



# PJSRV05W-4LC

## LOW CAPACITANCE TVS DIODE ARRAY

The PJSRV05W-4LC has a low typical capacitance of 0.8pF 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 surge.

### 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 150W under 8/20μs waveform
- Protect four I/O lines.
- Molded JEDEC SOT-363 package
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: SOT-363, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Weight: approximately 0.006 gram
- Marking : KC

### 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

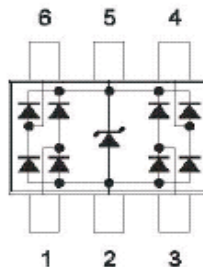
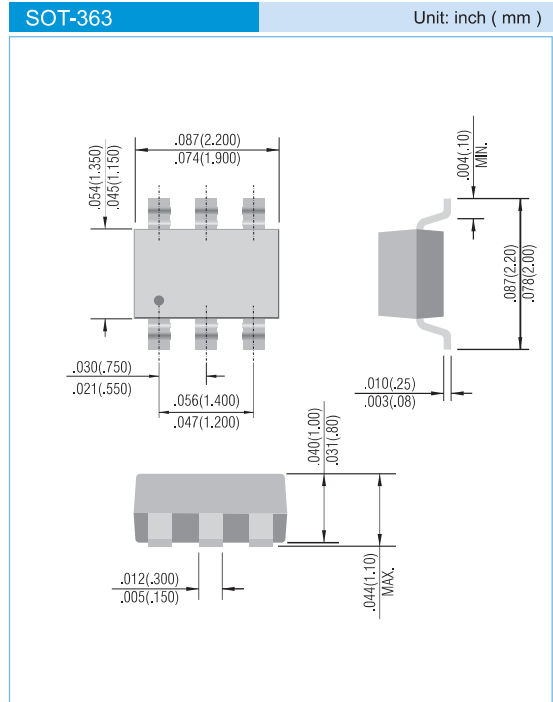


Fig.70



### MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Pulse Power (8/20μs waveform)	P <sub>PP</sub>	150	W
Peak Pulse Current (8/20μs waveform)	I <sub>PPM</sub>	6	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



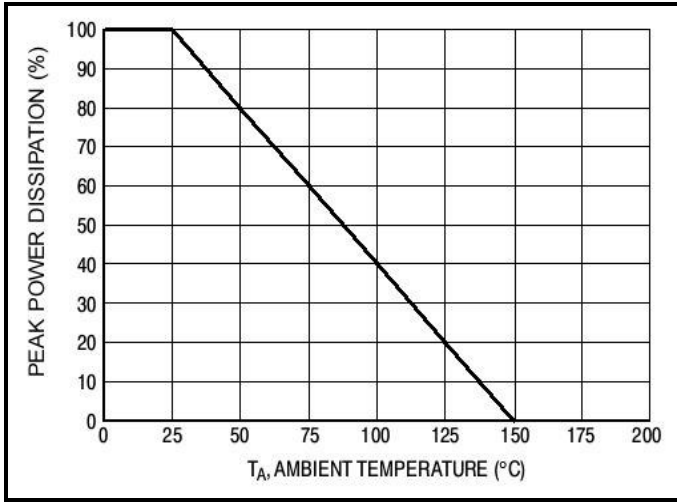
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## ELECTRICAL CHARACTERISTICS (T<sub>J</sub>=25°C)

