

- Snap Mount
- Large Capacitance
- High CV
- High Ripple
- +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 3, 4 or 5-pin straight terminals with or without standoffs.

The standard SMH capacitors are non-solvent proof and are not recommended when halogenated cleaning solvents are used. Refer to the Mini-Glossary for recommended cleaning conditions.

Summary of Specifications

- PC board 2 or 4-pin snap-in; optional 3, 4 or 5-pin straight terminals.
- Capacitance range: 56 to 270,000 μ F.
- Voltage range: 6.3 to 450VDC.
- Operating 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(μ A) or 3mA, whichever is smaller, after 5 minutes at +20°C.
- Standard capacitance tolerance: \pm 20%
- Nominal case size (D \times L): 22 \times 20mm to 40 \times 80mm.
- Rated lifetime: 2,000 hours at +85°C with the rated ripple current applied.

SMH Series

SMH Specifications

Item	Characteristics																																											
Operating 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 = 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"> <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) See Note</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. Note: 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) See Note	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) See Note	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"> <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	-	-																																					
Ripple Current Multipliers <i>Refer to Section 4 of the Mini-Glossary for explanation of Ripple Current Multipliers.</i>	Ambient Temperature (°C) <table border="1"> <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> Frequency (Hz) <table border="1"> <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																																									
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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																																						
Load Life	The following specifications shall be satisfied when the capacitors are restored to +20°C after subjecting them to the DC rated voltage for 2,000 hours at +85°C with the rated ripple current applied. The sum of 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																																											
Others	Satisfies characteristic W of JIS C5141																																											

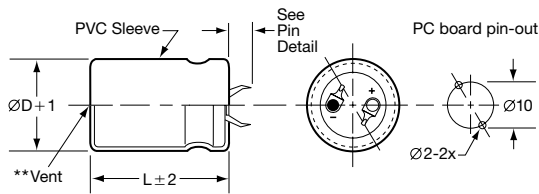
SMH Series

Diagram of Dimensions

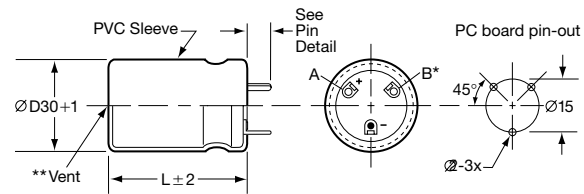
Snap Mount

Unit: mm

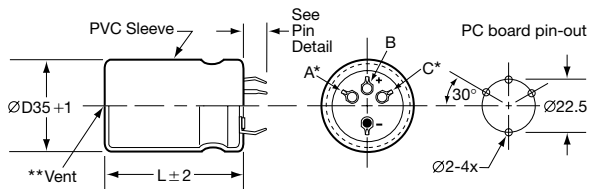
Types VN-T2 & VS-T2 $\varnothing 22\text{--}\varnothing 35$



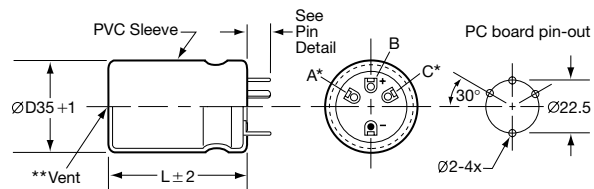
Type VR-T3 $\varnothing 30$



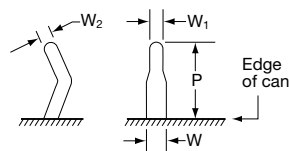
Types VN-T4 $\varnothing 35$ & $\varnothing 40$



Type VR-T4 $\varnothing 35$



VN & VS Pin Dimensions



Type	P	W	W ₁	W ₂
VN-T2 $\varnothing 22\text{--}\varnothing 35$	5.8 ± 1.0	1.5 ± 0.2	1.0	1.0
VN-T4 $\varnothing 35\text{--}\varnothing 40$	5.8 ± 1.0			
VS-T2 $\varnothing 22\text{--}\varnothing 30$	4.0 ± 0.5			
VS-T2 $\varnothing 35$	3.5 ± 0.5			

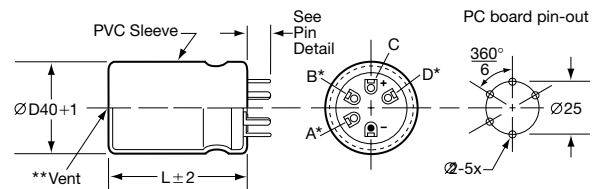
CAUTION

* 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.

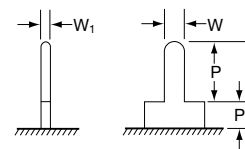
*** Add an "H" to the end of the part number for standoffs.

Type VR-T5 $\varnothing 40$

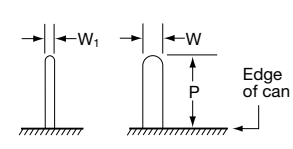


VR Pin Dimensions

Standoff Pin (Standard)***



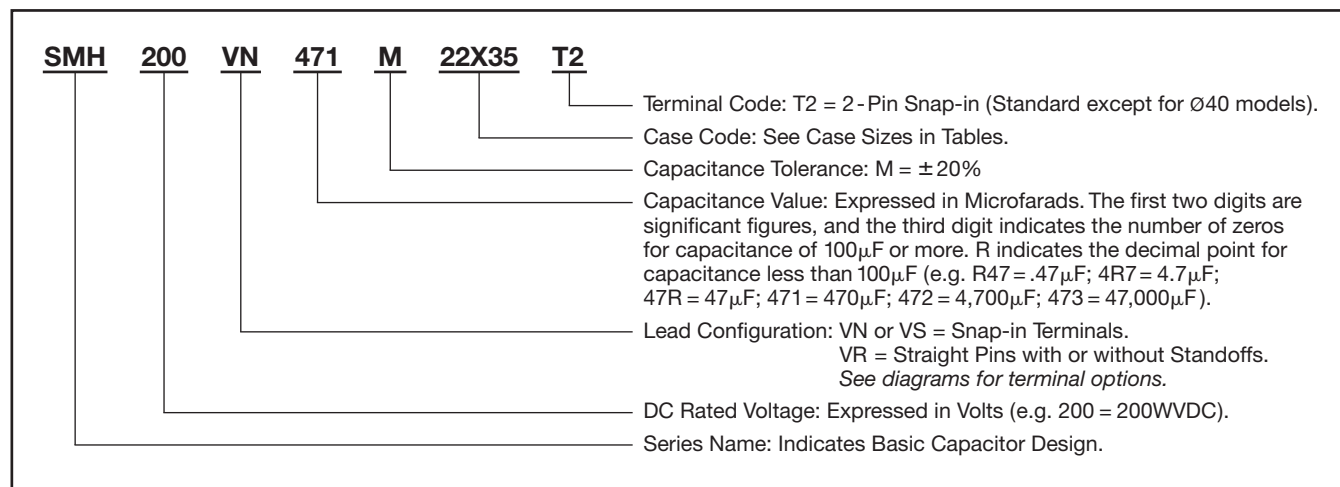
Straight Pin



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

SMH Series

Part Numbering System for SMH Series When ordering, always specify complete catalog number for SMH Series.



