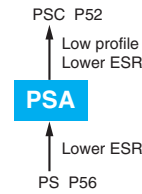


# NPCAP™-PSA Series

- Super low ESR, high temperature resistance and high ripple current capability
- Rated voltage range : 2.5 to 16V<sub>dc</sub>
- Endurance : 15,000 hours at 105°C
- Suitable for DC-DC converters, voltage regulators and decoupling applications for computer motherboards
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS Compliant
- Halogen Free



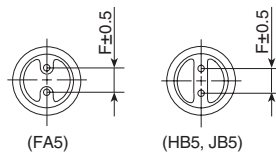
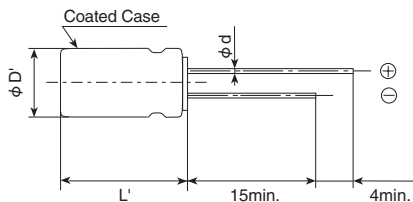
## ◆ SPECIFICATIONS

Items	Characteristics										
<b>Category</b>	-55 to +105°C										
<b>Temperature Range</b>	-55 to +105°C										
<b>Rated Voltage Range</b>	2.5 to 16V <sub>dc</sub>										
<b>Capacitance Tolerance</b>	±20% (M) (at 20°C, 120Hz)										
<b>Surge Voltage</b>	Rated voltage × 1.15 (at 105°C)										
<b>Leakage Current</b>	I=0.2CV										
<b>*Note</b>	Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V <sub>dc</sub> ) (at 20°C after 2 minutes)										
<b>Dissipation Factor (tan δ)</b>	0.08 max. (FA5 size : 0.12max.) (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 15,000 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>≤ 150% 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	≤ 150% of the initial specified value	Leakage current	≤ The initial specified value
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Capacitance change	≤ ±20% of the initial value										
D.F. (tan δ)	≤ 150% of the initial specified value										
ESR	≤ 150% 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>≤ 150% of the initial specified value</td> </tr> <tr> <td>ESR</td> <td>≤ 150% 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	≤ 150% of the initial specified value	Leakage current	≤ The initial specified value
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D.F. (tan δ)	≤ 150% of the initial specified value										
ESR	≤ 150% of 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>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>≤ 150% 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	≤ 150% of the initial specified value	Leakage current	≤ The initial specified value
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Capacitance change	≤ ±20% of the initial value										
D.F. (tan δ)	≤ 150% of the initial specified value										
ESR	≤ 150% of 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	FA5	HB5	JB5
φD	6.3	8.0	10.0
φd	0.5	0.8	
F	2.5	3.5	5.0
φD'	φD+0.5max		
L'	L+0.3max	L+1.5max	

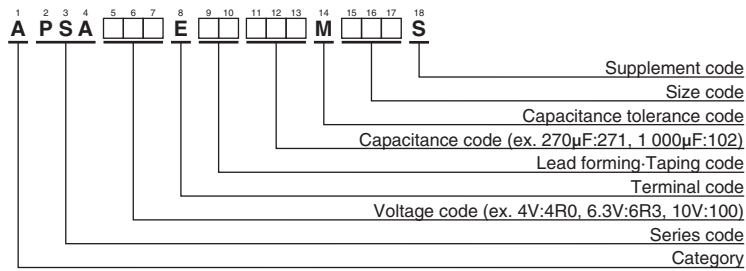
## ◆ MARKING

EX) 4V560μF



NPCAP™-PSA 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	390	6.3 × 10.5	20	3,160	APSA2R5E□□391MFA5S
	680	8 × 11.5	7	5,580	APSA2R5E□□681MHB5S
	820	8 × 11.5	7	5,580	APSA2R5E□□821MHB5S
	1,000	10 × 11.5	6	5,860	APSA2R5E□□102MJB5S
	1,500	10 × 11.5	7	5,860	APSA2R5E□□152MJB5S
4	270	6.3 × 10.5	20	3,160	APSA4R0E□□271MFA5S
	390	6.3 × 10.5	24	3,300	APSA4R0E□□391MFA5S
	560	8 × 11.5	7	5,580	APSA4R0E□□561MHB5S
	820	10 × 11.5	6	5,860	APSA4R0E□□821MJB5S
6.3	220	6.3 × 10.5	20	3,160	APSA6R3E□□221MFA5S
	330	6.3 × 10.5	28	3,190	APSA6R3E□□331MFA5S
	390	8 × 11.5	8	5,080	APSA6R3E□□391MHB5S
	470	8 × 11.5	7	5,700	APSA6R3E□□471MHB5S
	680	10 × 11.5	7	5,860	APSA6R3E□□681MJB5S
10	47	6.3 × 10.5	25	2,820	APSA100E□□470MFA5S
	68	6.3 × 10.5	25	2,820	APSA100E□□680MFA5S
	100	6.3 × 10.5	25	2,820	APSA100E□□101MFA5S
	150	6.3 × 10.5	25	2,820	APSA100E□□151MFA5S
	270	8 × 11.5	9	4,710	APSA100E□□271MHB5S
16	470	10 × 11.5	8	5,650	APSA100E□□471MJB5S
	100	6.3 × 10.5	25	2,820	APSA160E□□101MFA5S

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

# Mouser Electronics

Authorized Distributor

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[APSA2R5ELL681MHB5S](#) [APSA4R0ELL821MJB5S](#) [APSA100ELL471MJB5S](#) [APSA4R0ELL561MHB5S](#)  
[APSA160ELL101MFA5S](#) [APSA100ETD470MFA5S](#) [APSA6R3ETD221MFA5S](#) [APSA4R0ETD561MHB5S](#)  
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