



# PJSRV05W-4GW5

## Low Capacitance TVS/ESD Protection

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

**5 V**

### Features

- IEC61000-4-2(ESD): ±30kV Air, ±30kV Contact Compliance
- IEC61000-4-4(EFT): 40A(5/50nS)
- IEC61000-4-5(Lightning): 10A(8/20μS)
- Low leakage current, maximum 3μA 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

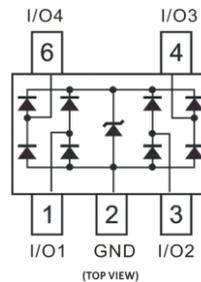
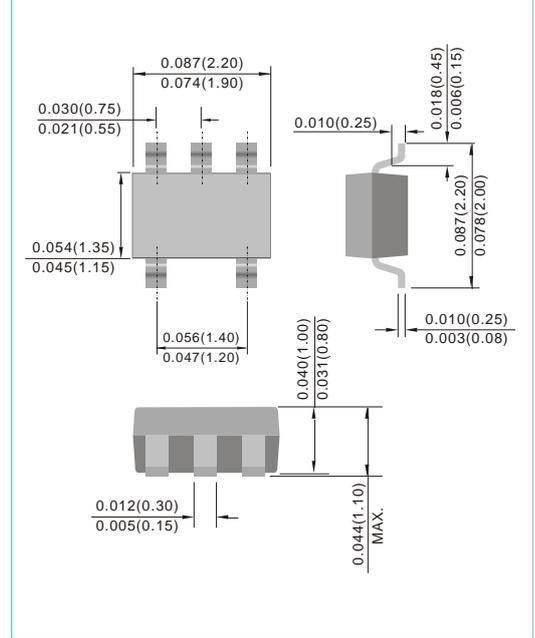
- Case: SOT-353, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0002 ounces, 0.006 grams
- Marking: GW5

### 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-353**

Unit : inch(mm)



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

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	V <sub>ESD</sub>	±30	kV
ESD IEC61000-4-2(Contact)		±30	
Operating Junction Temperature	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C



## PJSRV05W-4GW5

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	$V_{BR}$	$I_{BR}=1\text{mA}$ , any I/O pin to GND	6	-	9	V
Reverse leakage current	$I_R$	$V_R=5\text{V}$ , any I/O pin to GND	-	-	3	$\mu\text{A}$
Clamping Voltage	$V_{CL}$	$I_{PP}=1\text{A}$ , $t_p=8/20\mu\text{s}$ , any I/O pin to GND	-	-	8	V
		$I_{PP}=10\text{A}$ , $t_p=8/20\mu\text{s}$ , any I/O pin to GND	-	-	12	
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	-	17	-	
Dynamic Resistance <sup>(Note 2)</sup>	$R_{DYN}$	$t_p=100\text{ns}$	-	0.8	-	$\Omega$
Off State Junction Capacitance	$C_J$	0Vdc Bias $f=1\text{MHz}$ , Between any I/O pins to GND	-	1.6	2	pF
		0Vdc Bias $f=1\text{MHz}$ , Between any I/O pins	-	0.8	1	

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:  $Z_0 = 50\Omega$  ,  $t_p = 100\text{ ns}$ .



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## TYPICAL CHARACTERISTIC CURVES

