

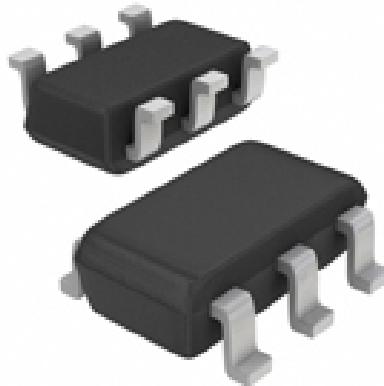


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**SEST23U0526PH**  
ESD Protection Diode Array

## 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 ( $C_j=0.3\text{pF}$  typ. IO to IO)
- Protection one data/power line to:
- ESD capability according to AEC-Q101:  
human body model: class H3B: > 8 kV
- IEC 61000-4-2  $\pm 25\text{kV}$  contact  $\pm 25\text{kV}$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4.0A (8/20 $\mu s$ )



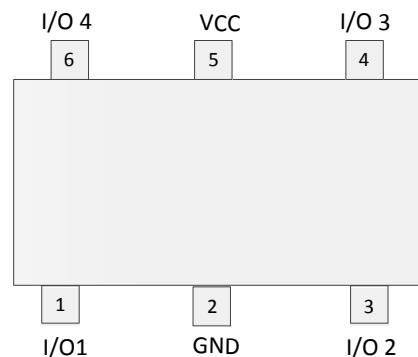
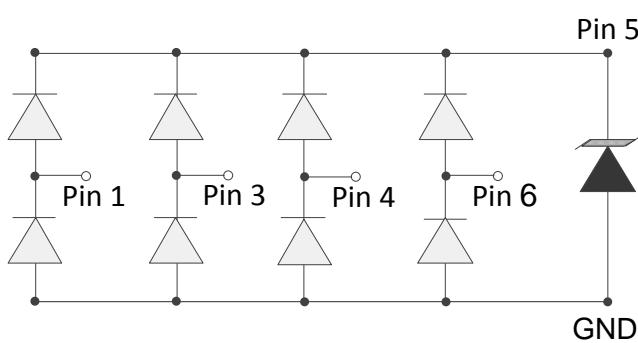
## Applications

- 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



SOT23-6

**Absolute Maximum Rating**

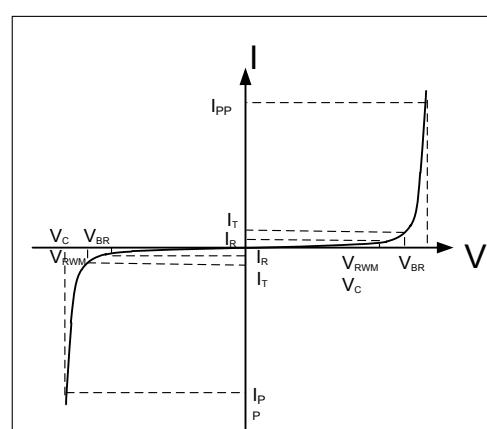
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	P <sub>PP</sub>	60	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)	I <sub>PP</sub>	4.0	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V <sub>ESD</sub>	25 25	kV
Lead Soldering Temperature	T <sub>L</sub>	260(10seconds)	°C
Junction Temperature	T <sub>J</sub>	-55 to + 125	°C
Storage Temperature	T <sub>stg</sub>	-55 to + 125	°C

**Electrical Characteristics**

Parameter	Symbol	Conditions	Min	Typical	Max	Units
<b>I/O port TVS</b>						
Reverse Stand-Off Voltage	V <sub>RWM</sub>				5.0	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	6	8.0		V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =5V,T=25°C		0.2	0.5	uA
Peak Pulse Current	I <sub>PP</sub>	t <sub>p</sub> =8/20μs			4.0	A
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =4.0A,t <sub>p</sub> =8/20μs		10	15	V
Junction Capacitance	C <sub>j</sub>	V <sub>R</sub> = 0V, f = 1MHz I/O to I/O		0.3	0.35	pF
		V <sub>R</sub> = 0V, f = 1MHz I/O to GND		0.6	0.7	pF
<b>VCC TVS</b>						
Reverse Stand-Off Voltage	V <sub>RWM</sub>				5.0	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	6.0			V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =5V,T=25°C			1	uA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =20A,t <sub>p</sub> =8/20μs		12	15	V
Junction Capacitance	C <sub>j</sub>	V <sub>R</sub> = 0V, f = 1MHz VCC to GND	160	165		pF

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

Symbol	Parameter
I <sub>PP</sub>	Maximum Reverse Peak Pulse Current
V <sub>C</sub>	Clamping Voltage @ I <sub>PP</sub>
V <sub>RWM</sub>	Working Peak Reverse Voltage
I <sub>R</sub>	Maximum Reverse Leakage Current @ V <sub>RWM</sub>
V <sub>BR</sub>	Breakdown Voltage @ I <sub>T</sub>
I <sub>T</sub>	Test Current

