

RNS Standard



FPCAP

- Low ESR, High ripple current.
- Load life of 2000 hours at 105°C.
- Radial lead type : Lead free flow soldering condition correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).



■ Specifications

| Item | Performance Characteristics | |
|-------------------------------|--|---|
| Category Temperature Range | -55 to +105°C | |
| Rated Voltage Range | 4.0 to 25V | |
| Rated Capacitance Range | 10 to 1200μF | |
| Capacitance Tolerance | ±20% at 120Hz, 20°C | |
| Tangent of loss angle (tan δ) | Less than or equal to the specified value at 120Hz, 20°C | |
| ESR (*1) | Less than or equal to the specified value at 100kHz, 20°C | |
| Leakage Current (*2) | Less than or equal to the specified value. After 2 minutes' application of rated voltage at 20°C | |
| Endurance | Test condition | 105°C, rated voltage 2000Hrs. |
| | Capacitance change | Within ±20% of initial value before test |
| | tan δ | 150% or less than the initial specified value |
| | ESR(*1) | 150% or less than the initial specified value |
| | Leakage current (*2) | Less than or equal to the initial specified value |

※1 ESR should be measured at both of the terminal ends closest where the terminals protrude through the plastic platform.
 ※2 Conditioning : If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.

■ Dimensions



| (mm) | | | |
|---------|------|-----|-----|
| φD×L | φd | P | α |
| 6.3×7 | 0.45 | 2.5 | 1.0 |
| 6.3×10 | 0.5 | 2.5 | 1.0 |
| 8×11.5 | 0.6 | 3.5 | 1.5 |
| 10×12.5 | 0.6 | 5.0 | 1.5 |

● Frequency coefficient of rated ripple current

| Frequency | 120 Hz | 1 kHz | 10 kHz | 100 kHz | 300 kHz |
|-------------|--------|-------|--------|---------|---------|
| Coefficient | 0.10 | 0.45 | 0.50 | 1.00 | 1.00 |

