

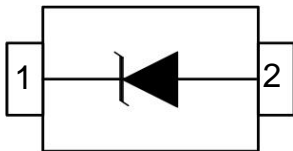
DESCRIPTION

The ESD5Z5V0 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: ESD5Z5V0
- ✧ 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 : 5.0V
- ✧ Low leakage current

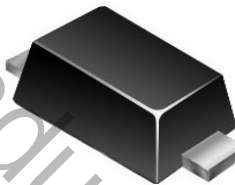
MACHANICAL DATA

- ✧ 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) @ $T_a=25^{\circ}C$ | 150 | mW |
| T_J, T_{STG} | Junction and Storage Temperature | -55/+150 | $^{\circ}C$ |
| T_L | Lead Solder Temperature – Maximum (10 Second Duration) | 260 | $^{\circ}C$ |

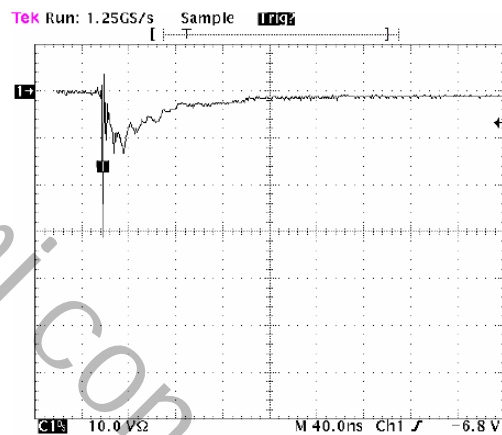
These ratings are limiting values above which the serviceability of the diode may be impaired

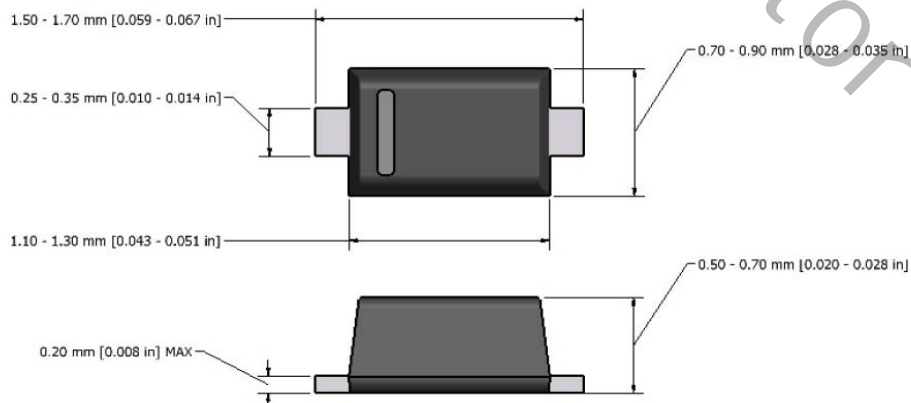
Note 1. FR-5=1.0x0.75x0.62 in.

ELECTRICAL CHARACTERISTICS (Tamb=25°C)

| PART NUMBER | DEVICE MARKING | V _{RWM} | I _R | V _B | I _T | V _C | | V _C | | P _{PK} | C _J |
|-------------|----------------|------------------|----------------|----------------|----------------|----------------|-----|----------------|------|-----------------|----------------|
| | | (V) | (μA) | (V) | (mA) | (V) | (V) | (W) | (pF) | | |
| | | Max | Max | Min | | Max | @A | Max | @A | Max | Max |
| ESD5Z5V0 | ZF | 5.0 | 0.08 | 6.2 | 1 | 11.6 | 5.0 | 15.0 | 7.0 | 105 | 80 |

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.