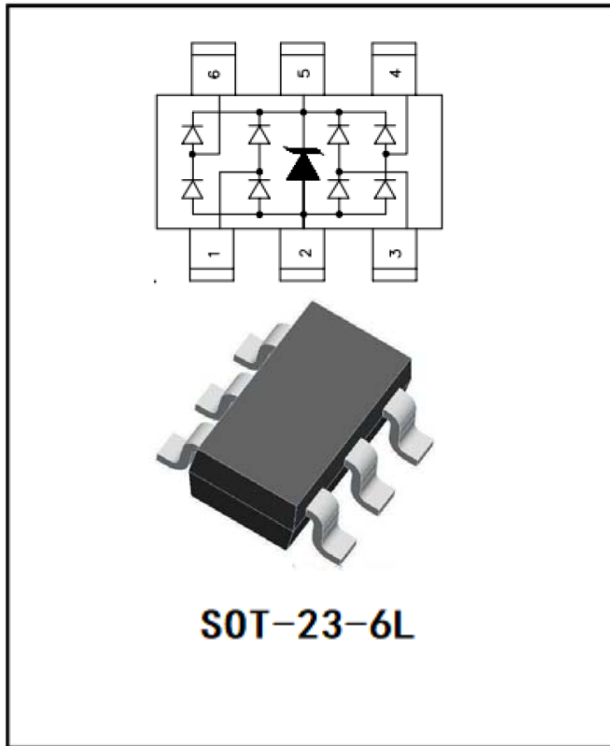


4-Line Low Capacitance TVS Diode Array

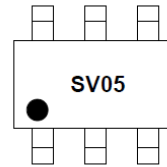


Features

- 300W peak pulse power (8/20 μ s)
- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Up to four lines and one power line protects
- RoHS Compliant

Mechanical Characteristics

- Package: SOT-23-6L
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Marking Information: See Below



SV05 = Device Marking Code
Dot denotes Pin1

■ Absolute Maximum Ratings (Ta=25°C unless otherwise specified)

PARAMETER	SYMBOL	VALUE	UNIT
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C
ESD per IEC 61000-4-2 (Air)	VESD	±30	KV
ESD per IEC 61000-4-2 (Contact)		±30	KV
Peak Pulse Power(8/20 μ s)	P _{Pk}	300	W
Peak Pulse Current(8/20 μ s)	I _{PP}	12	A



SRV05-4

■Electrical Characteristics (Ta=25°C Unless otherwise specified)

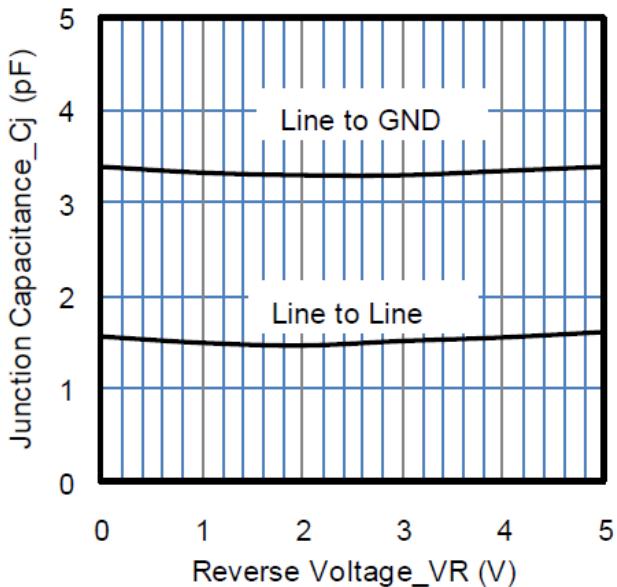
PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Working Voltage	V_{RWM}	V	Any I/O Pin to ground			5
Reverse Leakage Current	I_R	uA	$V_{RWM}=5V$, Any I/O Pin to ground			0.5
Breakdown Voltage	$V_{(BR)}$	V	$I_r=1mA$, Any I/O Pin to ground	6		
Forward Voltage	V_F	V	$I_F = 15mA$, ground to Pin1, 3, 4, 5, 6			1.2
Forward Voltage	V_F	V	$I_F = 15mA$, Pin1, 3, 4, 6 to Pin5			1.2
Clamping Voltage	V_C	V	$I_{PP} = 1A$ (8 x 20 μs pulse), any I/O pin to ground			15
Clamping Voltage	V_C	V	$I_{PP} = 12A$ (8 x 20 μs pulse), any I/O pin to ground			25
Junction Capacitance	C_J	pF	$V_R = 0V$, $f = 1MHz$, between I/O pins		1.5	
Junction Capacitance	C_J	pF	$V_R = 0V$, $f = 1MHz$, any I/O pin to ground		3.0	5.0

