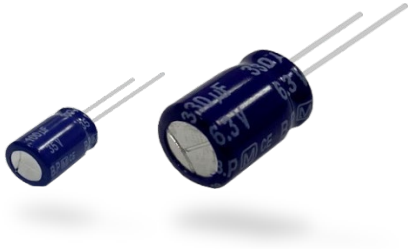
Panasonic INDUSTRY

⚠ This Series is no longer available for purchase in the country of Japan.

Aluminum Electrolytic Capacitors

Radial Lead Type

SU-A (Bi-polar) series



Features

- Endurance : 85 ℃ 2000 h
- RoHS compliant

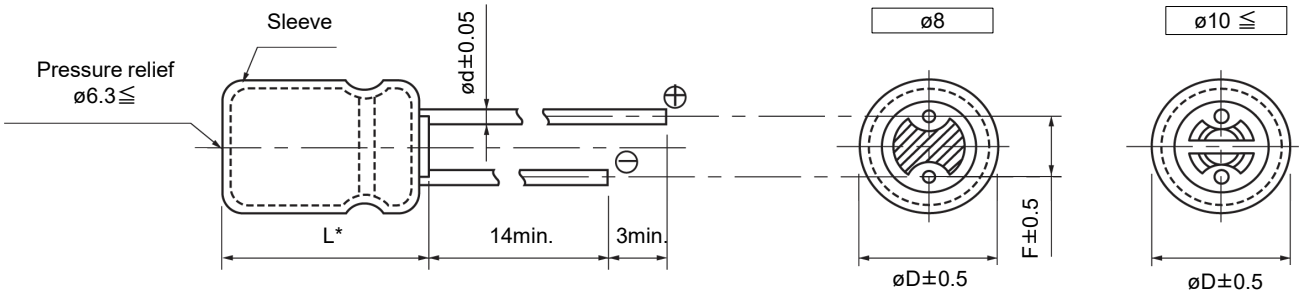
Specifications

Category temp. range	–40 ℃ to +85 ℃	
Rated voltage range	6.3 V to 50 V	
Capacitance range	2.2 µF to 6800 µF	
Capacitance tolerance	±20 % (120 Hz / +20℃)	
Leakage current	I ≦ 0.03 CV + 3 (µA) After 5 minutes	
Dissipation factor (tan δ)	Please see the attached characteristics list	
Endurance	After 2000 h application of DC working voltage (1000 h for each polarity) at +85 ℃ ± 2 ℃, when the capacitors are restored to 20 ℃, the capacitors shall meet the following limits.	
	Capacitance change	Within ±20 % of the initial value
	Dissipation factor (tan δ)	≦ 150 % of the initial limit
	DC leakage current	Within the initial limit
Shelf life	After storage for 1000 h at +85 ℃ ± 2 ℃ with no voltage applied and then being stabilized at +20 ℃, capacitors shall meet the limits specified in endurance. (With voltage treatment)	

Frequency correction factor for ripple current

Freq.(Hz) / Capacitance (µF)	50, 60	120	1 k	10 k to
2.2 to 6800	0.70	1.00	1.30	1.70

Dimensions



* L ≦ 16 : L±1.0
L ≧ 20 : L±2.0

Unit : mm

øD	5.0	6.3	8.0	10.0	12.5	16.0	18.0
ød	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5

Characteristics list

Endurance : 85 ℃ 2000 h (1000 h for each polarity)

