

APPLICATIONS

- ▶ USB2.0,USB3.0,Ethernet
- ▶ HDMI2.0,Displayport 1.3,eSATA
- ▶ Unified Display Interface
- ▶ Digital Visual Interface
- ▶ High Speed Serial Interface

IECCOMPATIBILITY

- ▶ IEC61000-4-2 (ESD) $\pm 20\text{kV}$ (air), $\pm 15\text{kV}$ (contact)
- ▶ IEC61000-4-5 (Lightning) $4.0\text{A}(8/20\mu\text{s})$

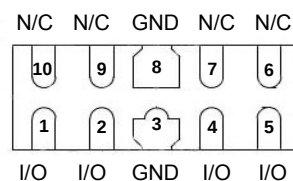
FEATURES

- ▶ 50.0 Watts Peak Pulse Power per Line ($t_p=8/20\mu\text{s}$)
- ▶ Protects Four I/O lines
- ▶ Operating Voltage: 5V
- ▶ Ultra Low Capacitance: 0.3pF typical (I/O to GND)

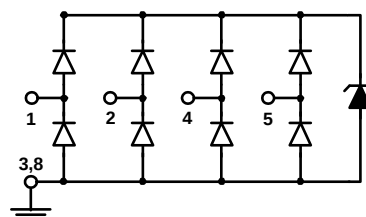
MECHANICALCHARACTERISTICS

- ▶ DFN2510P10 PACKAGE INFORMATION
- ▶ Quantity Per Reel : 3,000pcs
- ▶ Lead Finish : Lead Free
- ▶ AEC-Q101
- ▶ Marking : 05U

DFN-2510



PIN CONFIGURATION



Absolute maximum rating@25°C

Rating	Symbol	Value	Unit
Peak Pulse Power ($t_P = 8/20\mu\text{s}$)	Ppp	50	W
Lead Solder Temperature –Maximum (10 Seconds)	TL	260	°C
Operating Junction Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

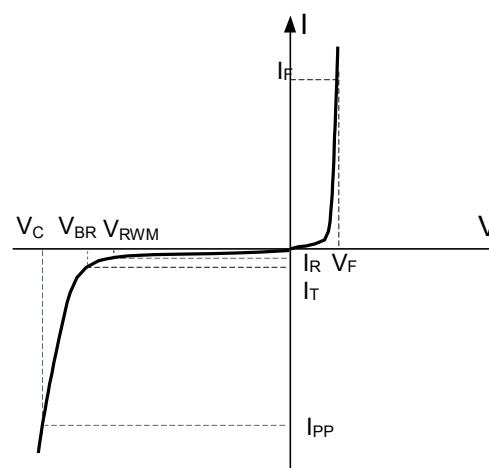
Electrical characteristics (T_A=25°C, unless otherwise noted)

Parameter	Symbol	Conditions	Min.	TYP.	Max.	Units
Reverse stand-off voltage	V _{RWM}				5.0	V
Reverse leakage current	I _R I/O to GND	V _{RWM} =5.0V			0.5	uA
Reveres breakdown voltage	V _{BR} I/O to GND	I _T =1mA	6.0			V
Forward Voltage	V _F GND to I/O	I _T =10.0mA		0.7	1.2	V
Clamping voltage	V _C I/O to GND	I _{PP} =1A(8/20us)		7.5		V
		I _{pp} = 4A(8/20us)			13.5	V
Junction capacitance	C _J I/O to GND	VR=0V f=1GHz		0.3		pF
Junction capacitance	C _J I/O to I/O	VR=0V f=1MHz		0.25	0.3	pF

ELECTRICAL CHARACTERISTICS

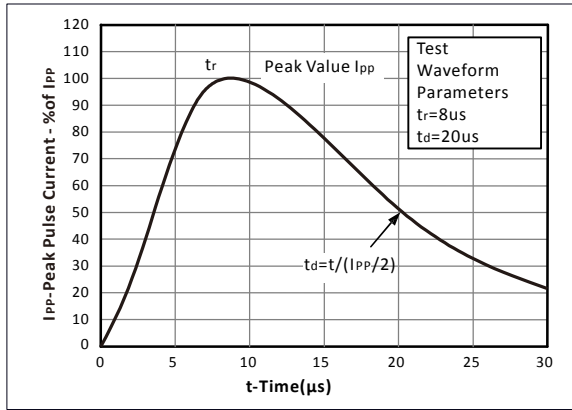
(T_A = 25°C unless otherwise noted)

