

- Snap Mount
- Downsize
- High Voltage
- High Ripple
- RoHS Compliant
- +105°C Maximum Temperature



The KMM series is a high voltage, long life snap-in capacitor series that offers downsized versions of the KMH series. The KMM capacitors have smaller case sizes and an extended rated lifetime compared to the KMH capacitors. These characteristics plus high ripple current capability make the KMM capacitors ideal for use in power supply filter circuits. The KMM capacitors are available in 2 or 4-pin snap-in styles and 4-pin straight terminals. The KMM series capacitors are RoHS compliant offering Pb-free construction.

The standard KMM 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 or 4-pin snap-in; optional 4-pin straight terminals.
- Capacitance range: 39 to 3,300µF.
- Voltage range: 160 to 450VDC.
- Category temperature range: -25°C to +105°C.
- Leakage current: $3\sqrt{CV}$ (µA) maximum after 5 minutes at +20°C.
- Standard capacitance tolerance: ±20%
- Nominal case size (D × L): 20 × 20mm to 35 × 60mm.
- Rated lifetime: 2,000 to 3,000 hours at +105°C with the rated ripple current applied, depending on case size.

KMM Specifications - Snap Mount

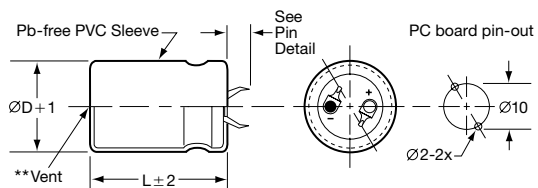
Item	Characteristics																																		
Category Temperature Range	− 25 to +105°C																																		
Rated Voltage Range	160 to 450VDC																																		
Capacitance Range	39 to 3,300μF																																		
Capacitance Tolerance	± 20% (M) at +20°C, 120Hz																																		
Leakage Current	I ≤ 3√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 <table border="1"><tr><td>Rated Voltage (V)</td><td>160 - 400</td><td>420 - 450</td></tr><tr><td>Tan δ (DF) Max.</td><td>0.15</td><td>0.20</td></tr></table>				Rated Voltage (V)	160 - 400	420 - 450	Tan δ (DF) Max.	0.15	0.20																									
Rated Voltage (V)	160 - 400	420 - 450																																	
Tan δ (DF) Max.	0.15	0.20																																	
Low Temperature Characteristics	At 120Hz, impedance (Z) ratio between the − 25°C value and +20°C value shall not exceed the values given below. <table border="1"><tr><td>Rated Voltage (V)</td><td>160 - 400</td><td>420 - 450</td></tr><tr><td>Z (−25°C) / Z (+20°C)</td><td>4</td><td>8</td></tr></table>				Rated Voltage (V)	160 - 400	420 - 450	Z (−25°C) / Z (+20°C)	4	8																									
Rated Voltage (V)	160 - 400	420 - 450																																	
Z (−25°C) / Z (+20°C)	4	8																																	
Rated Ripple Current Multipliers	Ambient Temperature (°C) <table border="1"><tr><td>+45°C</td><td>+60°C</td><td>+70°C</td><td>+85°C</td><td>+105°C</td></tr><tr><td>2.64</td><td>2.23</td><td>2.12</td><td>1.73</td><td>1.00</td></tr></table> Frequency (Hz) <table border="1"><tr><td>DC Rated Voltage</td><td>50Hz</td><td>120Hz</td><td>300Hz</td><td>1kHz</td><td>10kHz</td><td>50kHz</td></tr><tr><td>160 - 250V</td><td>0.81</td><td>1.00</td><td>1.17</td><td>1.32</td><td>1.45</td><td>1.50</td></tr><tr><td>315 - 450V</td><td>0.77</td><td>1.00</td><td>1.16</td><td>1.30</td><td>1.41</td><td>1.43</td></tr></table>				+45°C	+60°C	+70°C	+85°C	+105°C	2.64	2.23	2.12	1.73	1.00	DC Rated Voltage	50Hz	120Hz	300Hz	1kHz	10kHz	50kHz	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
+45°C	+60°C	+70°C	+85°C	+105°C																															
2.64	2.23	2.12	1.73	1.00																															
DC Rated Voltage	50Hz	120Hz	300Hz	1kHz	10kHz	50kHz																													
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 the specified test time 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. <table border="1"><tr><td>Case Diameter</td><td>Ø20mm</td><td>Ø22mm & Above</td></tr><tr><td>Test Time</td><td>2,000 Hours</td><td>3,000 Hours</td></tr></table> Capacitance change: ≤ ± 20% of initial measured value Tan δ (DF) : ≤ 200% of initial specified value Leakage current : ≤ initial specified value				Case Diameter	Ø20mm	Ø22mm & Above	Test Time	2,000 Hours	3,000 Hours																									
Case Diameter	Ø20mm	Ø22mm & Above																																	
Test Time	2,000 Hours	3,000 Hours																																	
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

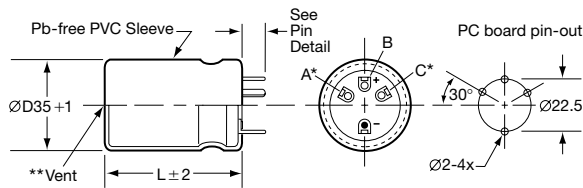
Snap Mount

Unit: mm

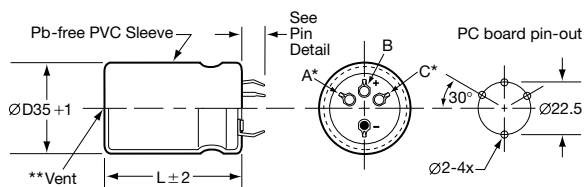
Types VSN $\varnothing 20\sim\varnothing 35$; VNN $\varnothing 22\sim\varnothing 35$



