

### Surface Mount Type **SP-Cap**

Series: **FD, CD, CX, UD, UE**



#### ■ Features

- Low ESR
- Excellent Noise-absorbent Characteristics
- RoHS directive compliant

#### ■ Specifications

| Series & Size Code    | FD  | CD                                 | CX                 | UD                     | UE                |
|-----------------------|---|------------------------------------|--------------------|------------------------|-------------------|
| Category Temp. Range  | -40 °C to +105 °C   |                                    |                    |                        |                   |
| Rated W.V.Range       | 2 V.DC to 12.5 V.DC   | 2 V.DC to 16 V.DC                  | 2 V.DC to 6.3 V.DC | 2 V.DC to 8 V.DC       | 2 V.DC to 8 V.DC  |
| Nominal Cap.Range     | 15 μF to 68 μF  | 2.2 μF to 220 μF                   | 100 μF to 470 μF   | 68 μF to 470 μF        | 100 μF to 560 μF  |
| Capacitance Tolerance | ±20 %   |                                    |                    |                        |                   |
| DC Leakage Current    | Reflow 240 °C : $I \leq 0.06 CV (\mu A) 2 \text{ minutes (2 V.DC to 4 V.DC)}$<br>$I \leq 0.04 CV \text{ or } 3 (\mu A) 2 \text{ minutes (6.3 V.DC to 16 V.DC)}$ (Whichever is greater)<br>Reflow 260 °C : $I \leq 0.1 CV (\mu A) 2 \text{ minutes}$ |                                    |                    |                        |                   |
| tan δ                 | ≤ 0.06 (120 Hz/+20 °C)  |                                    |                    | ≤ 0.10 (120 Hz/+20 °C) |                   |
| Surge Voltage         | Rated Working Voltage × 1.25 (15 °C to 35 °C)   |                                    |                    |                        |                   |
| Endurance             | After applying rated working voltage for 1000 hours at 105 °C±2 °C, and then being stabilized at +20 °C, capacitor shall meet the following limits.   |                                    |                    |                        |                   |
|                       | Capacitance change  | ±10% of initial measured value     |                    |                        |                   |
|                       | tan δ   | ≤ Initial specified value          |                    |                        |                   |
|                       | DC leakage current  | ≤ Initial specified value          |                    |                        |                   |
| Moisture resistance   | After storing for 500 hours at 60 °C, 90 %  |                                    |                    |                        |                   |
|                       | Capacitance change of initial measured value  | 2, 2.5 V.DC                        | 4 V.DC             | 6.3 V.DC               | 8 V.DC to 16 V.DC |
|                       |   | +70, -20 %                         | +60, -20 %         | +50, -20 %             | +40, -20 %        |
|                       | tan δ   | ≤ 200 % of initial specified value |                    |                        |                   |
|                       | DC leakage current  | ≤ Initial specified value          |                    |                        |                   |

#### ■ Marking



#### ■ Dimensions in mm(not to scale)



(mm)

| Series & Size Code | L±0.2 | W1±0.2 | W2±0.1 | H       | P±0.3 |
|--------------------|-------|--------|--------|---------|-------|
| FD                 | 7.3   | 4.3    | 2.4    | 1.1±0.1 | 1.3   |
| CD                 | 7.3   | 4.3    | 2.4    | 1.8±0.1 | 1.3   |
| CX                 | 7.3   | 4.3    | 2.4    | 1.9±0.2 | 1.3   |
| UD                 | 7.3   | 4.3    | 2.4    | 2.8±0.2 | 1.3   |
| UE                 | 7.3   | 4.3    | 2.4    | 4.2±0.1 | 1.3   |

\* Externals of figure are the reference.

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately.

