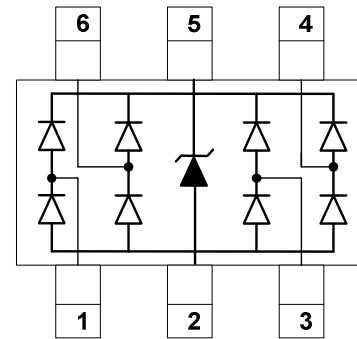


Features

- Ultra low capacitance: 0.3pF typical (I/O to I/O)
 - Ultra low leakage: nA level
 - Low operating voltage: 5V
 - Low clamping voltage
 - Up to 4 data lines and one power line protects
 - Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: ±30kV
Contact discharge: ±25kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) : 3A(8/20μs)
- ROHS Compliant



Circuit and Pin Schematic

Applications

- USB 2.0 and USB 3.0 Ports
- USB OTG
- Digital video interface(DVI)
- Monitor and Flat Panel Displays
- PCI Express and Serial SATA Ports
- Gigabit Ethernet
- IEEE 1394 firewire ports
- Consumer products (STB, DVD, DSC, DVC...)

Mechanical Characteristics

- Package: SOT23-6
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020

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

| Parameter | Symbol | Value | Unit |
|---------------------------------|--------|-------------|------|
| Peak Pulse Power (tp=8/20μs) | PPP | 60 | W |
| Peak Pulse Current (tp=8/20μs) | IPP | 3 | A |
| ESD per IEC 61000-4-2 (Air) | VESD | ±30 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ±25 | |
| Operating Temperature Range | TJ | -55 to +125 | °C |
| Storage Temperature Range | Tstg | -55 to +150 | °C |

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

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|-------------------------|--------|-----|-----|-----|------|---|
| Reverse Working Voltage | VRWM | | | 5 | V | Any I/O pin to ground |
| Breakdown Voltage | VBR | 6 | | | V | IT = 1mA, any I/O pin to ground |
| Reverse Leakage Current | IR | | | 0.5 | µA | VRWM = 5V, any I/O pin to ground |
| Clamping Voltage | VC | | | 15 | V | I _{PP} = 1A (8 x 20µs pulse) any I/O pin to ground |
| Clamping Voltage | VC | | | 20 | V | I _{PP} = 3A (8 x 20µs pulse) any I/O pin to ground |
| Junction Capacitance | CJ | | 0.3 | 0.4 | pF | VR = 0V, f = 1MHz, between I/O pins |
| Junction Capacitance | CJ | | | 0.8 | pF | VR = 0V, f = 1MHz, any I/O pin to ground |

Note 1: I/O pins are Pin 1, 3, 4 and 6

Typical Characteristics

Fig1. 8/20μs Pulse Waveform

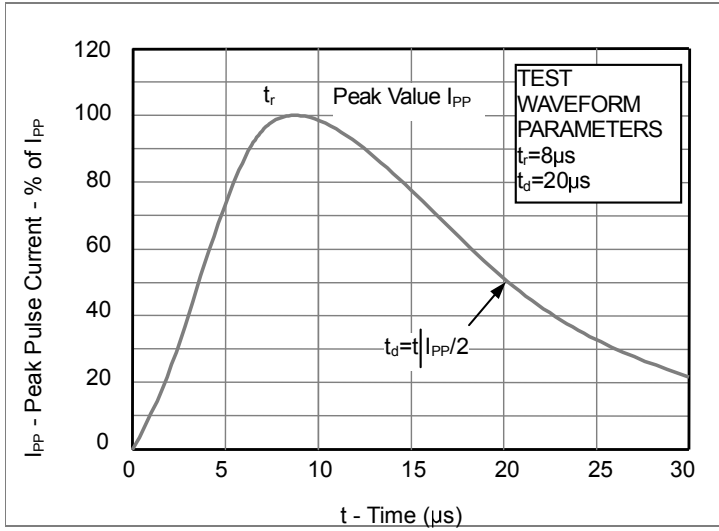


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

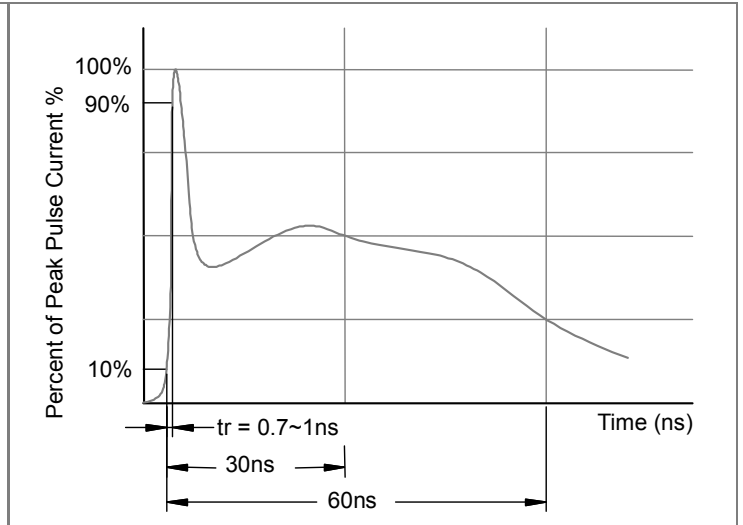
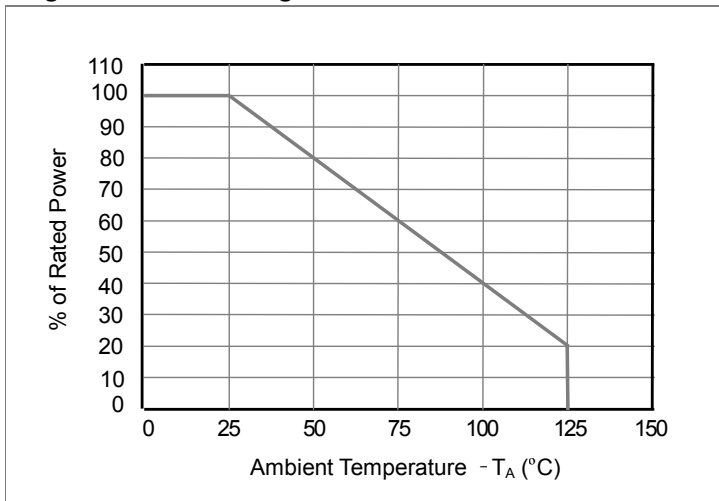
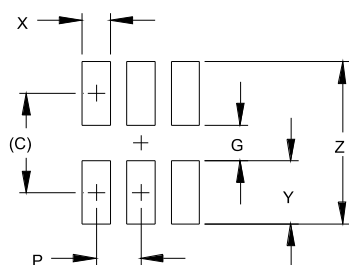


Fig3. Power Derating Curve

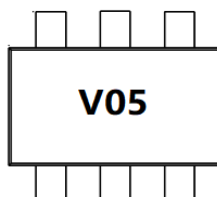


Outline Drawing - SOT23-6



| DIMENSIONS | | |
|------------|--------|-------------|
| DIM | INCHES | MILLIMETERS |
| C | (.098) | (2.50) |
| G | .055 | 1.40 |
| P | .037 | 0.95 |
| X | .024 | 0.60 |
| Y | .043 | 1.10 |
| Z | .141 | 3.60 |

Marking



Ordering information

| Order code | Package | Base qty | Delivery mode |
|-----------------|---------|----------|---------------|
| UMW SRV05-4.TCT | SOT23-6 | 3000 | Tape and reel |