

Features

- Bi-directional ESD protection of four lines
- Working voltage: 3.3V
- Junction Capacitance: 0.13pF(Typ) I/O-I/O
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 15\text{kV}$ contact $\pm 20\text{kV}$ air
- IEC 61000-4-5 (Lightning) 6A (8/20 μs)

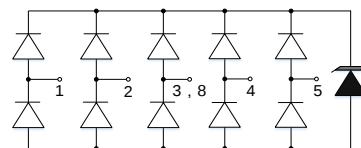
Applications

- USB2.0,USB3.0,USB3.1
- HDMI2.0,Displayport1.3,eSATA
- PCI Express
- Digital Display interface
- High speed serial interface

Mechanical Data

- Package:DFN2510-10L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
ESD73034D	DFN2510-10L	. 324J	3000 Tape & Reel	7 inches

Absolute Maximum Rating($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Pulse Current ($t_p=8/20\mu\text{s}$) (Note1)	I_{pp}	6	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	20 15	kV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}\text{C}$
Junction Temperature	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +125	$^{\circ}\text{C}$

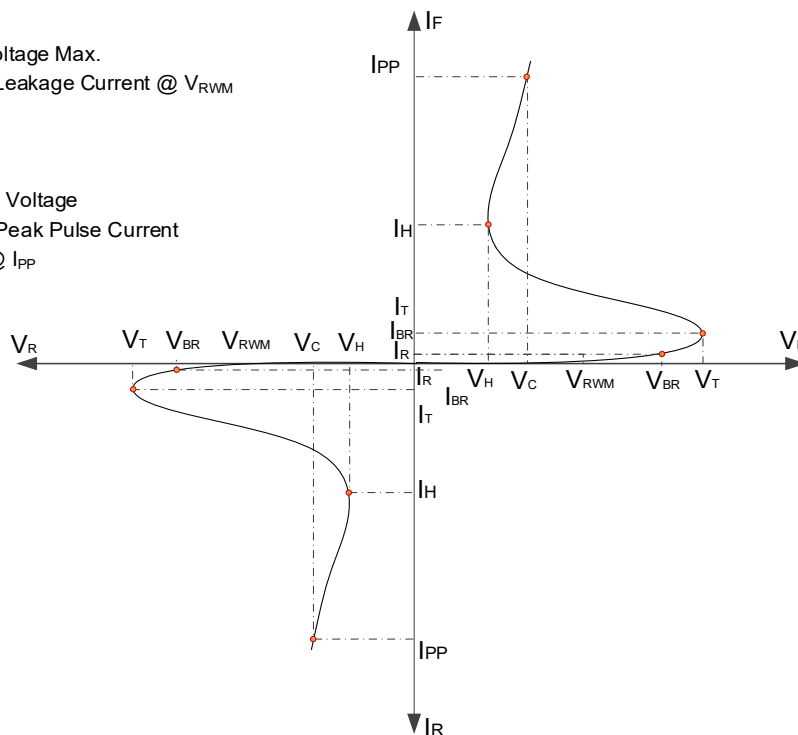
Electrical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				3.3	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	5.0			V
Reverse Leakage Current	I_R	$V_{RWM}=3.3\text{V}$			0.5	μA
Holding Voltage	V_H	$I_H=100\text{mA}$	2.0		3.3	V
Clamping Voltage	V_C	$I_{PP}=6\text{A}, t_p=8/20\mu\text{s}$		5.5	6.5	V
Clamping Voltage	V_C	$I_{TLP}=4\text{A}, t_p=0.2/100\text{ns}$		5.8		V
Clamping Voltage	V_C	$I_{TLP}=16\text{A}, t_p=0.2/100\text{ns}$		9.4	11.8	V
ESD Dynamic Resistance	R_{DYN}	$TLP=0.2/100\text{ns}$		0.3	0.5	Ω
Junction Capacitance	C_J	Between I/O; $V_R=0\text{V}$; $f=1\text{MHz}$		0.13	0.18	pF
Junction Capacitance	C_J	I/O pin to GND ; $V_R=0\text{V}$; $f=1\text{MHz}$		0.26	0.35	pF



