

## STEERING DIODE/ TVS ARRAY COMBO

## APPLICATIONS

- ✓ Ethernet - 10/100/1000 Base T
- ✓ Cellular Phones
- ✓ Handheld & Portable Electronics
- ✓ Video/Graphics Card
- ✓ USB 2.0 Interface
- ✓ DVI Interface

## IEC COMPATIBILITY (EN61000-4)

- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 24A, 8/20 $\mu$ s - Level 2(Line-Gnd) & Level 3(Line-Line)

## FEATURES

- ✓ 500 Watts Peak Pulse Power per Line (tp=8/20 $\mu$ s)
- ✓ ESD Protection > 40 kilovolts
- ✓ Low Clamping Voltage
- ✓ Protects 4 Lines
- ✓ Ultra Low Capacitance: C<sub>i(SD)</sub> 0.7pF Typical
- ✓ RoHS Compliant

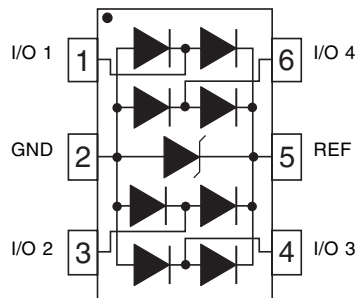
## MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOT-23-6 Package
- ✓ Weight 16 milligrams (Approximate)
- ✓ Available in Lead-Free Nickel-Paladium-Gold Plating
- ✓ Solder Reflow Temperature:  
Nickel-Paladium-Gold (Ni/Pd/Au) - Sn/Ag/Cu, 96/3.5/0.5: 260-270°C
- ✓ Flammability Rating UL 94V-0
- ✓ 8mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Marking Code & Pin One Defined By DOT on Package



SOT-23-6

## PIN CONFIGURATION



# SRV05-4LC

## DEVICE CHARACTERISTICS

### MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp = 8/20μs) - See Figure 1	P <sub>PP</sub>	500	Watts
Operating Temperature	T <sub>L</sub>	-55 to 150	°C
Storage Temperature	T <sub>STG</sub>	-55 to 150	°C
Forward Surge Rating(5ms @ 25°C, I <sub>F</sub> = 10mA)	V <sub>F</sub>	0.5 Min. to 1.2 Max.	Volts
Peak Pulse Current (tp = 8/20μs) - See Note 1	I <sub>PP</sub>	30	Amps

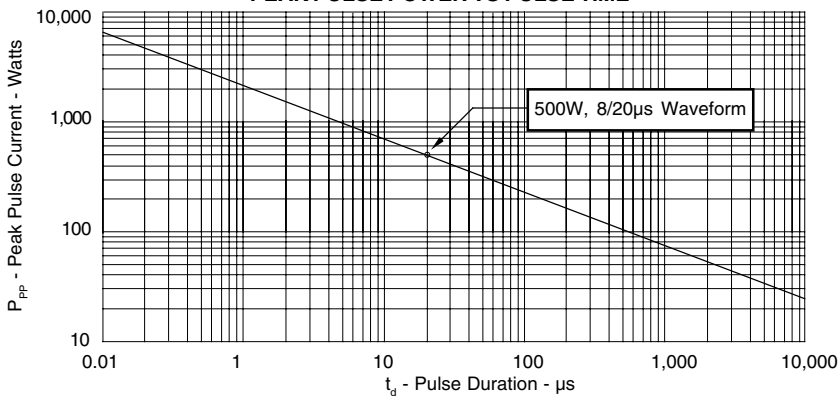
**Note 1:** Across TVS only - pin 2 to pin 5.

### ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

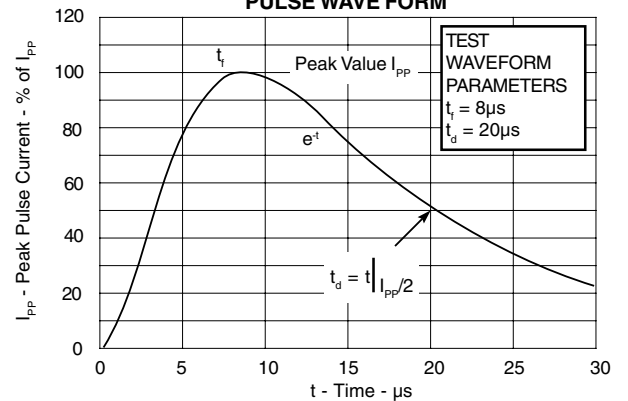
PART NUMBER	DEVICE MARKING	RATED STAND-OFF VOLTAGE (See Note 1)  V <sub>WM</sub> VOLTS	MINIMUM BREAKDOWN VOLTAGE (See Note 1)  @ 1mA V <sub>(BR)</sub> VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) (See Note 1) @ I <sub>p</sub> = 1A V <sub>C</sub> VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) (See Note 1) @ I <sub>p</sub> = 5A V <sub>C</sub> VOLTS	MAXIMUM LEAKAGE CURRENT (See Note 1)  @ V <sub>WM</sub> I <sub>b</sub> μA	TYPICAL CAPACITANCE  0V @ 1 MHz C <sub>(JSD)</sub> pF
SRV05-4LC	TS	5.0	6.0	12.0	15.0	5	0.7

