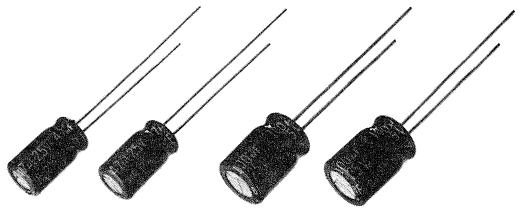
Bi-polar Series SU



Features

- Ideal for circuits where polarity is not constant or reverse voltage is applied when switches are turned on or off
- Life: 2000 hours at +85℃

Specifications

Item	Performance Characteristics
Operating Temperature Range	−40 to +85℃
Rated Working Voltage Range	6.3 to 50V DC
Nominal Capacitance Range	0.47 to 6800μF
Capacitance Tolerance	±20%(120Hz, +20℃)
Leakage Current	I≦0.03CV+3 [μA] after 5 minutes application of rated working voltage at +20℃.

tanδ (120Hz, +20℃)

Working voltage[V]	6.3	10	16	25	35	50
tanδ max.	0.30	0.25	0.20	0.15	0.15	0.15

Characteristics at Low Temperature

Impedance raito max.at 120Hz

Working voltage[V]	6.3	10	16	25	35	50
−25℃/+20℃	4	3	2	2	2	2
−40℃/+20℃	8	6	4	4	4	3

Endurance

Test conditions
- Duration : 2000 hours
- Ambient temperature : +85℃
- Applied voltage : Rated DC working voltage to each polarity for 1000 hours

Post test requirements at +20℃
- Leakage current : ≦Initial specified value
- Capacitauce change : ±20% of initial measured value
- tanδ : ≦150% of initial specified value

Shelf Life

Test conditions
- Duration : 1000 hours
- Ambient temperature : +85℃
- Applied voltage : (None)

Post test requirements at +20℃
Same limits for "Endurance"

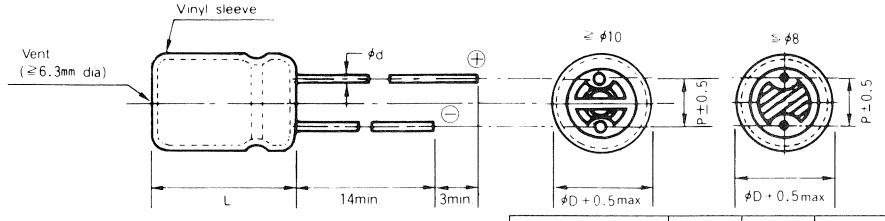
Explanation of Part Numbers

E	C	E	A			N				U/X		

Common code — Shape — W.V.code — Capacitance code — Suffix — Series code

(See page: 17～20)

Dimensions in mm (not to scale)



L≦16 : L+1.0max
L≧20 : L+2.0max

Body dia. φD	5	6.3	8	10	12.5	16	18
Lead dia. φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
Lead space P	2.0	2.5	3.5	5.0	5.0	7.5	7.5

Case Size

φD×L[mm]

Cap.[μF] \ W.V.[V.DC]	6.3 (0J)	10 (1A)	16 (1C)	25 (1E)	35 (1V)	50 (1H)
0.47(R47)						5 ×11
1 (010)						5 ×11
2.2 (2R2)						5 ×11
3.3 (3R3)				5 ×11		5 ×11
4.7 (4R7)				5 ×11	5 ×11	5 ×11
10 (100)			5 ×11	5 ×11	5 ×11	6.3×11.2
22 (220)		5 ×11	5 ×11	●5 ×11	6.3×11.2	8 ×11.5
33 (330)	5 ×11	5 ×11	5 ×11	6.3×11.2	8 ×11.5	8 ×11.5
47 (470)	5 ×11	5 ×11	6.3×11.2	6.3×11.2	8 ×11.5	10 ×12.5
100 (101)	6.3×11.2	6.3×11.2	8 ×11.5	8 ×11.5	10 ×16	10 ×20
220 (221)	8 ×11.5	8 ×11.5	●10 ×12.5	10 ×16	12.5×20	12.5×25
330 (331)	8 ×11.5	10 ×16	10 ×16	12.5×20	12.5×20	16 ×25
470 (471)	●10 ×12.5	10 ×16	10 ×20	12.5×20	12.5×25	16 ×31.5
1000 (102)	10 ×20	●12.5×20	12.5×25	16 ×25		
2200 (222)	12.5×25	16 ×25	16 ×31.5	18 ×35.5		
3300 (332)	16 ×25	16 ×31.5	18 ×35.5			
4700 (472)	16 ×31.5	18 ×35.5				
6800 (682)	18 ×35.5					

( )indicates W.V. and capacitance code.
● indicates an "X" in the part number suffix.
ex. ECEA□□N□□□X

