



## Features

- ◆ Operating voltage: 15V
- ◆ Ultra low leakage: nA level
- ◆ Low clamping voltage
- ◆ Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 30\text{kV}$   
Contact discharge:  $\pm 30\text{kV}$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 5A (8/20 $\mu\text{s}$ )
- ◆ RoHS Compliant

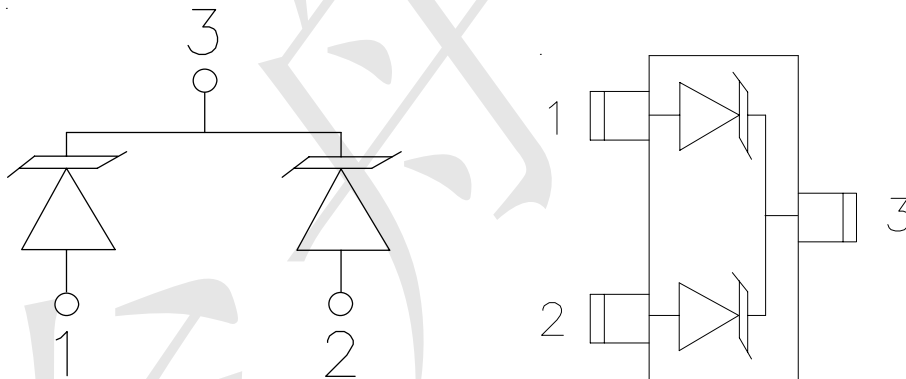
## Mechanical Characteristics

- ◆ Package: SOT23
- ◆ Lead Finish: Matte Tin
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Pb-Free, Halogen Free, RoHS/WEEE Compliant
- ◆ Shipping Qty : 3000pcs/7Inch Tape & Reel

## Applications

- ◆ USB Power & Data Line Protection
- ◆ Monitors and Flat Panel Displays
- ◆ I<sup>2</sup>C Bus Protection
- ◆ Portable Instrumentation
- ◆ Set Top Box

## Dimensions and Pin Configuration



**Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$  unless otherwise specified)**

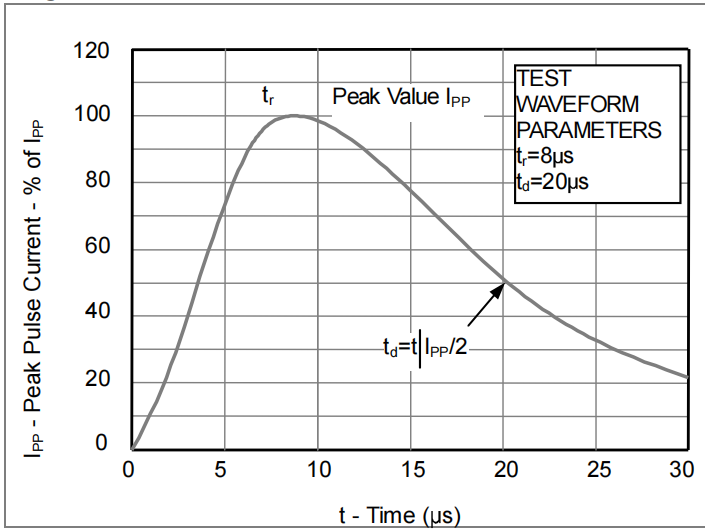
Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Air)	VESD	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

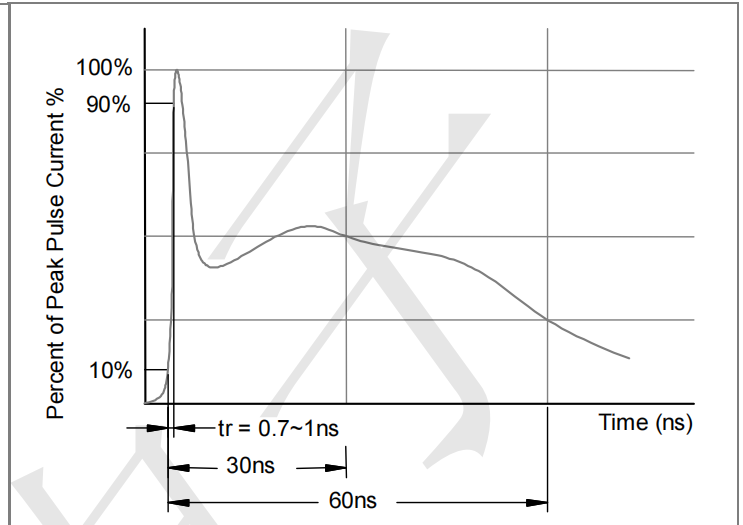
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			15	V	
Breakdown Voltage	VBR	16.5	18	20	V	$I_T = 1\text{mA}$
Reverse Leakage Current	IR		0.01	0.1	μA	VRWM = 15V
Clamping Voltage	VC			18	V	$I_{PP} = 1\text{A}$ (8 x 20μs pulse)
Clamping Voltage	VC		27	40	V	$I_{PP} = 5\text{A}$ (8 x 20μs pulse)
Peak Pulse Current	I <sub>PP</sub>			5	A	$t_P=8/20\mu\text{s}$
Junction Capacitance	CJ			55	pF	VR=0, f=1MHz, Pin 1 to Pin 3 or Pin 2 to Pin 3



