

# RPS / RPA

Standard  
( $\phi 6.3, \phi 8, \phi 10$ )



For SMD



High Ripple Current



Low Impedance



For High Frequency



Anti-Solvent Feature

# FPCAP

- High voltage (to 63V), Low ESR, High ripple current.
- Load life of 2000 / 5000 hours at 105°C.
- SMD type : Lead free reflow soldering condition at 260°C peak correspondence.
- Compliant to the RoHS directive (2011/65/EU, (EU)2015/863).



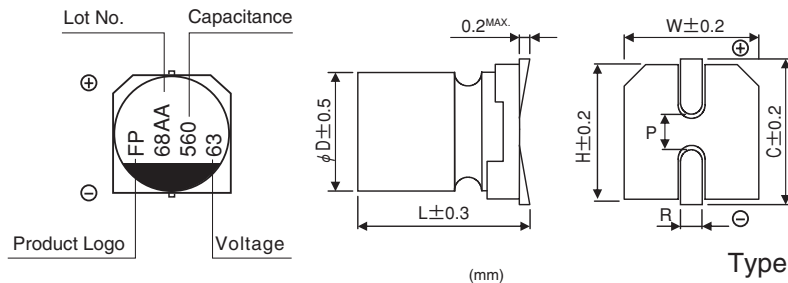
## Specifications

| Item                                  | Performance Characteristics                                                                      |                                                   |
|---------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Category Temperature Range            | -55 to +105°C                                                                                    |                                                   |
| Rated Voltage Range                   | 2.5 to 63V                                                                                       |                                                   |
| Rated Capacitance Range               | 8.2 to 1500 $\mu$ F                                                                              |                                                   |
| Capacitance Tolerance                 | $\pm 20\%$ at 120Hz, 20°C                                                                        |                                                   |
| Tangent of loss angle (tan $\delta$ ) | 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 $\pm 20\%$ of initial value before test    |
|                                       | tan $\delta$                                                                                     | 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



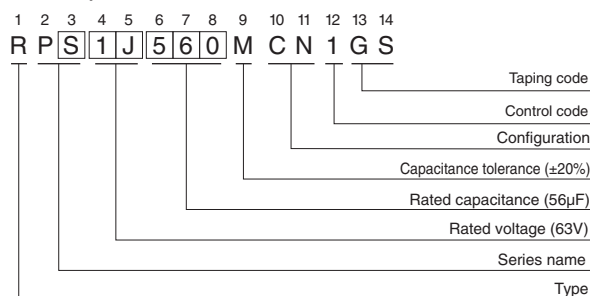
| $\phi D \times L$ | W    | H    | C    | R          | P   |
|-------------------|------|------|------|------------|-----|
| 6.3×5.7           | 6.5  | 6.5  | 7.2  | 0.5 to 0.9 | 2.1 |
| 8×6.7             | 8.3  | 8.3  | 9.0  | 0.8 to 1.1 | 3.2 |
| 8×11.7            | 8.3  | 8.3  | 9.0  | 0.8 to 1.1 | 3.2 |
| 10×7.7            | 10.3 | 10.3 | 11.0 | 0.8 to 1.1 | 4.6 |
| 10×12.4           | 10.3 | 10.3 | 11.0 | 0.8 to 1.1 | 4.6 |

### Frequency coefficient of rated ripple current

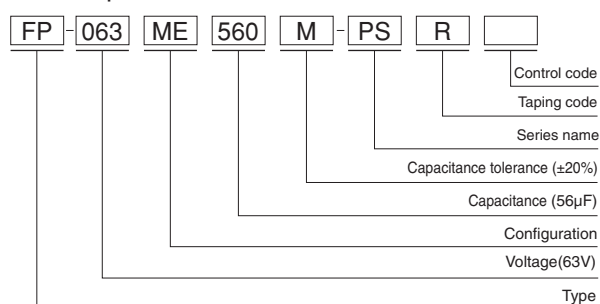
| Frequency   | 120 Hz | 1 kHz | 10 kHz | 100 kHz | 300 kHz |
|-------------|--------|-------|--------|---------|---------|
| Coefficient | 0.10   | 0.45  | 0.50   | 1.00    | 1.00    |

Type numbering system (Example : 63V 56 $\mu$ F)

