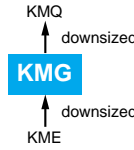


# KMG Series

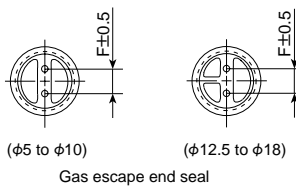
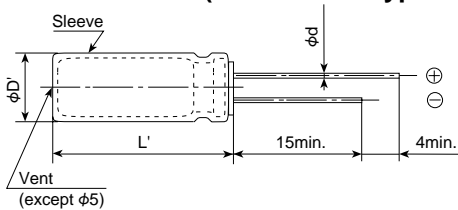
- Downsized from current standard KME series
- Solvent-proof type except 350 to 450V<sub>dc</sub>  
(see PRECAUTIONS AND GUIDELINES)



## SPECIFICATIONS

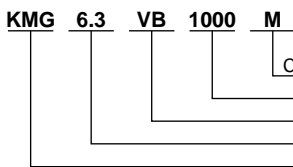
Items	Characteristics																						
Category	-55 to +105°C(6.3 to 100V <sub>dc</sub> ) -40 to +105°C(160 to 400V <sub>dc</sub> ) -25 to +105°C(450V <sub>dc</sub> )																						
Temperature Range																							
Rated Voltage Range	6.3 to 450V <sub>dc</sub>																						
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)																						
Leakage Current	6.3 to 100V <sub>dc</sub>																						
	I=0.03CV or 4µA, whichever is greater.																						
	160 to 450V <sub>dc</sub>																						
	<table border="1"> <thead> <tr> <th>CV</th> <th>Time</th> <th>After 1minute</th> <th>After 5minutes</th> </tr> </thead> <tbody> <tr> <td>CV≤1000</td> <td></td> <td>I=0.1CV+40</td> <td>I=0.03CV+15</td> </tr> <tr> <td>CV&gt;1000</td> <td></td> <td>I=0.04CV+100</td> <td>I=0.02CV+25</td> </tr> </tbody> </table>												CV	Time	After 1minute	After 5minutes	CV≤1000		I=0.1CV+40	I=0.03CV+15	CV>1000		I=0.04CV+100
CV	Time	After 1minute	After 5minutes																				
CV≤1000		I=0.1CV+40	I=0.03CV+15																				
CV>1000		I=0.04CV+100	I=0.02CV+25																				
(at 20°C after 1 minute) (at 20°C)																							
Where, I : Max. leakage current (µA), C : Nominal capacitance (µF), V : Rated voltage (V)																							
Dissipation Factor (tanδ)	Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V	63V	100V	160 to 250V	350 to 400V	450V											
	tanδ (Max.)	0.34	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.24	0.24											
	When nominal capacitance exceeds 1000µF, add 0.02 to the value above for each 1000µF increase. (at 20°C, 120Hz)																						
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V	63V	100V	160 to 250V	350 to 400V	450V											
	Z(-25°C)/Z(+20°C)	5	4	3	2	2	2	2	2	3	6	6											
	Z(-40°C)/Z(+20°C)	12	10	8	5	4	3	3	3	4	6	6											
(at 120Hz)																							
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for 1000 hours (2000 hours to meet the following two conditions 1) : 160V <sub>dc</sub> and larger, 2) : φ12.5 and larger) at 105°C.																						
	Capacitance change	≤±20% of the initial value																					
	D.F. (tanδ)	≤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 1000 hours at 105°C without voltage applied.																						
	Rated voltage	6.3 to 100V <sub>dc</sub>						160 to 450V <sub>dc</sub>															
	Capacitance change	≤±20% of the initial value						≤±20% of the initial value															
	D.F. (tanδ)	≤200% of the initial specified value						≤200% of the initial specified value															
	Leakage current	≤The initial specified value						≤500% of the initial specified value															

