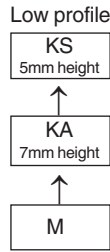


### Radial Lead Type

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

■ **Features** Endurance: 85°C 1000 h  
5 mm height

■ **Specifications**

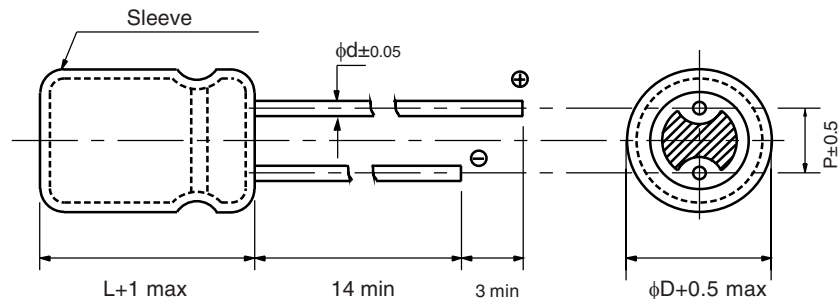


Country of Origin  
Japan  
Malaysia



Category temp. range	-40 to +85°C								
Rated W.V. Range	4 to 50 V .DC								
Nominal Cap. Range	0.1 to 330 μ F								
Capacitance Tolerance	±20 % (120Hz/+20°C)								
DC Leakage Current	I ≤ 0.01 CV or 3(μ A) after 2 minutes ( Whichever, greater)								
tan δ	Please see the attached standard products list.								
Characteristics at Low Temperature	W.V. (V)	4	6.3	10	16	25	35	50	(Impedance ratio at 120 Hz)
	Z(-25°C)/Z(+20°C)	7	4	3	2	2	2	2	
	Z(-40°C)/Z(+20°C)	15	8	6	4	4	3	3	
Endurance	After applying rated working voltage for 1000 hours at +85°C and then being stabilized at +20°C, capacitors shall meet the following limits.								
	Capacitance change	± 20% of initial measured value (4V. : ±30%)							
	tan δ	≤200 % of initial specified value							
	DC leakage current	≤initial specified value							
Shelf Life	After storage for 1000 hours at +85±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)**



Body Dia. φD	3	4	5	6.3	8
Lead Dia. φd	0.4	0.45	0.45	0.45	0.45
Lead Space P	1.0	1.5	2.0	2.5	2.5

## ■ Standard Products

W.V. (V)	Cap. (±20%) (μF)	Case size		Specification		Lead Length				Part No.	Min.PackagingQ' ty	
		Dia. (mm)	Length (mm)	Ripple current (120Hz) (+85°C) (mA)	tan δ (120Hz) (+20°C)	Lead Dia. (mm)	Lead Space				Straight Leads (pcs)	Taping (pcs)
							Straight (mm)	Taping *B (mm)	Taping *i (mm)			
4	22	3	5	19	0.35	0.40	1.0	5.0	2.5	ECEA0GKK220( )	200	2000
	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	3	5	20	0.16	0.40	1.0	5.0	2.5	ECEA1CKK100( )	200	2000
		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	2.2	3	5	8	0.14	0.40	1.0	5.0	2.5	ECEA1EKK2R2( )	200	2000
	3.3	3	5	10	0.14	0.40	1.0	5.0	2.5	ECEA1EKK3R3( )	200	2000
	4.7	3	5	12	0.14	0.40	1.0	5.0	2.5	ECEA1EKK4R7( )	200	2000
		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	2000
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	3	5	1	0.10	0.40	1.0	5.0	2.5	ECEA1HKK0R1( )	200	2000
		4	5	1	0.10	0.45	1.5	5.0	2.5	ECEA1HKS0R1( )	200	2000

When requesting taped product, please put the letter "B" or "i" between the "( )". Lead wire pitch B=5mm, i=2.5mm.  
The taping dimensions are explained on p.188 of our Catalog. Please use it as a reference guide.  
Endurance : 85°C 1000h

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

W.V. (V)	Cap. (±20%) (μF)	Case size		Specification		Lead Length				Part No.	MinPackagingQ' ty	
		Dia. (mm)	Length (mm)	Ripple current (120Hz) (+85°C) (mA)	tan δ (120Hz) (+20°C)	Lead Dia. (mm)	Lead Space				Straight Leads (pcs)	Taping (pcs)
							Straight (mm)	Taping *B	Taping *i			
50	0.22	3	5	2	0.10	0.40	1.0	5.0	2.5	ECEA1HKKR22( )	200	2000
		4	5	2	0.10	0.45	1.5	5.0	2.5	ECEA1HKSR22( )	200	2000
	0.33	3	5	3	0.10	0.40	1.0	5.0	2.5	ECEA1HKKR33( )	200	2000
		4	5	3	0.10	0.45	1.5	5.0	2.5	ECEA1HKSR33( )	200	2000
	0.47	3	5	5	0.10	0.40	1.0	5.0	2.5	ECEA1HKKR47( )	200	2000
		4	5	5	0.10	0.45	1.5	5.0	2.5	ECEA1HKSR47( )	200	2000
	1	3	5	8	0.10	0.40	1.0	5.0	2.5	ECEA1HKK010( )	200	2000
		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

When requesting taped product, please put the letter "B" or "i" between the "( )". Lead wire pitch B=5mm, i=2.5mm.  
The taping dimensions are explained on p.188 of our Catalog. Please use it as a reference guide.  
Endurance : 85°C 1000h