



Ultra Low Capacitance TVS/ESD Protection Diode



APPLICATIONS

- ◆ Serial ATA
- ◆ Desktops, Servers and Notebooks
- ◆ PCI Express
- ◆ MDDI Ports
- ◆ USB Data Line Protection
- ◆ HDMI Ports
- ◆ Digital Visual Interfaces (DVI)

IEC COMPATIBILITY

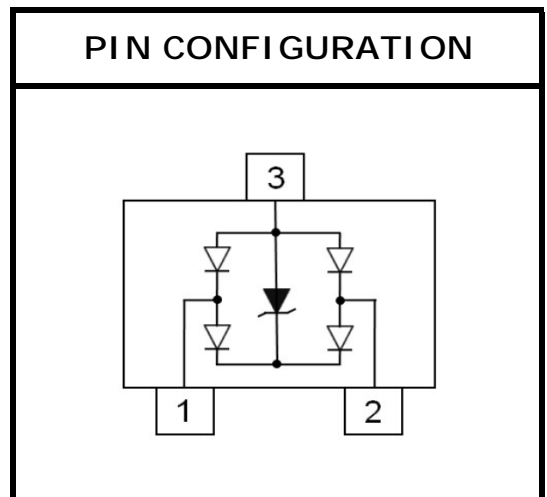
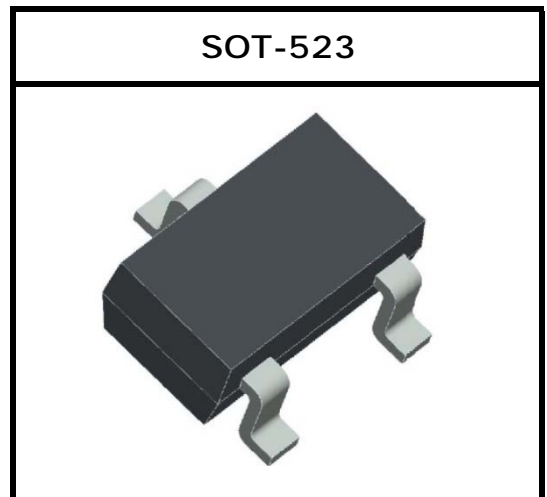
- ◆ IEC 61000-4-2 (ESD) ±15kV (Air), ±8kV (Contact)
- ◆ IEC 61000-4-4 (EFT) 40A (5/50 ns)

FEATURES

- ◆ Transient protection for high-speed data lines
- ◆ Small package
- ◆ Protects two data lines
- ◆ Low capacitance : 0.2pF Typical (I/O-I/O)
- ◆ Low leakage current
- ◆ Low clamping voltage

MECHANICAL CHARACTERISTICS

- ◆ SOT-523 package
- ◆ Flammability Rating: UL 94V-0
- ◆ Packaging: Tape and Reel
- ◆ High temperature soldering guaranteed : 260/10s
- ◆ Reel size : 7 inch
- ◆ Quantity per reel : 3,000pcs
- ◆ Marking : 52L



