



# PJSRV05-4

## LOW CAPACITANCE TVS DIODE ARRAY

The PJSRV05-4 has a low capacitance of 1.2pF and operates with virtually no insertion loss to 1GHz. This makes the device ideal for protection of high-speed data lines such as USB2.0, firewire, DVI, and gigabit Ethernet interfaces. The low capacitance array configuration allows the user to protect Four high-speed data or transmission lines. The low inductance construction minimizes voltage overshoot during high current surges. They may be used to meet the ESD immunity requirements of IEC61000-4-2, Level 4 (15kV air, 8kV contact discharge).

<b>VOLTAGE</b>	<b>5 Volt</b>	<b>POWER</b>	<b>350 Watt</b>
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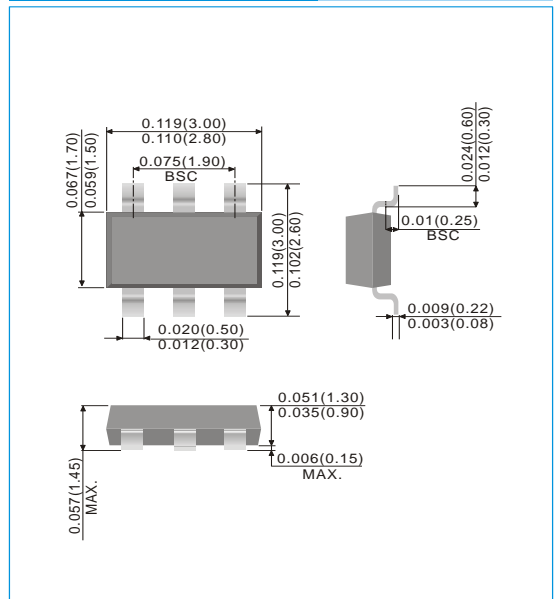
<b>SOT-23 6L</b>	Unit : inch(mm)
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### FEATURES

- IEC61000-4-2 ESD 15kV Air, 8kV Contact compliance
- Low leakage current, maximum of 1µA at rated voltage
- Low clamping voltage
- Peak power dissipation of 350W under 8/20µs waveform
- Protect four I/O lines
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case : SOT-23 6L, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx weight : 0.0005 ounces, 0.014 grams
- Marking : 054



### 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
- ATM Interfaces

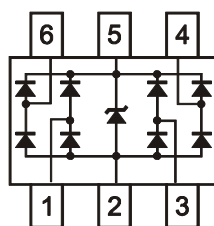


Fig.70(TOP VIEW)

### MAXIMUM RATINGS

Rating	Symbol	Value	Units
Peak Pulse Power (8/20 µs Waveform)	PPP	350	W
Peak Pulse Current (8/20 µs Waveform)	I PPM	12	A
ESD Voltage (HBM Contact)	V <sub>ESD</sub>	>8	kV
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C



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Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	$V_{WRM}$		-	-	5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1mA$ , PIN 5 to 2	6	-	-	V
Reverse Leakage Current	$I_R$	$V_R=5V$ , PIN 5 to 2	-	1.2	5	$\mu A$
Clamping Voltage (8/20 $\mu s$ )	$V_C$	$I_{PP}=1A$ , ANY I/O pin to pin 2	-	-	12	V
Clamping Voltage (8/20 $\mu s$ )	$V_C$	$I_{PP}=5A$ , ANY I/O pin to pin 2	-	-	17	V
Off State Junction Capacitance	$C_J$	0Vdc, f=1.0MHz between I/O lines and GND	-	1.1	1.2	pF
Off State Junction Capacitance	$C_J$	0Vdc, f=1.0MHz between I/O lines	-	0.55	0.60	pF



