



**THE DATASHEET OF
SMQ400VS331M22X50T2**



SMQ Series



- Snap Mount
- Downsize
- Large Capacitance
- +85°C Maximum Temperature



The SMQ series is a new high voltage snap-in capacitor series from United Chemi-Con that offers downsized versions of the current miniaturized SMM series. These capacitors have a rated lifetime of 2,000 hours at +85°C with the rated ripple current applied. With high ripple current capability and higher CV per case size than the SMM series, the SMQ capacitors are suitable for many downsized power supply circuits. The SMQ capacitors have a standard 2-pin snap-in terminal style. As an option the SMQ series is available with environmentally friendly PET (polyester) sleeves and Pb-free materials.

The standard SMQ series capacitors are non-solvent proof. Refer to the Mini-Glossary for cleaning guidelines and recommended cleaning agents that are compatible with United Chemi-Con products.

Summary of Specifications

- PC board 2-pin snap-in terminals.
- Capacitance range: 82 to 3,900µF.
- Voltage range: 160 to 450VDC.
- Category temperature range: -25°C to +85°C.
- Leakage current: $3\sqrt{CV}$ (µA) maximum after 5 minutes at +20°C.
- Standard capacitance tolerance: ±20%
- Nominal case size (D × L): 22 × 25mm to 35 × 50mm.
- Rated lifetime: 2,000 hours at +85°C with the rated ripple current applied.

SMQ Specifications

| Item | Characteristics | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------|---------|-------|-----------------------|-----------|-----------|-----------|------|------|------|------|------|------|----------|------|------|------|------|------|------|
| Category Temperature Range | -25 to +85°C | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage Range | 160 to 450VDC | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Range | 82 to 3,900 μ F | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | $\pm 20\%$ (M) at +20°C, 120Hz | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | $I \leq 3\sqrt{CV}$ (μ A) after 5 minutes at +20°C. Where I = Max. leakage current (μ A), C = Nominal capacitance (μ F) and V = Rated voltage (V) | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor (Tan δ) | At +20°C, 120Hz <table border="1" style="margin-left: 20px;"> <tr> <td>Rated Voltage (V)</td> <td>160-250</td> <td>315-400</td> <td>450</td> </tr> <tr> <td>Tan δ (DF)</td> <td>0.15 max.</td> <td>0.15 max.</td> <td>0.20 max.</td> </tr> </table> | Rated Voltage (V) | 160-250 | 315-400 | 450 | Tan δ (DF) | 0.15 max. | 0.15 max. | 0.20 max. | | | | | | | | | | | | | |
| Rated Voltage (V) | 160-250 | 315-400 | 450 | | | | | | | | | | | | | | | | | | | |
| Tan δ (DF) | 0.15 max. | 0.15 max. | 0.20 max. | | | | | | | | | | | | | | | | | | | |
| 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" style="margin-left: 20px;"> <tr> <td>Rated Voltage (V)</td> <td>160-250</td> <td>315-400</td> <td>450</td> </tr> <tr> <td>Z (-25°C) / Z (+20°C)</td> <td>4</td> <td>8</td> <td>8</td> </tr> </table> | Rated Voltage (V) | 160-250 | 315-400 | 450 | Z (-25°C) / Z (+20°C) | 4 | 8 | 8 | | | | | | | | | | | | | |
| Rated Voltage (V) | 160-250 | 315-400 | 450 | | | | | | | | | | | | | | | | | | | |
| Z (-25°C) / Z (+20°C) | 4 | 8 | 8 | | | | | | | | | | | | | | | | | | | |
| Rated Ripple Current Multipliers <i>Refer to Section 4 of the Mini-Glossary for explanation of Rated Ripple Current Multipliers.</i> | Frequency (Hz) <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>DC Rated Voltage</th> <th>50Hz</th> <th>120Hz</th> <th>300Hz</th> <th>1kHz</th> <th>10kHz</th> <th>50kHz</th> </tr> </thead> <tbody> <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> </tbody> </table> | 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 |
| 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 2,000 hours at +85°C with the rated ripple current applied. The sum of the DC voltage and peak AC voltage must not exceed the full rated voltage of the capacitors. Capacitance change: $\leq \pm 20\%$ of initial measured value Tan δ (DF) : $\leq 200\%$ of initial specified value Leakage current : \leq initial specified value | | | | | | | | | | | | | | | | | | | | | |
| Shelf Life | The following specifications shall be satisfied when the capacitors are restored to +20°C after exposing them for 1,000 hours at +85°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: $\leq \pm 15\%$ of initial measured value Tan δ (DF) : $\leq 150\%$ of initial specified value Leakage current : \leq initial specified value | | | | | | | | | | | | | | | | | | | | | |

