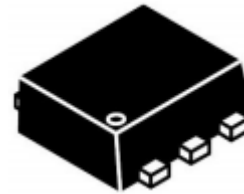


Features

- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 25\text{kV}$
 - Contact discharge: $\pm 15\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
- RoHS Compliant

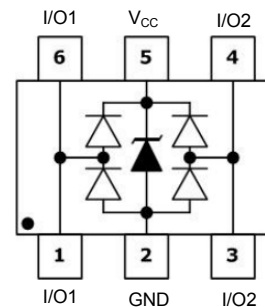
Dimensions SOT-563



Applications

- Ethernet Interface
- Switchin Systems
- Access Equipment
- Central Of fice Equipment
- Microcontroller Input Protection

Pin Configuration



Mechanical Characteristics

- Package: SOT-563
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3,000pcs
- Reel Size: 7inch
- Device Marking: 2A

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

| Parameter | Symbol | Value | Unit |
|---------------------------------|------------------|-------------|------|
| Peak Pulse Power (8/20 μ s) | Ppp | 150 | W |
| ESD per IEC 61000-4-2 (Air) | V _{ESD} | ± 25 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ± 15 | |
| 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 | Conditions | Min. | Typ. | Max. | Units |
|---------------------------|-----------|---|------|------|------|---------------|
| Reverse Working Voltage | V_{RWM} | | | | 5 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T = 1\text{mA}$, I/O to GND | 6 | 7 | 10 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T = 1\text{mA}$, V_{CC} to GND | 6 | 7 | 12 | V |
| Reverse Leakage Current | I_R | $V_{RWM} = 5\text{V}$, I/O to GND & V_{CC} to GND | | | 0.1 | μA |
| Forward Voltage | V_F | $I_F = 15\text{mA}$, I/O to GND & V_{CC} to GND | | | 1.2 | V |
| Clamping Voltage | V_C | $I_{PP} = 1\text{A}$, $t_P = 8/20\mu\text{s}$, I/O to GND & V_{CC} to GND | | | 13 | V |
| Clamping Voltage | V_C | $I_{PP} = 5\text{A}$, $t_P = 8/20\mu\text{s}$, I/O to GND | | | 15 | V |
| Clamping Voltage | V_C | $I_{PP} = 10\text{A}$, $t_P = 8/20\mu\text{s}$, V_{CC} to GND | | | 15 | V |
| Junction Capacitance | C_J | $V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O to GND | | | 0.6 | pF |
| Junction Capacitance | C_J | $V_R = 0\text{V}$, $f = 1\text{MHz}$, I/O to I/O | | | 0.3 | pF |

