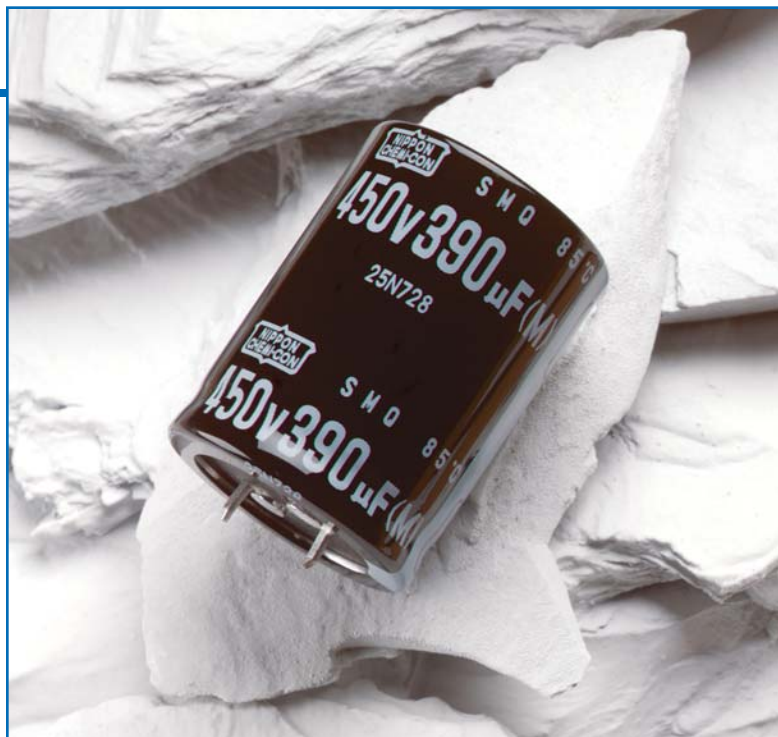


- **Snap Mount**
- **Downsize**
- **Large Capacitance**
- **RoHS Compliant**
- **+85°C Maximum Temperature**



The SMQ series is a high voltage snap-in capacitor series that offers downsized versions of the current miniaturized SMM series. These capacitors have a rated lifetime of 2,000 hours at +85°C with the rated ripple current applied. With high ripple current capability and higher CV per case size than the SMM series, the SMQ capacitors are suitable for many downsized power supply circuits. The standard SMQ capacitors have a 2-pin snap-in terminal style. The SMQ series is RoHS compliant offering Pb-free construction and PET (polyester) sleeves with no end disk as the standard.

