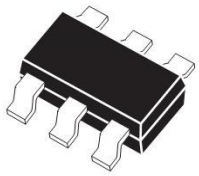
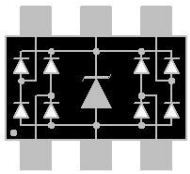
# PJSRV05-4

## LOW CAPACITANCE TVS DIODE ARRAY

The PJSRV05-4 has a low capacitance of 2.1pF and operates with virtually no insertion loss to 1GHz. This makes the device ideal for protection of high-speed data lines such as USB2.0, firewire, DVI, and gigabit Ethernet interfaces.
The low capacitance array configuration allows the user to protect Four high-speed data or transmission lines. The low inductance construction minimizes voltageovershoot during high current surges. They may be used to meet the ESD immunity requirements of IEC61000-4-2, Level 4 (15kV air, 8kVcontact discharge).



SOT-23 6L



CONFIGURATION


MARKING

### SPECIFICATION FEATURES

- IEC61000-4-2 ESD 15kV Air, 8kV Contact compliance
- Low leakage current,maxiimum of 1uA at rated voltage
- Low clamping voltage
- Peak power dissipation of 350W under 8/20us waveform
- Protect four I/O lines.
- Molded JEDEC SOT-23 6L package
- Flammability rating UL94V-0
- Lead Free package 100% tin plating matt finish

### APPLICATIONS

- USB 2.0 Power and Data Line Protection
- Video Graphics Cards
- Monitors and Flat Panel Displays
- Digital Vedio Interface (DVI)
- 10/100/1000 Ethernet
- ATM Interfaces


## MAXIMUM RATINGS

| Rating | Symbol | Value | Unit |
|---|---|---|---|
| Peak Pulse Power (8/20us waveform) | $P_{PP}$ | 350 | W |
| Peak Pulse Current (8/20us waveform) | $I_{PPM}$ | 12 | A |
| ESD Voltage (HBM Contact) | $V_{ESD}$ | >8 | kV |
| Operating Temperature Range | $T_J$ | -55~+150 | ℃ |
| Storage Temperature Range | $T_{STG}$ | -55~+150 | ℃ |

# ELECTRICAL CHARACTERISTICS ($T_J$=25℃)

**PJSRV05-4**

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Reverse Stand-Off Voltage | $V_{WRM}$ | | | | 5 | V |
| Reverse Breakdown Voltage | $V_{BR}$ | $I_{BR}$=1mA, PIN 5 to 2 | 6 | | | V |
| Reverse Leakage Current | $I_R$ | $V_R$=5V, PIN 5 to 2 | | 1.2 | 3 | uA |
| Clamping Voltage (8/20us) | $V_C$ | $I_{PP}$=1A, Any I/O pin to Pin 2 | | | 12 | V |
| Clamping Voltage (8/20us) | $V_C$ | $I_{PP}$=5A, Any I/O pin to Pin 2 | | | 17 | V |
| Off State Junction Capacitance | $C_J$ | 0Vdc, f=1MHZ between I/O lines and GND | | 2.1 | 3 | pF |
| Off State Junction Capacitance | $C_J$ | 0Vdc, f=1MHZ between I/O lines | | 1 | 1.5 | pF |

