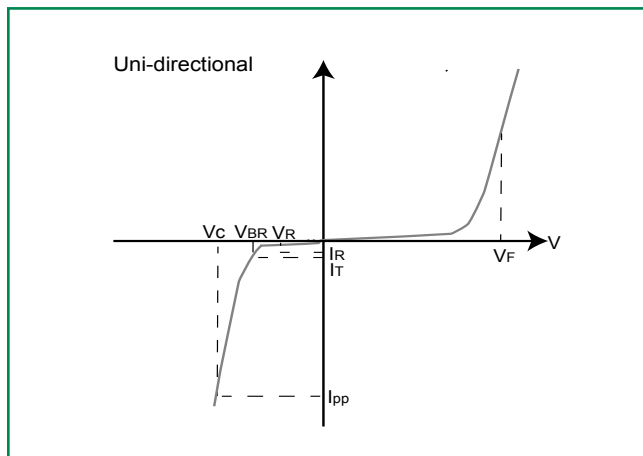


I-V Curve Characteristics



P_{PPM} Peak Pulse Power Dissipation – Max power dissipation

V_R Stand-off Voltage – Maximum voltage that can be applied to the TVS without operation

V_{BR} Breakdown Voltage – Maximum voltage that flows through the TVS at a specified test current (I_T)

V_C Clamping Voltage – Peak voltage measured across the TVS at a specified I_{PPM} (peak impulse current)

I_R Reverse Leakage Current – Current measured at V_R

V_F Forward Voltage Drop for Uni-directional

note: V_F distribution range from 10V to 15V

Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Figure 1 - TVS Transients Clamping Waveform

