

# FPCAP Functional Polymer Aluminum Solid Electrolytic Capacitors

## E5 series

Ultra Low ESR

Low Profile

Large Capacitance

Lead-free

RoHS Compliance

### 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%)

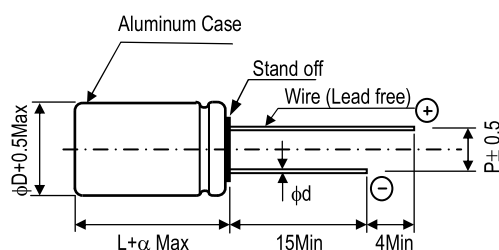
### Specifications

| Items                 | Characteristics             |                                           |
|-----------------------|-----------------------------|-------------------------------------------|
|                       | E5                          |                                           |
| Operating Temp. Range | - 55 to + 105°C             |                                           |
| Rated Voltage Range   | 2.5 to 4V-dc                |                                           |
| Capacitance Range     | 560 to 820μF                |                                           |
| 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) |                                           |

### Size List

|                               |              |              | [φD×L]       |
|-------------------------------|--------------|--------------|--------------|
| R.V(S.V.)<br>[M]<br>Cap. [μF] | 2.5<br>(2.8) | 4.0<br>(4.6) | 6.3<br>(7.2) |
| 560                           | 8×8          | 8×8          |              |
| 820                           | 8×8          |              |              |

### Dimensions



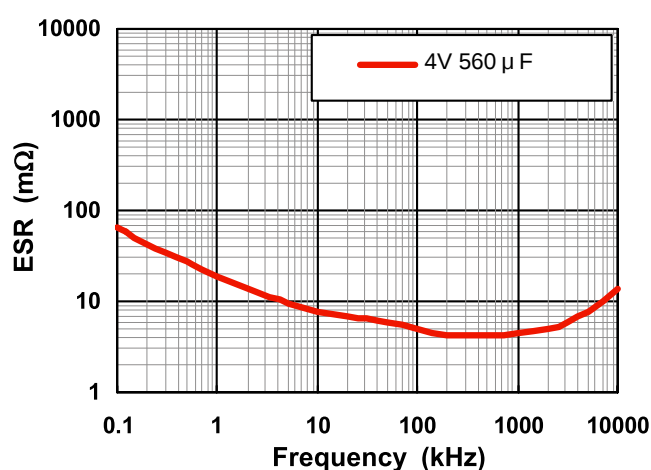
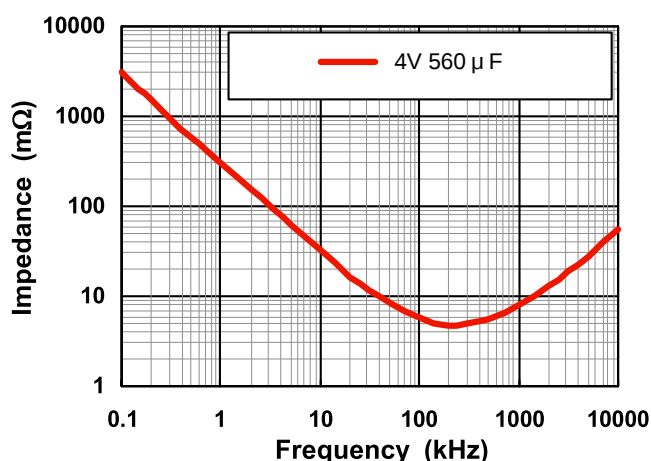
| [Unit : mm] |     |     |     |
|-------------|-----|-----|-----|
| φD×L        | φd  | P   | α   |
| 8×8         | 0.6 | 3.5 | 1.0 |

## ●Part number & Specifications

| Rated Voltage<br>(V) | Rated Capacitance<br>( $\mu$ F, 120Hz) | Part Number    |                   | Leakage Current *<br>( $\mu$ A, 2 min) | $\tan\delta$<br>(120Hz) | ESR<br>(m $\Omega$ , 100kHz) | Rated Ripple Current<br>(mA, r.m.s.) | Case Size<br>$\phi$ D $\times$ L(mm) |
|----------------------|----------------------------------------|----------------|-------------------|----------------------------------------|-------------------------|------------------------------|--------------------------------------|--------------------------------------|
|                      |                                        | NICHICON       | FPCAP             |                                        |                         |                              |                                      |                                      |
| 2.5                  | 560                                    | RE50E561MDN1□□ | FP-2R5RE561M-E5□□ | 500                                    | 0.10                    | 5                            | 6300                                 | 8 $\times$ 8                         |
|                      | 820                                    | RE50E821MDN1□□ | FP-2R5RE821M-E5□□ | 513                                    | 0.10                    | 5                            | 6300                                 | 8 $\times$ 8                         |
| 4.0                  | 560                                    | RE50G561MDN1□□ | FP-4R0RE561M-E5□□ | 560                                    | 0.10                    | 5                            | 6300                                 | 8 $\times$ 8                         |

\* 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, 560 $\mu$ F

|          |             |               |                   |                       |               |              |              |
|----------|-------------|---------------|-------------------|-----------------------|---------------|--------------|--------------|
| <b>R</b> | <b>E5</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:  $\phi$ 8, 3.5mm pitch tapping  
 PX:  $\phi$ 8, 5.0mm pitch tapping