Part Numbering System for SMQ Series

When ordering, always specify complete catalog number for SMQ Series.

| SMQ | 450 | VS | 391 | M | 30X40 | T2 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|-----|---|-------|----|
| Terminal Code: T2 = 2 - Pin Snap-in (Standard). Case Code: See Case Sizes in Tables. Capacitance Tolerance: M = $\pm 20\%$ Capacitance Value: Expressed in Microfarads. The first two digits are significant figures, and the third digit indicates the number of zeros for capacitance of 100 μ F or more. R indicates the decimal point for capacitance less than 100 μ F (e.g. R39 = .39 μ F; 3R9 = 3.9 μ F; 39R = 39 μ F; 391 = 390 μ F; 392 = 3,900 μ F; 393 = 39,000 μ F). Lead Configuration: VS = 2 - Pin Snap-in Terminals. DC Rated Voltage: Expressed in Volts (e.g. 450 = 450WVDC). Series Name: Indicates Basic Capacitor Design. | | | | | | |

Diagram of Dimensions

Snap Mount

Type VS-T2 $\varnothing 22 \sim \varnothing 35$

Standard design does not have a plastic disk.

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

VS Pin Dimensions

| Type | P | W | W ₁ | W ₂ |
|-------|-----------|-----------|----------------|----------------|
| VS-T2 | 4.0 ± 0.5 | 1.5 ± 0.2 | 1.0 | 1.0 |

Unit: mm

Standard Voltage Ratings - VS/Snap Mount

| Rated Voltage (WVDC) | Capacitance (μF) | Catalog Part Number | Nominal Case Size* D × L (mm) | Maximum ESR (Ω) at +20°C, 120Hz | Rated Ripple Current (A rms) at +85°C, 120Hz |
|----------------------|------------------|---------------------|-------------------------------|---------------------------------|----------------------------------------------|
|----------------------|------------------|---------------------|-------------------------------|---------------------------------|----------------------------------------------|

| | | | | | |
|--------------------------------------|---------------------|---------------------|-----------|-------|------|
| 160 Volts 200 Volts Surge | 560 | SMQ160VS561M22X25T2 | 22 × 25 | 0.444 | 2.25 |
| | 680 | SMQ160VS681M22X30T2 | 22 × 30 | 0.366 | 2.5 |
| | 820 | SMQ160VS821M22X35T2 | 22 × 35 | 0.303 | 2.75 |
| | 1,000 | SMQ160VS102M22X40T2 | 22 × 40 | 0.249 | 3.0 |
| | 1,200 | SMQ160VS122M22X45T2 | 22 × 45 | 0.207 | 3.25 |
| | 1,500 | SMQ160VS152M22X50T2 | 22 × 50 | 0.166 | 3.73 |
| | 1,000 | SMQ160VS102M25X30T2 | 25.4 × 30 | 0.249 | 3.0 |
| | 1,200 | SMQ160VS122M25X35T2 | 25.4 × 35 | 0.207 | 3.25 |
| | 1,500 | SMQ160VS152M25X40T2 | 25.4 × 40 | 0.166 | 3.73 |
| | 1,800 | SMQ160VS182M25X45T2 | 25.4 × 45 | 0.138 | 4.2 |
| | 1,200 | SMQ160VS122M30X25T2 | 30 × 25 | 0.207 | 3.25 |
| | 1,500 | SMQ160VS152M30X30T2 | 30 × 30 | 0.166 | 3.73 |
| | 1,800 | SMQ160VS182M30X35T2 | 30 × 35 | 0.138 | 4.2 |
| | 2,200 | SMQ160VS222M30X40T2 | 30 × 40 | 0.113 | 4.78 |
| | 1,500 | SMQ160VS152M35X25T2 | 35 × 25 | 0.166 | 3.73 |
| | 1,800 | SMQ160VS182M35X30T2 | 35 × 30 | 0.138 | 4.2 |
| | 2,200 | SMQ160VS222M35X35T2 | 35 × 35 | 0.113 | 4.78 |
| 2,700 | SMQ160VS272M35X40T2 | 35 × 40 | 0.092 | 5.45 | |
| 3,300 | SMQ160VS332M35X45T2 | 35 × 45 | 0.075 | 5.75 | |
| 3,900 | SMQ160VS392M35X50T2 | 35 × 50 | 0.064 | 6.0 | |

