

Features

- Ultra-Low capacitance:0.05pF(typ.)
- Low leakage current(<10nA)
- Fast response time(<1ns)
- Protects four I/O lines
- IEC 61000-4-2 (ESD Air): 15kV
IEC 61000-4-2 (ESD Contact): 8kV

Mechanical Characteristics

- DFN2510-10 (2.5mmx1.0mmx0.5mm)package
- Molding compound flammability rating:
- UL 94V-0
- Packaging: Tape and Reel per EIA 481
- RoHS Compliant

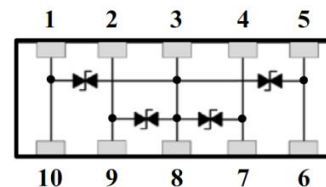
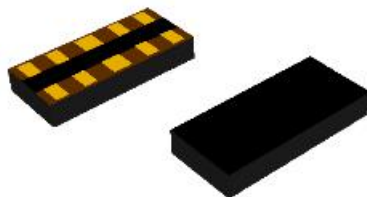
Applications

- USB 3.0/3.1
- HDMI 1.3/1.4/2.0
- DisplayPort Interface
- SATA and eSATA Interface

Ordering Information

Part Number	Qty per Reel	Reel Size
TPESD2510G05V	3000	7"

Dimensions and Pin Configuration



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

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Air)	VESD	±15	kV
ESD per IEC 61000-4-2 (Contact)		±8	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Continuous Operating Voltage	V _{DC}			5	V	
Trigger Voltage	V _T		450		V	IEC61000-4-2 8kV contact discharge
Clamping Voltage	V _C		40		V	IEC61000-4-2 8kV contact discharge
Leakage Current	I _L			10	nA	DC 5V shall be applied on component
Capacitance	C _J		0.05		pF	Measured at 10MHz

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

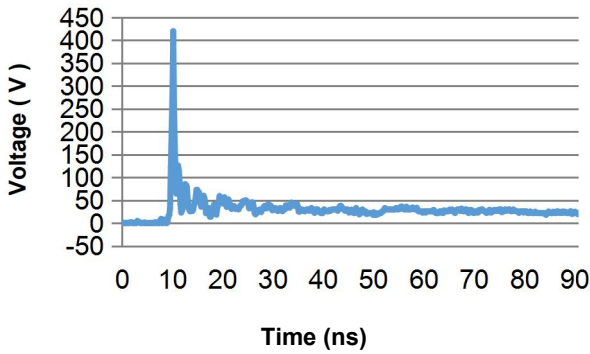


Fig.1 Typical ESD Response
 (IEC 61000-4-2, 8kV contact discharge)

