

MMBD7000

Surface Mount Switching Diode

VOLTAGE 100 Volt **POWER** 225 mWatt

SOT-23 Unit : inch(mm)

FEATURES

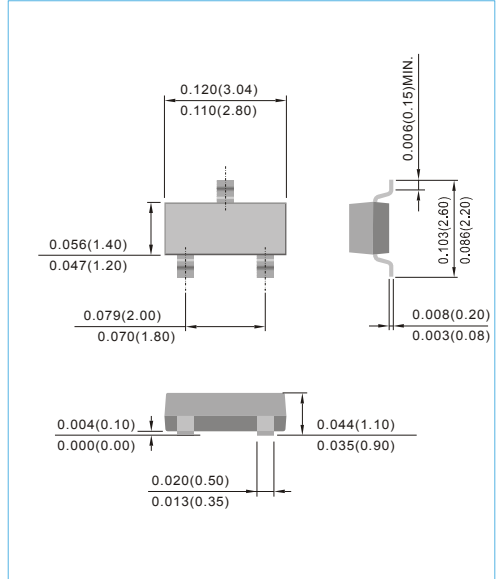
- Very fast reverse recovery ($T_{rr} < 2$ ns typical)
- Isolated, series-connected diode pair
- Surface mount package ideally suited for automatic insertion
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

Case : SOT-23, Plastic

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

Approx. Weight : 0.0084 grams



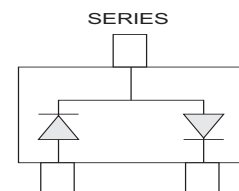
ABSOLUTE RATINGS

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	$^{\circ}C$

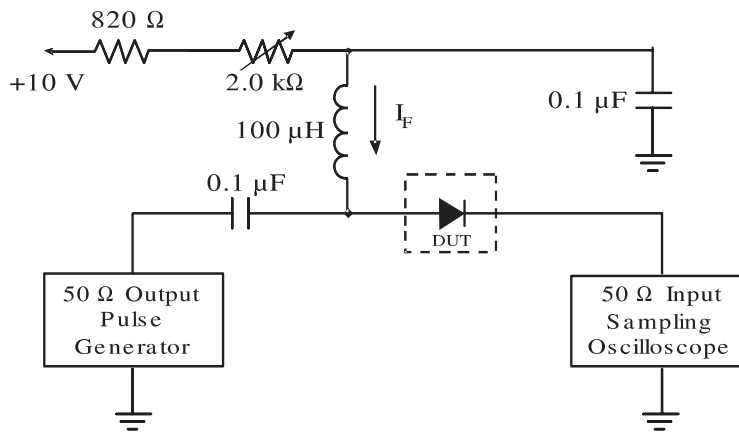
Note 1. FR-4 Board = 70 x 60 x 1mm.



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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	μA
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 Ω 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

