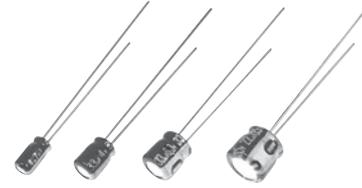
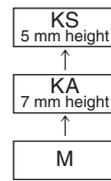


Radial Lead Type

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

Low Profile



Features

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

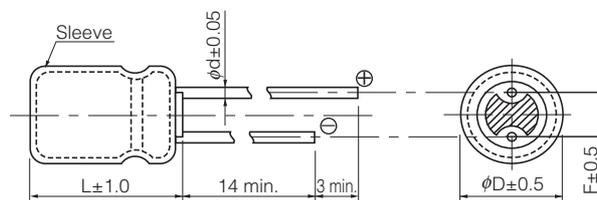
Specifications

| | | |
|----------------------------|---|--|
| Category temperature range | -40 °C to +85 °C | |
| Rated voltage range | 4 V.DC to 50 V.DC | |
| Capacitance range | 2.2 μF to 330 μF | |
| Capacitance tolerance | ±20 % (120 Hz/+20 °C) | |
| Leakage current | $I \leq 0.01 CV$ or 3 (μA) After 2 minutes (Whichever is greater) | |
| Dissipation factor (tan δ) | Please see the attached characteristics 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 | Within ±20 % of the initial value (4 V.DC : ±30 %) |
| | tan δ | ≤ 200 % of the initial limit |
| Shelf life | DC leakage current | Within the initial limit |
| | 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) | |

Frequency correction factor for ripple current

| | | | | |
|-------------------|--------|------|------|---------|
| Frequency (Hz) | 50, 60 | 120 | 1 k | 10 k to |
| Correction factor | 0.70 | 1.00 | 1.30 | 1.70 |

Dimensions



(Unit : mm)

| | | | | |
|----|------|------|------|------|
| φD | 4 | 5 | 6.3 | 8 |
| φd | 0.45 | 0.45 | 0.45 | 0.45 |
| F | 1.5 | 2.0 | 2.5 | 2.5 |

Characteristics list

Endurance : 85 °C 1000 h

| Rated voltage (V.DC) | Cap. (±20 %) (μF) | Case size (mm) | | Specification | | Lead length (mm) | | | | Part No. | Min. Packaging Q'ty | |
|----------------------|-------------------|----------------|----|--|-------------------------|------------------|------------|-----------|----------------|----------------|----------------------|--------------|
| | | φD | L | Ripple current (120 Hz) (+85 °C) (mA r.m.s.) | tan δ (120 Hz) (+20 °C) | Lead dia. φd | Lead space | | | | Straight leads (pcs) | Taping (pcs) |
| | | | | | | | Straight | Taping *B | Taping *i | | | |
| 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 |
| | 220 | 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 |
| | 100 | 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 |
| | 100 | 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 |
| | 33 | 8 | 5 | 65 | 0.12 | 0.45 | 2.5 | | 2.5 | ECEA1VKS330() | 200 | 1000 |
| | | | 8 | 5 | 65 | 0.12 | 0.45 | | 5.0 | | ECEA1VKS330Q | |
| 47 | 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 | 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 |
| | 22 | 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 |

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

· Please refer to the page of "Taping dimensions".