

Surface Mount Type

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



Features

Endurance: 85 °C 2000 h

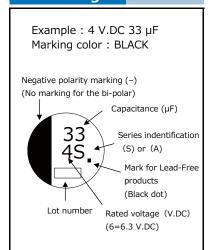
• Vibration-proof product is available upon request. (φ8 mm and larger)

RoHS compliant

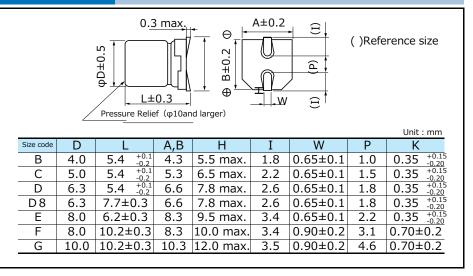
Specifications												
Category temp. range	-40 ℃ to +85 ℃											
Rated voltage range	4 V.DC to 100 V.DC											
Capacitance range	1 μF to 1500 μF											
Capacitance tolerance	±20 % (120 Hz/+20℃)											
Leakage cur rent	$I \le 0.01$ CV or 3 (μ A) (Bi-Polar I ≤ 0.02 CV or 6 (μ A)) After 2 minutes (Whichever is greater)											
Dissipation factor (tan δ)		Please see the attached characteristics list										
Characteristics	V.DC	4 6.3	10	16	25	35	50	63		(Impedance ratio		
at low temperature	Z(-25 °C)/Z(+20 °C)	7 4	3	2	2	2	2	3	3	at 120 Hz)		
at low temperature		15 8	6	4	4	3	3	4	-	,		
		After applying rated working voltage for 2000 h (Bi-polar:1000 h for each polarity)										
	at +85 °C±2 °C and then being stabilized at +20 °C, Capacitors shall meet the following limits.											
	Within ±20 % of the initial value											
			Size code			Rated voltage			Cap. Change			
Endurance	Capacitance change	B(φ4) to D, D8(φ6.3)				4 V.DC			1000 hours ±30 %			
		≤ D(φ6.3) Miniature			6.3 V.DC							
	_				≥ 10 V.DC				1000 hours ±20 %			
	tan δ	≦200 %			mit							
	DC leakege current											
	After storage for 1000 h at +85 °C±2 °C with no voltage applied and then being											
Shelf life	stabilized at +20 °C, capacitors shall meet the limits specified in Endurance.											
	(With voltage treatment)											
	After reflow soldering	and then	being st	tabilize	d at +	20 °C,	capaci	tors	shall me	et the		
Resistance to	following limits.		10.01									
soldering heat	Capacitance change				iitial va	alue						
Solucining field	tan δ	Within th										
450.0000	DC leakege current	Within th										
AEC-Q200	AEC-Q200 compliant											

Frequency corr	ection factor for r	ripple current		
Frequency (Hz)	50, 60	120	1 k	10 k to
Correction factor	0.70	1.00	1.30	1.70

