

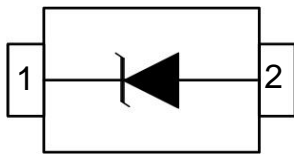
### DESCRIPTION

The ESD5Z3V3 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: ESD5Z3.3
- ◇ Package: SOD-523
- ◇ Material: Halogen free
- ◇ Packing: Tape & Reel
- ◇ Quantity per reel: 3,000 pcs

### PIN CONFIGURATION



### FEATURES

- ◇ IEC61000-4-2 Level 4 ESD Protection
- ◇ Protects one directional I/O line
- ◇ Low clamping voltage
- ◇ Working voltages : 3.3V
- ◇ Low leakage current

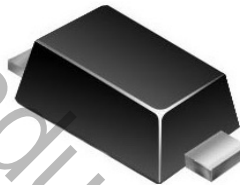
### MACHANICAL DATA

- ◇ 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



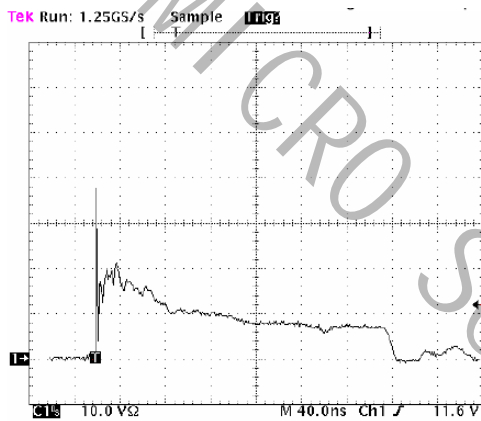
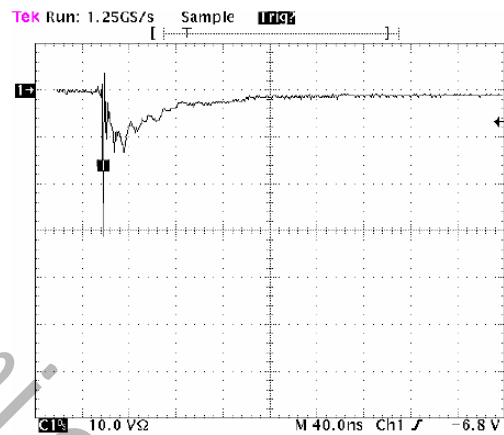
| ABSOLUTE MAXIMUM RATING           |  |          |       |
|-----------------------------------|--|----------|-------|
| Symbol                            | Parameter  | Value    | Units |
| V <sub>ESD</sub>                  | ESD per IEC 61000-4-2 (Air)                              | ±30      | kV    |
|                                   | 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 <sub>D</sub>                    | Total Power Dissipation on FR-5 Board (Note 1) @ Ta=25°C | 150      | mW    |
| T <sub>J</sub> , T <sub>STG</sub> | Junction and Storage Temperature                         | -55/+150 | °C    |
| T <sub>L</sub>                    | Lead Solder Temperature – Maximum (10 Second Duration)   | 260      | °C    |

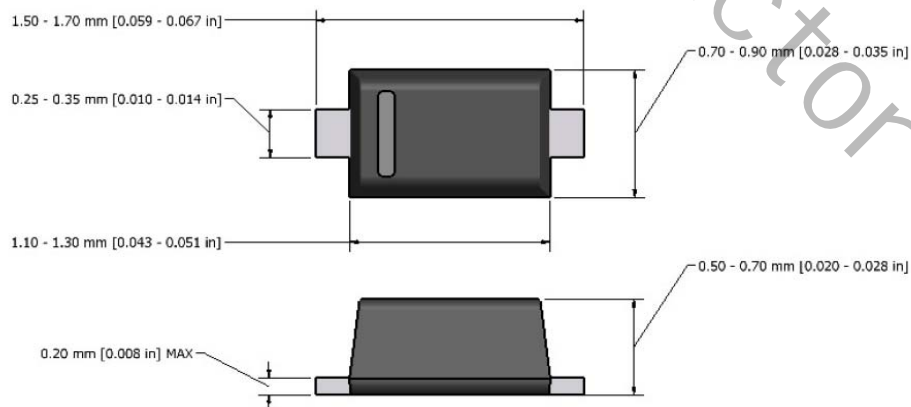
These ratings are limiting values above which the serviceability of the diode may be impaired

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

**ELECTRICAL CHARACTERISTICS (Tamb=25°C)**

| PART NUMBER | DEVICE MARKING | V <sub>RWM</sub> | I <sub>R</sub> | V <sub>B</sub> | I <sub>T</sub> | V <sub>C</sub> |     | V <sub>C</sub> |      | P <sub>PK</sub> | C <sub>J</sub> |
|-------------|----------------|------------------|----------------|----------------|----------------|----------------|-----|----------------|------|-----------------|----------------|
|             |                | (V)              | (μA)           | (V)            | (mA)           | (V)            | (V) | (W)            | (pF) |                 |                |
|             |                | Max              | Max            | Min            |                | Max            | @A  | Max            | @A   | Max             | Max            |
| ESD5Z3.3    | ZE             | 3.3              | 0.90           | 5.0            | 1              | 10.0           | 5.0 | 14.0           | 7.5  | 105             | 105            |

**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.