Nichicon part number



FPCAP part number



## RPS / RPA

## ■ Dimensions

| Rated Voltage<br>(V)<br>(code) | Surge<br>Voltage<br>(V) | Rated<br>Capacitance<br>(μF) | Case Size<br>φD×L (mm) | tan δ | Leakage<br>Current<br>(μA)<br>(at 20°C after<br>2 minutes) | ESR<br>(mΩ)<br>(20°C/100kHz) | Rated Ripple<br>Current<br>(mA <sub>rms</sub> )<br>(105°C/100kHz) | NICHICON         | FPCAP               |
|--------------------------------|-------------------------|------------------------------|------------------------|-------|------------------------------------------------------------|------------------------------|-------------------------------------------------------------------|------------------|---------------------|
| 2.5<br>(0E)                    | 2.8                     | 680                          | 8×11.7                 | 0.12  | 425                                                        | 13                           | 4500                                                              | RPS0E681MCN1GS   | FP-2R5ME681M-PSR    |
|                                |                         | 1500                         | 10×12.4                | 0.12  | 938                                                        | 10                           | 5500                                                              | RPS0E152MCN1GS   | FP-2R5ME152M-PSR    |
| 4.0<br>(0G)                    | 4.6                     | 100                          | 6.3×5.7                | 0.12  | 80                                                         | 35                           | 2200                                                              | RPS0G101MCN1GS   | FP-4R0ME101M-PSR    |
|                                |                         | 220                          | 8×6.7                  | 0.12  | 176                                                        | 30                           | 2700                                                              | RPS0G221MCN1GS   | FP-4R0ME221M-PSR    |
|                                |                         | 330                          | 8×6.7                  | 0.12  | 264                                                        | 30                           | 2700                                                              | RPS0G331MCN1GS   | FP-4R0ME331M-PSR    |
|                                |                         | 470                          | 10×7.7                 | 0.12  | 376                                                        | 22                           | 3800                                                              | RPS0G471MCN1GS   | FP-4R0ME471M-PSR    |
|                                |                         | 560                          | 8×11.7                 | 0.12  | 448                                                        | 13                           | 4500                                                              | RPS0G561MCN1GS   | FP-4R0ME561M-PSR    |
|                                |                         | 560                          | 8×11.7                 | 0.12  | 448                                                        | 9                            | 5400                                                              | RPA0G561MCN1GS   | FP-4R0ME561M-PAR    |
|                                |                         | 680                          | 10×7.7                 | 0.12  | 544                                                        | 22                           | 3800                                                              | RPS0G681MCN1GS   | FP-4R0ME681M-PSR    |
|                                |                         | 1200                         | 10×12.4                | 0.12  | 960                                                        | 12                           | 5500                                                              | RPS0G122MCN1GS   | FP-4R0ME122M-PSR    |
| 6.3<br>(0J)                    | 7.2                     | 82                           | 6.3×5.7                | 0.12  | 103                                                        | 35                           | 2200                                                              | RPS0J820MCN1GS   | FP-6R3ME820M-PSR    |
|                                |                         | 150                          | 8×6.7                  | 0.12  | 189                                                        | 30                           | 2600                                                              | RPS0J151MCN1GS   | FP-6R3ME151M-PSR    |
|                                |                         | 180                          | 8×6.7                  | 0.12  | 227                                                        | 30                           | 2600                                                              | RPS0J181MCN1GS   | FP-6R3ME181M-PSR    |
|                                |                         | 330                          | 10×7.7                 | 0.12  | 416                                                        | 22                           | 3600                                                              | RPS0J331MCN1GS   | FP-6R3ME331M-PSR    |
|                                |                         | 470                          | 8×11.7                 | 0.15  | 592                                                        | 15                           | 4300                                                              | RPS0J471MCN1GS   | FP-6R3ME471M-PSR    |
|                                |                         | 470                          | 10×7.7                 | 0.12  | 592                                                        | 18                           | 4300                                                              | RPA0J471MCN1GS   | FP-6R3ME471M-PAR    |
|                                |                         | 560                          | 8×11.7                 | 0.15  | 706                                                        | 14                           | 4400                                                              | RPS0J561MCN1GS   | FP-6R3ME561M-PSR    |
|                                |                         | 680                          | 10×12.4                | 0.15  | 643                                                        | 13                           | 5200                                                              | RPS0J681MCN1GS   | FP-6R3ME681M-PSR    |
|                                |                         | 820                          | 10×12.4                | 0.15  | 775                                                        | 12                           | 5500                                                              | RPS0J821MCN1GS   | FP-6R3ME821M-PSR    |
