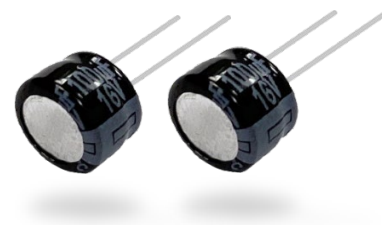
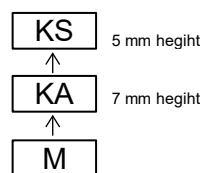


# Aluminum Electrolytic Capacitors

## Radial Lead Type

### KS-A series

#### Low Profile



## Features

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

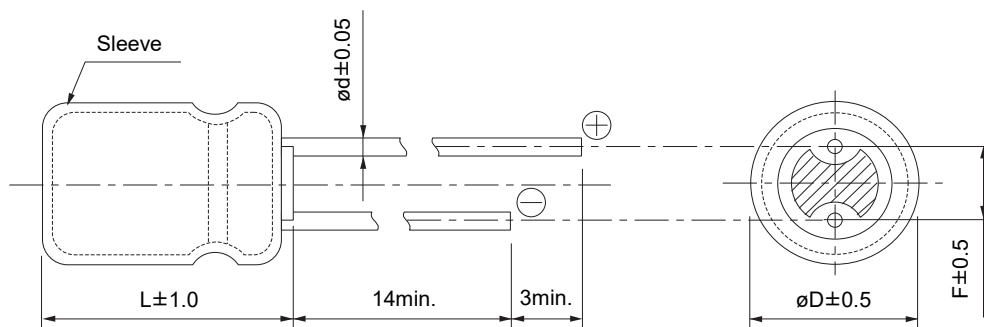
## Specifications

Category temp. range	-40 °C to +85 °C	
Rated voltage range	4 V to 50 V	
Capacitance range	2.2 µF to 330 µF	
Capacitance tolerance	±20 % (120 Hz / +20°C)	
Leakage current	I ≤ 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 h 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 : ±30 %)
	Dissipation factor (tan δ)	≤ 200 % of the initial limit
	DC leakage current	Within the initial limit
Shelf life	After storage for 1000 h 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