TYPIC CHARACTERISTICS

Fig. 1 - 8 X 20 μ s Pulse Waveform

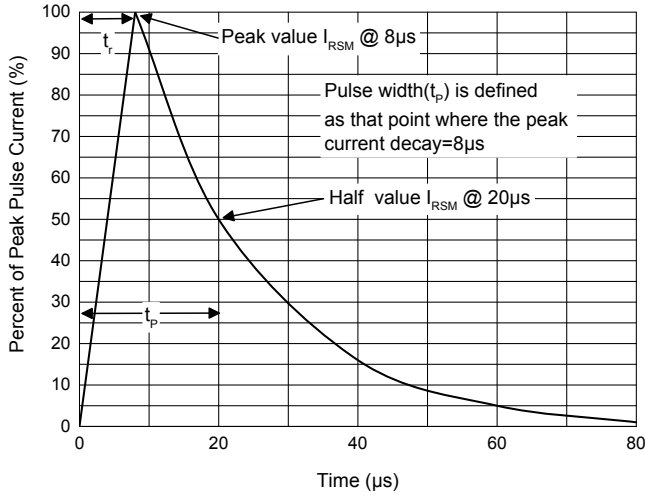


Fig. 2 - Pulse Derating Curve

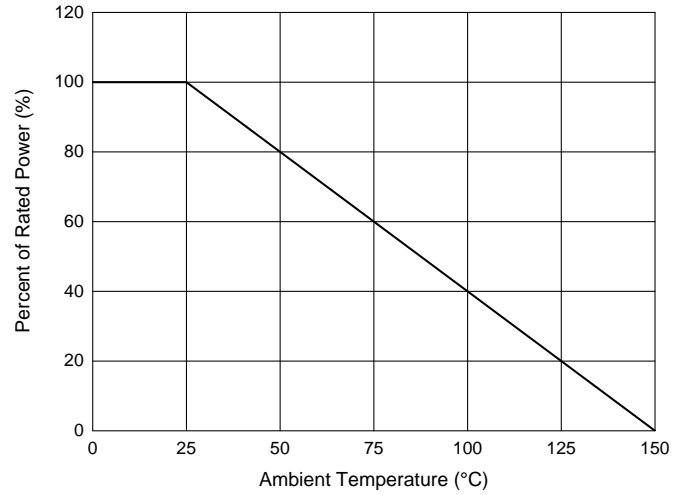


Fig. 3 - Capacitance Characteristics

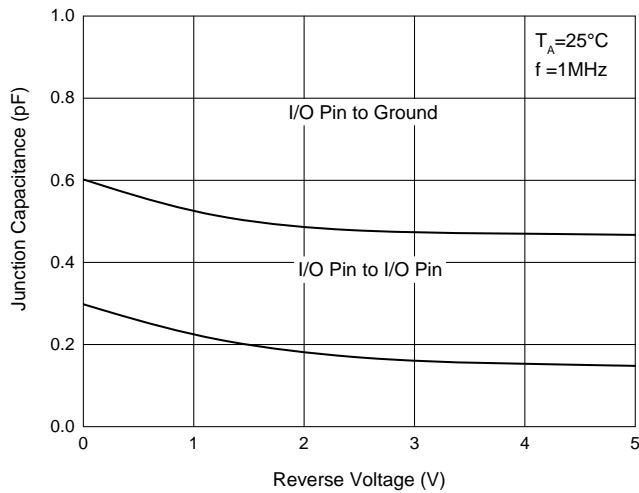
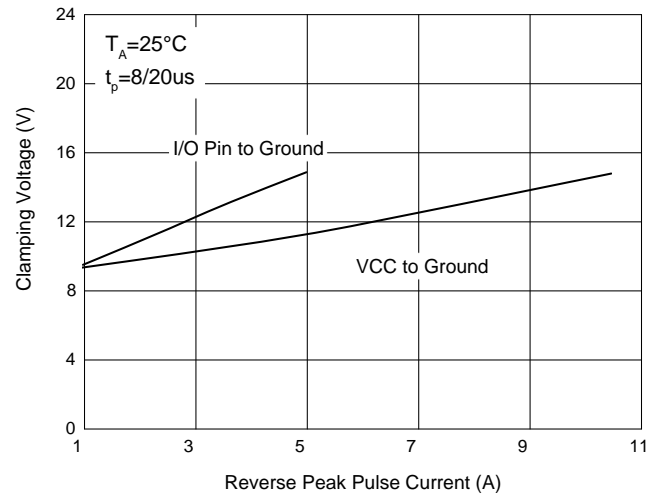
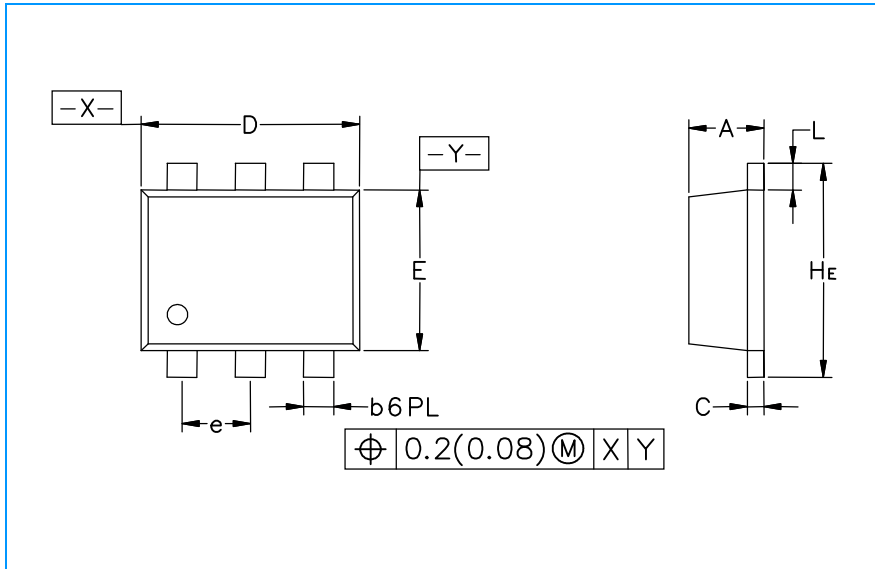


