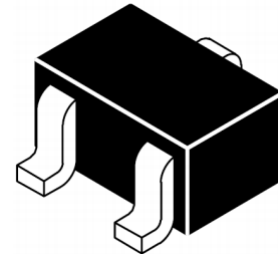


Features

- Ultra low leakage: nA level
- Operating voltage: 24V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 3A (8/20 μs)
- RoHS Compliant

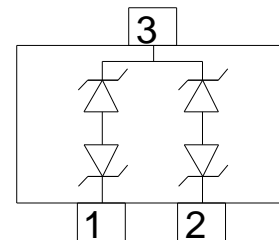
Dimensions SOT-323



Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Networking and Telecom
- Serial and Parallel Ports
- Peripherals

Pin Configuration



Mechanical Characteristics

- Package: SOT-323
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3000 pcs
- Reel Size: 7 inch
- Device Marking: TCL

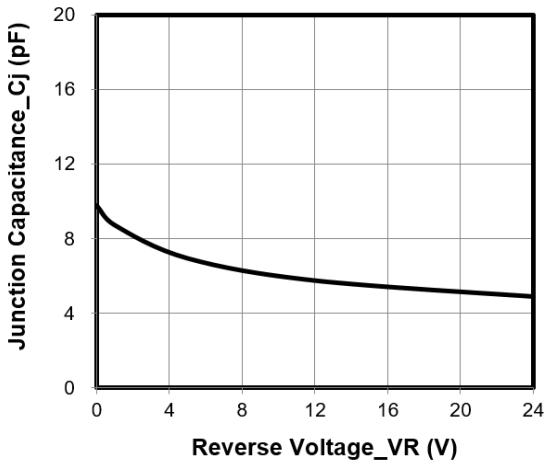
Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|------------------|-------------|------|
| Peak Pulse Power (8/20 μs) | P _{pp} | 150 | W |
| ESD per IEC 61000-4-2 (Air) | V _{ESD} | ± 30 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ± 30 | |
| Operating Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{STJ} | -55 to +150 | °C |

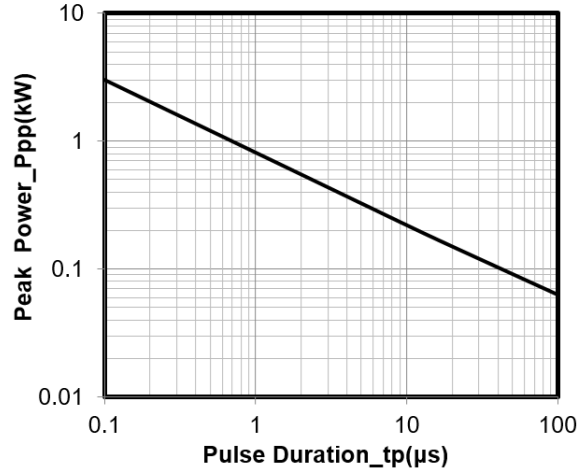
Electrical Characteristics (TA=25°C unless otherwise specified)

| Parameter | Symbol | Test Condition | Min | Typ | Max | Unit |
|-------------------------|-----------|--|-----|-----|-----|---------------|
| Reverse Working Voltage | V_{RWM} | | | | 24 | V |
| Breakdown Voltage | V_{BR} | $I_T = 1\text{mA}$ | 27 | | | V |
| Reverse Leakage Current | I_R | $V_{RWM} = 24\text{V}$ | | | 0.2 | μA |
| Clamping Voltage | V_C | $I_{PP} = 1\text{A}$ (8 x 20 μs pulse) | | | 36 | V |
| Clamping Voltage | V_C | $I_{PP} = 3\text{A}$ (8 x 20 μs pulse) | | | 50 | V |
| Junction Capacitance | C_J | $V_R = 0\text{V}$, $f = 1\text{MHz}$, Pin 1 to Pin 3 or Pin 2 to Pin 3 | | 10 | | pF |
| Junction Capacitance | C_J | $V_R = 0\text{V}$, $f = 1\text{MHz}$, Pin 1 to Pin 2 | | 5 | | pF |

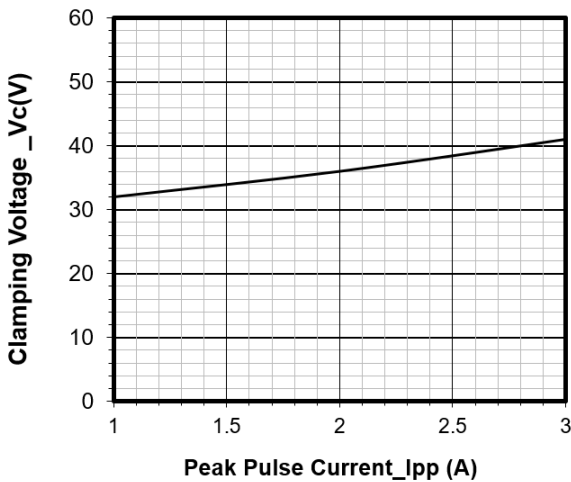
Typical Performance Characteristics(TA=25°C unless otherwise specified)



