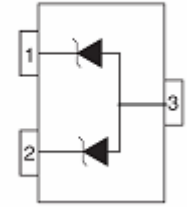


Description

TVS diodes are designed to replace multilayer varistors (MLVs) in portable applications such as cell phones, notebook computers, and PDA's. They offer superior electrical characteristics such as lower clamping voltage and no device degradation when compared to MLVs.

The SESLC5VT523-3U is a TVS array designed to protect I/O or data lines from the damaging effects of ESD. The SOT-523 is a very small package which allows space saving on high density printed circuit board and also gives the designer the flexibility to provide two I/O lines protection.



Feature

- Solid-state silicon-avalanche technology
- SOT-523 package
- Protect up two data lines
- Low clamping voltage
- Working voltage: 5V
- Low leakage current
- 125 watts peak pulse power($T_p=8/20\mu s$)
- Complies with the following standards: IEC 61000-4-2(ESD)Air-15kv,Contact-8kv

Applications

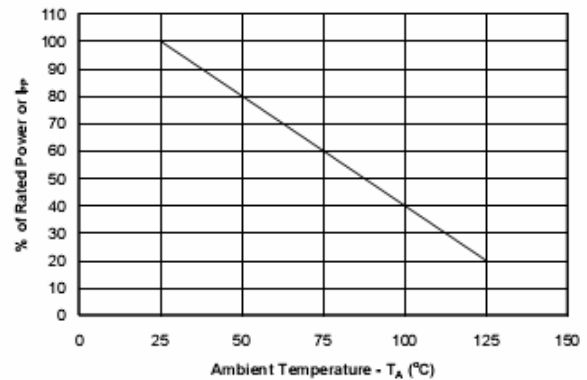
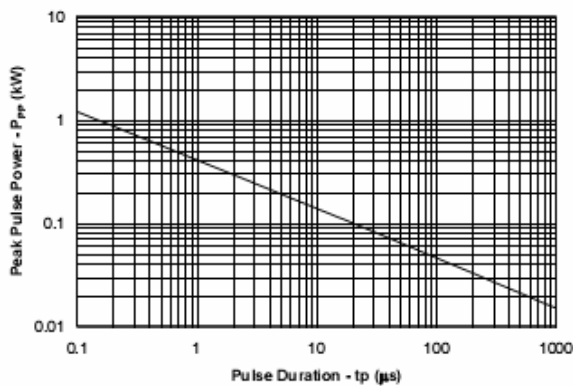
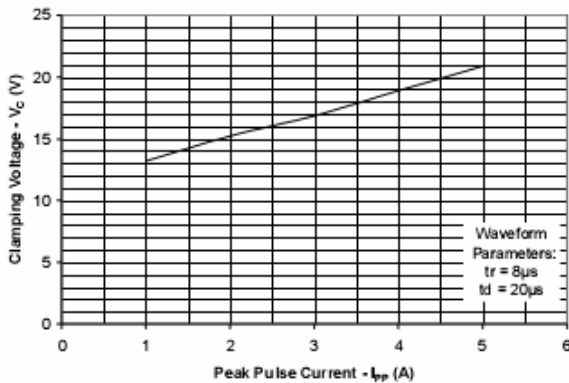
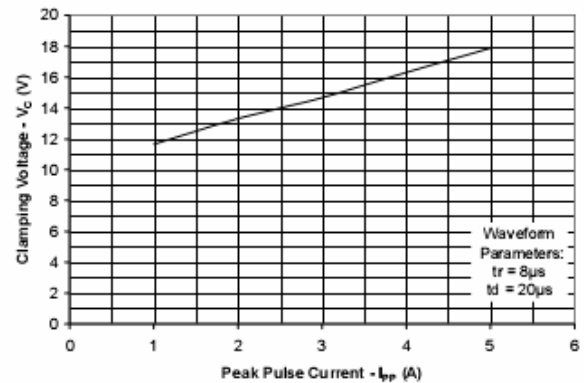
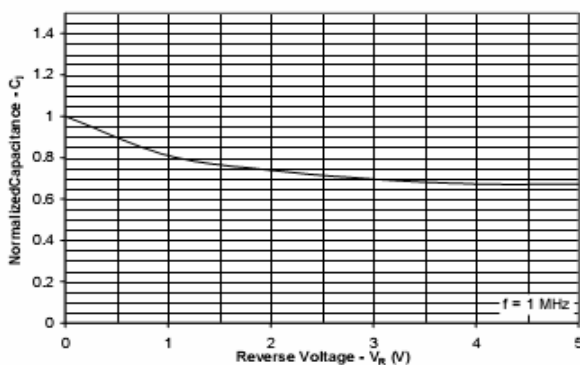
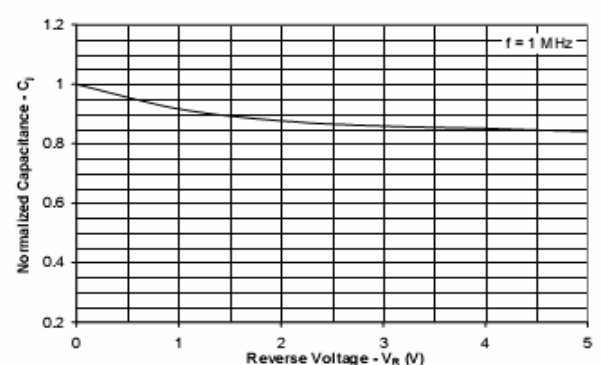
- High-Definition Multimedia Interface(HDMI)
- Mobile Display Digital Interface(MDDI)
- RF/Antenna Circuits
- USB 2.0&Firewire Ports
- HBT Power Amp Protection
- Infiniband Transceiver Protection

