



PJE5V0U8TB-AU

Ultra Low Capacitance ESD Protection

V_{RWM}

5 V

Features

- IEC61000-4-2(ESD): $\pm 18\text{kV}$ Air, $\pm 12\text{kV}$ Contact Compliance
- IEC61000-4-4(EFT): 40A(5/50nS)
- IEC61000-4-5(Lightning): 4A(8/20 μ S)
- Low leakage current, maximum 1 μ A at rated voltage
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

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

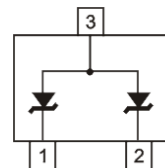
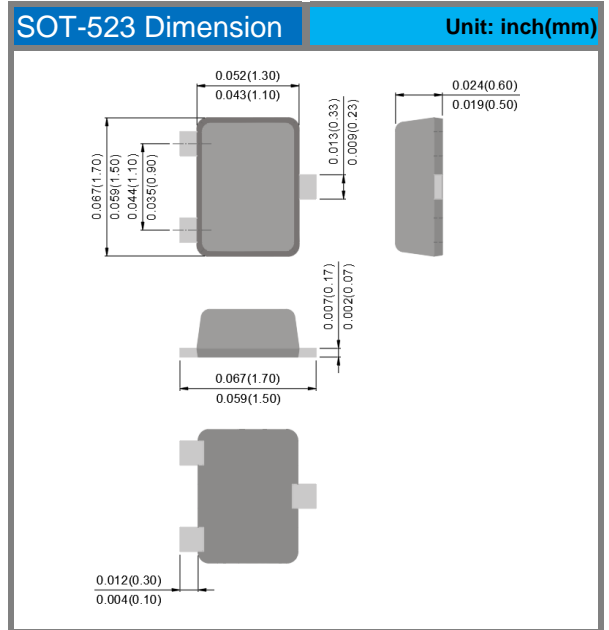


Fig.25(Top View)

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

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	V_{ESD}	± 18	kV
ESD IEC61000-4-2(Contact)		± 12	
Operating Junction Temperature Range	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$



PJE5V0U8TB-AU

Electrical Characteristics (T_A=25°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} =1mA, Between any I/O pins to GND	5.8	-	10.2	V
Reverse leakage current	I _R	V _R =5V, any I/O pin to GND	-	-	1	μA
Clamping Voltage	V _{CL}	I _{PP} =1A, t _P =8/20μs, any I/O pin to GND	-	9	12	V
		I _{PP} =4A, t _P =8/20μs, any I/O pin to GND	-	-	15	
Clamping Voltage TLP ^(Note 1)	V _{CL}	I _{PP} =4A, t _P =100ns, any I/O pin to GND	-	9.6	-	V
		I _{PP} =8A, t _P =100ns, any I/O pin to GND	-	10.6	-	
Dynamic Resistance ^(Note 1)	R _{DYN}	t _P =100ns	-	0.25	-	Ω
Off State Junction Capacitance	C _J	0Vdc Bias f=1MHz, Between any I/O pins to GND	-	0.6	0.8	pF

NOTES :