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

SMQ Specifications - Snap Mount

Item	Characteristics																											
Category Temperature Range	− 25 to +85°C																											
Rated Voltage Range	160 to 450VDC																											
Capacitance Range	82 to 3,900μF																											
Capacitance Tolerance	±20% (M) at +20°C, 120Hz																											
Leakage Current	I ≤ 3√CV (μA) after 5 minutes at +20°C. Where I = Max. leakage current (μA), C = Nominal capacitance (μF) and V= Rated voltage (V)																											
Dissipation Factor (Tan δ)	At +20°C, 120Hz <table><tr><td>Rated Voltage (V)</td><td>160-250</td><td>315-400</td><td colspan="4">420, 450</td></tr><tr><td>Tan δ (DF) Max.</td><td>0.15</td><td>0.15</td><td colspan="4">0.20</td></tr></table>							Rated Voltage (V)	160-250	315-400	420, 450				Tan δ (DF) Max.	0.15	0.15	0.20										
Rated Voltage (V)	160-250	315-400	420, 450																									
Tan δ (DF) Max.	0.15	0.15	0.20																									
Low Temperature Characteristics	At 120Hz, impedance (Z) ratio between the − 25°C value and +20°C value shall not exceed the values given below. <table><tr><td>Rated Voltage (V)</td><td>160-250</td><td>315-400</td><td colspan="4">420, 450</td></tr><tr><td>Z(−25°C) / Z(+20°C)</td><td>4</td><td>8</td><td colspan="4">8</td></tr></table>							Rated Voltage (V)	160-250	315-400	420, 450				Z(−25°C) / Z(+20°C)	4	8	8										
Rated Voltage (V)	160-250	315-400	420, 450																									
Z(−25°C) / Z(+20°C)	4	8	8																									