| | | | | | |
|--------------------------------------|-------|---------------------|-----------|-------|------|
| 180 Volts 225 Volts Surge | 470 | SMQ180VS471M22X25T2 | 22 × 25 | 0.529 | 2.08 |
| | 560 | SMQ180VS561M22X30T2 | 22 × 30 | 0.444 | 2.25 |
| | 680 | SMQ180VS681M22X30T2 | 22 × 30 | 0.366 | 2.5 |
| | 820 | SMQ180VS821M22X35T2 | 22 × 35 | 0.303 | 2.75 |
| | 1,000 | SMQ180VS102M22X45T2 | 22 × 45 | 0.249 | 3.0 |
| | 1,200 | SMQ180VS122M22X50T2 | 22 × 50 | 0.207 | 3.31 |
| | 680 | SMQ180VS681M25X25T2 | 25.4 × 25 | 0.366 | 2.5 |
| | 820 | SMQ180VS821M25X30T2 | 25.4 × 30 | 0.303 | 2.75 |
| | 1,000 | SMQ180VS102M25X35T2 | 25.4 × 35 | 0.249 | 3.0 |
| | 1,200 | SMQ180VS122M25X40T2 | 25.4 × 40 | 0.207 | 3.31 |
| | 1,500 | SMQ180VS152M25X45T2 | 25.4 × 45 | 0.166 | 3.83 |
| | 1,800 | SMQ180VS182M25X50T2 | 25.4 × 50 | 0.138 | 4.32 |
| | 1,000 | SMQ180VS102M30X25T2 | 30 × 25 | 0.249 | 3.0 |
| | 1,200 | SMQ180VS122M30X30T2 | 30 × 30 | 0.207 | 3.31 |

*The case sizes in table are with no sleeve, refer to diagram for case sizes with sleeve.

