

# FPCAP Functional Polymer Aluminum Solid Electrolytic Capacitors

## R5 series

### ● Features

By using Functional Polymer cathode, Frequency & Temp. characteristics are greatly improved.

- Low ESR at a high frequency range.
- High ripple current capability.
- Long life and high reliability.

### ● Applications

- Switching Power Supply and DC/DC Converter.
- Buck up Power Supplies of CPU (VRM etc.)
- Miniature high Power Supply.

### ● Environmental Correspondence

- Any environmental hazardous substances are not used.
- The lead free of terminal plating (Sn 100%)

### ● Specifications

| Items                 | Characteristics             |   |
|-----------------------|-----------------------------|---|
|                       | R5                          |   |
| Operating Temp. Range | - 55 to + 105°C             |   |
| Rated Voltage Range   | 2.5 to 6.3V-dc              |   |
| Capacitance Range     | 390 to 1500μF               |   |
| Capacitance Tolerance | ± 20% (M)                   |   |
| Endurance             | Condition                   | 105°C 2000Hrs at rated voltage            |
|                       | Capacitance                 | Within ± 20% of the value before test     |
|                       | Leakage Current             | Not to exceed the value specified         |
|                       | tan δ                       | Not to exceed 150% of the value specified |
| Failure Rate          | 0.1% / 1000Hrs. Max (60%CL) |   |

Ultra Low ESR

Lead-free

RoHS Compliance

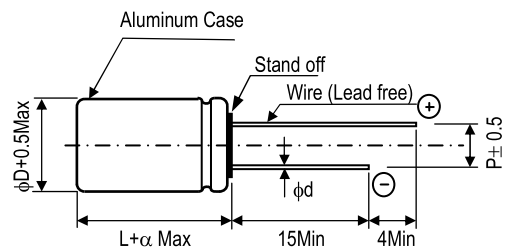
ESR 5mΩ



### ● Size List

| Cap. [μF] | [φD×L]         |           |           |           |
|-----------|----------------|-----------|-----------|-----------|
|           | R.V (S.V.) [V] | 2.5 (2.8) | 4.0 (4.6) | 6.3 (7.2) |
| 390       |                |           |           | 8×11.5    |
| 470       |                |           |           |           |
| 560       |                | 8×11.5    | 8×11.5    |           |
| 680       |                | 8×11.5    |           | 10×12.5   |
| 820       |                | 8×11.5    | 10×12.5   | 10×12.5   |
| 1000      |                | 8×11.5    |           |           |
| 1200      |                |           | 10×12.5   |           |
| 1500      |                |           | 10×12.5   |           |

### ● Dimensions



[Unit : mm]

| φD×L    | φd  | P   | α   |
|---------|-----|-----|-----|
| 8×11.5  | 0.6 | 3.5 | 1.5 |
| 10×12.5 | 0.6 | 5.0 | 1.5 |

## ● Part number & Specifications

| Rated Voltage (V) | Rated Capacitance (μF, 120Hz) | Part Number    |                   | Leakage Current * (μA, 2 min) | tanδ (120Hz) | ESR (mΩ, 100kHz) | Rated Ripple Current (mA, r.m.s.) | Case Size φD×L(mm) |
|-------------------|-------------------------------|----------------|-------------------|-------------------------------|--------------|------------------|-----------------------------------|--------------------|
|                   |                               | NICHICON       | FPCAP             |                               |              |                  |                                   |                    |
| 2.5               | 560                           | RR50E561MDN1□□ | FP-2R5RE561M-R5□□ | 350                           | 0.15         | 5                | 6630                              | 8 × 11.5           |
|                   | 680                           | RR50E681MDN1□□ | FP-2R5RE681M-R5□□ | 425                           | 0.15         | 5                | 6630                              | 8 × 11.5           |
|                   | 820                           | RR50E821MDN1□□ | FP-2R5RE821M-R5□□ | 513                           | 0.15         | 5                | 6630                              | 8 × 11.5           |
|                   | 1000                          | RR50E102MDN1□□ | FP-2R5RE102M-R5□□ | 625                           | 0.15         | 5                | 6630                              | 8 × 11.5           |
|                   | 1500                          | RR50E152MDN1□□ | FP-2R5RE152M-R5□□ | 938                           | 0.15         | 5                | 7220                              | 10 × 12.5          |
| 4.0               | 560                           | RR50G561MDN1□□ | FP-4R0RE561M-R5□□ | 560                           | 0.15         | 5                | 6630                              | 8 × 11.5           |
|                   | 820                           | RR50G821MDN1□□ | FP-4R0RE821M-R5□□ | 820                           | 0.15         | 5                | 7220                              | 10 × 12.5          |
|                   | 1200                          | RR50G122MDN1□□ | FP-4R0RE122M-R5□□ | 1200                          | 0.15         | 5                | 7220                              | 10 × 12.5          |
| 6.3               | 390                           | RR50J391MDN1□□ | FP-6R3RE391M-R5□□ | 614                           | 0.15         | 5                | 6630                              | 8 × 11.5           |
|                   | 680                           | RR50J681MDN1□□ | FP-6R3RE681M-R5□□ | 1071                          | 0.15         | 5                | 7220                              | 10 × 12.5          |
|                   | 820                           | RR50J821MDN1□□ | FP-6R3RE821M-R5□□ | 1292                          | 0.15         | 5                | 7220                              | 10 × 12.5          |

\* In case of some doubt about measured values, measure after applying rated voltage for 120 minutes at 105°C.

## ● Frequency Characteristics



## ● Part Number (EX) 4V, 560μF

|          |             |               |                   |                       |               |              |              |
|----------|-------------|---------------|-------------------|-----------------------|---------------|--------------|--------------|
| <b>R</b> | <b>R5</b>   | <b>0G</b>     | <b>561</b>        | <b>M</b>              | <b>DN</b>     | <b>1</b>     |              |
| Type     | Series name | Rated Voltage | Rated Capacitance | Capacitance Tolerance | Configuration | Control code | Lead Forming |

( CG: Cut lead (Bulk)  
 KX: φ8, 3.5mm pitch taping  
 PX: φ8, 5.0mm pitch taping  
 PH: φ10, 5.0mm pitch taping )