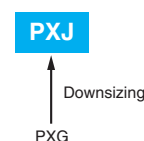


# NPCAP™-PXJ Series

- Super low ESR, impedance and high heat resistance have been obtained by using conductive polymer as electrolyte.
- Rated voltage range : 2.5 to 25V<sub>dc</sub>, Capacitance range : 56 to 1,200μF
- Case size range : φ6.3×5.8L to φ8×6.7L
- Suitable for DC-DC converters, voltage regulators and decoupling applications used on computer motherboards etc.
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant
- Halogen Free



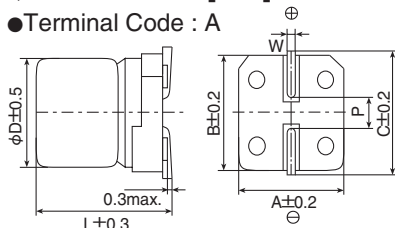
## SPECIFICATIONS

| Items                                                         | Characteristics                                                                                                                                                                                                   |                                                   |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <b>Category</b>                                               | -55 to +105°C                                                                                                                                                                                                     |                                                   |
| <b>Temperature Range</b>                                      |                                                                                                                                                                                                                   |                                                   |
| <b>Rated Voltage Range</b>                                    | 2.5 to 25V <sub>dc</sub>                                                                                                                                                                                          |                                                   |
| <b>Capacitance Tolerance</b>                                  | ±20% (M) (at 20°C, 120Hz)                                                                                                                                                                                         |                                                   |
| <b>Surge Voltage</b>                                          | Rated voltage × 1.15 (at 105°C)                                                                                                                                                                                   |                                                   |
| <b>Leakage Current</b>                                        | Shall not exceed values shown in STANDARD RATINGS. (at 20°C after 2 minutes)                                                                                                                                      |                                                   |
| <b>Dissipation Factor (tan δ)</b>                             | 0.12 max. (at 20°C, 120Hz)                                                                                                                                                                                        |                                                   |
| <b>Low Temperature Characteristics (Max. Impedance Ratio)</b> | Z(-25°C)/Z(+20°C) ≤ 1.15<br>Z(-55°C)/Z(+20°C) ≤ 1.25 (at 100kHz)                                                                                                                                                  |                                                   |
| <b>Endurance</b>                                              | The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 15,000 hours at 105°C.                                                            |                                                   |
|                                                               | Appearance                                                                                                                                                                                                        | No significant damage                             |
|                                                               | Capacitance change                                                                                                                                                                                                | ≤ ±20% of the initial value                       |
|                                                               | D.F. (tan δ)                                                                                                                                                                                                      | ≤ 150% of the initial specified value             |
|                                                               | ESR                                                                                                                                                                                                               | ≤ 150% of the initial specified value             |
|                                                               | Leakage current                                                                                                                                                                                                   | ≤ The initial specified value                     |
| <b>Bias Humidity</b>                                          | The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to the DC rated voltage at 60°C, 90 to 95% RH for 1,000 hours.                                     |                                                   |
|                                                               | Appearance                                                                                                                                                                                                        | No significant damage                             |
|                                                               | Capacitance change                                                                                                                                                                                                | ≤ ±20% of the initial value                       |
|                                                               | D.F. (tan δ)                                                                                                                                                                                                      | ≤ 150% of the initial specified value             |
|                                                               | ESR                                                                                                                                                                                                               | ≤ 150% of the initial specified value             |
|                                                               | Leakage current                                                                                                                                                                                                   | ≤ The initial specified value                     |
| <b>Surge Voltage</b>                                          | 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. |                                                   |
|                                                               | Appearance                                                                                                                                                                                                        | No significant damage                             |
|                                                               | Capacitance change                                                                                                                                                                                                | ≤ ±20% of the initial value                       |
|                                                               | D.F. (tan δ)                                                                                                                                                                                                      | ≤ 150% of the initial specified value             |
|                                                               | ESR                                                                                                                                                                                                               | ≤ 150% of the initial specified value             |
|                                                               | Leakage current                                                                                                                                                                                                   | ≤ The initial specified value                     |
| <b>Soldering Heat</b>                                         | The following specifications shall be satisfied when the solder temperature is reduced back to 20°C to measure dip resistance after soldering has been performed under the recommended soldering conditions.      |                                                   |
|                                                               | Appearance                                                                                                                                                                                                        | No significant damage                             |
|                                                               | Capacitance value                                                                                                                                                                                                 | Within the specified tolerance range              |
|                                                               | D.F. (tan δ)                                                                                                                                                                                                      | ≤ The initial specified value                     |
|                                                               | ESR                                                                                                                                                                                                               | ≤ The initial specified value                     |
|                                                               | Leakage current                                                                                                                                                                                                   | ≤ The initial specified value (Voltage treatment) |
| <b>Failure Rate</b>                                           | 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]

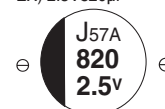
- Terminal Code : A



| Size Code | φD  | L   | A   | B   | C   | W          | P   |
|-----------|-----|-----|-----|-----|-----|------------|-----|
| F61       | 6.3 | 5.8 | 6.6 | 6.6 | 7.2 | 0.5 to 0.8 | 1.9 |
| F80       | 6.3 | 7.7 | 6.6 | 6.6 | 7.2 | 0.5 to 0.8 | 1.9 |
| FA0       | 6.3 | 9.7 | 6.6 | 6.6 | 7.2 | 0.5 to 0.8 | 1.9 |
| H70       | 8   | 6.7 | 8.3 | 8.3 | 9.0 | 0.7 to 1.1 | 3.1 |

