



**THE DATASHEET OF
ESMH201VNN471MP35T**



- Snap Mount
- Large Capacitance
- High CV
- High Ripple
- RoHS Compliant
- +85°C Maximum Temperature



The SMH series capacitors are the standard +85°C, large capacitance, snap-in capacitors from United Chemi-Con. The load life for the SMH series is 2,000 hours at +85°C with the rated ripple current applied. The very high CV values and ripple current capabilities make these capacitors ideal for use in power supply filter circuits. The SMH capacitors are available in 2 or 4-pin snap-in styles and 4 or 5-pin straight terminals. The SMH series is RoHS compliant offering Pb-free construction.

The standard SMH 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 or 5-pin straight terminals.
- Capacitance range: 56 to 270,000µF.
- Voltage range: 6.3 to 450VDC.
- Category temperature range: -40°C to +85°C for 6.3 to 100V; -25°C to +85°C for 160 to 450V.
- Leakage current: 0.02CV(µA) or 3mA, whichever is smaller, after 5 minutes at +20°C.
- Standard capacitance tolerance: ±20%
- Nominal case size (D × L): 22 × 20mm to 40 × 80mm.
- Rated lifetime: 2,000 hours at +85°C with the rated ripple current applied.

SMH Specifications - Snap Mount

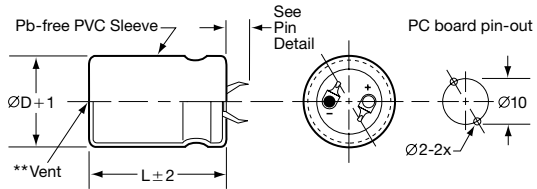
| Item | Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|--|-------------------|--------|--------|---------|---------|---------|---------|---------|-------------------|---------|-------------------------|-------|------|-------|--------|---------|-------------------|------|-------|------|------|------|---------|------|------|------|------|------|------|----------|------|------|------|------|------|------|----------|------|------|------|------|------|------|
| Category Temperature Range | - 40 to +85°C for 6.3 to 100VDC; - 25 to +85°C for 160 to 450VDC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage Range | 6.3 to 450VDC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Range | 56 to 270,000 μ F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | \pm 20% (M) at +20°C, 120Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | I = 0.02CV (μ A) or 3mA, whichever is smaller, 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-top: 10px;"> <thead> <tr> <th>Rated Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63-100</th> <th>160-250</th> <th>315-450</th> </tr> </thead> <tbody> <tr> <td>Tan δ (DF) Max.†</td> <td>0.60</td> <td>0.50</td> <td>0.40</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> <td>0.15</td> <td>0.10*</td> <td>0.15</td> </tr> </tbody> </table> <p>*0.15 maximum for 35mm and 40mm diameter. † For rated voltages \leq 63V, values are not valid for case sizes >35mm in diameter or >50mm in length.</p> | Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63-100 | 160-250 | 315-450 | Tan δ (DF) Max.† | 0.60 | 0.50 | 0.40 | 0.30 | 0.25 | 0.20 | 0.15 | 0.10* | 0.15 | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63-100 | 160-250 | 315-450 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tan δ (DF) Max.† | 0.60 | 0.50 | 0.40 | 0.30 | 0.25 | 0.20 | 0.15 | 0.10* | 0.15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Temperature Characteristics | At 120Hz, impedance (Z) ratio between the -25°C or -40°C value and +20°C value shall not exceed the values given below. <table border="1" style="margin-top: 10px;"> <thead> <tr> <th>Rated Voltage (V)</th> <th>6.3-16</th> <th>25</th> <th>35</th> <th>50, 63</th> <th>80, 100</th> <th>160-400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C)/Z(+20°C)</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>4</td> <td>8</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>15</td> <td>10</td> <td>8</td> <td>6</td> <td>5</td> <td>—</td> <td>—</td> </tr> </tbody> </table> | Rated Voltage (V) | 6.3-16 | 25 | 35 | 50, 63 | 80, 100 | 160-400 | 450 | Z(-25°C)/Z(+20°C) | 4 | 3 | 3 | 2 | 2 | 4 | 8 | Z(-40°C)/Z(+20°C) | 15 | 10 | 8 | 6 | 5 | — | — | | | | | | | | | | | | | | | | | | | |
| Rated Voltage (V) | 6.3-16 | 25 | 35 | 50, 63 | 80, 100 | 160-400 | 450 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z(-25°C)/Z(+20°C) | 4 | 3 | 3 | 2 | 2 | 4 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z(-40°C)/Z(+20°C) | 15 | 10 | 8 | 6 | 5 | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Ripple Current Multipliers | Ambient Temperature (°C) <table border="1" style="margin-top: 10px;"> <thead> <tr> <th>+45°C</th> <th>+60°C</th> <th>+70°C</th> <th>+85°C</th> </tr> </thead> <tbody> <tr> <td>1.73</td> <td>1.50</td> <td>1.32</td> <td>1.00</td> </tr> </tbody> </table> <p>Frequency (Hz)</p> <table border="1" style="margin-top: 10px;"> <thead> <tr> <th>DC Rated Voltage</th> <th>50Hz</th> <th>120Hz</th> <th>300Hz</th> <th>1kHz</th> <th>10kHz</th> <th>100kHz</th> </tr> </thead> <tbody> <tr> <td>6.3-50V</td> <td>0.95</td> <td>1.00</td> <td>1.03</td> <td>1.05</td> <td>1.08</td> <td>1.08</td> </tr> <tr> <td>63-100V</td> <td>0.92</td> <td>1.00</td> <td>1.07</td> <td>1.13</td> <td>1.19</td> <td>1.20</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> </tbody> </table> | +45°C | +60°C | +70°C | +85°C | 1.73 | 1.50 | 1.32 | 1.00 | DC Rated Voltage | 50Hz | 120Hz | 300Hz | 1kHz | 10kHz | 100kHz | 6.3-50V | 0.95 | 1.00 | 1.03 | 1.05 | 1.08 | 1.08 | 63-100V | 0.92 | 1.00 | 1.07 | 1.13 | 1.19 | 1.20 | 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.73 | 1.50 | 1.32 | 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DC Rated Voltage | 50Hz | 120Hz | 300Hz | 1kHz | 10kHz | 100kHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.3-50V | 0.95 | 1.00 | 1.03 | 1.05 | 1.08 | 1.08 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 63-100V | 0.92 | 1.00 | 1.07 | 1.13 | 1.19 | 1.20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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: $\leq \pm$ 20% of initial measured value Tan δ (DF) : \leq 150% of initial specified value Leakage current : \leq initial specified value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Diagram of Dimensions - Snap Mount

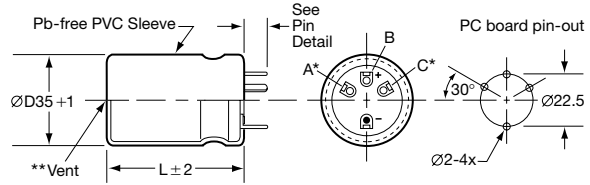
Snap Mount

Unit: mm

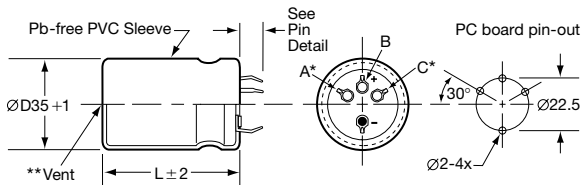
Types VSN & VNN $\varnothing 22\text{-}\varnothing 35$



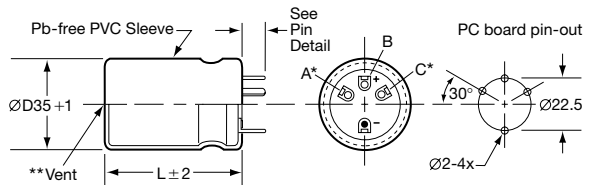
Type VRD $\varnothing 35$



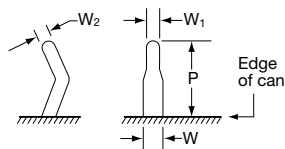
Type VND $\varnothing 35$ & $\varnothing 40$



Type VQD $\varnothing 35$

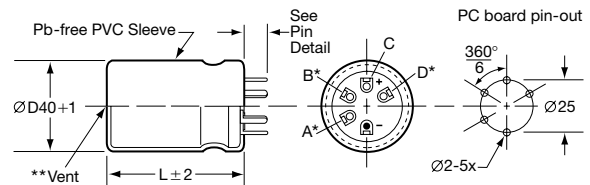


VS & VN Pin Dimensions



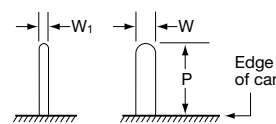
| Type | P | W | W ₁ | W ₂ |
|--|---------------|---------------|----------------|----------------|
| VSN $\varnothing 22\text{-}\varnothing 30$ | 4.0 ± 0.5 | 1.5 ± 0.2 | 1.0 | 1.0 |
| VSN $\varnothing 35$ | 3.5 ± 0.5 | | | |
| VNN $\varnothing 22\text{-}\varnothing 35$ | 5.8 ± 1.0 | | | |
| VND $\varnothing 35\text{-}\varnothing 40$ | 5.8 ± 1.0 | | | |

