

Discontinuation Notice for Select Low Capacitance Aluminum Electrolytic Capacitors

PDN.PG25.03.16.2015

03/16/15

Effective Date:	Immediately
Last Time Buy Date:	June 30 th , 2015
Last Time Ship Date:	September 30 th , 2015
Discontinuation Details:	Due to declining demand in the market, Panasonic has decided to discontinue select low capacitance lytic capacitors. Parts effected: $\leq 1\mu\text{F}$ and $\leq 100\text{ VDC}$ Radials, $\leq 0.82\mu\text{F}$ all voltage rating SMD
Suggested Replacement:	None
Affected Part Numbers:	Please refer to the attached excel spreadsheet.
Datasheets:	See Attached
Notes:	Only select low capacitance parts from the above series are being discontinued, not the entire series.

ECE-A1HKA010
ECE-A1HKA010B
ECE-A1HKA010I
ECE-A1HKS010
ECE-A1HKS010B
ECE-A1HKS010I
ECE-A1HKSR47
ECE-A1HKSR47B
ECE-A1HKSR47I
EEA-GA1H1R0
EEA-GA1H1R0B
EEA-GA1H1R0H
EEA-GA1HR68
EEA-GA1HR68B
EEA-GA1HR68H
EEE-1HAR10AR
EEE-1HAR22AR
EEE-1HAR22NR
EEE-1HAR22SR
EEE-1HAR33AR
EEE-1HAR33NR
EEE-1HAR33SR

Surface Mount Type

Series: **S** Type: **V**



■ Features

- Endurance: 85 °C 2000 h
- Vibration-proof product is available upon request. (08 mm and larger)
- AEC-Q200 qualified*
- RoHS directive compliant

■ Specifications

Category Temp. Range	-40 °C to +85 °C										
Rated W.V. Range	4 V.DC to 100 V.DC										
Nominal Cap. Range	1 μF to 1500 μF										
Capacitance Tolerance	±20 % (120 Hz/+20 °C)										
DC Leakage Current	I < 0.01 CV or 3 (μA) (Bi-Polar I < 0.02 CV or 6 (μA) After 2 minutes (Whichever is greater)										
tan d	Please see the attached standard products list										
Characteristics at Low Temperature	W.V. (V)	4	6.3	10	16	25	35	50	63	100	(Impedance ratio at 120 Hz)
	Z(-25 °C)/Z(+20 °C)	7	4	3	2	2	2	2	3	3	
	Z(-40 °C)/Z(+20 °C)	15	8	6	4	4	3	3	4	4	
Endurance	After applying rated working voltage for 2000 hours (Bi-polar:1000 hours for each polarity) at +85 °C ±2 °C and then being stabilized at +20 °C, Capacitors shall meet the following limits.										
	Capacitance change	±20 % of inisial measured value									
		Size code	Rated W.V.		Cap. change						
		B(04) to D, D8(06.3)	4 W.V		1000 hours ±30 %						
	< D(06.3) Miniature	6.3 W.V		1000 hours ±20 %							
tan d	< 200 % 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)										
Resistance to Soldering Heat	After reflow soldering and then being stabilized at +20 °C, capacitors shall meet the following limits.										
	Capacitance change	±10 % of initial measured value									
	tan d	< initial specified value									
	DC leakage current	< initial specified value									

■ 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

■ Marking

Example: 4V 33 μF (Polarized)
Marking color: BLACK

Negative polarity marking (-)
(No marking for the bi-polar)

Capacitance (μF)

33

Series identification (S) or (A)

44

Mark for Lead-Free Products Black Dot (Square)

Rated voltage Mark (V.DC)
(6=6.3 V.DC)

Lot number

■ Dimensions in mm (not to scale)

(Unit : mm)

Size code	D	L	A, B	H	I	W	P	K
B	4.0	5.4 ^{+0.1} _{-0.2}	4.3	5.5 max.	1.8	0.65±0.1	1.0	0.35 ^{+0.15} _{-0.20}
C	5.0	5.4 ^{+0.1} _{-0.2}	5.3	6.5 max.	2.2	0.65±0.1	1.5	0.35 ^{+0.15} _{-0.20}
D	6.3	5.4 ^{+0.1} _{-0.2}	6.6	7.8 max.	2.6	0.65±0.1	1.8	0.35 ^{+0.15} _{-0.20}
D8	6.3	7.7±0.3	6.6	7.8 max.	2.6	0.65±0.1	1.8	0.35 ^{+0.15} _{-0.20}
E	8.0	6.2±0.3	8.3	9.5 max.	3.4	0.65±0.1	2.2	0.35 ^{+0.15} _{-0.20}
F	8.0	10.2±0.3	8.3	10.0 max.	3.4	0.90±0.2	3.1	0.70±0.20
G	10.0	10.2±0.3	10.3	12.0 max.	3.5	0.90±0.2	4.6	0.70±0.20

() Reference size

* This product qualify for AEC-Q200, but it has some deviations.

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.

