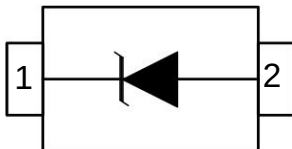


DESCRIPTION

The ESD5Zxxx 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 : 2.5V, 3.3V, 5V, 6V, 7V, 12V, 15V
- ✧ 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)	±22	
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) @ $T_a=25^{\circ}\text{C}$	150	mW
T_J, T_{STG}	Junction and Storage Temperature	-55/+150	$^{\circ}\text{C}$
T_L	Lead Solder Temperature – Maximum (10 Second Duration)	260	$^{\circ}\text{C}$

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 (Tamb=25°C)

PART NUMBER	DEVICE MARKING	V_{RWM} (V)	I_R (μ A)	V_B (V)	I_T (mA)	V_C (V)		V_C (V)		P_{PK} (W)	C_J (pF)
		Max	Max	Min		Max	@A	Max	@A	Max	Max
ESD5Z2V5	ZD + code	2.5	6.0	4.0	1	9.0	5.0	11.5	9.0	104	145
ESD5Z3V3	ZE + code	3.3	0.90	5.0	1	10.0	5.0	14.0	7.5	105	105
ESD5Z5V0	ZF + code	5.0	0.08	6.2	1	11.6	5.0	15.0	7.0	105	80
ESD5Z6V0	ZG + code	6.0	0.05	6.8	1	13.5	5.0	17.5	6.0	105	70
ESD5Z7V0	ZH + code	7.0	0.03	7.5	1	14.0	5.0	18.0	6.0	108	65
ESD5Z12V	ZM + code	12.0	0.03	14.1	1	20.0	1.0	26.0	4.0	104	45
ESD5Z15V	ZN + code	15.0	0.50	16.0	1	23.0	1.0	30.0	4.0	120	28

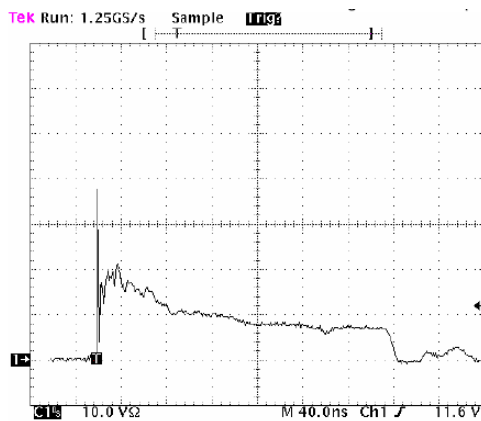
ELECTRICAL CHARACTERISTICS CURVE


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

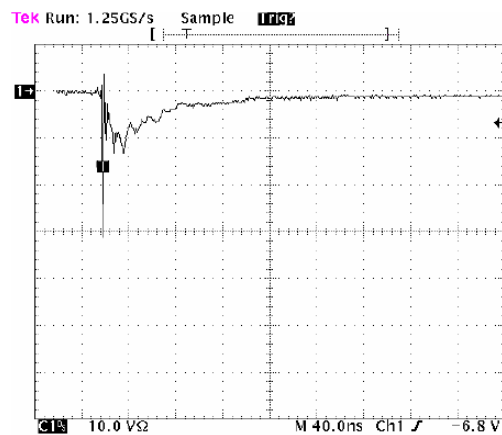
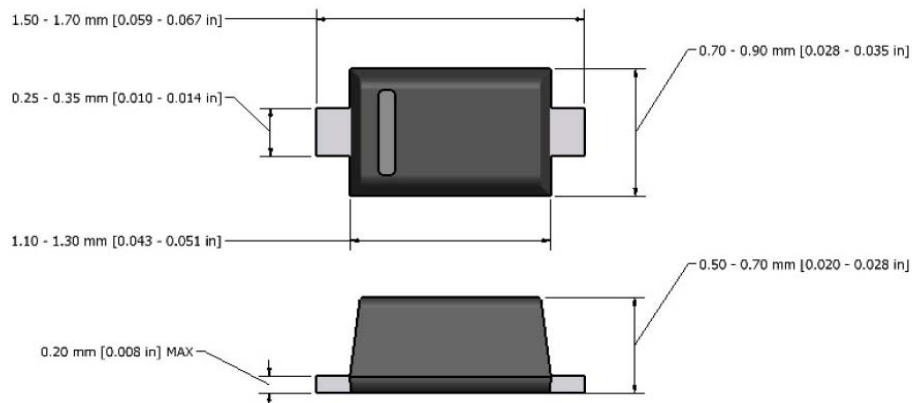


Figure 2. ESD Clamping Voltage Screenshot
Negative 8 kV contact per IEC 61000-4-2

SOD-523 PACKAGE OUTLINE DIMENSIONS


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