



MMBD7000

SURFACE MOUNT SWITCHING DIODE

VOLTAGE 100 Volts **POWER** 225 mWatts

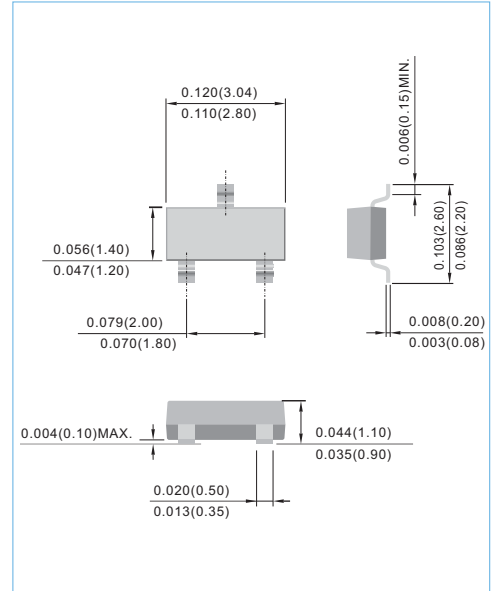
SOT-23 Unit : inch(mm)

FEATURES

- Very fast reverse recovery ($t_{rr} < 2.0$ ns typical)
- Isolated, series-connected diode pair
- Surface mount package ideally suited for automatic insertion

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 $t=1.0 \mu s$	I_{FSM}	4.0	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	$^{\circ}C$

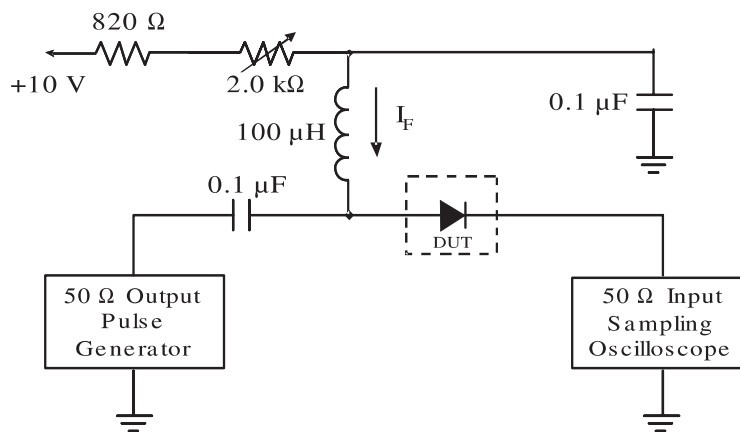
Note 1. FR-4 Board = 70 x 60 x 1mm.



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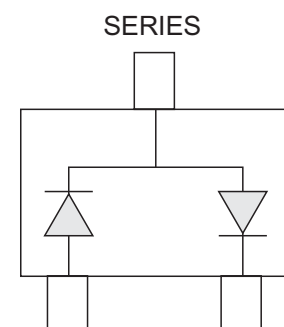
ELECTRICAL CHARACTERISTICS

PARAMETER	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100 \mu A$	100	--	--	V
Reverse Current	I_r	$V_R=50 V$ $V_R=100 V$ $V_R=50 V, T_J=125^\circ C$	--	--	1.0 3.0 100	μA
Forward Voltage	V_F	$I_F=1.0mA$ $I_F=10mA$ $I_F=100mA$	--	--	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