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

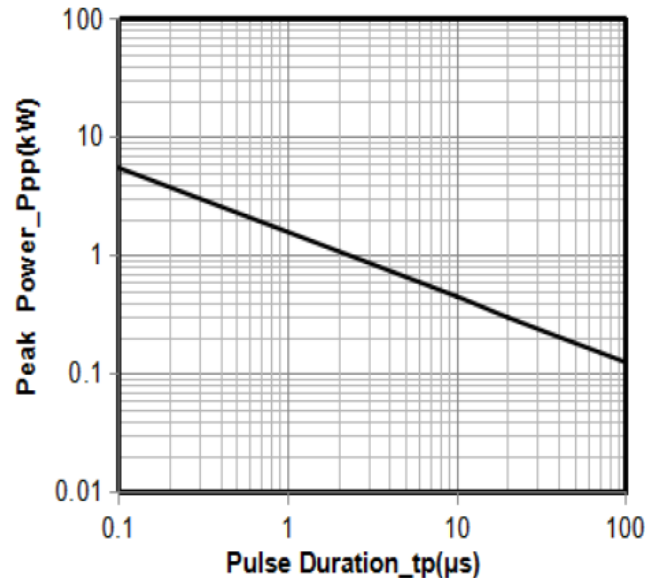
■Thermal Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SRV05-4
Thermal Resistance(Typical)	$R_{\theta J-A}$	°C/W	357
	$R_{\theta J-C}$	°C/W	143

■Typical Performance Characteristics (Ta=25°C unless otherwise Specified)



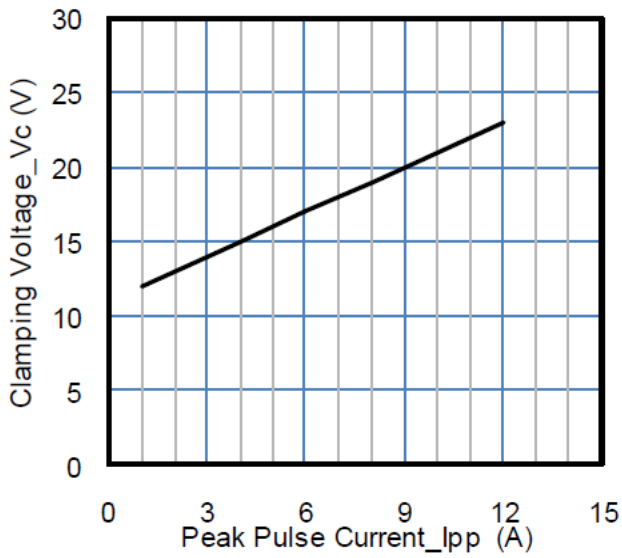
Junction Capacitance vs. Reverse Voltage



