



## PRODUCT DATA SHEET



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**Datasheet**



**Resources**

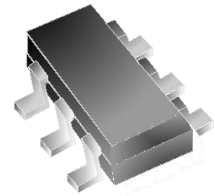


**Samples**

Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at [www.jg-semi.cn](http://www.jg-semi.cn). Please email any questions regarding the system integration to [JINGAO\\_questions@jgsemi.com](mailto:JINGAO_questions@jgsemi.com).

## Features

- Low operating voltage: 5V
- Low capacitance
- Solid-state silicon-avalanche and active circuit triggering technology
- Back-drive protection for power-down mode
- Lead-free version available


**SOT-23-6L**

## IEC Compatibility (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 25\text{kV}$  (air),  $\pm 20\text{kV}$  (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4.5A (8/20 $\mu\text{s}$ )

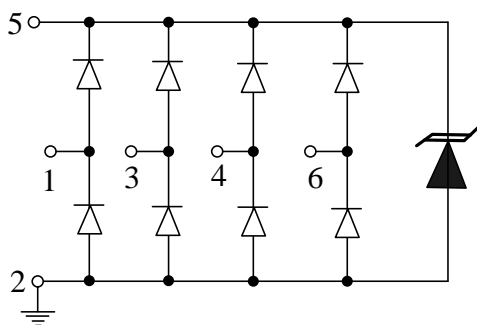
## Mechanical Characteristics

- SOT-23-6L package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS Compliant

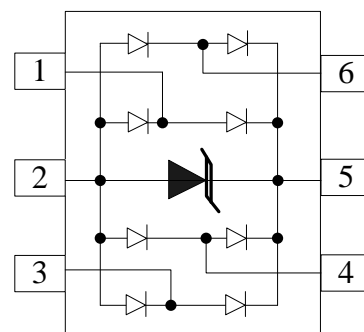
## Applications

- Video/Graphics Card
- Digital Visual Interface (DVI)
- USB2.0 Power and Data lines protection
- Notebook and PC Computers
- Monitors and Flat Panel Displays

## Circuit Diagram



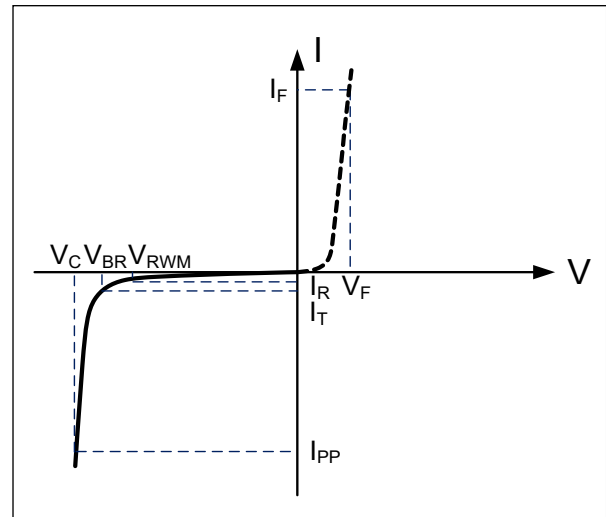
## Schematic & PIN Configuration


**SOT-23-6L (Top View)**

<b>Absolute Maximum Rating</b>			
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	90	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ )	$I_{PP}$	4.5	A
Operating Temperature	$T_J$	-55 to +150	°C
Storage Temperature	$T_{STG}$	-55 to +125	°C