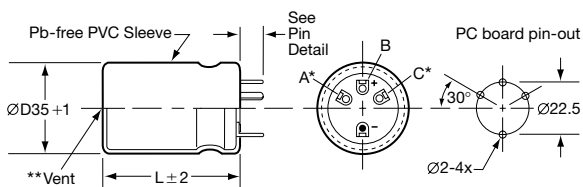
Type VRD $\varnothing 35$



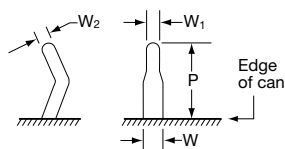
Type VND $\varnothing 35$



Type VQD $\varnothing 35$



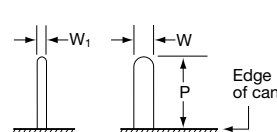
VS & VN Pin Dimensions



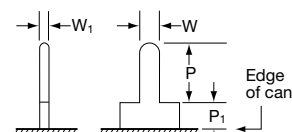
Type	P	W	W ₁	W ₂
VSN $\varnothing 20\sim\varnothing 30$	4.0 ± 0.5	1.5 ± 0.2	1.0	1.0
VSN $\varnothing 35$	3.5 ± 0.5			
VNN $\varnothing 22\sim\varnothing 35$	5.8 ± 1.0			
VND $\varnothing 35$	5.8 ± 1.0			

VR & VQ Pin Dimensions

VR Straight Pin



VQ Standoff Pin



Type	P	P ₁	W	W ₁
Straight Pin (VR)	5.50 ± 1.0	—	1.5 ± 0.1	0.7
Standoff Pin (VQ)	3.75 ± 1.0	2.0 max.		

CAUTION:

*Use the blank terminals for mechanical support only. The blank terminals must not be connected to a solder trace on the PC board, but be electrically isolated from the negative or positive terminal.

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

Part Numbering System for KMM 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.
M = Pb-free PVC sleeve without end disk.
T = Pb-free PVC sleeve with end disk.
- 8 Case Size.** Fields 15, 16 and 17.
The single letter diameter code is inserted in field 15.
N = Ø20mm
P = Ø22mm
Q = Ø25.4mm
R = Ø30mm
A = Ø35mm

The double digit length code is inserted in fields 16 and 17.
20 = 20mm
25 = 25mm
30 = 30mm
35 = 35mm
40 = 40mm
45 = 45mm
50 = 50mm
60 = 60mm
- 7 Capacitance Tolerance.** Field 14.
M = $\pm 20\%$
- 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 10 μ F or more. R indicates the decimal point for capacitance less than 10 μ F (e.g. 3R3 = 3.3 μ F; 330 = 33 μ F; 331 = 330 μ F; 332 = 3,300 μ F; 333 = 33,000 μ F).
- 5 Dummy Terminals.** Field 10.
N = No dummy terminals.
D = 2 dummy terminals.
- 4 Terminal Type.** Fields 8 and 9.
VS = Snap-in pins, 4.0mm in length, 3.5mm for Ø35 only.
VN = Snap-in pins, 5.8mm in length.
VR = Straight pins.
VQ = Straight standoff 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. 4R5 = 4.5VDC; 450 = 45VDC; 451 = 450VDC).
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).

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	180	EKMM161VSN181MN20T	20 × 20	N20	1.381	0.68
	220	EKMM161VSN221MN25T	20 × 25	N25	1.13	0.85
	270	EKMM161VSN271MN25T	20 × 25	N25	0.921	1.1
	330	EKMM161VSN331MN30T	20 × 30	N30	0.753	1.2
	390	EKMM161VSN391MN30T	20 × 30	N30	0.638	1.3
	470	EKMM161VSN471MN35T	20 × 35	N35	0.529	1.34
	560	EKMM161VSN561MN40T	20 × 40	N40	0.444	1.5
	680	EKMM161VSN681MN45T	20 × 45	N45	0.366	1.7
	220	EKMM161VSN221MP20T	22 × 20	P20	1.13	0.81
	330	EKMM161VSN331MP25T	22 × 25	P25	0.753	1.2
	390	EKMM161VSN391MP30T	22 × 30	P30	0.638	1.3
	470	EKMM161VSN471MP30T	22 × 30	P30	0.529	1.55
	560	EKMM161VSN561MP35T	22 × 35	P35	0.444	1.67
	680	EKMM161VSN681MP40T	22 × 40	P40	0.366	1.82
	820	EKMM161VSN821MP45T	22 × 45	P45	0.303	2.04
	1,000	EKMM161VSN102MP50T	22 × 50	P50	0.249	2.25
	270	EKMM161VSN271MQ20T	25.4 × 20	Q20	0.921	0.98
	330	EKMM161VSN331MQ20T	25.4 × 20	Q20	0.753	1.02
	390	EKMM161VSN391MQ25T	25.4 × 25	Q25	0.638	1.26
	470	EKMM161VSN471MQ25T	25.4 × 25	Q25	0.529	1.55
	560	EKMM161VSN561MQ30T	25.4 × 30	Q30	0.444	1.67
	680	EKMM161VSN681MQ30T	25.4 × 30	Q30	0.366	1.82
	820	EKMM161VSN821MQ35T	25.4 × 35	Q35	0.303	2.04
	1,000	EKMM161VSN102MQ40T	25.4 × 40	Q40	0.249	2.25
	1,200	EKMM161VSN122MQ45T	25.4 × 45	Q45	0.207	2.49
	1,500	EKMM161VSN152MQ60T	25.4 × 60	Q60	0.166	2.97
	390	EKMM161VSN391MR20T	30 × 20	R20	0.638	1.25
	470	EKMM161VSN471MR20T	30 × 20	R20	0.529	1.3
	560	EKMM161VSN561MR25T	30 × 25	R25	0.444	1.67
	680	EKMM161VSN681MR25T	30 × 25	R25	0.366	1.82
	820	EKMM161VSN821MR30T	30 × 30	R30	0.303	2.04
	1,000	EKMM161VSN102MR30T	30 × 30	R30	0.249	2.25
	1,200	EKMM161VSN122MR35T	30 × 35	R35	0.207	2.49
	1,500	EKMM161VSN152MR40T	30 × 40	R40	0.166	2.84
	1,800	EKMM161VSN182MR45T	30 × 45	R45	0.138	3.32
	2,200	EKMM161VSN222MR60T	30 × 60	R60	0.113	3.86
	560	EKMM161VSN561MA20T	35 × 20	A20	0.444	1.46
	680	EKMM161VSN681MA20T	35 × 20	A20	0.366	1.51
	820	EKMM161VSN821MA25T	35 × 25	A25	0.303	2.04
	1,000	EKMM161VSN102MA25T	35 × 25	A25	0.249	2.25
	1,200	EKMM161VSN122MA30T	35 × 30	A30	0.207	2.49
	1,500	EKMM161VSN152MA35T	35 × 35	A35	0.166	2.84
	1,800	EKMM161VSN182MA35T	35 × 35	A35	0.138	3.0
	2,200	EKMM161VSN222MA45T	35 × 45	A45	0.113	3.5
	2,700	EKMM161VSN272MA50T	35 × 50	A50	0.092	4.0
	3,300	EKMM161VSN332MA60T	35 × 60	A60	0.075	4.63