Rated Ripple Current Multipliers	Frequency (Hz) <table><tr><td>DC Rated Voltage</td><td>50Hz</td><td>120Hz</td><td>300Hz</td><td>1kHz</td><td>10kHz</td><td>50kHz</td></tr><tr><td>160-250V</td><td>0.81</td><td>1.00</td><td>1.17</td><td>1.32</td><td>1.45</td><td>1.50</td></tr><tr><td>315-450V</td><td>0.77</td><td>1.00</td><td>1.16</td><td>1.30</td><td>1.41</td><td>1.43</td></tr></table>							DC Rated Voltage	50Hz	120Hz	300Hz	1kHz	10kHz	50kHz	160-250V	0.81	1.00	1.17	1.32	1.45	1.50	315-450V	0.77	1.00	1.16	1.30	1.41	1.43
DC Rated Voltage	50Hz	120Hz	300Hz	1kHz	10kHz	50kHz																						
160-250V	0.81	1.00	1.17	1.32	1.45	1.50																						
315-450V	0.77	1.00	1.16	1.30	1.41	1.43																						
Endurance (Load Life)	The following specifications shall be satisfied when the capacitors are restored to +20°C after subjecting them to DC voltage for 2,000 hours at +85°C with the rated ripple current applied. The sum of the DC voltage and peak AC voltage must not exceed the full rated voltage of the capacitors. Capacitance change: ≤ ±20% of initial measured value Tan δ (DF) : ≤ 200% of initial specified value Leakage current : ≤ 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: ≤ ±15% of initial measured value Tan δ (DF) : ≤ 150% of initial specified value Leakage current : ≤ initial specified value																											

Diagram of Dimensions - Snap Mount

Snap Mount

Unit: mm

Type VSN $\phi 22 \sim \phi 35$

Standard design does not have a plastic end disk.

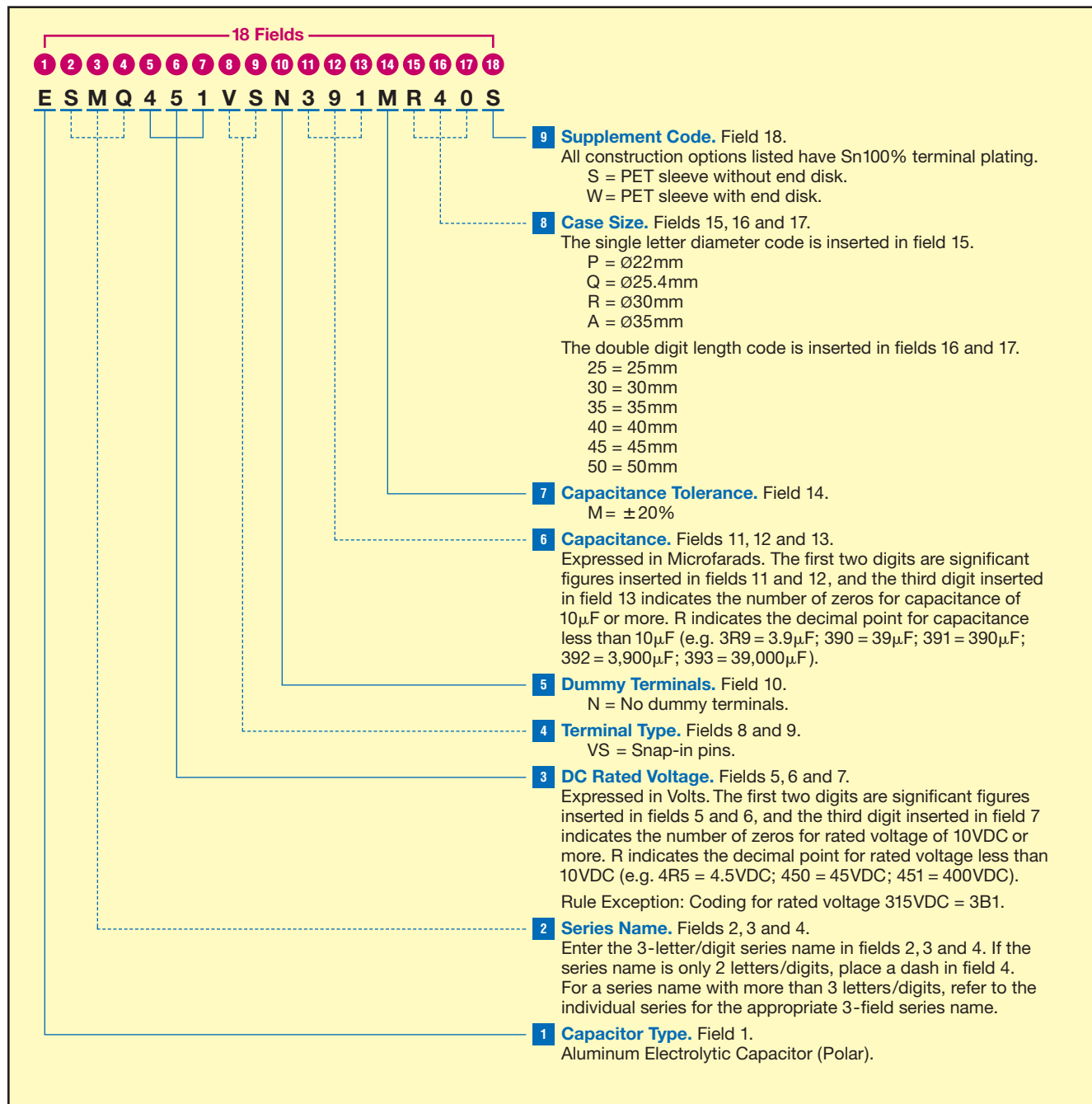
*Vent may be located either on the bottom or side of the can.