|                                |                         | 1000                         | 10×12.4                | 0.15  | 945                                                        | 12                           | 5500                                                              | RPS0J102MCN1GS   | FP-6R3ME102M-PSR    |
| 10<br>(1A)                     | 11.5                    | 47                           | 6.3×5.7                | 0.12  | 94                                                         | 40                           | 2100                                                              | RPS1A470MCN1GS   | FP-010ME470M-PSR    |
|                                |                         | 56                           | 6.3×5.7                | 0.12  | 112                                                        | 40                           | 2100                                                              | RPS1A560MCN1GS   | FP-010ME560M-PSR    |
|                                |                         | 120                          | 8×6.7                  | 0.12  | 240                                                        | 30                           | 2600                                                              | RPS1A121MCN1GS   | FP-010ME121M-PSR    |
|                                |                         | 270                          | 10×7.7                 | 0.12  | 540                                                        | 25                           | 3500                                                              | RPS1A271MCN1GS   | FP-010ME271M-PSR    |
|                                |                         | 330                          | 8×11.7                 | 0.15  | 660                                                        | 17                           | 4000                                                              | RPS1A331MCN1GS   | FP-010ME331M-PSR    |
|                                |                         | 330                          | 10×7.7                 | 0.12  | 660                                                        | 20                           | 3600                                                              | RPA1A331MCN1GS   | FP-010ME331M-PAR    |
|                                |                         | 560                          | 10×12.4                | 0.15  | 840                                                        | 13                           | 5300                                                              | RPS1A561MCN1GS   | FP-010ME561M-PSR    |
| 16<br>(1C)                     | 18.4                    | 33                           | 6.3×5.7                | 0.10  | 211                                                        | 40                           | 1700                                                              | RPS1C330MCN1GS   | FP-016ME330M-PSR    |
|                                |                         | 39                           | 6.3×5.7                | 0.10  | 125                                                        | 45                           | 2000                                                              | RPS1C390MCN1GS   | FP-016ME390M-PSR    |
|                                |                         | 39                           | 6.3×5.7                | 0.10  | 125                                                        | 24                           | 2500                                                              | RPA1C390MCN1GS   | FP-016ME390M-PAR    |
|                                |                         | 56                           | 8×6.7                  | 0.10  | 179                                                        | 40                           | 2300                                                              | RPS1C560MCN1GS   | FP-016ME560M-PSR    |
|                                |                         | 82                           | 8×6.7                  | 0.10  | 262                                                        | 40                           | 2300                                                              | RPS1C820MCN1GS   | FP-016ME820M-PSR    |
|                                |                         | 100                          | 10×7.7                 | 0.10  | 320                                                        | 30                           | 3200                                                              | RPS1C101MCN1GS   | FP-016ME101M-PSR    |
|                                |                         | 150                          | 10×7.7                 | 0.10  | 480                                                        | 30                           | 3200                                                              | RPS1C151MCN1GS   | FP-016ME151M-PSR    |
|                                |                         | 180                          | 8×11.7                 | 0.12  | 576                                                        | 20                           | 3700                                                              | RPS1C181MCN1GS   | FP-016ME181M-PSR    |
|                                |                         | 180                          | 10×7.7                 | 0.12  | 576                                                        | 20                           | 3600                                                              | RPA1C181MCN1GS   | FP-016ME181M-PAR    |
|                                |                         | 220                          | 8×11.7                 | 0.12  | 704                                                        | 20                           | 3700                                                              | RPS1C221MCN1GS   | FP-016ME221M-PSR    |
|                                |                         | 220                          | 10×7.7                 | 0.10  | 704                                                        | 22                           | 3450                                                              | RPA1C221MCN1GS   | FP-016ME221M-PAR    |
|                                |                         | 270                          | 8×11.7                 | 0.12  | 864                                                        | 14                           | 4400                                                              | RPS1C271MCN1GS   | FP-016ME271M-PSR    |
|                                |                         | 330                          | 10×12.4                | 0.12  | 792                                                        | 16                           | 4800                                                              | RPS1C331MCN1GS   | FP-016ME331M-PSR    |
|                                |                         | 470                          | 10×12.4                | 0.12  | 1504                                                       | 9                            | 6100                                                              | RPS1C471MCN1GS   | FP-016ME471M-PSR    |
