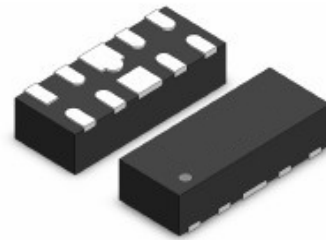


## Features

- 40Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ( $C_j = 0.35pF$  typ. I/O to I/O)



## IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2  $\pm 25kV$  contact  $\pm 25kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20 $\mu s$ )

**DFN2510-10L**

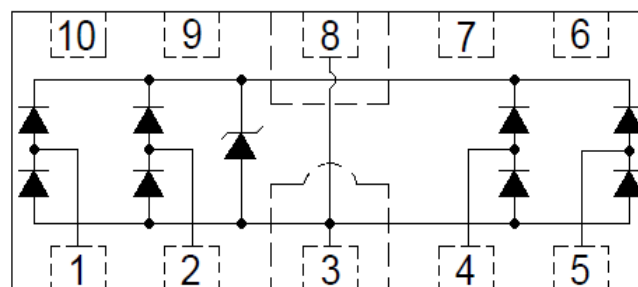
## Applications

- USB3.0, USB2.0, Ethernet
- HDMI 2.0, Displayport 1.3, eSATA
- Unified Display interface
- Digital Visual Interface
- High speed serial interface

## Mechanical Characteristics

- Tiny DFN2510L(2.5mmx1.0mm) package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

## Schematic & PIN Configuration



**DFN2510-10L**

### Absolute Maximum Rating

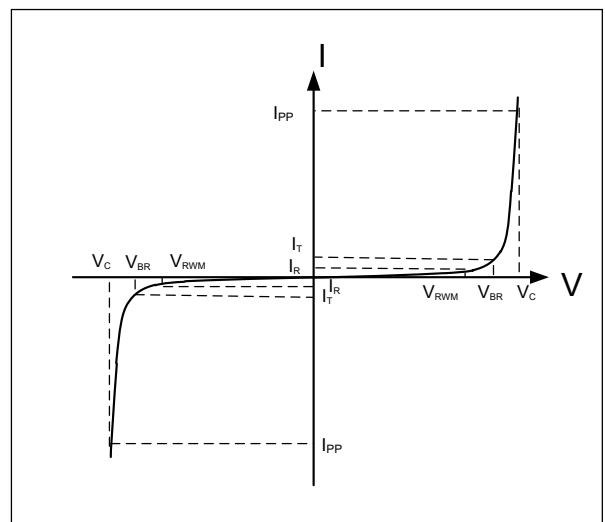
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	40	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)	$I_{PP}$	4	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	25 25	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	$^{\circ}C$
Junction Temperature	$T_J$	-55 to + 125	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55 to + 125	$^{\circ}C$

### Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	5.5	7.8		V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V, T = 25^{\circ}C$			0.5	$\mu A$
Peak Pulse Current	$I_{PP}$	$t_p = 8/20\mu s$			4	A
Clamping Voltage	$V_C$	$I_{PP} = 4A, t_p = 8/20\mu s$		10	11	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$ I/O to I/O		0.35		pF
		$V_R = 0V, f = 1MHz$ I/O to GND		0.70		

### Electrical Parameters (TA = 25°C unless otherwise noted)

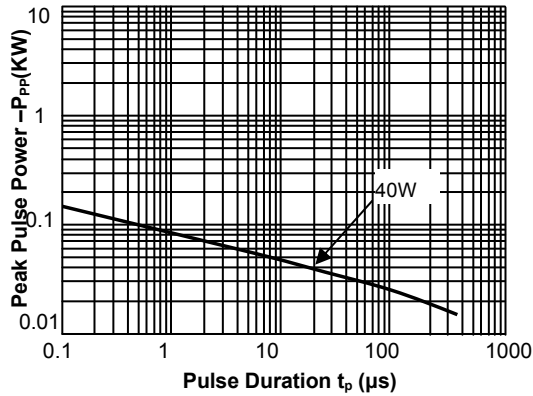
	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current



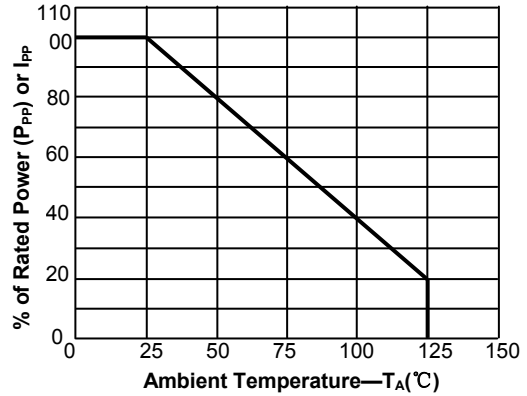
Note: 8/20 $\mu s$  pulse waveform.