Type numbering system (Example : 20V 100μF)
 Nichicon part number



FPCAP part number



RNS

■ Dimensions

| Rated Voltage (V) (code) | Surge Voltage (V) | Rated Capacitance (μF) | Case Size φD×L (mm) | tan δ | Leakage Current (μA, 2min.) | ESR (mΩ) (20°C/100kHz) | Rated Ripple Current (mA _{rms}) (105°C/100kHz) | NICHICON | FPCAP |
|--------------------------|-------------------|------------------------|---------------------|-------|-----------------------------|------------------------|--|----------------|-------------------|
| 4.0 (0G) | 4.6 | 560 | 8×11.5 | 0.08 | 336 | 10 | 5230 | RNS0G561MDN1□□ | FP-4R0RE561M-NS□□ |
| | | 820 | 10×12.5 | 0.08 | 492 | 10 | 5500 | RNS0G821MDN1□□ | FP-4R0RE821M-NS□□ |
| | | 1200 | 10×12.5 | 0.15 | 720 | 10 | 5500 | RNS0G122MDN1□□ | FP-4R0RE122M-NS□□ |
| 6.3 (0J) | 7.2 | 47 | 6.3×7 | 0.07 | 50 | 42 | 2050 | RNS0J470MDS1□□ | FP-6R3RE470M-NS□□ |
| | | 150 | 8×11.5 | 0.07 | 142 | 21 | 3900 | RNS0J151MDN1□□ | FP-6R3RE151M-NS□□ |
| | | 220 | 8×11.5 | 0.07 | 208 | 21 | 3900 | RNS0J221MDN1□□ | FP-6R3RE221M-NS□□ |
| | | 330 | 10×12.5 | 0.07 | 312 | 10 | 5500 | RNS0J331MDN1□□ | FP-6R3RE331M-NS□□ |
| | | 390 | 8×11.5 | 0.08 | 369 | 10 | 5230 | RNS0J391MDN1□□ | FP-6R3RE391M-NS□□ |
| | | 680 | 10×12.5 | 0.08 | 643 | 10 | 5500 | RNS0J681MDN1□□ | FP-6R3RE681M-NS□□ |
| | | 820 | 10×12.5 | 0.12 | 775 | 10 | 5500 | RNS0J821MDN1□□ | FP-6R3RE821M-NS□□ |
| 1000 | 10×12.5 | 0.12 | 945 | 10 | 5500 | RNS0J102MDN1□□ | FP-6R3RE102M-NS□□ | | |
| 10 (1A) | 11.5 | 33 | 6.3×7 | 0.07 | 50 | 49 | 1900 | RNS1A330MDS1□□ | FP-010RE330M-NS□□ |
| | | 68 | 6.3×10 | 0.07 | 102 | 35 | 2650 | RNS1A680MDS1□□ | FP-010RE680M-NS□□ |
| | | 100 | 8×11.5 | 0.07 | 150 | 21 | 3900 | RNS1A101MDN1□□ | FP-010RE101M-NS□□ |
| | | 220 | 10×12.5 | 0.07 | 330 | 10 | 5500 | RNS1A221MDN1□□ | FP-010RE221M-NS□□ |
| | | 470 | 10×12.5 | 0.08 | 705 | 10 | 5500 | RNS1A471MDN1□□ | FP-010RE471M-NS□□ |
| 16 (1C) | 18.4 | 22 | 6.3×7 | 0.06 | 53 | 49 | 1900 | RNS1C220MDS1□□ | FP-016RE220M-NS□□ |
| | | 33 | 6.3×7 | 0.06 | 79 | 49 | 1900 | RNS1C330MDS1□□ | FP-016RE330M-NS□□ |
| | | 47 | 6.3×10 | 0.06 | 113 | 42 | 2400 | RNS1C470MDS1□□ | FP-016RE470M-NS□□ |
| | | 68 | 8×11.5 | 0.06 | 163 | 25 | 3600 | RNS1C680MDN1□□ | FP-016RE680M-NS□□ |
| | | 100 | 8×11.5 | 0.06 | 240 | 21 | 3900 | RNS1C101MDN1□□ | FP-016RE101M-NS□□ |
| | | 150 | 10×12.5 | 0.06 | 360 | 10 | 5500 | RNS1C151MDN1□□ | FP-016RE151M-NS□□ |
| | | 180 | 8×11.5 | 0.08 | 432 | 16 | 4700 | RNS1C181MDN1□□ | FP-016RE181M-NS□□ |
| 330 | 10×12.5 | 0.08 | 792 | 10 | 5500 | RNS1C331MDN1□□ | FP-016RE331M-NS□□ | | |
| 20 (1D) | 23.0 | 15 | 6.3×7 | 0.06 | 50 | 63 | 1700 | RNS1D150MDS1□□ | FP-020RE150M-NS□□ |
| | | 22 | 6.3×7 | 0.06 | 66 | 49 | 1900 | RNS1D220MDS1□□ | FP-020RE220M-NS□□ |
| | | 33 | 6.3×10 | 0.06 | 99 | 49 | 2200 | RNS1D330MDS1□□ | FP-020RE330M-NS□□ |
| | | 47 | 8×11.5 | 0.06 | 141 | 28 | 3400 | RNS1D470MDN1□□ | FP-020RE470M-NS□□ |
| | | 68 | 8×11.5 | 0.06 | 204 | 25 | 3600 | RNS1D680MDN1□□ | FP-020RE680M-NS□□ |
| | | 100 | 10×12.5 | 0.06 | 300 | 15 | 4500 | RNS1D101MDN1□□ | FP-020RE101M-NS□□ |
| 25 (1E) | 28.7 | 10 | 6.3×7 | 0.06 | 50 | 63 | 1700 | RNS1E100MDS1□□ | FP-025RE100M-NS□□ |
| | | 15 | 6.3×10 | 0.06 | 75 | 49 | 2200 | RNS1E150MDS1□□ | FP-025RE150M-NS□□ |
| | | 22 | 8×11.5 | 0.06 | 110 | 28 | 3400 | RNS1E220MDN1□□ | FP-025RE220M-NS□□ |
| | | 33 | 10×12.5 | 0.06 | 165 | 20 | 3800 | RNS1E330MDN1□□ | FP-025RE330M-NS□□ |
| | | 47 | 10×12.5 | 0.06 | 235 | 20 | 3800 | RNS1E470MDN1□□ | FP-025RE470M-NS□□ |
| | | 100 | 10×12.5 | 0.08 | 500 | 15 | 4500 | RNS1E101MDN1□□ | FP-025RE101M-NS□□ |

- Taping specifications are given in page 26, 27.
- Please refer to page 3 for the minimum order quantity.