

# SMF24AT

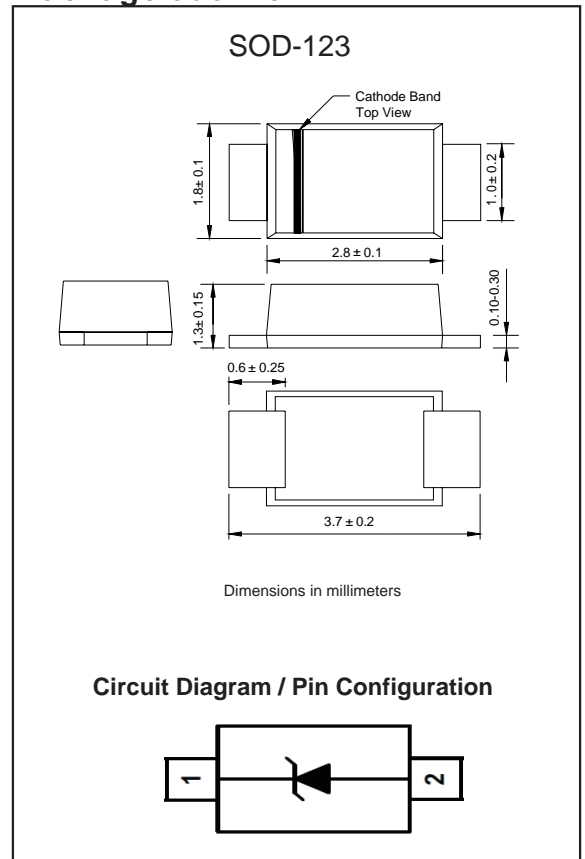
## Features

- ◆ ESD/Surge Protection for 1 line with Unidirectional
- ◆ Provide ESD protection for each line to  
**IEC 61000-4-2(ESD) $\pm$ 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



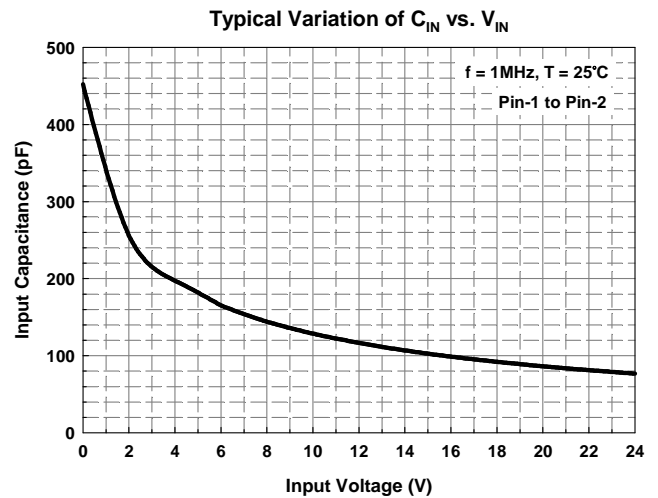
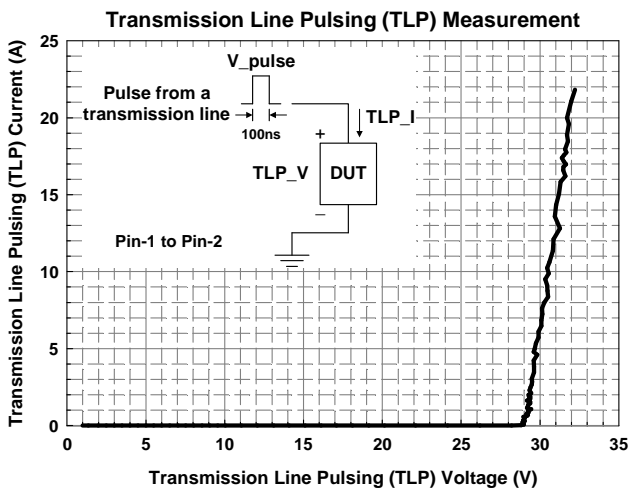
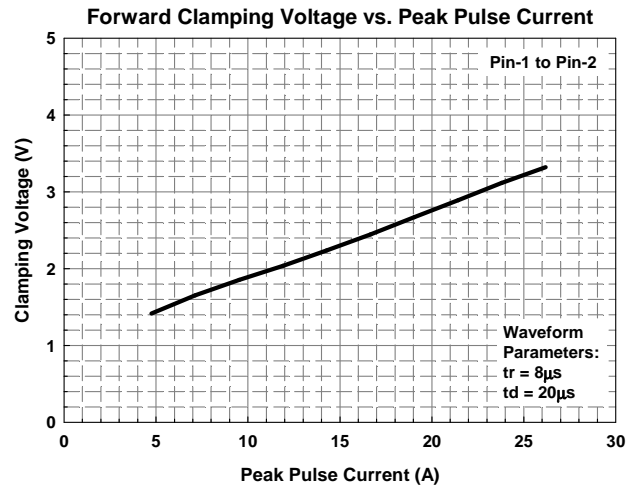
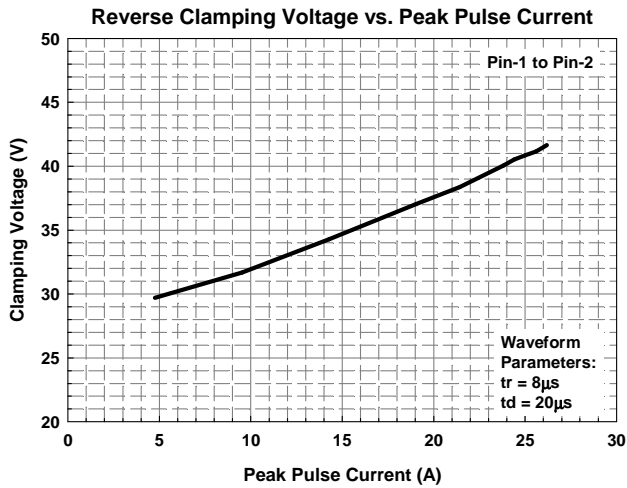
## SPECIFICATIONS

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

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



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## Rating and characteristic curves

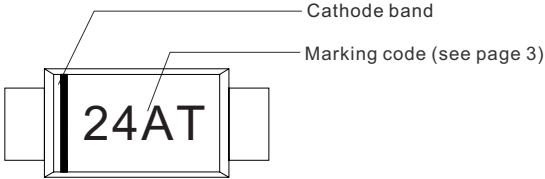


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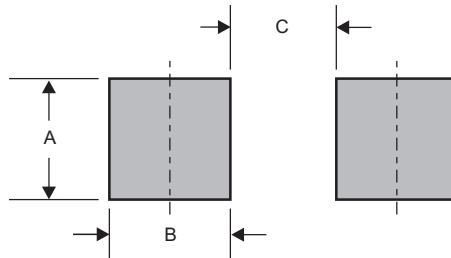
## Pinning information

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)