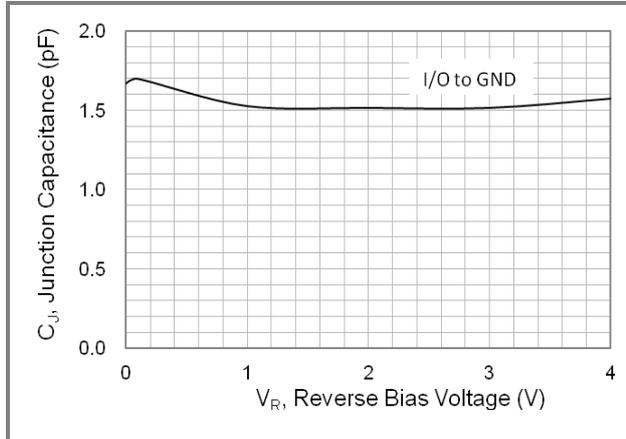


Fig.1 Typical Junction Capacitance

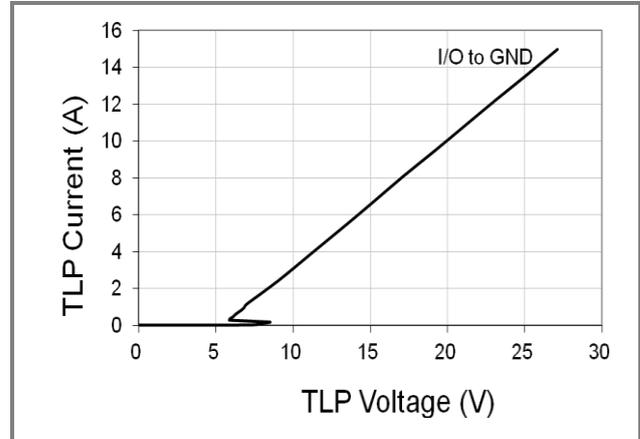


Fig2 Transmission Line Pulsing (TLP) Measurement

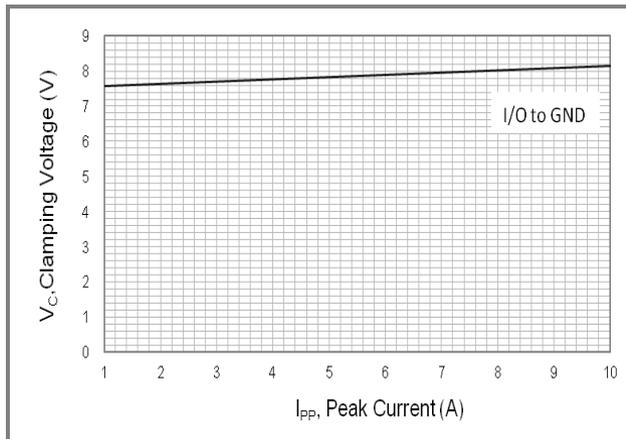


Fig.3 Typical Peak Clamping Voltage(8/20 $\mu$ s)

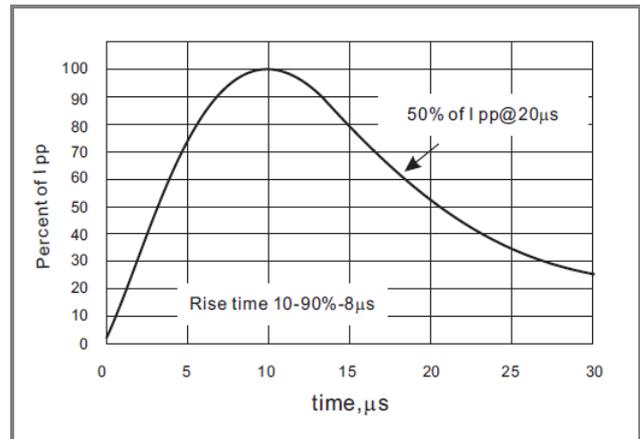
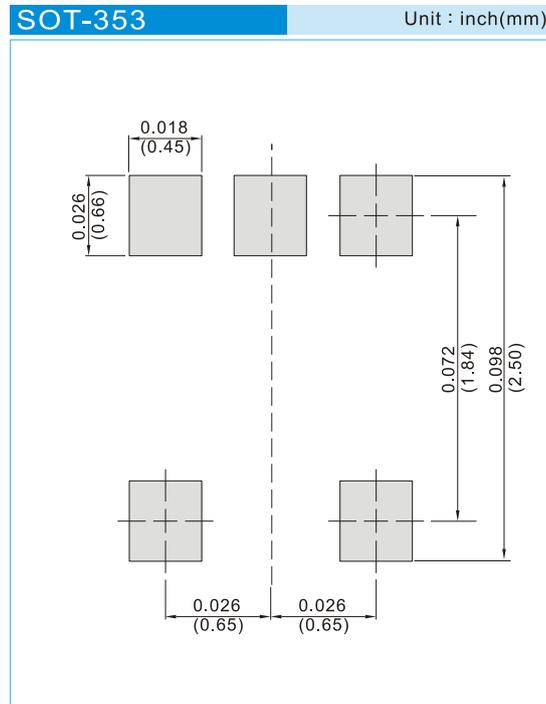


Fig.4 8/20 $\mu$ s Pulse Waveform



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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



# PJSRV05W-4GW5

**Part No\_packing code\_Version**

PJSRV05W-4GW5\_R1\_00001

PJSRV05W-4GW5\_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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