Standard Voltage Ratings - VS/Snap Mount

| Rated Voltage (WVDC) | Capacitance (µF) | Catalog Part Number | Nominal Case Size* D × L (mm) | Maximum ESR (Ω) at +20°C, 120Hz | Rated Ripple Current (A rms) at +85°C, 120Hz |
|-------------------------------------|---------------------|---------------------|-------------------------------|---------------------------------|----------------------------------------------|
| 180 Volts 225 Volts Surge | 1,500 | SMQ180VS152M30X35T2 | 30 × 35 | 0.166 | 3.83 |
| | 1,800 | SMQ180VS182M30X40T2 | 30 × 40 | 0.138 | 4.32 |
| | 2,200 | SMQ180VS222M30X45T2 | 30 × 45 | 0.113 | 4.92 |
| | 1,200 | SMQ180VS122M35X25T2 | 35 × 25 | 0.207 | 3.31 |
| | 1,500 | SMQ180VS152M35X30T2 | 35 × 30 | 0.166 | 3.83 |
| | 1,800 | SMQ180VS182M35X30T2 | 35 × 30 | 0.138 | 4.32 |
| | 2,200 | SMQ180VS222M35X40T2 | 35 × 40 | 0.113 | 4.92 |
| | 2,700 | SMQ180VS272M35X45T2 | 35 × 45 | 0.092 | 5.52 |
| 3,300 | SMQ180VS332M35X50T2 | 35 × 50 | 0.075 | 5.75 | |
| 200 Volts 250 Volts Surge | 390 | SMQ200VS391M22X25T2 | 22 × 25 | 0.638 | 1.68 |
| | 470 | SMQ200VS471M22X30T2 | 22 × 30 | 0.529 | 1.85 |
| | 560 | SMQ200VS561M22X30T2 | 22 × 30 | 0.444 | 2.43 |
| | 680 | SMQ200VS681M22X35T2 | 22 × 35 | 0.366 | 2.68 |
| | 820 | SMQ200VS821M22X40T2 | 22 × 40 | 0.303 | 2.93 |
| | 1,000 | SMQ200VS102M22X45T2 | 22 × 45 | 0.249 | 3.25 |
| | 560 | SMQ200VS561M25X25T2 | 25.4 × 25 | 0.444 | 2.43 |
| | 680 | SMQ200VS681M25X30T2 | 25.4 × 30 | 0.366 | 2.68 |
| | 820 | SMQ200VS821M25X30T2 | 25.4 × 30 | 0.303 | 2.93 |
| | 1,000 | SMQ200VS102M25X35T2 | 25.4 × 35 | 0.249 | 3.25 |
| | 1,200 | SMQ200VS122M25X40T2 | 25.4 × 40 | 0.207 | 3.5 |
| | 1,500 | SMQ200VS152M25X50T2 | 25.4 × 50 | 0.166 | 3.87 |
| | 820 | SMQ200VS821M30X25T2 | 30 × 25 | 0.303 | 2.93 |
| | 1,000 | SMQ200VS102M30X30T2 | 30 × 30 | 0.249 | 3.25 |
| | 1,200 | SMQ200VS122M30X30T2 | 30 × 30 | 0.207 | 3.5 |
| | 1,500 | SMQ200VS152M30X35T2 | 30 × 35 | 0.166 | 3.87 |
| | 1,800 | SMQ200VS182M30X45T2 | 30 × 45 | 0.138 | 4.32 |
| | 2,200 | SMQ200VS222M30X50T2 | 30 × 50 | 0.113 | 4.92 |
| | 1,000 | SMQ200VS102M35X25T2 | 35 × 25 | 0.249 | 3.25 |
| | 1,200 | SMQ200VS122M35X30T2 | 35 × 30 | 0.207 | 3.5 |
| 1,500 | SMQ200VS152M35X30T2 | 35 × 30 | 0.166 | 3.87 | |
| 1,800 | SMQ200VS182M35X35T2 | 35 × 35 | 0.138 | 4.32 | |
| 2,200 | SMQ200VS222M35X40T2 | 35 × 40 | 0.113 | 4.92 | |
| 2,700 | SMQ200VS272M35X50T2 | 35 × 50 | 0.092 | 5.45 | |
| 250 Volts 300 Volts Surge | 270 | SMQ250VS271M22X25T2 | 22 × 25 | 0.921 | 1.31 |
| | 330 | SMQ250VS331M22X30T2 | 22 × 30 | 0.754 | 1.75 |
| | 390 | SMQ250VS391M22X30T2 | 22 × 30 | 0.638 | 1.91 |
| | 470 | SMQ250VS471M22X35T2 | 22 × 35 | 0.529 | 2.11 |
| | 560 | SMQ250VS561M22X40T2 | 22 × 40 | 0.444 | 2.25 |
| | 680 | SMQ250VS681M22X45T2 | 22 × 45 | 0.366 | 2.5 |
| | 820 | SMQ250VS821M22X50T2 | 22 × 50 | 0.303 | 2.77 |
| | 390 | SMQ250VS391M25X25T2 | 25.4 × 25 | 0.638 | 1.91 |
| | 470 | SMQ250VS471M25X30T2 | 25.4 × 30 | 0.529 | 2.11 |
| | 560 | SMQ250VS561M25X30T2 | 25.4 × 30 | 0.444 | 2.25 |
| | 680 | SMQ250VS681M25X35T2 | 25.4 × 35 | 0.366 | 2.5 |
| | 820 | SMQ250VS821M25X40T2 | 25.4 × 40 | 0.303 | 2.77 |
| | 1,000 | SMQ250VS102M25X45T2 | 25.4 × 45 | 0.249 | 3.32 |
| | 560 | SMQ250VS561M30X25T2 | 30 × 25 | 0.444 | 2.25 |
| | 680 | SMQ250VS681M30X30T2 | 30 × 30 | 0.366 | 2.5 |
| | 820 | SMQ250VS821M30X30T2 | 30 × 30 | 0.303 | 2.77 |
| | 1,000 | SMQ250VS102M30X35T2 | 30 × 35 | 0.249 | 3.32 |
| | 1,200 | SMQ250VS122M30X40T2 | 30 × 40 | 0.207 | 3.53 |
| | 1,500 | SMQ250VS152M30X50T2 | 30 × 50 | 0.166 | 4.04 |
| | 820 | SMQ250VS821M35X25T2 | 35 × 25 | 0.303 | 2.77 |
| | 1,000 | SMQ250VS102M35X30T2 | 35 × 30 | 0.249 | 3.32 |
| | 1,200 | SMQ250VS122M35X35T2 | 35 × 35 | 0.207 | 3.53 |
| | 1,500 | SMQ250VS152M35X40T2 | 35 × 40 | 0.166 | 4.04 |
| | 1,800 | SMQ250VS182M35X45T2 | 35 × 45 | 0.138 | 4.55 |