1. Testing using Transmission Line Pulse (TLP) conditions: Z₀ = 50Ω, t_P = 100 ns.



PJE5V0U8TB-AU

TYPICAL CHARACTERISTIC CURVES

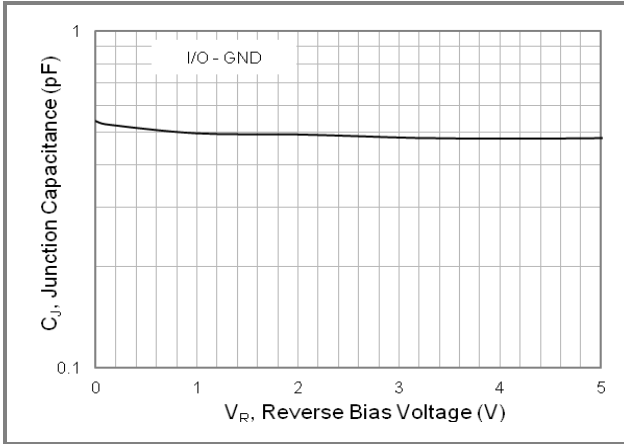


Fig.1 Typical Junction Capacitance

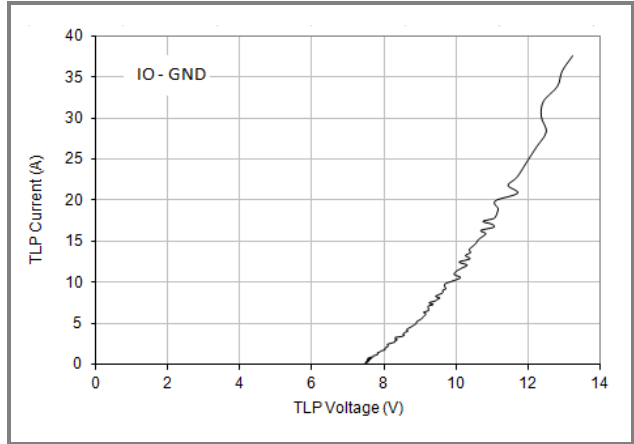


Fig.2 Transmission Line Pulsing (TLP) Measurement

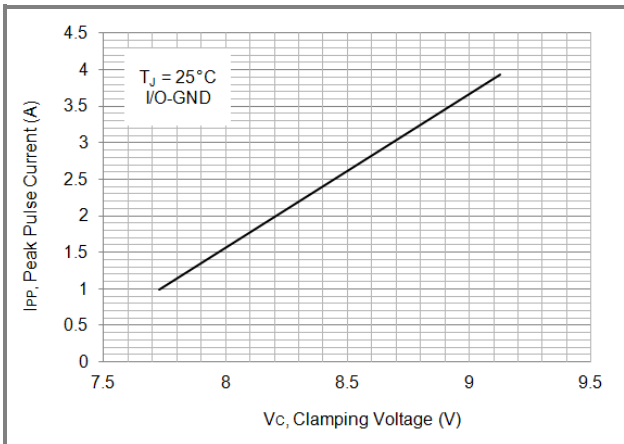


Fig.3 Typical Peak Clamping Voltage(8/20µs)

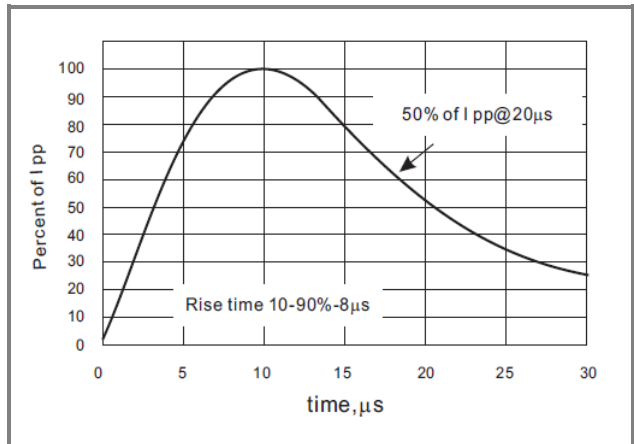


Fig.4 8/20µs Pulse Waveform



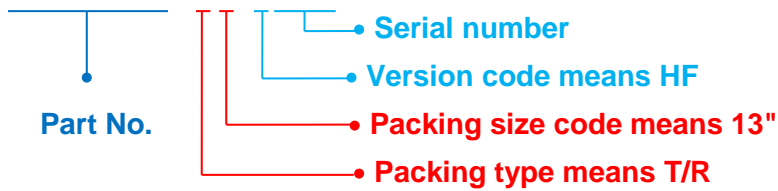
PJE5V0U8TB-AU

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 RoHS compliant

For example :

RB500V-40_R2_00001

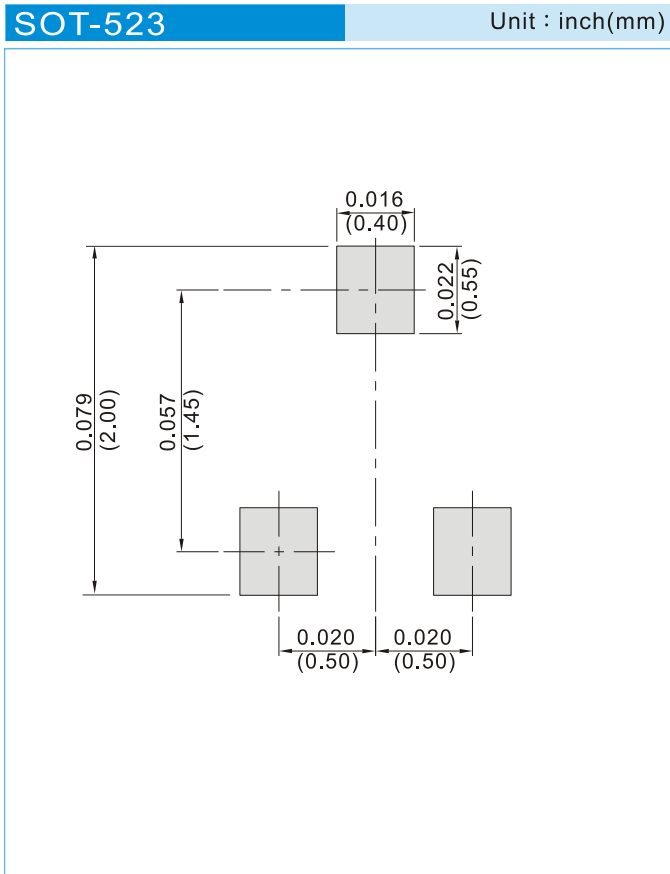


C				Version Code X		Serial number XXXX
Packing type	1 st Code	Packing size code	2 nd Code	HSF Level	1 st Code	2 nd ~5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	Halogen free RoHS compliant	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS compliant	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube 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





PJE5V0U8TB-AU

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 relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, 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.