

Ultra Low Capacitance ESD Protection Array

DESCRIPTION

The GESD0504T5L provides a maximum line to GND capacitance of 0.8pF and low clamping voltage providing greater signal integrity making it ideally suited for USB 2.0 applications, such as Digital TVs, DVD players, Computing, set-top boxes and MDDI applications in mobile computing devices.

The GESD0504T5L has been specifically designed to protect sensitive components which are connected to high-speed data and transmission lines from overvoltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).

FEATURES

- ✧ Protects four I/O lines
- ✧ Low capacitance
- ✧ Working voltages: 5V
- ✧ Low leakage current
- ✧ Low clamping voltage
- ✧ Low capacitance for high-speed interfaces

MACHANICAL DATA

- ✧ SOT-553 package
- ✧ Flammability Rating: UL 94V-0
- ✧ Terminal: Matte tin plated.
- ✧ Packaging: Tape and Reel
- ✧ High temperature soldering guaranteed:
260°C/10s
- ✧ Reel size: 7 inch

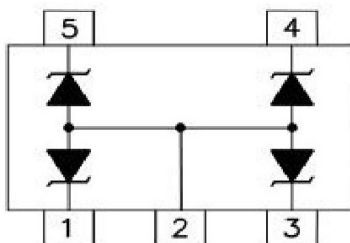
ORDERING INFORMATION

- ✧ Device: GESD0504T5L
- ✧ Package: SOT-553
- ✧ Marking: 54L
- ✧ Material: Halogen free and RoHS compliant
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 3,000pcs

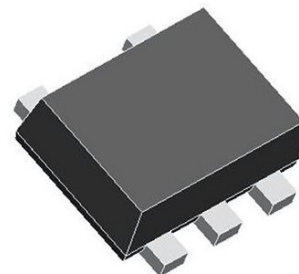
APPLICATIONS

- ✧ High Definition Multi-Media Interface (HDMI)
- ✧ Digital Visual Interface (DVI)
- ✧ Dual USB port
- ✧ IEEE 1394 Firewire Ports
- ✧ Notebooks & Handhelds
- ✧ Projection TV & Monitors
- ✧ Set-top box
- ✧ Flat Panel Displays

