

## »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 ( $C_j=0.28pF$  typ.)
- Protection one data/power line
- IEC 61000-4-2  $\pm 12kV$  contact  $\pm 15kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 3.5A (8/20 $\mu s$ )



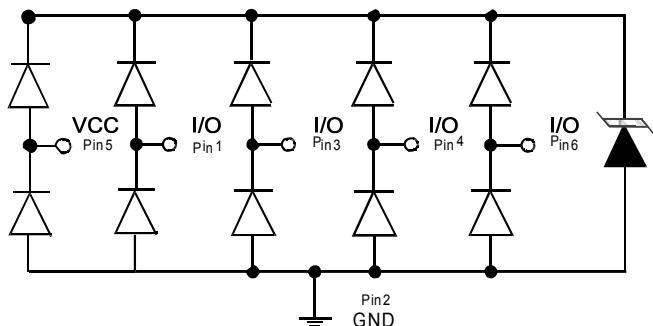
## »Applications

- 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

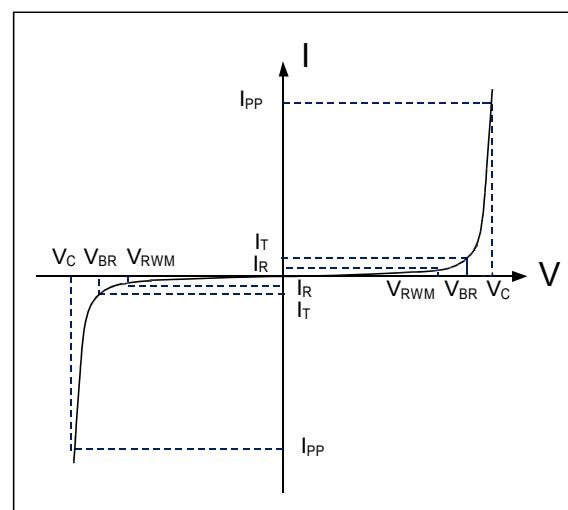
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	60	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ )(note1)	$I_{pp}$	3.5	A
ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact)	$V_{ESD}$	15 12	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	°C
Junction Temperature	$T_J$	-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	7.8		V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V, T = 25^\circ C$		50	500	nA
Peak Pulse Current	$I_{PP}$	$t_p = 8/20\mu s$			3.5	A
Clamping Voltage	$V_C$	$IPP = 3.5A, t_p = 8/20\mu s$		15	18	V
Junction Capacitance	$C_J$	$V_R = 0V, f = 1MHz$ IO to IO		0.2	0.28	pF
		$V_R = 0V, f = 1MHz$ IO to GND		0.35	0.5	

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

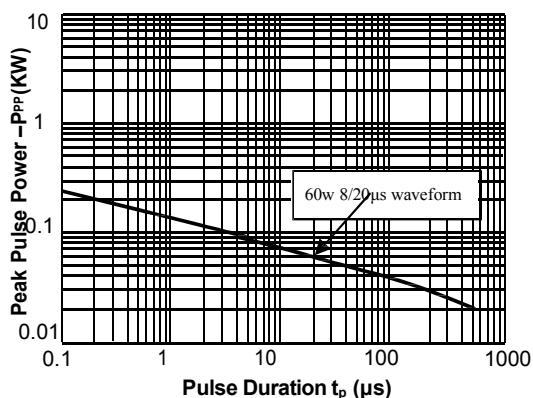
Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current



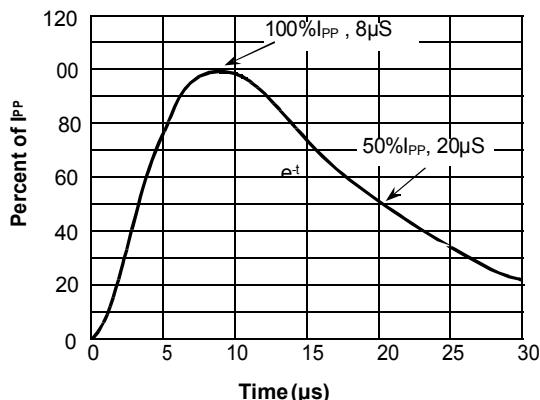
Note: 8/20μs pulsed waveform.