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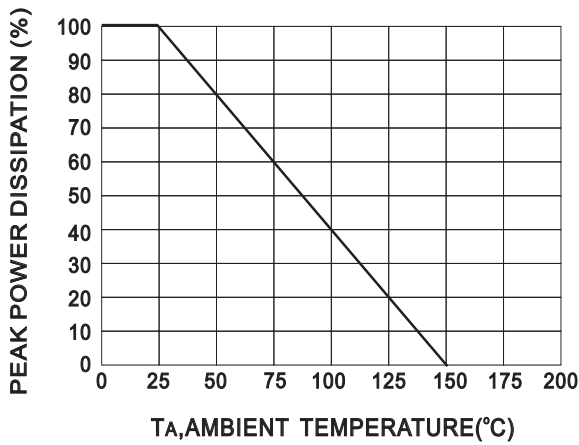


Fig 1. Power Derating Curve

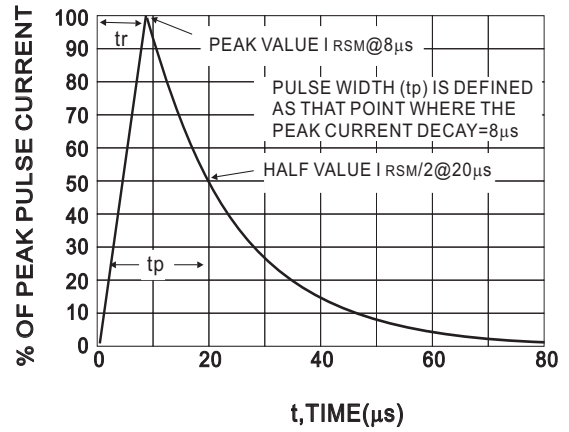


Fig 2. 8x20µs Pulse Waveform

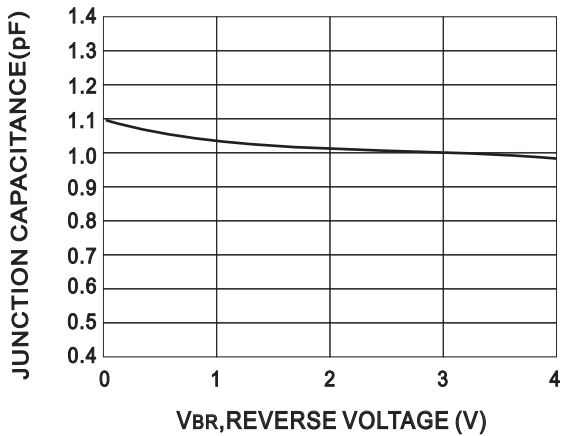


Fig 3. Junction Capacitance vs Reverse Voltage

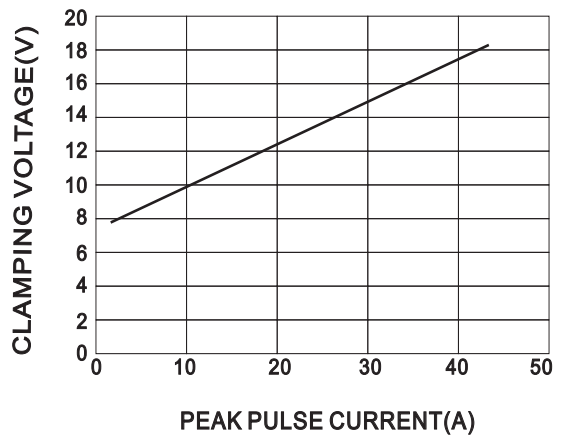


Fig 4. Clamping Voltage vs Peak Pulse Current (8x20µs Waveform)