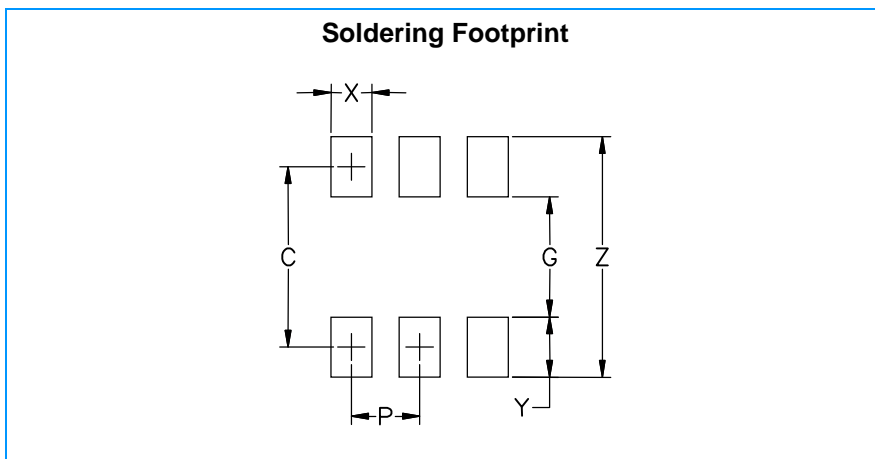
Fig. 4 - Clamping Voltage Characteristics



SOT-563 Package Outline & Dimensions



| Symbol | Inches | | | Millimeters | | |
|----------------|----------|-------|-------|-------------|------|------|
| | Min. | Nom. | Max. | Min. | Nom. | Max. |
| A | 0.020 | 0.021 | 0.023 | 0.50 | 0.55 | 0.60 |
| b | 0.007 | 0.009 | 0.011 | 0.17 | 0.22 | 0.27 |
| C | 0.003 | 0.005 | 0.007 | 0.08 | 0.12 | 0.18 |
| D | 0.059 | 0.062 | 0.066 | 1.50 | 1.60 | 1.70 |
| E | 0.043 | 0.047 | 0.051 | 1.10 | 1.20 | 1.30 |
| e | 0.02 BSC | | | 0.5 BSC | | |
| L | 0.004 | 0.008 | 0.012 | 0.10 | 0.20 | 0.30 |
| H _E | 0.059 | 0.062 | 0.067 | 1.50 | 1.60 | 1.70 |



| Symbol | Inches | Millimeters |
|--------|--------|-------------|
| C | 0.0531 | 1.35 |
| G | 0.0354 | 0.90 |
| P | 0.0197 | 0.50 |
| X | 0.0118 | 0.30 |
| Y | 0.0177 | 0.45 |
| Z | 0.0709 | 1.80 |

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