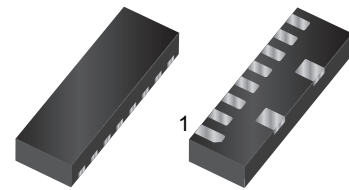
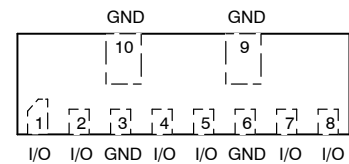
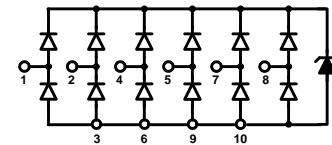


Features

- DFN3310 package
- Protects up to 6-Lines operating at 5V
- R2R + Zener technology
- Low clamping voltage
- Low leakage current
- Ultra low capacitance (0.15pF typical I/O to I/O)
- ESD Protection for high-speed data lines to:
IEC 61000-4-2 ±8KV contact ±15KV air
- 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


DFN3310

Pin Configuration

Schematic Diagram

Absolute Maximum Ratings

($T_A=25^\circ\text{C}$, Unless otherwise specified.)

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

Electrical Characteristics

($T_A=25^\circ\text{C}$, Unless otherwise specified.)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	6	7.2	9.5	V
Reverse Leakage Current	I_R	$V_R=5\text{V}$		0.01	1	μA
Clamping Voltage (IEC 61000-4-5)	V_C	$I_{PP}=3\text{A}$, $T_P=8/20\mu\text{S}$		10		V
Trigger Voltage (IEC 61000-4-2)	V_T	$V_{ESD}=8\text{kV}$		135		V
Clamping Voltage (IEC 61000-4-2)	V_C	$V_{ESD}=8\text{kV}$		20		V
Junction Capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$, I/O to I/O		0.15		pF
	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$, I/O to GND		0.35		pF

Typical Characteristic Curves

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

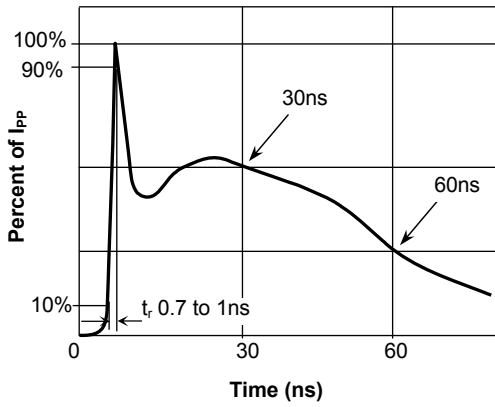


Fig.3 IEC61000-4-2 +8kV Contact ESD Clamping Waveform

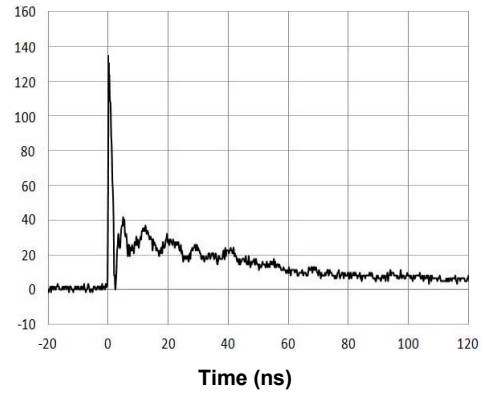


Fig.5 Eye Diagram - USB3.1 at 10Gbps per channel (with MDFN10A056U)