Type VQT $\varnothing 40$

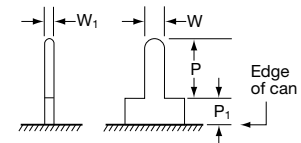


VR & VQ Pin Dimensions

VR Straight Pin



VQ Standoff Pin



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

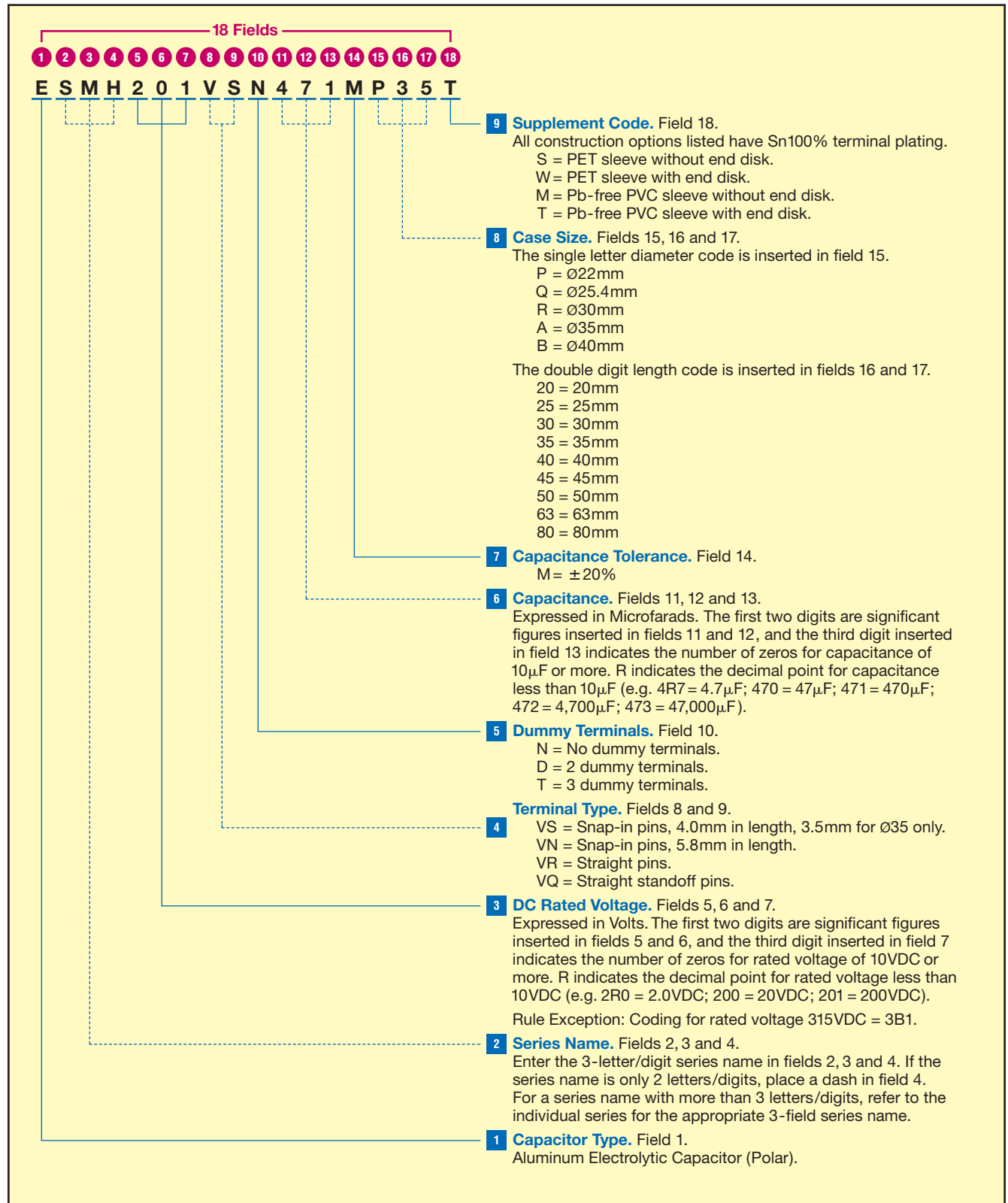
CAUTION:

*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 SMH Series

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



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 +85°C, 120Hz |
|------------------------------------|--------------------|---------------------|-------------------------------|----------------|---------------------------------|--|
| 6.3 Volts 8 Volts Surge | 15,000 | ESMH6R3VSN153MP25T | 22 × 25 | P25 | 0.066 | 2.44 |
| | 18,000 | ESMH6R3VSN183MP30T | 22 × 30 | P30 | 0.055 | 2.67 |
| | 22,000 | ESMH6R3VSN223MP30T | 22 × 30 | P30 | 0.045 | 3.06 |
| | 27,000 | ESMH6R3VSN273MP35T | 22 × 35 | P35 | 0.037 | 3.49 |
| | 33,000 | ESMH6R3VSN333MP40T | 22 × 40 | P40 | 0.03 | 3.97 |
| | 39,000 | ESMH6R3VSN393MP50T | 22 × 50 | P50 | 0.026 | 4.55 |
| | 18,000 | ESMH6R3VSN183MQ25T | 25.4 × 25 | Q25 | 0.055 | 2.7 |
| | 22,000 | ESMH6R3VSN223MQ25T | 25.4 × 25 | Q25 | 0.045 | 3.07 |
| | 27,000 | ESMH6R3VSN273MQ30T | 25.4 × 30 | Q30 | 0.037 | 3.52 |
| | 33,000 | ESMH6R3VSN333MQ35T | 25.4 × 35 | Q35 | 0.03 | 4.02 |
| | 39,000 | ESMH6R3VSN393MQ40T | 25.4 × 40 | Q40 | 0.026 | 4.5 |
| | 47,000 | ESMH6R3VSN473MQ45T | 25.4 × 45 | Q45 | 0.021 | 5.09 |
| | 56,000 | ESMH6R3VSN563MQ50T | 25.4 × 50 | Q50 | 0.018 | 5.71 |
| | 27,000 | ESMH6R3VSN273MR25T | 30 × 25 | R25 | 0.037 | 3.57 |
| | 33,000 | ESMH6R3VSN333MR25T | 30 × 25 | R25 | 0.03 | 3.95 |
| | 39,000 | ESMH6R3VSN393MR30T | 30 × 30 | R30 | 0.026 | 4.45 |
| | 47,000 | ESMH6R3VSN473MR35T | 30 × 35 | R35 | 0.021 | 5.06 |
| | 56,000 | ESMH6R3VSN563MR40T | 30 × 40 | R40 | 0.018 | 5.7 |
| | 68,000 | ESMH6R3VSN683MR45T | 30 × 45 | R45 | 0.015 | 6.48 |
| | 82,000 | ESMH6R3VSN823MR50T | 30 × 50 | R50 | 0.012 | 7.32 |
| | 39,000 | ESMH6R3VSN393MA25T | 35 × 25 | A25 | 0.026 | 4.51 |
| | 47,000 | ESMH6R3VSN473MA30T | 35 × 30 | A30 | 0.021 | 5.01 |
| | 56,000 | ESMH6R3VSN563MA30T | 35 × 30 | A30 | 0.018 | 5.77 |
| | 68,000 | ESMH6R3VSN683MA35T | 35 × 35 | A35 | 0.015 | 6.42 |
| | 82,000 | ESMH6R3VSN823MA40T | 35 × 40 | A40 | 0.012 | 7.29 |
| | 100,000 | ESMH6R3VSN104MA45T | 35 × 45 | A45 | 0.01 | 8.31 |
| | 150,000 | ESMH6R3VSN154MA63T | 35 × 63 | A63 | 0.01 | 10.91 |
| | 180,000 | ESMH6R3VSN184MA80T | 35 × 80 | A80 | 0.009 | 12.78 |
| | 56,000 | ESMH6R3VQT563MB25T | 40 × 25 | B25 | 0.027 | 5.48 |
| | 82,000 | ESMH6R3VQT823MB30T | 40 × 30 | B30 | 0.02 | 6.94 |
| 100,000 | ESMH6R3VQT104MB35T | 40 × 35 | B35 | 0.017 | 7.95 | |
| 120,000 | ESMH6R3VQT124MB40T | 40 × 40 | B40 | 0.014 | 8.97 | |
| 150,000 | ESMH6R3VQT154MB50T | 40 × 50 | B50 | 0.012 | 10.66 | |
| 220,000 | ESMH6R3VQT224MB63T | 40 × 63 | B63 | 0.009 | 13.79 | |
| 270,000 | ESMH6R3VQT274MB80T | 40 × 80 | B80 | 0.008 | 16.62 | |
| 10 Volts 13 Volts Surge | 12,000 | ESMH100VSN123MP25T | 22 × 25 | P25 | 0.069 | 2.39 |
| | 15,000 | ESMH100VSN153MP30T | 22 × 30 | P30 | 0.055 | 2.76 |
| | 18,000 | ESMH100VSN183MP35T | 22 × 35 | P35 | 0.046 | 3.12 |
| | 22,000 | ESMH100VSN223MP40T | 22 × 40 | P40 | 0.038 | 3.55 |
| | 27,000 | ESMH100VSN273MP45T | 22 × 45 | P45 | 0.031 | 4.04 |
| | 33,000 | ESMH100VSN333MP50T | 22 × 50 | P50 | 0.025 | 4.58 |
| | 15,000 | ESMH100VSN153MQ25T | 25.4 × 25 | Q25 | 0.055 | 2.77 |
| | 18,000 | ESMH100VSN183MQ25T | 25.4 × 25 | Q25 | 0.046 | 3.04 |
| | 22,000 | ESMH100VSN223MQ30T | 25.4 × 30 | Q30 | 0.038 | 3.48 |
| | 27,000 | ESMH100VSN273MQ35T | 25.4 × 35 | Q35 | 0.031 | 3.98 |
| | 33,000 | ESMH100VSN333MQ40T | 25.4 × 40 | Q40 | 0.025 | 4.54 |
| | 39,000 | ESMH100VSN393MQ45T | 25.4 × 45 | Q45 | 0.021 | 5.08 |
| | 47,000 | ESMH100VSN473MQ50T | 25.4 × 50 | Q50 | 0.018 | 5.73 |
| | 22,000 | ESMH100VSN223MR25T | 30 × 25 | R25 | 0.038 | 3.53 |
| | 27,000 | ESMH100VSN273MR30T | 30 × 30 | R30 | 0.031 | 3.73 |
| | 33,000 | ESMH100VSN333MR30T | 30 × 30 | R30 | 0.025 | 4.13 |
| | 39,000 | ESMH100VSN393MR35T | 30 × 35 | R35 | 0.021 | 5.05 |
| | 47,000 | ESMH100VSN473MR40T | 30 × 40 | R40 | 0.018 | 5.72 |
| | 56,000 | ESMH100VSN563MR45T | 30 × 45 | R45 | 0.015 | 6.44 |
| | 27,000 | ESMH100VSN273MA25T | 35 × 25 | A25 | 0.031 | 3.73 |
| | 33,000 | ESMH100VSN333MA25T | 35 × 25 | A25 | 0.025 | 4.13 |
| | 39,000 | ESMH100VSN393MA30T | 35 × 30 | A30 | 0.021 | 4.8 |
| | 47,000 | ESMH100VSN473MA30T | 35 × 30 | A30 | 0.018 | 5.27 |
| | 56,000 | ESMH100VSN563MA35T | 35 × 35 | A35 | 0.015 | 6.38 |

