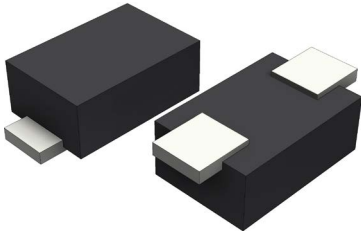


**RoHS
Compliant**



Description

The SMF series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

Features

- For surface mounted applications
- Low profile space
- 200W Peak pulse power capability at 10/1000 μ s waveform
- Excellent clamping capability
- Fast response time: typically less than 1.0ps from 0 Volts to VBR min
- High temperature soldering: 260°C/10s

Mechanical Data

- Case: SOD-123FL package
- Case material: "green" molding compound
- UL flammability classification rating 94V-0
- Polarity : by cathode band denotes uni-directional device, none cathode band denotes bi-directional device
- Weight: 0.017grams

Applications

- TVS devices are ideal for the protection of I/O interfaces, Vcc bus and other vulnerable circuits used in cellular phones, portable devices, business machines, power supplies and other consumer applications.

Maximum Ratings (@TA = +25°C, unless otherwise specified.)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at TA=25°C by 10/1000us Waveform (Note 1)	P _{PP}	200	W
Power Dissipation on Infinite Heat Sink at TL=50°C	P _{M(AV)}	1	
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Note 2)	I _{FSM}	20	A
Operating Temperature Range	T _j	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +150	

NOTE: 1. Non-repetitive current pulse, per Fig.4 and derated above T_j(initial) =25°C per Fig.1

2. For unidirectional units only.

Electrical Characteristics (@TA = 25°C, unless otherwise specified.)

