



# CONDUCTIVE POLYMER ALUMINUM SOLID CAPACITORS

Radial Lead

## 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

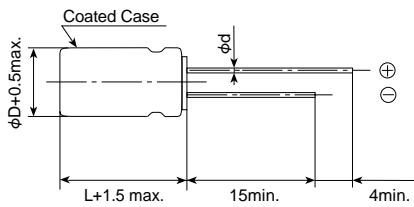
Items	Characteristics											
<b>Category</b> <b>Temperature Range</b>	-55 to +105°C											
<b>Rated Voltage Range</b>	2.5 to 16V <sub>dc</sub>											
<b>Capacitance Tolerance</b>	±20% (M)	(at 20°C, 120Hz)										
<b>Surge Voltage</b>	Rated voltage×1.15V	(at 105°C)										
<b>Leakage Current</b> *Note	I=0.2CV (max.) Where, I : Leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V <sub>dc</sub> )	(at 20°C after 2 minutes)										
<b>Dissipation Factor</b> (tanδ)	0.08 max.	(at 20°C, 120Hz)										
<b>Low Temperature Characteristics</b>	Max. impedance ratio at 100kHz to the 20°C value $Z(-25^\circ\text{C})/Z(+20^\circ\text{C}) \leq 1.15$ $Z(-55^\circ\text{C})/Z(+20^\circ\text{C}) \leq 1.25$											
<b>Endurance</b>	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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<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 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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<b>Surge Voltage Test</b>	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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<b>Failure Rate</b>	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.

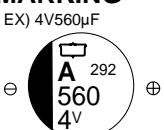
### ◆DIMENSIONS [mm]

- Terminal Code : E



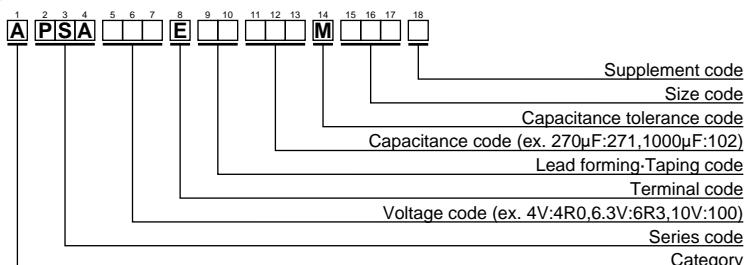
φD	6.3	8	10
φd	0.5	0.8	
L'	L+1.0	L+1.5	
F	2.5	3.5	5

### ◆MARKING



**Upgrade!**  
NPCAP™-PSA Series

### ◆PART NUMBERING SYSTEM



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

### ◆STANDARD RATINGS

WV(Vdc)	Cap(μF)	Case size φDXL(mm)	ESR (mΩmax/20°C, 100k to 300kHz)	Rated ripple current (mAmps/105°C, 100kHz)	Part No.
2.5	390	6.3×9.8	20	3160	APSA2R5E□□391MF9JG
	680	8×11.5	7	5580	APSA2R5E□□681MHB5S
	820	8×11.5	7	5580	APSA2R5E□□821MHB5S
	1000	10×11.5	6	5860	APSA2R5E□□102MJB5S
4	270	6.3×9.8	20	3160	APSA4R0E□□271MF9JG
	390	6.3×9.8	24	3300	APSA4R0E□□391MF9JG
	560	8×11.5	7	5580	APSA4R0E□□561MHB5S
	820	10×11.5	6	5860	APSA4R0E□□821MJB5S
6.3	220	6.3×9.8	20	3160	APSA6R3E□□221MF9JG
	330	6.3×9.8	28	3190	APSA6R3E□□331MF9JG
	390	8×11.5	8	5080	APSA6R3E□□391MHB5S
	680	10×11.5	7	5860	APSA6R3E□□681MJB5S
10	47	6.3×9.8	25	2820	APSA100E□□470MF9JG
	68	6.3×9.8	25	2820	APSA100E□□680MF9JG
	100	6.3×9.8	25	2820	APSA100E□□101MF9JG
	150	6.3×9.8	25	2820	APSA100E□□151MF9JG
	270	8×11.5	9	4710	APSA100E□□271MHB5S
	470	10×11.5	8	5650	APSA100E□□471MJB5S
16	100	6.3×9.8	25	2820	APSA160E□□101MF9JG

□□ : Lead forming code and taping code

**Данный компонент на территории Российской Федерации****Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибуторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ Р В 0015-002 и ЭС РД 009

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