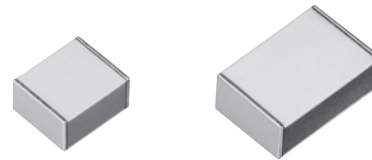


Stacked Metallized PEN Film Chip Capacitor

Type : **ECWU(C)**

Stacked metallized PEN film as dielectric with simple mold-less construction



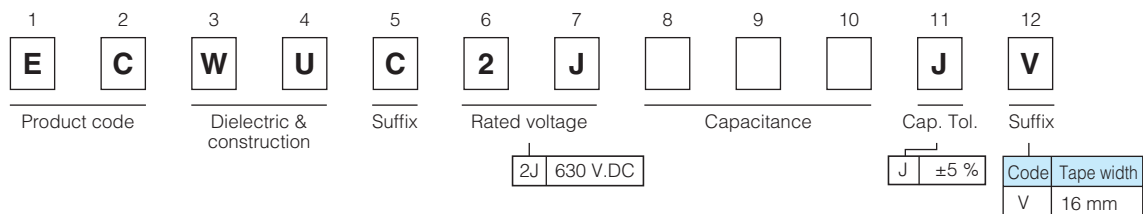
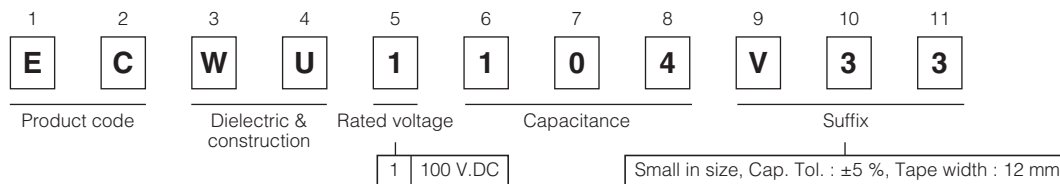
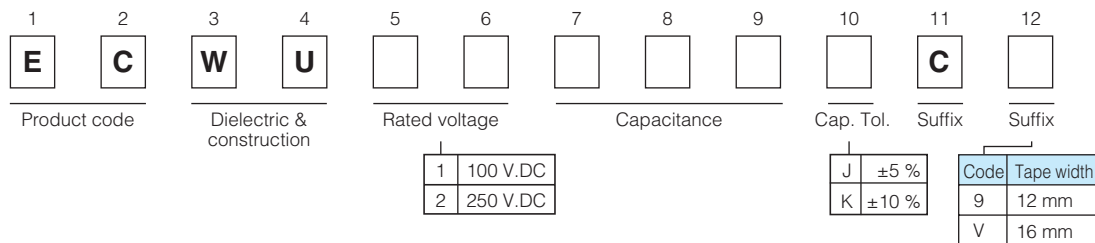
Features

- Small in size
- For reflow soldering
- RoHS directive compliant

Recommended applications

- General purpose (Coupling, By-pass)