Standard Voltage Ratings - VN & VR/Snap Mount

Rated Voltage (WVDC)	Capacitance (μ F)	Catalog Part Number	Nominal Case Size* D x L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (A rms) at +85°C, 120Hz
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6.3 Volts 8 Volts Surge	15,000	SMH6.3VN153M22X25T2	22 x 25	0.066	2.44
	18,000	SMH6.3VN183M22X30T2	22 x 30	0.055	2.67
	22,000	SMH6.3VN223M22X30T2	22 x 30	0.045	3.06
	27,000	SMH6.3VN273M22X35T2	22 x 35	0.037	3.49
	33,000	SMH6.3VN333M22X40T2	22 x 40	0.03	3.97
	39,000	SMH6.3VN393M22X50T2	22 x 50	0.026	4.55
	18,000	SMH6.3VN183M25X25T2	25.4 x 25	0.055	2.7
	22,000	SMH6.3VN223M25X25T2	25.4 x 25	0.045	3.07
	27,000	SMH6.3VN273M25X30T2	25.4 x 30	0.037	3.52
	33,000	SMH6.3VN333M25X35T2	25.4 x 35	0.03	4.02
	39,000	SMH6.3VN393M25X40T2	25.4 x 40	0.026	4.5
	47,000	SMH6.3VN473M25X45T2	25.4 x 45	0.021	5.09
	56,000	SMH6.3VN563M25X50T2	25.4 x 50	0.018	5.71
	27,000	SMH6.3VN273M30X25T2	30 x 25	0.037	3.57
	33,000	SMH6.3VN333M30X25T2	30 x 25	0.03	3.95
	39,000	SMH6.3VN393M30X30T2	30 x 30	0.026	4.45
	47,000	SMH6.3VN473M30X35T2	30 x 35	0.021	5.06
	56,000	SMH6.3VN563M30X40T2	30 x 40	0.018	5.7
	68,000	SMH6.3VN683M30X45T2	30 x 45	0.015	6.48
	82,000	SMH6.3VN823M30X50T2	30 x 50	0.012	7.32
	39,000	SMH6.3VN393M35X25T2	35 x 25	0.026	4.51
	47,000	SMH6.3VN473M35X30T2	35 x 30	0.021	5.01
	56,000	SMH6.3VN563M35X30T2	35 x 30	0.018	5.77
	68,000	SMH6.3VN683M35X35T2	35 x 35	0.015	6.42
	82,000	SMH6.3VN823M35X40T2	35 x 40	0.012	7.29
	100,000	SMH6.3VN104M35X45T2	35 x 45	0.01	8.31
	150,000	SMH6.3VN154M35X63T2	35 x 63	0.01	10.91
	180,000	SMH6.3VN184M35X80T2	35 x 80	0.009	12.78
	56,000	SMH6.3VR563M40X25T5H	40 x 25	0.027	5.48
	82,000	SMH6.3VR823M40X30T5H	40 x 30	0.02	6.94
100,000	SMH6.3VR104M40X35T5H	40 x 35	0.017	7.95	
120,000	SMH6.3VR124M40X40T5H	40 x 40	0.014	8.97	
150,000	SMH6.3VR154M40X50T5H	40 x 50	0.012	10.66	
220,000	SMH6.3VR224M40X63T5H	40 x 63	0.009	13.79	
270,000	SMH6.3VR274M40X80T5H	40 x 80	0.008	16.62	

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

SMH Series

Standard Voltage Ratings - VN & VR/Snap Mount

Rated Voltage (VWDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (A rms) at +85°C, 120Hz
10 Volts 13 Volts Surge	12,000	SMH10VN123M22X25T2	22 × 25	0.069	2.39
	15,000	SMH10VN153M22X30T2	22 × 30	0.055	2.76
	18,000	SMH10VN183M22X35T2	22 × 35	0.046	3.12
	22,000	SMH10VN223M22X40T2	22 × 40	0.038	3.55
	27,000	SMH10VN273M22X45T2	22 × 45	0.031	4.04
	33,000	SMH10VN333M22X50T2	22 × 50	0.025	4.58
	15,000	SMH10VN153M25X25T2	25.4 × 25	0.055	2.77
	18,000	SMH10VN183M25X25T2	25.4 × 25	0.046	3.04
	22,000	SMH10VN223M25X30T2	25.4 × 30	0.038	3.48
	27,000	SMH10VN273M25X35T2	25.4 × 35	0.031	3.98
	33,000	SMH10VN333M25X40T2	25.4 × 40	0.025	4.54
	39,000	SMH10VN393M25X45T2	25.4 × 45	0.021	5.08
	47,000	SMH10VN473M25X50T2	25.4 × 50	0.018	5.73
	22,000	SMH10VN223M30X25T2	30 × 25	0.038	3.53
	27,000	SMH10VN273M30X30T2	30 × 30	0.031	3.73
	33,000	SMH10VN333M30X30T2	30 × 30	0.025	4.13
	39,000	SMH10VN393M30X35T2	30 × 35	0.021	5.05
	47,000	SMH10VN473M30X40T2	30 × 40	0.018	5.72
	56,000	SMH10VN563M30X45T2	30 × 45	0.015	6.44
	27,000	SMH10VN273M35X25T2	35 × 25	0.031	3.73
	33,000	SMH10VN333M35X25T2	35 × 25	0.025	4.13
	39,000	SMH10VN393M35X30T2	35 × 30	0.021	4.8
	47,000	SMH10VN473M35X30T2	35 × 30	0.018	5.27
	56,000	SMH10VN563M35X35T2	35 × 35	0.015	6.38
	68,000	SMH10VN683M35X40T2	35 × 40	0.012	7.27
	82,000	SMH10VN823M35X50T2	35 × 50	0.01	8.49
	100,000	SMH10VN104M35X63T2	35 × 63	0.01	8.91
	150,000	SMH10VN154M35X80T2	35 × 80	0.009	11.67
	47,000	SMH10VR473M40X25T5H	40 × 25	0.026	5.02
	56,000	SMH10VR563M40X30T5H	40 × 30	0.021	5.74
	68,000	SMH10VR683M40X35T5H	40 × 35	0.018	6.56
	82,000	SMH10VR823M40X40T5H	40 × 40	0.015	7.42
	120,000	SMH10VR124M40X50T5H	40 × 50	0.012	9.54
150,000	SMH10VR154M40X63T5H	40 × 63	0.01	11.39	
220,000	SMH10VR224M40X80T5H	40 × 80	0.008	15.0	
16 Volts 20 Volts Surge	8,200	SMH16VN822M22X25T2	22 × 25	0.081	2.51
	10,000	SMH16VN103M22X25T2	22 × 25	0.066	2.77
	12,000	SMH16VN123M22X30T2	22 × 30	0.055	2.86
	15,000	SMH16VN153M22X35T2	22 × 35	0.044	3.29
	18,000	SMH16VN183M22X40T2	22 × 40	0.037	3.72
	22,000	SMH16VN223M22X50T2	22 × 50	0.03	4.37
	12,000	SMH16VN123M25X25T2	25.4 × 25	0.055	2.95
	15,000	SMH16VN153M25X30T2	25.4 × 30	0.044	3.46
	18,000	SMH16VN183M25X35T2	25.4 × 35	0.037	3.98
	22,000	SMH16VN223M25X40T2	25.4 × 40	0.03	4.26
	27,000	SMH16VN273M25X45T2	25.4 × 45	0.025	4.72
	33,000	SMH16VN333M25X50T2	25.4 × 50	0.02	5.33
	15,000	SMH16VN153M30X25T2	30 × 25	0.044	3.66
	18,000	SMH16VN183M30X25T2	30 × 25	0.037	4.0
	22,000	SMH16VN223M30X30T2	30 × 30	0.03	4.21
	27,000	SMH16VN273M30X35T2	30 × 35	0.025	4.82
	33,000	SMH16VN333M30X40T2	30 × 40	0.02	5.36
	39,000	SMH16VN393M30X45T2	30 × 45	0.017	6.01
	47,000	SMH16VN473M30X50T2	30 × 50	0.014	6.79
	22,000	SMH16VN223M35X25T2	35 × 25	0.03	4.15
	27,000	SMH16VN273M35X30T2	35 × 30	0.025	4.65
	33,000	SMH16VN333M35X30T2	35 × 30	0.02	5.15