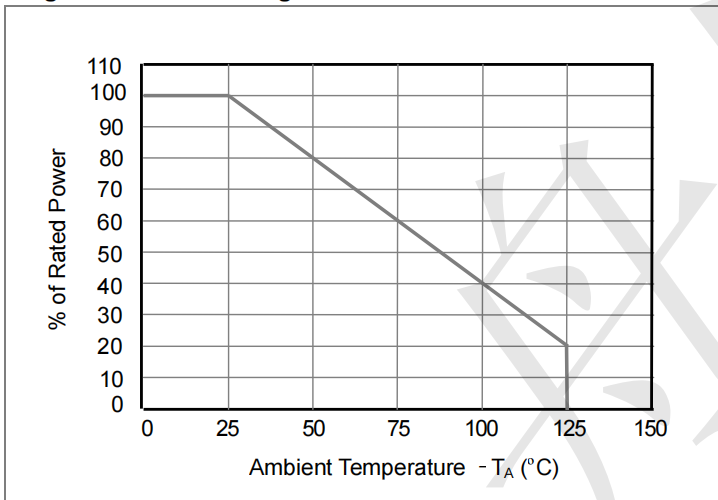
**Fig1. 8/20 $\mu$ s Pulse Waveform**



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

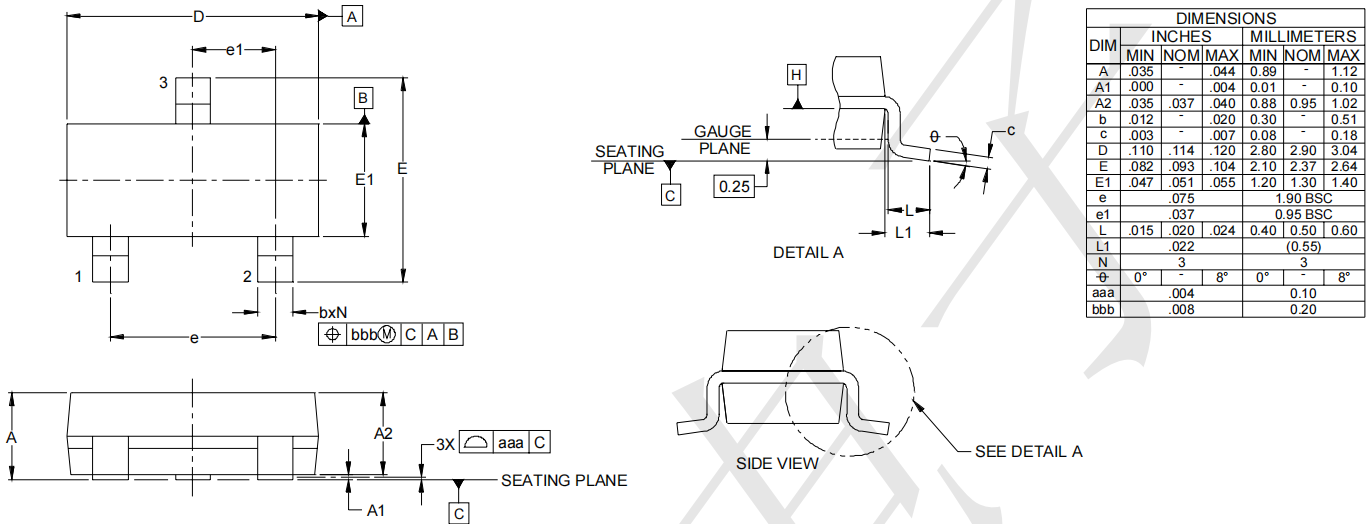


**Fig3. Power Derating Curve**





**Outline Drawing - SOT23**



**Land Pattern - SOT23**

