

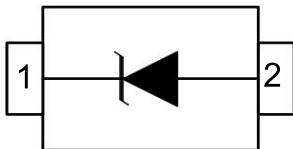
DESCRIPTION

The ESD5Z Series 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. Because of its small size, it is suited for use in cellular phones, portable devices, digital cameras, power supplies and many other portable applications.

ORDERING INFORMATION

- ✧ Device: ESD5ZXXX
- ✧ Package: SOD-523
- ✧ Material: Halogen free
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 3,000pcs

PIN CONFIGURATION



FEATURES

- ✧ IEC61000-4-2 Level 4 ESD Protection
- ✧ Protects one directional I/O line
- ✧ Low clamping voltage
- ✧ Working voltages : 3.3V, 5V,7V,12V
- ✧ 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

APPLICATIONS

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

PACKAGE OUTLINE



ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Air)	± 30	kV
	ESD per IEC 61000-4-2 (Contact)	± 30	
ESD	ESD Voltage per human body model	16	kV
	ESD Voltage per machine model	400	V
P_D	Total Power Dissipation on FR-5 Board (Note 1) @ $T_a=25^\circ C$	150	mW
T_J, T_{STG}	Junction and Storage Temperature	-55/+150	$^\circ C$
T_L	Lead Solder Temperature – Maximum (10 Second Duration)	260	$^\circ C$

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)

PART NUMBER	DEVICE MARKING	V _{RWM} (V) (max.)	I _R (μA) (max.)	V _B (V) (min.)	I _T (mA)	V _{C@5A} (V) (max.)	V _C (V) (max.) (@A)	P _{PK} (W) (max.)	C _J (pF) (typ.)
ESD5Z3.3	ZE	3.3	0.90	5.0	1	9.4	14.1	11.2	158
ESD5Z5.0	ZF	5.0	0.08	6.2	1	11.6	18.6	9.4	174
ESD5Z7.0	ZH	7.0	0.03	7.5	1	13.5	22.7	8.8	200
ESD5Z12	ZM	12.0	0.02	14.1	1	23.0	29.0	6.0	174

ELECTRICAL CHARACTERISTICS CURVE

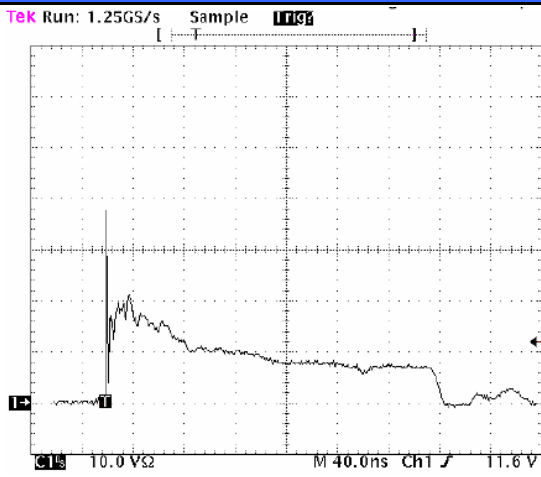


Figure 1. ESD Clamping Voltage Screenshot
Positive 8 kV contact per IEC 61000-4-2

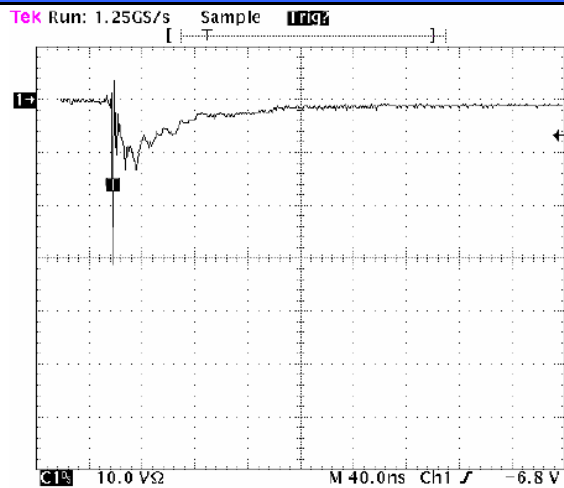
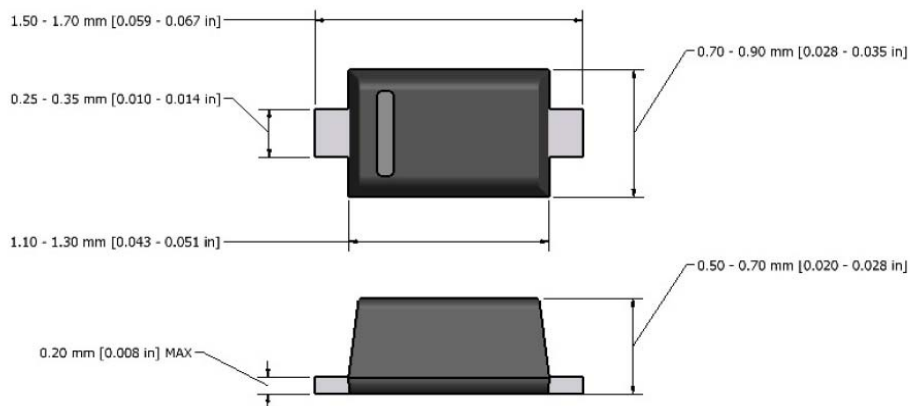


Figure 2. ESD Clamping Voltage Screenshot
Negative 8 kV contact per IEC 61000-4-2

SOD-523 PACKAGE OUTLINE DIMENSIONS



Note: Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.