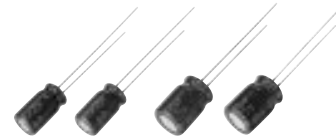


Radial Lead Type

Series: **SU(Bi-polar)** Type: **A**



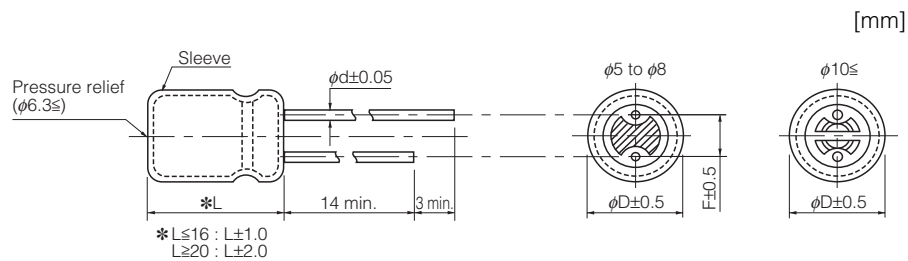
■ Features

- Endurance : 85 °C 2000 h
- RoHS directive compliant

■ Specifications

| | | |
|-----------------------|--|------------------------------------|
| Category Temp. Range | -40 °C to +85 °C | |
| Rated W.V. Range | 6.3 V.DC to 50 V.DC | |
| Nominal Cap. Range | 0.47 μF to 6800 μF | |
| Capacitance Tolerance | ±20 % (120 Hz/+20 °C) | |
| DC Leakage Current | I ≤ 0.03 CV +3 (μA) After 5 minutes | |
| tan δ | Please see the attached standard products list. | |
| Endurance | After 2000 hours application of DC working voltage (1000 hours for each polarity) at +85 °C±2 °C, when the capacitors are restored to 20 °C, the capacitors shall meet the following limits. | |
| | Capacitance change | ± 20 % of initial measured value |
| | tan δ | ≤ 150 % of initial specified value |
| | DC leakage current | ≤ initial specified value |
| Shelf Life | After storage for 1000 hours at +85 °C±2 °C with no voltage applied and then being stabilized at +20 °C capacitors shall meet the limits specified in Endurance. (With voltage treatment) | |

■ Dimensions in mm (not to scale)



| | (mm) | | | | | | |
|--------------|------|-----|-----|-----|------|-----|-----|
| Body Dia. φD | 5 | 6.3 | 8 | 10 | 12.5 | 16 | 18 |
| Lead Dia. φd | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.8 | 0.8 |
| Lead space F | 2.0 | 2.5 | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 |

Standard Products (Bi-polar)