Electrical Parameters ($T_A = 25^\circ\text{C}$ unless otherwise noted)

- V_{RWM} Reverse Working Voltage Max.
 I_R Maximum Reverse Leakage Current @ V_{RWM}
 V_T Trigger Voltage
 V_H Holding Voltage
 I_H Holding Current
 V_{BR} Reverse Breakdown Voltage
 I_{PP} Maximum Reverse Peak Pulse Current
 V_C Clamping Voltage @ I_{PP}



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

Figure1: Reverse Clamping Voltage vs. Peak Pulse Current

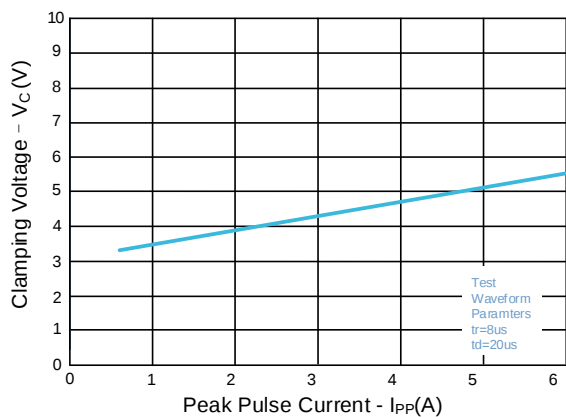


Figure 2: Power Derating Curve

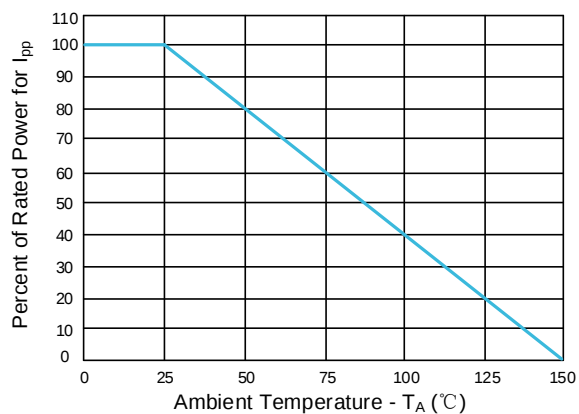




Figure3: TLP Positive I-V Curve

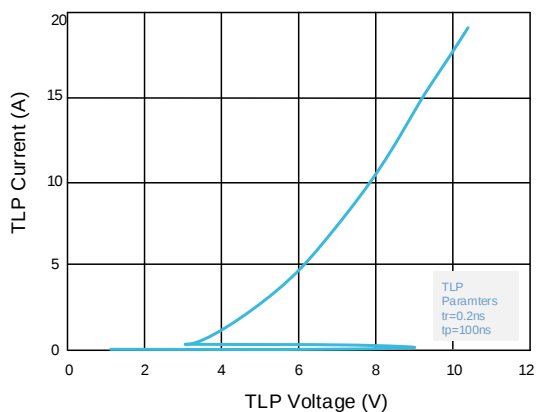


Figure4: TLP Negative I-V Curve