02 Mar. 2014

Standard Products

W.V.	Cap. (±20 %)	Case size			Specification			Part No. (RoHS:compliant)	Reflow	Min. Packaging Q'ty
		Dia.	Length	*Size Code	Ripple Current (120 Hz (+85 °C) (mA r.m.s.)	tan d (120 Hz) (+20 °C)	Endurance			Taping
(V)	(μF)	(mm)	(mm)			(hours)			(pcs)	
4	33	4	5.4	B	26	0.35	1000	EEE0GA330SR	(1)	2000
	47	4	5.4	B	34	0.35	1000	EEE0GA470SR	(1)	2000
	100	5	5.4	C	61	0.35	1000	EEE0GA101SR	(1)	1000
	220	6.3	5.4	D	82	0.35	1000	EEE0GA221SP	(1)	1000
	330	6.3	5.4	(D)	80	0.50	1000	EEE0GA331WP	(1)	1000
	470	6.3	7.7	D8	200	0.35	1000	EEE0GA471XP	(1)	900
6.3	22	4	5.4	B	29	0.26	2000	EEE0JA220SR	(1)	2000
	33	4	5.4	(B)	22	0.35	1000	EEE0JA330WR	(1)	2000
	47	4	5.4	(B)	36	0.35	1000	EEE0JA470WR	(1)	2000
		5	5.4	C	46	0.26	2000	EEE0JA470SR	(1)	1000
	100	5	5.4	(C)	47	0.35	1000	EEE0JA101WR	(1)	1000
		6.3	5.4	D	71	0.26	2000	EEE0JA101SP	(1)	1000
	220	6.3	5.4	(D)	74	0.35	1000	EEE0JA221WP	(1)	1000
	330	6.3	7.7	D8	188	0.26	2000	EEE0JA331XP	(1)	900
		8	6.2	E	300	0.35	2000	EEE0JA331P	(2)	1000
	470	8	10.2	F	380	0.35	2000	EEE0JA471P	(2)	500
	1000	8	10.2	(F)	500	0.35	2000	EEE0JA102UP	(2)	500
		10	10.2	G	700	0.35	2000	EEE0JA102P	(2)	500
1500	10	10.2	G	750	0.35	2000	EEE0JA152P	(2)	500	
10	22	4	5.4	(B)	28	0.30	1000	EEE1AA220WR	(1)	2000
	33	4	5.4	(B)	29	0.30	1000	EEE1AA330WR	(1)	2000
		5	5.4	C	43	0.20	2000	EEE1AA330SR	(1)	1000
	47	5	5.4	(C)	43	0.30	1000	EEE1AA470WR	(1)	1000
	100	5	5.4	(C)	50	0.30	1000	EEE1AA101WR	(1)	1000
		6.3	5.4	D	70	0.26	2000	EEE1AA101SP	(1)	1000
	220	6.3	7.7	D8	173	0.20	2000	EEE1AA221XP	(1)	900
		8	6.2	E	250	0.26	2000	EEE1AA221P	(2)	1000
	330	8	10.2	F	390	0.26	2000	EEE1AA331P	(2)	500
	470	8	10.2	(F)	390	0.26	2000	EEE1AA471UP	(2)	500
		10	10.2	G	400	0.26	2000	EEE1AA471P	(2)	500
	1000	10	10.2	G	580	0.26	2000	EEE1AA102P	(2)	500
16	10	4	5.4	B	28	0.16	2000	EEE1CA100SR	(1)	2000
	22	4	5.4	(B)	28	0.26	1000	EEE1CA220WR	(1)	2000
		5	5.4	C	39	0.16	2000	EEE1CA220SR	(1)	1000
	33	5	5.4	(C)	35	0.26	1000	EEE1CA330WR	(1)	1000
	47	5	5.4	(C)	39	0.26	1000	EEE1CA470WR	(1)	1000
		6.3	5.4	D	70	0.16	2000	EEE1CA470SP	(1)	1000
	100	6.3	5.4	(D)	70	0.26	1000	EEE1CA101WP	(1)	1000
		8	6.2	E	200	0.20	2000	EEE1CA101P	(2)	1000
	220	6.3	7.7	D8	162	0.16	2000	EEE1CA221XP	(1)	900
		8	10.2	F	280	0.20	2000	EEE1CA221P	(2)	500
	330	8	10.2	(F)	320	0.20	2000	EEE1CA331UP	(2)	500
		10	10.2	G	380	0.20	2000	EEE1CA331P	(2)	500
	470	8	10.2	(F)	350	0.20	2000	EEE1CA471UP	(2)	500
		10	10.2	G	420	0.20	2000	EEE1CA471P	(2)	500

* Size code():Miniaturization product

- Please refer to the page of "Reflow Profile" and "The Taping Dimensions".
- When requesting vibration-proof product, please put the last "V" instead to "P"

