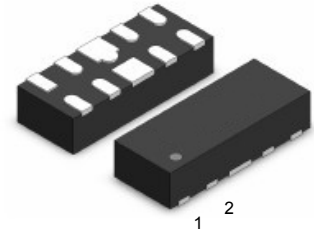


Features

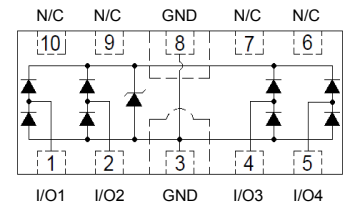
- DFN2510 Package
- Protects up to 4-Lines Operating at 3.3V
- Uni-Directional Configuration
- Snap-Back Technology
- Low Clamping Voltage
- Low Leakage Current
- Ultra Low Capacitance (0.20pF typical)
- ESD Protection for High-Speed Data Lines to:
IEC 61000-4-2 ±10KV Contact, ±15KV Air
IEC 61000-4-4 (EFT) 40A (5/50ns)
IEC 61000-4-5 (Lightning) 5A (8/20µs)
- RoHS Compliant



DFN2510

Applications

- USB 3.0/3.1
- HDMI 1.4/2.0, Display Port 1.3, eSATA
- Unified Display Interface (UDI)
- Digital Visual Interface (DVI)
- High Speed Serial Interfaces



Schematic Diagram

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

Parameter	Symbol	Value	Unit
Peak Pulse Current (T _p =8/20µS)	I _{PP}	5	A
IEC 61000-4-2 Contact (ESD)	V _{ESD}	±10	kV
IEC 61000-4-2 Air (ESD)	V _{ESD}	±15	kV
Junction Temperature	T _J	-55 To +125	°C
Storage Temperature	T _{STG}	-55 To +150	°C

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

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V _{RWM}	-	-	-	3.3	V
Reverse Breakdown Voltage	V _{BR}	I _T =1mA	5	6.5	10	V
Reverse Leakage Current	I _R	V _R =3.3V	-	0.01	0.1	µA
Trigger Voltage (IEC61000-4-5)	V _T	I _{PP} =5A, T _p =8/20µS	-	9	-	V
Clamping Voltage (IEC61000-4-5)	V _C	I _{PP} =5A, T _p =8/20µS	-	8	-	V
Clamping Voltage (TLP 8A)	V _C	IEC 61000-4-2 Level 2 (±4 kV Contact, ±4 kV Air)	-	6.3	-	V
Clamping Voltage (TLP 16A)	V _C	IEC 61000-4-2 Level 4 (±8 kV Contact, ±8 kV Air)	-	7.8	-	V
Dynamic Resistance	R _{dyn}	I _T =0 to 30A, T _p =TLP	-	0.25	-	Ω
Junction Capacitance	C _J	V _R =0V, f=1MHz, I/O to I/O	-	0.2	-	pF
	C _J	V _R =0V, f=1MHz, I/O to GND	-	0.4	-	pF

