

# PJSRV05W-4DW6

## Low Capacitance TVS/ESD Protection

**V<sub>RWM</sub>**

**5 V**

### Features

- IEC61000-4-2(ESD): ±15kV Air, ±10kV Contact Compliance
- IEC61000-4-4(EFT): 40A(5/50nS)
- IEC61000-4-5(Lightning): 5A(8/20μS)
- Low leakage current, maximum 5μA at rated voltage
- Lead free in compliance with EU RoHS 2011/65/EU directive.
- Green molding compound as per IEC61249 Std.  
(Halogen Free)

### Mechanical Data

- Case: SOT-23 6L, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0005 ounces, 0.014 grams
- Marking: K6D

### Applications

- USB2.0 Data Line Protection
- Video Graphics Cards
- Monitors and Flat Panel Displays Notebook computers
- Digital Video Interface(DVI)
- 10/100/1000 Ethernet
- ATM Interfaces
- Control Signal Lines Protection

### SOT-23 6L

Unit : inch(mm)

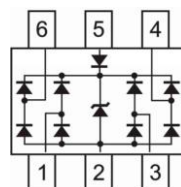
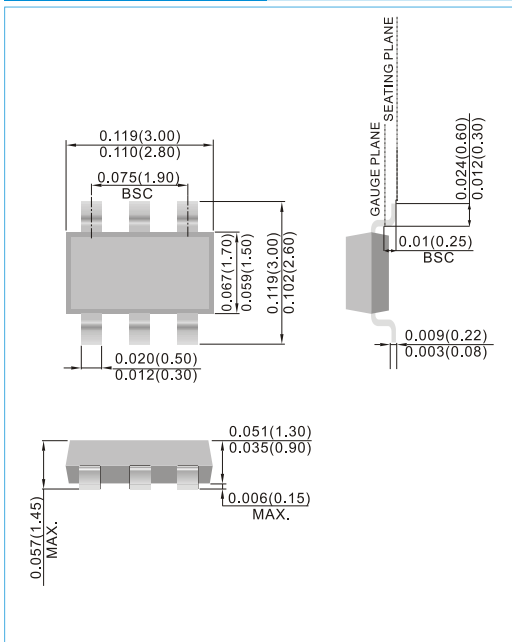


Fig.200(Top View)

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

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	V <sub>ESD</sub>	±15	kV
ESD IEC61000-4-2(Contact)		±10	
Operating Junction Temperature	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C



## PJSRV05W-4DW6

Electrical Characteristics ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage <sup>(Note 1)</sup>	$V_{RWM}$	-	-	-	5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1\text{mA}$ , PIN 5 to GND	6	-	9	V
Reverse leakage current	$I_R$	$V_R=5\text{V}$ , PIN 5 to GND	-	-	5	$\mu\text{A}$
Clamping Voltage	$V_{CL}$	$I_{PP}=1\text{A}$ , $t_P=8/20\mu\text{s}$ , any I/O pin to GND	-	-	8	V
		$I_{PP}=5\text{A}$ , $t_P=8/20\mu\text{s}$ , any I/O pin to GND	-	-	10	
Clamping Voltage TLP <sup>(Note 2)</sup>	$V_{CL}$	$I_{PP}=4\text{A}$ , $t_P=100\text{ns}$ , any I/O pin to GND	-	12	-	V
		$I_{PP}=8\text{A}$ , $t_P=100\text{ns}$ , any I/O pin to GND	-	18.6	-	
Dynamic Resistance <sup>(Note 2)</sup>	$R_{DYN}$	$t_P=100\text{ns}$	-	0.61	-	$\Omega$
Off State Junction Capacitance	$C_J$	0Vdc Bias $f=1\text{MHz}$ , Between any I/O pins to GND	-	1	1.2	pF
		0Vdc Bias $f=1\text{MHz}$ , Between any I/O pins	-	0.5	0.6	

NOTES :

1. A transient suppressor is selected according to the working peak reverse voltage( $V_{RWM}$ ), Which should be equal to or greater than the DC or continuous peak operation voltage level.
2. Testing using Transmission Line Pulse (TLP) conditions:  $Z_0 = 50\Omega$  ,  $t_P = 100\text{ ns}$ .