■ Standard Products

W.V.	Cap. (±20 %)	Case size			Specification			Part No. (RoHS:compliant)	Reflow	Min. Packaging Q'ty
		Dia.	Length	*Size Code	Ripple Current (120 Hz) (+85 °C) (mA r.m.s.)	tan d (120 Hz) (+20 °C)	Endurance			Taping
(V)	(μF)	(mm)	(mm)			(hours)			(pcs)	
25	4.7	4	5.4	B	22	0.14	2000	EEE1EA4R7SR	(1)	2000
	10	4	5.4	(B)	22	0.20	1000	EEE1EA100WR	(1)	2000
		5	5.4	C	28	0.14	2000	EEE1EA100SR	(1)	1000
	22	5	5.4	(C)	35	0.20	1000	EEE1EA220WR	(1)	1000
		6.3	5.4	D	55	0.14	2000	EEE1EA220SP	(1)	1000
	33	5	5.4	(C)	42	0.20	1000	EEE1EA330WR	(1)	1000
		6.3	5.4	D	65	0.14	2000	EEE1EA330SP	(1)	1000
	47	6.3	5.4	(D)	70	0.20	1000	EEE1EA470WP	(1)	1000
	100	6.3	7.7	D8	143	0.14	2000	EEE1EA101XP	(1)	900
		8	6.2	(E)	91	0.16	2000	EEE1EA101UP	(2)	1000
		8	10.2	F	180	0.16	2000	EEE1EA101P	(2)	500
	220	8	10.2	(F)	230	0.16	2000	EEE1EA221UP	(2)	500
10.0		10.2	G	310	0.16	2000	EEE1EA221P	(2)	500	
330	8	10.2	(F)	270	0.16	2000	EEE1EA331UP	(2)	500	
	10	10.2	G	340	0.16	2000	EEE1EA331P	(2)	500	
470	10	10.2	G	380	0.16	2000	EEE1EA471P	(2)	500	
35	4.7	4	5.4	B	22	0.12	2000	EEE1VA4R7SR	(1)	2000
	10	4	5.4	(B)	22	0.16	1000	EEE1VA100WR	(1)	2000
		5	5.4	C	30	0.12	2000	EEE1VA100SR	(1)	1000
	22	5	5.4	(C)	36	0.16	1000	EEE1VA220WR	(1)	1000
		6.3	5.4	D	60	0.12	2000	EEE1VA220SP	(1)	1000
	33	6.3	5.4	(D)	60	0.16	1000	EEE1VA330WP	(1)	1000
		8	6.2	E	130	0.14	2000	EEE1VA330P	(2)	1000
	47	6.3	5.4	(D)	70	0.16	1000	EEE1VA470WP	(1)	1000
		8	6.2	E	165	0.14	2000	EEE1VA470P	(2)	1000
	100	6.3	7.7	D8	132	0.12	2000	EEE1VA101XP	(1)	900
		8	10.2	(F)	140	0.14	2000	EEE1VA101UP	(2)	500
		10	10.2	G	210	0.14	2000	EEE1VA101P	(2)	500
220	8	10.2	(F)	200	0.14	2000	EEE1VA221UP	(2)	500	
	10	10.2	G	310	0.14	2000	EEE1VA221P	(2)	500	
330	10	10.2	G	350	0.14	2000	EEE1VA331P	(2)	500	

* Size code():Miniaturization product

- Please refer to the page of "Reflow Profile" and "The Taping Dimensions".
- When requesting vibration-proof product, please put the last "V" instead to "P"

■ Standard Products

W.V.	Cap. (±20 %)	Case size			Specification			Part No. (RoHS:compliant)	Reflow	Min. Packaging Q'ty
		Dia.	Length	*Size Code	Ripple Current (120 Hz) (+85 °C) (mA r.m.s.)	tan d (120 Hz) (+20 °C)	Endurance			Taping
(V)	(μF)	(mm)	(mm)			(hours)			(pcs)	
50	0.1	4	5.4	B	1	0.12	2000	EEE1HA0R1SR ***	(1)	2000
	0.22	4	5.4	B	2	0.12	2000	EEE1HAR22SR ***	(1)	2000
	0.33	4	5.4	B	3	0.12	2000	EEE1HAR33SR ***	(1)	2000
	0.47	4	5.4	B	5	0.12	2000	EEE1HAR47SR ***	(1)	2000
	1	4	5.4	B	10	0.12	2000	EEE1HA010SR	(1)	2000
	2.2	4	5.4	B	16	0.12	2000	EEE1HA2R2SR	(1)	2000
	3.3	4	5.4	B	16	0.12	2000	EEE1HA3R3SR	(1)	2000
	4.7	4	5.4	(B)	18	0.14	1000	EEE1HA4R7WR	(1)	2000
		5	5.4	C	23	0.12	2000	EEE1HA4R7SR	(1)	1000
	10	5	5.4	(C)	27	0.14	1000	EEE1HA100WR	(1)	1000
		6.3	5.4	D	35	0.12	2000	EEE1HA100SP	(1)	1000
	22	6.3	5.4	(D)	40	0.14	1000	EEE1HA220WP	(1)	1000
		8	6.2	E	120	0.12	2000	EEE1HA220P	(2)	1000
	33	6.3	7.7	D8	85	0.12	2000	EEE1HA330XP	(1)	900
		8	6.2	(E)	65	0.12	2000	EEE1HA330UP	(2)	1000
		8	10.2	F	110	0.12	2000	EEE1HA330P	(2)	500
	47	6.3	7.7	D8	105	0.12	2000	EEE1HA470XP	(1)	900
		8	10.2	(F)	110	0.12	2000	EEE1HA470UP	(2)	500
		10	10.2	G	130	0.12	2000	EEE1HA470P	(2)	500
	100	8	10.2	(F)	200	0.12	2000	EEE1HA101UP	(2)	500
10		10.2	G	250	0.12	2000	EEE1HA101P	(2)	500	
220	10	10.2	G	300	0.12	2000	EEE1HA221P	(2)	500	
63	22	8	6.2	(E)	40	0.18	2000	EEE1JA220UP	(2)	1000
		8	10.2	F	40	0.18	2000	EEE1JA220P	(2)	500
	33	8	10.2	F	45	0.18	2000	EEE1JA330P	(2)	500
	47	8	10.2	(F)	45	0.18	2000	EEE1JA470UP	(2)	500
		10	10.2	G	45	0.18	2000	EEE1JA470P	(2)	500
100	10	10.2	G	60	0.18	2000	EEE1JA101P	(2)	500	
100	3.3	8	6.2	E	50	0.18	2000	EEE2AA3R3P	(2)	1000
	4.7	8	6.2	(E)	50	0.18	2000	EEE2AA4R7UP	(2)	1000
	10	8	6.2	(E)	50	0.18	2000	EEE2AA100UP	(2)	1000
		8	10.2	F	85	0.18	2000	EEE2AA100P	(2)	500
	22	8	10.2	(F)	55	0.18	2000	EEE2AA220UP	(2)	500
		10	10.2	G	85	0.18	2000	EEE2AA220P	(2)	500
	33	10	10.2	G	90	0.18	2000	EEE2AA330P	(2)	500

* Size code():Miniaturization product

*** Please kindly accept last shipment : 31/Mar/2015

· Please refer to the page of "Reflow Profile" and "The Taping Dimensions".

