THE DATASHEET OF

ECE-V1VA101UP

Surface Mount Type Aluminum Electrolytic Capacitors

Japan



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

Surface mount type

■ Features
- Lifetime: 85 ˚C 2000 h
- 5.5 mm (≦ φ6.3) height

■ Recommended Applications
- AV (TV, Video, Audio), Personal Computer, Home appliance

■ Specifications

Operating Temp. Range

–40 to +85 ˚C

Rated W.V. Range

4 to 100 V.DC

Nominal Cap. Range

0.1 to 1000 µF

Capacitance Tolerance

±20 % (120 Hz/+20 ˚C)

DC Leakage Current

I ≦ 0.01 CV or 3 (µA) after 2 minutes (Whichever, greater)
(Bi-polar: I ≦ 0.02 CV or 6 (µA))

Dissipation Factor

W.V. (V)		4	6.3	10	16	25	35	50	63	100
D.F.	φ4~φ6.3	0.35	0.26 (0.35)	0.20 (0.30)	0.16 (0.26)	0.14	0.12	0.12	—	—
	φ8~φ10	0.40	0.35	0.26	0.20	0.16	0.14	0.12	0.18	0.18

Add 0.02 to D.F. for φ3 case size. ( ) is applied to miniature (120 Hz/+20 ˚C) (max.)

Bi-polar

W.V. (V)	6.3	10	16	25	35	50
D.F.	0.52	0.40	0.32	0.28	0.24	0.24

Characteristics at Low Temperature

W.V. (V)	4	6.3	10	16	25	35	50	63	100
–25/+20 ˚C	7	4	3	2	2	2	2	3	3
–40/+20 ˚C	15	8	6	4	4	3	3	4	4

(Impedance ratio at 120 Hz)

Endurance

After applying rated working voltage for 2000 hours at +85 ˚C and then being stabilized at +20 ˚C, capacitors shall meet the following limits

Capacitance change	±20 % of initial measured value (φ3, 4 W.V. and miniature of 6.3 W.V.: 1000h±30 %)
D.F.	≦ 200 % of initial specified value
DC leakage current	≦ Initial specified value

Shelf Life

After storage for 1000 hours at +85 ˚C with no voltage applied and then being stabilized at +20 ˚C, capacitor shall meet the limits specified in “Endurance”.
(With voltage treatment)

Resistance to Soldering Heat

After reflow soldering (Refer to page 20 for recommendable temperature profile) and then being stabilized at +20 ˚C, capacitor shall meet the following limits.

Capacitance change	±10 % of initial measured value
D.F.	≦ Initial specified value
DC leakage current	≦ Initial specified value

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■ Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11	12
E	C	E	V								

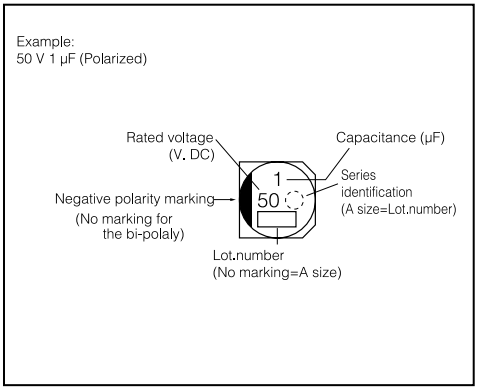
Product Code | Style | R.W. Voltage Code | Series Code | N.Capacitance Value Coad | Option | Packaging

Polarized	S□□□S	φ3
	A□□□S	φ4 to φ6.3
	A□□□	φ8 to φ10
Miniaturization	S□□□W	φ3
	A□□□W	φ4 to φ6.3
	A□□□U	φ8
Bi-polar	A□□□N	φ4 to φ6.3

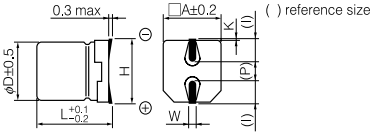
Taped on reel		
R	W=12 mm	φ3,φ4,φ5 (A,B,C)
S	W=12 mm	φ5 : P1 = 8 mm
P	W=16 mm	φ6.3 (D) φ8x6.2 (E)
P	W=24 mm	φ8x10.2 φ10x10.2 (F,G)

P1 : Pitch dimension between capacitors on taping

■ Marking



■ Dimensions in mm (not to scale)



(mm)

