

## Features

- Protects one data or power line
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 30\text{kV}$
    - Contact discharge:  $\pm 30\text{kV}$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
- RoHS Compliant

## Ordering Information

Part Number	Qty per Reel	Reel Size
TPESD5B5.0ST1G	3000	7"

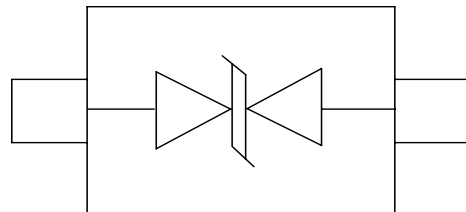
## Mechanical Characteristics

- Package: SOD-523
- 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

## Applications

- Cellular Handsets & Accessories
- Digital Visual Interface (DVI)
- Display Port
- MDDI Ports
- USB Ports
- PCI Express
- Serial ATA

## Dimensions and Pin Configuration

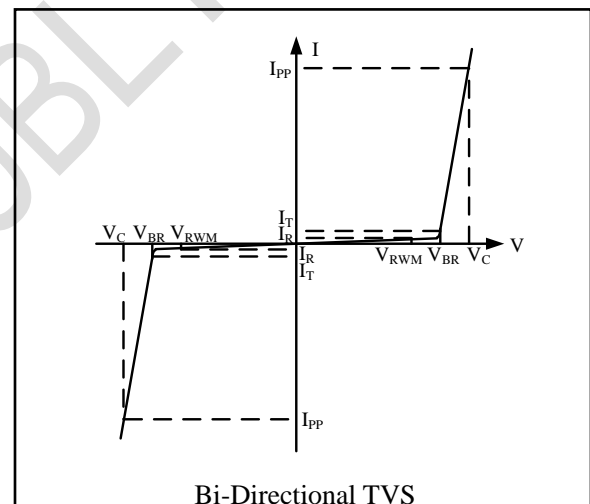


**Absolute Maximum Ratings** (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Current (8/20μs)	I <sub>PP</sub>	7	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)

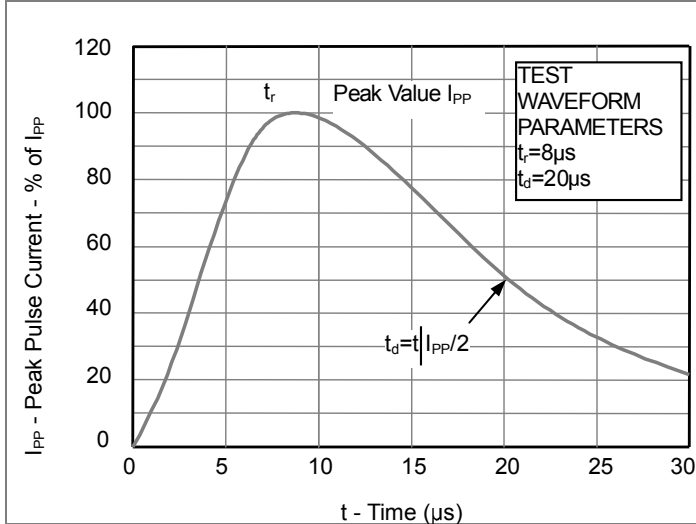
Symbol	Parameter
V <sub>RWM</sub>	Nominal Reverse Working Voltage
I <sub>R</sub>	Reverse Leakage Current @ V <sub>RWM</sub>
V <sub>BR</sub>	Reverse Breakdown Voltage @ I <sub>T</sub>
I <sub>T</sub>	Test Current for Reverse Breakdown
V <sub>C</sub>	Clamping Voltage @ I <sub>PP</sub>
I <sub>PP</sub>	Maximum Peak Pulse Current
C <sub>ESD</sub>	Parasitic Capacitance
V <sub>R</sub>	Reverse Voltage
f	Small Signal Frequency



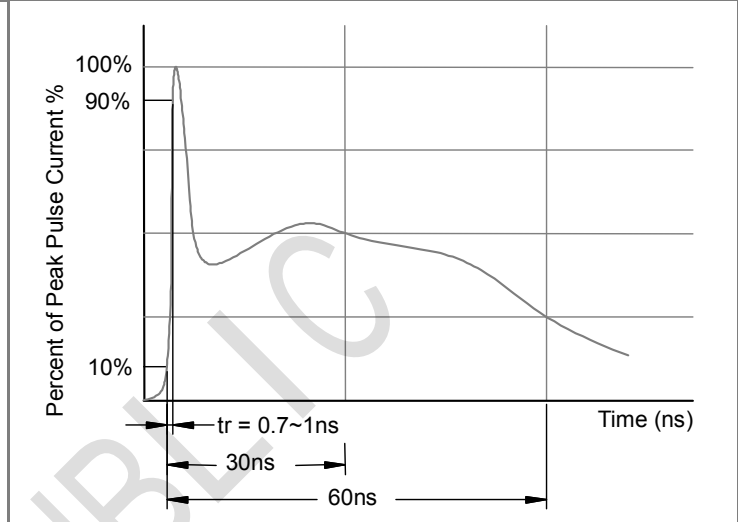
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V <sub>RWM</sub>			5	V	
Breakdown Voltage	V <sub>BR</sub>	6	7	9	V	I <sub>T</sub> = 1mA
Reverse Leakage Current	I <sub>R</sub>			0.2	uA	V <sub>RWM</sub> = 5V
Clamping Voltage	V <sub>C</sub>			7	V	I <sub>PP</sub> = 1A (8 x 20μs pulse)
Clamping Voltage	V <sub>C</sub>			9	V	I <sub>PP</sub> = 7A (8 x 20μs pulse)
Junction Capacitance	C <sub>J</sub>		15		pF	V <sub>R</sub> = 0V, f = 1MHz