Explanation of part number



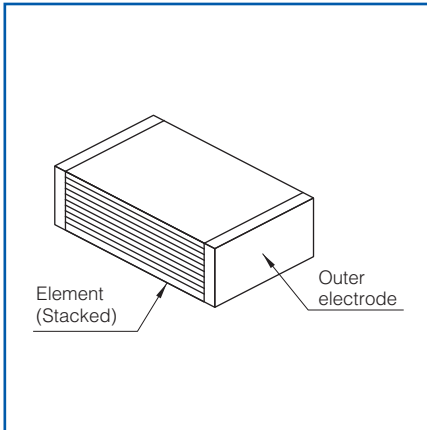
Specifications

| | | |
|--|---|---|
| Category temp. range (Including temperature-rise on unit surface) | - 55 °C to +125 °C | |
| Rated voltage | 100 V.DC, 250 V.DC, 630 V.DC (Derating of rated voltage by 1.25 %/°C more than 85 °C) | |
| Capacitance range | 100 V.DC | 0.012 μF to 1.0 μF (E12) |
| | 250 V.DC | 0.0010 μF to 0.12 μF (E12) |
| | 630 V.DC | 0.022 μF, 0.027 μF, 0.033 μF |
| Capacitance tolerance | 100 V.DC | ±5 %(J), ±10 %(K) (C ≥ 0.18 μF : ±10 %(K) Only) |
| | 250 V.DC | ±5 %(J), ±10 %(K) |
| | 630 V.DC | ±5 %(J) |
| Dissipation factor (tan δ) | tan δ ≤ 1.0 % (20 °C, 1 kHz) | |
| Withstand voltage | Between terminals : Rated volt. (V.DC) × 150 %, 60 s | |
| Insulation resistance (IR) | C ≤ 0.33 μF | 100 V.DC, 250 V.DC, 630 V.DC : IR ≥ 3000 MΩ (20 °C, 100 V.DC, 60 s) |
| | C > 0.33 μF | 100 V.DC : IR ≥ 1000 MΩ·μF (20 °C, 100 V.DC, 60 s) |
| Soldering conditions | 100 V.DC | Reflow soldering : 250 °C max. and 60 s max. at more than 220 °C |
| | 250 V.DC | (Temp. at capacitor surface) |
| | 630 V.DC | Reflow soldering : 250 °C max. and 60 s to 150 s. at more than 217 °C (Temp. at cap. surface) |

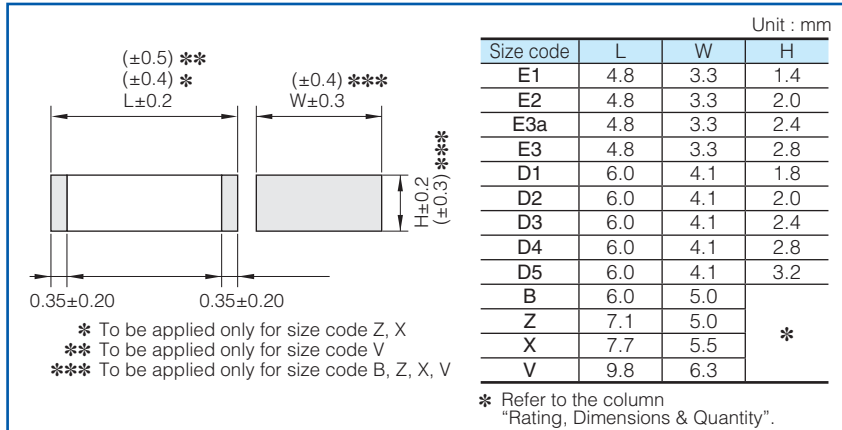
* In case of applying voltage in alternating current (50 Hz or 60 Hz sine wave) to a capacitor with DC rated voltage, please refer to the page of "Permissible voltage (R.M.S) in alternating current corresponding to DC rated voltage".

* Please consult us for capacitance range between 0.15 μF and 1.0 μF. (250 V.DC)

Construction



Dimensions



Taping specification for automatic mounting

Refer to the page of taping specifications

Rating · Dimensions · Quantity

● Capacitance tolerance : ±5 % (J), ±10 % (K)