	D	L	A	H	I	W	P	K
A	3.0	5.4	3.3	4.5 MAX	1.5	0.55±0.1	0.6	$0.35^{+0.15}_{-0.20}$
B	4.0	5.4	4.3	5.5 MAX	1.8	0.65±0.1	1.0	$0.35^{+0.15}_{-0.20}$
C	5.0	5.4	5.3	6.5 MAX	2.2	0.65±0.1	1.5	$0.35^{+0.15}_{-0.20}$
D	6.3	5.4	6.6	7.8 MAX	2.6	0.65±0.1	1.8	$0.35^{+0.15}_{-0.20}$
E	8.0	6.2	8.3	9.5 MAX	3.4	0.65±0.1	2.2	$0.35^{+0.15}_{-0.20}$
F	8.0	10.2	8.3	10.0 MAX	3.4	0.90±0.2	3.1	0.70±0.2
G	10.0	10.2	10.3	12.0 MAX	3.5	0.90±0.2	4.6	0.70±0.2

■ Case size/Ripple current

● Polarized ( ) is applied to miniature

(mA) r.m.s. (120 Hz/+85 ˚C)

Cap. (μF) \ W.V. (V)	4 (0G)		6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)		63 (1J)		100 (2A)	
0.1 (0R1)													A,B	1,1				
0.22 (R22)													A,B	2,2				
0.33 (R33)													A,B	3,3				
0.47 (R47)													A,B	5,5				
1.0 (010)													A,B	8,10				
2.2 (2R2)											A	8	B	16				
3.3 (3R3)											A	10	B	16			E	50
4.7 (4R7)									A,B	12,22	B	22	C	23			F	80
10 (100)							A,B	20,28	C	28	C	30	D	35	E	35	F	85
22 (220)	A	19	B(A)	29(20)	(B)	(28)	C(B)	39(28)	D	55	D	60	E	120	F	40	G	85
33 (330)	B	26	(B)	(22)	C(B)	43(29)	(C)	(35)	D	65	E	130	F(E)	110(65)	F	45	G	90
47 (470)	B	34	C	46	(C)	(43)	D(C)	70(39)			E	165	G(F)	130(110)				
100 (101)	C	61	D	71	D	70	E(D)	200(70)	F(E)	180(91)	G(F)	210(140)	G	250	G	60		
220 (221)	D	82			E	250	F	280	G(F)	310(140)	G	310						
330 (331)			E	300	F	330	G(F)	380(320)										
470 (471)			F	380	G(F)	400(330)	G	420									Size code	Ripple current
1000 (102)			G	700	G	580												

● Bi-polar

Cap. (μF) \ W.V. (V)	6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
0.22 (R22)											B	2
0.33 (R33)											B	3
0.47 (R47)											B	5
1.0 (010)											B	10
2.2 (2R2)									B	12	C	16
3.3 (3R3)							B	12			C※	21
4.7 (4R7)					B	20	C	21	C	22	D	31
10 (100)			B	25	C	25	D	28	D	30		
22 (220)	C	29			D	39						
33 (330)			D	43							Size code	Ripple current
47 (470)	D	46										

( ) shows W.V. and capacitance code.