Symbol	Parameter
V _{RWM}	Peak Reverse Working Voltage
I _R	Reverse Leakage Current @ V _{RWM}
V _{BR}	Breakdown Voltage @ I _T
I _T	Test Current
I _{PP}	Maximum Reverse Peak Pulse Current
V _C	Clamping Voltage @ I _{PP}
P _{PP}	Peak Pulse Power
C _J	Junction Capacitance
I _F	Forward Current
V _F	Forward Voltage @ I _F

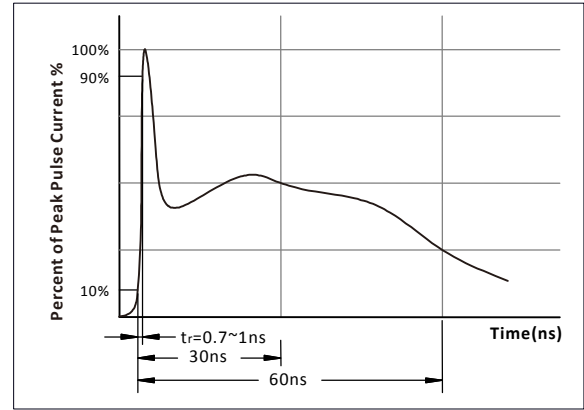


Uni -Directional TVS

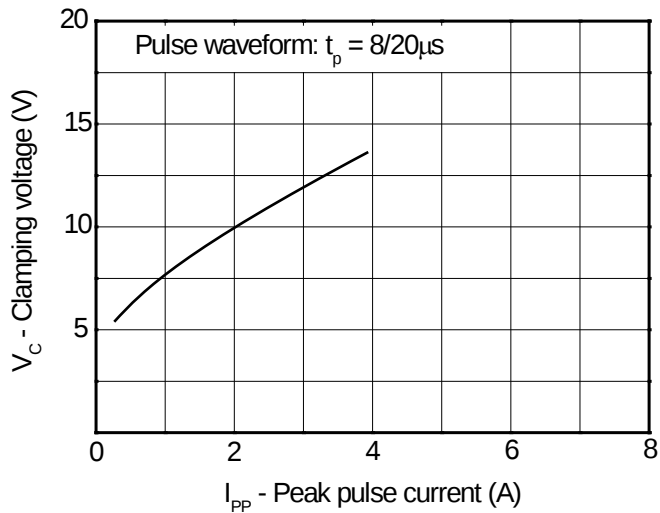
Typical characteristics ($T_A=25^\circ\text{C}$, unless otherwise noted)



