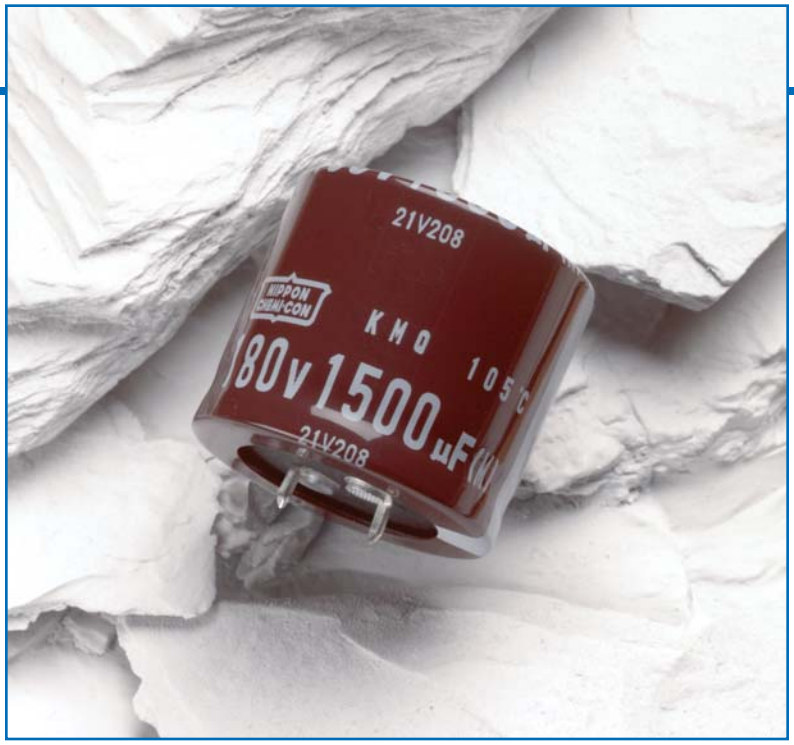
KMQ Series

UNITED CHEMI-CON

- Snap Mount
- Downsize
- Large Capacitance
- RoHS Compliant
- +105°C Maximum Temperature



The KMQ series is a snap-in capacitor series that offers downsized versions of the current miniaturized KMM series. These capacitors have a rated lifetime of 2,000 hours at +105°C with the rated ripple current applied. With high ripple current capability and higher CV per case size than the KMM series, the KMQ capacitors are suitable for many downsized power supply circuits. The standard KMQ capacitors have a 2-pin snap-in terminal style. The KMQ series is RoHS compliant offering Pb-free construction and PET (polyester) sleeves with no end disk as the standard.

The standard KMQ series capacitors are *not* solvent proof. Refer to guidelines and precautions on the website for usage and installation conditions recommended for United Chemi-Con products.

Summary of Specifications

- **PC board 2-pin snap-in terminals.**
- **Capacitance range: 68 to 33,000μF.**
- **Voltage range: 35, 50, 160 to 450VDC.**
- **Category temperature range: −40°C to +105°C for 35V and 50V; −25°C to +105°C for 160 to 450V.**
- **Leakage current: $3\sqrt{CV}$ (μA) maximum after 5 minutes at +20°C.**
- **Standard capacitance tolerance: ±20%**
- **Nominal case size (D×L): 22×25mm to 35×50mm.**
- **Rated lifetime: 2,000 hours at +105°C with the rated ripple current applied.**

KMQ Specifications - Snap Mount

Item	Characteristics
Category Temperature Range	−40 to +105°C for 35 and 50VDC; −25 to +105°C for 160 to 450VDC
Rated Voltage Range	35, 50, 160 to 450VDC
Capacitance Range	68 to 33,000μF
Capacitance Tolerance	±20% (M) at +20°C, 120Hz
Leakage Current	$I \leq 3\sqrt{CV}$ (μA) after 5 minutes at +20°C. Where I = Max. leakage current (μA), C = Nominal capacitance (μF) and V = Rated voltage (V)
Dissipation Factor (Tan δ)	At +20°C, 120Hz

Rated Voltage (V)	35		50		160-250	315-400	420, 450
Capacitance (μF)	<10,000	≥10,000	<10,000	≥10,000	—	—	—
Tan δ (DF) Max.	0.30	0.35	0.25	0.30	0.15	0.15	0.20

Low Temperature Characteristics	At 120Hz, impedance (Z) ratio between the −25°C or −40°C value and +20°C value shall not exceed the values given below.