**Note 1:** From I/O pin to ground.

**FIGURE 1**  
PEAK PULSE POWER VS PULSE TIME

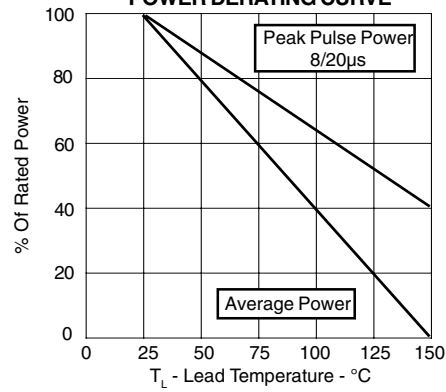


**FIGURE 2**  
PULSE WAVE FORM

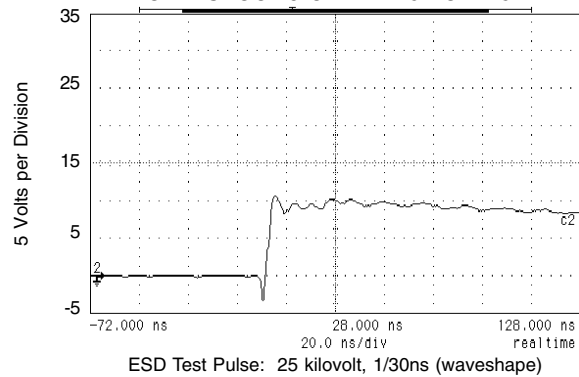


## GRAPHS

**FIGURE 3  
POWER DERATING CURVE**



**FIGURE 4  
OVERSHOOT & CLAMPING VOLTAGE**



# SRV05-4LC

## SOT-23-6 PACKAGE OUTLINE & DIMENSIONS

**PACKAGE OUTLINE**

**SOT-23-6**

**PACKAGE DIMENSIONS**

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.80	3.05	0.110	0.120
B	1.50	1.75	0.059	0.070
C	0.90	1.30	0.036	0.051
D	0.30	0.40	0.012	0.016
E	0.85	1.05	0.033	0.040
G	0.90	1.45	0.036	0.057
J	0.09	0.20	0.003	0.008
K	2.60	3.00	0.102	0.118
L	0.0	0.15	0.0	0.006
M	0.30	0.60	0.012	0.024

**MOUNTING PAD**

TYPICAL		
DIM	Millimeters	Inches
1	0.70	0.028
2	1.90	0.074
3	0.95	0.037
4	2.40	0.094
5	1.00	0.039

**NOTES**

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Inches
3. Dimensions are exclusive of mold flash and metal burrs.

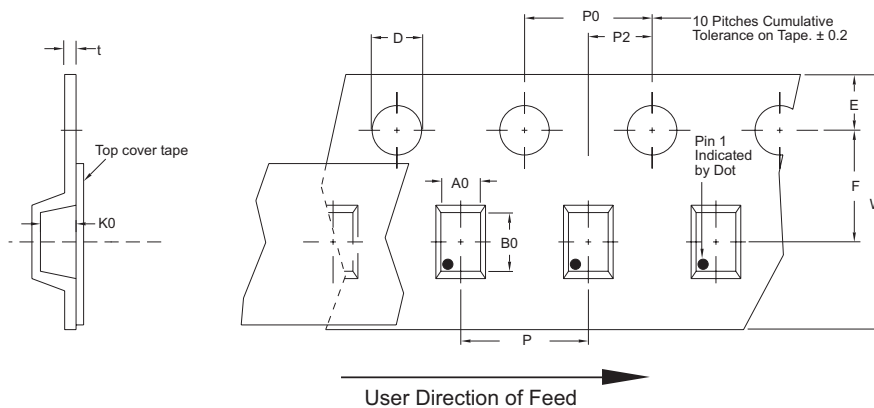
**TAPE & REEL/BULK ORDERING NOMENCLATURE**

1. Surface mount product is taped and reeled in accordance with EIA-481.
2. Suffix -T7 = 7 Inch Reel - 3,000 pieces per 8mm tape, i.e., SRV05-4LC-T7

**Outline & Dimensions: Rev 3 - 3/08, 06013**

### Tape & Reel Specifications (Dimensions in millimeters)

Reel Dia.	Tape Width	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	3.20 ± 0.10	3.20 ± 0.10	1.65 ± 0.10	1.50 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	8.00 ± 0.30	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	0.25



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