· When requesting vibration-proof product, please put the last "V" instead to "P"

■ Standard Products (Bi-polar)

Endurance : 85 °C 2000 h

W.V.	Cap. (±20 %)	Case size			Specification			Part No. (RoHS:compliant)	Reflow	Min. Packaging Q'ty
		Dia.	Length	Size Code	Ripple Current (120 Hz) (+85 °C) (mA r.m.s.)	tan d (120 Hz) (+20 °C)	Endurance			Taping (pcs)
(V)	(μF)	(mm)	(mm)				(hours)			
6.3	22	5	5.4	C	29	0.52	2000	EEE0JA220NR	(1)	1000
	47	6.3	5.4	D	46	0.52	2000	EEE0JA470NP	(1)	1000
10	10	4	5.4	B	25	0.40	2000	EEE1AA100NR	(1)	2000
	33	6.3	5.4	D	43	0.40	2000	EEE1AA330NP	(1)	1000
16	4.7	4	5.4	B	20	0.32	2000	EEE1CA4R7NR	(1)	2000
	10	5	5.4	C	25	0.32	2000	EEE1CA100NR	(1)	1000
	22	6.3	5.4	D	39	0.32	2000	EEE1CA220NP	(1)	1000
25	3.3	4	5.4	B	12	0.28	2000	EEE1EA3R3NR	(1)	2000
	4.7	5	5.4	C	21	0.28	2000	EEE1EA4R7NR	(1)	1000
	10	6.3	5.4	D	28	0.28	2000	EEE1EA100NP	(1)	1000
35	2.2	4	5.4	B	12	0.24	2000	EEE1VA2R2NR	(1)	2000
	4.7	5	5.4	C	22	0.24	2000	EEE1VA4R7NR	(1)	1000
	10	6.3	5.4	D	30	0.24	2000	EEE1VA100NP	(1)	1000
50	0.22	4	5.4	B	2	0.24	2000	EEE1HAR22NR ***	(1)	2000
	0.33	4	5.4	B	3	0.24	2000	EEE1HAR33NR ***	(1)	2000
	0.47	4	5.4	B	5	0.24	2000	EEE1HAR47NR ***	(1)	2000
	1	4	5.4	B	10	0.24	2000	EEE1HA010NR	(1)	2000
	2.2	5	5.4	C	16	0.24	2000	EEE1HA2R2NR	(1)	1000
	3.3	5	5.4	C	21	0.24	2000	EEENZ1H3R3R	(1)	1000
	4.7	6.3	5.4	D	31	0.24	2000	EEE1HA4R7NP	(1)	1000

*** Please kindly accept last shipment : 31/Mar/2015

- Please refer to the page of "Reflow Profile" and "The Taping Dimensions".
- When requesting vibration-proof product, please put the last "V" instead to "P"

Surface Mount Type

Series: **S** Type: **V**

S High temperature Lead-Free reflow (suffix:A*)



■ Features

- Endurance: 85 °C 2000 h
- Vibration-proof product is available upon request.(08 mm and larger)
- AEC-Q200 qualified*
- RoHS directive compliant

■ Specifications

Category Temp. Range	-40 °C to +85 °C							
Rated W.V. Range	6.3 V.DC to 50 V.DC							
Nominal Cap. Range	1 μF to 1500 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 d	Please see the attached High temperature lead-free reflow products list.							
Characteristics at Low Temperature	W.V. (V)	6.3	10	16	25	35	50	(Impedance ratio at 120 Hz)
	Z(-25 °C)/Z(+20 °C)	4	3	2	2	2	2	
	Z(-40 °C)/Z(+20 °C)	8	6	4	4	3	3	
Endurance	After applying rated working voltage for 2000 hours (Miniaturization product type 1000 hours) at +85 °C±2 °C and then being stabilized at +20 °C, Capacitors shall meet the following limits.							
	Capacitance change	±20 % of initial measured value						
		Size code		Cap. change				
		D8(06.3×7.7)		2000 hours ±25 %				
<D(06.3) Miniature		1000 hours ±30 %						
tan d	< 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)							
Resistance to Soldering Heat	After reflow soldering and then being stabilized at +20 °C, capacitors shall meet the following limits.							
	Capacitance change	±10 % of initial measured value						
	tan d	< initial specified value						
	DC leakage current	< initial specified value						

■ 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

■ Marking

Example: 6.3 V 22 μF (Polarized)
Marking color: BLACK

Negative polarity marking (-)

Capacitance (μF)

Series identification (S) or (A)

Mark for Lead-Free Products Black Dot (Square)

Lot number

Rated voltage Mark (V.DC) (6=6.3 V.DC)

■ Dimensions in mm (not to scale)

(Unit : mm)

Pressure Relief (010 and larger)

