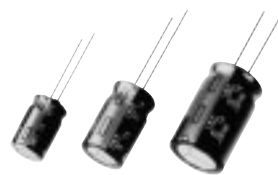


Radial Lead Type

Series: **TA** Type: **A**



■ Features

- Endurance: 125 °C 2000 h
- Heat cycle: 1000 cycle -40 °C to +125 °C
- RoHS directive compliant

■ Specifications

| | | | | | | | | |
|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------|------|------|------|------|------------------|
| Category Temp. Range | -40 °C to + 125 °C | | | | | | | |
| Rated W.V. Range | 10 V .DC to 63 V .DC | | | | | | | |
| Nominal Cap. Range | 1 μF to 4700 μF | | | | | | | |
| Capacitance Tolerance | ±20 % (120 Hz/+20 °C) | | | | | | | |
| DC Leakage Current | $I \leq 0.01 CV$ or 3 (μA) After 2 minutes (Whichever is greater) | | | | | | | |
| tan δ | W.V.(V) | 10 | 16 | 25 | 35 | 50 | 63 | (120Hz / +20 °C) |
| | tan δ | 0.20 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | |
| For capacitance value ≥ 1000 μF , add 0.02 per every 1000 μF. | | | | | | | | |
| Endurance | After following life test with DC voltage and +125 °C±2 °C ripple current value applied (The sum of DC and ripple peak voltage shall not exceed the rated working voltage), for 2000 hours, when the capacitors are restored to 20 °C, the capacitors, shall meet the limits specified below. | | | | | | | |
| | Capacitance change | ±30% of initial measured value | | | | | | |
| | tan δ | ≤ 300 % of initial specified value | | | | | | |
| | DC leakage current | ≤ initial specified value | | | | | | |
| Shelf Life | After storage for 1000 hours at +125 °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) | | | | | | | |

■ Frequency correction factor for ripple current

| W.V. (V.DC) | Cap. (μF) | Frequency (Hz) | | | | |
|-------------|--------------|----------------|------|------|------|-------|
| | | 60 | 120 | 1 k | 10 k | 100 k |
| 10 to 63 | 1 to 330 | 0.55 | 0.65 | 0.85 | 0.90 | 1.00 |
| | 470 to 1000 | 0.70 | 0.75 | 0.90 | 0.95 | 1.00 |
| | 2200 to 4700 | 0.75 | 0.80 | 0.90 | 0.95 | 1.00 |

■ Dimensions in mm (not to scale)

(Unit : mm)

| | | | | | |
|--------------|-----|-----|------|-----|-----|
| Body Dia. φD | 8 | 10 | 12.5 | 16 | 18 |
| Lead Dia. φd | 0.6 | 0.6 | 0.6 | 0.8 | 0.8 |
| Lead space F | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 |