※ Part number is EEVNZ1H3R3□

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■ Standard Products

W.V. (V)	Cap. (±20%) (μF)	Case size Dia. (mm)	Length (mm)	Size Code	Specification Ripple current (120Hz) (+85°C) (mA)	D.F.	Life Time (hours)	Part No.	Min. Packaging Q'ty Taping (pcs)
4	22	3	5.4	A	19	0.37	1000	ECEV0GS220SR	2000
	33	4	5.4	B	26	0.35	1000	ECEV0GA330SR	2000
	47	4	5.4	B	34	0.35	1000	ECEV0GA470SR	2000
	100	4	5.4	B	61	0.35	1000	ECEV0GA101SR	1000
	220	6.3	5.4	D	82	0.35	1000	ECEV0GA221SP	1000
6.3	22	3	5.4	A	20	0.35	1000	ECEV0JS220WR	2000
		4	5.4	B	29	0.26	2000	ECEV0JA220SR	2000
	33	4	5.4	B	22	0.35	1000	ECEV0JA330WR	2000
	47	5	5.4	C	46	0.26	2000	ECEV0JA470SR	1000
	100	6.3	5.4	D	71	0.26	2000	ECEV0JA101SP	1000
	330	8	6.2	E	300	0.35	2000	ECEV0JA331P	1000
	470	8	10.2	F	380	0.35	2000	ECEV0JA471P	500
	1000	10	10.2	G	700	0.35	2000	ECEV0JA102P	500
10	22	4	5.4	B	28	0.30	2000	ECEV1AA220WR	2000
	33	4	5.4	B	29	0.30	2000	ECEV1AA330WR	2000
		5	5.4	C	43	0.20	2000	ECEV1AA330SR	1000
	47	5	5.4	C	43	0.30	2000	ECEV1AA470WR	1000
	100	6.3	5.4	D	70	0.20	2000	ECEV1AA101SP	1000
	220	8	6.2	E	250	0.26	2000	ECEV1AA221P	1000
	330	8	10.2	F	330	0.26	2000	ECEV1AA331P	500
	470	8	10.2	F	330	0.26	2000	ECEV1AA471UP	500
		10	10.2	G	400	0.26	2000	ECEV1AA471P	500
	1000	10	10.2	G	580	0.26	2000	ECEV1AA102P	500
16	10	3	5.4	A	20	0.18	1000	ECEV1CS100SR	2000
		4	5.4	B	28	0.16	2000	ECEV1CA100SR	2000
	22	4	5.4	B	28	0.26	2000	ECEV1CA220WR	2000
		5	5.4	C	39	0.16	2000	ECEV1CA220SR	1000
	33	5	5.4	C	35	0.26	2000	ECEV1CA330WR	1000
	47	5	5.4	C	39	0.26	2000	ECEV1CA470WR	1000
		6.3	5.4	D	70	0.16	2000	ECEV1CA470SP	1000
	100	6.3	5.4	D	70	0.26	2000	ECEV1CA101WP	1000
		8	6.2	E	200	0.20	2000	ECEV1CA101P	1000
	220	8	10.2	F	280	0.20	2000	ECEV1CA221P	500
	330	8	10.2	F	320	0.20	2000	ECEV1CA331UP	500
		10	10.2	G	380	0.20	2000	ECEV1CA331P	500
	470	10	10.2	G	420	0.20	2000	ECEV1CA471P	500

The taping dimension are explained on p.00 of our Catalog.
Please use it as a reference guide.

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■ Standard Products

W.V.	Cap. (±20%)	Case size			Specification			Part No.	Min. Packaging Q'ty
		Dia.	Length	Size Code	Ripple current (120Hz) (+85°C)	D.F.	Life Time		Taping
(V)	(μF)	(mm)	(mm)		(mA)		(hours)		(pcs)
25	4.7	3	5.4	A	12	0.16	1000	ECEV1ES4R7SR	2000
		4	5.4	B	22	0.14	2000	ECEV1EA4R7SR	2000
	10	5	5.4	C	28	0.14	2000	ECEV1EA100SR	1000
	22	6.3	5.4	D	55	0.14	2000	ECEV1EA220SP	1000
	33	6.3	5.4	D	65	0.14	2000	ECEV1EA330SP	1000
	100	8	6.2	E	91	0.16	2000	ECEV1EA101UP	1000
		8	10.2	F	180	0.16	2000	ECEV1EA101P	500
	220	8	10.2	F	140	0.16	2000	ECEV1EA221UP	500
		10	10.2	G	310	0.16	2000	ECEV1EA221P	500
35	2.2	3	5.4	A	8	0.14	1000	ECEV1VS2R2SR	2000
	3.3	3	5.4	A	10	0.14	1000	ECEV1VS3R3SR	2000
	4.7	4	5.4	B	22	0.12	2000	ECEV1VA4R7SR	2000
	10	5	5.4	C	30	0.12	2000	ECEV1VA100SR	1000
	22	6.3	5.4	D	60	0.12	2000	ECEV1VA220SP	1000
	33	8	6.2	E	130	0.14	2000	ECEV1VA330P	1000
	47	8	6.2	E	165	0.14	2000	ECEV1VA470P	1000
	100	8	10.2	F	140	0.14	2000	ECEV1VA101UP	500
		10	10.2	G	210	0.14	2000	ECEV1VA101P	500
	220	10	10.2	G	310	0.14	2000	ECEV1VA221P	500
50	0.1	3	5.4	A	1	0.14	1000	ECEV1HS0R1SR	2000
		4	5.4	B	1	0.12	2000	ECEV1HA0R1SR	2000
	0.22	3	5.4	A	2	0.14	1000	ECEV1HSR22SR	2000
		4	5.4	B	2	0.12	2000	ECEV1HAR22SR	2000
	0.33	3	5.4	A	3	0.14	1000	ECEV1HSR33SR	2000
		4	5.4	B	3	0.12	2000	ECEV1HAR33SR	2000
	0.47	3	5.4	A	5	0.14	1000	ECEV1HSR47SR	2000
		4	5.4	B	5	0.12	2000	ECEV1HAR47SR	2000
	1	3	5.4	A	8	0.14	1000	ECEV1HS010SR	2000
		4	5.4	B	10	0.12	2000	ECEV1HA010SR	2000
	2.2	4	5.4	B	16	0.12	2000	ECEV1HA2R2SR	2000
	3.3	4	5.4	B	16	0.12	1000	ECEV1HA3R3SR	2000
	4.7	5	5.4	C	23	0.12	2000	ECEV1HA4R7SR	1000
	10	6.3	5.4	D	35	0.12	2000	ECEV1HA100SP	1000
	22	8	6.2	E	120	0.12	2000	ECEV1HA220P	1000
	33	8	6.2	E	65	0.12	2000	ECEV1HA330UP	1000
		8	10.2	F	110	0.12	2000	ECEV1HA330P	500
	47	8	10.2	F	110	0.12	2000	ECEV1HA470UP	500
		10	10.2	G	130	0.12	2000	ECEV1HA470P	500
	100	10	10.2	G	250	0.12	2000	ECEV1HA101P	500

