



# PJEC5V0M1TA

## Low Capacitance TVS/ESD Protection

$V_{RWM}$

**5 V**

### Features

- Bidirectional ESD protection of one line
- IEC61000-4-2(ESD):  $\pm 15\text{kV}$  Air,  $\pm 8\text{kV}$  Contact Compliance with the capability up to  $\pm 30\text{kV}$
- IEC61000-4-4(EFT):  $40\text{A}(5/50\text{nS})$
- IEC61000-4-5(Lightning):  $3.5\text{A}(8/20\mu\text{S})$
- Low leakage current, maximum of  $0.1\mu\text{A}$  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: M1A

### Applications

- Mobile Phones and accessories
- Desktops, Servers and Notebook
- Hand held portable
- Digital Cameras
- Computer Interfaces Protection
- Serial and Parallel Ports Protection
- Control Signal Lines Protection

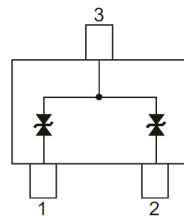
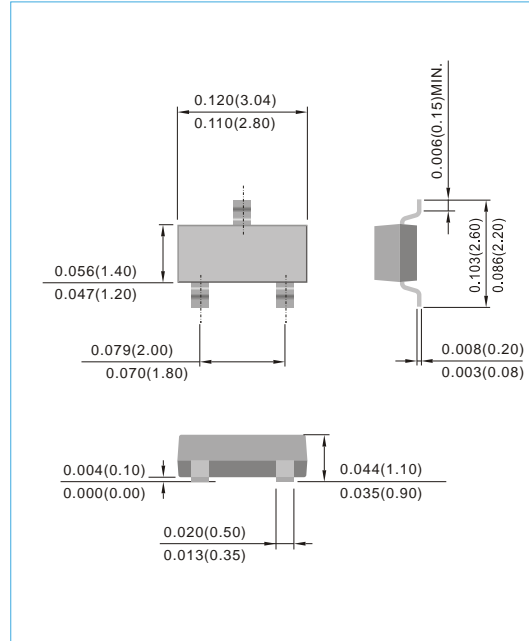


Fig.170(Top View)

**SOT-23**

Unit : inch(mm)



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

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	$V_{ESD}$	$\pm 30$	kV
ESD IEC61000-4-2(Contact)		$\pm 30$	
Operating Junction Temperature	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$



## PJEC5V0M1TA

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	-	5	V
Snap-Break Voltage	$V_{SB}$	$I_{SB}=50\text{mA}$	5	-	8	V
Reverse Leakage Current	$I_R$	$V_R=5.0\text{V}$	-	-	0.1	$\mu\text{A}$
Clamping Voltage	$V_{CL}$	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$	-	-	9	V
		$I_{PP}=3.5\text{A}, t_p=8/20\mu\text{s}$	-	-	12.5	
Clamping Voltage TLP (Note 1)	$V_{CL}$	$I_{PP}=4\text{A}, t_p=100\text{ns}$	-	8.6	-	V
		$I_{PP}=8\text{A}, t_p=100\text{ns}$	-	9.7	-	
Dynamic Resistance	$R_{DYN}$	$t_p=100\text{ns}$	-	0.27	-	$\Omega$
Off State Junction Capacitance	$C_J$	0Vdc Bias $f=1\text{MHz}$	-	-	10	pF

NOTES :

1. Testing using Transmission Line Pulse (TLP) conditions:  $Z_0 = 50\Omega$  ,  $t_p = 100\text{ ns}$ .



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## TYPICAL CHARACTERISTIC CURVES

