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

Surface mount type

Surface Mount Type Aluminium Electrolytic Capacitors

Japan

■ 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 50 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))

tan δ

W.V. (V)		4	6.3	10	16	25	35	50
tan δ	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

(120 Hz/+20 °C)

Add 0.02 to tan δ for ϕ3 case size
( ) is applied to miniature

Bi-polar

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

(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.: ±30 %)
tan δ	≦ 200 % of initial specified value
DC leakage current	≦ Initial specified value

Shelf Life

(With voltage treatment)
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".

Resistance to Soldering Heat

After reflow soldering (Refer to page 24 for recommendable temperature profile) and then being stabilized at +20 °C, capacitor shall meet the following limits.

Capacitance change	±10 % of initial measured value
tan δ	≦ Initial specified value
DC leakage current	≦ Initial specified value

■ Explanation of Part Numbers

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

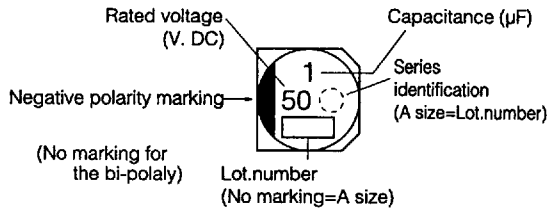
Product Code | Style | R.W. Voltage Code | Series Code | N.Capacitance Value Coad | Option | Packaging

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

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

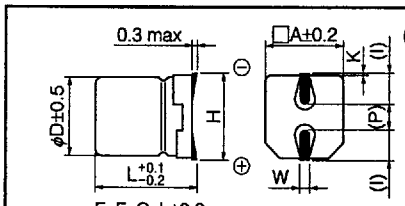
■ Marking

Example:
50 V 1 μF (Polarized)



F and G size have vinyl sleeve

■ 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	13.0 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)	
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
4.7 (4R7)									A,B	12,22	B	22	C	23
10 (100)							A,B	20,28	C	28	C	30	D	35
22 (220)	A	19	B(A)	29(20)	(B)	(28)	C(B)	39(28)	D	55	D	60	E	120
33 (330)	B	26	(B)	(22)	C(B)	43(29)	(C)	(35)	D	65	E	130	F	110
47 (470)	B	34	C	46	(C)	(43)	D(C)	70(39)			E	165	G	130
100 (101)	C	61	D	71	D	70	E(D)	200(70)	F	180	G	210		
220 (221)	D	82			E	250	F	280	G	310				
330 (331)			E	300	F	330	G	380						
470 (471)			F	380	G	400	G	420					Size code	Ripple current
1000 (102)			G	700										

● 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								
47 (470)	D	46									Size code	Ripple current

( ) shows W.V. and capacitance code.