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

SMH Series

Standard Voltage Ratings - VN & VR/Snap Mount

Rated Voltage (VVDC)	Capacitance (μF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (A rms) at +85°C, 120Hz
16 Volts 20 Volts Surge	39,000	SMH16VN393M35X35T2	35 × 35	0.017	5.95
	47,000	SMH16VN473M35X40T2	35 × 40	0.014	6.76
	56,000	SMH16VN563M35X45T2	35 × 45	0.012	7.62
	68,000	SMH16VN683M35X50T2	35 × 50	0.01	8.63
	82,000	SMH16VN823M35X63T2	35 × 63	0.011	9.88
	100,000	SMH16VN104M35X80T2	35 × 80	0.009	11.67
	33,000	SMH16VR333M40X25T5H	40 × 25	0.027	5.15
	39,000	SMH16VR393M40X30T5H	40 × 30	0.022	5.86
	47,000	SMH16VR473M40X35T5H	40 × 35	0.019	6.68
	68,000	SMH16VR683M40X40T5H	40 × 40	0.015	8.27
	82,000	SMH16VR823M40X50T5H	40 × 50	0.012	9.66
100,000	SMH16VR104M40X63T5H	40 × 63	0.01	11.39	
150,000	SMH16VR154M40X80T5H	40 × 80	0.008	15.17	
25 Volts 32 Volts Surge	5,600	SMH25VN562M22X25T2	22 × 25	0.089	2.21
	6,800	SMH25VN682M22X30T2	22 × 30	0.073	2.4
	8,200	SMH25VN822M22X35T2	22 × 35	0.061	2.72
	10,000	SMH25VN103M22X40T2	22 × 40	0.05	3.09
	12,000	SMH25VN123M22X45T2	22 × 45	0.041	3.48
	15,000	SMH25VN153M22X50T2	22 × 50	0.033	4.0
	6,800	SMH25VN682M25X25T2	25.4 × 25	0.073	2.56
	8,200	SMH25VN822M25X25T2	25.4 × 25	0.061	2.8
	10,000	SMH25VN103M25X30T2	25.4 × 30	0.05	3.12
	12,000	SMH25VN123M25X35T2	25.4 × 35	0.041	3.43
	15,000	SMH25VN153M25X40T2	25.4 × 40	0.033	3.95
	18,000	SMH25VN183M25X45T2	25.4 × 45	0.028	4.45
	10,000	SMH25VN103M30X25T2	30 × 25	0.05	3.21
	12,000	SMH25VN123M30X30T2	30 × 30	0.041	3.86
	15,000	SMH25VN153M30X30T2	30 × 30	0.033	4.0
	18,000	SMH25VN183M30X35T2	30 × 35	0.028	4.46
	22,000	SMH25VN223M30X45T2	30 × 45	0.023	5.21
	27,000	SMH25VN273M30X50T2	30 × 50	0.018	5.94
	12,000	SMH25VN123M35X25T2	35 × 25	0.041	3.54
	15,000	SMH25VN153M35X25T2	35 × 25	0.033	3.95
	18,000	SMH25VN183M35X30T2	35 × 30	0.028	4.63
	22,000	SMH25VN223M35X35T2	35 × 35	0.023	5.16
	27,000	SMH25VN273M35X40T2	35 × 40	0.018	5.92
	33,000	SMH25VN333M35X45T2	35 × 45	0.015	6.75
	39,000	SMH25VN393M35X50T2	35 × 50	0.013	7.56
	47,000	SMH25VN473M35X63T2	35 × 63	0.012	8.63
	68,000	SMH25VN683M35X80T2	35 × 80	0.009	11.11
	22,000	SMH25VR223M40X25T5H	40 × 25	0.027	4.86
27,000	SMH25VR273M40X30T5H	40 × 30	0.021	5.63	
33,000	SMH25VR333M40X35T5H	40 × 35	0.018	6.46	
39,000	SMH25VR393M40X40T5H	40 × 40	0.015	7.24	
56,000	SMH25VR563M40X50T5H	40 × 50	0.012	9.21	
68,000	SMH25VR683M40X63T5H	40 × 63	0.01	10.84	
100,000	SMH25VR104M40X80T5H	40 × 80	0.008	14.31	
35 Volts 44 Volts Surge	3,900	SMH35VN392M22X25T2	22 × 25	0.106	2.22
	4,700	SMH35VN472M22X30T2	22 × 30	0.088	2.41
	5,600	SMH35VN562M22X35T2	22 × 35	0.074	2.75
	6,800	SMH35VN682M22X40T2	22 × 40	0.061	2.8
	8,200	SMH35VN822M22X45T2	22 × 45	0.051	3.47
	10,000	SMH35VN103M22X50T2	22 × 50	0.041	3.57
	4,700	SMH35VN472M25X25T2	25.4 × 25	0.088	2.42
	5,600	SMH35VN562M25X25T2	25.4 × 25	0.074	2.64
6,800	SMH35VN682M25X30T2	25.4 × 30	0.061	2.74	

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

SMH Series

Standard Voltage Ratings - VN & VR/Snap Mount

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (A rms) at +85°C, 120Hz
35 Volts 44 Volts Surge	8,200	SMH35VN822M25X35T2	25.4 × 35	0.051	3.1
	10,000	SMH35VN103M25X40T2	25.4 × 40	0.041	3.53
	12,000	SMH35VN123M25X45T2	25.4 × 45	0.035	3.98
	15,000	SMH35VN153M25X50T2	25.4 × 50	0.028	4.54
	6,800	SMH35VN682M30X25T2	30 × 25	0.061	2.97
	8,200	SMH35VN822M30X30T2	30 × 30	0.051	3.13
	10,000	SMH35VN103M30X30T2	30 × 30	0.041	3.46
	12,000	SMH35VN123M30X35T2	30 × 35	0.035	4.01
	15,000	SMH35VN153M30X40T2	30 × 40	0.028	4.52
	18,000	SMH35VN183M30X45T2	30 × 45	0.023	4.71
	22,000	SMH35VN223M30X50T2	30 × 50	0.019	5.33
	8,200	SMH35VN822M35X25T2	35 × 25	0.051	2.73
	10,000	SMH35VN103M35X25T2	35 × 25	0.041	3.02
	12,000	SMH35VN123M35X30T2	35 × 30	0.035	4.42
	15,000	SMH35VN153M35X35T2	35 × 35	0.028	5.01
	18,000	SMH35VN183M35X40T2	35 × 40	0.023	5.54
	22,000	SMH35VN223M35X45T2	35 × 45	0.019	6.04
	27,000	SMH35VN273M35X50T2	35 × 50	0.015	6.89
	33,000	SMH35VN333M35X63T2	35 × 63	0.012	7.93
	47,000	SMH35VN473M35X80T2	35 × 80	0.01	10.12
	15,000	SMH35VR153M40X25T5H	40 × 25	0.028	4.39
	18,000	SMH35VR183M40X30T5H	40 × 30	0.023	5.04
	22,000	SMH35VR223M40X35T5H	40 × 35	0.019	5.78
	27,000	SMH35VR273M40X40T5H	40 × 40	0.016	6.59
	39,000	SMH35VR393M40X50T5H	40 × 50	0.012	8.42
	47,000	SMH35VR473M40X63T5H	40 × 63	0.01	9.88
	68,000	SMH35VR683M40X80T5H	40 × 80	0.008	12.92
	50 Volts 63 Volts Surge	2,200	SMH50VN222M22X25T2	22 × 25	0.151
3,300		SMH50VN332M22X30T2	22 × 30	0.10	2.37
3,900		SMH50VN392M22X35T2	22 × 35	0.085	2.65
4,700		SMH50VN472M22X40T2	22 × 40	0.071	2.99
5,600		SMH50VN562M22X45T2	22 × 45	0.059	3.36
6,800		SMH50VN682M22X50T2	22 × 50	0.049	3.81
3,300		SMH50VN332M25X25T2	25.4 × 25	0.10	2.38
3,900		SMH50VN392M25X30T2	25.4 × 30	0.085	2.68
4,700		SMH50VN472M25X35T2	25.4 × 35	0.071	3.03
5,600		SMH50VN562M25X35T2	25.4 × 35	0.059	3.31
6,800		SMH50VN682M25X40T2	25.4 × 40	0.049	3.81
8,200		SMH50VN822M25X50T2	25.4 × 50	0.04	4.37
3,900		SMH50VN392M30X25T2	30 × 25	0.085	2.55
4,700		SMH50VN472M30X25T2	30 × 25	0.071	2.81
5,600		SMH50VN562M30X30T2	30 × 30	0.059	3.37
6,800		SMH50VN682M30X35T2	30 × 35	0.049	3.85
8,200		SMH50VN822M30X40T2	30 × 40	0.04	4.36
10,000		SMH50VN103M30X45T2	30 × 45	0.033	4.97
12,000		SMH50VN123M30X50T2	30 × 50	0.028	5.6
5,600		SMH50VN562M35X25T2	35 × 25	0.059	3.42
6,800		SMH50VN682M35X30T2	35 × 30	0.049	3.85
8,200		SMH50VN822M35X30T2	35 × 30	0.04	4.41
10,000		SMH50VN103M35X35T2	35 × 35	0.033	4.92
12,000		SMH50VN123M35X40T2	35 × 40	0.028	5.58
15,000		SMH50VN153M35X45T2	35 × 45	0.022	6.44
18,000		SMH50VN183M35X50T2	35 × 50	0.018	6.71
22,000		SMH50VN223M35X63T2	35 × 63	0.013	7.23
27,000		SMH50VN273M35X80T2	35 × 80	0.011	8.57
8,200		SMH50VR822M40X25T5H	40 × 25	0.033	3.63
12,000		SMH50VR123M40X30T5H	40 × 30	0.024	4.6