Rated voltage (V)	Capacitance (±20 %) (μF)	Case size (mm)		Specification		Lead length (mm)				Part No.	Min. Packaging Q'ty (PCS)	
							Lead space					
		øD	L	Ripple current*1 (mA rms)	tan δ*2	Lead dia. (ød)	Straight	Taping ✻B	Taping ✻i		Strai-ght leads	Taping
6.3	330	8.0	11.5	250	0.30	0.6	3.5	5.0	—	ECEA0JN331U( )	200	1000
	470	10.0	12.5	310	0.30	0.6	5.0	5.0	—	ECEA0JN471X( )	200	500
	1000	10.0	20.0	430	0.30	0.6	5.0	5.0	—	ECEA0JN102U( )	200	500
	2200	12.5	25.0	660	0.32	0.6	5.0	5.0	—	ECEA0JN222U( )	200	500
	3300	16.0	25.0	760	0.34	0.8	7.5	7.5	—	ECEA0JN332U( )	100	250
	4700	16.0	31.5	1170	0.36	0.8	7.5	—	—	ECEA0JN472U	100	—
	6800	18.0	35.5	1450	0.40	0.8	7.5	—	—	ECEA0JN682U	50	—
10	47	5.0	11.0	90	0.25	0.5	2.0	5.0	2.5	ECEA1AN470U( )	200	2000
	100	6.3	11.2	130	0.25	0.5	2.5	5.0	2.5	ECEA1AN101X( )	200	2000
	220	8.0	11.5	200	0.25	0.6	3.5	5.0	—	ECEA1AN221U( )	200	1000
	330	10.0	16.0	280	0.25	0.6	5.0	5.0	—	ECEA1AN331U( )	200	500
	470	10.0	16.0	340	0.25	0.6	5.0	5.0	—	ECEA1AN471U( )	200	500
	1000	12.5	20.0	470	0.25	0.6	5.0	5.0	—	ECEA1AN102X( )	200	500
	2200	16.0	25.0	690	0.27	0.8	7.5	7.5	—	ECEA1AN222U( )	100	250
	3300	16.0	31.5	1090	0.29	0.8	7.5	—	—	ECEA1AN332U	100	—
	4700	18.0	35.5	1200	0.31	0.8	7.5	—	—	ECEA1AN472U	50	—
16	10	5.0	11.0	40	0.20	0.5	2.0	5.0	2.5	ECEA1CN100U( )	200	2000
	22	5.0	11.0	60	0.20	0.5	2.0	5.0	2.5	ECEA1CN220U( )	200	2000
	33	5.0	11.0	80	0.20	0.5	2.0	5.0	2.5	ECEA1CN330U( )	200	2000
	47	6.3	11.2	100	0.20	0.5	2.5	5.0	2.5	ECEA1CN470U( )	200	2000
	220	10.0	12.5	260	0.20	0.6	5.0	5.0	—	ECEA1CN221X( )	200	500
	330	10.0	16.0	330	0.20	0.6	5.0	5.0	—	ECEA1CN331U( )	200	500
	470	10.0	20.0	380	0.20	0.6	5.0	5.0	—	ECEA1CN471U( )	200	500
	1000	12.5	25.0	560	0.20	0.6	5.0	5.0	—	ECEA1CN102U( )	200	500
	2200	16.0	31.5	750	0.22	0.8	7.5	—	—	ECEA1CN222U	100	—
	3300	18.0	35.5	900	0.24	0.8	7.5	—	—	ECEA1CN332U	50	—
25	10	5.0	11.0	45	0.15	0.5	2.0	5.0	2.5	ECEA1EN100U( )	200	2000
	22	5.0	11.0	60	0.15	0.5	2.0	5.0	2.5	ECEA1EN220X( )	200	2000
	33	6.3	11.2	90	0.15	0.5	2.5	5.0	2.5	ECEA1EN330U( )	200	2000
	47	6.3	11.2	110	0.15	0.5	2.5	5.0	2.5	ECEA1EN470U( )	200	2000
	100	8.0	11.5	180	0.15	0.6	3.5	5.0	—	ECEA1EN101U( )	200	1000
	220	10.0	16.0	320	0.15	0.6	5.0	5.0	—	ECEA1EN221U( )	200	500
	330	12.5	20.0	350	0.15	0.6	5.0	5.0	—	ECEA1EN331U( )	200	500
	470	12.5	20.0	430	0.15	0.6	5.0	5.0	—	ECEA1EN471U( )	200	500
	1000	16.0	25.0	680	0.15	0.8	7.5	7.5	—	ECEA1EN102U( )	100	250
	2200	18.0	35.5	900	0.17	0.8	7.5	—	—	ECEA1EN222U	50	—
35	10	5.0	11.0	43	0.15	0.5	2.0	5.0	2.5	ECEA1VN100U( )	200	2000
	22	6.3	11.2	80	0.15	0.5	2.5	5.0	2.5	ECEA1VN220U( )	200	2000
	33	8.0	11.5	100	0.15	0.6	3.5	5.0	—	ECEA1VN330U( )	200	1000
	47	8.0	11.5	120	0.15	0.6	3.5	5.0	—	ECEA1VN470U( )	200	1000
	100	10.0	16.0	230	0.15	0.6	5.0	5.0	—	ECEA1VN101U( )	200	500
	220	12.5	20.0	360	0.15	0.6	5.0	5.0	—	ECEA1VN221U( )	200	500
	330	12.5	20.0	450	0.15	0.6	5.0	5.0	—	ECEA1VN331U( )	200	500
	470	12.5	25.0	590	0.15	0.6	5.0	5.0	—	ECEA1VN471U( )	200	500

*1: Ripple current (120 Hz / +85 ℃)

*2: tan δ (120 Hz / +20 ℃)

・When requesting taped product, please put the letter “B” or “i” between the "( )".
Lead wire pitch ✻B=5 mm, 7.5 mm, i=2.5 mm.

・Please refer to the page of “Taping dimensions”.

Characteristics list

Endurance : 85 ℃ 2000 h (1000 h for each polarity)

Rated voltage (V)	Capacitance (±20 %) (μF)	Case size (mm)		Specification		Lead length (mm)				Part No.	Min. Packaging Q'ty (PCS)	
							Lead space					
		øD	L	Ripple current*1 (mA rms)	tan δ*2	Lead dia. (ød)	Straight	Taping ✻B	Taping ✻i		Strai-ght leads	Taping
50	2.2	5.0	11.0	18	0.15	0.5	2.0	5.0	2.5	ECEA1HN2R2U( )	200	2000
	3.3	5.0	11.0	25	0.15	0.5	2.0	5.0	2.5	ECEA1HN3R3U( )	200	2000
	4.7	5.0	11.0	30	0.15	0.5	2.0	5.0	2.5	ECEA1HN4R7U( )	200	2000
	10	6.3	11.2	50	0.15	0.5	2.5	5.0	2.5	ECEA1HN100U( )	200	2000
	22	8.0	11.5	90	0.15	0.6	3.5	5.0	—	ECEA1HN220U( )	200	1000
	33	8.0	11.5	110	0.15	0.6	3.5	5.0	—	ECEA1HN330U( )	200	1000
	47	10.0	12.5	140	0.15	0.6	5.0	5.0	—	ECEA1HN470U( )	200	500
	100	10.0	20.0	250	0.15	0.6	5.0	5.0	—	ECEA1HN101U( )	200	500
	220	12.5	25.0	360	0.15	0.6	5.0	5.0	—	ECEA1HN221U( )	200	500
	330	16.0	25.0	450	0.15	0.8	7.5	7.5	—	ECEA1HN331U( )	100	250
	470	16.0	31.5	590	0.15	0.8	7.5	—	—	ECEA1HN471U	100	—

*1: Ripple current (120 Hz / +85 ℃)

*2: tan δ (120 Hz / +20 ℃)

・When requesting taped product, please put the letter “B” or “i” between the "( )".
Lead wire pitch ✻B=5 mm, 7.5 mm, i=2.5 mm.

・Please refer to the page of “Taping dimensions”.