

Features

- ◆ 300W peak pulse power(8/20 μ 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: ± 30 kV
 - Contact discharge: ± 30 kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 10A (8/20 μ s)
- ◆ RoHS Compliant

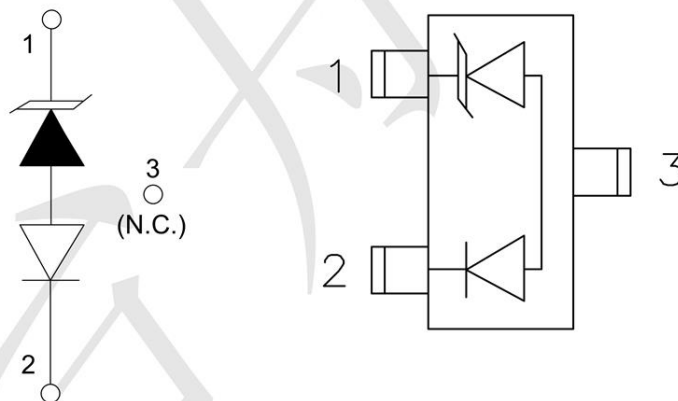
Mechanical Characteristics

- ◆ 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 _{PP}	10	A
ESD per IEC 61000-4-2 (Air)	VESD	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			12	V	
Breakdown Voltage	V _{BR}	13	15	17	V	I _T = 1mA
Reverse Leakage Current	I _R			0.1	μA	V _{RWM} = 12V
Forward Voltage	V _F		0.8	1.2	V	I _F = 10mA
Clamping Voltage	V _C		15		V	I _{PP} = 1A (8 x 20μs pulse)
Clamping Voltage	V _C			30	V	I _{PP} = 10A (8 x 20μs pulse)
Junction Capacitance	C _J		1		pF	V _R =0, f=1MHz, Pin 1 to Pin 2

