

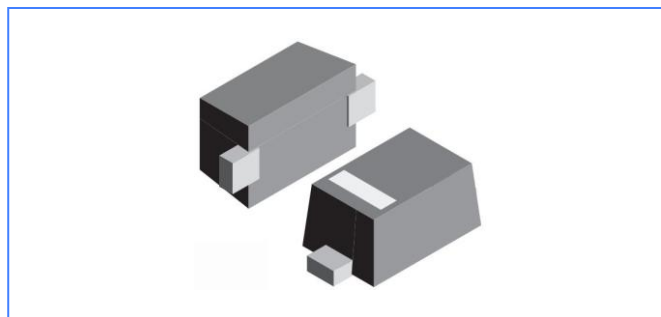
## ESD15VD5

### Description

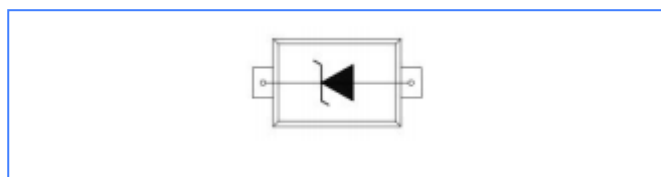
ESD15VD5 is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.

### Features

- 200 Watts Peak Pulse Power per Line ( $t_p=8/20\mu s$ )
- Operating voltage: 15V
- Low leakage current
- Package: SOD-523
- Low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 15kV$
    - Contact discharge:  $\pm 8kV$



### Functional Diagram



### Applications

- Cellular Handsets and Accessories
- Portable Electronics
- Industrial Controls
- Set-Top Box
- Instrumentation
- Servers, Notebook, and Desktop PC
- Display Ports

### Absolute Maximum Ratings ( $T_{amb}=25\text{ }^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu s$ )	$P_{PP}$	200	Watts
ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	$\pm 15$	KV
ESD per IEC 61000-4-2 (Contact)		$\pm 8$	KV
Lead Soldering Temperature	TL	260 (10 sec)	$^\circ\text{C}$
Operating Temperature Range	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STJ}$	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	VRWM				15	V
Reverse Breakdown Voltage	VBR	It = 1mA	16.6			V
Reverse Leakage Current	IR	VR = VRWM			1	μA
Clamping Voltage	VC	I <sub>PP</sub> =1A, t <sub>P</sub> = 8/20μs			21	V
Clamping Voltage	VC	I <sub>PP</sub> =5A, t <sub>P</sub> = 8/20μs			35	V
Junction Capacitance	CJ	VR=0V, f = 1MHz			50	pF

