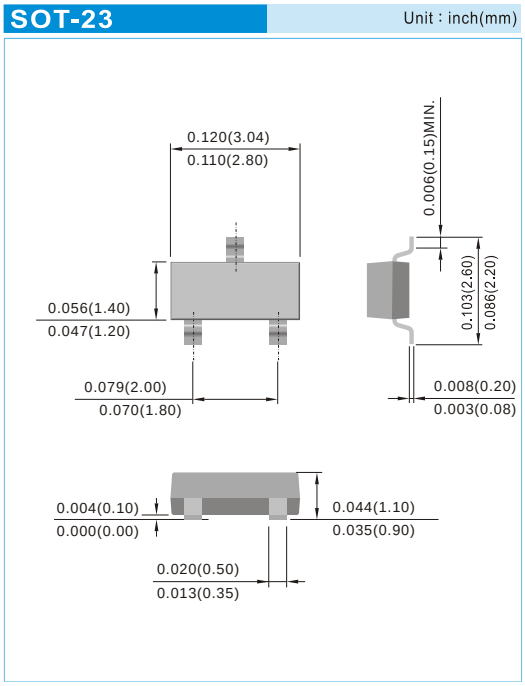
PJEC12VM1TA

ESD Protection

V_{RWM}	12 V



Features

- Bidirectional ESD protection of one line
- IEC61000-4-2(ESD): ±15kV Air, ±8kV Contact Compliance with the capability up to ±30kV
- IEC61000-4-4(EFT): 40A(5/50nS)
- IEC61000-4-5(Lightning): 3A(8/20μS)
- Low leakage current, maximum of 0.05μA 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-23, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounces, 0.008 grams
- Marking: 12W

Applications

- Computers and peripherals
- Audio and video equipment
- Communication systems
- Control Signal Lines Protection
- Digital Cameras

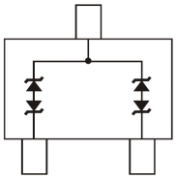


Fig.84(Top View)

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}	±30 ±30	kV
Operating Junction Temperature	T_J	-55 to +125	°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}	-	-	-	12	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA, Between any I/O pins to GND	14	-	16.5	V
Reverse leakage current	I_R	V_R=12V	-	-	0.05	μA
Clamping Voltage	V_{CL}	I_{PP}=1A, t_P=8/20μs	-	-	19	V
		I_{PP}=3A, t_P=8/20μs	-	-	25	
Clamping Voltage TLP(Note 1)	V_{CL}	I_{PP}=4A, t_P=100ns	-	17.7	-	V
		I_{PP}=8A, t_P=100ns	-	19.5	-	
Dynamic Resistance	R_{DYN}	t_P=100ns	-	0.45	-	Ω
Off State Junction Capacitance	C_J	0Vdc Bias f=1MHz	-	-	10	pF

NOTES :

1. Testing using Transmission Line Pulse (TLP) conditions: Z_0 = 50Ω, t_P = 100 ns.

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TYPICAL CHARACTERISTIC CURVES

