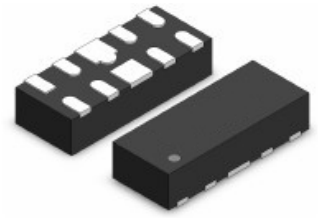
Ultra Low Capacitance ESD TVS Array

Features

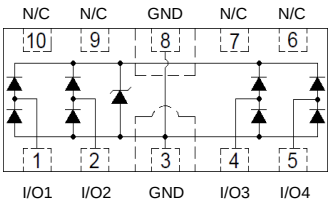
- DFN2510 package
- Low leakage current
- Low clamping voltage
- R2R + Zener technology
- Protects up to 4-Lines operating at 5V
- ESD Protection for high-speed data lines to:
- IEC 61000-4-2 ±10KV contact ±15KV air
- Ultra low capacitance (0.15pF typical I/O to I/O)
- RoHS compliant

RoHS COMPLIANT



Marking：5R2P **DFN2510**

Schematic Diagram



Applications

- USB 3.0/3.1
- Digital Visual Interface (DVI)
- Unified Display Interface (UDI)
- HDMI 1.4/2.0, Display Port 1.3, eSATA
- High speed serial interfaces

Absolute Maximum Ratings (T_A=25℃, Unless otherwise specified.)

Parameter	Symbol	Value	Unit
Junction Temperature	T_J	-55 to +125	℃
Storage Temperature	T_{STG}	-55 to +150	℃
Lead Soldering Temperature	T_L	260 (10sec.)	℃
Peak Pulse Current (tP = 8/20μS)	I_{PP}	3	A
IEC 61000-4-2 Contact (ESD)	VESD	±10	kV
IEC 61000-4-2 Air (ESD)	VESD	±15	kV

Electrical Characteristics (T_A=25℃, Unless otherwise specified.)

Parameter	Symbol	Conditions	Min	Typ.	Max	Unit
Reverse stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	6	7.2		V
Reverse Leakage Current	I_R	V_R=5V		0.01	1	μA
Clamping Voltage (IEC 61000-4-5)	V_C	I_{PP}=3A， T_P=8/20μS		10		V
Trigger Voltage (IEC 61000-4-2)	V_T	V_{ESD} =8kV		135		V
Clamping Voltage (IEC 61000-4-2)	V_C	V_{ESD} =8kV		20		V
Junction Capacitance	C_J	V_R=0V,f=1MHz, I/O to I/O		0.15		pF
	C_J	V_R=0V,f=1MHz, I/O to GND		0.35		pF

Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)

Fig.1 Pulse Waveform-ESD(IEC61000-4-2)

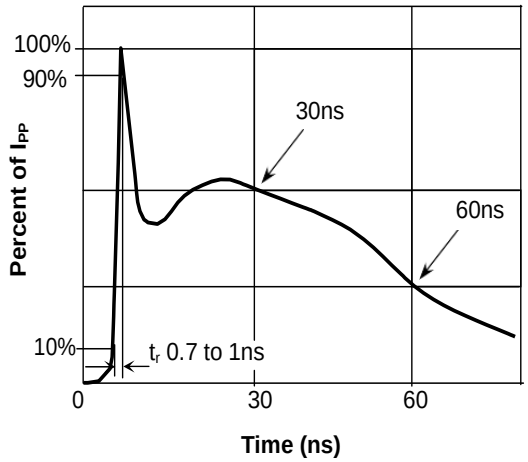


Fig.3 IEC61000-4-2 +8kV Contact ESD Clamping Waveform

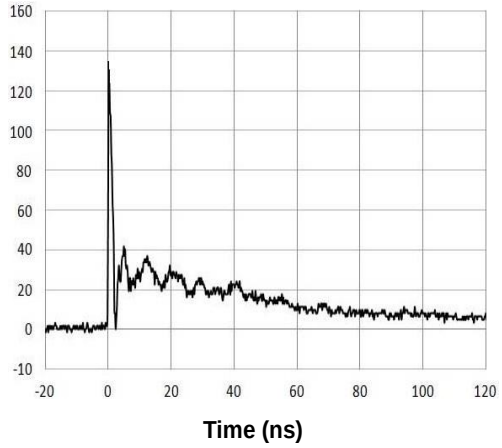


Fig.5 Eye Diagram - USB3.1 at 10Gbps per channel (with SESUC5VD2510-10U)

