



# MMBD7000

## SURFACE MOUNT SWITCHING DIODE

**VOLTAGE** 100 Volt **POWER** 225 mWatt

**SOT-23**

Unit : inch(mm)

### FEATURES

- Very fast reverse recovery ( $T_{rr} < 2$  ns typical)
- Isolated, series-connected diode pair
- Surface mount package ideally suited for automatic insertion
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

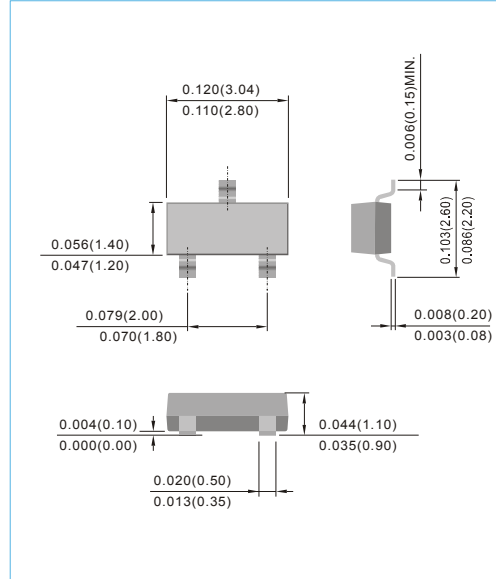
### MECHANICAL DATA

Case: SOT-23, Plastic

Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight: 0.0003 ounces, 0.0084 grams

Marking: T3



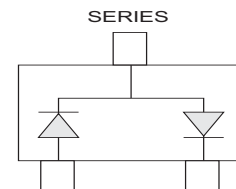
### ABSOLUTE RATINGS

Parameter	Symbol	Value	Units
Maximum Reverse Voltage	$V_R$	100	V
Peak Reverse Voltage	$V_{RRM}$	100	V
Continuous Forward Current	$I_F$	0.2	A
Non-repetitive Peak Forward Surge Current at $t=1\mu s$	$I_{FSM}$	4	A

### THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Power Dissipation (Note 1)	$P_{TOT}$	225	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	556	$^{\circ}C/W$
Junction Temperature	$T_J$	-55 to 150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55 to 150	$^{\circ}C$

Note 1. FR-4 Board = 70 x 60 x 1mm.

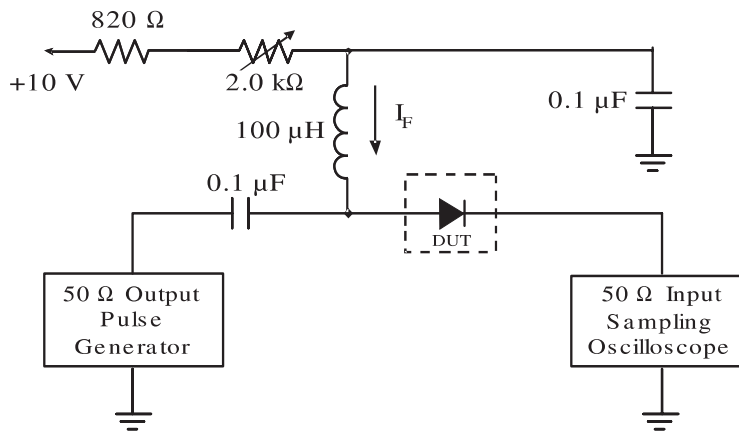




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## ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage	$V_{BR}$	$I_R=100\mu A$	100	--	--	V
Reverse Current	$I_R$	$V_R=50V$ $V_R=100V$ $V_R=50V, T_J=125^\circ C$	--	--	1 3 100	$\mu A$
Forward Voltage	$V_F$	$I_F=1mA$ $I_F=10mA$ $I_F=100mA$	--	--	0.7 0.82 1.1	V
Total Capacitance	$C_J$	$V_R=0V, f=1MHz$	--	--	2	pF
Reverse Recovery Time (See Figure 1)	$T_{RR}$	$I_F=10mA, I_R=10mA$ $R_L=100\Omega$	--	--	4	ns



- Notes: 1. A 2.0k $\Omega$  variable resistor adjusted for a forward current ( $I_F$ ) to 10mA  
2. Input pulse is adjusted to  $I_{R(peak)}$  is equal to 10mA

Figure 1. REVERSE RECOVERY TIME EQUIVALENT TEST CIRCUIT



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## ELECTRICAL CHARACTERISTICS CURVE