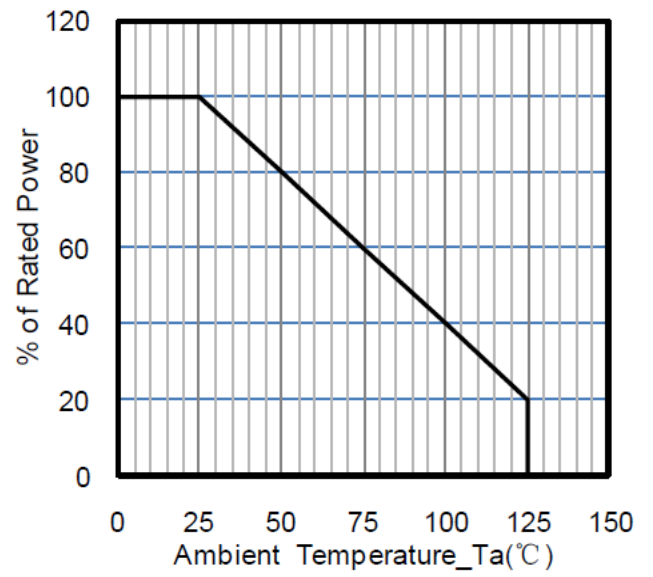
Peak Pulse Power vs. Pulse Time



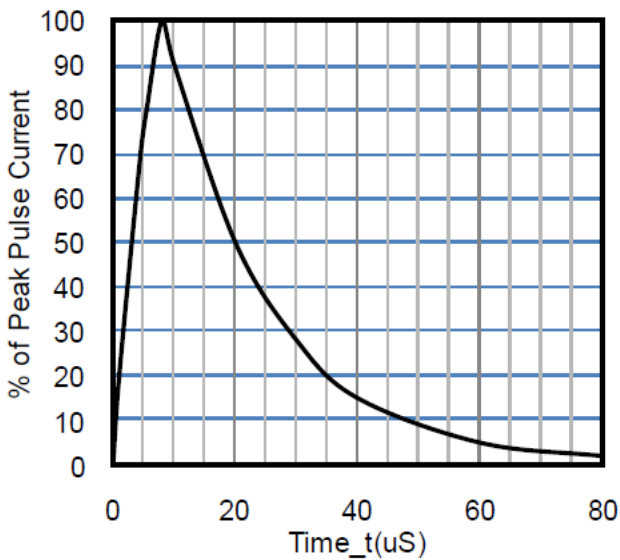
SRV05-4



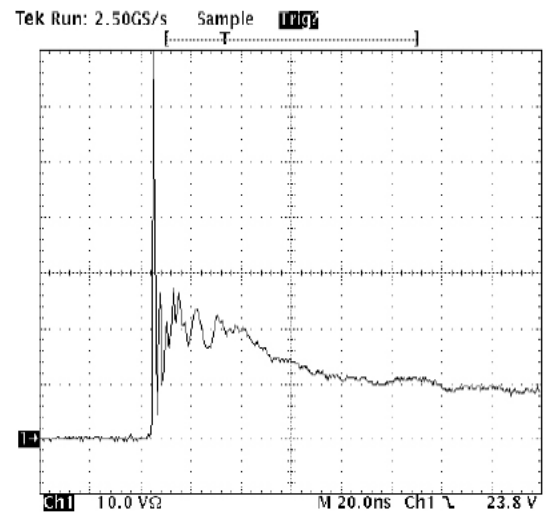
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20µs Pulse Waveform

