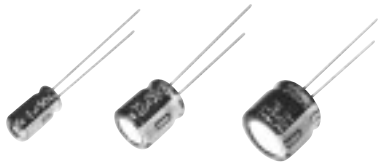
## Radial Lead Type

Series: **KA** Type: **A**

Low Profile

KA
7 mm height
↑
M



### ■ Features

- Endurance : 85° C 1000 h
- 7 mm height

### ■ Specifications

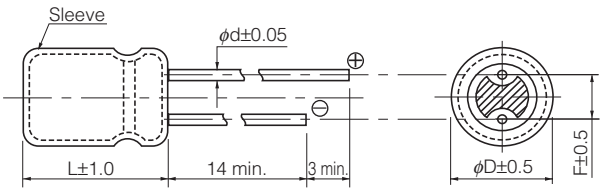
| | | |
|---|---|---|
| Category Temp. Range | –40 °C to +85 °C | |
| Rated W.V. Range | 4 V.DC to 50 V.DC | |
| Nominal Cap. Range | 0.1 µF to 470 µF | |
| Capacitance Tolerance | ±20 % (120 Hz/+20 °C) | |
| DC Leakage Current | I ≦ 0.01 CV or 3 (µA) After 2 minutes (Whichever is greater) | |
| tan $\delta$ | 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 |
| | tan $\delta$ | ≦ 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) | |

### ■ 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 in mm (not to scale)

(Unit : mm)




| Body Dia. $\phi$D | 4 | 5 | 6.3 | 8 |
|---|---|---|---|---|
| Lead Dia. $\phi$d | 0.45 | 0.45 | 0.45 | 0.45 |
| Lead space F | 1.5 | 2.0 | 2.5 | 3.5 |

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.

## ■ Standard Products

Endurance : 85 °C 1000 h

| 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.) | | (mm) | (mm) | (mm) | (mm) | | (pcs) | (pcs) |
| 4 | 47 | 4 | 7 | 34 | 0.35 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA0GKA470( ) | 200 | 2000 |
| | 100 | 5 | 7 | 61 | 0.35 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA0GKA101( ) | 200 | 2000 |
| | 220 | 6.3 | 7 | 82 | 0.35 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA0GKA221( ) | 200 | 2000 |
| | 330 | 8 | 7 | 110 | 0.35 | 0.45 | 3.5 | | 2.5 | ECEA0GKA331( ) | 200 | 1000 |
| | | 8 | 7 | 110 | 0.35 | 0.45 | | 5.0 | | ECEA0GKA331Q | | 1000 |
| | 470 | 8 | 7 | 140 | 0.35 | 0.45 | 3.5 | | 2.5 | ECEA0GKA471( ) | 200 | 1000 |
| | | 8 | 7 | 140 | 0.35 | 0.45 | | 5.0 | | ECEA0GKA471Q | | 1000 |
| 6.3 | 47 | 4 | 7 | 46 | 0.24 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA0JKA470( ) | 200 | 2000 |
| | 100 | 5 | 7 | 71 | 0.24 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA0JKA101( ) | 200 | 2000 |
| | 220 | 6.3 | 7 | 103 | 0.24 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA0JKA221( ) | 200 | 2000 |
| | 330 | 8 | 7 | 130 | 0.24 | 0.45 | 3.5 | | 2.5 | ECEA0JKA331( ) | 200 | 1000 |
| | | 8 | 7 | 130 | 0.24 | 0.45 | | 5.0 | | ECEA0JKA331Q | | 1000 |
| 10 | 33 | 4 | 7 | 43 | 0.20 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1AKA330( ) | 200 | 2000 |
| | 100 | 6.3 | 7 | 80 | 0.20 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1AKA101( ) | 200 | 2000 |
| | 220 | 8 | 7 | 120 | 0.20 | 0.45 | 3.5 | | 2.5 | ECEA1AKA221( ) | 200 | 1000 |
| | | 8 | 7 | 120 | 0.20 | 0.45 | | 5.0 | | ECEA1AKA221Q | | 1000 |
| 16 | 10 | 4 | 7 | 28 | 0.16 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1CKA100( ) | 200 | 2000 |
| | 22 | 4 | 7 | 39 | 0.16 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1CKA220( ) | 200 | 2000 |
| | 33 | 5 | 7 | 60 | 0.16 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA1CKA330( ) | 200 | 2000 |
| | 47 | 5 | 7 | 70 | 0.16 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA1CKA470( ) | 200 | 2000 |
| | 100 | 6.3 | 7 | 91 | 0.16 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1CKA101( ) | 200 | 2000 |
| 25 | 10 | 4 | 7 | 28 | 0.14 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1EKA100( ) | 200 | 2000 |
| | 22 | 5 | 7 | 55 | 0.14 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA1EKA220( ) | 200 | 2000 |
| | 33 | 6.3 | 7 | 65 | 0.14 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1EKA330( ) | 200 | 2000 |
| | 47 | 6.3 | 7 | 70 | 0.14 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1EKA470( ) | 200 | 2000 |
| 35 | 10 | 5 | 7 | 30 | 0.12 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA1VKA100( ) | 200 | 2000 |
| | 22 | 6.3 | 7 | 60 | 0.12 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1VKA220( ) | 200 | 2000 |
| | 33 | 6.3 | 7 | 65 | 0.12 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1VKA330( ) | 200 | 2000 |
| | 47 | 8 | 7 | 85 | 0.12 | 0.45 | 3.5 | | 2.5 | ECEA1VKA470( ) | 200 | 1000 |
| | | 8 | 7 | 85 | 0.12 | 0.45 | | 5.0 | | ECEA1VKA470Q | | 1000 |
| 50 | 0.1 | 4 | 7 | 1 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKA0R1( ) | 200 | 2000 |
| | 0.22 | 4 | 7 | 2 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKAR22( ) | 200 | 2000 |
| | 0.33 | 4 | 7 | 3 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKAR33( ) | 200 | 2000 |
| | 0.47 | 4 | 7 | 5 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKAR47( ) | 200 | 2000 |
| | 1 | 4 | 7 | 10 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKA010( ) | 200 | 2000 |
| | 2.2 | 4 | 7 | 16 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKA2R2( ) | 200 | 2000 |
| | 3.3 | 4 | 7 | 18 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKA3R3( ) | 200 | 2000 |
| | 4.7 | 4 | 7 | 23 | 0.10 | 0.45 | 1.5 | 5.0 | 2.5 | ECEA1HKA4R7( ) | 200 | 2000 |
| | 10 | 5 | 7 | 35 | 0.10 | 0.45 | 2.0 | 5.0 | 2.5 | ECEA1HKA100( ) | 200 | 2000 |
| | 22 | 6.3 | 7 | 60 | 0.10 | 0.45 | 2.5 | 5.0 | 2.5 | ECEA1HKA220( ) | 200 | 2000 |
| | 33 | 8 | 7 | 75 | 0.10 | 0.45 | 3.5 | | 2.5 | ECEA1HKA330( ) | 200 | 1000 |
| | | 8 | 7 | 75 | 0.10 | 0.45 | | 5.0 | | ECEA1HKA330Q | | 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”.

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