180 Volts 225 Volts Surge	150	EKMM181VSN151MP20T	20 × 20	N20	1.658	0.62
	180	EKMM181VSN181MN25T	20 × 25	N25	1.381	0.77
	220	EKMM181VSN221MN25T	20 × 25	N25	1.13	1.0
	270	EKMM181VSN271MN30T	20 × 30	N30	0.921	1.1
	330	EKMM181VSN331MN30T	20 × 30	N30	0.753	1.2
	390	EKMM181VSN391MN35T	20 × 35	N35	0.638	1.3
	470	EKMM181VSN471MN40T	20 × 40	N40	0.529	1.4
	560	EKMM181VSN561MN45T	20 × 45	N45	0.444	1.55
	680	EKMM181VSN681MN50T	20 × 50	N50	0.366	1.75
	180	EKMM181VSN181MP20T	22 × 20	P20	1.381	0.8
	270	EKMM181VSN271MP25T	22 × 25	P25	0.921	1.0
	330	EKMM181VSN331MP30T	22 × 30	P30	0.753	1.2

† For terminal and 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 (VWDC)	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
----------------------	------------------	---------------------	-------------------------------	----------------	---------------------------------	---

180 Volts 225 Volts Surge	390	EKMM181VSN391MP30T	22 × 30	P30	0.638	1.35
	470	EKMM181VSN471MP35T	22 × 35	P35	0.529	1.5
	560	EKMM181VSN561MP40T	22 × 40	P40	0.444	1.67
	680	EKMM181VSN681MP45T	22 × 45	P45	0.366	1.78
	820	EKMM181VSN821MP50T	22 × 50	P50	0.303	2.04
	220	EKMM181VSN221MQ20T	25.4 × 20	Q20	1.13	0.9
	270	EKMM181VSN271MQ20T	25.4 × 20	Q20	0.921	0.95
	330	EKMM181VSN331MQ25T	25.4 × 25	Q25	0.753	1.16
	390	EKMM181VSN391MQ25T	25.4 × 25	Q25	0.638	1.35
	470	EKMM181VSN471MQ30T	25.4 × 30	Q30	0.529	1.5
	560	EKMM181VSN561MQ30T	25.4 × 30	Q30	0.444	1.67
	680	EKMM181VSN681MQ35T	25.4 × 35	Q35	0.366	1.78
	820	EKMM181VSN821MQ40T	25.4 × 40	Q40	0.303	2.04
	1,000	EKMM181VSN102MQ45T	25.4 × 45	Q45	0.249	2.3
	1,200	EKMM181VSN122MQ50T	25.4 × 50	Q50	0.207	2.55
	330	EKMM181VSN331MR20T	30 × 20	R20	0.753	1.15
	390	EKMM181VSN391MR20T	30 × 20	R20	0.638	1.2
	470	EKMM181VSN471MR25T	30 × 25	R25	0.529	1.5
	560	EKMM181VSN561MR25T	30 × 25	R25	0.444	1.67
	680	EKMM181VSN681MR30T	30 × 30	R30	0.366	1.78
	820	EKMM181VSN821MR30T	30 × 30	R30	0.303	2.04
	1,000	EKMM181VSN102MR35T	30 × 35	R35	0.249	2.3
	1,200	EKMM181VSN122MR40T	30 × 40	R40	0.207	2.55
	1,500	EKMM181VSN152MR45T	30 × 45	R45	0.166	2.9
	1,800	EKMM181VSN182MR60T	30 × 60	R60	0.138	3.49
	470	EKMM181VSN471MA20T	35 × 20	A20	0.529	1.36
	560	EKMM181VSN561MA20T	35 × 20	A20	0.444	1.43
	680	EKMM181VSN681MA25T	35 × 25	A25	0.366	1.83
	820	EKMM181VSN821MA25T	35 × 25	A25	0.303	2.04
	1,000	EKMM181VSN102MA30T	35 × 30	A30	0.249	2.3
	1,200	EKMM181VSN122MA30T	35 × 30	A30	0.207	2.55
	1,500	EKMM181VSN152MA35T	35 × 35	A35	0.166	2.9
	1,800	EKMM181VSN182MA40T	35 × 40	A40	0.138	3.3
	2,200	EKMM181VSN222MA50T	35 × 50	A50	0.113	3.65
	2,700	EKMM181VSN272MA60T	35 × 60	A60	0.092	4.19

200 Volts 250 Volts Surge	120	EKMM201VSN121MN20T	20 × 20	N20	2.072	0.56
	150	EKMM201VSN151MN25T	20 × 25	N25	1.658	0.71
	180	EKMM201VSN181MN25T	20 × 25	N25	1.381	0.77
	220	EKMM201VSN221MN25T	20 × 25	N25	1.13	1.0
	270	EKMM201VSN271MN30T	20 × 30	N30	0.921	1.1
	330	EKMM201VSN331MN35T	20 × 35	N35	0.753	1.2
	390	EKMM201VSN391MN40T	20 × 40	N40	0.638	1.31
	470	EKMM201VSN471MN45T	20 × 45	N45	0.529	1.45
	560	EKMM201VSN561MN50T	20 × 50	N50	0.444	1.58
	150	EKMM201VSN151MP20T	22 × 20	P20	1.658	0.73
	180	EKMM201VSN181MP20T	22 × 20	P20	1.381	0.8
	270	EKMM201VSN271MP25T	22 × 25	P25	0.921	1.1
	330	EKMM201VSN331MP30T	22 × 30	P30	0.753	1.25
	390	EKMM201VSN391MP30T	22 × 30	P30	0.638	1.35
	470	EKMM201VSN471MP35T	22 × 35	P35	0.529	1.5
	560	EKMM201VSN561MP40T	22 × 40	P40	0.444	1.67
	680	EKMM201VSN681MP45T	22 × 45	P45	0.366	1.78
	220	EKMM201VSN221MQ20T	25.4 × 20	Q20	1.13	0.85
	330	EKMM201VSN331MQ25T	25.4 × 25	Q25	0.753	1.25
	390	EKMM201VSN391MQ25T	25.4 × 25	Q25	0.638	1.35
	470	EKMM201VSN471MQ30T	25.4 × 30	Q30	0.529	1.5
	560	EKMM201VSN561MQ35T	25.4 × 35	Q35	0.444	1.67
	680	EKMM201VSN681MQ40T	25.4 × 40	Q40	0.366	1.78

