

GHA Axial Leads, 105°C Standard Series

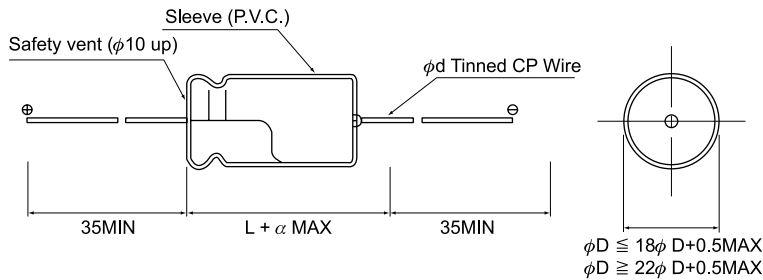
- Standardized case sizes and temperature range up to 105°C.
- Suitable for industrial equipments application.
- Life guaranteed 2,000 hours/105°C.



• Specifications

Item	Performance Characteristics											
Operating Temperature range	-40 + 105°C						-25 + 105°C					
Rated Voltage	6.3V ~ 100V						160V ~ 450V					
Capacitance Range	0.47 ~ 22,000 μF											
Capacitance Tolerance	±20% (120Hz, 20°C)											
Leakage Current	I ≤ 0.02CV or 4 μA, whichever is greater after 2 minutes application of rated voltage.						I ≤ 0.03CV + 10 μA max. after 2 minutes application of rated voltage.					
Dissipation Factor (120Hz, 20°C)	Rated voltage (V)	6.3	10	16	25	35	50	63	100	160~250	350~450	
	Tan δ (max.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.10	0.20	0.25	
	For capacitance of more than 1,000μF, add 0.02 for every increase of 1,000μF.											
Temperature Characteristics (120Hz)	Impedance Ratio / Stability at Low Temperature											
	Rated voltage (V)	6.3	10	16	25	35	50	63~100	160~250	350~400	450	
	Z (-25°C) / Z (20°C)	5	4	3	2	2	2	2	4	4	6	
	Z (-40°C) / Z (20°C)	12	10	8	6	5	4	4	15	10	-	
Load Life	After 2,000 hours application of WV at 105°C, capacitor shall meet the characteristics requirements mentioned below.											
	Capacitance change	Within ±20% of initial value										
	Tan δ	200% or less of initial specified value										
	Leakage current	Initial specified value or less										
Shelf Life	At 105°C, no voltage applied for 1,000 hours, the capacitor shall meet the limits as in load life.											

• Dimension (mm)



φD	5	6	8	10	13	16	18	22	25
φd	0.6			0.8			0.8 / 1.0		
α	6.3 ~ 100V		1.5		2.0		2.0		
	160V ~ 450V		1.5		2.0		2.0		

• Standard Products Table

Dφ x L (mm)

WV(SV) Cap (μF)	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (75)	100 (125)
0.47						5 x 13	5	5 x 13 9
1						5 x 13	10	5 x 13 14
2.2						5 x 13	18	5 x 13 19
3.3						5 x 13	22	6.3 x 13 27
4.7						5 x 13	26	6.3 x 13 32
10				5 x 13	30	5 x 13	33	5 x 13 36 6.3 x 13 44 6.3 x 16 52
22			5 x 13	41	5 x 13	48	6.3 x 13	57 6.3 x 16 69 6.3 x 16 73 8 x 16 85
33			5 x 13	54	6.3 x 13	64	6.3 x 16	76 6.3 x 16 82 6.3 x 16 89 8 x 20 115
47		5 x 13	57	6.3 x 13	71	6.3 x 16	85	6.3 x 16 88 6.3 x 16 100 8 x 16 115 8 x 20 135
100	6.3 x 13	89	6.3 x 16	105	6.3 x 16	115	6.3 x 16	120 8 x 16 140 8 x 16 155 8 x 20 185 10 x 26 240
220	6.3 x 16	145	6.3 x 16	155	8 x 16	185	8 x 16	200 8 x 20 240 10 x 21 290 10 x 26 340 13 x 31 430
330	8 x 16	200	8 x 16	220	8 x 16	230	8 x 20	270 10 x 21 330 10 x 26 400 13 x 26 460 16 x 31 570
470	8 x 16	240	8 x 16	250	8 x 20	310	10 x 21	370 10 x 26 430 13 x 26 530 13 x 31 590 16 x 41 770
1000	10 x 21	430	10 x 21	460	10 x 26	550	13 x 26	640 13 x 31 750 16 x 31 890 16 x 31 940 22 x 41 1210
2200	13 x 26	720	13 x 26	780	13 x 31	910	16 x 31	1040 16 x 31 1120 18 x 41 1360 22 x 41 1520 25 x 60 2170
3300	13 x 26	860	13 x 31	980	16 x 31	1140	16 x 31	1200 16 x 41 1430 22 x 41 1660 22 x 51 1740
4700	13 x 31	1060	16 x 31	1220	16 x 31	1300	18 x 41	1540 22 x 41 1740 22 x 51 1860 25 x 51 2400
6800	16 x 31	1300	16 x 31	1370	16 x 41	1620	22 x 41	1810 22 x 51 1910
10000	16 x 41	1620	18 x 41	1690	22 x 41	1900	22 x 51	1980 25 x 51 2510
15000	18 x 41	1740	22 x 41	1950	22 x 51	2050		
22000	22 x 41	2000	22 x 51	2080	25 x 51	2650		

WV(SV) Cap (μF)	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)	450 (500)						
1		6.3 x 13	10	6.3 x 16	11	6.3 x 16	10	8 x 16	12	8 x 16	12	
2.2		6.3 x 16	17	8 x 16	20	8 x 16	17	8 x 20	19	10 x 21	22	
3.3		8 x 16	24	8 x 16	24	8 x 20	24	10 x 21	27	10 x 21	27	
4.7	8 x 16	28	8 x 16	28	8 x 20	32	10 x 21	33	10 x 21	33	10 x 26	36
10	8 x 20	43	10 x 21	50	10 x 21	50	13 x 26	60	13 x 26	60	13 x 31	67
22	10 x 26	85	13 x 26	100	13 x 26	100	16 x 31	110	16 x 31	110	16 x 41	130
33	13 x 26	120	13 x 26	120	13 x 31	135	16 x 31	135	16 x 41	160	18 x 41	165
47	13 x 31	155	13 x 31	155	16 x 31	175	16 x 41	185	18 x 41	200	22 x 41	220
100	16 x 31	270	16 x 41	300	16 x 41	300	22 x 41	310				
220	22 x 41	510	22 x 41	510						Case Size	Ripple	

Ripple current (mA) at 105°C 120 Hz

• Frequency coefficient of allowable ripple current

WV	Cap(μF) \ Frequency	50 Hz	120 Hz	300 Hz	1 KHz	10 KHz~
6.3~100	~ 47	0.75	1	1.35	1.57	2.00
	100 ~ 470	0.80	1	1.23	1.34	1.50
	1,000 ~ 22,000	0.85	1	1.10	1.13	1.15
160~450	1 ~ 220	0.80	1	1.25	1.40	1.60