VS Pin Dimensions

Type	P	W	W ₁	W ₂
VSN	4.0 $\pm$ 0.5	1.5 $\pm$ 0.2	1.0	1.0

Part Numbering System for SMQ 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
160 Volts 200 Volts Surge	560	ESMQ161VSN561MP25S	22 × 25	P25	0.444	2.25
	680	ESMQ161VSN681MP30S	22 × 30	P30	0.366	2.5
	820	ESMQ161VSN821MP35S	22 × 35	P35	0.303	2.75
	1,000	ESMQ161VSN102MP40S	22 × 40	P40	0.249	3.0
	1,200	ESMQ161VSN122MP45S	22 × 45	P45	0.207	3.25
	1,500	ESMQ161VSN152MP50S	22 × 50	P50	0.166	3.73
	1,000	ESMQ161VSN102MQ30S	25.4 × 30	Q30	0.249	3.0
	1,200	ESMQ161VSN122MQ35S	25.4 × 35	Q35	0.207	3.25
	1,500	ESMQ161VSN152MQ40S	25.4 × 40	Q40	0.166	3.73
	1,800	ESMQ161VSN182MQ45S	25.4 × 45	Q45	0.138	4.2
	1,200	ESMQ161VSN122MR25S	30 × 25	R25	0.207	3.25
	1,500	ESMQ161VSN152MR30S	30 × 30	R30	0.166	3.73
	1,800	ESMQ161VSN182MR35S	30 × 35	R35	0.138	4.2
	2,200	ESMQ161VSN222MR40S	30 × 40	R40	0.113	4.78
	1,500	ESMQ161VSN152MA25S	35 × 25	A25	0.166	3.73
	1,800	ESMQ161VSN182MA30S	35 × 30	A30	0.138	4.2
	2,200	ESMQ161VSN222MA35S	35 × 35	A35	0.113	4.78
	2,700	ESMQ161VSN272MA40S	35 × 40	A40	0.092	5.45
	3,300	ESMQ161VSN332MA45S	35 × 45	A45	0.075	5.75
	3,900	ESMQ161VSN392MA50S	35 × 50	A50	0.064	6.0
180 Volts 225 Volts Surge	470	ESMQ181VSN471MP25S	22 × 25	P25	0.529	2.08
	560	ESMQ181VSN561MP30S	22 × 30	P30	0.444	2.25
	680	ESMQ181VSN681MP30S	22 × 30	P30	0.366	2.5
	820	ESMQ181VSN821MP35S	22 × 35	P35	0.303	2.75
	1,000	ESMQ181VSN102MP45S	22 × 45	P45	0.249	3.0
	1,200	ESMQ181VSN122MP50S	22 × 50	P50	0.207	3.31
	680	ESMQ181VSN681MQ25S	25.4 × 25	Q25	0.366	2.5
	820	ESMQ181VSN821MQ30S	25.4 × 30	Q30	0.303	2.75
	1,000	ESMQ181VSN102MQ35S	25.4 × 35	Q35	0.249	3.0
	1,200	ESMQ181VSN122MQ40S	25.4 × 40	Q40	0.207	3.31
	1,500	ESMQ181VSN152MQ45S	25.4 × 45	Q45	0.166	3.83
	1,800	ESMQ181VSN182MQ50S	25.4 × 50	Q50	0.138	4.32
	1,000	ESMQ181VSN102MR25S	30 × 25	R25	0.249	3.0
	1,200	ESMQ181VSN122MR30S	30 × 30	R30	0.207	3.31
	1,500	ESMQ181VSN152MR35S	30 × 35	R35	0.166	3.83
	1,800	ESMQ181VSN182MR40S	30 × 40	R40	0.138	4.32
	2,200	ESMQ181VSN222MR45S	30 × 45	R45	0.113	4.92
	1,200	ESMQ181VSN122MA25S	35 × 25	A25	0.207	3.31
	1,500	ESMQ181VSN152MA30S	35 × 30	A30	0.166	3.83
	1,800	ESMQ181VSN182MA30S	35 × 30	A30	0.138	4.32
	2,200	ESMQ181VSN222MA40S	35 × 40	A40	0.113	4.92
	2,700	ESMQ181VSN272MA45S	35 × 45	A45	0.092	5.52
	3,300	ESMQ181VSN332MA50S	35 × 50	A50	0.075	5.75
200 Volts 250 Volts Surge	390	ESMQ201VSN391MP25S	22 × 25	P25	0.638	1.68
	470	ESMQ201VSN471MP30S	22 × 30	P30	0.529	1.85
	560	ESMQ201VSN561MP30S	22 × 30	P30	0.444	2.43
	680	ESMQ201VSN681MP35S	22 × 35	P35	0.366	2.68
	820	ESMQ201VSN821MP40S	22 × 40	P40	0.303	2.93
	1,000	ESMQ201VSN102MP45S	22 × 45	P45	0.249	3.25
	560	ESMQ201VSN561MQ25S	25.4 × 25	Q25	0.444	2.43
	680	ESMQ201VSN681MQ30S	25.4 × 30	Q30	0.366	2.68
	820	ESMQ201VSN821MQ30S	25.4 × 30	Q30	0.303	2.93
	1,000	ESMQ201VSN102MQ35S	25.4 × 35	Q35	0.249	3.25
	1,200	ESMQ201VSN122MQ40S	25.4 × 40	Q40	0.207	3.5
	1,500	ESMQ201VSN152MQ50S	25.4 × 50	Q50	0.166	3.87
	820	ESMQ201VSN821MR25S	30 × 25	R25	0.303	2.93
	1,000	ESMQ201VSN102MR30S	30 × 30	R30	0.249	3.25