Electrical characteristics per line@25°C(unless otherwise specified)

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Units |
|---------------------------|-----------|--|------|------|------|---------|
| Reverse stand-off voltage | V_{RWM} | | | | 5 | V |
| Reverse Breakdown voltage | V_{BR} | $I_t = 1mA$ | 6 | | | V |
| Reverse Leakage Current | I_R | $V_{RWM} = 5V$ $T=25^\circ C$ | | | 1 | μA |
| Clamping Voltage | V_C | $I_{PP} = 1A$, $t_p = 8/20\mu S$ pin1 to pin2 | | | 15 | V |
| Clamping Voltage | V_C | $I_{PP} = 5A$, $t_p = 8/20\mu S$ pin1 or pin2 to pin3 | | | 22 | V |
| Clamping Voltage | V_C | $I_{PP} = 5A$, $t_p = 8/20\mu S$ pin1 to Pin2 | | | 25 | V |
| Junction Capacitance | C_j | $V_R=0V$ $f = 1MHz$ Pin1 to Pin2 | | 1.5 | | pF |
| Junction Capacitance | C_j | $V_R=0V$ $f = 1MHz$ pin1 or Pin2 to Pin3 | | 3 | | pF |

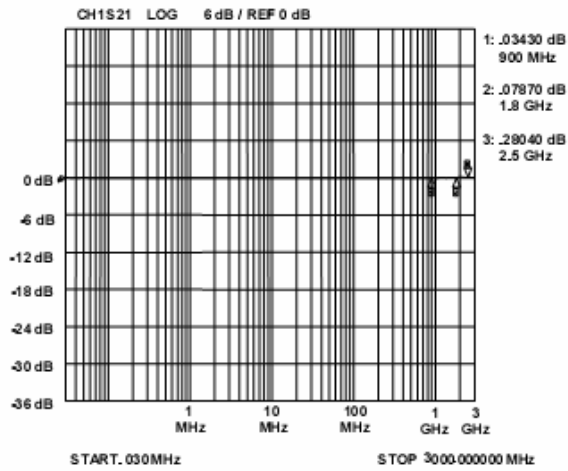
Absolute maximum rating @25°C

| Rating | Symbol | Value | Units |
|--------------------------------------|-----------|-------------|-------|
| Peak Pulse Power ($t_p=8/20\mu S$) | P_{pp} | 125 | Watts |
| Peak Pulse Power ($t_p=8/20\mu S$) | I_{pp} | 5 | A |
| Operating Temperature | T_J | -55 to +125 | °C |
| Storage Temperature | T_{STG} | -55 to +150 | °C |