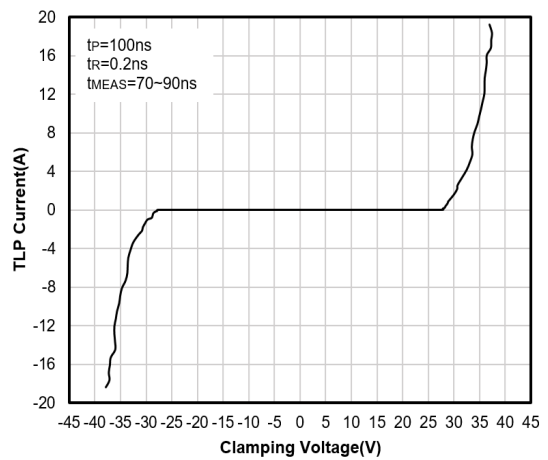
Junction Capacitance vs. Reverse Voltage



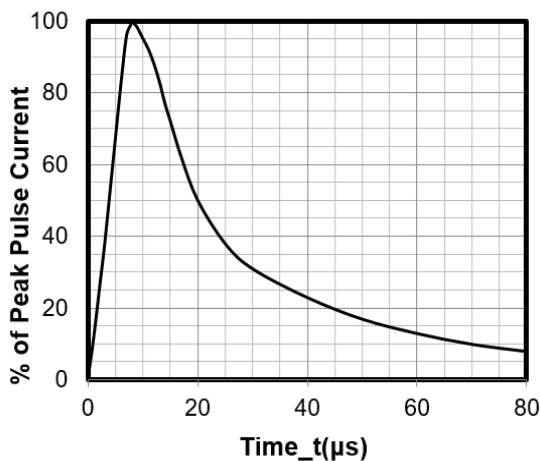
Peak Pulse Power vs. Pulse Time



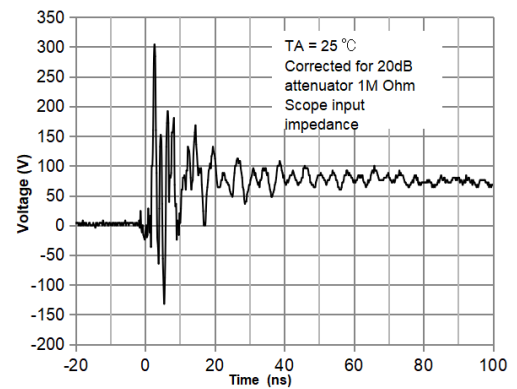
Clamping Voltage vs. Peak Pulse Current



TLP Curve

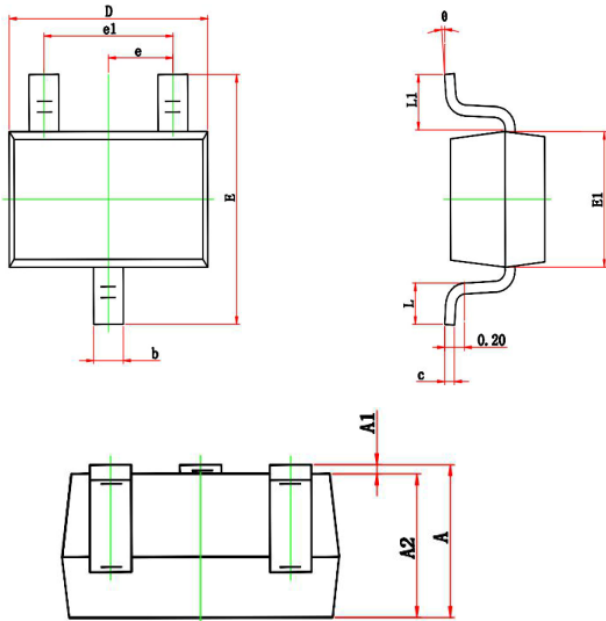


8 X 20μs Pulse Waveform



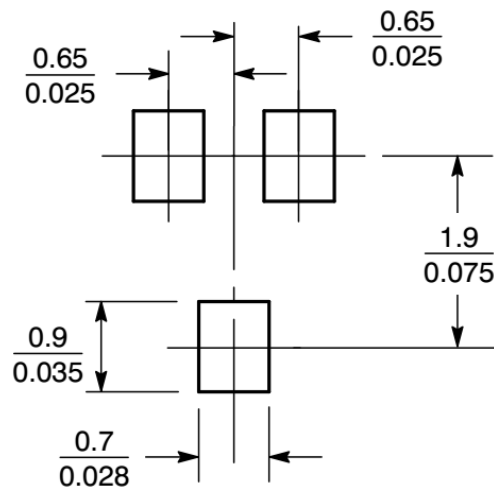
Note: Data is taken with a 10x attenuator
ESD Clamping Voltage
8 kV Contact per IEC61000-4-2

SOT-323 Package Outline Drawing



| Symbol | Dim in mm | | |
|--------|-----------|------|------|
| | Min | Nor | Max |
| A | 0.90 | 1.00 | 1.10 |
| A1 | 0.00 | 0.05 | 0.10 |
| A2 | 0.90 | 0.95 | 1.00 |
| b | 0.20 | 0.30 | 0.40 |
| c | 0.08 | 0.12 | 0.15 |
| D | 2.00 | 2.10 | 2.20 |
| E | 2.15 | 2.30 | 2.45 |
| E1 | 1.15 | 1.25 | 1.35 |
| e | 0.650TPY. | | |
| e1 | 1.2 | 1.3 | 1.4 |
| L | 0.26 | 0.36 | 0.46 |
| L1 | 0.525REF. | | |
| θ | 0° | 4° | 8° |

Suggested Land Pattern



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