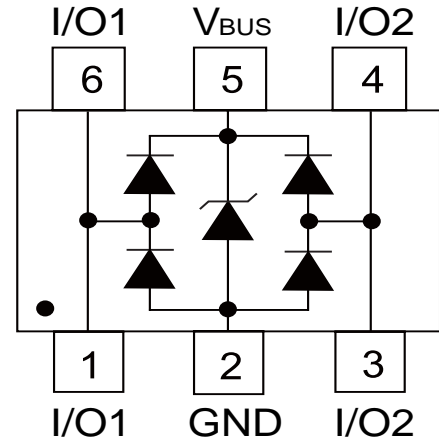


Features

- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 6A (8/20 μs)
- RoHS Compliant



Applications

- USB 2.0 interface
- 10/100 Ethernet
- Personal digital assistants (PDA's)
- Notebooks, Desktops and Servers
- Portable instrumentation
- Digital cameras

Mechanical Characteristics

- Package: SOT23-6 Lead
- Finish: Matte Tin
- UL Flammability Classification Rating 94V-0
- Pb-Free, Halogen Free, RoHS/WEEE Compliant

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|--------|-------------|------------------|
| Peak Pulse Power (8/20 μs) | Ppk | 150 | W |
| Peak Pulse Current (8/20 μs) | Ipp | 6 | A |
| ESD per IEC 61000-4-2 (Air) | VESD | ± 30 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ± 30 | |
| Operating Temperature Range | TJ | -55 to +125 | $^\circ\text{C}$ |
| Storage Temperature Range | Tstg | -55 to +150 | $^\circ\text{C}$ |

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test Condition | Min | Typ | Max | Unit |
|--|-----------|--|-----|------|-----|---------------|
| Reverse stand-off voltage | V_{RWM} | | | | 5 | V |
| Reverse breakdown voltage | V_{BR} | $I_{BR}=1\text{mA}$ | 6 | | 9 | V |
| Reverse leakage current | I_R | $V_R=5\text{V}$ | | | 0.1 | μA |
| Clamping voltage ($t_p=8/20\mu\text{s}$) | V_C | $I_{PP}=1\text{A}$ | | | 10 | V |
| Clamping voltage ($t_p=8/20\mu\text{s}$) | V_C | $I_{PP}=6\text{A}$ | | | 15 | V |
| Junction capacitance | C_J | 0Vdc, f=1MHz Between I/O pins and GND | | 0.8 | 1 | pF |
| | C_J | 0Vdc, f=1MHz I/O to I/O | | 0.35 | 0.4 | pF |

