

SMF24AT

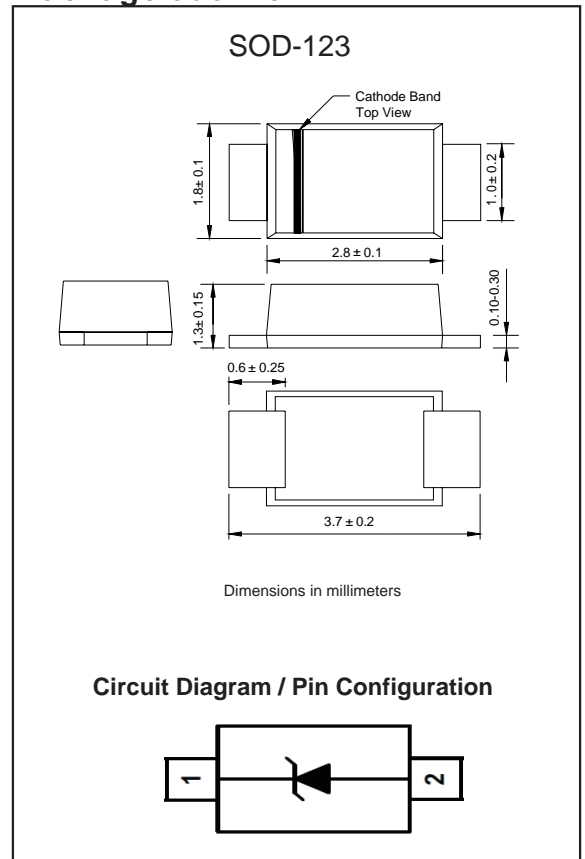
Features

- ◆ 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



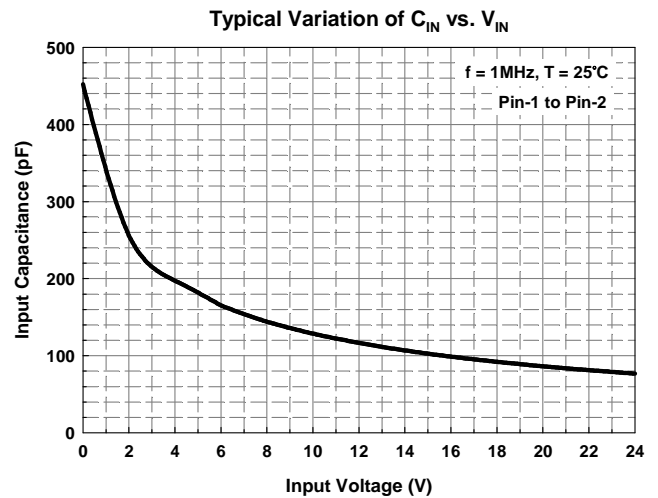
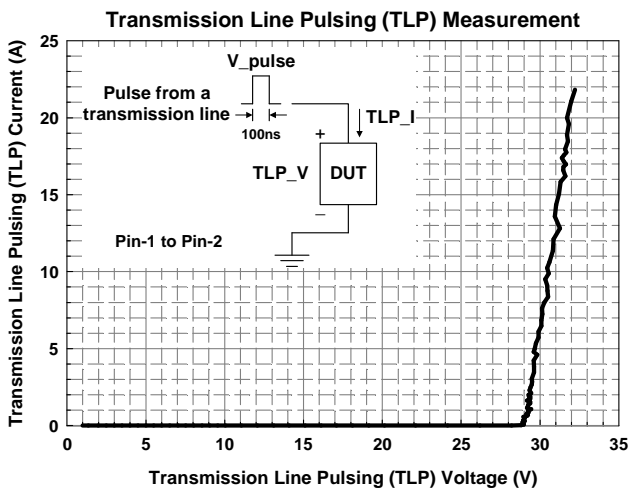
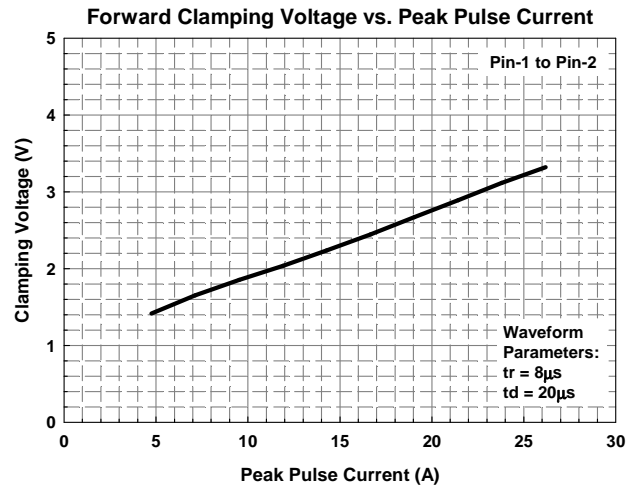
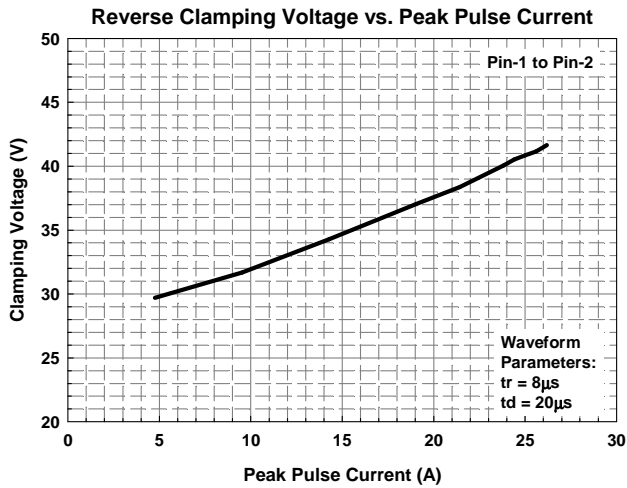
SPECIFICATIONS

