

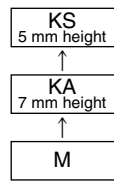
Radial Lead Type

Series: **KS** Type: **A**

■ Features

- Endurance : 85° C 1000 h
- 5 mm height
- RoHS directive compliant

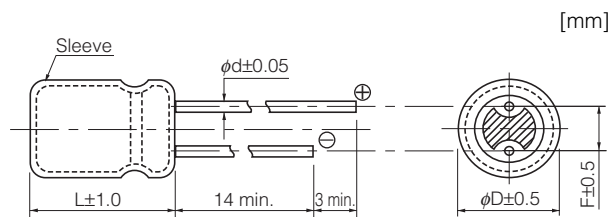
Low Profile



■ Specifications

| | | |
|-----------------------|---|---|
| Category Temp. Range | -40 °C to +85 °C | |
| Rated W.V. Range | 4 V.DC to 50 V.DC | |
| Nominal Cap. Range | 0.1 μF to 330 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 | Please see the attached standard products list | |
| Endurance | After applying rated working voltage for 1000 hours at +85 °C±2 °C, when the capacitors are restored to 20°C capacitors, shall meet the following limits. | |
| | Capacitance change | ± 20% of initial measured value (4 V : ±30 %) |
| | tan δ | ≤ 200 % 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 | 4 | 5 | 6.3 | 8 |
| Lead Dia. φd | 0.45 | 0.45 | 0.45 | 0.45 |
| Lead space F | 1.5 | 2.0 | 2.5 | 2.5 |

