

## 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  $\mu\text{s}$ )
- RoHS Compliant

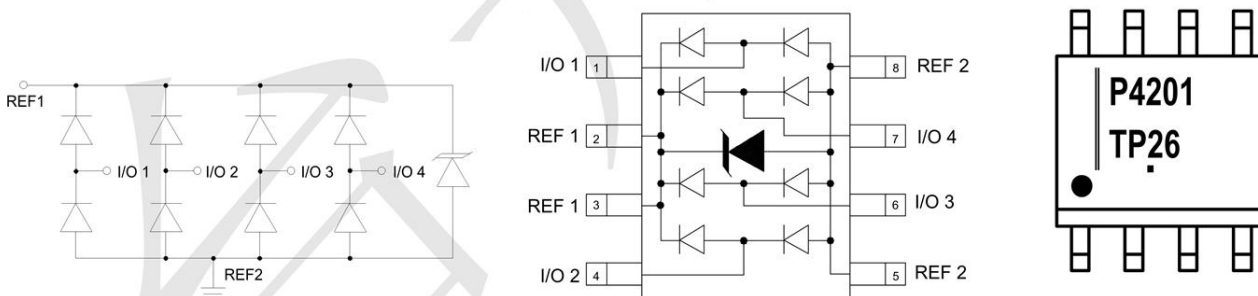
## Mechanical Characteristics

- 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)

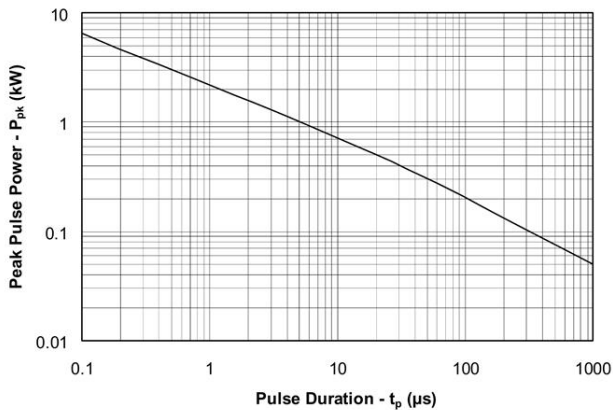
Parameter	Symbol	Value	Unit
Peak Pulse Power(8/20μs)	Ppk	500	W
Peak Forward Voltage (If=1A, tp=8/20μs)	VFP	1.5	V
Lead Soldering Temperature	TL	260(10 sec.)	°C
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

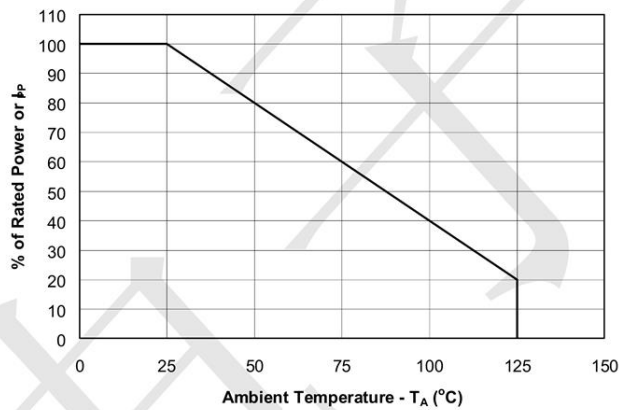
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	
Reverse Breakdown Voltage	VBR	6			V	IT = 1mA
Reverse Leakage Current	IR			0.5	μA	VRWM = 5V, T=25°C
Clamping Voltage	Vc			10	V	I <sub>PP</sub> = 1A (8 x 20μs pulse) Line to Ground
Clamping Voltage	Vc			12	V	I <sub>PP</sub> = 10A (8 x 20μs pulse) Line to Ground
Clamping Voltage	Vc			25	V	I <sub>PP</sub> = 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)

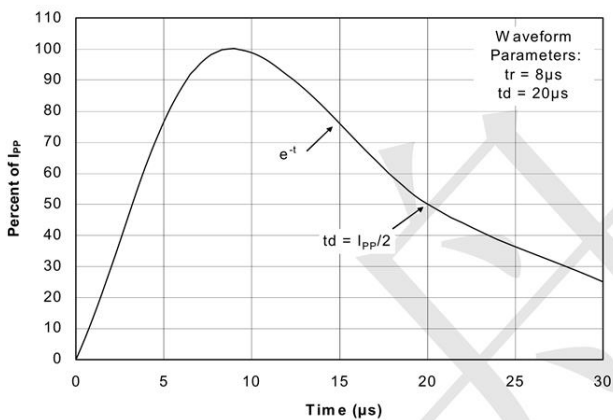
**Non-Repetitive Peak Pulse Power vs. Pulse Time**



