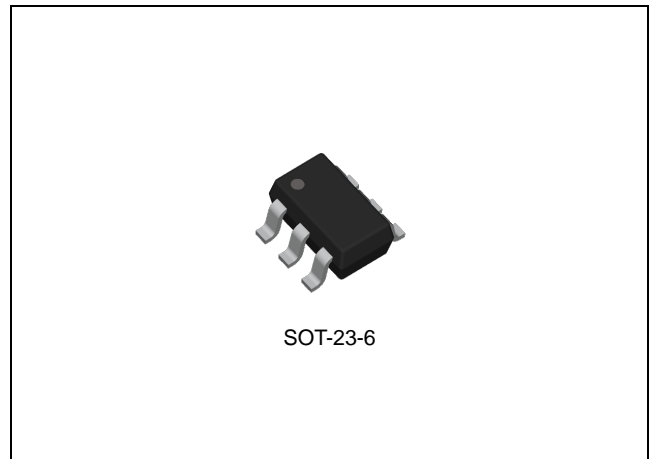


## FEATURES

- Transient Protection for High Speed Data Lines to IEC 61000-4-2 (ESD)  $\pm 15\text{kV}$  (Air),  $\pm 8\text{kV}$  (Contact)
- Array of Surge Rated Diodes with Internal TVS Diode
- Protects Four I/O Lines
- Low Operating Voltage: 5V
- Low Capacitance
- Low Clamping Voltage

## APPLICATIONS

- High Speed Communication Line Protection
- USB 2.0 Power and Data Line Protection
- Monitors and Flat panel Display
- Digital Video Interface (DVI)
- 10/100/1000 Ethernet
- Notebook Computers
- IEEE 1394 Firewire Ports



SOT-23-6

## ORDERING INFORMATION

Device	Package
SRV05-4SF6	SOT-23-6L

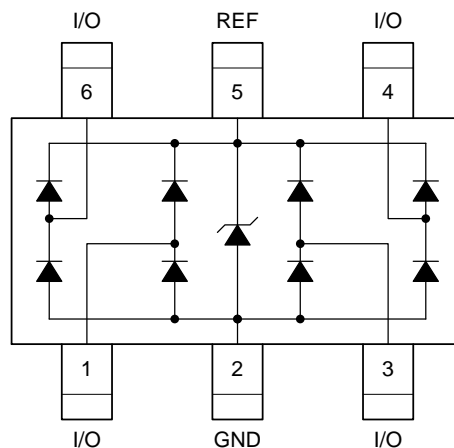
## DESCRIPTION

The SRV05-4 of transient voltage suppressors (TVS) is designed to protect high speed data interfaces which are connected to data and transmission lines from overvoltage caused by electrostatic discharge (ESD), electrical fast transients (EFT), and lightning.

The SRV05-4 incorporates eight surge rated, low capacitance steering diodes and a TVS diode in a single package. During transient conditions, the steering diodes direct the transient to either the positive side of the power supply line or to ground. The internal TVD diode prevents over-voltage on the power line, protecting any down-stream components.

The low capacitance array configuration allows the user to protect four high-speed data or transmission line. The low inductance construction minimizes voltage overshoot during high current surges.

## PIN CONFIGURATION AND BLOCK DIAGRAM



## ORDERING INFORMATION

Package	Order No.	Description	Supplied As	Status
SOT-23-6L	SRV05-4SF6	Low Capacitance Diode Array	Tape & Reel	Active

## ABSOLUTE MAXIMUM RATINGS (Note 1)

CHARACTERISTIC	SYMBOL	VAULUE	UNIT
Peak Pulse Power ( $t_p = 8/20 \mu s$ )	$P_{PK}$	200	W
Peak Pulse Current ( $t_p = 8/20 \mu s$ )	$I_{PP}$	10	A
ESD Immunity Voltage	$V_{ESD}$	8 (Contact), 15 (Air)	kV
Max Operating Junction Temperature	$T_J$	125	°C
Storage Temperature	$T_{STG}$	-55 to +150	°C

Note1. Stresses beyond those listed under *Absolute Maximum Ratings* may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated under *Recommended Operating Conditions* is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

## ELECTRICAL CHARACTERISTICS

Limits are for  $T_A = 25^\circ C$  unless otherwise noted.

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Stand-Off Voltage	$V_{RWM}$	Pin 5 to 2	-	-	5.0	V
Breakdown Voltage	$V_{BR}$	$I_t = 1mA$ , Pin 5 to 2	5.8	6.5	-	V
Reverse Leakage Current	$I_R$	$V_R = 5V$ , Pin 5 to 2	-	-	5.0	$\mu A$
Forward Voltage	$V_F$	$I_F = 15mA$	-	-	1.15	V
Clamping Voltage	$V_C$	$I_{PP} = 1.0A$ , $t_p = 8/20 \mu s$ , Any I/O Pin to Pin 2	-	-	10	V
		$I_{PP} = 5.0A$ , $t_p = 8/20 \mu s$ , Any I/O Pin to Pin 2	-	-	15	V
		$I_{PP} = 10A$ , $t_p = 8/20 \mu s$ , Any I/O Pin to Pin 2	-	-	20	V
Junction Capacitance	$C_J$	$V_R = 0V$ , $f = 1MHz$ , Any I/O Pin to Pin 2	-	3.3	5.0	pF
		$V_R = 0V$ , $f = 1MHz$ , Between I/O Pins	-	1.5	-	pF

**TYPICAL OPERATING CHARACTERISTICS**

T.B.D.

## REVISION NOTICE

The description in this datasheet is subject to change without any notice to describe its electrical characteristics properly.