The taping dimension are explained on p.00 of our Catalog.
Please use it as a reference guide.

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■ Standard Products

W.V. (V)	Cap. (±20%) (µF)	Case size Dia. (mm)	Length (mm)	Size Code	Specification Ripple current (120Hz) (+85°C) (mA)	D.F.	Life Time (hours)	Part No.	Min. Packaging Q'ty Taping (pcs)
63	10	8	6.2	E	35	0.18	2000	ECEV1JA100P	1000
	22	8	10.2	F	40	0.18	2000	ECEV1JA220P	500
	33	8	10.2	F	45	0.18	2000	ECEV1JA330P	500
	100	10	10.2	G	60	0.18	2000	ECEV1JA101P	500
100	3.3	8	6.2	E	50	0.18	2000	ECEV2AA3R3P	1000
	4.7	8	10.2	F	80	0.18	2000	ECEV2AA4R7P	500
	10	8	10.2	F	85	0.18	2000	ECEV2AA100P	500
	22	10	10.2	G	85	0.18	2000	ECEV2AA220P	500
	33	10	10.2	G	90	0.18	2000	ECEV2AA330P	500

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■ Standard Products(Bi-polar)

W.V. (V)	Cap. (±20%) (µF)	Case size Dia. (mm)	Length (mm)	Size Code	Specification Ripple current (120Hz) (+85°C) (mA)	D.F.	Part No.	Min. Packaging Q'ty Taping (pcs)
6.3	22	5	5.4	C	29	0.52	ECEV0JA220NR	1000
	47	6.3	5.4	D	46	0.52	ECEV0JA470NP	1000
10	10	4	5.4	B	25	0.40	ECEV1AA100NR	2000
	33	6.3	5.4	D	43	0.40	ECEV1AA330NP	1000
16	4.7	4	5.4	B	20	0.32	ECEV1CA4R7NR	2000
	10	5	5.4	C	25	0.32	ECEV1CA100NP	1000
	22	6.3	5.4	D	39	0.32	ECEV1CA220NP	1000
25	3.3	4.0	5.4	B	12	0.28	ECEV1EA3R3NR	2000
	4.7	5	5.4	C	21	0.28	ECEV1EA4R7NR	1000
	10	6.3	5.4	D	28	0.28	ECEV1EA100NP	1000
35	2.2	4	5.4	B	12	0.24	ECEV1VA2R2NR	2000
	4.7	5	5.4	C	22	0.24	ECEV1VA4R7NR	1000
	10	6.3	5.4	D	30	0.24	ECEV1VA100NP	1000
50	0.22	4	5.4	B	2	0.24	ECEV1HAR22NR	2000
	0.33	4	5.4	B	3	0.24	ECEV1HAR33NR	2000
	0.47	4	5.4	B	5	0.24	ECEV1HAR47NR	2000
	1	4	5.4	B	10	0.24	ECEV1HA010NR	2000
	2.2	5	5.4	C	16	0.24	ECEV1HA2R2NR	1000
	3.3	5	5.4	C	21	0.24	EEVNZ1H3R3R	1000
	4.7	6.3	5.4	D	31	0.24	ECEV1HA4R7NP	1000

Please use it as a reference guide.
High temperature Load Life test : 85°C 2000h

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