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NPCAP™-PSE Series

- Super low ESR, high ripple current capability
- Downsized from PSC series (φ8×8L to φ6.3×8L)
- Endurance is longer life than PSC series (5,000 hours at 105°C)
- ESR after endurance is specified within the initial spec
- Rated voltage range : 2.5 to 6.3V_{dc}
- RoHS Compliant
- Halogen Free

Halogen Free
Downsized
Long Life



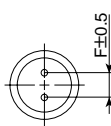
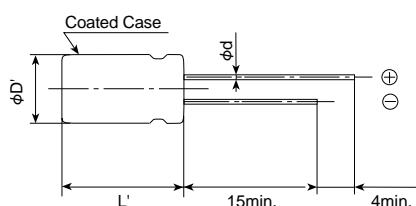
◆ SPECIFICATIONS

Items	Characteristics																				
Category																					
Temperature Range	-55 to +105°C																				
Rated Voltage Range	2.5 to 6.3V _{dc}																				
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)																				
Surge Voltage	Rated voltage(V)×1.15 (at 105°C)																				
Leakage Current	I=0.2CV or 500μA, whichever is greater (at 20°C after 2 minutes)																				
<small>*Note</small>	Where, I : Leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)																				
Dissipation Factor (tanδ)	0.10 max. (at 20°C, 120Hz)																				
Low Temperature Characteristics (Max.Impedance Ratio)	Z(-25°C)/Z(+20°C)≤1.15 Z(-55°C)/Z(+20°C)≤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 5,000 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. (tanδ)</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. (tanδ)	≤The initial specified value	ESR	≤The initial specified value	Leakage current	≤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.																				
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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=1kΩ) and discharge for 5 minutes 30 seconds.																				
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Halogen Free (Definition)	All homogeneous materials within a capacitor meet the criteria in Table-1 and Tabel-2. Homogeneous material has uniform composition throughout and cannot be mechanically disjointed into different materials.																				
	<table border="1"> <thead> <tr> <th colspan="2">Table-1</th> <th colspan="2">Table-2</th> </tr> <tr> <th>Substance</th> <th>Permissible limit (by weight)</th> <th>Substance</th> <th>Permissible limit (by weight)</th> </tr> </thead> <tbody> <tr> <td>Bromine (Br)</td> <td>≤900ppm (0.09%)</td> <td>Antimony Trioxide (Sb₂O₃)</td> <td>≤1,000ppm (0.10%)</td> </tr> <tr> <td>Chlorine (Cl)</td> <td>≤900ppm (0.09%)</td> <td>Red Phosphorus</td> <td>≤1,000ppm (0.10%)</td> </tr> <tr> <td>Total concentration of Chlorine (Cl) + Bromine (Br)</td> <td>≤1,500ppm (0.15%)</td> <td></td> <td></td> </tr> </tbody> </table>	Table-1		Table-2		Substance	Permissible limit (by weight)	Substance	Permissible limit (by weight)	Bromine (Br)	≤900ppm (0.09%)	Antimony Trioxide (Sb ₂ O ₃)	≤1,000ppm (0.10%)	Chlorine (Cl)	≤900ppm (0.09%)	Red Phosphorus	≤1,000ppm (0.10%)	Total concentration of Chlorine (Cl) + Bromine (Br)	≤1,500ppm (0.15%)		
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Total concentration of Chlorine (Cl) + Bromine (Br)	≤1,500ppm (0.15%)																				
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
φD	6.3
φd	0.6
F	2.5
φD'	φD+0.5max.
L'	L+1.5max.

◆ MARKING

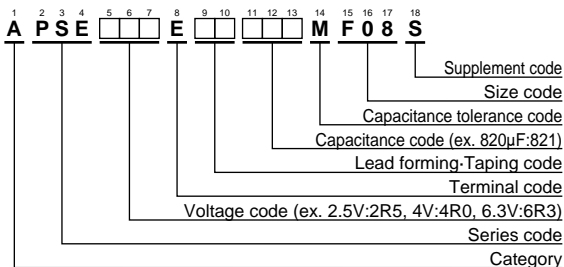
EX) 2.5V820μF



Specifications in this bulletin are subject to change without notice.

NPCAP™-PSE Series

◆PART NUMBERING SYSTEM



◆STANDARD RATINGS

WV(Vdc)	Cap(μF)	Case size φD×L(mm)	ESR (mΩ max./20°C, 100k to 300kHz)	Rated ripple current (mA _{rms} /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.