

**KMG Series**

● 105°C 1,000~2,000Hrs assured.

- General
- RoHS compliant.
- Halogen-free capacitors are also available.

Solvent-proof

WV ≤ 100V<sub>DC</sub>

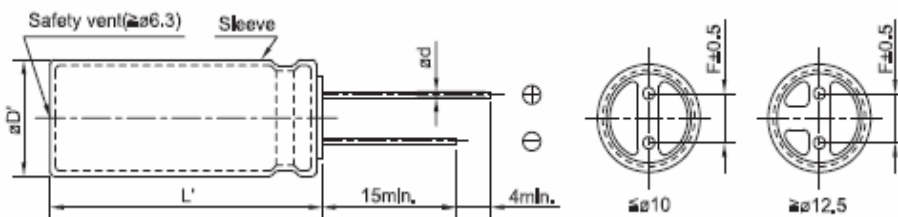


**SPECCIFICATIONS**

Item	Characteristics											
Rated Voltage Range	6.3 ~ 100 V <sub>DC</sub>	160 ~ 400 V <sub>DC</sub>	450 V <sub>DC</sub>									
Operating Temperature Range	-55 ~ +105 °C	-40 ~ +105 °C	-25 ~ +105 °C									
Capacitance Tolerance	±20% (M) (at 20 °C, 120Hz)											
Leakage Current	After 1 minute : I = 0.03CV or 4 μA, whichever is greater.	<table border="1"> <thead> <tr> <th>Time</th> <th>After 1 minute</th> <th>After 5 minute</th> </tr> </thead> <tbody> <tr> <td>≤ 1000</td> <td>I = 0.1CV + 40</td> <td>I = 0.03CV + 15</td> </tr> <tr> <td>&gt; 1000</td> <td>I = 0.04CV + 100</td> <td>I = 0.02CV + 25</td> </tr> </tbody> </table>		Time	After 1 minute	After 5 minute	≤ 1000	I = 0.1CV + 40	I = 0.03CV + 15	> 1000	I = 0.04CV + 100	I = 0.02CV + 25
	Time			After 1 minute	After 5 minute							
≤ 1000	I = 0.1CV + 40	I = 0.03CV + 15										
> 1000	I = 0.04CV + 100	I = 0.02CV + 25										
	After 2 minute : I = 0.01CV or 3 μA, whichever is greater.											
Where, I : Max. Leakage current(μA) C : Nominal capacitance(μF) V : Rated voltage(V <sub>DC</sub> ) (at 20 °C)												
Dissipation Factor ( tan δ )	Rated Voltage(V <sub>DC</sub> )	6.3	10	16	25	35	50	63	100	160~250	350~450	
	Tanδ(Max.)	0.34	0.24	0.2	0.16	0.14	0.12	0.10	0.09	0.20	0.24	
(at 20 °C, 120Hz)												
Temperature Characteristics (Capacitance change ratio)	Rated Voltage(V <sub>DC</sub> )	6.3	10	16	25	35	50	63~100	160	200~250	350~400	450
	Z(-25°C) / Z(+20°C)	5	4	3	2	2	2	3	3	3	6	6
	Z(-40°C) / Z(+20°C)	12	10	8	5	4	3	4	4	5	6	-
(at 120Hz)												
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20 °C after the rated voltage is applied for 2,000 hours at 105 °C. (Where, 1,000 hours ≤ Φ8) Capacitance change ≤ ±20 % of the initial value tan δ ≤ 200 % of the initial specified value Leakage current ≤ The initial specified value											
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20 °C after exposing them for 1,000 hours at 105 °C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements. (Where, 500 hours ≤ Φ8) Capacitance change ≤ ±20 % of the initial value tan δ ≤ 200 % of the initial specified value Leakage current ≤ The initial specified value (Where, 200% for ≥ WV 160V <sub>DC</sub> )											
Others	Satisfied characteristics KS C IEC 60384-4											

\* Please refer each approval sheet for detail specification.

**DIMENSIONS OF KMG Series**



Unit (mm)

Marking : BROWN SLEEVE , WHITE INK

φD	5	6.3	8	10	12.5	16	18
φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φD'	φD + 0.5max.						
L'	L + 1.5max.			L + 2.0max.			

# MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS



## RATINGS OF KMG Series

$V_{DC}$ $\mu F$	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
0.1						5 × 11 2.1	5 × 11 3.2	5 × 11 3.6						
0.22						5 × 11 3.2	5 × 11 4.3	5 × 11 4.8						
0.33						5 × 11 6.3	5 × 11 7.2	5 × 11 7.8						
0.47						5 × 11 10	5 × 11 11	5 × 11 12	6.3 × 11 12	6.3 × 11 12	6.3 × 11 12	6.3 × 11 12		
0.68						5 × 11 12	5 × 11 13	5 × 11 14	6.3 × 11 14	6.3 × 11 15	6.3 × 11 15	6.3 × 11 15		
1						5 × 11 13	5 × 11 15	5 × 11 16	6.3 × 11 14	6.3 × 11 15	6.3 × 11 17	6.3 × 11 18	6.3 × 11 19	6.3 × 11 14
2.2						5 × 11 18	5 × 11 19	5 × 11 21	6.3 × 11 20	6.3 × 11 24	6.3 × 11 27	8 × 11.5 29	8 × 11.5 30	10 × 12.5 28
3.3						5 × 11 30	5 × 11 33	5 × 11 34	6.3 × 11 35	6.3 × 11 36	8 × 11.5 37	8 × 11.5 38	10 × 12.5 41	10 × 16 38
4.7				5 × 11 25	5 × 11 27	5 × 11 37	5 × 11 39	5 × 11 40	6.3 × 11 41	8 × 11.5 42	8 × 11.5 45	10 × 12.5 47	10 × 16 49	10 × 20 45
6.8				5 × 11 31	5 × 11 33	5 × 11 44	5 × 11 48	5 × 11 49	8 × 11.5 52	10 × 12.5 59	10 × 12.5 60	10 × 16 62	10 × 16 65	12.5 × 16 59
10			5 × 11 35	5 × 11 37	5 × 11 40	5 × 11 54	5 × 11 59	6.3 × 11 61	10 × 12.5 71	10 × 12.5 72	10 × 16 74	10 × 20 79	10 × 20 86	12.5 × 20 84
22		5 × 11 48	5 × 11 53	5 × 11 56	5 × 11 67	5 × 11 79	5 × 11 87	6.3 × 11 100	10 × 20 117	10 × 20 119	10 × 20 127	12.5 × 20 150	12.5 × 25 163	16 × 25 151
33	5 × 11 52	5 × 11 56	5 × 11 60	5 × 11 75	5 × 11 80	5 × 11 97	6.3 × 11 122	8 × 11.5 144	10 × 20 156	10 × 20 158	12.5 × 20 184	16 × 25 200	16 × 25 222	16 × 31.5 203
47	5 × 11 61	5 × 11 66	5 × 11 77	5 × 11 80	5 × 11 101	6.3 × 11 133	6.3 × 11 146	10 × 12.5 199	12.5 × 20 218	12.5 × 20 220	12.5 × 25 238	16 × 25 265	16 × 31.5 290	16 × 35.5 254
68	5 × 11 69	5 × 11 83	5 × 11 92	5 × 11 113	6.3 × 11 138	8 × 11.5 189	8 × 11.5 207	10 × 16 264	12.5 × 25 287	16 × 20 293	16 × 25 318	16 × 31.5 348	18 × 35.5 392	
100	5 × 11 90	5 × 11 100	5 × 11 125	6.3 × 11 159	6.3 × 11 168	8 × 11.5 229	10 × 12.5 251	10 × 20 349	12.5 × 25 360	16 × 25 386	16 × 31.5 422	18 × 31.5 450		
150	5 × 11 127	5 × 11 140	6.3 × 11 176	8 × 11.5 227	8 × 11.5 243	10 × 12.5 326	10 × 16 389	10 × 20 421	12.5 × 35 460	16 × 31.5 508	18 × 31.5 515			
220	5 × 11 153	5 × 11 170	6.3 × 11 213	8 × 11.5 294	8 × 11.5 294	10 × 12.5 395	10 × 16 474	12.5 × 25 662	16 × 31.5 680	18 × 35.5 705	18 × 40 730			
330	6.3 × 11 216	6.3 × 11 239	8 × 11.5 308	8 × 11.5 340	10 × 12.5 419	10 × 16 529	10 × 20 633	16 × 20 810	18 × 35.5 863					
470	6.3 × 11 258	6.3 × 11 286	8 × 11.5 366	10 × 12.5 471	10 × 16 547	10 × 20 690	12.5 × 20 886	16 × 25 1,072						
680	8 × 11.5 365	10 × 12.5 472	10 × 12.5 480	10 × 16 620	12.5 × 16 777	12.5 × 20 973	12.5 × 25 1,160	18 × 31.5 1,410						
1,000	8 × 11.5 443	10 × 12.5 571	10 × 16 680	10 × 20 821	12.5 × 20 1,023	12.5 × 25 1,287	16 × 25 1,565	18 × 40 2,020						
2,200	10 × 20 817	10 × 20 886	12.5 × 20 1,108	12.5 × 25 1,297	16 × 25 1,497	16 × 35.5 1,884								
3,300	10 × 20 1,032	12.5 × 20 1,205	12.5 × 25 1,389	16 × 25 1,646	16 × 35.5 1,950	18 × 35.5 2,260								
4,700	12.5 × 20 1,280	12.5 × 25 1,492	16 × 25 1,740	16 × 31.5 2,012	18 × 35.5 2,335									
6,800	12.5 × 25 1,554	16 × 25 1,824	16 × 31.5 2,081	18 × 35.5 2,452										
10,000	16 × 25 1,897	16 × 35.5 2,201	18 × 35.5 2,527											
15,000	16 × 35.5 2,344	18 × 35.5 2,606												
22,000	18 × 40 2,787													

## RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Freq.(Hz) Cap.( $\mu F$ )	120	1k	10k	50k	100k
0.1~6.8	1.00	1.75	2.30	2.40	2.50
10~68	1.00	1.50	1.75	1.77	1.80
100~1,000	1.00	1.30	1.40	1.45	1.50
2,200~22,000	1.00	1.05	1.08	1.09	1.10