

Upgrade!

NPCAP™-PSG Series

- Super low ESR, high ripple current capability
- Endurance: 2,000 to 5,000 hours at 105°C
- Rated voltage : 16 to 25V<sub>dc</sub>
- RoHS Compliant
- Halogen Free

PSG

Downsized  
PSF



## SPECIFICATIONS

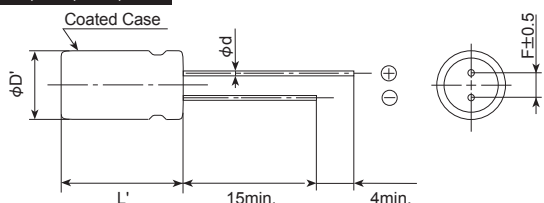
| Items                                                 | Characteristics                                                                                                                                                                                                                                                                                                                                                            |            |                       |                    |                             |              |                               |     |                                       |                 |                               |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------------|--------------------|-----------------------------|--------------|-------------------------------|-----|---------------------------------------|-----------------|-------------------------------|
| Category                                              | Temperature Range                                                                                                                                                                                                                                                                                                                                                          |            |                       |                    |                             |              |                               |     |                                       |                 |                               |
|                                                       | -55 to +105°C                                                                                                                                                                                                                                                                                                                                                              |            |                       |                    |                             |              |                               |     |                                       |                 |                               |
| Rated Voltage                                         | 16 to 25V <sub>dc</sub>                                                                                                                                                                                                                                                                                                                                                    |            |                       |                    |                             |              |                               |     |                                       |                 |                               |
| Capacitance Tolerance                                 | ±20% (M) (at 20°C, 120Hz)                                                                                                                                                                                                                                                                                                                                                  |            |                       |                    |                             |              |                               |     |                                       |                 |                               |
| Surge Voltage                                         | Rated voltage(V)×1.15 (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<br>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 (20, 25V : 2,000 hours) at 105°C.                                                                                                                                                                                              |            |                       |                    |                             |              |                               |     |                                       |                 |                               |
|                                                       | <table> <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.                                                                                                                                                                                                        |            |                       |                    |                             |              |                               |     |                                       |                 |                               |
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| 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.                                                                                                                                                          |            |                       |                    |                             |              |                               |     |                                       |                 |                               |
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| 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.

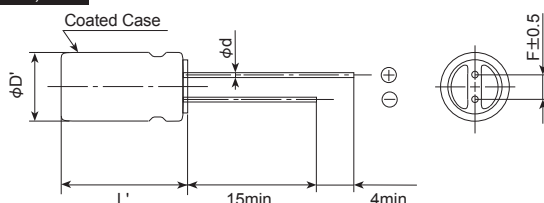
## DIMENSIONS [mm]

- Terminal Code : E

F05,F08,H06,H08



HB5,JB5



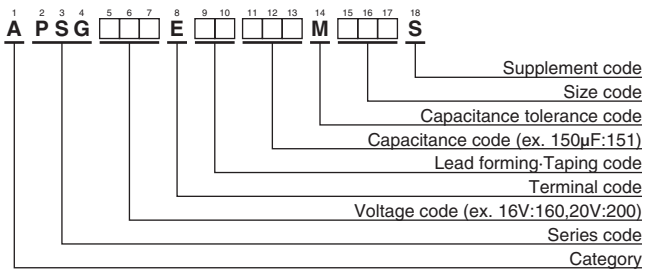
| Size code | F05        | F08 | H06 | H08       | HB5 | JB5  |
|-----------|------------|-----|-----|-----------|-----|------|
| φD        | 6.3        |     |     | 8.0       |     | 10.0 |
| φd        | 0.45       |     |     | 0.6       |     |      |
| F         | 2.5        |     |     | 3.5       |     | 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<br>(Vdc) | Cap<br>(μF) | Case size<br>φD×L (mm) | ESR<br>(mΩ max./20°C, 100k to 300kHz) | Rated ripple current<br>(mA rms/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 |
|             | 120         | 6.3×5                  | 20                                    | 3,200                                          | APSG200E□□121MF05S |
|             | 330         | 8×8                    | 17                                    | 3,880                                          | APSG200E□□331MH08S |
|             | 390         | 8×11.5                 | 14                                    | 4,970                                          | APSG200E□□391MHB5S |
| 25          | 680         | 10×11.5                | 12                                    | 5,400                                          | APSG200E□□681MJB5S |
|             | 56          | 6.3×5                  | 30                                    | 2,600                                          | APSG250E□□560MF05S |
|             | 180         | 8×8                    | 18                                    | 3,770                                          | APSG250E□□181MH08S |
|             | 180         | 8×11.5                 | 16                                    | 4,650                                          | APSG250E□□181MHB5S |
|             | 220         | 8×11.5                 | 16                                    | 4,650                                          | APSG250E□□221MHB5S |
|             | 330         | 10×11.5                | 14                                    | 5,000                                          | APSG250E□□331MJB5S |
|             | 390         | 10×11.5                | 14                                    | 5,000                                          | APSG250E□□391MJB5S |

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

# Mouser Electronics

Authorized Distributor

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[APSG200ELL121MF05S](#) [APSG200ELL681MJB5S](#) [APSG250ELL391MJB5S](#)

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Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

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