PIN CONFIGURATION



PACKAGE OUTLINE



ABSOLUTE MAXIMUM RATING

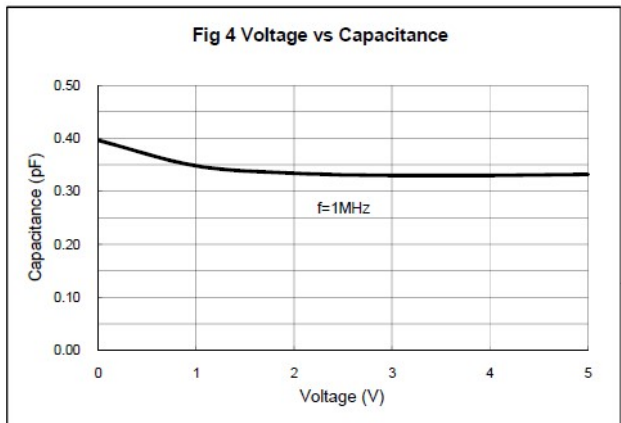
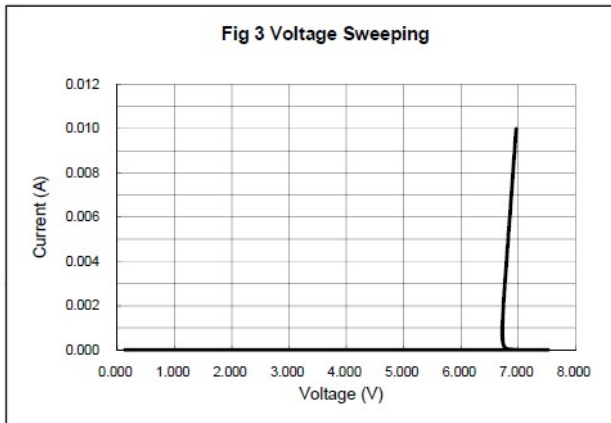
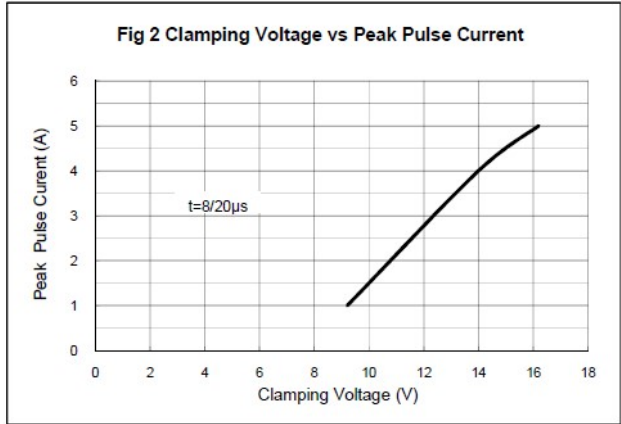
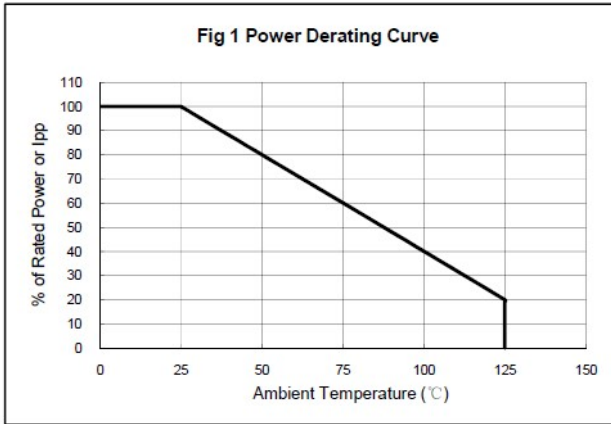
Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (8/20 μ s)	60	W
V_{ESD}	ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air)	± 20 ± 25	kV
T_L	Lead Soldering Temperature	260(10sec.)	$^{\circ}$ C
T_J	Operating Temperature	-55/+125	$^{\circ}$ C
T_{STG}	Storage Temperature	-55/+150	$^{\circ}$ C

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}$ C)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage	Any I/O pin to GND			5.0	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1mA$ Any I/O pin to GND	6.0			V
I_R	Reverse Leakage Current	$V_{RWM} = 5V$ Any I/O pin to GND			100	nA
V_F	Forward Voltage	$I_F = 10mA$ Any I/O pin to GND			1.2	V
V_{C1}	Clamping Voltage 1	$I_{PP} = 1A, t_p = 8/20\mu s$ Any I/O pin to GND			10.0	V
V_{C2}	Clamping Voltage 2	$I_{PP} = 4A, t_p = 8/20\mu s$ Any I/O pin to GND			15.0	V
C_J	Junction Capacitance	$V_R = 0V, f = 1MHz$ Any I/O pin to GND			0.8	pF

Note: I/O pins are pin 1,3,4,5.

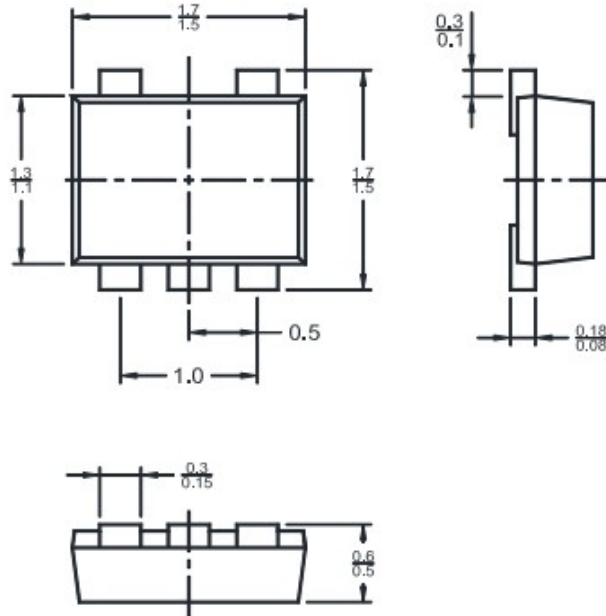
ELECTRICAL CHARACTERISTICS CURVE



SOT-553 PACKAGE OUTLINE DIMENSIONS

Package Outline Dimensions (Units: mm)

SOT-553



Recommended Soldering Footprint