DEVICE CHARACTERISTICS

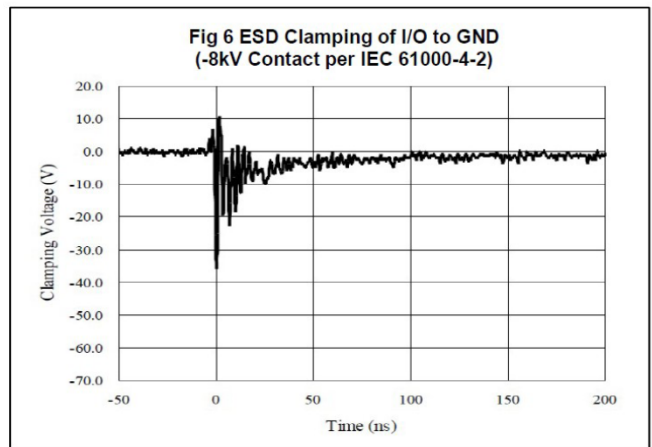
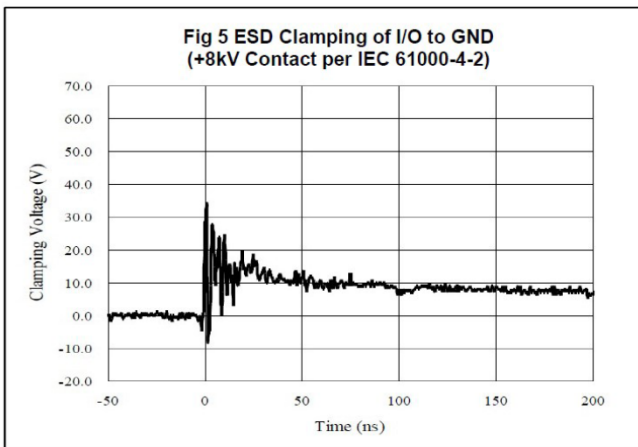
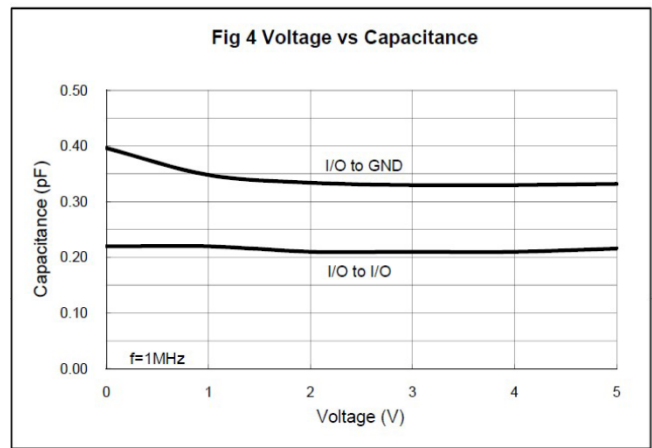
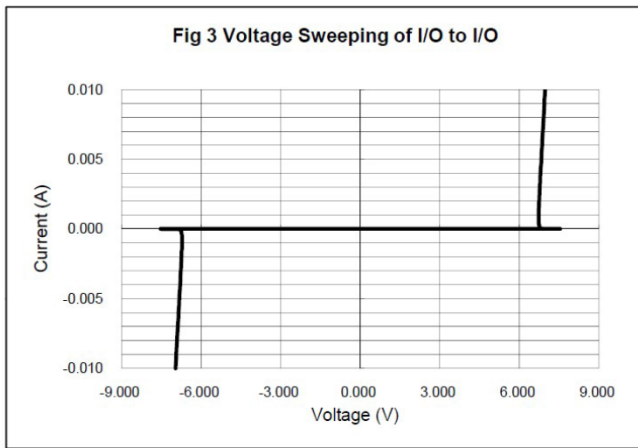
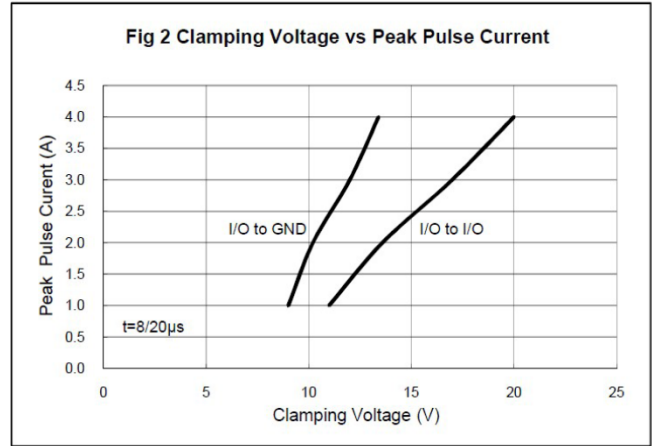
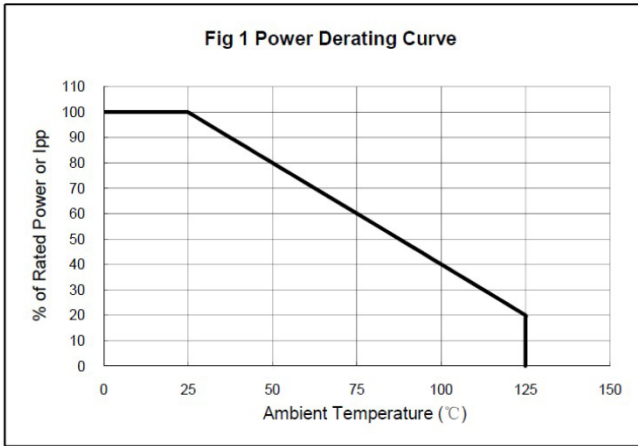
YSESD0502T5L

