

Features

- Protects four I/O lines
- Low capacitance (20pF) Max
- Low operating voltage:5V
- Low clamping voltage
- Protects two lines in common and differential mode
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-5 (Lightning) 25A (8/20 μs)
- RoHS Compliant

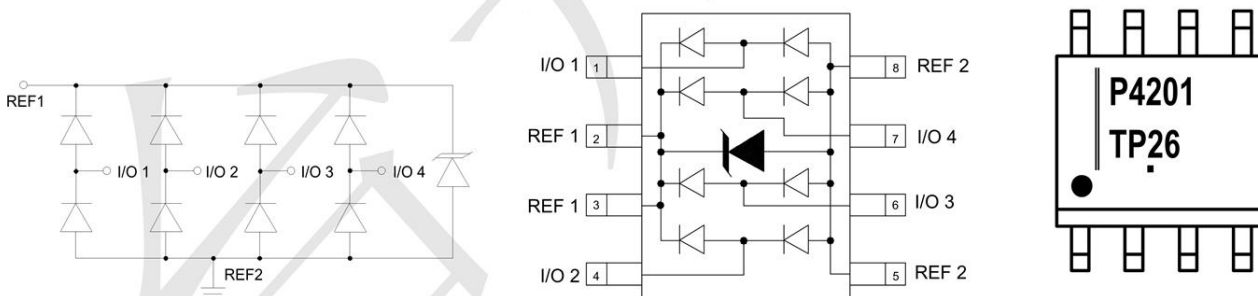
Mechanical Characteristics

- Package: SOP-8
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Shipping Qty :2500pcs/7Inch Tape & Reel

Applications

- T1/E1 Line Cards
- T3/E3 and DS3 Interfaces
- STS-1 Interfaces
- 10/100/1000 BaseT Ethernet
- Set Top Box
- ISDN Interfaces
- Low Voltage Interfaces

Dimensions and Pin Configuration



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

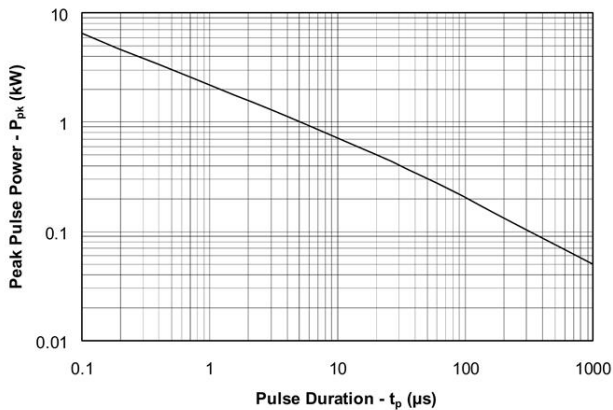
| Parameter | Symbol | Value | Unit |
|---|--------|--------------|------|
| Peak Pulse Power(8/20μs) | Ppk | 500 | W |
| Peak Forward Voltage (If=1A, tp=8/20μs) | VFP | 1.5 | V |
| Lead Soldering Temperature | TL | 260(10 sec.) | °C |
| Operating Temperature Range | TJ | -55 to +125 | °C |
| Storage Temperature Range | Tstg | -55 to +150 | °C |

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

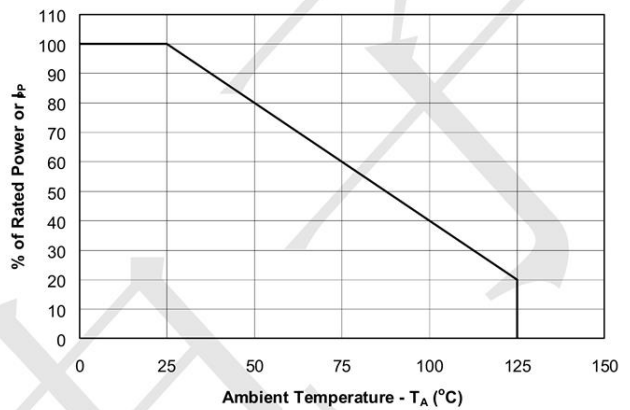
| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|---------------------------|--------|-----|-----|-----|------|--|
| Reverse Working Voltage | VRWM | | | 5 | V | |
| Reverse Breakdown Voltage | VBR | 6 | | | V | IT = 1mA |
| Reverse Leakage Current | IR | | | 0.5 | μA | VRWM = 5V, T=25°C |
| Clamping Voltage | Vc | | | 10 | V | I _{PP} = 1A (8 x 20μs pulse) Line to Ground |
| Clamping Voltage | Vc | | | 12 | V | I _{PP} = 10A (8 x 20μs pulse) Line to Ground |
| Clamping Voltage | Vc | | | 25 | V | I _{PP} = 25A (8 x 20μs pulse) Line to Ground |
| Junction Capacitance | CJ | | 10 | 20 | pF | VR = 0V, f = 1MHz Between I/O pins and Ground |
| | | | 5 | | pF | VR = 0V, f = 1MHz Between I/O pins |

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

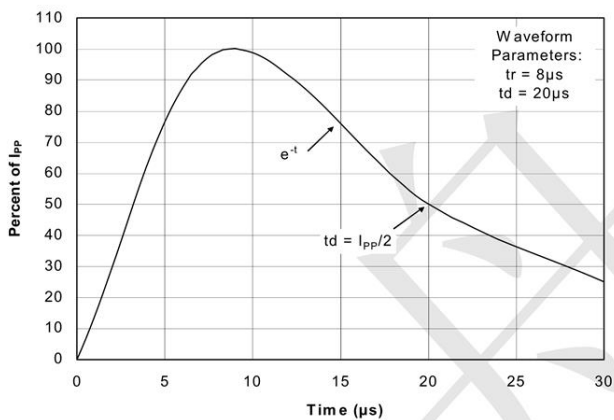
Non-Repetitive Peak Pulse Power vs. Pulse Time



