



VS902SL — Low Capacitance TVS Diode

General Purpose Protection Device

Applications

- USB 2.0.
- Mobile communication.
- STB, MP3, DVD, DSC, LCD....
- Notebooks and desktop computers, peripherals.

Features

- ESD / transient protection of high-speed data lines in 3.3 /5/12V applications.
- Smallest form factor down to 1.0×0.6×0.4mm³.
- Maximum working voltage: -8/+14V.
- Very low capacitance down to 2pF (When used in series).
- Pb-free (RoHS compliant) package.

Specifications

Absolute Maximum Ratings at Ta=25°C, unless otherwise specified

Parameter	Symbol	Conditions	Ratings	Unit
ESD Discharge *1	V _{ESD}	Between all pins	15	kV
Peak Pulse Current *2	I _{pp}	T _p =8/20μs	1	A
Operating Temperature Range	Top		-55 to +125	°C
Storage Temperature	T _{stg}		-65 to +150	°C

Note : *1 V_{ESD} according to IEC61000-4-2

*2 I_{pp} according to IEC61000-4-5

Marking : B3

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VS902SL

Electrical Characteristics at Ta=25°C, unless otherwise specified

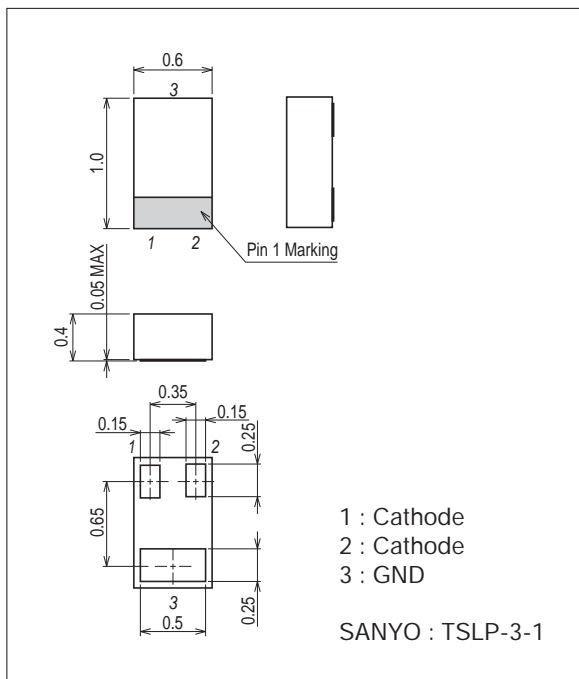
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Working Voltage	VRWM		-8		14	V
Breakdown Voltage	V(BR)	I(BR)=1mA, from pin1/2 to 3	14.5			V
		I(BR)=1mA, from pin3 to 1/2	8.5			V
		I(BR)=1mA, from pin1 to 2	23			V
Reverse Current	IR	VR=3V, between all pins			50	nA
Clamping Voltage	VCL	VESD=+15kV(contact), *3, from pin1/2 to 3		26		V
		VESD=-15kV(contact), *3, from pin1/2 to 3		20		V
Line Capacitance	CT	VR=0V, f=1MHz, from pin1/2 to 3		4	7	pF
		VR=0V, f=1MHz, from pin1 to 2, pin3 is not connected		2	4	pF

Note : *3 VESD according to IEC61000-4-2

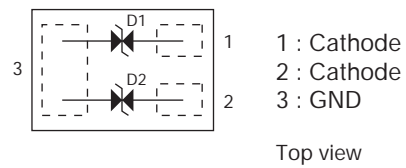
Package Dimensions

unit : mm (typ)

7061-001

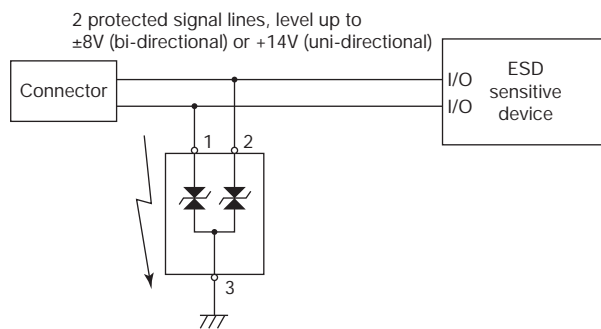


Electrical Connection



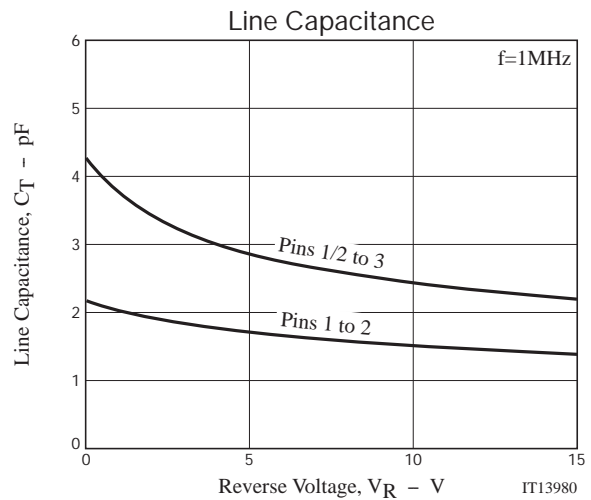
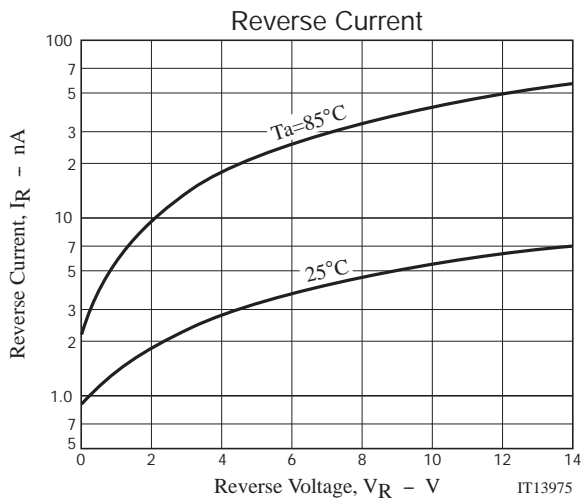
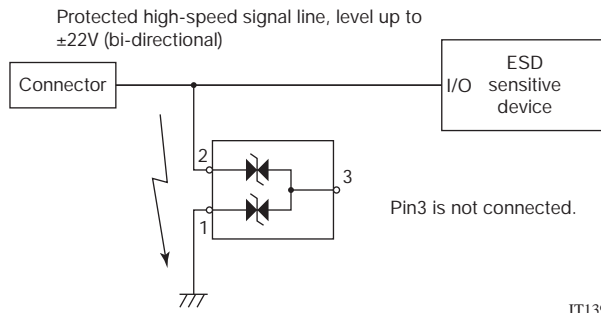
Application Example

2 channels, bi-directional



Application Example

1 high-speed channel, bi-directional



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