†For 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	1,200	ESMQ201VSN122MR30S	30 × 30	R30	0.207	3.5
	1,500	ESMQ201VSN152MR35S	30 × 35	R35	0.166	3.87
	1,800	ESMQ201VSN182MR45S	30 × 45	R45	0.138	4.32
	2,200	ESMQ201VSN222MR50S	30 × 50	R50	0.113	4.92
	1,000	ESMQ201VSN102MA25S	35 × 25	A25	0.249	3.25
	1,200	ESMQ201VSN122MA30S	35 × 30	A30	0.207	3.5
	1,500	ESMQ201VSN152MA30S	35 × 30	A30	0.166	3.87
	1,800	ESMQ201VSN182MA35S	35 × 35	A35	0.138	4.32
	2,200	ESMQ201VSN222MA40S	35 × 40	A40	0.113	4.92
	2,700	ESMQ201VSN272MA50S	35 × 50	A50	0.092	5.45
250 Volts 300 Volts Surge	270	ESMQ251VSN271MP25S	22 × 25	P25	0.921	1.31
	330	ESMQ251VSN331MP30S	22 × 30	P30	0.754	1.75
	390	ESMQ251VSN391MP30S	22 × 30	P30	0.638	1.91
	470	ESMQ251VSN471MP35S	22 × 35	P35	0.529	2.11
	560	ESMQ251VSN561MP40S	22 × 40	P40	0.444	2.25
	680	ESMQ251VSN681MP45S	22 × 45	P45	0.366	2.5
	820	ESMQ251VSN821MP50S	22 × 50	P50	0.303	2.77
	390	ESMQ251VSN391MQ25S	25.4 × 25	Q25	0.638	1.91
	470	ESMQ251VSN471MQ30S	25.4 × 30	Q30	0.529	2.11
	560	ESMQ251VSN561MQ30S	25.4 × 30	Q30	0.444	2.25
	680	ESMQ251VSN681MQ35S	25.4 × 35	Q35	0.366	2.5
	820	ESMQ251VSN821MQ40S	25.4 × 40	Q40	0.303	2.77
	1,000	ESMQ251VSN102MQ45S	25.4 × 45	Q45	0.249	3.32
	560	ESMQ251VSN561MR25S	30 × 25	R25	0.444	2.25
	680	ESMQ251VSN681MR30S	30 × 30	R30	0.366	2.5
	820	ESMQ251VSN821MR30S	30 × 30	R30	0.303	2.77
	1,000	ESMQ251VSN102MR35S	30 × 35	R35	0.249	3.32
	1,200	ESMQ251VSN122MR40S	30 × 40	R40	0.207	3.53
	1,500	ESMQ251VSN152MR50S	30 × 50	R50	0.166	4.04
	820	ESMQ251VSN821MA25S	35 × 25	A25	0.303	2.77
	1,000	ESMQ251VSN102MA30S	35 × 30	A30	0.249	3.32
	1,200	ESMQ251VSN122MA35S	35 × 35	A35	0.207	3.53
	1,500	ESMQ251VSN152MA40S	35 × 40	A40	0.166	4.04
	1,800	ESMQ251VSN182MA45S	35 × 45	A45	0.138	4.55
315 Volts 365 Volts Surge	180	ESMQ3B1VSN181MP25S	22 × 25	P25	1.382	1.21
	220	ESMQ3B1VSN221MP30S	22 × 30	P30	1.13	1.41
	270	ESMQ3B1VSN271MP30S	22 × 30	P30	0.921	1.6
	330	ESMQ3B1VSN331MP40S	22 × 40	P40	0.754	1.82
	390	ESMQ3B1VSN391MP45S	22 × 45	P45	0.638	2.01
	470	ESMQ3B1VSN471MP50S	22 × 50	P50	0.529	2.27
	330	ESMQ3B1VSN331MQ30S	25.4 × 30	Q30	0.754	1.82
	390	ESMQ3B1VSN391MQ35S	25.4 × 35	Q35	0.638	2.01
	470	ESMQ3B1VSN471MQ40S	25.4 × 40	Q40	0.529	2.27
	560	ESMQ3B1VSN561MQ45S	25.4 × 45	Q45	0.444	2.56
	330	ESMQ3B1VSN331MR25S	30 × 25	R25	0.754	1.82
	390	ESMQ3B1VSN391MR30S	30 × 30	R30	0.638	2.01
	470	ESMQ3B1VSN471MR30S	30 × 30	R30	0.529	2.27
	560	ESMQ3B1VSN561MR35S	30 × 35	R35	0.444	2.56
	680	ESMQ3B1VSN681MR40S	30 × 40	R40	0.366	2.87
	820	ESMQ3B1VSN821MR45S	30 × 45	R45	0.303	3.25
	1,000	ESMQ3B1VSN102MR50S	30 × 50	R50	0.249	3.63
	470	ESMQ3B1VSN471MA25S	35 × 25	A25	0.529	2.27
	560	ESMQ3B1VSN561MA30S	35 × 30	A30	0.444	2.56
	680	ESMQ3B1VSN681MA35S	35 × 35	A35	0.366	2.87
	820	ESMQ3B1VSN821MA40S	35 × 40	A40	0.303	3.25
	1,000	ESMQ3B1VSN102MA45S	35 × 45	A45	0.249	3.63

