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Upgrade!  
NPCAP™-PSA Series

- Super low ESR, high temperature resistance and high ripple current capability
- Rated voltage range : 2.5 to 16V<sub>dc</sub>
- 2000 hours at 105°C
- Suitable for DC-DC converters, voltage regulators and decoupling applications for computer motherboards
- Pb-free design



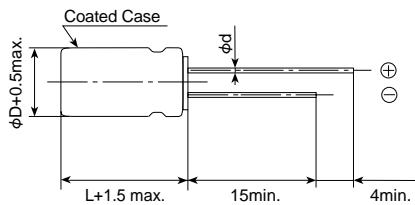
◆ SPECIFICATIONS

Items	Characteristics										
Category											
Temperature Range	-55 to +105°C										
Rated Voltage Range	2.5 to 16V <sub>dc</sub>										
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)										
Surge Voltage	Rated voltage×1.15V (at 105°C)										
Leakage Current	I=0.2CV (max.)										
*Note	Where, I : Leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V <sub>dc</sub> ) (at 20°C after 2 minutes)										
Dissipation Factor (tanδ)	0.08 max. (at 20°C, 120Hz)										
Low Temperature Characteristics	Max. impedance ratio at 100kHz to the 20°C value Z(-25°C)/Z(+20°C) ≤ 1.15 Z(-55°C)/Z(+20°C) ≤ 1.25										
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2000 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 measured value</td> </tr> <tr> <td>D.F. (tanδ)</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 measured value	D.F. (tanδ)	≤150% of the initial specified value	ESR	≤150% of 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 1000 hours. <table border="1"> <tr> <td>Appearance</td> <td>No significant damage</td> </tr> <tr> <td>Capacitance change</td> <td>≤±20% of the initial measured value</td> </tr> <tr> <td>D.F. (tanδ)</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 measured value	D.F. (tanδ)	≤150% of the initial specified value	ESR	≤150% of the initial specified value	Leakage current	≤The initial specified value
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Leakage current	≤The initial specified value										
Surge Voltage Test	The capacitors shall be subjected to 1000 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 measured value</td> </tr> <tr> <td>D.F. (tanδ)</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 measured value	D.F. (tanδ)	≤150% of the initial specified value	ESR	≤150% of the initial specified value	Leakage current	≤The initial specified value
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ESR	≤150% of the initial specified value										
Leakage current	≤The initial specified value										
Failure Rate	1% per 1000 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



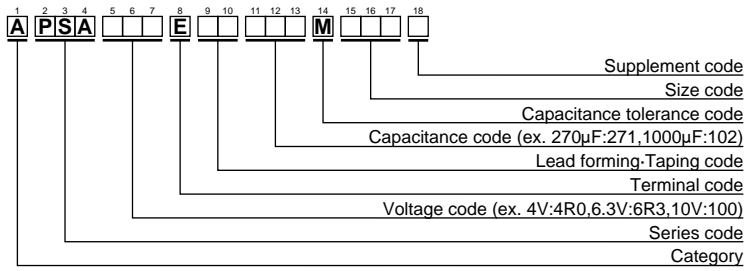
φD	6.3	8	10
φd	0.5	0.8	
L'	L+1.0	L+1.5	
F	2.5	3.5	5

◆ MARKING

EX) 4V560μF



◆PART NUMBERING SYSTEM



Please refer to "A guide to global code (conductive polymer type)"

◆STANDARD RATINGS

WV(Vdc)	Cap( $\mu$ F)	Case size $\phi$ D $\times$ L(mm)	ESR (m $\Omega$ max/20 $^{\circ}$ C, 100k to 300kHz)	Rated ripple current (mArms/105 $^{\circ}$ C, 100kHz)	Part No.
2.5	390	6.3 $\times$ 9.8	20	3160	APSA2R5E□□391MF9JG
	680	8 $\times$ 11.5	7	5580	APSA2R5E□□681MHB5S
	820	8 $\times$ 11.5	7	5580	APSA2R5E□□821MHB5S
	1000	10 $\times$ 11.5	6	5860	APSA2R5E□□102MJB5S
4	270	6.3 $\times$ 9.8	20	3160	APSA4R0E□□271MF9JG
	390	6.3 $\times$ 9.8	24	3300	APSA4R0E□□391MF9JG
	560	8 $\times$ 11.5	7	5580	APSA4R0E□□561MHB5S
	820	10 $\times$ 11.5	6	5860	APSA4R0E□□821MJB5S
6.3	220	6.3 $\times$ 9.8	20	3160	APSA6R3E□□221MF9JG
	330	6.3 $\times$ 9.8	28	3190	APSA6R3E□□331MF9JG
	390	8 $\times$ 11.5	8	5080	APSA6R3E□□391MHB5S
	680	10 $\times$ 11.5	7	5860	APSA6R3E□□681MJB5S
10	47	6.3 $\times$ 9.8	25	2820	APSA100E□□470MF9JG
	68	6.3 $\times$ 9.8	25	2820	APSA100E□□680MF9JG
	100	6.3 $\times$ 9.8	25	2820	APSA100E□□101MF9JG
	150	6.3 $\times$ 9.8	25	2820	APSA100E□□151MF9JG
	270	8 $\times$ 11.5	9	4710	APSA100E□□271MHB5S
16	470	10 $\times$ 11.5	8	5650	APSA100E□□471MJB5S
	100	6.3 $\times$ 9.8	25	2820	APSA160E□□101MF9JG

□□ : Lead forming code and taping code