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

SMH
SNAP MOUNT - 85°C

SMH Series

Standard Voltage Ratings - VN & VR/Snap Mount

Rated Voltage (VVDC)	Capacitance (μF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (A rms) at +85°C, 120Hz
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50 Volts 63 Volts Surge	15,000	SMH50VR153M40X35T5H	40 × 35	0.02	5.33
	18,000	SMH50VR183M40X40T5H	40 × 40	0.017	6.02
	22,000	SMH50VR223M40X50T5H	40 × 50	0.014	7.07
	33,000	SMH50VR333M40X63T5H	40 × 63	0.011	9.25
	39,000	SMH50VR393M40X80T5H	40 × 80	0.009	10.94

63 Volts 79 Volts Surge	1,800	SMH63VN182M22X25T2	22 × 25	0.138	1.82
	2,200	SMH63VN222M22X30T2	22 × 30	0.113	2.31
	2,700	SMH63VN272M22X35T2	22 × 35	0.092	2.4
	3,300	SMH63VN332M22X35T2	22 × 35	0.075	2.62
	3,900	SMH63VN392M22X40T2	22 × 40	0.064	2.93
	4,700	SMH63VN472M22X50T2	22 × 50	0.053	3.39
	2,200	SMH63VN222M25X25T2	25.4 × 25	0.113	2.3
	2,700	SMH63VN272M25X25T2	25.4 × 25	0.092	2.4
	3,300	SMH63VN332M25X30T2	25.4 × 30	0.075	2.64
	3,900	SMH63VN392M25X35T2	25.4 × 35	0.064	2.97
	4,700	SMH63VN472M25X40T2	25.4 × 40	0.053	3.36
	5,600	SMH63VN562M25X45T2	25.4 × 45	0.044	3.77
	6,800	SMH63VN682M25X50T2	25.4 × 50	0.037	4.27
	3,300	SMH63VN332M30X25T2	30 × 25	0.075	2.78
	3,900	SMH63VN392M30X30T2	30 × 30	0.064	3.0
	4,700	SMH63VN472M30X30T2	30 × 30	0.053	3.32
	5,600	SMH63VN562M30X35T2	30 × 35	0.044	3.75
	6,800	SMH63VN682M30X40T2	30 × 40	0.037	4.27
	8,200	SMH63VN822M30X45T2	30 × 45	0.03	4.83
	10,000	SMH63VN103M30X50T2	30 × 50	0.025	5.49
	3,900	SMH63VN392M35X25T2	35 × 25	0.064	3.0
	4,700	SMH63VN472M35X25T2	35 × 25	0.053	3.36
	5,600	SMH63VN562M35X30T2	35 × 30	0.044	3.76
	6,800	SMH63VN682M35X30T2	35 × 30	0.037	4.15
	8,200	SMH63VN822M35X35T2	35 × 35	0.03	4.79
	10,000	SMH63VN103M35X40T2	35 × 40	0.025	5.47
	12,000	SMH63VN123M35X45T2	35 × 45	0.021	6.19
	15,000	SMH63VN153M35X63T2	35 × 63	0.015	6.9
	22,000	SMH63VN223M35X80T2	35 × 80	0.011	8.94
	6,800	SMH63VR682M40X25T5H	40 × 25	0.036	3.82
	8,200	SMH63VR822M40X30T5H	40 × 30	0.029	4.39
	10,000	SMH63VR103M40X35T5H	40 × 35	0.024	5.03
	12,000	SMH63VR123M40X40T5H	40 × 40	0.02	5.68
18,000	SMH63VR183M40X50T5H	40 × 50	0.015	7.39	
22,000	SMH63VR223M40X63T5H	40 × 63	0.013	8.72	
33,000	SMH63VR333M40X80T5H	40 × 80	0.01	11.62	

80 Volts 100 Volts Surge	1,200	SMH80VN122M22X25T2	22 × 25	0.207	1.69
	1,800	SMH80VN182M22X25T2	22 × 25	0.138	1.88
	1,800	SMH80VN182M22X30T2	22 × 30	0.138	2.14
	2,200	SMH80VN222M22X35T2	22 × 35	0.113	2.44
	2,700	SMH80VN272M22X40T2	22 × 40	0.092	2.78
	3,300	SMH80VN332M22X45T2	22 × 45	0.075	3.16
	3,900	SMH80VN392M22X50T2	22 × 50	0.064	3.52
	1,800	SMH80VN182M25X25T2	25.4 × 25	0.138	2.26
	2,200	SMH80VN222M25X30T2	25.4 × 30	0.113	2.46
	2,700	SMH80VN272M25X35T2	25.4 × 35	0.092	2.81
	3,300	SMH80VN332M25X40T2	25.4 × 40	0.075	3.21
	3,900	SMH80VN392M25X45T2	25.4 × 45	0.064	3.59
	4,700	SMH80VN472M25X50T2	25.4 × 50	0.053	4.05
	2,200	SMH80VN222M30X25T2	30 × 25	0.113	2.49
	2,700	SMH80VN272M30X25T2	30 × 25	0.092	2.75
	3,300	SMH80VN332M30X30T2	30 × 30	0.075	3.17
	3,900	SMH80VN392M30X35T2	30 × 35	0.064	3.57

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

SMH Series

Standard Voltage Ratings - VN & VR/Snap Mount

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (A rms) at +85°C, 120Hz
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80 Volts 100 Volts Surge	4,700	SMH80VN472M30X40T2	30 × 40	0.053	4.05
	5,600	SMH80VN562M30X45T2	30 × 45	0.044	4.55
	6,800	SMH80VN682M30X50T2	30 × 50	0.037	5.16
	3,300	SMH80VN332M35X25T2	35 × 25	0.075	3.5
	4,700	SMH80VN472M35X30T2	35 × 30	0.053	4.09
	5,600	SMH80VN562M35X35T2	35 × 35	0.044	4.51
	6,800	SMH80VN682M35X40T2	35 × 40	0.037	5.14
	8,200	SMH80VN822M35X45T2	35 × 45	0.03	5.83
	10,000	SMH80VN103M35X50T2	35 × 50	0.025	6.63
	12,000	SMH80VN123M35X63T2	35 × 63	0.021	6.9
	15,000	SMH80VN153M35X80T2	35 × 80	0.017	9.04
	4,700	SMH80VR472M40X25T5H	40 × 25	0.053	3.89
	5,600	SMH80VR562M40X30T5H	40 × 30	0.044	4.44
	6,800	SMH80VR682M40X35T5H	40 × 35	0.037	5.08
	8,200	SMH80VR822M40X40T5H	40 × 40	0.03	5.75
	12,000	SMH80VR123M40X50T5H	40 × 50	0.021	7.39
	15,000	SMH80VR153M40X63T5H	40 × 63	0.017	8.82
22,000	SMH80VR223M40X80T5H	40 × 80	0.011	11.62	

100 Volts 125 Volts Surge	820	SMH100VN821M22X25T2	22 × 25	0.303	1.86
	1,200	SMH100VN122M22X30T2	22 × 30	0.207	2.09
	1,500	SMH100VN152M22X35T2	22 × 35	0.166	2.41
	1,800	SMH100VN182M22X40T2	22 × 40	0.138	2.71
	2,200	SMH100VN222M22X45T2	22 × 45	0.113	3.08
	2,700	SMH100VN272M22X50T2	22 × 50	0.092	3.53
	1,200	SMH100VN122M25X25T2	25.4 × 25	0.207	2.1
	1,500	SMH100VN152M25X30T2	25.4 × 30	0.166	2.43
	1,800	SMH100VN182M25X35T2	25.4 × 35	0.138	2.75
	2,200	SMH100VN222M25X40T2	25.4 × 40	0.113	3.13
	2,700	SMH100VN272M25X45T2	25.4 × 45	0.092	3.57
	3,300	SMH100VN332M25X50T2	25.4 × 50	0.075	4.06
	1,500	SMH100VN152M30X25T2	30 × 25	0.166	2.46
	1,800	SMH100VN182M30X25T2	30 × 25	0.138	2.72
	2,200	SMH100VN222M30X30T2	30 × 30	0.113	3.09
	2,700	SMH100VN272M30X35T2	30 × 35	0.092	3.55
	3,300	SMH100VN332M30X40T2	30 × 40	0.075	4.05
	3,900	SMH100VN392M30X45T2	30 × 45	0.064	4.54
	4,700	SMH100VN472M30X50T2	30 × 50	0.053	5.13
	2,200	SMH100VN222M35X25T2	35 × 25	0.113	3.14
	2,700	SMH100VN272M35X30T2	35 × 30	0.092	3.71
	3,300	SMH100VN332M35X30T2	35 × 30	0.075	4.05
	3,900	SMH100VN392M35X35T2	35 × 35	0.064	4.49
	4,700	SMH100VN472M35X40T2	35 × 40	0.053	5.11
	5,600	SMH100VN562M35X45T2	35 × 45	0.044	5.75
	6,800	SMH100VN682M35X50T2	35 × 50	0.037	6.50
	8,200	SMH100VN822M35X80T2	35 × 80	0.03	7.47
	2,700	SMH100VR272M40X25T5H	40 × 25	0.092	3.29
	3,300	SMH100VR332M40X30T5H	40 × 30	0.075	3.81
	3,900	SMH100VR392M40X35T5H	40 × 35	0.064	4.3
	4,700	SMH100VR472M40X40T5H	40 × 40	0.053	4.86
6,800	SMH100VR682M40X50T5H	40 × 50	0.037	6.22	
8,200	SMH100VR822M40X63T5H	40 × 63	0.03	7.29	
12,000	SMH100VR123M40X80T5H	40 × 80	0.021	9.6	

