Upgrade!

NP CAP™-PS Series

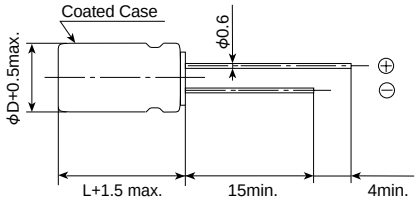
- Super low ESR, high temperature resistance
- Large capacitance & Improved high ripple current capability
- Rated voltage range : 2.5 to 25Vdc (20/25V newly added)
- 2000 hours at 105℃
- Suitable for DC-DC converters, voltage regulators and decoupling applications
  For computer motherboards

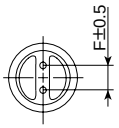
◆SPECIFICATIONS

Items	Characteristics
Category Temperature Range	−55 to +105℃
Rated Voltage Range	2.5 to 25Vdc
Capacitance Tolerance	±20% (M) (at 20℃, 120Hz)
Surge Voltage	Rated voltage×1.15V (at 105℃)
Leakage Current *Note	I=0.2CV (max.) Where, I : Leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (Vdc) (at 20℃ after 2 minutes)
Dissipation Factor (tanδ)	0.12 max. (at 20℃, 120Hz)
Low Temperature Characteristics	Max. impedance ratio at 100kHz to the 20℃ value Z(−25℃)/Z(+20℃)≦1.15 Z(−55℃)/Z(+20℃)≦1.25
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 2000 hours at 105℃.
	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℃ after subjecting them to DC voltage at 60℃, 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℃ 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℃)

*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℃.

◆DIMENSIONS [mm]

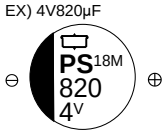




ϕD	8	10
L	11.5	12.5
F	3.5	5.0

◆MARKING

EX) 4V820μF



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◆PART NUMBERING SYSTEM

4 PS 820 M ___ J12 -T14

- -T14: Lead configuration code
- J12: Case code (H11 : 8×11.5, J12 : 10×12.5)
- ___: Design change number
- M: Capacitance tolerance (±20%)
- 820: Nominal capacitance code
- PS: Series name
- 4: 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 (Vdc)	Nominal Capacitance (μF)	ESR (mΩmax./20℃, 100k to 300kHz)	Ripple current (mArms max./ 105℃,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