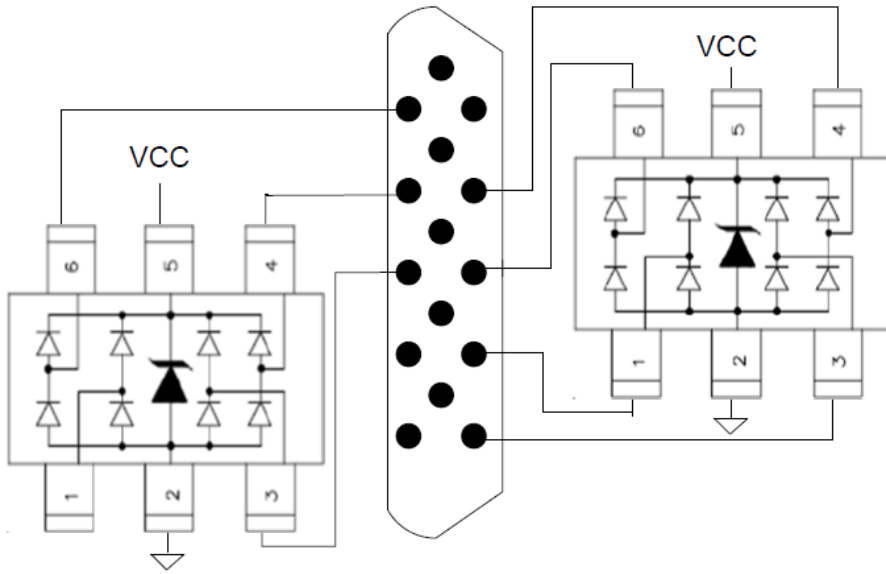


Note: Data is taken with a 10x attenuator

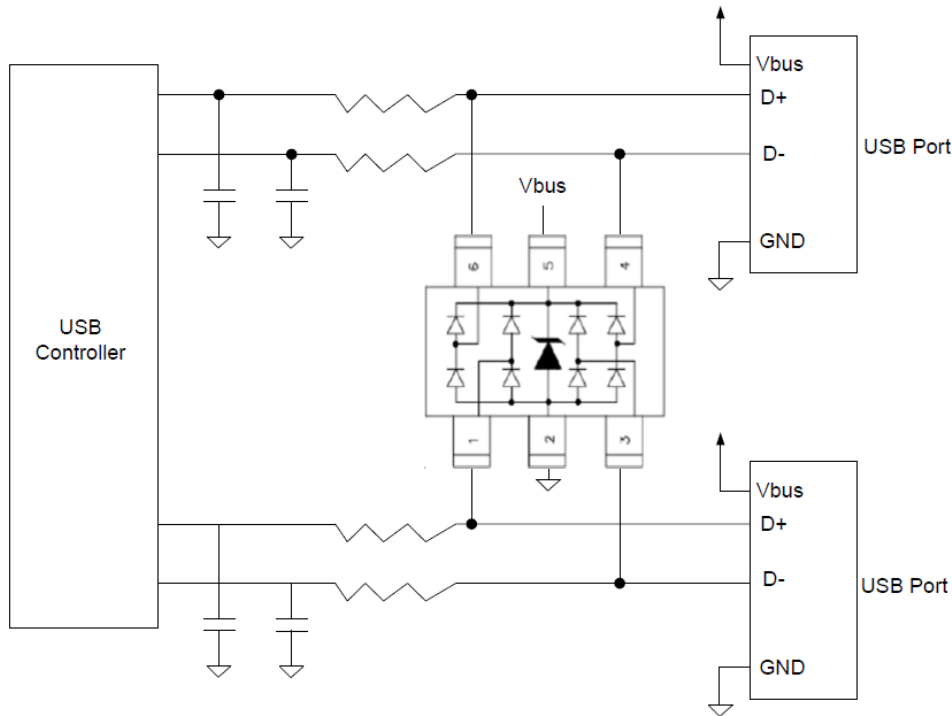
ESD Clamping Voltage

8 kV Contact per IEC61000-4-2

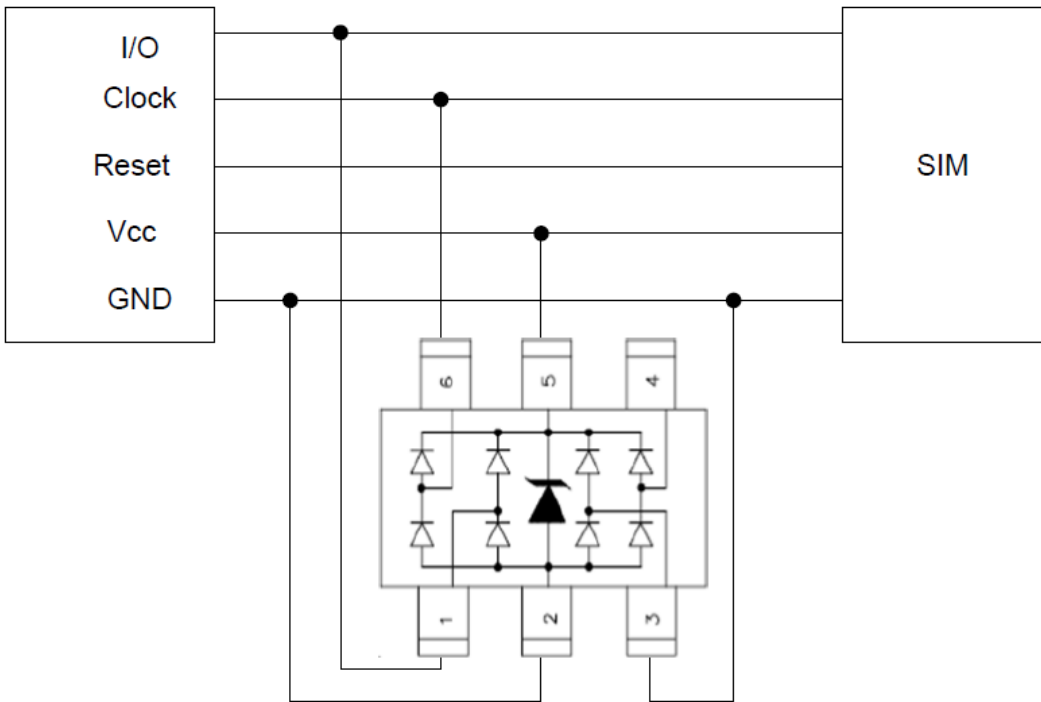
■ SRV05-4 on Video Interface Application



