

## Features

- ◆ 250W peak pulse power(8/20μs)
- ◆ Protects two bi-directional lines
- ◆ Ultra low leakage: nA level
- ◆ Operating voltage: 15V
- ◆ Low clamping voltage
- ◆ Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge: ±30kV  
Contact discharge: ±30kV
  - IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ RoHS Compliant

## Ordering Information

Part Number	Qty per Reel	Reel Size
TPESD15BS3	3000	7"

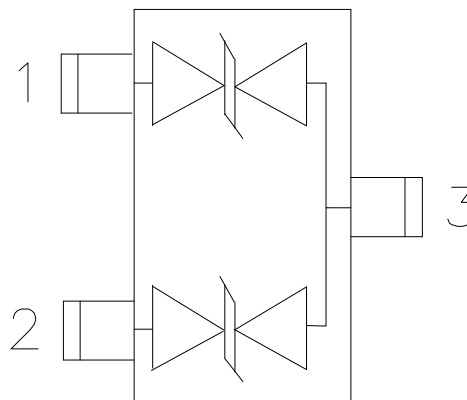
## Mechanical Characteristics

- ◆ 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

## Applications

- ◆ Cellular Handsets and Accessories
- ◆ Notebooks and Handhelds
- ◆ Portable Instrumentation
- ◆ Set Top Box
- ◆ Industrial Controls

## Dimensions and Pin Configuration



Marking: V6t Or 15B

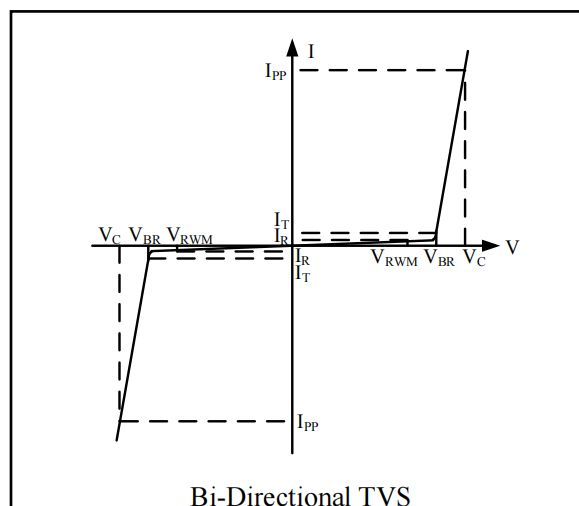
Circuit and Pin Schematic

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

Parameter	Symbol	Value	Unit
Peak Pulse Power(8/20μs)	Ppk	250	W
ESD per IEC 61000-4-2 (Air)	VESD	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

Symbol	Parameter
$V_{RWM}$	Nominal Reverse Working Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Reverse Breakdown Voltage @ $I_T$
$I_T$	Test Current for Reverse Breakdown
$V_C$	Clamping Voltage @ $I_{PP}$
$I_{PP}$	Maximum Peak Pulse Current
$C_{ESD}$	Parasitic Capacitance
$V_R$	Reverse Voltage
f	Small Signal Frequency