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 Nov. 2012

■ Standard Products

Endurance : 125 °C 2000 h

| W.V. | Cap. (±20 %) | Case size | | Specification | | Lead Length | | | Part No. | Min. Packaging Q'ty | | |
|------|-----------------|-----------|--------|---------------------------------------------------------|-------------------------------------------|-------------------|------------------|----------------------|----------------|-------------------------|-----------------|------|
| | | Dia. | Length | Ripple Current (100 kHz) (+125 °C) (mA r.m.s.) | Impedance (100 kHz) (+20 °C) (Ω) | Lead Dia. (mm) | Lead Space | | | Straight Leads (pcs) | Taping (pcs) | |
| | | | | | | | Straight (mm) | Taping *B (mm) | | | | |
| (V) | (μF) | (mm) | (mm) | (mA r.m.s.) | (Ω) | (mm) | (mm) | (mm) | | (pcs) | (pcs) | |
| 10 | 330 | 8 | 11.5 | 500 | 0.130 | 0.6 | 3.5 | 5.0 | EEUTA1A331() | 200 | 1000 | |
| | 470 | 10 | 12.5 | 680 | 0.100 | 0.6 | 5.0 | 5.0 | EEUTA1A471() | 200 | 500 | |
| | 1000 | 10 | 10 | 20 | 1100 | 0.057 | 0.6 | 5.0 | 5.0 | EEUTA1A102() | 200 | 500 |
| | | | 12.5 | 15 | 1085 | 0.070 | 0.6 | 5.0 | 5.0 | EEUTA1A102S() | 200 | 500 |
| | 2200 | 12.5 | 25 | 1750 | 0.033 | 0.6 | 5.0 | 5.0 | EEUTA1A222L() | 200 | 500 | |
| | | | 16 | 20 | 1985 | 0.032 | 0.8 | 7.5 | 7.5 | EEUTA1A222() | 100 | 250 |
| | | | 18 | 15 | 1800 | 0.042 | 0.8 | 7.5 | 7.5 | EEUTA1A222S() | 100 | 250 |
| | 3300 | 16 | 25 | 2300 | 0.024 | 0.8 | 7.5 | 7.5 | EEUTA1A332() | 100 | 250 | |
| | | | 18 | 20 | 2250 | 0.031 | 0.8 | 7.5 | 7.5 | EEUTA1A332S() | 100 | 250 |
| | 4700 | 16 | 31.5 | 2710 | 0.020 | 0.8 | 7.5 | | EEUTA1A472 | 100 | | |
| | | | 18 | 25 | 2470 | 0.022 | 0.8 | 7.5 | 7.5 | EEUTA1A472S() | 100 | 250 |
| | 16 | 220 | 8 | 11.5 | 500 | 0.130 | 0.6 | 3.5 | 5.0 | EEUTA1C221() | 200 | 1000 |
| | | 330 | 10 | 12.5 | 680 | 0.100 | 0.6 | 5.0 | 5.0 | EEUTA1C331() | 200 | 500 |
| | | 470 | 10 | 16 | 945 | 0.075 | 0.6 | 5.0 | 5.0 | EEUTA1C471() | 200 | 500 |
| 1000 | | 12.5 | 20 | 1490 | 0.042 | 0.6 | 5.0 | 5.0 | EEUTA1C102() | 200 | 500 | |