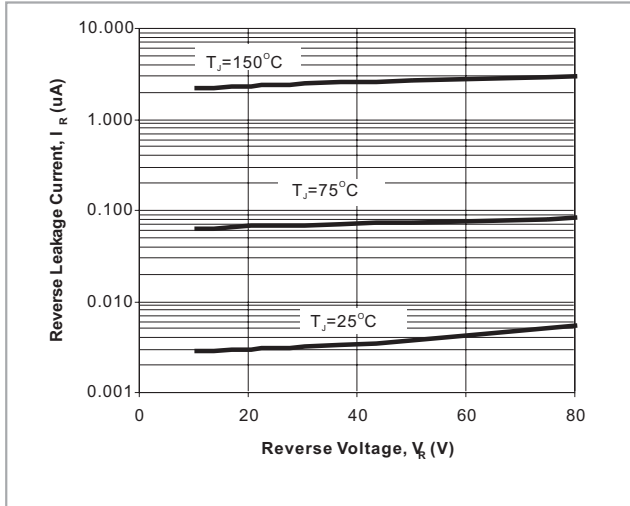


Fig. 2. Reverse Current vs. Reverse Voltage

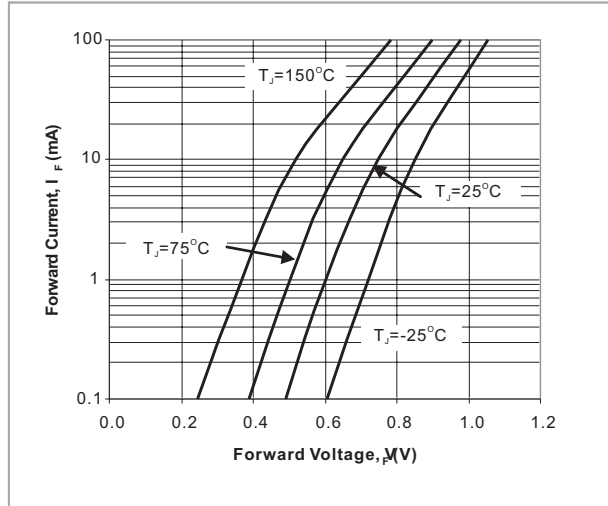


Fig. 3. Forward Current vs. Forward

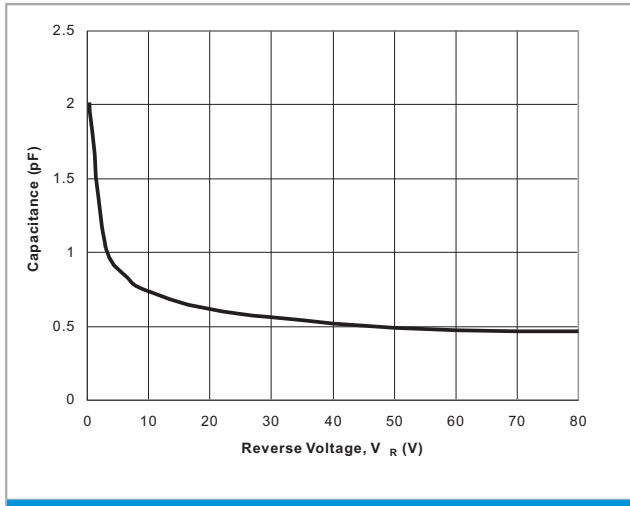


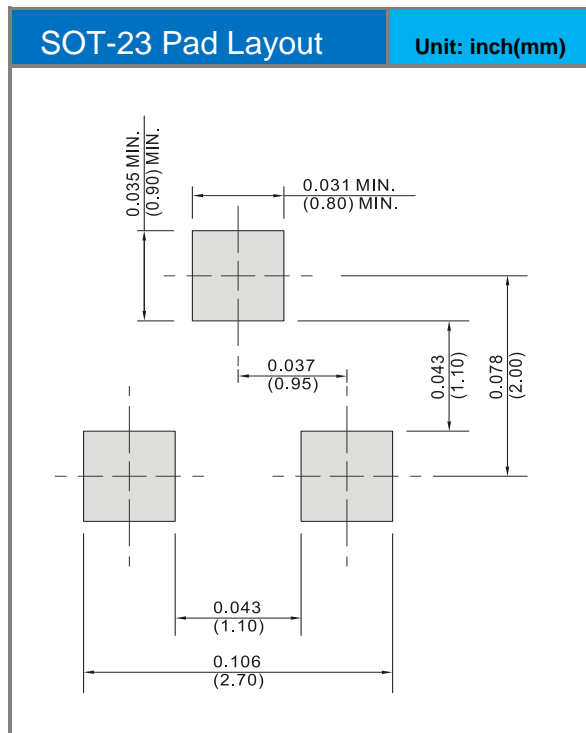
Fig. 4. Capacitance vs. Reverse Voltage

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
MMBD7000	SOT-23	3K pcs / 7" reel	T3

Mounting Pad Layout



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