

## Features

- \* 200W peak pulse power (8/20 $\mu$ s)
- \* Low operating :12V
- \* Ultra low capacitance: 1.0 pF typical
- \* Ultra low leakage: nA level
- \* Low clamping voltage
- \* Protects one power line or data line
- \* Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 20$ kV  
Contact discharge:  $\pm 15$ kV
  - IEC61000-4-4 (EFT) 40A (5/50ns)
- \* RoHS Compliant

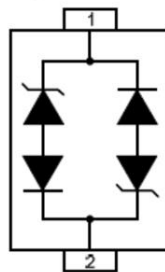
## Mechanical Characteristics

- \* Package: SOD-323
- \* Ultra low leakage: nA level
- \* Case Material: "Green" Molding Compound.
- \* UL Flammability Classification Rating 94V-0
- \* Moisture Sensitivity: Level 3 per J-STD-020
- \* Shipping Qty :3000pcs/7Inch Tape & Reel

## Applications

- \* USB 2.0 and USB 3.0 interface
- \* 10/100/1000 Ethernet
- \* Personal digital assistants (PDA)
- \* Serial ATA protection

## Dimensions and Pin Configuration



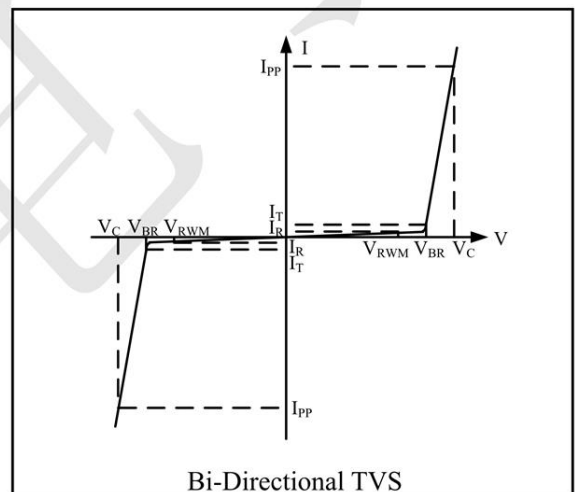
**Marking: DC Or DCL**

### Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Air)	VESD	±20	kV
ESD per IEC 61000-4-2 (Contact)		±15	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

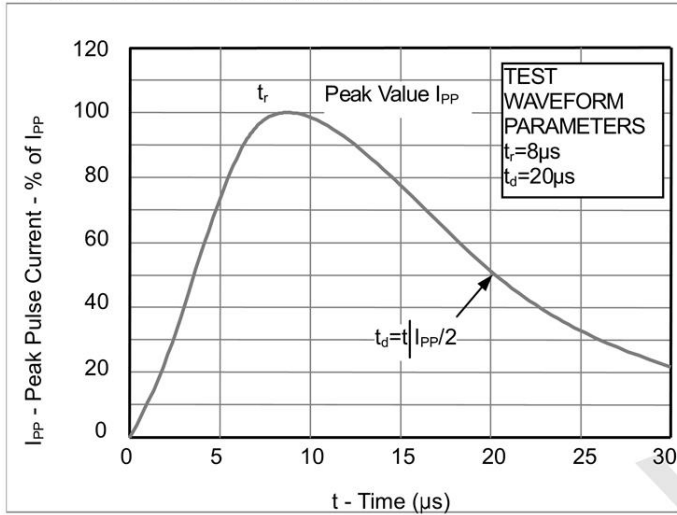
Symbol	Parameter
$V_{RWM}$	Nominal Reverse Working Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Reverse Breakdown Voltage @ $I_T$
$I_T$	Test Current for Reverse Breakdown
$V_C$	Clamping Voltage @ $I_{PP}$
$I_{PP}$	Maximum Peak Pulse Current
$C_{ESD}$	Parasitic Capacitance
$V_R$	Reverse Voltage
f	Small Signal Frequency