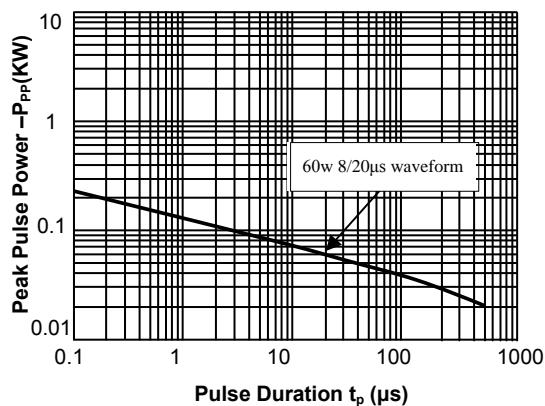


Note: 8/20μs pulse waveform.

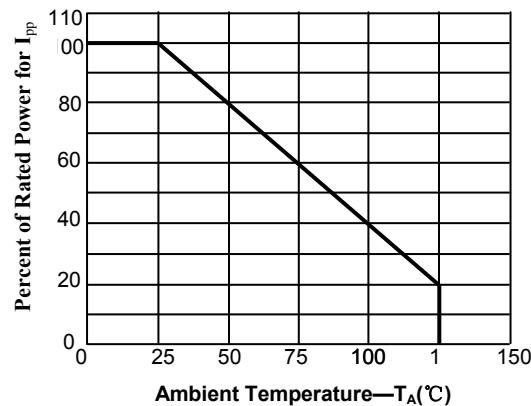
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## Typical Characteristic Curves

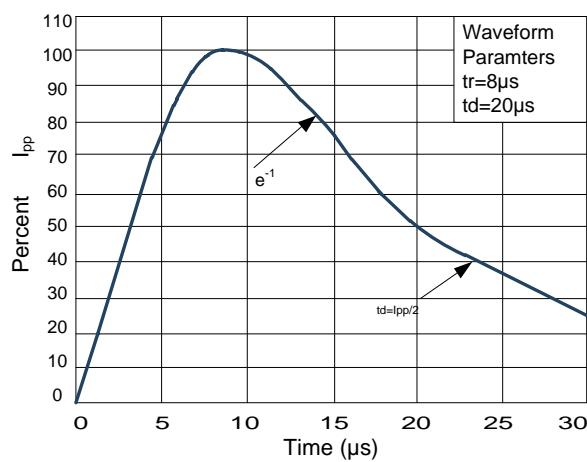
**Fig.1 Peak Pulse Power Rating Curve**



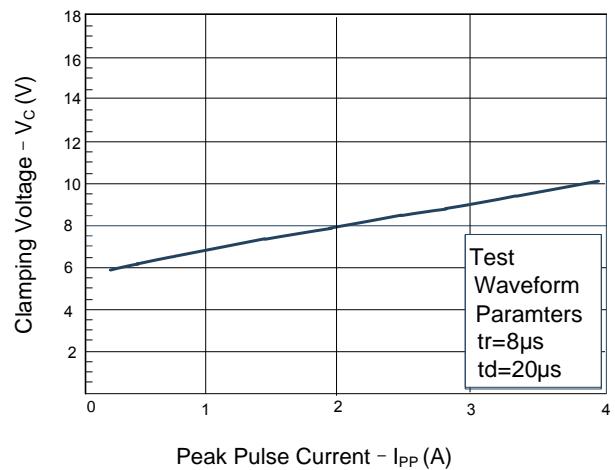
**Fig.2 Pulse Derating Curve**



**Figure3: Pulse Waveform**

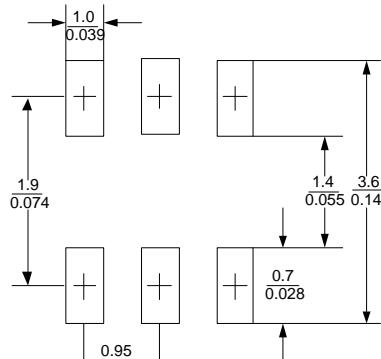


**Figure 4: Clamping Voltage vs.I<sub>pp</sub>(I/Oto GND)**



## 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°	

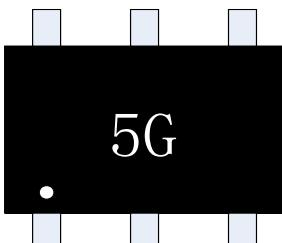



**Notes**

- 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
SEST23U0526PH	SOT23-6	3k	Tape and reel