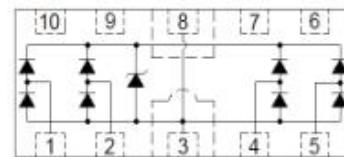
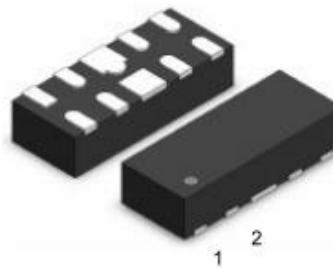


Features

- ◆ 24Watts peak pulse power ($t_p = 8/20\mu s$)
- ◆ DFN2510 Package
- ◆ Unidirectional configurations
- ◆ Solid-state silicon-avalanche technology
- ◆ Low clamping voltage
- ◆ Low leakage current
- ◆ Low capacitance (0.15pF typical I/O to I/O)
- ◆ ESD Protection for high-speed data lines to:
IEC 61000-4-2 ±10KV contact ±15KV air
IEC 61000-4-4 (EFT) 40A (5/50ns)
IEC 61000-4-5 (Lightning) 3A (8/20μs)



Applications

- ◆ USB 3.1, USB 3.0, MHL
- ◆ HDMI 2.0, Display Port 1.3, eSATA
- ◆ Unified Display Interface (UDI)
- ◆ Digital visual interface (DVI)
- ◆ High speed serial interfaces

Mechanical data

- ◆ Case: DFN2510 (plastic package). Lead free; RoHS compliant
- ◆ Molding Compound Flammability Rating: UL 94 V-0
- ◆ Terminals: High temperature soldering guaranteed: 260 °C/10 sec. at terminals

Absolute Maximum Ratings (Ratings at 25 °C, ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_p=8/20\mu s$)	P_{PP}	24	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	10/15	kV
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	3.0	A
Junction Temperature	T_J	-55 to +125	°C
Storage temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics ($T_A = 25^\circ C$ unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				3.3	V
Holding Voltage	V_H	$I_T = I_H$	2.0		3.0	V
Holding Current	I_H		20			mA
Reverse Leakage Current	I_R	$V_{RWM}=3.3V$			0.5	uA
Clamping Voltage	V_C	$I_{PP}=3A, t_p=8/20\mu s$			4.5	V
Clamping Voltage(TLP)	V_C	$I_{PP}=16A, T_p=100ns$		6.3		V
Dynamic Resistance	R_{dyn}	$I_{TLP}=0A \sim 20A$		0.25		
Junction Capacitance	C_J	$VR=0V, f=1MHz, I/O \text{ to } I/O$		0.25		pF
	C_J	$VR=0V, f=1MHz, I/O \text{ to } GND$		0.55		pF

Typical Characteristics ($T_{amb} = 25^{\circ}\text{C}$ unless otherwise specified)