## Typical Characteristics

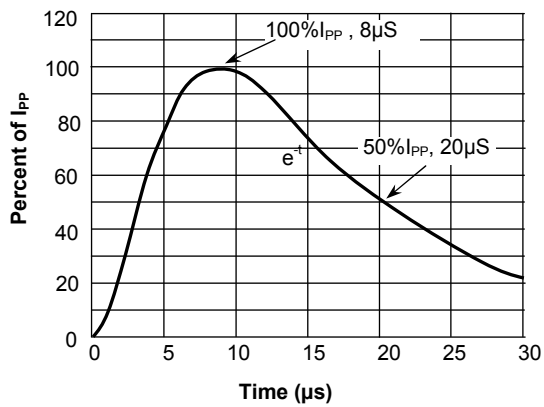
**Fig.1 Peak Pulse Power Rating Curve**



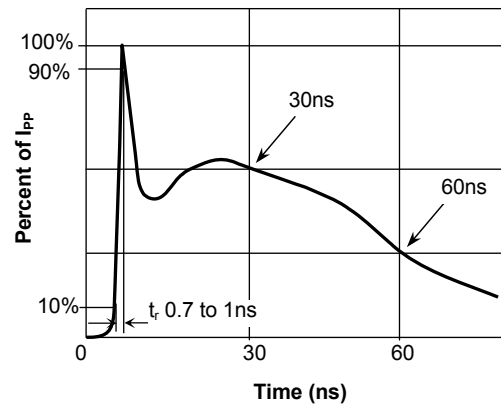
**Fig.2 Pulse Derating Curve**



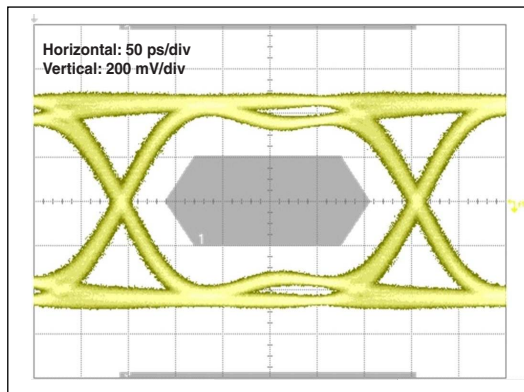
**Fig.3 Pulse Waveform-8/20 $\mu$ s**



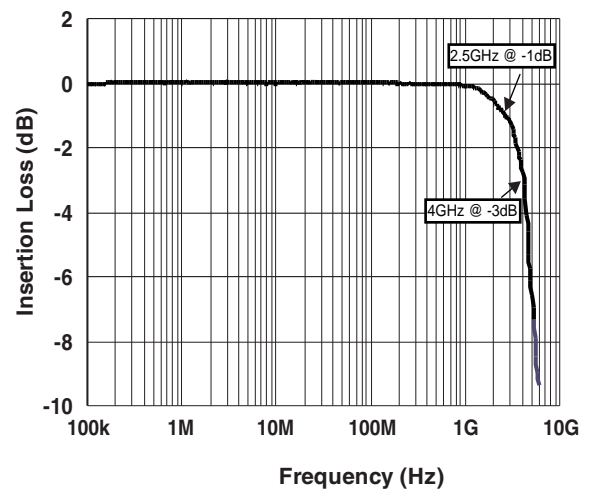
**Fig.4 Pulse Waveform-ESD(IEC61000-4-2)**



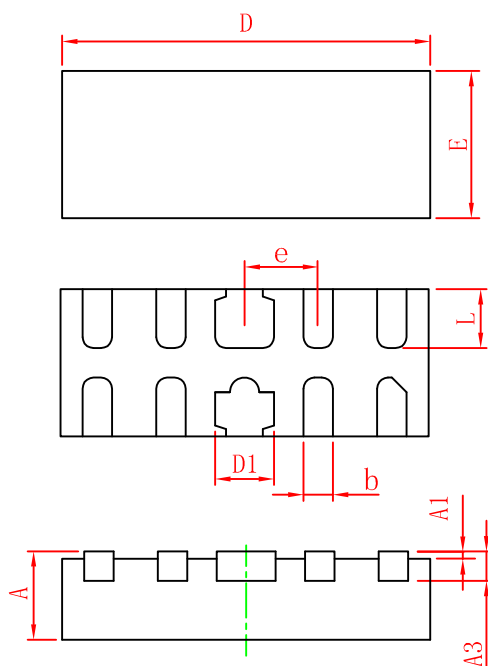
**Fig.5 Eye Diagram - HDMI mask at 3.4Gbps per channel**



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

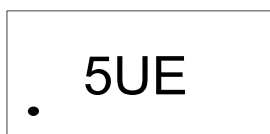


## Outline Drawing – DFN2510-10L



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

## Marking



## Ordering information

Order code	Package	Base qty	Delivery mode
PTN2510U035M5CA4	DFN2510-10	3k	Tape and reel