

Snap-in Type

Series: **EE** Type: **TS**

Discontinued

(Last purchasing order : 31/Mar/2015)
(Last shipment : 30/Jun/2015)



■ Features

- Endurance : 105 °C 3000 h
- Miniaturize (Maximum Ripple Current) Low profile
- RoHS directive compliant

■ Specifications

| | | |
|-----------------------|---|------------------------------------|
| Category Temp. Range | -40 °C to +105 °C | -25 °C to +105 °C |
| Rated W.V. Range | 200 V.DC, 250 V.DC | 400 V.DC, 450 V.DC |
| Nominal Cap. Range | 220 μF to 1800 μF | 75 μF to 560 μF |
| Capacitance Tolerance | ±20 % (120 Hz/+20 °C) | |
| DC Leakage Current | 3√CV (μA) max. After 5 minutes application of rated working voltage at +20 °C C : Capacitance (μF) V: W.V. (V.DC) | |
| tan δ | Please see the attached standard products list | |
| Endurance | After 3000 hours application of DC voltage with specified ripple current (≤ rated DC working voltage) at +105 °C±2 °C, the capacitors shall meet the following limits. | |
| | Capacitance change | ≤ ±20 % of initial measured value |
| | tan δ | ≤ 200 % of initial specified value |
| | DC leakage current | ≤ initial specified value |
| Shelf Life | After storage for 1000 hours at +105 °C±2 °C within no voltage applied and then being stabilized at +20 °C, capacitors shall meet the limits specified in Endurance. (With voltage treatment) | |

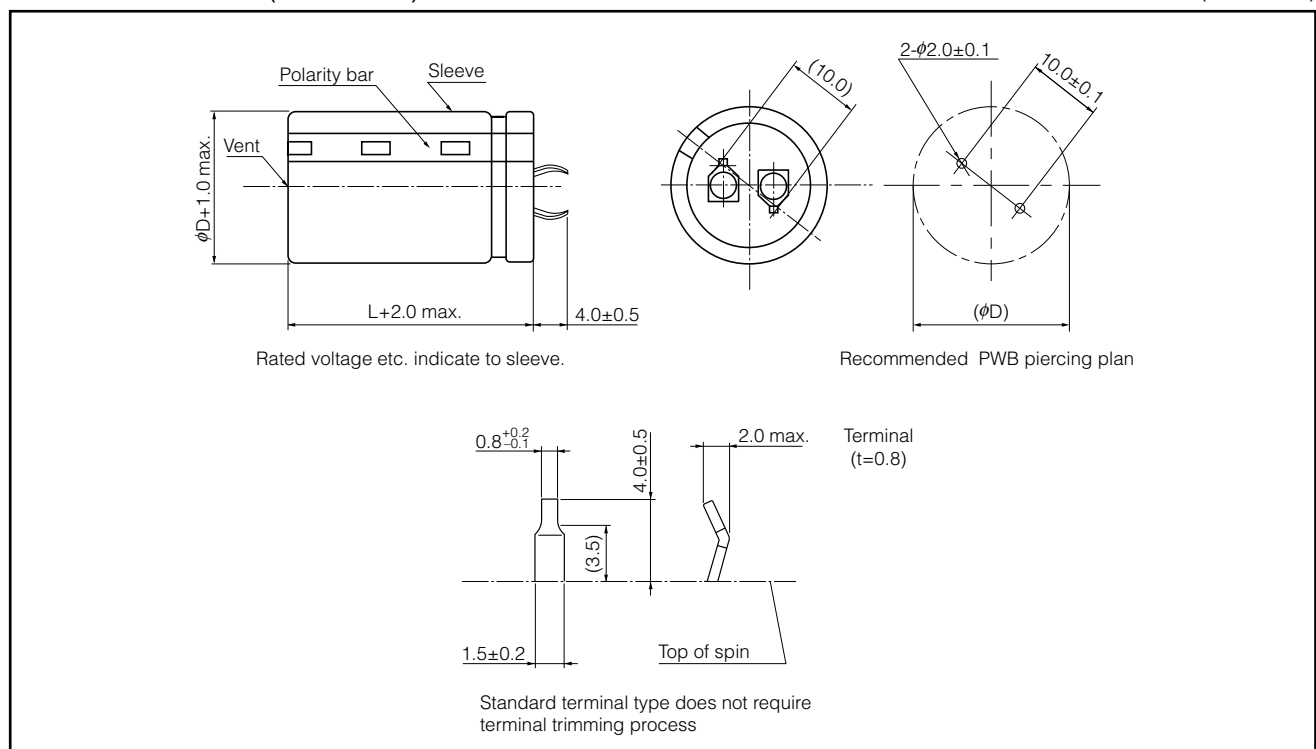
* A formula to calculate estimated lifetime of TS-EE Series is different from other series. Please contact us.