† 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 +85°C, 120Hz |
|-----------------------------------|--------------------|---------------------|-------------------------------|----------------|---------------------------------|--|
| 10 Volts 13 Volts Surge | 68,000 | ESMH100VSN683MA40T | 35 × 40 | A40 | 0.012 | 7.27 |
| | 82,000 | ESMH100VSN823MA50T | 35 × 50 | A50 | 0.01 | 8.49 |
| | 100,000 | ESMH100VSN104MA63T | 35 × 63 | A63 | 0.01 | 8.91 |
| | 150,000 | ESMH100VSN154MA80T | 35 × 80 | A80 | 0.009 | 11.67 |
| | 47,000 | ESMH100VQT473MB25T | 40 × 25 | B25 | 0.026 | 5.02 |
| | 56,000 | ESMH100VQT563MB30T | 40 × 30 | B30 | 0.021 | 5.74 |
| | 68,000 | ESMH100VQT683MB35T | 40 × 35 | B35 | 0.018 | 6.56 |
| | 82,000 | ESMH100VQT823MB40T | 40 × 40 | B40 | 0.015 | 7.42 |
| | 120,000 | ESMH100VQT124MB50T | 40 × 50 | B50 | 0.012 | 9.54 |
| | 150,000 | ESMH100VQT154MB63T | 40 × 63 | B63 | 0.01 | 11.39 |
| 220,000 | ESMH100VQT224MB80T | 40 × 80 | B80 | 0.008 | 15.0 | |
| 16 Volts 20 Volts Surge | 8,200 | ESMH160VSN822MP25T | 22 × 25 | P25 | 0.081 | 2.51 |
| | 10,000 | ESMH160VSN103MP25T | 22 × 25 | P25 | 0.066 | 2.77 |
| | 12,000 | ESMH160VSN123MP30T | 22 × 30 | P30 | 0.055 | 2.86 |
| | 15,000 | ESMH160VSN153MP35T | 22 × 35 | P35 | 0.044 | 3.29 |
| | 18,000 | ESMH160VSN183MP40T | 22 × 40 | P40 | 0.037 | 3.72 |
| | 22,000 | ESMH160VSN223MP50T | 22 × 50 | P50 | 0.03 | 4.37 |
| | 12,000 | ESMH160VSN123MQ25T | 25.4 × 25 | Q25 | 0.055 | 2.95 |
| | 15,000 | ESMH160VSN153MQ30T | 25.4 × 30 | Q30 | 0.044 | 3.46 |
| | 18,000 | ESMH160VSN183MQ35T | 25.4 × 35 | Q35 | 0.037 | 3.98 |
| | 22,000 | ESMH160VSN223MQ40T | 25.4 × 40 | Q40 | 0.03 | 4.26 |
| | 27,000 | ESMH160VSN273MQ45T | 25.4 × 45 | Q45 | 0.025 | 4.72 |
| | 33,000 | ESMH160VSN333MQ50T | 25.4 × 50 | Q50 | 0.02 | 5.33 |
| | 15,000 | ESMH160VSN153MR25T | 30 × 25 | R25 | 0.044 | 3.66 |
| | 18,000 | ESMH160VSN183MR25T | 30 × 25 | R25 | 0.037 | 4.0 |
| | 22,000 | ESMH160VSN223MR30T | 30 × 30 | R30 | 0.03 | 4.21 |
| | 27,000 | ESMH160VSN273MR35T | 30 × 35 | R35 | 0.025 | 4.82 |
| | 33,000 | ESMH160VSN333MR40T | 30 × 40 | R40 | 0.02 | 5.36 |
| | 39,000 | ESMH160VSN393MR45T | 30 × 45 | R45 | 0.017 | 6.01 |
| | 47,000 | ESMH160VSN473MR50T | 30 × 50 | R50 | 0.014 | 6.79 |
| | 22,000 | ESMH160VSN223MA25T | 35 × 25 | A25 | 0.03 | 4.15 |
| | 27,000 | ESMH160VSN273MA30T | 35 × 30 | A30 | 0.025 | 4.65 |
| | 33,000 | ESMH160VSN333MA30T | 35 × 30 | A30 | 0.02 | 5.15 |
| | 39,000 | ESMH160VSN393MA35T | 35 × 35 | A35 | 0.017 | 5.95 |
| | 47,000 | ESMH160VSN473MA40T | 35 × 40 | A40 | 0.014 | 6.76 |
| | 56,000 | ESMH160VSN563MA45T | 35 × 45 | A45 | 0.012 | 7.62 |
| | 68,000 | ESMH160VSN683MA50T | 35 × 50 | A50 | 0.01 | 8.63 |
| | 82,000 | ESMH160VSN823MA63T | 35 × 63 | A63 | 0.011 | 9.88 |
| | 100,000 | ESMH160VSN104MA80T | 35 × 80 | A80 | 0.009 | 11.67 |
| | 33,000 | ESMH160VQT333MB25T | 40 × 25 | B25 | 0.027 | 5.15 |
| | 39,000 | ESMH160VQT393MB30T | 40 × 30 | B30 | 0.022 | 5.86 |
| | 47,000 | ESMH160VQT473MB35T | 40 × 35 | B35 | 0.019 | 6.68 |
| | 68,000 | ESMH160VQT683MB40T | 40 × 40 | B40 | 0.015 | 8.27 |
| | 82,000 | ESMH160VQT823MB50T | 40 × 50 | B50 | 0.012 | 9.66 |
| 100,000 | ESMH160VQT104MB63T | 40 × 63 | B63 | 0.01 | 11.39 | |
| 150,000 | ESMH160VQT154MB80T | 40 × 80 | B80 | 0.008 | 15.17 | |
| 25 Volts 32 Volts Surge | 5,600 | ESMH250VSN562MP25T | 22 × 25 | P25 | 0.089 | 2.21 |
| | 6,800 | ESMH250VSN682MP30T | 22 × 30 | P30 | 0.073 | 2.4 |
| | 8,200 | ESMH250VSN822MP35T | 22 × 35 | P35 | 0.061 | 2.72 |
| | 10,000 | ESMH250VSN103MP40T | 22 × 40 | P40 | 0.05 | 3.09 |
| | 12,000 | ESMH250VSN123MP45T | 22 × 45 | P45 | 0.041 | 3.48 |
| | 15,000 | ESMH250VSN153MP50T | 22 × 50 | P50 | 0.033 | 4.0 |
| | 6,800 | ESMH250VSN682MQ25T | 25.4 × 25 | Q25 | 0.073 | 2.56 |
| | 8,200 | ESMH250VSN822MQ25T | 25.4 × 25 | Q25 | 0.061 | 2.8 |
| | 10,000 | ESMH250VSN103MQ30T | 25.4 × 30 | Q30 | 0.05 | 3.12 |
| | 12,000 | ESMH250VSN123MQ35T | 25.4 × 35 | Q35 | 0.041 | 3.43 |
| | 15,000 | ESMH250VSN153MQ40T | 25.4 × 40 | Q40 | 0.033 | 3.95 |
| | 18,000 | ESMH250VSN183MQ45T | 25.4 × 45 | Q45 | 0.028 | 4.45 |

† 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 +85°C, 120Hz |
|------------------------------------|--------------------|---------------------|-------------------------------|----------------|---------------------------------|--|
| 25 Volts 32 Volts Surge | 10,000 | ESMH250VSN103MR25T | 30 × 25 | R25 | 0.05 | 3.21 |
| | 12,000 | ESMH250VSN123MR30T | 30 × 30 | R30 | 0.041 | 3.86 |
| | 15,000 | ESMH250VSN153MR30T | 30 × 30 | R30 | 0.033 | 4.0 |
| | 18,000 | ESMH250VSN183MR35T | 30 × 35 | R35 | 0.028 | 4.46 |
| | 22,000 | ESMH250VSN223MR45T | 30 × 45 | R45 | 0.023 | 5.21 |
| | 27,000 | ESMH250VSN273MR50T | 30 × 50 | R50 | 0.018 | 5.94 |
| | 12,000 | ESMH250VSN123MA25T | 35 × 25 | A25 | 0.041 | 3.54 |
| | 15,000 | ESMH250VSN153MA25T | 35 × 25 | A25 | 0.033 | 3.95 |
| | 18,000 | ESMH250VSN183MA30T | 35 × 30 | A30 | 0.028 | 4.63 |
| | 22,000 | ESMH250VSN223MA35T | 35 × 35 | A35 | 0.023 | 5.16 |
| | 27,000 | ESMH250VSN273MA40T | 35 × 40 | A40 | 0.018 | 5.92 |
| | 33,000 | ESMH250VSN333MA45T | 35 × 45 | A45 | 0.015 | 6.75 |
| | 39,000 | ESMH250VSN393MA50T | 35 × 50 | A50 | 0.013 | 7.56 |
| | 47,000 | ESMH250VSN473MA63T | 35 × 63 | A63 | 0.012 | 8.63 |
| | 68,000 | ESMH250VSN683MA80T | 35 × 80 | A80 | 0.009 | 11.11 |
| | 22,000 | ESMH250VQT223MB25T | 40 × 25 | B25 | 0.027 | 4.86 |
| | 27,000 | ESMH250VQT273MB30T | 40 × 30 | B30 | 0.021 | 5.63 |
| | 33,000 | ESMH250VQT333MB35T | 40 × 35 | B35 | 0.018 | 6.46 |
| | 39,000 | ESMH250VQT393MB40T | 40 × 40 | B40 | 0.015 | 7.24 |
| | 56,000 | ESMH250VQT563MB50T | 40 × 50 | B50 | 0.012 | 9.21 |
| 68,000 | ESMH250VQT683MB63T | 40 × 63 | B63 | 0.01 | 10.84 | |
| 100,000 | ESMH250VQT104MB80T | 40 × 80 | B80 | 0.008 | 14.31 | |

| | | | | | | |
|------------------------------------|--------------------|--------------------|-----------|-------|-------|-------|
| 35 Volts 44 Volts Surge | 3,900 | ESMH350VSN392MP25T | 22 × 25 | P25 | 0.106 | 2.22 |
| | 4,700 | ESMH350VSN472MP30T | 22 × 30 | P30 | 0.088 | 2.41 |
| | 5,600 | ESMH350VSN562MP35T | 22 × 35 | P35 | 0.074 | 2.75 |
| | 6,800 | ESMH350VSN682MP40T | 22 × 40 | P40 | 0.061 | 2.8 |
| | 8,200 | ESMH350VSN822MP45T | 22 × 45 | P45 | 0.051 | 3.47 |
| | 10,000 | ESMH350VSN103MP50T | 22 × 50 | P50 | 0.041 | 3.57 |
| | 4,700 | ESMH350VSN472MQ25T | 25.4 × 25 | Q25 | 0.088 | 2.42 |
| | 5,600 | ESMH350VSN562MQ25T | 25.4 × 25 | Q25 | 0.074 | 2.64 |
| | 6,800 | ESMH350VSN682MQ30T | 25.4 × 30 | Q30 | 0.061 | 2.74 |
| | 8,200 | ESMH350VSN822MQ35T | 25.4 × 35 | Q35 | 0.051 | 3.1 |
| | 10,000 | ESMH350VSN103MQ40T | 25.4 × 40 | Q40 | 0.041 | 3.53 |
| | 12,000 | ESMH350VSN123MQ45T | 25.4 × 45 | Q45 | 0.035 | 3.98 |
| | 15,000 | ESMH350VSN153MQ50T | 25.4 × 50 | Q50 | 0.028 | 4.54 |
| | 6,800 | ESMH350VSN682MR25T | 30 × 25 | R25 | 0.061 | 2.97 |
| | 8,200 | ESMH350VSN822MR30T | 30 × 30 | R30 | 0.051 | 3.13 |
| | 10,000 | ESMH350VSN103MR30T | 30 × 30 | R30 | 0.041 | 3.46 |
| | 12,000 | ESMH350VSN123MR35T | 30 × 35 | R35 | 0.035 | 4.01 |
| | 15,000 | ESMH350VSN153MR40T | 30 × 40 | R40 | 0.028 | 4.52 |
| | 18,000 | ESMH350VSN183MR45T | 30 × 45 | R45 | 0.023 | 4.71 |
| | 22,000 | ESMH350VSN223MR50T | 30 × 50 | R50 | 0.019 | 5.33 |
| | 8,200 | ESMH350VSN822MA25T | 35 × 25 | A25 | 0.051 | 2.73 |
| | 10,000 | ESMH350VSN103MA25T | 35 × 25 | A25 | 0.041 | 3.02 |
| | 12,000 | ESMH350VSN123MA30T | 35 × 30 | A30 | 0.035 | 4.42 |
| | 15,000 | ESMH350VSN153MA35T | 35 × 35 | A35 | 0.028 | 5.01 |
| | 18,000 | ESMH350VSN183MA40T | 35 × 40 | A40 | 0.023 | 5.54 |
| | 22,000 | ESMH350VSN223MA45T | 35 × 45 | A45 | 0.019 | 6.04 |
| | 27,000 | ESMH350VSN273MA50T | 35 × 50 | A50 | 0.015 | 6.89 |
| | 33,000 | ESMH350VSN333MA63T | 35 × 63 | A63 | 0.012 | 7.93 |
| | 47,000 | ESMH350VSN473MA80T | 35 × 80 | A80 | 0.01 | 10.12 |
| | 15,000 | ESMH350VQT153MB25T | 40 × 25 | B25 | 0.028 | 4.39 |
| | 18,000 | ESMH350VQT183MB30T | 40 × 30 | B30 | 0.023 | 5.04 |
| | 22,000 | ESMH350VQT223MB35T | 40 × 35 | B35 | 0.019 | 5.78 |
| | 27,000 | ESMH350VQT273MB40T | 40 × 40 | B40 | 0.016 | 6.59 |
| | 39,000 | ESMH350VQT393MB50T | 40 × 50 | B50 | 0.012 | 8.42 |
| 47,000 | ESMH350VQT473MB63T | 40 × 63 | B63 | 0.01 | 9.88 | |
| 68,000 | ESMH350VQT683MB80T | 40 × 80 | B80 | 0.008 | 12.92 | |

