

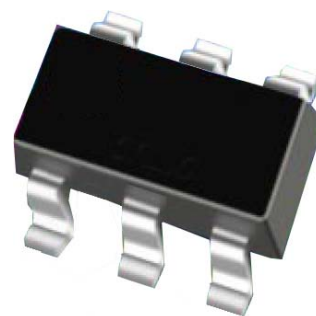


## Low Capacitance TVS Diode Array

### FEATURES

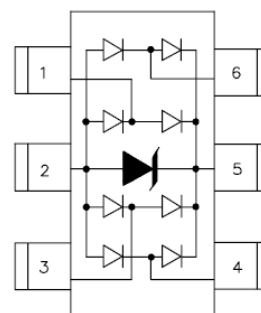
- ESD protection for high-speed data lines to  
**IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact)**  
**IEC 61000-4-4 (EFT) 40A (5/50ns)**  
**IEC 61000-4-5 (Lightning) 12A (8/20µs)**
- Array of surge rated diodes with internal TVS Diode
- Small package saves board space
- Protects four I/O lines
- Low capacitance: 3pF typical
- Low clamping voltage
- Low operating voltage: 5.0V
- Solid-state silicon-avalanche technology

**SOT23-6L**



### APPLICATIONS

- USB 2.0 Power and Data Line Protection
- Video Graphics Cards
- Monitors and Flat Panel Displays
- Digital Video Interface (DVI)
- 10/100/1000 Ethernet
- Notebook Computers
- SIM Ports
- ATM Interfaces
- IEEE 1394 Firewire Ports



### DEVICE CHARACTERISTICS

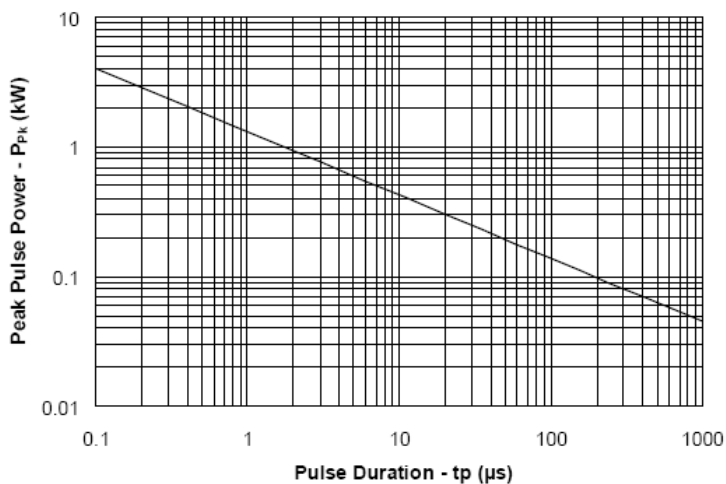
<b>Absolute Maximum Rating</b>			
<b>Rating</b>	<b>Symbol</b>	<b>Value</b>	<b>Units</b>
Peak Pulse Power (tp = 8/20µs)	P <sub>pk</sub>	350	Watts
Peak Pulse Current (tp = 8/20µs)	I <sub>pp</sub>	12	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V <sub>ESD</sub>	15 8	kV
Lead Soldering Temperature	T <sub>L</sub>	260 (10 sec.)	°C
Operating Temperature	T <sub>J</sub>	-55 to +125	°C
Storage Temperature	T <sub>STG</sub>	-55 to +150	°C