| Capacitance (μF) | Rated voltage 100 V.DC | | | | | | Rated voltage 250 V.DC | | | | | |
|------------------|---|-----------------|-----|-----|-----------|------|------------------------|-----------------|-----|-----|-----------|------|
| | Part No. | Dimensions (mm) | | | Size code | Q'ty | Part No. | Dimensions (mm) | | | Size code | Q'ty |
| | | L | W | H | | | | L | W | H | | |
| 0.0010 | Please use 0.001 μF to 0.01 μF rating ECWU(X) | 4.8 | 3.3 | 1.4 | E1 | 3000 | ECWU2102□C9 | 4.8 | 3.3 | 1.4 | E1 | 1500 |
| 0.0012 | | | | | | | ECWU2122□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.0015 | | | | | | | ECWU2152□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.0018 | | | | | | | ECWU2182□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.0022 | | | | | | | ECWU2222□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.0027 | | | | | | | ECWU2272□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.0033 | | | | | | | ECWU2332□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.0039 | | | | | | | ECWU2392□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.0047 | | | | | | | ECWU2472□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.0056 | | | | | | | ECWU2562□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.0068 | | | | | | | ECWU2682□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.0082 | | | | | | | ECWU2822□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.010 | | | | | | | ECWU2103□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.012 | | | | | | | ECWU1123□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.015 | | | | | | | ECWU1153□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.018 | ECWU1183□C9 | 4.8 | 3.3 | 1.4 | E1 | | | | | | | |
| 0.022 | ECWU1223□C9 | 4.8 | 3.3 | 1.4 | E1 | | | | | | | |
| 0.027 | ECWU1273□C9 | 4.8 | 3.3 | 1.4 | E1 | | | | | | | |
| 0.033 | ECWU1333□C9 | 4.8 | 3.3 | 1.4 | E1 | | | | | | | |
| 0.039 | ECWU1393□C9 | 4.8 | 3.3 | 1.4 | E1 | | | | | | | |
| 0.047 | ECWU1473□C9 | 4.8 | 3.3 | 2.0 | E2 | | | | | | | |
| 0.056 | ECWU1563□C9 | 4.8 | 3.3 | 2.0 | E2 | | | | | | | |
| 0.068 | ECWU1683□C9 | 4.8 | 3.3 | 2.4 | E3a | | | | | | | |
| 0.082 | ECWU1823□C9 | 4.8 | 3.3 | 2.8 | E3 | | | | | | | |
| 0.10 | ECWU1104□C9 | 6.0 | 4.1 | 1.8 | D1 | | | | | | | |
| 0.12 | ECWU1124□C9 | 6.0 | 4.1 | 2.4 | D3 | | | | | | | |
| 0.15 | ECWU1154□C9 | 6.0 | 4.1 | 2.8 | D4 | | | | | | | |
| 0.18 | ECWU1184KC9 | 7.1 | 5.0 | 2.0 | Z | | | | | | | |
| 0.22 | ECWU1224KC9 | 7.1 | 5.0 | 2.4 | Z | | | | | | | |
| 0.27 | ECWU1274KC9 | 7.1 | 5.0 | 2.9 | Z | | | | | | | |
| 0.33 | ECWU1334KC9 | 7.1 | 5.0 | 3.5 | Z | | | | | | | |
| 0.39 | ECWU1394KCV | 7.7 | 5.5 | 3.4 | x | | | | | | | |
| 0.47 | ECWU1474KCV | 7.7 | 5.5 | 4.0 | x | | | | | | | |
| 0.56 | ECWU1564KCV | 9.8 | 6.3 | 3.0 | V | | | | | | | |
| 0.68 | ECWU1684KCV | 9.8 | 6.3 | 3.6 | V | | | | | | | |
| 0.82 | ECWU1824KCV | 9.8 | 6.3 | 4.3 | V | | | | | | | |
| 1.0 | ECWU1105KCV | 9.8 | 6.3 | 5.1 | V | | | | | | | |
| | | | | | | | ECWU2124□C9 | 6.0 | 5.0 | 4.5 | B | |
| | | | | | | | ECWU2104□C9 | 6.0 | 5.0 | 3.8 | B | |

* □ : Capacitance tolerance

Rating · Dimensions · Quantity

- Capacitance tolerance : $\pm 5\%$ (J)

| Capacitance (μF) | Rated voltage 630 V.DC | | | | | Size code | Q'ty |
|----------------------------------|------------------------|-----------------|-----|-----|---|--------------|------|
| | Part No. | Dimensions (mm) | | | | | |
| | | L | W | H | | | |
| 0.022 | ECWUC2J223JV | 7.1 | 6.3 | 3.6 | Y | 1000 | |
| 0.027 | ECWUC2J273JV | 7.1 | 6.3 | 4.1 | Y | | |
| 0.033 | ECWUC2J333JV | 7.1 | 6.3 | 5.1 | Y | | |

Recommended for land dimensions

Electrode

Land

A

B

C

Unit : mm

| Size code | Land dimensions | | |
|--------------------|------------------|------|-----|
| | Reflow soldering | | |
| | A | B | C |
| E1, E2, E3a, E3 | 2.6 | 6.6 | 3.0 |
| D1, D2, D3, D4, D5 | 3.8 | 7.8 | 3.8 |
| B | 3.8 | 7.8 | 4.6 |
| Z | 4.5 | 9.0 | 4.6 |
| Y | 4.5 | 9.0 | 5.7 |
| X | 5.1 | 9.7 | 5.0 |
| V | 7.2 | 11.9 | 5.7 |

* It is not warrantable that you can mount the capacitor without trouble under all the mounting condition when "Recommender for Land dimensions" is adopted.