

# RNU

High Capacitance



High Ripple Current



Low Impedance



For High Frequency



Long Life

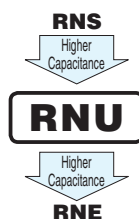


Anti-Solvent Feature

# FPCAP

# Expanded

- Low ESR, High Capacitance, High ripple current.
- Load life of 2000/5000 hours at 105°C.
- Radial lead type : Lead free flow soldering condition correspondence.
- Compliant to the RoHS directive (2011/65/EU).



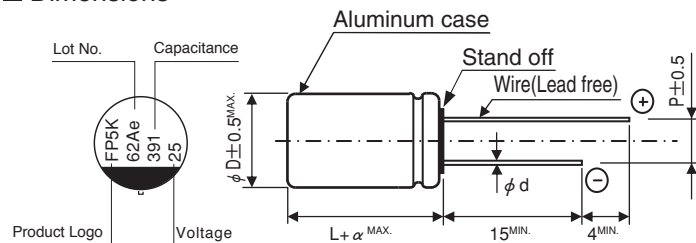
## Specifications

| Item                          | Performance Characteristics                                                                      |                                                   |
|-------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Category Temperature Range    | -55 to +105°C                                                                                    |                                                   |
| Rated Voltage Range           | 2.5 to 63V                                                                                       |                                                   |
| Rated Capacitance Range       | 10 to 2700μF                                                                                     |                                                   |
| 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 2000 / 5000Hrs.              |
|                               | 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 to the capacitor body.

※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

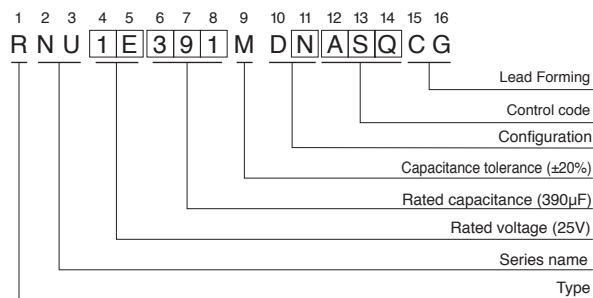


| φD×L    | φd   | P   | α   |
|---------|------|-----|-----|
| 4×5     | 0.45 | 1.5 | 1.0 |
| 6.3×10  | 0.5  | 2.5 | 1.0 |
| 8×11.5  | 0.6  | 3.5 | 1.5 |
| 10×12.5 | 0.6  | 5.0 | 1.5 |

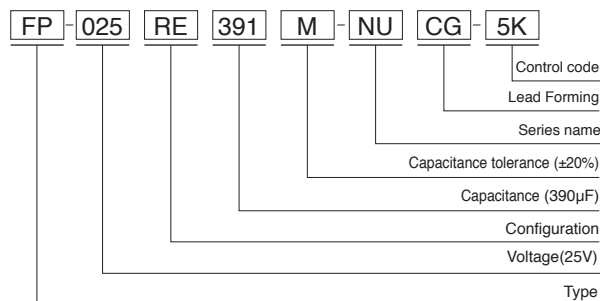
### Frequency coefficient of rated ripple current

| 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 : 25V 390μF) Nichicon part number



## FPCAP part number



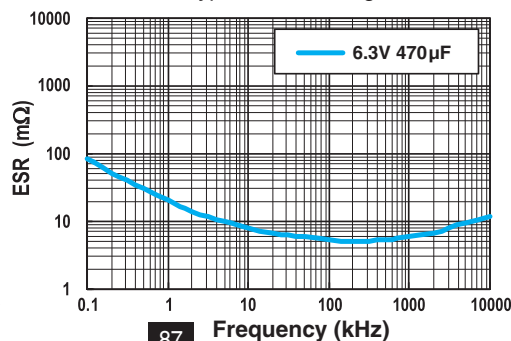
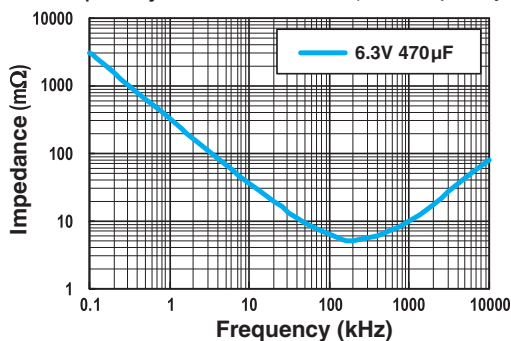
**RNU**