■ Frequency correction factor for ripple current

| Rated Voltage | Frequency (Hz) | | | | | | |
|------------------|----------------|------|------|------|------|------|---------|
| | 50 | 60 | 100 | 120 | 500 | 1 k | 10 k to |
| 200V.DC, 250V.DC | 0.75 | 0.80 | 0.95 | 1.00 | 1.20 | 1.25 | 1.30 |
| 400V.DC, 450V.DC | 0.75 | 0.80 | 0.95 | 1.00 | 1.20 | 1.25 | 1.40 |

■ 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

Discontinued

Endurance : 105 °C 3000 h

| W.V. (V. DC) | Cap. (120 Hz) (±20 %) (μF) | Case size | | Part No. PET sleeve Terminal Length 4.0 mm (Without Top Plate) | Specification | | Min. Packaging Q'ty (pcs) | |
|-----------------|-------------------------------------|--------------|----------------|--|---|---------------------------------------|----------------------------------|-----|
| | | Dia. (mm) | Length (mm) | | Ripple Current (120 Hz) (+105 °C) (A r.m.s.) | tan δ (120 Hz) (+20 °C) max. | | |
| 200 | 300 | 22 | 25 | EETEE2D301HJ | 1.70 | 0.15 | 200 | |
| | 390 | 22 | 30 | EETEE2D391HJ | 2.17 | 0.15 | 200 | |
| | 470 | 22 | 35 | EETEE2D471HJ | 2.22 | 0.15 | 200 | |
| | 590 | 590 | 22 | 40 | EETEE2D591HJ | 2.30 | 0.15 | 200 |
| | | | 25 | 30 | EETEE2D591JJ | 2.30 | 0.15 | 200 |
| | 700 | 700 | 22 | 45 | EETEE2D701HJ | 2.65 | 0.15 | 200 |
| | | | 25 | 35 | EETEE2D701JJ | 2.65 | 0.15 | 200 |
| | 590 | 30 | 25 | EETEE2D591KJ | 3.08 | 0.15 | 100 | |
| | 800 | 800 | 22 | 50 | EETEE2D801HJ | 3.08 | 0.15 | 200 |
| | | | 25 | 40 | EETEE2D801JJ | 3.08 | 0.15 | 200 |
| | | | 30 | 30 | EETEE2D801KJ | 3.48 | 0.15 | 100 |
| | | | 35 | 25 | EETEE2D801LJ | 3.48 | 0.15 | 100 |
| | 1000 | 1000 | 25 | 50 | EETEE2D102JJ | 3.48 | 0.15 | 200 |
| | | | 30 | 35 | EETEE2D102KJ | 3.98 | 0.15 | 100 |
