



Ultra Low Capacitance ESD Protection Array



APPLICATIONS

- ◆ Serial ATA
- ◆ MDDI Ports
- ◆ USB 2.0/3.0 Power and Data Line Protection
- ◆ Display Ports
- ◆ High Definition Multi-Media Interface (HDMI)
- ◆ Digital Visual Interface (DVI)

IEC COMPATIBILITY

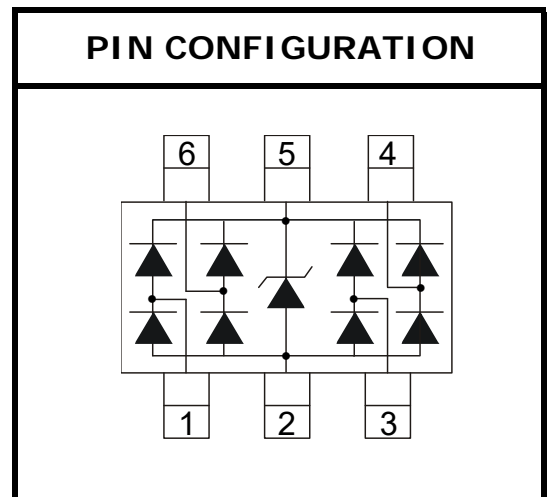
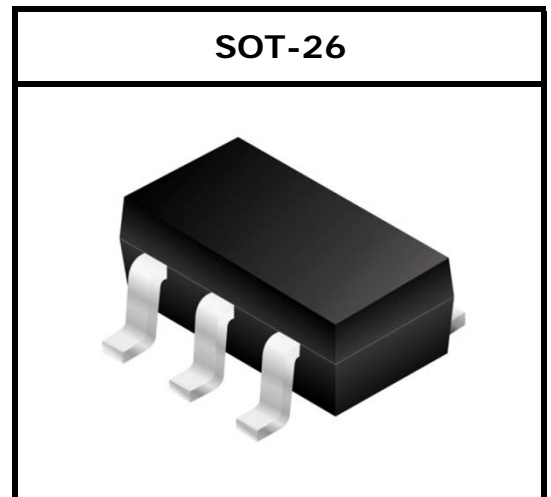
- ◆ IEC 61000-4-2 (ESD) ±25kV (Air)
- ◆ IEC 61000-4-2 (ESD) ±20kV (Contact)
- ◆ IEC 61000-4-4 (EFT) 40A (5/50 ns)

FEATURES

- ◆ Package Optimized for High-Speed Lines
- ◆ Protects Four Data Lines and One VCC Line
- ◆ Low Capacitance : 0.20pF (I/O to I/O)
- ◆ Low Leakage Current
- ◆ Low Clamping Voltage
- ◆ Each I/O Pin Can Withstand Over 1000 ESD Strikes for ±8KV Contact Discharge
- ◆ Marking : V05

MACHANICAL DATA

- ◆ SOT-26 Package
- ◆ Flammability Rating : UL 94V-0
- ◆ Terminal : Matte Tin Plated.
- ◆ High temperature soldering guaranteed : 260°C/10s



# DEVICE CHARACTERISTICS

## YSESD0504TL

ABSOLUTE MAXIMUM RATING			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (8/20 $\mu$ s)	P <sub>PP</sub>	60	W
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	$\pm 25$	kV
ESD per IEC 61000-4-2 (Contact)		$\pm 20$	
Operating Temperature	T <sub>OPT</sub>	-55 ~ 125	°C
Storage Temperature	T <sub>STG</sub>	-55 ~ 150	°C