() Reference size

Size code	D	L	A, B	H	I	W	P	K
B	4.0	5.4 ^{+0.1} _{-0.2}	4.3	5.5 max	1.8	0.65±0.1	1.0	0.35 ^{+0.15} _{-0.20}
C	5.0	5.4 ^{+0.1} _{-0.2}	5.3	6.5 max	2.2	0.65±0.1	1.5	0.35 ^{+0.15} _{-0.20}
D	6.3	5.4 ^{+0.1} _{-0.2}	6.6	7.8 max	2.6	0.65±0.1	1.8	0.35 ^{+0.15} _{-0.20}
D8	6.3	7.7±0.3	6.6	7.8 max	2.6	0.65±0.1	1.8	0.35 ^{+0.15} _{-0.20}
E	8.0	6.2±0.3	8.3	9.5 max	3.4	0.65±0.1	2.2	0.35 ^{+0.15} _{-0.20}
F	8.0	10.2±0.3	8.3	10.0 max	3.4	0.90±0.2	3.1	0.70±0.20
G	10.0	10.2±0.3	10.3	12.0 max	3.5	0.90±0.2	4.6	0.70±0.20

* This product qualify for AEC-Q200, but it has some deviations.

High temperature Lead-Free reflow Products

W.V.	Cap. (±20 %)	Case size			Specification			Part No. (RoHS:compliant)	Reflow	Min. Packaging Q'ty
		Dia.	Length	*Size Code	Ripple Current (120 Hz (+85 °C) (mA r.m.s.)	tan d (120 Hz) (+20 °C)	Endurance			Taping
(V)	(μF)	(mm)	(mm)			(hours)			(pcs)	
6.3	22	4	5.4	B	29	0.30	2000	EEE0JA220AR	(5)	2000
	33	4	5.4	(B)	22	0.35	1000	EEE0JA330WAR	(5)	2000
	47	5	5.4	C	46	0.30	2000	EEE0JA470AR	(5)	1000
	100	5	5.4	(C)	47	0.40	1000	EEE0JA101WAR	(5)	1000
		6.3	5.4	D	71	0.30	2000	EEE0JA101AP	(5)	1000
	330	6.3	7.7	D8	188	0.30	2000	EEE0JA331XAP	(5)	900
		8	6.2	E	300	0.35	2000	EEE0JA331AP	(7)	1000
	470	8	10.2	(F)	380	0.35	1000	EEE0JA471UAP	(7)	500
	1000	10	10.2	G	700	0.35	2000	EEE0JA102AP	(7)	500
1500	10	10.2	(G)	750	0.50	1000	EEE0JA152UAP	(7)	500	
10	22	4	5.4	(B)	28	0.30	1000	EEE1AA220WAR	(5)	2000
	33	4	5.4	(B)	29	0.30	1000	EEE1AA330WAR	(5)	2000
		5	5.4	C	43	0.22	2000	EEE1AA330AR	(5)	1000
	47	5	5.4	(C)	47	0.30	1000	EEE1AA470WAR	(5)	1000
	100	5	5.4	(C)	50	0.30	1000	EEE1AA101WAR	(5)	1000
		6.3	5.4	D	70	0.26	2000	EEE1AA101AP	(5)	1000
	220	6.3	7.7	D8	173	0.22	2000	EEE1AA221XAP	(5)	900
		8	6.2	E	250	0.26	2000	EEE1AA221AP	(7)	1000
	330	8	10.2	F	390	0.26	2000	EEE1AA331AP	(7)	500
	470	8	10.2	(F)	390	0.26	1000	EEE1AA471UAP	(7)	500
10		10.2	G	400	0.26	2000	EEE1AA471AP	(7)	500	
1000	10	10.2	(G)	580	0.35	1000	EEE1AA102UAP	(7)	500	
16	10	4	5.4	B	28	0.16	2000	EEE1CA100AR	(5)	2000
	22	4	5.4	(B)	28	0.26	1000	EEE1CA220WAR	(5)	2000
		5	5.4	C	39	0.16	2000	EEE1CA220AR	(5)	1000
	33	5	5.4	(C)	35	0.26	1000	EEE1CA330WAR	(5)	1000
	47	5	5.4	(C)	39	0.26	1000	EEE1CA470WAR	(5)	1000
		6.3	5.4	D	70	0.16	2000	EEE1CA470AP	(5)	1000
	100	6.3	5.4	(D)	70	0.26	1000	EEE1CA101WAP	(5)	1000
		8	6.2	E	200	0.20	2000	EEE1CA101AP	(7)	1000
	220	6.3	7.7	D8	162	0.20	2000	EEE1CA221XAP	(5)	900
		8	10.2	(F)	280	0.20	1000	EEE1CA221UAP	(7)	500
	330	8	10.2	(F)	320	0.20	1000	EEE1CA331UAP	(7)	500
		10	10.2	G	380	0.20	2000	EEE1CA331AP	(7)	500
	470	8	10.2	(F)	350	0.26	1000	EEE1CA471UAP	(7)	500
10		10.2	G	420	0.20	2000	EEE1CA471AP	(7)	500	
25	4.7	4	5.4	B	22	0.14	2000	EEE1EA4R7AR	(5)	2000
	10	4	5.4	(B)	22	0.20	1000	EEE1EA100WAR	(5)	2000
		5	5.4	C	28	0.14	2000	EEE1EA100AR	(5)	1000
	22	5	5.4	(C)	35	0.20	1000	EEE1EA220WAR	(5)	1000
		6.3	5.4	D	55	0.14	2000	EEE1EA220AP	(5)	1000
	33	5	5.4	(C)	42	0.20	1000	EEE1EA330WAR	(5)	1000
		6.3	5.4	D	65	0.14	2000	EEE1EA330AP	(5)	1000
	47	6.3	5.4	(D)	70	0.20	1000	EEE1EA470WAP	(5)	1000
	100	8	6.2	(E)	91	0.16	1000	EEE1EA101UAP	(7)	1000
		6.3	7.7	D8	143	0.16	2000	EEE1EA101XAP	(5)	900
		8	10.2	F	180	0.16	2000	EEE1EA101AP	(7)	500
	220	8	10.2	(F)	230	0.20	1000	EEE1EA221UAP	(7)	500
		10	10.2	G	310	0.16	2000	EEE1EA221AP	(7)	500
	330	8	10.2	(F)	270	0.20	1000	EEE1EA331UAP	(7)	500
		10	10.2	G	340	0.16	2000	EEE1EA331AP	(7)	500
470	10	10.2	(G)	380	0.25	1000	EEE1EA471UAP	(7)	500	