Rated Voltage (V)	35, 50	160-250	315-400	420, 450
Z(−25°C)/Z(+20°C)	10	4	8	8
Z(−40°C)/Z(+20°C)	4	—	—	—

Rated Ripple Current Multipliers — Frequency (Hz)

DC Rated Voltage	50Hz	120Hz	300Hz	1kHz	10kHz	50kHz
35V, 50V	0.95	1.00	1.03	1.05	1.08	1.08
160-250V	0.81	1.00	1.17	1.32	1.45	1.50
315-450V	0.77	1.00	1.16	1.30	1.41	1.43

Endurance (Load Life)

The following specifications shall be satisfied when the capacitors are restored to +20°C after subjecting them to DC voltage for 2,000 hours at +105°C with the rated ripple current applied. The sum of the DC voltage and peak AC voltage must not exceed the full rated voltage of the capacitors.

Capacitance change: ≤ ±20% of initial measured value
Tan δ (DF) : ≤ 200% of initial specified value
Leakage current : ≤ 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. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements.

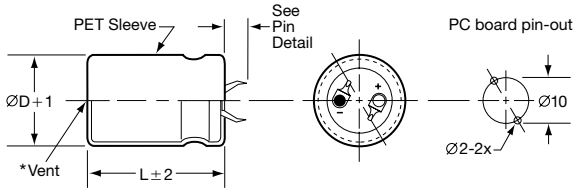
Capacitance change: ≤ ±15% of initial measured value
Tan δ (DF) : ≤ 150% of initial specified value
Leakage current : ≤ initial specified value

Diagram of Dimensions - Snap Mount

Snap Mount

Unit: mm

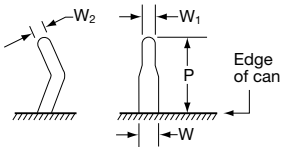
Type VSN ø22~ø35



Standard design does not have a plastic end disk.

*Vent may be located either on the bottom or side of the can.

VS Pin Dimensions



Type	P	W	W1	W2
VSN	4.0±0.5	1.5±0.2	1.0	1.0

KMQ Series

Part Numbering System for KMQ Series

When ordering, always specify complete 18-field global part number.

9 Supplement Code. Field 18.
All construction options listed have Sn100% terminal plating.
S = PET sleeve without end disk.
W = PET sleeve with end disk.

8 Case Size. Fields 15, 16 and 17.
The single letter diameter code is inserted in field 15.
P = Ø22mm
Q = Ø25.4mm
R = Ø30mm
A = Ø35mm

The double digit length code is inserted in fields 16 and 17.
25 = 25mm
30 = 30mm
35 = 35mm
40 = 40mm
45 = 45mm
50 = 50mm

7 Capacitance Tolerance. Field 14.
M = ±20%

6 Capacitance. Fields 11, 12 and 13.
Expressed in Microfarads. The first two digits are significant figures inserted in fields 11 and 12, and the third digit inserted in field 13 indicates the number of zeros for capacitance of 10μF or more. R indicates the decimal point for capacitance less than 10μF (e.g. 1R5 = 1.5μF; 150 = 15μF; 151 = 150μF; 152 = 1,500μF; 153 = 15,000μF).

5 Dummy Terminals. Field 10.
N = No dummy terminals.

4 Terminal Type. Fields 8 and 9.
VS = Snap-in pins.

3 DC Rated Voltage. Fields 5, 6 and 7.
Expressed in Volts. The first two digits are significant figures inserted in fields 5 and 6, and the third digit inserted in field 7 indicates the number of zeros for rated voltage of 10VDC or more. R indicates the decimal point for rated voltage less than 10VDC (e.g. 1R8 = 1.8VDC; 180 = 18VDC; 181 = 180VDC).

Rule Exception: Coding for rated voltage 315VDC = 3B1.

2 Series Name. Fields 2, 3 and 4.
Enter the 3-letter/digit series name in fields 2, 3 and 4. If the series name is only 2 letters/digits, place a dash in field 4. For a series name with more than 3 letters/digits, refer to the individual series for the appropriate 3-field series name.

