

## Description

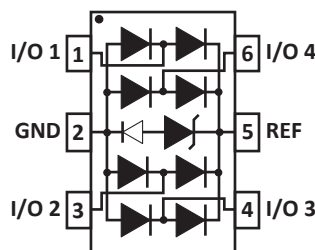
The SRV2.8-4 is an ultra low capacitance steering diode/TVS array. This device can be used in applications such as video cards, SMART phones, Gigabit Ethernet and other computer interfaces. Designed for ESD protection, the SRV2.8-4 can clamp the effects of electrical fast transients on the power bus.

The SRV2.8-4 combines low capacitance steering diodes for up to four individual data or transmission lines and one TVS diode for power bus protection. This device is available in the space-saving SOT23-6 package configuration, which minimizes lead inductance to prevent overshoot voltages during high ESD current events. The SRV2.8-4 meets the IEC 61000-4-2, IEC 61000-4-4 and 61000-4-5 requirements.

## Mechanical Characteristics

- ◆ Package: SOT23-6
- ◆ Approximate Weight: 16milligrams
- ◆ Lead-Free Nickel Paladium Gold Plating
- ◆ Solder Reflow Temperature: 260-270°C
- ◆ UL Flammability Classification Rating 94V-0
- ◆ 8mm Tape and Reel per EIA Standard 481
- ◆ Marking Information: See Below

## Dimensions and Pin Configuration



Circuit and Pin Schematic

## Ordering Information

Part Number	Marking	Packaging	Reel Size
SRV2.8-4	S2	3000/Tape & Reel	7 inch

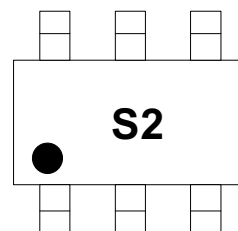
## Features

- ◆ Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±15kV
    - Contact discharge: ±8kV
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Surge) : 24A(8/20µs) -Level 2(Line-Gnd) & Level 3(Line-Line)
- ◆ 600W Peak Pulse Power per Line(tp=8/20µs)
- ◆ ESD Protection >25 kilovolts
- ◆ Low Clamping Voltage
- ◆ Protection for 4 Lines
- ◆ Ultra Low Capacitance: 3.5pF Typical
- ◆ ROHS Compliant
- ◆ REACH Compliant

## Applications

- ◆ Gigabit Ethernet
- ◆ SMART Phones
- ◆ Portable Electronics
- ◆ Video Card Interfaces
- ◆ USB 2.0 Interface
- ◆ DVI Interfaces

## Marking Information



S2 = Device Marking Code  
Dot denotes Pin1

### **Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$ unless otherwise specified)**

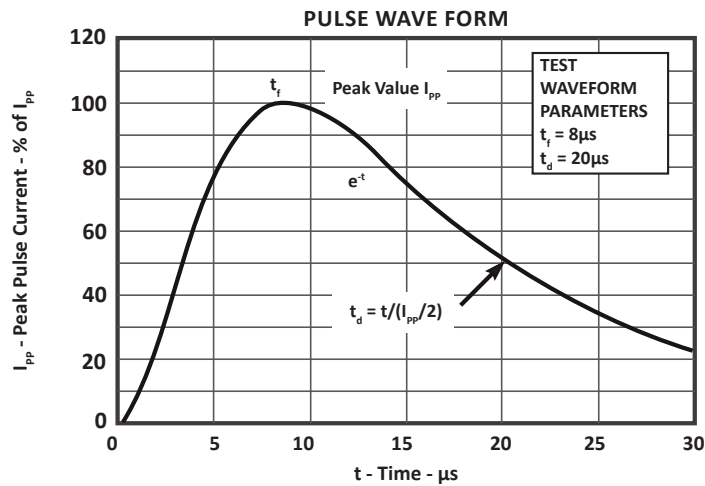
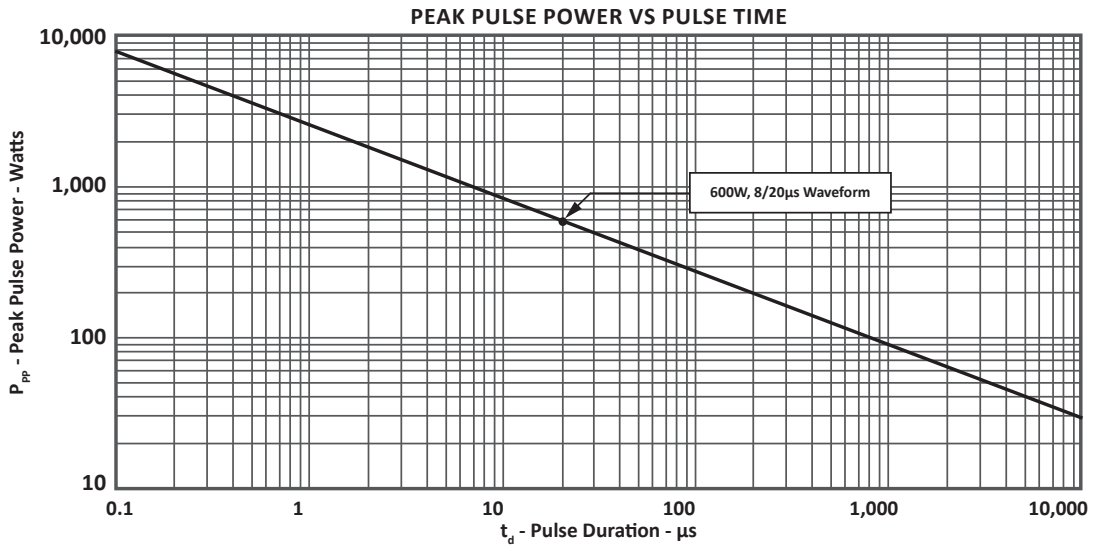
Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs)	PPP	600	W
Peak Pulse Current (tp=8/20μs)	I <sub>PP</sub>	24	A
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	±15	kV
ESD per IEC 61000-4-2 (Contact)		±8	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

