



# SRV05-4

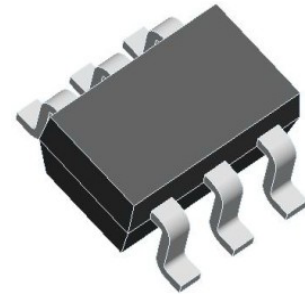
## LOW CAPACITANCE TVS ARRAY / ESD ARRAY

### 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)  
IEC 61000-4-5 (Lightning) 12A (8/20  $\mu\text{s}$ )
- 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



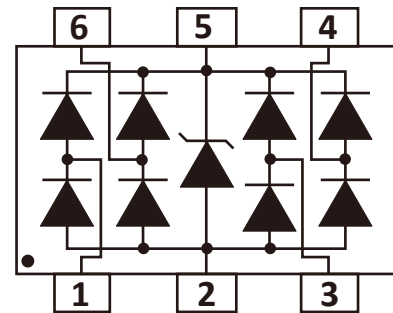
### SOT-23-6



### 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

### Pin Configuration



### Absolute Maximum Ratings (T<sub>amb</sub>=25°C unless otherwise specified)

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power (t <sub>p</sub> = 8/20 $\mu\text{s}$ )	P <sub>pk</sub>	350	Watts
Peak Pulse Current (t <sub>p</sub> = 8/20 $\mu\text{s}$ )	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



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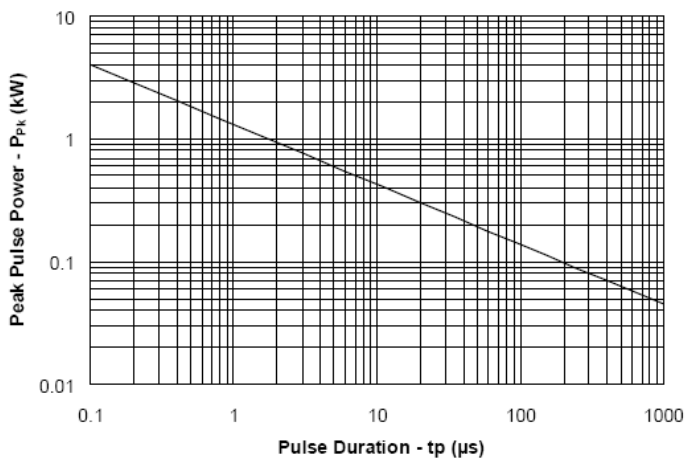
## LOW CAPACITANCE TVS ARRAY / ESD ARRAY

### ● Electrical Characteristics (Tamb=25 °C)

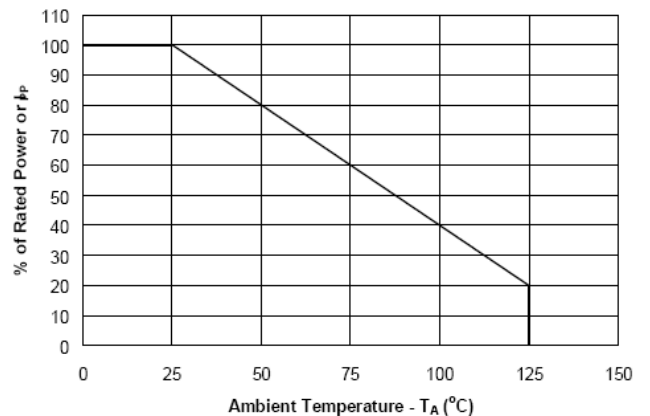
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	$V_{RWM}$	Pin 5 to 2			5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_t = 1mA$ Pin 5 to 2	6			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V, T=25^{\circ}C$ Pin 5 to 2			5	$\mu A$
Forward Voltage	$V_F$	$I_f = 15mA$			1.2	V
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

