

Features

- 45Watts peak pulse power ($t_p = 8/20\mu s$)
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ($C_j = 0.2pF$ typ. IO to IO)

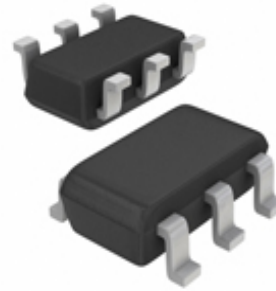
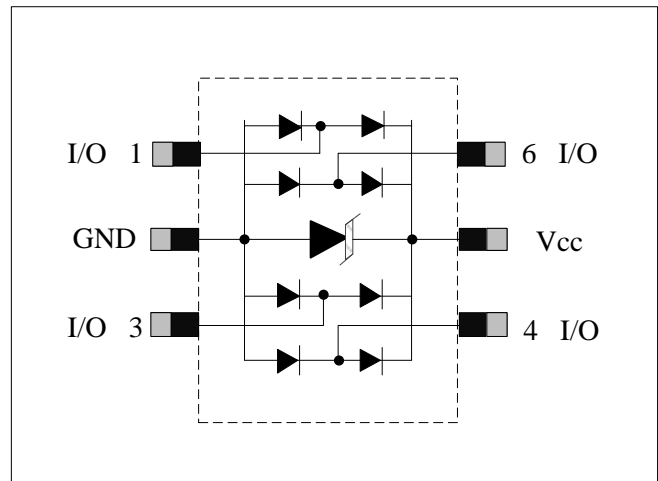
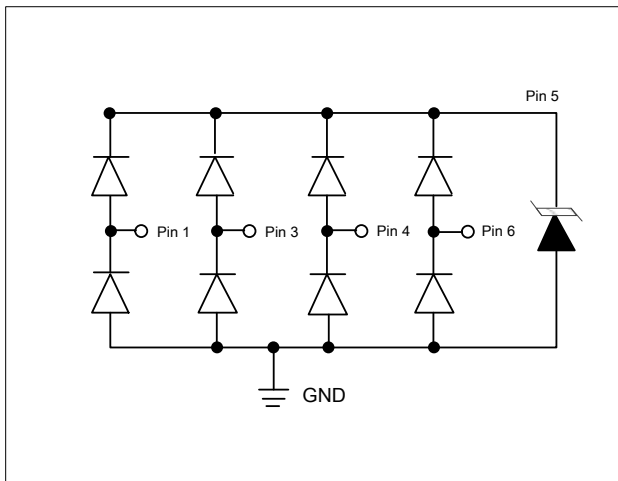
IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 $\pm 12kV$ contact $\pm 15kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 3.8A (8/20 μs)

Applications

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

Schematic & PIN Configuration



SOT23-6

Mechanical Characteristics

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

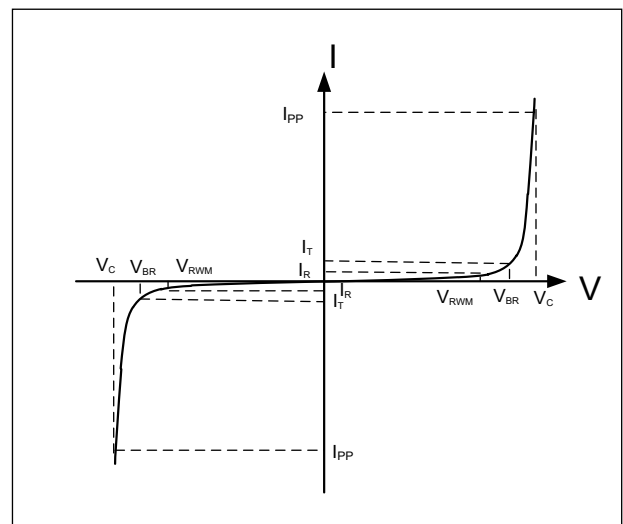
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	45	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{pp}	3.8	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	15 12	kV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}C$
Junction Temperature	T_J	-55 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}	$I_T = 1mA$	6	7.2	8.5	V
Reverse Leakage Current	I_R	$V_{RWM} = 5V, T = 25^{\circ}C$		50	500	nA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$			6	A
Clamping Voltage	V_C	$I_{PP} = 3.8A, t_p = 8/20\mu s$		10	12	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	0.4	

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: 8/20 μs pulse waveform.

