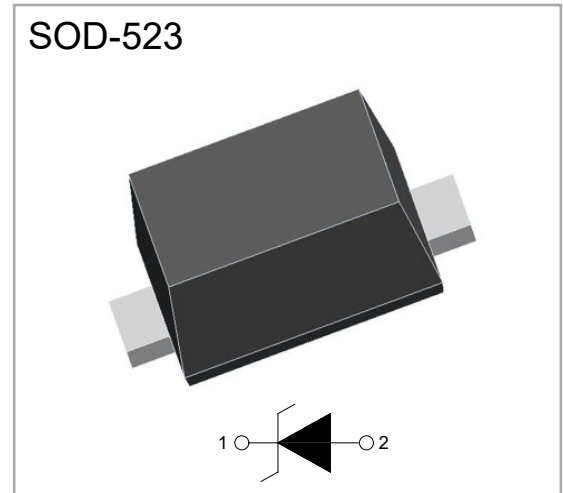


■ Features

- 240 Watts Peak Pulse Power per (tp=8/20us)
- Low clamping voltage
- Stand-off voltages: 2.5V to 12V
- Low leakage current
- Response Time is Typically <1ns
- IEC61000-4-2 Level 4 ESD protection
- IEC61000-4-4 Level 4 EFT Protection
- ESD Rating of Class 3(>16kV) per Human Body Model

SOD-523



■ Mechanical Data

- SOD-523 package
- Molding compound flammability rating: UL 94V-0
- High temperature soldering guaranteed: 260 °C/10s
- Device Meets MSL 1 Requirements
- Packaging: Tape and Reel

■ Absolute Maximum Rating($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameters	Symbol	Value	Unit
ESD per IEC61000-4-2(Air) ESD per IEC61000-4-2(Contact)	V_{ESD}	± 30	kV
IEC 61000-4-4(EFT)		40	A
ESD Voltage per human body model		16	kV
ESD Voltage per machine model		400	v
Total Power Dissipation on FR-5 Board (note 1)@ $T_a=25^\circ\text{C}$	P_{PP}	200	W
Operating temperature	T_{OPT}	-55-+150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55-+150	$^\circ\text{C}$
Lead Soldering temperature-Maximum (10 second Duration)	T_L	260(10 sec.)	$^\circ\text{C}$

These ratings are limiting values above which the serviceability of the diode may be impaired

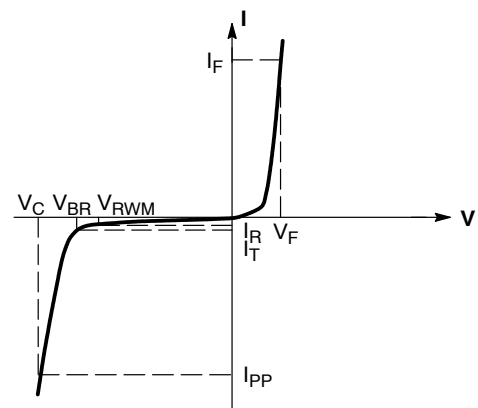
Note 1. FR-5=1.0x0.75x0.62 in.

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

DEVICE	DEVICE MARKING	VRWM (V) (max.)	IR(μA) @VRWM (max.)	VBR(V) @IT(note2) (min.)	IT (mA)	Vc@5A (V) (Typ.)	Vc (V) (max.) (@A)		Ppk (W) (max.)	C (pF) (Typ.)
ESD5Z2.5	ZD	2.5	6.0	4.0	1.0	6.5	10.9	11.0	120	145
ESD5Z3.3	ZE	3.3	0.05	5.0	1.0	8.4	14.1	11.2	158	105
ESD5Z5.0	ZF	5.0	0.05	6.2	1.0	11.6	18.6	9.4	174	80
ESD5Z6.0	ZG	6.0	0.01	6.8	1.0	12.4	20.5	8.8	181	70
ESD5Z7.0	ZH	7.0	0.01	7.5	1.0	13.5	22.7	8.8	200	65
ESD5Z12	ZM	12	0.01	14.1	1.0	17	25	9.6	240	55