*The case sizes in table are with no sleeve, refer to diagram for case sizes with sleeve.

Standard Voltage Ratings - VS/Snap Mount

| Rated Voltage (WVDC) | Capacitance (µF) | Catalog Part Number | Nominal Case Size* D × L (mm) | Maximum ESR (Ω) at +20°C, 120Hz | Rated Ripple Current (A rms) at +85°C, 120Hz |
|-------------------------------------|---------------------|---------------------|-------------------------------|---------------------------------|----------------------------------------------|
| 315 Volts 365 Volts Surge | 180 | SMQ315VS181M22X25T2 | 22 × 25 | 1.382 | 1.21 |
| | 220 | SMQ315VS221M22X30T2 | 22 × 30 | 1.13 | 1.41 |
| | 270 | SMQ315VS271M22X30T2 | 22 × 30 | 0.921 | 1.6 |
| | 330 | SMQ315VS331M22X40T2 | 22 × 40 | 0.754 | 1.82 |
| | 390 | SMQ315VS391M22X45T2 | 22 × 45 | 0.638 | 2.01 |
| | 470 | SMQ315VS471M22X50T2 | 22 × 50 | 0.529 | 2.27 |
| | 330 | SMQ315VS331M25X30T2 | 25.4 × 30 | 0.754 | 1.82 |
| | 390 | SMQ315VS391M25X35T2 | 25.4 × 35 | 0.638 | 2.01 |
| | 470 | SMQ315VS471M25X40T2 | 25.4 × 40 | 0.529 | 2.27 |
| | 560 | SMQ315VS561M25X45T2 | 25.4 × 45 | 0.444 | 2.56 |
| | 330 | SMQ315VS331M30X25T2 | 30 × 25 | 0.754 | 1.82 |
| | 390 | SMQ315VS391M30X30T2 | 30 × 30 | 0.638 | 2.01 |
| | 470 | SMQ315VS471M30X30T2 | 30 × 30 | 0.529 | 2.27 |
| | 560 | SMQ315VS561M30X35T2 | 30 × 35 | 0.444 | 2.56 |
| | 680 | SMQ315VS681M30X40T2 | 30 × 40 | 0.366 | 2.87 |
| | 820 | SMQ315VS821M30X45T2 | 30 × 45 | 0.303 | 3.25 |
| | 1,000 | SMQ315VS102M30X50T2 | 30 × 50 | 0.249 | 3.63 |
| | 470 | SMQ315VS471M35X25T2 | 35 × 25 | 0.529 | 2.27 |
| | 560 | SMQ315VS561M35X30T2 | 35 × 30 | 0.444 | 2.56 |
| | 680 | SMQ315VS681M35X35T2 | 35 × 35 | 0.366 | 2.87 |
| 820 | SMQ315VS821M35X40T2 | 35 × 40 | 0.303 | 3.25 | |
| 1,000 | SMQ315VS102M35X45T2 | 35 × 45 | 0.249 | 3.63 | |
| 350 Volts 400 Volts Surge | 150 | SMQ350VS151M22X25T2 | 22 × 25 | 1.658 | 1.12 |
| | 180 | SMQ350VS181M22X30T2 | 22 × 30 | 1.382 | 1.22 |
| | 220 | SMQ350VS221M22X35T2 | 22 × 35 | 1.13 | 1.44 |
