



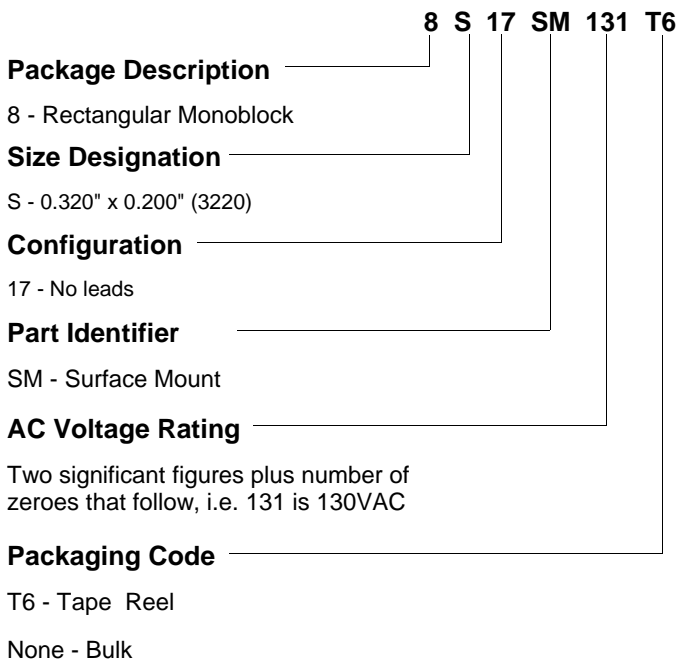
MAIDA STYLE NUMBER 8S17SM251T6

MAIDA ITEM NUMBER 01-0290

The SMV Series, designed for surface mount applications, are small varistors manufactured in a leadless monoblock form. The SMV Series varistors have significantly lower profiles than our radial-leaded devices, thus reducing PC board design requirements. They are available with maximum continuous operating voltages (MCOV) ranging from 10VAC to 300VAC.

SMV Series are typically packaged in Tape and Reel packaging. To order in an alternate packaging scheme, please see the order code below or contact us.

The Maida Style Number is the typical means to identify our components when ordered. The style number identifies several parameters that are important for the characteristics of the device. An alternative ordering method, if known, is by our Item Number. The following example is the standard part numbering system when ordering our SMV Series components by the Maida Style Number:



Electrical Specifications

Continuous AC Voltage	250 VAC
Continuous DC Voltage	330 VDC
Maximum DC Leakage	200 uA
Low Varistor Voltage Limit	354 VDC
High Varistor Voltage Limit	429 VDC
Nominal Varistor Voltage	390 VDC
Current for Varistor Voltage	1 mA
Maximum Clamp Voltage	650 V
Maximum Clamp Voltage Test Current	10 A
Peak Current Rating (1 Pulse)	500 A
Peak Current Rating (2 Pulse)	350 A
Energy Rating (8X20us)	21 J
Typical Capacitance	90 pF
Impulse Response Time	< 50 ns
Current/Energy Derating Above 85°C	-2.5 %/°C

Special Notes:

Safety Agency Recognitions

UL 1449 File Number	E321173
- Tested to Type:	5-0.05kA
C-UL File Number	
VDE File Number	
CSA File Number	
SEV File Number	