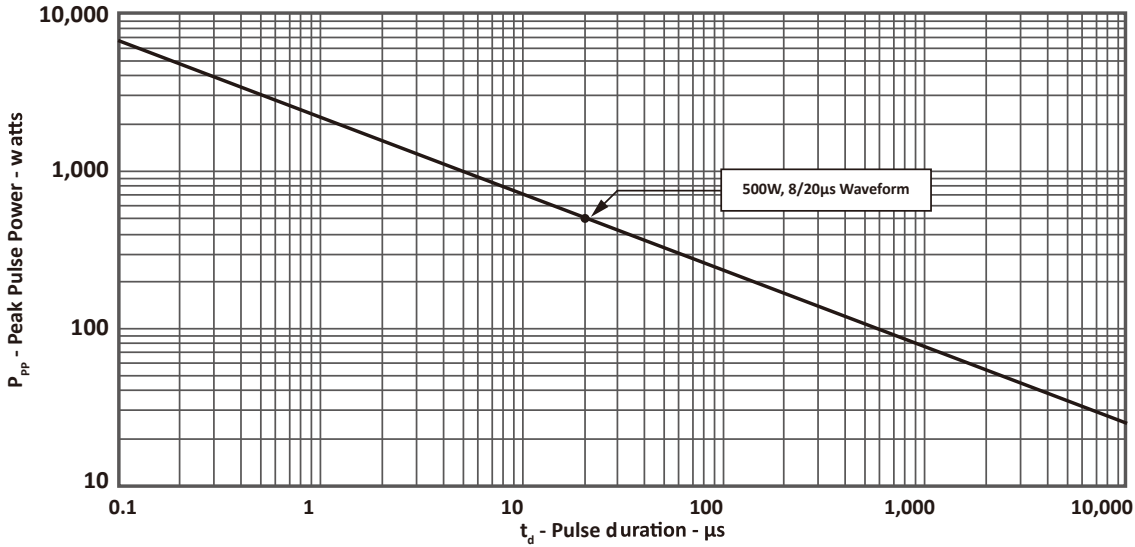




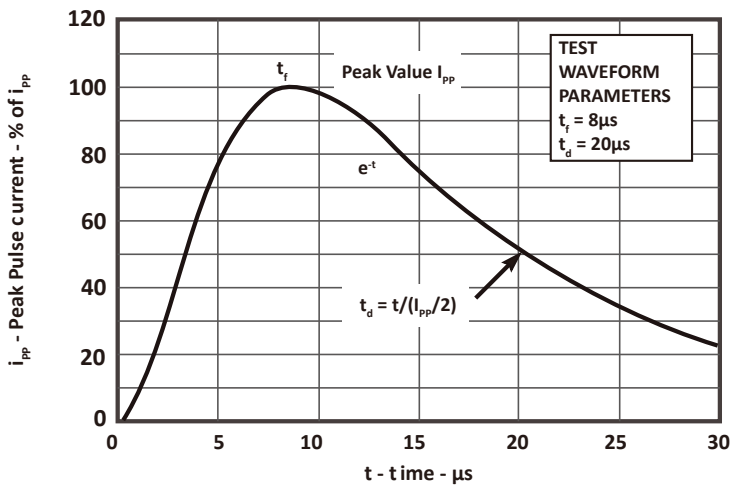
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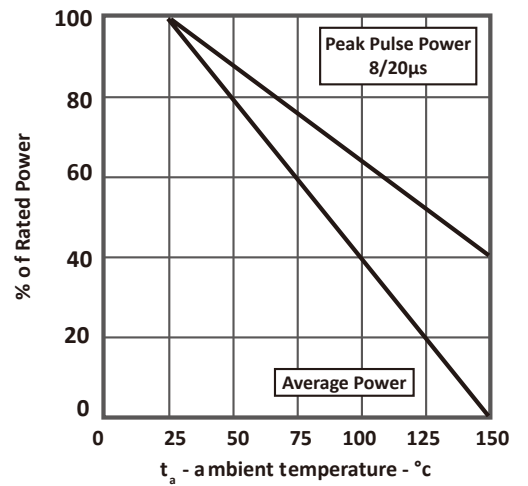
Peak Pulse Power VS Pulse Time



Pulse Waveform



Power Derating Curve

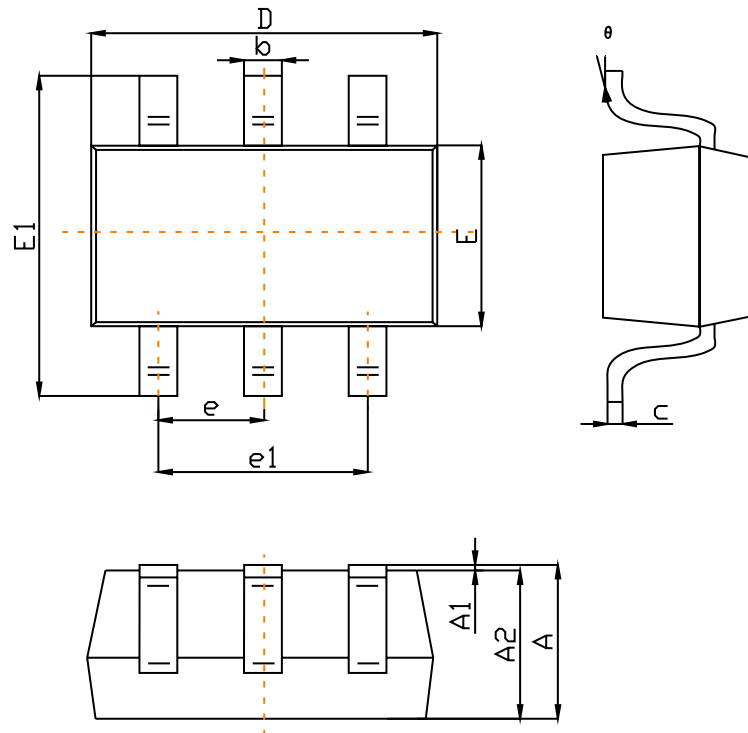




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LOW CAPACITANCE TVS ARRAY / ESD ARRAY

## SOT-23-6 PACKAGE OUTLINE DIMENTION



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100		0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0,950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
	0°	8°	0°	8°