

New!

NPCAP™-PSG Series

- Super low ESR, high ripple current capability
- Endurance: 2,000 to 5,000 hours at 105°C
- Rated voltage : 16 to 20V_{dc}
- RoHS Compliant
- Halogen Free

PSG

↑
Downsized
PSF



◆ SPECIFICATIONS

| Items | Characteristics | | | | | | | | | | |
|---|---|------------|-----------------------|--------------------|-----------------------------|--------------|-------------------------------|-----|---------------------------------------|-----------------|-------------------------------|
| Category | | | | | | | | | | | |
| Temperature Range | -55 to +105°C | | | | | | | | | | |
| Rated Voltage | 16 to 20V _{dc} | | | | | | | | | | |
| Capacitance Tolerance | P20% (M) (at 20°C, 120Hz) | | | | | | | | | | |
| Surge Voltage | Rated voltage(V)B1.15 (at 105°C) | | | | | | | | | | |
| Leakage Current | I=0.2CV or 500μA, whichever is greater (at 20°C after 2 minutes) | | | | | | | | | | |
| *Note Where, I : Leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) | | | | | | | | | | | |
| Dissipation Factor (tan δ) | 0.12 max. (at 20°C, 120Hz) | | | | | | | | | | |
| Low Temperature Characteristics (Max.Impedance Ratio) | Z(-25°C)/Z(+20°C) ≤ 1.15 Z(-55°C)/Z(+20°C) ≤ 1.25 (at 100kHz) | | | | | | | | | | |
| Endurance | The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 5,000 hours (20V : 2,000 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 value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤ 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 value | D.F. (tan δ) | ≤ The initial specified value | ESR | ≤ 150% of the initial specified value | Leakage current | ≤ The initial specified value |
| Appearance | No significant damage | | | | | | | | | | |
| Capacitance change | ≤ ±20% of the initial value | | | | | | | | | | |
| D.F. (tan δ) | ≤ 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 1,000 hours. | | | | | | | | | | |
| | <table border="1"> <tr> <td>Appearance</td> <td>No significant damage</td> </tr> <tr> <td>Capacitance change</td> <td>≤ ±20% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤ 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 value | D.F. (tan δ) | ≤ The initial specified value | ESR | ≤ 150% of the initial specified value | Leakage current | ≤ The initial specified value |
| Appearance | No significant damage | | | | | | | | | | |
| Capacitance change | ≤ ±20% of the initial value | | | | | | | | | | |
| D.F. (tan δ) | ≤ 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 1,000 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 value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤ 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 value | D.F. (tan δ) | ≤ The initial specified value | ESR | ≤ 150% of the initial specified value | Leakage current | ≤ The initial specified value |
| Appearance | No significant damage | | | | | | | | | | |
| Capacitance change | ≤ ±20% of the initial value | | | | | | | | | | |
| D.F. (tan δ) | ≤ The initial specified value | | | | | | | | | | |
| ESR | ≤ 150% of the initial specified value | | | | | | | | | | |
| Leakage current | ≤ The initial specified value | | | | | | | | | | |
| Failure Rate | 0.5% per 1,000 hours maximum (Confidence level 60% at 105°C) | | | | | | | | | | |

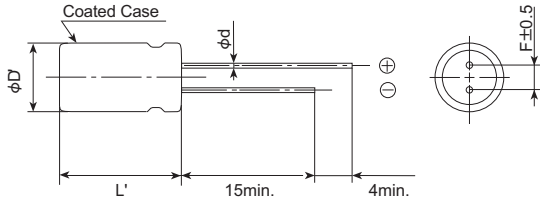
*Note : If any doubt arises, measure the leakage current after the following voltage treatment.

Voltage treatment : DC rated voltage is applied to the capacitors for 120 minutes at 105°C.

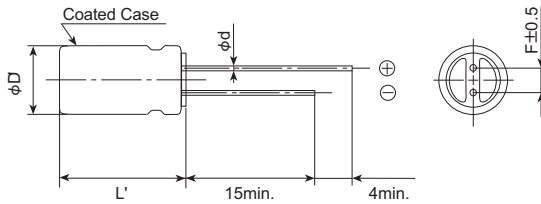
◆ DIMENSIONS [mm]

● Terminal Code : E

F05, F08, H06, H08



HB5, JB5



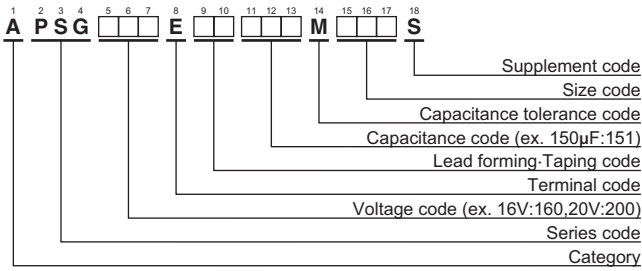
| Size code | F05 | F08 | H06 | H08 | HB5 | JB5 |
|-----------|------------|-----|-----|-----------|-----|------|
| φD | 6.3 | | 8.0 | | | 10.0 |
| φd | 0.45 | | 0.6 | | | |
| F | 2.5 | | 3.5 | | 5.0 | |
| φD' | φD+0.5max. | | | | | |
| L' | L+1.0max. | | | L+1.5max. | | |

◆ MARKING

EX) 16V150μF



◆ 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°C, 100k to 300kHz) | Rated ripple current (mArms/105°C, 100kHz) | Part No. |
|----------------------|---------|-----------------------|---------------------------------------|---|--------------------|
| 16 | 150 | 6.3×5 | 20 | 3,200 | APSG160E□□151MF05S |
| | 270 | 6.3×8 | 15 | 3,800 | APSG160E□□271MF08S |
| | 270 | 8×6 | 22 | 3,300 | APSG160E□□271MH06S |
| | 470 | 8×8 | 16 | 4,000 | APSG160E□□471MH08S |
| | 560 | 8×11.5 | 14 | 4,970 | APSG160E□□561MHB5S |
| | 820 | 10×11.5 | 12 | 5,400 | APSG160E□□821MJB5S |
| 20 | 1,000 | 10×11.5 | 12 | 5,400 | APSG160E□□102MJB5S |
| 20 | 120 | 6.3×5 | 20 | 3,200 | APSG200E□□121MF05S |

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