† 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 +85°C, 120Hz |
|-----------------------------------|--------------------|---------------------|-------------------------------|----------------|---------------------------------|--|
| 50 Volts 63 Volts Surge | 2,200 | ESMH500VSN222MP25T | 22 × 25 | P25 | 0.151 | 1.91 |
| | 3,300 | ESMH500VSN332MP30T | 22 × 30 | P30 | 0.10 | 2.37 |
| | 3,900 | ESMH500VSN392MP35T | 22 × 35 | P35 | 0.085 | 2.65 |
| | 4,700 | ESMH500VSN472MP40T | 22 × 40 | P40 | 0.071 | 2.99 |
| | 5,600 | ESMH500VSN562MP45T | 22 × 45 | P45 | 0.059 | 3.36 |
| | 6,800 | ESMH500VSN682MP50T | 22 × 50 | P50 | 0.049 | 3.81 |
| | 3,300 | ESMH500VSN332MQ25T | 25.4 × 25 | Q25 | 0.10 | 2.38 |
| | 3,900 | ESMH500VSN392MQ30T | 25.4 × 30 | Q30 | 0.085 | 2.68 |
| | 4,700 | ESMH500VSN472MQ35T | 25.4 × 35 | Q35 | 0.071 | 3.03 |
| | 5,600 | ESMH500VSN562MQ35T | 25.4 × 35 | Q35 | 0.059 | 3.31 |
| | 6,800 | ESMH500VSN682MQ40T | 25.4 × 40 | Q40 | 0.049 | 3.81 |
| | 8,200 | ESMH500VSN822MQ50T | 25.4 × 50 | Q50 | 0.04 | 4.37 |
| | 3,900 | ESMH500VSN392MR25T | 30 × 25 | R25 | 0.085 | 2.55 |
| | 4,700 | ESMH500VSN472MR25T | 30 × 25 | R25 | 0.071 | 2.81 |
| | 5,600 | ESMH500VSN562MR30T | 30 × 30 | R30 | 0.059 | 3.37 |
| | 6,800 | ESMH500VSN682MR35T | 30 × 35 | R35 | 0.049 | 3.85 |
| | 8,200 | ESMH500VSN822MR40T | 30 × 40 | R40 | 0.04 | 4.36 |
| | 10,000 | ESMH500VSN103MR45T | 30 × 45 | R45 | 0.033 | 4.97 |
| | 12,000 | ESMH500VSN123MR50T | 30 × 50 | R50 | 0.028 | 5.6 |
| | 5,600 | ESMH500VSN562MA25T | 35 × 25 | A25 | 0.059 | 3.42 |
| | 6,800 | ESMH500VSN682MA30T | 35 × 30 | A30 | 0.049 | 3.85 |
| | 8,200 | ESMH500VSN822MA30T | 35 × 30 | A30 | 0.04 | 4.41 |
| | 10,000 | ESMH500VSN103MA35T | 35 × 35 | A35 | 0.033 | 4.92 |
| | 12,000 | ESMH500VSN123MA40T | 35 × 40 | A40 | 0.028 | 5.58 |
| | 15,000 | ESMH500VSN153MA45T | 35 × 45 | A45 | 0.022 | 6.44 |
| | 18,000 | ESMH500VSN183MA50T | 35 × 50 | A50 | 0.018 | 6.71 |
| | 22,000 | ESMH500VSN223MA63T | 35 × 63 | A63 | 0.013 | 7.23 |
| | 27,000 | ESMH500VSN273MA80T | 35 × 80 | A80 | 0.011 | 8.57 |
| | 8,200 | ESMH500VQT822MB25T | 40 × 25 | B25 | 0.033 | 3.63 |
| | 12,000 | ESMH500VQT123MB30T | 40 × 30 | B30 | 0.024 | 4.6 |
| 15,000 | ESMH500VQT153MB35T | 40 × 35 | B35 | 0.02 | 5.33 | |
| 18,000 | ESMH500VQT183MB40T | 40 × 40 | B40 | 0.017 | 6.02 | |
| 22,000 | ESMH500VQT223MB50T | 40 × 50 | B50 | 0.014 | 7.07 | |
| 33,000 | ESMH500VQT333MB63T | 40 × 63 | B63 | 0.011 | 9.25 | |
| 39,000 | ESMH500VQT393MB80T | 40 × 80 | B80 | 0.009 | 10.94 | |
| 63 Volts 79 Volts Surge | 1,800 | ESMH630VSN182MP25T | 22 × 25 | P25 | 0.138 | 1.82 |
| | 2,200 | ESMH630VSN222MP30T | 22 × 30 | P30 | 0.113 | 2.31 |
| | 2,700 | ESMH630VSN272MP35T | 22 × 35 | P35 | 0.092 | 2.4 |
| | 3,300 | ESMH630VSN332MP35T | 22 × 35 | P35 | 0.075 | 2.62 |
| | 3,900 | ESMH630VSN392MP40T | 22 × 40 | P40 | 0.064 | 2.93 |
| | 4,700 | ESMH630VSN472MP50T | 22 × 50 | P50 | 0.053 | 3.39 |
| | 2,200 | ESMH630VSN222MQ25T | 25.4 × 25 | Q25 | 0.113 | 2.3 |
| | 2,700 | ESMH630VSN272MQ25T | 25.4 × 25 | Q25 | 0.092 | 2.4 |
| | 3,300 | ESMH630VSN332MQ30T | 25.4 × 30 | Q30 | 0.075 | 2.64 |
| | 3,900 | ESMH630VSN392MQ35T | 25.4 × 35 | Q35 | 0.064 | 2.97 |
| | 4,700 | ESMH630VSN472MQ40T | 25.4 × 40 | Q40 | 0.053 | 3.36 |
| | 5,600 | ESMH630VSN562MQ45T | 25.4 × 45 | Q45 | 0.044 | 3.77 |
| | 6,800 | ESMH630VSN682MQ50T | 25.4 × 50 | Q50 | 0.037 | 4.27 |
| | 3,300 | ESMH630VSN332MR25T | 30 × 25 | R25 | 0.075 | 2.78 |
| | 3,900 | ESMH630VSN392MR30T | 30 × 30 | R30 | 0.064 | 3.0 |
| | 4,700 | ESMH630VSN472MR30T | 30 × 30 | R30 | 0.053 | 3.32 |
| | 5,600 | ESMH630VSN562MR35T | 30 × 35 | R35 | 0.044 | 3.75 |
| | 6,800 | ESMH630VSN682MR40T | 30 × 40 | R40 | 0.037 | 4.27 |
| | 8,200 | ESMH630VSN822MR45T | 30 × 45 | R45 | 0.03 | 4.83 |
| | 10,000 | ESMH630VSN103MR50T | 30 × 50 | R50 | 0.025 | 5.49 |
| | 3,900 | ESMH630VSN392MA25T | 35 × 25 | A25 | 0.064 | 3.0 |
| | 4,700 | ESMH630VSN472MA25T | 35 × 25 | A25 | 0.053 | 3.36 |
| | 5,600 | ESMH630VSN562MA30T | 35 × 30 | A30 | 0.044 | 3.76 |
| | 6,800 | ESMH630VSN682MA30T | 35 × 30 | A30 | 0.037 | 4.15 |