| | | | 16 | 15 | 1520 | 0.047 | 0.8 | 7.5 | 7.5 | EEUTA1C102S() | 100 | 250 |
| 2200 | | 16 | 25 | 2300 | 0.024 | 0.8 | 7.5 | 7.5 | EEUTA1C222() | 100 | 250 | |
| | | | 18 | 20 | 2250 | 0.031 | 0.8 | 7.5 | 7.5 | EEUTA1C222S() | 100 | 250 |
| 3300 | | 16 | 31.5 | 2710 | 0.020 | 0.8 | 7.5 | | EEUTA1C332 | 100 | | |
| | | | 18 | 25 | 2470 | 0.022 | 0.8 | 7.5 | 7.5 | EEUTA1C332S() | 100 | 250 |
| 4700 | | 18 | 31.5 | 3270 | 0.018 | 0.8 | 7.5 | | EEUTA1C472 | 50 | | |
| 25 | 100 | 8 | 11.5 | 500 | 0.130 | 0.6 | 3.5 | 5.0 | EEUTA1E101() | 200 | 1000 | |
| | 220 | 10 | 12.5 | 680 | 0.100 | 0.6 | 5.0 | 5.0 | EEUTA1E221() | 200 | 500 | |
| | 330 | 10 | 16 | 945 | 0.075 | 0.6 | 5.0 | 5.0 | EEUTA1E331() | 200 | 500 | |
| | 470 | 10 | 20 | 1100 | 0.057 | 0.6 | 5.0 | 5.0 | EEUTA1E471() | 200 | 500 | |
| | | | 12.5 | 15 | 1085 | 0.070 | 0.6 | 5.0 | 5.0 | EEUTA1E471S() | 200 | 500 |
| | 1000 | 12.5 | 25 | 1750 | 0.033 | 0.6 | 5.0 | 5.0 | EEUTA1E102L() | 200 | 500 | |
| | | | 16 | 20 | 1985 | 0.032 | 0.8 | 7.5 | 7.5 | EEUTA1E102() | 100 | 250 |
| | | | 18 | 15 | 1800 | 0.042 | 0.8 | 7.5 | 7.5 | EEUTA1E102S() | 100 | 250 |
| | 2200 | 16 | 31.5 | 2710 | 0.020 | 0.8 | 7.5 | | EEUTA1E222 | 100 | | |
| | | | 18 | 25 | 2470 | 0.022 | 0.8 | 7.5 | 7.5 | EEUTA1E222S() | 100 | 250 |
| | 3300 | 18 | 35.5 | 3310 | 0.017 | 0.8 | 7.5 | | EEUTA1E332 | 50 | | |
| | 35 | 100 | 10 | 12.5 | 555 | 0.180 | 0.6 | 5.0 | 5.0 | EEUTA1V101() | 200 | 500 |
| | | 220 | 10 | 16 | 765 | 0.130 | 0.6 | 5.0 | 5.0 | EEUTA1V221() | 200 | 500 |
| 330 | | 10 | 20 | 930 | 0.100 | 0.6 | 5.0 | 5.0 | EEUTA1V331() | 200 | 500 | |
| 470 | | 12.5 | 20 | 1330 | 0.070 | 0.6 | 5.0 | 5.0 | EEUTA1V471() | 200 | 500 | |
| | | | 16 | 15 | 1450 | 0.088 | 0.8 | 7.5 | 7.5 | EEUTA1V471S() | 100 | 250 |
| 1000 | | 16 | 25 | 2010 | 0.037 | 0.8 | 7.5 | 7.5 | EEUTA1V102() | 100 | 250 | |
| | | | 18 | 20 | 2180 | 0.046 | 0.8 | 7.5 | 7.5 | EEUTA1V102S() | 100 | 250 |
| 2200 | | 18 | 35.5 | 2790 | 0.025 | 0.8 | 7.5 | | EEUTA1V222 | 50 | | |