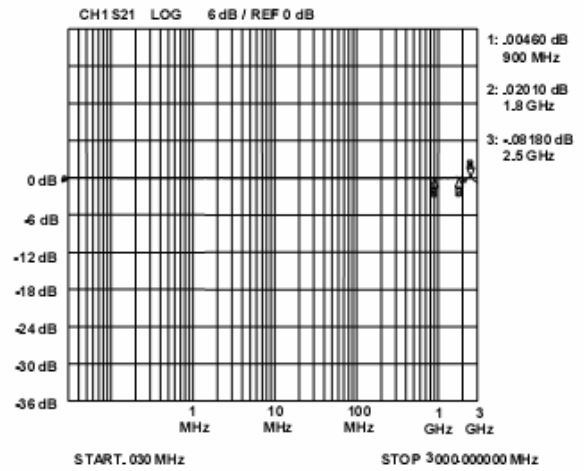
Typical Characteristics

**Clamping Voltage vs. Peak Pulse Current
Pin 1 to Pin 2**

**Clamping Voltage vs. Peak Pulse Current
Pin 1 or Pin 2 to Pin 3**

**Normalized Capacitance vs. Reverse Voltage
Pin 1 or Pin 2 to Pin 3**

**Normalized Capacitance vs. Reverse Voltage
Pin 1 to Pin 2**




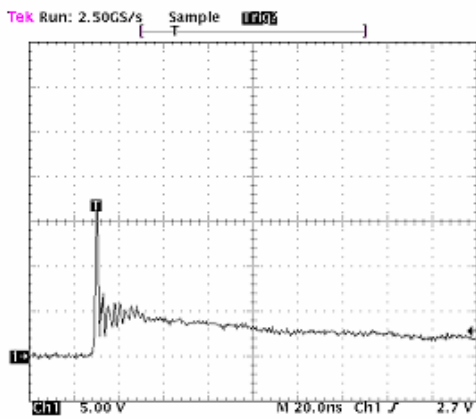
Insertion Loss S21 (Pin 1 to Pin 2)



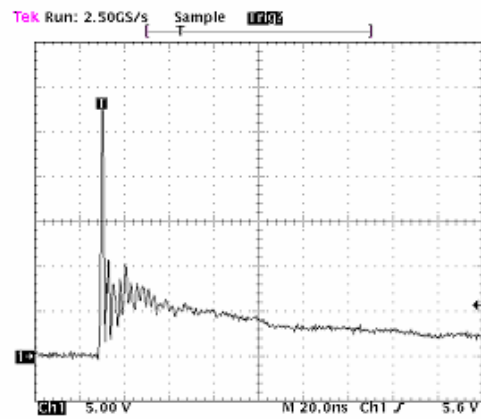
Insertion Loss S21 (Pin 1 or Pin 2 to Pin 3)



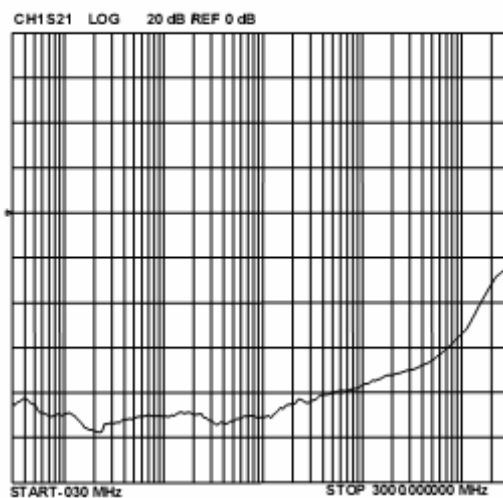
ESD Response (4kV Contact per IEC 61000-4-2)

