



# PJE5V0U8TB-AU

## Ultra Low Capacitance ESD Protection

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

**5 V**

### Features

- IEC61000-4-2(ESD): ±18kV Air, ±12kV Contact Compliance
- IEC61000-4-4(EFT): 40A(5/50nS)
- IEC61000-4-5(Lightning): 4A(8/20μS)
- Low leakage current, maximum 1μA at rated voltage
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2011/65/EU directive.
- Green molding compound as per IEC61249 Std..(Halogen Free)

### Mechanical Data

- Case: SOT-523, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00007 ounces, 0.002 grams

### Applications

- USB3.0 Data Line Protection
- High Definition Multi-Media Interface Protection
- Monitors and Flat Panel Displays Notebook computers
- Video Line Protection & Base Stations
- 10/100/1000 Ethernet
- HDSL, IDSL Secondary IC Side Protection
- Control Signal Lines Protection

**SOT-523**

Unit : inch(mm)

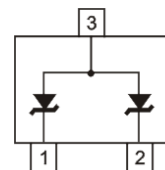
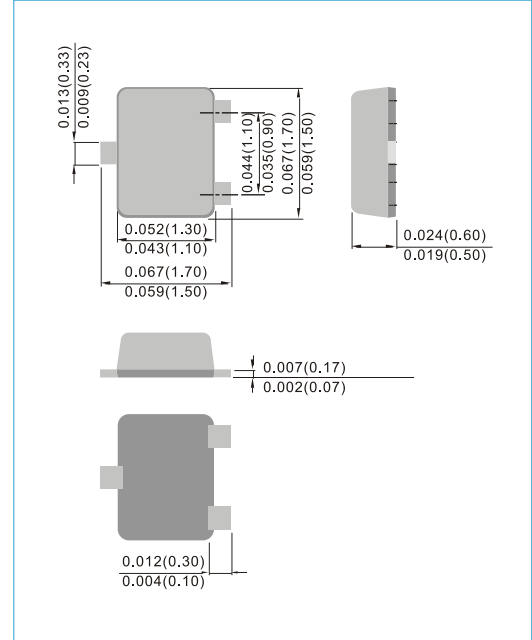


Fig.25(Top View)

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

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	V <sub>ESD</sub>	±18	kV
ESD IEC61000-4-2(Contact)		±12	
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C



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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1\text{mA}$ , Between any I/O pins to GND	5.8	-	10.2	V
Reverse leakage current	$I_R$	$V_R=5\text{V}$ , any I/O pin to GND	-	-	1	$\mu\text{A}$
Clamping Voltage	$V_{CL}$	$I_{PP}=1\text{A}$ , $t_p=8/20\mu\text{s}$ , any I/O pin to GND	-	9	12	V
		$I_{PP}=4\text{A}$ , $t_p=8/20\mu\text{s}$ , any I/O pin to GND	-	-	15	
Clamping Voltage TLP <sup>(Note 1)</sup>	$V_{CL}$	$I_{PP}=4\text{A}$ , $t_p=100\text{ns}$ , any I/O pin to GND	-	9.6	-	V
		$I_{PP}=8\text{A}$ , $t_p=100\text{ns}$ , any I/O pin to GND	-	10.6	-	
Dynamic Resistance <sup>(Note 1)</sup>	$R_{DYN}$	$t_p=100\text{ns}$	-	0.25	-	$\Omega$
Off State Junction Capacitance	$C_J$	0Vdc Bias $f=1\text{MHz}$ , Between any I/O pins to GND	-	0.6	0.8	pF

NOTES :

1. Testing using Transmission Line Pulse (TLP) conditions:  $Z_0 = 50\Omega$  ,  $t_p = 100\text{ ns}$ .



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## TYPICAL CHARACTERISTIC CURVES

