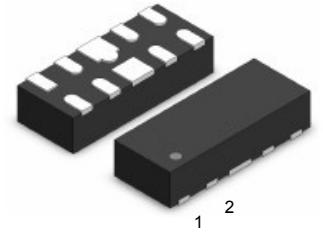
SESUC3V3D2510SN-10U
Ultra Low Capacitance TVS Diode Array

Features

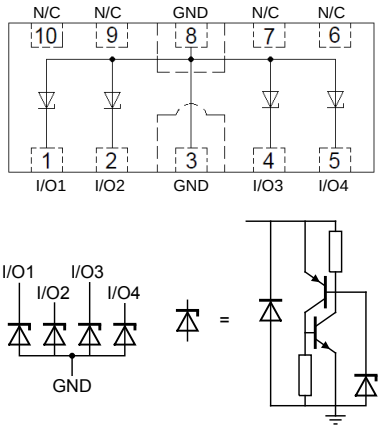
- DFN2510 package
- Protects up to 4-Lines operating at 3.3V
- Snap-Back technology
- Low clamping voltage
- Low leakage current
- Ultra low capacitance (0.20pF typical I/O to I/O)
- ESD Protection for high-speed data lines to:
  IEC 61000-4-2 ±10KV contact ±15KV air
  IEC 61000-4-4 (EFT) 40A (5/50ns)
  IEC 61000-4-5 (Lightning) 5A (8/20 μs)
- RoHS compliant

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



DFN2510



Schematic Diagram

Absolute Maximum Ratings

(T_A=25℃, 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	℃
Storage Temperature	T_{STG}	-55 to +150	℃

Electrical Characteristics

(T_A=25℃, 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	5.0	6.0	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		8.0		V
Clamping Voltage (IEC61000-4-5)	V_C	I_{PP}=5A , T_P=8/20μS		4.0		V
Clamping Voltage (TLP 8A)	V_C	IEC 61000−4−2 Level 2 (±4 kV Contact, ±4 kV Air)		4.5		V
Clamping Voltage (TLP 16A)	V_C	IEC 61000−4−2 Level 4 (±8 kV Contact, ±8 kV Air)		5.5		V
Dynamic Resistance	R_{dyn}	I_T =0~30A, t_p=TLP		0.25		Ω
Junction Capacitance	C_J	V_R=0V,f=1MHz, I/O to I/O		0.20		pF
	C_J	V_R=0V,f=1MHz, I/O to GND		0.50		pF

Typical Characteristic Curves

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

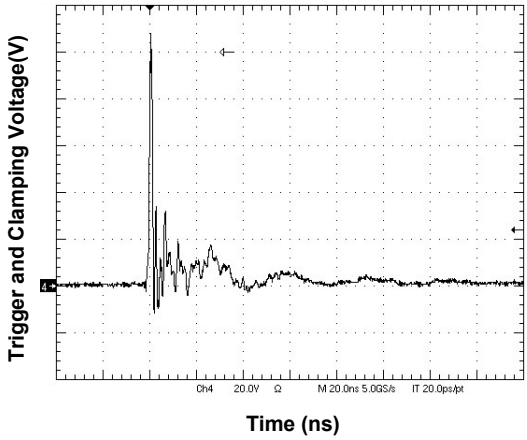


Fig.2 IEC61000-4-2 -8kV Contact Discharge

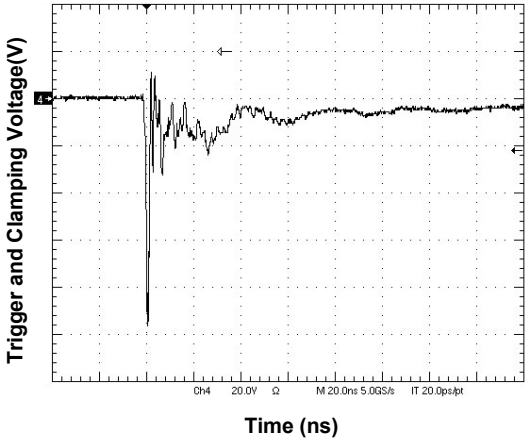


Fig.3 Transmission Line Pulse (tp=100ns) (I/O to GND)