1 Capacitor Type. Field 1.
Aluminum Electrolytic Capacitor (Polar).

KMQ Series

Standard Voltage Ratings - Snap Mount

Rated Voltage (WVDC)	Capacitance (µF)	Global Part Number	Nominal Case Size* D × L (mm)	Case Size Code	Maximum ESR (Ω) at +20°C, 120Hz	Rated Ripple Current (A rms) at +105°C, 120Hz
35 Volts 44 Volts Surge	4,700	EKMQ350VSN472MP25S	22 × 25	P25	0.106	1.87
	5,600	EKMQ350VSN562MP25S	22 × 25	P25	0.089	2.04
	6,800	EKMQ350VSN682MP30S	22 × 30	P30	0.073	2.36
	8,200	EKMQ350VSN822MP35S	22 × 35	P35	0.061	2.65
	10,000	EKMQ350VSN103MP40S	22 × 40	P40	0.058	3.0
	12,000	EKMQ350VSN123MP50S	22 × 50	P50	0.048	3.47
	5,600	EKMQ350VSN562MQ25S	25.4 × 25	Q25	0.089	2.0
	6,800	EKMQ350VSN682MQ25S	25.4 × 25	Q25	0.073	2.21
	8,200	EKMQ350VSN822MQ30S	25.4 × 30	Q30	0.061	2.49
	10,000	EKMQ350VSN103MQ35S	25.4 × 35	Q35	0.058	2.88
	12,000	EKMQ350VSN123MQ35S	25.4 × 35	Q35	0.048	3.15
	15,000	EKMQ350VSN153MQ40S	25.4 × 40	Q40	0.039	3.61
	18,000	EKMQ350VSN183MQ50S	25.4 × 50	Q50	0.032	4.14
	8,200	EKMQ350VSN822MR25S	30 × 25	R25	0.061	2.62
	10,000	EKMQ350VSN103MR25S	30 × 25	R25	0.058	2.9
	12,000	EKMQ350VSN123MR30S	30 × 30	R30	0.048	3.25
	15,000	EKMQ350VSN153MR35S	30 × 35	R35	0.039	3.78
	18,000	EKMQ350VSN183MR40S	30 × 40	R40	0.032	4.3
	22,000	EKMQ350VSN223MR50S	30 × 50	R50	0.026	5.0
	12,000	EKMQ350VSN123MA25S	35 × 25	A25	0.048	3.2
	15,000	EKMQ350VSN153MA25S	35 × 25	A25	0.039	3.6
	18,000	EKMQ350VSN183MA30S	35 × 30	A30	0.032	4.1
	22,000	EKMQ350VSN223MA35S	35 × 35	A35	0.026	4.64
	27,000	EKMQ350VSN273MA40S	35 × 40	A40	0.021	5.37
	33,000	EKMQ350VSN333MA50S	35 × 50	A50	0.018	6.0