| | | | 35 | 30 | EETEE2D102LJ | 4.20 | 0.15 | 100 |
| | 1200 | 30 | 40 | EETEE2D122KJ | 4.20 | 0.15 | 100 | |
| | 1300 | 30 | 45 | EETEE2D132KJ | 4.62 | 0.15 | 100 | |
| | 1500 | 1500 | 35 | 40 | EETEE2D152LJ | 4.62 | 0.15 | 100 |
| 30 | | | 50 | EETEE2D152KJ | 5.22 | 0.15 | 100 | |
| * | 1800 | 35 | 45 | EETEE2D182LJ | 5.22 | 0.15 | 100 | |
| 250 | 220 | 22 | 25 | EETEE2E221HJ | 1.43 | 0.15 | 200 | |
| | 300 | 300 | 22 | 30 | EETEE2E301HJ | 1.56 | 0.15 | 200 |
| | | | 25 | 25 | EETEE2E301JJ | 1.70 | 0.15 | 200 |
| | 370 | 22 | 35 | EETEE2E371HJ | 1.70 | 0.15 | 200 | |
| | 420 | 420 | 22 | 40 | EETEE2E421HJ | 1.82 | 0.15 | 200 |
| | | | 25 | 30 | EETEE2E421JJ | 1.82 | 0.15 | 200 |
| | | | 30 | 25 | EETEE2E421KJ | 2.20 | 0.15 | 100 |
| | 520 | 520 | 22 | 45 | EETEE2E521HJ | 2.00 | 0.15 | 200 |
| | | | 25 | 35 | EETEE2E521JJ | 2.00 | 0.15 | 200 |
| | 590 | 590 | 22 | 50 | EETEE2E591HJ | 2.30 | 0.15 | 200 |
| | | | 25 | 40 | EETEE2E591JJ | 2.30 | 0.15 | 200 |
| | | | 30 | 30 | EETEE2E591KJ | 2.50 | 0.15 | 100 |
| | | | 35 | 25 | EETEE2E591LJ | 2.50 | 0.15 | 100 |
| | 730 | 730 | 25 | 45 | EETEE2E731JJ | 2.70 | 0.15 | 200 |
| | | | 30 | 35 | EETEE2E731KJ | 3.00 | 0.15 | 100 |
| | | | 35 | 30 | EETEE2E731LJ | 3.00 | 0.15 | 100 |
| | 860 | 30 | 40 | EETEE2E861KJ | 3.30 | 0.15 | 100 | |
| | 1000 | 30 | 45 | EETEE2E102KJ | 3.45 | 0.15 | 100 | |
| * | 1300 | 35 | 45 | EETEE2E132LJ | 3.75 | 0.15 | 100 | |
| * | 1500 | 35 | 50 | EETEE2E152LJ | 4.05 | 0.15 | 100 | |

* When capacitors of $\phi 35 \times 45L$ and $\phi 35 \times 50L$ are mounted on PWB, reinforce them with mounting clamp or adhesives.
(Avoid using adhesives including halogenated compositions.)