| | 270 | SMQ350VS271M22X40T2 | 22 × 40 | 0.921 | 1.66 |
| | 330 | SMQ350VS331M22X45T2 | 22 × 45 | 0.754 | 1.88 |
| | 390 | SMQ350VS391M22X50T2 | 22 × 50 | 0.638 | 2.06 |
| | 270 | SMQ350VS271M25X30T2 | 25.4 × 30 | 0.921 | 1.66 |
| | 330 | SMQ350VS331M25X35T2 | 25.4 × 35 | 0.754 | 1.88 |
| | 390 | SMQ350VS391M25X40T2 | 25.4 × 40 | 0.638 | 2.06 |
| | 470 | SMQ350VS471M25X45T2 | 25.4 × 45 | 0.529 | 2.4 |
| | 560 | SMQ350VS561M25X50T2 | 25.4 × 50 | 0.444 | 2.6 |
| | 390 | SMQ350VS391M30X30T2 | 30 × 30 | 0.638 | 2.06 |
| | 470 | SMQ350VS471M30X35T2 | 30 × 35 | 0.529 | 2.4 |
| | 560 | SMQ350VS561M30X40T2 | 30 × 40 | 0.444 | 2.6 |
| | 680 | SMQ350VS681M30X45T2 | 30 × 45 | 0.366 | 2.96 |
| | 820 | SMQ350VS821M30X50T2 | 30 × 50 | 0.303 | 3.25 |
| | 390 | SMQ350VS391M35X25T2 | 35 × 25 | 0.638 | 2.06 |
| | 470 | SMQ350VS471M35X30T2 | 35 × 30 | 0.529 | 2.4 |
| | 560 | SMQ350VS561M35X30T2 | 35 × 30 | 0.444 | 2.6 |
| | 680 | SMQ350VS681M35X35T2 | 35 × 35 | 0.366 | 2.96 |
| 820 | SMQ350VS821M35X45T2 | 35 × 45 | 0.303 | 3.25 | |
| 1,000 | SMQ350VS102M35X50T2 | 35 × 50 | 0.249 | 3.54 | |
| 400 Volts 450 Volts Surge | 120 | SMQ400VS121M22X25T2 | 22 × 25 | 2.072 | 1.02 |
| | 150 | SMQ400VS151M22X30T2 | 22 × 30 | 1.658 | 1.16 |
| | 180 | SMQ400VS181M22X35T2 | 22 × 35 | 1.382 | 1.44 |
| | 220 | SMQ400VS221M22X40T2 | 22 × 40 | 1.13 | 1.49 |
| | 270 | SMQ400VS271M22X45T2 | 22 × 45 | 0.921 | 1.67 |
| | 330 | SMQ400VS331M22X50T2 | 22 × 50 | 0.754 | 1.9 |
| | 220 | SMQ400VS221M25X30T2 | 25.4 × 30 | 1.13 | 1.49 |
| | 270 | SMQ400VS271M25X35T2 | 25.4 × 35 | 0.921 | 1.67 |
| | 330 | SMQ400VS331M25X40T2 | 25.4 × 40 | 0.754 | 1.9 |
| | 390 | SMQ400VS391M25X45T2 | 25.4 × 45 | 0.638 | 2.13 |
| | 470 | SMQ400VS471M25X50T2 | 25.4 × 50 | 0.529 | 2.39 |
| | 270 | SMQ400VS271M30X25T2 | 30 × 25 | 0.921 | 1.67 |
| | 330 | SMQ400VS331M30X30T2 | 30 × 30 | 0.754 | 1.9 |
| | 390 | SMQ400VS391M30X35T2 | 30 × 35 | 0.638 | 2.13 |

*The case sizes in table are with no sleeve, refer to diagram for case sizes with sleeve.



