

## Features

- Low operating voltage:  $\pm 5V$
- Ultra low capacitance: 15pF typical
- Ultra low leakage: nA level
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
  - - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 30kV$   
Contact discharge:  $\pm 30kV$
  - - IEC61000-4-5 (Lightning) 9A (8/20 $\mu s$ )
- These are Pb-Free Devices
- Response Time is Typically  $< 1 ns$

## Mechanical Characteristics

- Package: SOD523 (0603)
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below

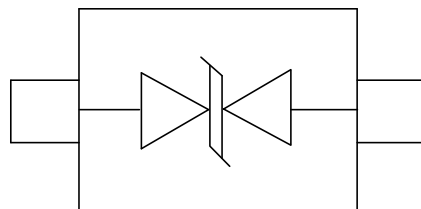
## Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals

## Ordering Information

Part Number	Qty per Reel	Reel Size
ESD5V0D5B	3000	7"

## Dimensions and Pin Configuration



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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	90	W
Peak Pulse Current (8/20μs)	Ipp	9	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±30 ±30	kV
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	
Breakdown Voltage	VBR	5.6	6.5		V	IT = 1mA
Reverse Leakage Current	IR			0.07	uA	VRWM = 5V
Clamping Voltage	VC		7	8.6	V	Ipp=1A(8x 20us pulse)
Clamping Voltage	VC		8.6	10	V	Ipp=9A(8x 20us pulse)
Junction Capacitance	CJ		15		pF	VR = 0V, f = 1MHz

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

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

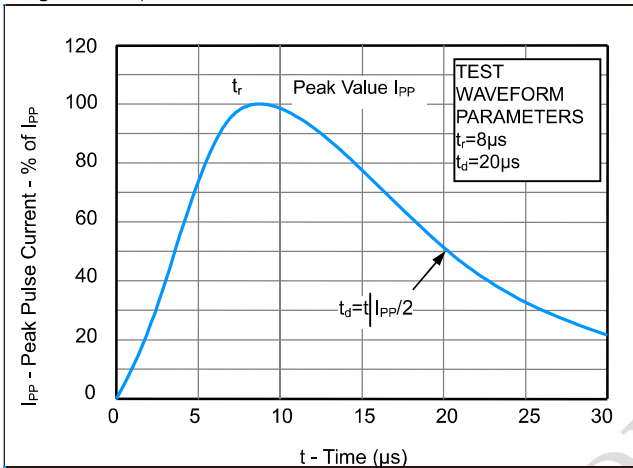


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

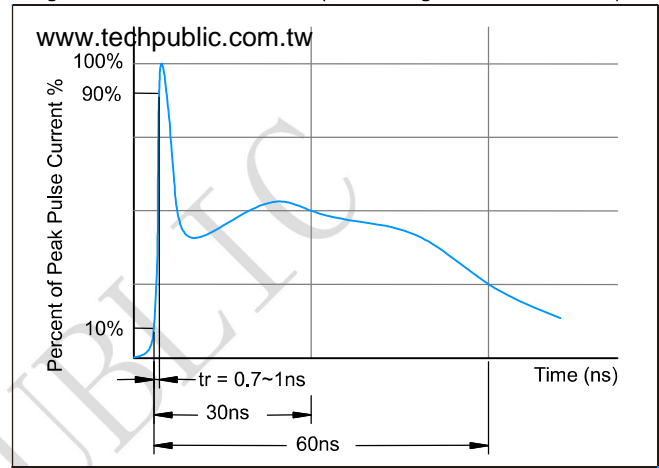
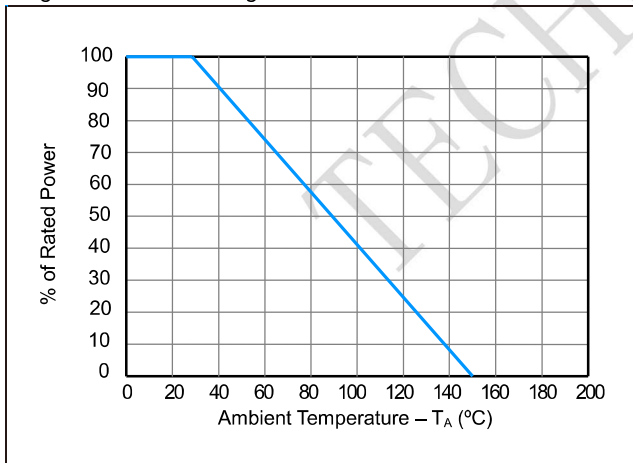
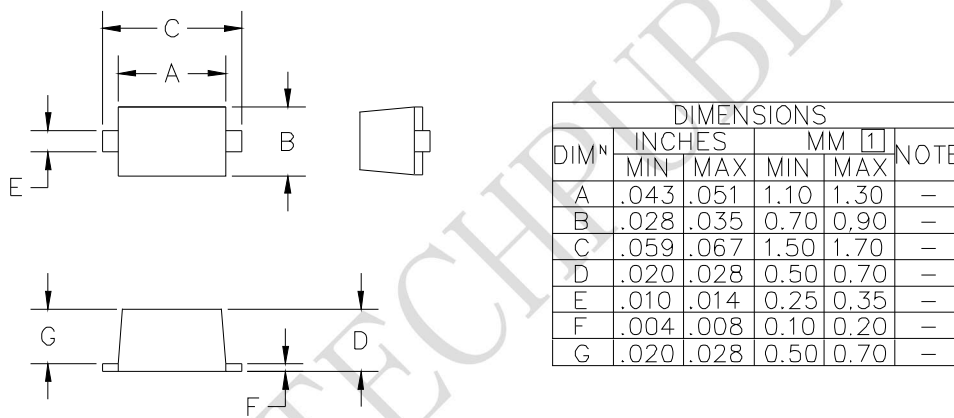


Fig3. Power Derating Curve

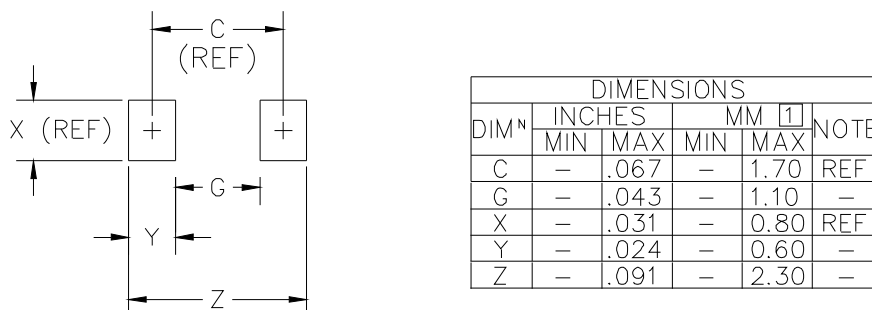


**SOD523 (0603) Package Outline Drawing**



[1] CONTROLLING DIMENSION: MILLIMETERS

**Suggested Land Pattern**



[1] CONTROLLING DIMENSION: MILLIMETERS

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