



DATA SHEET

MMBD6100

SURFACE MOUNT SWITCHING DIODES

VOLTAGE 80 Volts **POWER** 225mWatts

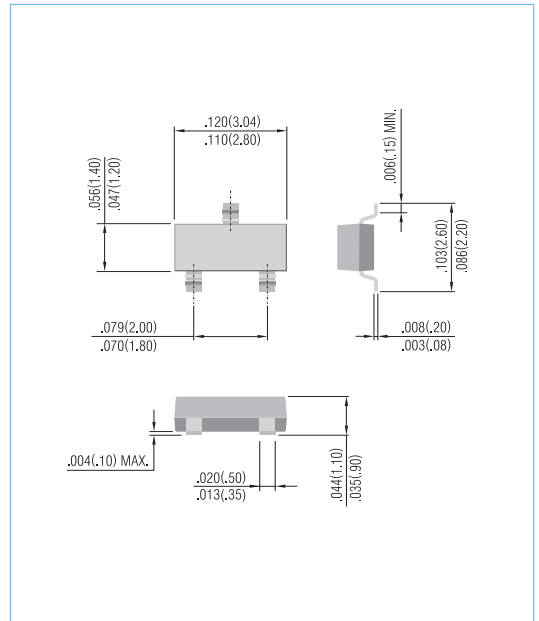
SOT-23 Unit: inch (mm)

FEATURES

- Dual, common cathode configuration
- Very fast reverse recovery ($T_{rr} < 2.0\text{ns}$ typical)
- Low capacitance ($< 2.5\text{pF}$ @ 0V)
- 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 : T4



ABSOLUTE RATINGS

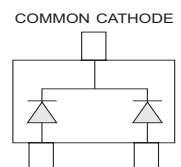
PARAMETER	SYMBOL	VALUE	UNITS
Maximum Reverse Voltage	V_R	80	V
Peak Reverse Voltage	V_{RRM}	80	V
Continuous Forward Current	I_F	0.2	A
Non-repetitive Peak Forward Surge Current at $t=1.0 \mu\text{s}$	I_{FSM}	4.0	A

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNITS
Power Dissipation ⁽¹⁾	P_{TOT}	225	mW
Thermal Resistance, Junction to Ambient ⁽¹⁾	$R_{\theta JA}$	556	$^{\circ}\text{C/W}$
Junction Temperature	T_J	-50 to 150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-50 to 150	$^{\circ}\text{C}$

NOTE:

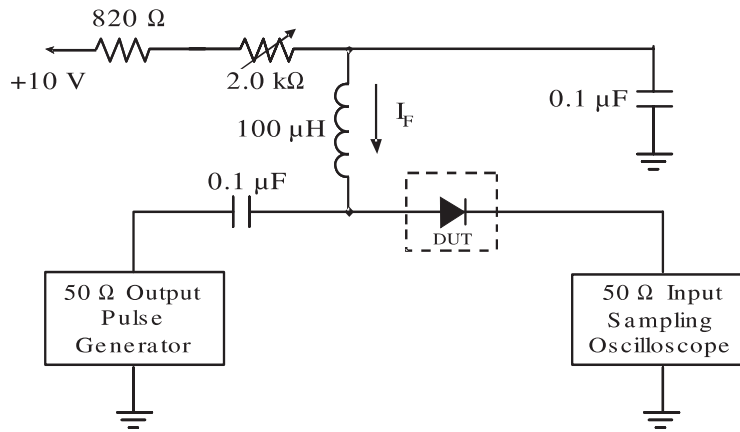
1. FR-4 Board=70 x 60 x 1mm.





ELECTRICAL CHARACTERISTICS ($T_J=25^{\circ}\text{C}$, unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Reverse Breakdown Voltage	V_{BR}	$I_R=100\mu\text{A}$	80	-	-	V
Reverse Current	I_R	$V_R=50\text{V}$	-	-	100	nA
Forward Voltage	V_F	$I_F=1\text{mA}$ $I_F=100\text{mA}$	-	-	0.7 1.1	V
Total Capacitance	C_T	$V_R=0\text{V}$, $f=1\text{MHz}$	-	-	2.5	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



ELECTRICAL CHARACTERISTIC CURVES (each diode)