|                                |                         | 820                          | 10×12.4                | 0.12  | 2640                                                       | 18                           | 4200                                                              | RPS1C821MCN1GS   | FP-016ME821M-PSR    |
|                                |                         | 1000                         | 10×12.4                | 0.12  | 3200                                                       | 12                           | 5400                                                              | RPS1C102MCN1GS   | FP-016ME102M-PSR    |
|                                |                         | 1200                         | 10×12.4                | 0.12  | 3840                                                       | 12                           | 5400                                                              | RPS1C122MCN1GS   | FP-016ME122M-PSR    |
| 20<br>(1D)                     | 23.0                    | 560                          | 10×12.4                | 0.10  | 2240                                                       | 20                           | 3100                                                              | RPA1D561MCN1GS   | FP-020ME561M-PAR    |
| 25<br>(1E)                     | 28.7                    | 22                           | 8×6.7                  | 0.12  | 275                                                        | 50                           | 1800                                                              | RPS1E220MCN1GS   | FP-025ME220M-PSR    |
|                                |                         | 100                          | 8×11.7                 | 0.12  | 500                                                        | 24                           | 3320                                                              | RPS1E101MCN1GS   | FP-025ME101M-PSR    |
|                                |                         | 220                          | 8×11.7                 | 0.12  | 1100                                                       | 18                           | 4400                                                              | RPS1E221MCN1GS   | FP-025ME221M-PSR    |
|                                |                         | *330                         | 10×12.4                | 0.08  | 1650                                                       | 14                           | 5000                                                              | RPS1E331MCNASQGS | FP-025ME331M-PSR-5K |
|                                |                         | 390                          | 10×12.4                | 0.12  | 1950                                                       | 16                           | 4800                                                              | RPS1E391MCN1GS   | FP-025ME391M-PSR    |
| 35<br>(1V)                     | 40.2                    | 150                          | 10×12.4                | 0.12  | 1050                                                       | 28                           | 2600                                                              | RPS1V151MCN1GS   | FP-035ME151M-PSR    |
| 50<br>(1H)                     | 57.5                    | 12                           | 6.3×5.7                | 0.12  | 120                                                        | 40                           | 1250                                                              | RPS1H120MCN1GS   | FP-050ME120M-PSR    |
|                                |                         | 22                           | 8×6.7                  | 0.12  | 220                                                        | 37                           | 1550                                                              | RPS1H220MCN1GS   | FP-050ME220M-PSR    |
|                                |                         | 33                           | 10×7.7                 | 0.12  | 330                                                        | 32                           | 1950                                                              | RPS1H330MCN1GS   | FP-050ME330M-PSR    |
|                                |                         | 39                           | 8×11.7                 | 0.15  | 390                                                        | 26                           | 2300                                                              | RPS1H390MCN1GS   | FP-050ME390M-PSR    |
|                                |                         | 47                           | 8×11.7                 | 0.15  | 470                                                        | 26                           | 2300                                                              | RPS1H470MCN1GS   | FP-050ME470M-PSR    |
|                                |                         | 82                           | 10×12.4                | 0.15  | 820                                                        | 23                           | 2800                                                              | RPS1H820MCN1GS   | FP-050ME820M-PSR    |
| 63<br>(1J)                     | 72.5                    | 8.2                          | 6.3×5.7                | 0.12  | 103                                                        | 41                           | 1200                                                              | RPS1J8R2MCN1GS   | FP-063ME8R2M-PSR    |
|                                |                         | 12                           | 8×6.7                  | 0.12  | 151                                                        | 38                           | 1500                                                              | RPS1J120MCN1GS   | FP-063ME120M-PSR    |
|                                |                         | 22                           | 10×7.7                 | 0.12  | 277                                                        | 33                           | 1900                                                              | RPS1J220MCN1GS   | FP-063ME220M-PSR    |
|                                |                         | 33                           | 8×11.7                 | 0.15  | 416                                                        | 27                           | 2250                                                              | RPS1J330MCN1GS   | FP-063ME330M-PSR    |
|                                |                         | 56                           | 10×12.4                | 0.15  | 706                                                        | 24                           | 2700                                                              | RPS1J560MCN1GS   | FP-063ME560M-PSR    |

\*: Load life 5000hours.

• For taping specifications, recommended conditions of soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.