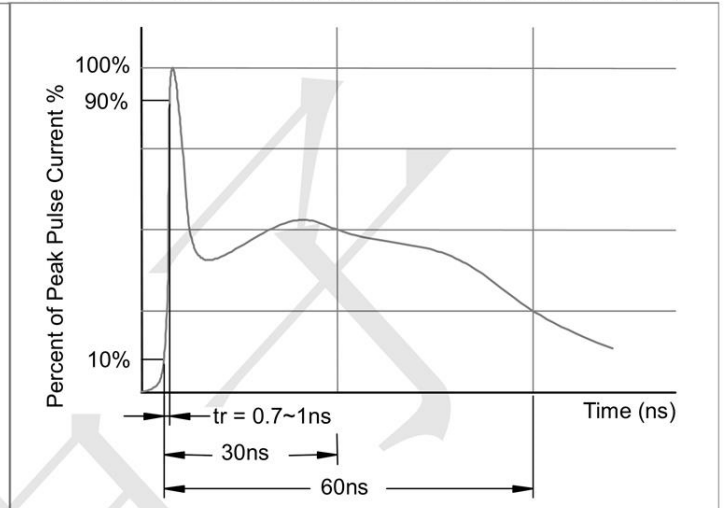
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	$V_{RWM}$				12	V
Breakdown Voltage	$V_{BR}$	$I_T = 1\text{mA}$	13		8	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 12\text{V}$			0.2	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP} = 1\text{A}$ (8 x 20 $\mu\text{s}$ pulse)			13	V
Clamping Voltage	$V_C$	$I_{PP} = 7\text{A}$ (8 x 20 $\mu\text{s}$ pulse)			29	V
Junction Capacitance	$C_J$	$V_R = 0\text{V}$ , f = 1MHz		1		pF

### Electrical Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise specified)

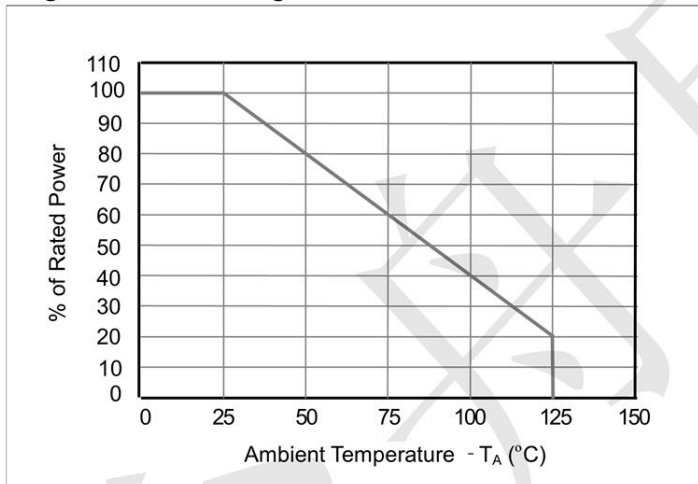
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



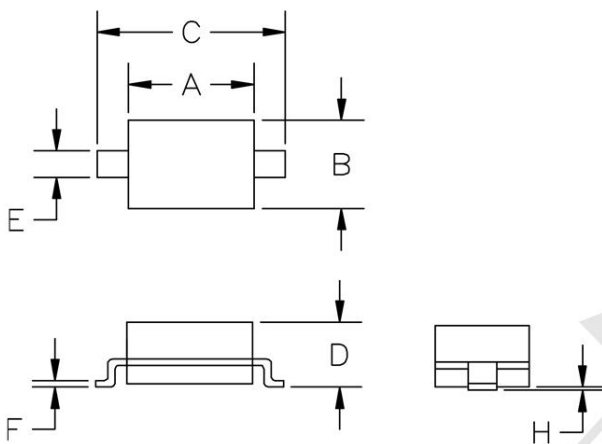
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**

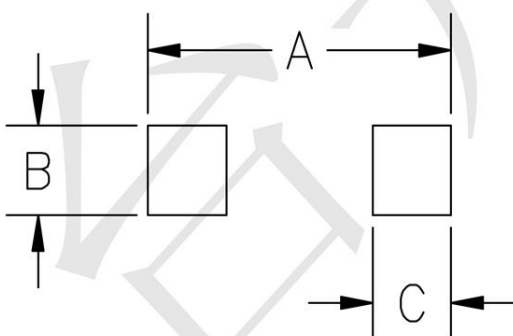


**Outline Drawing - SOD-323**



SYM	DIMENSIONS			
	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.50	1.80	0.060	0.071
B	1.20	1.40	0.045	0.054
C	2.30	2.70	0.090	0.107
D	-	1.10	-	0.043
E	0.30	0.40	0.012	0.016
F	0.10	0.25	0.004	0.010
H	-	0.10	-	0.004

**Land Pattern - SOD-323**



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
A	3.15	0.120
B	0.80	0.031
C	0.80	0.031

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