

## Features

- ◆ 150 Watts peak pulse power ( $t_p = 8/20\mu s$ )
- ◆ Transient protection for high speed data lines to IEC 61000-4-2 (ESD)  $\pm 15kV$  (air),  $\pm 8kV$  (contact) IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆ Working voltages : 5V
- ◆ Protects one bidirectional line or two unidirectional lines
- ◆ Low operating and clamping voltages
- ◆ Solid-state silicon avalanche technology

## Ordering Information

Part Number	Qty per Reel	Reel Size
SM05	3000	7"

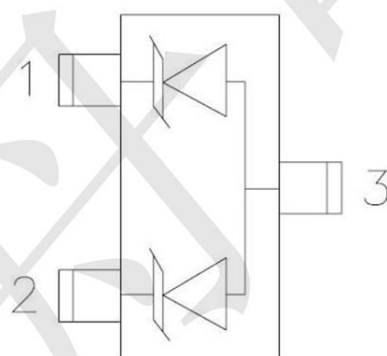
## Mechanical Characteristics

- ◆ Package: SOT23
- ◆ Lead Finish: Matte Tin
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Pb-Free, Halogen Free, RoHS/WEEE Compliant

## 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



Circuit and Pin Schematic

**Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)**

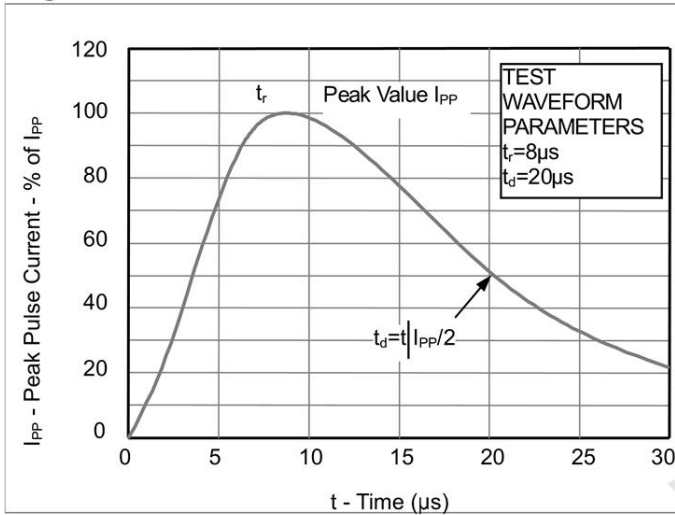
Parameter	Symbol	Value	Unit
Peak Pulse Power(8/20μs)	Ppk	150	W
ESD per IEC 61000-4-2 (Air)	VESD	±15	kV
ESD per IEC 61000-4-2 (Contact)		±8	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

**Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)**

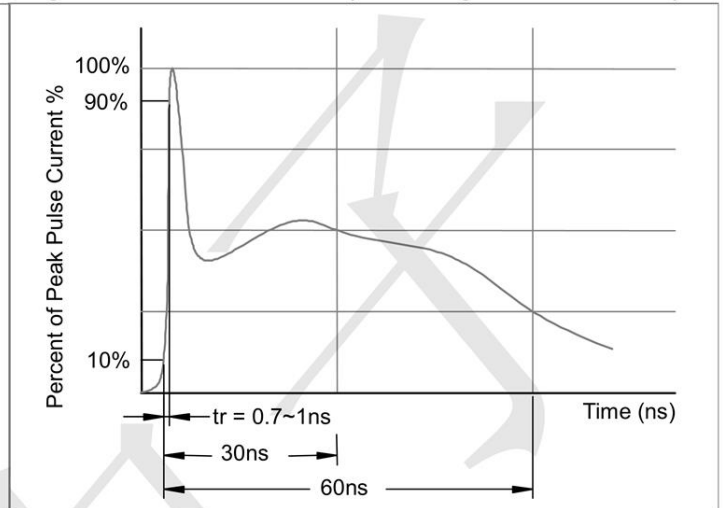
Part Number	V <sub>RWM</sub>	IDRM	VBR	IR	VC	IPP	VC	IPP	CO
	V	μA	V	mA	V	A	V	A	pF
		MAX	MIN		MAX		MAX		MAX
SM05	5	1	6	1	9.8	1	15	10	100