Marking



Dimensions



Ch	aracteri	stics	list							
	Case size					Specification			Packaning	
Rated	Capacitance	(m	m)	Size						Q'ty
voltage (V.DC)	(±20 %) (µF)	φD	L	code	Ripple	tan δ *3	Endurance	Part number	Reflow	Taping
(V.DC)	(μι)	Ψυ	L	*1	current *2 (mA r.m.s.)	tarro	(hours)			(pcs)
	33	4.0	5.4	В	26	0.35	1000	EEE0GA330SR	(1)	2000
4	47	4.0	5.4	В	34	0.35	1000	EEE0GA470SR	(1)	2000
	100	5.0	5.4	С	61	0.35	1000	EEE0GA101SR	(1)	1000
4	220	6.3	5.4	О	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
	22	4.0	5.4	В	29	0.26	2000	EEE0JA220SR	(1)	2000
	33	4.0	5.4	(B)	22	0.35	1000	EEE0JA330WR	(1)	2000
	47	4.0	5.4	(B)	36	0.35	1000	EEE0JA470WR	(1)	2000
		5.0	5.4	C	46	0.26	2000	EEE0JA470SR	(1)	1000
	100	5.0	5.4	(C)	47	0.35	1000	EEE0JA101WR	(1)	1000
6.3		6.3	5.4	D (D)	71	0.26	2000	EEE0JA101SP	(1)	1000
6.3	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
	470	8.0	6.2	E	300	0.35	2000	EEE0JA331P	(2)	1000
	470	8.0	10.2	F (F)	380	0.35	2000	EEE0JA471P	(2)	500
	1000	8.0	10.2	(F) G	500 700	0.35 0.35	2000 2000	EEE0JA102UP	(2)	500 500
	1500	10.0	10.2	G	750	0.35	2000	EEE0JA102P	(2)	500
	22	4.0	5.4	(B)	28	0.30	1000	EEE0JA152P	(1)	2000
	33	4.0	5.4	(B)	29	0.30	1000	EEE1AA220WR EEE1AA330WR	(1)	2000
		5.0	5.4	C	43	0.20	2000	EEE1AA330SR	(1)	1000
	47	5.0	5.4	(C)	43	0.30	1000	EEE1AA470WR	(1)	1000
	100	5.0	5.4	(C)	50	0.30	1000	EEE1AA101WR	(1)	1000
10		6.3	5.4	Ď	70	0.26	2000	EEE1AA101SP	(1)	1000
10	220	6.3	7.7	D8	173	0.20	2000	EEE1AA221XP	(1)	900
		8.0	6.2	Е	250	0.26	2000	EEE1AA221P	(2)	1000
	330	8.0	10.2	F	390	0.26	2000	EEE1AA331P	(2)	500
	470	8.0	10.2	(F)	390	0.26	2000	EEE1AA471UP	(2)	500
		10.0	10.2	G	400	0.26	2000	EEE1AA471P	(2)	500
	1000	10.0		G	580	0.26	2000	EEE1AA102P	(2)	500
	10	4.0	5.4	В	28	0.16	2000	EEE1CA100SR	(1)	2000
	22	4.0	5.4	(B)	28	0.26	1000	EEE1CA220WR	(1)	2000
		5.0	5.4	C	39	0.16	2000	EEE1CA220SR	(1)	1000
	33	5.0	5.4	(C)	35	0.26	1000	EEE1CA330WR	(1)	1000
	47	5.0	5.4	(C)	39	0.26	1000	EEE1CA470WR	(1)	1000
		6.3	5.4	D	70	0.16	2000	EEE1CA470SP	(1)	1000
1.0	100	6.3	5.4	(D)	70	0.26	1000	EEE1CA101WP	(1)	1000
16		8.0	6.2	E	200	0.20	2000	EEE1CA101P	(2)	1000
	220	6.3 8.0	7.7 6.2	D8 E	162 200	0.16	2000 2000	EEE1CA221VP	(1)	900
	220	8.0	10.2	F	280	0.20 0.20	2000	EEE1CA221UP	(2)	1000 500
		8.0	10.2	(F)	320	0.20	2000	EEE1CA221UD	(2)	500
	330	10.0	10.2	(F)	380	0.20	2000	EEE1CA331UP	(2)	500
		8.0	10.2	(F)	350	0.20	2000	EEE1CA331P	(2)	500
	470			G (F)	420	0.20	2000	EEE1CA471UP	(2)	500
	1	10.0	10.2	G	720	0.20	2000	EEE1CA471P	(4)	300

^{*1:} Size code() : Miniaturization product

^{*2:} Ripple current (120 Hz / +85 °C)

^{*3:} tanδ (120 Hz / +20 ℃)

 $[\]cdot$ Please refer to the page of "Refl ow Profi le" and "The Taping Dimensions".