■ 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
I _F	Forward Current
V _F	Forward Voltage @ I _F
P _{PK}	Peak Power Dissipation
C	Max. Capacitance @ VR=0 and f=1MHZ



Uni-Directional TVS



■ Typical Characteristics

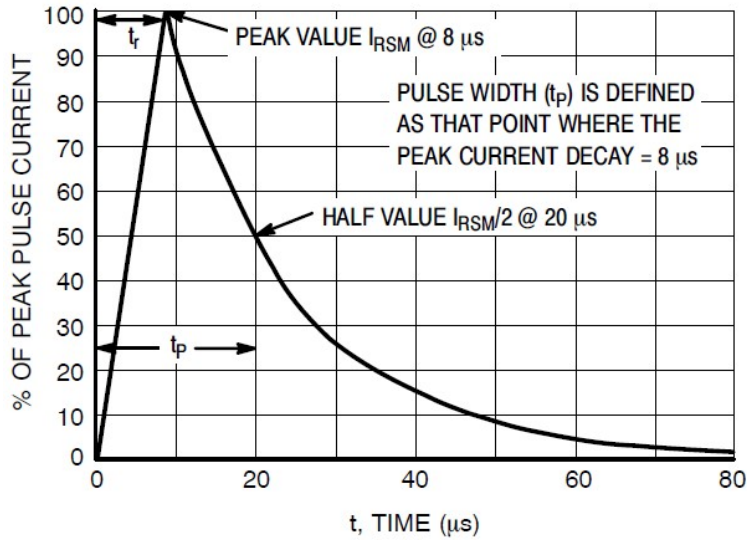


Figure 1. 8 x 20 μs Pulse Waveform

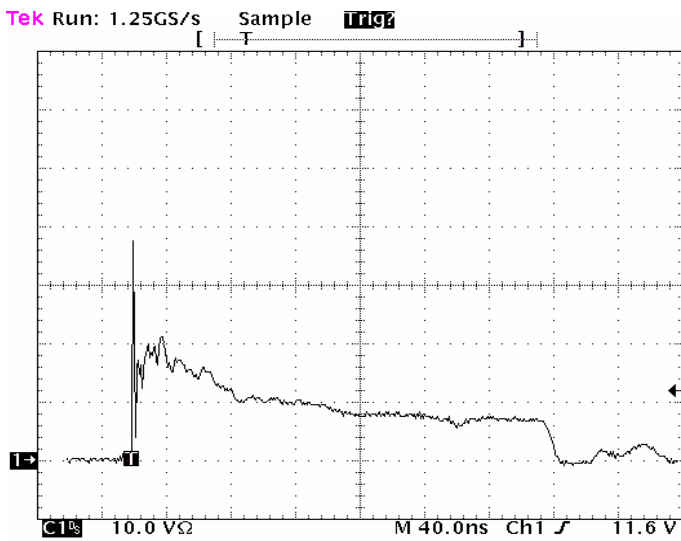


Figure 2. ESD Clamping Voltage Screenshot
Positive 8 kV contact per IEC 61000-4-2