MAIDA DEVELOPMENT COMPANY

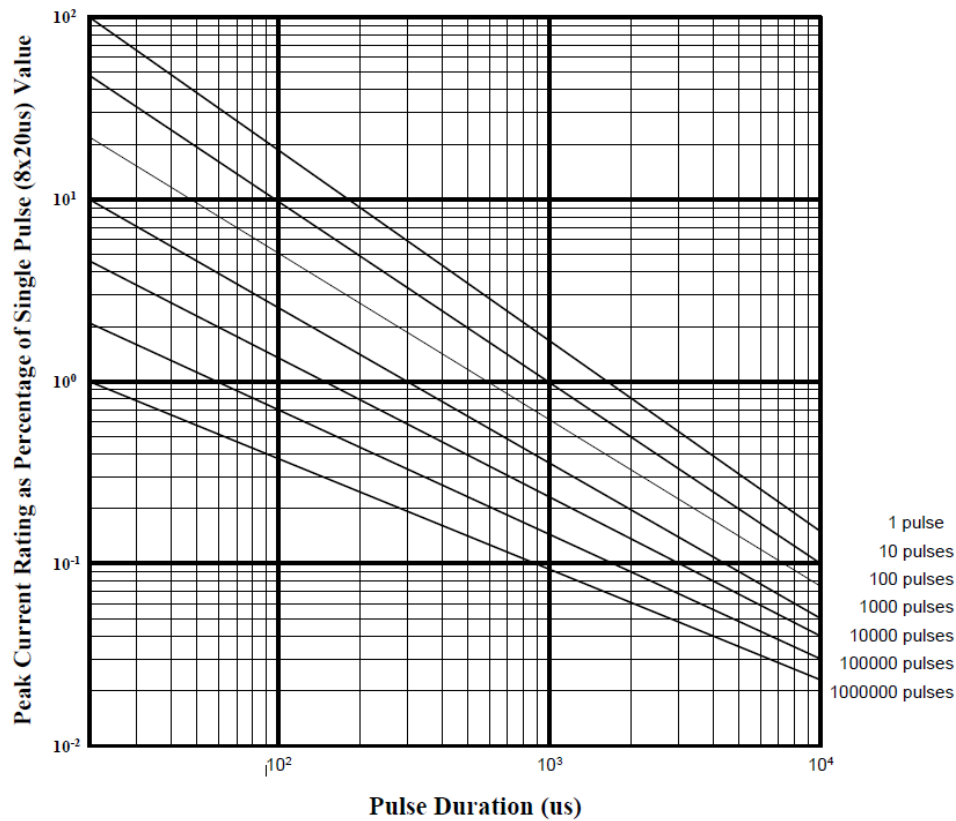
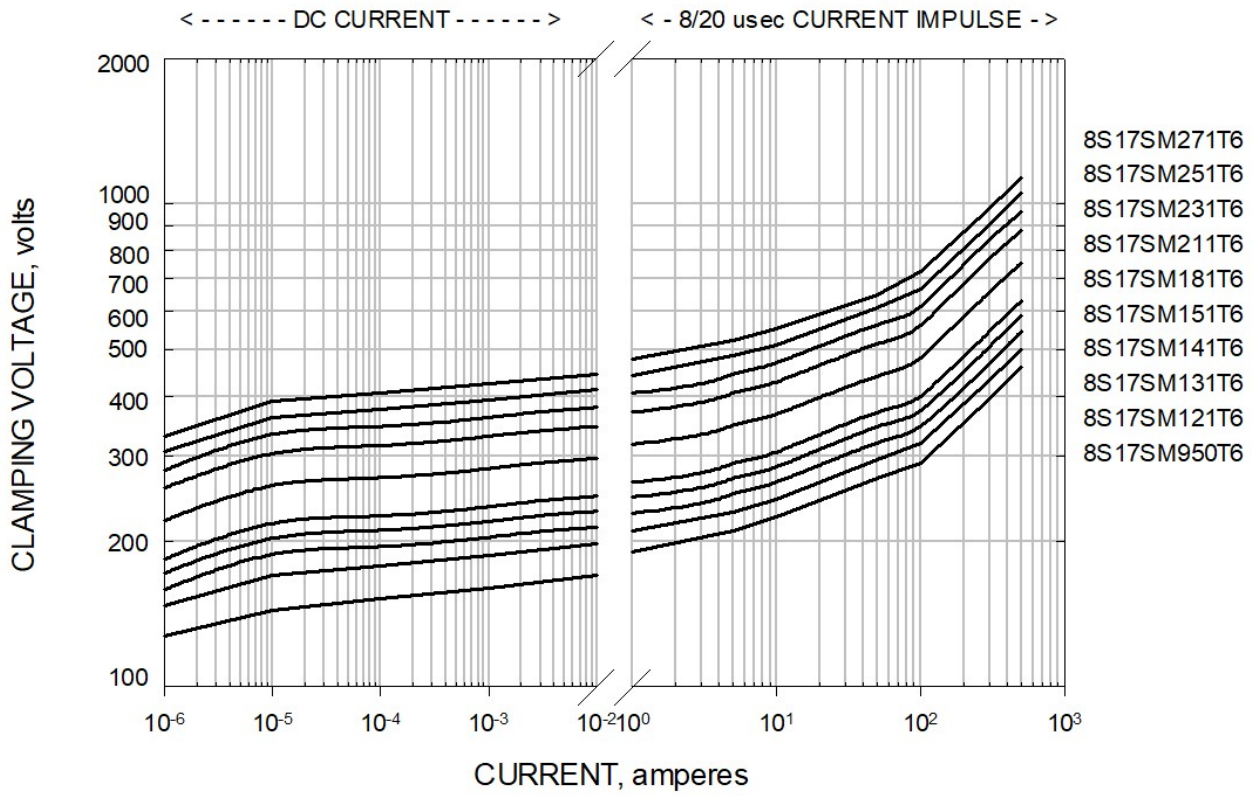
P.O. Box 3529

