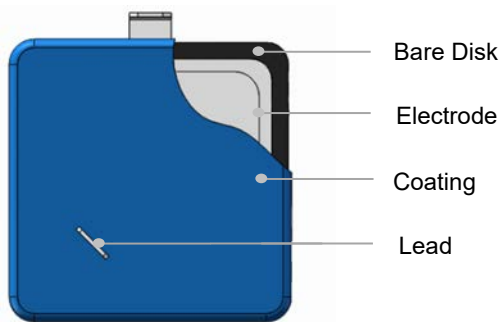






Description

Compared with standard type varistor, the high-surge impact varistor uses materials with extra high performance, having impulse capacity about 30% higher than normal varistor of the same size. Besides, the varistor has good long-term stability, and can be used in higher surge requirement or miniaturization designmen .

Product Structure



Agency Approvals

Agency	Standards	No.
	UL 1449 4 th Edition	on request
	CSA C22.2 NO.269.5-17	on request

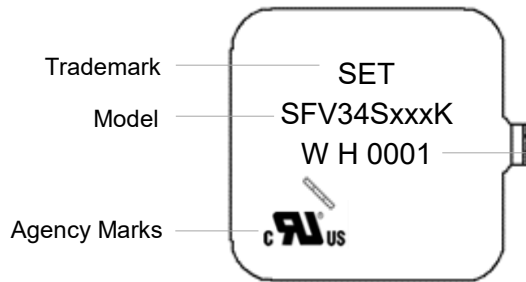
Features

- High surge tolerance
- High energy quantity
- Customized dimensions are available
- RoHS & REACH Compliant

Applications

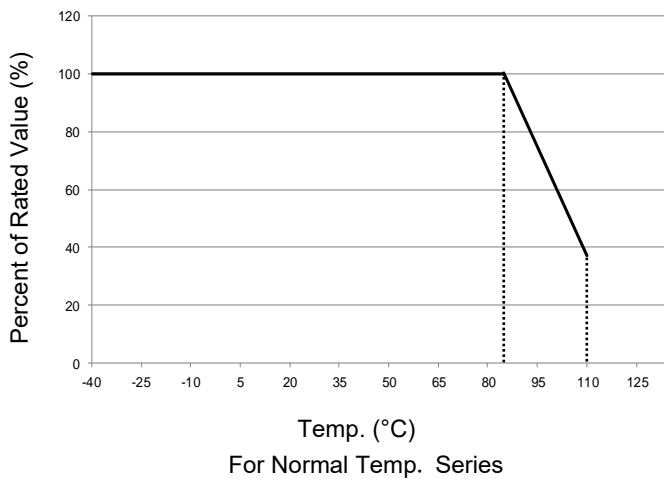
- Power Supplies
- Home Electrical Appliances
- Industrial Devices
- Surge Protectors
- Telecom Devices

Marking



Internal code	
Year Code	2000—A 2022—W
Surge Level	H: High Energy Type
Serial No.	(E.G.: 0001)