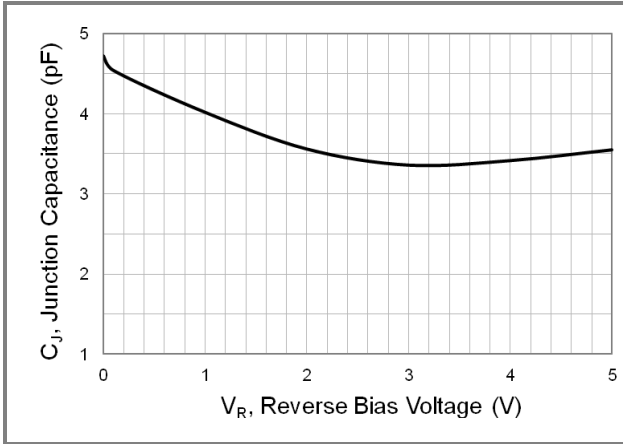


Fig.1 Typical Junction Capacitance

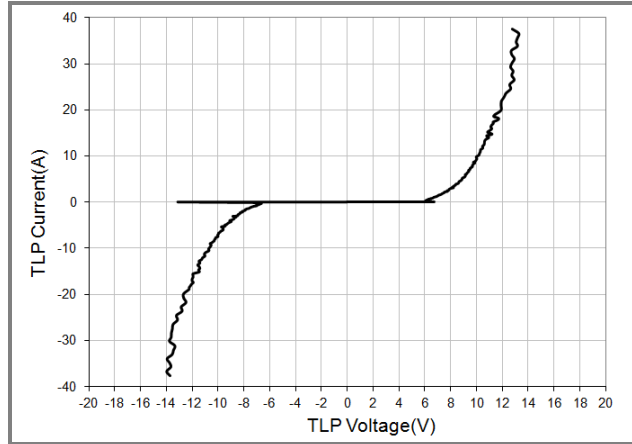


Fig.2 Transmission Line Pulsing (TLP) Measurement

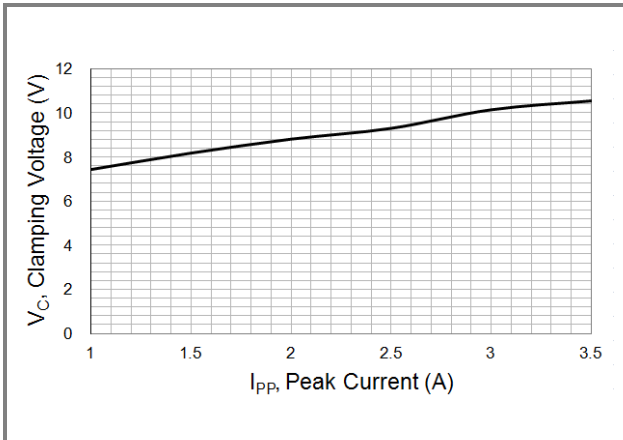


Fig.3 Typical Peak Clamping Voltage(8/20 $\mu$ s)

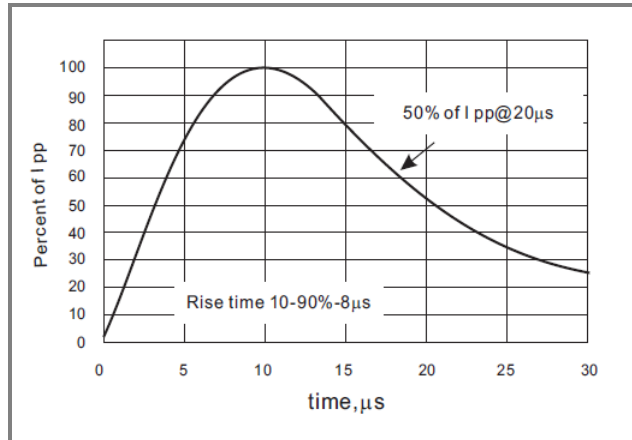


Fig.4 8/20 $\mu$ s Pulse Waveform

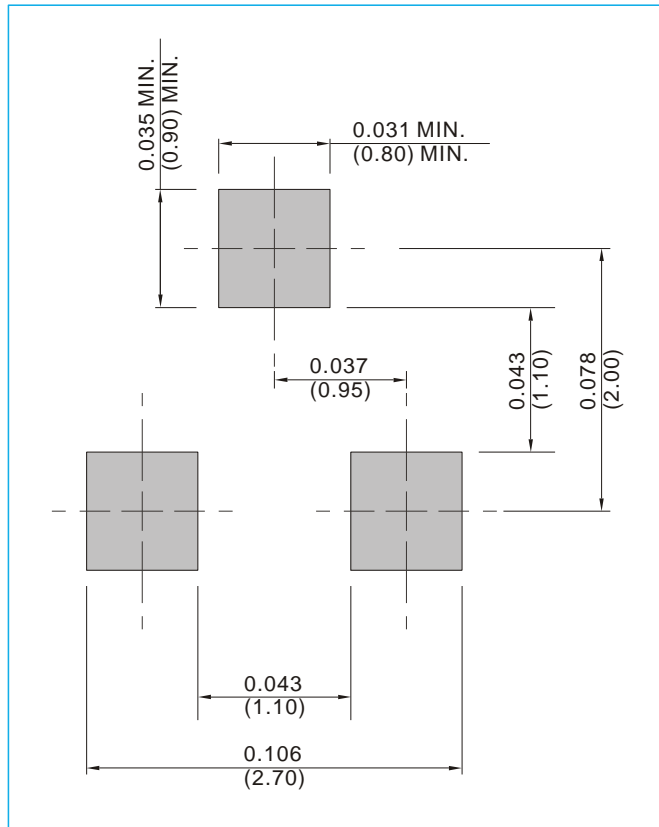


# PJEC5V0M1TA

## MOUNTING PAD LAYOUT

**SOT-23**

Unit : inch(mm)



## ORDER INFORMATION

### Packing information

T/R – 3K per 7" plastic Reel

T/R – 12K per 13" plastic Reel



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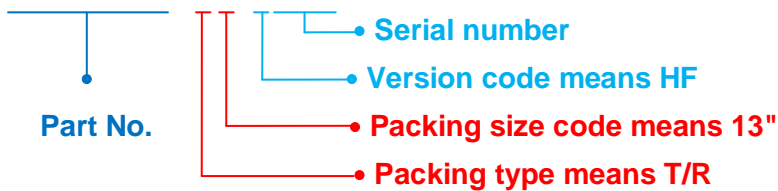
**Part No\_packing code\_Version**

PJEC5V0M1TA\_R1\_00001

PJEC5V0M1TA\_R2\_00001

**For example :**

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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