## ■ Standard Ratings

| Rated Voltage (V) (code) | Surge Voltage (V) | Rated Capacitance (μF) | Case Size φD×L (mm) | tan δ | Leakage Current (μA, 2min.) | ESR (mΩ, 100kHz) | Rated Ripple Current (mA rms) | NICHICON         | FPCAP                |
|--------------------------|-------------------|------------------------|---------------------|-------|-----------------------------|------------------|-------------------------------|------------------|----------------------|
| 2.5 (0E)                 | 2.8               | 1500                   | 8×11.5              | 0.08  | 938                         | 7                | 5700                          | RNU0E152MDN1□□   | FP-2R5RE152M-NU□□    |
|                          |                   | 2700                   | 10×12.5             | 0.08  | 1350                        | 7                | 6100                          | RNU0E272MDN1□□   | FP-2R5RE272M-NU□□    |
| 4.0 (0G)                 | 4.6               | 820                    | 8×11.5              | 0.08  | 656                         | 7                | 5700                          | RNU0G821MDN1□□   | FP-4R0RE821M-NU□□    |
|                          |                   | 1000                   | 8×11.5              | 0.08  | 800                         | 7                | 5700                          | RNU0G102MDN1□□   | FP-4R0RE102M-NU□□    |
|                          |                   | 1200                   | 8×11.5              | 0.08  | 960                         | 7                | 5700                          | RNU0G122MDN1□□   | FP-4R0RE122M-NU□□    |
|                          |                   | 1800                   | 10×12.5             | 0.08  | 1440                        | 7                | 6100                          | RNU0G182MDN1□□   | FP-4R0RE182M-NU□□    |
|                          |                   | 2200                   | 10×12.5             | 0.08  | 1760                        | 7                | 6100                          | RNU0G222MDN1□□   | FP-4R0RE222M-NU□□    |
|                          |                   |                        |                     |       |                             |                  |                               |                  |                      |
| 6.3 (0J)                 | 7.2               | 220                    | 6.3×10              | 0.08  | 277                         | 20               | 3200                          | RNU0J221MDS1□□   | FP-6R3RE221M-NU□□    |
|                          |                   | 470                    | 8×11.5              | 0.08  | 592                         | 7                | 5700                          | RNU0J471MDN1□□   | FP-6R3RE471M-NU□□    |
|                          |                   | 680                    | 8×11.5              | 0.08  | 857                         | 7                | 5700                          | RNU0J681MDN1□□   | FP-6R3RE681M-NU□□    |
|                          |                   | 820                    | 8×11.5              | 0.08  | 1033                        | 7                | 5700                          | RNU0J821MDN1□□   | FP-6R3RE821M-NU□□    |
|                          |                   | 1000                   | 8×11.5              | 0.08  | 1260                        | 7                | 5700                          | RNU0J102MDN1□□   | FP-6R3RE102M-NU□□    |
|                          |                   | 1200                   | 8×11.5              | 0.08  | 1512                        | 9                | 6100                          | RNU0J122MDN1□□   | FP-6R3RE122M-NU□□    |
|                          |                   | 1500                   | 10×12.5             | 0.08  | 1890                        | 7                | 6100                          | RNU0J152MDN1□□   | FP-6R3RE152M-NU□□    |
|                          |                   |                        |                     |       |                             |                  |                               |                  |                      |
| 10 (1A)                  | 11.5              | 10                     | 4×5                 | 0.12  | 300                         | 220              | 700                           | RNU1A100MDS1□□   | FP-010RE100M-NU□□    |
|                          |                   | ※10                    | 4×5                 | 0.12  | 300                         | 220              | 700                           | RNU1A100MDSASQ□□ | FP-010RE100M-NU□□-5K |
|                          |                   | 820                    | 8×11.5              | 0.08  | 1640                        | 10               | 5800                          | RNU1A821MDN1□□   | FP-010RE821M-NU□□    |
|                          |                   | 1200                   | 10×12.5             | 0.08  | 2400                        | 9                | 6200                          | RNU1A122MDN1□□   | FP-010RE122M-NU□□    |
| 16 (1C)                  | 18.4              | 100                    | 6.3×10              | 0.08  | 320                         | 25               | 2820                          | RNU1C101MDS1□□   | FP-016RE101M-NU□□    |
|                          |                   | ※100                   | 6.3×10              | 0.08  | 320                         | 25               | 2820                          | RNU1C101MDSASQ□□ | FP-016RE101M-NU□□-5K |
|                          |                   | 180                    | 8×11.5              | 0.08  | 576                         | 8                | 5700                          | RNU1C181MDN1□□   | FP-016RE181M-NU□□    |
|                          |                   | 270                    | 8×11.5              | 0.08  | 864                         | 8                | 5000                          | RNU1C271MDN1□□   | FP-016RE271M-NU□□    |
