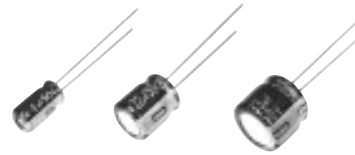
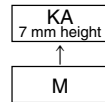


### Radial Lead Type

Series: **KA**      Type: **A**

Low Profile



#### ■ Features

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

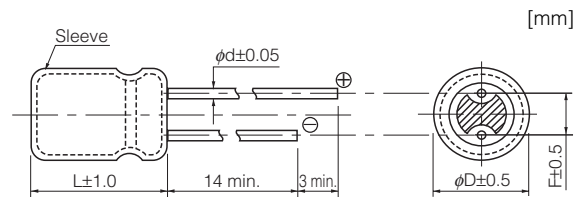
#### ■ Specifications

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 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
	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)	

#### ■ Frequency correction factor for ripple current

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

#### ■ 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	3.5

### Standard Products

W.V.	Cap. (±20 %)	Case size		Specification		Lead Length				Part No.	Min. Packaging Qty	
		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)	(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
		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	

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 EE189 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.

00 Sep. 2010