160 Volts 200 Volts Surge	270	SMH160VN271M22X20T2	22 × 20	0.614	1.18
	330	SMH160VN331M22X25T2	22 × 25	0.502	1.4
	470	SMH160VN471M22X30T2	22 × 30	0.353	1.73
	560	SMH160VN561M22X35T2	22 × 35	0.296	1.95
	680	SMH160VN681M22X40T2	22 × 40	0.244	2.21

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

SMH
SNAP MOUNT - 85°C

SMH Series

Standard Voltage Ratings - VN & VR/Snap Mount

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (A rms) at +85°C, 120Hz
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160 Volts 200 Volts Surge	820	SMH160VN821M22X45T2	22 × 45	0.202	2.49
	1,000	SMH160VN102M22X50T2	22 × 50	0.166	2.82
	330	SMH160VN331M25X20T2	25.4 × 20	0.502	1.35
	470	SMH160VN471M25X25T2	25.4 × 25	0.353	1.74
	560	SMH160VN561M25X25T2	25.4 × 25	0.296	1.95
	680	SMH160VN681M25X30T2	25.4 × 30	0.244	2.16
	820	SMH160VN821M25X35T2	25.4 × 35	0.202	2.45
	1,000	SMH160VN102M25X40T2	25.4 × 40	0.166	2.79
	1,200	SMH160VN122M25X45T2	25.4 × 45	0.138	3.15
	1,500	SMH160VN152M25X50T2	25.4 × 50	0.111	3.72
	470	SMH160VN471M30X20T2	30 × 20	0.353	1.7
	680	SMH160VN681M30X25T2	30 × 25	0.244	2.19
	820	SMH160VN821M30X30T2	30 × 30	0.202	2.5
	1,000	SMH160VN102M30X30T2	30 × 30	0.166	2.8
	1,200	SMH160VN122M30X35T2	30 × 35	0.138	3.13
	1,500	SMH160VN152M30X45T2	30 × 45	0.111	3.73
	1,800	SMH160VN182M30X50T2	30 × 50	0.092	4.2
	680	SMH160VN681M35X20T2	35 × 20	0.366	2.14
	820	SMH160VN821M35X25T2	35 × 25	0.303	2.5
	1,000	SMH160VN102M35X25T2	35 × 25	0.249	2.8
	1,200	SMH160VN122M35X30T2	35 × 30	0.207	3.27
	1,500	SMH160VN152M35X35T2	35 × 35	0.166	3.69
	1,800	SMH160VN182M35X40T2	35 × 40	0.138	4.18
	2,200	SMH160VN222M35X45T2	35 × 45	0.113	4.78
	2,700	SMH160VN272M35X50T2	35 × 50	0.092	5.45
	3,300	SMH160VN332M35X63T2	35 × 63	0.075	5.6
	4,700	SMH160VN472M35X80T2	35 × 80	0.053	7.15
	1,500	SMH160VR152M40X25T5H	40 × 25	0.166	3.11
	1,800	SMH160VR182M40X30T5H	40 × 30	0.138	3.56
	2,200	SMH160VR222M40X35T5H	40 × 35	0.113	4.09
2,700	SMH160VR272M40X40T5H	40 × 40	0.092	4.66	
3,900	SMH160VR392M40X50T5H	40 × 50	0.064	5.96	
4,700	SMH160VR472M40X63T5H	40 × 63	0.053	6.98	
6,800	SMH160VR682M40X80T5H	40 × 80	0.037	9.14	

180 Volts 225 Volts Surge	220	SMH180VN221M22X20T2	22 × 20	0.753	1.06
	270	SMH180VN271M22X25T2	22 × 25	0.614	1.27
	390	SMH180VN391M22X30T2	22 × 30	0.425	1.58
	470	SMH180VN471M22X35T2	22 × 35	0.353	1.79
	560	SMH180VN561M22X40T2	22 × 40	0.296	2.0
	680	SMH180VN681M22X45T2	22 × 45	0.244	2.27
	820	SMH180VN821M22X50T2	22 × 50	0.202	2.55
	270	SMH180VN271M25X20T2	25.4 × 20	0.614	1.22
	390	SMH180VN391M25X25T2	25.4 × 25	0.425	1.58
	560	SMH180VN561M25X30T2	25.4 × 30	0.296	1.96
	680	SMH180VN681M25X35T2	25.4 × 35	0.244	2.23
	820	SMH180VN821M25X40T2	25.4 × 40	0.202	2.53
	1,000	SMH180VN102M25X45T2	25.4 × 45	0.166	2.87
	390	SMH180VN391M30X20T2	30 × 20	0.425	1.55
	560	SMH180VN561M30X25T2	30 × 25	0.296	1.99
	820	SMH180VN821M30X30T2	30 × 30	0.202	2.7
	1,000	SMH180VN102M30X35T2	30 × 35	0.166	2.86
	1,200	SMH180VN122M30X40T2	30 × 40	0.138	3.23
	1,500	SMH180VN152M30X50T2	30 × 50	0.111	3.83
	560	SMH180VN561M35X20T2	35 × 20	0.444	1.94
	820	SMH180VN821M35X25T2	35 × 25	0.303	2.53
	1,000	SMH180VN102M35X30T2	35 × 30	0.249	2.99
	1,200	SMH180VN122M35X35T2	35 × 35	0.207	3.31
	1,500	SMH180VN152M35X40T2	35 × 40	0.166	3.82