|                          |                   | ※270                   | 8×11.5              | 0.08  | 864                         | 8                | 5000                          | RNU1C271MDNASQ□□ | FP-016RE271M-NU□□-5K |
|                          |                   | 330                    | 8×11.5              | 0.08  | 1056                        | 8                | 6100                          | RNU1C331MDN1□□   | FP-016RE331M-NU□□    |
|                          |                   | 470                    | 10×12.5             | 0.08  | 1504                        | 10               | 6100                          | RNU1C471MDN1□□   | FP-016RE471M-NU□□    |
|                          |                   | ※470                   | 10×12.5             | 0.08  | 1504                        | 10               | 6100                          | RNU1C471MDNASQ□□ | FP-016RE471M-NU□□-5K |
|                          |                   | 680                    | 10×12.5             | 0.08  | 2176                        | 10               | 6100                          | RNU1C681MDN1□□   | FP-016RE681M-NU□□    |
|                          |                   |                        |                     |       |                             |                  |                               |                  |                      |
| 20 (1D)                  | 23.0              | 390                    | 8×11.5              | 0.12  | 1560                        | 14               | 4970                          | RNU1D391MDN1□□   | FP-020RE391M-NU□□    |
|                          |                   | 680                    | 10×12.5             | 0.12  | 2720                        | 12               | 5400                          | RNU1D681MDN1□□   | FP-020RE681M-NU□□    |
| 25 (1E)                  | 28.7              | 33                     | 8×11.5              | 0.12  | 413                         | 24               | 3600                          | RNU1E330MDN1□□   | FP-025RE330M-NU□□    |
|                          |                   | 47                     | 8×11.5              | 0.12  | 588                         | 24               | 3600                          | RNU1E470MDN1□□   | FP-025RE470M-NU□□    |
|                          |                   | 68                     | 8×11.5              | 0.12  | 850                         | 24               | 3600                          | RNU1E680MDN1□□   | FP-025RE680M-NU□□    |
|                          |                   | 180                    | 8×11.5              | 0.12  | 900                         | 16               | 4650                          | RNU1E181MDN1□□   | FP-025RE181M-NU□□    |
|                          |                   | 220                    | 8×11.5              | 0.12  | 1100                        | 16               | 4650                          | RNU1E221MDN1□□   | FP-025RE221M-NU□□    |
|                          |                   | ※220                   | 8×11.5              | 0.12  | 1100                        | 16               | 4650                          | RNU1E221MDNASQ□□ | FP-025RE221M-NU□□-5K |
|                          |                   | 330                    | 10×12.5             | 0.12  | 1650                        | 14               | 5000                          | RNU1E331MDN1□□   | FP-025RE331M-NU□□    |
|                          |                   | ※330                   | 10×12.5             | 0.12  | 1650                        | 14               | 5000                          | RNU1E331MDNASQ□□ | FP-025RE331M-NU□□-5K |
|                          |                   | 390                    | 10×12.5             | 0.12  | 1950                        | 14               | 5000                          | RNU1E391MDN1□□   | FP-025RE391M-NU□□    |
|                          |                   | ※390                   | 10×12.5             | 0.12  | 1950                        | 14               | 5000                          | RNU1E391MDNASQ□□ | FP-025RE391M-NU□□-5K |
| 35 (1V)                  | 40.2              | 47                     | 8×11.5              | 0.12  | 329                         | 24               | 3600                          | RNU1V470MDN1□□   | FP-035RE470M-NU□□    |
|                          |                   | 150                    | 10×12.5             | 0.12  | 1050                        | 20               | 3800                          | RNU1V151MDN1□□   | FP-035RE151M-NU□□    |
| 50 (1H)                  | 57.5              | 39                     | 8×11.5              | 0.12  | 390                         | 25               | 2400                          | RNU1H390MDN1□□   | FP-050RE390M-NU□□    |
|                          |                   | 47                     | 10×12.5             | 0.12  | 470                         | 24               | 2700                          | RNU1H470MDN1□□   | FP-050RE470M-NU□□    |
|                          |                   | 68                     | 10×12.5             | 0.12  | 680                         | 24               | 2700                          | RNU1H680MDN1□□   | FP-050RE680M-NU□□    |
| 63 (1J)                  | 72.5              | 33                     | 8×11.5              | 0.12  | 416                         | 26               | 2300                          | RNU1J330MDN1□□   | FP-063RE330M-NU□□    |
|                          |                   | 39                     | 10×12.5             | 0.12  | 492                         | 25               | 2600                          | RNU1J390MDN1□□   | FP-063RE390M-NU□□    |
|                          |                   | 56                     | 10×12.5             | 0.12  | 706                         | 25               | 2600                          | RNU1J560MDN1□□   | FP-063RE560M-NU□□    |

※ : Load life 5000hours.

## ■ Frequency Characteristics (The frequency characteristics are typical and not a guaranteed value.)



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

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