Temp. Derating Curve



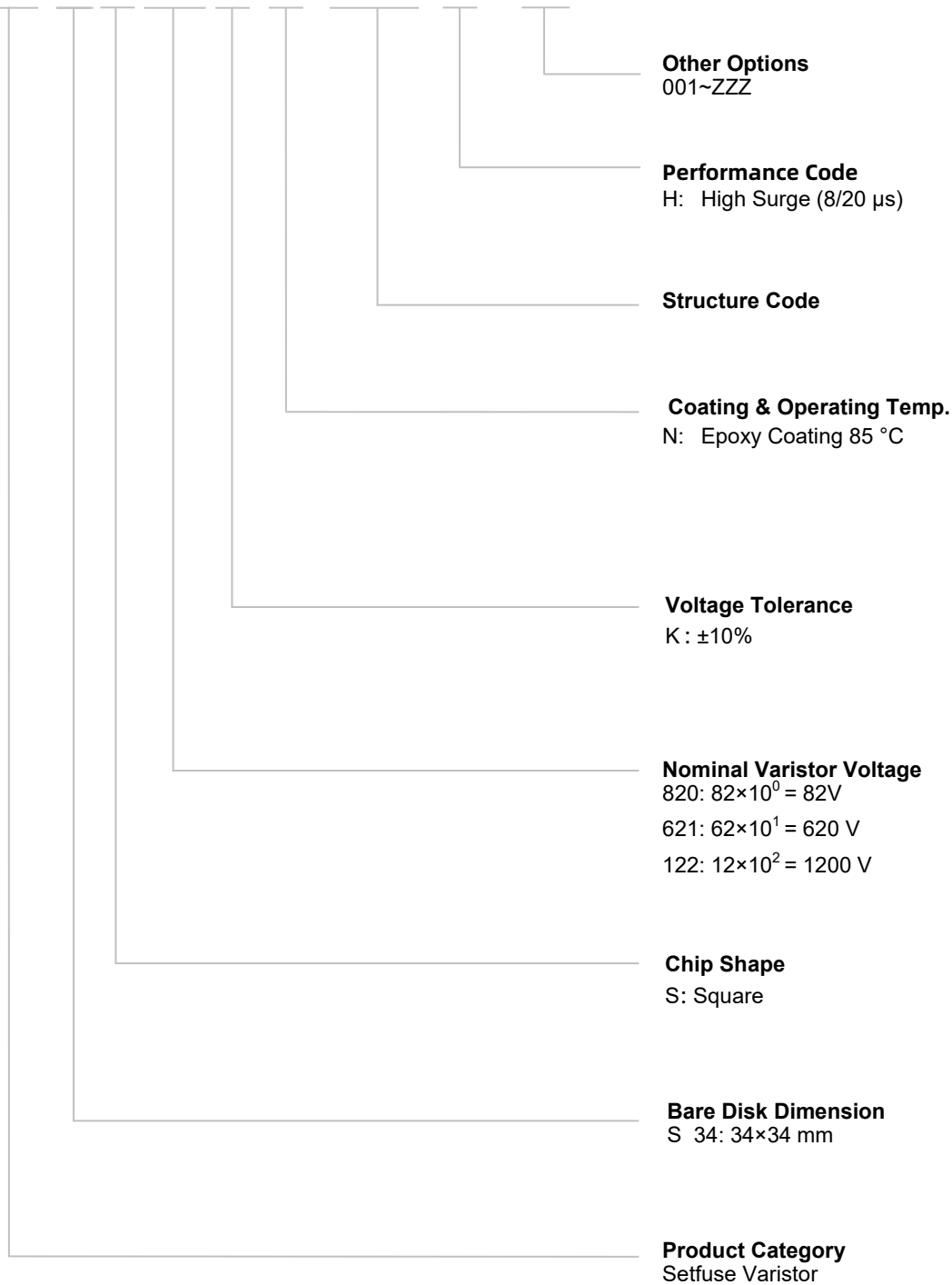
Note: When ambient temp. exceeds 85 °C, the peak surge current and energy rating should be reduced as shown in left curve.

General Technical Data

Item	Value	Unit
Operating Temperature	-40 ~ +85	°C
Storage Temperature	-40 to +125	°C
Voltage Proof	≥2500	V _{ac}
Insulation Resistance	≥100	MΩ

Part Numbering System

SFV 34 S 621 K N xxxxx H - 001



MOV

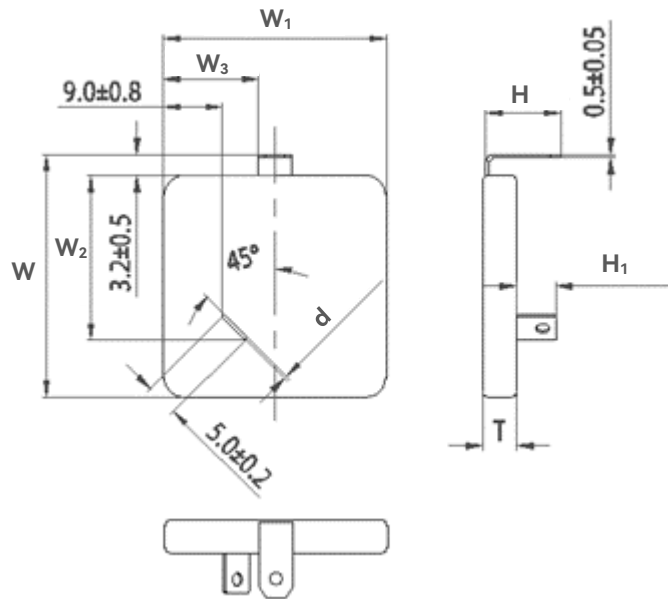
MOV

*For More Details Refer To Packaging Information.