50 Volts 63 Volts Surge	2,700	EKMQ500VSN272MP25S	22 × 25	P25	0.153	1.65
	3,300	EKMQ500VSN332MP30S	22 × 30	P30	0.126	1.92
	3,900	EKMQ500VSN392MP30S	22 × 30	P30	0.106	2.08
	4,700	EKMQ500VSN472MP35S	22 × 35	P35	0.089	2.43
	5,600	EKMQ500VSN562MP40S	22 × 40	P40	0.074	2.63
	6,800	EKMQ500VSN682MP50S	22 × 50	P50	0.061	3.05
	3,300	EKMQ500VSN332MQ25S	25.4 × 25	Q25	0.126	1.76
	3,900	EKMQ500VSN392MQ25S	25.4 × 25	Q25	0.106	2.04
	4,700	EKMQ500VSN472MQ30S	25.4 × 30	Q30	0.089	2.5
	5,600	EKMQ500VSN562MQ35S	25.4 × 35	Q35	0.074	2.61
	6,800	EKMQ500VSN682MQ40S	25.4 × 40	Q40	0.061	2.94
	8,200	EKMQ500VSN822MQ45S	25.4 × 45	Q45	0.051	3.6
	10,000	EKMQ500VSN103MQ50S	25.4 × 50	Q50	0.050	4.0
	4,700	EKMQ500VSN472MR25S	30 × 25	R25	0.089	2.29
	5,600	EKMQ500VSN562MR25S	30 × 25	R25	0.074	2.8
	6,800	EKMQ500VSN682MR30S	30 × 30	R30	0.061	3.3
	8,200	EKMQ500VSN822MR35S	30 × 35	R35	0.051	3.6
	10,000	EKMQ500VSN103MR40S	30 × 40	R40	0.050	4.0
	12,000	EKMQ500VSN123MR50S	30 × 50	R50	0.041	4.29
	6,800	EKMQ500VSN682MA25S	35 × 25	A25	0.061	2.77
	8,200	EKMQ500VSN822MA30S	35 × 30	A30	0.051	3.6
	10,000	EKMQ500VSN103MA30S	35 × 30	A30	0.050	4.0
	12,000	EKMQ500VSN123MA35S	35 × 35	A35	0.041	4.37
	15,000	EKMQ500VSN153MA40S	35 × 40	A40	0.033	4.5
	18,000	EKMQ500VSN183MA50S	35 × 50	A50	0.028	5.3
160 Volts 200 Volts Surge	470	EKMQ161VSN471MP25S	22 × 25	P25	0.529	1.4
	560	EKMQ161VSN561MP30S	22 × 30	P30	0.444	1.5
	680	EKMQ161VSN681MP30S	22 × 30	P30	0.366	1.7
	820	EKMQ161VSN821MP35S	22 × 35	P35	0.303	2.0
	1,000	EKMQ161VSN102MP40S	22 × 40	P40	0.249	2.2
	680	EKMQ161VSN681MQ25S	25.4 × 25	Q25	0.366	1.7
	820	EKMQ161VSN821MQ30S	25.4 × 30	Q30	0.303	2.0