## Electrical Characteristics( $T_{amb}=25^{\circ}C$ )

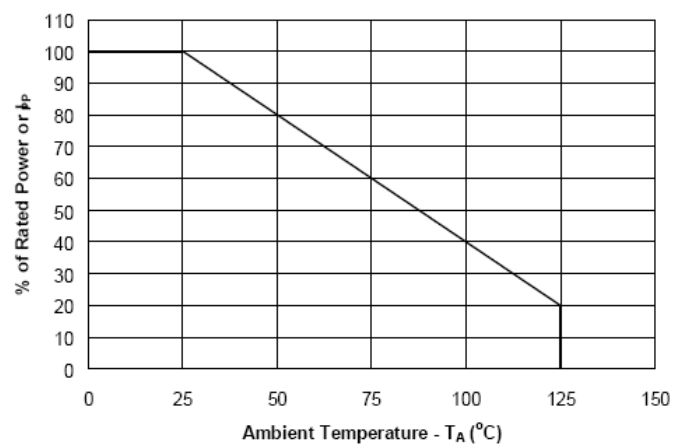
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	$V_{RWM}$	Pin 5 to 2			5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_t = 1mA$ Pin 5 to 2	6			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V, T=25^{\circ}C$ Pin 5 to 2			5	$\mu A$
Forward Voltage	$V_F$	$I_f = 15mA$			1.2	V
Clamping Voltage	$V_C$	$I_{PP} = 1A, t_p = 8/20\mu s$ Any I/O pin to Ground			12.5	V
Clamping Voltage	$V_C$	$I_{PP} = 5A, t_p = 8/20\mu s$ Any I/O pin to Ground			17.5	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$ Any I/O pin to Ground		3	5	pF
		$V_R = 0V, f = 1MHz$ Between I/O pins		1.5		pF

## Electrical Characteristics Curve

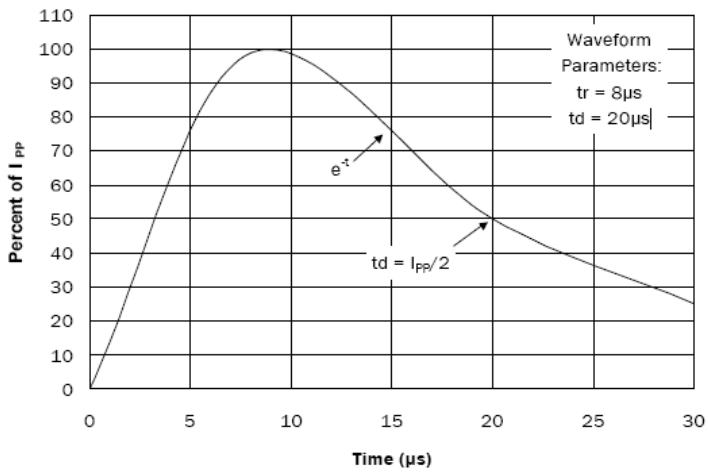
Non-Repetitive Peak Pulse Power vs. Pulse Time



