

NPCAP™-PXF Series

- Super low ESR, impedance and high heat resistance have been obtained by using conductive polymer as electrolyte.
- Rated voltage range : 2 to 10V_{dc}, Capacitance range : 120 to 1,000μF
- Case size range : φ 5x3.9L to φ 8x7.7L
- Suitable for DC-DC converters, voltage regulators and decoupling applications used on computer motherboards etc.
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS Compliant
- Halogen Free

PXF

Lower ESR
PXE P40



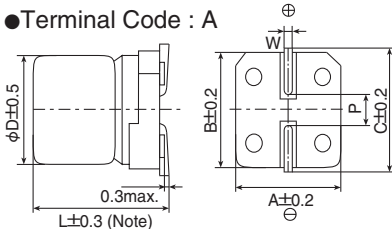
◆ SPECIFICATIONS

| Items | Characteristics | | | | | | | | | | |
|--|--|------------|-----------------------|--------------------|-----------------------------|--------------|---------------------------------------|-----|---------------------------------------|-----------------|-------------------------------|
| Category | | | | | | | | | | | |
| Temperature Range | -55 to +105°C | | | | | | | | | | |
| Rated Voltage Range | 2 to 10V _{dc} | | | | | | | | | | |
| Capacitance Tolerance | ±20% (M) (at 20°C, 120Hz) | | | | | | | | | | |
| Surge Voltage | Rated voltage × 1.15 (at 105°C) | | | | | | | | | | |
| Leakage Current | Shall not exceed values shown in STANDARD RATINGS. (at 20°C after 2 minutes) | | | | | | | | | | |
| 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 15,000 hours (E40, E46, F45 : 3,000 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>≤ 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 value | D.F. (tan δ) | ≤ 150% of the initial specified value | ESR | ≤ 150% of the initial specified value | Leakage current | ≤ The initial specified value |
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| ESR | ≤ 150% of the initial specified value | | | | | | | | | | |
| Leakage current | ≤ The initial specified value | | | | | | | | | | |
| Bias Humidity | 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 (E40, E46, F45 : 500 hours). | | | | | | | | | | |
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| ESR | ≤ 150% of the initial specified value | | | | | | | | | | |
| Leakage current | ≤ The initial specified value | | | | | | | | | | |
| Surge Voltage | 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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| 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 : A



Note : L+0.1/-0.2 for E40, E46 and F45

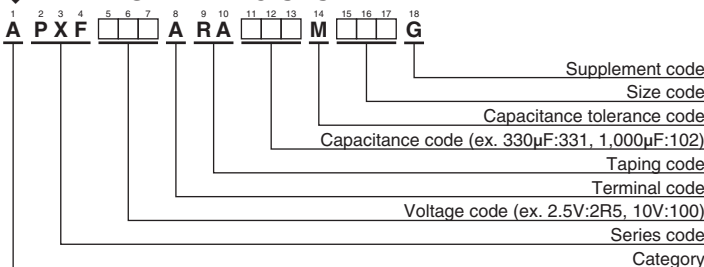
| Size Code | φD | L | A | B | C | W | P |
|-----------|-----|-----|-----|-----|-----|------------|-----|
| E40 | 5 | 3.9 | 5.3 | 5.3 | 5.9 | 0.5 to 0.8 | 1.4 |
| E46 | 5 | 4.5 | 5.3 | 5.3 | 5.9 | 0.5 to 0.8 | 1.4 |
| E61 | 5 | 5.8 | 5.3 | 5.3 | 5.9 | 0.5 to 0.8 | 1.4 |
| F45 | 6.3 | 4.4 | 6.6 | 6.6 | 7.2 | 0.5 to 0.8 | 1.9 |
| 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 |
| H70 | 8 | 6.7 | 8.3 | 8.3 | 9.0 | 0.7 to 1.1 | 3.1 |
| H80 | 8 | 7.7 | 8.3 | 8.3 | 9.0 | 0.7 to 1.1 | 3.1 |

◆ MARKING

EX) 2.5V390μF



◆ PART NUMBERING SYSTEM



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

NPCAP™-PXF Series
◆STANDARD RATINGS

| WV (V _{dc}) | Cap (μF) | Size code | Leakage current (μA max./after 2min.) | ESR (mΩ max./20°C, 100k to 300kHz) | Rated ripple current (mArms/105°C, 100kHz) | Part No. |
|-----------------------|----------|-----------|---------------------------------------|------------------------------------|--|--------------------|
| 2 | 680 | F61 | 700 | 12 | 3,500 | APXF2R0ARA681MF61G |
| | 220 | E40 | 700 | 12 | 3,300 | APXF2R5ARA221ME40G |
| 2.5 | 220 | E46 | 700 | 25 | 2,100 | APXF2R5ARA221ME46G |
| | 330 | E61 | 700 | 10 | 3,900 | APXF2R5ARA331ME61G |
| | 330 | F45 | 700 | 12 | 3,500 | APXF2R5ARA331MF45G |
| | 390 | E61 | 700 | 10 | 3,900 | APXF2R5ARA391ME61G |
| | 390 | F61 | 292 | 10 | 3,900 | APXF2R5ARA391MF61G |
| | 470 | F80 | 352 | 9 | 4,200 | APXF2R5ARA471MF80G |
| | 560 | F61 | 700 | 10 | 3,900 | APXF2R5ARA561MF61G |
| | 560 | F80 | 420 | 9 | 4,200 | APXF2R5ARA561MF80G |
| | 560 | H70 | 420 | 10 | 4,500 | APXF2R5ARA561MH70G |
| | 680 | H70 | 510 | 10 | 4,500 | APXF2R5ARA681MH70G |
| | 1,000 | H80 | 750 | 9 | 4,500 | APXF2R5ARA102MH80G |
| 4 | 330 | F61 | 396 | 10 | 3,900 | APXF4R0ARA331MF61G |
| | 390 | F80 | 468 | 9 | 4,200 | APXF4R0ARA391MF80G |
| | 470 | H70 | 564 | 10 | 4,500 | APXF4R0ARA471MH70G |
| | 560 | H70 | 672 | 10 | 4,500 | APXF4R0ARA561MH70G |
| | 680 | H80 | 816 | 9 | 4,500 | APXF4R0ARA681MH80G |
| 6.3 | 150 | E40 | 700 | 20 | 2,700 | APXF6R3ARA151ME40G |
| | 150 | E46 | 700 | 25 | 2,100 | APXF6R3ARA151ME46G |
| | 150 | E61 | 700 | 12 | 3,500 | APXF6R3ARA151ME61G |
| | 220 | E61 | 700 | 12 | 3,500 | APXF6R3ARA221ME61G |
| | 220 | F61 | 415 | 10 | 3,900 | APXF6R3ARA221MF61G |
| | 270 | F80 | 510 | 9 | 4,200 | APXF6R3ARA271MF80G |
| | 330 | F61 | 700 | 10 | 3,900 | APXF6R3ARA331MF61G |
| | 330 | F80 | 623 | 9 | 4,200 | APXF6R3ARA331MF80G |
| | 330 | H70 | 623 | 10 | 4,500 | APXF6R3ARA331MH70G |
| | 390 | H70 | 737 | 10 | 4,500 | APXF6R3ARA391MH70G |
| | 470 | H80 | 888 | 9 | 4,500 | APXF6R3ARA471MH80G |
| | 560 | H80 | 1,050 | 9 | 4,500 | APXF6R3ARA561MH80G |
| | 10 | 120 | E61 | 240 | 22 | 2,600 |
| 270 | | F61 | 540 | 20 | 2,800 | APXF100ARA271MF61G |