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

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

Standard Voltage Ratings - Snap Mount

Rated Voltage (VWDC)	Capacitance (μF)	Global Part Number†	Nominal Case Size* D × L (mm)	Case Size Code	Maximum ESR (Ω) at +20°C, 120Hz	Rated Ripple Current (A rms) at +85°C, 120Hz
350 Volts 400 Volts Surge	150	ESMQ351VSN151MP25S	22 × 25	P25	1.658	1.12
	180	ESMQ351VSN181MP30S	22 × 30	P30	1.382	1.22
	220	ESMQ351VSN221MP35S	22 × 35	P35	1.13	1.44
	270	ESMQ351VSN271MP40S	22 × 40	P40	0.921	1.66
	330	ESMQ351VSN331MP45S	22 × 45	P45	0.754	1.88
	390	ESMQ351VSN391MP50S	22 × 50	P50	0.638	2.06
	270	ESMQ351VSN271MQ30S	25.4 × 30	Q30	0.921	1.66
	330	ESMQ351VSN331MQ35S	25.4 × 35	Q35	0.754	1.88
	390	ESMQ351VSN391MQ40S	25.4 × 40	Q40	0.638	2.06
	470	ESMQ351VSN471MQ45S	25.4 × 45	Q45	0.529	2.4
	560	ESMQ351VSN561MQ50S	25.4 × 50	Q50	0.444	2.6
	390	ESMQ351VSN391MR30S	30 × 30	R30	0.638	2.06
	470	ESMQ351VSN471MR35S	30 × 35	R35	0.529	2.4
	560	ESMQ351VSN561MR40S	30 × 40	R40	0.444	2.6
	680	ESMQ351VSN681MR45S	30 × 45	R45	0.366	2.96
	820	ESMQ351VSN821MR50S	30 × 50	R50	0.303	3.25
	390	ESMQ351VSN391MA25S	35 × 25	A25	0.638	2.06
	470	ESMQ351VSN471MA30S	35 × 30	A30	0.529	2.4
	560	ESMQ351VSN561MA30S	35 × 30	A30	0.444	2.6
	680	ESMQ351VSN681MA35S	35 × 35	A35	0.366	2.96
	820	ESMQ351VSN821MA45S	35 × 45	A45	0.303	3.25
	1,000	ESMQ351VSN102MA50S	35 × 50	A50	0.249	3.54
400 Volts 450 Volts Surge	120	ESMQ401VSN121MP25S	22 × 25	P25	2.072	1.02
	150	ESMQ401VSN151MP30S	22 × 30	P30	1.658	1.16
	180	ESMQ401VSN181MP35S	22 × 35	P35	1.382	1.44
	220	ESMQ401VSN221MP40S	22 × 40	P40	1.13	1.49
	270	ESMQ401VSN271MP45S	22 × 45	P45	0.921	1.67
	330	ESMQ401VSN331MP50S	22 × 50	P50	0.754	1.9
	220	ESMQ401VSN221MQ30S	25.4 × 30	Q30	1.13	1.49
	270	ESMQ401VSN271MQ35S	25.4 × 35	Q35	0.921	1.67
	330	ESMQ401VSN331MQ40S	25.4 × 40	Q40	0.754	1.9
	390	ESMQ401VSN391MQ45S	25.4 × 45	Q45	0.638	2.13
	470	ESMQ401VSN471MQ50S	25.4 × 50	Q50	0.529	2.39
	270	ESMQ401VSN271MR25S	30 × 25	R25	0.921	1.67
	330	ESMQ401VSN331MR30S	30 × 30	R30	0.754	1.9
	390	ESMQ401VSN391MR35S	30 × 35	R35	0.638	2.13
	470	ESMQ401VSN471MR40S	30 × 40	R40	0.529	2.39
	560	ESMQ401VSN561MR45S	30 × 45	R45	0.444	2.69
	680	ESMQ401VSN681MR50S	30 × 50	R50	0.366	2.96
	330	ESMQ401VSN331MA25S	35 × 25	A25	0.754	1.9
	390	ESMQ401VSN391MA30S	35 × 30	A30	0.638	2.13
	470	ESMQ401VSN471MA30S	35 × 30	A30	0.529	2.39
	560	ESMQ401VSN561MA35S	35 × 35	A35	0.444	2.69
	680	ESMQ401VSN681MA40S	35 × 40	A40	0.366	2.96
	820	ESMQ401VSN821MA45S	35 × 45	A45	0.303	3.25
420 Volts 470 Volts Surge	100	ESMQ421VSN101MP25S	22 × 25	P25	3.315	0.97
	120	ESMQ421VSN121MP25S	22 × 25	P25	2.763	1.08
	150	ESMQ421VSN151MP30S	22 × 30	P30	2.21	1.30
	180	ESMQ421VSN181MP35S	22 × 35	P35	1.842	1.48
	220	ESMQ421VSN221MP40S	22 × 40	P40	1.507	1.65
	270	ESMQ421VSN271MP50S	22 × 50	P50	1.228	1.94
	150	ESMQ421VSN151MQ25S	25.4 × 25	Q25	2.21	1.30
	180	ESMQ421VSN181MQ30S	25.4 × 30	Q30	1.842	1.48
	220	ESMQ421VSN221MQ35S	25.4 × 35	Q35	1.507	1.65
	270	ESMQ421VSN271MQ35S	25.4 × 35	Q35	1.228	1.94
	330	ESMQ421VSN331MQ45S	25.4 × 45	Q45	1.005	2.17
	390	ESMQ421VSN391MQ50S	25.4 × 50	Q50	0.85	2.27