Typical Characteristic Curves

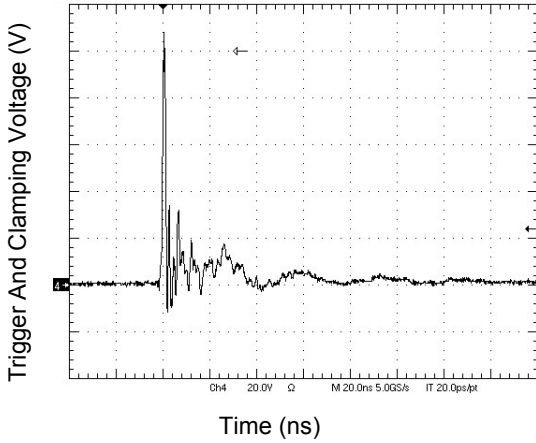


Figure 1. IEC61000-4-2 +8kV Contact Discharge

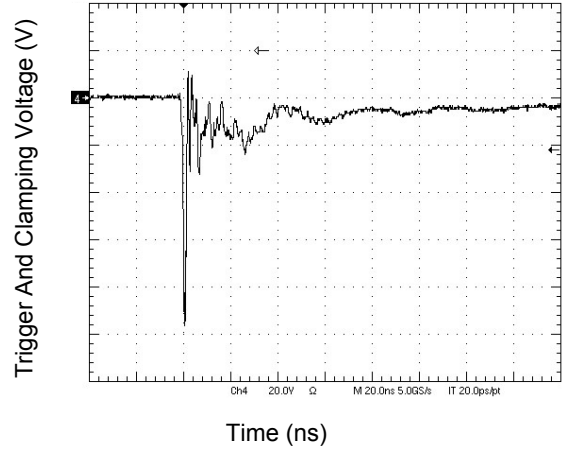


Figure 2. IEC61000-4-2 -8kV Contact Discharge

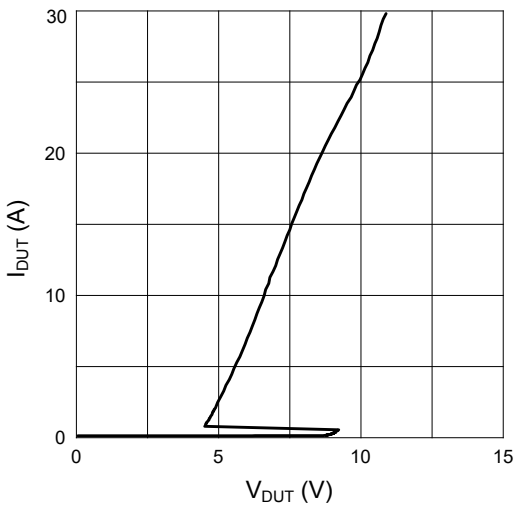


Figure 3. Transmission Line Pulse ($T_p=100ns$)

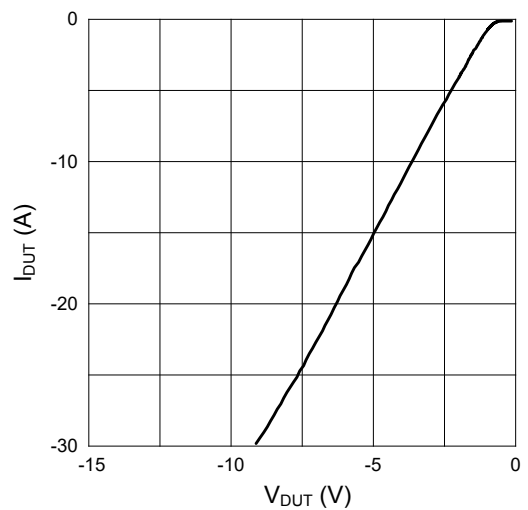


Figure 4. Transmission Line Pulse ($T_p=100ns$)

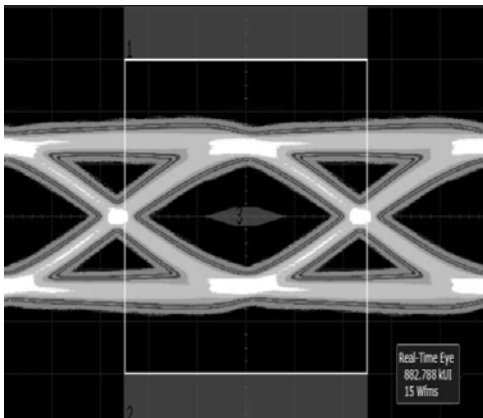


Fig.5 Eye Diagram - USB3.1 at 10Gbps per channel

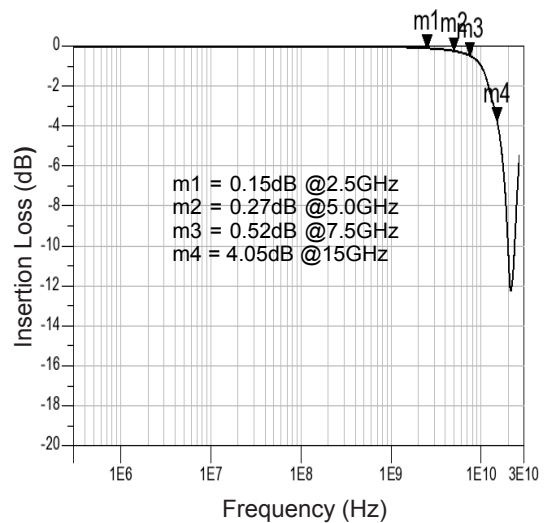
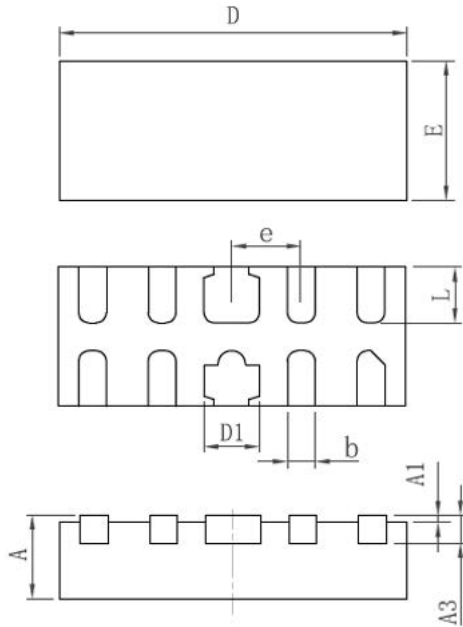


Fig.6 Insertion Loss S21 - I/O to I/O

Product Dimensions DFN2510



Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	0.45	0.53	0.60
A1	-	0.02	0.05
A3	0.10	0.15	0.20
D	2.45	2.50	2.55
E	0.95	1.00	1.05
D1	0.35	0.40	0.45
b	0.15	0.20	0.25
e	0.50BSC		
L	0.30	0.40	0.45

Order Information

Device	Package	Marking	Carrier	Quantity	HSF Status
GSECL3U004	DFN2510	5S	Tape & Reel	3000pcs	RoHS compliant