

## NPCAP™-PSE Series

- Super low ESR, high ripple current capability
- Downsized from PSC series ( $\phi 8 \times 8L$  to  $\phi 6.3 \times 8L$ )
- Endurance is longer than PSC series (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 P2-44



## ◆SPECIFICATIONS

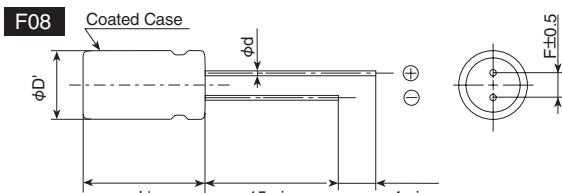
Items	Characteristics											
Category Temperature Range	-55 to +105°C											
Rated Voltage Range	2.5 to 6.3V <sub>dc</sub>											
Capacitance Tolerance	$\pm 20\%$ (M) (at 20°C, 120Hz)											
Surge Voltage	Rated voltage(V) $\times 1.15$ (at 105°C)											
Leakage Current *Note	I=0.2CV or 500 $\mu$ A, whichever is greater Where, I : Max. leakage current ( $\mu$ A), C : Nominal capacitance ( $\mu$ F), V : Rated voltage (V) (at 20°C after 2 minutes)											
Dissipation Factor (tan $\delta$ )	0.10 max. (at 20°C, 120Hz)											
Low Temperature Characteristics (Max.Impedance Ratio)	$Z(-25^\circ\text{C})/Z(+20^\circ\text{C}) \leq 1.15$ $Z(-55^\circ\text{C})/Z(+20^\circ\text{C}) \leq 1.25$ (at 100kHz)											
Endurance	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" data-bbox="376 916 968 1066"> <tr> <td>Appearance</td><td>No significant damage</td></tr> <tr> <td>Capacitance change</td><td><math>\leq \pm 20\%</math> of the initial value</td></tr> <tr> <td>D.F. (tan <math>\delta</math>)</td><td><math>\leq 150\%</math> of the initial specified value</td></tr> <tr> <td>ESR</td><td><math>\leq 200\%</math> of the initial specified value</td></tr> <tr> <td>Leakage current</td><td><math>\leq</math> The initial specified value</td></tr> </table>		Appearance	No significant damage	Capacitance change	$\leq \pm 20\%$ of the initial value	D.F. (tan $\delta$ )	$\leq 150\%$ of the initial specified value	ESR	$\leq 200\%$ of the initial specified value	Leakage current	$\leq$ The initial specified value
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Bias Humidity Test	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" data-bbox="376 1089 968 1239"> <tr> <td>Appearance</td><td>No significant damage</td></tr> <tr> <td>Capacitance change</td><td><math>\leq \pm 20\%</math> of the initial value</td></tr> <tr> <td>D.F. (tan <math>\delta</math>)</td><td><math>\leq</math> The initial specified value</td></tr> <tr> <td>ESR</td><td><math>\leq</math> The initial specified value</td></tr> <tr> <td>Leakage current</td><td><math>\leq</math> The initial specified value</td></tr> </table>		Appearance	No significant damage	Capacitance change	$\leq \pm 20\%$ of the initial value	D.F. (tan $\delta$ )	$\leq$ The initial specified value	ESR	$\leq$ The initial specified value	Leakage current	$\leq$ The initial specified value
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Surge Voltage Test	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 ( $R=1\text{k}\Omega$ ) and discharge for 5 minutes 30 seconds. <table border="1" data-bbox="376 1262 968 1412"> <tr> <td>Appearance</td><td>No significant damage</td></tr> <tr> <td>Capacitance change</td><td><math>\leq \pm 20\%</math> of the initial value</td></tr> <tr> <td>D.F. (tan <math>\delta</math>)</td><td><math>\leq</math> The initial specified value</td></tr> <tr> <td>ESR</td><td><math>\leq</math> The initial specified value</td></tr> <tr> <td>Leakage current</td><td><math>\leq</math> The initial specified value</td></tr> </table>		Appearance	No significant damage	Capacitance change	$\leq \pm 20\%$ of the initial value	D.F. (tan $\delta$ )	$\leq$ The initial specified value	ESR	$\leq$ The initial specified value	Leakage current	$\leq$ The initial specified value
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Leakage current	$\leq$ The initial specified value											
Failure Rate	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.

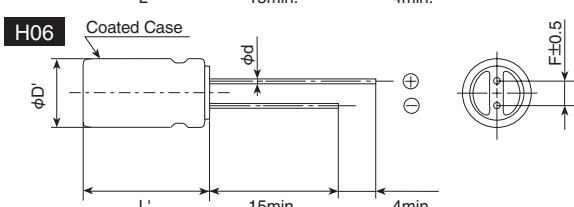
Voltage treatment : DC rated voltage is applied to the capacitors for 120 minutes at 105°C.

## ◆DIMENSIONS [mm]

## ●Terminal Code : E



Size code	F08	H06
$\phi D$	6.3	8.0
$\phi d$	0.6	
F	2.5	3.5
$\phi D'$	$\phi D+0.5\text{max.}$	
L'	L+1.5max.	



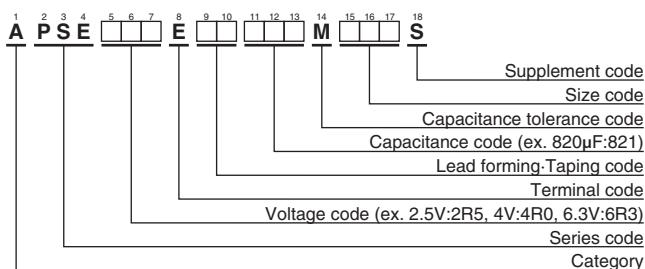
## ◆MARKING

EX) 2.5V820 $\mu$ F



## 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 ϕ D × L(mm)	ESR (mΩ max./20°C, 100k to 300kHz)	Rated ripple current (mA rms/105°C, 100kHz)	Part No.
2.5	680	8 × 6	8	4,900	APSE2R5E□□681MH06S
	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