00 Sep. 2010

### Standard Products

| Series & Size Code | Rated W.V. (V.DC) | Capacitance (±20 %) (μF) | Case Size |        |        | Specification                          |                             | Part number                             |  | Min. Packaging Qty (pcs) |      |
|--------------------|-------------------|--------------------------|-----------|--------|--------|--|-----------------------------|---|--|--------------------------|------|
|                    |                   |                          | L (mm)    | W (mm) | H (mm) | Ripple current (Ar.m.s.) <sup>*1</sup> | ESR <sup>*2</sup> (mΩ max.) | Reflow condition : 240 °C <sup>*3</sup> | Reflow condition : 260 °C [Proposal] <sup>*3</sup> |                          |      |
| FD                 | 2                 | 68                       | 7.3       | 4.3    | 1.1    | 2.0                                    | 28                          | EEFFD0D680R                             | —  | 3500                     |      |
|                    | 2.5               | 56                       | 7.3       | 4.3    | 1.1    | 2.0                                    | 28                          | EEFFD0E560R                             | —  | 3500                     |      |
|                    | 4                 | 39                       | 7.3       | 4.3    | 1.1    | 2.0                                    | 28                          | EEFFD0G390R                             | —  | 3500                     |      |
|                    |                   | 47                       | 7.3       | 4.3    | 1.1    | 2.0                                    | 28                          | EEFFD0G470R                             | —  | 3500                     |      |
|                    | 6.3               | 33                       | 7.3       | 4.3    | 1.1    | 2.0                                    | 28                          | EEFFD0J330R                             | —  | 3500                     |      |
|                    | 8                 | 22                       | 7.3       | 4.3    | 1.1    | 2.0                                    | 28                          | EEFFD0K220R                             | —  | 3500                     |      |
| 12.5               | 15                | 7.3                      | 4.3       | 1.1    | 1.4    | 40                                     | EEFFD1B150R                 | —                                       | 3500   |                          |      |
| CD                 | 2                 | 100                      | 7.3       | 4.3    | 1.8    | 2.5                                    | 18                          | EEFCD0D101R                             | EEFCD0D101ER                                       | 3500                     |      |
|                    |                   |                          | 7.3       | 4.3    | 1.8    | 2.7                                    | 15                          | EEFCD0D101XR                            | EEFCD0D101XE                                       | 3500                     |      |
|                    |                   | 120                      | 7.3       | 4.3    | 1.8    | 2.5                                    | 18                          | EEFCD0D121R                             | EEFCD0D121ER                                       | 3500                     |      |
|                    |                   |                          | 7.3       | 4.3    | 1.8    | 2.7                                    | 15                          | EEFCD0D121XR                            | EEFCD0D121XE                                       | 3500                     |      |
|                    |                   | 150                      | 7.3       | 4.3    | 1.8    | 2.5                                    | 18                          | EEFCD0D151R                             | EEFCD0D151ER                                       | 3500                     |      |
|                    |                   | 180                      | 7.3       | 4.3    | 1.8    | 2.5                                    | 18                          | EEFCD0D181R                             | EEFCD0D181ER                                       | 3500                     |      |
|                    | 220               | 7.3                      | 4.3       | 1.8    | 2.5    | 18                                     | EEFCD0D221R                 | EEFCD0D221ER                            | 3500   |                          |      |
|                    | 2.5               | 82                       | 7.3       | 4.3    | 1.8    | 2.5                                    | 18                          | EEFCD0E820R                             | EEFCD0E820ER                                       | 3500                     |      |
|                    |                   |                          | 7.3       | 4.3    | 1.8    | 2.7                                    | 15                          | EEFCD0E820XR                            | EEFCD0E820XE                                       | 3500                     |      |
|                    |                   | 100                      | 7.3       | 4.3    | 1.8    | 2.5                                    | 18                          | EEFCD0E101R                             | EEFCD0E101ER                                       | 3500                     |      |
|                    |                   |                          | 7.3       | 4.3    | 1.8    | 2.7                                    | 15                          | EEFCD0E101XR                            | EEFCD0E101XE                                       | 3500                     |      |
|                    |                   | 120                      | 7.3       | 4.3    | 1.8    | 2.5                                    | 18                          | EEFCD0E121R                             | EEFCD0E121ER                                       | 3500                     |      |
|                    |                   | 150                      | 7.3       | 4.3    | 1.8    | 2.5                                    | 18                          | EEFCD0E151R                             | EEFCD0E151ER                                       | 3500                     |      |
|                    | 4                 | 56                       | 7.3       | 4.3    | 1.8    | 2.5                                    | 18                          | EEFCD0G560R                             | EEFCD0G560ER                                       | 3500                     |      |
