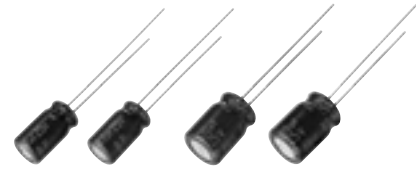


### Radial Lead Type

Series: **GA(Bi-polar)** Type: **A**

#### ■ Features

- Endurance : 105 °C 1000 h to 2000 h
- RoHS directive compliant



#### ■ Specifications

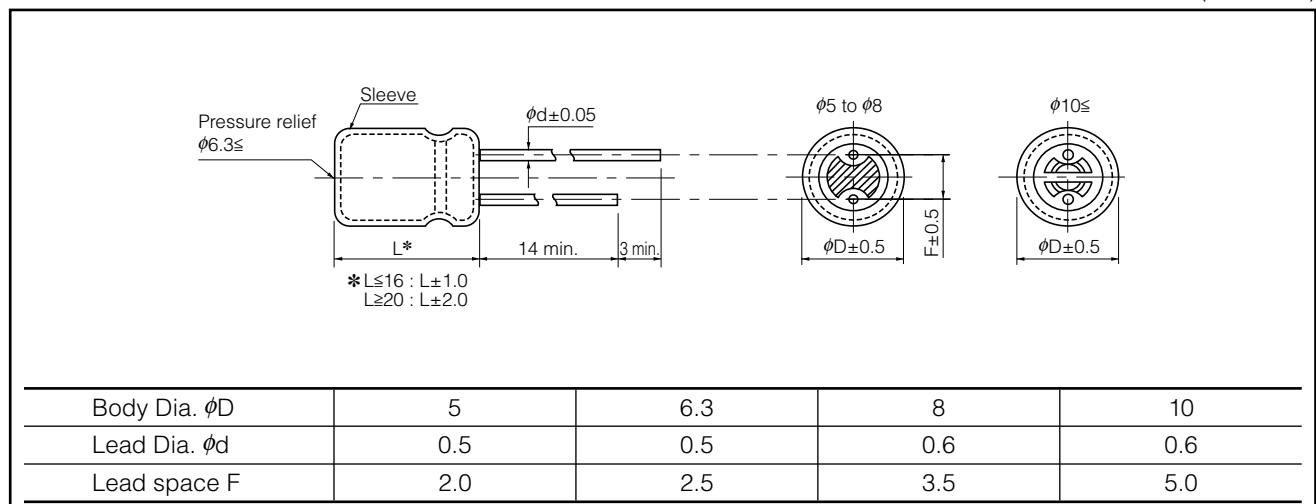
Category Temp. Range	-40 °C to +105 °C	
Rated W.V. Range	6.3 V.DC to 50 V.DC	
Nominal Cap. Range	2.2 μF to 330 μF	
Capacitance Tolerance	±20 % (120 Hz/+20 °C)	
DC Leakage Current	$I \leq 0.03 CV + 3 (\mu A)$ After 2 minutes or $I \leq 0.03 CV$ or 3 (μA) After 5 minutes (Whichever is greater)	
tan δ	Please see the attached standard products list	
Endurance	After following life test of DC working voltage at +105 °C±2 °C when the capacitors are restored to 20 °C, the capacitors shall meet the following limits. Duration φ5 to φ8 : 1000 hours (500 hours for each polarity) φ10 : 2000 hours (1000 hours for each polarity)	
	Capacitance change	± 20% of initial measured value
	tan δ	≤ 200 % of initial specified value
	DC leakage current	≤ initial specified value
Shelf Life	After storage for 1000 hours at +105 °C±2 °C with no voltage applied and then being stabilized at +20 °C, capacitors shall meet the limits specified in Endurance. (With voltage treatment)	

#### ■ Frequency correction factor for ripple current

	Frequency (Hz)			
	50, 60	120	1 k	10 k to
Correction factor	0.70	1.00	1.30	1.70

#### ■ Dimensions in mm (not to scale)

(Unit : mm)



Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately.