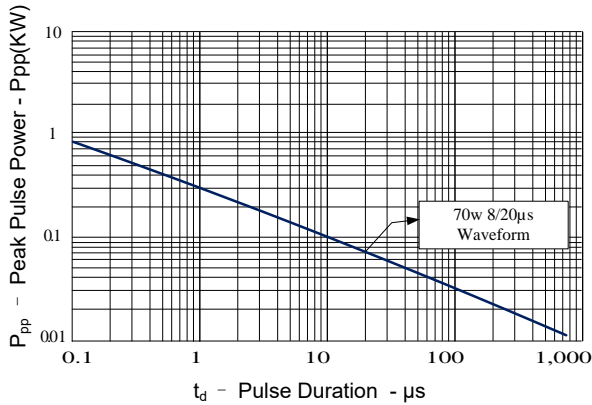
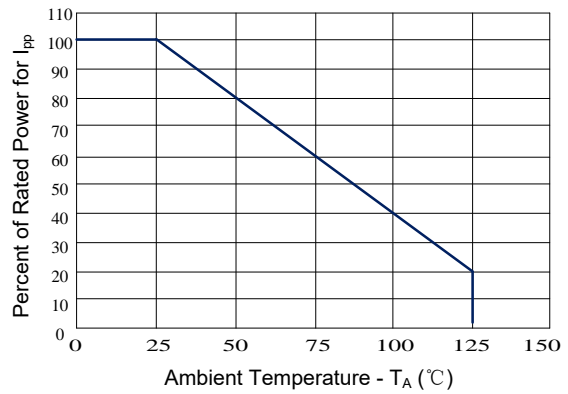
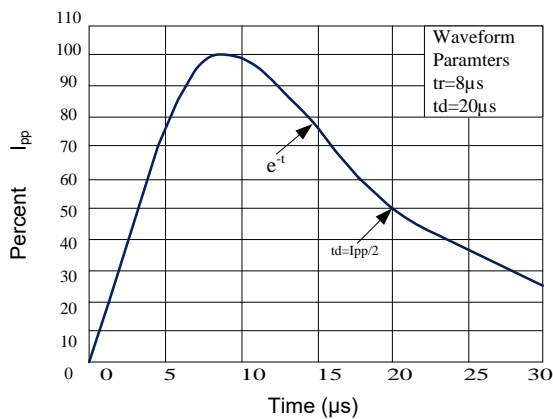
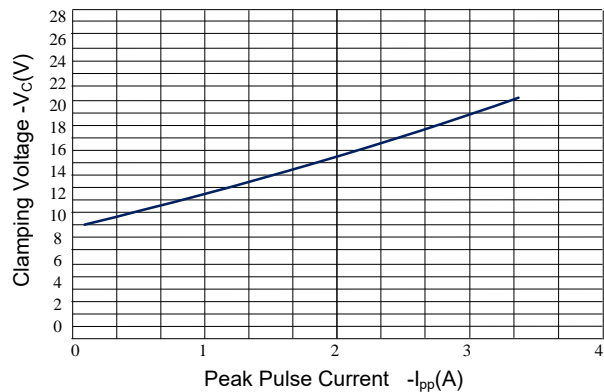
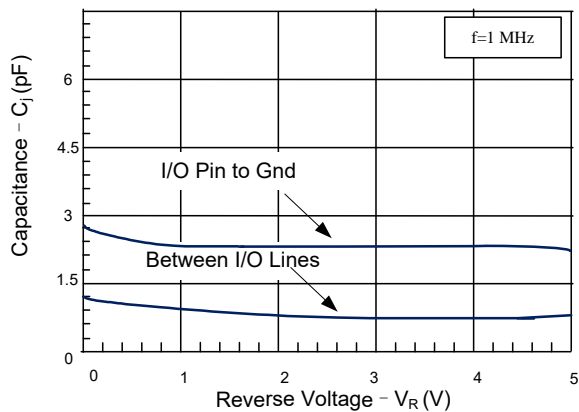
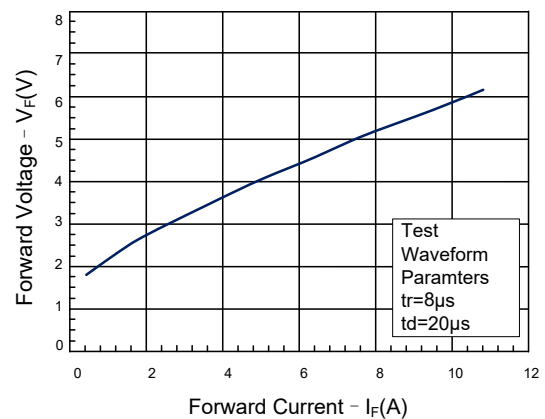
**Electrical Parameters (T=25°C)**

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


**Electrical Characteristics**

Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	$V_{RWM}$	Pin5 to pin2 T=25°C			5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$ Pin 5 to pin2	5.6			V
Reverse Leakage Current	$I_R$	$V_{RWM}=5V$ , T=25°C Pin 5 to pin2			500	nA
Forward Voltage	$V_F$	$I_T=15mA$		0.8	1.5	V
Clamping Voltage	$V_C$	$I_{PP}=4.5A$ , $t_p=8/20\mu s$ I/O pin to GND			20	V
Junction Capacitance	$C_j$	$V_R = 0V$ , f = 1MHz I/O pin to GND		2.5	3.5	pF
		$V_R = 0V$ , f = 1MHz Between I/O pins		1.0	2.0	pF

## Typical Characteristics

**Figure 1: Peak Pulse Power vs. Pulse Time**

**Figure 2: Power Derating Curve**

**Figure 3: Pulse Waveform**

**Figure 4: Clamping Voltage vs. Peak Pulse Current**

**Figure 5: Capacitance vs. Reverse Voltage**

**Figure 6: Forward Voltage vs. Forward Current**




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