

## Features

- ◆ 300W peak pulse power(8/20 $\mu$ s)
- ◆ Protects two line pairs(four lines)
- ◆ Ultra low leakage: nA level
- ◆ Low operating voltage: 2.8V
- ◆ Low capacitance
- ◆ Ultra low clamping voltage
- ◆ JEDEC SO-8 package
- ◆ Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 30$ kV
    - Contact discharge:  $\pm 30$ kV
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 20A (8/20 $\mu$ s)
- ◆ RoHS Compliant

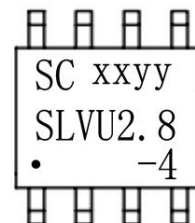
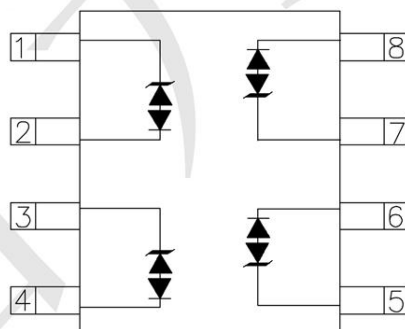
## Mechanical Characteristics

- ◆ Package: SO-8
- ◆ Lead Finish: Matte Tin
- ◆ Case Material: "Green" Molding Compound.
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Moisture Sensitivity: Level 3 per J-STD-020
- ◆ Terminal Connections: See Diagram Below
- ◆ Shipping Qty : 2500pcs/7Inch Tape & Reel

## Applications

- ◆ Base Station
- ◆ Analog Inputs
- ◆ Switch Systems
- ◆ 10/100/1000 Ethernet
- ◆ WAN/LAN Equipment
- ◆ Desktops, Servers, and Notebooks
- ◆ 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	300	W
Peak Pulse Current(8/20μs)	I <sub>PP</sub>	20	A
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	T <sub>J</sub>	-40 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V <sub>RWM</sub>			2.8	V	
Breakdown Voltage	V <sub>BR</sub>	3.0			V	I <sub>T</sub> = 1mA, any I/O to GND
Reverse Leakage Current	I <sub>R</sub>			0.5	μA	V <sub>RWM</sub> = 2.8V
Clamping Voltage	V <sub>C</sub>		6		V	I <sub>PP</sub> = 1A (8 x 20μs pulse)
Clamping Voltage	V <sub>C</sub>			14	V	I <sub>PP</sub> = 20A (8 x 20us pulse)
Junction Capacitance	C <sub>J</sub>		1.0		pF	V <sub>R</sub> = 0V, f = 1MHz, any I/O to GND
Junction Capacitance	C <sub>J</sub>		0.5		pF	V <sub>R</sub> = 0V, f = 1MHz, any I/O to IO

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

Fig1. 8/20 $\mu\text{s}$  Pulse Waveform

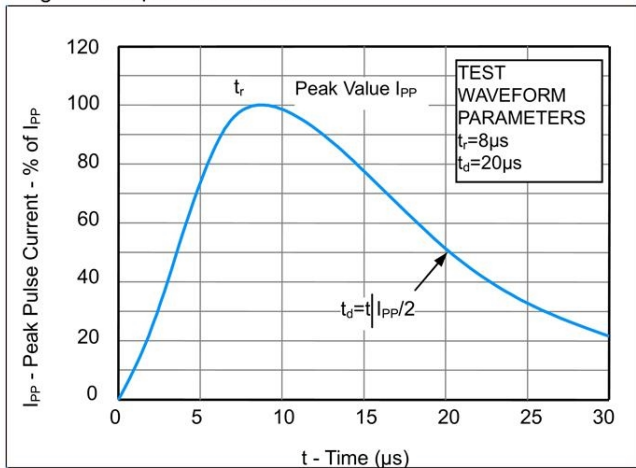


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

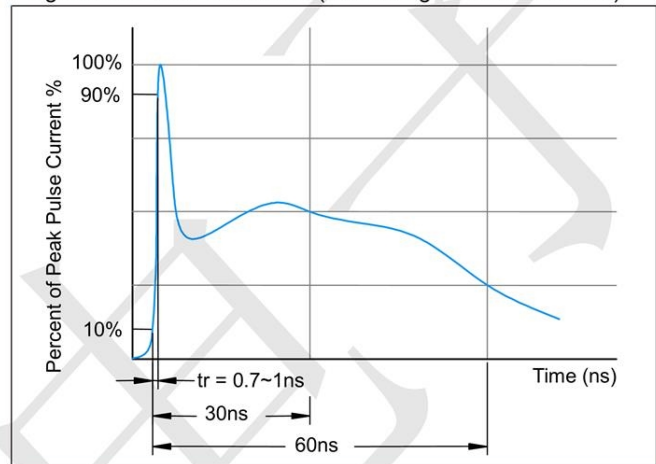
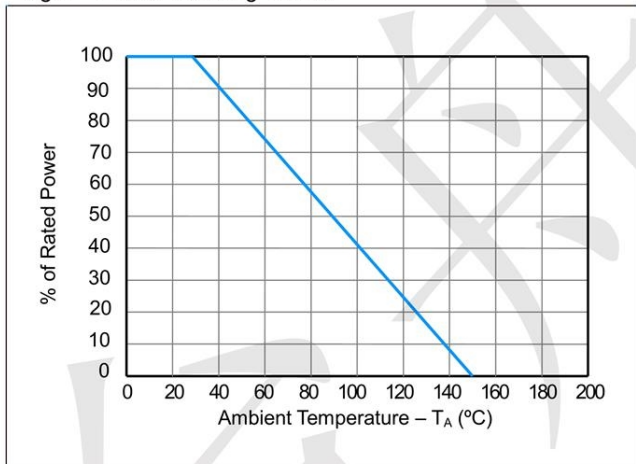
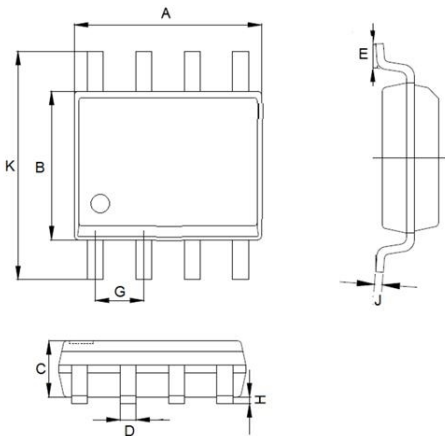


Fig3. Power Derating Curve

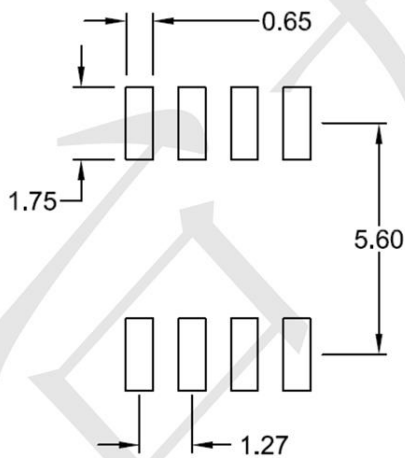


**SOP-8 Package Outline Drawing** (Unit: mm)



SOP-8		
Dimension	Min.	Max.
A	4.80	5.20
B	3.80	4.20
C	1.30	1.50
D	0.30	0.50
E	0.40	1.00
G	1.17	1.37
H	0.10	0.30
J	0.10	0.30
K	5.80	6.20

**Suggested Land Pattern** (Unit: mm)



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