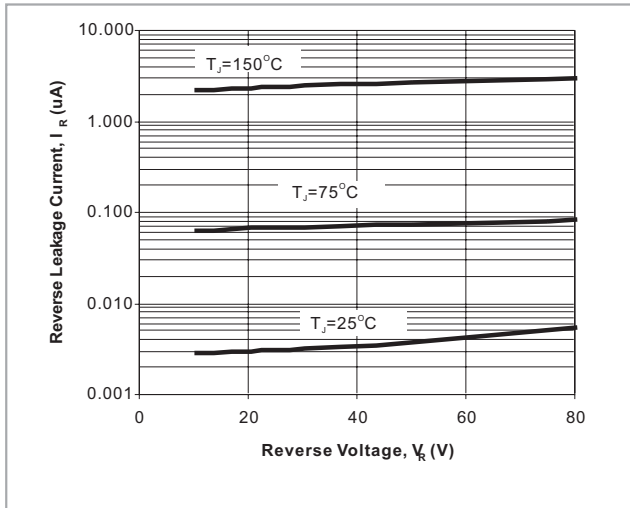


Fig. 2. Reverse Current vs. Reverse Voltage

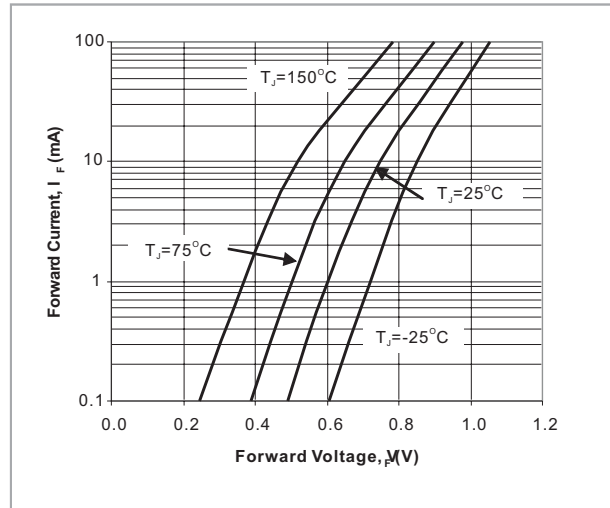


Fig. 3. Forward Current vs. Forward

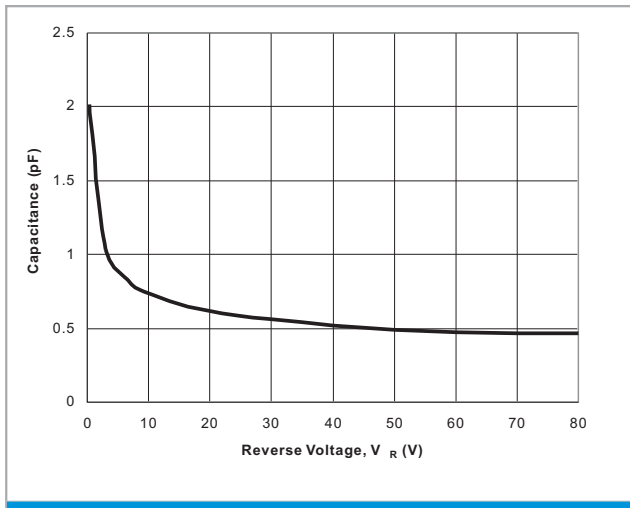


Fig. 4. Capacitance vs. Reverse Voltage

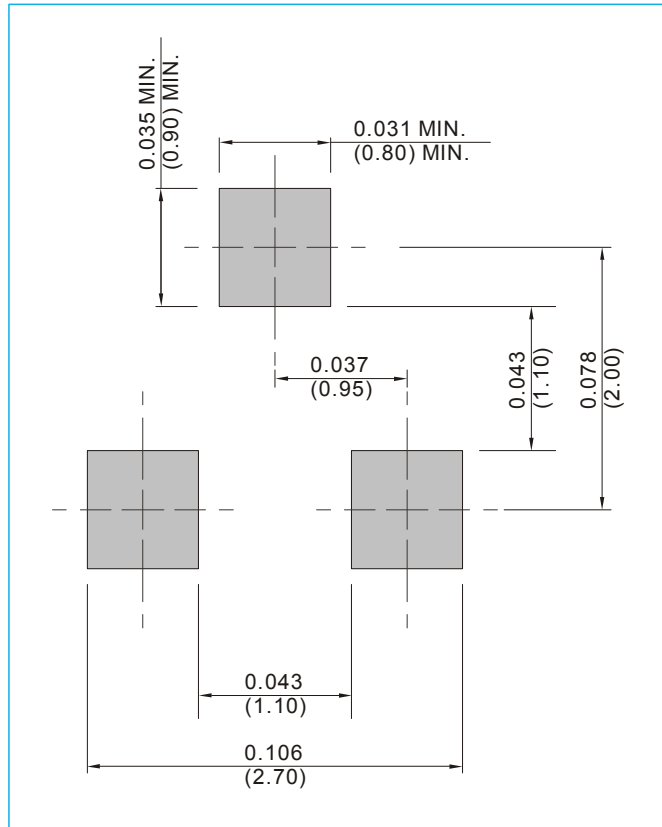


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## MOUNTING PAD LAYOUT

**SOT-23**

Unit : inch(mm)



## ORDER INFORMATION

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



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## Part No\_packing code\_Version

MMBD7000\_R1\_00001

MMBD7000\_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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