

## Features

- \* 300W peak pulse power (8/20 $\mu$ s)
- \* Low operating :5V
- \* 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:  $\pm$ 30kV
    - Contact discharge:  $\pm$ 30kV
  - IEC61000-4-5 (Lightning) 18A (8/20 $\mu$ s)
  - IEC61000-4-4 (EFT) 40A (5/50ns)
- \* RoHS Compliant

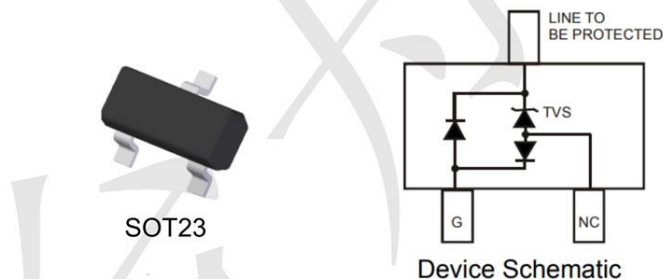
## Mechanical Characteristics

- \* Package: SOT23
- \* Lead Finish: Matte Tin
- \* Case Material: “Green” Molding Compound.
- \* UL Flammability Classification Rating 94V-0
- \* Moisture Sensitivity: Level 3 per J-STD-020
- \* Terminal Connections: See Diagram Below
- \* Shipping Qty :3000pcs/7Inch Tape & Reel

## Applications

- \* USB Ports
- \* Smart Phones
- \* Wireless Systems
- \* Ethernet 10/100/1000 Base T

## Dimensions and Pin Configuration



**Marking:A05**

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

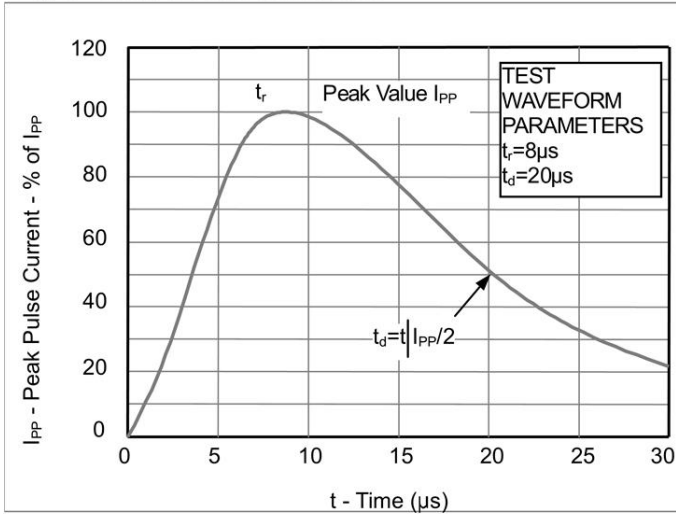
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	300	W
Peak Pulse Current (8/20μs)	I <sub>PP</sub>	18	A
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

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

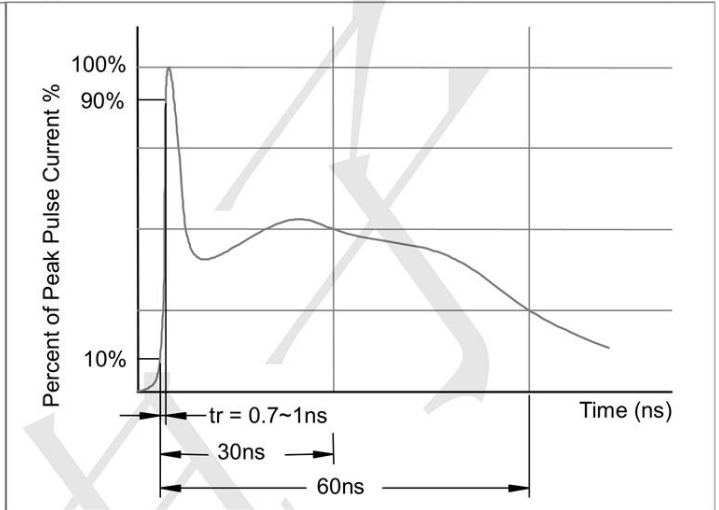
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V <sub>RWM</sub>				5.0	V
Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> = 1mA	6			V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> = 5V			0.2	μA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 1A (8 x 20μs pulse)			9	V
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> = 18A (8 x 20us pulse)		16		V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> = 0V, f = 1MHz		1		pF