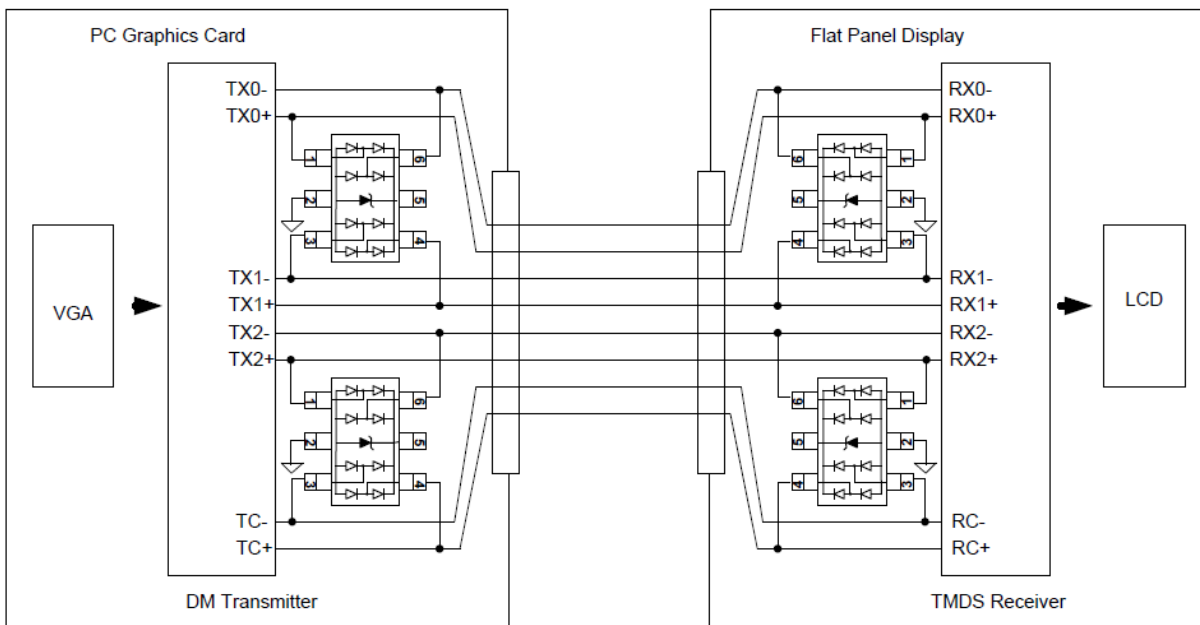
■ SRV05-4 on USB Port Application



■SRV05-4 on SIM Port Application



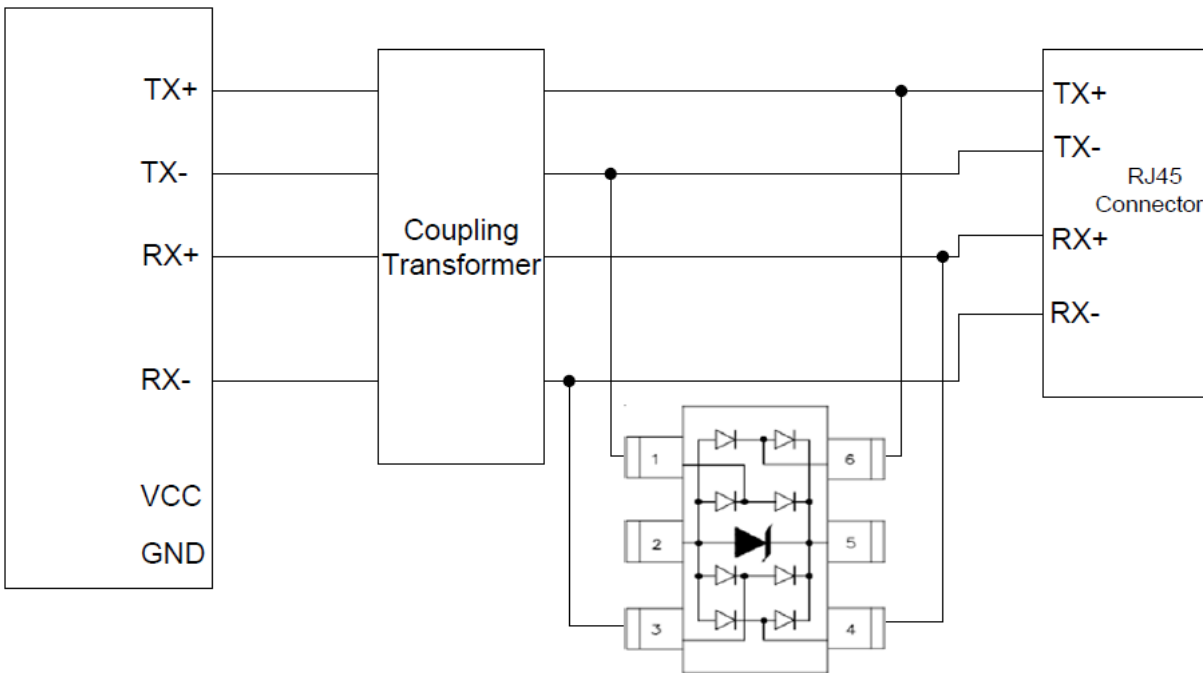
■SRV05-4 on Digital Visual Interface (DVI) Application