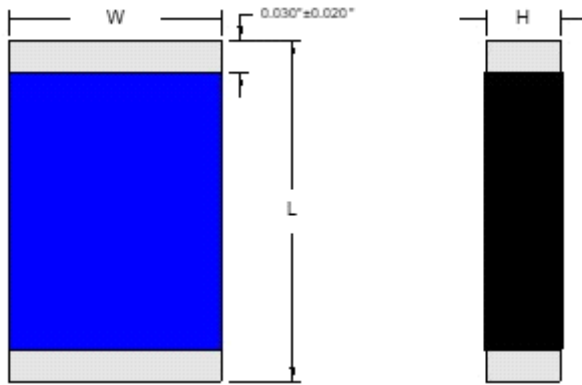
Hampton, Virginia 23663

Ph: (757) 723-0785 Fax (757) 722-1194

www.maida.com

Characteristic Graphs

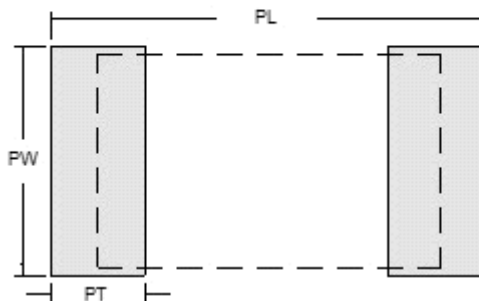




Physical Specifications

Length (L)	0.320 in.
Length Tolerance	0.012 in.
Width (W)	0.200 in.
Width Tolerance	0.012 in.
H Maximum (H)	0.064 in.
Termination Spacing	0.030 in.
Termination Tolerance	0.020 in.
Pad Length (PL)	0.402 in.
Pad Width (PW)	0.216 in.
Pad Thickness (PT)	0.087 in.

Recommended Land Pad Layout



* Contact Maida for a more detailed configuration drawing.

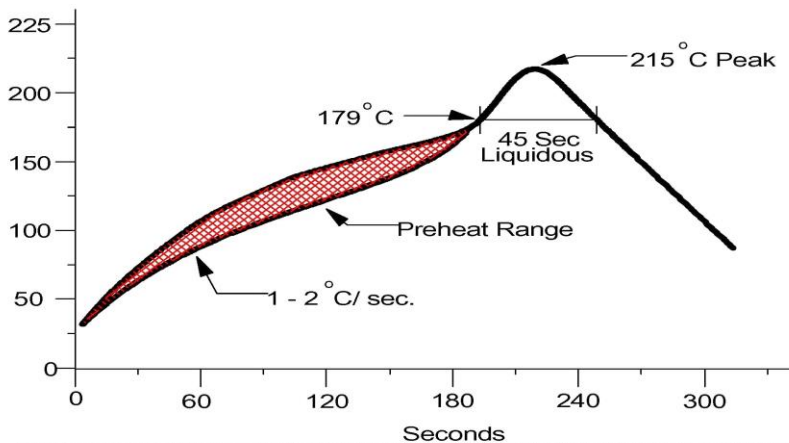
Thermal Specifications

Minimum Operating Temperature	-40 °C
Maximum Operating Temperature	85 °C
Varistor Voltage Temperature Coeff	-0.05 %/°C
Minimum Storage Temperature	-50 °C
Maximum Storage Temperature	125 °C

Environmental Compliances



Recommended Soldering Profile



NOTE: This soldering profile is used by the Maida Development Company to verify solderability of its SMV devices. Due to processing variations (such as solder type, flux type, temperature, reflow duration) by end users, Maida highly recommends that the SMV devices are tested by the end user to verify electrical, and physical/mechanical characteristics have been unchanged due to the processing. Proper solderability should be verified as well.

MOV Terminology

TECHNICAL TERM	DESCRIPTION
Operating Temperature	Operating Temperature Range without Derating.
Storage Temperature	Storage Temperature Range without Voltage Applied.
Curent / Energy Derating	Derating of maximum Values when Operated above +85°C
Varistor Voltage Temperature Coefficient	$\frac{V_v \text{ at } 85^\circ\text{C} - V_v \text{ at } 25^\circ\text{C}}{V_v \text{ at } 25^\circ\text{C}} \times \frac{1}{60} \times 100$ <p>Where Vv is varistor voltage at 1mADC</p>
Insulation Resistance	Minimum resistance between shorted terminals and varistor surface.
HiPot Encapsulation	Minimum voltage applied for one minute between shorted terminals and varistor surface.
Impulse Response Time	Time lag between application of surge and varistor's "turn-on" conduction state.
DC Leakage Current	Maximum current with specified DC voltage applied.
Applied Voltage - AC	Maximum continuous sinusoidal RMS voltage which may be applied (MCOV).
Applied Voltage - DC	Maximum continuous DC voltage which may be applied.
Transient Energy (Joules)	The maximum energy absorbed with a varistor voltage change of less than $\pm 10\%$ when one impulse of an 8x20us current waveform is applied.
Transient Peak Current	The maximum current with a varistor voltage change of less than $\pm 10\%$ when one impulse of an 8x20us current waveform is applied.
Varistor Voltage	Voltage across the varistor measured at 1mADC
Maximum Clamping Voltage	Peak voltage across the varistor with a specific peak impulse current applied (8x20us).
Capacitance	Typical value measured at 1Vrms and a test frequency of 1KHz.