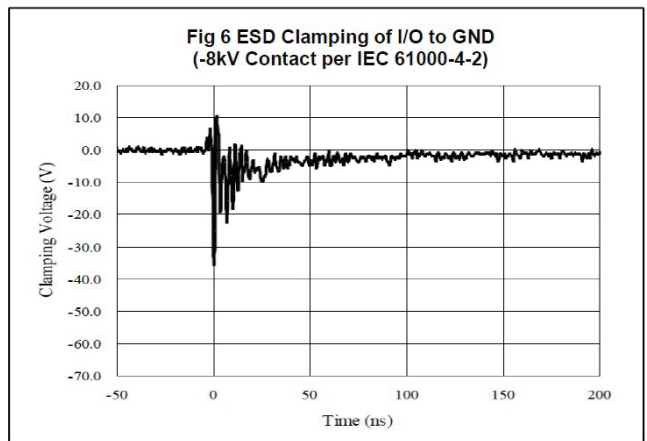
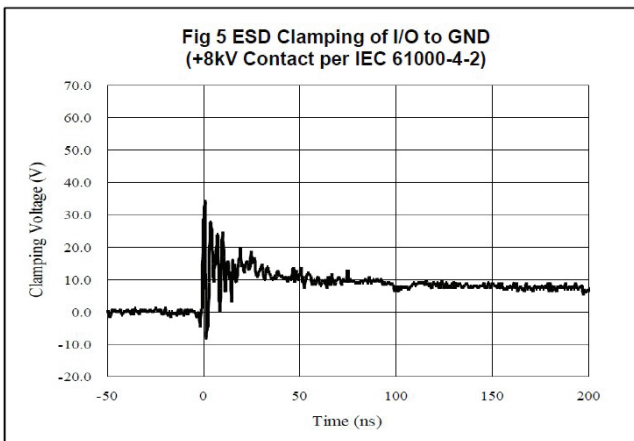
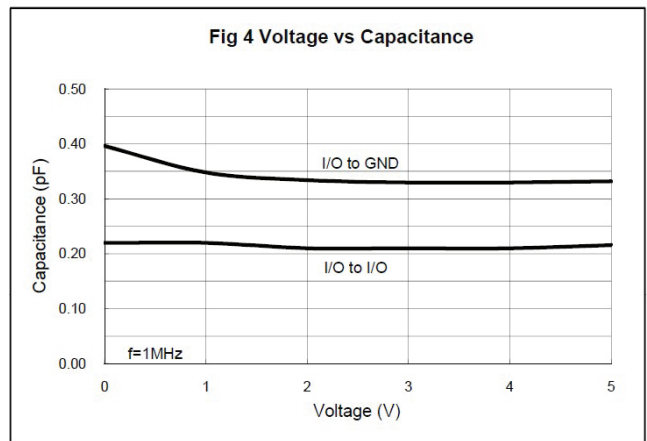
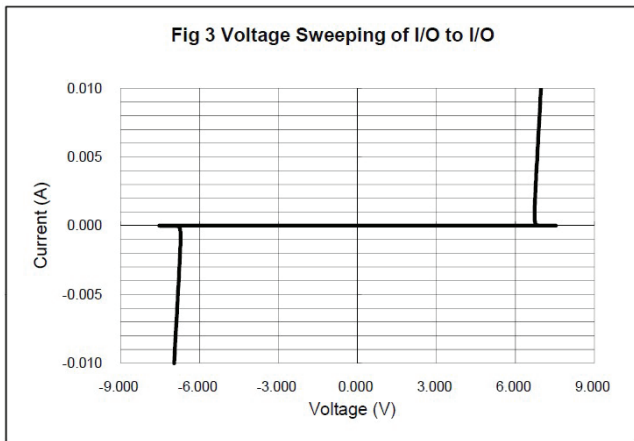
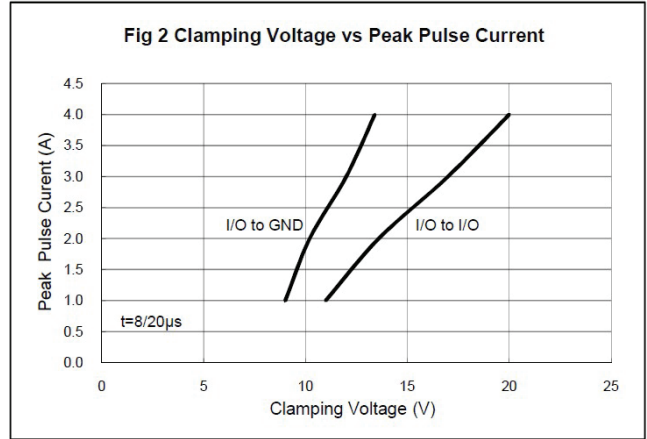
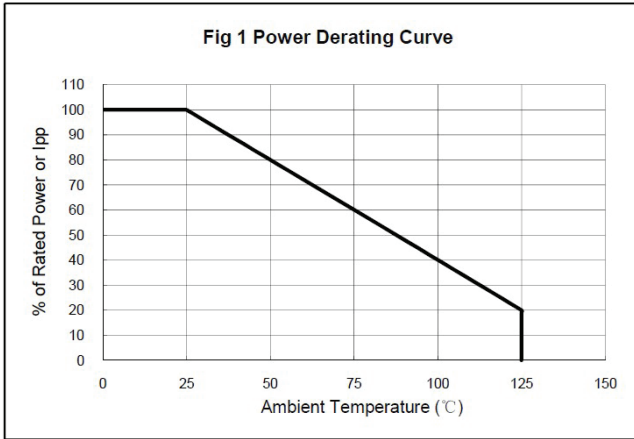
ELECTRICAL CHARACTERISTICS (TA=25°C UNLESS OTHERWISE NOTED)						
PARAMETER	TEST CONDITION	SYMBOL	Min.	Typ.	Max.	UNITS
Reverse Working Voltage	Any I/O Pin to GND	V <sub>RWM</sub>	-	-	5	V
Breakdown Voltage	I <sub>T</sub> =1mA, Any I/O Pin to GND	V <sub>BR</sub>	6	-	9	V
Reverse Leakage Current	V <sub>RWM</sub> =5V, Any I/O Pin to GND	I <sub>R</sub>	-	-	1	$\mu$ A
Clamping Voltage (tp=8/20us)	I <sub>PP</sub> =1A, Any I/O Pin to GND	V <sub>C</sub>	-	-	10	V
	I <sub>PP</sub> =4A, Any I/O Pin to GND		-	-	15	
	I <sub>PP</sub> =8A, VCC Pin to GND		-	-	15	
Parasitic Capacitance	V <sub>R</sub> =0V, f=1MHz, Between I/O and I/O	C <sub>ESD</sub>	-	0.20	0.30	pF
	V <sub>R</sub> =0V, f=1MHz, Between I/O and GND		-	0.45	0.50	
	V <sub>R</sub> =0V, f=1MHz, Between VCC and GND		-	0.80	-	

