

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet

**PACKAGE OUTLINE**



SOD-523

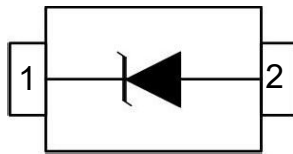
**FEATURES**

- ✧ IEC61000-4-2 Level 4 ESD Protection
- ✧ Protects one directional I/O line
- ✧ Low clamping voltage
- ✧ Working voltages : 36V
- ✧ Low leakage current

**MACHANICAL DATA**

- ✧ SOD-523 package
- ✧ Flammability Rating: UL 94V-0
- ✧ Packaging: Tape and Reel
- ✧ High temperature soldering guaranteed:260°C/10s
- ✧ Reel size: 7 inch

**PIN CONFIGURATION**



**APPLICATIONS**

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

<b>ABSOLUTE MAXIMUM RATING</b>			
<b>Symbol</b>	<b>Parameter</b>	<b>Value</b>	<b>Unit</b>
$V_{ESD}$	ESD per IEC 61000-4-2 (Air)	±25	kV
	ESD per IEC 61000-4-2 (Contact)	±20	
$P_D$	Total Power Dissipation on FR-5 Board (Note 1) @ $T_a=25^{\circ}C$	150	mW
$T_{OPT}$	Operating Temperature	-55~125	°C
$T_{STG}$	Storage Temperature	-55~150	°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 (Tamb=25°C)						
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V <sub>RWM</sub>	Reverse Working Voltage				36	V
V <sub>BR</sub>	Reverse Breakdown Voltage	I <sub>T</sub> = 1mA	40			V
I <sub>R</sub>	Reverse Leakage Current	V <sub>RWM</sub> = 36V			5	μA
V <sub>C</sub>	Clamping Voltage	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs			55	V
C <sub>J</sub>	Junction Capacitance	V <sub>R</sub> = 0V, f = 1MHz			28	pF

**ELECTRICAL CHARACTERISTICS CURVE**

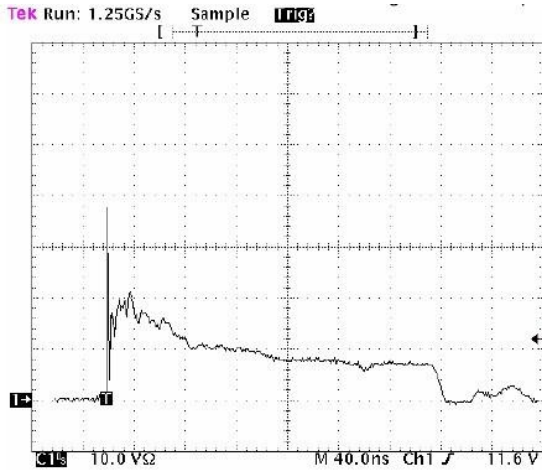


Figure 1. ESD Clamping Voltage Screenshot  
Positive 8 kV contact per IEC 61000-4-2

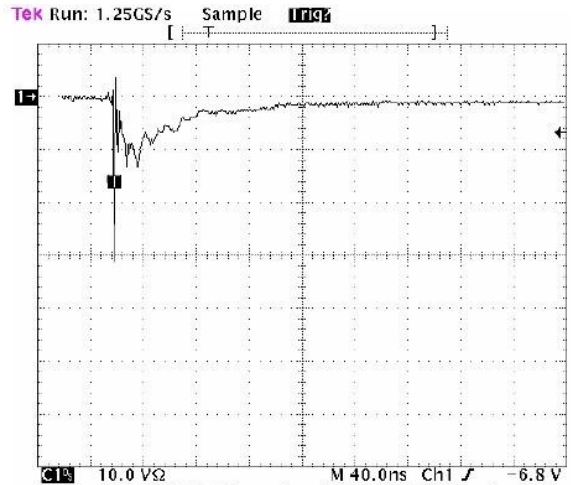
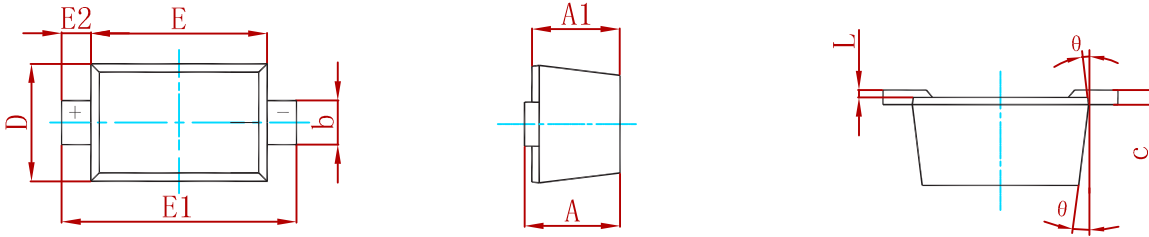


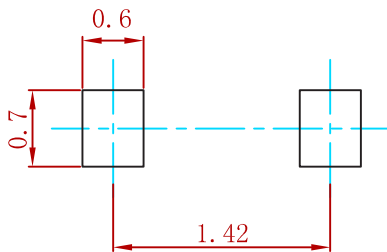
Figure 2. ESD Clamping Voltage Screenshot  
Negative 8 kV contact per IEC 61000-4-2

**PACKAGE MECHANICAL DATA**



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	

**Suggested Pad Layout**



- Note:
1. Controlling dimension: in millimeters.
  2. General tolerance: ± 0.05mm.
  3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
ESD5Z36V-MS	SOD-523	3000

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