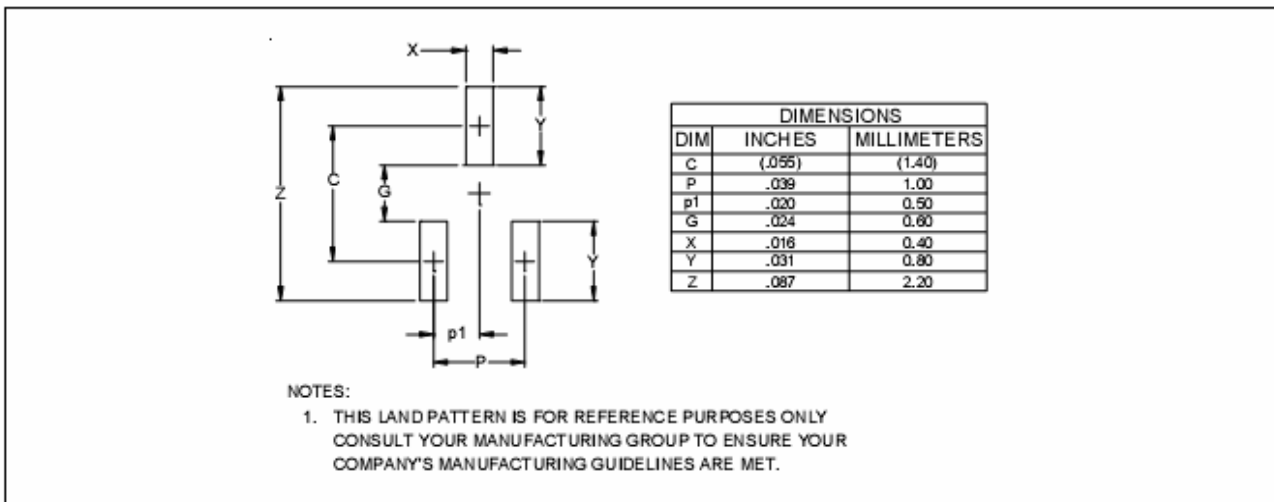
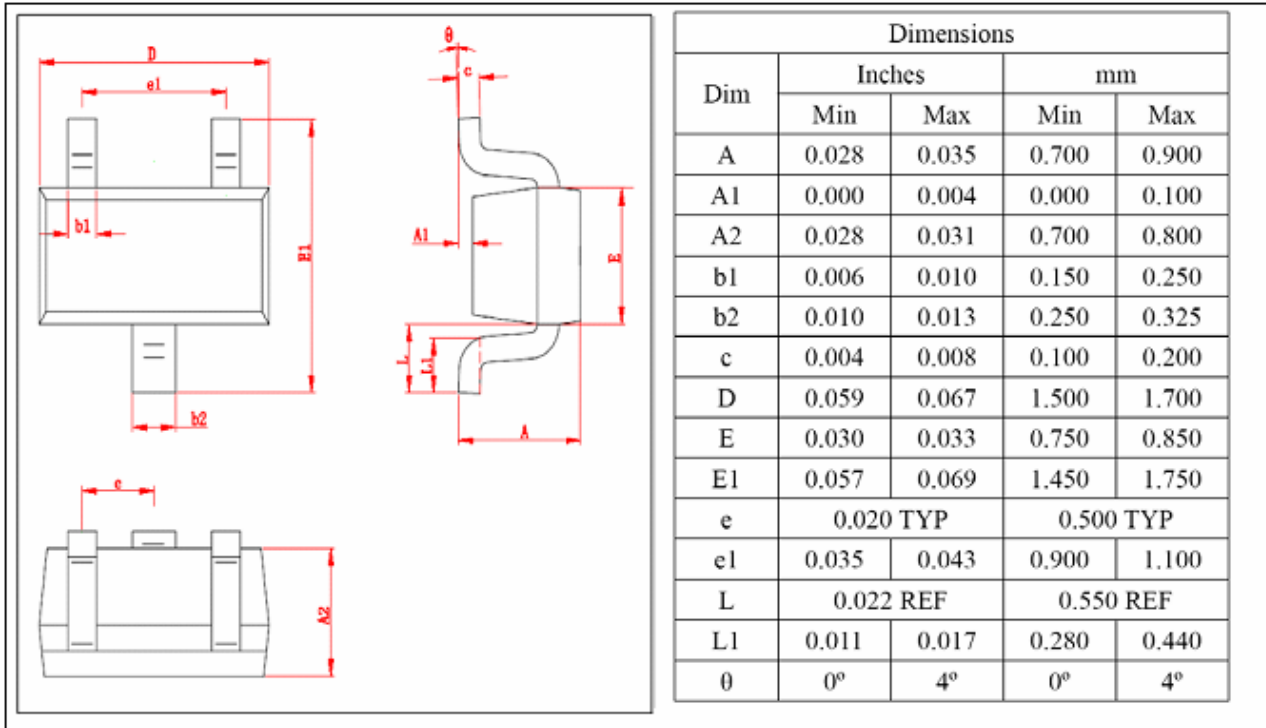


ESD Response (8kV Contact per IEC 61000-4-2)



Analog Crosstalk




Product dimension and pad size

Revision History

| Revision | Date | Changes |
|----------|-----------|---------|
| 1.0 | 2008-8-20 | - |

 Website: <http://www.semiteltech.com>

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