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SEMICONDUCTOR



ESD



TVS



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PLED

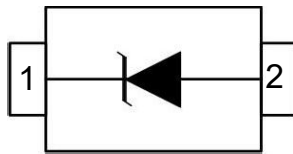
Product data sheet

PACKAGE OUTLINE



SOD-523

PIN CONFIGURATION



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

APPLICATIONS

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

| ABSOLUTE MAXIMUM RATING | | | |
|--------------------------------|--|--------------|-------------|
| Symbol | Parameter | Value | Unit |
| V_{ESD} | ESD per IEC 61000-4-2 (Air) | ±25 | kV |
| | ESD per IEC 61000-4-2 (Contact) | ±20 | |
| P_D | Total Power Dissipation on FR-5 Board (Note 1) @ $T_a=25^{\circ}C$ | 150 | mW |
| T_{OPT} | Operating Temperature | -55~125 | °C |
| T_{STG} | Storage Temperature | -55~150 | °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 = 1mA | 40 | | | V |
| I _R | Reverse Leakage Current | V _{RWM} = 36V | | | 5 | μA |
| V _C | Clamping Voltage | I _{PP} = 1A, t _p = 8/20μs | | | 55 | V |
| C _J | Junction Capacitance | V _R = 0V, f = 1MHz | | | 28 | pF |

ELECTRICAL CHARACTERISTICS CURVE

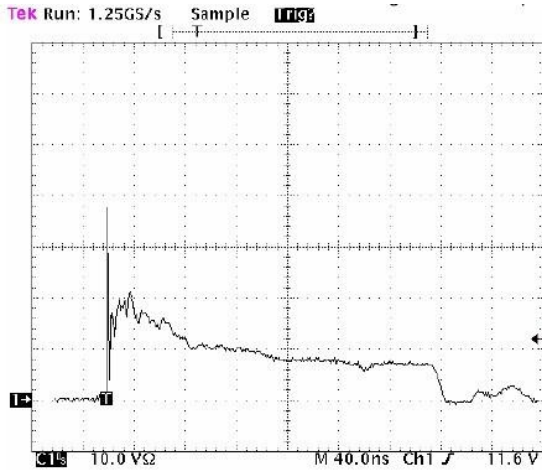


Figure 1. ESD Clamping Voltage Screenshot
Positive 8 kV contact per IEC 61000-4-2

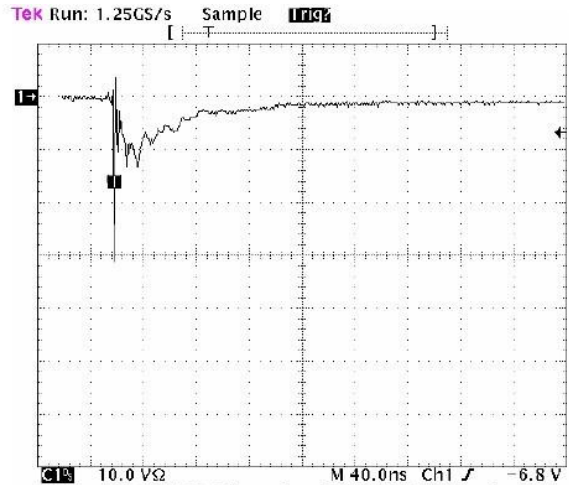
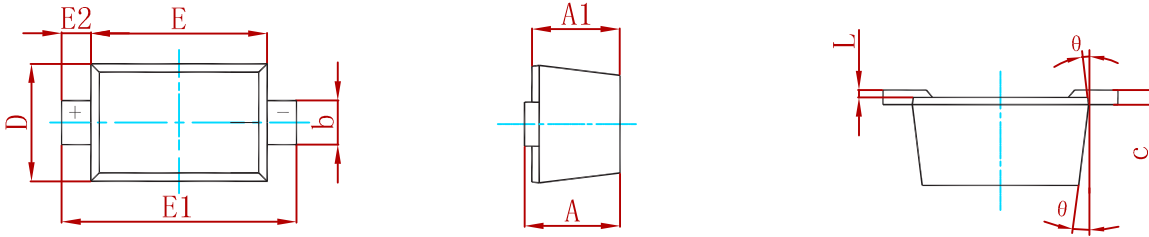


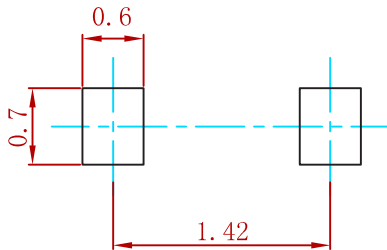
Figure 2. ESD Clamping Voltage Screenshot
Negative 8 kV contact per IEC 61000-4-2

PACKAGE MECHANICAL DATA



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.510 | 0.770 | 0.020 | 0.031 |
| A1 | 0.500 | 0.700 | 0.020 | 0.028 |
| b | 0.250 | 0.350 | 0.010 | 0.014 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 0.750 | 0.850 | 0.030 | 0.033 |
| E | 1.100 | 1.300 | 0.043 | 0.051 |
| E1 | 1.500 | 1.700 | 0.059 | 0.067 |
| E2 | 0.200 REF | | 0.008 REF | |
| L | 0.010 | 0.070 | 0.001 | 0.003 |
| θ | 7° REF | | 7° REF | |

Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: ± 0.05mm.
 3. The pad layout is for reference purposes only.

REEL SPECIFICATION

| P/N | PKG | QTY |
|-------------|---------|------|
| ESD5Z36V-MS | SOD-523 | 3000 |

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