

MMBD7000

SURFACE MOUNT SWITCHING DIODE

VOLTAGE 100 Volts **POWER** 225 mWatts

SOT-23

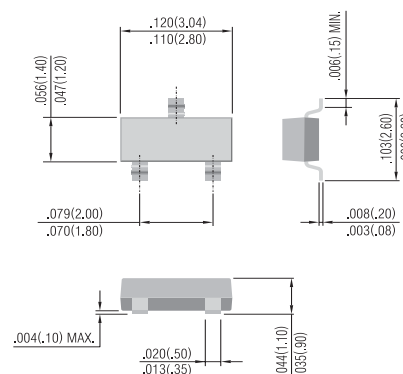
Unit: inch (mm)

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-23, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.008 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

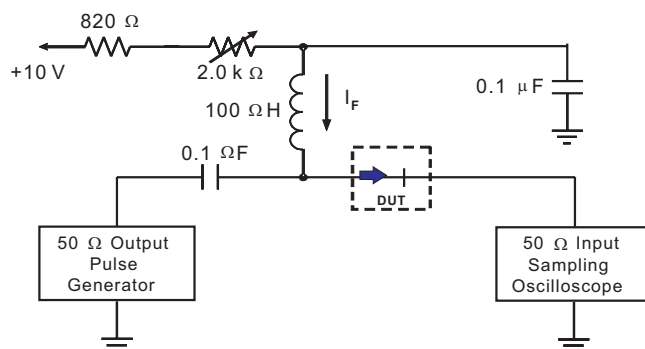
PARAMETER	Symbol	Value	Units
Power Dissipation (Note 1)	P_{TOT}	225	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	556	$^{\circ}C/W$
Junction Temperature	T_J	-55 to 150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}C$

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

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ELECTRICAL CHARACTERISTICS

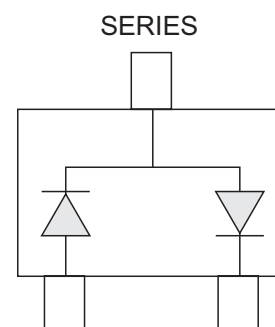
PARAMETER	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100\text{ }\mu\text{A}$	100	--	--	V
Reverse Current	I_r	$V_R=50\text{ V}$ $V_R=100\text{ V}$ $V_R=50\text{ V}, T_J=125^\circ\text{C}$	--	--	1.0 3.0 100	μA
Forward Voltage	V_F	$I_F=1.0\text{mA}$ $I_F=10\text{mA}$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



Notes:

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

Figure 1. REVERSE RECOVERY TIME EQUIVALENT TEST CIRCUIT



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ELECTRICAL CHARACTERISTICS CURVE

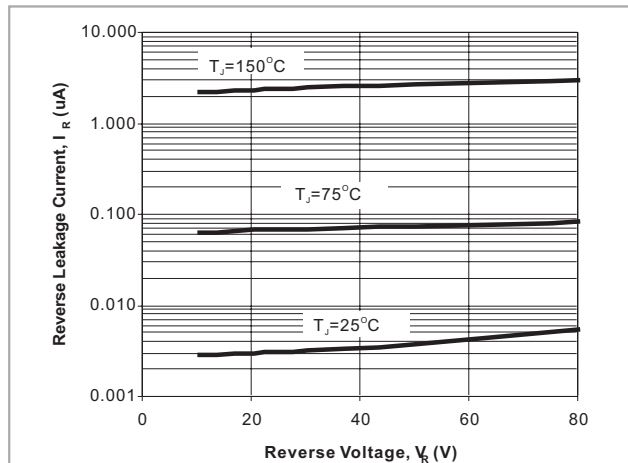


Fig. 2. Reverse Current vs. Reverse Voltage

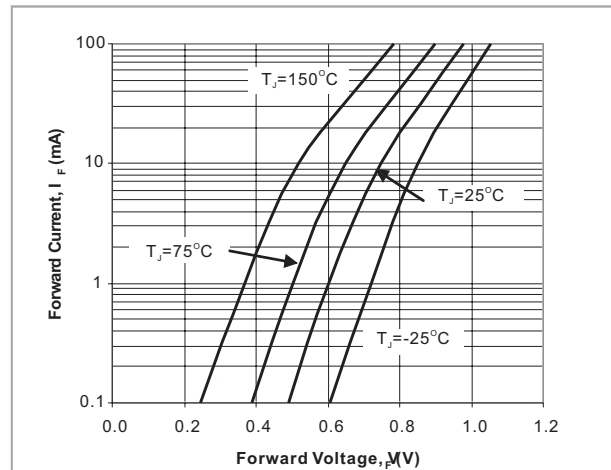


Fig. 3. Forward Current vs. Forward

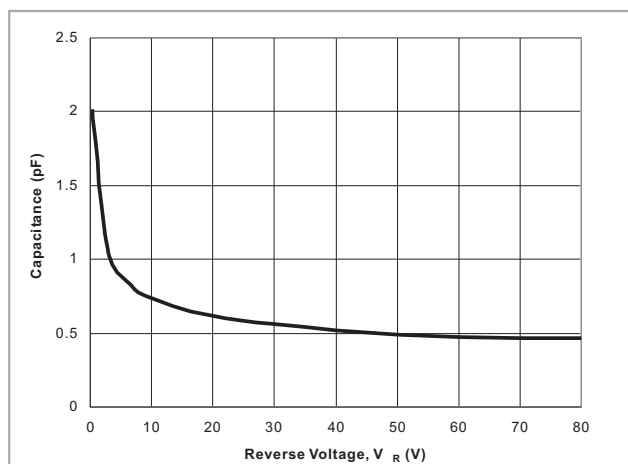


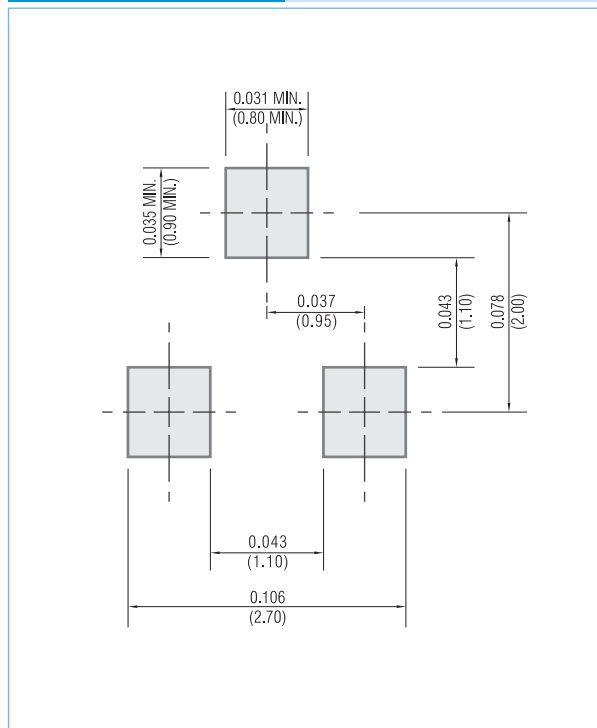
Fig. 4. Capacitance vs. Reverse Voltage

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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

LEGAL STATEMENT

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