†For construction options, refer to the part numbering system for descriptions and codes.
*** Refer to diagram of dimensions for detailed case size specifications.**

KMQ Series

Standard Voltage Ratings - Snap Mount

Rated Voltage (WVDC)	Capacitance (µF)	Global Part Number	Nominal Case Size* D×L (mm)	Case Size Code	Maximum ESR (Ω) at +20°C, 120Hz	Rated Ripple Current (A rms) at +105°C, 120Hz
160 Volts 200 Volts Surge	1,000	EKMQ161VSN102MQ35S	25.4 × 35	Q35	0.249	2.2
	1,200	EKMQ161VSN122MQ40S	25.4 × 40	Q40	0.207	2.3
	1,500	EKMQ161VSN152MQ45S	25.4 × 45	Q45	0.166	2.5
	1,800	EKMQ161VSN182MQ50S	25.4 × 50	Q50	0.138	2.7
	820	EKMQ161VSN821MR25S	30 × 25	R25	0.303	2.0
	1,000	EKMQ161VSN102MR25S	30 × 25	R25	0.249	2.2
	1,200	EKMQ161VSN122MR30S	30 × 30	R30	0.207	2.3
	1,500	EKMQ161VSN152MR35S	30 × 35	R35	0.166	2.5
	1,800	EKMQ161VSN182MR40S	30 × 40	R40	0.138	2.7
	2,200	EKMQ161VSN222MR45S	30 × 45	R45	0.113	2.9
	2,700	EKMQ161VSN272MR50S	30 × 50	R50	0.092	3.1
	1,200	EKMQ161VSN122MA25S	35 × 25	A25	0.207	2.3
	1,500	EKMQ161VSN152MA30S	35 × 30	A30	0.166	2.5
	1,800	EKMQ161VSN182MA30S	35 × 30	A30	0.138	2.7
	2,200	EKMQ161VSN222MA35S	35 × 35	A35	0.113	2.9
	2,700	EKMQ161VSN272MA40S	35 × 40	A40	0.092	3.1
	3,300	EKMQ161VSN332MA50S	35 × 50	A50	0.075	3.3
180 Volts 225 Volts Surge	390	EKMQ181VSN391MP25S	22 × 25	P25	0.638	1.3
	470	EKMQ181VSN471MP30S	22 × 30	P30	0.529	1.4
	560	EKMQ181VSN561MP30S	22 × 30	P30	0.444	1.5
	680	EKMQ181VSN681MP35S	22 × 35	P35	0.366	1.7
	820	EKMQ181VSN821MP40S	22 × 40	P40	0.303	2.0
	1,000	EKMQ181VSN102MP45S	22 × 45	P45	0.249	2.2
	560	EKMQ181VSN561MQ25S	25.4 × 25	Q25	0.444	1.5
	680	EKMQ181VSN681MQ30S	25.4 × 30	Q30	0.366	1.7
	820	EKMQ181VSN821MQ30S	25.4 × 30	Q30	0.303	2.0
	1,000	EKMQ181VSN102MQ40S	25.4 × 40	Q40	0.249	2.2
	1,200	EKMQ181VSN122MQ45S	25.4 × 45	Q45	0.207	2.3
	1,500	EKMQ181VSN152MQ50S	25.4 × 50	Q50	0.166	2.5
	820	EKMQ181VSN821MR25S	30 × 25	R25	0.303	2.0
	1,000	EKMQ181VSN102MR30S	30 × 30	R30	0.249	2.2
	1,200	EKMQ181VSN122MR35S	30 × 35	R35	0.207	2.3
	1,500	EKMQ181VSN152MR40S	30 × 40	R40	0.166	2.5
	1,800	EKMQ181VSN182MR45S	30 × 45	R45	0.138	2.7
	2,200	EKMQ181VSN222MR50S	30 × 50	R50	0.113	2.9
	1,000	EKMQ181VSN102MA25S	35 × 25	A25	0.249	2.2
	1,200	EKMQ181VSN122MA30S	35 × 30	A30	0.207	2.3
	1,500	EKMQ181VSN152MA30S	35 × 30	A30	0.166	2.5
	1,800	EKMQ181VSN182MA35S	35 × 35	A35	0.138	2.7
	2,200	EKMQ181VSN222MA40S	35 × 40	A40	0.113	2.9
	2,700	EKMQ181VSN272MA50S	35 × 50	A50	0.092	3.1
200 Volts 250 Volts Surge	390	EKMQ201VSN391MP25S	22 × 25	P25	0.638	1.31
	470	EKMQ201VSN471MP30S	22 × 30	P30	0.529	1.45
	560	EKMQ201VSN561MP30S	22 × 30	P30	0.444	1.67
	680	EKMQ201VSN681MP40S	22 × 40	P40	0.366	1.75
	820	EKMQ201VSN821MP45S	22 × 45	P45	0.303	2.04
	1,000	EKMQ201VSN102MP50S	22 × 50	P50	0.249	2.3
	560	EKMQ201VSN561MQ25S	25.4 × 25	Q25	0.444	1.67
	680	EKMQ201VSN681MQ30S	25.4 × 30	Q30	0.366	1.75
	820	EKMQ201VSN821MQ35S	25.4 × 35	Q35	0.303	2.04
	1,000	EKMQ201VSN102MQ45S	25.4 × 45	Q45	0.249	2.3
	1,200	EKMQ201VSN122MQ50S	25.4 × 50	Q50	0.207	2.65
	820	EKMQ201VSN821MR25S	30 × 25	R25	0.303	2.04
	1,000	EKMQ201VSN102MR30S	30 × 30	R30	0.249	2.3
	1,200	EKMQ201VSN122MR35S	30 × 35	R35	0.207	2.65