Standard Products

| W.V. | Cap. (±20 %) | Case size | | Specification | | Lead Length | | | | Part No. | Min. Packaging Q'ty | |
|------|-----------------|-----------|--------|---|-------------------------------|-------------|------------|--------------|--------------|----------------|---------------------|--------|
| | | Dia. | Length | Ripple Current (120 Hz) (+85 °C) (mA r.m.s.) | 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.) | | (mm) | (mm) | (mm) | | | (pcs) | (pcs) |
| 4 | 33 | 4 | 5 | 26 | 0.35 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA0GKS330() | 200 | 2000 |
| | 47 | 4 | 5 | 34 | 0.35 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA0GKS470() | 200 | 2000 |
| | 100 | 5 | 5 | 61 | 0.35 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA0GKS101() | 200 | 2000 |
| | 220 | 6.3 | 5 | 82 | 0.35 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA0GKS221() | 200 | 2000 |
| 6.3 | 22 | 4 | 5 | 29 | 0.24 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA0JKS220() | 200 | 2000 |
| | 33 | 5 | 5 | 38 | 0.24 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA0JKS330() | 200 | 2000 |
| | 47 | 5 | 5 | 46 | 0.24 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA0JKS470() | 200 | 2000 |
| | 100 | 6.3 | 5 | 71 | 0.24 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA0JKS101() | 200 | 2000 |
| | 330 | 8 | 5 | 130 | 0.24 | 0.45 | 2.5 | | 2.5 | ECEA0JKS331() | 200 | 1000 |
| 8 | | 5 | 130 | 0.24 | 0.45 | | 5.0 | | ECEA0JKS331Q | | 1000 | |
| 10 | 22 | 5 | 5 | 35 | 0.20 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA1AKS220() | 200 | 2000 |
| | 33 | 5 | 5 | 43 | 0.20 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA1AKS330() | 200 | 2000 |
| | 47 | 6.3 | 5 | 65 | 0.20 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1AKS470() | 200 | 2000 |
| | 100 | 6.3 | 5 | 80 | 0.20 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1AKS101() | 200 | 2000 |
| | | 8 | 5 | 120 | 0.20 | 0.45 | 2.5 | | 2.5 | ECEA1AKS221() | 200 | 1000 |
| 8 | 5 | 120 | 0.20 | 0.45 | | 5.0 | | ECEA1AKS221Q | | 1000 | | |
| 16 | 10 | 4 | 5 | 28 | 0.16 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1CKS100() | 200 | 2000 |
| | 22 | 5 | 5 | 39 | 0.16 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA1CKS220() | 200 | 2000 |
| | 33 | 6.3 | 5 | 60 | 0.16 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1CKS330() | 200 | 2000 |
| | 47 | 6.3 | 5 | 70 | 0.16 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1CKS470() | 200 | 2000 |
| | | 8 | 5 | 91 | 0.16 | 0.45 | 2.5 | | 2.5 | ECEA1CKS101() | 200 | 1000 |
| 8 | 5 | 91 | 0.16 | 0.45 | | 5.0 | | ECEA1CKS101Q | | 1000 | | |
| 25 | 4.7 | 4 | 5 | 22 | 0.14 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1EKS4R7() | 200 | 2000 |
| | 10 | 5 | 5 | 28 | 0.14 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA1EKS100() | 200 | 2000 |
| | 22 | 6.3 | 5 | 55 | 0.14 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1EKS220() | 200 | 2000 |
| | 33 | 6.3 | 5 | 65 | 0.14 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1EKS330() | 200 | 2000 |
| | | 8 | 5 | 85 | 0.14 | 0.45 | 2.5 | | 2.5 | ECEA1EKS101() | 200 | 1000 |
| 8 | 5 | 85 | 0.14 | 0.45 | | 5.0 | | ECEA1EKS101Q | | 1000 | | |
| 35 | 3.3 | 4 | 5 | 16 | 0.12 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1VKS3R3() | 200 | 2000 |
| | 4.7 | 4 | 5 | 22 | 0.12 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1VKS4R7() | 200 | 2000 |
| | 10 | 5 | 5 | 30 | 0.12 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA1VKS100() | 200 | 2000 |
| | 22 | 6.3 | 5 | 60 | 0.12 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1VKS220() | 200 | 2000 |
| | | 8 | 5 | 65 | 0.12 | 0.45 | 2.5 | | 2.5 | ECEA1VKS330() | 200 | 1000 |
| | 33 | 8 | 5 | 65 | 0.12 | 0.45 | | 5.0 | | ECEA1VKS330Q | | 1000 |
| | | 8 | 5 | 85 | 0.12 | 0.45 | 2.5 | | 2.5 | ECEA1VKS470() | 200 | 1000 |
| 8 | 5 | 85 | 0.12 | 0.45 | | 5.0 | | ECEA1VKS470Q | | 1000 | | |
| 50 | 0.1 | 4 | 5 | 1 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKS0R1() | 200 | 2000 |
| | 0.22 | 4 | 5 | 2 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKSR22() | 200 | 2000 |
| | 0.33 | 4 | 5 | 3 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKSR33() | 200 | 2000 |
| | 0.47 | 4 | 5 | 5 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKSR47() | 200 | 2000 |
| | 1 | 4 | 5 | 10 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKS010() | 200 | 2000 |
| | 2.2 | 4 | 5 | 16 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKS2R2() | 200 | 2000 |
| | 3.3 | 4 | 5 | 16 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKS3R3() | 200 | 2000 |
| | 4.7 | 5 | 5 | 23 | 0.10 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA1HKS4R7() | 200 | 2000 |
| | 10 | 6.3 | 5 | 35 | 0.10 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1HKS100() | 200 | 2000 |
| | | 8 | 5 | 60 | 0.10 | 0.45 | 2.5 | | 2.5 | ECEA1HKS220() | 200 | 1000 |
| 8 | 5 | 60 | 0.10 | 0.45 | | 5.0 | | ECEA1HKS220Q | | 1000 | | |

Endurance : 85 °C 1000 h

When requesting taped product, please put the letter "B" or "i" between the "()". Lead wire pitch B=5 mm, i=2.5 mm. The taping dimensions are explained on p.178 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.