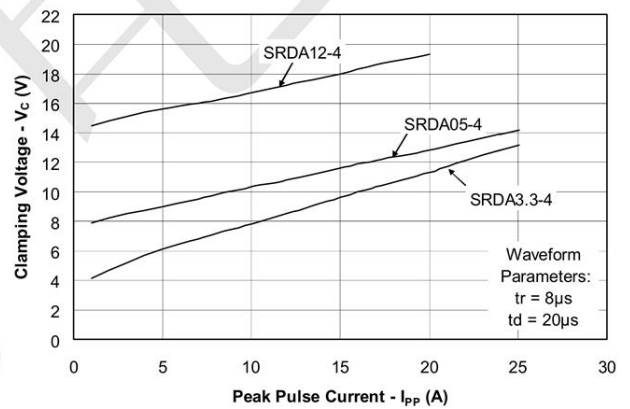
**Power Derating Curve**



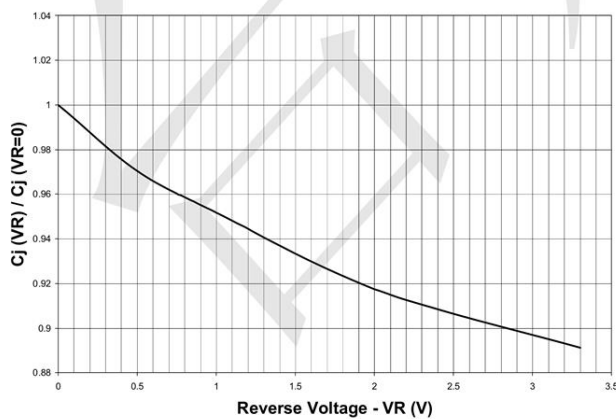
**Pulse Waveform**



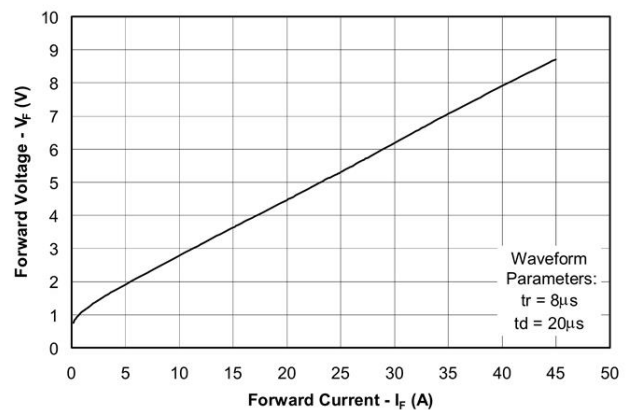
**Clamping Voltage vs. Peak Pulse Current**



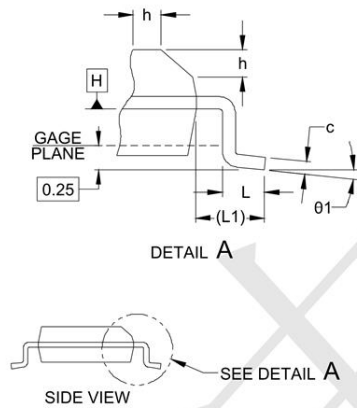
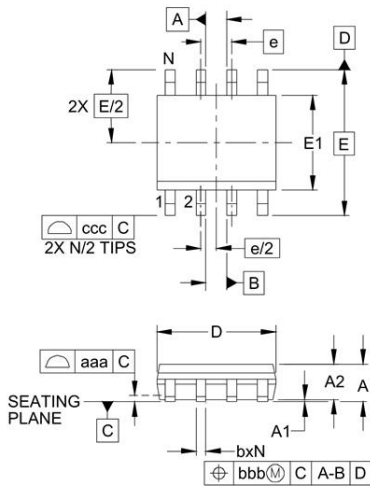
**Variation of Capacitance vs. Reverse Voltage**



**Forward Voltage vs. Forward Current**

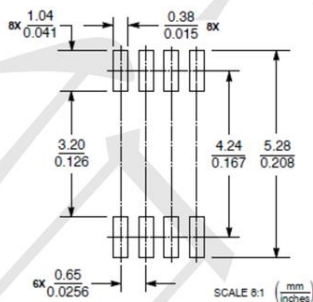


**SOP-8 Package Outline Drawing**



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**



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