

DATA SHEET

MMBD914

SURFACE MOUNT SWITCHING DIODE

VOLTAGE 100 Volts **POWER** 225 mWatts

FEATURES

- Very fast reverse recovery ($T_{rr} < 2.0$ ns typical)
- Low capacitance (4pF @ 0V typical)
- Surface mount package ideally suited for automatic insertion
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

Case: SOT-23, Plastic

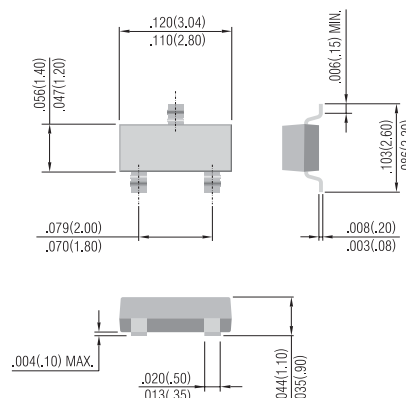
Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight: 0.008 gram

Marking: T1

SOT-23

Unit: inch (mm)



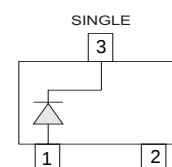
ABSOLUTE RATINGS

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 $t=1.0$ us	I_{FSM}	4.0	A

THERMAL CHARACTERISTICS

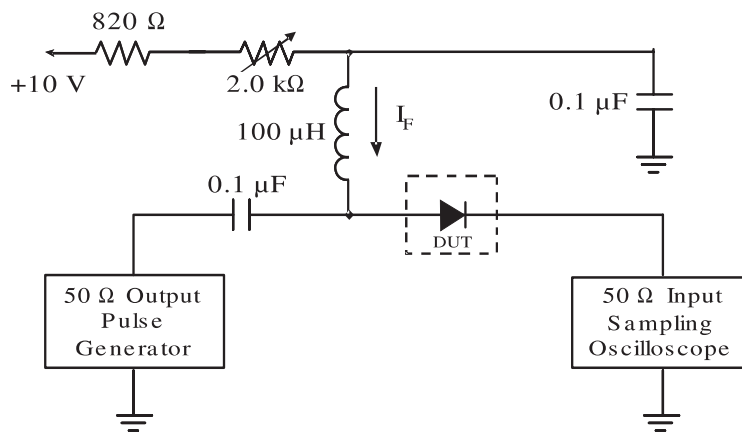
PARAMETER	Symbol	Value	Units
Power Dissipation (Note 1)	P_{TOT}	225	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	556	$^{\circ}C/W$
Junction Temperature	T_J	-55 to 150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}C$

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



ELECTRICAL CHARACTERISTICS (T_J=25°C, unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Breakdown Voltage	V _(BR)	I _R =100uA	100	-	-	V
Reverse Current	I _R	V _R =20V	-	-	0.025	uA
		V _R =75V	-	-	5.0	
Forward Voltage	V _F	I _F =10mA	-	-	1.0	V
Total Capacitance	C _T	V _R =0V, f =1MHz	-	-	4.0	pF
Reverse Recovery Time (Figure 1)	T _{RR}	I _F =I _R =10mA, R _L =100Ω	-	-	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