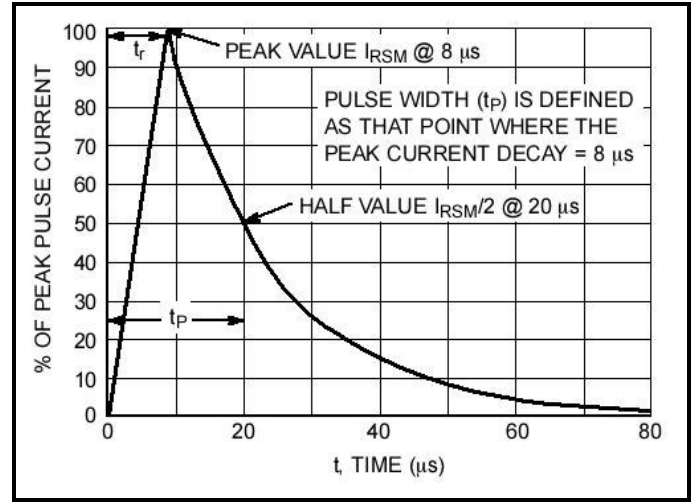
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V <sub>WRM</sub>		-	-	5	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>BR</sub> =1mA, PIN 5 to 2	6	-	-	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> =5V, PIN 5 to 2	-	1	3	μA
Clamping Voltage (8/20μs)	V <sub>C</sub>	I <sub>PP</sub> =1A, Any I/O pin to pin 2	-	-	15	V
Clamping Voltage (8/20μs)	V <sub>C</sub>	I <sub>PP</sub> =6A, Any I/O pin to pin 2	-	-	25	V
Off State Junction Capacitance	C <sub>J</sub>	0 Vdc, f=1MHz between I/O lines and GND	-	-	1	pF
Off State Junction Capacitance	C <sub>J</sub>	0 Vdc, f=1MHz between I/O lines	-	-	0.5	pF



# TYPICAL CHARACTERISTICS CURVES



**Figure 1. Power Derating Curve**



**Figure 2. 8x20us Pulse Waveform**

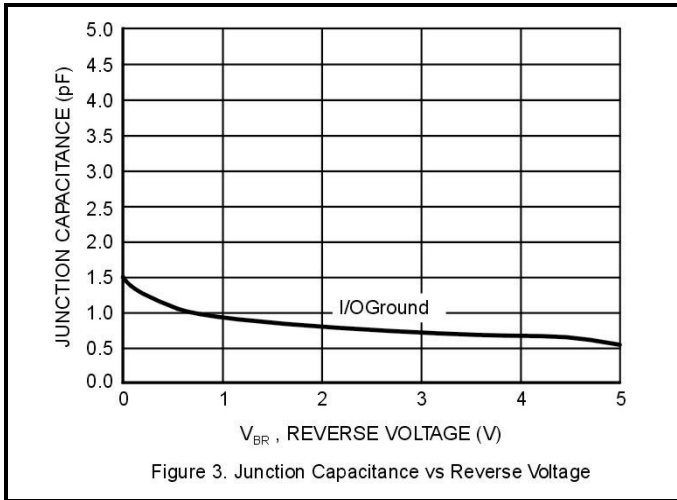
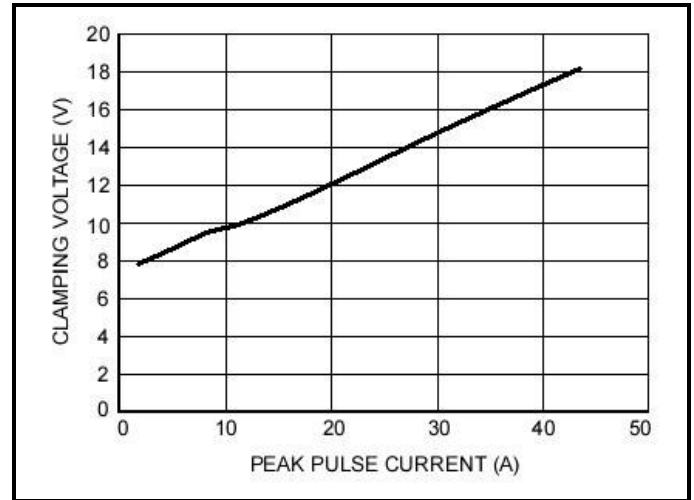
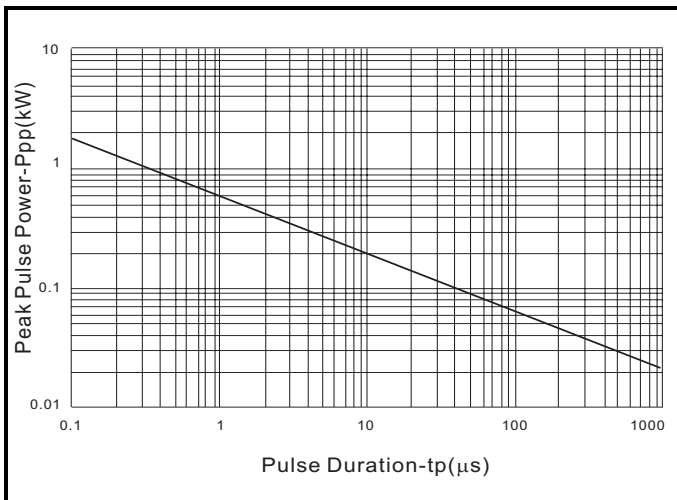