## PJSRV05W-4DW6

### TYPICAL CHARACTERISTIC CURVES

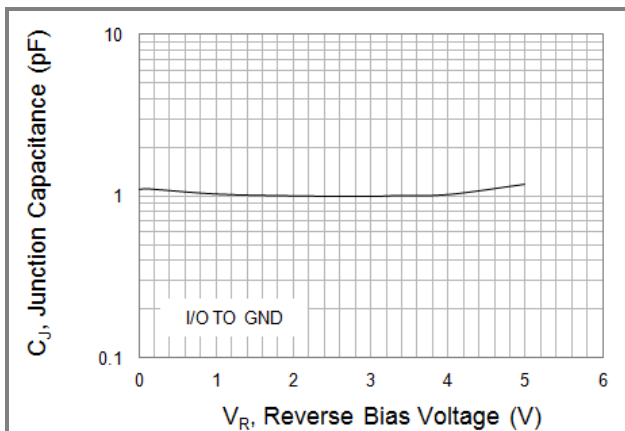


Fig.1 Typical Junction Capacitance

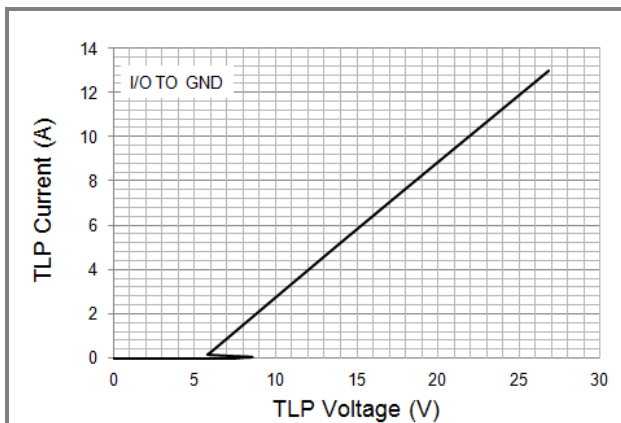


Fig.2 Transmission Line Pulsing (TLP) Measurement

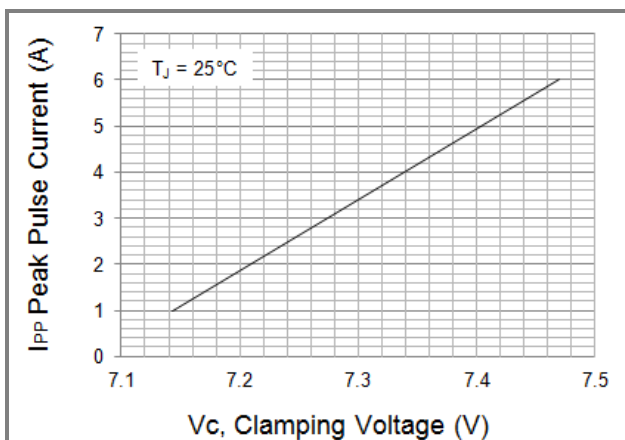


Fig.3 Typical Peak Clamping Voltage(8/20 $\mu$ s)

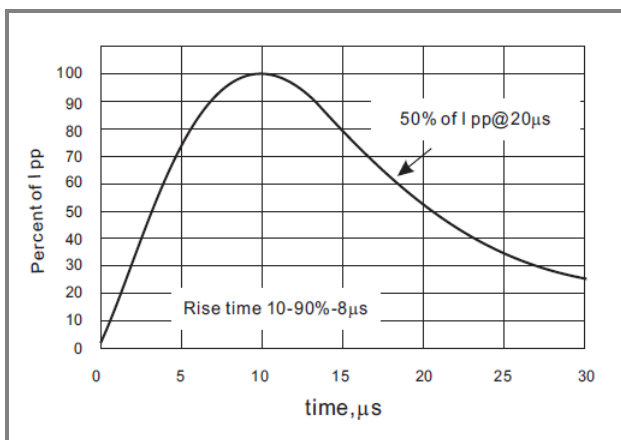


Fig.4 8/20 Pulse Waveform

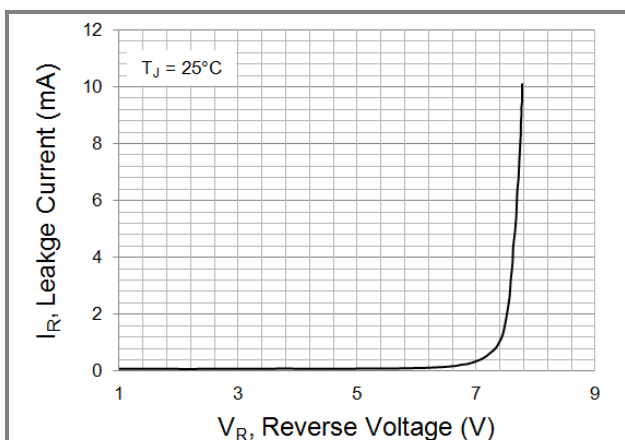


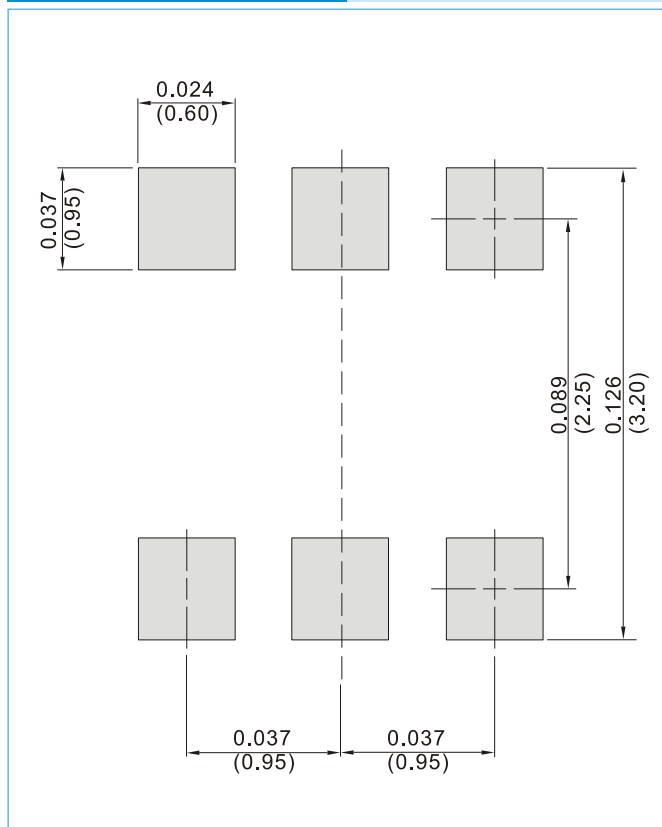
Fig.5 Typical Reverse Characteristics

## PJSRV05W-4DW6

### MOUNTING PAD LAYOUT

SOT-23 6L

Unit : inch(mm)



### ORDER INFORMATION

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



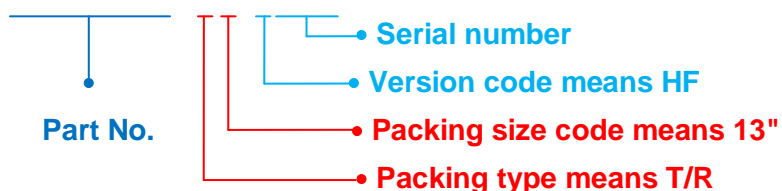
## PJSRV05W-4DW6

Part No\_packing code\_Version

PJSRV05W-4DW6\_R1\_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>			



## **PJSRV05W-4DW6**

### **Disclaimer**

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.