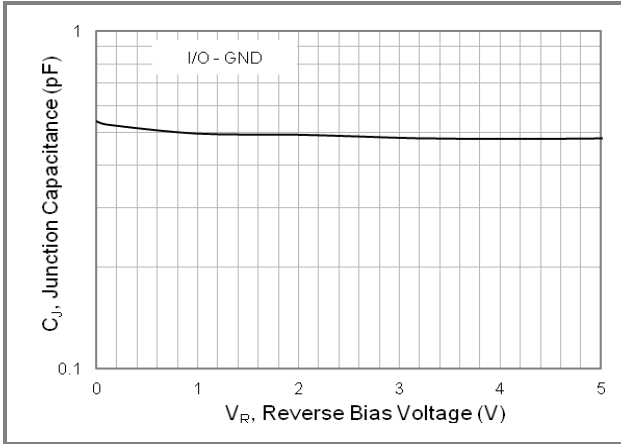


Fig.1 Typical Junction Capacitance

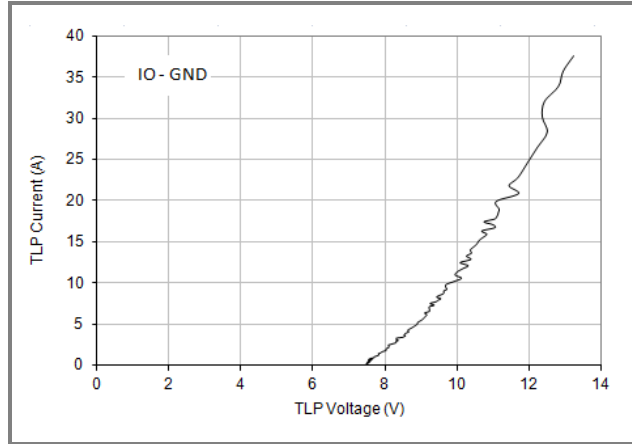


Fig.2 Transmission Line Pulsing (TLP) Measurement

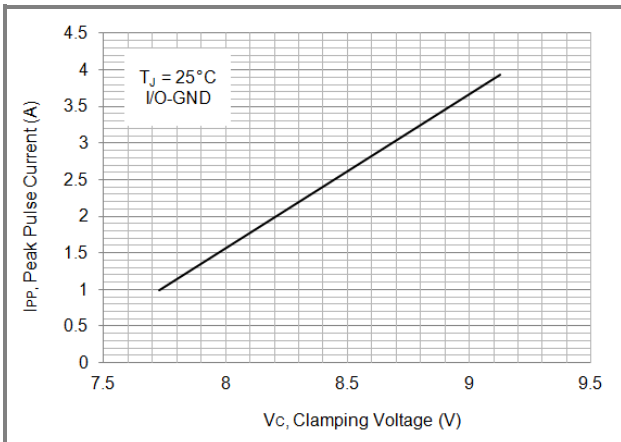


Fig.3 Typical Peak Clamping Voltage(8/20µs)

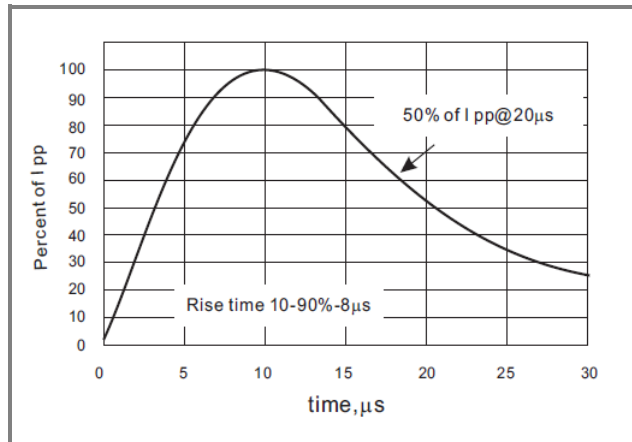


Fig.4 8/20µs Pulse Waveform



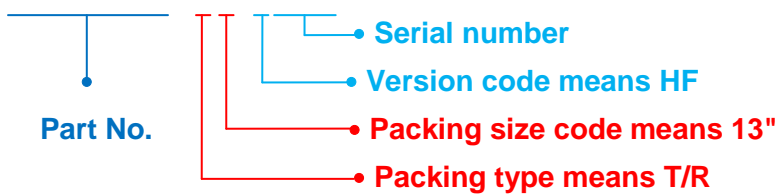
# PJE5V0U8TB-AU

PART NO PACKING CODE VERSION

Part No Packing Code	Package Type	Packing Type	Marking	Version
PJE5V0U8TB-AU_R1_000A1	SOT-523	4K pcs / 7" reel	8T	Halogen free

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)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			

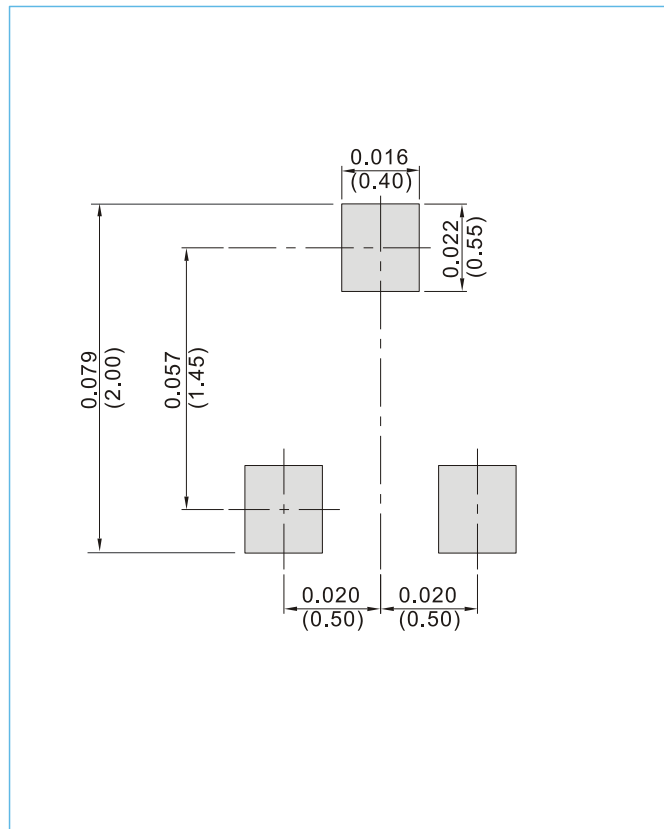


# PJE5V0U8TB-AU

## MOUNTING PAD LAYOUT

SOT-523

Unit : inch(mm)





## **PJE5V0U8TB-AU**

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