



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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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



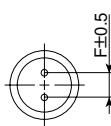
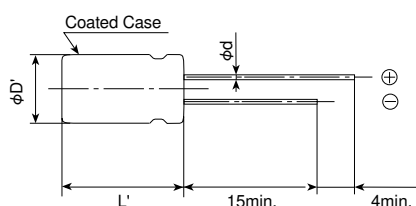
◆ **SPECIFICATIONS**

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**

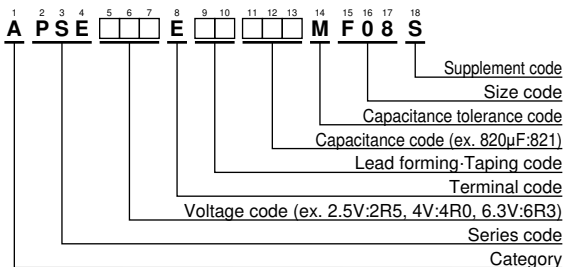
EX) 2.5V820μF



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.