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

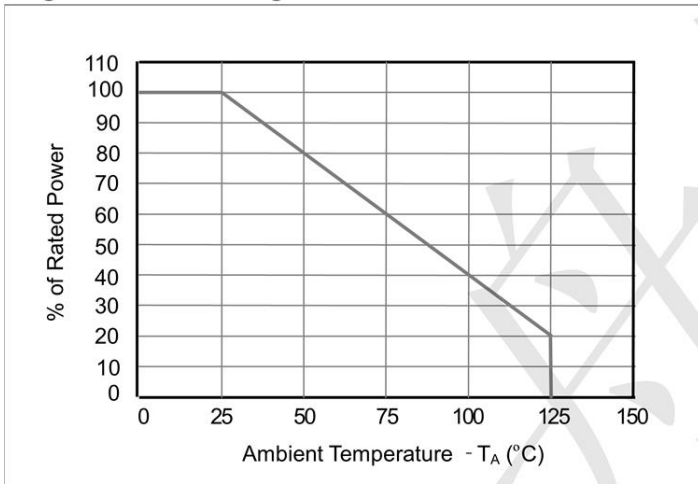
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



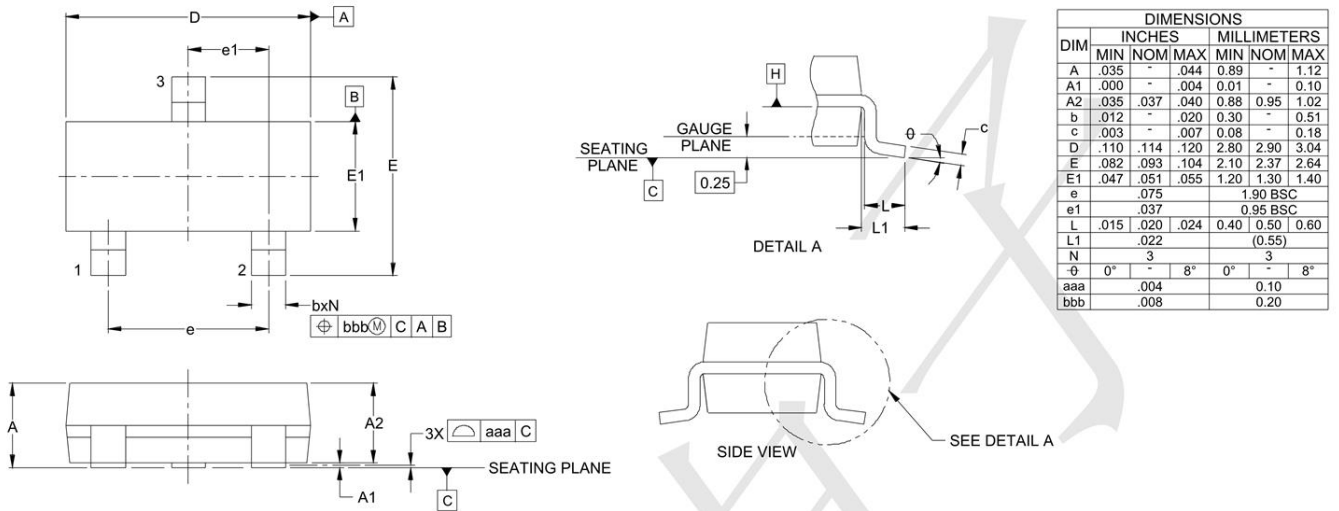
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**



**Outline Drawing - SOT23**



**Land Pattern - SOT23**