†For terminal and 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	820	EKMM201VSN821MQ45T	25.4 × 45	Q45	0.303	2.04
	1,000	EKMM201VSN102MQ50T	25.4 × 50	Q50	0.249	2.3
	1,200	EKMM201VSN122MQ60T	25.4 × 60	Q60	0.207	2.66
	270	EKMM201VSN271MR20T	30 × 20	R20	0.921	1.05
	330	EKMM201VSN331MR20T	30 × 20	R20	0.753	1.1
	470	EKMM201VSN471MR25T	30 × 25	R25	0.529	1.5
	560	EKMM201VSN561MR25T	30 × 25	R25	0.444	1.67
	680	EKMM201VSN681MR30T	30 × 30	R30	0.366	1.78
	820	EKMM201VSN821MR35T	30 × 35	R35	0.303	2.04
	1,000	EKMM201VSN102MR40T	30 × 40	R40	0.249	2.3
	1,200	EKMM201VSN122MR45T	30 × 45	R45	0.207	2.65
	1,500	EKMM201VSN152MR50T	30 × 50	R50	0.166	3.08
	1,800	EKMM201VSN182MR60T	30 × 60	R60	0.138	3.49
	390	EKMM201VSN391MA20T	35 × 20	A20	0.638	1.3
	470	EKMM201VSN471MA20T	35 × 20	A20	0.529	1.41
	680	EKMM201VSN681MA25T	35 × 25	A25	0.366	1.78
	820	EKMM201VSN821MA30T	35 × 30	A30	0.303	2.04
	1,000	EKMM201VSN102MA30T	35 × 30	A30	0.249	2.3
	1,200	EKMM201VSN122MA35T	35 × 35	A35	0.207	2.65
	1,500	EKMM201VSN152MA40T	35 × 40	A40	0.166	3.08
	1,800	EKMM201VSN182MA45T	35 × 45	A45	0.138	3.48
	2,200	EKMM201VSN222MA60T	35 × 60	A60	0.113	3.78

220 Volts 275 Volts Surge	120	EKMM221VSN121MN20T	20 × 20	N20	2.072	0.56
	150	EKMM221VSN151MN25T	20 × 25	N25	1.658	0.73
	180	EKMM221VSN181MN25T	20 × 25	N25	1.381	0.9
	220	EKMM221VSN221MN30T	20 × 30	N30	1.13	1.0
	270	EKMM221VSN271MN35T	20 × 35	N35	0.921	1.15
	330	EKMM221VSN331MN40T	20 × 40	N40	0.753	1.25
	390	EKMM221VSN391MN45T	20 × 45	N45	0.638	1.4
	470	EKMM221VSN471MN50T	20 × 50	N50	0.529	1.51
	150	EKMM221VSN151MP20T	22 × 20	P20	1.658	0.67
	220	EKMM221VSN221MP25T	22 × 25	P25	1.13	1.0
	270	EKMM221VSN271MP30T	22 × 30	P30	0.921	1.15
	330	EKMM221VSN331MP35T	22 × 35	P35	0.753	1.25
	390	EKMM221VSN391MP35T	22 × 35	P35	0.638	1.4
	470	EKMM221VSN471MP40T	22 × 40	P40	0.529	1.51
	560	EKMM221VSN561MP45T	22 × 45	P45	0.444	1.7
	180	EKMM221VSN181MQ20T	25.4 × 20	Q20	1.381	0.76
	220	EKMM221VSN221MQ20T	25.4 × 20	Q20	1.13	0.84
	270	EKMM221VSN271MQ25T	25.4 × 25	Q25	0.921	1.08
	330	EKMM221VSN331MQ25T	25.4 × 25	Q25	0.753	1.25
	390	EKMM221VSN391MQ30T	25.4 × 30	Q30	0.638	1.4
	470	EKMM221VSN471MQ35T	25.4 × 35	Q35	0.529	1.54
	560	EKMM221VSN561MQ40T	25.4 × 40	Q40	0.444	1.72
	680	EKMM221VSN681MQ45T	25.4 × 45	Q45	0.366	1.94
	820	EKMM221VSN821MQ50T	25.4 × 50	Q50	0.303	2.18
	1,000	EKMM221VSN102MQ60T	25.4 × 60	Q60	0.249	2.54
	270	EKMM221VSN271MR20T	30 × 20	R20	0.921	0.98
	390	EKMM221VSN391MR25T	30 × 25	R25	0.638	1.36
	470	EKMM221VSN471MR25T	30 × 25	R25	0.529	1.5
	560	EKMM221VSN561MR30T	30 × 30	R30	0.444	1.7
	680	EKMM221VSN681MR35T	30 × 35	R35	0.366	1.93
	820	EKMM221VSN821MR40T	30 × 40	R40	0.303	2.19
	1,000	EKMM221VSN102MR45T	30 × 45	R45	0.249	2.5
	1,200	EKMM221VSN122MR50T	30 × 50	R50	0.207	2.81
	1,500	EKMM221VSN152MR60T	30 × 60	R60	0.166	3.3
	330	EKMM221VSN331MA20T	35 × 20	A20	0.753	1.13
	390	EKMM221VSN391MA20T	35 × 20	A20	0.638	1.23

