

Upgrade!  
NPCAP™-PSA Series

- Super low ESR, high temperature resistance and high ripple current capability
- Rated voltage range : 2.5 to 16V<sub>dc</sub>
- 2000 hours at 105°C
- Suitable for DC-DC converters, voltage regulators and decoupling applications for computer motherboards
- Pb-free design



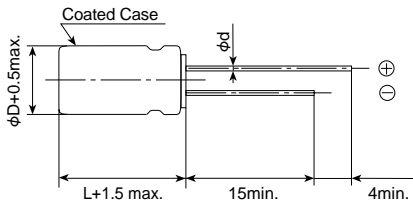
◆ SPECIFICATIONS

| Items                           | Characteristics   |            |                       |                    |                                     |             |                                      |     |                                      |                 |                              |
|---------------------------------|---|------------|-----------------------|--------------------|-------------------------------------|-------------|--------------------------------------|-----|--------------------------------------|-----------------|------------------------------|
| Category                        |   |            |                       |                    |                                     |             |                                      |     |                                      |                 |                              |
| Temperature Range               | -55 to +105°C   |            |                       |                    |                                     |             |                                      |     |                                      |                 |                              |
| Rated Voltage Range             | 2.5 to 16V <sub>dc</sub>  |            |                       |                    |                                     |             |                                      |     |                                      |                 |                              |
| 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 <sub>dc</sub> ) (at 20°C after 2 minutes)   |            |                       |                    |                                     |             |                                      |     |                                      |                 |                              |
| Dissipation Factor (tanδ)       | 0.08 max. (at 20°C, 120Hz)  |            |                       |                    |                                     |             |                                      |     |                                      |                 |                              |
| Low Temperature Characteristics | Max. impedance ratio at 100kHz to the 20°C value<br>Z(-25°C)/Z(+20°C) ≤ 1.15<br>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.  |            |                       |                    |                                     |             |                                      |     |                                      |                 |                              |
|                                 | <table border="1"> <tr> <td>Appearance</td> <td>No significant damage</td> </tr> <tr> <td>Capacitance change</td> <td>≤±20% of the initial measured value</td> </tr> <tr> <td>D.F. (tanδ)</td> <td>≤150% of 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 measured value | D.F. (tanδ) | ≤150% of 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 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 1000 hours.  |            |                       |                    |                                     |             |                                      |     |                                      |                 |                              |
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| 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.  |            |                       |                    |                                     |             |                                      |     |                                      |                 |                              |
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| 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]

- Terminal Code : E



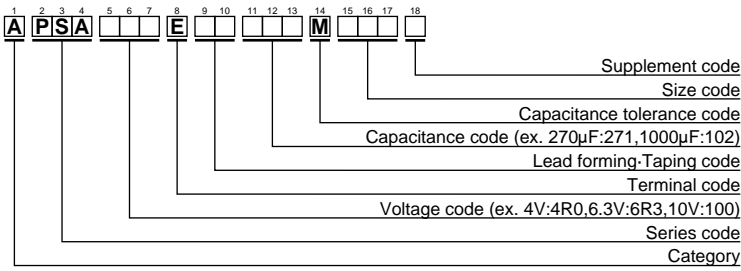
| φD | 6.3   | 8     | 10 |
|----|-------|-------|----|
| φd | 0.5   | 0.8   |    |
| L' | L+1.0 | L+1.5 |    |
| F  | 2.5   | 3.5   | 5  |

◆ MARKING

EX) 4V560μF



◆PART NUMBERING SYSTEM



Please refer to "A guide to global code (conductive polymer type)"

◆STANDARD RATINGS

| WV(Vdc) | Cap( $\mu$ F) | Case size<br>$\phi$ D $\times$ L(mm) | ESR<br>(m $\Omega$ max/20 $^{\circ}$ C, 100k to 300kHz) | Rated ripple current<br>(mArms/105 $^{\circ}$ C, 100kHz) | Part No.           |
|---------|---------------|--------------------------------------|---|--|--------------------|
| 2.5     | 390           | 6.3 $\times$ 9.8                     | 20  | 3160   | APSA2R5E□□391MF9JG |
|         | 680           | 8 $\times$ 11.5                      | 7   | 5580   | APSA2R5E□□681MHB5S |
|         | 820           | 8 $\times$ 11.5                      | 7   | 5580   | APSA2R5E□□821MHB5S |
|         | 1000          | 10 $\times$ 11.5                     | 6   | 5860   | APSA2R5E□□102MJB5S |
| 4       | 270           | 6.3 $\times$ 9.8                     | 20  | 3160   | APSA4R0E□□271MF9JG |
|         | 390           | 6.3 $\times$ 9.8                     | 24  | 3300   | APSA4R0E□□391MF9JG |
|         | 560           | 8 $\times$ 11.5                      | 7   | 5580   | APSA4R0E□□561MHB5S |
|         | 820           | 10 $\times$ 11.5                     | 6   | 5860   | APSA4R0E□□821MJB5S |
| 6.3     | 220           | 6.3 $\times$ 9.8                     | 20  | 3160   | APSA6R3E□□221MF9JG |
|         | 330           | 6.3 $\times$ 9.8                     | 28  | 3190   | APSA6R3E□□331MF9JG |
|         | 390           | 8 $\times$ 11.5                      | 8   | 5080   | APSA6R3E□□391MHB5S |
|         | 680           | 10 $\times$ 11.5                     | 7   | 5860   | APSA6R3E□□681MJB5S |
| 10      | 47            | 6.3 $\times$ 9.8                     | 25  | 2820   | APSA100E□□470MF9JG |
|         | 68            | 6.3 $\times$ 9.8                     | 25  | 2820   | APSA100E□□680MF9JG |
|         | 100           | 6.3 $\times$ 9.8                     | 25  | 2820   | APSA100E□□101MF9JG |
|         | 150           | 6.3 $\times$ 9.8                     | 25  | 2820   | APSA100E□□151MF9JG |
|         | 270           | 8 $\times$ 11.5                      | 9   | 4710   | APSA100E□□271MHB5S |
| 16      | 470           | 10 $\times$ 11.5                     | 8   | 5650   | APSA100E□□471MJB5S |
|         | 100           | 6.3 $\times$ 9.8                     | 25  | 2820   | APSA160E□□101MF9JG |

□□ : Lead forming code and taping code



## Стандарт Электрон Связь

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

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С нами вы становитесь еще успешнее!

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