

Features

- 60Watts 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 ($C_j=0.22\text{pF}$ typ. IO to IO)
- Protection one data/power line to:
- IEC 61000-4-2 $\pm 20\text{kV}$ contact $\pm 20\text{kV}$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20 μs)



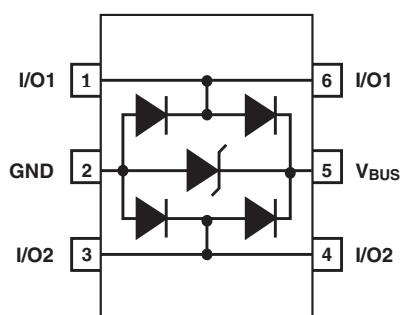
Applications

- 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

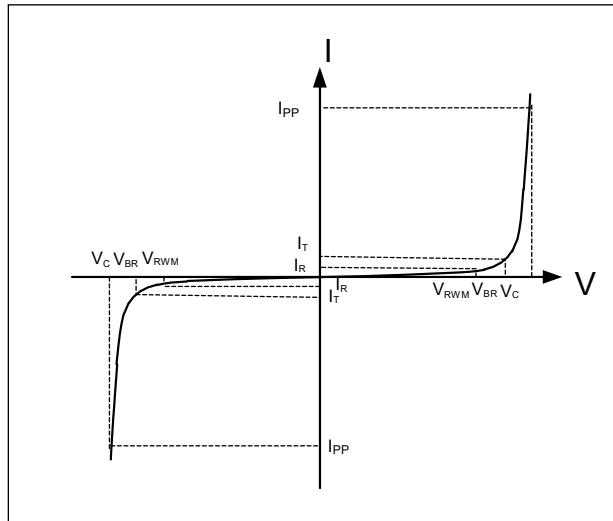
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P _{PP}	60	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I _{PP}	4.0	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	20 20	kV
Lead Soldering Temperature	T _L	260(10seconds)	°C
Junction Temperature	T _J	-55 to + 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			V
Reverse Leakage Current	I _R	V _{RWM} =5V, T=25°C			500	nA
Peak Pulse Current	I _{PP}	t _p =8/20μs			4.0	A
Clamping Voltage	V _C	I _{PP} =4.0A, t _p =8/20μs			15	V
Junction Capacitance	C _j	V _R = 0V, f = 1MHz IO to IO		0.22	0.4	pF
		V _R = 0V, f = 1MHz IO to GND		0.45	0.8	

Electrical Parameters (TA = 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



Note: 8/20μs pulse waveform.

Ver.1.0

Typical Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

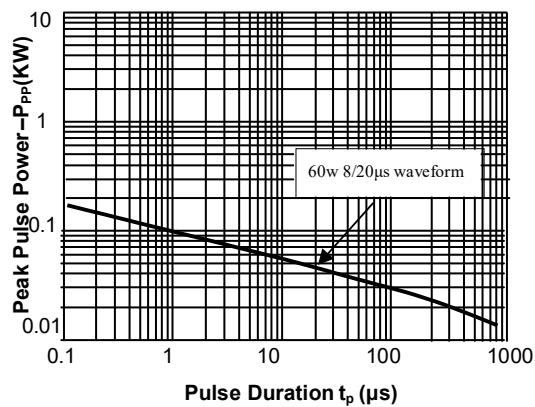


Fig.2 Pulse Derating Curve

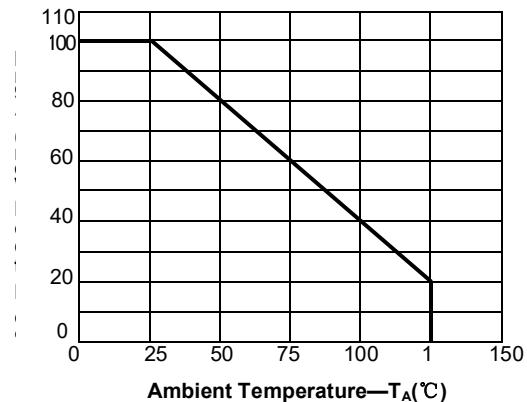


Fig.3 Pulse Waveform-8/20μs

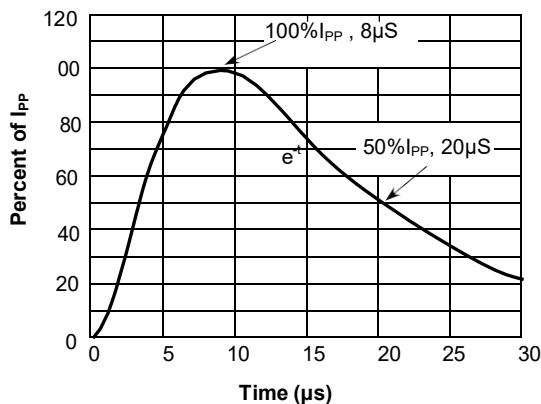
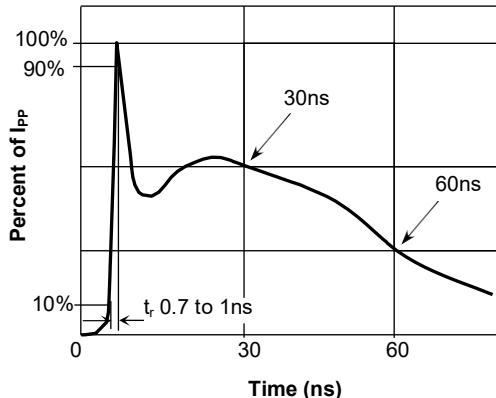


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)



Outline Drawing – SOT23-6

PACKAGE OUTLINE		DIMENSIONS			
SYMBOL	INCHES		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°	

Reference land pattern diagram for SOT23-6 package. Dimensions shown in inches:

- Pad width: 0.56
- Pad thickness: 0.022
- Pad pitch: 2.6
- Pad height: 0.102
- Pad length: 0.95
- Pad thickness: 0.037
- Pad width: 1.6
- Pad thickness: 0.063
- Pad length: 3.6
- Pad thickness: 0.141
- Pad width: 1.0
- Pad thickness: 0.039
- Pad length: 0.39

Notes

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

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