Fig.1 Peak Pulse Power Rating Curve

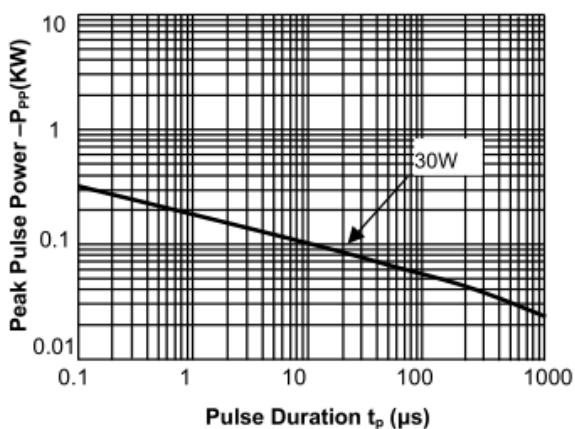


Fig.2 Pulse Derating Curve

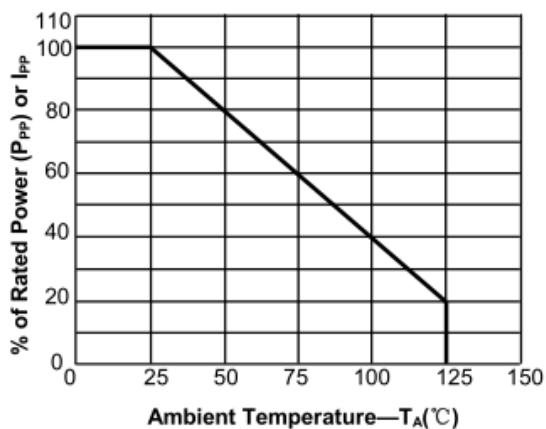


Fig.3 Pulse Waveform-8/20μs

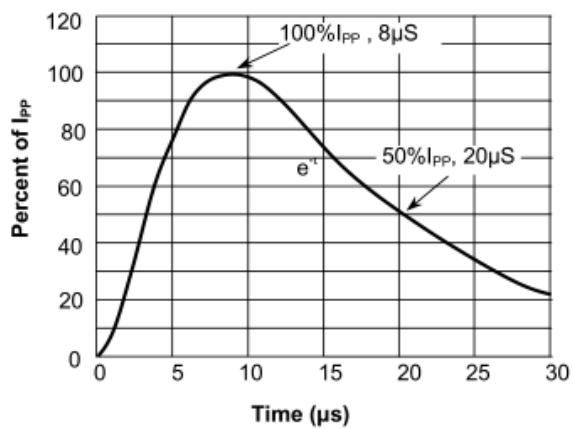


Fig.4 Transmission Line Pulse

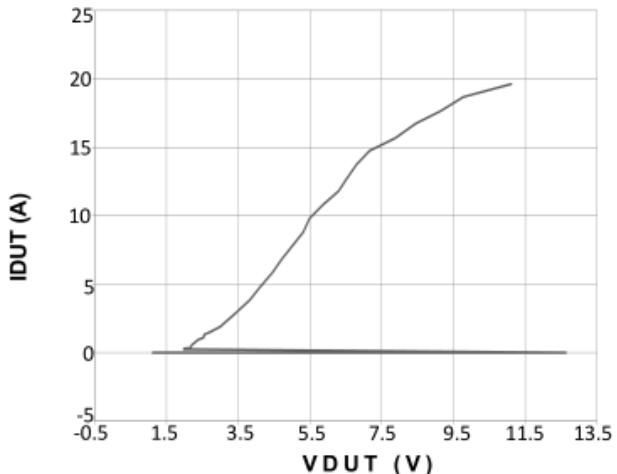


Fig.5 Eye Diagram - HDMI mask at 5Gbps per channel

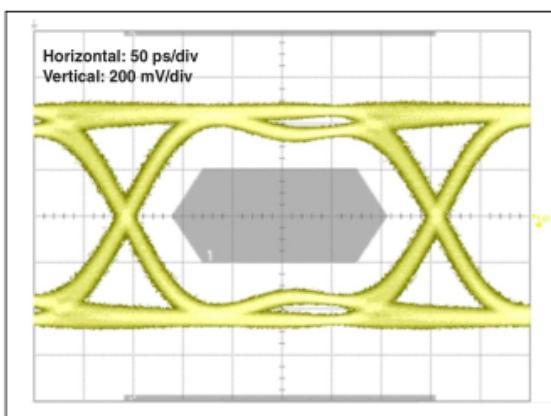
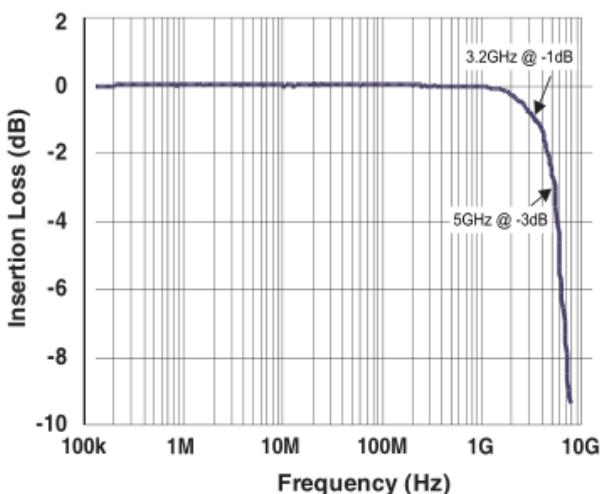
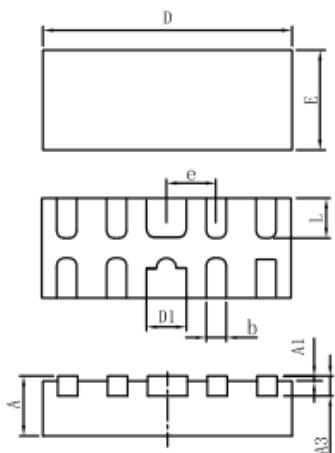


Fig.6 Insertion Loss S21 - I/O to GND

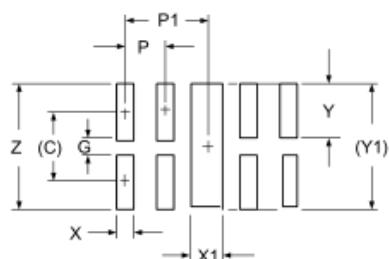


Package Dimensions



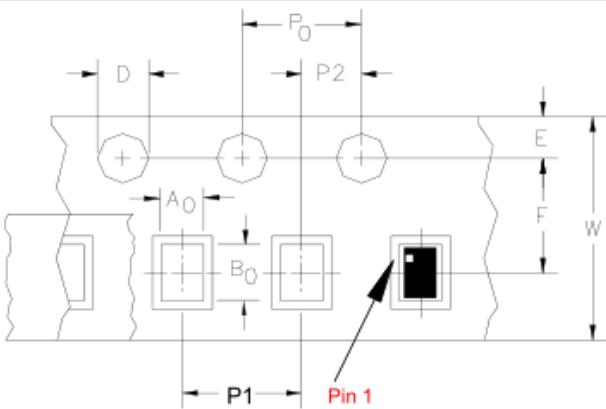
Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	0.45	0.50	0.55
A1	-	0.02	0.05
A3	0.10	0.15	0.20
D	2.45	2.50	2.55
E	0.95	1.00	1.05
D1	0.35	0.40	0.45
b	0.15	0.20	0.25
e	0.50BS		
L	0.35	0.40	0.45

Pad Dimensions



DIMENSIONS		
DIM	INCHES	MMILLIMETERS
C	.034	0.875
G	.008	0.20
P	.020	0.50
P1	.039	1.00
X	.010	0.25
X1	.018	0.45
Y	.027	0.675
Y1	.061	1.55
Z	.061	1.55

Package Information



Dimension	Typical	Unit
A0	1.15	
B0	2.65	
D	1.55	
P0	4.00	
P1	4.00	
P2	2.00	
E	1.75	
F	3.50	
W	8.00	

mm

Ordering Information

Order code	Marking	Package	Packaging option	Base quantity	Packaging specification
CESD10U3324PS	33U	DFN2510	Tape and reel	3000pcs / reel	EIA STD RS-481