†For construction options, refer to the part numbering system for descriptions and codes.
*** Refer to diagram of dimensions for detailed case size specifications.**

Standard Voltage Ratings - Snap Mount

Rated Voltage (WVDC)	Capacitance (µF)	Global Part Number	Nominal Case Size* D×L (mm)	Case Size Code	Maximum ESR (Ω) at +20°C, 120Hz	Rated Ripple Current (A rms) at +105°C, 120Hz
200 Volts 250 Volts Surge	1,500	EKMQ201VSN152MR40S	30 × 40	R40	0.166	2.8
	1,800	EKMQ201VSN182MR45S	30 × 45	R45	0.138	3.08
	1,000	EKMQ201VSN102MA25S	35 × 25	A25	0.249	2.3
	1,200	EKMQ201VSN122MA30S	35 × 30	A30	0.207	2.65
	1,500	EKMQ201VSN152MA30S	35 × 30	A30	0.166	2.8
	1,800	EKMQ201VSN182MA40S	35 × 40	A40	0.138	3.08
	2,200	EKMQ201VSN222MA45S	35 × 45	A45	0.113	3.48
250 Volts 300 Volts Surge	220	EKMQ251VSN221MP25S	22 × 25	P25	1.13	1.0
	270	EKMQ251VSN271MP25S	22 × 25	P25	0.921	1.1
	330	EKMQ251VSN331MP30S	22 × 30	P30	0.754	1.2
	390	EKMQ251VSN391MP35S	22 × 35	P35	0.638	1.3
	470	EKMQ251VSN471MP40S	22 × 40	P40	0.529	1.4
	560	EKMQ251VSN561MP45S	22 × 45	P45	0.444	1.5
	680	EKMQ251VSN681MP50S	22 × 50	P50	0.366	1.7
	330	EKMQ251VSN331MQ25S	25.4 × 25	Q25	0.754	1.2
	390	EKMQ251VSN391MQ25S	25.4 × 25	Q25	0.638	1.3
	470	EKMQ251VSN471MQ30S	25.4 × 30	Q30	0.529	1.4
	560	EKMQ251VSN561MQ35S	25.4 × 35	Q35	0.444	1.5
	680	EKMQ251VSN681MQ40S	25.4 × 40	Q40	0.366	1.7
	820	EKMQ251VSN821MQ45S	25.4 × 45	Q45	0.303	2.0
	470	EKMQ251VSN471MR25S	30 × 25	R25	0.529	1.4
	560	EKMQ251VSN561MR25S	30 × 25	R25	0.444	1.5
	680	EKMQ251VSN681MR30S	30 × 30	R30	0.366	1.7
	820	EKMQ251VSN821MR35S	30 × 35	R35	0.303	2.0
	1,000	EKMQ251VSN102MR40S	30 × 40	R40	0.249	2.2
	1,200	EKMQ251VSN122MR45S	30 × 45	R45	0.207	2.3
	680	EKMQ251VSN681MA25S	35 × 25	A25	0.366	1.7
	820	EKMQ251VSN821MA30S	35 × 30	A30	0.303	2.0
	1,000	EKMQ251VSN102MA30S	35 × 30	A30	0.249	2.2
	1,200	EKMQ251VSN122MA35S	35 × 35	A35	0.207	2.3
	1,500	EKMQ251VSN152MA45S	35 × 45	A45	0.166	2.5
	1,800	EKMQ251VSN182MA50S	35 × 50	A50	0.138	2.7
315 Volts 365 Volts Surge	150	EKMQ3B1VSN151MP25S	22 × 25	P25	1.658	0.82
	180	EKMQ3B1VSN181MP30S	22 × 30	P30	1.382	0.9
	220	EKMQ3B1VSN221MP30S	22 × 30	P30	1.13	1.0
	270	EKMQ3B1VSN271MP35S	22 × 35	P35	0.921	1.1
	330	EKMQ3B1VSN331MP45S	22 × 45	P45	0.754	1.2
	390	EKMQ3B1VSN391MP45S	22 × 45	P45	0.638	1.3
	220	EKMQ3B1VSN221MQ25S	25.4 × 25	Q25	1.13	1.0
	270	EKMQ3B1VSN271MQ30S	25.4 × 30	Q30	0.921	1.1
	330	EKMQ3B1VSN331MQ35S	25.4 × 35	Q35	0.754	1.2
	390	EKMQ3B1VSN391MQ40S	25.4 × 40	Q40	0.638	1.3
	470	EKMQ3B1VSN471MQ45S	25.4 × 45	Q45	0.529	1.4
	560	EKMQ3B1VSN561MQ50S	25.4 × 50	Q50	0.444	1.5
	330	EKMQ3B1VSN331MR25S	30 × 25	R25	0.754	1.2
	390	EKMQ3B1VSN391MR30S	30 × 30	R30	0.638	1.3
	470	EKMQ3B1VSN471MR35S	30 × 35	R35	0.529	1.4
	560	EKMQ3B1VSN561MR40S	30 × 40	R40	0.444	1.5
	680	EKMQ3B1VSN681MR45S	30 × 45	R45	0.366	1.7
	820	EKMQ3B1VSN821MR50S	30 × 50	R50	0.303	2.0
	390	EKMQ3B1VSN391MA25S	35 × 25	A25	0.638	1.3
	470	EKMQ3B1VSN471MA25S	35 × 25	A25	0.529	1.4
	560	EKMQ3B1VSN561MA30S	35 × 30	A30	0.444	1.5
	680	EKMQ3B1VSN681MA35S	35 × 35	A35	0.366	1.7
	820	EKMQ3B1VSN821MA40S	35 × 40	A40	0.303	2.0
	1,000	EKMQ3B1VSN102MA45S	35 × 45	A45	0.249	2.3

†For construction options, refer to the part numbering system for descriptions and codes.
*** Refer to diagram of dimensions for detailed case size specifications.**

