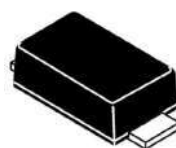


Bi-Directional High Power TVS Diode

Features

- Operating voltage: 12V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-5 (Lightning) 250A (8/20 μs)
- RoHS Compliant

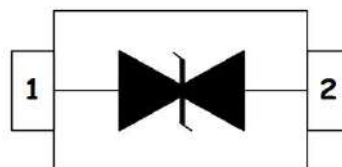
Dimensions SOD-123FL



Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Networking and Telecom
- Serial and Parallel Ports
- Peripherals

Pin Configuration



Mechanical Characteristics

- Package: SOD-123 FL
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3,000 pcs
- Reel Size: 7 inch
- Device Marking: 12CA

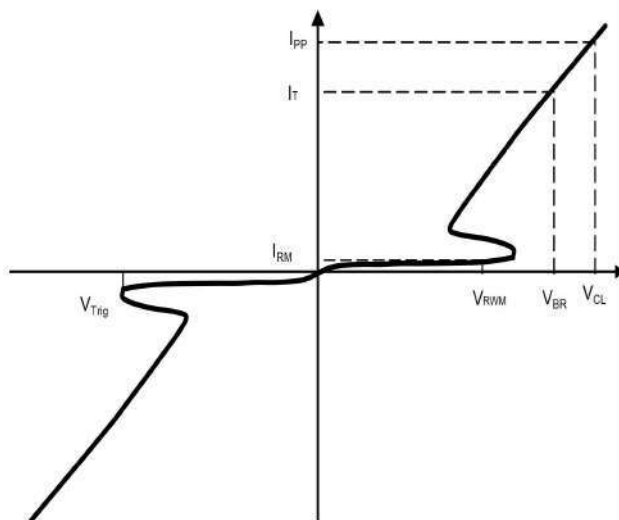
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{pk}	6000	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				12	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	12.5			V
Reverse Leakage Current	I_R	$V_{RWM} = 12\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP} = 250\text{A}$ (8 x 20 μs pulse)			24	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$		500		pF

Electrical Parameters (TA=25°C unless otherwise specified)



Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_{CL}	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_{RM}	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T
V_{Trig}	Triggering Voltage

Typical Performance Characteristics (TA=25°C unless otherwise specified)

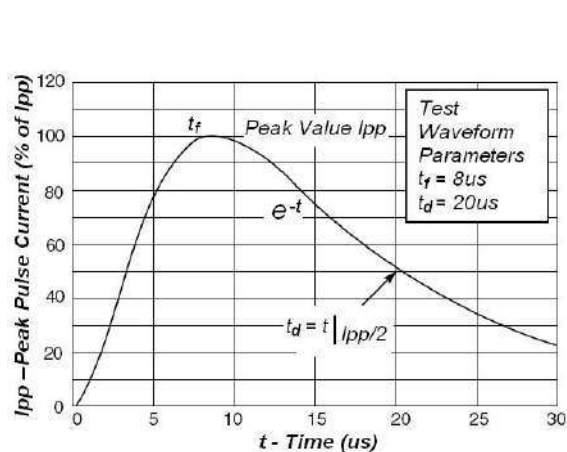


Fig.1 Pulse Waveform

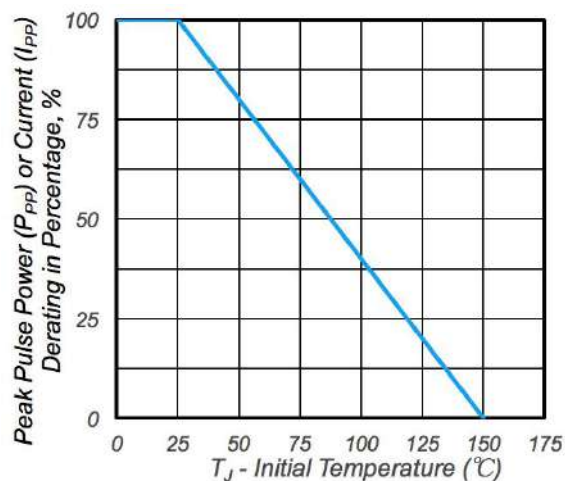
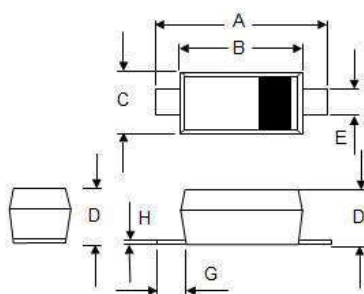


Fig.2 Pulse Derating Curve

SOD-123FL Package Outline Drawing



Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	3.40	3.95	0.142	0.155
B	2.50	2.90	0.098	0.114
C	1.40	1.95	0.055	0.077
D	0.80	0.98	0.031	0.038
E	0.50	1.10	0.020	0.043
G	0.25	-----	0.010	----
H	-----	0.20	----	0.008