ABSOLUTE MAXIMUM RATING			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (8/20 μ s)	P _{PP}	60	Watts
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 20	kV
ESD per IEC 61000-4-2 (Contact)		± 20	
Operating Temperature	T _{OPT}	-55 ~ 125	°C
Storage Temperature	T _{STG}	-55 ~ 125	°C

ELECTRICAL CHARACTERISTICS (T _{amb} =25°C)						
PARAMETER	TEST CONDITION	SYMBOL	Min.	Typ.	Max.	UNITS
Reverse Working Voltage	I/O to GND	V _{RWM}	-	-	5	V
Reverse Breakdown Voltage	I _T =1mA, Between I/O and GND	V _{BR}	6	-	-	V
Reverse Leakage Current	V _{RWM} =5V, Between I/O and GND	I _R	-	-	100	nA
Forward Voltage	I _T =10mA, Between I/O and GND	V _F	-	-	1.2	V
Clamping Voltage (t _p =8/20 μ s)	I _{PP} =1A, Between I/O and GND	V _C	-	-	10	V
	I _{PP} =4A, Between I/O and GND		-	-	15	
Total Capacitance	V _R =0V, f=1MHz, Between I/O and GND	C _T	-	0.4	0.6	pF
	V _R =0V, f=1MHz, Between I/O and I/O		-	0.2	0.3	

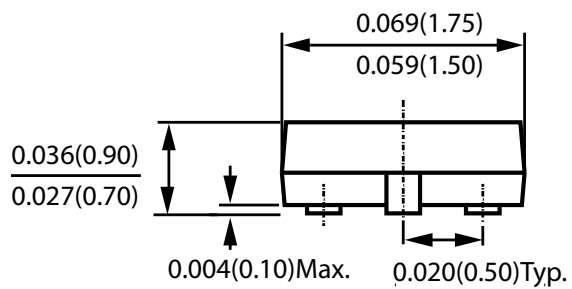
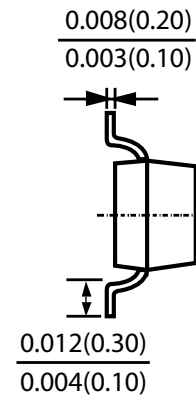
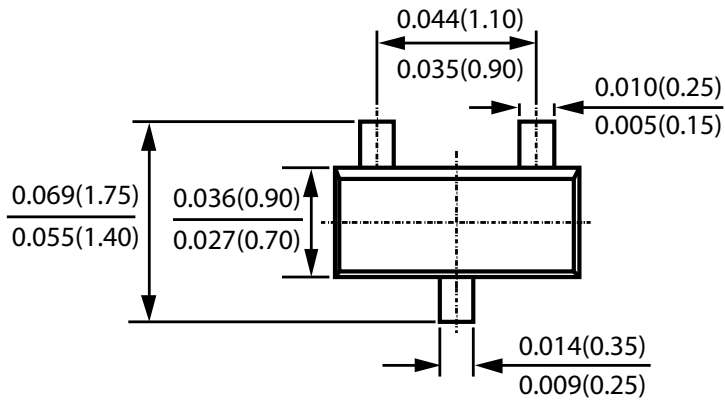
DEVICE CHARACTERISTICS

YSESD0502T5L



PACKAGE OUTLINE & DIMENSIONS

YSESD0502T5L



SOT-523

Dimensions in inches and (millimeters)