

## Features

- ◆ 300W peak pulse power(8/20 $\mu$ s)
- ◆ Ultra low leakage: nA level
- ◆ Operating voltage: 12V
- ◆ Low clamping voltage
- ◆ Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 30$ kV
    - Contact discharge:  $\pm 30$ kV
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 10A (8/20 $\mu$ s)
- ◆ RoHS Compliant

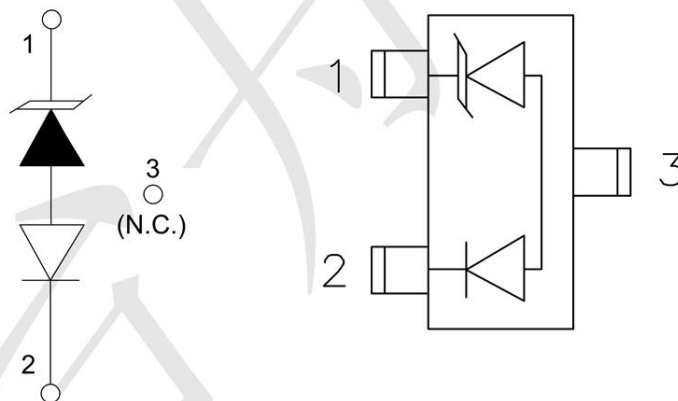
## Mechanical Characteristics

- ◆ Package: SOT-23
- ◆ Lead Finish: Matte Tin
- ◆ 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

- ◆ High-Speed data lines
- ◆ Cellular handsets AND accessories
- ◆ Universal Serial Bus (USB) port protection
- ◆ Portable instrumentation
- ◆ LAN/WAN equipment
- ◆ Peripherals

## Dimensions and Pin Configuration



**Marking: L12.x**  
"x" is internal code

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

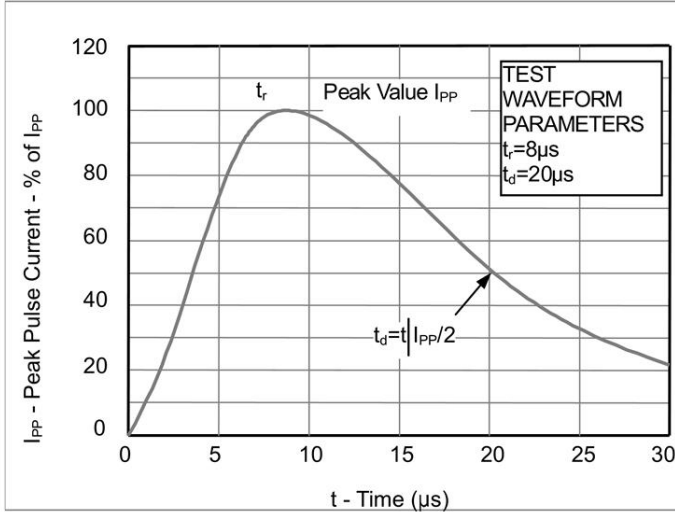
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	300	W
Peak Pulse Current (8/20μs)	I <sub>PP</sub>	10	A
ESD per IEC 61000-4-2 (Air)	VESD	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

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

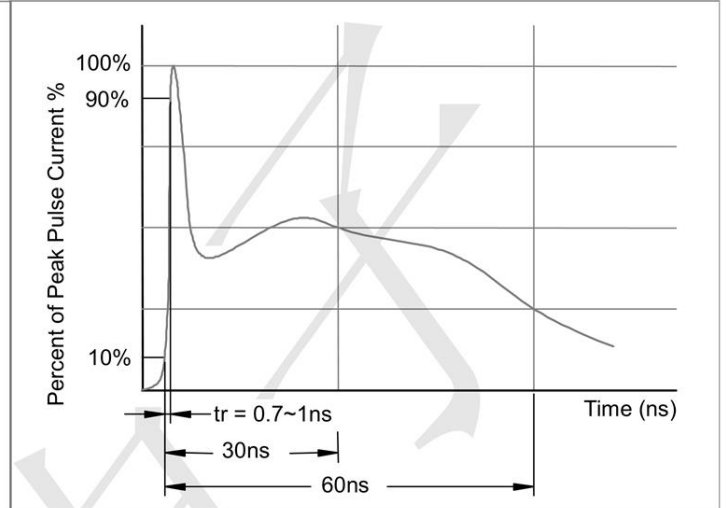
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V <sub>RWM</sub>			12	V	
Breakdown Voltage	V <sub>BR</sub>	13	15	17	V	I <sub>T</sub> = 1mA
Reverse Leakage Current	I <sub>R</sub>			0.1	μA	V <sub>RWM</sub> = 12V
Forward Voltage	V <sub>F</sub>		0.8	1.2	V	I <sub>F</sub> = 10mA
Clamping Voltage	V <sub>C</sub>		15		V	I <sub>PP</sub> = 1A (8 x 20μs pulse)
Clamping Voltage	V <sub>C</sub>			30	V	I <sub>PP</sub> = 10A (8 x 20μs pulse)
Junction Capacitance	C <sub>J</sub>		1		pF	V <sub>R</sub> =0, f=1MHz, Pin 1 to Pin 2

**Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)**

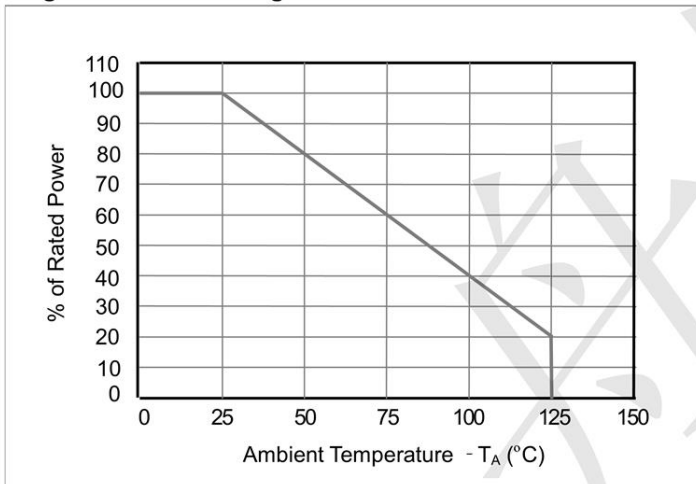
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



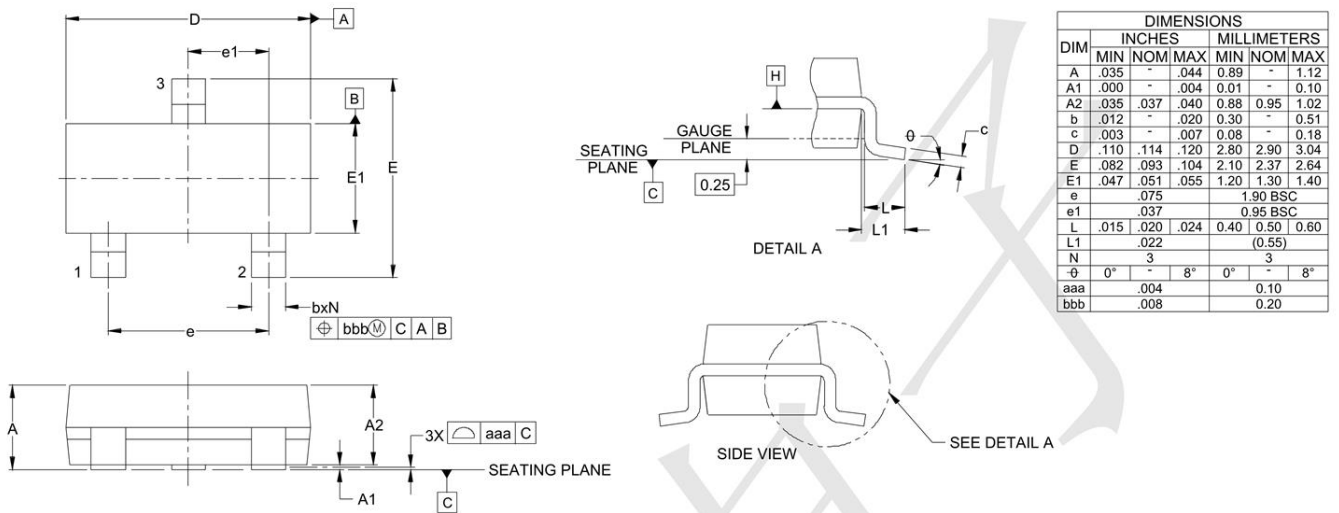
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**



**Outline Drawing - SOT23**



**Land Pattern - SOT23**

