KMQ Series



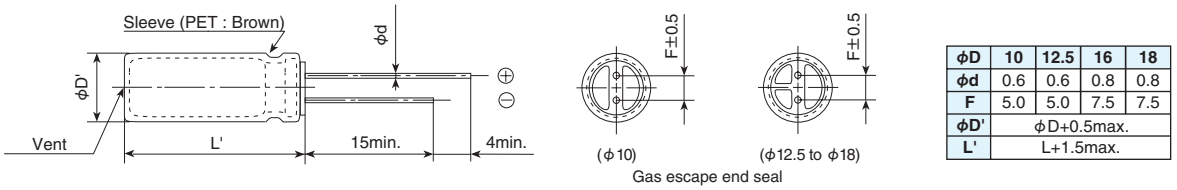
- Downsized from current standard KMG series
- Solvent resistant type except 160 to 450Vdc (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant

◆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. 160 to 450Vdc: 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℃ after 1 minute)											
Dissipation Factor (tan δ)	Rated voltage (Vdc)	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℃, 120Hz)											
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (Vdc)	6.3V	10V	16V	25V	35V	50V	63 to 100V	160 to 200V	250V	350V	400V	450V
	Z(-25℃)/Z(+20℃)	5	4	3	2	2	2	2	3	3	4	4	6
	Z(-40℃)/Z(+20℃)	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℃ 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℃.											
	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℃ after exposing them for 1,000 hours at 105℃ 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 100Vdc / 160 to 450Vdc											
	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											

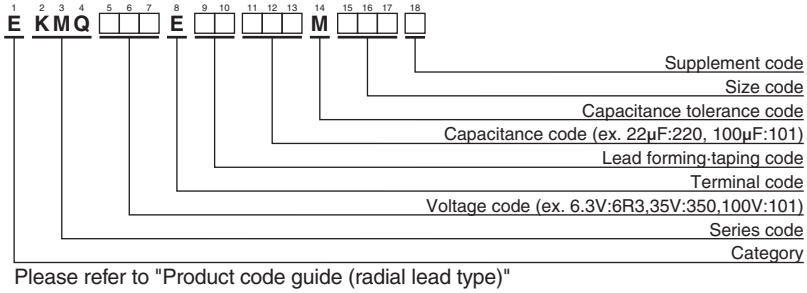
◆DIMENSIONS [mm]

● 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)"

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KMQ Series

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (mArms/ 105℃, 120Hz)	Part No.
6.3	2,200	10×16	0.30	635	EKMQ6R3E□□222MJ16S
	3,300	10×20	0.32	840	EKMQ6R3E□□332MJ20S
	4,700	12.5×20	0.34	1,090	EKMQ6R3E□□472MK20S
	6,800	12.5×25	0.38	1,350	EKMQ6R3E□□682MK25S
	10,000	16×25	0.46	1,650	EKMQ6R3E□□103ML25S
	15,000	16×31.5	0.56	1,820	EKMQ6R3E□□153MLN3S
	22,000	18×35.5	0.70	2,280	EKMQ6R3E□□223MMP1S
10	1,000	10×12.5	0.24	460	EKMQ100E□□102MJC5S
	2,200	10×16	0.26	705	EKMQ100E□□222MJ16S
	3,300	12.5×20	0.28	1,000	EKMQ100E□□332MK20S
	4,700	12.5×25	0.30	1,260	EKMQ100E□□472MK25S
	6,800	16×25	0.34	1,570	EKMQ100E□□682ML25S
	10,000	16×31.5	0.42	1,820	EKMQ100E□□103MLN3S
	15,000	16×35.5	0.52	2,050	EKMQ100E□□153MLP1S
	22,000	18×40	0.66	2,420	EKMQ100E□□223MM40S
16	1,000	10×12.5	0.20	500	EKMQ160E□□102MJC5S
	2,200	10×20	0.22	710	EKMQ160E□□222MJ20S
	3,300	12.5×25	0.24	1,170	EKMQ160E□□332MK25S
	4,700	16×25	0.26	1,500	EKMQ160E□□472ML25S
	6,800	16×25	0.30	1,600	EKMQ160E□□682ML25S
	10,000	16×35.5	0.38	1,930	EKMQ160E□□103MLP1S
	15,000	18×40	0.48	2,210	EKMQ160E□□153MM40S
25	470	10×12.5	0.16	380	EKMQ250E□□471MJC5S
	1,000	10×16	0.16	610	EKMQ250E□□102MJ16S
	2,200	12.5×25	0.18	1,090	EKMQ250E□□222MK25S
	3,300	16×25	0.20	1,400	EKMQ250E□□332ML25S
	4,700	16×25	0.22	1,570	EKMQ250E□□472ML25S
	6,800	16×35.5	0.26	1,850	EKMQ250E□□682MLP1S
	10,000	18×40	0.34	2,000	EKMQ250E□□103MM40S
35	330	10×12.5	0.14	350	EKMQ350E□□331MJC5S
	470	10×16	0.14	460	EKMQ350E□□471MJ16S
	1,000	12.5×20	0.14	810	EKMQ350E□□102MK20S
	2,200	16×25	0.16	1,260	EKMQ350E□□222ML25S
	3,300	16×31.5	0.18	1,500	EKMQ350E□□332MLN3S
	4,700	16×35.5	0.20	1,780	EKMQ350E□□472MLP1S
	6,800	18×40	0.24	2,000	EKMQ350E□□682MM40S
50	220	10×12.5	0.12	300	EKMQ500E□□221MJC5S
	330	10×16	0.12	410	EKMQ500E□□331MJ16S
	470	10×20	0.12	540	EKMQ500E□□471MJ20S
	1,000	12.5×25	0.12	950	EKMQ500E□□102MK25S
	2,200	16×31.5	0.14	1,410	EKMQ500E□□222MLN3S
	3,300	18×35.5	0.16	1,770	EKMQ500E□□332MMP1S