Glossary

Item	Description
V_N	Nominal Varistor Voltage Voltage, at specified D.C. current used as a reference point in the component characteristics.
I_L	Leakage Current Measuring at 75% of varistor voltage.
UCT	Upper Category Temp. Max. ambient temp. for which a varistor has been designed to operate continuously.
LCT	Lower Category Temp. Minimum ambient temp. at which a varistor has been designed to operate continuously.
Max. Peak Current	Max. Peak Current Max. current per pulse, which may be passed by a varistor at an ambient temp. of 25 °C, for a given number of pulses.
V_C	Clamping Voltage Peak voltage developed across the varistor terminations under standard atmospheric conditions, when passing an 8/20 μs class current pulse.
Voltage Proof	Voltage Proof Max. peak voltage, which may be applied under continuous operating conditions between the varistor terminations and any conducting mounting surface (Applicable only to insulated varistors).
C_V	Capacitance Capacitance across the MOV measured at a specified frequency and voltage.
V_{ac}	Max. Continuous a.c. Voltage Max. a.c. r.m.s. voltage of a substantially sinusoidal waveform (less than 5% total harmonic distortion) which can be applied to the component under continuous operating conditions at 25 °C.
V_{dc}	Max. Continuous d.c. Voltage Max. d.c. voltage (with less than 5% ripple) which can be applied to the component under continuous operating conditions at an ambient temp. of 25 °C.

Dimensions (mm)







Model	W	W ₁	W ₂	W ₃	H	H ₁	T	d
SFV34S241K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	4.3	0.5±0.05
SFV34S271K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	4.5	0.5±0.05
SFV34S301K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	4.7	0.5±0.05
SFV34S331K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	4.9	0.5±0.05
SFV34S361K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	5.0	0.5±0.05
SFV34S391K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	5.1	0.5±0.05
SFV34S431K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	5.2	0.5±0.05
SFV34S471K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	5.4	0.5±0.05
SFV34S511K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	5.6	0.5±0.05
SFV34S561K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	5.8	0.5±0.05
SFV34S621K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	6.1	0.5±0.05
SFV34S681K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	6.5	0.5±0.05
SFV34S751K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	6.8	0.5±0.05
SFV34S821K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	7.2	0.5±0.05
SFV34S911K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	7.6	0.5±0.05
SFV34S102K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	8.0	0.5±0.05
SFV34S112K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	8.5	0.5±0.05
SFV34S122K	37.2±1.0	34.0±1.0	25.2±0.5	14.5±0.5	11.5±0.5	6.0±0.5	9.0	0.5±0.05

Note:

The above data is for reference only.