|                    |                   |                          | 7.3       | 4.3    | 1.8    | 2.7                                    | 15                          | EEFCD0G560XR                            | EEFCD0G560XE                                       | 3500                     |      |
|                    |                   | 68                       | 7.3       | 4.3    | 1.8    | 2.5                                    | 18                          | EEFCD0G680R                             | EEFCD0G680ER                                       | 3500                     |      |
|                    |                   |                          | 7.3       | 4.3    | 1.8    | 2.7                                    | 15                          | EEFCD0G680XR                            | EEFCD0G680XE                                       | 3500                     |      |
|                    |                   | 82                       | 7.3       | 4.3    | 1.8    | 2.5                                    | 18                          | EEFCD0G820R                             | EEFCD0G820ER                                       | 3500                     |      |
|                    |                   |                          | 7.3       | 4.3    | 1.8    | 2.7                                    | 15                          | EEFCD0G820XR                            | EEFCD0G820XE                                       | 3500                     |      |
|                    | 100               | 7.3                      | 4.3       | 1.8    | 2.5    | 18                                     | EEFCD0G101R                 | EEFCD0G101ER                            | 3500   |                          |      |
|                    | 6.3               | 10                       | 7.3       | 4.3    | 1.8    | 1.4                                    | 55                          | EEFCD0J100R                             | EEFCD0J100ER                                       | 3500                     |      |
|                    |                   | 22                       | 7.3       | 4.3    | 1.8    | 1.6                                    | 40                          | EEFCD0J220R                             | EEFCD0J220ER                                       | 3500                     |      |
|                    |                   | 33                       | 7.3       | 4.3    | 1.8    | 2.0                                    | 28                          | EEFCD0J330R                             | EEFCD0J330ER                                       | 3500                     |      |
|                    |                   | 47                       | 7.3       | 4.3    | 1.8    | 2.5                                    | 18                          | EEFCD0J470R                             | EEFCD0J470ER                                       | 3500                     |      |
|                    |                   |                          | 7.3       | 4.3    | 1.8    | 2.7                                    | 15                          | EEFCD0J470XR                            | EEFCD0J470XE                                       | 3500                     |      |
|                    |                   | 68                       | 7.3       | 4.3    | 1.8    | 2.5                                    | 18                          | EEFCD0J680R                             | EEFCD0J680ER                                       | 3500                     |      |
|                    | 8                 | 8.2                      | 7.3       | 4.3    | 1.8    | 1.4                                    | 55                          | EEFCD0K8R2R                             | EEFCD0K8R2ER                                       | 3500                     |      |
|                    |                   |                          | 7.3       | 4.3    | 1.8    | 1.6                                    | 40                          | EEFCD0K150R                             | EEFCD0K150ER                                       | 3500                     |      |
|                    |                   | 22                       | 7.3       | 4.3    | 1.8    | 2.0                                    | 28                          | EEFCD0K220R                             | EEFCD0K220ER                                       | 3500                     |      |
|                    |                   | 33                       | 7.3       | 4.3    | 1.8    | 2.5                                    | 18                          | EEFCD0K330R                             | EEFCD0K330ER                                       | 3500                     |      |
|                    |                   | 47                       | 7.3       | 4.3    | 1.8    | 1.8                                    | 25                          | EEFCD0K470R                             | EEFCD0K470ER                                       | 3500                     |      |
|                    |                   |                          | —         | —      | —      | —                                      | —                           | —                                       | EEFCD1A220ER                                       | 3500                     |      |
|                    | 10                | 33                       | 7.3       | 4.3    | 1.8    | 1.8                                    | 25                          | —                                       | EEFCD1A330ER                                       | 3500                     |      |
|                    |                   | 39                       | 7.3       | 4.3    | 1.8    | 1.8                                    | 25                          | —                                       | EEFCD1A390ER                                       | 3500                     |      |
|                    |                   | 4.7                      | 7.3       | 4.3    | 1.8    | 1.0                                    | 80                          | EEFCD1B4R7R                             | —  | 3500                     |      |
|                    | 12.5              | 10                       | 7.3       | 4.3    | 1.8    | 1.0                                    | 60                          | EEFCD1B100R                             | —  | 3500                     |      |