Typical Characteristics

Fig.1 Peak Pulse Power Rating Curve

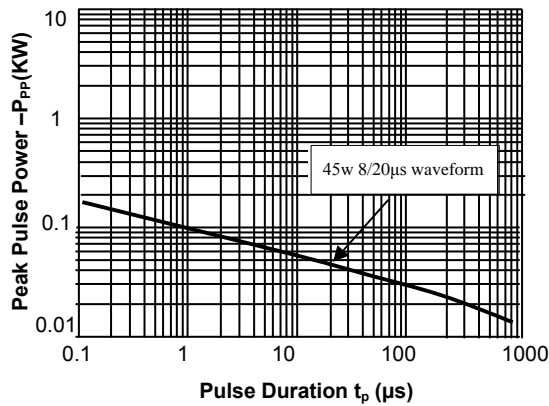


Fig.2 Pulse Derating Curve

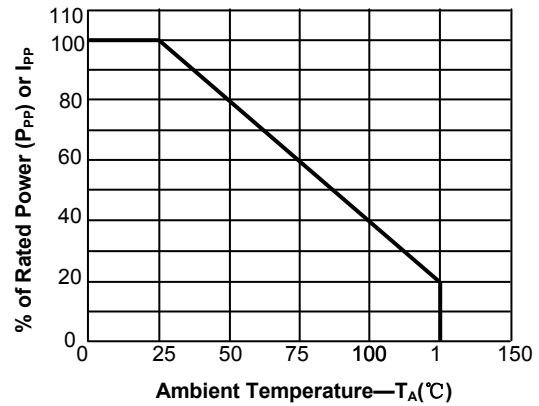


Fig.3 Pulse Waveform-8/20μs

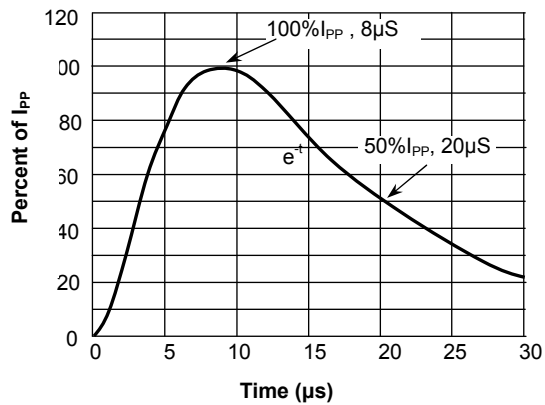


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

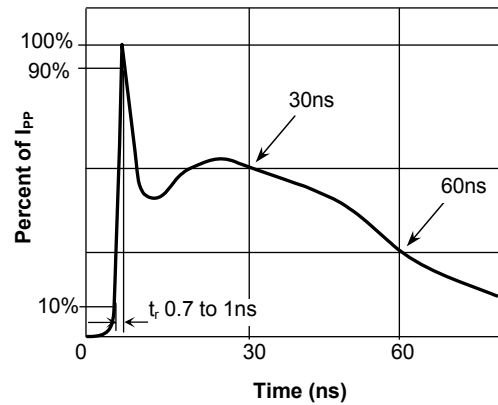


Fig.5 Eye Diagram - HDMI mask at 3.4Gbps per channel

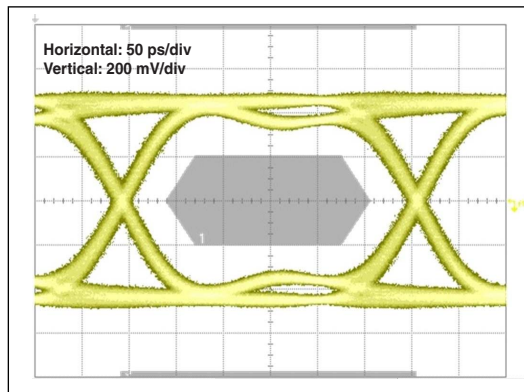