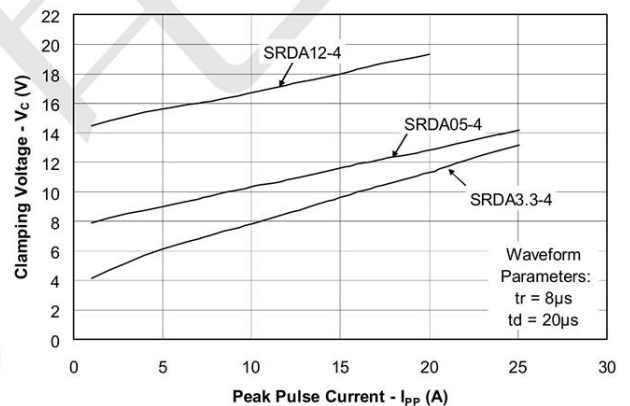
Power Derating Curve



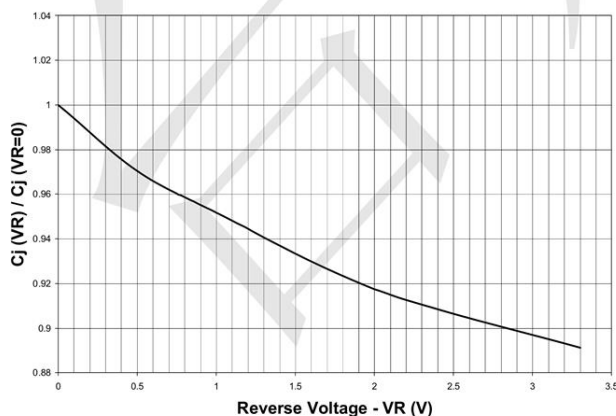
Pulse Waveform



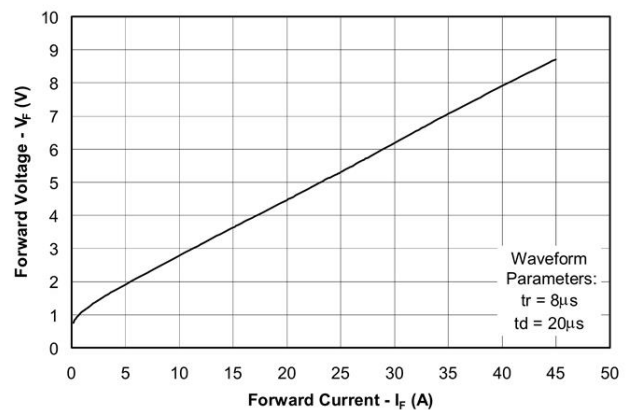
Clamping Voltage vs. Peak Pulse Current



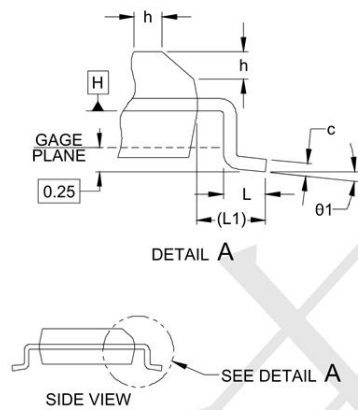
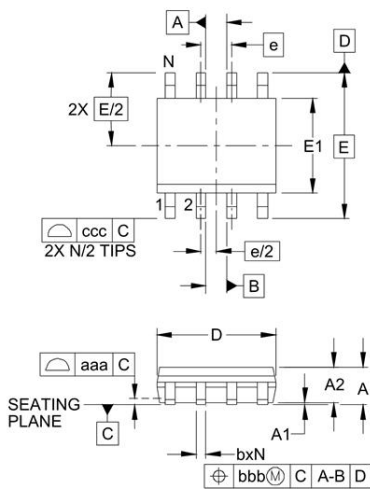
Variation of Capacitance vs. Reverse Voltage



Forward Voltage vs. Forward Current



SOP-8 Package Outline Drawing



| DIM | INCHES | | | MILLIMETERS | | |
|-----|----------|------|------|-------------|------|------|
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | .053 | - | .069 | 1.35 | - | 1.75 |
| A1 | .004 | - | .010 | 0.10 | - | 0.25 |
| A2 | .049 | - | .065 | 1.25 | - | 1.65 |
| b | .012 | - | .020 | 0.31 | - | 0.51 |
| c | .007 | - | .010 | 0.17 | - | 0.25 |
| D | .189 | .193 | .197 | 4.80 | 4.90 | 5.00 |
| E1 | .150 | .154 | .157 | 3.80 | 3.90 | 4.00 |
| E | .236 BSC | | | 6.00 BSC | | |
| e | .050 BSC | | | 1.27 BSC | | |
| h | .010 | - | .020 | 0.25 | - | 0.50 |
| L | .016 | .028 | .041 | 0.40 | 0.72 | 1.04 |
| L1 | (.041) | | | (1.04) | | |
| N | 8 | | | 8 | | |
| 01 | 0° | - | 8° | 0° | - | 8° |
| aaa | .004 | | | 0.10 | | |
| bbb | .010 | | | 0.25 | | |
| ccc | .008 | | | 0.20 | | |

Suggested Land Pattern