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

SMH Series

Standard Voltage Ratings - VN & VR/Snap Mount

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (A rms) at +85°C, 120Hz
180 Volts 225 Volts Surge	1,800	SMH180VN182M35X45T2	35 × 45	0.138	4.32
	2,200	SMH180VN222M35X50T2	35 × 50	0.113	4.92
	2,700	SMH180VN272M35X63T2	35 × 63	0.092	5.67
	3,900	SMH180VN392M35X80T2	35 × 80	0.064	7.29
	1,200	SMH180VR122M40X25T5H	40 × 25	0.207	3.11
	1,500	SMH180VR152M40X30T5H	40 × 30	0.166	3.64
	1,800	SMH180VR182M40X35T5H	40 × 35	0.138	4.13
	2,200	SMH180VR222M40X40T5H	40 × 40	0.113	4.71
	3,300	SMH180VR332M40X50T5H	40 × 50	0.075	6.13
	3,900	SMH180VR392M40X63T5H	40 × 63	0.064	7.11
5,600	SMH180VR562M40X80T5H	40 × 80	0.044	9.27	
200 Volts 250 Volts Surge	180	SMH200VN181M22X20T2	22 × 20	0.921	0.96
	270	SMH200VN271M22X25T2	22 × 25	0.614	1.27
	330	SMH200VN331M22X30T2	22 × 30	0.502	1.45
	390	SMH200VN391M22X30T2	22 × 30	0.425	1.58
	470	SMH200VN471M22X35T2	22 × 35	0.353	1.78
	560	SMH200VN561M22X40T2	22 × 40	0.296	2.0
	680	SMH200VN681M22X50T2	22 × 50	0.244	2.33
	270	SMH200VN271M25X20T2	25.4 × 20	0.614	1.22
	330	SMH200VN331M25X25T2	25.4 × 25	0.502	1.45
	390	SMH200VN391M25X25T2	25.4 × 25	0.425	1.58
	470	SMH200VN471M25X30T2	25.4 × 30	0.353	1.8
	560	SMH200VN561M25X35T2	25.4 × 35	0.296	2.03
	680	SMH200VN681M25X40T2	25.4 × 40	0.244	2.3
	820	SMH200VN821M25X45T2	25.4 × 45	0.202	2.6
	1,000	SMH200VN102M25X50T2	25.4 × 50	0.166	2.95
	390	SMH200VN391M30X20T2	30 × 20	0.425	1.55
	470	SMH200VN471M30X25T2	30 × 25	0.353	1.8
	560	SMH200VN561M30X25T2	30 × 25	0.296	2.0
	680	SMH200VN681M30X30T2	30 × 30	0.244	2.28
	820	SMH200VN821M30X35T2	30 × 35	0.202	2.59
	1,000	SMH200VN102M30X40T2	30 × 40	0.166	2.95
	1,200	SMH200VN122M30X45T2	30 × 45	0.138	3.31
	1,500	SMH200VN152M30X50T2	30 × 50	0.111	3.82
	560	SMH200VN561M35X20T2	35 × 20	0.444	1.94
	680	SMH200VN681M35X25T2	35 × 25	0.366	2.31
	820	SMH200VN821M35X25T2	35 × 25	0.303	2.6
	1,000	SMH200VN102M35X30T2	35 × 30	0.249	2.95
	1,200	SMH200VN122M35X35T2	35 × 35	0.207	3.31
	1,500	SMH200VN152M35X40T2	35 × 40	0.166	3.82
	1,800	SMH200VN182M35X45T2	35 × 45	0.138	4.32
	2,200	SMH200VN222M35X50T2	35 × 50	0.113	4.92
	2,700	SMH200VN272M35X63T2	35 × 63	0.092	5.67
	3,300	SMH200VN332M35X80T2	35 × 80	0.075	6.7
1,000	SMH200VR102M40X25T5H	40 × 25	0.249	2.84	
1,500	SMH200VR152M40X30T5H	40 × 30	0.166	3.64	
1,800	SMH200VR182M40X35T5H	40 × 35	0.138	4.13	
2,200	SMH200VR222M40X40T5H	40 × 40	0.113	4.71	
2,700	SMH200VR272M40X50T5H	40 × 50	0.092	5.54	
3,900	SMH200VR392M40X63T5H	40 × 63	0.064	7.11	
4,700	SMH200VR472M40X80T5H	40 × 80	0.053	8.49	
250 Volts 300 Volts Surge	120	SMH250VN121M22X20T2	22 × 20	1.381	0.78
	180	SMH250VN181M22X25T2	22 × 25	0.921	1.04
	220	SMH250VN221M22X25T2	22 × 25	0.753	1.15
	270	SMH250VN271M22X30T2	22 × 30	0.614	1.31
	330	SMH250VN331M22X35T2	22 × 35	0.502	1.49
	390	SMH250VN391M22X40T2	22 × 40	0.425	1.67

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

SMH
SNAP MOUNT - 85°C

SMH Series

Standard Voltage Ratings - VN & VR/Snap Mount

Rated Voltage (WVDC)	Capacitance (μF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (A rms) at +85°C, 120Hz
250 Volts 300 Volts Surge	470	SMH250VN471M22X45T2	22 × 45	0.353	1.88
	560	SMH250VN561M22X50T2	22 × 50	0.296	2.1
	180	SMH250VN181M25X20T2	25.4 × 20	0.921	1.0
	270	SMH250VN271M25X25T2	25.4 × 25	0.614	1.32
	330	SMH250VN331M25X30T2	25.4 × 30	0.502	1.51
	390	SMH250VN391M25X30T2	25.4 × 30	0.425	1.66
	470	SMH250VN471M25X35T2	25.4 × 35	0.353	1.86
	560	SMH250VN561M25X40T2	25.4 × 40	0.296	2.09
	680	SMH250VN681M25X50T2	25.4 × 50	0.244	2.44
	270	SMH250VN271M30X20T2	30 × 20	0.614	1.29
	330	SMH250VN331M30X25T2	30 × 25	0.502	1.52
	390	SMH250VN391M30X25T2	30 × 25	0.425	1.66
	470	SMH250VN471M30X30T2	30 × 30	0.353	1.89
	560	SMH250VN561M30X35T2	30 × 35	0.296	2.14
	680	SMH250VN681M30X40T2	30 × 40	0.244	2.43
	820	SMH250VN821M30X45T2	30 × 45	0.202	2.75
	1,000	SMH250VN102M30X50T2	30 × 50	0.166	3.31
	390	SMH250VN391M35X20T2	35 × 20	0.638	1.62
	470	SMH250VN471M35X25T2	35 × 25	0.529	1.88
	560	SMH250VN561M35X25T2	35 × 25	0.444	2.06
	680	SMH250VN681M35X30T2	35 × 30	0.366	2.46
	820	SMH250VN821M35X35T2	35 × 35	0.303	2.77
	1,000	SMH250VN102M35X40T2	35 × 40	0.249	3.32
	1,200	SMH250VN122M35X45T2	35 × 45	0.207	3.53
	1,500	SMH250VN152M35X50T2	35 × 50	0.166	4.04
	1,800	SMH250VN182M35X63T2	35 × 63	0.138	4.63
	2,200	SMH250VN222M35X80T2	35 × 80	0.113	5.47
	680	SMH250VR681M40X25T5H	40 × 25	0.366	2.34
	1,000	SMH250VR102M40X30T5H	40 × 30	0.249	2.97
	1,200	SMH250VR122M40X35T5H	40 × 35	0.207	3.37
	1,500	SMH250VR152M40X40T5H	40 × 40	0.166	3.89
	1,800	SMH250VR182M40X50T5H	40 × 50	0.138	4.52
	2,200	SMH250VR222M40X63T5H	40 × 63	0.113	5.34
3,300	SMH250VR332M40X80T5H	40 × 80	0.075	7.12	
315 Volts 365 Volts Surge	82	SMH315VN82RM22X20T2	22 × 20	3.032	0.65
	120	SMH315VN121M22X25T2	22 × 25	2.072	0.94
	150	SMH315VN151M22X30T2	22 × 30	1.658	1.11
	180	SMH315VN181M22X35T2	22 × 35	1.381	1.2
	220	SMH315VN221M22X40T2	22 × 40	1.13	1.41
	270	SMH315VN271M22X45T2	22 × 45	0.921	1.6
	330	SMH315VN331M22X50T2	22 × 50	0.753	1.82
	100	SMH315VN101M25X20T2	25.4 × 20	2.486	0.74
	150	SMH315VN151M25X25T2	25.4 × 25	1.658	1.1
	180	SMH315VN181M25X25T2	25.4 × 25	1.381	1.2
	220	SMH315VN221M25X30T2	25.4 × 30	1.13	1.38
	270	SMH315VN271M25X35T2	25.4 × 35	0.921	1.59
	330	SMH315VN331M25X40T2	25.4 × 40	0.753	1.8
	390	SMH315VN391M25X45T2	25.4 × 45	0.638	2.01
	470	SMH315VN471M25X45T2	25.4 × 45	0.529	2.2
	150	SMH315VN151M30X20T2	30 × 20	1.658	0.96
	220	SMH315VN221M30X25T2	30 × 25	1.13	1.4
	270	SMH315VN271M30X30T2	30 × 30	0.921	1.59
	330	SMH315VN331M30X30T2	30 × 30	0.753	1.8
	390	SMH315VN391M30X35T2	30 × 35	0.638	1.99
470	SMH315VN471M30X40T2	30 × 40	0.529	2.27	
560	SMH315VN561M30X45T2	30 × 45	0.444	2.56	
680	SMH315VN681M30X50T2	30 × 50	0.366	2.88	

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

SMH Series

Standard Voltage Ratings - VN & VR/Snap Mount

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (A rms) at +85°C, 120Hz
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315 Volts 365 Volts Surge	220	SMH315VN221M35X20T2	35 × 20	1.13	1.22
	270	SMH315VN271M35X25T2	35 × 25	0.921	1.59
	330	SMH315VN331M35X25T2	35 × 25	0.753	1.8
	390	SMH315VN391M35X30T2	35 × 30	0.638	2.0
	470	SMH315VN471M35X30T2	35 × 30	0.529	2.23
	560	SMH315VN561M35X35T2	35 × 35	0.444	2.49
	680	SMH315VN681M35X40T2	35 × 40	0.366	2.87
	820	SMH315VN821M35X45T2	35 × 45	0.303	3.25
	1,000	SMH315VN102M35X50T2	35 × 50	0.249	3.69
	1,200	SMH315VN122M35X63T2	35 × 63	0.207	4.36
	1,500	SMH315VN152M35X80T2	35 × 80	0.166	5.22
	390	SMH315VR391M40X25T5H	40 × 25	0.638	2.04
	560	SMH315VR561M40X30T5H	40 × 30	0.444	2.57
	680	SMH315VR681M40X35T5H	40 × 35	0.366	2.93
	820	SMH315VR821M40X40T5H	40 × 40	0.303	3.32
	1,200	SMH315VR122M40X50T5H	40 × 50	0.207	4.27
	1,500	SMH315VR152M40X63T5H	40 × 63	0.166	5.09
	2,200	SMH315VR222M40X80T5H	40 × 80	0.113	6.71