† 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 +85°C, 120Hz |
|--------------------------------------|--------------------|---------------------|-------------------------------|----------------|---------------------------------|--|
| 63 Volts 79 Volts Surge | 8,200 | ESMH630VSN822MA35T | 35 × 35 | A35 | 0.03 | 4.79 |
| | 10,000 | ESMH630VSN103MA40T | 35 × 40 | A40 | 0.025 | 5.47 |
| | 12,000 | ESMH630VSN123MA45T | 35 × 45 | A45 | 0.021 | 6.19 |
| | 15,000 | ESMH630VSN153MA63T | 35 × 63 | A63 | 0.015 | 6.9 |
| | 22,000 | ESMH630VSN223MA80T | 35 × 80 | A80 | 0.011 | 8.94 |
| | 6,800 | ESMH630VQT682MB25T | 40 × 25 | B25 | 0.036 | 3.82 |
| | 8,200 | ESMH630VQT822MB30T | 40 × 30 | B30 | 0.029 | 4.39 |
| | 10,000 | ESMH630VQT103MB35T | 40 × 35 | B35 | 0.024 | 5.03 |
| | 12,000 | ESMH630VQT123MB40T | 40 × 40 | B40 | 0.02 | 5.68 |
| | 18,000 | ESMH630VQT183MB50T | 40 × 50 | B50 | 0.015 | 7.39 |
| 22,000 | ESMH630VQT223MB63T | 40 × 63 | B63 | 0.013 | 8.72 | |
| 33,000 | ESMH630VQT333MB80T | 40 × 80 | B80 | 0.01 | 11.62 | |
| 80 Volts 100 Volts Surge | 1,200 | ESMH800VSN122MP25T | 22 × 25 | P25 | 0.207 | 1.69 |
| | 1,500 | ESMH800VSN182MP25T | 22 × 25 | P25 | 0.138 | 1.88 |
| | 1,800 | ESMH800VSN182MP30T | 22 × 30 | P30 | 0.138 | 2.14 |
| | 2,200 | ESMH800VSN222MP35T | 22 × 35 | P35 | 0.113 | 2.44 |
| | 2,700 | ESMH800VSN272MP40T | 22 × 40 | P40 | 0.092 | 2.78 |
| | 3,300 | ESMH800VSN332MP45T | 22 × 45 | P45 | 0.075 | 3.16 |
| | 3,900 | ESMH800VSN392MP50T | 22 × 50 | P50 | 0.064 | 3.52 |
| | 1,800 | ESMH800VSN182MQ25T | 25.4 × 25 | Q25 | 0.138 | 2.26 |
| | 2,200 | ESMH800VSN222MQ30T | 25.4 × 30 | Q30 | 0.113 | 2.46 |
| | 2,700 | ESMH800VSN272MQ35T | 25.4 × 35 | Q35 | 0.092 | 2.81 |
| | 3,300 | ESMH800VSN332MQ40T | 25.4 × 40 | Q40 | 0.075 | 3.21 |
| | 3,900 | ESMH800VSN392MQ45T | 25.4 × 45 | Q45 | 0.064 | 3.59 |
| | 4,700 | ESMH800VSN472MQ50T | 25.4 × 50 | Q50 | 0.053 | 4.05 |
| | 2,200 | ESMH800VSN222MR25T | 30 × 25 | R25 | 0.113 | 2.49 |
| | 2,700 | ESMH800VSN272MR25T | 30 × 25 | R25 | 0.092 | 2.75 |
| | 3,300 | ESMH800VSN332MR30T | 30 × 30 | R30 | 0.075 | 3.17 |
| | 3,900 | ESMH800VSN392MR35T | 30 × 35 | R35 | 0.064 | 3.57 |
| | 4,700 | ESMH800VSN472MR40T | 30 × 40 | R40 | 0.053 | 4.05 |
| | 5,600 | ESMH800VSN562MR45T | 30 × 45 | R45 | 0.044 | 4.55 |
| | 6,800 | ESMH800VSN682MR50T | 30 × 50 | R50 | 0.037 | 5.16 |
| | 3,300 | ESMH800VSN332MA25T | 35 × 25 | A25 | 0.075 | 3.21 |
| | 3,900 | ESMH800VSN392MA25T | 35 × 25 | A25 | 0.064 | 3.5 |
| | 4,700 | ESMH800VSN472MA30T | 35 × 30 | A30 | 0.053 | 4.09 |
| | 5,600 | ESMH800VSN562MA35T | 35 × 35 | A35 | 0.044 | 4.51 |
| | 6,800 | ESMH800VSN682MA40T | 35 × 40 | A40 | 0.037 | 5.14 |
| | 8,200 | ESMH800VSN822MA45T | 35 × 45 | A45 | 0.03 | 5.83 |
| | 10,000 | ESMH800VSN103MA50T | 35 × 50 | A50 | 0.025 | 6.63 |
| | 12,000 | ESMH800VSN123MA63T | 35 × 63 | A63 | 0.021 | 6.9 |
| | 15,000 | ESMH800VSN153MA80T | 35 × 80 | A80 | 0.017 | 9.04 |
| | 4,700 | ESMH800VQT472MB25T | 40 × 25 | B25 | 0.053 | 3.89 |
| | 5,600 | ESMH800VQT562MB30T | 40 × 30 | B30 | 0.044 | 4.44 |
| | 6,800 | ESMH800VQT682MB35T | 40 × 35 | B35 | 0.037 | 5.08 |
| 8,200 | ESMH800VQT822MB40T | 40 × 40 | B40 | 0.03 | 5.75 | |
| 12,000 | ESMH800VQT123MB50T | 40 × 50 | B50 | 0.021 | 7.39 | |
| 15,000 | ESMH800VQT153MB63T | 40 × 63 | B63 | 0.017 | 8.82 | |
| 22,000 | ESMH800VQT223MB80T | 40 × 80 | B80 | 0.011 | 11.62 | |
| 100 Volts 125 Volts Surge | 820 | ESMH101VSN821MP25T | 22 × 25 | P25 | 0.303 | 1.86 |
| | 1,200 | ESMH101VSN122MP30T | 22 × 30 | P30 | 0.207 | 2.09 |
| | 1,500 | ESMH101VSN152MP35T | 22 × 35 | P35 | 0.166 | 2.41 |
| | 1,800 | ESMH101VSN182MP40T | 22 × 40 | P40 | 0.138 | 2.71 |
| | 2,200 | ESMH101VSN222MP45T | 22 × 45 | P45 | 0.113 | 3.08 |
| | 2,700 | ESMH101VSN272MP50T | 22 × 50 | P50 | 0.092 | 3.53 |
| | 1,200 | ESMH101VSN122MQ25T | 25.4 × 25 | Q25 | 0.207 | 2.1 |
| | 1,500 | ESMH101VSN152MQ30T | 25.4 × 30 | Q30 | 0.166 | 2.43 |
| | 1,800 | ESMH101VSN182MQ35T | 25.4 × 35 | Q35 | 0.138 | 2.75 |
| | 2,200 | ESMH101VSN222MQ40T | 25.4 × 40 | Q40 | 0.113 | 3.13 |

† 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 +85°C, 120Hz |
|--------------------------------------|--------------------|---------------------|-------------------------------|----------------|---------------------------------|--|
| 100 Volts 125 Volts Surge | 2,700 | ESMH101VSN272MQ45T | 25.4 × 45 | Q45 | 0.092 | 3.57 |
| | 3,300 | ESMH101VSN332MQ50T | 25.4 × 50 | Q50 | 0.075 | 4.06 |
| | 1,500 | ESMH101VSN152MR25T | 30 × 25 | R25 | 0.166 | 2.46 |
| | 1,800 | ESMH101VSN182MR25T | 30 × 25 | R25 | 0.138 | 2.72 |
| | 2,200 | ESMH101VSN222MR30T | 30 × 30 | R30 | 0.113 | 3.09 |
| | 2,700 | ESMH101VSN272MR35T | 30 × 35 | R35 | 0.092 | 3.55 |
| | 3,300 | ESMH101VSN332MR40T | 30 × 40 | R40 | 0.075 | 4.05 |
| | 3,900 | ESMH101VSN392MR45T | 30 × 45 | R45 | 0.064 | 4.54 |
| | 4,700 | ESMH101VSN472MR50T | 30 × 50 | R50 | 0.053 | 5.13 |
| | 2,200 | ESMH101VSN222MA25T | 35 × 25 | A25 | 0.113 | 3.14 |
| | 2,700 | ESMH101VSN272MA30T | 35 × 30 | A30 | 0.092 | 3.71 |
| | 3,300 | ESMH101VSN332MA30T | 35 × 30 | A30 | 0.075 | 4.05 |
| | 3,900 | ESMH101VSN392MA35T | 35 × 35 | A35 | 0.064 | 4.49 |
| | 4,700 | ESMH101VSN472MA40T | 35 × 40 | A40 | 0.053 | 5.11 |
| | 5,600 | ESMH101VSN562MA45T | 35 × 45 | A45 | 0.044 | 5.75 |
| | 6,800 | ESMH101VSN682MA50T | 35 × 50 | A50 | 0.037 | 6.50 |
| | 8,200 | ESMH101VSN822MA80T | 35 × 80 | A80 | 0.03 | 7.47 |
| | 2,700 | ESMH101VQT272MB25T | 40 × 25 | B25 | 0.092 | 3.29 |
| | 3,300 | ESMH101VQT332MB30T | 40 × 30 | B30 | 0.075 | 3.81 |
| | 3,900 | ESMH101VQT392MB35T | 40 × 35 | B35 | 0.064 | 4.3 |
| 4,700 | ESMH101VQT472MB40T | 40 × 40 | B40 | 0.053 | 4.86 | |
| 6,800 | ESMH101VQT682MB50T | 40 × 50 | B50 | 0.037 | 6.22 | |
| 8,200 | ESMH101VQT822MB63T | 40 × 63 | B63 | 0.03 | 7.29 | |
| 12,000 | ESMH101VQT123MB80T | 40 × 80 | B80 | 0.021 | 9.6 | |

| | | | | | | |
|--------------------------------------|-------|--------------------|-----------|-----|-------|------|
| 160 Volts 200 Volts Surge | 270 | ESMH161VSN271MP20T | 22 × 20 | P20 | 0.614 | 1.18 |
| | 330 | ESMH161VSN331MP25T | 22 × 25 | P25 | 0.502 | 1.4 |
| | 470 | ESMH161VSN471MP30T | 22 × 30 | P30 | 0.353 | 1.73 |
| | 560 | ESMH161VSN561MP35T | 22 × 35 | P35 | 0.296 | 1.95 |
| | 680 | ESMH161VSN681MP40T | 22 × 40 | P40 | 0.244 | 2.21 |
| | 820 | ESMH161VSN821MP45T | 22 × 45 | P45 | 0.202 | 2.49 |
| | 1,000 | ESMH161VSN102MP50T | 22 × 50 | P50 | 0.166 | 2.82 |
| | 330 | ESMH161VSN331MQ20T | 25.4 × 20 | Q20 | 0.502 | 1.35 |
| | 470 | ESMH161VSN471MQ25T | 25.4 × 25 | Q25 | 0.353 | 1.74 |
| | 560 | ESMH161VSN561MQ25T | 25.4 × 25 | Q25 | 0.296 | 1.95 |
| | 680 | ESMH161VSN681MQ30T | 25.4 × 30 | Q30 | 0.244 | 2.16 |
| | 820 | ESMH161VSN821MQ35T | 25.4 × 35 | Q35 | 0.202 | 2.45 |
| | 1,000 | ESMH161VSN102MQ40T | 25.4 × 40 | Q40 | 0.166 | 2.79 |
| | 1,200 | ESMH161VSN122MQ45T | 25.4 × 45 | Q45 | 0.138 | 3.15 |
| | 1,500 | ESMH161VSN152MQ50T | 25.4 × 50 | Q50 | 0.111 | 3.72 |
| | 470 | ESMH161VSN471MR20T | 30 × 20 | R20 | 0.353 | 1.7 |
| | 680 | ESMH161VSN681MR25T | 30 × 25 | R25 | 0.244 | 2.19 |
| | 820 | ESMH161VSN821MR30T | 30 × 30 | R30 | 0.202 | 2.5 |
| | 1,000 | ESMH161VSN102MR30T | 30 × 30 | R30 | 0.166 | 2.8 |
| | 1,200 | ESMH161VSN122MR35T | 30 × 35 | R35 | 0.138 | 3.13 |
| | 1,500 | ESMH161VSN152MR45T | 30 × 45 | R45 | 0.111 | 3.73 |
| | 1,800 | ESMH161VSN182MR50T | 30 × 50 | R50 | 0.092 | 4.2 |
| | 680 | ESMH161VSN681MA20T | 35 × 20 | A20 | 0.366 | 2.14 |
| | 820 | ESMH161VSN821MA25T | 35 × 25 | A25 | 0.303 | 2.5 |
| | 1,000 | ESMH161VSN102MA25T | 35 × 25 | A25 | 0.249 | 2.8 |
| | 1,200 | ESMH161VSN122MA30T | 35 × 30 | A30 | 0.207 | 3.27 |
| | 1,500 | ESMH161VSN152MA35T | 35 × 35 | A35 | 0.166 | 3.69 |
| | 1,800 | ESMH161VSN182MA40T | 35 × 40 | A40 | 0.138 | 4.18 |
| | 2,200 | ESMH161VSN222MA45T | 35 × 45 | A45 | 0.113 | 4.78 |
| | 2,700 | ESMH161VSN272MA50T | 35 × 50 | A50 | 0.092 | 5.45 |
| | 3,300 | ESMH161VSN332MA63T | 35 × 63 | A63 | 0.075 | 5.6 |
| | 4,700 | ESMH161VSN472MA80T | 35 × 80 | A80 | 0.053 | 7.15 |
| | 1,500 | ESMH161VQT152MB25T | 40 × 25 | B25 | 0.166 | 3.11 |
| | 1,800 | ESMH161VQT182MB30T | 40 × 30 | B30 | 0.138 | 3.56 |