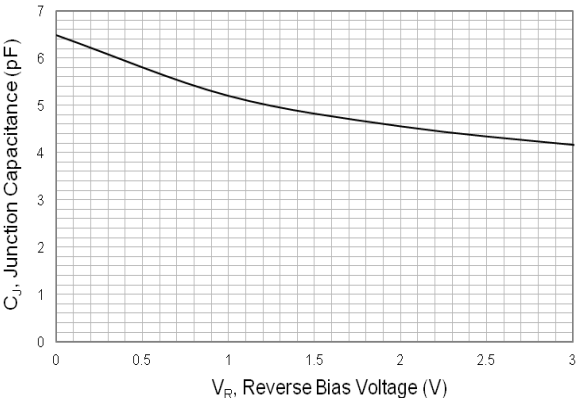


Fig.1 Typical Junction Capacitance

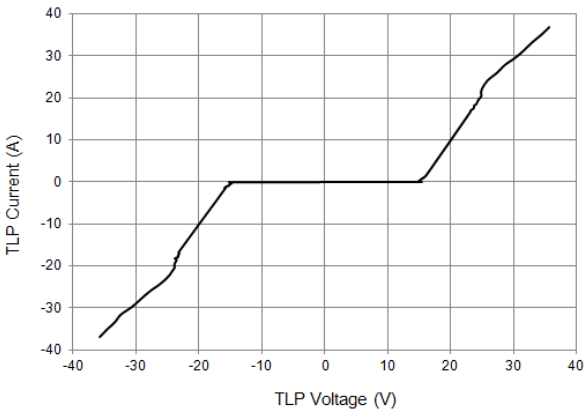


Fig.2 Transmission Line Pulsing (TLP) Measurement

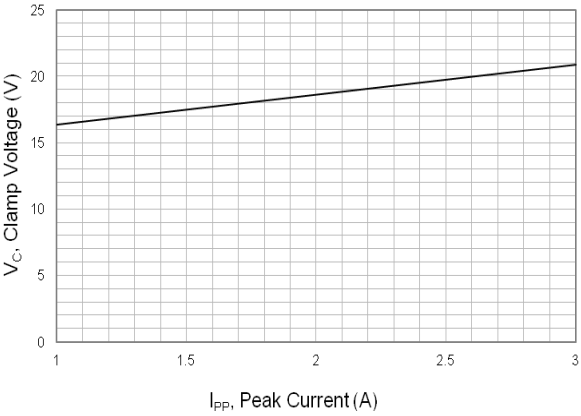


Fig.3 Typical Peak Clamping Voltage(8/20μs)

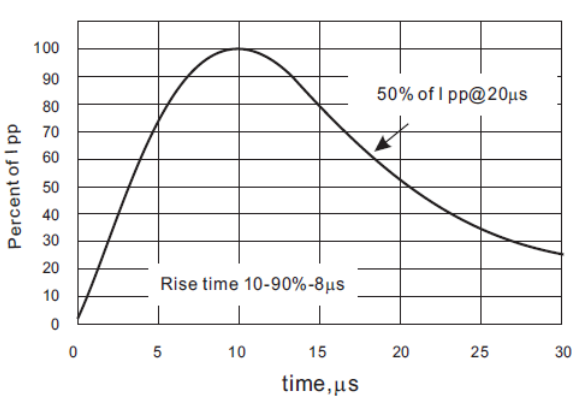


Fig.4 8/20μs Pulse Waveform

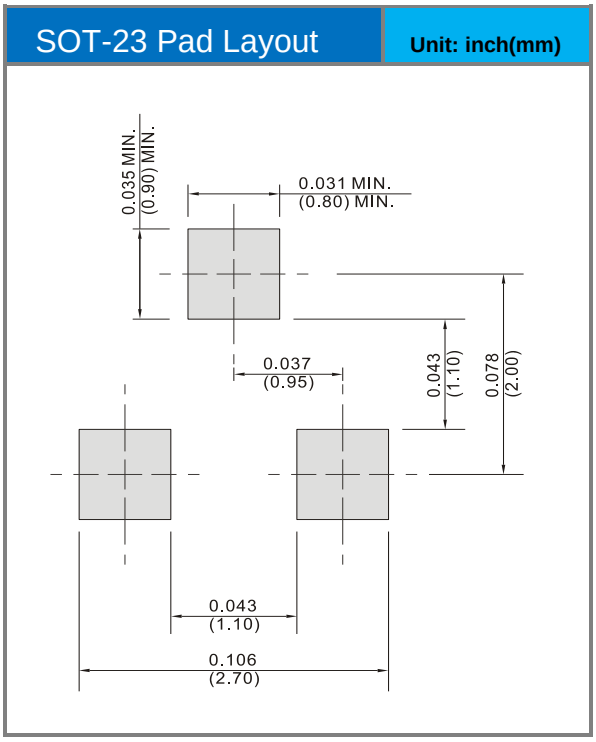
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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PJEC12VM1TA	SOT-23	3K pcs / 7” reel	12W
PJEC12VM1TA	SOT-23	12K pcs / 13” reel	12W

Mounting Pad Layout

SOT-23 Pad Layout Unit: inch(mm)



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