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

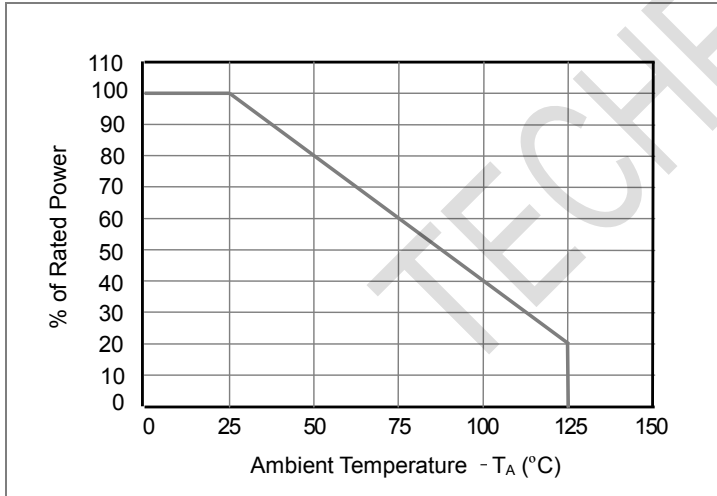
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



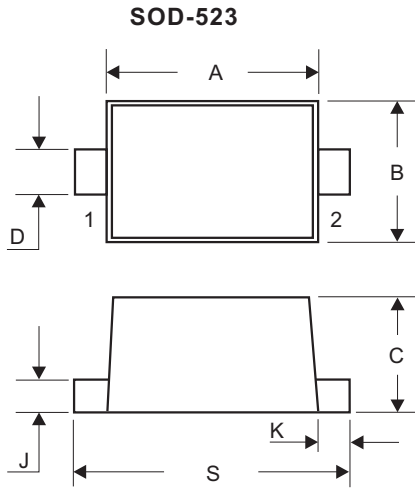
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**



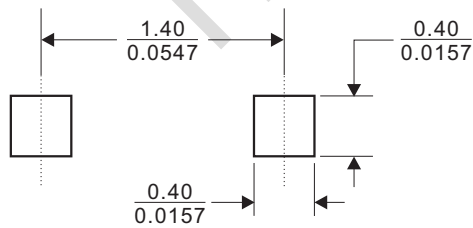
## Outline Drawing - SOD-523



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	1.10	1.30	0.043	0.051
B	0.70	0.90	0.028	0.035
C	0.50	0.70	0.020	0.028
D	0.25	0.35	0.010	0.014
J	0.07	0.20	0.0028	0.0079
K	0.15	0.25	0.006	0.010
S	1.50	1.70	0.059	0.067

## Land Pattern - SOD-523

### Recommended Mounting Pad Layout



Dimensions in ( $\frac{\text{millimeters}}{\text{inches}}$ )

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [ESD Suppressors / TVS Diodes](#) category:*

*Click to view products by [TECH PUBLIC](#) manufacturer:*

Other Similar products are found below :

[NTE4902](#) [P4SMAJ15A](#) [P4SMAJ26A](#) [SMAJ400CA-TP](#) [TGL34-47CA](#) [ESDAULC45-1BF4](#) [SM1605E3/TR13](#) [SMF20A-TP](#) [P4SMAJ12A](#)  
[CPDUR24V-HF](#) [CPDQC5V0USP-HF](#) [CPDQC5V0-HF](#) [MPLAD30KP45CAE3](#) [MMBZ27VCLQ-7-F](#) [MMAD1108/TR13](#) [MPLAD30KP24A](#)  
[ACPDQC5V0R-HF](#) [DFLT170A-7](#) [NTE4900](#) [NTE4926](#) [NTE4938](#) [SMF22A-TP](#) [SMF12A-TP](#) [SLVU2.8-TP](#) [SMLJ6.5CA-TP](#) [SMAJ6.5CA-](#)  
[TP](#) [MMAD1108E3/TR13](#) [D5V0M1U2LP3-7](#) [SMAJ400A-TP](#) [AOZ8811DT-03](#) [AOZ8831DI-05](#) [AOZ8831DT-03](#) [SMAJ188CA](#) [3SMC33CA](#)  
[BK](#) [CPDQC3V3C-HF](#) [CPDQC12VE-HF](#) [MPLAD30KP170CA](#) [82357120100](#) [5.0SMLJ15CA-TP](#) [5KP18A-TP](#) [P6KE8.2A-TP](#)  
[MPLAD30KP43CAE3](#) [SMAJ43A-TP](#) [D5V0F6U8LP33-7](#) [TVS5501V10MUT5G](#) [5.0SMLJ24CA-TP](#) [SMAJ110CA-TP](#) [MPLAD15KP75CAE3](#)  
[MMAD1103e3/TR13](#) [DFLT40AQ-7](#)