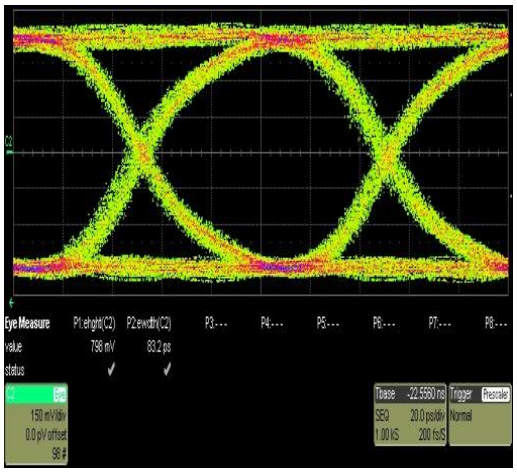
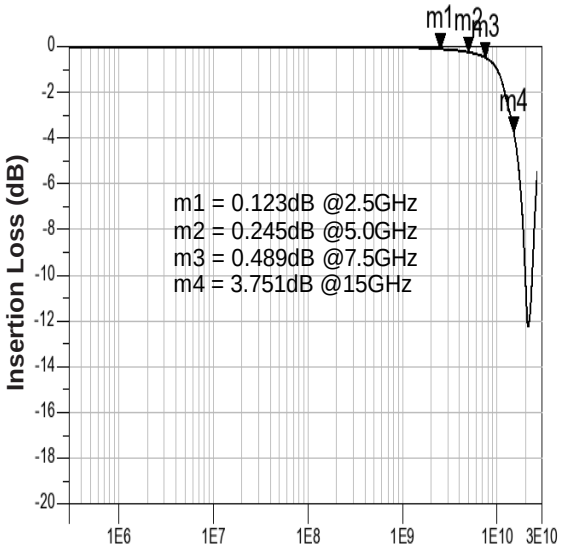
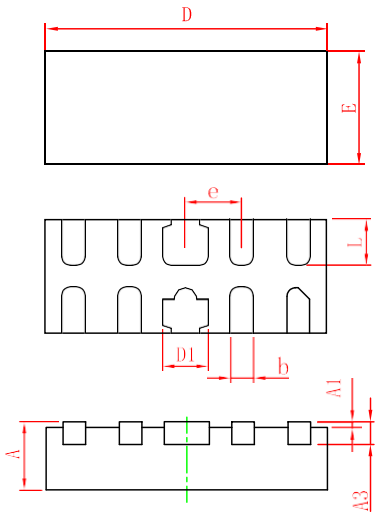


Fig.6 Insertion Loss S21 - I/O to I/O



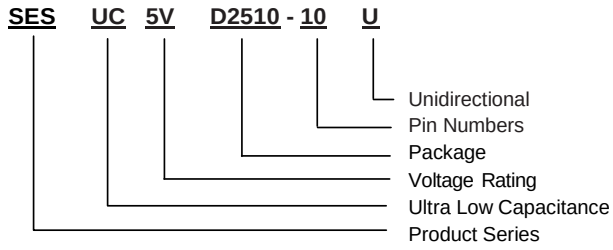
Package Outline Dimensions

in inches (millimeters)



Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	0.45	0.50	0.55
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	0.35	0.40	0.45

Part Number System



Revision History

Document Version	Date of release	Description of changes
Rev.A	2016.01.26	First issue

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