KMQ Series

Standard Voltage Ratings - Snap Mount

Rated Voltage (WVDC)	Capacitance (µF)	Global Part Number	Nominal Case Size* D×L (mm)	Case Size Code	Maximum ESR (Ω) at +20°C, 120Hz	Rated Ripple Current (A rms) at +105°C, 120Hz
350 Volts 400 Volts Surge	120	EKMQ351VSN121MP25S	22 × 25	P25	2.072	0.75
	150	EKMQ351VSN151MP30S	22 × 30	P30	1.658	0.82
	180	EKMQ351VSN181MP30S	22 × 30	P30	1.382	0.9
	220	EKMQ351VSN221MP35S	22 × 35	P35	1.13	1.0
	270	EKMQ351VSN271MP40S	22 × 40	P40	0.921	1.1
	330	EKMQ351VSN331MP45S	22 × 45	P45	0.754	1.2
	180	EKMQ351VSN181MQ25S	25.4 × 25	Q25	1.382	0.9
	220	EKMQ351VSN221MQ30S	25.4 × 30	Q30	1.13	1.0
	270	EKMQ351VSN271MQ30S	25.4 × 30	Q30	0.921	1.1
	330	EKMQ351VSN331MQ40S	25.4 × 40	Q40	0.754	1.2
	390	EKMQ351VSN391MQ45S	25.4 × 45	Q45	0.638	1.3
	470	EKMQ351VSN471MQ50S	25.4 × 50	Q50	0.529	1.4
	270	EKMQ351VSN271MR25S	30 × 25	R25	0.921	1.1
	330	EKMQ351VSN331MR30S	30 × 30	R30	0.754	1.2
	390	EKMQ351VSN391MR35S	30 × 35	R35	0.638	1.3
	470	EKMQ351VSN471MR35S	30 × 35	R35	0.529	1.4
	560	EKMQ351VSN561MR45S	30 × 45	R45	0.444	1.5
	680	EKMQ351VSN681MR50S	30 × 50	R50	0.366	1.7
	470	EKMQ351VSN471MA30S	35 × 30	A30	0.529	1.4
	560	EKMQ351VSN561MA35S	35 × 35	A35	0.444	1.5
	680	EKMQ351VSN681MA40S	35 × 40	A40	0.366	1.7
	820	EKMQ351VSN821MA45S	35 × 45	A45	0.303	1.9
400 Volts 450 Volts Surge	100	EKMQ401VSN101MP25S	22 × 25	P25	2.487	0.7
	120	EKMQ401VSN121MP30S	22 × 30	P30	2.072	0.75
	150	EKMQ401VSN151MP30S	22 × 30	P30	1.658	0.88
	180	EKMQ401VSN181MP35S	22 × 35	P35	1.382	0.95
	220	EKMQ401VSN221MP45S	22 × 45	P45	1.13	1.1
	270	EKMQ401VSN271MP50S	22 × 50	P50	0.921	1.22
	150	EKMQ401VSN151MQ25S	25.4 × 25	Q25	1.658	0.88
	180	EKMQ401VSN181MQ30S	25.4 × 30	Q30	1.382	0.95
	220	EKMQ401VSN221MQ35S	25.4 × 35	Q35	1.13	1.1
	270	EKMQ401VSN271MQ40S	25.4 × 40	Q40	0.921	1.22
	330	EKMQ401VSN331MQ45S	25.4 × 45	Q45	0.754	1.44
	390	EKMQ401VSN391MQ50S	25.4 × 50	Q50	0.638	1.55
	220	EKMQ401VSN221MR25S	30 × 25	R25	1.13	1.1
	270	EKMQ401VSN271MR30S	30 × 30	R30	0.921	1.22
	330	EKMQ401VSN331MR35S	30 × 35	R35	0.754	1.44
	390	EKMQ401VSN391MR40S	30 × 40	R40	0.638	1.55
	470	EKMQ401VSN471MR45S	30 × 45	R45	0.529	1.68
	560	EKMQ401VSN561MR50S	30 × 50	R50	0.444	1.9
	270	EKMQ401VSN271MA25S	35 × 25	A25	0.921	1.22
	330	EKMQ401VSN331MA30S	35 × 30	A30	0.754	1.44
	390	EKMQ401VSN391MA30S	35 × 30	A30	0.638	1.55
	470	EKMQ401VSN471MA35S	35 × 35	A35	0.529	1.68
	560	EKMQ401VSN561MA40S	35 × 40	A40	0.444	1.9
	680	EKMQ401VSN681MA45S	35 × 45	A45	0.366	2.12
420 Volts 470 Volts Surge	82	EKMQ421VSN820MP25S	22 × 25	P25	4.043	0.64
	100	EKMQ421VSN101MP25S	22 × 25	P25	3.315	0.66
	120	EKMQ421VSN121MP30S	22 × 30	P30	2.763	0.81
	150	EKMQ421VSN151MP35S	22 × 35	P35	2.21	0.84
	180	EKMQ421VSN181MP40S	22 × 40	P40	1.842	0.91
	220	EKMQ421VSN221MP45S	22 × 45	P45	1.507	1.05
	100	EKMQ421VSN101MQ25S	25.4 × 25	Q25	4.043	0.66
	120	EKMQ421VSN121MQ25S	25.4 × 25	Q25	2.763	0.81
	150	EKMQ421VSN151MQ30S	25.4 × 30	Q30	2.21	0.84
	180	EKMQ421VSN181MQ30S	25.4 × 30	Q30	1.842	0.91
	220	EKMQ421VSN221MQ35S	25.4 × 35	Q35	1.507	1.05