ELECTRICAL CHARACTERISTICS CURVE

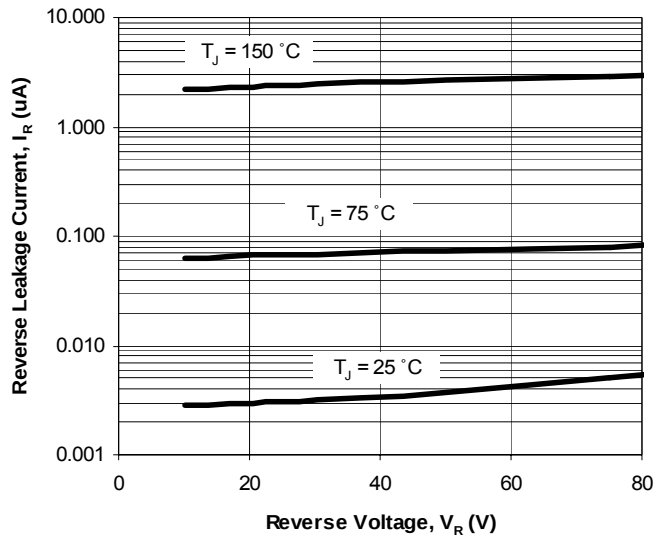


Fig. 2. Reverse Current vs. Reverse Voltage

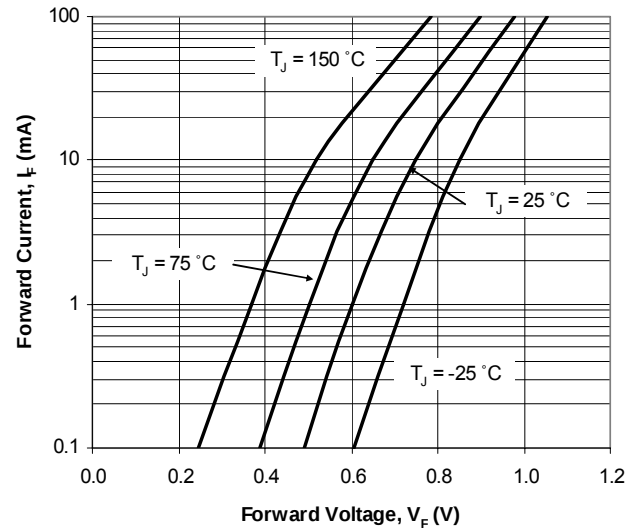


Fig. 3. Forward Current vs. Forward Voltage

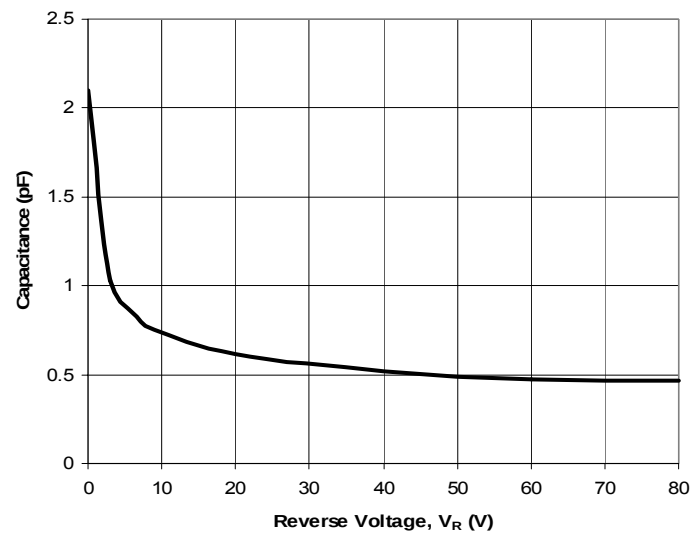
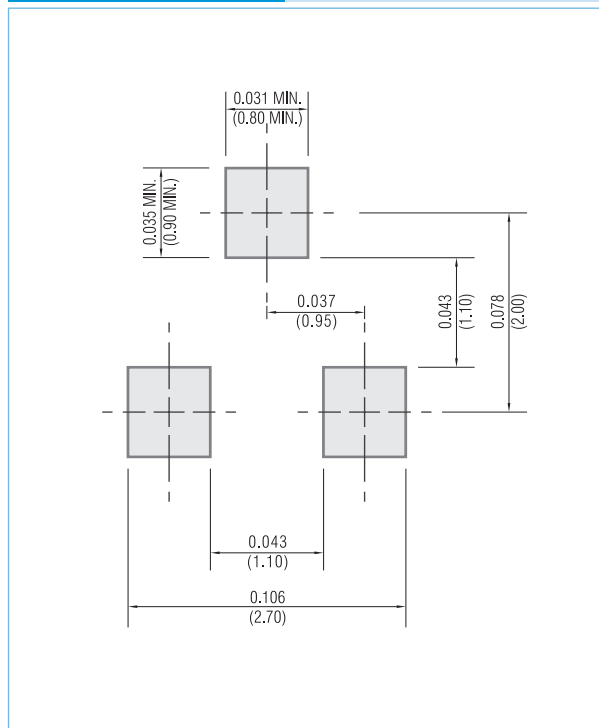


Fig. 4. Capacitance vs. Reverse Voltage

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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