|                    |                   | 15                       | 7.3       | 4.3    | 1.8    | 1.3                                    | 50                          | EEFCD1B150R                             | —  | 3500                     |      |
|                    |                   | 22                       | 7.3       | 4.3    | 1.8    | 1.6                                    | 30                          | EEFCD1B220R                             | —  | 3500                     |      |
|                    |                   | 2.2                      | 7.3       | 4.3    | 1.8    | 1.0                                    | 110                         | EEFCD1C2R2R                             | —  | 3500                     |      |
|                    | 16                | 4.7                      | 7.3       | 4.3    | 1.8    | 1.0                                    | 80                          | EEFCD1C4R7R                             | —  | 3500                     |      |
|                    |                   | 6.8                      | 7.3       | 4.3    | 1.8    | 1.0                                    | 70                          | EEFCD1C6R8R                             | —  | 3500                     |      |
|                    |                   | 8.2                      | 7.3       | 4.3    | 1.8    | 1.3                                    | 45                          | EEFCD1C8R2R                             | —  | 3500                     |      |
|                    | CX                | 2                        | 220       | 7.3    | 4.3    | 1.9                                    | 2.7                         | 15                                      | —  | EEFCX0D221R              | 3500 |
|                    |                   |                          | 270       | 7.3    | 4.3    | 1.9                                    | 3.0                         | 12                                      | —  | EEFCX0D271XR             | 3500 |
|                    |                   |                          | 330       | 7.3    | 4.3    | 1.9                                    | 2.7                         | 15                                      | —  | EEFCX0D331R              | 3500 |
|                    |                   |                          |           | 7.3    | 4.3    | 1.9                                    | 3.0                         | 12                                      | —  | EEFCX0D331XR             | 3500 |
|                    |                   |                          | 390       | 7.3    | 4.3    | 1.9                                    | 2.7                         | 15                                      | —  | EEFCX0D391R              | 3500 |
|                    |                   |                          | 470       | 7.3    | 4.3    | 1.9                                    | 2.7                         | 15                                      | —  | EEFCX0D471R              | 3500 |
|                    |                   | 2.5                      | 220       | 7.3    | 4.3    | 1.9                                    | 2.7                         | 15                                      | —  | EEFCX0E221R              | 3500 |
|                    |                   |                          | 330       | 7.3    | 4.3    | 1.9                                    | 2.7                         | 15                                      | —  | EEFCX0E331R              | 3500 |
|                    |                   |                          | 390       | 7.3    | 4.3    | 1.9                                    | 2.7                         | 15                                      | —  | EEFCX0E391R              | 3500 |
|                    |                   |                          | 470       | 7.3    | 4.3    | 1.9                                    | 2.7                         | 15                                      | —  | EEFCX0E471R              | 3500 |
|                    |                   |                          | 150       | 7.3    | 4.3    | 1.9                                    | 2.7                         | 15                                      | —  | EEFCX0G151R              | 3500 |
|                    |                   |                          |           | 7.3    | 4.3    | 1.9                                    | 2.7                         | 15                                      | —  | EEFCX0G181R              | 3500 |
| 4                  |                   | 180                      | 7.3       | 4.3    | 1.9    | 3.0                                    | 12                          | —                                       | EEFCX0G181XR                                       | 3500                     |      |
|                    |                   |                          | 7.3       | 4.3    | 1.9    | 2.7                                    | 15                          | —                                       | EEFCX0G221R  | 3500                     |      |
|                    |                   | 220                      | 7.3       | 4.3    | 1.9    | 3.0                                    | 12                          | —                                       | EEFCX0G221XR                                       | 3500                     |      |
| 6.3                |                   | 100                      | 7.3       | 4.3    | 1.9    | 2.7                                    | 15                          | —                                       | EEFCX0J101R  | 3500                     |      |
|                    |                   | 120                      | 7.3       | 4.3    | 1.9    | 2.7                                    | 15                          | —                                       | EEFCX0J121R  | 3500                     |      |
|                    |                   | 150                      | 7.3       | 4.3    | 1.9    | 2.7                                    | 15                          | —                                       | EEFCX0J151R  | 3500                     |      |
|                    |                   |                          | 7.3       | 4.3    | 1.9    | 3.0                                    | 12                          | —                                       | EEFCX0J151XR                                       | 3500                     |      |