**PROTECTION PRODUCTS**  
Typical characteristics

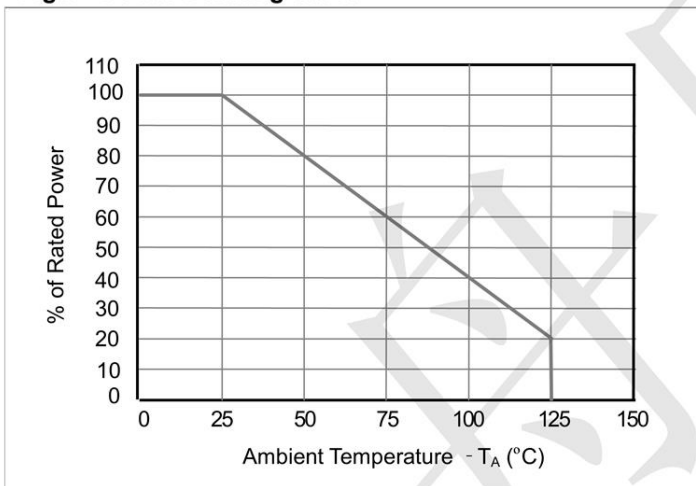
**Fig1. 8/20 $\mu$ s Pulse Waveform**



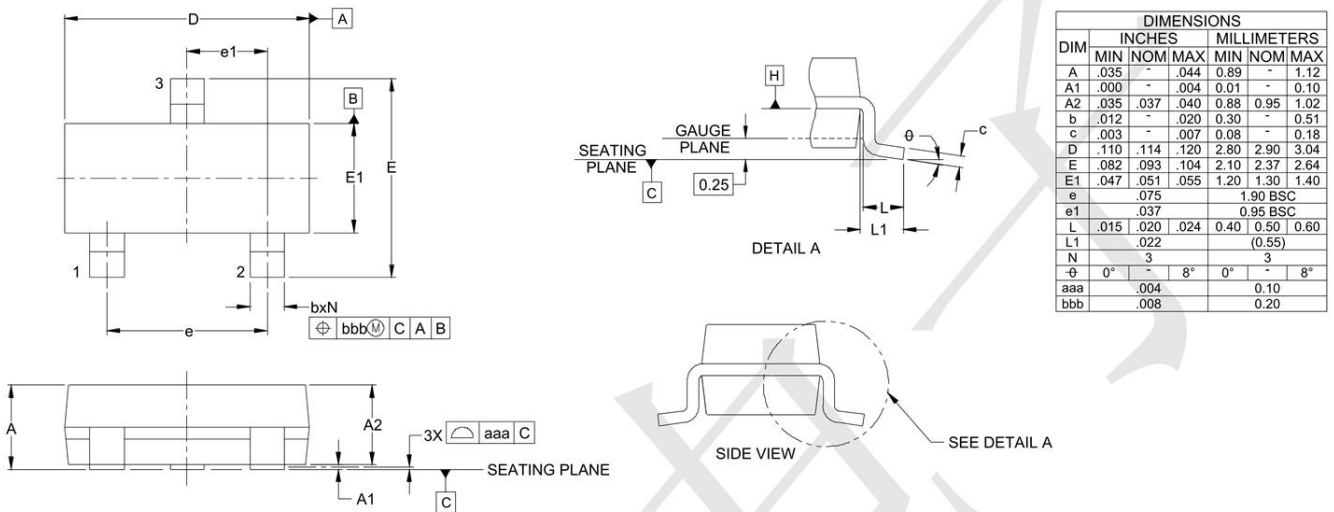
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**



**Outline Drawing - SOT23**



**Land Pattern - SOT23**