# TYPICAL CHARACTERISTICS CURVES

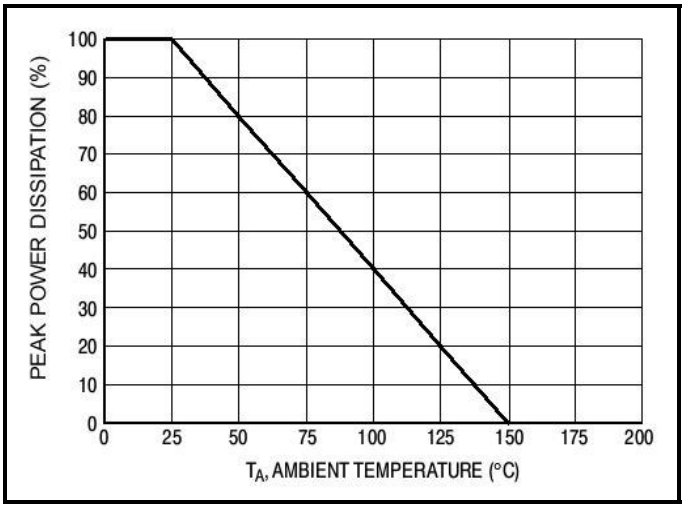



**Figure 1. Power Derating Curve**

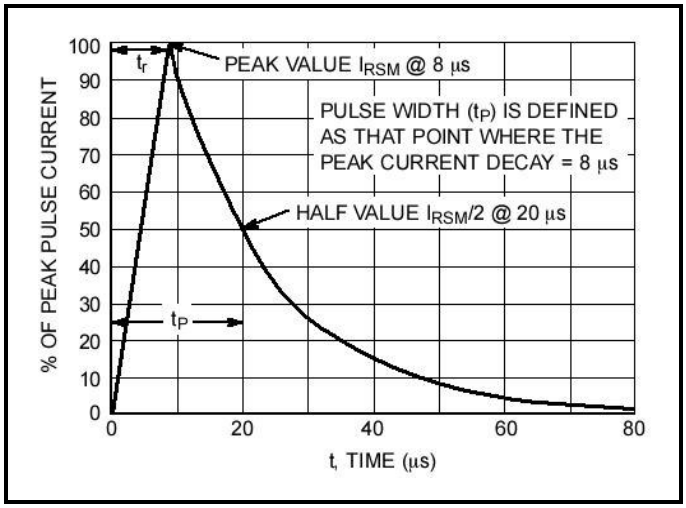



**Figure 2. 8x20us Pulse Waveform**

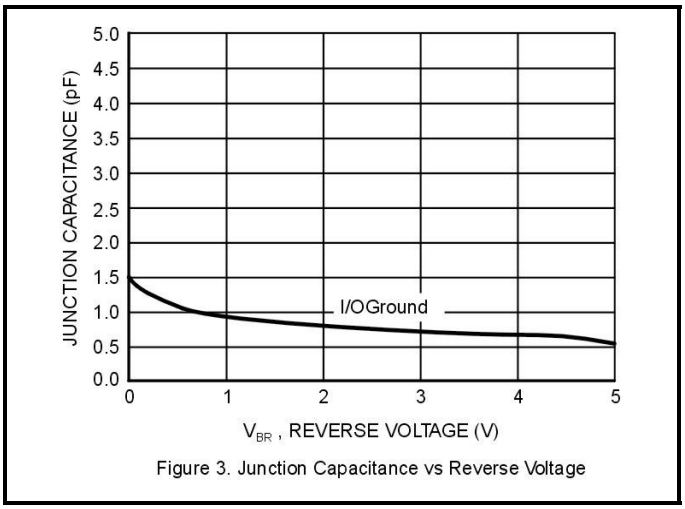



**Figure 3. Junction Capacitance vs Reverse Voltage**

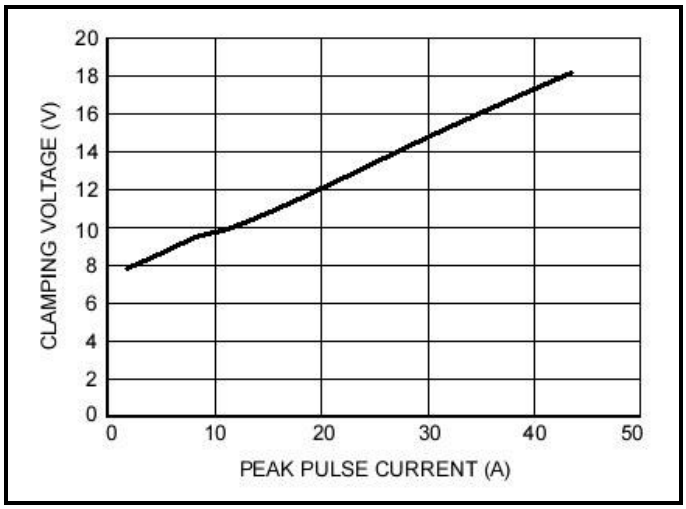



**Figure 4. Clamping Voltage vs Peak Pulse Current (8x20 Waveform)**

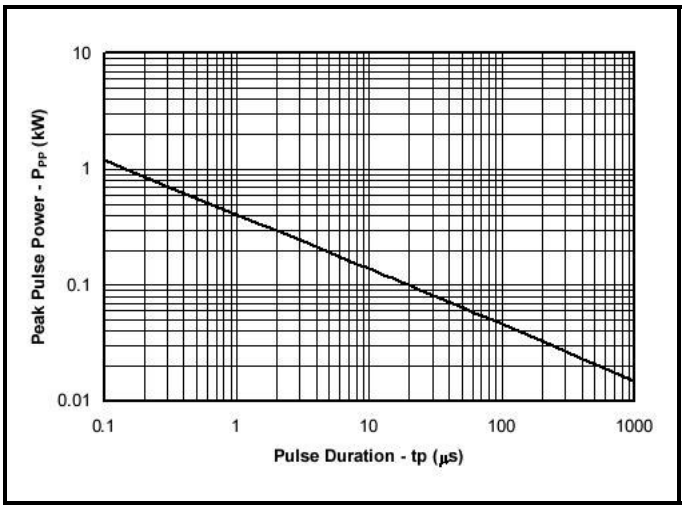