Standard Products

W.V. [V.DC]	Cap. [μF]	Part No.	Cap.tol.[%] (120Hz/+20℃)	D.C.L. (+20℃/5min) [μA]max.	tanδ (120Hz/+20℃) max.	Ripple Current (120Hz/+85℃) [mA]rms max.	Dimensions [mm]	
							φD	L
6.3	33	ECEA0JN330U	±20	9.2	0.30	80	5	11
	47	ECEA0JN470U		11.8	0.30	90	5	11
	100	ECEA0JN101U		21.9	0.30	130	6.3	11.2
	220	ECEA0JN221U		44.5	0.30	200	8	11.5
	330	ECEA0JN331U		65.3	0.30	250	8	11.5
	470	ECEA0JN471X		91.8	0.30	310	10	12.5
	1000	ECEA0JN102U		192.0	0.30	430	10	20
	2200	ECEA0JN222U		418.8	0.30	660	12.5	25
	3300	ECEA0JN332U		626.7	0.30	760	16	25
	4700	ECEA0JN472U		891.3	0.30	1170	16	31.5
	6800	ECEA0JN682U		1288.2	0.30	1450	18	35.5
10	22	ECEA1AN220U	±20	9.6	0.25	60	5	11
	33	ECEA1AN330U		12.9	0.25	80	5	11
	47	ECEA1AN470U		17.1	0.25	90	5	11
	100	ECEA1AN101U		33.0	0.25	130	6.3	11.2
	220	ECEA1AN221U		69.0	0.25	200	8	11.5
	330	ECEA1AN331U		102.0	0.25	280	10	16
	470	ECEA1AN471U		144.0	0.25	340	10	16
	1000	ECEA1AN102X		303.0	0.25	470	12.5	20
	2200	ECEA1AN222U		663.0	0.25	690	16	25
	3300	ECEA1AN332U		993.0	0.25	1090	16	31.5
	4700	ECEA1AN472U		1413.0	0.25	1200	18	35.5

Radial lead Bi-polar SU

Standard Products

W.V. [V.DC]	Cap. [μF]	Part No.	Cap.tol.[%] (120Hz/+20℃)	D.C.L. (+20℃/5min) [μA] max.	tanδ (120Hz +20℃) max.	Ripple Current (120Hz +85℃) [mA]rms max.	Dimensions [mm]	
							φD	L
16	10	ECEA1CN100U	±20	7.8	0.20	40	5	11
	22	ECEA1CN220U		13.5	0.20	60	5	11
	33	ECEA1CN330U		18.8	0.20	80	5	11
	47	ECEA1CN470U		25.5	0.20	100	6.3	11.2
	100	ECEA1CN101U		51.0	0.20	180	8	11.5
	220	ECEA1CN221X		108.6	0.20	260	10	12.5
	330	ECEA1CN331U		161.4	0.20	330	10	16
	470	ECEA1CN471U		228.6	0.20	380	10	20
	1000	ECEA1CN102U		483.0	0.20	560	12.5	25
	2200	ECEA1CN222U		1059.0	0.20	750	16	31.5
	3300	ECEA1CN332U		1587.0	0.20	900	18	35.5
25	3.3	ECEA1EN3R3U	±20	5.4	0.15	20	5	11
	4.7	ECEA1EN4R7U		6.5	0.15	25	5	11
	10	ECEA1EN100U		10.5	0.15	45	5	11
	22	ECEA1EN220X		19.5	0.15	60	5	11
	33	ECEA1EN330U		27.7	0.15	90	6.3	11.2
	47	ECEA1EN470U		38.2	0.15	110	6.3	11.2
	100	ECEA1EN101U		78.0	0.15	180	8	11.5
	220	ECEA1EN221U		168.0	0.15	320	10	16
	330	ECEA1EN331U		250.5	0.15	350	12.5	20
	470	ECEA1EN471U		355.5	0.15	430	12.5	20
	1000	ECEA1EN102U		753.0	0.15	680	16	25
	2200	ECEA1EN222U		1653.0	0.15	900	18	35.5
35	4.7	ECEA1VN4R7U	±20	7.9	0.15	30	5	11
	10	ECEA1VN100U		13.5	0.15	43	5	11
	22	ECEA1VN220U		26.1	0.15	80	6.3	11.2
	33	ECEA1VN330U		37.6	0.15	100	8	11.5
	47	ECEA1VN470U		52.3	0.15	120	8	11.5
	100	ECEA1VN101U		108.0	0.15	230	10	16
	220	ECEA1VN221U		234.0	0.15	360	12.5	20
	330	ECEA1VN331U		349.5	0.15	450	12.5	20
	470	ECEA1VN471U		496.5	0.15	590	12.5	25
50	0.47	ECEA1HNR47U	±20	3.7	0.15	10	5	11
	1	ECEA1HN010U		4.5	0.15	10	5	11
	2.2	ECEA1HN2R2U		6.3	0.15	18	5	11
	3.3	ECEA1HN3R3U		7.9	0.15	25	5	11
	4.7	ECEA1HN4R7U		10.0	0.15	30	5	11
	10	ECEA1HN100U		18.0	0.15	50	6.3	11.2
	22	ECEA1HN220U		36.0	0.15	90	8	11.5
	33	ECEA1HN330U		52.5	0.15	110	8	11.5
	47	ECEA1HN470U		73.5	0.15	140	10	12.5
	100	ECEA1HN101U		153.0	0.15	250	10	20
	220	ECEA1HN221U		333.0	0.15	360	12.5	25
	330	ECEA1HN331U		498.0	0.15	450	16	25
	470	ECEA1HN471U		708.0	0.15	590	16	31.5