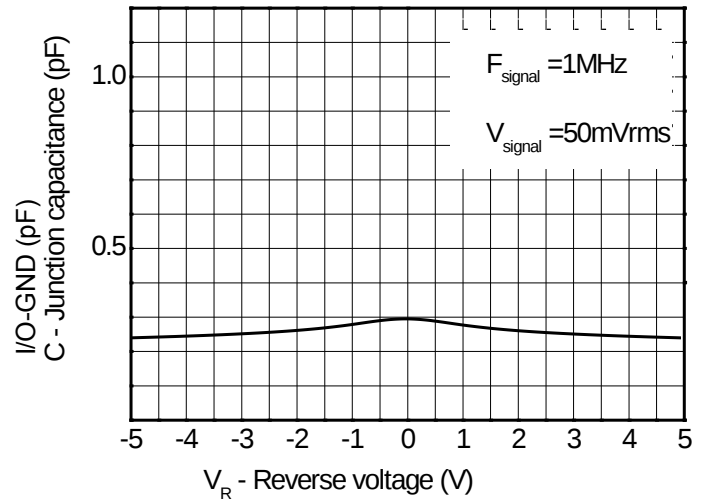
8/20 μs Pulse Waveform



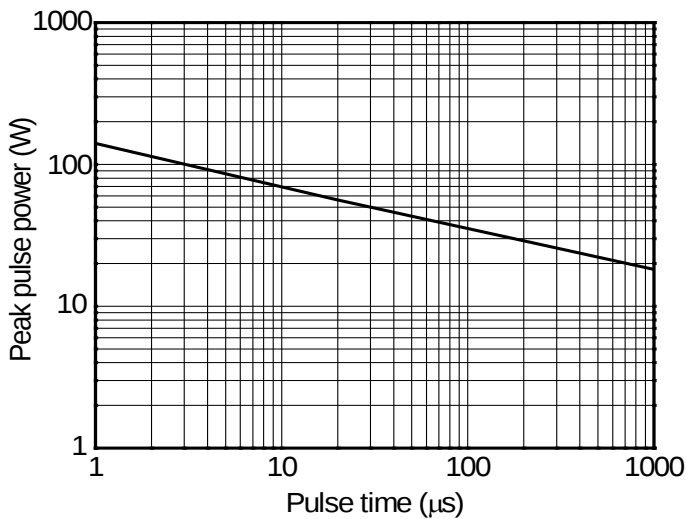
ESD Pulse Waveform (according to IEC 61000 4 2)



