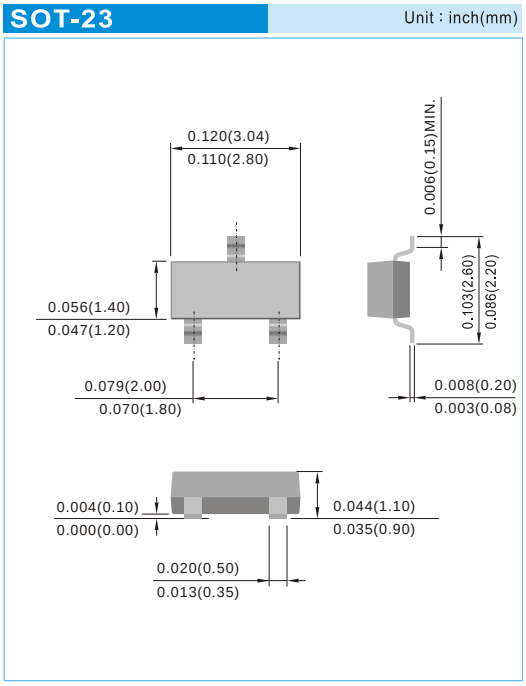
PJEC12VM1TA

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

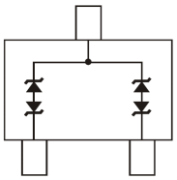


Fig.84(Top View)

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

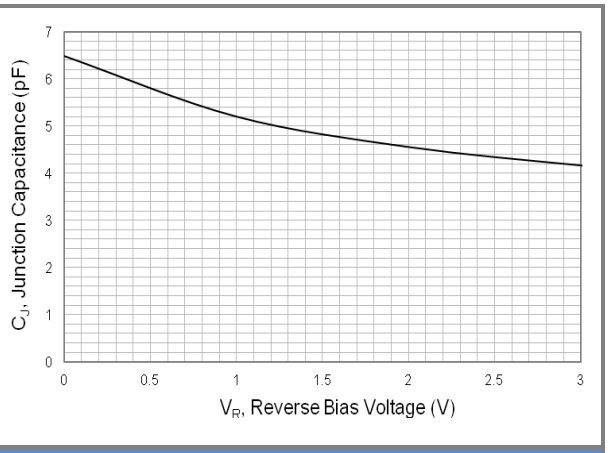

Fig.1 Typical Junction Capacitance

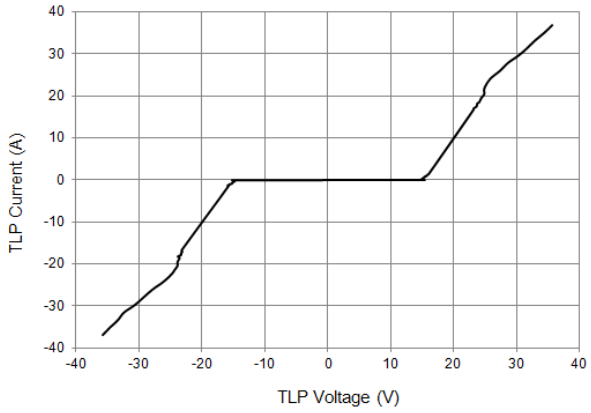

Fig.2 Transmission Line Pulsing (TLP) Measurement

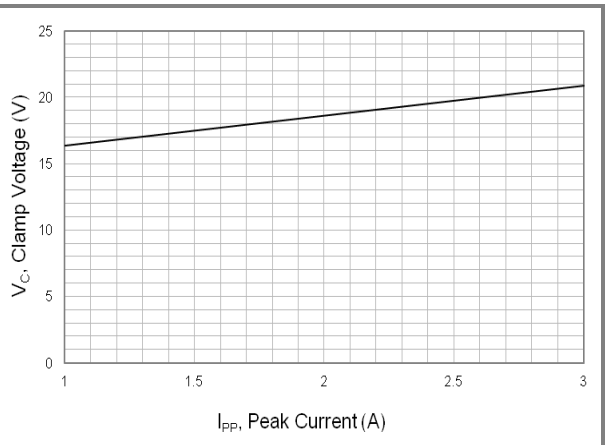

Fig.3 Typical Peak Clamping Voltage(8/20μs)