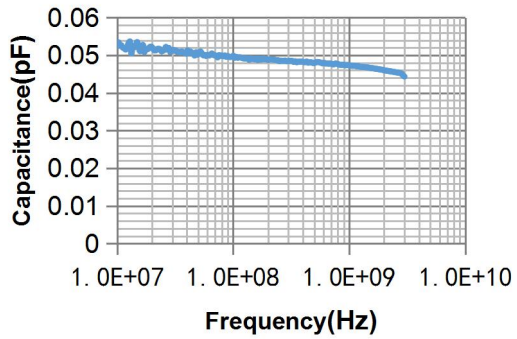


Fig.2 Typical Device Capacitance VS. Frequency

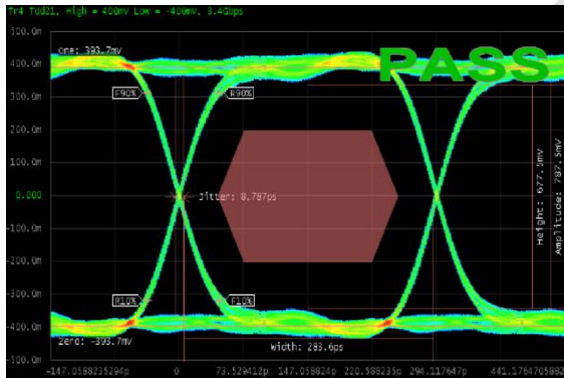


Fig.3 HDMI 1.4 Mask at 3.4 Gbps

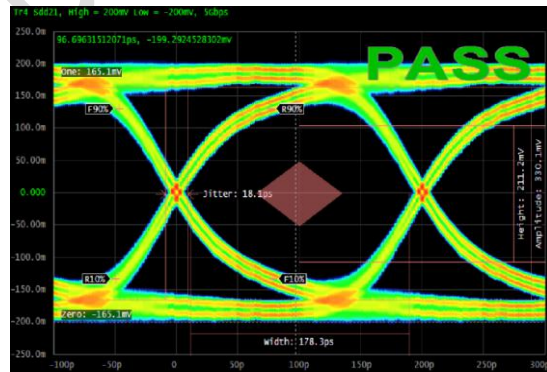


Fig.4 USB 3.0 Mask at 5.0 Gbps



Fig.5 HDMI 2.0 Mask at 6.0 Gbps

Applications Information

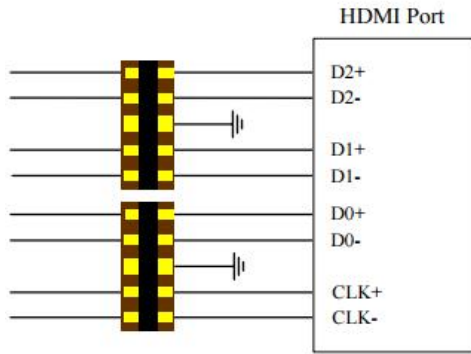


Fig.6 ESD Protection for HDMI

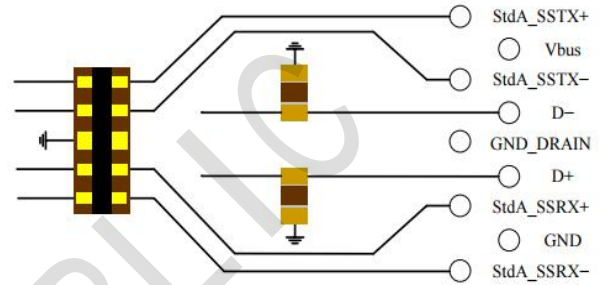
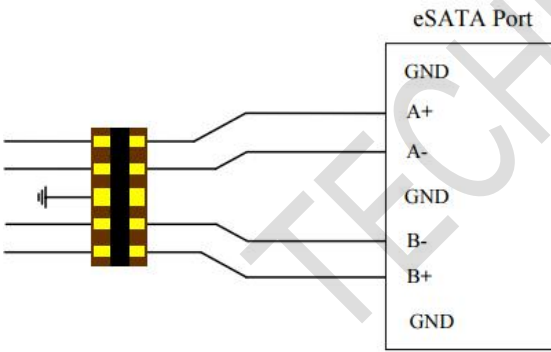
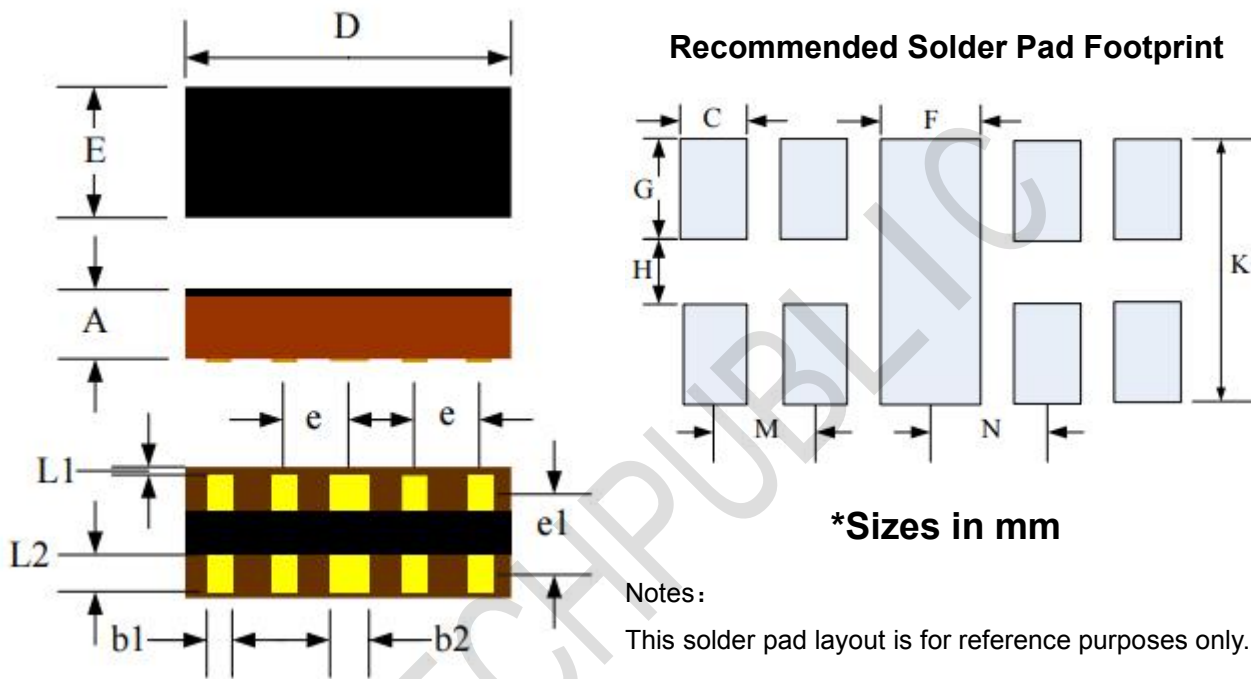


Fig.7 ESD Protection for USB 3.0 Type A



Outline Drawing - DFN2510-10



Dimension	Unit: Millimeters	
	Min.	Max.
A	0.40	0.60
b1	0.10	0.30
b2	0.20	0.40
D	2.40	2.60
E	0.90	1.10
e	0.40	0.60
e1	0.50	0.70
L1	0.04	0.06
L2	0.20	0.40

Dimension	Unit: Millimeters	
	Min.	Max.
C	0.20	0.30
F	0.35	0.45
G	0.55	0.65
H	0.25	0.35
K	1.40	1.60
M	0.45	0.55
N	0.45	0.55