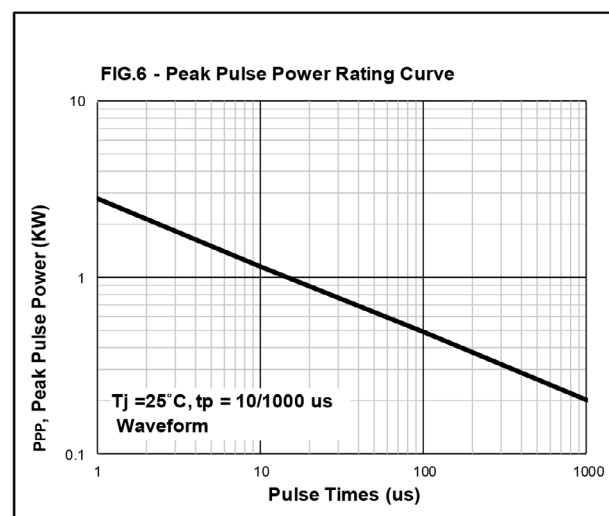
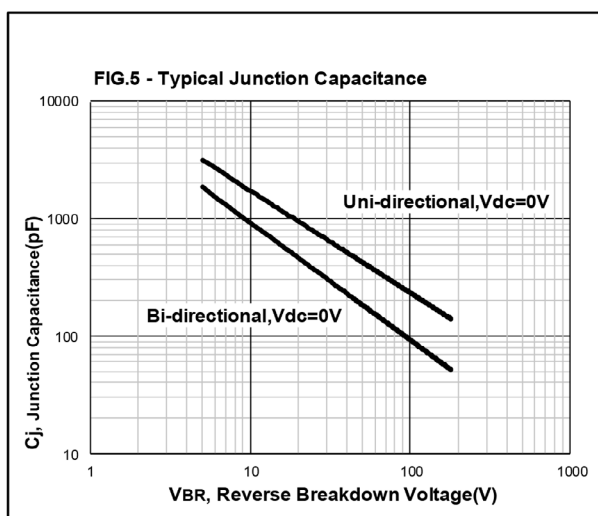
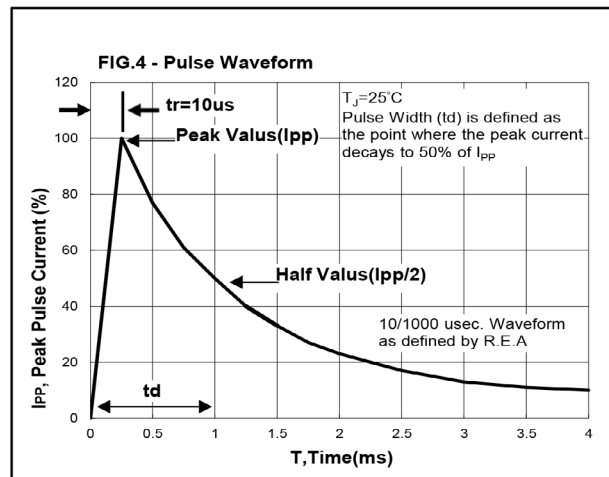
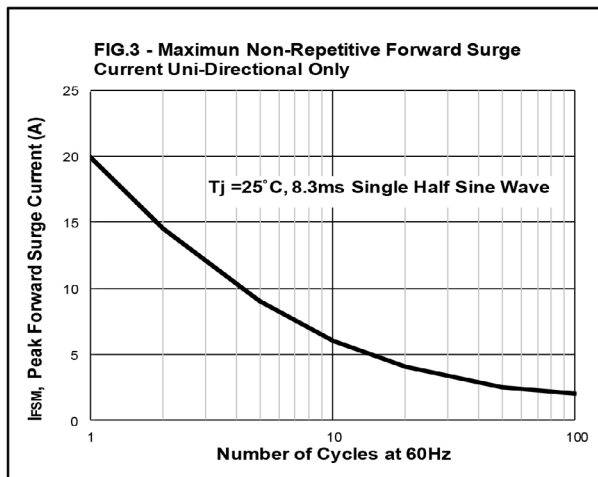
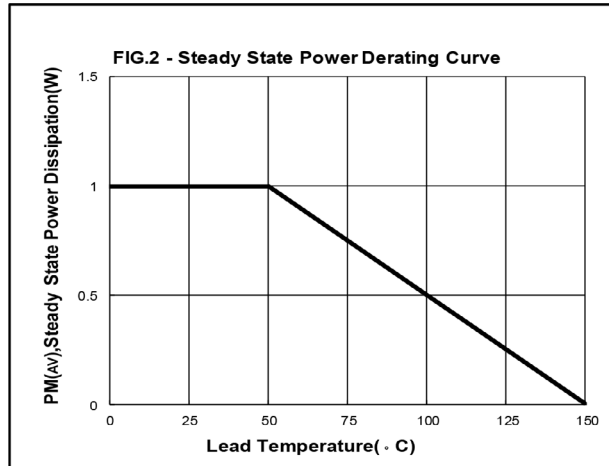
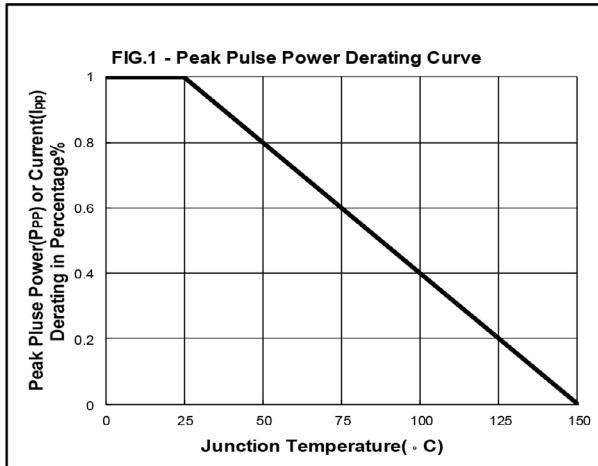
Part Number	Marking Code	Reverse Working Voltage V _{RWM} (V)	Reverse Breakdown Voltage V _B (V)			Reverse Leakage (Max) I _R (uA) @V _R	Reverse Clamping Voltage (Max) V _C (V) @I _{PP}	Peak Pulse Current (Max) I _{PP} (A)
			Min.	Max.	@I _T (mA)			
SMF12A	12A	12	13.3	14.7	1	2.5	19.9	10.1

Note: 1. Suffix "A" denotes 5% tolerance device.

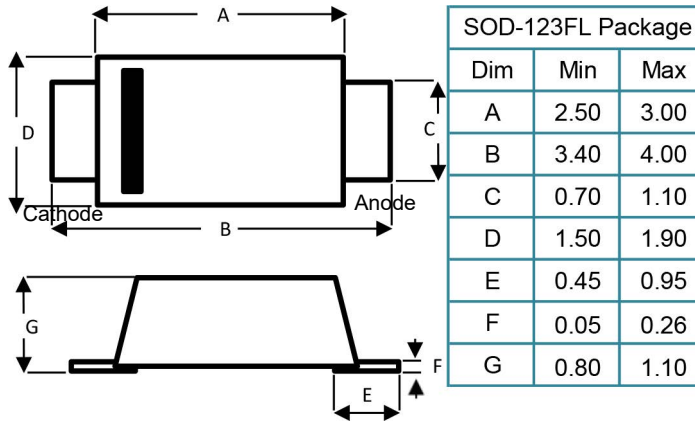
2. Add suffix "CA" after part number to specify bi-directional devices.

3. The IR limit is double for bi-directional devices.

Rating and Characteristic Curves



Packaging Dimensions



Device Schematic



Dimensions : Millimetres

Part Number Table

Description	Part Number
TVS Diode, Uni-Directional, 200W, 12V, SOD-123FL	SMF12A

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