

KMG Series

- Endurance with ripple current : 1,000 to 2,000 hours at 105°C
- Solvent resistant type except 350 to 450V_{dc}
(see PRECAUTIONS AND GUIDELINES)
- RoHS Compliant

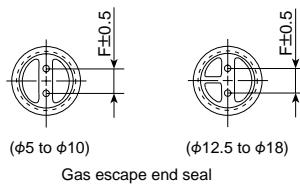
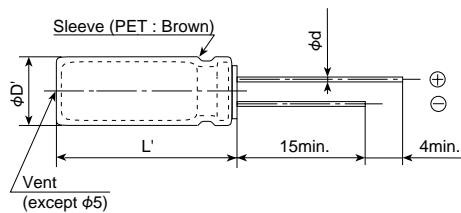


◆ SPECIFICATIONS

Items	Characteristics																						
Category Temperature Range	-55 to +105°C(6.3 to 100V _{dc}) -40 to +105°C(160 to 400V _{dc}) -25 to +105°C(450V _{dc})																						
Rated Voltage Range	6.3 to 450V _{dc}																						
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)																						
Leakage Current	6.3 to 100V _{dc}																						
	I=0.03CV or 4µA, whichever is greater.																						
	160 to 450V _{dc}																						
	<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≤1,000</td> <td></td> <td>I=0.1CV+40 max.</td> <td>I=0.03CV+15 max.</td> </tr> <tr> <td>CV>1,000</td> <td></td> <td>I=0.04CV+100 max.</td> <td>I=0.02CV+25 max.</td> </tr> </tbody> </table>												CV	Time	After 1minute	After 5minutes	CV≤1,000		I=0.1CV+40 max.	I=0.03CV+15 max.	CV>1,000		I=0.04CV+100 max.
CV	Time	After 1minute	After 5minutes																				
CV≤1,000		I=0.1CV+40 max.	I=0.03CV+15 max.																				
CV>1,000		I=0.04CV+100 max.	I=0.02CV+25 max.																				
(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 _{dc})	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 1,000µF, add 0.02 to the value above for each 1,000µF increase. (at 20°C, 120Hz)																						
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V _{dc})	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	—											
(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 1,000 hours (2,000 hours to meet the following two conditions 1) : 160V _{dc} 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 1,000 hours at 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.																						
	Rated voltage	6.3 to 100V _{dc}						160 to 450V _{dc}															
	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															

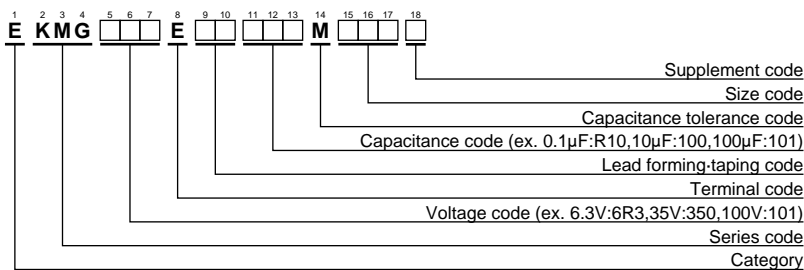
◆ DIMENSIONS [mm]

- Terminal Code : E



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



Please refer to "Product code guide (radial lead type)"

◆STANDARD RATINGS

is not solvent resistant.

WV (Vdc)	Cap (μF)	Case size φDXL(mm)	tanδ	Rated ripple current (mA _{rms} /105°C,120Hz)	Part No.
250	10	10×16	0.20	74	EKMG251E□□100MJ16S
	22	12.5×20	0.20	130	EKMG251E□□220MK20S
	33	12.5×20	0.20	160	EKMG251E□□330MK20S
	47	12.5×25	0.20	210	EKMG251E□□470MK25S
	100	16×31.5	0.20	365	EKMG251E□□101MLN3S
	220	18×40	0.20	585	EKMG251E□□221MM40S
350	0.47	6.3×11	0.24	11	EKMG351E□□R47MF11D
	1.0	6.3×11	0.24	15	EKMG351E□□1R0MF11D
	2.2	8×11.5	0.24	26	EKMG351E□□2R2MHB5D
	3.3	10×12.5	0.24	38	EKMG351E□□3R3MJC5S
	4.7	10×16	0.24	50	EKMG351E□□4R7MJ16S
	10	10×20	0.24	80	EKMG351E□□100MJ20S
	22	12.5×20	0.24	130	EKMG351E□□220MK20S
	33	16×25	0.24	195	EKMG351E□□330ML25S
	47	16×25	0.24	230	EKMG351E□□470ML25S
	100	18×31.5	0.24	375	EKMG351E□□101MMN3S

□□ : Enter the appropriate lead forming or taping code.

WV (Vdc)	Cap (μF)	Case size φDXL(mm)	tanδ	Rated ripple current (mA _{rms} /105°C,120Hz)	Part No.
400	1.0	6.3×11	0.24	15	EKMG401E□□1R0MF11D
	2.2	8×11.5	0.24	26	EKMG401E□□2R2MHB5D
	3.3	10×12.5	0.24	38	EKMG401E□□3R3MJC5S
	4.7	10×16	0.24	50	EKMG401E□□4R7MJ16S
	10	10×20	0.24	80	EKMG401E□□100MJ20S
	22	12.5×25	0.24	145	EKMG401E□□220MK25S
	33	16×25	0.24	195	EKMG401E□□330ML25S
	47	16×31.5	0.24	250	EKMG401E□□470MLN3S
	100	16×40	0.24	350	EKMG401E□□101ML40S
450	0.47	10×12.5	0.24	9.0	EKMG451E□□R47MJC5S
	1.0	10×12.5	0.24	13	EKMG451E□□1R0MJC5S
	2.2	10×12.5	0.24	23	EKMG451E□□2R2MJC5S
	3.3	10×16	0.24	31	EKMG451E□□3R3MJ16S
	4.7	10×20	0.24	40	EKMG451E□□4R7MJ20S
	10	12.5×20	0.24	65	EKMG451E□□100MK20S
	22	16×25	0.24	115	EKMG451E□□220ML25S
	33	16×31.5	0.24	155	EKMG451E□□330MLN3S
	47	16×35.5	0.24	185	EKMG451E□□470MLP1S

◆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

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.