**Characteristics Curves**

Figure 1- Power Derating Curve

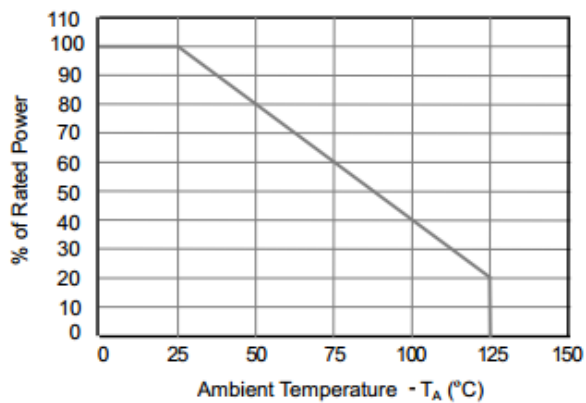
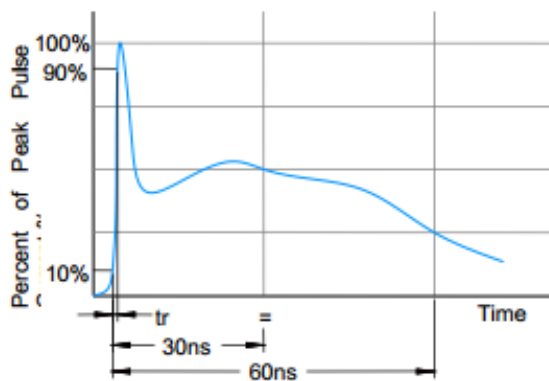
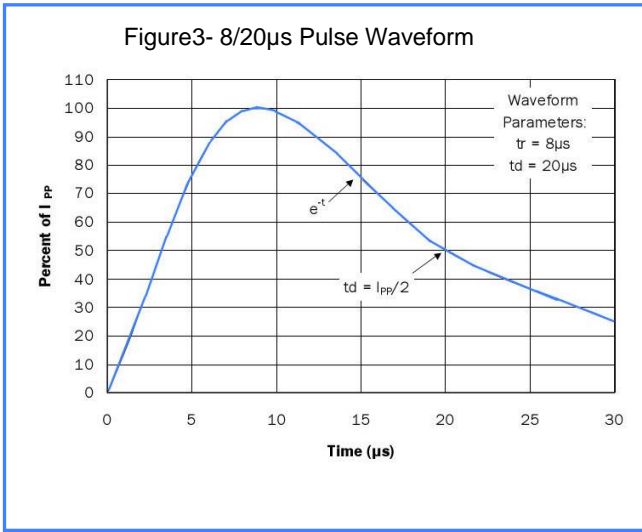
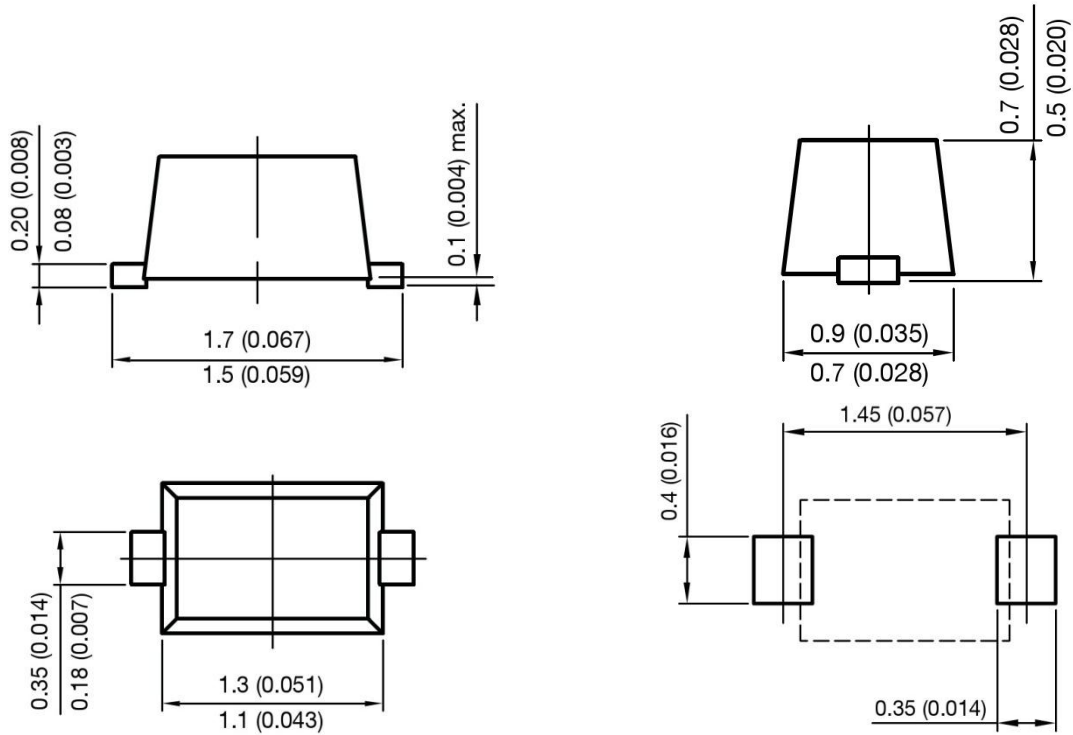


Figure 2- ESD Pulse Waveform (according to IEC 61000-4-2)





**PACKAGE OUTLINE DIMENSIONS in millimeters (inches) :SOD523**



**Mounting Pad Layout**

**Disclaimer**

Specifications are subject to change without notice.  
 The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
 Users should verify actual device performance in their specific applications.