† For terminal and 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
220 Volts 275 Volts Surge	560	EKMM221VSN561MA25T	35 × 25	A25	0.444	1.71
	680	EKMM221VSN681MA25T	35 × 25	A25	0.366	1.89
	820	EKMM221VSN821MA30T	35 × 30	A30	0.303	2.16
	1,000	EKMM221VSN102MA35T	35 × 35	A35	0.249	2.44
	1,200	EKMM221VSN122MA40T	35 × 40	A40	0.207	2.79
	1,500	EKMM221VSN152MA45T	35 × 45	A45	0.166	3.22
	1,800	EKMM221VSN182MA50T	35 × 50	A50	0.138	3.63
	2,200	EKMM221VSN222MA60T	35 × 60	A60	0.113	4.23
250 Volts 300 Volts Surge	100	EKMM251VSN101MN20T	20 × 20	N20	2.486	0.51
	120	EKMM251VSN121MN25T	20 × 25	N25	2.072	0.58
	150	EKMM251VSN151MN25T	20 × 25	N25	1.658	0.79
	180	EKMM251VSN181MN30T	20 × 30	N30	1.381	0.9
	220	EKMM251VSN221MN30T	20 × 30	N30	1.13	1.0
	270	EKMM251VSN271MN35T	20 × 35	N35	0.921	1.1
	330	EKMM251VSN331MN40T	20 × 40	N40	0.753	1.2
	390	EKMM251VSN391MN50T	20 × 50	N50	0.638	1.45
	120	EKMM251VSN121MP20T	22 × 20	P20	2.072	0.6
	180	EKMM251VSN181MP25T	22 × 25	P25	1.381	0.78
	220	EKMM251VSN221MP30T	22 × 30	P30	1.13	1.0
	270	EKMM251VSN271MP30T	22 × 30	P30	0.921	1.18
	330	EKMM251VSN331MP35T	22 × 35	P35	0.753	1.3
	390	EKMM251VSN391MP40T	22 × 40	P40	0.638	1.49
	470	EKMM251VSN471MP45T	22 × 45	P45	0.529	1.65
	560	EKMM251VSN561MP50T	22 × 50	P50	0.444	1.67
	150	EKMM251VSN151MQ20T	25.4 × 20	Q20	1.658	0.74
	180	EKMM251VSN181MQ20T	25.4 × 20	Q20	1.381	0.75
	220	EKMM251VSN221MQ25T	25.4 × 25	Q25	1.13	0.95
	270	EKMM251VSN271MQ25T	25.4 × 25	Q25	0.921	1.18
	330	EKMM251VSN331MQ30T	25.4 × 30	Q30	0.753	1.3
	390	EKMM251VSN391MQ35T	25.4 × 35	Q35	0.638	1.49
	470	EKMM251VSN471MQ35T	25.4 × 35	Q35	0.529	1.65
	560	EKMM251VSN561MQ40T	25.4 × 40	Q40	0.444	1.8
	680	EKMM251VSN681MQ50T	25.4 × 50	Q50	0.366	2.0
	820	EKMM251VSN821MQ60T	25.4 × 60	Q60	0.303	2.2
	220	EKMM251VSN221MR20T	30 × 20	R20	1.13	0.95
	270	EKMM251VSN271MR20T	30 × 20	R20	0.921	1.0
	330	EKMM251VSN331MR25T	30 × 25	R25	0.753	1.3
	390	EKMM251VSN391MR25T	30 × 25	R25	0.638	1.49
	470	EKMM251VSN471MR30T	30 × 30	R30	0.529	1.65
	560	EKMM251VSN561MR30T	30 × 30	R30	0.444	1.8
	680	EKMM251VSN681MR35T	30 × 35	R35	0.366	2.0
	820	EKMM251VSN821MR40T	30 × 40	R40	0.303	2.3
	1,000	EKMM251VSN102MR50T	30 × 50	R50	0.249	2.47
	1,200	EKMM251VSN122MR60T	30 × 60	R60	0.207	2.85
	330	EKMM251VSN331MA20T	35 × 20	A20	0.753	1.16
	470	EKMM251VSN471MA25T	35 × 25	A25	0.529	1.65
	560	EKMM251VSN561MA25T	35 × 25	A25	0.444	1.8
	680	EKMM251VSN681MA30T	35 × 30	A30	0.366	2.0
	820	EKMM251VSN821MA35T	35 × 35	A35	0.303	2.3
	1,000	EKMM251VSN102MA40T	35 × 40	A40	0.249	2.47
	1,200	EKMM251VSN122MA45T	35 × 45	A45	0.207	2.6
	1,500	EKMM251VSN152MA50T	35 × 50	A50	0.166	3.0
	1,800	EKMM251VSN182MA60T	35 × 60	A60	0.138	3.42
315 Volts 365 Volts Surge	56	EKMM3B1VSN560MN20T	20 × 20	N20	4.44	0.38
	68	EKMM3B1VSN680MN25T	20 × 25	N25	3.656	0.47
	82	EKMM3B1VSN820MN25T	20 × 25	N25	3.032	0.64
	100	EKMM3B1VSN101MN30T	20 × 30	N30	2.486	0.69

†For terminal and 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
----------------------	------------------	---------------------	-------------------------------	----------------	---------------------------------	---