* Size code():Miniaturization product

· Please refer to the page of "Reflow Profile" and "The Taping Dimensions".

· When requesting vibration-proof product, please put the last "V" instead to "P"

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.

02 Mar. 2014

■ High temperature Lead-Free reflow Products

W.V.	Cap. (±20 %)	Case size			Specification			Part No. (RoHS:compliant)	Reflow	Min. Packaging Q'ty
		Dia.	Length	*Size Code	Ripple Current (120 Hz) (+85 °C) (mA r.m.s.)	tan d (120 Hz) (+20 °C)	Endurance			Taping (pcs)
(V)	(μF)	(mm)	(mm)			(hours)				
35	4.7	4	5.4	B	22	0.12	2000	EEE1VA4R7AR	(5)	2000
	10	4	5.4	(B)	22	0.16	1000	EEE1VA100WAR	(5)	2000
		5	5.4	C	30	0.12	2000	EEE1VA100AR	(5)	1000
	22	5	5.4	(C)	36	0.16	1000	EEE1VA220WAR	(5)	1000
		6.3	5.4	D	60	0.12	2000	EEE1VA220AP	(5)	1000
	33	6.3	5.4	(D)	60	0.16	1000	EEE1VA330WAP	(5)	1000
		8	6.2	E	130	0.14	2000	EEE1VA330AP	(7)	1000
	47	6.3	5.4	(D)	70	0.16	1000	EEE1VA470WAP	(5)	1000
		8	6.2	E	165	0.14	2000	EEE1VA470AP	(7)	1000
	100	6.3	7.7	D8	132	0.14	2000	EEE1VA101XAP	(5)	900
		8	10.2	(F)	140	0.14	1000	EEE1VA101UAP	(7)	500
		10	10.2	G	210	0.14	2000	EEE1VA101AP	(7)	500
	220	8	10.2	(F)	200	0.14	1000	EEE1VA221UAP	(7)	500
		10	10.2	G	310	0.14	2000	EEE1VA221AP	(7)	500
330	10	10.2	(G)	350	0.30	1000	EEE1VA331UAP	(7)	500	
50	0.1	4	5.4	B	1	0.12	2000	EEE1HAR10AR ***	(5)	2000
	0.22	4	5.4	B	2	0.12	2000	EEE1HAR22AR ***	(5)	2000
	0.33	4	5.4	B	3	0.12	2000	EEE1HAR33AR ***	(5)	2000
	0.47	4	5.4	B	5	0.12	2000	EEE1HAR47AR ***	(5)	2000
	1	4	5.4	B	10	0.12	2000	EEE1HA1R0AR	(5)	2000
	2.2	4	5.4	B	16	0.12	2000	EEE1HA2R2AR	(5)	2000
	3.3	4	5.4	B	16	0.12	2000	EEE1HA3R3AR	(5)	2000
	4.7	4	5.4	(B)	18	0.14	1000	EEE1HA4R7WAR	(5)	2000
		5	5.4	C	23	0.12	2000	EEE1HA4R7AR	(5)	1000
	10	5	5.4	(C)	27	0.14	1000	EEE1HA100WAR	(5)	1000
		6.3	5.4	D	35	0.12	2000	EEE1HA100AP	(5)	1000
	22	6.3	5.4	(D)	40	0.14	1000	EEE1HA220WAP	(5)	1000
		8	6.2	E	120	0.12	2000	EEE1HA220AP	(7)	1000
	33	8	6.2	(E)	65	0.12	1000	EEE1HA330UAP	(7)	1000
		6.3	7.7	D8	65	0.14	2000	EEE1HA330XAP	(5)	900
		8	10.2	F	110	0.12	2000	EEE1HA330AP	(7)	500
	47	6.3	7.7	D8	105	0.14	2000	EEE1HA470XAP	(5)	900
		8	10.2	(F)	110	0.12	1000	EEE1HA470UAP	(7)	500
		10	10.2	G	130	0.12	2000	EEE1HA470AP	(7)	500
	100	8	10.2	(F)	200	0.18	1000	EEE1HA101UAP	(7)	500
10		10.2	G	250	0.12	2000	EEE1HA101AP	(7)	500	
220	10	10.2	(G)	300	0.18	1000	EEE1HA221UAP	(7)	500	

* Size code():Miniaturization product

*** Please kindly accept last shipment : 31/Mar/2015

· Please refer to the page of "Reflow Profile" and "The Taping Dimensions".