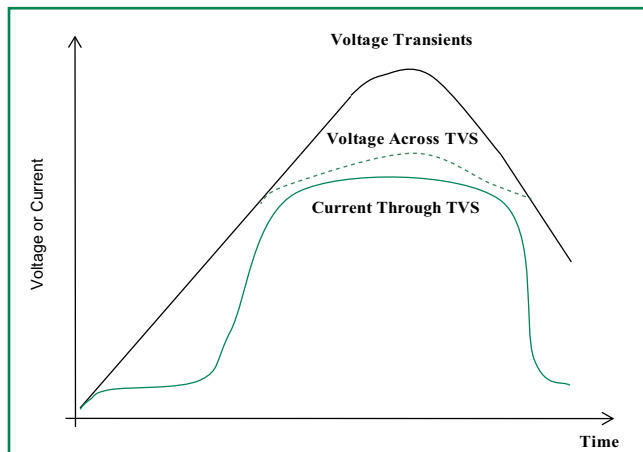


Figure 2 - Peak Pulse Power Rating Curve

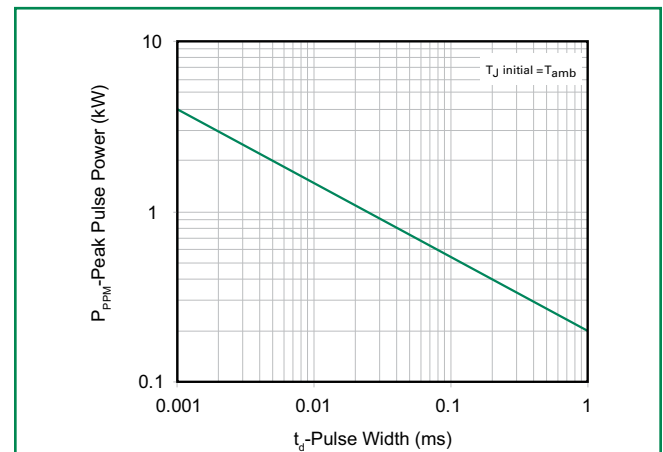


Figure 3 - Peak Pulse Power Derating Curve

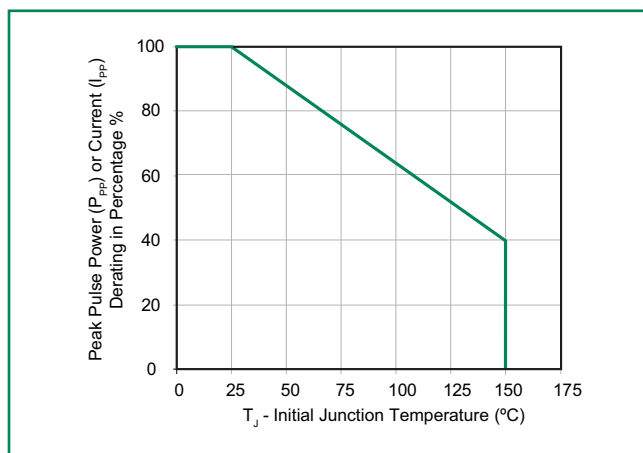


Figure 4 - 10/1000 μS Pulse Waveform

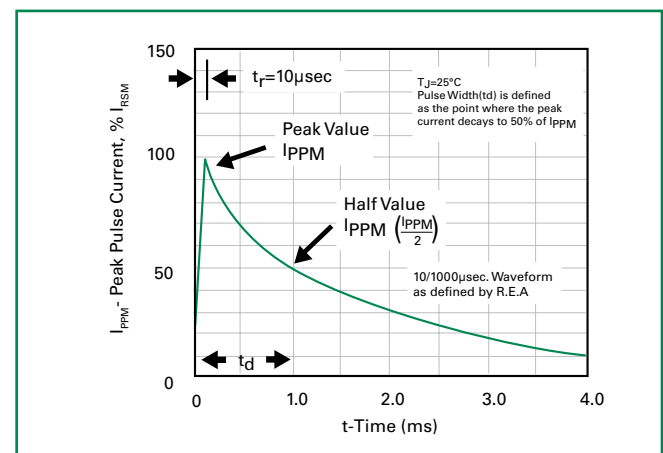


Figure 5 - Capacitance vs. Reverse Bias

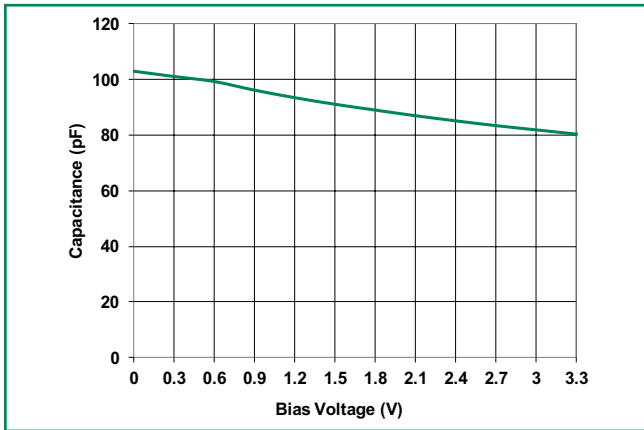
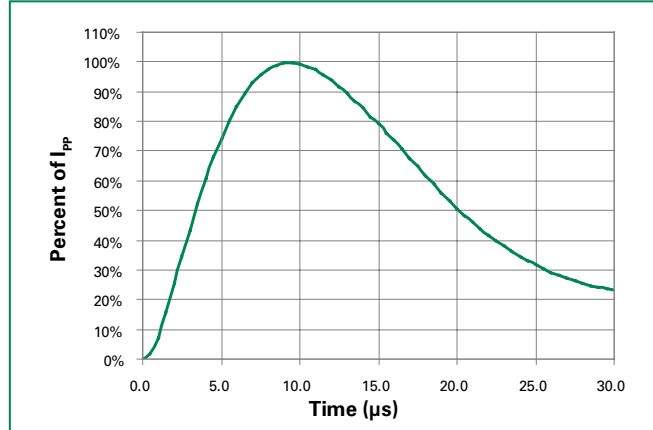
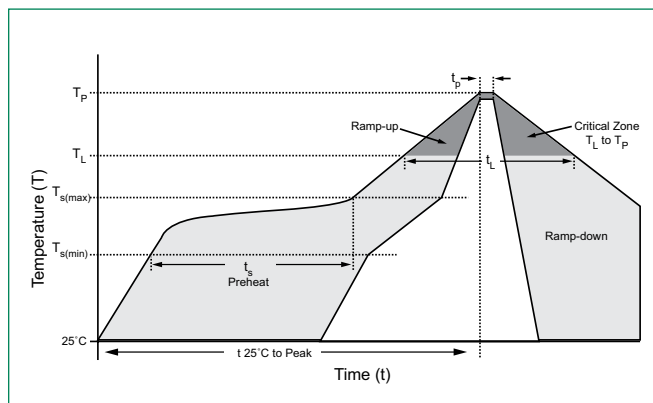