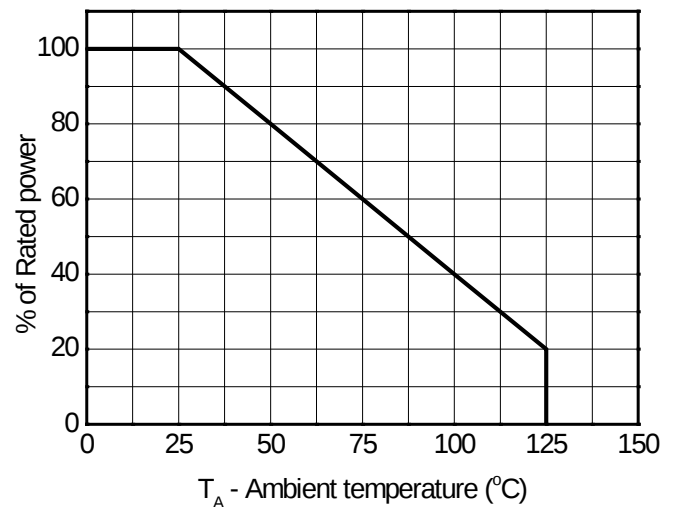
Clamping voltage vs. Peak pulse current



Capacitance vs. Reverse voltage

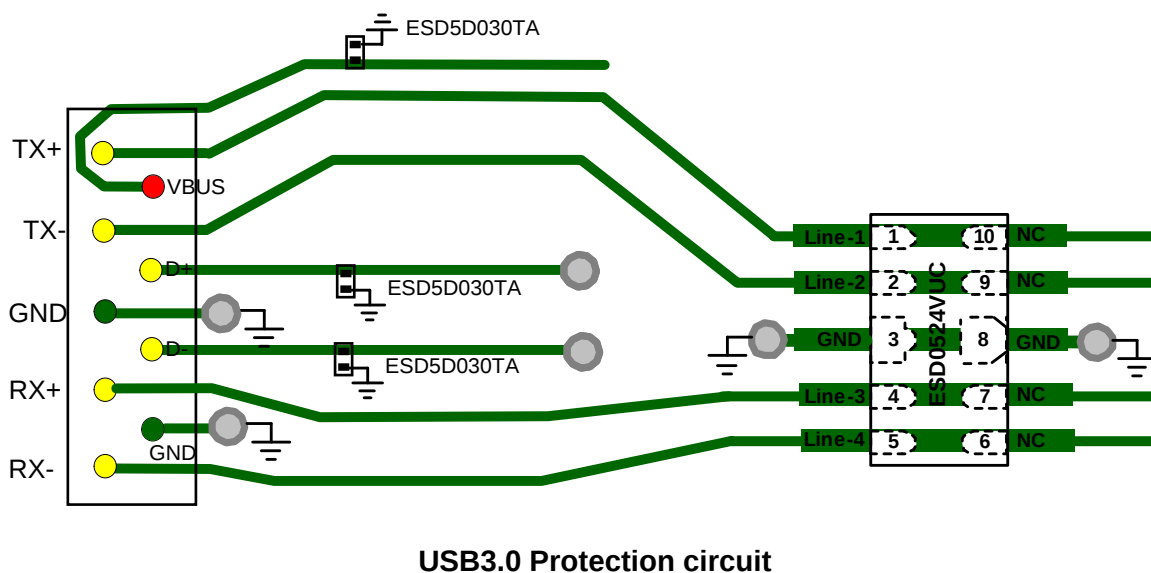
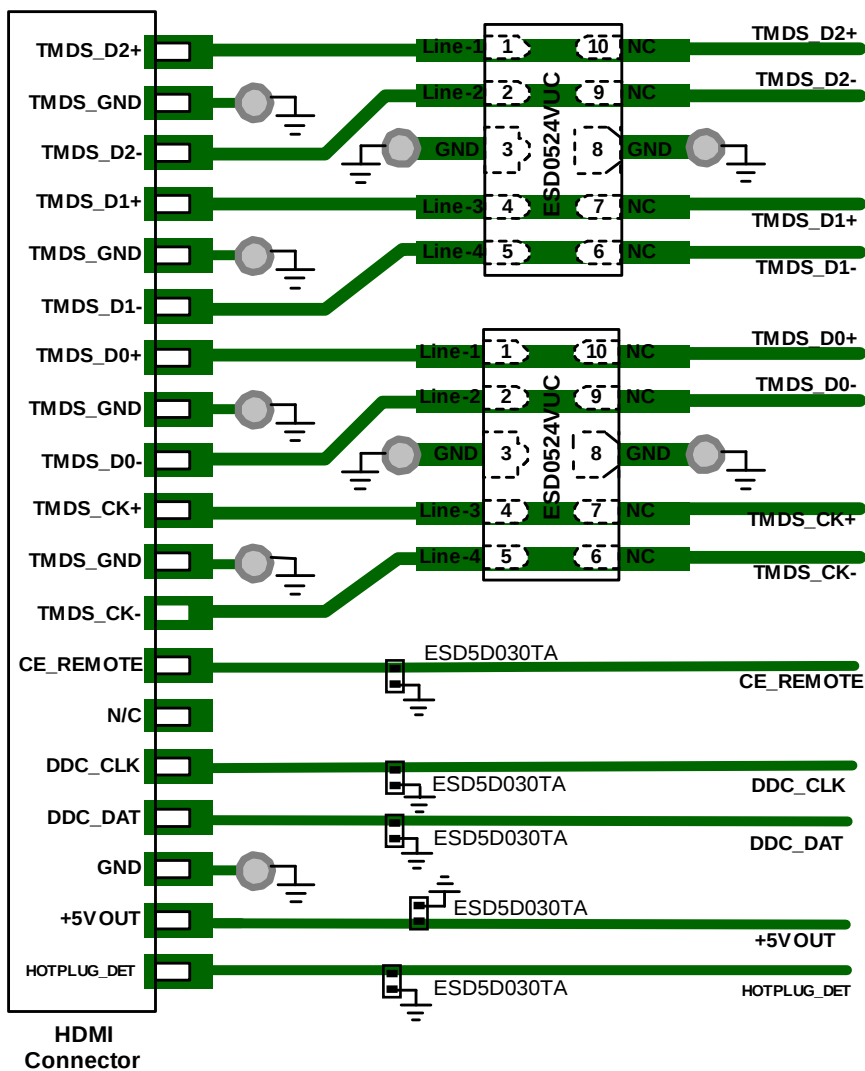