\*1: Ripple current (100 kHz/ +20 to +105 °C), \*2: ESR (100 kHz/+20 °C)

\*3: Please confirm EE25 in detail of the Mounting Specifications.

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately.

01 Mar. 2011

### Standard Products

| Series & Size Code | Rated W.V. (V.DC) | Capacitance (±20 %) (μF) | Case Size |        |        | Specification                          |                             | Part number                             |  | Min. Packaging Qty (pcs)   |      |
|--------------------|-------------------|--------------------------|-----------|--------|--------|--|-----------------------------|---|--|----------------------------|------|
|                    |                   |                          | L (mm)    | W (mm) | H (mm) | Ripple current <sup>*1</sup> (Ar.m.s.) | ESR <sup>*2</sup> (mΩ max.) | Reflow condition : 240 °C <sup>*3</sup> | Reflow condition : 260 °C [Proposal] <sup>*3</sup> |                            |      |
| UD                 | 2                 | 330                      | 7.3       | 4.3    | 2.8    | 3.0                                    | 15                          | EEFUD0D331R <sup>*4</sup>               | EEFUD0D331ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.3                                    | 12                          | EEFUD0D331XR <sup>*4</sup>              | EEFUD0D331XE <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.4                                    | 9                           | EEFUD0D331LR <sup>*4</sup>              | EEFUD0D331LE <sup>*4</sup>                         | 2000                       |      |
|                    |                   | 390                      | 7.3       | 4.3    | 2.8    | 3.0                                    | 15                          | EEFUD0D391R <sup>*4</sup>               | EEFUD0D391ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.4                                    | 9                           | EEFUD0D391LR <sup>*4</sup>              | EEFUD0D391LE <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.4                                    | 9                           | EEFUD0D471LR <sup>*4</sup>              | EEFUD0D471LE <sup>*4</sup>                         | 2000                       |      |
|                    | 2.5               | 220                      | 7.3       | 4.3    | 2.8    | 3.0                                    | 15                          | EEFUD0E221R <sup>*4</sup>               | EEFUD0E221ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.3                                    | 12                          | EEFUD0E221XR <sup>*4</sup>              | EEFUD0E221XE <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.4                                    | 9                           | EEFUD0E221LR <sup>*4</sup>              | EEFUD0E221LE <sup>*4</sup>                         | 2000                       |      |
|                    |                   | 270                      | 7.3       | 4.3    | 2.8    | 3.0                                    | 15                          | EEFUD0E271R <sup>*4</sup>               | EEFUD0E271ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.4                                    | 9                           | EEFUD0E271LR <sup>*4</sup>              | EEFUD0E271LE <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.0                                    | 15                          | EEFUD0G121R <sup>*4</sup>               | EEFUD0G121ER <sup>*4</sup>                         | 2000                       |      |
|                    | 4                 | 120                      | 7.3       | 4.3    | 2.8    | 3.4                                    | 12                          | EEFUD0G121XR <sup>*4</sup>              | EEFUD0G121XE <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.0                                    | 15                          | EEFUD0G151R <sup>*4</sup>               | EEFUD0G151ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.3                                    | 12                          | EEFUD0G151XR <sup>*4</sup>              | EEFUD0G151XE <sup>*4</sup>                         | 2000                       |      |
|                    |                   | 150                      | 7.3       | 4.3    | 2.8    | 3.4                                    | 9                           | EEFUD0G151LR <sup>*4</sup>              | EEFUD0G151LE <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 2.5                                    | 18                          | EEFUD0G181R <sup>*4</sup>               | EEFUD0G181ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.4                                    | 9                           | EEFUD0G181LR <sup>*4</sup>              | EEFUD0G181LE <sup>*4</sup>                         | 2000                       |      |
|                    | 6.3               | 100                      | 7.3       | 4.3    | 2.8    | 3.0                                    | 15                          | EEFUD0J101R <sup>*4</sup>               | EEFUD0J101ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.3                                    | 12                          | EEFUD0J101XR <sup>*4</sup>              | EEFUD0J101XE <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.0                                    | 15                          | EEFUD0J121R <sup>*4</sup>               | EEFUD0J121ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   | 120                      | 7.3       | 4.3    | 2.8    | 3.3                                    | 12                          | EEFUD0J121XR <sup>*4</sup>              | EEFUD0J121XE <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.4                                    | 9                           | EEFUD0J121LR <sup>*4</sup>              | —  | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 2.5                                    | 18                          | EEFUD0J151R <sup>*4</sup>               | EEFUD0J151ER <sup>*4</sup>                         | 2000                       |      |
