

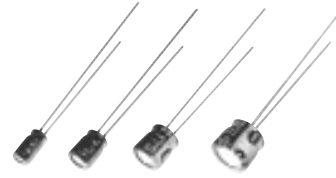
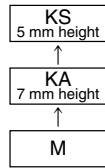
### Radial Lead Type

Series: **KS**      Type: **A**

#### ■ Features

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

Low Profile



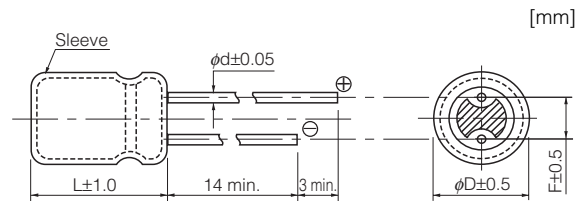
#### ■ Specifications

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 ≤ 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)	

#### ■ 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)



	(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

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.

01 Jun. 2011

### 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				(pcs)
(V)	(μF)	(mm)	(mm)	(mA r.m.s.)		(mm)	(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	
	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		1000
	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	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	ECEA1HKS22( )	200	2000	
	0.33	4	5	3	0.10	0.45	1.5	5.0	2.5	ECEA1HKS33( )	200	2000	
	0.47	4	5	5	0.10	0.45	1.5	5.0	2.5	ECEA1HKS47( )	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	
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	

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.

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00 Sep. 2010