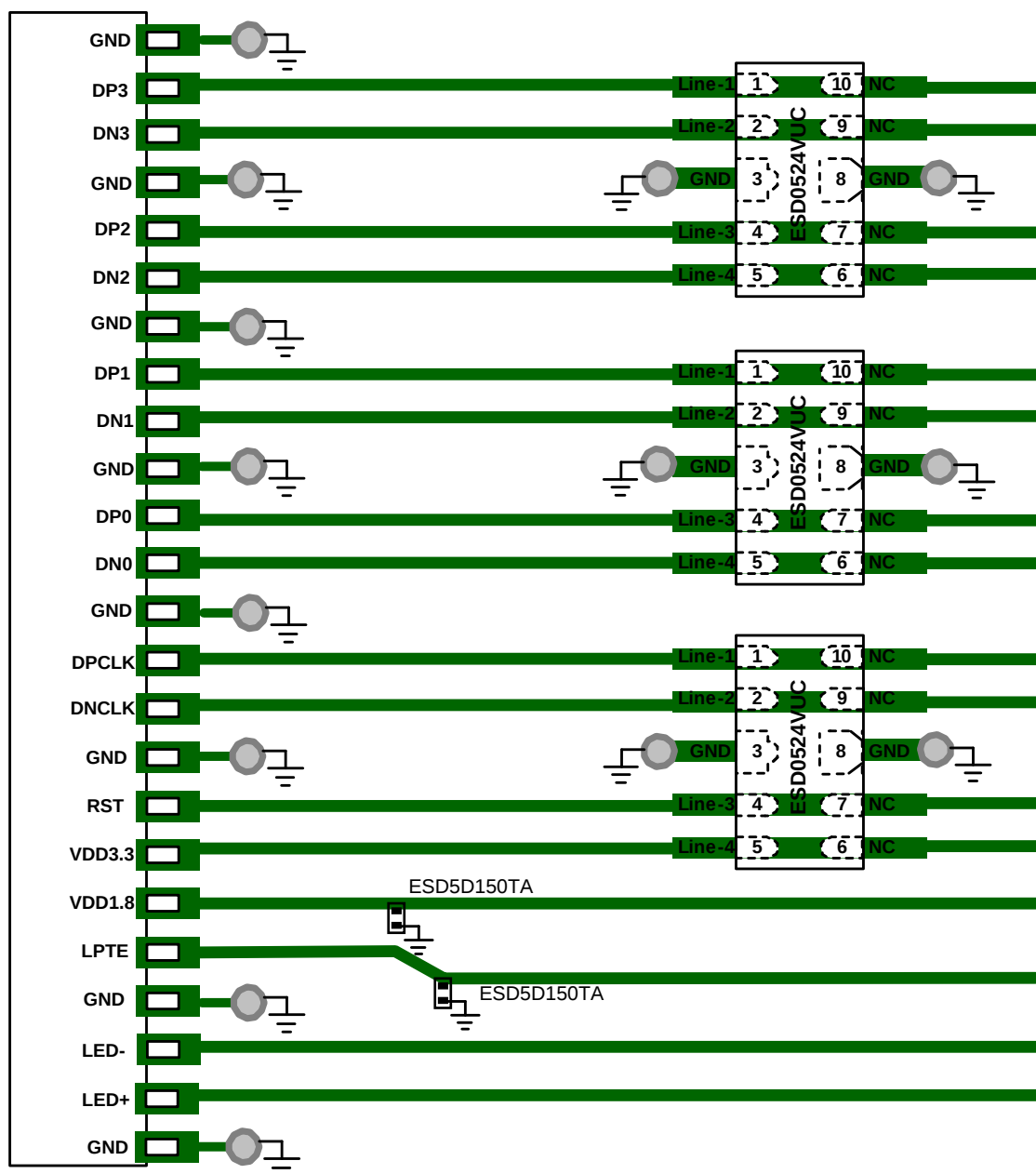
Non-repetitive peak pulse power vs. Pulse time