Specification

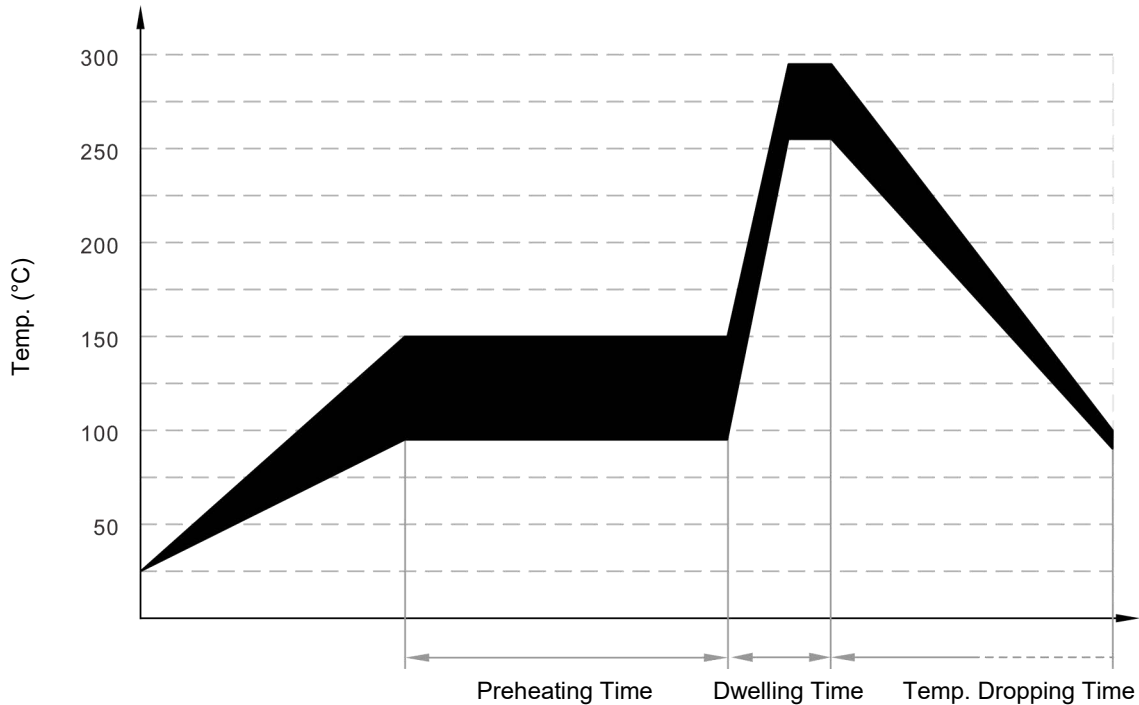
Model	Max. Continuous Operating Voltage		Varistor Voltage @1 mA DC		Clamping Voltage (Max.)		Max. Discharge Current (8/20 μs)		Max. Energy (10/1000 μs)	Typical Capacitance (For reference only) @1 kHz	Agency Approvals			
	VAC	VDC	Min.	Max.	V _C	I _P	I _n	I _{max}	(J)	(pF)				
	(V)	(V)	(V)	(V)	(V)	(A)	(kA)	(kA)			UL	cUL	TUV	CQC
SFV34S241K	150	200	216	264	395	300	20	50	480	5650	●	●	○	○
SFV34S271K	175	225	243	297	455	300	20	50	540	5100	●	●	○	○
SFV34S301K	190	250	270	330	500	300	20	50	600	4510	●	●	○	○
SFV34S331K	210	275	297	363	550	300	20	50	656	4150	●	●	○	○
SFV34S361K	230	300	324	396	595	300	20	50	745	3750	●	●	○	○
SFV34S391K	250	320	351	429	650	300	20	50	830	3500	●	●	○	○
SFV34S431K	275	350	387	473	710	300	20	50	920	2950	●	●	○	○
SFV34S471K	300	385	423	517	775	300	20	50	1000	2880	●	●	○	○
SFV34S511K	320	415	459	561	845	300	20	50	1060	2650	●	●	○	○
SFV34S561K	350	460	504	616	925	300	20	50	1150	2450	●	●	○	○
SFV34S621K	385	505	558	682	1025	300	20	50	1250	2200	●	●	○	○
SFV34S681K	420	560	612	748	1120	300	20	50	1250	2000	●	●	○	○
SFV34S751K	460	615	675	825	1240	300	20	50	1280	1820	●	●	○	○
SFV34S821K	510	670	738	902	1355	300	20	50	1300	1800	●	●	○	○
SFV34S911K	550	745	819	1001	1500	300	20	50	1475	1500	●	●	○	○
SFV34S102K	625	825	900	1100	1650	300	20	50	1550	1350	●	●	○	○
SFV34S112K	680	895	990	1210	1815	300	20	50	1750	1230	●	●	○	○
SFV34S122K	750	1000	1080	1320	1980	300	20	50	2000	1135	●	●	○	○

Note: ● Approved ○ Unauthorized

Soldering Parameters

Wave Soldering Parameters

The wave soldering parameters are for reference only. When MOV is for practice use, some related validation is recommended.



Wave Soldering Curve

Item	Temp. (°C)	Time (s)
Preheating	90 to 150	<150
Dwelling	255 to 290	3 to 10

Recommended Hand-Soldering Parameters

Item	Condition
Temp. of Solder Head	350 °C (max.)
Soldering Time	4 seconds (max.)