350 Volts 400 Volts Surge	68	SMH350VN68RM22X20T2	22 × 20	3.656	0.59
	100	SMH350VN101M22X25T2	22 × 25	2.486	0.86
	120	SMH350VN121M22X30T2	22 × 30	2.072	0.99
	150	SMH350VN151M22X35T2	22 × 35	1.658	1.14
	180	SMH350VN181M22X40T2	22 × 40	1.381	1.28
	220	SMH350VN221M22X45T2	22 × 45	1.13	1.44
	270	SMH350VN271M22X50T2	22 × 50	0.921	1.64
	82	SMH350VN82RM25X20T2	25.4 × 20	3.032	0.67
	120	SMH350VN121M25X25T2	25.4 × 25	2.072	0.99
	150	SMH350VN151M25X25T2	25.4 × 25	1.658	1.1
	180	SMH350VN181M25X30T2	25.4 × 30	1.381	1.24
	220	SMH350VN221M25X35T2	25.4 × 35	1.13	1.44
	270	SMH350VN271M25X40T2	25.4 × 40	0.921	1.63
	330	SMH350VN331M25X50T2	25.4 × 50	0.753	1.88
	120	SMH350VN121M30X20T2	30 × 20	2.072	0.86
	180	SMH350VN181M30X25T2	30 × 25	1.381	1.27
	220	SMH350VN221M30X30T2	30 × 30	1.13	1.44
	270	SMH350VN271M30X35T2	30 × 35	0.921	1.66
	330	SMH350VN331M30X35T2	30 × 35	0.753	1.83
	390	SMH350VN391M30X40T2	30 × 40	0.638	2.06
	470	SMH350VN471M30X50T2	30 × 50	0.529	2.4
	180	SMH350VN181M35X20T2	35 × 20	1.381	1.1
	220	SMH350VN221M35X25T2	35 × 25	1.13	1.44
	270	SMH350VN271M35X25T2	35 × 25	0.921	1.63
	330	SMH350VN331M35X30T2	35 × 30	0.753	1.87
	390	SMH350VN391M35X30T2	35 × 30	0.638	2.03
	470	SMH350VN471M35X35T2	35 × 35	0.529	2.33
	560	SMH350VN561M35X40T2	35 × 40	0.444	2.6
	680	SMH350VN681M35X45T2	35 × 45	0.366	2.96
	820	SMH350VN821M35X50T2	35 × 50	0.303	3.04
	1,000	SMH350VN102M35X63T2	35 × 63	0.249	3.98
	1,200	SMH350VN122M35X80T2	35 × 80	0.207	4.67
	330	SMH350VR331M40X25T5H	40 × 25	0.753	1.88
	470	SMH350VR471M40X30T5H	40 × 30	0.529	2.35
	560	SMH350VR561M40X35T5H	40 × 35	0.444	2.66
	680	SMH350VR681M40X40T5H	40 × 40	0.366	3.02
	1,000	SMH350VR102M40X50T5H	40 × 50	0.249	3.89
	1,500	SMH350VR152M40X63T5H	40 × 63	0.166	5.09
	1,800	SMH350VR182M40X80T5H	40 × 80	0.138	6.07

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

SMH Series

Standard Voltage Ratings - VN & VR/Snap Mount

Rated Voltage (WVDC)	Capacitance (μF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (A rms) at +85°C, 120Hz
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400 Volts 450 Volts Surge	56	SMH400VN56RM22X20T2	22 × 20	4.44	0.53
	82	SMH400VN82RM22X25T2	22 × 25	3.032	0.78
	100	SMH400VN101M22X30T2	22 × 30	2.486	0.9
	120	SMH400VN121M22X35T2	22 × 35	2.072	1.02
	150	SMH400VN151M22X40T2	22 × 40	1.658	1.16
	180	SMH400VN181M22X45T2	22 × 45	1.381	1.31
	220	SMH400VN221M22X50T2	22 × 50	1.13	1.49
	270	SMH400VN271M22X50T2	22 × 50	0.921	1.64
	68	SMH400VN68RM25X20T2	25.4 × 20	3.656	0.61
	100	SMH400VN101M25X25T2	25.4 × 25	2.486	0.9
	120	SMH400VN121M25X25T2	25.4 × 25	2.072	0.98
	150	SMH400VN151M25X30T2	25.4 × 30	1.658	1.14
	180	SMH400VN181M25X35T2	25.4 × 35	1.381	1.30
	220	SMH400VN221M25X40T2	25.4 × 40	1.13	1.47
	270	SMH400VN271M25X45T2	25.4 × 45	0.921	1.67
	330	SMH400VN331M25X50T2	25.4 × 50	0.753	1.88
	100	SMH400VN101M30X20T2	30 × 20	2.486	0.78
	150	SMH400VN151M30X25T2	30 × 25	1.658	1.16
	180	SMH400VN181M30X30T2	30 × 30	1.381	1.44
	220	SMH400VN221M30X30T2	30 × 30	1.13	1.47
	270	SMH400VN271M30X35T2	30 × 35	0.921	1.66
	330	SMH400VN331M30X40T2	30 × 40	0.753	1.9
	390	SMH400VN391M30X45T2	30 × 45	0.638	2.13
	470	SMH400VN471M30X50T2	30 × 50	0.529	2.4
	150	SMH400VN151M35X20T2	35 × 20	1.658	1.0
	180	SMH400VN181M35X25T2	35 × 25	1.381	1.32
	220	SMH400VN221M35X25T2	35 × 25	1.13	1.47
	270	SMH400VN271M35X30T2	35 × 30	0.921	1.69
	330	SMH400VN331M35X30T2	35 × 30	0.753	1.87
	390	SMH400VN391M35X35T2	35 × 35	0.638	2.08
	470	SMH400VN471M35X40T2	35 × 40	0.529	2.39
	560	SMH400VN561M35X45T2	35 × 45	0.444	2.69
	680	SMH400VN681M35X50T2	35 × 50	0.366	3.04
	820	SMH400VN821M35X63T2	35 × 63	0.303	3.61
	1,200	SMH400VN122M35X80T2	35 × 80	0.207	4.67
	270	SMH400VR271M40X25T5H	40 × 25	0.921	1.7
390	SMH400VR391M40X30T5H	40 × 30	0.638	2.14	
560	SMH400VR561M40X35T5H	40 × 35	0.444	2.66	
680	SMH400VR681M40X40T5H	40 × 40	0.366	3.02	
820	SMH400VR821M40X50T5H	40 × 50	0.303	3.53	
1,200	SMH400VR122M40X63T5H	40 × 63	0.207	4.56	
1,500	SMH400VR152M40X80T5H	40 × 80	0.166	5.54	

450 Volts 500 Volts Surge	56	SMH450VN56RM22X25T2	22 × 25	4.44	0.65
	68	SMH450VN68RM22X25T2	22 × 25	3.656	0.71
	82	SMH450VN82RM22X30T2	22 × 30	3.032	0.82
	100	SMH450VN101M22X35T2	22 × 35	2.486	0.93
	120	SMH450VN121M22X40T2	22 × 40	2.072	1.04
	150	SMH450VN151M22X45T2	22 × 45	1.658	1.19
	180	SMH450VN181M22X50T2	22 × 50	1.381	1.34
	82	SMH450VN82RM25X25T2	25.4 × 25	3.032	0.82
	100	SMH450VN101M25X25T2	25.4 × 25	2.486	0.9
	120	SMH450VN121M25X30T2	25.4 × 30	2.072	1.02
	150	SMH450VN151M25X35T2	25.4 × 35	1.658	1.19
	180	SMH450VN181M25X40T2	25.4 × 40	1.381	1.33
	220	SMH450VN221M25X50T2	25.4 × 50	1.13	1.54
	120	SMH450VN121M30X25T2	30 × 25	2.072	1.03
	150	SMH450VN151M30X30T2	30 × 30	1.658	1.19
	180	SMH450VN181M30X35T2	30 × 35	1.381	1.35