Power derating vs. Ambient temperature

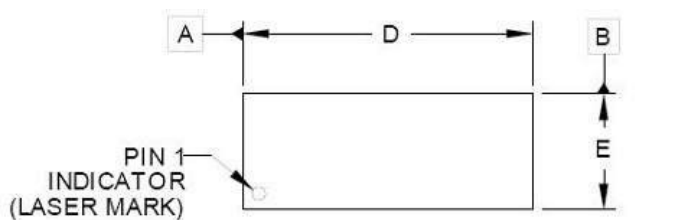
APPLICATION INFORMATION



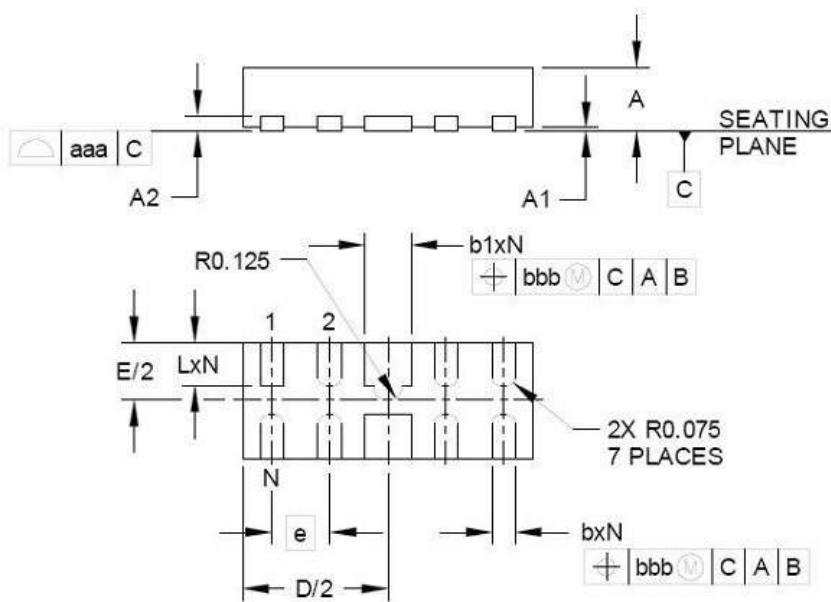


MIPI Protection circuit

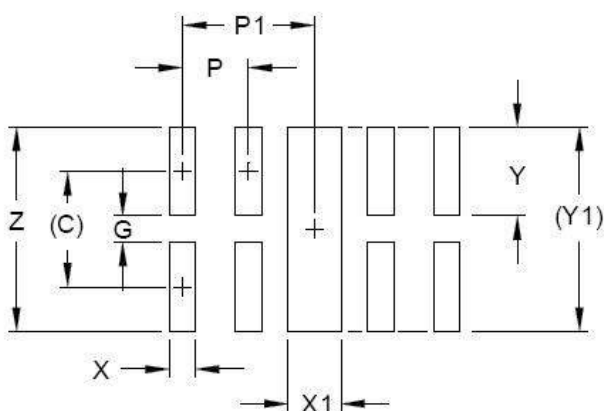
DFN2510PACKAGEOUTLINE DIMENSIONS



DIM	DIMENSIONS					
	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.020	.023	.026	0.50	0.58	0.65
A1	0.00	.001	.002	0.00	0.03	0.05
A2		(.005)			(0.13)	
b	.006	.008	.010	0.15	0.20	0.25
b1	.014	.016	.018	0.35	0.40	0.45
D	.094	.098	.102	2.40	2.50	2.60
E	.035	.039	.043	0.90	1.00	1.10
e	.020 BSC			0.50 BSC		
L	.012	.015	.017	0.30	0.38	0.425
N	10			10		
aaa	.003			0.08		
bbb	.004			0.10		



*SOLDERING FOOTPRINT



DIM	DIMENSIONS	
	INCHES	MILLIMETERS
C	(.034)	(0.875)
G	.008	0.20
P	.020	0.50
P1	.039	1.00
X	.008	0.20
X1	.016	0.40
Y	.027	0.675
Y1	(.061)	(1.55)
Z	.061	1.55