

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_{dc} (20/25V newly added)
- 2000 hours at 105°C
- Suitable for DC-DC converters, voltage regulators and decoupling applications
For computer motherboards

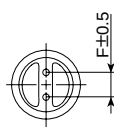
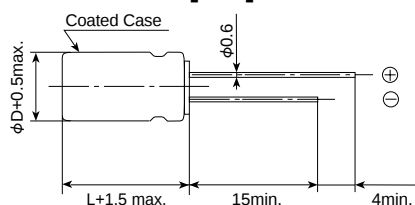


◆ SPECIFICATIONS

Items	Characteristics	
Category	Temperature Range	
	-55 to +105°C	
Rated Voltage Range	2.5 to 25V _{dc}	
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 _{dc})	
	(at 20°C after 2 minutes)	
Dissipation Factor (tanδ)	0.12 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.	
	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
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 500 hours.	
	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
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.	
	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
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.

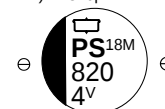
◆ DIMENSIONS [mm]



φD	8	10
L	11.5	12.5
F	3.5	5.0

◆ MARKING

EX) 4V820μF



◆PART NUMBERING SYSTEM

4 PS 820 M J12 -T14

Lead configuration code
Case code (H11 : 8×11.5, J12 : 10×12.5)
Design change number
Capacitance tolerance (±20%)
Nominal capacitance code
Series name
Rated voltage code

Capacitance	Code
270μF	270
560μF	560
820μF	820

Rated voltage	Code
2.5V	2R5
4V	4
6.3V	6
10V	10
16V	16
20V	20
25V	25

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 _{dc})	Nominal Capacitance (μF)	ESR (mΩmax./20°C, 100k to 300kHz)	Ripple current (mA _{rms} 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
10×12.5	25	68	24	3,320	25PS68MH11
	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

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