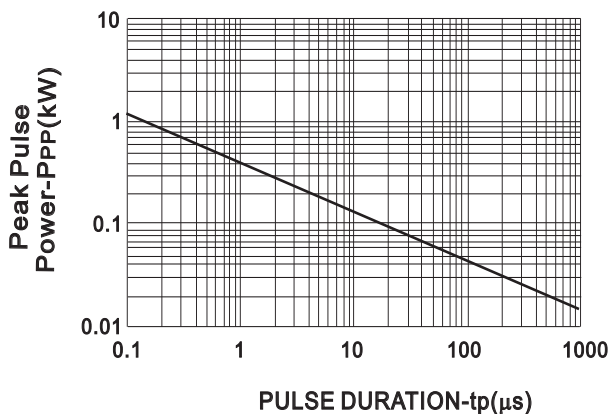


Fig 5. Non-Repetitive Peak Pulse vs. Pulse Time

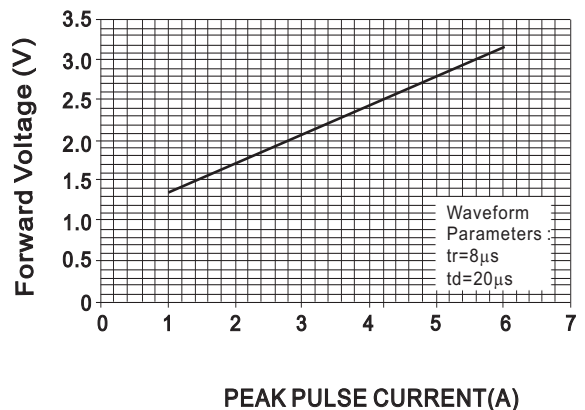
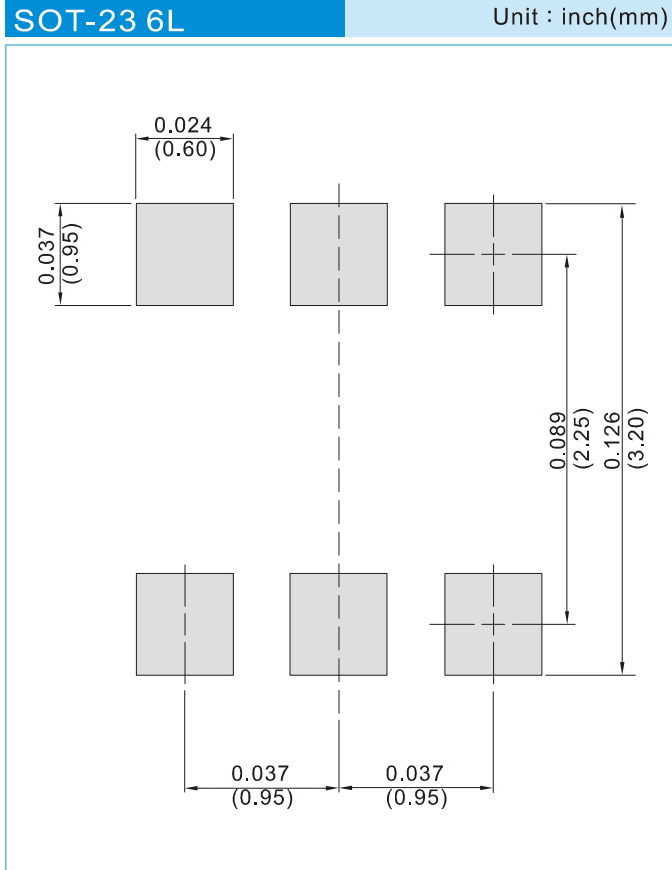


Fig 6. Forward Voltage vs. Forward Current



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information  
T/R - 10K per 13" plastic Reel  
T/R - 3K per 7" plastic Reel



# PJSRV05-4

## Part No\_packing code\_Version

PJSRV05-4\_R1\_00001

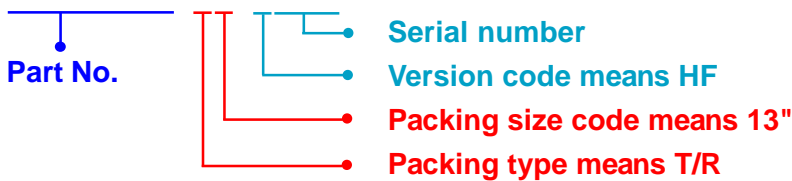
PJSRV05-4\_R2\_00001

PJSRV05-4\_S1\_00001

PJSRV05-4\_S2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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