

KMQ Series

- Downsized from current standard KMG series
- Solvent resistant type except 160 to 450V_{dc}
(see PRECAUTIONS AND GUIDELINES)
- RoHS Compliant

KMQ

↑ Downsized
KMG P142

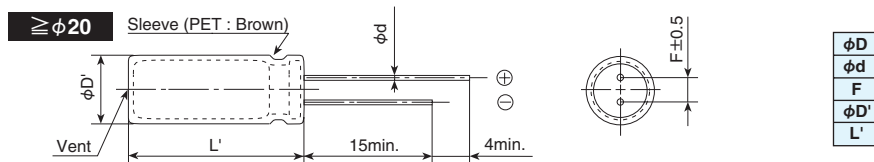
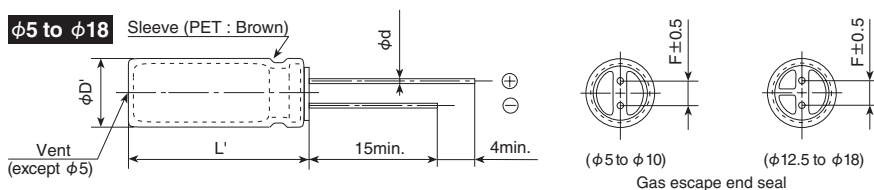


SPECIFICATIONS

Items	Characteristics													
Category	-55 to +105°C(6.3 to 100V _{dc}) -40 to +105°C(160 to 400V _{dc}) -25 to +105°C(450V _{dc})													
Temperature Range														
Rated Voltage Range	6.3 to 450V _{dc}													
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)													
Leakage Current	6.3 to 100V _{dc}						160 to 450V _{dc}							
	≤ φ 18	I=0.03CV or 4μA, whichever is greater.						CV \ Time		After 1 minute				
								CV ≤ 1,000		I=0.1CV+40 max.				
								CV > 1,000		I=0.04CV+100 max.				
	(at 20°C after 1 minute)						(at 20°C)							
	≥ φ 20						I=0.03CV max. (at 20°C after 3 minutes)							
Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)														
Dissipation Factor (tan δ)	Rated voltage (V _{dc})	6.3V	10V	16V	25V	35V	50V	63V	100V	160 to 250V	350 to 400V	450V		
	tan δ (Max.)	0.28	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	63 to 100V	160 to 200V	250V	350V	400V	450V	
	Z(-25°C)/Z(+20°C)	≤ φ 8	5	4	3	2	2	2	2	3	3	4	4	6
		≥ φ 10	5	4	3	2	2	2	2	3	3	4	4	6
	Z(-40°C)/Z(+20°C)	≤ φ 8	10	8	6	4	3	3	3	8	10	8	8	—
≥ φ 10		10	8	6	4	3	3	3	4	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 (the peak voltage shall not exceed the rated voltage) for 1,000 hours (2,000 hours for φ 10 and more at 105°C).													
	Capacitance change	≤ ±20% of the initial value												
	D.F. (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. 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. (tan δ)	≤ 200% of the initial specified value						≤ 200% of the initial specified value						
	Leakage current	≤ The initial specified value						≤ 500% of the initial specified value						

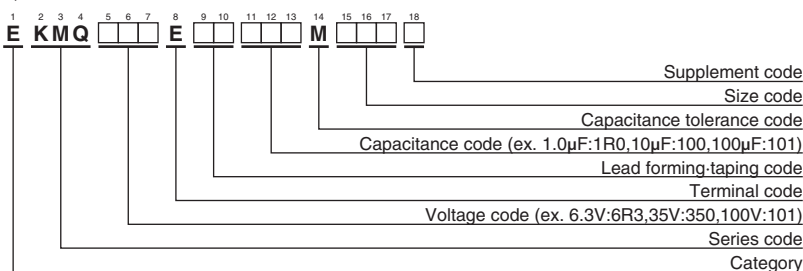
DIMENSIONS [mm]

- Terminal Code : E



φD	5	6.3	8	10	12.5	16	18	20	22
φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8	1.0	1.0
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	10.0
φD'	φD+0.5max.							φD+0.5max.	
L'	L+1.5max.							L+2.0max.	

PART NUMBERING SYSTEM



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

◆ STANDARD RATINGS

is not solvent resistant.

WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (mA _{rms} /105°C, 120Hz)	Part No.	WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (mA _{rms} /105°C, 120Hz)	Part No.
350	10	10 × 12.5	0.24	64	EKMQ351E□□100MJC5S	450	2.2	8 × 11.5	0.24	20	EKMQ451E□□2R2MHB5D
	22	12.5 × 20	0.24	130	EKMQ351E□□220MK20S		3.3	10 × 12.5	0.24	28	EKMQ451E□□3R3MJC5S
	33	12.5 × 25	0.24	170	EKMQ351E□□330MK25S		4.7	10 × 12.5	0.24	32	EKMQ451E□□4R7MJC5S
	47	16 × 25	0.24	230	EKMQ351E□□470ML25S		10	10 × 20	0.24	56	EKMQ451E□□100MJ20S
	68	16 × 25	0.24	285	EKMQ351E□□680ML25S		22	12.5 × 25	0.24	100	EKMQ451E□□220MK25S
	100	18 × 31.5	0.24	375	EKMQ351E□□101MMN3S		33	16 × 25	0.24	125	EKMQ451E□□330ML25S
400	1.0	6.3 × 11	0.24	15	EKMQ401E□□1R0MF11D		47	16 × 31.5	0.24	155	EKMQ451E□□470MLN3S
	2.2	8 × 11.5	0.24	27	EKMQ401E□□2R2MHB5D		68	18 × 35.5	0.24	185	EKMQ451E□□680MMP1S
	3.3	8 × 11.5	0.24	34	EKMQ401E□□3R3MHB5D		100	18 × 40	0.24	200	EKMQ451E□□101MM40S
	4.7	10 × 12.5	0.24	42	EKMQ401E□□4R7MJC5S						
	10	10 × 16	0.24	64	EKMQ401E□□100MJ16S						
	22	12.5 × 25	0.24	145	EKMQ401E□□220MK25S						
	33	16 × 25	0.24	195	EKMQ401E□□330ML25S						
	47	16 × 25	0.24	200	EKMQ401E□□470ML25S						
	68	16 × 31.5	0.24	240	EKMQ401E□□680MLN3S						
	100	18 × 35.5	0.24	310	EKMQ401E□□101MMP1S						

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

◆ RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

(φ5 to φ18)

Capacitance(μF)	Frequency(Hz)	50	120	300	1k	10k	100k
1.0 to 4.7		0.65	1.00	1.35	1.75	2.30	2.50
10 to 68		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

(φ20 to φ22)

Capacitance(μF)	Frequency(Hz)	50	120	300	1k	10k	100k
6.3 to 50		0.95	1.00	1.03	1.05	1.08	1.08
63 to 100		0.92	1.00	1.07	1.13	1.19	1.20

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.