Standard Voltage Ratings - VS/Snap Mount

| Rated Voltage (WVDC) | Capacitance (µF) | Catalog Part Number | Nominal Case Size* D × L (mm) | Maximum ESR (Ω) at +20°C, 120Hz | Rated Ripple Current (A rms) at +85°C, 120Hz |
|--------------------------------------|---------------------|---------------------|-------------------------------|---------------------------------|----------------------------------------------|
| 400 Volts 450 Volts Surge | 470 | SMQ400VS471M30X40T2 | 30 × 40 | 0.529 | 2.39 |
| | 560 | SMQ400VS561M30X45T2 | 30 × 45 | 0.444 | 2.69 |
| | 680 | SMQ400VS681M30X50T2 | 30 × 50 | 0.366 | 2.96 |
| | 330 | SMQ400VS331M35X25T2 | 35 × 25 | 0.754 | 1.9 |
| | 390 | SMQ400VS391M35X30T2 | 35 × 30 | 0.638 | 2.13 |
| | 470 | SMQ400VS471M35X30T2 | 35 × 30 | 0.529 | 2.39 |
| | 560 | SMQ400VS561M35X35T2 | 35 × 35 | 0.444 | 2.69 |
| | 680 | SMQ400VS681M35X40T2 | 35 × 40 | 0.366 | 2.96 |
| | 820 | SMQ400VS821M35X45T2 | 35 × 45 | 0.303 | 3.25 |
| 450 Volts 500 Volts Surge | 82 | SMQ450VS82RM22X25T2 | 22 × 25 | 4.043 | 0.83 |
| | 100 | SMQ450VS101M22X25T2 | 22 × 25 | 3.316 | 0.93 |
| | 120 | SMQ450VS121M22X30T2 | 22 × 30 | 2.763 | 1.04 |
| | 150 | SMQ450VS151M22X35T2 | 22 × 35 | 2.21 | 1.19 |
| | 180 | SMQ450VS181M22X40T2 | 22 × 40 | 1.842 | 1.35 |
| | 220 | SMQ450VS221M22X45T2 | 22 × 45 | 1.507 | 1.55 |
| | 270 | SMQ450VS271M22X50T2 | 22 × 50 | 1.228 | 1.78 |
| | 150 | SMQ450VS151M25X25T2 | 25.4 × 25 | 2.21 | 1.19 |
| | 180 | SMQ450VS181M25X30T2 | 25.4 × 30 | 1.842 | 1.35 |
| | 220 | SMQ450VS221M25X40T2 | 25.4 × 40 | 1.507 | 1.55 |
| | 270 | SMQ450VS271M25X40T2 | 25.4 × 40 | 1.228 | 1.78 |
| | 330 | SMQ450VS331M25X50T2 | 25.4 × 50 | 1.005 | 2.01 |
| | 220 | SMQ450VS221M30X30T2 | 30 × 30 | 1.507 | 1.55 |
| | 270 | SMQ450VS271M30X30T2 | 30 × 30 | 1.228 | 1.78 |
| | 330 | SMQ450VS331M30X40T2 | 30 × 40 | 1.005 | 2.01 |
| | 390 | SMQ450VS391M30X40T2 | 30 × 40 | 0.85 | 2.24 |
| | 470 | SMQ450VS471M30X45T2 | 30 × 45 | 0.705 | 2.53 |
| | 560 | SMQ450VS561M30X50T2 | 30 × 50 | 0.592 | 2.82 |
| | 220 | SMQ450VS221M35X25T2 | 35 × 25 | 1.507 | 1.55 |
| | 330 | SMQ450VS331M35X30T2 | 35 × 30 | 1.005 | 2.01 |
| | 390 | SMQ450VS391M35X35T2 | 35 × 35 | 0.85 | 2.24 |
| 470 | SMQ450VS471M35X40T2 | 35 × 40 | 0.705 | 2.53 | |
| 560 | SMQ450VS561M35X45T2 | 35 × 45 | 0.592 | 2.82 | |







*The case sizes in table are with no sleeve, refer to diagram for case sizes with sleeve.

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