

PJE5V0U8TB

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
- 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)

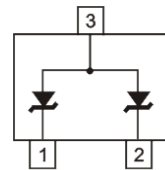
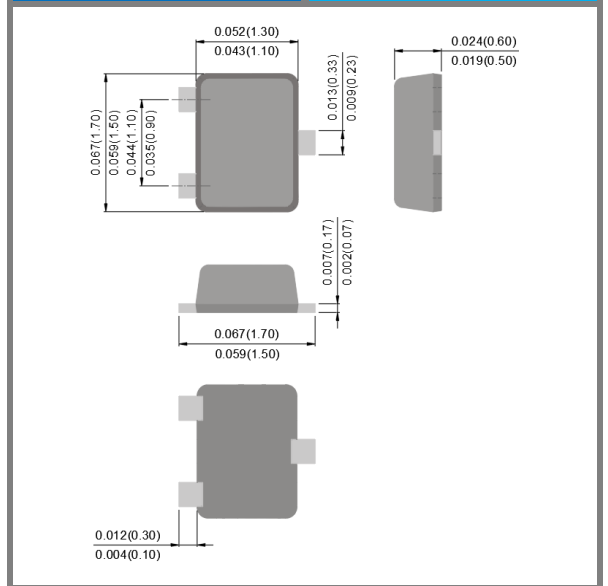


Fig.25(Top View)

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

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	V _{ESD}	±18	kV
ESD IEC61000-4-2(Contact)		±12	
Operating Junction Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

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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.

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TYPICAL CHARACTERISTIC CURVES

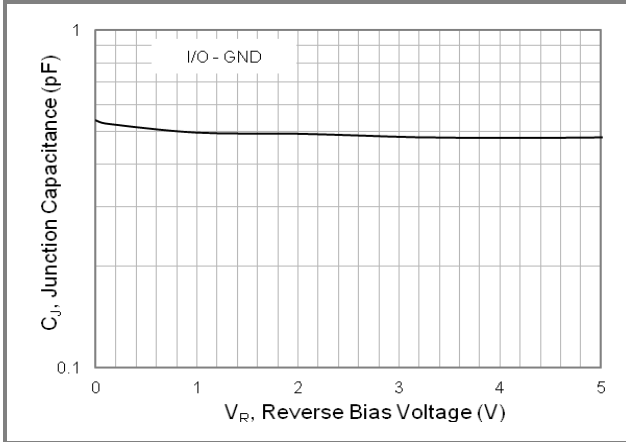


Fig.1 Typical Junction Capacitance

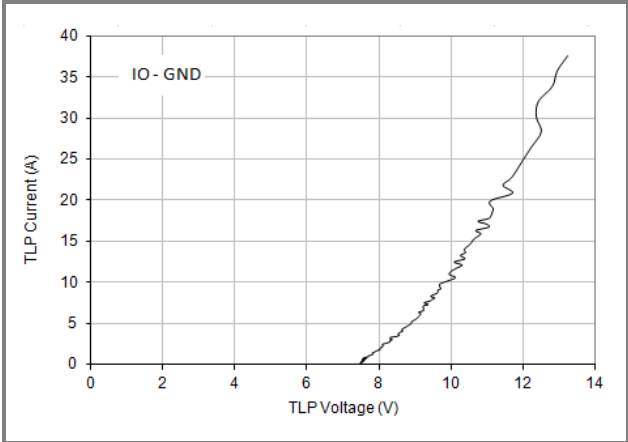


Fig.2 Transmission Line Pulsing (TLP) Measurement

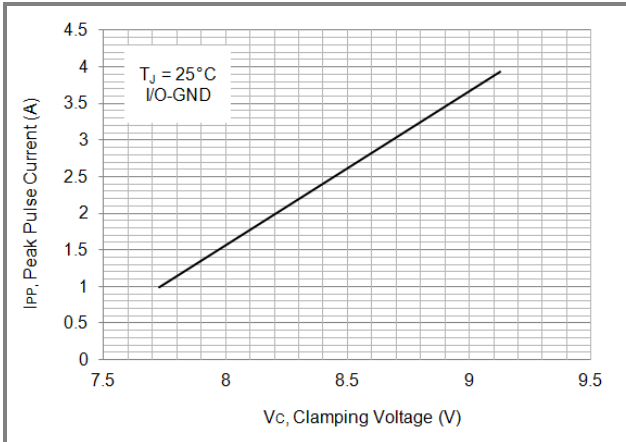


Fig.3 Typical Peak Clamping Voltage(8/20µs)

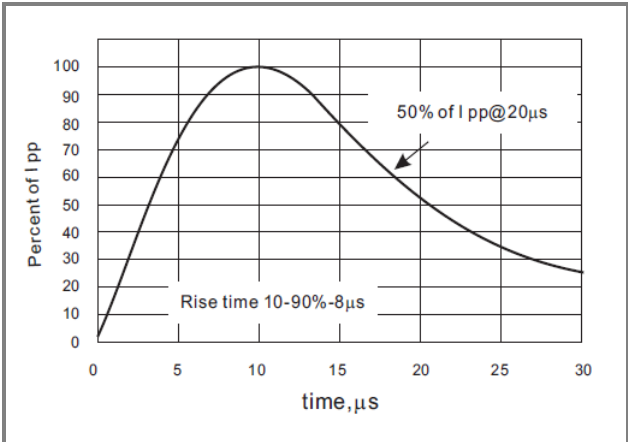


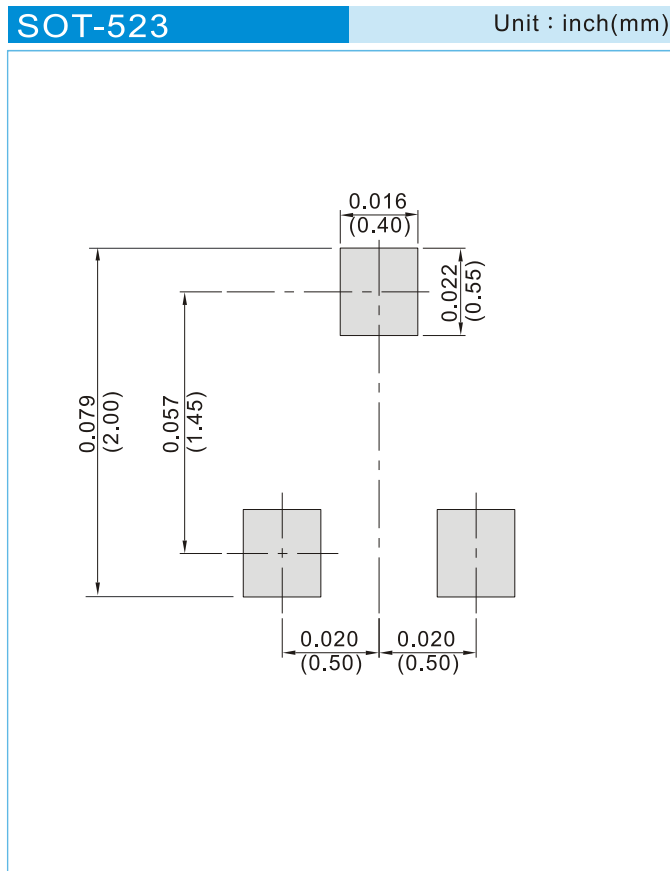
Fig.4 8/20µs Pulse Waveform

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Product and Packing Information

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

Mounting Pad Layout



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