† 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 +85°C, 120Hz |
|-------------------------------------|--------------------|---------------------|-------------------------------|----------------|---------------------------------|--|
| 160 Volts 200 Volts Surge | 2,200 | ESMH161VQT222MB35T | 40 × 35 | B35 | 0.113 | 4.09 |
| | 2,700 | ESMH161VQT272MB40T | 40 × 40 | B40 | 0.092 | 4.66 |
| | 3,900 | ESMH161VQT392MB50T | 40 × 50 | B50 | 0.064 | 5.96 |
| | 4,700 | ESMH161VQT472MB63T | 40 × 63 | B63 | 0.053 | 6.98 |
| | 6,800 | ESMH161VQT682MB80T | 40 × 80 | B80 | 0.037 | 9.14 |
| 180 Volts 225 Volts Surge | 220 | ESMH181VSN221MP20T | 22 × 20 | P20 | 0.753 | 1.06 |
| | 270 | ESMH181VSN221MP25T | 22 × 25 | P25 | 0.614 | 1.27 |
| | 390 | ESMH181VSN221MP30T | 22 × 30 | P30 | 0.425 | 1.58 |
| | 470 | ESMH181VSN221MP35T | 22 × 35 | P35 | 0.353 | 1.79 |
| | 560 | ESMH181VSN221MP40T | 22 × 40 | P40 | 0.296 | 2.0 |
| | 680 | ESMH181VSN221MP45T | 22 × 45 | P45 | 0.244 | 2.27 |
| | 820 | ESMH181VSN221MP50T | 22 × 50 | P50 | 0.202 | 2.55 |
| | 270 | ESMH181VSN271MQ20T | 25.4 × 20 | Q20 | 0.614 | 1.22 |
| | 390 | ESMH181VSN391MQ25T | 25.4 × 25 | Q25 | 0.425 | 1.58 |
| | 560 | ESMH181VSN561MQ30T | 25.4 × 30 | Q30 | 0.296 | 1.96 |
| | 680 | ESMH181VSN681MQ35T | 25.4 × 35 | Q35 | 0.244 | 2.23 |
| | 820 | ESMH181VSN821MQ40T | 25.4 × 40 | Q40 | 0.202 | 2.53 |
| | 1,000 | ESMH181VSN102MQ45T | 25.4 × 45 | Q45 | 0.166 | 2.87 |
| | 390 | ESMH181VSN391MR20T | 30 × 20 | R20 | 0.425 | 1.55 |
| | 560 | ESMH181VSN561MR25T | 30 × 25 | R25 | 0.296 | 1.99 |
| | 820 | ESMH181VSN821MR30T | 30 × 30 | R30 | 0.202 | 2.7 |
| | 1,000 | ESMH181VSN102MR35T | 30 × 35 | R35 | 0.166 | 2.86 |
| | 1,200 | ESMH181VSN122MR40T | 30 × 40 | R40 | 0.138 | 3.23 |
| | 1,500 | ESMH181VSN152MR50T | 30 × 50 | R50 | 0.111 | 3.83 |
| | 560 | ESMH181VSN561MA20T | 35 × 20 | A20 | 0.444 | 1.94 |
| | 820 | ESMH181VSN821MA25T | 35 × 25 | A25 | 0.303 | 2.53 |
| | 1,000 | ESMH181VSN102MA30T | 35 × 30 | A30 | 0.249 | 2.99 |
| | 1,200 | ESMH181VSN122MA35T | 35 × 35 | A35 | 0.207 | 3.31 |
| | 1,500 | ESMH181VSN152MA40T | 35 × 40 | A40 | 0.166 | 3.82 |
| | 1,800 | ESMH181VSN182MA45T | 35 × 45 | A45 | 0.138 | 4.32 |
| | 2,200 | ESMH181VSN222MA50T | 35 × 50 | A50 | 0.113 | 4.92 |
| | 2,700 | ESMH181VSN272MA63T | 35 × 63 | A63 | 0.092 | 5.67 |
| | 3,900 | ESMH181VSN392MA80T | 35 × 80 | A80 | 0.064 | 7.29 |
| | 1,200 | ESMH181VQT122MB25T | 40 × 25 | B25 | 0.207 | 3.11 |
| | 1,500 | ESMH181VQT152MB30T | 40 × 30 | B30 | 0.166 | 3.64 |
| | 1,800 | ESMH181VQT182MB35T | 40 × 35 | B35 | 0.138 | 4.13 |
| | 2,200 | ESMH181VQT222MB40T | 40 × 40 | B40 | 0.113 | 4.71 |
| 3,300 | ESMH181VQT332MB50T | 40 × 50 | B50 | 0.075 | 6.13 | |
| 3,900 | ESMH181VQT392MB63T | 40 × 63 | B63 | 0.064 | 7.11 | |
| 5,600 | ESMH181VQT562MB80T | 40 × 80 | B80 | 0.044 | 9.27 | |
| 200 Volts 250 Volts Surge | 180 | ESMH201VSN181MP20T | 22 × 20 | P20 | 0.921 | 0.96 |
| | 270 | ESMH201VSN271MP25T | 22 × 25 | P25 | 0.614 | 1.27 |
| | 330 | ESMH201VSN331MP30T | 22 × 30 | P30 | 0.502 | 1.45 |
| | 390 | ESMH201VSN391MP30T | 22 × 30 | P30 | 0.425 | 1.58 |
| | 470 | ESMH201VSN471MP35T | 22 × 35 | P35 | 0.353 | 1.78 |
| | 560 | ESMH201VSN561MP40T | 22 × 40 | P40 | 0.296 | 2.0 |
| | 680 | ESMH201VSN681MP50T | 22 × 50 | P50 | 0.244 | 2.33 |
| | 270 | ESMH201VSN271MQ20T | 25.4 × 20 | Q20 | 0.614 | 1.22 |
| | 330 | ESMH201VSN331MQ25T | 25.4 × 25 | Q25 | 0.502 | 1.45 |
| | 390 | ESMH201VSN391MQ25T | 25.4 × 25 | Q25 | 0.425 | 1.58 |
| | 470 | ESMH201VSN471MQ30T | 25.4 × 30 | Q30 | 0.353 | 1.8 |
| | 560 | ESMH201VSN561MQ35T | 25.4 × 35 | Q35 | 0.296 | 2.03 |
| | 680 | ESMH201VSN681MQ40T | 25.4 × 40 | Q40 | 0.244 | 2.3 |
| | 820 | ESMH201VSN821MQ45T | 25.4 × 45 | Q45 | 0.202 | 2.6 |
| | 1,000 | ESMH201VSN102MQ50T | 25.4 × 50 | Q50 | 0.166 | 2.95 |
| | 390 | ESMH201VSN391MR20T | 30 × 20 | R20 | 0.425 | 1.55 |
| | 470 | ESMH201VSN471MR25T | 30 × 25 | R25 | 0.353 | 1.8 |
| | 560 | ESMH201VSN561MR25T | 30 × 25 | R25 | 0.296 | 2.0 |

† 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 +85°C, 120Hz |
|--------------------------------------|--------------------|---------------------|-------------------------------|----------------|---------------------------------|--|
| 200 Volts 250 Volts Surge | 680 | ESMH201VSN681MR30T | 30 × 30 | R30 | 0.244 | 2.28 |
| | 820 | ESMH201VSN821MR35T | 30 × 35 | R35 | 0.202 | 2.59 |
| | 1,000 | ESMH201VSN102MR40T | 30 × 40 | R40 | 0.166 | 2.95 |
| | 1,200 | ESMH201VSN122MR45T | 30 × 45 | R45 | 0.138 | 3.31 |
| | 1,500 | ESMH201VSN152MR50T | 30 × 50 | R50 | 0.111 | 3.82 |
| | 560 | ESMH201VSN561MA20T | 35 × 20 | A20 | 0.444 | 1.94 |
| | 680 | ESMH201VSN681MA25T | 35 × 25 | A25 | 0.366 | 2.31 |
| | 820 | ESMH201VSN821MA25T | 35 × 25 | A25 | 0.303 | 2.6 |
| | 1,000 | ESMH201VSN102MA30T | 35 × 30 | A30 | 0.249 | 2.95 |
| | 1,200 | ESMH201VSN122MA35T | 35 × 35 | A35 | 0.207 | 3.31 |
| | 1,500 | ESMH201VSN152MA40T | 35 × 40 | A40 | 0.166 | 3.82 |
| | 1,800 | ESMH201VSN182MA45T | 35 × 45 | A45 | 0.138 | 4.32 |
| | 2,200 | ESMH201VSN222MA50T | 35 × 50 | A50 | 0.113 | 4.92 |
| | 2,700 | ESMH201VSN272MA63T | 35 × 63 | A63 | 0.092 | 5.67 |
| | 3,300 | ESMH201VSN332MA80T | 35 × 80 | A80 | 0.075 | 6.7 |
| | 1,000 | ESMH201VQT102MB25T | 40 × 25 | B25 | 0.249 | 2.84 |
| | 1,500 | ESMH201VQT152MB30T | 40 × 30 | B30 | 0.166 | 3.64 |
| | 1,800 | ESMH201VQT182MB35T | 40 × 35 | B35 | 0.138 | 4.13 |
| | 2,200 | ESMH201VQT222MB40T | 40 × 40 | B40 | 0.113 | 4.71 |
| | 2,700 | ESMH201VQT272MB50T | 40 × 50 | B50 | 0.092 | 5.54 |
| 3,900 | ESMH201VQT392MB63T | 40 × 63 | B63 | 0.064 | 7.11 | |
| 4,700 | ESMH201VQT472MB80T | 40 × 80 | B80 | 0.053 | 8.49 | |