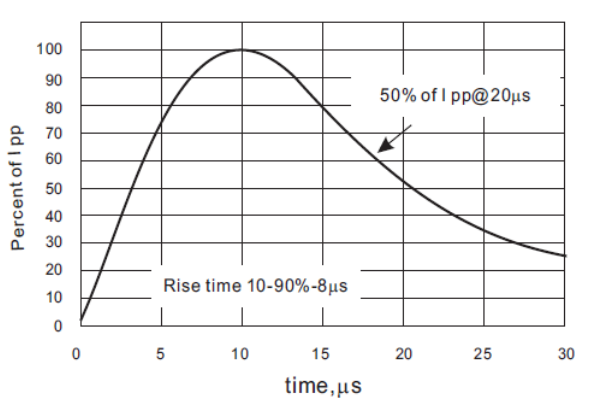

Fig.4 8/20μs Pulse Waveform

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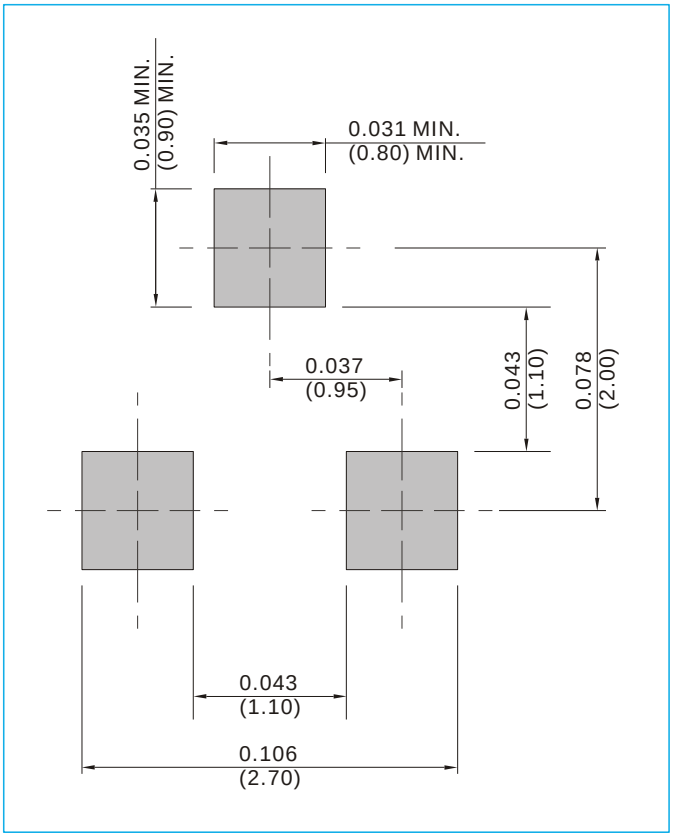
MOUNTING PAD LAYOUT

SOT-23 Unit：inch(mm)



ORDER INFORMATION

- Packing information
  T/R – 12K per 13" plastic Reel
  T/R – 3K per 7" plastic Reel

PJEC12VM1TA

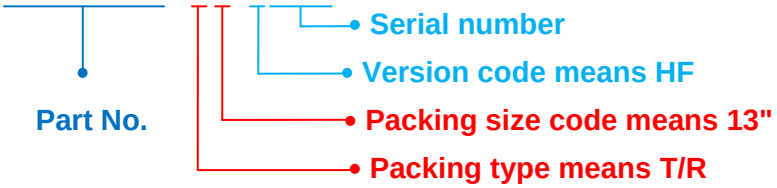
Part No_packing code_Version

PJEC12VM1TA_R1_00001

PJEC12VM1TA_R2_00001

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1st Code	Packing size code	2nd Code	HF or RoHS	1st Code	2nd~5th 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			

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