NOTES :

1. I/O Pins are Pin 1,3,4,6. Pin 5 is Vcc. Pin 2 is GND.

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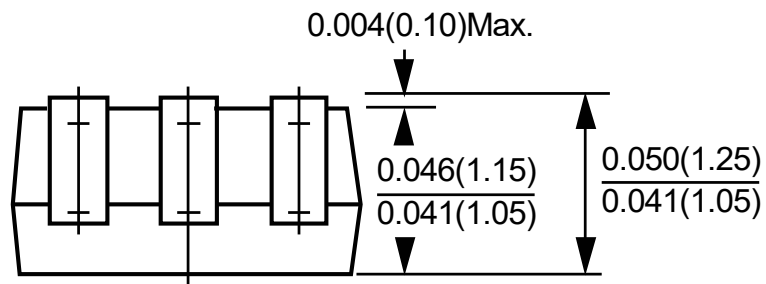
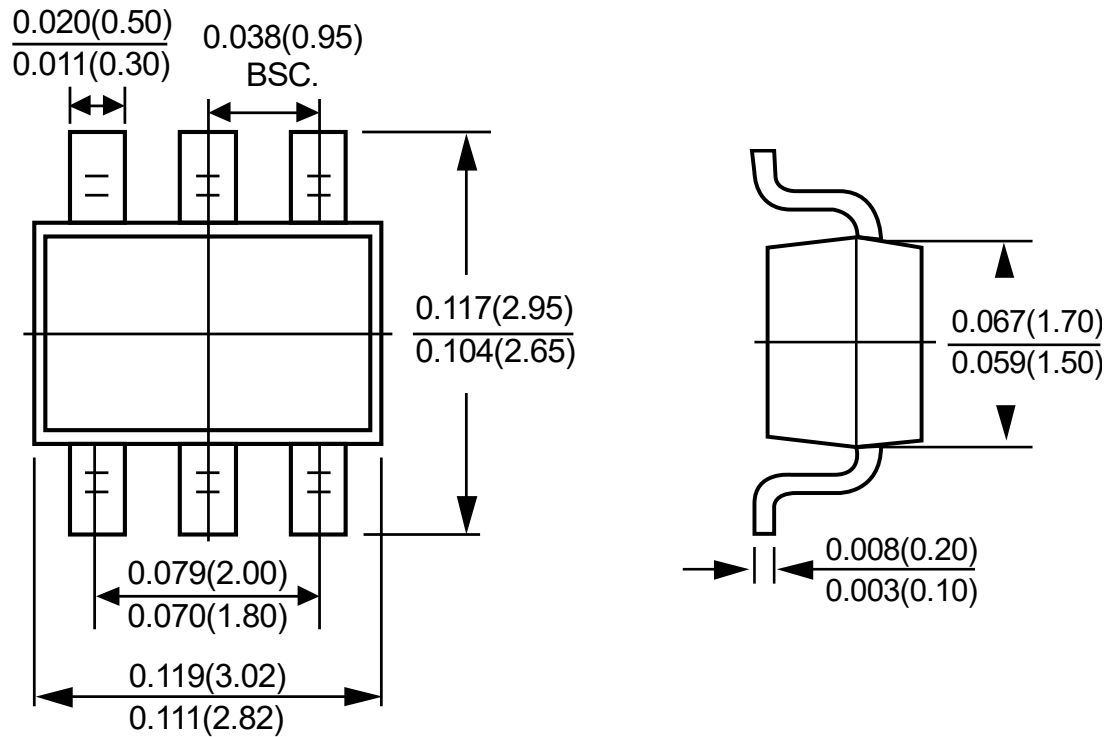
## YSESD0504TL



# PACKAGE OUTLINE & DIMENSIONS

YSESD0504TL

## Package Outline Dimensions



**SOT-26**

Dimensions in inches and (millimeters)