

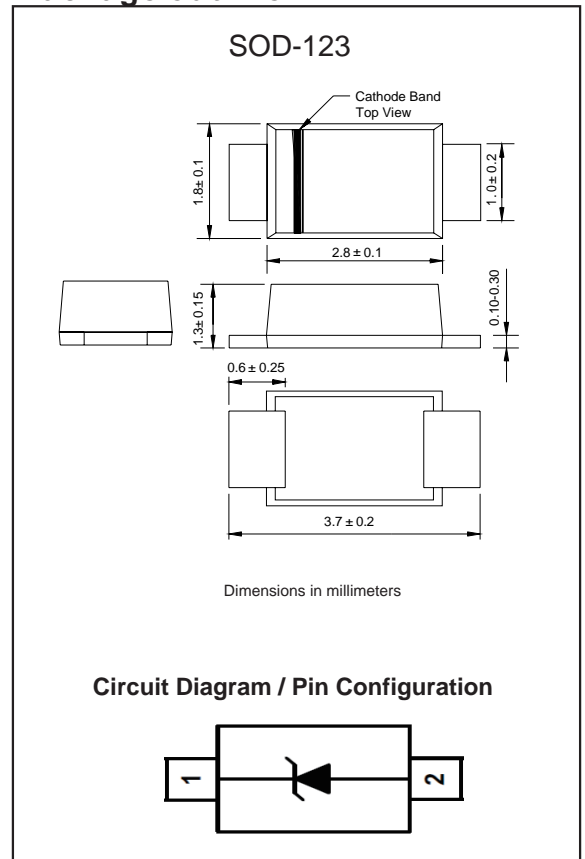
Features

- ◆ ESD/Surge Protection for 1 line with Unidirectional
- ◆ Provide ESD protection for each line to
IEC 61000-4-2(ESD)±30kV (air / contact)
IEC 61000-4-4(EFT) 80A (5 / 50ns)
IEC 61000-4-5(Lighting) 25A (8 / 20us)
- ◆ Suitable for,24V and below,operating voltage applications
- ◆ Small package saves board space
- ◆ Fast turn-on and Low clamping voltage
- ◆ Solid-state silicon-avalanche and active circuit triggering technology
- ◆ Green Product

Mechanical data

- ◆ Case: JEDEC SOD-123 molded plastic body over passivated chip
- ◆ Terminals: Plated axial leads, solderable per MIL-STD-750,Method 2026
- ◆ Polarity: Color band denotes cathode end
- ◆ Mounting Position: Any
- ◆ Weight: 0.0007 ounce, 0.02 grams

Package outline



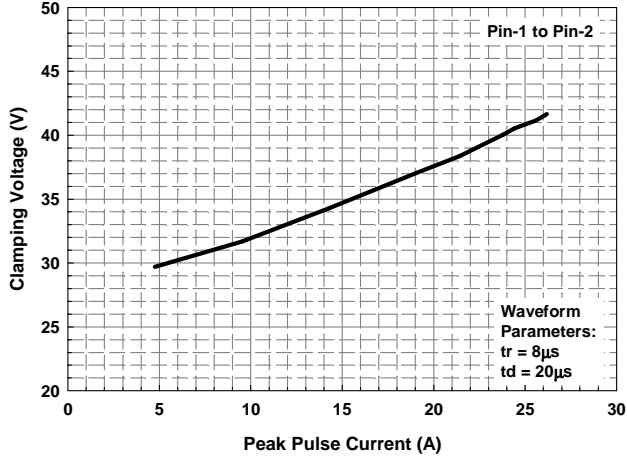
SPECIFICATIONS

ABSOLUTE MAXIMUM RATING			
PARAMETER	SYMBOL	RATING	UNITS
Peak Pulse Current (tp=8/20us)	I _{PP}	25	A
Operating Supply Voltage (pin-1 to pin-2)	V _{bc}	26.4	V
Pin-1 to pin-2 ESD per IEC61000-4-2 (Air)	V _{ESD-1}	± 30	kV
Pin-1 to pin-2 ESD per IEC61000-4-2 (Contact)	V _{ESD-2}	± 30	kV
Lead Soldering Temperature	T _{sol}	260(10 sec.)	°C
Operating Temperature	T _{OP}	-55 to +85	°C
Storage Temperature	T _{sto}	-55 to +150	°C