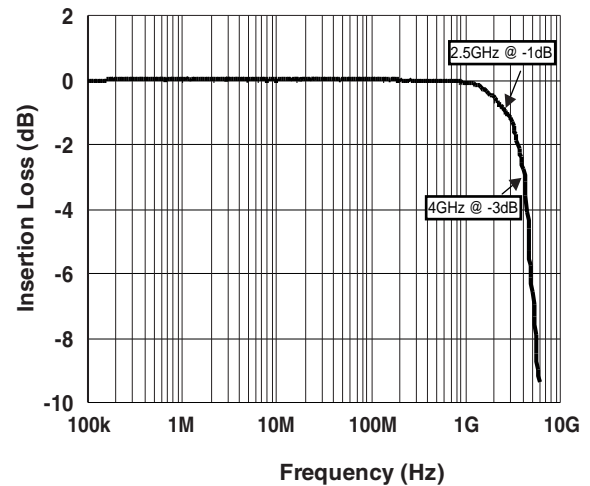
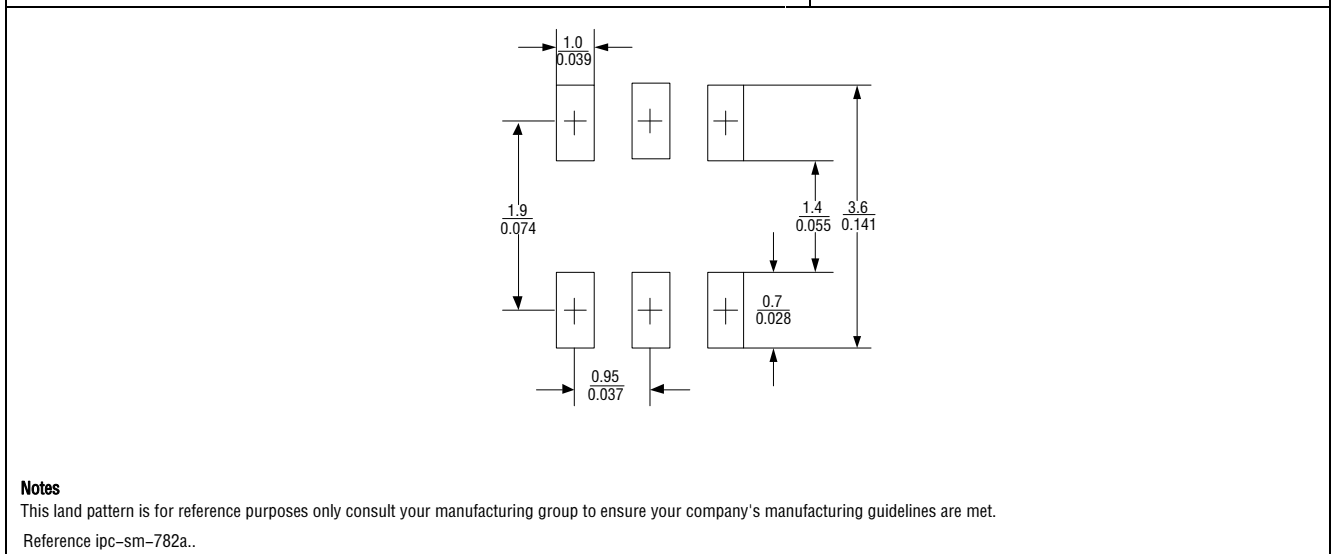
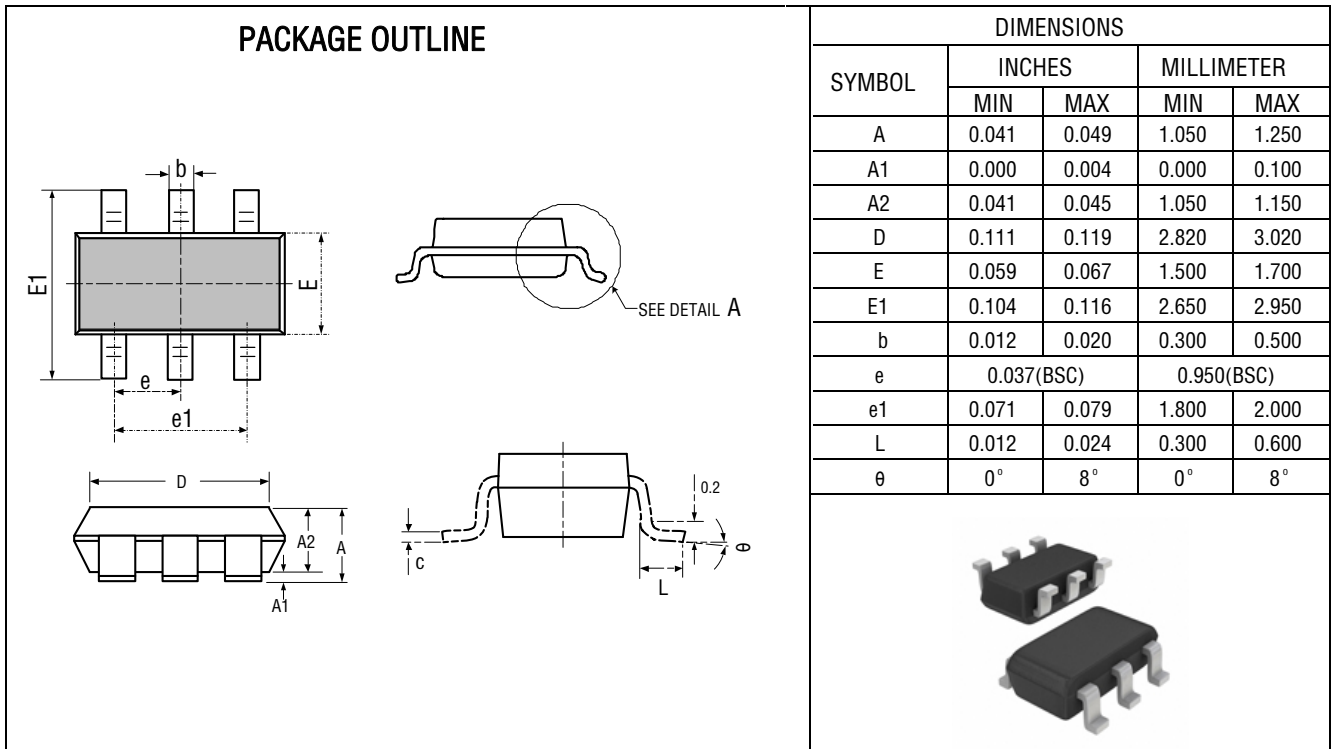


Fig.6 Insertion Loss S21 - I/O to GND

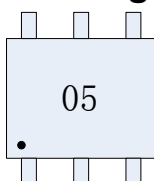


Ultra-Low Capacitance Series
ESD Protection
PTT236U036M5CA4

Outline Drawing



Marking



Ordering information

Order code	Package	Base qty	Delivery mode
PTT236U036M5CA4	SOT23-6	3k	Tape and reel