| W.V. (V) | Cap. (±20 %) (μF) | Case size | | Specification | | Lead Length | | | | Part No. | Min. Packaging Qty | |
|-------------|-------------------------|--------------|----------------|---|--------------------------------------|-------------------|------------------|----------------------|----------------------|-----------------|-------------------------|-----------------|
| | | Dia. (mm) | Length (mm) | Ripple Current (120 Hz) (+85 °C) (mA r.m.s.) | tan δ (120 Hz) (+20 °C) (Ω) | Lead Dia. (mm) | Lead Space | | | | Straight Leads (pcs) | Taping (pcs) |
| | | | | | | | Straight (mm) | Taping *B (mm) | Taping *i (mm) | | | |
| 6.3 | 330 | 8 | 11.5 | 250 | 0.30 | 0.6 | 3.5 | 5.0 | | ECEA0JN331U () | 200 | 1000 |
| | 470 | 10 | 12.5 | 310 | 0.30 | 0.6 | 5.0 | 5.0 | | ECEA0JN471X () | 200 | 500 |
| | 1000 | 10 | 20 | 430 | 0.30 | 0.6 | 5.0 | 5.0 | | ECEA0JN102U () | 200 | 500 |
| | 2200 | 12.5 | 25 | 660 | 0.32 | 0.6 | 5.0 | 5.0 | | ECEA0JN222U () | 200 | 500 |
| | 3300 | 16 | 25 | 760 | 0.34 | 0.8 | 7.5 | 7.5 | | ECEA0JN332U () | 100 | 250 |
| | 4700 | 16 | 31.5 | 1170 | 0.36 | 0.8 | 7.5 | | | ECEA0JN472U | 100 | |
| | 6800 | 18 | 35.5 | 1450 | 0.40 | 0.8 | 7.5 | | | ECEA0JN682U | 50 | |
| 10 | 47 | 5 | 11 | 90 | 0.25 | 0.5 | 2.0 | 5.0 | 2.5 | ECEA1AN470U () | 200 | 2000 |
| | 100 | 6.3 | 11.2 | 130 | 0.25 | 0.5 | 2.5 | 5.0 | 2.5 | ECEA1AN101X () | 200 | 2000 |
| | 220 | 8 | 11.5 | 200 | 0.25 | 0.6 | 3.5 | 5.0 | | ECEA1AN221U () | 200 | 1000 |
| | 330 | 10 | 16 | 280 | 0.25 | 0.6 | 5.0 | 5.0 | | ECEA1AN331U () | 200 | 500 |
| | 470 | 10 | 16 | 340 | 0.25 | 0.6 | 5.0 | 5.0 | | ECEA1AN471U () | 200 | 500 |
| | 1000 | 12.5 | 20 | 470 | 0.25 | 0.6 | 5.0 | 5.0 | | ECEA1AN102X () | 200 | 500 |
| | 2200 | 16 | 25 | 690 | 0.27 | 0.8 | 7.5 | 7.5 | | ECEA1AN222U () | 100 | 250 |
| | 3300 | 16 | 31.5 | 1090 | 0.29 | 0.8 | 7.5 | | | ECEA1AN332U | 100 | |
| 16 | 10 | 5 | 11 | 40 | 0.20 | 0.5 | 2.0 | 5.0 | 2.5 | ECEA1CN100U () | 200 | 2000 |
| | 22 | 5 | 11 | 60 | 0.20 | 0.5 | 2.0 | 5.0 | 2.5 | ECEA1CN220U () | 200 | 2000 |
| | 33 | 5 | 11 | 80 | 0.20 | 0.5 | 2.0 | 5.0 | 2.5 | ECEA1CN330U () | 200 | 2000 |
| | 47 | 6.3 | 11.2 | 100 | 0.20 | 0.5 | 2.5 | 5.0 | 2.5 | ECEA1CN470U () | 200 | 2000 |
| | 220 | 10 | 12.5 | 260 | 0.20 | 0.6 | 5.0 | 5.0 | | ECEA1CN221X () | 200 | 500 |
| | 330 | 10 | 16 | 330 | 0.20 | 0.6 | 5.0 | 5.0 | | ECEA1CN331U () | 200 | 500 |
| | 470 | 10 | 20 | 380 | 0.20 | 0.6 | 5.0 | 5.0 | | ECEA1CN471U () | 200 | 500 |
| | 1000 | 12.5 | 25 | 560 | 0.20 | 0.6 | 5.0 | 5.0 | | ECEA1CN102U () | 200 | 500 |
| | 2200 | 16 | 31.5 | 750 | 0.22 | 0.8 | 7.5 | | | ECEA1CN222U | 100 | |
| | 3300 | 18 | 35.5 | 900 | 0.24 | 0.8 | 7.5 | | | ECEA1CN332U | 50 | |
| 25 | 10 | 5 | 11 | 45 | 0.15 | 0.5 | 2.0 | 5.0 | 2.5 | ECEA1EN100U () | 200 | 2000 |
| | 22 | 5 | 11 | 60 | 0.15 | 0.5 | 2.0 | 5.0 | 2.5 | ECEA1EN220X () | 200 | 2000 |
| | 33 | 6.3 | 11.2 | 90 | 0.15 | 0.5 | 2.5 | 5.0 | 2.5 | ECEA1EN330U () | 200 | 2000 |
| | 47 | 6.3 | 11.2 | 110 | 0.15 | 0.5 | 2.5 | 5.0 | 2.5 | ECEA1EN470U () | 200 | 2000 |
| | 100 | 8 | 11.5 | 180 | 0.15 | 0.6 | 3.5 | 5.0 | | ECEA1EN101U () | 200 | 1000 |
| | 220 | 10 | 16 | 320 | 0.15 | 0.6 | 5.0 | 5.0 | | ECEA1EN221U () | 200 | 500 |
| | 330 | 12.5 | 20 | 350 | 0.15 | 0.6 | 5.0 | 5.0 | | ECEA1EN331U () | 200 | 500 |
| | 470 | 12.5 | 20 | 430 | 0.15 | 0.6 | 5.0 | 5.0 | | ECEA1EN471U () | 200 | 500 |
| | 1000 | 16 | 25 | 680 | 0.15 | 0.8 | 7.5 | 7.5 | | ECEA1EN102U () | 100 | 250 |
| 2200 | 18 | 35.5 | 900 | 0.17 | 0.8 | 7.5 | | | ECEA1EN222U | 50 | | |
| 35 | 10 | 5 | 11 | 43 | 0.15 | 0.5 | 2.0 | 5.0 | 2.5 | ECEA1VN100U () | 200 | 2000 |
| | 22 | 6.3 | 11.2 | 80 | 0.15 | 0.5 | 2.5 | 5.0 | 2.5 | ECEA1VN220U () | 200 | 2000 |
| | 33 | 8 | 11.5 | 100 | 0.15 | 0.6 | 3.5 | 5.0 | | ECEA1VN330U () | 200 | 1000 |
| | 47 | 8 | 11.5 | 120 | 0.15 | 0.6 | 3.5 | 5.0 | | ECEA1VN470U () | 200 | 1000 |
| | 100 | 10 | 16 | 230 | 0.15 | 0.6 | 5.0 | 5.0 | | ECEA1VN101U () | 200 | 500 |
| | 220 | 12.5 | 20 | 360 | 0.15 | 0.6 | 5.0 | 5.0 | | ECEA1VN221U () | 200 | 500 |
| | 330 | 12.5 | 20 | 450 | 0.15 | 0.6 | 5.0 | 5.0 | | ECEA1VN331U () | 200 | 500 |
| | 470 | 12.5 | 25 | 590 | 0.15 | 0.6 | 5.0 | 5.0 | | ECEA1VN471U () | 200 | 500 |