- Notes: 1. A 2.0kΩ 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

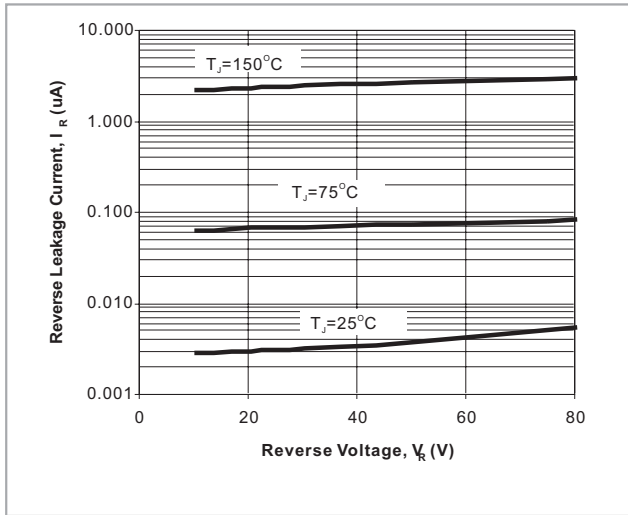


Fig. 2. Reverse Current vs. Reverse Voltage

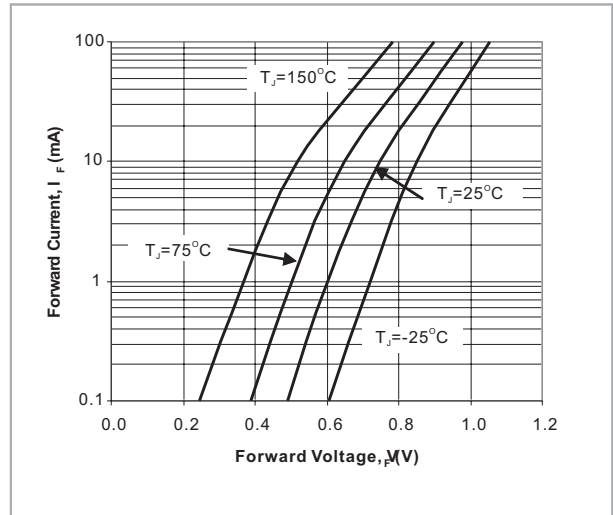


Fig. 3. Forward Current vs. Forward

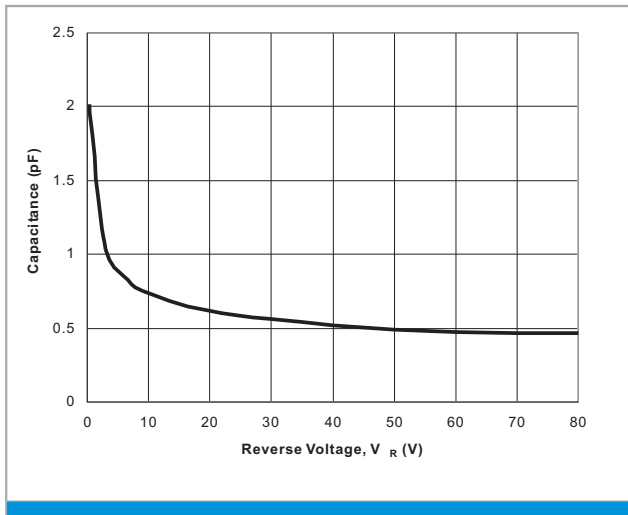
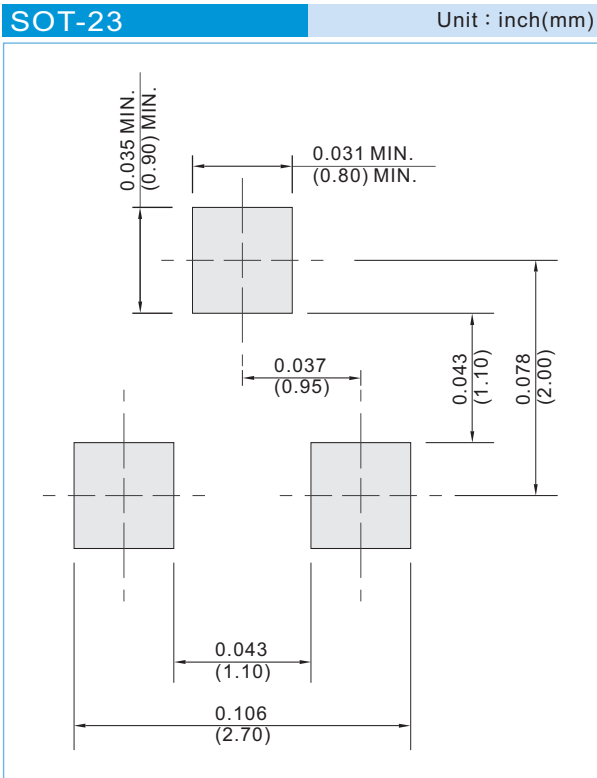


Fig. 4. Capacitance vs. Reverse Voltage



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MOUNTING PAD LAYOUT



ORDER INFORMATION

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

LEGAL STATEMENT

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