



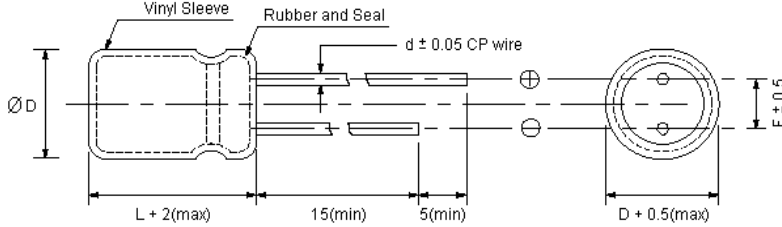
**RoHS Compliant ALUMINIUM ELECTROLYTIC CAPACITOR**

**GM Series**

■ **FEATURES**

- ◆ Miniaturized low profile with 9mm to 25mm height
- ◆ Load life of 1000 hours at 105°C
- ◆ Applications for space-saving equipment

■ **OUTLINE**



	mm											
D	5	6.3	8	10	13	16	18					
F	2.0	2.5	3.5	5.0		7.5						
d	0.5			0.6		0.8						

■ **SPECIFICATIONS**

Items	Characteristics												
<b>Capacitance Tolerance (120Hz, 25°C)</b>	± 20% (M)												
<b>Rated Working Voltage Range</b>	6.3 ~ 250Vdc						350 ~ 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 1 minute applying the DC working voltage)						
	I ≤ 0.01CV or 3 (uA)						I ≤ 0.04CV + 100 (uA)						
◆ I : Leakage Current (uA)      ◆ C : Rated Capacitance (uF)      ◆ V : Working Voltage (V)													
<b>Surge Voltage (25°C)</b>	<b>W.V.</b>	6.3	10	16	25	35	50	160	200	250	350	400	450
	<b>S.V.</b>	8	13	20	32	44	63	200	250	300	400	450	500
<b>Dissipation Factor (120Hz, 25°C)</b>	<b>W.V.</b>	6.3	10	16	25	35	50	160	200	250	350	400	450
	<b>tan δ</b>	0.28	0.24	0.20	0.16	0.14	0.12	0.15	0.15	0.15	0.20	0.24	0.24
◆ For capacitance exceeding 1000 uF, add 0.02 per increment of 1000 uF													
<b>Temperature Characteristics</b>	<b>W.V.</b>	6.3	10	16	25	35	50	160	200	250	350	400	450
	<b>- 25°C / + 25°C</b>	5	4	3	3	2	2	3	3	3	6	6	6
	<b>- 40°C / + 25°C</b>	10	8	6	4	3	3	6	6	6	-	-	-
◆ Impedance ratio at 120Hz													
<b>Load Test</b>	After 1000 hours application of WV at +105°C, the capacitor shall meet the following limits:												
	<b>Rated Voltage</b>	6.3 ~ 16VDC						25 ~ 450VDC					
	<b>Capacitance Change</b>	≤ ± 25% of initial value						≤ ± 20% of initial value					
	<b>tan δ</b>	≤ 200% of initial specified value						≤ 200% of initial specified value					
	<b>Leakage Current</b>	≤ initial specified value						≤ initial specified value					
<b>Shelf Test</b>	After 500 hours, no voltage applied at +105°C, the capacitor shall meet the following limits:												
	<b>Rated Voltage</b>	6.3 ~ 16VDC						25 ~ 450VDC					
	<b>Capacitance Change</b>	≤ ± 25% of initial value						≤ ± 20% of initial value					
	<b>tan δ</b>	≤ 200% of initial specified value						≤ 200% of initial specified value					
	<b>Leakage Current</b>	≤ 200% of initial specified value						≤ 200% of initial specified value					



■ **DIMENSIONS**

**D x L (mm)**

WV uF	6.3	10	16	25	35	50	160	200	250	350	400	450
1					]	5 x 9						
2.2					]	5 x 9					8 x 9	
3.3					]	5 x 9				8 x 9	10 x 9	
4.7					]	5 x 9	8 x 9	8 x 9	8 x 9	10 x 9	10 x 9	13 x 16
10					]	5 x 9	10 x 9	10 x 9		13 x 13	13 x 13	16 x 16
22					]	5 x 9		13 x 16	13 x 16	16 x 16	13 x 16	16 x 20
33				]	5 x 9	6.3 x 9	13 x 16	13 x 16	16 x 16	16 x 20	16 x 20	18 x 25
47			]	5 x 9	6.3 x 9	6.3 x 9	16 x 16	16 x 16	16 x 20	18 x 20	18 x 20	18 x 25
100	]	5 x 9	6.3 x 9	6.3 x 9	8 x 9	8 x 9	16 x 20	18 x 20	18 x 25			
220	]	6.3 x 9	8 x 9	8 x 9	10 x 9	10 x 9	18 x 25					
330	6.3 x 9	8 x 9	8 x 9	10 x 9	]	13 x 16						
470	8 x 9	8 x 9	10 x 9	]	13 x 13	16 x 16						
1000	10 x 9	]	13 x 13	13 x 16	16 x 16	16 x 20						
2200	13 x 16	13 x 16	16 x 16	18 x 16	18 x 20							
3300	16 x 16	16 x 16	18 x 16	18 x 20	18 x 25							
4700	16 x 16	18 x 16	18 x 20	18 x 25								
6800	18 x 16	18 x 20	18 x 25									
10000	18 x 20	18 x 25										

■ **PERMISSIBLE RIPPLE CURRENT**

**mA (rms) at 120Hz 105°C**

WV uF	6.3	10	16	25	35	50	160	200	250	350	400	450
1					]	12						
2.2					]	18					34	
3.3					]	22				35	38	
4.7					]	27	49	49	49	47	47	55
10					]	46	83	83		98	98	74
22					]	61		154	154	170	170	168
33				]	67	80	175	175	228	235	235	238
47			]	75	95	95	255	355	275	310	310	262
100	]	93	115	121	155	155	395	420	450			
220	]	154	205	230	235	235	602					
330	175	243	251	270	]	370						
470	268	272	290	]	415	535						
1000	365	]	515	590	720	830						
2200	685	690	830	970	1110							
3300	930	940	1050	1220	1490							
4700	1010	1120	1260	1470								
6800	1190	1330	1560									
10000	1440	1700										