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

SMH Series

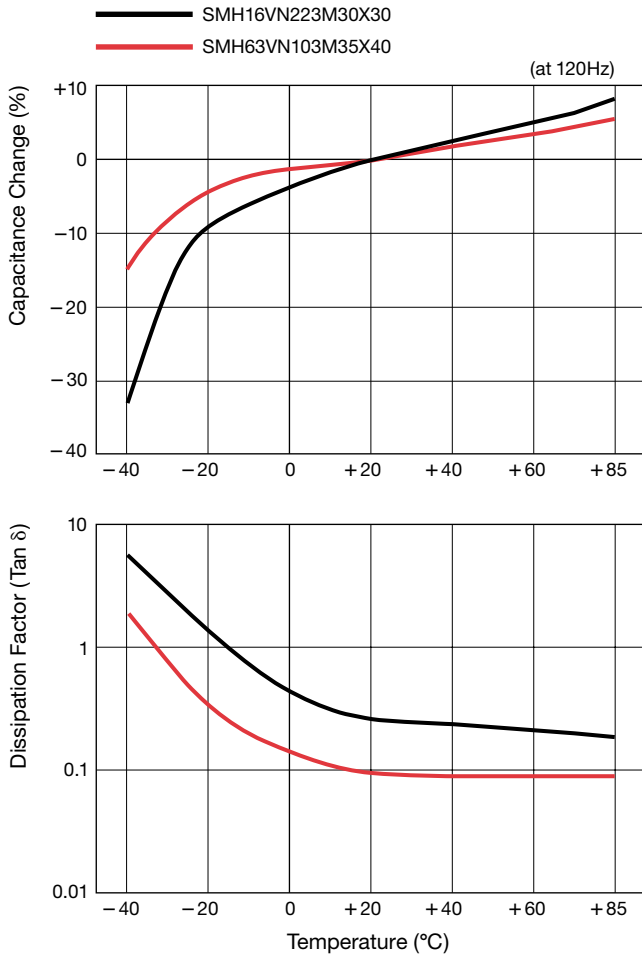
Standard Voltage Ratings - VN & VR/Snap Mount

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (Ω) at +20°C, 120Hz	Maximum Ripple Current (A rms) at +85°C, 120Hz
450 Volts 500 Volts Surge	220	SMH450VN221M30X40T2	30 × 40	1.13	1.55
	270	SMH450VN271M30X45T2	30 × 45	0.921	1.78
	330	SMH450VN331M30X50T2	30 × 50	0.753	2.01
	150	SMH450VN151M35X25T2	35 × 25	1.658	1.19
	180	SMH450VN181M35X25T2	35 × 25	1.381	1.33
	220	SMH450VN221M35X30T2	35 × 30	1.13	1.53
	270	SMH450VN271M35X35T2	35 × 35	0.921	1.73
	330	SMH450VN331M35X40T2	35 × 40	0.753	2.0
	390	SMH450VN391M35X45T2	35 × 45	0.638	2.24
	470	SMH450VN471M35X50T2	35 × 50	0.529	2.53
	560	SMH450VN561M35X63T2	35 × 63	0.444	2.98
	820	SMH450VN821M35X80T2	35 × 80	0.303	3.86
	220	SMH450VR221M40X25T5H	40 × 25	1.13	1.54
	270	SMH450VR271M40X30T5H	40 × 30	0.921	1.78
	390	SMH450VR391M40X35T5H	40 × 35	0.638	2.22
	470	SMH450VR471M40X40T5H	40 × 40	0.529	2.51
	680	SMH450VR681M40X50T5H	40 × 50	0.366	3.21
	820	SMH450VR821M40X63T5H	40 × 63	0.303	3.77
	1,200	SMH450VR122M40X80T5H	40 × 80	0.207	4.96

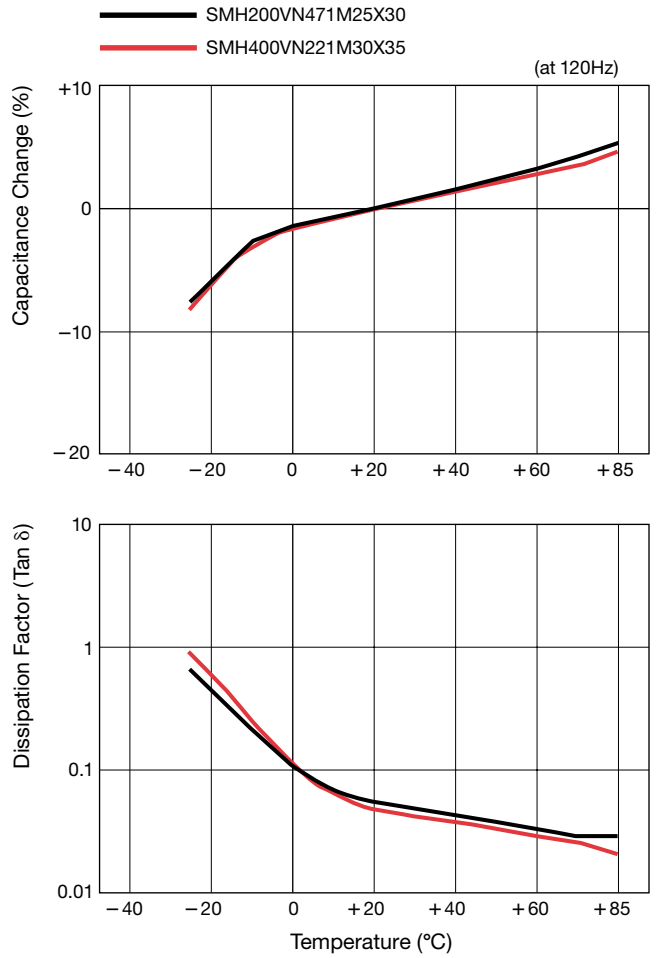
*The case sizes in table are with no sleeve, refer to diagrams for case sizes with sleeve.

SMH Series

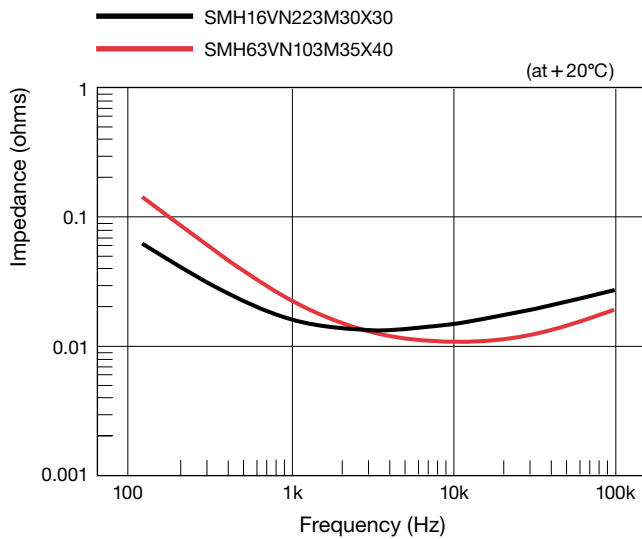
Temperature Characteristics



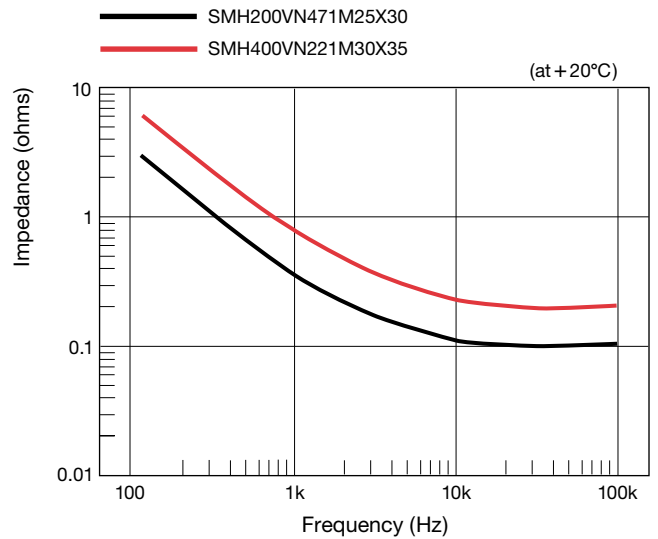
Temperature Characteristics



Impedance - Frequency Characteristics



Impedance - Frequency Characteristics



SMH SNAP MOUNT - 85°C