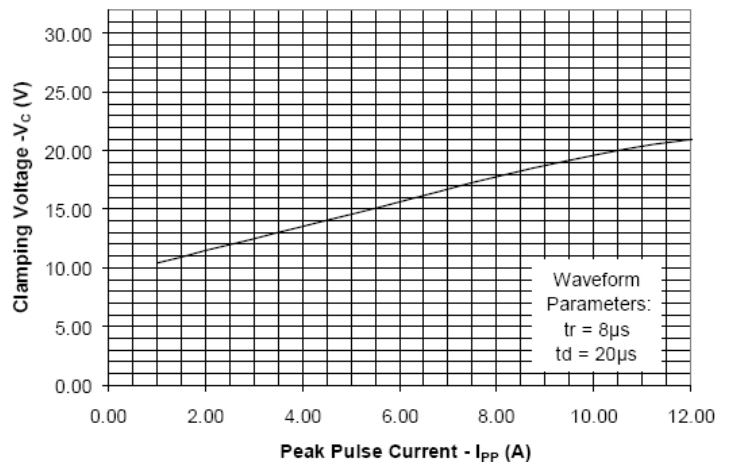
Power Derating Curve



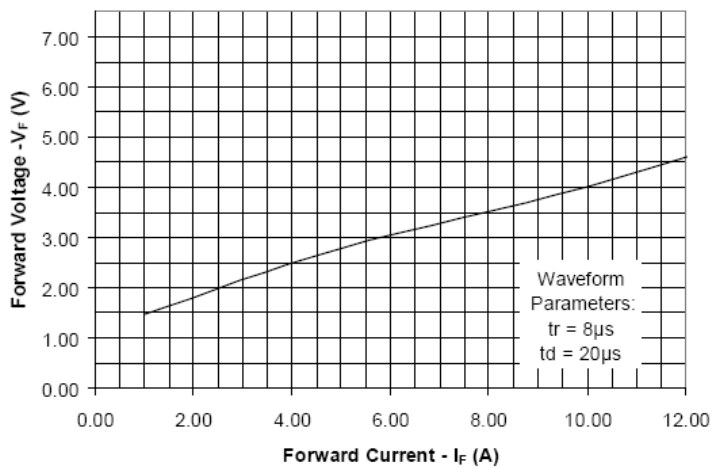
### Pulse Waveform



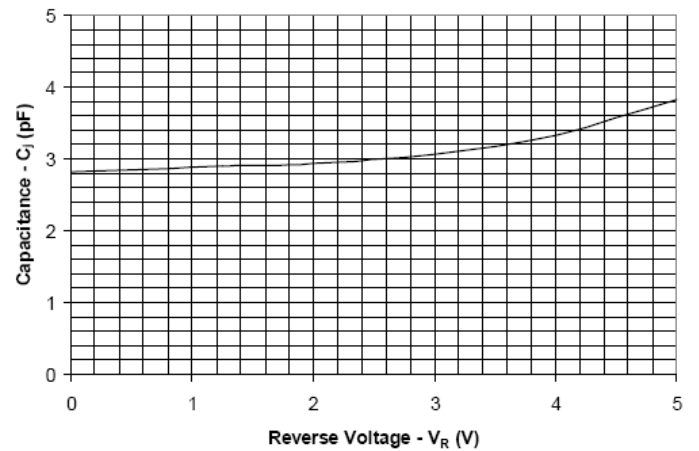
### Clamping Voltage vs. Peak Pulse Current



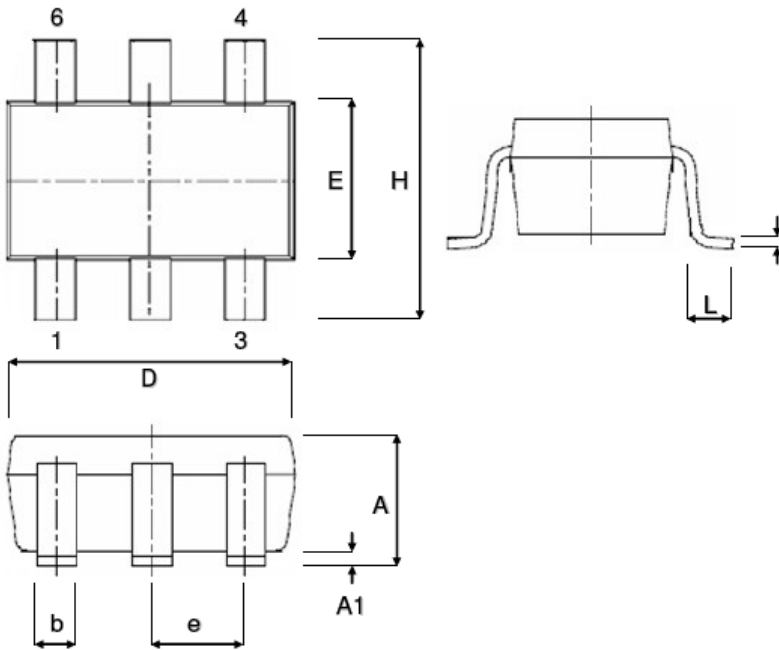
### Forward Voltage vs. Forward Current



### Capacitance vs. Reverse Voltage



## PACKAGE OUTLINE & DIMENSIONS (SOT23-6L)



Symbol	Dimension in MM		Dimension in inch	
	Min.	Max.	Min.	Max.
A	1.05	1.35	0.041	0.053
A1	0.05	0.15	0.002	0.006
b	0.30	0.50	0.012	0.020
c	0.08	0.20	0.003	0.008
D	2.80	3.00	0.110	0.118
E	1.50	1.70	0.059	0.067
e	0.95 BSC		0.0374 BSC	
H	2.60	3.00	0.102	0.118
L	0.35	0.55	0.014	0.022