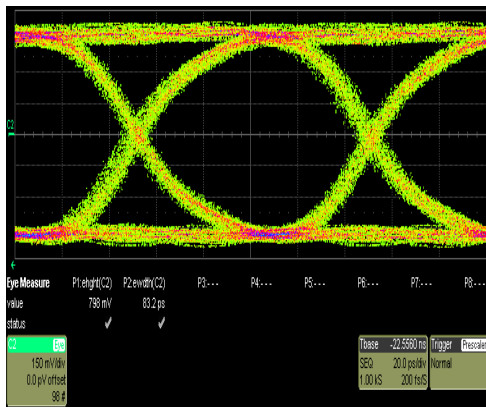
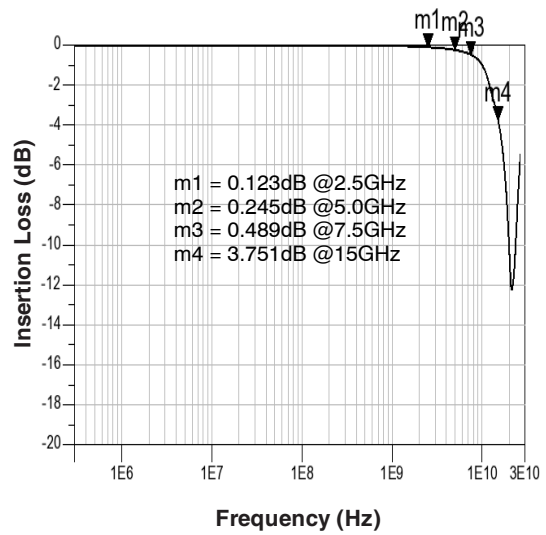
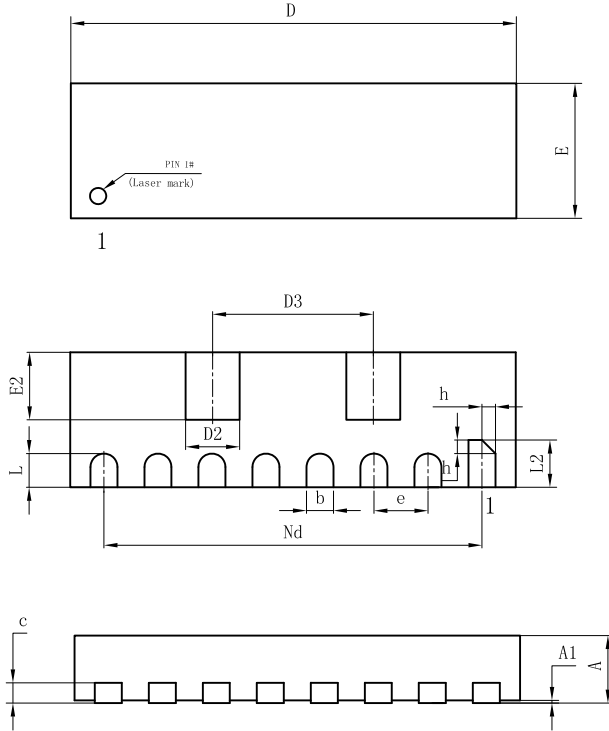


Fig.6 Insertion Loss S21 - I/O to I/O



Product Dimensions


SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.45	0.50	0.55
A1	—	0.02	0.05
b	0.15	0.20	0.25
c	0.100	0.152	0.200
D	3.25	3.30	3.35
D2	0.30	0.35	0.40
D3	1. 19BSC		
e	0. 40BSC		
Nd	2. 80BSC		
E	0.95	1.00	1.05
E2	0.45	0.50	0.55
L	0.20	0.25	0.30
L2	0.30	0.35	0.40
h	0.05	0.10	0.15

Order Information

Device	Package	Carrier	Quantity	HSF Status
MDFN10A056U	DFN3310	Tape & Reel (7")	3000pcs / Reel	RoHS Compliant

Marking


X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [ESD Suppressors / TVS Diodes](#) category:

Click to view products by [Me-TECH](#) manufacturer:

Other Similar products are found below :

[NTE4902](#) [P4SMAJ15A](#) [P4SMAJ26A](#) [SMAJ400CA-TP](#) [TGL34-47CA](#) [ESDAULC45-1BF4](#) [SM1605E3/TR13](#) [SMF20A-TP](#) [P4SMAJ12A](#)
[CPDUR24V-HF](#) [CPDQC5V0USP-HF](#) [CPDQC5V0-HF](#) [MPLAD30KP45CAE3](#) [MMBZ27VCLQ-7-F](#) [MMAD1108/TR13](#) [MPLAD30KP24A](#)
[ACPDQC5V0R-HF](#) [DFLT170A-7](#) [NTE4900](#) [NTE4926](#) [NTE4938](#) [SMF22A-TP](#) [SMF12A-TP](#) [SLVU2.8-TP](#) [SMLJ6.5CA-TP](#) [SMAJ6.5CA-](#)
[TP](#) [MMAD1108E3/TR13](#) [D5V0M1U2LP3-7](#) [SMAJ400A-TP](#) [AOZ8811DT-03](#) [AOZ8831DI-05](#) [AOZ8831DT-03](#) [SMAJ188CA](#) [3SMC33CA](#)
[BK](#) [CPDQC3V3C-HF](#) [CPDQC12VE-HF](#) [MPLAD30KP170CA](#) [82357120100](#) [5.0SMLJ15CA-TP](#) [5KP18A-TP](#) [P6KE8.2A-TP](#)
[MPLAD30KP43CAE3](#) [SMAJ43A-TP](#) [D5V0F6U8LP33-7](#) [TVS5501V10MUT5G](#) [5.0SMLJ24CA-TP](#) [SMAJ110CA-TP](#) [MPLAD15KP75CAE3](#)
[MMAD1103e3/TR13](#) [DFLT40AQ-7](#)