Figure 6 - 8/20μS Pulse Waveform



Soldering Parameters

Reflow Condition		Lead-free assembly
Pre Heat	- Temperature Min ($T_{s(min)}$)	150°C
	- Temperature Max ($T_{s(max)}$)	200°C
	- Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_A) to peak)		3°C/second max
$T_{s(max)}$ to T_A - Ramp-up Rate		3°C/second max
Reflow	- Temperature (T_A) (Liquidus)	217°C
	- Time (min to max) (t_s)	60 – 150 seconds
Peak Temperature (T_p)		260 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		260°C



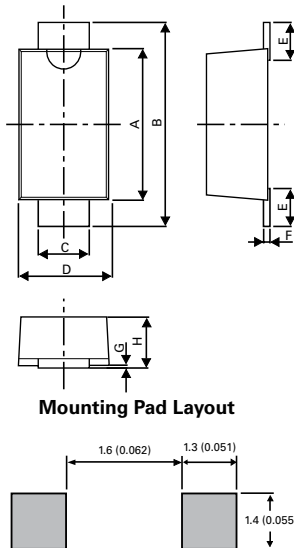
Physical Specifications

Case	SOD-123FL plastic over passivated junction
Polarity	Color band denotes cathode except bipolar
Terminal	Matte tin-plated leads, solderable per JESD22-B102

High Reliability Test Specification

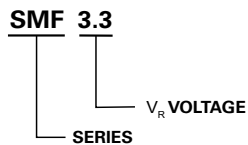
Pre-condition (HTRB/ TC/ PCT/ H3TRB)	(1) Bake 24hrs @150°C (2) 168hrs @85% RH and 85°C (3) I_R reflow, 3 reflows, peak temperature of 260°C
HTRB	JESD 22-108C V_{CC} bias = 80% V_{DRM} & $T_A = 150^\circ\text{C}$, 1008hrs
Temperature Cycling	MIL-STD-883F, Method 1010.8 Condition C -65°C to 150°C, 1000 cycles
Pressure Cooker	JEDEC 22-A102C 100%RH @121°C @15psi, 96hrs
Bias Humidity (H3TRB)	JESD 22-A101B V_{CC} bias (pin1 to pin3) = V_{DRM} , 85%RH, 85°C, 1008 hours
RSH	JESD 22-A111 260°C, 10 secs.

Dimensions - SOD-123FL Package

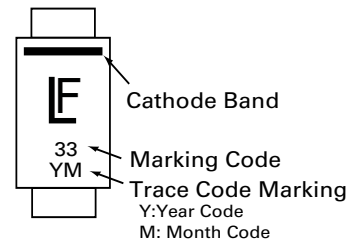


Dimensions	Millimeters		Inches	
	Min	Max	Min	Max
A	2.90	3.10	0.114	0.122
B	3.50	3.90	0.138	0.154
C	0.85	1.05	0.033	0.041
D	1.70	2.00	0.067	0.079
E	0.43	0.83	0.017	0.033
F	0.10	0.25	0.004	0.010
G	0.00	0.10	0.000	0.004
H	0.90	1.08	0.035	0.043

Part Numbering System



Part Marking System



Packaging Options

Part number	Component Package	Quantity	Packaging Option	Packaging Specification
SMF3.3	SOD-123FL	3000	Tape & Reel – 8mm tape/7" reel	EIA RS-481

Tape and Reel Specification