ABSOLUTE MAXIMUM RATING			
PARAMETER	SYMBOL	RATING	UNITS
Peak Pulse Current ($t_p=8/20\mu s$)	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, $T=25\text{ C}$.			24	V
Reverse Leakage Current	V_{Leak}	$V_{RWM}=24V, T=25\text{ C}, \text{pin-1 to pin-2.}$			1	μA
Reverse Breakdown Voltage	V_{BV}	$I_{BV}=1mA, T=25\text{ C}, \text{pin-1 to pin-2.}$	26.7		29.5	V
Forward Voltage	V_F	$I_F=15mA, T=25\text{ C}, \text{pin-2 to pin-1.}$	0.6		1.2	V
Surge Clamping Voltage	$V_{CL-surge}$	$I_{PP}=5A, t_p=8/20\mu s, T=25\text{ C}, \text{pin-1 to pin-2.}$		30		V
ESD Clamping Voltage	V_{clamp}	IEC61000-4-2 +6kV, $T=25\text{ C}$, Contact mode, pin-1 to pin-2.		32		V
ESD Dynamic Turn-on Resistance	$R_{dynamic}$	IEC61000-4-2 0~+6kV, $T=25\text{ C}$, Contact mode, pin-1 to pin-2.		0.14		Ω
Channel Input Capacitance	C_{IN}	$V_R=0V, f=1MHz, T=25\text{ C}, \text{pin-1 to pin-2.}$		450	540	pF



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Rating and characteristic curves

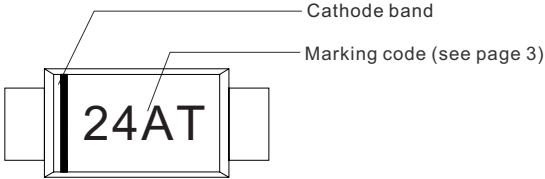


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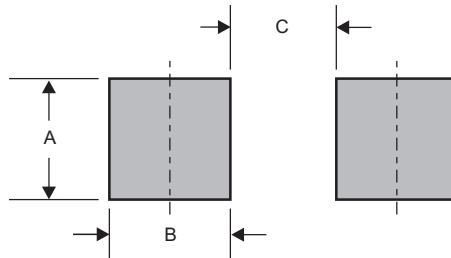
Pinning information

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)

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