· When requesting vibration-proof product, please put the last "V" instead to "P"

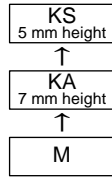
Radial Lead Type

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

■ Features

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

Low Profile



■ Specifications

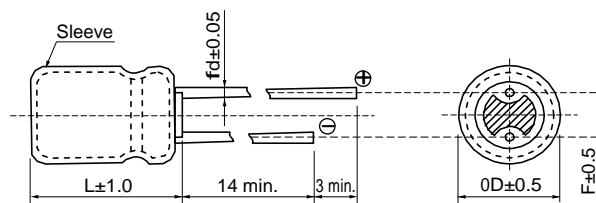
Category Temp. Range	-40 °C to +85 °C	
Rated W.V. Range	4 V.DC to 50 V.DC	
Nominal Cap. Range	2.2 μF to 330 μF	
Capacitance Tolerance	±20 % (120 Hz/+20 °C)	
DC Leakage Current	I < 0.01 CV or 3 (μA) After 2 minutes (Whichever is greater)	
tan d	Please see the attached standard products list	
Endurance	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 d	< 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)

(Unit : mm)



	4	5	6.3	8
Body Dia. 0D				
Lead Dia. 0d	0.45	0.45	0.45	0.45
Lead space F	1.5	2.0	2.5	2.5

Standard Products

Endurance : 85 °C 1000 h

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 d (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	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	ECEA1HKS0R2()***	200	2000	
	0.33	4	5	3	0.10	0.45	1.5	5.0	2.5	ECEA1HKS0R3()***	200	2000	
	0.47	4	5	5	0.10	0.45	1.5	5.0	2.5	ECEA1HKS0R4()***	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	

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

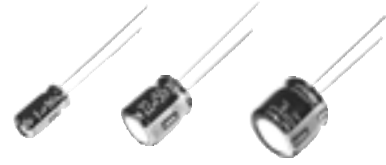
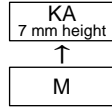
· Please refer to the page of "Taping Dimensions".

*** Please kindly accept last shipment : 31/Mar/2015

Radial Lead Type

Series: **KA** Type: **A**

Low Profile



■ Features

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

■ Specifications

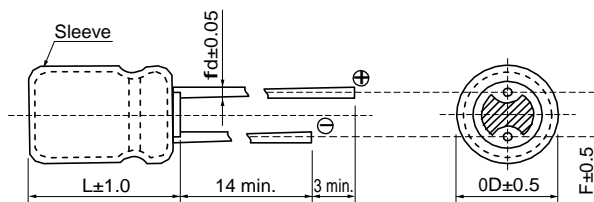
Category Temp. Range	-40 °C to +85 °C	
Rated W.V. Range	4 V.DC to 50 V.DC	
Nominal Cap. Range	2.2 μF to 470 μF	
Capacitance Tolerance	±20 % (120 Hz/+20 °C)	
DC Leakage Current	I < 0.01 CV or 3 (μA) After 2 minutes (Whichever is greater)	
tan d	Please see the attached standard products list	
Endurance	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 d	< 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)

(Unit : mm)



Body Dia. 0D	4	5	6.3	8
Lead Dia. 0d	0.45	0.45	0.45	0.45
Lead space F	1.5	2.0	2.5	2.5

Standard Products

Endurance : 85 °C 1000 h

W.V. (V)	Cap. (±20 %) (μF)	Case size		Specification		Lead Length				Part No.	Min. Packaging Qty	
		Dia. (mm)	Length (mm)	Ripple Current (120 Hz) (+85 °C) (mA r.m.s.)	tan d (120 Hz) (+20 °C)	Lead Dia. (mm)	Lead Space				Straight Leads (pcs)	Taping (pcs)
							Straight (mm)	Taping *B (mm)	Taping *i (mm)			
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	2.5		2.5	ECEA0GKA331()	200	1000
		8	7	110	0.35	0.45		5.0		ECEA0GKA331Q		1000
	470	8	7	140	0.35	0.45	2.5		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	2.5		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	2.5		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
	47	8	7	85	0.12	0.45	2.5		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	2.5		2.5	ECEA1HKA330()	200	1000
8		7	75	0.10	0.45		5.0		ECEA1HKA330Q		1000	

· 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".

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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.

02 Apr. 2014

Radial Lead Type

Series: **GA** Type: **A**

■ Features

- Endurance : 105 °C 1000 h
- RoHS directive compliant



■ Specifications

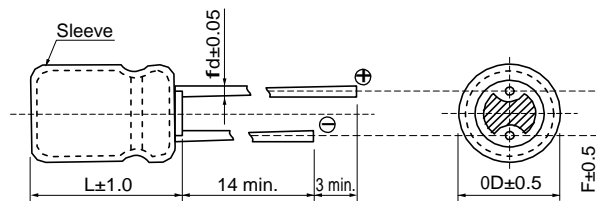
Category Temp. Range	-55 °C to +105 °C	
Rated W.V. Range	10 V.DC to 50 V.DC	
Nominal Cap. Range	1.5 μF to 220 μF	
Capacitance Tolerance	±20 % (120 Hz/+20 °C)	
DC Leakage Current	$I < 0.01 CV$ or 3 (μA) After 2 minutes (Whichever is greater)	
tan d	Please see the attached standard products list	
Endurance	After following life test with DC voltage and +105 °C±2 °C ripple current value applied (The sum of DC and ripple peak voltage shall not exceed the rated working voltage), for 1000 hours, when the capacitors are restored to 20 °C, the capacitors shall meet the limits specified below.	
	Capacitance change	±20 % of initial measured value
	tan d	< 200 % of initial specified value
	DC leakage current	< initial specified value
Shelf Life	After storage for 1000 hours at +105 °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

