

NEW

Surface Mount Type **SP-Cap**

Series: **CS, CT, CX**
(High Voltage Product)



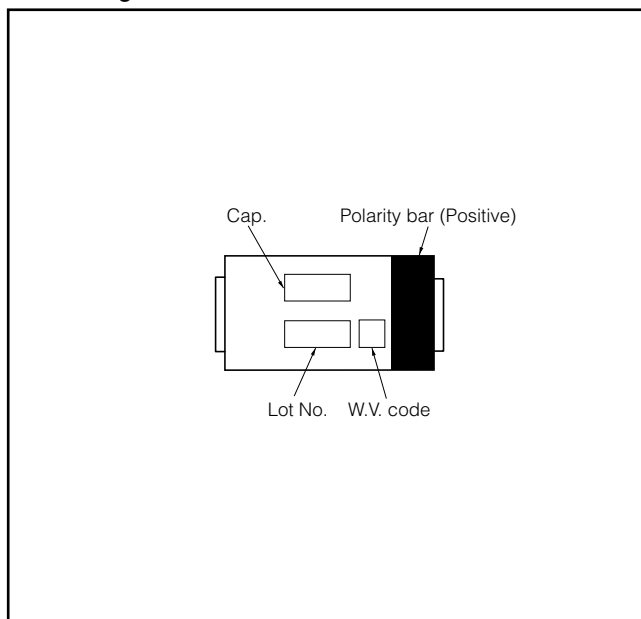
■ Features

- High voltage available using conductive specialty polymer.
- Low profile 1.1 mm, 1.4 mm, 1.9 mm
- High temperature reflow soldering applicable.
- RoHS directive compliant

■ Specifications

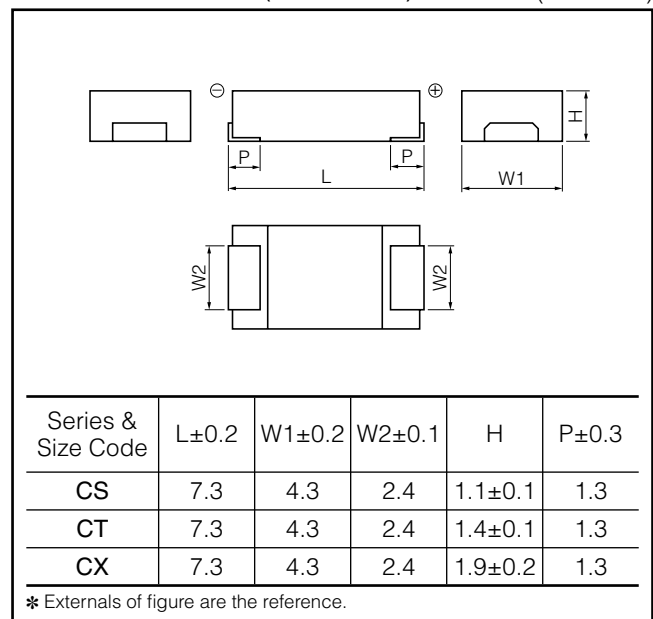
| Series & Size Code | CS | CT | CX |
|-----------------------|---|------------------------------------|-----------------|
| Category Temp. Range | -40 °C to +105 °C | | |
| Rated W.V.Range | 10 V.DC to 25 V.DC | | |
| Nominal Cap.Range | 10 μF to 47 μF | 22 μF to 68 μF | 15 μF to 100 μF |
| Capacitance Tolerance | ±20 % (120 Hz / + 20 °C) | | |
| DC Leakage Current | $I \leq 0.3 CV (\mu A)$ 2minutes | | |
| tan δ | ≤ 0.06 (120 Hz/+20 °C) | | |
| Surge Voltage | Rated Working Voltage × 1.25 [10 V.DC to 16 V.DC], × 1.15 [25 V.DC](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 | 10 V.DC to 25 V.DC +40, -20 % | |
| | tan δ | ≤ 200 % of initial specified value | |
| | DC leakage current | ≤ 300 % of initial specified value | |

■ Marking



■ Dimensions in mm(not to scale)

(Unit : mm)



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.

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.) ^{*1} | ESR (mΩ max.) ^{*2} | | |
| CS | 10 | 47 | 7.3 | 4.3 | 1.1 | 3.0 | 40 | EEFCS1A470R | 3500 |
| | 16 | 15 | 7.3 | 4.3 | 1.1 | 3.0 | 40 | EEFCS1C150R | 3500 |
| | | 22 | 7.3 | 4.3 | 1.1 | 3.0 | 40 | EEFCS1C220R | 3500 |
| | | 33 | 7.3 | 4.3 | 1.1 | 3.0 | 40 | EEFCS1C330R | 3500 |
| | 25 | 10 | 7.3 | 4.3 | 1.1 | 3.0 | 40 | EEFCS1E100R | 3500 |
| | | 15 | 7.3 | 4.3 | 1.1 | 3.0 | 40 | EEFCS1E150R | 3500 |
| CT | 10 | 68 | 7.3 | 4.3 | 1.4 | 3.0 | 40 | EEFCT1A680R | 3500 |
| | 16 | 47 | 7.3 | 4.3 | 1.4 | 3.0 | 40 | EEFCT1C470R | 3500 |
| | 25 | 22 | 7.3 | 4.3 | 1.4 | 3.0 | 40 | EEFCT1E220R | 3500 |
| CX | 10 | 47 | 7.3 | 4.3 | 1.9 | 3.0 | 40 | EEFCX1A470R | 3500 |
| | | 68 | 7.3 | 4.3 | 1.9 | 3.0 | 40 | EEFCX1A680R | 3500 |
| | | 100 | 7.3 | 4.3 | 1.9 | 3.0 | 40 | EEFCX1A101R | 3500 |
| | 16 | 15 | 7.3 | 4.3 | 1.9 | 3.0 | 40 | EEFCX1C150R | 3500 |
| | | 22 | 7.3 | 4.3 | 1.9 | 3.0 | 40 | EEFCX1C220R | 3500 |
| | | 33 | 7.3 | 4.3 | 1.9 | 3.0 | 40 | EEFCX1C330R | 3500 |
| | | 47 | 7.3 | 4.3 | 1.9 | 3.0 | 40 | EEFCX1C470R | 3500 |
| | | 68 | 7.3 | 4.3 | 1.9 | 3.0 | 40 | EEFCX1C680R | 3500 |
| | 25 | 15 | 7.3 | 4.3 | 1.9 | 3.0 | 40 | EEFCX1E150R | 3500 |
| | | 22 | 7.3 | 4.3 | 1.9 | 3.0 | 40 | EEFCX1E220R | 3500 |
| | | 33 | 7.3 | 4.3 | 1.9 | 3.0 | 40 | EEFCX1E330R | 3500 |
| | | | | | | | | | |

*1: Ripple current (100 kHz/ +45°C), *2: ESR (100 kHz/+20 °C)

*3: Please refer to the page of "Mounting Specifications".

| Temperature Compensation Multipliers for Ripple Current | | |
|---|-------------------|--------------------|
| ≤ 45 °C | 45 °C < T ≤ 85 °C | 85 °C < T ≤ 105 °C |
| 1.00 | 0.83 | 0.53 |