- When requesting taped product, please put the letter "B" between the "()". Lead wire pitch B=5 mm, 7.5 mm.
- Please refer to the page of "Taping Dimensions".

■ Standard Products

Endurance : 125 °C 2000 h

| W.V. | Cap. (±20 %) | Case size | | Specification | | Lead Length | | | Part No. | Min. Packaging Q'ty | |
|------|-----------------|-----------|--------|---------------------------------------------------------|-------------------------------------------|-------------------|------------------|----------------------|----------------|-------------------------|-----------------|
| | | Dia. | Length | Ripple Current (100 kHz) (+125 °C) (mA r.m.s.) | Impedance (100 kHz) (+20 °C) (Ω) | Lead Dia. (mm) | Lead Space | | | Straight Leads (pcs) | Taping (pcs) |
| | | | | | | | Straight (mm) | Taping *B (mm) | | | |
| (V) | (μF) | (mm) | (mm) | (mA r.m.s.) | (Ω) | (mm) | (mm) | (mm) | | (pcs) | (pcs) |
| 50 | 1 | 8 | 11.5 | 35 | 2.00 | 0.6 | 3.5 | 5.0 | EEUTA1H1R0() | 200 | 1000 |
| | 2.2 | 8 | 11.5 | 50 | 1.80 | 0.6 | 3.5 | 5.0 | EEUTA1H2R2() | 200 | 1000 |
| | 3.3 | 8 | 11.5 | 60 | 1.50 | 0.6 | 3.5 | 5.0 | EEUTA1H3R3() | 200 | 1000 |
| | 4.7 | 8 | 11.5 | 85 | 1.15 | 0.6 | 3.5 | 5.0 | EEUTA1H4R7() | 200 | 1000 |
| | 10 | 8 | 11.5 | 180 | 0.950 | 0.6 | 3.5 | 5.0 | EEUTA1H100() | 200 | 1000 |
| | 22 | 8 | 11.5 | 250 | 0.650 | 0.6 | 3.5 | 5.0 | EEUTA1H220() | 200 | 1000 |
| | 33 | 8 | 11.5 | 300 | 0.450 | 0.6 | 3.5 | 5.0 | EEUTA1H330() | 200 | 1000 |
| | 47 | 8 | 11.5 | 440 | 0.350 | 0.6 | 3.5 | 5.0 | EEUTA1H470S() | 200 | 1000 |
| | 100 | 10 | 12.5 | 555 | 0.180 | 0.6 | 5.0 | 5.0 | EEUTA1H101() | 200 | 500 |
| | 220 | 10 | 20 | 930 | 0.100 | 0.6 | 5.0 | 5.0 | EEUTA1H221() | 200 | 500 |
| | 330 | 12.5 | 20 | 1330 | 0.070 | 0.6 | 5.0 | 5.0 | EEUTA1H331() | 200 | 500 |
| | | 16 | 15 | 1450 | 0.088 | 0.8 | 7.5 | 7.5 | EEUTA1H331S() | 100 | 250 |
| | 470 | 12.5 | 25 | 1650 | 0.055 | 0.6 | 5.0 | 5.0 | EEUTA1H471L() | 200 | 500 |
| | | 16 | 20 | 1650 | 0.053 | 0.8 | 7.5 | 7.5 | EEUTA1H471() | 100 | 250 |
| | | 18 | 15 | 1710 | 0.075 | 0.8 | 7.5 | 7.5 | EEUTA1H471S() | 100 | 250 |
| | 1000 | 16 | 31.5 | 2430 | 0.031 | 0.8 | 7.5 | | EEUTA1H102 | 100 | |
| 18 | | 25 | 2350 | 0.032 | 0.8 | 7.5 | 7.5 | EEUTA1H102S() | 100 | 250 | |
| 63 | 22 | 8 | 11.5 | 310 | 0.470 | 0.6 | 3.5 | 5.0 | EEUTA1J220() | 200 | 1000 |
| | 33 | 10 | 12.5 | 410 | 0.360 | 0.6 | 5.0 | 5.0 | EEUTA1J330() | 200 | 500 |
| | 47 | 10 | 16 | 460 | 0.270 | 0.6 | 5.0 | 5.0 | EEUTA1J470() | 200 | 500 |
| | 100 | 10 | 20 | 680 | 0.205 | 0.6 | 5.0 | 5.0 | EEUTA1J101() | 200 | 500 |
| | 220 | 12.5 | 25 | 1325 | 0.100 | 0.6 | 5.0 | 5.0 | EEUTA1J221L() | 200 | 500 |
| | | 16 | 20 | 1360 | 0.085 | 0.8 | 7.5 | 7.5 | EEUTA1J221() | 100 | 250 |
| | | 18 | 15 | 1300 | 0.120 | 0.8 | 7.5 | 7.5 | EEUTA1J221S() | 100 | 250 |
| | 330 | 16 | 25 | 1660 | 0.070 | 0.8 | 7.5 | 7.5 | EEUTA1J331() | 100 | 250 |
| | | 18 | 20 | 1760 | 0.077 | 0.8 | 7.5 | 7.5 | EEUTA1J331S() | 100 | 250 |
| | 470 | 16 | 31.5 | 2055 | 0.060 | 0.8 | 7.5 | | EEUTA1J471 | 100 | |
| 18 | | 25 | 1990 | 0.060 | 0.8 | 7.5 | 7.5 | EEUTA1J471S() | 100 | 250 | |

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- Please refer to the page of "Taping Dimensions".