315 Volts 365 Volts Surge	120	EKMM3B1VSN121MN30T	20 × 30	N30	2.072	0.75
	150	EKMM3B1VSN151MN35T	20 × 35	N35	1.658	0.82
	180	EKMM3B1VSN181MN40T	20 × 40	N40	1.381	0.9
	220	EKMM3B1VSN221MN50T	20 × 50	N50	1.13	1.0
	68	EKMM3B1VSN680MP20T	22 × 20	P20	3.656	0.45
	82	EKMM3B1VSN820MP20T	22 × 20	P20	3.032	0.47
	100	EKMM3B1VSN101MP25T	22 × 25	P25	2.486	0.61
	120	EKMM3B1VSN121MP30T	22 × 30	P30	2.072	0.75
	150	EKMM3B1VSN151MP35T	22 × 35	P35	1.658	0.82
	180	EKMM3B1VSN181MP35T	22 × 35	P35	1.381	0.92
	220	EKMM3B1VSN221MP40T	22 × 40	P40	1.13	1.04
	270	EKMM3B1VSN271MP45T	22 × 45	P45	0.921	1.16
	330	EKMM3B1VSN331MP50T	22 × 50	P50	0.753	1.33
	100	EKMM3B1VSN101MQ20T	25.4 × 20	Q20	2.486	0.56
	120	EKMM3B1VSN121MQ20T	25.4 × 20	Q20	2.072	0.62
	150	EKMM3B1VSN151MQ25T	25.4 × 25	Q25	1.658	0.82
	180	EKMM3B1VSN181MQ30T	25.4 × 30	Q30	1.381	0.92
	220	EKMM3B1VSN221MQ35T	25.4 × 35	Q35	1.13	1.04
	270	EKMM3B1VSN271MQ40T	25.4 × 40	Q40	0.921	1.16
	330	EKMM3B1VSN331MQ45T	25.4 × 45	Q45	0.753	1.33
	390	EKMM3B1VSN391MQ50T	25.4 × 50	Q50	0.638	1.47
	470	EKMM3B1VSN471MQ60T	25.4 × 60	Q60	0.529	1.7
	120	EKMM3B1VSN121MR20T	30 × 20	R20	2.072	0.65
	150	EKMM3B1VSN151MR20T	30 × 20	R20	1.658	0.7
	180	EKMM3B1VSN181MR25T	30 × 25	R25	1.381	0.9
	220	EKMM3B1VSN221MR25T	30 × 25	R25	1.13	1.04
	270	EKMM3B1VSN271MR25T	30 × 25	R25	0.921	1.16
	330	EKMM3B1VSN331MR30T	30 × 30	R30	0.753	1.33
	390	EKMM3B1VSN391MR35T	30 × 35	R35	0.638	1.47
	470	EKMM3B1VSN471MR40T	30 × 40	R40	0.529	1.7
	560	EKMM3B1VSN561MR45T	30 × 45	R45	0.444	2.05
	680	EKMM3B1VSN681MR50T	30 × 50	R50	0.366	2.17
	150	EKMM3B1VSN151MA20T	35 × 20	A20	1.658	0.76
	180	EKMM3B1VSN181MA20T	35 × 20	A20	1.381	0.85
	220	EKMM3B1VSN221MA20T	35 × 20	A20	1.13	0.9
	270	EKMM3B1VSN271MA25T	35 × 25	A25	0.921	1.15
	330	EKMM3B1VSN331MA30T	35 × 30	A30	0.753	1.33
	390	EKMM3B1VSN391MA30T	35 × 30	A30	0.638	1.47
	470	EKMM3B1VSN471MA35T	35 × 35	A35	0.529	1.7
	560	EKMM3B1VSN561MA40T	35 × 40	A40	0.444	2.05
	680	EKMM3B1VSN681MA45T	35 × 45	A45	0.366	2.17
	820	EKMM3B1VSN821MA50T	35 × 50	A50	0.303	2.20
	1,000	EKMM3B1VSN102MA60T	35 × 60	A60	0.249	2.55

350 Volts 400 Volts Surge	47	EKMM351VSN470MN20T	20 × 20	N20	5.29	0.35
	56	EKMM351VSN560MN25T	20 × 25	N25	4.44	0.43
	68	EKMM351VSN680MN25T	20 × 25	N25	3.656	0.47
	82	EKMM351VSN820MN30T	20 × 30	N30	3.032	0.54
	100	EKMM351VSN101MN30T	20 × 30	N30	2.486	0.6
	120	EKMM351VSN121MN35T	20 × 35	N35	2.072	0.68
	150	EKMM351VSN151MN40T	20 × 40	N40	1.658	0.78
	180	EKMM351VSN181MN45T	20 × 45	N45	1.381	0.87
	220	EKMM351VSN221MN50T	20 × 50	N50	1.13	1.0
	56	EKMM351VSN560MP20T	22 × 20	P20	4.44	0.41
	82	EKMM351VSN820MP25T	22 × 25	P25	3.032	0.55
	100	EKMM351VSN101MP25T	22 × 25	P25	2.486	0.69
	120	EKMM351VSN121MP30T	22 × 30	P30	2.072	0.75
	150	EKMM351VSN151MP35T	22 × 35	P35	1.658	0.82
	180	EKMM351VSN181MP40T	22 × 40	P40	1.381	0.92

† For terminal and 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
----------------------	------------------	---------------------	-------------------------------	----------------	---------------------------------	---

350 Volts 400 Volts Surge	220	EKMM351VSN221MP45T	22 × 45	P45	1.13	1.05
	270	EKMM351VSN271MP50T	22 × 50	P50	0.921	1.16
	68	EKMM351VSN680MQ20T	25.4 × 20	Q20	3.656	0.46
	82	EKMM351VSN820MQ20T	25.4 × 20	Q20	3.032	0.51
	120	EKMM351VSN121MQ25T	25.4 × 25	Q25	2.072	0.75
	150	EKMM351VSN151MQ30T	25.4 × 30	Q30	1.658	0.83
	180	EKMM351VSN181MQ30T	25.4 × 30	Q30	1.381	0.92
	220	EKMM351VSN221MQ35T	25.4 × 35	Q35	1.13	1.04
	270	EKMM351VSN271MQ40T	25.4 × 40	Q40	0.921	1.18
	330	EKMM351VSN331MQ45T	25.4 × 45	Q45	0.753	1.29
	390	EKMM351VSN391MQ50T	25.4 × 50	Q50	0.638	1.51
	470	EKMM351VSN471MQ60T	25.4 × 60	Q60	0.529	1.66
	100	EKMM351VSN101MR20T	30 × 20	R20	2.486	0.6
	120	EKMM351VSN121MR20T	30 × 20	R20	2.072	0.65
	150	EKMM351VSN151MR25T	30 × 25	R25	1.658	0.82
	180	EKMM351VSN181MR25T	30 × 25	R25	1.381	0.9
	220	EKMM351VSN221MR30T	30 × 30	R30	1.13	1.02
	270	EKMM351VSN271MR30T	30 × 30	R30	0.921	1.17
	330	EKMM351VSN331MR35T	30 × 35	R35	0.753	1.34
	390	EKMM351VSN391MR40T	30 × 40	R40	0.638	1.51
	470	EKMM351VSN471MR45T	30 × 45	R45	0.529	1.65
	560	EKMM351VSN561MR50T	30 × 50	R50	0.444	1.85
	680	EKMM351VSN681MR60T	30 × 60	R60	0.366	2.15
	150	EKMM351VSN151MA20T	35 × 20	A20	1.658	0.76
	220	EKMM351VSN221MA25T	35 × 25	A25	1.13	1.04
	270	EKMM351VSN271MA25T	35 × 25	A25	0.921	1.2
	330	EKMM351VSN331MA30T	35 × 30	A30	0.753	1.22
	390	EKMM351VSN391MA35T	35 × 35	A35	0.638	1.47
	470	EKMM351VSN471MA35T	35 × 35	A35	0.529	1.69
	560	EKMM351VSN561MA40T	35 × 40	A40	0.444	1.9
	680	EKMM351VSN681MA50T	35 × 50	A50	0.366	1.99
	820	EKMM351VSN821MA60T	35 × 60	A60	0.303	2.31