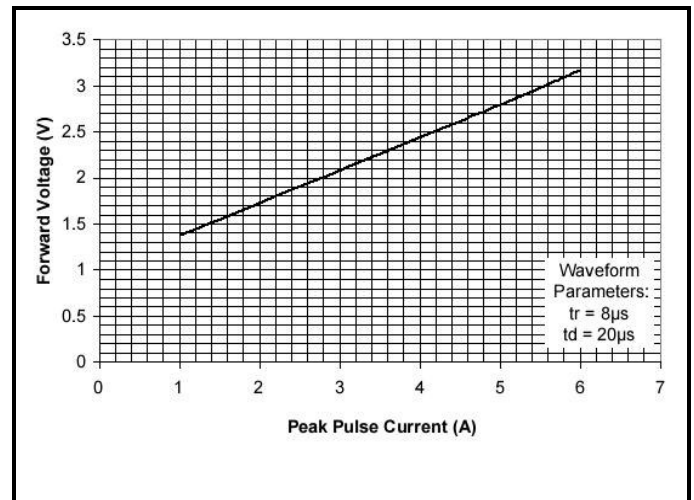
Figure 3. Junction Capacitance vs Reverse Voltage



**Figure 4. Clamping Voltage vs Peak Pulse Current (8x20us Waveform)**



**Figure 5. Non-Repetitive Peak Pulse vs. Pulse Time**

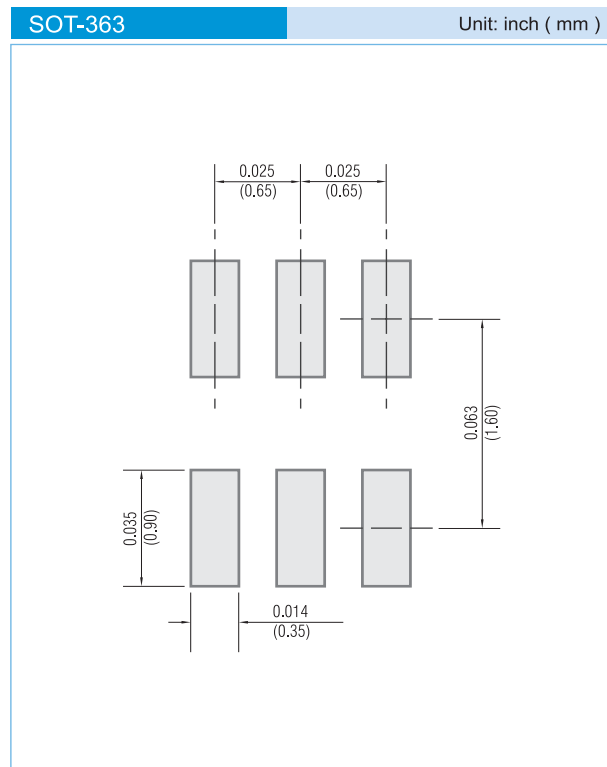


**Figure 6. Forward Voltage vs. Forward Current**



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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

### LEGAL STATEMENT

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