

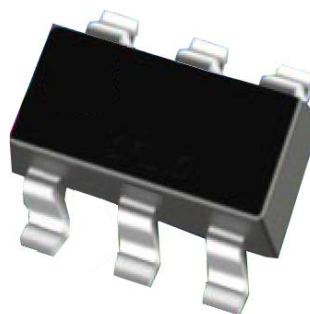


## Low Capacitance TVS Diode Array

### FEATURES

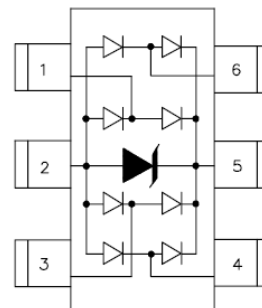
- ESD protection for high-speed data lines to  
**IEC 61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)**  
**IEC 61000-4-4 (EFT) 40A (5/50ns)**
- Array of surge rated diodes with internal TVS Diode
- Small package saves board space
- Protects four I/O lines
- Low capacitance: 0.5pF typical
- Low clamping voltage
- Low operating voltage: 5.0V
- Solid-state silicon-avalanche technology

SOT-363



### 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 ( $t_p = 8/20\mu\text{s}$ )	$P_{pk}$	150	Watts
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	15 8	kV
Lead Soldering Temperature	$T_L$	260 (10 sec.)	$^{\circ}\text{C}$
Operating Temperature	$T_J$	-55 to +125	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-55 to +150	$^{\circ}\text{C}$

## 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
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$ Any I/O pin to Ground		0.8		pF
		$V_R = 0V, f = 1MHz$ Between I/O pins		0.4		pF