### ■ Standard Products (Bi-polar)

Endurance : 105 °C  $\phi$ 5 to  $\phi$ 8=1000 h (500 h for each polarity),  $\phi$ 10=2000 h (1000 h for each polarity)

W.V. (V)	Cap. ( $\pm$ 20 %) ( $\mu$ F)	Case size		Specification		Lead Length			Part No.	Min. Packaging Q'ty		
		Dia. (mm)	Length (mm)	Ripple Current (120 Hz) (+105 °C) (mA r.m.s.)	$\tan \delta$ (120 Hz) (+20 °C)	Lead Dia. (mm)	Lead Space			Straight Leads (pcs)	Taping (pcs)	
							Straight (mm)	Taping *B (mm)				Taping *i (mm)
6.3	100	6.3	11.2	130	0.30	0.5	2.5	5.0	2.5	ECA0JEN101( )	200	2000
	330	8	11.5	250	0.30	0.6	3.5	5.0		ECA0JEN331( )	200	1000
10	47	5	11	90	0.24	0.5	2.0	5.0	2.5	ECA1AEN470( )	200	2000
16	10	5	11	40	0.20	0.5	2.0	5.0	2.5	ECA1CEN100( )	200	2000
	22	5	11	60	0.20	0.5	2.0	5.0	2.5	ECA1CEN220( )	200	2000
	33	5	11	80	0.20	0.5	2.0	5.0	2.5	ECA1CEN330( )	200	2000
	47	6.3	11.2	100	0.20	0.5	2.5	5.0	2.5	ECA1CEN470( )	200	2000
25	10	5	11	45	0.15	0.5	2.0	5.0	2.5	ECA1EEN100( )	200	2000
	22	6.3	11.2	60	0.15	0.5	2.5	5.0	2.5	ECA1EEN220( )	200	2000
	33	6.3	11.2	90	0.15	0.5	2.5	5.0	2.5	ECA1EEN330( )	200	2000
	47	6.3	11.2	110	0.15	0.5	2.5	5.0	2.5	ECA1EEN470( )	200	2000
	100	8	11.5	180	0.15	0.6	3.5	5.0		ECA1EEN101( )	200	1000
35	33	8	11.5	100	0.15	0.6	3.5	5.0		ECA1VEN330( )	200	1000
	100	10	16	230	0.15	0.6	5.0	5.0		ECA1VEN101( )	200	500
50	0.47	5	11	10	0.15	0.5	2.0	5.0	2.5	ECA1HENR47( )***	200	2000
	1	5	11	10	0.15	0.5	2.0	5.0	2.5	ECA1HEN010( )***	200	2000
	2.2	5	11	18	0.15	0.5	2.0	5.0	2.5	ECA1HEN2R2( )	200	2000
	3.3	5	11	25	0.15	0.5	2.0	5.0	2.5	ECA1HEN3R3( )	200	2000
	4.7	5	11	30	0.15	0.5	2.0	5.0	2.5	ECA1HEN4R7( )	200	2000
	10	6.3	11.2	50	0.15	0.5	2.5	5.0	2.5	ECA1HEN100( )	200	2000
	22	8	11.5	90	0.15	0.6	3.5	5.0		ECA1HEN220( )	200	1000
	33	8	11.5	110	0.15	0.6	3.5	5.0		ECA1HEN330( )	200	1000
	47	10	12.5	140	0.15	0.6	5.0	5.0		ECA1HEN470( )	200	500
	100	10	20	250	0.15	0.6	5.0	5.0		ECA1HEN101( )	200	500

· When requesting taped product, please put the letter "B" or "i" between the "( )". Lead wire pitch \*B=5 mm, i=2.5 mm.

· Please refer to the page of "Taping Dimensions".

\*\*\* Please kindly accept last shipment : 31/Mar/2015