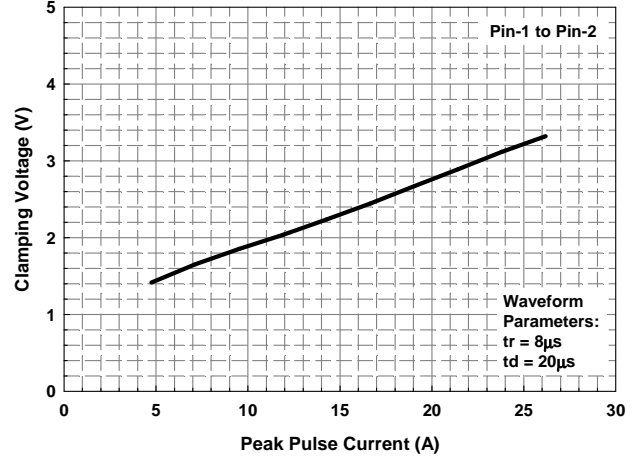
ELECTRICAL CHARACTERISTICS						
PARAMETER	SYMBOL	SYMBOL	MINI	TYP	MAX	UNITS
Reverse Stand-Off Voltage	V _{RWM}	Pin-1 to pin-2, T=25 °C .			24	V
Reverse Leakage Current	V _{Leak}	V _{RWM} =24V, T=25 °C ,pin-1 to pin-2.			1	uA
Reverse Breakdown Voltage	V _{BV}	I _{BV} =1mA, T=25 °C ,pin-1 to pin-2.	26.7		29.5	V
Forward Voltage	V _F	I _F =15mA, T=25 °C ,pin-2 to pin-1.	0.6		1.2	V
Surge Clamping Voltage	V _{CL-surge}	I _{PP} =5A, tp=8/20us, T=25 °C ,pin-1 to pin-2.		30		V
ESD Clamping Voltage	V _{clamp}	IEC61000-4-2 +6kV, T=25 °C , Contact mode,pin-1 to pin-2.		32		V
ESD Dynamic Turn-on Resistance	R _{dynamic}	IEC61000-4-2 0~+6kV, T=25 °C ,Contact mode,pin-1 to pin-2.		0.14		Ω
Channel Input Capacitance	C _{IN}	V _R =0V, f=1MHZ, T=25 °C ,pin-1 to pin-2.		450	540	pF

Rating and characteristic curves

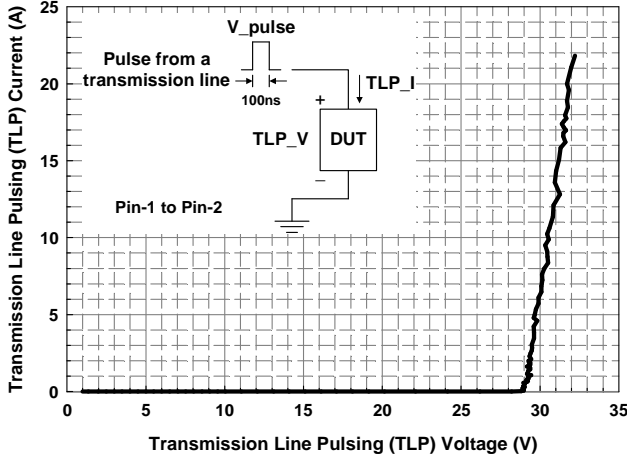
Reverse Clamping Voltage vs. Peak Pulse Current



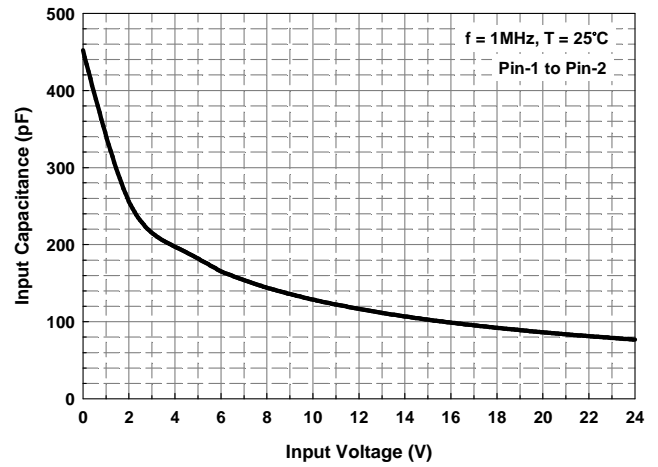
Forward Clamping Voltage vs. Peak Pulse Current



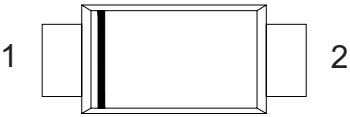

Transmission Line Pulsing (TLP) Measurement



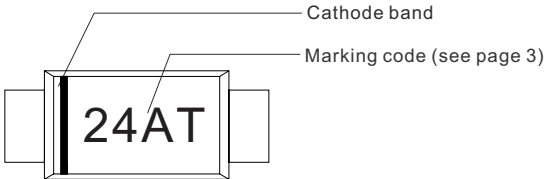
Typical Variation of C_{IN} vs. V_{IN}



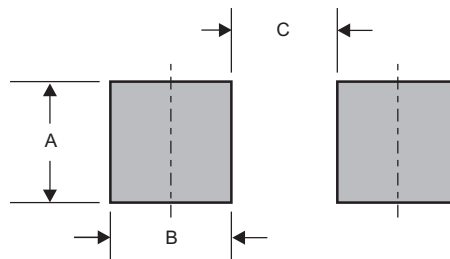
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Example
SMF24AT	

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123	0.044 (1.10)	0.040 (1.00)	0.079 (2.00)