

# KMQ Series

- Endurance with ripple current : 2,000 hours at 105°C
- Downsized and high ripple current from KMH series
- RoHS2 Compliant

KMQ

↑  
Downsized  
Higher ripple  
KMH



## SPECIFICATIONS

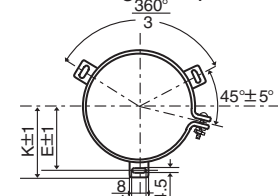
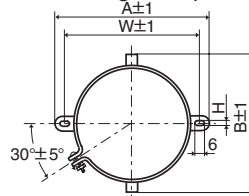
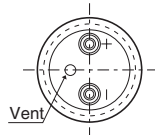
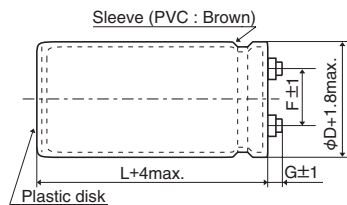
Items	Characteristics						
Category	-25 to +105°C						
Temperature Range							
Rated Voltage Range	315 to 450V <sub>dc</sub>						
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)						
Leakage Current	I=0.02CV or 5mA, whichever is smaller. Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 5 minutes)						
Dissipation Factor (tan δ)	Shall not exceed the values shown in the STANDARD RATINGS (at 20°C, 120Hz)						
Low Temperature Characteristics	Capacitance change $C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C}) \geq 0.7$ (at 120Hz)						
Insulation Resistance	When measured between the terminals that are connected to each other and to the mounting clamp on the insulating sleeve covering the case by using an insulation resistance meter of 500V <sub>dc</sub> , the insulation resistance shall not be less than 100MΩ.						
Insulation Withstanding Voltage	When a voltage of 2,000V <sub>ac</sub> is applied for 1 minute between the terminals that are connected to each other and to the mounting clamp on the insulating sleeve covering the case, there shall not be electrical damage.						
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. <table border="1"> <tr> <td>Capacitance change</td> <td>≤ ±20% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤ 200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> </tr> </table>	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ 200% of the initial specified value	Leakage current	≤ The initial specified value
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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 500 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. <table border="1"> <tr> <td>Capacitance change</td> <td>≤ ±20% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤ 200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> </tr> </table>	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ 200% of the initial specified value	Leakage current	≤ The initial specified value
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Leakage current	≤ The initial specified value						

## DIMENSIONS (Screw-Mount) [mm]

Terminal Code : LG

Mounting Clamp Code : B

Mounting Clamp Code : C



φD	A	B	W	H	F
35	58.0	44.0	48.0	3.5	12.7
50	78.0	64.0	68.0	4.5	22.4
63.5	90.0	76.0	80.0	4.5	28.0
76.2	104.5	90.0	93.5	4.5	31.5

φD	E	K	J	F
50	32.5	37.0	14.0	22.4
63.5	38.1	43.5	14.0	28.0
76.2	44.5	50.0	14.0	31.5
89	50.8	56.5	16.0	31.5

φ35 to φ63.5 : G=6  
φ76.2 & φ89 : G=5

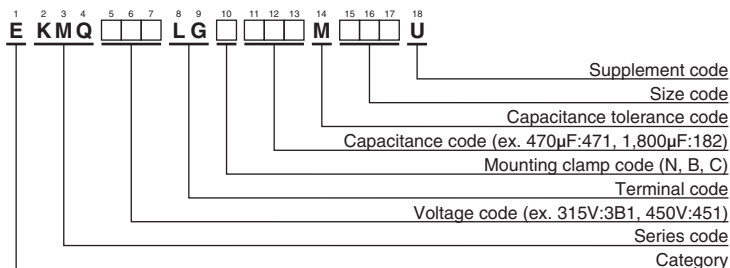
<Screw specifications>

Plus hexagon-headed screw : M5×0.8×10

Maximum screw tightening torque : 3.23Nm

\* The screw and the mounting clamp are separately supplied and not attached to the product.

## PART NUMBERING SYSTEM



Please refer to "Product code guide (screw-mount terminal type)"

◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.	WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.
315	560	35 × 55	0.10	2.4	EKMQ3B1LGB561MA55U	400	390	35 × 55	0.10	2.0	EKMQ401LGB391MA55U
	680	35 × 65	0.15	2.9	EKMQ3B1LGB681MA65U		470	35 × 60	0.10	2.3	EKMQ401LGB471MA60U
	820	35 × 75	0.15	3.3	EKMQ3B1LGB821MA75U		560	35 × 70	0.15	2.7	EKMQ401LGB561MA70U
	1,000	35 × 80	0.15	3.8	EKMQ3B1LGB102MA80U		680	35 × 80	0.15	3.1	EKMQ401LGB681MA80U
	1,200	35 × 100	0.15	4.5	EKMQ3B1LGB122MAA0U		820	35 × 90	0.15	3.6	EKMQ401LGB821MA90U
	1,500	50 × 70	0.15	5.4	EKMQ3B1LGC152MC70U		1,000	50 × 65	0.15	4.2	EKMQ401LGC102MC65U
	1,800	50 × 75	0.15	6.0	EKMQ3B1LGC182MC75U		1,200	50 × 75	0.15	4.9	EKMQ401LGC122MC75U
	2,200	50 × 90	0.15	7.2	EKMQ3B1LGC222MC90U		1,500	50 × 85	0.15	5.8	EKMQ401LGC152MC85U
	2,700	50 × 100	0.15	8.4	EKMQ3B1LGC272MCA0U		2,200	63.5 × 85	0.15	8.1	EKMQ401LGC222MD85U
	3,300	63.5 × 85	0.15	9.9	EKMQ3B1LGC332MD85U		3,300	63.5 × 105	0.15	10.8	EKMQ401LGC332MDA5U
	3,900	63.5 × 96	0.15	11.3	EKMQ3B1LGC392MD96U		4,700	76.2 × 105	0.15	14.3	EKMQ401LGC472MEA5U
	4,700	76.2 × 85	0.15	13.1	EKMQ3B1LGC472ME85U		5,600	89 × 96	0.15	13.9	EKMQ401LGC562MF96U
	5,600	76.2 × 96	0.15	15.0	EKMQ3B1LGC562ME96U		6,800	89 × 115	0.15	16.6	EKMQ401LGC682MFB5U
	6,800	76.2 × 110	0.15	17.6	EKMQ3B1LGC682MEB0U		8,200	89 × 130	0.15	19.2	EKMQ401LGC822MFD0U
8,200	89 × 100	0.15	17.2	EKMQ3B1LGC822MFA0U	450	330	35 × 55	0.10	1.8	EKMQ451LGB331MA55U	
10,000	89 × 115	0.15	20.1	EKMQ3B1LGC103MFB5U		390	35 × 65	0.10	2.2	EKMQ451LGB391MA65U	
350	470	35 × 55	0.10	2.2		EKMQ351LGB471MA55U	470	35 × 75	0.10	2.5	EKMQ451LGB471MA75U
	560	35 × 60	0.10	2.5		EKMQ351LGB561MA60U	560	35 × 80	0.15	2.8	EKMQ451LGB561MA80U
	680	35 × 70	0.15	2.9		EKMQ351LGB681MA70U	680	35 × 100	0.15	3.5	EKMQ451LGB681MAA0U
	820	35 × 80	0.15	3.4		EKMQ351LGB821MA80U	820	35 × 110	0.15	4.1	EKMQ451LGB821MAB0U
	1,000	35 × 90	0.15	4.0		EKMQ351LGB102MA90U	1,000	50 × 80	0.15	4.6	EKMQ451LGC102MC80U
	1,200	50 × 65	0.15	4.6		EKMQ351LGC122MC65U	1,200	50 × 90	0.15	5.3	EKMQ451LGC122MC90U
	1,500	50 × 75	0.15	5.5		EKMQ351LGC152MC75U	1,500	50 × 105	0.15	6.4	EKMQ451LGC152MCA5U
	1,800	50 × 85	0.15	6.4		EKMQ351LGC182MC85U	2,200	63.5 × 96	0.15	8.5	EKMQ451LGC222MD96U
	2,200	50 × 100	0.15	7.6		EKMQ351LGC222MCA0U	3,300	63.5 × 130	0.15	11.9	EKMQ451LGC332MDD0U
	2,700	63.5 × 85	0.15	9.0		EKMQ351LGC272MD85U	4,700	76.2 × 130	0.15	15.7	EKMQ451LGC472MED0U
	3,900	76.2 × 80	0.15	11.7		EKMQ351LGC392ME80U	5,600	76.2 × 155	0.15	18.5	EKMQ451LGC562MEF5U
	5,600	76.2 × 105	0.15	15.6		EKMQ351LGC562MEA5U	5,600	89 × 120	0.15	15.3	EKMQ451LGC562MFC0U
	6,800	76.2 × 125	0.15	18.6	EKMQ351LGC682MEC5U	6,800	89 × 140	0.15	18.0	EKMQ451LGC682MFE0U	
	8,200	89 × 115	0.15	18.2	EKMQ351LGC822MFB5U	8,200	89 × 170	0.15	21.6	EKMQ451LGC822MFH0U	

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Frequency (Hz)	50	120	300	1k	3k
φ 35, 50	0.70	1.00	1.30	1.70	1.80
φ 63.5 to 89	0.80	1.00	1.10	1.15	1.15

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.