

- 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

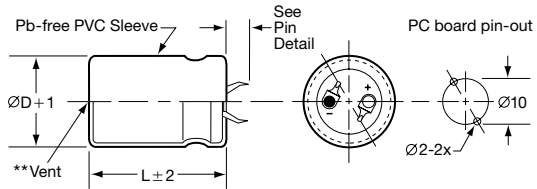
| Item                             | Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |       |        |       |                   |           |               |                       |             |             |      |      |      |      |                  |      |       |       |      |       |       |            |      |      |      |      |      |      |            |      |      |      |      |      |      |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------|--------|-------|-------------------|-----------|---------------|-----------------------|-------------|-------------|------|------|------|------|------------------|------|-------|-------|------|-------|-------|------------|------|------|------|------|------|------|------------|------|------|------|------|------|------|
| 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.<br>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><br>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 &amp; Above</td></tr><tr><td>Test Time</td><td>2,000 Hours</td><td>3,000 Hours</td></tr></table><br>Capacitance change: ≤ ± 20% of initial measured value<br>Tan δ (DF) : ≤ 200% of initial specified value<br>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.<br>Capacitance change: ≤ ± 15% of initial measured value<br>Tan δ (DF) : ≤ 150% of initial specified value<br>Leakage current : ≤ initial specified value                                                                                                                                                                |               |       |        |       |                   |           |               |                       |             |             |      |      |      |      |                  |      |       |       |      |       |       |            |      |      |      |      |      |      |            |      |      |      |      |      |      |

## Diagram of Dimensions - Snap Mount

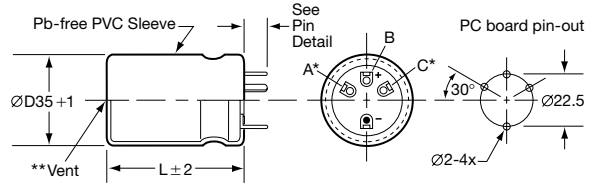
### Snap Mount

Unit: mm

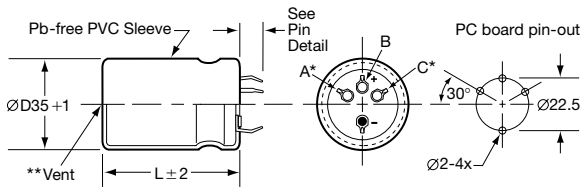
#### Types VSN $\varnothing 20\sim\varnothing 35$ ; VNN $\varnothing 22\sim\varnothing 35$



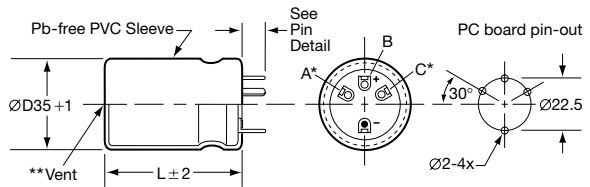
#### Type VRD $\varnothing 35$



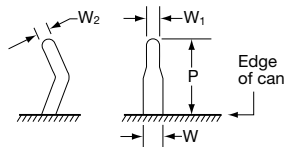
#### Type VND $\varnothing 35$



#### Type VQD $\varnothing 35$



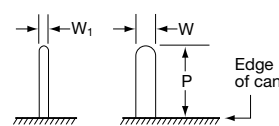
#### VS & VN Pin Dimensions



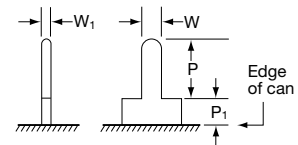
| Type                                   | P             | W             | W <sub>1</sub> | W <sub>2</sub> |
|----------------------------------------|---------------|---------------|----------------|----------------|
| VSN $\varnothing 20\sim\varnothing 30$ | $4.0 \pm 0.5$ | $1.5 \pm 0.2$ | 1.0            | 1.0            |
| VSN $\varnothing 35$                   | $3.5 \pm 0.5$ |               |                |                |
| VNN $\varnothing 22\sim\varnothing 35$ | $5.8 \pm 1.0$ |               |                |                |
| VND $\varnothing 35$                   | $5.8 \pm 1.0$ |               |                |                |

#### VR & VQ Pin Dimensions

##### VR Straight Pin



##### VQ Standoff Pin



| Type              | P              | P <sub>1</sub> | W             | W <sub>1</sub> |
|-------------------|----------------|----------------|---------------|----------------|
| Straight Pin (VR) | $5.50 \pm 1.0$ | —              | $1.5 \pm 0.1$ | 0.7            |
| Standoff Pin (VQ) | $3.75 \pm 1.0$ | 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 $\mu$ F or more. R indicates the decimal point for capacitance less than 10 $\mu$ F (e.g. 3R3 = 3.3 $\mu$ F; 330 = 33 $\mu$ F; 331 = 330 $\mu$ F; 332 = 3,300 $\mu$ F; 333 = 33,000 $\mu$ 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<br>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<br>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 |
|----------------------|------------------|---------------------|-------------------------------|----------------|---------------------------------|-----------------------------------------------|
|----------------------|------------------|---------------------|-------------------------------|----------------|---------------------------------|-----------------------------------------------|

|                                      |       |                    |           |     |       |      |
|--------------------------------------|-------|--------------------|-----------|-----|-------|------|
| <b>180 Volts<br/>225 Volts Surge</b> | 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 |

|                                      |     |                    |           |     |       |      |
|--------------------------------------|-----|--------------------|-----------|-----|-------|------|
| <b>200 Volts<br/>250 Volts Surge</b> | 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 |
|----------------------|------------------|---------------------|-------------------------------|----------------|---------------------------------|-----------------------------------------------|
|----------------------|------------------|---------------------|-------------------------------|----------------|---------------------------------|-----------------------------------------------|

|                                     |       |                    |           |     |       |      |
|-------------------------------------|-------|--------------------|-----------|-----|-------|------|
| <b>200 Volts</b><br>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 |

|                                     |       |                    |           |     |       |      |
|-------------------------------------|-------|--------------------|-----------|-----|-------|------|
| <b>220 Volts</b><br>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 |
|----------------------|------------------|---------------------|-------------------------------|----------------|---------------------------------|-----------------------------------------------|
|----------------------|------------------|---------------------|-------------------------------|----------------|---------------------------------|-----------------------------------------------|

|                                     |       |                    |         |     |       |      |
|-------------------------------------|-------|--------------------|---------|-----|-------|------|
| <b>220 Volts</b><br>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 |

|                                     |       |                    |           |     |       |      |
|-------------------------------------|-------|--------------------|-----------|-----|-------|------|
| <b>250 Volts</b><br>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 |

|                                     |     |                    |         |     |       |      |
|-------------------------------------|-----|--------------------|---------|-----|-------|------|
| <b>315 Volts</b><br>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<br>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<br>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<br>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<br>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 |
|----------------------|------------------|---------------------|-------------------------------|----------------|---------------------------------|-----------------------------------------------|
|----------------------|------------------|---------------------|-------------------------------|----------------|---------------------------------|-----------------------------------------------|

|                                      |     |                    |         |     |       |      |
|--------------------------------------|-----|--------------------|---------|-----|-------|------|
| <b>400 Volts<br/>450 Volts Surge</b> | 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 |

|                                      |     |                    |           |     |       |      |
|--------------------------------------|-----|--------------------|-----------|-----|-------|------|
| <b>420 Volts<br/>470 Volts Surge</b> | 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 (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<br>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<br>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.