## Electrical Characteristics Curve

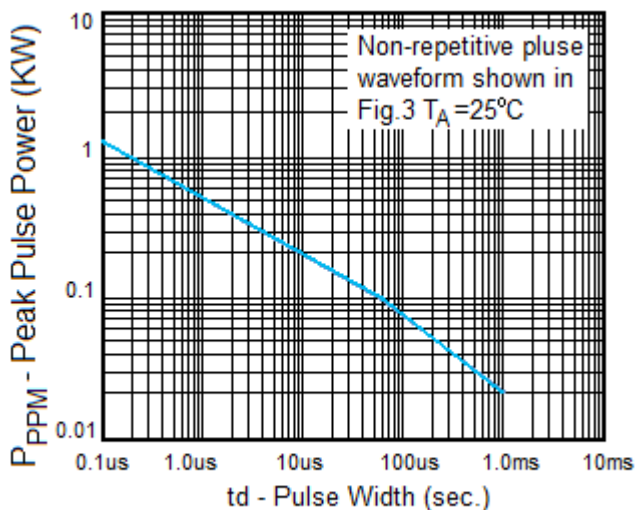


Fig. 1 Peak Pulse Power Rating

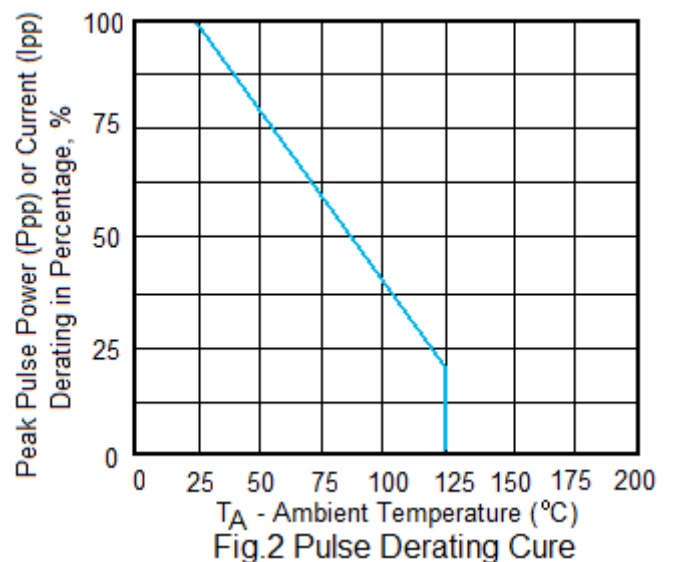


Fig.2 Pulse Derating Curve

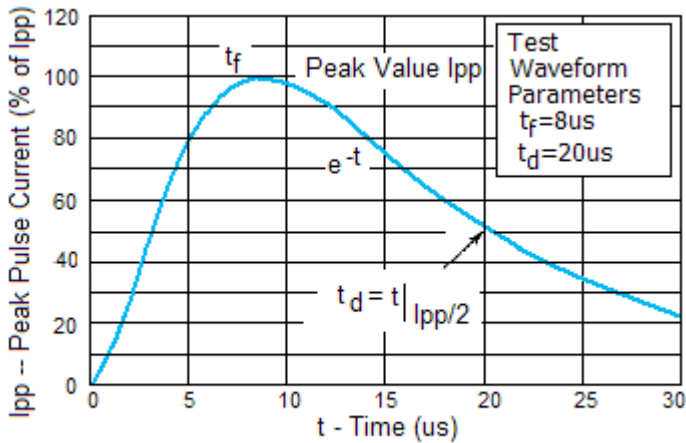


Fig. 3 Pulse Waveform

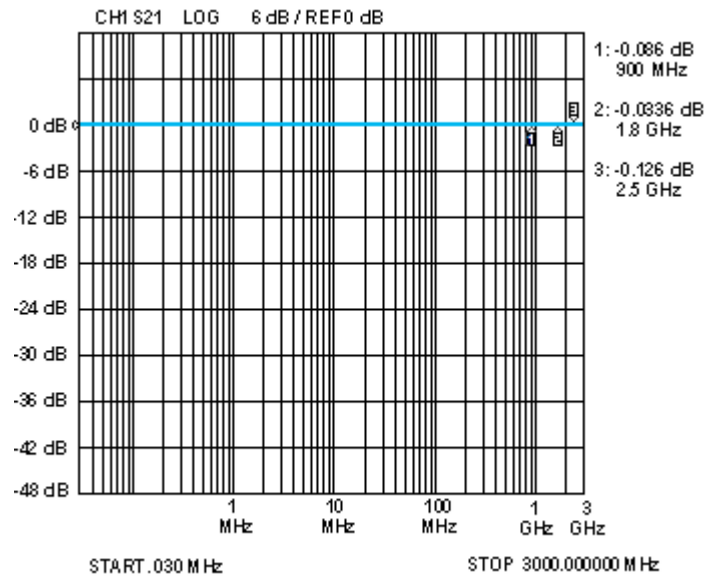
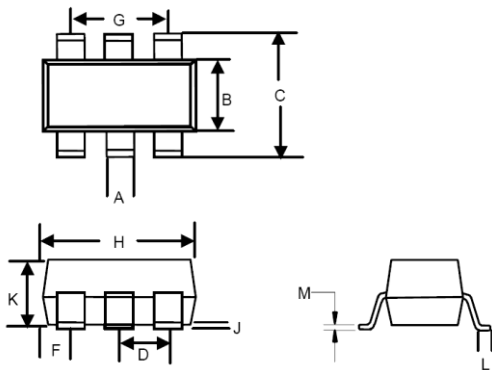


Fig.4 Insertion Loss S21 - I/O to I/O

## PACKAGE OUTLINE & DIMENSIONS (SOT-363)

### SOT-363



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.004	.012	0.10	0.30	
B	.045	.053	1.15	1.35	
C	.079	.087	2.00	2.20	
D	.026		0.65Nominal		
F	.012	.016	0.30	0.40	
H	.071	.087	1.80	2.20	
J	---	.004	---	0.10	
K	.035	.039	0.90	1.00	
L	.010	.016	0.25	0.40	
M	.004	.016	0.10	0.25	