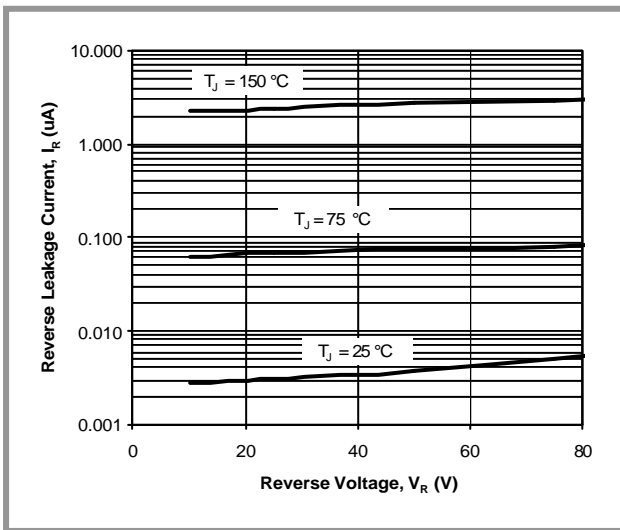


Fig. 2. Reverse Current vs. Reverse Voltage

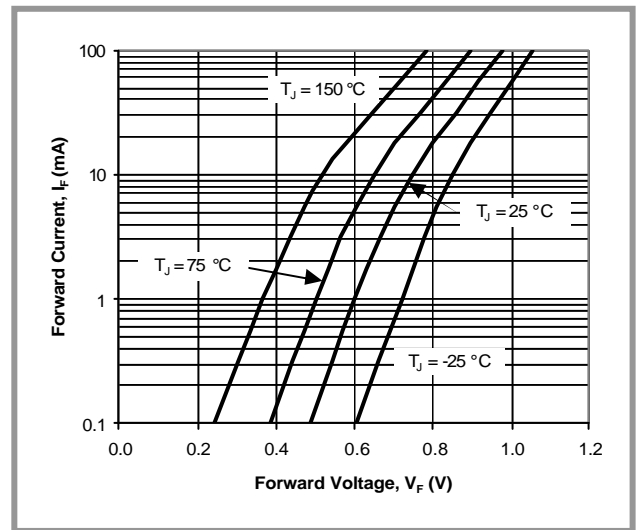


Fig. 3. Forward Current vs. Forward Voltage

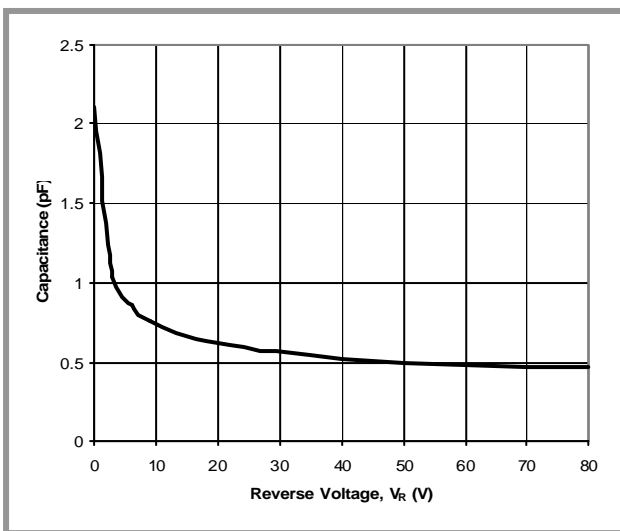
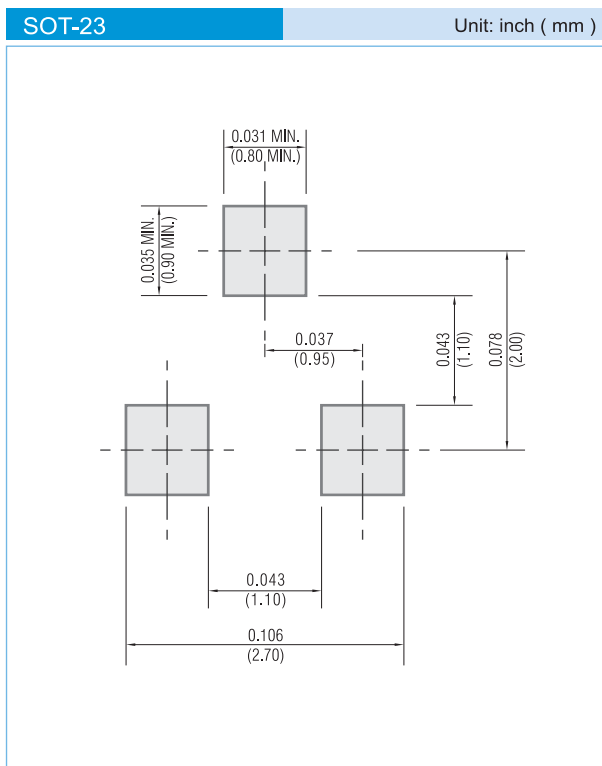


Fig. 4. Capacitance vs. Reverse Voltage



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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