



# MMBD7000W

## SURFACE MOUNT SWITCHING DIODE

**VOLTAGE** 100 Volts **POWER** 200 mWatts

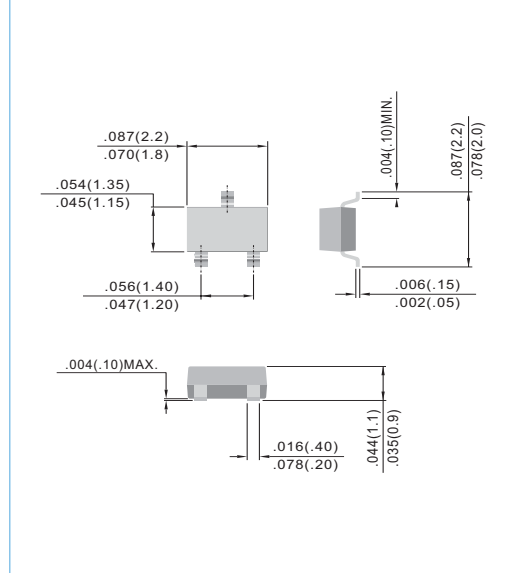
**SOT-323** Unit: inch (mm)

### FEATURES

- Very fast reverse recovery ( $t_{rr} < 2.0$  ns typical)
- Isolated, series-connected diode pair
- Surface mount package ideally suited for automatic insertion
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: SOT-323, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0048 gram
- 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 $t=1.0 \mu s$	$I_{FSM}$	2.0	A

### THERMAL CHARACTERISTICS

PARAMETER	Symbol	Value	Units
Power Dissipation (Note 1)	$P_{TOT}$	200	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	$^{\circ}C$

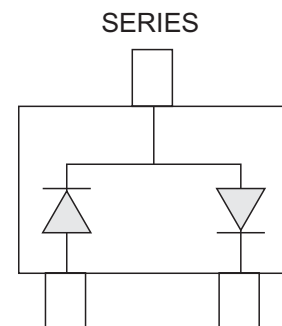
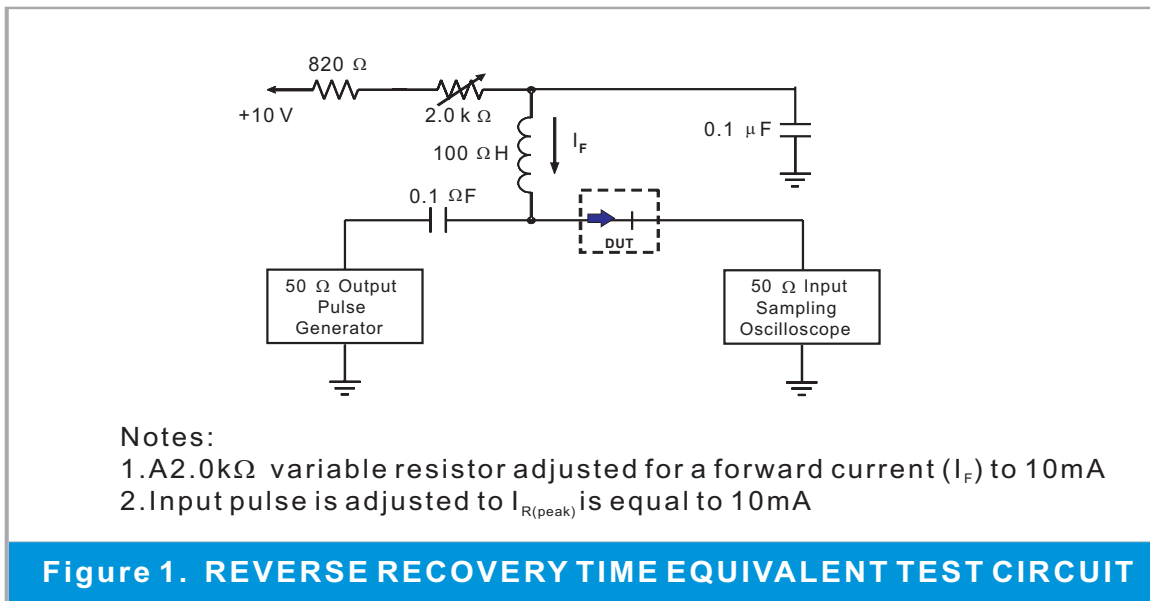
Note 1. FR-5 Board = 1.0x0.75x0.062 in.