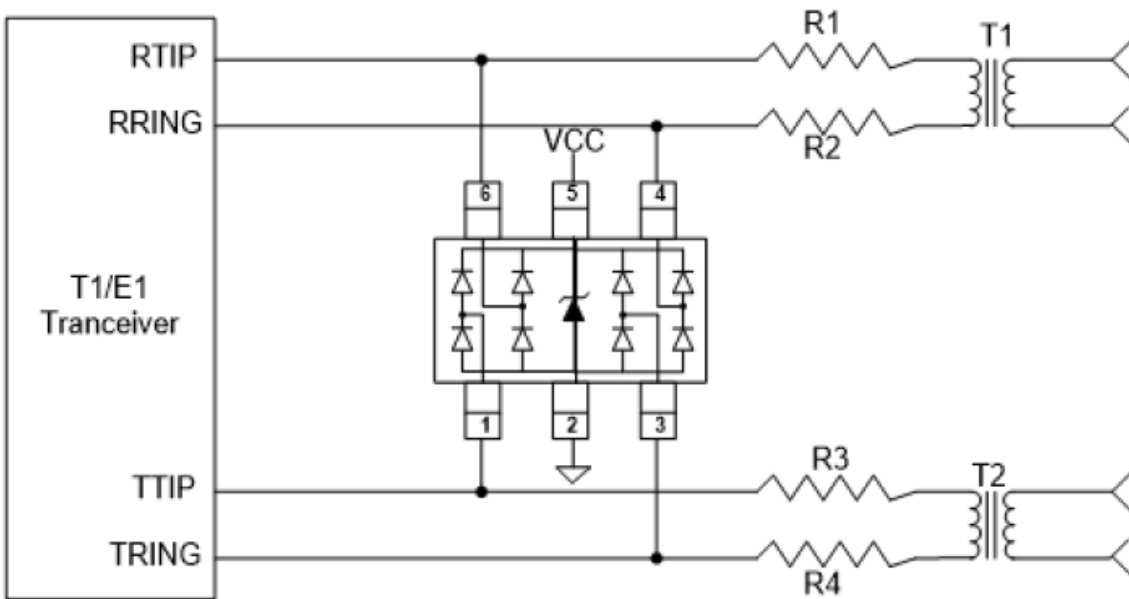


SRV05-4

■SRV05-4 on Ethernet 10/100 (Differential mode) Application



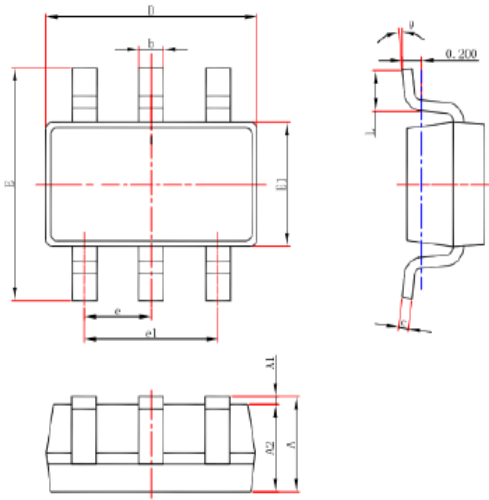
■SRV05-4 on T1/E1 Interface Application





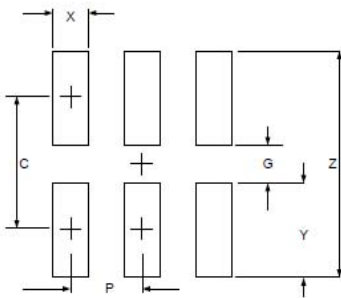
SRV05-4

■SOT-23 6L Package Outline Drawing



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

■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



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