Endurance: 85 °C 2000 h (1000 hours for each polarity)

When requesting taped product, please put the letter "B" or "i" between the "()". Lead wire pitch B=5 mm, 7.5 mm, i=2.5 mm.

The taping dimensions are explained on EE189 of our Catalog. Please use it as a reference guide.

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 (Bi-polar)

| W.V. | Cap. (±20 %) | Case size | | Specification | | Lead Length | | | Part No. | Min. Packaging Q'ty | | |
|------|-----------------|-----------|--------|--|-------------------------------|-------------|------------|--------------|-------------|---------------------|--------|--------------|
| | | Dia. | Length | Ripple Current (120 Hz) (+85 °C) | tan δ (120 Hz) (+20 °C) | Lead Dia. | Lead Space | | | Straight Leads | Taping | |
| | | | | | | | Straight | Taping *B | | | | Taping *i |
| (V) | (μF) | (mm) | (mm) | (mA r.m.s.) | (Ω) | (mm) | (mm) | (mm) | (mm) | (pcs) | (pcs) | |
| 50 | 0.47 | 5 | 11 | 10 | 0.15 | 0.5 | 2.0 | 5.0 | 2.5 | ECEA1HNR47U() | 200 | 2000 |
| | 1 | 5 | 11 | 10 | 0.15 | 0.5 | 2.0 | 5.0 | 2.5 | ECEA1HN010U() | 200 | 2000 |
| | 2.2 | 5 | 11 | 18 | 0.15 | 0.5 | 2.0 | 5.0 | 2.5 | ECEA1HN2R2U() | 200 | 2000 |
| | 3.3 | 5 | 11 | 25 | 0.15 | 0.5 | 2.0 | 5.0 | 2.5 | ECEA1HN3R3U() | 200 | 2000 |
| | 4.7 | 5 | 11 | 30 | 0.15 | 0.5 | 2.0 | 5.0 | 2.5 | ECEA1HN4R7U() | 200 | 2000 |
| | 10 | 6.3 | 11.2 | 50 | 0.15 | 0.5 | 2.5 | 5.0 | 2.5 | ECEA1HN100U() | 200 | 2000 |
| | 22 | 8 | 11.5 | 90 | 0.15 | 0.6 | 3.5 | 5.0 | | ECEA1HN220U() | 200 | 1000 |
| | 33 | 8 | 11.5 | 110 | 0.15 | 0.6 | 3.5 | 5.0 | | ECEA1HN330U() | 200 | 1000 |
| | 47 | 10 | 12.5 | 140 | 0.15 | 0.6 | 5.0 | 5.0 | | ECEA1HN470U() | 200 | 500 |
| | 100 | 10 | 20 | 250 | 0.15 | 0.6 | 5.0 | 5.0 | | ECEA1HN101U() | 200 | 500 |
| | 220 | 12.5 | 25 | 360 | 0.15 | 0.6 | 5.0 | 5.0 | | ECEA1HN221U() | 200 | 500 |
| | 330 | 16 | 25 | 450 | 0.15 | 0.8 | 7.5 | 7.5 | | ECEA1HN331U() | 100 | 250 |
| 470 | 16 | 31.5 | 590 | 0.15 | 0.8 | 7.5 | | | ECEA1HN471U | 100 | | |

Endurance: 85 °C 2000 h (1000 hours for each polarity)

When requesting taped product, please put the letter "B" or "i" between the "()". Lead wire pitch B=5 mm, 7.5 mm, i=2.5 mm.

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