|                    | 8                 | 68                       | 7.3       | 4.3    | 2.8    | 3.4                                    | 9                           | EEFUD0J151LR <sup>*4</sup>              | —  | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 3.0                                    | 15                          | EEFUD0K680R                             | EEFUD0K680ER                                       | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 2.8    | 2.5                                    | 18                          | EEFUD0K101R                             | EEFUD0K101ER                                       | 2000                       |      |
|                    |                   | 100                      | 7.3       | 4.3    | 2.8    | 2.5                                    | 18                          | EEFUD0K101R                             | EEFUD0K101ER                                       | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.3                                    | 12                          | EEFUE0D271R <sup>*4</sup>               | EEFUE0D271ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.5                                    | 10                          | EEFUE0D271XR <sup>*4</sup>              | EEFUE0D271XE <sup>*4</sup>                         | 2000                       |      |
|                    | UE                | 2                        | 330       | 7.3    | 4.3    | 4.2                                    | 3.3                         | 12                                      | EEFUE0D331R <sup>*4</sup>                          | EEFUE0D331ER <sup>*4</sup> | 2000 |
|                    |                   |                          |           | 7.3    | 4.3    | 4.2                                    | 3.5                         | 10                                      | EEFUE0D331XR <sup>*4</sup>                         | EEFUE0D331XE <sup>*4</sup> | 2000 |
|                    |                   |                          |           | 7.3    | 4.3    | 4.2                                    | 3.5                         | 10                                      | EEFUE0D331LR <sup>*4</sup>                         | EEFUE0D331LE <sup>*4</sup> | 2000 |
|                    |                   |                          | 390       | 7.3    | 4.3    | 4.2                                    | 3.3                         | 12                                      | EEFUE0D391R <sup>*4</sup>                          | EEFUE0D391ER <sup>*4</sup> | 2000 |
|                    |                   |                          |           | 7.3    | 4.3    | 4.2                                    | 3.5                         | 10                                      | EEFUE0D391XR <sup>*4</sup>                         | EEFUE0D391XE <sup>*4</sup> | 2000 |
|                    |                   |                          |           | 7.3    | 4.3    | 4.2                                    | 3.7                         | 7                                       | EEFUE0D391LR <sup>*4</sup>                         | EEFUE0D391LE <sup>*4</sup> | 2000 |
| 470                |                   |                          | 7.3       | 4.3    | 4.2    | 3.3                                    | 12                          | EEFUE0D471R <sup>*4</sup>               | EEFUE0D471ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.5                                    | 10                          | EEFUE0D471XR <sup>*4</sup>              | EEFUE0D471XE <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.7                                    | 7                           | EEFUE0D471LR <sup>*4</sup>              | EEFUE0D471LE <sup>*4</sup>                         | 2000                       |      |
| 2.5                |                   |                          | 560       | 7.3    | 4.3    | 4.2                                    | 3.3                         | 12                                      | EEFUE0D561R  | EEFUE0D561ER               | 2000 |
|                    |                   |                          |           | 7.3    | 4.3    | 4.2                                    | 3.7                         | 7                                       | EEFUE0D561LR                                       | EEFUE0D561LE               | 2000 |
|                    |                   |                          |           | 7.3    | 4.3    | 4.2                                    | 3.3                         | 12                                      | EEFUE0E221R <sup>*4</sup>                          | EEFUE0E221ER <sup>*4</sup> | 2000 |
|                    |                   | 220                      | 7.3       | 4.3    | 4.2    | 3.5                                    | 10                          | EEFUE0E221XR <sup>*4</sup>              | EEFUE0E221XE <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.3                                    | 12                          | EEFUE0E271R <sup>*4</sup>               | EEFUE0E271ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.5                                    | 10                          | EEFUE0E271XR <sup>*4</sup>              | EEFUE0E271XE <sup>*4</sup>                         | 2000                       |      |