### **Electrical Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise specified)**

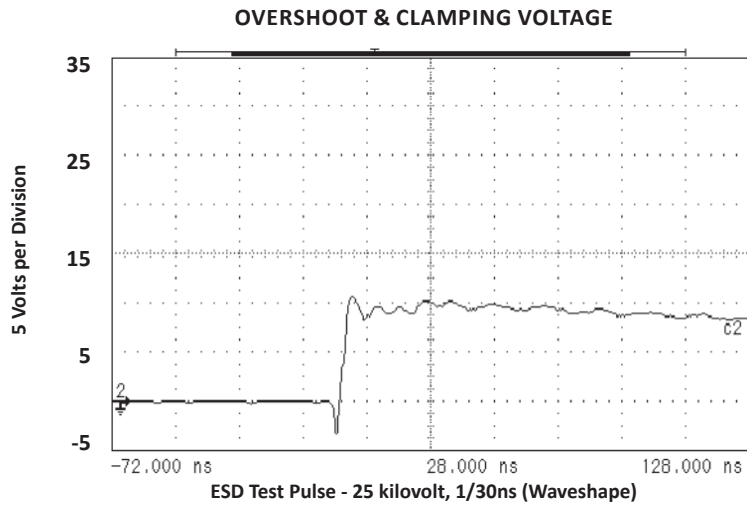
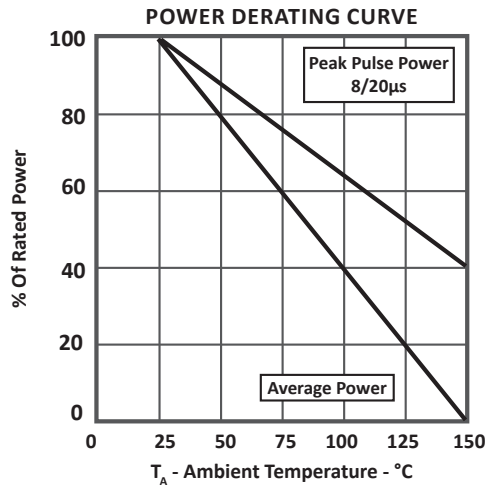
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V <sub>RWM</sub>			2.8	V	I/O pin to ground
Breakdown Voltage	V <sub>BR</sub>	3.0			V	I <sub>T</sub> = 1mA, I/O pin to ground
Reverse Leakage Current	I <sub>R</sub>			1	μA	V <sub>RWM</sub> = 5V, I/O pin to ground
Clamping Voltage	V <sub>C</sub>			5.5	V	I <sub>PP</sub> = 1A (8 x 20μs pulse) I/O pin to ground
Clamping Voltage	V <sub>C</sub>			8.5	V	I <sub>PP</sub> = 5A (8 x 20μs pulse) I/O pin to ground
Clamping Voltage	V <sub>C</sub>			18	V	I <sub>PP</sub> = 24A (8 x 20μs pulse) I/O pin to ground
Forward Voltage	V <sub>F</sub>			1.2	V	I <sub>F</sub> = 15mA
Junction Capacitance	C <sub>J</sub>		3.5		pF	V <sub>R</sub> = 0V, f = 1MHz, I/O pin to ground

Note 1: I/O pins are Pin 1, 3, 4 and 6

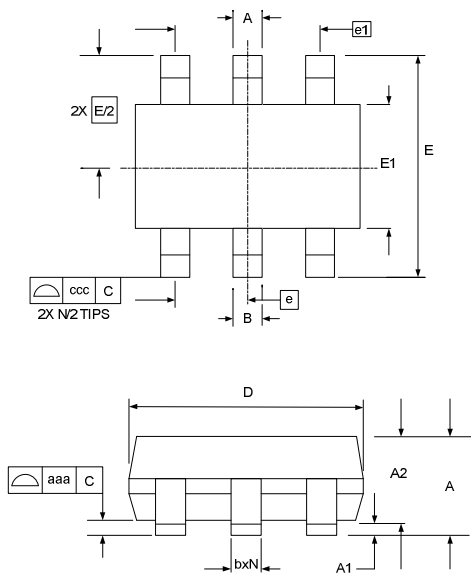
**Typical Performance Characteristics (TA=25°C unless otherwise Specified)**



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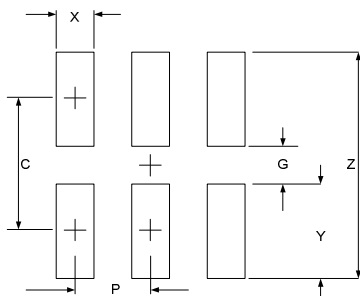


## SOT23-6 Package Outline Drawing



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.90		1.45	0.035		0.057
A1	0.00		0.15	0.000		0.006
A2	0.90	1.15	1.30	0.035	0.045	0.051
b	0.25		0.50	0.010		0.020
c	0.08		0.22	0.003		0.009
D	2.80	2.90	3.10	0.110	0.114	0.122
E1	1.50	1.60	1.75	0.060	0.063	0.069
E	2.80 BSC			0.110 BSC		
e	0.95 BSC			0.037 BSC		
e1	1.90 BSC			0.075 BSC		
N	6			6		
aaa	0.10			0.004		
ccc	0.20			0.008		

## Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
C	2.50	0.098
G	1.40	0.055
P	0.95	0.037
X	0.60	0.024
Y	1.10	0.043
Z	3.60	0.141

## Contact Information

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