

Stacked Metallized PPS Film Chip Capacitor

Type: **ECHU(C)**

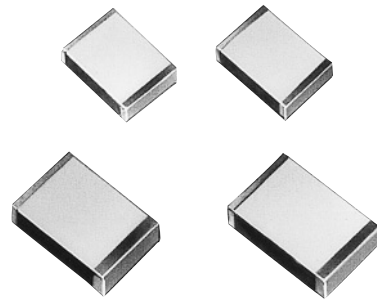
Stacked metallized PPS film as dielectric with simple mold-less construction

■ **Features**

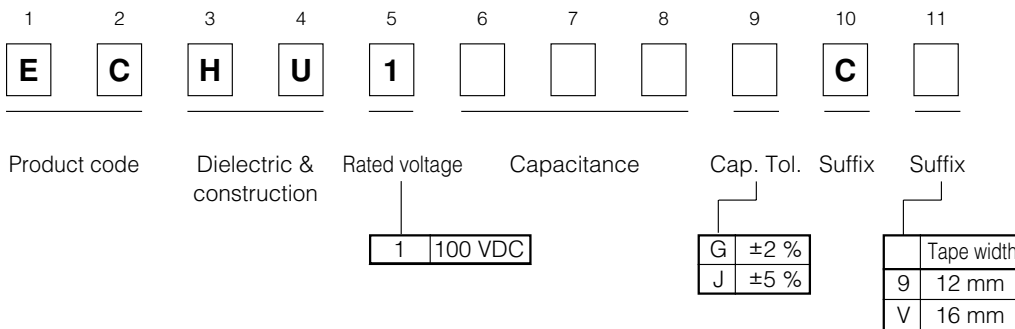
- Small in size
- Low loss and excellent frequency characteristics
- For reflow soldering
- RoHS directive compliant

■ **Recommended Applications**

- Time-constant
- Filtering
- Oscillation and resonance
- Resonance circuit for LCD backlight inverter unit



■ **Explanation of Numbers**



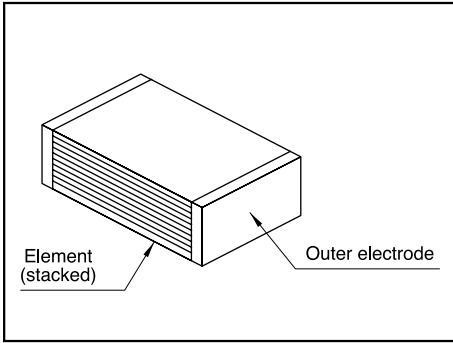
■ **Specifications**

| | |
|--|---|
| Category temp. range (Including temperature-rise on unit surface) | -55 °C to +105 °C |
| Rated voltage | 100 VDC |
| Capacitance range | 0.010 μF to 0.22 μF(E12) |
| Capacitance tolerance | ±2 %(G), ±5 %(J) |
| Withstand voltage | Between terminals : Rated volt. (VDC)×150 % 60 s |
| Dissipation factor (tanδ) | tan δ ≤0.6 % (20 °C, 1 kHz) |
| Insulation resistance (IR) | IR ≥3000 MΩ(20 °C, 100 VDC, 60 s) |
| Soldering conditions | Reflow soldering : 260 °C max. and 95 s max. at more than 220 °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".

Chip

■ Construction



■ Dimensions in mm (not to scale)

| size code | L | W | H |
|-----------|-----|-----|-----|
| E1 | 4.8 | 3.3 | 1.4 |
| E2 | 4.8 | 3.3 | 2.0 |
| E3a | 4.8 | 3.3 | 2.4 |
| E3 | 4.8 | 3.3 | 2.8 |
| D1 | 6.0 | 4.1 | 1.8 |
| D2 | 6.0 | 4.1 | 2.0 |
| D3 | 6.0 | 4.1 | 2.4 |
| D4 | 6.0 | 4.1 | 2.8 |
| D5 | 6.0 | 4.1 | 3.2 |
| Z | 7.1 | 5.0 | * |
| Y | 7.1 | 6.3 | * |

* To be applied only for size Z&Y

*Refer to the column "Rating,Dimensions&Quantity"

■ Taping Specification for Automatic Mounting

Refer to the page of taping specifications.

■ Rating, Dimensions & Quantity/Reel

● Capacitance tolerance: ±2 % (G), ±5 % (J)

| Cap.(μF) | Rated volt. 100 VDC | | | | | Q'ty |
|----------|---------------------|-----------------|-----|-----|-----------|------|
| | Part No. | Dimensions (mm) | | | Size Code | |
| | | L | W | H | | |
| 0.010 | ECHU1103□C9 | 4.8 | 3.3 | 1.4 | E1 | 3000 |
| 0.012 | ECHU1123□C9 | 4.8 | 3.3 | 1.4 | E1 | |
| 0.015 | ECHU1153□C9 | 4.8 | 3.3 | 2.0 | E2 | |
| 0.018 | ECHU1183□C9 | 4.8 | 3.3 | 2.0 | E2 | |
| 0.022 | ECHU1223□C9 | 4.8 | 3.3 | 2.4 | E3a | 2000 |
| 0.027 | ECHU1273□C9 | 4.8 | 3.3 | 2.8 | E3 | |
| 0.033 | ECHU1333□C9 | 6.0 | 4.1 | 1.8 | D1 | 3000 |
| 0.039 | ECHU1393□C9 | 6.0 | 4.1 | 2.0 | D2 | |
| 0.047 | ECHU1473□C9 | 6.0 | 4.1 | 2.4 | D3 | |
| 0.056 | ECHU1563□C9 | 6.0 | 4.1 | 2.8 | D4 | 2000 |
| 0.068 | ECHU1683□C9 | 6.0 | 4.1 | 3.2 | D5 | |
| 0.082 | ECHU1823□C9 | 7.1 | 5.0 | 2.8 | Z | 1500 |
| 0.10 | ECHU1104□C9 | 7.1 | 5.0 | 3.0 | Z | |
| 0.12 | ECHU1124□C9 | 7.1 | 5.0 | 3.4 | Z | |
| 0.15 | ECHU1154□CV | 7.1 | 6.3 | 3.4 | Y | 1000 |
| 0.18 | ECHU1184□CV | 7.1 | 6.3 | 4.0 | Y | |
| 0.22 | ECHU1224□CV | 7.1 | 6.3 | 4.8 | Y | |

↑ Cap. tol. code

■ Recommended for Land Dimensions (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 |
| Z | 4.5 | 9.0 | 4.6 |
| Y | 4.5 | 9.0 | 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.

Design, Specifications are subject to change without notice. Ask factory for technical specifications before purchase and/or use. Whenever a doubt about safety arises from this product, please inform us immediately for technical consultation without fail.