

Features

- 45Watts peak pulse power ($t_p = 8/20\mu s$)
- SOT23-6 package
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ($C_j=0.3\text{pF}$ typ. IO to IO)
- Protection one data/power line to:
- IEC 61000-4-2 $\pm 12\text{kV}$ contact $\pm 15\text{kV}$ air
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 3.5A(8/20 μs)

SOT23-6



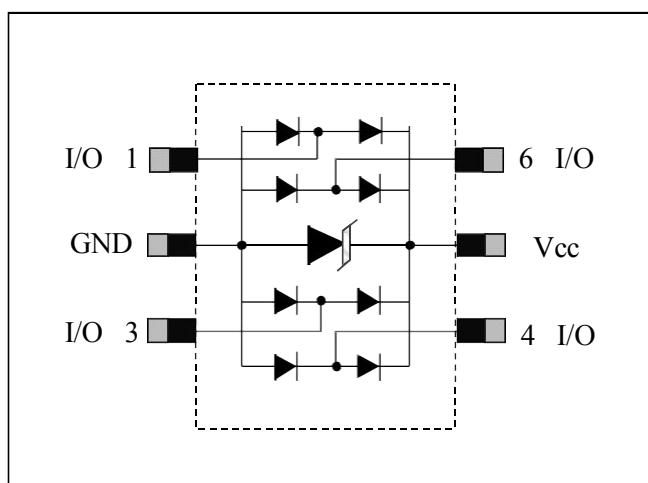
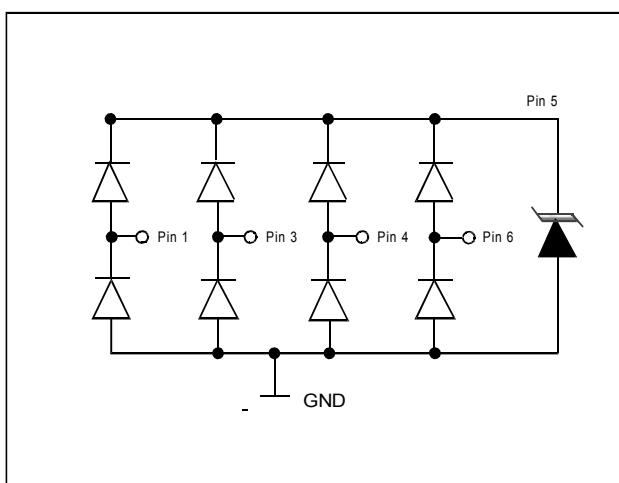
Applications

- Ethernet
- Digital Visual Interface (DVI)
- USB2.0
- Notebook and PC Computers

Mechanical Data

- SOT23-6 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Absolute Maximum Rating

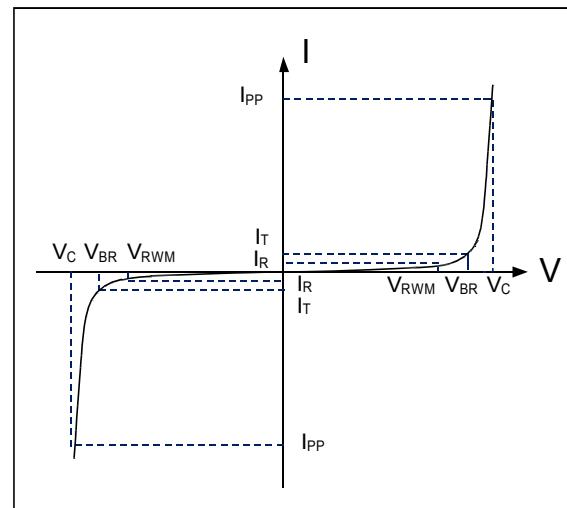
Rating	Symbol	Value	Units
Peak Pulse Power (tp =8/20μs)	P _{PP}	45	Watts
Peak Pulse Current (tp =8/20μs)(note1)	I _{PP}	3.5	A
ESD per IEC 61000-4-2(Air)	V _{ESD}	15	kV
ESD per IEC 61000-4-2(Contact)		12	
Lead Soldering Temperature	T _L	260(10seconds)	°C
Junction Temperature	T _J	-55 to +125	°C
Storage Temperature	T _{STG}	-55 to +125	°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	6	6.8	8.5	V
Reverse Leakage Current	I _R	V _{RWM} =5V,T=25°C		50	500	nA
Peak Pulse Current	I _{PP}	tp =8/20μs			3.5	A
Clamping Voltage	V _C	I _{PP} =3.5A,tp=8/20μs		10	13	V
Junction Capacitance	C _J	V _R = 0V, f =1MHz IO to IO		0.2	0.25	pF
		V _R = 0V, f =1MHz IO to GND		0.36	0.5	

Electrical Parameters (T_A = 25°C unless otherwise noted)