| | | | | | | |
|--------------------------------------|-------|--------------------|-----------|-----|-------|------|
| 250 Volts 300 Volts Surge | 120 | ESMH251VSN121MP20T | 22 × 20 | P20 | 1.381 | 0.78 |
| | 180 | ESMH251VSN181MP25T | 22 × 25 | P25 | 0.921 | 1.04 |
| | 220 | ESMH251VSN221MP25T | 22 × 25 | P25 | 0.753 | 1.15 |
| | 270 | ESMH251VSN271MP30T | 22 × 30 | P30 | 0.614 | 1.31 |
| | 330 | ESMH251VSN331MP35T | 22 × 35 | P35 | 0.502 | 1.49 |
| | 390 | ESMH251VSN391MP40T | 22 × 40 | P40 | 0.425 | 1.67 |
| | 470 | ESMH251VSN471MP45T | 22 × 45 | P45 | 0.353 | 1.88 |
| | 560 | ESMH251VSN561MP50T | 22 × 50 | P50 | 0.296 | 2.1 |
| | 180 | ESMH251VSN181MQ20T | 25.4 × 20 | Q20 | 0.921 | 1.0 |
| | 270 | ESMH251VSN271MQ25T | 25.4 × 25 | Q25 | 0.614 | 1.32 |
| | 330 | ESMH251VSN331MQ30T | 25.4 × 30 | Q30 | 0.502 | 1.51 |
| | 390 | ESMH251VSN391MQ30T | 25.4 × 30 | Q30 | 0.425 | 1.66 |
| | 470 | ESMH251VSN471MQ35T | 25.4 × 35 | Q35 | 0.353 | 1.86 |
| | 560 | ESMH251VSN561MQ40T | 25.4 × 40 | Q40 | 0.296 | 2.09 |
| | 680 | ESMH251VSN681MQ50T | 25.4 × 50 | Q50 | 0.244 | 2.44 |
| | 270 | ESMH251VSN271MR20T | 30 × 20 | R20 | 0.614 | 1.29 |
| | 330 | ESMH251VSN331MR25T | 30 × 25 | R25 | 0.502 | 1.52 |
| | 390 | ESMH251VSN391MR25T | 30 × 25 | R25 | 0.425 | 1.66 |
| | 470 | ESMH251VSN471MR30T | 30 × 30 | R30 | 0.353 | 1.89 |
| | 560 | ESMH251VSN561MR35T | 30 × 35 | R35 | 0.296 | 2.14 |
| | 680 | ESMH251VSN681MR40T | 30 × 40 | R40 | 0.244 | 2.43 |
| | 820 | ESMH251VSN821MR45T | 30 × 45 | R45 | 0.202 | 2.75 |
| | 1,000 | ESMH251VSN102MR50T | 30 × 50 | R50 | 0.166 | 3.31 |
| | 390 | ESMH251VSN391MA20T | 35 × 20 | A20 | 0.638 | 1.62 |
| | 470 | ESMH251VSN471MA25T | 35 × 25 | A25 | 0.529 | 1.88 |
| | 560 | ESMH251VSN561MA25T | 35 × 25 | A25 | 0.444 | 2.06 |
| | 680 | ESMH251VSN681MA30T | 35 × 30 | A30 | 0.366 | 2.46 |
| | 820 | ESMH251VSN821MA35T | 35 × 35 | A35 | 0.303 | 2.77 |
| | 1,000 | ESMH251VSN102MA40T | 35 × 40 | A40 | 0.249 | 3.32 |
| | 1,200 | ESMH251VSN122MA45T | 35 × 45 | A45 | 0.207 | 3.53 |
| | 1,500 | ESMH251VSN152MA50T | 35 × 50 | A50 | 0.166 | 4.04 |
| | 1,800 | ESMH251VSN182MA63T | 35 × 63 | A63 | 0.138 | 4.63 |
| | 2,200 | ESMH251VSN222MA80T | 35 × 80 | A80 | 0.113 | 5.47 |
| | 680 | ESMH251VQT681MB25T | 40 × 25 | B25 | 0.366 | 2.34 |
| | 1,000 | ESMH251VQT102MB30T | 40 × 30 | B30 | 0.249 | 2.97 |
| | 1,200 | ESMH251VQT122MB35T | 40 × 35 | B35 | 0.207 | 3.37 |

† 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 +85°C, 120Hz |
|----------------------|------------------|---------------------|-------------------------------|----------------|---------------------------------|--|
|----------------------|------------------|---------------------|-------------------------------|----------------|---------------------------------|--|

| | | | | | | |
|--|-------|--------------------|---------|-----|-------|------|
| 250 Volts 300 Volts Surge | 1,500 | ESMH251VQT152MB40T | 40 × 40 | B40 | 0.166 | 3.89 |
| | 1,800 | ESMH251VQT182MB50T | 40 × 50 | B50 | 0.138 | 4.52 |
| | 2,200 | ESMH251VQT222MB63T | 40 × 63 | B63 | 0.113 | 5.34 |
| | 3,300 | ESMH251VQT332MB80T | 40 × 80 | B80 | 0.075 | 7.12 |

| | | | | | | |
|--|--------------------|--------------------|-----------|-------|-------|------|
| 315 Volts 365 Volts Surge | 82 | ESMH3B1VSN820MP20T | 22 × 20 | P20 | 3.032 | 0.65 |
| | 120 | ESMH3B1VSN121MP25T | 22 × 25 | P25 | 2.072 | 0.94 |
| | 150 | ESMH3B1VSN151MP30T | 22 × 30 | P30 | 1.658 | 1.11 |
| | 180 | ESMH3B1VSN181MP35T | 22 × 35 | P35 | 1.381 | 1.2 |
| | 220 | ESMH3B1VSN221MP40T | 22 × 40 | P40 | 1.13 | 1.41 |
| | 270 | ESMH3B1VSN271MP45T | 22 × 45 | P45 | 0.921 | 1.6 |
| | 330 | ESMH3B1VSN331MP50T | 22 × 50 | P50 | 0.753 | 1.82 |
| | 100 | ESMH3B1VSN101MQ20T | 25.4 × 20 | Q20 | 2.486 | 0.74 |
| | 150 | ESMH3B1VSN151MQ25T | 25.4 × 25 | Q25 | 1.658 | 1.1 |
| | 180 | ESMH3B1VSN181MQ25T | 25.4 × 25 | Q25 | 1.381 | 1.2 |
| | 220 | ESMH3B1VSN221MQ30T | 25.4 × 30 | Q30 | 1.13 | 1.38 |
| | 270 | ESMH3B1VSN271MQ35T | 25.4 × 35 | Q35 | 0.921 | 1.59 |
| | 330 | ESMH3B1VSN331MQ40T | 25.4 × 40 | Q40 | 0.753 | 1.8 |
| | 390 | ESMH3B1VSN391MQ45T | 25.4 × 45 | Q45 | 0.638 | 2.01 |
| | 470 | ESMH3B1VSN471MQ45T | 25.4 × 45 | Q45 | 0.529 | 2.2 |
| | 150 | ESMH3B1VSN151MR20T | 30 × 20 | R20 | 1.658 | 0.96 |
| | 220 | ESMH3B1VSN221MR25T | 30 × 25 | R25 | 1.13 | 1.4 |
| | 270 | ESMH3B1VSN271MR30T | 30 × 30 | R30 | 0.921 | 1.59 |
| | 330 | ESMH3B1VSN331MR30T | 30 × 30 | R30 | 0.753 | 1.8 |
| | 390 | ESMH3B1VSN391MR35T | 30 × 35 | R35 | 0.638 | 1.99 |
| | 470 | ESMH3B1VSN471MR40T | 30 × 40 | R40 | 0.529 | 2.27 |
| | 560 | ESMH3B1VSN561MR45T | 30 × 45 | R45 | 0.444 | 2.56 |
| | 680 | ESMH3B1VSN681MR50T | 30 × 50 | R50 | 0.366 | 2.88 |
| | 220 | ESMH3B1VSN221MA20T | 35 × 20 | A20 | 1.13 | 1.22 |
| | 270 | ESMH3B1VSN271MA25T | 35 × 25 | A25 | 0.921 | 1.59 |
| | 330 | ESMH3B1VSN331MA25T | 35 × 25 | A25 | 0.753 | 1.8 |
| | 390 | ESMH3B1VSN391MA30T | 35 × 30 | A30 | 0.638 | 2.0 |
| | 470 | ESMH3B1VSN471MA30T | 35 × 30 | A30 | 0.529 | 2.23 |
| | 560 | ESMH3B1VSN561MA35T | 35 × 35 | A35 | 0.444 | 2.49 |
| | 680 | ESMH3B1VSN681MA40T | 35 × 40 | A40 | 0.366 | 2.87 |
| | 820 | ESMH3B1VSN821MA45T | 35 × 45 | A45 | 0.303 | 3.25 |
| | 1,000 | ESMH3B1VSN102MA50T | 35 × 50 | A50 | 0.249 | 3.69 |
| | 1,200 | ESMH3B1VSN122MA63T | 35 × 63 | A63 | 0.207 | 4.36 |
| | 1,500 | ESMH3B1VSN152MA80T | 35 × 80 | A80 | 0.166 | 5.22 |
| 390 | ESMH3B1VQT391MB25T | 40 × 25 | B25 | 0.638 | 2.04 | |
| 560 | ESMH3B1VQT561MB30T | 40 × 30 | B30 | 0.444 | 2.57 | |
| 680 | ESMH3B1VQT681MB35T | 40 × 35 | B35 | 0.366 | 2.93 | |
| 820 | ESMH3B1VQT821MB40T | 40 × 40 | B40 | 0.303 | 3.32 | |
| 1,200 | ESMH3B1VQT122MB50T | 40 × 50 | B50 | 0.207 | 4.27 | |
| 1,500 | ESMH3B1VQT152MB63T | 40 × 63 | B63 | 0.166 | 5.09 | |
| 2,200 | ESMH3B1VQT222MB80T | 40 × 80 | B80 | 0.113 | 6.71 | |

| | | | | | | |
|--|-----|--------------------|-----------|-----|-------|------|
| 350 Volts 400 Volts Surge | 68 | ESMH351VSN680MP20T | 22 × 20 | P20 | 3.656 | 0.59 |
| | 100 | ESMH351VSN101MP25T | 22 × 25 | P25 | 2.486 | 0.86 |
| | 120 | ESMH351VSN121MP30T | 22 × 30 | P30 | 2.072 | 0.99 |
| | 150 | ESMH351VSN151MP35T | 22 × 35 | P35 | 1.658 | 1.14 |
| | 180 | ESMH351VSN181MP40T | 22 × 40 | P40 | 1.381 | 1.28 |
| | 220 | ESMH351VSN221MP45T | 22 × 45 | P45 | 1.13 | 1.44 |
| | 270 | ESMH351VSN271MP50T | 22 × 50 | P50 | 0.921 | 1.64 |
| | 82 | ESMH351VSN820MQ20T | 25.4 × 20 | Q20 | 3.032 | 0.67 |
| | 120 | ESMH351VSN121MQ25T | 25.4 × 25 | Q25 | 2.072 | 0.99 |
| | 150 | ESMH351VSN151MQ25T | 25.4 × 25 | Q25 | 1.658 | 1.1 |
| | 180 | ESMH351VSN181MQ30T | 25.4 × 30 | Q30 | 1.381 | 1.24 |
| | 220 | ESMH351VSN221MQ35T | 25.4 × 35 | Q35 | 1.13 | 1.44 |

