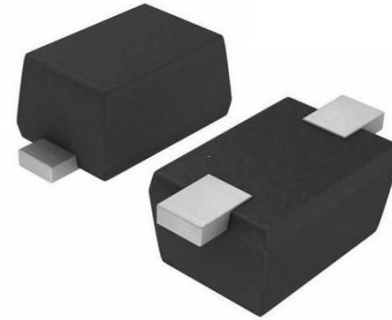


## Features

- 100Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2  $\pm 25kV$  contact  $\pm 25kV$  air
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 10A(8/20 $\mu s$ )



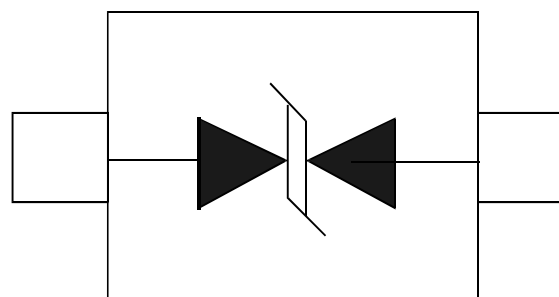
## Applications

- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers Peripherals

## Mechanical Data

- SOD523 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

## Schematic & PIN Configuration



SOD-523

## Absolute Maximum Rating

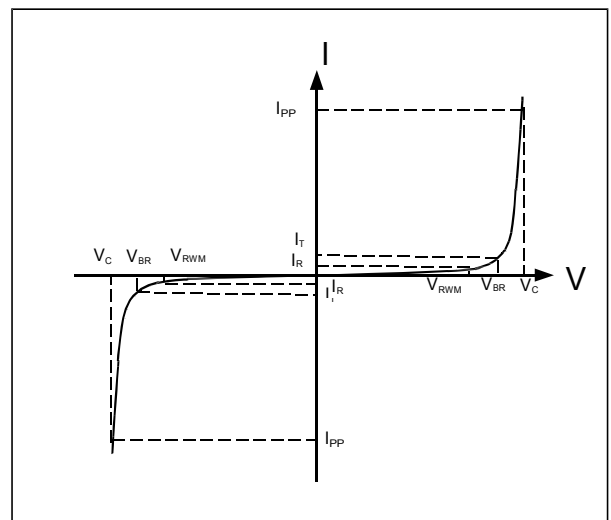
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	100	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ )(note1)	$I_{pp}$	10	A
ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact)	$V_{ESD}$	25 25	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	$^{\circ}C$
Junction Temperature	$T_J$	-55 to + 150	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55 to + 150	$^{\circ}C$

## Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				3.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	4.0			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5.0V, T = 25^{\circ}C$			500	$\mu A$
Clamping Voltage	$V_C$	$I_{PP} = 10A, t_p = 8/20\mu s$			10	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		13	15	pF

## Electrical Parameters (TA = 25°C unless otherwise noted)

Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current



Note: 8/20 $\mu s$  pulse waveform.

## Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

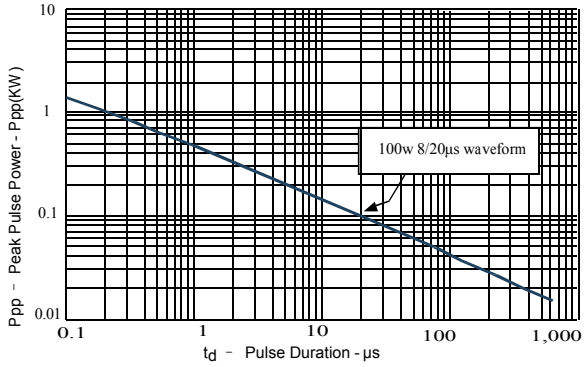


Figure 2: Power Derating Curve

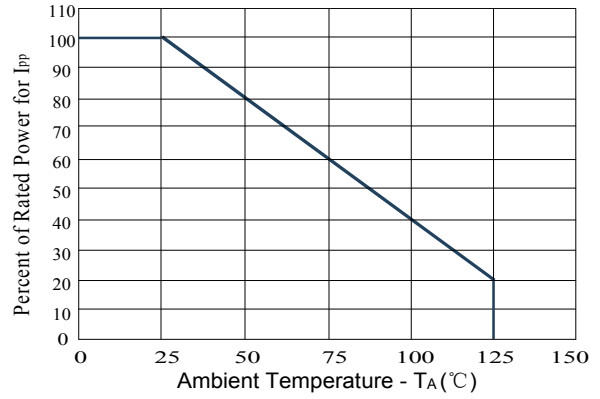


Figure 3: Pulse Waveform

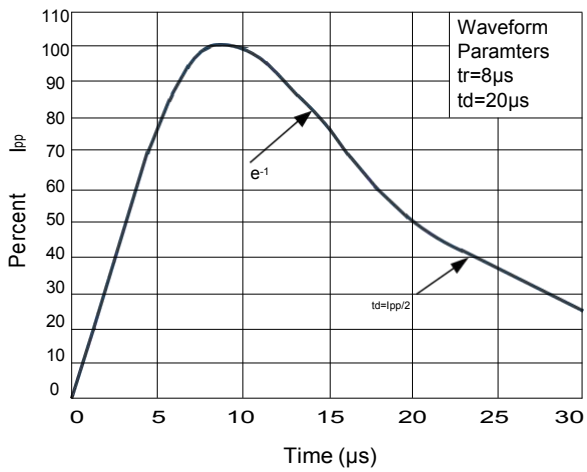
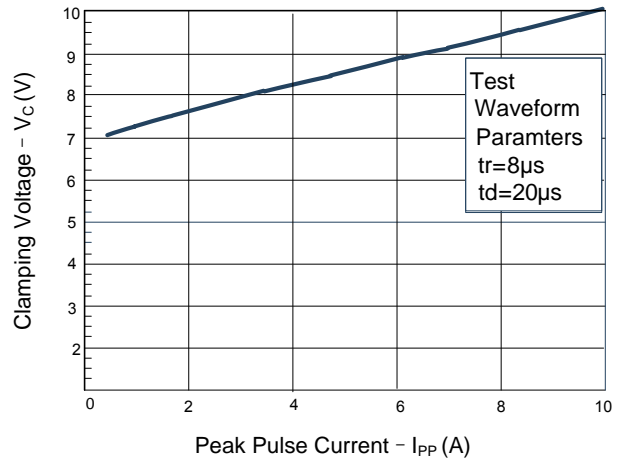
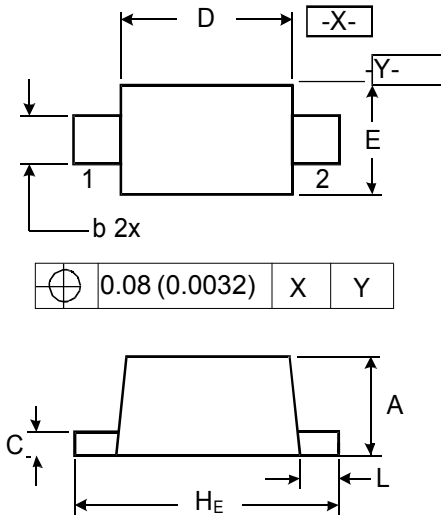


Figure 4: Clamping Voltage vs. Ipp



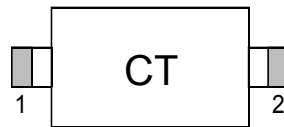
## Outline Drawing – SOD523



**DIMENSIONS**

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.50	0.70	0.020	0.028
b	0.25	0.35	0.010	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H <sub>E</sub>	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

## Marking



## Ordering information

Order code	Package	Base qty	Delivery mode
MSD5C031V	SOD523	5000	Tape and reel

## 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 [Me-TECH](#) manufacturer:*

Other Similar products are found below :

[60KS200C](#) [D18V0L1B2LP-7B](#) [D5V0F4U5P5-7](#) [DESD5V0U1BB-7](#) [NTE4902](#) [P4KE27CA](#) [P6KE11CA](#) [P6KE39CA-TP](#) [P6KE8.2A](#)  
[SA110CA](#) [SA60CA](#) [SA64CA](#) [SMBJ12CATR](#) [SMBJ33CATR](#) [SMBJ8.0A](#) [ESD101-B1-02ELS E6327](#) [ESD105-B1-02EL E6327](#) [ESD112-B1-02EL E6327](#) [ESD119B1W01005E6327XTSA1](#) [ESD5V0L1B02VH6327XTSA1](#) [ESD7451N2T5G](#) [19180-510](#) [CPDT-5V0USP-HF](#)  
[3.0SMCJ33CA-F](#) [3.0SMCJ36A-F](#) [HSPC16701B02TP](#) [D3V3Q1B2DLP3-7](#) [D55V0M1B2WS-7](#) [DESD5V0U1BL-7B](#) [DRTR5V0U4SL-7](#)  
[SCM1293A-04SO](#) [ESD200-B1-CSP0201 E6327](#) [SM12-7](#) [SMLJ45CA-TP](#) [CEN955 W/DATA](#) [82350120560](#) [VESD12A1A-HD1-GS08](#)  
[CPDUR5V0R-HF](#) [CPDQC5V0U-HF](#) [CPDQC5V0USP-HF](#) [CPDQC5V0-HF](#) [D1213A-01LP4-7B](#) [D1213A-02WL-7](#) [MMAD1108/TR13](#)  
[5KP100A](#) [5KP15A](#) [5KP18A](#) [5KP48A](#) [5KP90A](#) [5KP90CA](#)