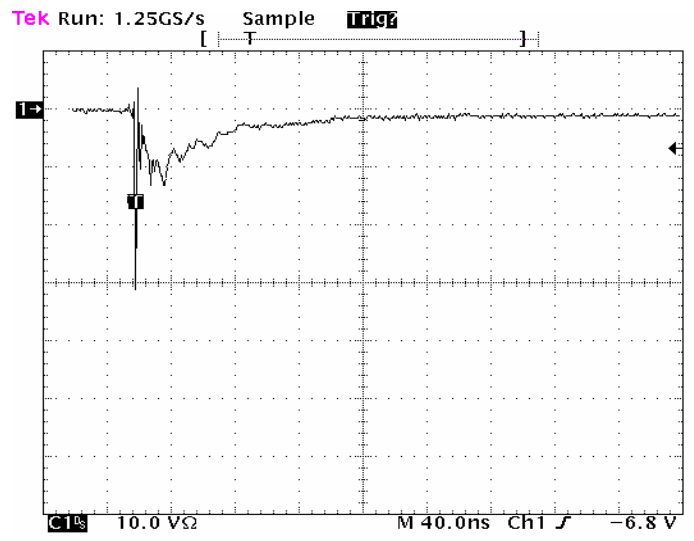
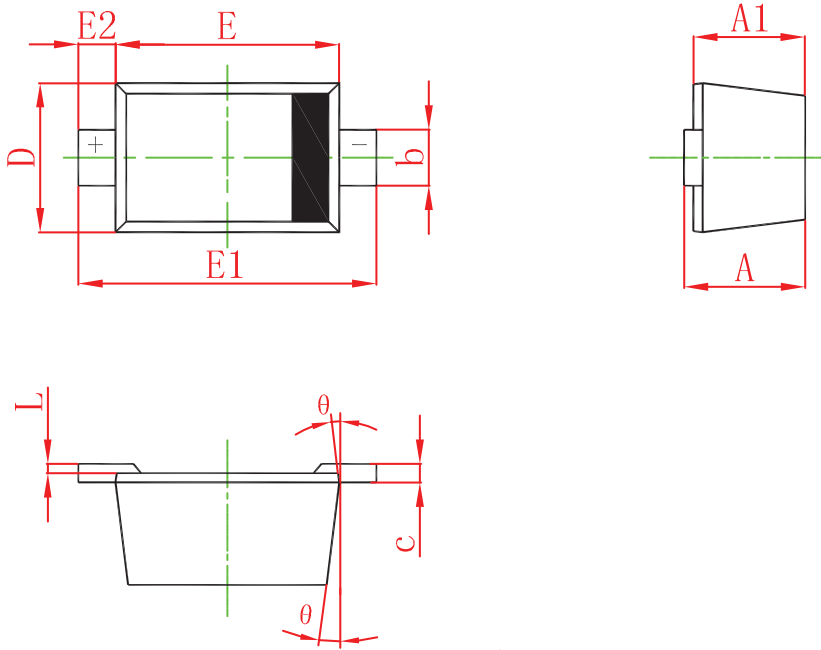


Figure 3. ESD Clamping Voltage Screenshot
Negative 8 kV contact per IEC 61000-4-2



■ SOD-523 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

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 [DOWO](#) manufacturer:

Other Similar products are found below :

[60KS200C](#) [D18V0L1B2LP-7B](#) [D5V0F4U5P5-7](#) [NTE4902](#) [P4KE27CA](#) [P6KE11CA](#) [P6KE8.2A](#) [SA60CA](#) [SA64CA](#) [SMBJ12CATR](#)
[SMBJ33CATR](#) [SMBJ6.5A](#) [SMBJ8.0A](#) [ESD101-B1-02ELS E6327](#) [ESD112-B1-02EL E6327](#) [ESD7451N2T5G](#) [19180-510](#) [CPDT-5V0USP-](#)
[HF](#) [3.0SMCJ33CA-F](#) [3.0SMCJ36A-F](#) [HSPC16701B02TP](#) [JANTX1N6126A](#) [D3V3Q1B2DLP3-7](#) [D55V0M1B2WS-7](#) [SCM1293A-04SO](#)
[ESD200-B1-CSP0201 E6327](#) [SM12-7](#) [CEN955 W/DATA](#) [VESD12A1A-HD1-GS08](#) [CPDQC5V0-HF](#) [D1213A-01LP4-7B](#) [ESD101-B1-02EL](#)
[E6327](#) [AOZ8808DI-03](#) [5KP15A](#) [5KP48A](#) [5KP90A](#) [ESD3V3D7-TP](#) [15KPA36A-LF](#) [P4KE56CA](#) [P4KE68A](#) [P4KE91CATR](#) [P6KE120A](#)
[P6KE13CA](#) [P6KE43CA](#) [P6KE6.8CA](#) [P6KE8.2](#) [P6SMBJ20CA](#) [JANTX1N6072A](#) [SR2835ESKG](#) [SA90CA](#)