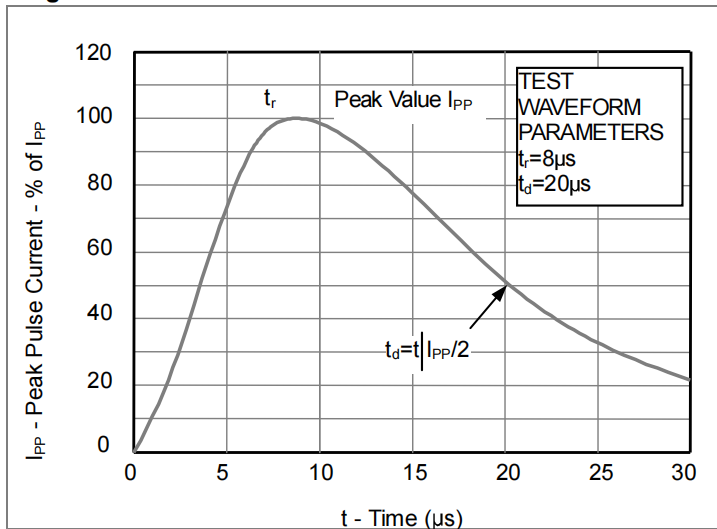


### TPESD15BS3

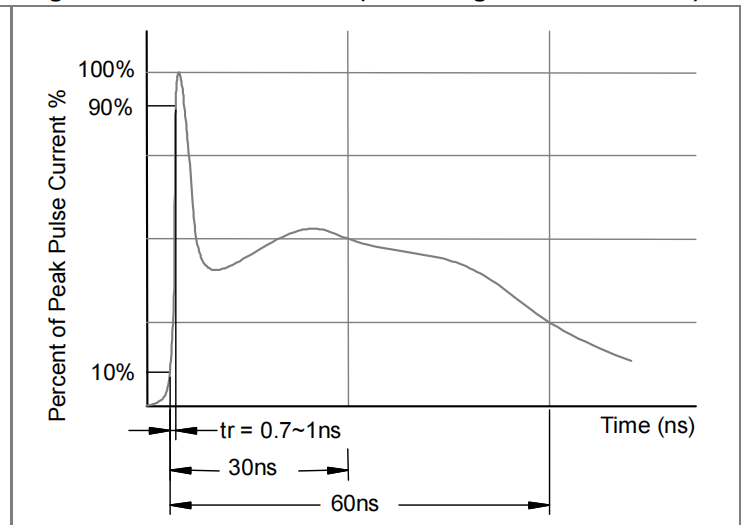
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			15	V	
Breakdown Voltage	VBR	16.7			V	$I_T = 1mA$
Reverse Leakage Current	IR		0.01	0.5	μA	$V_{RWM} = 15V$
Clamping Voltage	Vc		20		V	$I_{PP} = 1A$ (8 x 20μs pulse)
Clamping Voltage	Vc		30		V	$I_{PP} = 8A$ (8 x 20μs pulse)
Peak Pulse Current	IPP			8	A	$t_p = 8/20\mu s$
Junction Capacitance	CJ			18	pF	$V_R = 0$ , $f = 1MHz$ , Pin 1 to Pin 3 or Pin 2 to Pin 3

**PROTECTION PRODUCTS**  
Typical characteristics

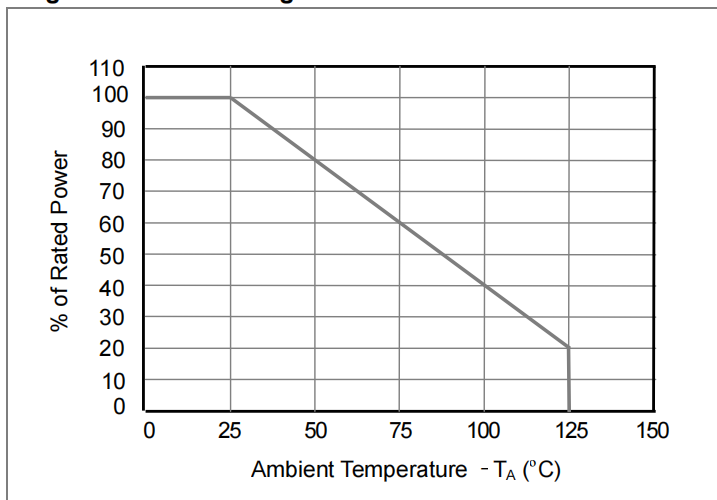
**Fig1. 8/20 $\mu$ s Pulse Waveform**



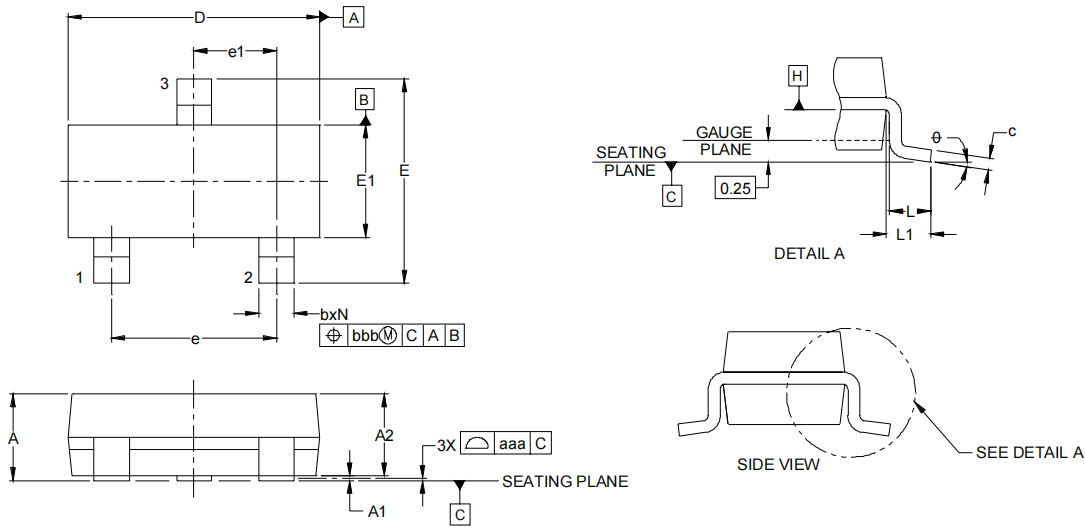
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**



**Outline Drawing - SOT23**



**Land Pattern - SOT23**