| 4                  |                   | 330                      | 7.3       | 4.3    | 4.2    | 3.3                                    | 12                          | EEFUE0E331R <sup>*4</sup>               | EEFUE0E331ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.5                                    | 10                          | EEFUE0E331XR <sup>*4</sup>              | EEFUE0E331XE <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.7                                    | 7                           | EEFUE0E331LR <sup>*4</sup>              | EEFUE0E331LE <sup>*4</sup>                         | 2000                       |      |
|                    |                   | 390                      | 7.3       | 4.3    | 4.2    | 3.3                                    | 12                          | EEFUE0E391R <sup>*4</sup>               | EEFUE0E391ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.7                                    | 7                           | EEFUE0E391LR <sup>*4</sup>              | EEFUE0E391LE <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.3                                    | 12                          | EEFUE0E471R                             | EEFUE0E471ER                                       | 2000                       |      |
| 6.3                |                   | 180                      | 7.3       | 4.3    | 4.2    | 3.3                                    | 12                          | EEFUE0E471LR                            | EEFUE0E471LE                                       | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.7                                    | 7                           | EEFUE0G181R <sup>*4</sup>               | EEFUE0G181ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.5                                    | 10                          | EEFUE0G181XR <sup>*4</sup>              | EEFUE0G181XE <sup>*4</sup>                         | 2000                       |      |
|                    |                   | 220                      | 7.3       | 4.3    | 4.2    | 3.3                                    | 12                          | EEFUE0G221R <sup>*4</sup>               | EEFUE0G221ER <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.5                                    | 10                          | EEFUE0G221XR <sup>*4</sup>              | EEFUE0G221XE <sup>*4</sup>                         | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.7                                    | 7                           | EEFUE0G221LR <sup>*4</sup>              | EEFUE0G221LE <sup>*4</sup>                         | 2000                       |      |
|                    |                   | 270                      | 7.3       | 4.3    | 4.2    | 3.3                                    | 12                          | EEFUE0G271R                             | EEFUE0G271ER                                       | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.7                                    | 7                           | EEFUE0G271LR                            | EEFUE0G271LE                                       | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.3                                    | 12                          | EEFUE0G331R                             | EEFUE0G331ER                                       | 2000                       |      |
|                    |                   | 8                        | 150       | 7.3    | 4.3    | 4.2                                    | 3.3                         | 12                                      | EEFUE0J151R <sup>*4</sup>                          | EEFUE0J151ER <sup>*4</sup> | 2000 |
|                    |                   |                          |           | 7.3    | 4.3    | 4.2                                    | 3.5                         | 10                                      | EEFUE0J151XR <sup>*4</sup>                         | EEFUE0J151XE <sup>*4</sup> | 2000 |
|                    |                   |                          |           | 7.3    | 4.3    | 4.2                                    | 3.3                         | 12                                      | EEFUE0J181R  | EEFUE0J181ER               | 2000 |
| 180                |                   |                          | 7.3       | 4.3    | 4.2    | 3.5                                    | 10                          | EEFUE0J181XR                            | EEFUE0J181XE                                       | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.7                                    | 7                           | EEFUE0J181LR                            | —  | 2000                       |      |
|                    |                   |                          | 7.3       | 4.3    | 4.2    | 3.0                                    | 15                          | EEFUE0J221R                             | EEFUE0J221ER                                       | 2000                       |      |
| 150                | 7.3               | 4.3                      | 4.2       | 3.7    | 7      | EEFUE0J221LR                           | —                           | 2000                                    |  |                            |      |
|                    | 7.3               | 4.3                      | 4.2       | 3.3    | 12     | EEFUE0K101R <sup>*4</sup>              | EEFUE0K101ER <sup>*4</sup>  | 2000                                    |  |                            |      |
|                    | 7.3               | 4.3                      | 4.2       | 3.0    | 15     | EEFUE0K151R                            | EEFUE0K151ER                | 2000                                    |  |                            |      |

\*1: Ripple current (100 kHz/ +20 to +105 °C), \*2: ESR (100 kHz/+20 °C)

\*3: Please confirm EE25 in detail of the Mounting Specifications.

\*4: Please use proposal part number of EE12, 13 when examining it.

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately.