



# PJSRV05W-4DW

## LOW CAPACITANCE TVS DIODE ARRAY

The PJSRV05W-4DW has a low typical capacitance of 1pF 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
- Low clamping voltage
- Peak power dissipation of 50W under 8/20μs waveform
- Protect four I/O lines
- Molded JEDEC SOT-363 package
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: SOT-363, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Weight: approximately 0.0002 ounces, 0.006 grams
- Marking : KW

### 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

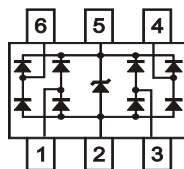
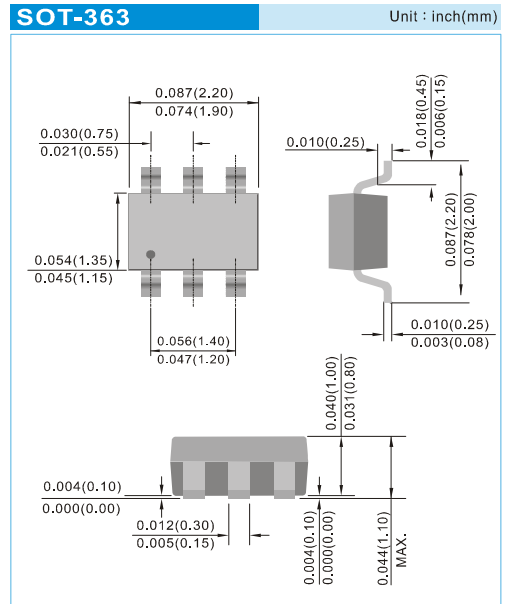


Fig. 70(TOP VIEW)



### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

RATING	SYMBOL	VALUE	UNIT
Peak Pulse Power (8/20μs waveform)	P <sub>PP</sub>	50	W
Peak Pulse Current (8/20μs waveform)	I <sub>PPM</sub>	5	A
ESD per IEC61000-4-2 (Air) ESD per IEC61000-4-2 (Contact)	V <sub>ESD</sub>	± 15 ± 8	kV
Operating Junction Temperature and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

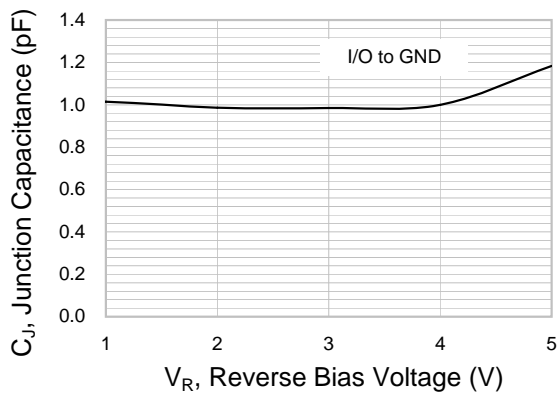


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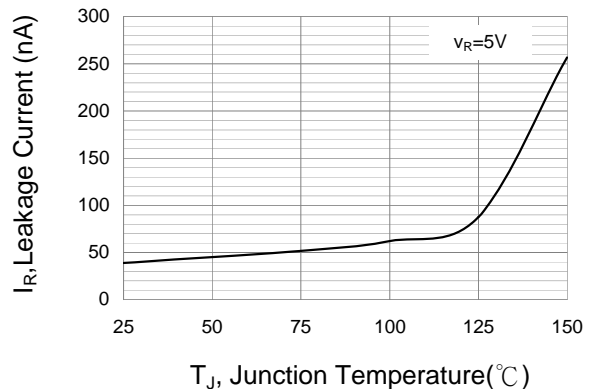
## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V <sub>RWM</sub>		-	-	5	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>BR</sub> =1mA, PIN 5 to 2	6	-	8	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> =5V, PIN 5 to 2	-	-	3	μA
Clamping Voltage (8/20μs)	V <sub>C</sub>	I <sub>PP</sub> =1A, Any I/O pin to pin 2	-	-	8	V
Clamping Voltage (8/20μs)	V <sub>C</sub>	I <sub>PP</sub> =5A, Any I/O pin to pin 2	-	-	10	V
Off State Junction Capacitance	C <sub>J</sub>	0 Vdc, f=1MHz between I/O lines and GND	-	1	1.2	pF
Off State Junction Capacitance	C <sub>J</sub>	0 Vdc, f=1MHz between I/O lines	-	0.5	0.6	pF

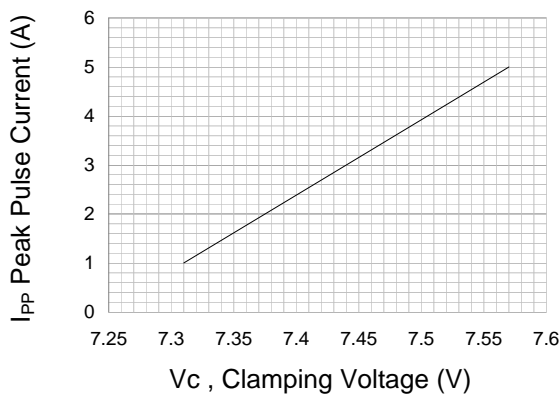
### RATING AND CHARACTERISTIC CURVES



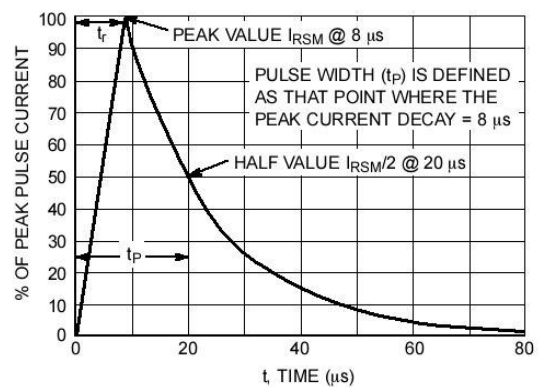
**Fig.1 Typical Junction Capacitance**



**Fig.2 Typical Reverse Characteristics**



**Fig.3 Typical Peak Clamping Voltage(8/20μs)**

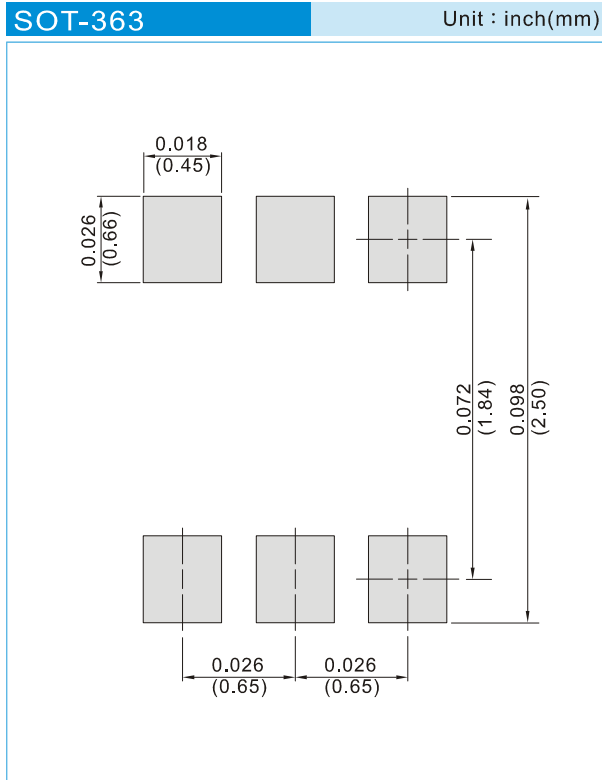


**Fig.4 8/20μs Peak Pulse Current Waveform**



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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



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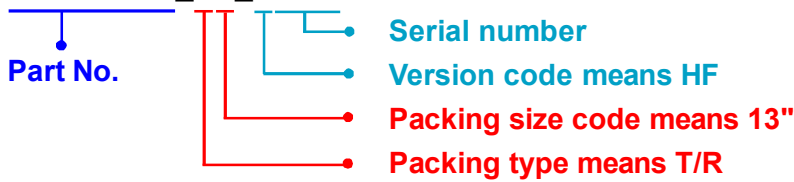
## Part No\_packing code\_Version

PJSRV05W-4DW\_R1\_00001

PJSRV05W-4DW\_R2\_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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