## DIMENSIONS (Radial Lead Type=VB) [mm]



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						

## PART NUMBERING SYSTEM



Capacitance	Code
0.1µF	R1
0.47µF	R47
1.0µF	1
4.7µF	4R7
10µF	10
100µF	100

◆STANDARD RATINGS

μF \ V <sub>dc</sub>	6.3		10		16		25		35		50		63		100	
0.1											5X11	1.3			5X11	1.5
0.22											5X11	2.9			5X11	3.4
0.33											5X11	4.3			5X11	5.0
0.47											5X11	6.2			5X11	7.1
1.0											5X11	13			5X11	15
2.2											5X11	20			5X11	21
3.3											5X11	25			5X11	29
4.7											5X11	30			5X11	32
10											5X11	40	5X11	46	6.3X11	54
22											5X11	65	5X11	71	8X11.5	93
33											5X11	90	6.3X11	100	8X11.5	130
47											5X11	110	6.3X11	120	10X12.5	165
100					5X11	110	6.3X11	130	6.3X11	150	8X11.5	180	10X12.5	215	10X20	265
220	5X11	140	6.3X11	170	6.3X11	180	8X11.5	230	8X11.5	270	10X12.5	300	10X16	335	12.5X25	440
330	6.3X11	190	6.3X11	200	8X11.5	260	8X11.5	310	10X12.5	350	10X16	410	10X20	510	16X25	540
470	6.3X11	230	8X11.5	250	8X11.5	310	10X12.5	380	10X16	460	10X20	530	12.5X20	640	16X31.5	715
1,000	8X11.5	380	10X12.5	460	10X16	560	10X20	680	12.5X20	810	12.5X25	950	16X25	930	18X40	985
2,200	10X20	710	10X20	760	12.5X20	920	12.5X25	1,090	16X25	1,260	16X35.5	1,470				
3,300	10X20	840	12.5X20	1,000	12.5X25	1,170	16X25	1,400	16X35.5	1,610	18X35.5	1,770				
4,700	12.5X20	1,090	12.5X25	1,260	16X25	1,480	16X31.5	1,710	18X35.5	1,910						
6,800	12.5X25	1,350	16X25	1,570	16X31.5	1,780	18X35.5	2,040								
10,000	16X25	1,650	16X35.5	1,890	18X35.5	2,060										
15,000	16X35.5	2,010	18X35.5	2,180												
22,000	18X40	2,350														

Case size φD×L (mm)  
Rated ripple current (mA<sub>rms</sub>) at 105°C, 120Hz

		Non solvent-proof											
μF \ V <sub>dc</sub>		160		200		250		350		400		450	
0.47								6.3X11	11			10X12.5	9
1.0								6.3X11	15	6.3X11	15	10X12.5	13
2.2						6.3X11	23	8X11.5	26	8X11.5	26	10X12.5	23
3.3	6.3X11	28	6.3X11	28	8X11.5	32	10X12.5	38	10X12.5	38	10X16	31	
4.7	6.3X11	34	8X11.5	39	8X11.5	39	10X16	50	10X16	50	10X20	40	
10	10X12.5	67	10X16	74	10X16	74	10X20	80	10X20	80	12.5X20	65	
22	10X20	120	10X20	120	12.5X20	130	12.5X20	130	12.5X25	145	16X25	115	
33	10X20	145	12.5X20	160	12.5X20	160	16X25	195	16X25	195	16X31.5	155	
47	12.5X20	195	12.5X20	195	12.5X25	210	16X25	230	16X31.5	250	16X35.5	185	
100	16X25	335	16X25	335	16X31.5	365	18X31.5	375	16X40	350			
220	16X31.5	540	18X35.5	575	18X40	585							
330	18X35.5	705											

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance (μF) \ Frequency (Hz)	50	120	300	1k	10k	100k
0.1 to 4.7	0.65	1.00	1.35	1.75	2.30	2.50
10 to 47	0.75	1.00	1.25	1.50	1.75	1.80
100 to 1,000	0.80	1.00	1.15	1.30	1.40	1.50
2,200 to	0.85	1.00	1.03	1.05	1.08	1.08