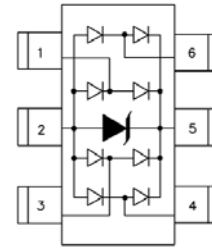


Description

The SRV05-4 is low capacitance transient voltage suppressor array for high speed data interface that designed to protect sensitive electronics from damage or latch-up due to ESD lightning, and other voltage induced transient events. All pins are rated to withstand 25kv ESD pulses using the IEC 61000-4-2 contact discharge method, which can meet the requirement of level 4.



Feature

- 500W peak pulse power ($t_p = 8/20\mu s$)
- SOT23-6L package
- Working voltage: 5 V
- Low clamping voltage
- Low capacitance
- RoHS Compliant Transient Protection for High Speed Data Lines to
IEC61000-4-2(ESD) $\pm 15kV$ (air), $\pm 8kV$ (Contact)
IEC61000-4-4(EFT) 40A(5/50ns)
IEC61000-4-5(lightning) 24A(8/20us)

Applications

- USB 2.0 Power & Data Line Protection
- DVI & HDMI Port Protection
- Serial ATA Port Protection
- Mobile Handsets
- Digital Cameras and camcorders
- PDA & MP3 Players
- Digital TV and Set-top Boxes
- Other Portable Electronic Components

Electrical characteristics per line@(unless otherwise specified)

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Units |
|---------------------------|-----------|----------------------------------|------|------|------|---------|
| Reverse Stand-off Voltage | V_{RWM} | | | | 5 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_t = 1mA$ | 6 | | | V |
| Reverse Leakage Current | I_R | $V_{RWM} = 5.0V, T = 25^\circ C$ | | | 1 | μA |
| Clamping Voltage | V_C | $I_{PP} = 1A, t_p = 8/20\mu s$ | | | 12.5 | V |
| Clamping Voltage | V_C | $I_{PP} = 5A, t_p = 8/20\mu s$ | | | 28.0 | V |
| Junction Capacitance | C_J | $V_R = 0V, f = 1MHz$ | | 2.5 | 5 | pF |

Absolute maximum rating @25°C

| Rating | Symbol | Value | Units |
|--------------------------------------|-----------|-------------|-------|
| Peak Pulse Power ($t_p=8/20\mu s$) | P_{pp} | 350 | W |
| Operating Temperature | T_J | -55 to +150 | °C |
| Storage Temperature | T_{STG} | -55 to +150 | °C |