■ Standard Products

Discontinued

Endurance : 105 °C 3000 h

| W.V. (V. DC) | Cap. (120 Hz) (±20 %) (μF) | Case size | | Part No. PET sleeve Terminal Length 4.0 mm (Without Top Plate) | Specification | | Min. Packaging Q'ty (pcs) |
|-----------------|-------------------------------------|--------------|----------------|--|--|---------------------------------------|----------------------------------|
| | | Dia. (mm) | Length (mm) | | Ripple Current (120 Hz) (+105 °C) (A r.m.s.) | tan δ (120 Hz) (+20 °C) max. | |
| 400 | 100 | 22 | 25 | EETEE2G101HJ | 0.95 | 0.15 | 200 |
| | 120 | 22 | 30 | EETEE2G121HJ | 1.22 | 0.15 | 200 |
| | 150 | 22 | 35 | EETEE2G151HJ | 1.33 | 0.15 | 200 |
| | 180 | 25 | 30 | EETEE2G181JJ | 1.33 | 0.15 | 200 |
| | | 30 | 25 | EETEE2G181KJ | 1.68 | 0.15 | 100 |
| | 220 | 22 | 45 | EETEE2G221HJ | 1.55 | 0.15 | 200 |
| | | 25 | 35 | EETEE2G221JJ | 1.55 | 0.15 | 200 |
| | | 30 | 30 | EETEE2G221KJ | 1.79 | 0.15 | 100 |
| | | 35 | 25 | EETEE2G221LJ | 1.79 | 0.15 | 100 |
| | 270 | 22 | 50 | EETEE2G271HJ | 1.68 | 0.15 | 200 |
| | | 25 | 40 | EETEE2G271JJ | 1.68 | 0.15 | 200 |
| | | 30 | 35 | EETEE2G271KJ | 2.12 | 0.15 | 100 |
| | 320 | 25 | 45 | EETEE2G321JJ | 1.90 | 0.15 | 200 |
| | 330 | 30 | 40 | EETEE2G331KJ | 2.33 | 0.15 | 100 |
| | | 35 | 30 | EETEE2G331LJ | 2.33 | 0.15 | 100 |
| | 370 | 25 | 50 | EETEE2G371JJ | 2.12 | 0.15 | 200 |
| | 390 | 30 | 45 | EETEE2G391KJ | 2.52 | 0.15 | 100 |
| | | 35 | 35 | EETEE2G391LJ | 2.52 | 0.15 | 100 |
| | 470 | 30 | 50 | EETEE2G471KJ | 2.85 | 0.15 | 100 |
| | | 35 | 40 | EETEE2G471LJ | 2.85 | 0.15 | 100 |
| * | 560 | 35 | 45 | EETEE2G561LJ | 3.18 | 0.15 | 100 |
| 450 | 75 | 22 | 25 | EETEE2W750HJ | 0.83 | 0.20 | 200 |
| | 100 | 22 | 30 | EETEE2W101HJ | 0.95 | 0.20 | 200 |
| | | 25 | 25 | EETEE2W101JJ | 0.95 | 0.20 | 200 |
| | 120 | 22 | 35 | EETEE2W121HJ | 1.15 | 0.20 | 200 |
| | | 25 | 30 | EETEE2W121JJ | 1.22 | 0.20 | 200 |
| | | 30 | 25 | EETEE2W121KJ | 1.22 | 0.20 | 100 |
| | 150 | 22 | 40 | EETEE2W151HJ | 1.22 | 0.20 | 200 |
| | 180 | 22 | 45 | EETEE2W181HJ | 1.38 | 0.20 | 200 |
| | | 25 | 40 | EETEE2W181JJ | 1.38 | 0.20 | 200 |
| | | 30 | 30 | EETEE2W181KJ | 1.60 | 0.20 | 100 |
| | | 35 | 25 | EETEE2W181LJ | 1.60 | 0.20 | 100 |
| | 220 | 25 | 45 | EETEE2W221JJ | 1.55 | 0.20 | 200 |
| | 250 | 35 | 30 | EETEE2W251LJ | 1.90 | 0.20 | 100 |
| | 270 | 25 | 50 | EETEE2W271JJ | 1.74 | 0.20 | 200 |
| | | 30 | 40 | EETEE2W271KJ | 1.90 | 0.20 | 100 |
| | 300 | 35 | 35 | EETEE2W301LJ | 2.20 | 0.20 | 100 |
| | 330 | 30 | 45 | EETEE2W331KJ | 2.20 | 0.20 | 100 |
| | | 35 | 40 | EETEE2W331LJ | 2.40 | 0.20 | 100 |
| | 390 | 30 | 50 | EETEE2W391KJ | 2.40 | 0.20 | 100 |
| | | 35 | 45 | EETEE2W391LJ | 2.61 | 0.20 | 100 |
| * | 470 | 35 | 50 | EETEE2W471LJ | 2.85 | 0.20 | 100 |

* When capacitors of $\phi 35 \times 45L$ and $\phi 35 \times 50L$ are mounted on PWB, reinforce them with mounting clamp or adhesives.
(Avoid using adhesives including halogenated compositions.)