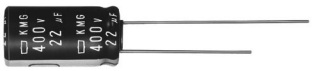
KMG Series

- Downsized from current standard KME series
- Solvent-proof type except 350 to 450Vdc (see PRECAUTIONS AND GUIDELINES)

KMG ↑ downsized KME



◆SPECIFICATIONS

Items	Characteristics
Category Temperature Range	−55 to +105℃(6.3 to 100Vdc) −40 to +105℃(160 to 400Vdc) -25 to +105℃(450Vdc)
Rated Voltage Range	6.3 to 450Vdc
Capacitance Tolerance	±20% (M) (at 20℃, 120Hz)
Leakage Current	6.3 to 100Vdc: I=0.03CV or 4μA, whichever is greater. (at 20℃ after 1 minute) 160 to 450Vdc: CV≦1000 → I=0.1CV+40 (After 1minute), I=0.03CV+15 (After 5minutes); CV>1000 → I=0.04CV+100 (After 1minute), I=0.02CV+25 (After 5minutes) (at 20℃) Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)

Dissipation Factor (tanδ)

Rated voltage (Vdc)	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℃, 120Hz)

Low Temperature Characteristics (Max. Impedance Ratio)

Rated voltage (Vdc)	6.3V	10V	16V	25V	35V	50V	63V	100V	160 to 250V	350 to 400V	450V
Z(−25℃)/Z(+20℃)	5	4	3	2	2	2	2	2	3	6	6
Z(−40℃)/Z(+20℃)	12	10	8	5	4	3	3	3	4	6	—

(at 120Hz)

Endurance

The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied for 1000 hours (2000 hours to meet the following two conditions 1) : 160Vdc and larger, 2) : φ12.5 and larger) at 105℃.

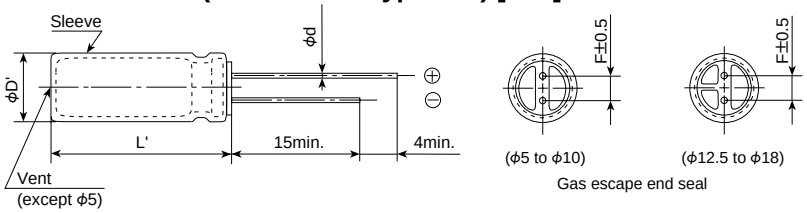
Capacitance change	≦±20% of the initial value
D.F. (tanδ)	≦200% of the initial specified value
Leakage current	≦The initial specified value

Shelf Life

The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1000 hours at 105℃ without voltage applied.

Rated voltage	6.3 to 100Vdc	160 to 450Vdc
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

KMG 6.3 VB 1000 M

- M : Capacitance tolerance (±20%)
- 1000 : Nominal capacitance code
- VB : Radial lead type
- 6.3 : Rated voltage in volts
- KMG : Series name

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

KMG Series

◆STANDARD RATINGS

μF \ Vdc	6.3		10		16		25		35		50		63		100	
0.1											5×11	1.3			5×11	1.5
0.22											5×11	2.9			5×11	3.4
0.33											5×11	4.3			5×11	5.0
0.47											5×11	6.2			5×11	7.1
1.0											5×11	13			5×11	15
2.2											5×11	20			5×11	21
3.3											5×11	25			5×11	29
4.7											5×11	30			5×11	32
10											5×11	40	5×11	46	6.3×11	54
22											5×11	65	5×11	71	8×11.5	93
33											5×11	90	6.3×11	100	8×11.5	130
47							5×11	80	5×11	90	6.3×11	110	6.3×11	120	10×12.5	165
100					5×11	110	6.3×11	130	6.3×11	150	8×11.5	180	10×12.5	215	10×20	265
220	5×11	140	6.3×11	170	6.3×11	180	8×11.5	230	8×11.5	270	10×12.5	300	10×16	335	12.5×25	440
330	6.3×11	190	6.3×11	200	8×11.5	260	8×11.5	310	10×12.5	350	10×16	410	10×20	510	16×25	540
470	6.3×11	230	8×11.5	250	8×11.5	310	10×12.5	380	10×16	460	10×20	530	12.5×20	640	16×31.5	715
1,000	8×11.5	380	10×12.5	460	10×16	560	10×20	680	12.5×20	810	12.5×25	950	16×25	930	18×40	985
2,200	10×20	710	10×20	760	12.5×20	920	12.5×25	1,090	16×25	1,260	16×35.5	1,470				
3,300	10×20	840	12.5×20	1,000	12.5×25	1,170	16×25	1,400	16×35.5	1,610	18×35.5	1,770				
4,700	12.5×20	1,090	12.5×25	1,260	16×25	1,480	16×31.5	1,710	18×35.5	1,910						
6,800	12.5×25	1,350	16×25	1,570	16×31.5	1,780	18×35.5	2,040								
10,000	16×25	1,650	16×35.5	1,890	18×35.5	2,060										
15,000	16×35.5	2,010	18×35.5	2,180												
22,000	18×40	2,350														

Case size ϕD×L (mm)
Rated ripple current (mArms) at 105℃, 120Hz

Non solvent-proof

μF \ Vdc	160		200		250		350		400		450	
0.47							6.3×11	11			10×12.5	9
1.0							6.3×11	15	6.3×11	15	10×12.5	13
2.2					6.3×11	23	8×11.5	26	8×11.5	26	10×12.5	23
3.3	6.3×11	28	6.3×11	28	8×11.5	32	10×12.5	38	10×12.5	38	10×16	31
4.7	6.3×11	34	8×11.5	39	8×11.5	39	10×16	50	10×16	50	10×20	40
10	10×12.5	67	10×16	74	10×16	74	10×20	80	10×20	80	12.5×20	65
22	10×20	120	10×20	120	12.5×20	130	12.5×20	130	12.5×25	145	16×25	115
33	10×20	145	12.5×20	160	12.5×20	160	16×25	195	16×25	195	16×31.5	155
47	12.5×20	195	12.5×20	195	12.5×25	210	16×25	230	16×31.5	250	16×35.5	185
100	16×25	335	16×25	335	16×31.5	365	18×31.5	375	16×40	350		
220	16×31.5	540	18×35.5	575	18×40	585						
330	18×35.5	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