# NPCAP™-PSE Series

- Super low ESR, high ripple current capability
- Endurance : 20,000 hours at 105℃
- Rated voltage range : 2.5 to 6.3Vdc
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant
- Halogen Free

PSE
↑ Longer life / Downsized
PSC

## ◆SPECIFICATIONS

| Items | Characteristics |
|---|---|
| **Category Temperature Range** | -55 to +105℃ |
| **Rated Voltage Range** | 2.5 to 6.3Vdc |
| **Capacitance Tolerance** | ±20% (M) (at 20℃, 120Hz) |
| **Leakage Current** *Note | I=0.2CV or 500μA, whichever is greater<br>Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20℃ after 2 minutes) |
| **Dissipation Factor (tan δ)** | 0.10 max. (at 20℃, 120Hz) |
| **Low Temperature Characteristics (Max.Impedance Ratio)** | Z(-25℃)/Z(+20℃)≦1.15<br>Z(-55℃)/Z(+20℃)≦1.25 (at 100kHz) |
| **Endurance** | The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 20,000 hours at 105℃. |

| | |
|---|---|
| Appearance | No significant damage |
| Capacitance change | ≦±20% of the initial value |
| D.F. (tan δ) | ≦150% of the initial specified value |
| ESR | ≦200% 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 1,000 hours. |
|---|---|

| | |
|---|---|
| Appearance | No significant damage |
| Capacitance change | ≦±20% of the initial value |
| D.F. (tan δ) | ≦The initial specified value |
| ESR | ≦The initial specified value |
| Leakage current | ≦The initial specified value |

| **Surge Voltage Test** | The capacitors shall be subjected to 1,000 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. |
|---|---|

| Rated voltage (Vdc) | 2.5 | 4.0 | 6.3 |
|---|---|---|---|
| Surge voltage (Vdc) | 2.9 | 4.6 | 7.2 |

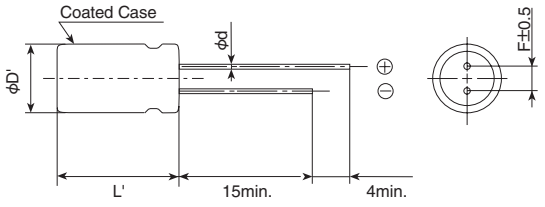
| | |
|---|---|
| Appearance | No significant damage |
| Capacitance change | ≦±20% of the initial value |
| D.F. (tan δ) | ≦The initial specified value |
| ESR | ≦The initial specified value |
| Leakage current | ≦The initial specified value |

| **Failure Rate** | 0.5% per 1,000 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]

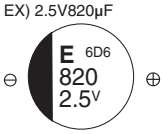
●Terminal Code : E




| Size code | F08 |
|---|---|
| φD | 6.3 |
| φd | 0.6 |
| F | 2.5 |
| φD' | φD+0.5max. |
| L' | L+1.5max. |

## ◆MARKING

EX) 2.5V820μF



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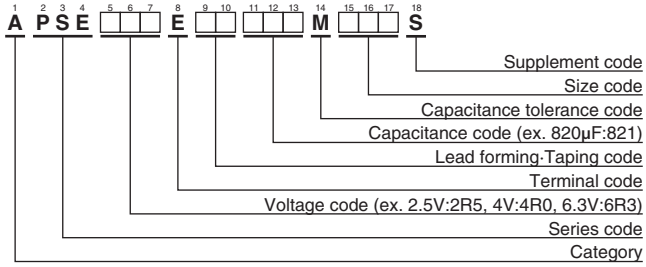
## ◆PART NUMBERING SYSTEM




Please refer to "Product code guide (conductive polymer type)"

## ◆STANDARD RATINGS

| WV ($V_{dc}$) | Cap (μF) | Case size φD×L(mm) | ESR (mΩ max./20℃, 100k to 300kHz) | Rated ripple current (mArms/105℃, 100kHz) | Part No. |
|---|---|---|---|---|---|
| 2.5 | 820 | 6.3×8 | 7 | 5,000 | APSE2R5E□□821MF08S |
| 4 | 560 | 6.3×8 | 7 | 5,000 | APSE4R0E□□561MF08S |
| 6.3 | 470 | 6.3×8 | 8 | 4,700 | APSE6R3E□□471MF08S |
| | 560 | 6.3×8 | 8 | 4,700 | APSE6R3E□□561MF08S |

□□ : Enter the appropriate lead forming or taping code.

## ◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

| Frequency(Hz) | 120 | 1k | 10k | 50k | 100k to 500k |
|---|---|---|---|---|---|
| Radial lead type | 0.10 | 0.35 | 0.60 | 0.80 | 1.00 |