Surge voltage (V <sub>dc</sub> )	2.9	4.6	7.2																
Appearance	No significant damage																		
Capacitance change	≤ ±20% of the initial value																		
D.F. (tan δ)	≤ The initial specified value																		
ESR	≤ The initial specified value																		
Leakage current	≤ The initial specified value																		
<b>Failure Rate</b>	0.5% per 1,000 hours maximum (Confidence level 60% at 105°C)																		

\*Note : If any doubt arises, measure the leakage current after the following voltage treatment.  
Voltage treatment : DC rated voltage is applied to the capacitors for 120 minutes at 105°C.

◆ DIMENSIONS [mm]

● Terminal Code : E



Size code	F08
φD	6.3
φd	0.6
F	2.5
φD'	φD+0.5max.
L'	L+1.5max.

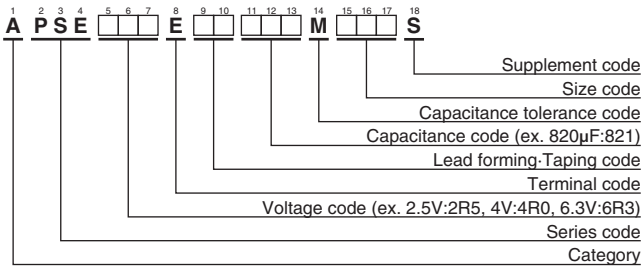
◆ MARKING

EX) 2.5V820μF



NPCAP™-PSE Series

◆PART NUMBERING SYSTEM



Please refer to "Product code guide (conductive polymer type)"

◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (µF)	Case size φD×L(mm)	ESR (mΩ max./20°C, 100k to 300kHz)	Rated ripple current (mA <sub>rms</sub> /105°C, 100kHz)	Part No.
2.5	820	6.3 × 8	7	5,000	APSE2R5E□□821MF08S
4	560	6.3 × 8	7	5,000	APSE4R0E□□561MF08S
6.3	470	6.3 × 8	8	4,700	APSE6R3E□□471MF08S
	560	6.3 × 8	8	4,700	APSE6R3E□□561MF08S

□□ : Enter the appropriate lead forming or taping code.

◆RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

Frequency (Hz)	120	1k	10k	50k	100k to 500k
Radial lead type	0.10	0.35	0.60	0.80	1.00