## »Typical Characteristic Curves

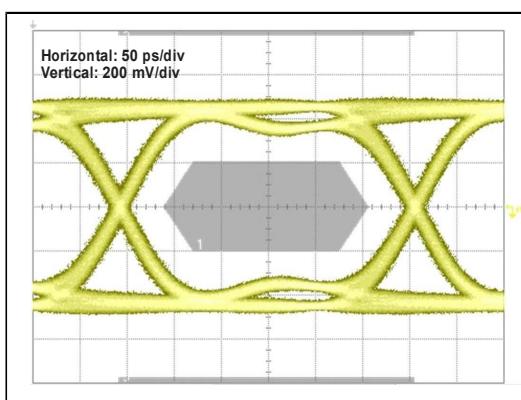
**Fig.1 Peak Pulse Power Rating Curve**



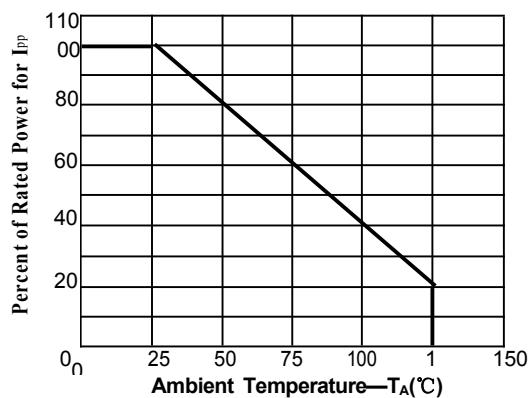
**Fig.3 PulseWaveform-8/20μs**



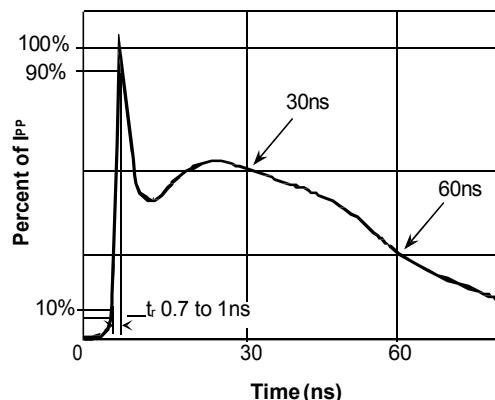
**Fig.5 Eye Diagram - HDMI mask at 5.0Gbps per channel**



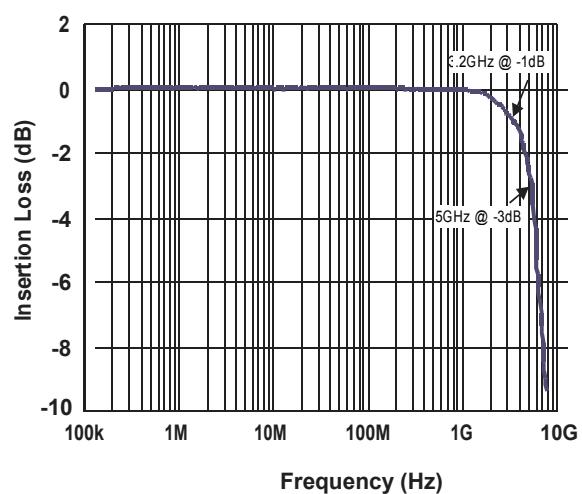
**Fig.2 Pulse Derating Curve**



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

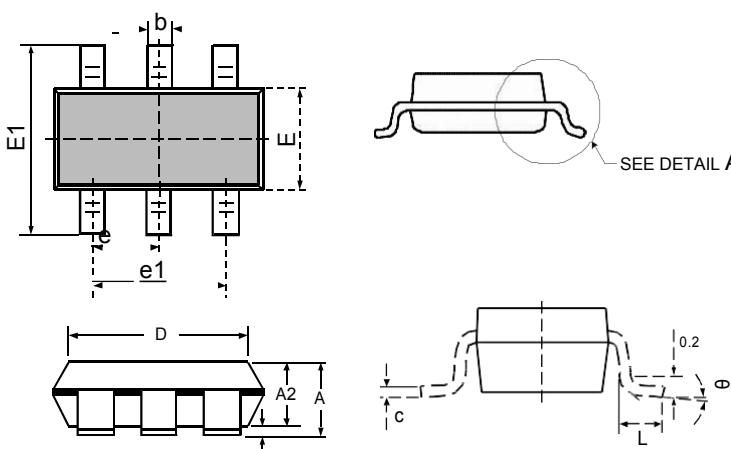


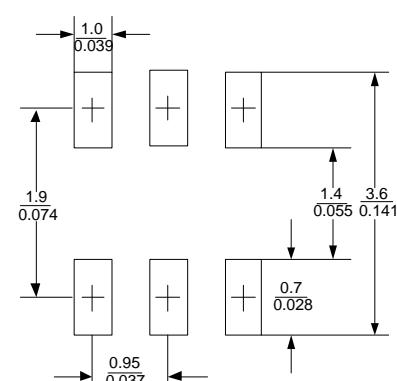
**Fig.6 Insertion Loss S21 - I/O to GND**



## »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°



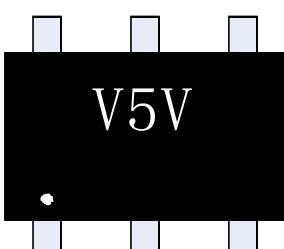


**Notes**

- 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
BST236A055R	SOT23-6	3k	Tape and reel