 $[\]cdot$ When requesting vibration-proof product, please put the last "V" instead to "P"



Aluminum Electrolytic Capacitors (SMD Type)

Cha	aracteri	stics	list							
Rated	Capacitance	Case (m	e size m)	Size		Specification			Packaging Q'ty	
voltage (V.DC)		φD	L	code *1	Ripple current *2 (mA r.m.s.)	tan δ *3	Endurance (hours)	Part number	Reflow	Taping (pcs)
	4.7	4.0	5.4	В	22	0.14	2000	EEE1EA4R7SR	(1)	2000
	10	4.0	5.4	(B)	22	0.20	1000	EEE1EA100WR	(1)	2000
	10	5.0	5.4	C	28	0.14	2000	EEE1EA100SR	(1)	1000
	22	5.0	5.4	(C)	35	0.20	1000	EEE1EA220WR	(1)	1000
	22	6.3	5.4	D	55	0.14	2000	EEE1EA220SP	(1)	1000
	33	5.0	5.4	(C)	42	0.20	1000	EEE1EA330WR	(1)	1000
	33	6.3	5.4	D	65	0.14	2000	EEE1EA330SP	(1)	1000
25	47	6.3	5.4	(D)	70	0.20	1000	EEE1EA470WP	(1)	1000
23		6.3	7.7	D8	143	0.14	2000	EEE1EA101XP	(1)	900
	100	8.0	6.2	(E)	91	0.16	2000	EEE1EA101UP	(2)	1000
		8.0	10.2	F	180	0.16	2000	EEE1EA101P	(2)	500
	220	8.0	10.2	(F)	230	0.16	2000	EEE1EA221UP	(2)	500
		10.0	10.2	O	310	0.16	2000	EEE1EA221P	(2)	500
	330	8.0	10.2	(F)	270	0.16	2000	EEE1EA331UP	(2)	500
		10.0	10.2	G	340	0.16	2000	EEE1EA331P	(2)	500
	470	10.0	10.2	G	380	0.16	2000	EEE1EA471P	(2)	500
	4.7	4.0	5.4	В	22	0.12	2000	EEE1VA4R7SR	(1)	2000
	10	4.0	5.4	(B)	22	0.16	1000	EEE1VA100WR	(1)	2000
	10	5.0	5.4	С	30	0.12	2000	EEE1VA100SR	(1)	1000
	22	5.0	5.4	(C)	36	0.16	1000	EEE1VA220WR	(1)	1000
	22	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
	33	8.0	6.2	Е	130	0.14	2000	EEE1VA330P	(2)	1000
35	47	6.3	5.4	(D)	70	0.16	1000	EEE1VA470WP	(1)	1000
	47	8.0	6.2	Е	165	0.14	2000	EEE1VA470P	(2)	1000
		6.3	7.7	D8	132	0.12	2000	EEE1VA101XP	(1)	900
	100	8.0	10.2	(F)	140	0.14	2000	EEE1VA101UP	(2)	500
		10.0	10.2	G	210	0.14	2000	EEE1VA101P	(2)	500
	220	8.0	10.2	(F)	200	0.14	2000	EEE1VA221UP	(2)	500
	220	10.0	10.2	G	310	0.14	2000	EEE1VA221P	(2)	500
	330	10.0	10.2	G	350	0.14	2000	EEE1VA331P	(2)	500

^{*1:} Size code(): Miniaturization product

^{*2:} Ripple current (120 Hz / +85 $^{\circ}$ C)

^{*3:} tanδ (120 Hz / +20 °C)

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Aluminum Electrolytic Capacitors (SMD Type)