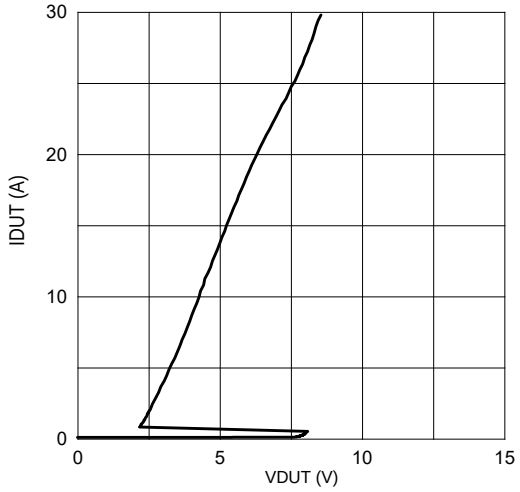


Fig.4 Transmission Line Pulse (tp=100ns) (GND to I/O)

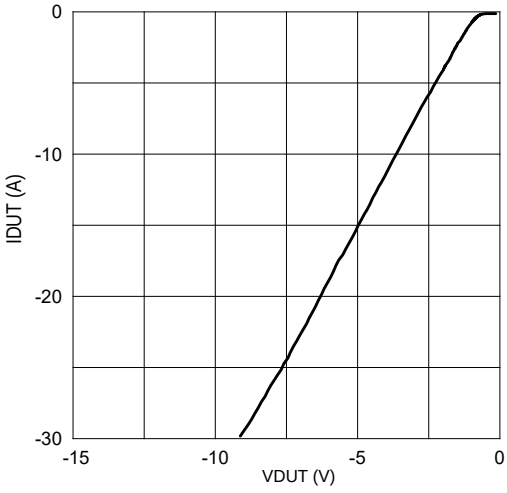
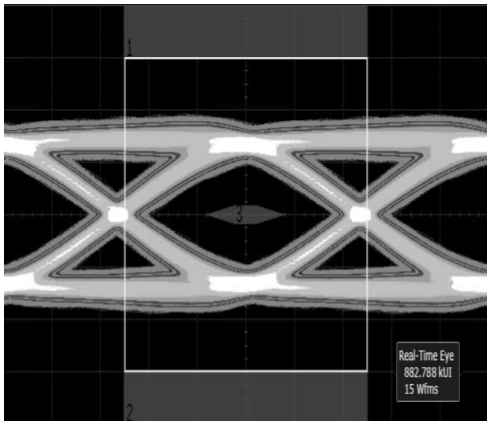
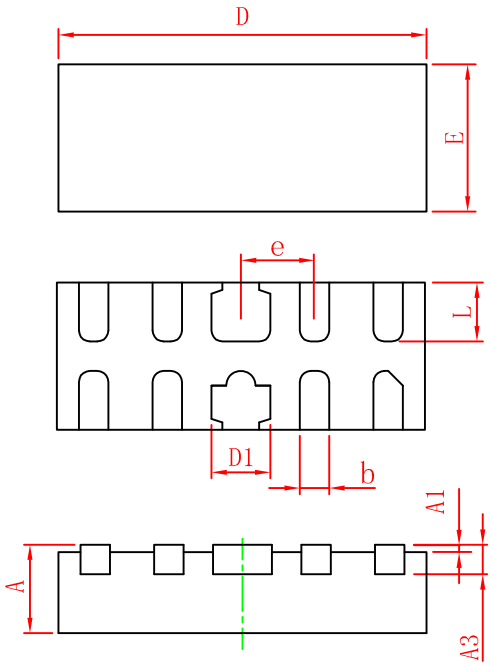


Fig.5 Eye Diagram - USB3.1 at 10Gbps per channel (with SESUC3V3D2510SN-10U)



Product Dimensions



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

Marking



Order Information

Device	Package	Carrier	Quantity	HSF Status
SESUC3V3D2510SN-10U	DFN2510	Tape & Reel (7")	3000pcs / Reel	RoHS Compliant

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