† 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 +85°C, 120Hz |
|--------------------------------------|--------------------|---------------------|-------------------------------|----------------|---------------------------------|--|
| 350 Volts 400 Volts Surge | 270 | ESMH351VSN271MQ40T | 25.4 × 40 | Q40 | 0.921 | 1.63 |
| | 330 | ESMH351VSN331MQ50T | 25.4 × 50 | Q50 | 0.753 | 1.88 |
| | 120 | ESMH351VSN121MR20T | 30 × 20 | R20 | 2.072 | 0.86 |
| | 180 | ESMH351VSN181MR25T | 30 × 25 | R25 | 1.381 | 1.27 |
| | 220 | ESMH351VSN221MR30T | 30 × 30 | R30 | 1.13 | 1.44 |
| | 270 | ESMH351VSN271MR35T | 30 × 35 | R35 | 0.921 | 1.66 |
| | 330 | ESMH351VSN331MR35T | 30 × 35 | R35 | 0.753 | 1.83 |
| | 390 | ESMH351VSN391MR40T | 30 × 40 | R40 | 0.638 | 2.06 |
| | 470 | ESMH351VSN471MR50T | 30 × 50 | R50 | 0.529 | 2.4 |
| | 180 | ESMH351VSN181MA20T | 35 × 20 | A20 | 1.381 | 1.1 |
| | 220 | ESMH351VSN221MA25T | 35 × 25 | A25 | 1.13 | 1.44 |
| | 270 | ESMH351VSN271MA25T | 35 × 25 | A25 | 0.921 | 1.63 |
| | 330 | ESMH351VSN331MA30T | 35 × 30 | A30 | 0.753 | 1.87 |
| | 390 | ESMH351VSN391MA30T | 35 × 30 | A30 | 0.638 | 2.03 |
| | 470 | ESMH351VSN471MA35T | 35 × 35 | A35 | 0.529 | 2.33 |
| | 560 | ESMH351VSN561MA40T | 35 × 40 | A40 | 0.444 | 2.6 |
| | 680 | ESMH351VSN681MA45T | 35 × 45 | A45 | 0.366 | 2.96 |
| | 820 | ESMH351VSN821MA50T | 35 × 50 | A50 | 0.303 | 3.04 |
| | 1,000 | ESMH351VSN102MA63T | 35 × 63 | A63 | 0.249 | 3.98 |
| | 1,200 | ESMH351VSN122MA80T | 35 × 80 | A80 | 0.207 | 4.67 |
| | 330 | ESMH351VQT331MB25T | 40 × 25 | B25 | 0.753 | 1.88 |
| | 470 | ESMH351VQT471MB30T | 40 × 30 | B30 | 0.529 | 2.35 |
| | 560 | ESMH351VQT561MB35T | 40 × 35 | B35 | 0.444 | 2.66 |
| | 680 | ESMH351VQT681MB40T | 40 × 40 | B40 | 0.366 | 3.02 |
| | 1,000 | ESMH351VQT102MB50T | 40 × 50 | B50 | 0.249 | 3.89 |
| | 1,500 | ESMH351VQT152MB63T | 40 × 63 | B63 | 0.166 | 5.09 |
| 1,800 | ESMH351VQT182MB80T | 40 × 80 | B80 | 0.138 | 6.07 | |
| 400 Volts 450 Volts Surge | 56 | ESMH401VSN560MP20T | 22 × 20 | P20 | 4.44 | 0.53 |
| | 82 | ESMH401VSN820MP25T | 22 × 25 | P25 | 3.032 | 0.78 |
| | 100 | ESMH401VSN101MP30T | 22 × 30 | P30 | 2.486 | 0.9 |
| | 120 | ESMH401VSN121MP35T | 22 × 35 | P35 | 2.072 | 1.02 |
| | 150 | ESMH401VSN151MP40T | 22 × 40 | P40 | 1.658 | 1.16 |
| | 180 | ESMH401VSN181MP45T | 22 × 45 | P45 | 1.381 | 1.31 |
| | 220 | ESMH401VSN221MP50T | 22 × 50 | P50 | 1.13 | 1.49 |
| | 270 | ESMH401VSN271MP50T | 22 × 50 | P50 | 0.921 | 1.64 |
| | 68 | ESMH401VSN680MQ20T | 25.4 × 20 | Q20 | 3.656 | 0.61 |
| | 100 | ESMH401VSN101MQ25T | 25.4 × 25 | Q25 | 2.486 | 0.9 |
| | 120 | ESMH401VSN121MQ25T | 25.4 × 25 | Q25 | 2.072 | 0.98 |
| | 150 | ESMH401VSN151MQ30T | 25.4 × 30 | Q30 | 1.658 | 1.14 |
| | 180 | ESMH401VSN181MQ35T | 25.4 × 35 | Q35 | 1.381 | 1.30 |
| | 220 | ESMH401VSN221MQ40T | 25.4 × 40 | Q40 | 1.13 | 1.47 |
| | 270 | ESMH401VSN271MQ45T | 25.4 × 45 | Q45 | 0.921 | 1.67 |
| | 330 | ESMH401VSN331MQ50T | 25.4 × 50 | Q50 | 0.753 | 1.88 |
| | 100 | ESMH401VSN101MR20T | 30 × 20 | R20 | 2.486 | 0.78 |
| | 150 | ESMH401VSN151MR25T | 30 × 25 | R25 | 1.658 | 1.16 |
| | 180 | ESMH401VSN181MR30T | 30 × 30 | R30 | 1.381 | 1.44 |
| | 220 | ESMH401VSN221MR30T | 30 × 30 | R30 | 1.13 | 1.47 |
| | 270 | ESMH401VSN271MR35T | 30 × 35 | R35 | 0.921 | 1.66 |
| | 330 | ESMH401VSN331MR40T | 30 × 40 | R40 | 0.753 | 1.9 |
| | 390 | ESMH401VSN391MR45T | 30 × 45 | R45 | 0.638 | 2.13 |
| | 470 | ESMH401VSN471MR50T | 30 × 50 | R50 | 0.529 | 2.4 |
| | 150 | ESMH401VSN151MA20T | 35 × 20 | A20 | 1.658 | 1.0 |
| | 180 | ESMH401VSN181MA25T | 35 × 25 | A25 | 1.381 | 1.32 |
| | 220 | ESMH401VSN221MA25T | 35 × 25 | A25 | 1.13 | 1.47 |
| | 270 | ESMH401VSN271MA30T | 35 × 30 | A30 | 0.921 | 1.69 |
| | 330 | ESMH401VSN331MA30T | 35 × 30 | A30 | 0.753 | 1.87 |
| | 390 | ESMH401VSN391MA35T | 35 × 35 | A35 | 0.638 | 2.08 |
| | 470 | ESMH401VSN471MA40T | 35 × 40 | A40 | 0.529 | 2.39 |
| | 560 | ESMH401VSN561MA45T | 35 × 45 | A45 | 0.444 | 2.69 |

† 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 +85°C, 120Hz |
|------------------------------|--------------------|---------------------|-------------------------------|----------------|---------------------------------|--|
| 400 Volts 450 Volts Surge | 680 | ESMH401VSN681MA50T | 35 × 50 | A50 | 0.366 | 3.04 |
| | 820 | ESMH401VSN821MA63T | 35 × 63 | A63 | 0.303 | 3.61 |
| | 1,200 | ESMH401VSN122MA80T | 35 × 80 | A80 | 0.207 | 4.67 |
| | 270 | ESMH401VQT271MB25T | 40 × 25 | B25 | 0.921 | 1.7 |
| | 390 | ESMH401VQT391MB30T | 40 × 30 | B30 | 0.638 | 2.14 |
| | 560 | ESMH401VQT561MB35T | 40 × 35 | B35 | 0.444 | 2.66 |
| | 680 | ESMH401VQT681MB40T | 40 × 40 | B40 | 0.366 | 3.02 |
| | 820 | ESMH401VQT821MB50T | 40 × 50 | B50 | 0.303 | 3.53 |
| | 1,200 | ESMH401VQT122MB63T | 40 × 63 | B63 | 0.207 | 4.56 |
| 1,500 | ESMH401VQT152MB80T | 40 × 80 | B80 | 0.166 | 5.54 | |
| 450 Volts 500 Volts Surge | 56 | ESMH451VSN560MP25T | 22 × 25 | P25 | 4.44 | 0.65 |
| | 68 | ESMH451VSN680MP25T | 22 × 25 | P25 | 3.656 | 0.71 |
| | 82 | ESMH451VSN820MP30T | 22 × 30 | P30 | 3.032 | 0.82 |
| | 100 | ESMH451VSN101MP35T | 22 × 35 | P35 | 2.486 | 0.93 |
| | 120 | ESMH451VSN121MP40T | 22 × 40 | P40 | 2.072 | 1.04 |
| | 150 | ESMH451VSN151MP45T | 22 × 45 | P45 | 1.658 | 1.19 |
| | 180 | ESMH451VSN181MP50T | 22 × 50 | P50 | 1.381 | 1.34 |
| | 82 | ESMH451VSN820MQ25T | 25.4 × 25 | Q25 | 3.032 | 0.82 |
| | 100 | ESMH451VSN101MQ25T | 25.4 × 25 | Q25 | 2.486 | 0.9 |
| | 120 | ESMH451VSN121MQ30T | 25.4 × 30 | Q30 | 2.072 | 1.02 |
| | 150 | ESMH451VSN151MQ35T | 25.4 × 35 | Q35 | 1.658 | 1.19 |
| | 180 | ESMH451VSN181MQ40T | 25.4 × 40 | Q40 | 1.381 | 1.33 |
| | 220 | ESMH451VSN221MQ50T | 25.4 × 50 | Q50 | 1.13 | 1.54 |
| | 120 | ESMH451VSN121MR25T | 30 × 25 | R25 | 2.072 | 1.03 |
| | 150 | ESMH451VSN151MR30T | 30 × 30 | R30 | 1.658 | 1.19 |
| | 180 | ESMH451VSN181MR35T | 30 × 35 | R35 | 1.381 | 1.35 |
| | 220 | ESMH451VSN221MR40T | 30 × 40 | R40 | 1.13 | 1.55 |
| | 270 | ESMH451VSN271MR45T | 30 × 45 | R45 | 0.921 | 1.78 |
| | 330 | ESMH451VSN331MR50T | 30 × 50 | R50 | 0.753 | 2.01 |
| | 150 | ESMH451VSN151MA25T | 35 × 25 | A25 | 1.658 | 1.19 |
| | 180 | ESMH451VSN181MA25T | 35 × 25 | A25 | 1.381 | 1.33 |
| | 220 | ESMH451VSN221MA30T | 35 × 30 | A30 | 1.13 | 1.53 |
| | 270 | ESMH451VSN271MA35T | 35 × 35 | A35 | 0.921 | 1.73 |
| | 330 | ESMH451VSN331MA40T | 35 × 40 | A40 | 0.753 | 2.0 |
| | 390 | ESMH451VSN391MA45T | 35 × 45 | A45 | 0.638 | 2.24 |
| | 470 | ESMH451VSN471MA50T | 35 × 50 | A50 | 0.529 | 2.53 |
| | 560 | ESMH451VSN561MA63T | 35 × 63 | A63 | 0.444 | 2.98 |
| | 820 | ESMH451VSN821MA80T | 35 × 80 | A80 | 0.303 | 3.86 |
| | 220 | ESMH451VQT221MB25T | 40 × 25 | B25 | 1.13 | 1.54 |
| | 270 | ESMH451VQT271MB30T | 40 × 30 | B30 | 0.921 | 1.78 |
| | 390 | ESMH451VQT391MB35T | 40 × 35 | B35 | 0.638 | 2.22 |
| | 470 | ESMH451VQT471MB40T | 40 × 40 | B40 | 0.529 | 2.51 |
| | 680 | ESMH451VQT681MB50T | 40 × 50 | B50 | 0.366 | 3.21 |
| 820 | ESMH451VQT821MB63T | 40 × 63 | B63 | 0.303 | 3.77 | |
| 1,200 | ESMH451VQT122MB80T | 40 × 80 | B80 | 0.207 | 4.96 | |

† 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.

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