W.V.(V.DC)	Cap (μF)	Frequency (Hz)				
		60	120	1 k	10 k	100 k to
10 to 50	1.5 to 220	0.85	1.00	1.30	1.40	1.55

■ Dimensions in mm(not to scale)

(Unit : mm)



	4	5	6.3	8
Body Dia. 0D	4	5	6.3	8
Lead Dia. 0d	0.45	0.45	0.45	0.45
Lead space F	1.5	2.0	2.5	2.5

Standard Products

Endurance : 105 °C 1000 h

W.V. (V)	Cap. (±20 %) (µF)	Case size		Specification			Lead Length			Part No.	Min. Packaging Q'ty		
		Dia. (mm)	Length (mm)	Ripple Current (120 Hz) (+105 °C) (mA r.m.s.)	tan d (120 Hz) (+20 °C)	Endurance (hours)	Lead Dia. (mm)	Lead Space			Straight Leads (pcs)	Taping (pcs)	
								Straight (mm)	Taping *B (mm)				Taping *H (mm)
10	22	4	7	30	0.22	1000	0.45	1.5	5.0	2.5	EEAGA1A220()	200	2000
	33	5	7	50	0.22	1000	0.45	2.0	5.0	2.5	EEAGA1A330()	200	2000
	47	6.3	7	65	0.22	1000	0.45	2.5	5.0	2.5	EEAGA1A470()	200	2000
	68	6.3	7	75	0.22	1000	0.45	2.5	5.0	2.5	EEAGA1A680()	200	2000
	100	6.3	7	110	0.22	1000	0.45	2.5	5.0	2.5	EEAGA1A101()	200	2000
	220	8	7	160	0.22	1000	0.45	2.5	5.0	2.5	EEAGA1A221()	200	1000
16	10	4	7	30	0.18	1000	0.45	1.5	5.0	2.5	EEAGA1C100()	200	2000
	15	4	7	33	0.18	1000	0.45	1.5	5.0	2.5	EEAGA1C150()	200	2000
	22	5	7	50	0.18	1000	0.45	2.0	5.0	2.5	EEAGA1C220()	200	2000
	33	6.3	7	65	0.18	1000	0.45	2.5	5.0	2.5	EEAGA1C330()	200	2000
	47	6.3	7	77	0.18	1000	0.45	2.5	5.0	2.5	EEAGA1C470()	200	2000
	100	8	7	120	0.18	1000	0.45	2.5	5.0	2.5	EEAGA1C101()	200	1000
25	10	4	7	33	0.16	1000	0.45	1.5	5.0	2.5	EEAGA1E100()	200	2000
	15	5	7	45	0.16	1000	0.45	2.0	5.0	2.5	EEAGA1E150()	200	2000
	22	5	7	50	0.16	1000	0.45	2.0	5.0	2.5	EEAGA1E220()	200	2000
	33	6.3	7	75	0.16	1000	0.45	2.5	5.0	2.5	EEAGA1E330()	200	2000
	68	8	7	100	0.16	1000	0.45	2.5	5.0	2.5	EEAGA1E680()	200	1000
35	6.8	4	7	33	0.13	1000	0.45	1.5	5.0	2.5	EEAGA1V6R8()	200	2000
	10	5	7	35	0.13	1000	0.45	2.0	5.0	2.5	EEAGA1V100()	200	2000
	15	6.3	7	50	0.13	1000	0.45	2.5	5.0	2.5	EEAGA1V150()	200	2000
	22	6.3	7	70	0.13	1000	0.45	2.5	5.0	2.5	EEAGA1V220()	200	2000
	47	8	7	96	0.13	1000	0.45	2.5	5.0	2.5	EEAGA1V470()	200	1000
50	0.1	4	7	1.1	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1HR10()***	200	2000
	0.15	4	7	1.7	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1HR15()***	200	2000
	0.22	4	7	2.3	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1HR22()***	200	2000
	0.33	4	7	3.5	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1HR33()***	200	2000
	0.47	4	7	5	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1HR47()***	200	2000
	0.68	4	7	7	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1HR68()***	200	2000
	1	4	7	10	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1H1R0()***	200	2000
	1.5	4	7	16	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1H1R5()	200	2000
	2.2	4	7	18	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1H2R2()	200	2000
	3.3	4	7	22	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1H3R3()	200	2000
	4.7	4	7	26	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1H4R7()	200	2000
	6.8	5	7	35	0.10	1000	0.45	2.0	5.0	2.5	EEAGA1H6R8()	200	2000
	10	6.3	7	39	0.10	1000	0.45	2.5	5.0	2.5	EEAGA1H100()	200	2000
15	6.3	7	55	0.10	1000	0.45	2.5	5.0	2.5	EEAGA1H150()	200	2000	
22	8	7	70	0.10	1000	0.45	2.5	5.0	2.5	EEAGA1H220()	200	1000	
33	8	7	91	0.10	1000	0.45	2.5	5.0	2.5	EEAGA1H330()	200	1000	

· When requesting taped product, please put the letter "B" or "H" between the "()". Lead wire pitch *B=5 mm, H=2.5 mm.

Suffix "BQ" for 08x7, 5mm pitch products

· Please refer to the page of "Taping Dimensions".

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