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (mArms/ 105℃, 120Hz)	Part No.
63	220	10×16	0.10	335	EKMQ630E□□221MJ16S
	330	10×20	0.10	510	EKMQ630E□□331MJ20S
	470	12.5×20	0.10	640	EKMQ630E□□471MK20S
	1,000	16×25	0.10	930	EKMQ630E□□102ML25S
	2,200	18×35.5	0.12	1,650	EKMQ630E□□222MMP1S
100	68	10×12.5	0.08	190	EKMQ101E□□680MJC5S
	100	10×16	0.08	240	EKMQ101E□□101MJ16S
	220	12.5×20	0.08	390	EKMQ101E□□221MK20S
	330	12.5×25	0.08	540	EKMQ101E□□331MK25S
	470	16×25	0.08	715	EKMQ101E□□471ML25S
	1,000	18×35.5	0.08	960	EKMQ101E□□102MMP1S
*1 160	68	12.5×20	0.20	250	EKMQ161E□□680MK20S
	100	12.5×25	0.20	310	EKMQ161E□□101MK25S
	220	16×31.5	0.20	540	EKMQ161E□□221MLN3S
	330	18×35.5	0.20	705	EKMQ161E□□331MMP1S
	470	18×40	0.20	855	EKMQ161E□□471MM40S
*1 200	47	12.5×20	0.20	195	EKMQ201E□□470MK20S
	68	12.5×25	0.20	250	EKMQ201E□□680MK25S
	100	16×25	0.20	335	EKMQ201E□□101ML25S
	220	16×35.5	0.20	500	EKMQ201E□□221MLP1S
	330	18×40	0.20	675	EKMQ201E□□331MM40S
*1 250	47	12.5×20	0.20	190	EKMQ251E□□470MK20S
	68	16×25	0.20	270	EKMQ251E□□680ML25S
	100	16×25	0.20	310	EKMQ251E□□101ML25S
	220	18×35.5	0.20	485	EKMQ251E□□221MMP1S
*1 350	22	12.5×20	0.24	130	EKMQ351E□□220MK20S
	33	12.5×25	0.24	170	EKMQ351E□□330MK25S
	47	16×25	0.24	230	EKMQ351E□□470ML25S
	68	16×25	0.24	285	EKMQ351E□□680ML25S
	100	18×31.5	0.24	375	EKMQ351E□□101MMN3S
*1 400	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
*1 450	22	12.5×25	0.24	100	EKMQ451E□□220MK25S
	33	16×25	0.24	125	EKMQ451E□□330ML25S
	47	16×31.5	0.24	155	EKMQ451E□□470MLN3S
	68	18×35.5	0.24	185	EKMQ451E□□680MMP1S
	100	18×40	0.24	200	EKMQ451E□□101MM40S

□□ : 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.

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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

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