

# KMQ Series

- Downsized from current standard KMG series
- Solvent resistant type except 160 to 450V<sub>dc</sub>  
(see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant

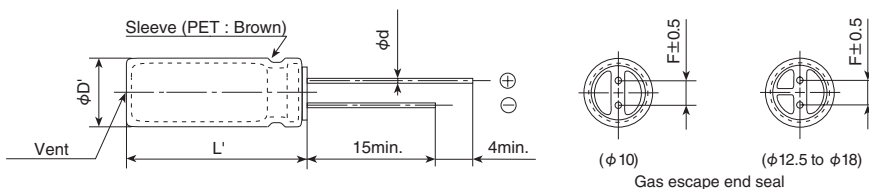


## SPECIFICATIONS

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>												160 to 450V <sub>dc</sub>	
	I=0.03CV or 4μA, whichever is greater.												CV≤1,000 I=0.1CV+40 max.	
													CV>1,000 I=0.04CV+100 max.	
Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 1 minute)														
Dissipation Factor (tan δ)	Rated voltage (V <sub>dc</sub> )	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 <sub>dc</sub> )	6.3V	10V	16V	25V	35V	50V	63 to 100V	160 to 200V	250V	350V	400V	450V	
	Z(-25°C)/Z(+20°C)	5	4	3	2	2	2	2	3	3	4	4	6	
	Z(-40°C)/Z(+20°C)	10	8	6	4	3	3	3	4	4	6	6	—	
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 2,000 hours 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 <sub>dc</sub>							160 to 450V <sub>dc</sub>					
	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					

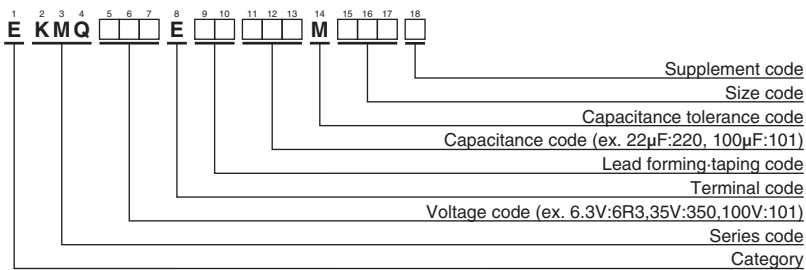
## DIMENSIONS [mm]

- Terminal Code : E



φD	10	12.5	16	18
φd	0.6	0.6	0.8	0.8
F	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

WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (mA <sub>rms</sub> /105°C, 120Hz)	Part No.	WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (mA <sub>rms</sub> /105°C, 120Hz)	Part No.	
6.3	2,200	10 × 16	0.30	635	EKMQ6R3E□□222MJ16S	63	220	10 × 16	0.10	335	EKMQ630E□□221MJ16S	
	3,300	10 × 20	0.32	840	EKMQ6R3E□□332MJ20S		330	10 × 20	0.10	510	EKMQ630E□□331MJ20S	
	4,700	12.5 × 20	0.34	1,090	EKMQ6R3E□□472MK20S		470	12.5 × 20	0.10	640	EKMQ630E□□471MK20S	
	6,800	12.5 × 25	0.38	1,350	EKMQ6R3E□□682MK25S		1,000	16 × 25	0.10	930	EKMQ630E□□102ML25S	
	10,000	16 × 25	0.46	1,650	EKMQ6R3E□□103ML25S		2,200	18 × 35.5	0.12	1,650	EKMQ630E□□222MMP1S	
	15,000	16 × 31.5	0.56	1,820	EKMQ6R3E□□153MLN3S		100	68	10 × 12.5	0.08	190	EKMQ101E□□680MJC5S
22,000	18 × 35.5	0.70	2,280	EKMQ6R3E□□223MMP1S	100	10 × 16		0.08	240	EKMQ101E□□101MJ16S		
10	1,000	10 × 12.5	0.24	460	EKMQ100E□□102MJC5S	220		12.5 × 20	0.08	390	EKMQ101E□□221MK20S	
	2,200	10 × 16	0.26	705	EKMQ100E□□222MJ16S	330		12.5 × 25	0.08	540	EKMQ101E□□331MK25S	
	3,300	12.5 × 20	0.28	1,000	EKMQ100E□□332MK20S	470		16 × 25	0.08	715	EKMQ101E□□471ML25S	
	4,700	12.5 × 25	0.30	1,260	EKMQ100E□□472MK25S	1,000		18 × 35.5	0.08	960	EKMQ101E□□102MMP1S	
	6,800	16 × 25	0.34	1,570	EKMQ100E□□682ML25S	160	68	12.5 × 20	0.20	250	EKMQ161E□□680MK20S	
	10,000	16 × 31.5	0.42	1,820	EKMQ100E□□103MLN3S		100	12.5 × 25	0.20	310	EKMQ161E□□101MK25S	
15,000	16 × 35.5	0.52	2,050	EKMQ100E□□153MLP1S	220		16 × 31.5	0.20	540	EKMQ161E□□221MLN3S		
22,000	18 × 40	0.66	2,420	EKMQ100E□□223MM40S	330		18 × 35.5	0.20	705	EKMQ161E□□331MMP1S		
16	1,000	10 × 12.5	0.20	500	EKMQ160E□□102MJC5S		470	18 × 40	0.20	855	EKMQ161E□□471MM40S	
	2,200	10 × 20	0.22	710	EKMQ160E□□222MJ20S		200	47	12.5 × 20	0.20	195	EKMQ201E□□470MK20S
	3,300	12.5 × 25	0.24	1,170	EKMQ160E□□332MK25S	68		12.5 × 25	0.20	250	EKMQ201E□□680MK25S	
	4,700	16 × 25	0.26	1,500	EKMQ160E□□472ML25S	100		16 × 25	0.20	335	EKMQ201E□□101ML25S	
	6,800	16 × 25	0.30	1,600	EKMQ160E□□682ML25S	220		16 × 35.5	0.20	500	EKMQ201E□□221MLP1S	
	10,000	16 × 35.5	0.38	1,930	EKMQ160E□□103MLP1S	330		18 × 40	0.20	675	EKMQ201E□□331MM40S	
15,000	18 × 40	0.48	2,210	EKMQ160E□□153MM40S	250	47		12.5 × 20	0.20	190	EKMQ251E□□470MK20S	
25	470	10 × 12.5	0.16	380		EKMQ250E□□471MJC5S	68	16 × 25	0.20	270	EKMQ251E□□680ML25S	
	1,000	10 × 16	0.16	610		EKMQ250E□□102MJ16S	100	16 × 25	0.20	310	EKMQ251E□□101ML25S	
	2,200	12.5 × 25	0.18	1,090		EKMQ250E□□222MK25S	220	18 × 35.5	0.20	485	EKMQ251E□□221MMP1S	
	3,300	16 × 25	0.20	1,400		EKMQ250E□□332ML25S	350	22	12.5 × 20	0.24	130	EKMQ351E□□220MK20S
	4,700	16 × 25	0.22	1,570		EKMQ250E□□472ML25S		33	12.5 × 25	0.24	170	EKMQ351E□□330MK25S
	6,800	16 × 35.5	0.26	1,850	EKMQ250E□□682MLP1S	47		16 × 25	0.24	230	EKMQ351E□□470ML25S	
10,000	18 × 40	0.34	2,000	EKMQ250E□□103MM40S	68	16 × 25		0.24	285	EKMQ351E□□680ML25S		
35	330	10 × 12.5	0.14	350	EKMQ350E□□331MJC5S	100		18 × 31.5	0.24	375	EKMQ351E□□101MMN3S	
	470	10 × 16	0.14	460	EKMQ350E□□471MJ16S	400		22	12.5 × 25	0.24	145	EKMQ401E□□220MK25S
	1,000	12.5 × 20	0.14	810	EKMQ350E□□102MK20S		33	16 × 25	0.24	195	EKMQ401E□□330ML25S	
	2,200	16 × 25	0.16	1,260	EKMQ350E□□222ML25S		47	16 × 25	0.24	200	EKMQ401E□□470ML25S	
	3,300	16 × 31.5	0.18	1,500	EKMQ350E□□332MLN3S		68	16 × 31.5	0.24	240	EKMQ401E□□680MLN3S	
	4,700	16 × 35.5	0.20	1,780	EKMQ350E□□472MLP1S		100	18 × 35.5	0.24	310	EKMQ401E□□101MMP1S	
6,800	18 × 40	0.24	2,000	EKMQ350E□□682MM40S	450		22	12.5 × 25	0.24	100	EKMQ451E□□220MK25S	
50	220	10 × 12.5	0.12	300		EKMQ500E□□221MJC5S	33	16 × 25	0.24	125	EKMQ451E□□330ML25S	
	330	10 × 16	0.12	410		EKMQ500E□□331MJ16S	47	16 × 31.5	0.24	155	EKMQ451E□□470MLN3S	
	470	10 × 20	0.12	540		EKMQ500E□□471MJ20S	68	18 × 35.5	0.24	185	EKMQ451E□□680MMP1S	
	1,000	12.5 × 25	0.12	950		EKMQ500E□□102MK25S	100	18 × 40	0.24	200	EKMQ451E□□101MM40S	
	2,200	16 × 31.5	0.14	1,410		EKMQ500E□□222MLN3S						
	3,300	18 × 35.5	0.16	1,770	EKMQ500E□□332MMP1S							

□□ : Enter the appropriate lead forming or taping code.  
 \*1: Assembly boards with the designated products attached cannot be cleaned.

### ◆RATED RIPPLE CURRENT MULTIPLIERS

#### ◎Frequency Multipliers

Capacitance(μF)	Frequency(Hz)					
	50	120	300	1k	10k	100k
22 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

The deterioration of aluminum electrolytic capacitors accelerates their life due to the internal heating produced by ripple current. For details, refer to Section "5-3 Ripple Current Effect on Lifetime" in the catalog, Technical Note.



- Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.
- Request the Product Specification on the product of NIPPON CHEMI-CON CORPORATION to refer to it as well as this brochure prior to the order of the products. Some specific notes on use of the ordered product may be described in the specifications.
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In addition, we have an established system with enhanced traceability, therefore we will limit the applicable lot items for any potential compensation.

[Part Numbering System](#)

[Part Numbering System \(Appendix\)](#)

[Standardization](#)

[Available Items by Manufacturing Locations](#)

[Environmental Measures](#)

[Technical Note](#)

[Precautions and Guidelines](#)

[Recommended Soldering Conditions](#)

[Taping, Lead-preforming and Packaging](#)

[Available Terminals for Snap-in and Screw Mount Type](#)