Typical Characteristics

Fig1. 8/20 μ s Pulse Waveform

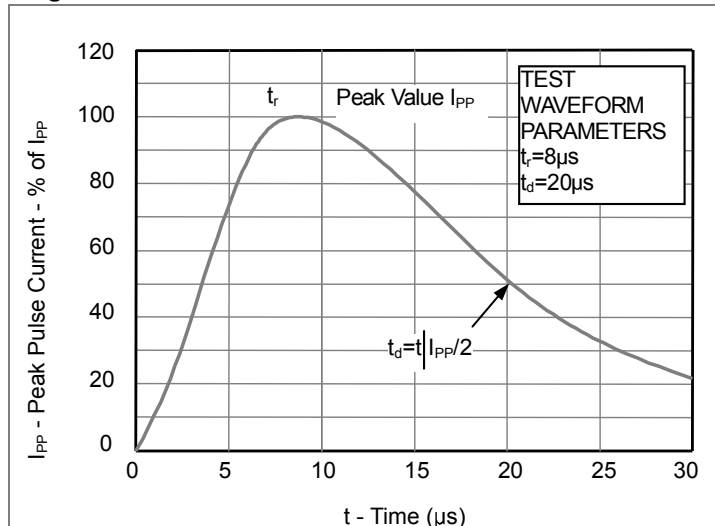


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

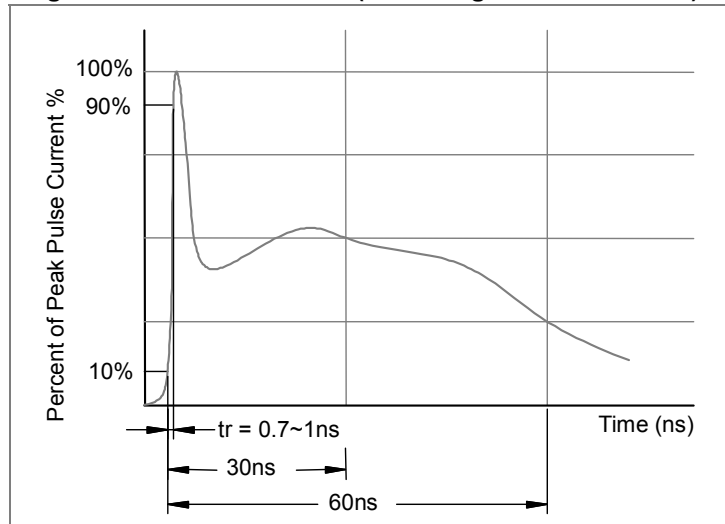
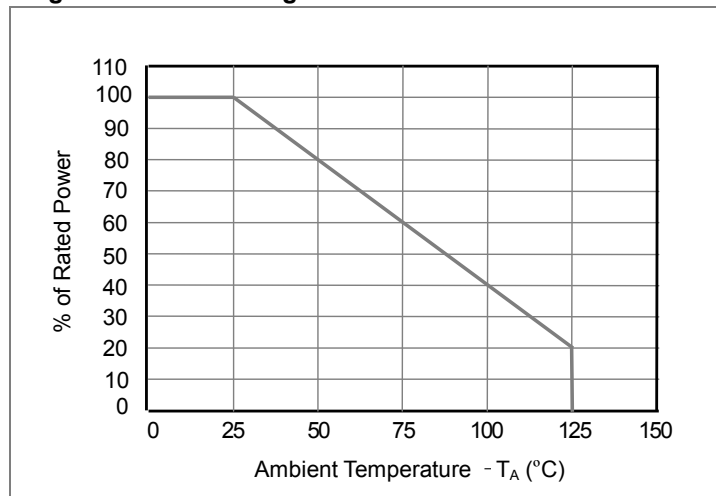
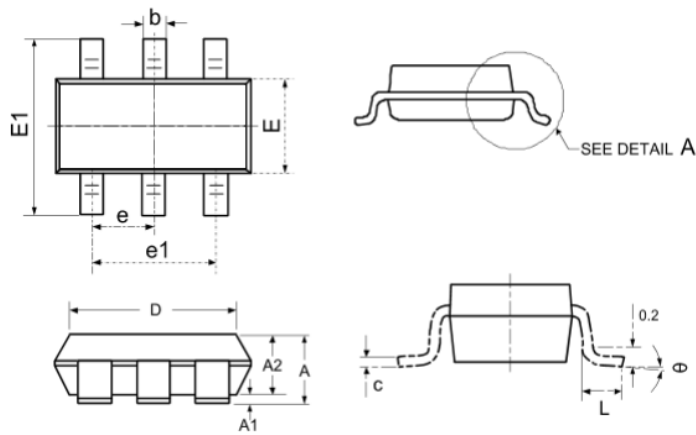


Fig3. Power Derating Curve

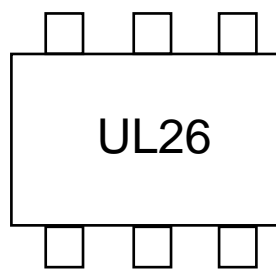


Outline Drawing – SOT23-6



| Symbol | Dimensions (mm) | |
|--------|-----------------|-------|
| | Min | Max |
| A | 1.050 | 1.250 |
| A1 | 0.000 | 0.100 |
| A2 | 1.050 | 1.150 |
| D | 2.820 | 3.020 |
| E | 1.500 | 1.700 |
| E1 | 2.650 | 2.950 |
| b | 0.300 | 0.500 |
| e | 0.950 (BSC) | |
| e1 | 1.800 | 2.000 |
| L | 0.300 | 0.600 |
| θ | 0° | 8° |

Marking



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