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## ELECTRICAL CHARACTERISTICS

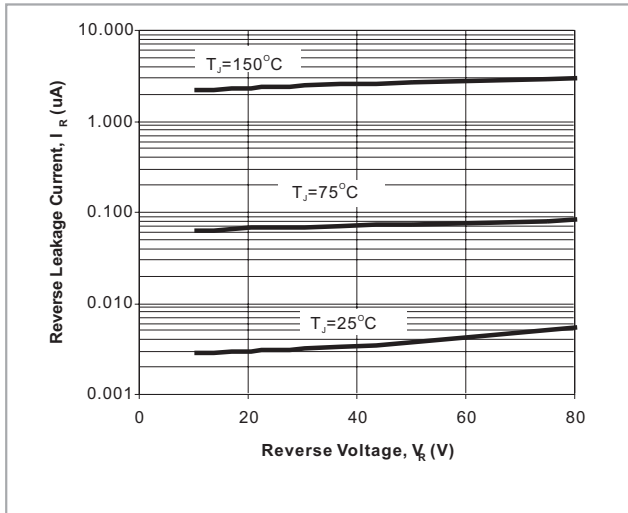
PARAMETER	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100 \mu A$	100	--	--	V
Reverse Current	$I_r$	$V_R=50 V$ $V_R=100 V$ $V_R=50 V, T_J=125^\circ C$	--	--	1.0 3.0 100	$\mu A$
Forward Voltage	$V_F$	$I_F=1.0mA$ $I_F=10mA$ $I_F=100mA$	0.55 0.67 0.75	--	0.70 0.82 1.10	V
Total Capacitance	$C_J$	$V_R=0V, f=1.0MHz$	--	2.0	--	pF
Reverse Recovery Time (Figure 1)	$t_{rr}$	$I_F=I_R=10mA, R_L=100\Omega$	--	--	4.0	ns



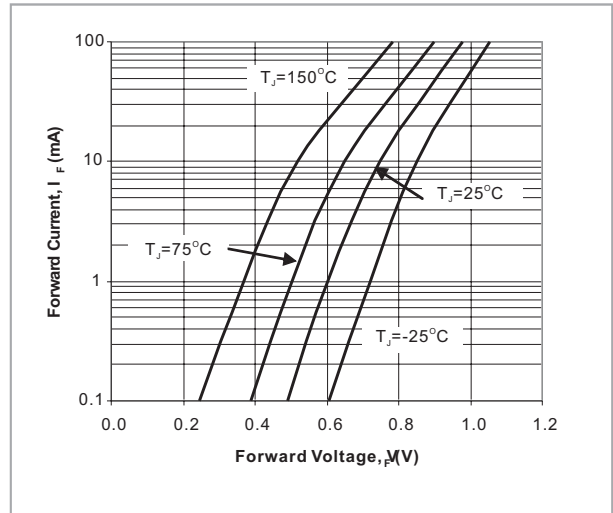


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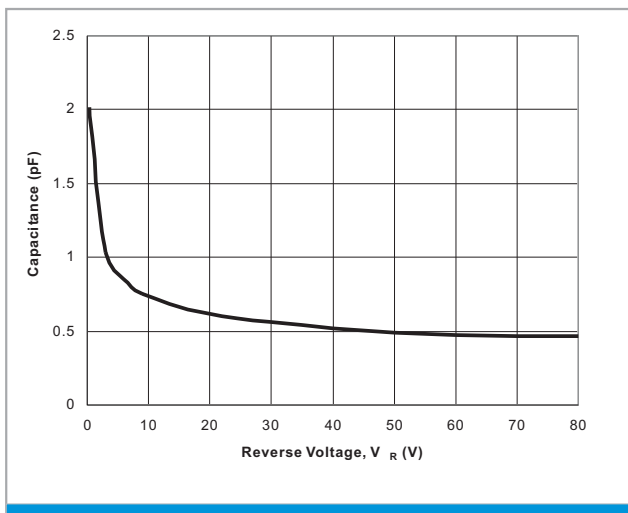
## ELECTRICAL CHARACTERISTICS CURVE



**Fig. 2. Reverse Current vs. Reverse Voltage**



**Fig. 3. Forward Current vs. Forward**

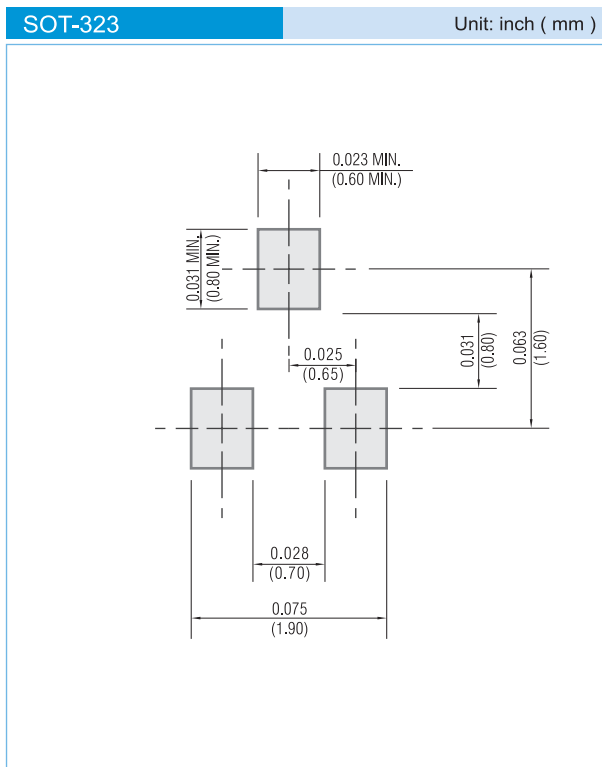


**Fig. 4. Capacitance vs. Reverse Voltage**



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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

## LEGAL STATEMENT

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