# Panasonic Aluminum Electrolytic Capacitors (Radial Lead Type)

## **Radial Lead Type**

Series : KS Type : A





### **Features**

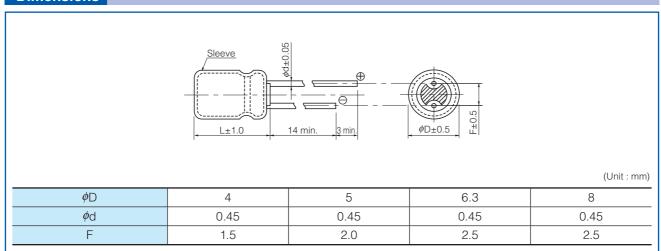
• Endurance: 85 °C 1000 h

• 5 mm height RoHS compliant

Specifications						
Category temperature range	−40 °C to +85 °C					
Rated voltage range	4 V.DC to 50 V.DC					
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 $\delta$ )	Please see the attached characteristics 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	Within ±20 % of the initial value (4 V.DC: ±30 %)				
	tan $\delta$	≤ 200 % of the initial limit				
	DC leakage current Within the initial limit					
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**



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## **Characteristics list**

Endurance: 85 °C 1000 h

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Rated voltage (V.DC)		Case si	ze (mm)	Specification		Lead length (mm)					Min. Pack	Min. Packaging Q'ty	
		φD	L	Ripple current (120 Hz)	current $\mid$ tan $\delta$	(120 Hz) dia. (+20 °C)	Lead space  Straight Taping Taping		ce Taping	Part No.	Straight leads	Taping	
		·		(+85 °C) ( (mA r.m.s.)	(+20 °C)		Straight	<b>*</b> B	<b>*</b> i		(pcs)	(pcs)	
	33	4	5	26	0.35	0.45	1.5	5.0	2.5	ECEA0GKS330()	200	2000	
4	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	
	550	8	5	130	0.24	0.45		5.0		ECEA0JKS331Q		1000	
	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	
10	47	6.3	5	65	0.20	0.45	2.5	5.0	2.5	ECEA1AKS470()	200	2000	
10	100	6.3	5	80	0.20	0.45	2.5	5.0	2.5	ECEA1AKS101()	200	2000	
	000	8	5	120	0.20	0.45	2.5		2.5	ECEA1AKS221()	200	1000	
	220	8	5	120	0.20	0.45		5.0		ECEA1AKS221Q		1000	
	10	4	5	28	0.16	0.45	1.5	5.0	2.5	ECEA1CKS100()	200	2000	
16	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	
		8	5	91	0.16	0.45	2.5		2.5	ECEA1CKS101()	200	1000	
	100	8	5	91	0.16	0.45		5.0		ECEA1CKS101Q		1000	
	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	
0=	22	6.3	5	55	0.14	0.45	2.5	5.0	2.5	ECEA1EKS220()	200	2000	
25	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	
		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	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	2.0	5.0		ECEA1HKS220Q		1000	
							l "			<b>VR</b> =5 mm i=2.5 mm		1000	

<sup>·</sup> When requesting taped product, please put the letter "B" or "i" between the "()". Lead wire pitch \*B=5 mm, i=2.5 mm.

<sup>·</sup> Please refer to the page of "Taping dimensions".



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