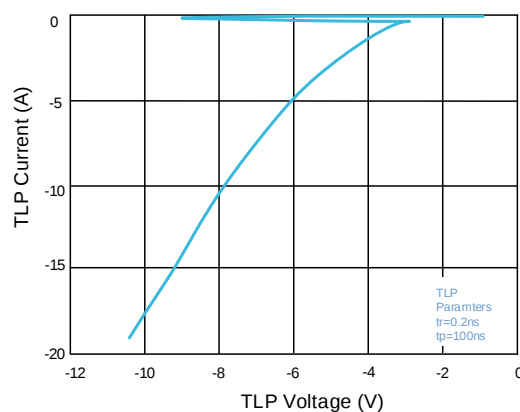


Figure5: IEC61000-4-2 : 8 kV positive pulse

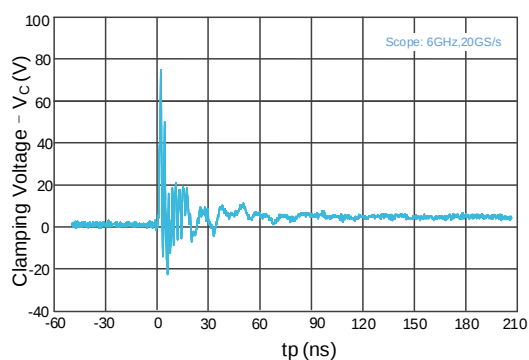
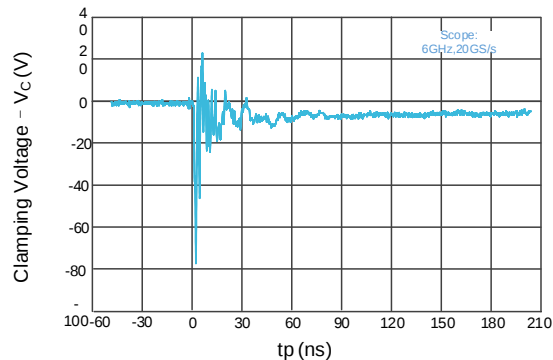
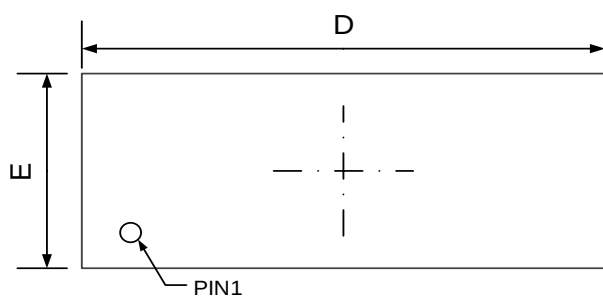


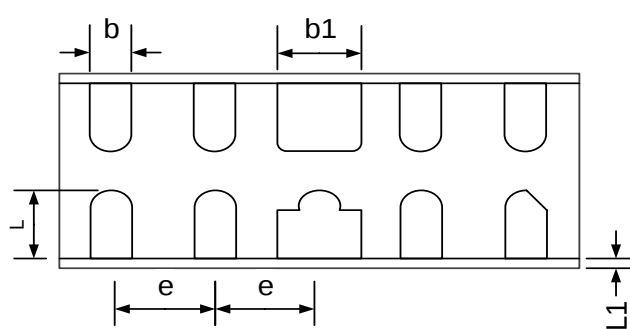
Figure6: IEC61000-4-2 : 8 Kv negative pulse



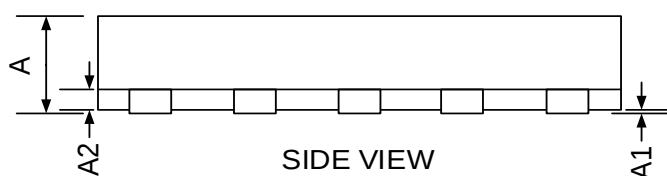
Outline Drawing – DFN2510-10L



TOP VIEW



BOTTOM VIEW



SIDE VIEW

COMMON DIMENSION (mm)			
PKG	DFN2510-10L		
REF.	MIN.	NOM.	MAX.
A	0.450	--	0.550
A1	--	--	0.005
A2	0.050	--	0.250
D	2.450	2.500	2.550
E	0.950	1.000	1.050
b	0.150	0.200	0.250
b1	0.350	0.400	0.450
L	0.300	0.350	0.400
L1	0.010	0.050	0.090
e	0.500BSC		