†For 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
420 Volts 470 Volts Surge	220	ESMQ421VSN221MR25S	30 × 25	R25	1.507	1.65
	270	ESMQ421VSN271MR30S	30 × 30	R30	1.228	1.94
	330	ESMQ421VSN331MR35S	30 × 35	R35	1.005	2.17
	390	ESMQ421VSN391MR35S	30 × 35	R35	0.85	2.27
	470	ESMQ421VSN471MR40S	30 × 40	R40	0.705	2.61
	560	ESMQ421VSN561MR50S	30 × 50	R50	0.592	2.82
	330	ESMQ421VSN331MA30S	35 × 30	A30	1.005	2.17
	390	ESMQ421VSN391MA30S	35 × 30	A30	0.85	2.27
	470	ESMQ421VSN471MA35S	35 × 35	A35	0.705	2.61
	560	ESMQ421VSN561MA40S	35 × 40	A40	0.592	2.82
	680	ESMQ421VSN681MA45S	35 × 45	A45	0.488	3.11
450 Volts 500 Volts Surge	82	ESMQ451VSN820MP25S	22 × 25	P25	4.043	0.83
	100	ESMQ451VSN101MP25S	22 × 25	P25	3.316	0.93
	120	ESMQ451VSN121MP30S	22 × 30	P30	2.763	1.04
	150	ESMQ451VSN151MP35S	22 × 35	P35	2.21	1.19
	180	ESMQ451VSN181MP40S	22 × 40	P40	1.842	1.35
	220	ESMQ451VSN221MP45S	22 × 45	P45	1.507	1.55
	270	ESMQ451VSN271MP50S	22 × 50	P50	1.228	1.78
	150	ESMQ451VSN151MP25S	25.4 × 25	Q25	2.21	1.19
	180	ESMQ451VSN181MP30S	25.4 × 30	Q30	1.842	1.35
	220	ESMQ451VSN221MP40S	25.4 × 40	Q40	1.507	1.55
	270	ESMQ451VSN271MP40S	25.4 × 40	Q40	1.228	1.78
	330	ESMQ451VSN331MP50S	25.4 × 50	Q50	1.005	2.01
	220	ESMQ451VSN221MR30S	30 × 30	R30	1.507	1.55
	270	ESMQ451VSN271MR30S	30 × 30	R30	1.228	1.78
	330	ESMQ451VSN331MR40S	30 × 40	R40	1.005	2.01
	390	ESMQ451VSN391MR40S	30 × 40	R40	0.85	2.24
	470	ESMQ451VSN471MR45S	30 × 45	R45	0.705	2.53
	560	ESMQ451VSN561MR50S	30 × 50	R50	0.592	2.82
	220	ESMQ451VSN221MA25S	35 × 25	A25	1.507	1.55
	330	ESMQ451VSN331MA30S	35 × 30	A30	1.005	2.01
	390	ESMQ451VSN391MA35S	35 × 35	A35	0.85	2.24
	470	ESMQ451VSN471MA40S	35 × 40	A40	0.705	2.53
	560	ESMQ451VSN561MA45S	35 × 45	A45	0.592	2.82

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

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