Freq. (Hz)	50, 60	120	1 k	10 k to
Cap. (µF)				
2.2 to 330	0.70	1.00	1.30	1.70

## Dimensions



Unit : mm				
øD	4.0	5.0	6.3	8.0
ød	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)	Capacitance (±20 %) (μF)	Case size (mm)		Specification		Lead length (mm)				Part No.	Min. Packaging Q'ty (PCS)	
		øD	L	Ripple current <sup>*1</sup> (mA rms)	tan δ <sup>*2</sup>	Lead dia. (ød)	Lead space				Strai- ght leads	Taping
							Straight	Taping *B	Taping *i			
4	33	4.0	5.0	26	0.35	0.45	1.5	5.0	2.5	ECEA0GKS330( )	200	2000
	47	4.0	5.0	34	0.35	0.45	1.5	5.0	2.5	ECEA0GKS470( )	200	2000
	100	5.0	5.0	61	0.35	0.45	2.0	5.0	2.5	ECEA0GKS101( )	200	2000
	220	6.3	5.0	82	0.35	0.45	2.5	5.0	2.5	ECEA0GKS221( )	200	2000
6.3	22	4.0	5.0	29	0.24	0.45	1.5	5.0	2.5	ECEA0JKS220( )	200	2000
	33	5.0	5.0	38	0.24	0.45	2.0	5.0	2.5	ECEA0JKS330( )	200	2000
	47	5.0	5.0	46	0.24	0.45	2.0	5.0	2.5	ECEA0JKS470( )	200	2000
	100	6.3	5.0	71	0.24	0.45	2.5	5.0	2.5	ECEA0JKS101( )	200	2000
	330	8.0	5.0	130	0.24	0.45	2.5	—	2.5	ECEA0JKS331( )	200	1000
		8.0	5.0	130	0.24	0.45	—	5.0	—	ECEA0JKS331Q	—	1000
10	22	5.0	5.0	35	0.20	0.45	2.0	5.0	2.5	ECEA1AKS220( )	200	2000
	33	5.0	5.0	43	0.20	0.45	2.0	5.0	2.5	ECEA1AKS330( )	200	2000
	47	6.3	5.0	65	0.20	0.45	2.5	5.0	2.5	ECEA1AKS470( )	200	2000
	100	6.3	5.0	80	0.20	0.45	2.5	5.0	2.5	ECEA1AKS101( )	200	2000
	220	8.0	5.0	120	0.20	0.45	2.5	—	2.5	ECEA1AKS221( )	200	1000
		8.0	5.0	120	0.20	0.45	—	5.0	—	ECEA1AKS221Q	—	1000
16	10	4.0	5.0	28	0.16	0.45	1.5	5.0	2.5	ECEA1CKS100( )	200	2000
	22	5.0	5.0	39	0.16	0.45	2.0	5.0	2.5	ECEA1CKS220( )	200	2000
	33	6.3	5.0	60	0.16	0.45	2.5	5.0	2.5	ECEA1CKS330( )	200	2000
	47	6.3	5.0	70	0.16	0.45	2.5	5.0	2.5	ECEA1CKS470( )	200	2000
	100	8.0	5.0	91	0.16	0.45	2.5	—	2.5	ECEA1CKS101( )	200	1000
		8.0	5.0	91	0.16	0.45	—	5.0	—	ECEA1CKS101Q	—	1000
25	4.7	4.0	5.0	22	0.14	0.45	1.5	5.0	2.5	ECEA1EKS4R7( )	200	2000
	10	5.0	5.0	28	0.14	0.45	2.0	5.0	2.5	ECEA1EKS100( )	200	2000
	22	6.3	5.0	55	0.14	0.45	2.5	5.0	2.5	ECEA1EKS220( )	200	2000
	33	6.3	5.0	65	0.14	0.45	2.5	5.0	2.5	ECEA1EKS330( )	200	2000
	100	8.0	5.0	85	0.14	0.45	2.5	—	2.5	ECEA1EKS101( )	200	1000
		8.0	5.0	85	0.14	0.45	—	5.0	—	ECEA1EKS101Q	—	1000
35	3.3	4.0	5.0	16	0.12	0.45	1.5	5.0	2.5	ECEA1VKS3R3( )	200	2000
	4.7	4.0	5.0	22	0.12	0.45	1.5	5.0	2.5	ECEA1VKS4R7( )	200	2000
	10	5.0	5.0	30	0.12	0.45	2.0	5.0	2.5	ECEA1VKS100( )	200	2000
	22	6.3	5.0	60	0.12	0.45	2.5	5.0	2.5	ECEA1VKS220( )	200	2000
	33	8.0	5.0	65	0.12	0.45	2.5	—	2.5	ECEA1VKS330( )	200	1000
		8.0	5.0	65	0.12	0.45	—	5.0	—	ECEA1VKS330Q	—	1000
	47	8.0	5.0	85	0.12	0.45	2.5		2.5	ECEA1VKS470( )	200	1000
		8.0	5.0	85	0.12	0.45	—	5.0	—	ECEA1VKS470Q	—	1000
50	2.2	4.0	5.0	16	0.10	0.45	1.5	5.0	2.5	ECEA1HKS2R2( )	200	2000
	3.3	4.0	5.0	16	0.10	0.45	1.5	5.0	2.5	ECEA1HKS3R3( )	200	2000
	4.7	5.0	5.0	23	0.10	0.45	2.0	5.0	2.5	ECEA1HKS4R7( )	200	2000
	10	6.3	5.0	35	0.10	0.45	2.5	5.0	2.5	ECEA1HKS100( )	200	2000
	22	8.0	5.0	60	0.10	0.45	2.5	—	2.5	ECEA1HKS220( )	200	1000
		8.0	5.0	60	0.10	0.45	—	5.0	—	ECEA1HKS220Q	—	1000

\*1: Ripple current (120 Hz / +85 °C)

\*2: tan δ (120 Hz / +20 °C)

• 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".