

### DESCRIPTION

The ESD5Z36 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.

### 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

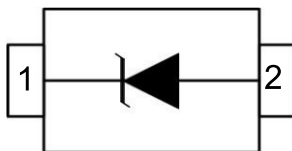
### ORDERING INFORMATION

- ✧ Device: ESD5Z36
- ✧ Package: SOD-523
- ✧ Marking: 5Y or ZS
- ✧ Material: Halogen free
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 3,000pcs

### APPLICATIONS

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

### PIN CONFIGURATION



### PACKAGE OUTLINE



### ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Unit
$V_{ESD}$	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	±25 ±20	kV
$P_D$	Total Power Dissipation on FR-5 Board (Note 1) @ $T_a=25^\circ\text{C}$	150	mW
$T_{OPT}$	Operating Temperature	-55~125	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55~150	$^\circ\text{C}$

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)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
$V_{RWM}$	Reverse Working Voltage				36	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	40			V
$I_R$	Reverse Leakage Current	$V_{RWM} = 36\text{V}$			5	$\mu\text{A}$
$V_C$	Clamping Voltage	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$			55	V
$C_J$	Junction Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$			28	pF

### ELECTRICAL CHARACTERISTICS CURVE

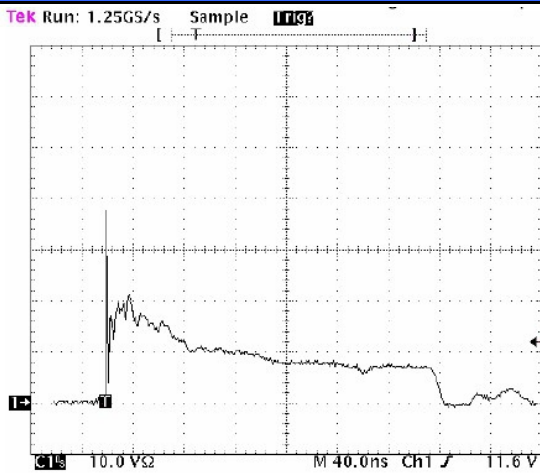


Figure 1. ESD Clamping Voltage Screenshot  
Positive 8 kV contact per IEC 61000-4-2

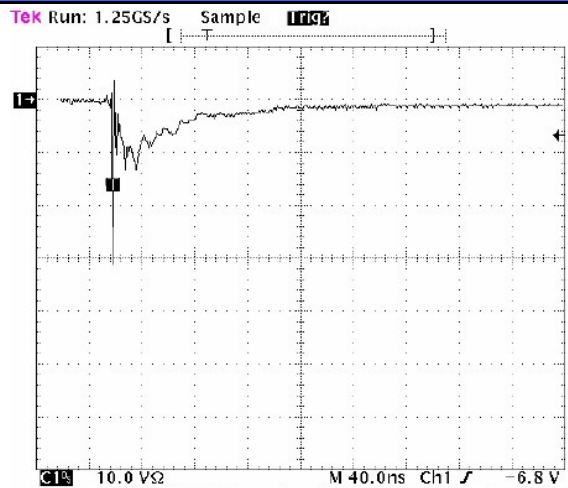
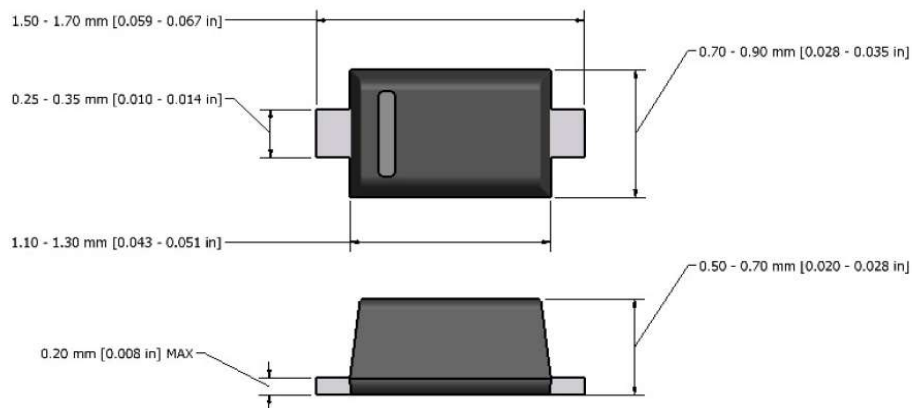


Figure 2. ESD Clamping Voltage Screenshot  
Negative 8 kV contact per IEC 61000-4-2

### SOD-523 PACKAGE OUTLINE DIMENSIONS



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