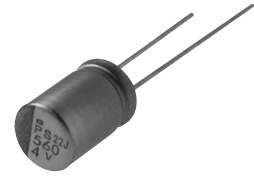


Upgrade!  
NP CAP™ - **PS** Series

- Super low ESR, high temperature resistance
- Large capacitance & Improved high ripple current capability
- Rated voltage range : 2.5 to 25V<sub>dc</sub> (20/25V newly added)
- 2000 hours at 105°C
- Suitable for DC-DC converters, voltage regulators and decoupling applications  
For computer motherboards

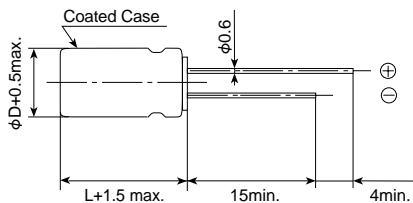


## ◆ SPECIFICATIONS

Items	Characteristics										
<b>Category</b>											
<b>Temperature Range</b>	-55 to +105°C										
<b>Rated Voltage Range</b>	2.5 to 25V <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>	I=0.2CV (max.)										
<b>*Note</b>	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 (tanδ)</b>	0.12 max. (at 20°C, 120Hz)										
<b>Low Temperature Characteristics</b>	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										
<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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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 500 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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ESR	≤ 150% of the initial specified value										
Leakage current	≤ The initial specified value										
<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.										
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D.F. (tanδ)	≤ 150% of the initial specified value										
ESR	≤ 150% of the initial specified value										
Leakage current	≤ The initial specified value										
<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]



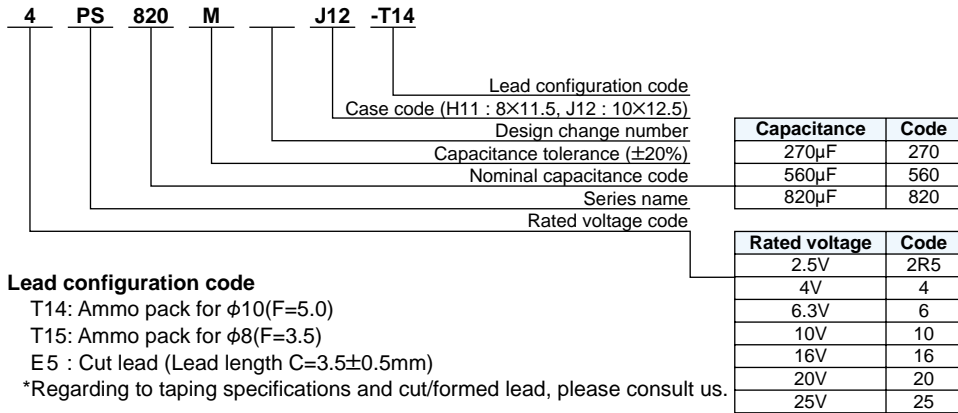
φD	8	10
L	11.5	12.5
F	3.5	5.0

## ◆ MARKING

EX) 4V820μF



### ◆PART NUMBERING SYSTEM



#### Lead configuration code

T14: Ammo pack for φ10(F=5.0)

T15: Ammo pack for φ8(F=3.5)

E5 : Cut lead (Lead length C=3.5±0.5mm)

\*Regarding to taping specifications and cut/formed lead, please consult us.

### ◆STANDARD RATINGS

Case size φD×L(mm)	Rated voltage (V <sub>ac</sub> )	Nominal Capacitance (μF)	ESR (mΩmax./20°C, 100k to 300kHz)	Ripple current (mArms max./ 105°C,100kHz)	Part Number
8×11.5	2.5	680	10	5,230	2R5PS680MH11
	4	560	10	5,230	4PS560MH11
	6.3	390	12	4,770	6PS390MH11
	10	270	14	4,420	10PS270MH11
	16	180	16	4,360	16PS180MH11
	20	100	24	3,320	20PS100MH11
	25	68	24	3,320	25PS68MH11
10×12.5	2.5	1,500	8	5,500	2R5PS1500MJ12
	4	820	8	5,500	4PS820MJ12
	6.3	680	10	5,500	6PS680MJ12
	10	470	12	5,300	10PS470MJ12
	16	330	14	5,050	16PS330MJ12
	20	150	20	4,320	20PS150MJ12
	25	100	20	4,320	25PS100MJ12