

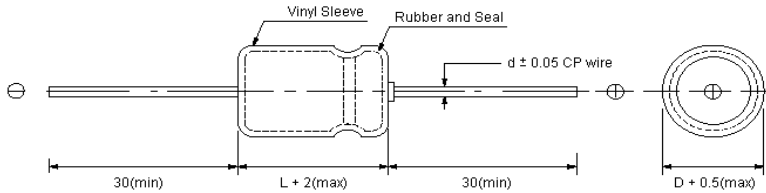
**RoHS Compliant ALUMINIUM ELECTROLYTIC CAPACITOR**

**GA Series**

■ **FEATURES**

- ◆ Load life of 2000 hours at 105°C
- ◆ High temperature and high reliability

■ **OUTLINE**



	mm													
D	6	8	10	13	16	18	20	22	25					
d	0.6					0.8								

■ **SPECIFICATIONS**

Items	Characteristics													
<b>Capacitance Tolerance (120Hz, 25°C)</b>	± 20% (M)													
<b>Rated Working Voltage Range</b>	6.3 ~ 100Vdc							160 ~ 450Vdc						
<b>Operation Temperature</b>	-40°C ~ +105°C							-25°C ~ +105°C						
<b>Leakage Current (25°C)</b>	(After 2 minutes applying the DC working voltage)							(After 5 minutes applying the DC working voltage)						
	I ≤ 0.01CV or 3 (uA)							I ≤ 0.03CV + 10 (uA)						
	◆ I : Leakage Current (uA)				◆ C : Rated Capacitance (uF)				◆ V : Working Voltage (V)					
<b>Surge Voltage (25°C)</b>	W.V.	6.3	10	16	25	35	50	63	100	160	200	250	350	400
	S.V.	8	13	20	32	44	63	79	125	200	250	300	400	450
<b>Dissipation Factor (120Hz, 25°C)</b>	W.V.	6.3	10	16	25	35	50	63	100	160	200	250	350	400
	tan δ	0.25	0.20	0.17	0.15	0.12	0.10	0.10	0.10	0.15	0.15	0.15	0.20	0.20
	◆ For capacitance exceeding 1000 uF, add 0.02 per increment of 1000 uF													
<b>Temperature Characteristics</b>	W.V.	6.3	10	16	25	35	50	63	100	160	200	250	350	400
	- 25°C / + 25°C	4	4	3	3	2	2	2	2	3	3	3	6	6
	- 40°C / + 25°C	10	8	6	4	3	3	3	3	4	4	4	6	6
	◆ Impedance ratio at 120Hz													
<b>Load Test</b>	After 2000 hours application of WV at +105°C, the capacitor shall meet the following limits:													
	<b>Capacitance Change</b>	≤ ± 20% of initial value												
	<b>tan δ</b>	≤ 150% of initial specified value												
	<b>Leakage Current</b>	≤ initial specified value												
<b>Shelf Test</b>	After 1000 hours, no voltage applied at +105°C, the capacitor shall meet the following limits:													
	<b>Capacitance Change</b>	≤ ± 20% of initial value												
	<b>tan δ</b>	≤ 200% of initial specified value												
	<b>Leakage Current</b>	≤ 200% of initial specified value												



■ **DIMENSIONS**

**D x L (mm)**

WV uF	6.3	10	16	25	35	50	63	100	160	200	250	350	400
0.47					]	6x13	6x13	6x13	6x13	8x16	8x16	8x16	8x16
1					]	6x13	6x13	6x13	6x13	8x16	8x16	8x16	8x16
2.2					]	6x13	6x13	6x13	8x16	8x16	8x16	10x16	10x16
3.3					]	6x13	6x13	6x13	8x16	10x16	10x16	10x16	10x21
4.7					]	6x13	6x13	6x13	8x16	10x16	10x16	10x21	13x21
10		]	6x13	6x13	6x13	6x13	6x13	8x16	10x21	10x21	10x21	13x21	13x24
22	]	6x13	6x13	6x13	6x13	6x13	6x16	8x20	13x21	13x21	13x27	16x33	16x33
33	]	6x13	6x13	6x13	6x13	8x16	8x16	8x20	13x21	16x28	13x33	16x33	
47	]	6x13	6x13	6x13	6x13	8x16	10x16	10x20	16x28	16x33	16x33		
100	]	6x13	6x16	8x16	8x16	8x16	10x21	13x21	16x33	18x36	18x36		
220	]	8x16	8x16	8x16	10x21	10x21	13x21	16x28	22x42	22x42	22x45		
330	]	8x16	8x16	10x21	10x21	13x21	13x26	16x33	22x50	25X52	25X57		
470	8x20	8x20	10x17	10x21	13x21	13x26	16x26	18x36					
1000	10x21	10x21	13x21	13x26	13x26	16x33	18x36						
2200	13x21	13x21	13x26	13x33	16x36	18x36	22x42						
3300	13x26	13x26	16x33	16x36	20x36	22x42							
4700	16x28	13x28	16x36	18x36	22x42	25x43							

■ **PERMISSIBLE RIPPLE CURRENT**

**mA (rms) at 120Hz 105°C**

WV uF	6.3	10	16	25	35	50	63	100	160	200	250	350	400
0.47					]	8	8	10	10	10	10	10	10
1					]	12	12	14	10	10	11	13	13
2.2					]	18	20	22	16	16	21	21	32
3.3					]	23	24	27	26	26	26	27	33
4.7					]	27	29	34	29	29	29	29	52
10		]	40	40	40	40	48	58	44	48	80	84	87
22	]	48	48	48	59	62	81	100	78	78	86	86	89
33	]	56	58	65	69	88	99	135	105	116	116	116	
47	]	60	73	77	105	115	138	150	175	230	238		
100	]	98	102	140	205	252	280	300	410	430	460		
220	]	170	220	260	305	320	394	505	515	585	650		
330	]	243	250	320	350	415	505	660	695	765	895		
470	260	315	385	420	530	640	715	875					
1000	450	480	615	760	820	965	1150						
2200	780	940	1000	1050	1165	1680	1835						
3300	1000	1150	1340	1500	1800	1945							
4700	1250	1400	1580	1980	2075	2350							