Cha	aracteri	stics	list							
Rated	Capacitance (±20 %) (μF)		size m)	Size		Specification			Reflow	Packaging Q'ty
voltage (V.DC)		φD	L	code *1	Ripple current *2 (mA r.m.s.)	tan δ *3	Endurance (hours)	Part number		Taping (pcs)
	1.0	4.0	5.4	В	10	0.12	2000	EEE1HA010SR	(1)	2000
	2.2	4.0	5.4	В	16	0.12	2000	EEE1HA2R2SR	(1)	2000
	3.3	4.0	5.4	В	16	0.12	2000	EEE1HA3R3SR	(1)	2000
	4.7	4.0	5.4	(B)	18	0.14	1000	EEE1HA4R7WR	(1)	2000
	т./	5.0	5.4	С	23	0.12	2000	EEE1HA4R7SR	(1)	1000
	10	5.0	5.4	(C)	27	0.14	1000	EEE1HA100WR	(1)	1000
	10	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
50		8.0	6.2	Е	120	0.12	2000	EEE1HA220P	(2)	1000
30	33	6.3	7.7	D8	85	0.12	2000	EEE1HA330XP	(1)	900
		8.0	6.2	(E)	65	0.12	2000	EEE1HA330UP	(2)	1000
		8.0	10.2	F	110	0.12	2000	EEE1HA330P	(2)	500
	47	6.3	7.7	D8	105	0.12	2000	EEE1HA470XP	(1)	900
		8.0	10.2	(F)	110	0.12	2000	EEE1HA470UP	(2)	500
		10.0	10.2	G	130	0.12	2000	EEE1HA470P	(2)	500
	100	8.0	10.2	(F)	200	0.12	2000	EEE1HA101UP	(2)	500
		10.0	10.2	G	250	0.12	2000	EEE1HA101P	(2)	500
	220	10.0	10.2	G	300	0.12	2000	EEE1HA221P	(2)	500
	22	8.0	6.2	(E)	40	0.18	2000	EEE1JA220UP	(2)	1000
		8.0	10.2	F	40	0.18	2000	EEE1JA220P	(2)	500
63	33	8.0	10.2	F	45	0.18	2000	EEE1JA330P	(2)	500
05	47	8.0	10.2	(F)	45	0.18	2000	EEE1JA470UP	(2)	500
	77	10.0	10.2	G	45	0.18	2000	EEE1JA470P	(2)	500
	100	10.0	10.2	G	60	0.18	2000	EEE1JA101P	(2)	500
	4.7	8.0	6.2	(E)	50	0.18	2000	EEE2AA4R7UP	(2)	1000
	10	8.0	6.2	(E)	50	0.18	2000	EEE2AA100UP	(2)	1000
100	10	8.0	10.2	F	85	0.18	2000	EEE2AA100P	(2)	500
100	22	8.0	10.2	(F)	55	0.18	2000	EEE2AA220UP	(2)	500
		10.0	10.2	G	85	0.18	2000	EEE2AA220P	(2)	500
	33	10.0	10.2	G	90	0.18	2000	EEE2AA330P	(2)	500

^{*1:} Size code() : Miniaturization product

^{*2:} Ripple current (120 Hz / +85 $^{\circ}$ C)

^{*3:} tanδ (120 Hz / +20 °C)

[•] Please refer to the page of "Refl ow Profi le" and "The Taping Dimensions".

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Aluminum Electrolytic Capacitors (SMD Type)

Characteristics list Case size(mm) Specification Capacitance Rated Size Ripple Reflow $(\pm 20 \%)$ voltage Part number **Taping** code (V.DC) φD L current *1 tan δ *2 (µF) (pcs) (mA r.m.s.) 22 5.0 5.4 C 29 0.52 EEE0JA220NR (1)1000 6.3 46 47 1000 6.3 5.4 D 0.52 EEE0JA470NP (1)В 10 4.0 5.4 25 0.40 EEE1AA100NR (1)2000 10 33 6.3 5.4 D 43 0.40 (1)1000 EEE1AA330NP 4.7 4.0 5.4 В 20 0.32 EEE1CA4R7NR (1)2000 C 16 10 5.0 5.4 25 0.32 EEE1CA100NR (1)1000 22 6.3 5.4 D 39 0.32 1000 EEE1CA220NP (1)В 0.28 3.3 4.0 5.4 12 2000 EEE1EA3R3NR (1)5.0 C 25 4.7 5.4 21 0.28 1000 EEE1EA4R7NR (1)10 6.3 5.4 D 28 0.28 EEE1EA100NP (1)1000 2.2 4.0 5.4 В 12 0.24 EEE1VA2R2NR (1)2000 C 35 4.7 5.0 5.4 22 0.24 1000 EEE1VA4R7NR (1)5.4 D 30 0.24 1000 10 6.3 EEE1VA100NP (1)4.0 В 2000 1.0 5.4 10 0.24 EEE1HA010NR (1)2.2 5.0 5.4 C 16 0.24 (1)1000 EEE1HA2R2NR 50 3.3 5.0 5.4 C 21 0.24 (1)1000 EEENZ1H3R3R 4.7 5.4 D 0.24 1000 6.3 31 EEE1HA4R7NP (1)

^{*1:} Ripple current (120 Hz / +85 ℃)

^{*2:} tanδ (120 Hz / +20 °C)

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