**Figure 5. Non-Repetitive Peak Pulse vs. Pulse Time**

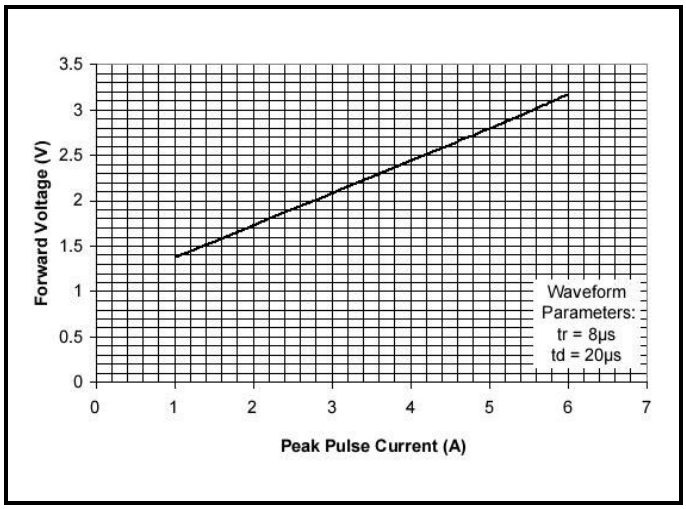
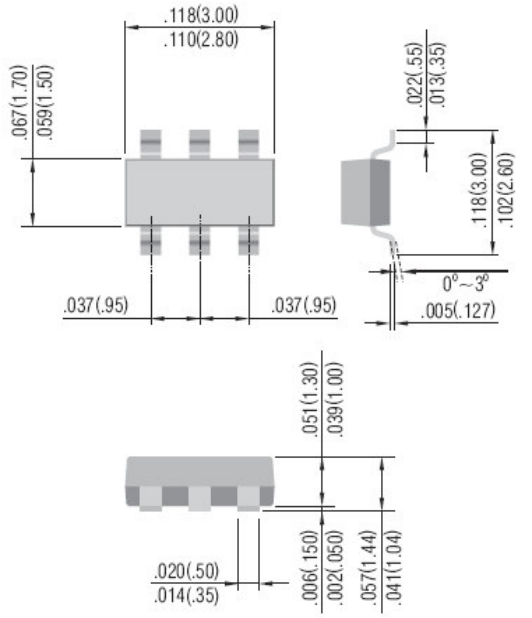


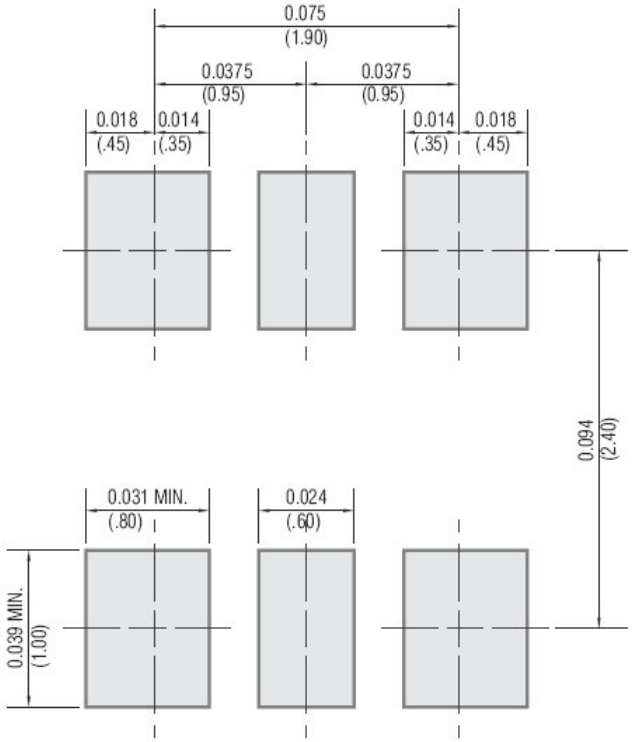

**Figure 6. Forward Voltage vs. Forward Current**

# PACKAGE AND SUGGESTED PAD LAYOUT DIMENSION

SOT23-6L Unit: inch ( mm )




SOT23-6L Unit: inch ( mm )




# LEGAL STATEMENT