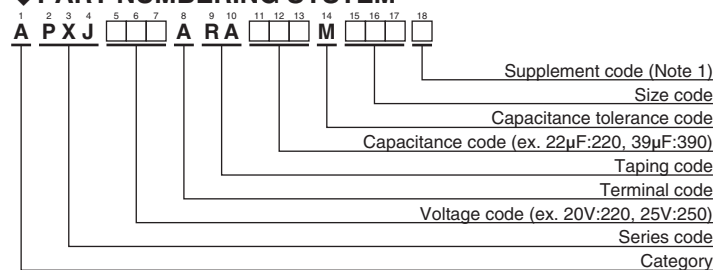
## MARKING

EX) 2.5V820μF



## NPCAP™-PXJ Series

### ◆PART NUMBERING SYSTEM



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

(Note1) :PXJ series, 16V270  $\mu$ F (Rated ripple current 5,080mArms) have supplement code "J". Terminal and terminal plating are the same as all other in PXJ series.

### ◆STANDARD RATINGS

| WV<br>(V <sub>dc</sub> ) | Cap<br>( $\mu$ F) | Size<br>code | Leakage current<br>( $\mu$ A max./after 2min.) | ESR<br>(m $\Omega$ max./20°C, 100k to 300kHz) | Rated ripple current<br>(mArms/105°C, 100kHz) | Part No.           |
|--------------------------|-------------------|--------------|------------------------------------------------|-----------------------------------------------|-----------------------------------------------|--------------------|
| 2.5                      | 820               | F61          | 1,020                                          | 10                                            | 4,900                                         | APXJ2R5ARA821MF61G |
|                          | 820               | F80          | 1,020                                          | 7                                             | 5,000                                         | APXJ2R5ARA821MF80G |
|                          | 820               | FA0          | 1,020                                          | 10                                            | 4,300                                         | APXJ2R5ARA821MFA0G |
|                          | 1,000             | FA0          | 1,250                                          | 10                                            | 4,300                                         | APXJ2R5ARA102MFA0G |
|                          | 1,200             | FA0          | 1,500                                          | 10                                            | 4,300                                         | APXJ2R5ARA122MFA0G |
|                          | 1,200             | H70          | 1,500                                          | 10                                            | 4,500                                         | APXJ2R5ARA122MH70G |
| 6.3                      | 390               | F61          | 1,220                                          | 10                                            | 4,900                                         | APXJ6R3ARA391MF61G |
|                          | 560               | F80          | 1,760                                          | 8                                             | 5,000                                         | APXJ6R3ARA561MF80G |
|                          | 560               | FA0          | 1,760                                          | 10                                            | 4,300                                         | APXJ6R3ARA561MFA0G |
|                          | 680               | H70          | 2,140                                          | 10                                            | 4,500                                         | APXJ6R3ARA681MH70G |
| 10                       | 270               | F61          | 1,350                                          | 15                                            | 4,000                                         | APXJ100ARA271MF61G |
|                          | 390               | F80          | 1,950                                          | 13                                            | 4,460                                         | APXJ100ARA391MF80G |
|                          | 390               | FA0          | 1,950                                          | 13                                            | 4,000                                         | APXJ100ARA391MFA0G |
|                          | 470               | H70          | 2,350                                          | 15                                            | 4,000                                         | APXJ100ARA471MH70G |
| 16                       | 220               | F61          | 704                                            | 20                                            | 3,500                                         | APXJ160ARA221MF61G |
|                          | 270               | F80          | 864                                            | 10                                            | 5,080                                         | APXJ160ARA271MF80J |
|                          | 270               | F80          | 864                                            | 13                                            | 4,460                                         | APXJ160ARA271MF80G |
|                          | 270               | FA0          | 864                                            | 16                                            | 3,500                                         | APXJ160ARA271MFA0G |
|                          | 390               | H70          | 1,240                                          | 25                                            | 3,600                                         | APXJ160ARA391MH70G |
| 20                       | 150               | F61          | 600                                            | 23                                            | 3,300                                         | APXJ200ARA151MF61G |
|                          | 150               | F80          | 600                                            | 18                                            | 3,790                                         | APXJ200ARA151MF80G |
|                          | 150               | FA0          | 600                                            | 18                                            | 3,200                                         | APXJ200ARA151MFA0G |
|                          | 220               | H70          | 880                                            | 28                                            | 3,300                                         | APXJ200ARA221MH70G |
| 25                       | 56                | F61          | 280                                            | 28                                            | 3,000                                         | APXJ250ARA560MF61G |
|                          | 82                | F80          | 410                                            | 28                                            | 3,040                                         | APXJ250ARA820MF80G |
|                          | 82                | FA0          | 410                                            | 28                                            | 3,000                                         | APXJ250ARA820MFA0G |
|                          | 120               | H70          | 600                                            | 38                                            | 3,200                                         | APXJ250ARA121MH70G |

### ◆RATED RIPPLE CURRENT MULTIPLIERS

#### ● Frequency Multipliers

| Frequency (Hz) | 120  | 1k   | 10k  | 50k  | 100k to 500k |
|----------------|------|------|------|------|--------------|
| SMD type       | 0.05 | 0.30 | 0.55 | 0.70 | 1.00         |