400 Volts 450 Volts Surge	39	EKMM401VSN390MN20T	20 × 20	N20	6.375	0.32
	47	EKMM401VSN470MN25T	20 × 25	N25	5.29	0.39
	56	EKMM401VSN560MN25T	20 × 25	N25	4.44	0.51
	68	EKMM401VSN680MN30T	20 × 30	N30	3.656	0.56
	82	EKMM401VSN820MN30T	20 × 30	N30	3.032	0.64
	100	EKMM401VSN101MN35T	20 × 35	N35	2.486	0.7
	120	EKMM401VSN121MN40T	20 × 40	N40	2.072	0.75
	150	EKMM401VSN151MN45T	20 × 45	N45	1.658	0.83
	47	EKMM401VSN470MP20T	22 × 20	P20	5.29	0.37
	68	EKMM401VSN680MP25T	22 × 25	P25	3.656	0.5
	82	EKMM401VSN820MP25T	22 × 25	P25	3.032	0.64
	100	EKMM401VSN101MP30T	22 × 30	P30	2.486	0.7
	120	EKMM401VSN121MP35T	22 × 35	P35	2.072	0.75
	150	EKMM401VSN151MP40T	22 × 40	P40	1.658	0.88
	180	EKMM401VSN181MP45T	22 × 45	P45	1.381	0.98
	220	EKMM401VSN221MP50T	22 × 50	P50	1.13	1.1
	56	EKMM401VSN560MQ20T	25.4 × 20	Q20	4.44	0.42
	68	EKMM401VSN680MQ20T	25.4 × 20	Q20	3.656	0.46
	100	EKMM401VSN101MQ25T	25.4 × 25	Q25	2.486	0.7
	120	EKMM401VSN121MQ30T	25.4 × 30	Q30	2.072	0.75
	150	EKMM401VSN151MQ30T	25.4 × 30	Q30	1.658	0.88
	180	EKMM401VSN181MQ35T	25.4 × 35	Q35	1.381	0.98
	220	EKMM401VSN221MQ40T	25.4 × 40	Q40	1.13	1.1
	270	EKMM401VSN271MQ45T	25.4 × 45	Q45	0.921	1.22
	330	EKMM401VSN331MQ50T	25.4 × 50	Q50	0.753	1.44
	390	EKMM401VSN391MQ60T	25.4 × 60	Q60	0.638	1.51

†For terminal and 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
----------------------	------------------	---------------------	-------------------------------	----------------	---------------------------------	---

400 Volts 450 Volts Surge	82	EKMM401VSN820MR20T	30 × 20	R20	3.032	0.55
	100	EKMM401VSN101MR20T	30 × 20	R20	2.486	0.6
	120	EKMM401VSN121MR25T	30 × 25	R25	2.072	0.73
	150	EKMM401VSN151MR25T	30 × 25	R25	1.658	0.82
	180	EKMM401VSN181MR30T	30 × 30	R30	1.381	0.98
	220	EKMM401VSN221MR30T	30 × 30	R30	1.13	1.1
	270	EKMM401VSN271MR35T	30 × 35	R35	0.921	1.22
	330	EKMM401VSN331MR40T	30 × 40	R40	0.753	1.44
	390	EKMM401VSN391MR45T	30 × 45	R45	0.638	1.6
	470	EKMM401VSN471MR50T	30 × 50	R50	0.529	1.9
	560	EKMM401VSN561MR60T	30 × 60	R60	0.444	2.1
	120	EKMM401VSN121MA20T	35 × 20	A20	2.072	0.75
	150	EKMM401VSN151MA20T	35 × 20	A20	1.658	0.8
	220	EKMM401VSN221MA25T	35 × 25	A25	1.13	1.1
	270	EKMM401VSN271MA30T	35 × 30	A30	0.921	1.22
	330	EKMM401VSN331MA35T	35 × 35	A35	0.753	1.44
	390	EKMM401VSN391MA35T	35 × 35	A35	0.638	1.6
	470	EKMM401VSN471MA40T	35 × 40	A40	0.529	1.9
	560	EKMM401VSN561MA45T	35 × 45	A45	0.444	2.12
	680	EKMM401VSN681MA60T	35 × 60	A60	0.366	2.27

