PJE5V0U8TB-AU

Ultra Low Capacitance ESD Protection

V_{RWM}	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 2.0
- Green molding compound as per IEC 61249 standard

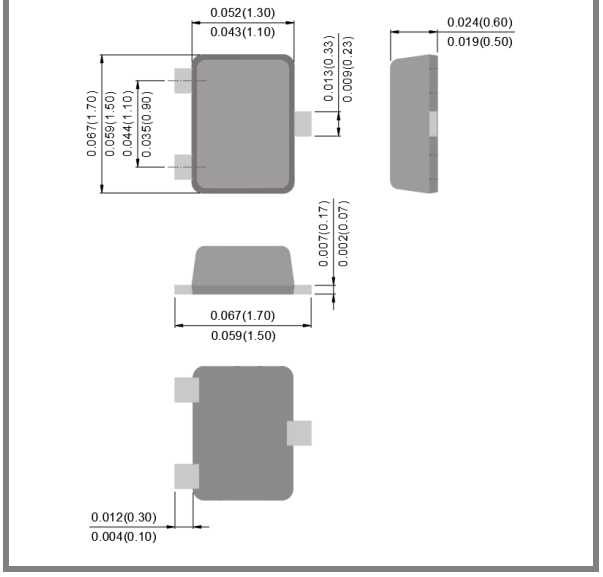
Mechanical Data

- 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

SOT-523 Dimension — Unit: inch(mm)



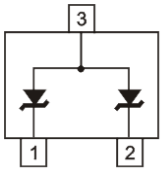


Fig.25(Top View)

Maximum Ratings (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air) ESD IEC61000-4-2(Contact)	V_{ESD}	±18 ±12	kV
Operating Junction Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°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: Z_0 = 50Ω, t_P = 100 ns.

PJE5V0U8TB-AU

TYPICAL CHARACTERISTIC CURVES

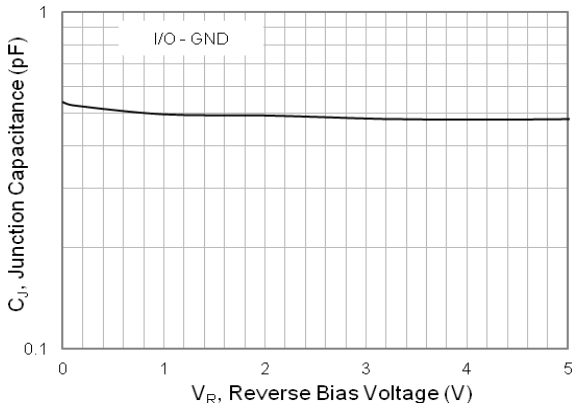


Fig.1 Typical Junction Capacitance

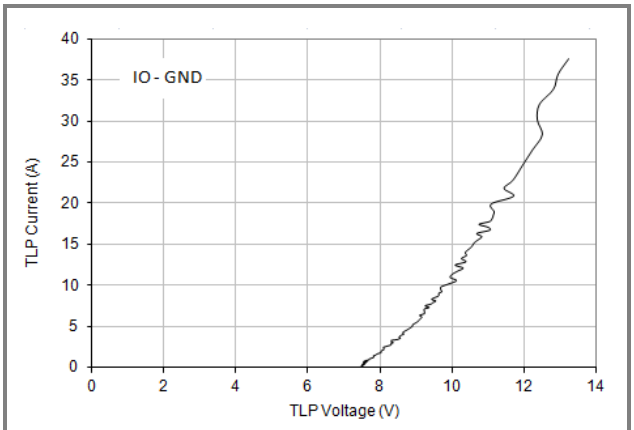


Fig.2 Transmission Line Pulsing (TLP) Measurement

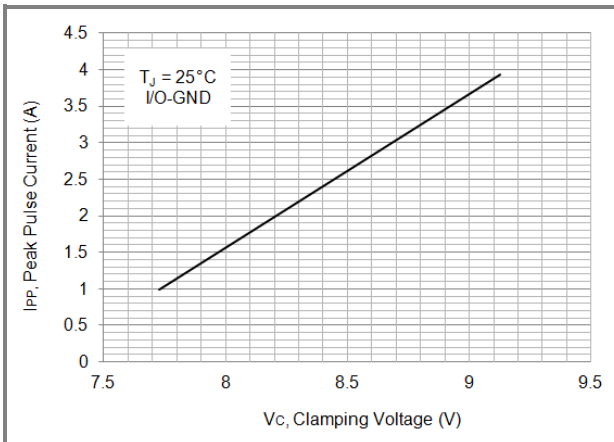


Fig.3 Typical Peak Clamping Voltage(8/20μs)

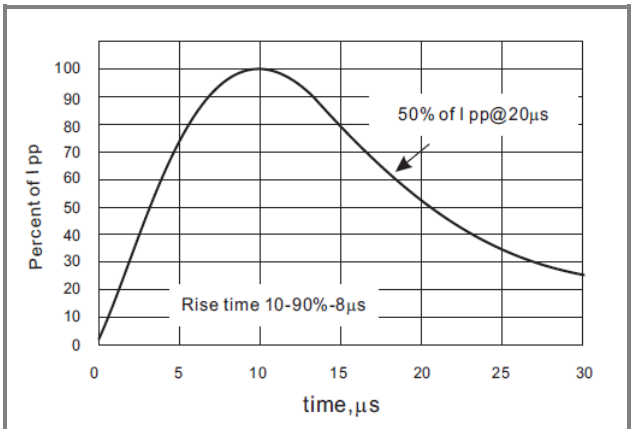


Fig.4 8/20μs Pulse Waveform

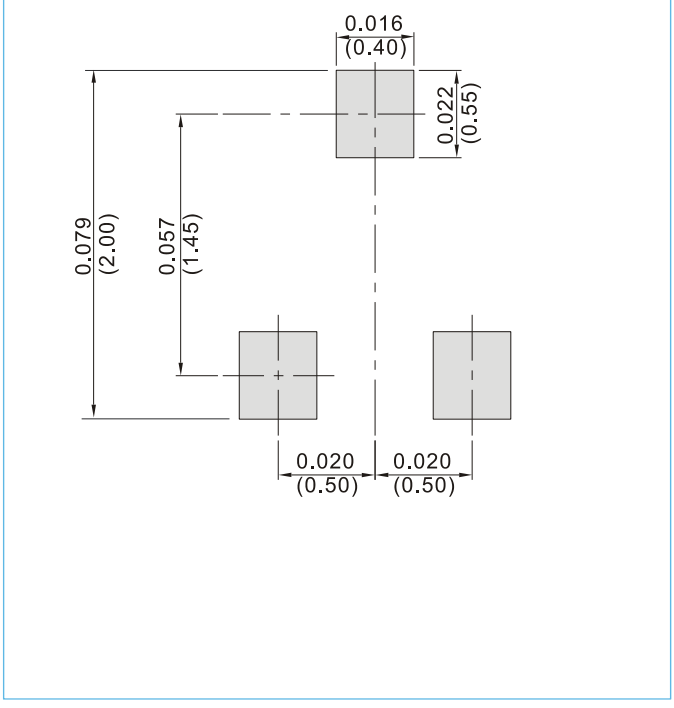
PJE5V0U8TB-AU

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PJE5V0U8TB-AU	SOT-523	4K pcs / 7” reel	8T

Mounting Pad Layout

SOT-523 Unit : inch(mm)



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