Packaging Information

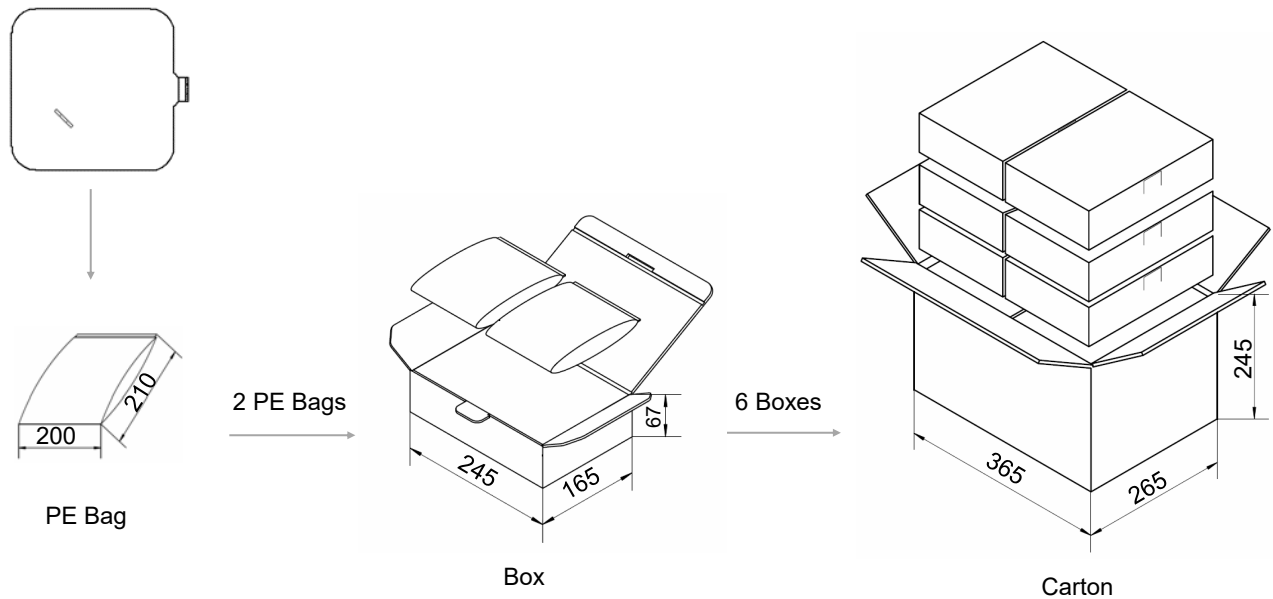
- Bulk Packaging (Code: BUL)
- Bulk Packaging Quantity & Weight.

Series	Nominal Varistor Voltage	PE Bag	Box	Carton	G. W / Carton (365 × 265 × 245)
	(V)	(PCS)	(PCS)	(PCS)	(kg)±10%
34S	241 ~ 301	40	80	480	9 ~ 10
	331 ~ 821	30	60	360	7 ~ 14
	911 ~ 122	20	40	240	10 ~ 13

Note:

Other lead length packaging information, please contact SETsafe | SETfuse.

All Dimensions in mm





ATTENTION

Usage

1. Varistor must operated in the specified ambient temp.
2. Do not clean the varistor with strong polar solvent such as ketone, esters, benzene and halogenated hydrocarbon.
3. Please do not apply severe vibration, shock or pressure to MOV.
4. Please fix lead wires when bending or cutting. The distance between the bending point and the sealing of MOV shall be greater than 2 mm.

Replacement

If varistor is visually damaged, please replace it.

Storage

1. Storage Temp. Range: (-40 to +125) °C
2. Relative Humidity : ≤75% RH
3. Altitude: <2000 m
4. Do not store the MOV at the high temp., high humidity or corrosive gas environment, to avoid influencing the solder-ability of the lead wires, the product shall be used up within 1 year after receiving the goods.

Environmental Conditions

1. Varistor should neither be exposed to the open air, nor direct sunshine.
2. Varistor should avoid rain, water vapor or other condition of high temp. and high humidity.
3. Varistor should avoid sand dust, salt spray, or other harmful gases.

Max. Typical Capacitance of Varistor

The typical capacitance of varistor is listed in the specifications. Designers may refer to it when designing MOV in high frequency circuit.

Installation

Mechanical Stress

Do not knock MOV when installing, to avoid mechanical damage.