420 Volts 470 Volts Surge	39	EKMM421VSN390MN20T	20 × 20	N20	8.5	0.32
	47	EKMM421VSN470MN25T	20 × 25	N25	7.053	0.39
	56	EKMM421VSN560MN25T	20 × 25	N25	5.92	0.51
	68	EKMM421VSN680MN30T	20 × 30	N30	4.875	0.56
	82	EKMM421VSN820MN35T	20 × 35	N35	4.043	0.64
	100	EKMM421VSN101MN35T	20 × 35	N35	3.315	0.7
	120	EKMM421VSN121MN40T	20 × 40	N40	2.763	0.75
	150	EKMM421VSN151MN50T	20 × 50	N50	2.21	0.88
	47	EKMM421VSN470MP20T	22 × 20	P20	7.053	0.37
	68	EKMM421VSN680MP25T	22 × 25	P25	4.875	0.5
	82	EKMM421VSN820MP25T	22 × 25	P25	4.043	0.64
	100	EKMM421VSN101MP30T	22 × 30	P30	3.315	0.7
	120	EKMM421VSN121MP35T	22 × 35	P35	2.763	0.75
	150	EKMM421VSN151MP40T	22 × 40	P40	2.21	0.88
	180	EKMM421VSN181MP45T	22 × 45	P45	1.842	0.95
	220	EKMM421VSN221MP50T	22 × 50	P50	1.507	1.1
	56	EKMM421VSN560MQ20T	25.4 × 20	Q20	5.92	0.42
	68	EKMM421VSN680MQ20T	25.4 × 20	Q20	4.875	0.46
	82	EKMM421VSN820MQ25T	25.4 × 25	Q25	4.043	0.58
	100	EKMM421VSN101MQ25T	25.4 × 25	Q25	3.315	0.7
	120	EKMM421VSN121MQ30T	25.4 × 30	Q30	2.763	0.75
	150	EKMM421VSN151MQ35T	25.4 × 35	Q35	2.21	0.88
	180	EKMM421VSN181MQ35T	25.4 × 35	Q35	1.842	0.95
	220	EKMM421VSN221MQ45T	25.4 × 45	Q45	1.507	1.1
	270	EKMM421VSN271MQ50T	25.4 × 50	Q50	1.228	1.22
	330	EKMM421VSN331MQ60T	25.4 × 60	Q60	1.005	1.41
	82	EKMM421VSN820MR20T	30 × 20	R20	4.043	0.53
	100	EKMM421VSN101MR20T	30 × 20	R20	3.315	0.59
	120	EKMM421VSN121MR25T	30 × 25	R25	2.763	0.73
	150	EKMM421VSN151MR25T	30 × 25	R25	2.21	0.88
	180	EKMM421VSN181MR30T	30 × 30	R30	1.842	0.95
	220	EKMM421VSN221MR35T	30 × 35	R35	1.507	1.1
	270	EKMM421VSN271MR40T	30 × 40	R40	1.228	1.22
	330	EKMM421VSN331MR45T	30 × 45	R45	1.005	1.45
	390	EKMM421VSN391MR50T	30 × 50	R50	0.85	1.55
	470	EKMM421VSN471MR60T	30 × 60	R60	0.705	1.79
	120	EKMM421VSN121MA20T	35 × 20	A20	2.763	0.67
	180	EKMM421VSN181MA25T	35 × 25	A25	1.842	0.94

† For terminal and 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 (VWDC)	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	220	EKMM421VSN221MA25T	35 × 25	A25	1.507	1.1
	270	EKMM421VSN271MA30T	35 × 30	A30	1.228	1.22
	330	EKMM421VSN331MA35T	35 × 35	A35	1.005	1.45
	390	EKMM421VSN391MA40T	35 × 40	A40	0.85	1.55
	470	EKMM421VSN471MA45T	35 × 45	A45	0.705	1.9
	560	EKMM421VSN561MA50T	35 × 50	A50	0.592	2.15
	680	EKMM421VSN681MA60T	35 × 60	A60	0.488	2.27
450 Volts 500 Volts Surge	39	EKMM451VSN390MN25T	20 × 25	N25	8.5	0.34
	47	EKMM451VSN470MN25T	20 × 25	N25	7.053	0.39
	56	EKMM451VSN560MN30T	20 × 30	N30	5.92	0.51
	68	EKMM451VSN680MN35T	20 × 35	N35	4.875	0.56
	82	EKMM451VSN820MN35T	20 × 35	N35	4.043	0.64
	100	EKMM451VSN101MN45T	20 × 45	N45	3.315	0.69
	120	EKMM451VSN121MN50T	20 × 50	N50	2.763	0.75
	56	EKMM451VSN560MP25T	22 × 25	P25	5.92	0.4
	68	EKMM451VSN680MP30T	22 × 30	P30	4.875	0.53
	82	EKMM451VSN820MP30T	22 × 30	P30	4.043	0.64
	100	EKMM451VSN101MP35T	22 × 35	P35	3.315	0.69
	120	EKMM451VSN121MP40T	22 × 40	P40	2.763	0.8
	150	EKMM451VSN151MP45T	22 × 45	P45	2.21	0.88
	68	EKMM451VSN680MQ25T	25.4 × 25	Q25	4.875	0.5
	82	EKMM451VSN820MQ25T	25.4 × 25	Q25	4.043	0.64
	100	EKMM451VSN101MQ30T	25.4 × 30	Q30	3.315	0.69
	120	EKMM451VSN121MQ30T	25.4 × 30	Q30	2.763	0.8
	150	EKMM451VSN151MQ35T	25.4 × 35	Q35	2.21	0.88
	180	EKMM451VSN181MQ40T	25.4 × 40	Q40	1.842	1.0
	220	EKMM451VSN221MQ45T	25.4 × 45	Q45	1.507	1.12
	270	EKMM451VSN271MQ60T	25.4 × 60	Q60	1.228	1.18
	100	EKMM451VSN101MR25T	30 × 25	R25	3.315	0.64
	120	EKMM451VSN121MR25T	30 × 25	R25	2.763	0.8
	150	EKMM451VSN151MR30T	30 × 30	R30	2.21	0.88
	180	EKMM451VSN181MR30T	30 × 30	R30	1.842	1.0
	220	EKMM451VSN221MR35T	30 × 35	R35	1.507	1.12
	270	EKMM451VSN271MR40T	30 × 40	R40	1.228	1.28
	330	EKMM451VSN331MR50T	30 × 50	R50	1.005	1.45
	390	EKMM451VSN391MR60T	30 × 60	R60	0.85	1.51
	120	EKMM451VSN121MA25T	35 × 25	A25	2.763	0.73
	150	EKMM451VSN151MA25T	35 × 25	A25	2.21	0.75
	220	EKMM451VSN221MA30T	35 × 30	A30	1.507	1.12
	270	EKMM451VSN271MA35T	35 × 35	A35	1.228	1.28
	330	EKMM451VSN331MA40T	35 × 40	A40	1.005	1.45
	390	EKMM451VSN391MA40T	35 × 40	A40	0.85	1.55
	470	EKMM451VSN471MA50T	35 × 50	A50	0.705	1.85
	560	EKMM451VSN561MA60T	35 × 60	A60	0.592	1.91

† For terminal and construction options, refer to the part numbering system for descriptions and codes.

* Refer to diagram of dimensions for detailed case size specifications.