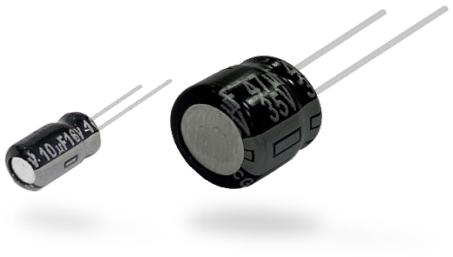
Panasonic
INDUSTRY

Aluminum Electrolytic Capacitors

Radial Lead Type

GA-A series



Features

- Endurance : 105 ℃ 1000 h
- RoHS compliant

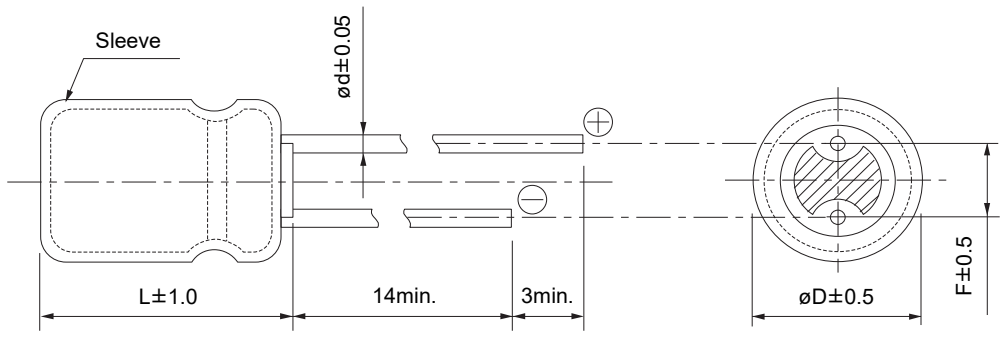
Specifications

Category temp. range	–55 ℃ to +105 ℃	
Rated voltage range	10 V to 50 V	
Capacitance range	1.5 µF to 220 µF	
Capacitance tolerance	±20 % (120 Hz / +20℃)	
Leakage current	I ≦ 0.01 CV or 3 (µA) After 2 minutes (Whichever is greater)	
Dissipation factor (tan δ)	Please see the attached characteristics list	
Endurance	After following life test with DC voltage and +105 ℃±2 ℃ ripple current value applied (The sum of DC and ripple peak voltage shall not exceed the rated working voltage), for 1000 hours, when the capacitors are restored to 20 ℃, the capacitors shall meet the limits specified bellow.	
	Capacitance change	Within ±20 % of the initial value
	Dissipation factor (tan δ)	≦ 200 % of the initial limit
	DC leakage current	Within the initial limit
Shelf life	After storage for 1000 h at +105 ℃±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

Cap. (µF) \ Freq. (Hz)	60	120	1 k	10 k	100 k to
1.5 to 220	0.85	1.00	1.30	1.40	1.55

Dimensions



Unit : mm

øD	4.0	5.0	6.3	8.0
ød	0.45	0.45	0.45	0.45
F	1.5	2.0	2.5	2.5

Characteristics list

Endurance : 105 ℃ 1000 h

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	Endu-rance (h)	Lead dia. (ød)	Straight	Taping ✻B	Taping ✻H		Straight leads	Taping
10	22	4.0	7.0	30	0.22	1000	0.45	1.5	5.0	2.5	EEAGA1A220( )	200	2000
	33	5.0	7.0	50	0.22	1000	0.45	2.0	5.0	2.5	EEAGA1A330( )	200	2000
	47	6.3	7.0	65	0.22	1000	0.45	2.5	5.0	2.5	EEAGA1A470( )	200	2000
	68	6.3	7.0	75	0.22	1000	0.45	2.5	5.0	2.5	EEAGA1A680( )	200	2000
	100	6.3	7.0	110	0.22	1000	0.45	2.5	5.0	2.5	EEAGA1A101( )	200	2000
	220	8.0	7.0	160	0.22	1000	0.45	2.5	5.0	2.5	EEAGA1A221( )	200	1000
16	10	4.0	7.0	30	0.18	1000	0.45	1.5	5.0	2.5	EEAGA1C100( )	200	2000
	15	4.0	7.0	33	0.18	1000	0.45	1.5	5.0	2.5	EEAGA1C150( )	200	2000
	22	5.0	7.0	50	0.18	1000	0.45	2.0	5.0	2.5	EEAGA1C220( )	200	2000
	33	6.3	7.0	65	0.18	1000	0.45	2.5	5.0	2.5	EEAGA1C330( )	200	2000
	47	6.3	7.0	77	0.18	1000	0.45	2.5	5.0	2.5	EEAGA1C470( )	200	2000
	100	8.0	7.0	120	0.18	1000	0.45	2.5	5.0	2.5	EEAGA1C101( )	200	1000
25	10	4.0	7.0	33	0.16	1000	0.45	1.5	5.0	2.5	EEAGA1E100( )	200	2000
	15	5.0	7.0	45	0.16	1000	0.45	2.0	5.0	2.5	EEAGA1E150( )	200	2000
	22	5.0	7.0	50	0.16	1000	0.45	2.0	5.0	2.5	EEAGA1E220( )	200	2000
	33	6.3	7.0	75	0.16	1000	0.45	2.5	5.0	2.5	EEAGA1E330( )	200	2000
	68	8.0	7.0	100	0.16	1000	0.45	2.5	5.0	2.5	EEAGA1E680( )	200	1000
35	6.8	4.0	7.0	33	0.13	1000	0.45	1.5	5.0	2.5	EEAGA1V6R8( )	200	2000
	10	5.0	7.0	35	0.13	1000	0.45	2.0	5.0	2.5	EEAGA1V100( )	200	2000
	15	6.3	7.0	50	0.13	1000	0.45	2.5	5.0	2.5	EEAGA1V150( )	200	2000
	22	6.3	7.0	70	0.13	1000	0.45	2.5	5.0	2.5	EEAGA1V220( )	200	2000
	47	8.0	7.0	96	0.13	1000	0.45	2.5	5.0	2.5	EEAGA1V470( )	200	1000
50	1.5	4.0	7.0	16	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1H1R5( )	200	2000
	2.2	4.0	7.0	18	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1H2R2( )	200	2000
	3.3	4.0	7.0	22	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1H3R3( )	200	2000
	4.7	4.0	7.0	26	0.10	1000	0.45	1.5	5.0	2.5	EEAGA1H4R7( )	200	2000
	6.8	5.0	7.0	35	0.10	1000	0.45	2.0	5.0	2.5	EEAGA1H6R8( )	200	2000
	10	6.3	7.0	39	0.10	1000	0.45	2.5	5.0	2.5	EEAGA1H100( )	200	2000
	15	6.3	7.0	55	0.10	1000	0.45	2.5	5.0	2.5	EEAGA1H150( )	200	2000
	22	8.0	7.0	70	0.10	1000	0.45	2.5	5.0	2.5	EEAGA1H220( )	200	1000
	33	8.0	7.0	91	0.10	1000	0.45	2.5	5.0	2.5	EEAGA1H330( )	200	1000

*1: Ripple current (120 Hz / +105 ℃)

*2: tan δ (120 Hz / +20 ℃)

・When requesting taped product, please put the letter "B" or "H" between the "( )".
Lead wire pitch ✻B=5 mm, H=2.5 mm. Suffix "BQ" for ø8×7, 5 mm pitch products

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