†For construction options, refer to the part numbering system for descriptions and codes.
*** Refer to diagram of dimensions for detailed case size specifications.**

KMQ Series

Standard Voltage Ratings - Snap Mount

Rated Voltage (WVDC)	Capacitance (µF)	Global Part Number	Nominal Case Size* D×L (mm)	Case Size Code	Maximum ESR (Ω) at +20°C, 120Hz	Rated Ripple Current (A rms) at +105°C, 120Hz
420 Volts 470 Volts Surge	270	EKMQ421VSN271MQ40S	25.4 × 40	Q40	1.228	1.25
	330	EKMQ421VSN331MQ50S	25.4 × 50	Q50	1.005	1.42
	150	EKMQ421VSN151MR25S	30 × 25	R25	2.21	0.84
	180	EKMQ421VSN181MR25S	30 × 25	R25	1.842	0.91
	220	EKMQ421VSN221MR30S	30 × 30	R30	1.507	1.05
	270	EKMQ421VSN271MR30S	30 × 30	R30	1.228	1.25
	330	EKMQ421VSN331MR35S	30 × 35	R35	1.005	1.42
	390	EKMQ421VSN391MR40S	30 × 40	R40	0.85	1.61
	470	EKMQ421VSN471MR45S	30 × 45	R45	0.705	1.86
	220	EKMQ421VSN221MA25S	35 × 25	A25	1.507	1.05
	270	EKMQ421VSN271MA25S	35 × 25	A25	1.228	1.25
	330	EKMQ421VSN331MA30S	35 × 30	A30	1.005	1.42
	390	EKMQ421VSN391MA35S	35 × 35	A35	0.85	1.61
	470	EKMQ421VSN471MA40S	35 × 40	A40	0.705	1.86
	560	EKMQ421VSN561MA45S	35 × 45	A45	0.592	2.1
	680	EKMQ421VSN681MA50S	35 × 50	A50	0.488	2.2
450 Volts 500 Volts Surge	68	EKMQ451VSN680MP25S	22 × 25	P25	4.876	0.5
	82	EKMQ451VSN820MP30S	22 × 30	P30	4.043	0.56
	100	EKMQ451VSN101MP30S	22 × 30	P30	3.315	0.64
	120	EKMQ451VSN121MP35S	22 × 35	P35	2.763	0.72
	150	EKMQ451VSN151MP40S	22 × 40	P40	2.21	0.79
	180	EKMQ451VSN181MP45S	22 × 45	P45	1.842	0.87
	100	EKMQ451VSN101MQ25S	25.4 × 25	Q25	3.316	0.64
	120	EKMQ451VSN121MQ30S	25.4 × 30	Q30	2.763	0.72
	150	EKMQ451VSN151MQ30S	25.4 × 30	Q30	2.21	0.79
	180	EKMQ451VSN181MQ40S	25.4 × 40	Q40	1.842	0.87
	220	EKMQ451VSN221MQ45S	25.4 × 45	Q45	1.507	1.0
	270	EKMQ451VSN271MQ50S	25.4 × 50	Q50	1.228	1.19
	150	EKMQ451VSN151MR25S	30 × 25	R25	2.21	0.79
	180	EKMQ451VSN181MR30S	30 × 30	R30	1.842	0.87
	220	EKMQ451VSN221MR30S	30 × 30	R30	1.507	1.0
	270	EKMQ451VSN271MR40S	30 × 40	R40	1.228	1.19
	330	EKMQ451VSN331MR45S	30 × 45	R45	1.005	1.38
	390	EKMQ451VSN391MR50S	30 × 50	R50	0.85	1.55
	220	EKMQ451VSN221MA25S	35 × 25	A25	1.507	1.0
	270	EKMQ451VSN271MA30S	35 × 30	A30	1.228	1.19
	330	EKMQ451VSN331MA35S	35 × 35	A35	1.005	1.38
	390	EKMQ451VSN391MA40S	35 × 40	A40	0.85	1.55
	470	EKMQ451VSN471MA45S	35 × 45	A45	0.705	1.74
	560	EKMQ451VSN561MA50S	35 × 50	A50	0.592	1.9

†For construction options, refer to the part numbering system for descriptions and codes.
*** Refer to diagram of dimensions for detailed case size specifications.**