Symbol	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



Typical Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

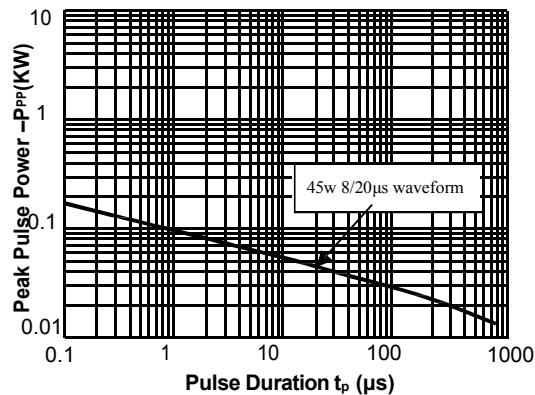


Fig.2 Pulse Derating Curve

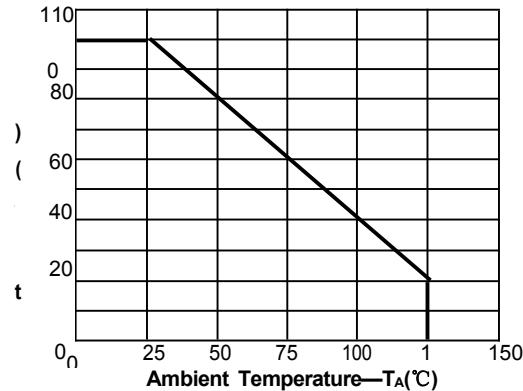


Fig.3 PulseWaveform-8/20μs

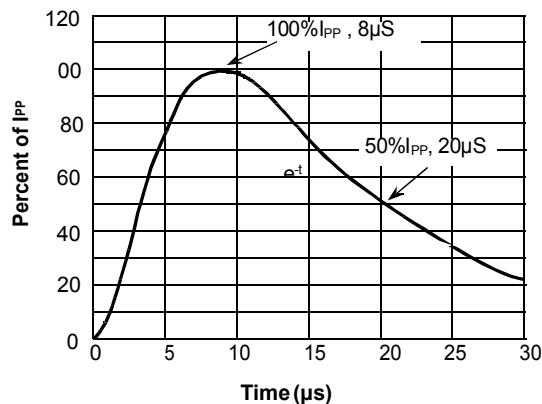


Fig.4 PulseWaveform-ESD(IEC61000-4-2)

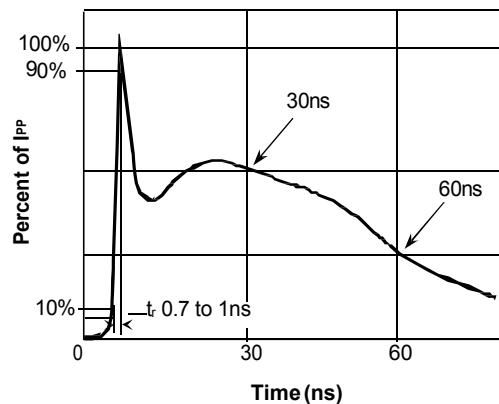


Fig.5 Eye Diagram - HDMI mask at 3.4Gbps per channel

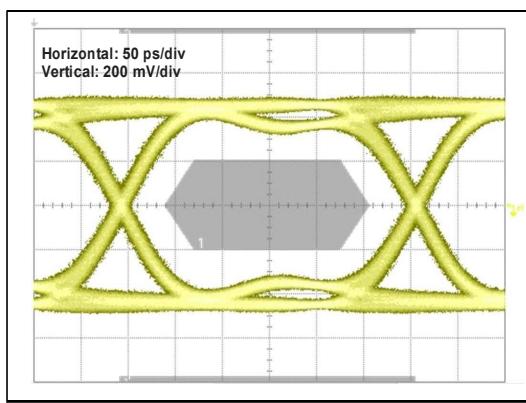
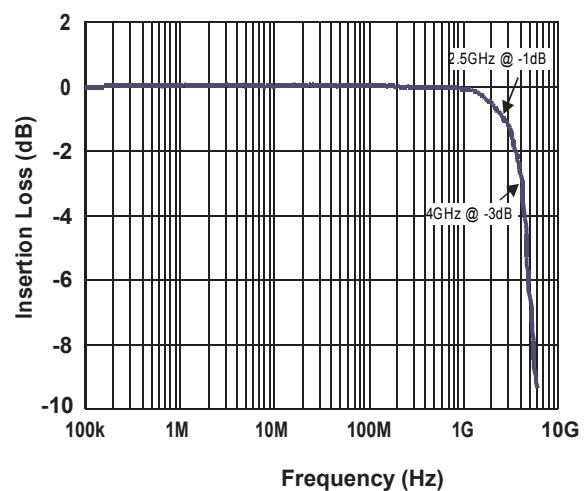


Fig.6 Insertion Loss S21 - I/O to GND



Outline Drawing – SOT23-6

PACKAGE OUTLINE		DIMENSIONS			
SYMBOL	INCHES	MIN		MILLIMETER	
		MIN	MAX	MIN	MAX
A	0.041	0.049		1.050	1.250
A1	0.000	0.004		0.000	0.100
A2	0.041	0.045		1.050	1.150
D	0.111	0.119		2.820	3.020
E	0.059	0.067		1.500	1.700
E1	0.104	0.116		2.650	2.950
b	0.012	0.020		0.300	0.500
e	0.037(BSC)			0.950(BSC)	
e1	0.071	0.079		1.800	2.000
L	0.012	0.024		0.300	0.600
θ	0°	8°		0°	8°

Land pattern dimensions:

- Pad width: 1.0 / 0.039
- Pad height: 1.9 / 0.074
- Pad pitch: 0.95 / 0.037
- Pad length: 0.7 / 0.028
- Pad gap: 1.4 / 0.055
- Total width: 3.6 / 0.141

Notes

- This land pattern is for reference purposes only consult your manufacturing group to ensure your company's manufacturing guidelines are met.
Reference ipc-sm-782a..

Marking

Ordering information

Order code	Package	Base qty	Delivery mode
LXE236F5V0U	SOT23-6	3K	Tape and reel

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