Typical Characteristics

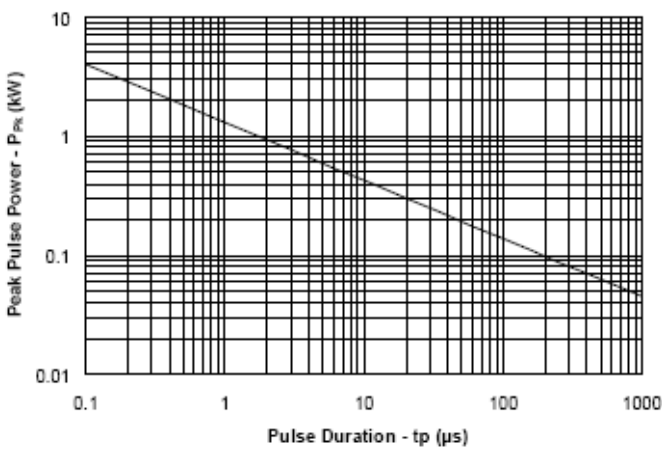


Fig1. Non-Repetitive Peak Pulse Power vs. Pulse time

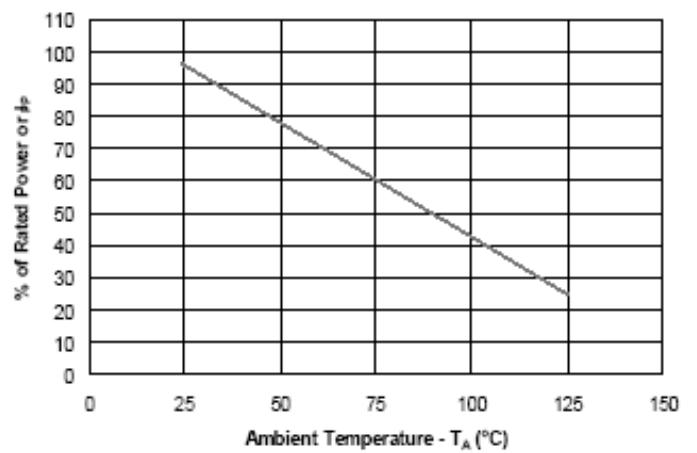


Fig2. Power Derating Curve

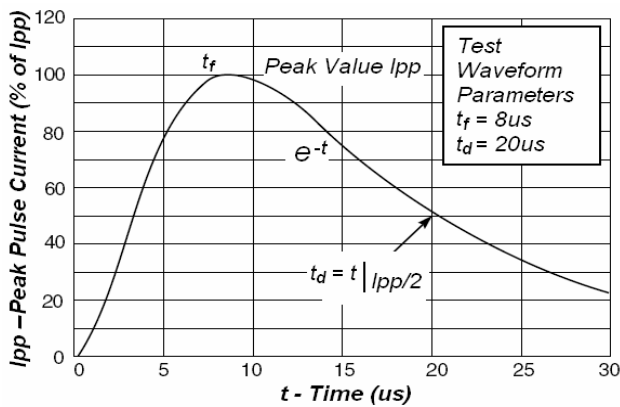


Fig3. Pulse Waveform

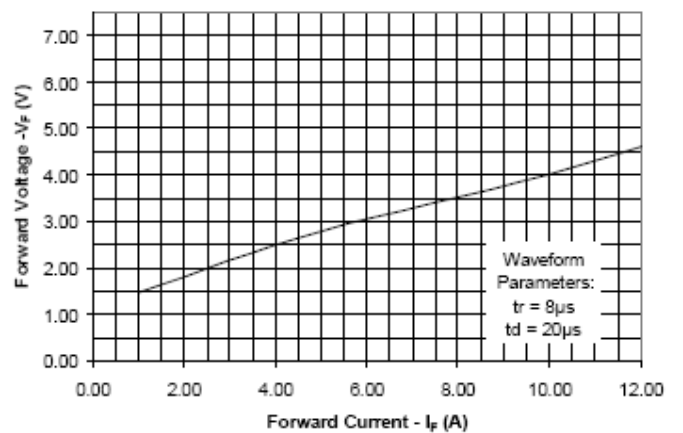


Fig4. Forward Voltage vs. Forward Current

Applications informations

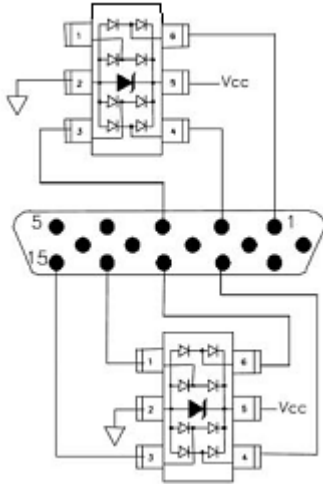


Fig5.Video Interface Protection

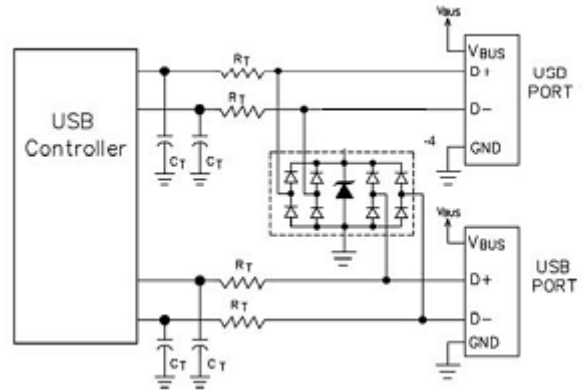


Fig6.Dual USB Port Protection

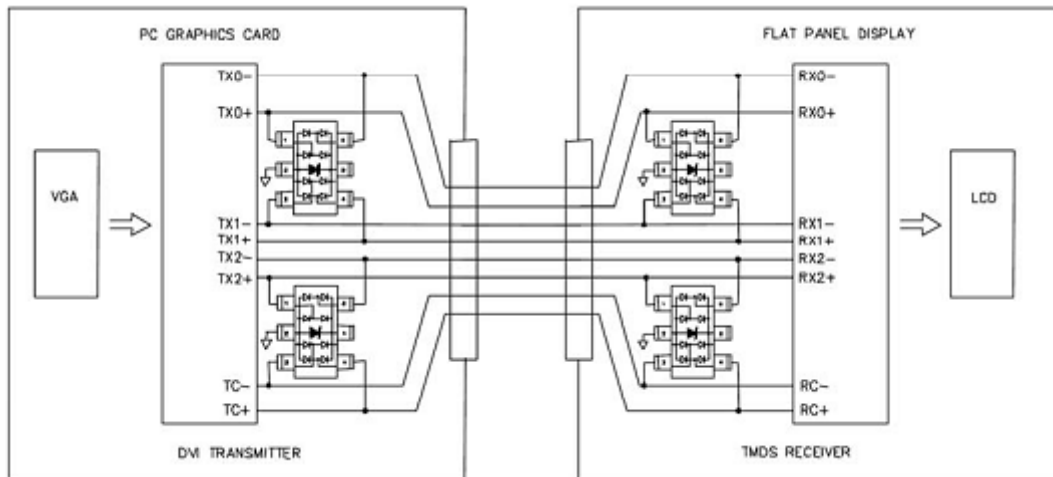
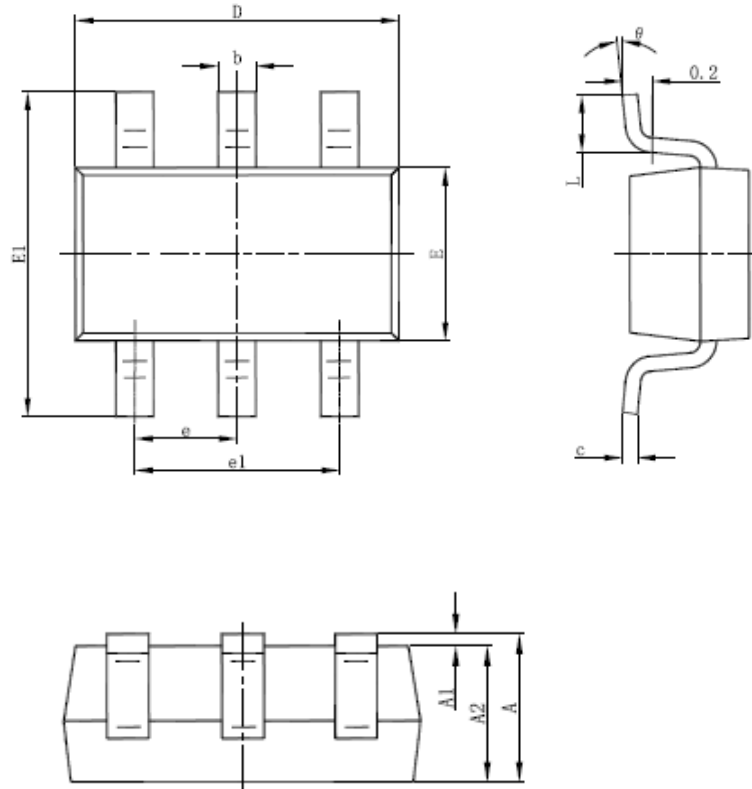



Fig7.Digital Video Interface (DVI) Protection

Product dimension (SOT23-6L)



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 1.050 | 1.250 | 0.041 | 0.049 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 1.050 | 1.150 | 0.041 | 0.045 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.100 | 0.200 | 0.004 | 0.008 |
| D | 2.820 | 3.020 | 0.111 | 0.119 |
| E | 1.500 | 1.700 | 0.059 | 0.067 |
| E1 | 2.650 | 2.950 | 0.104 | 0.116 |
| e | 0.950(BSC) | | 0.037(BSC) | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.300 | 0.600 | 0.012 | 0.024 |
| θ | 0° | 8° | 0° | 8° |


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