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

Fig1. 8/20 μs Pulse Waveform

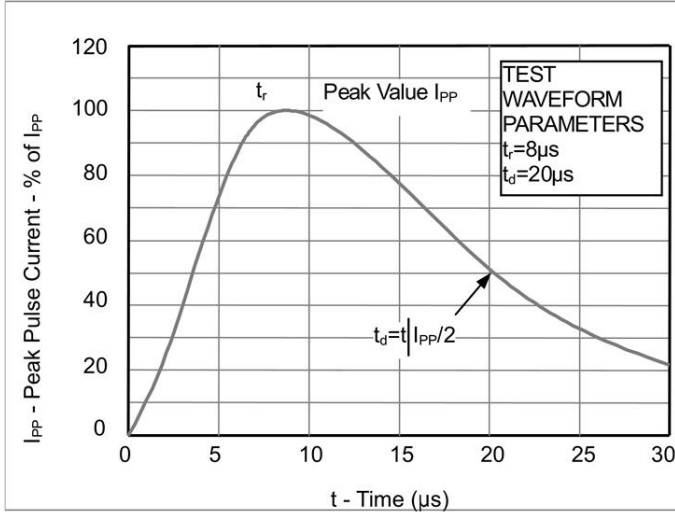


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

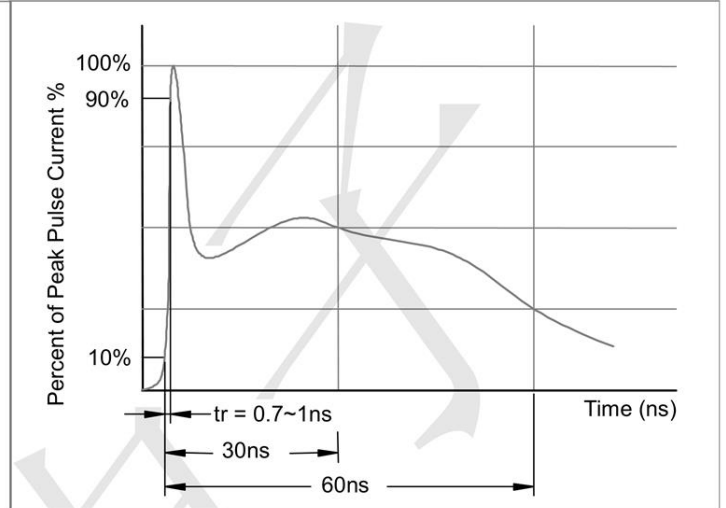
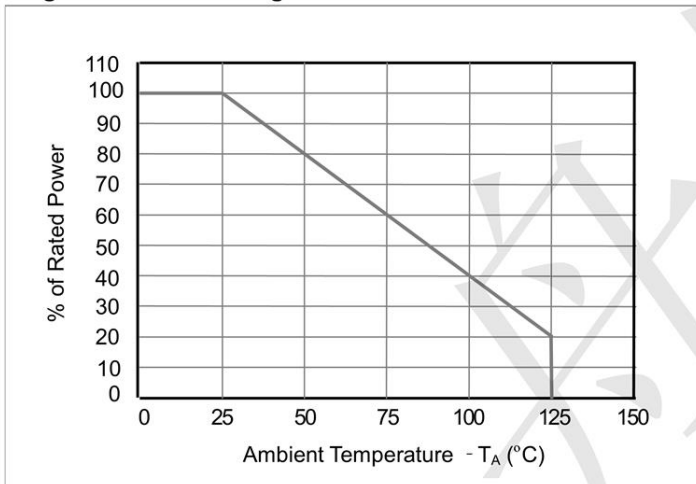
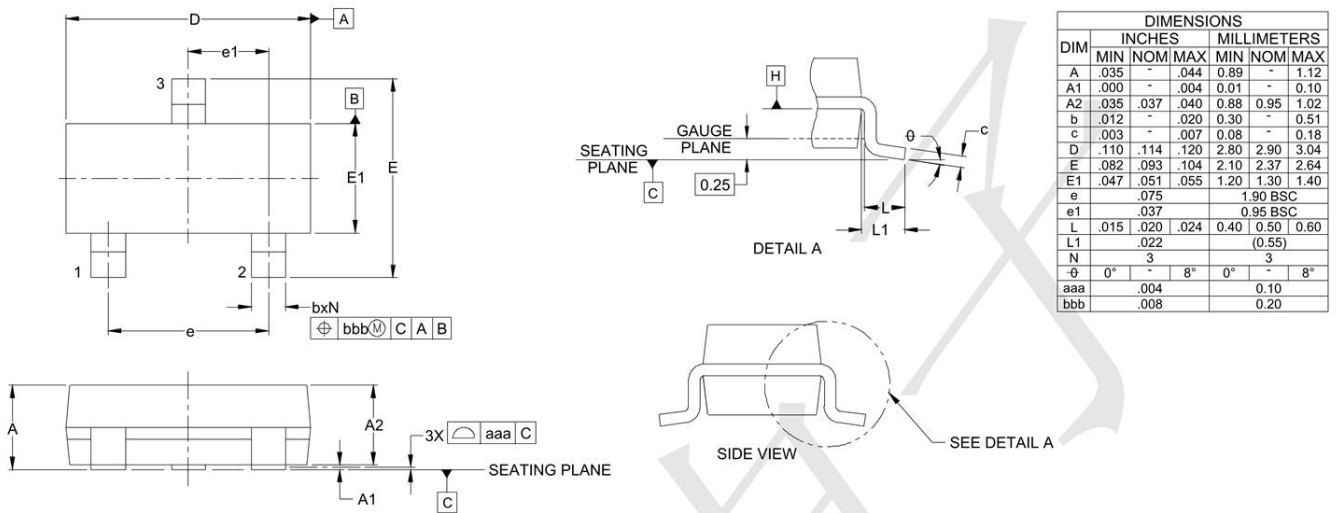


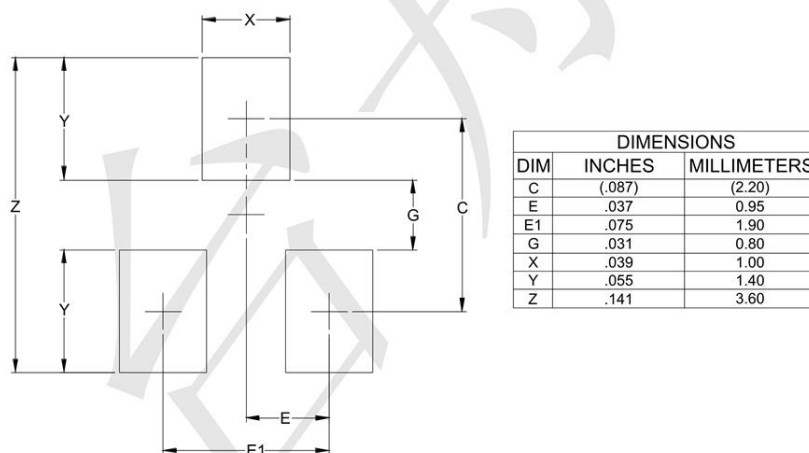
Fig3. Power Derating Curve



Outline Drawing - SOT23



Land Pattern - SOT23



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