

# MMBD914-EVL

## SURFACE MOUNT SWITCHING DIODE

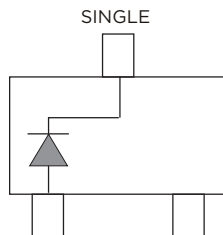
PART NUMBER	PACKAGE	VOLTAGE	POWER	CIRCUIT CONFIGURATION
MMBD7000-□VL E = 7" Embossed T&R (3,000) U = 13" Embossed T&R (12,000)	SOT-23	100V	225mW	SINGLE

### FEATURES:

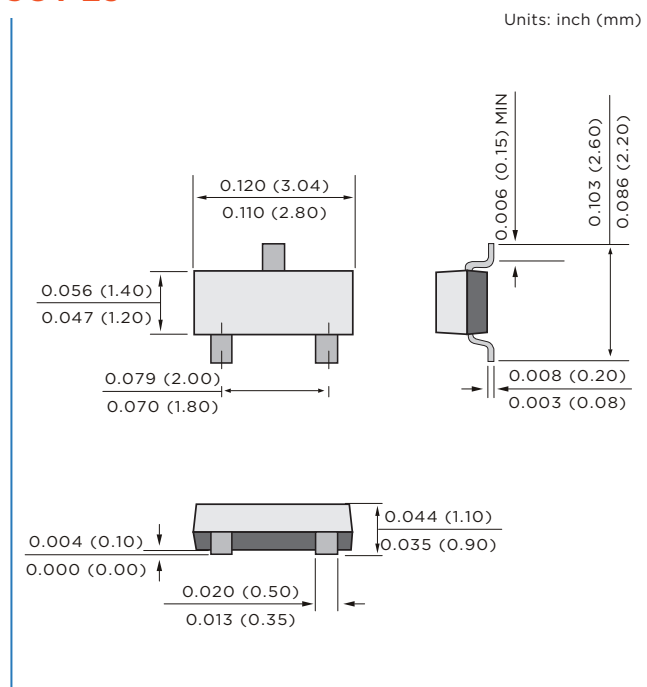
- Very fast reverse recovery ( $T_{rr} < 2$  ns typical)
- Low capacitance (4pF @ 0V typical)
- Surface mount package ideally suited for automatic insertion

### MECHANICAL DATA:

- Case: SOT-23 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounce, 0.0084 gram
- Marking: T1



### SOT-23



### 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

### ENVIRONMENTAL INFORMATION

RoHS Status	10 of 10 Compliant
REACH Status	Compliant
Halogen Status	Halogen Free
Conflict Mineral Status	Conflict Mineral Free
Moisture Sensitivity Level (MSL)	1



### 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	$^{\circ}C/W$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 TO +150	$^{\circ}C$

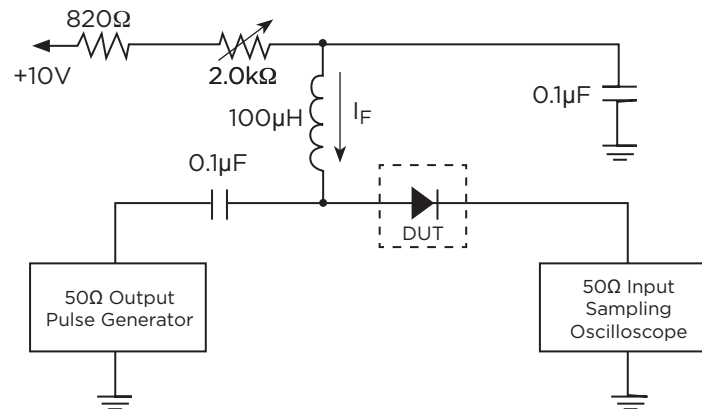
#### NOTES:

1. FR-5 Board = 1X0.75X0.062 in.

### ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Breakdown Voltage	$V_{(RR)}$	$I_R = 100\mu A$	100	-	-	V
Reverse Current	$I_R$	$V_R = 20V$ $V_R = 75V$	-	-	0.025 5.0	$\mu A$
Forward Voltage	$V_F$	$I_F = 10mA$	-	-	1	V
Total Capacitance	$C_J$	$f = 1.0MHz, V_R = 0V$	-	-	4	pF
Reverse Recovery Time (See Figure 1)	$T_{RR}$	$I_F = I_R = 10mA$ $R_L = 100\Omega$	-	-	4	ns

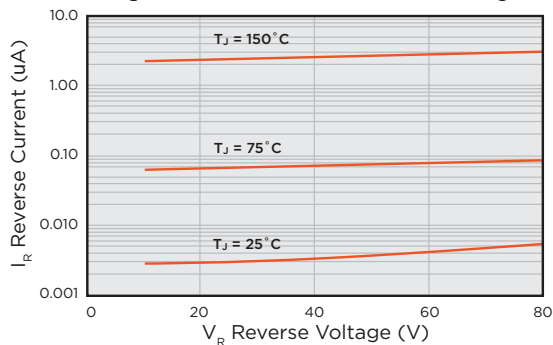
**FIGURE 1. REVERSE RECOVERY TIME EQUIVALENT TEST CIRCUIT**



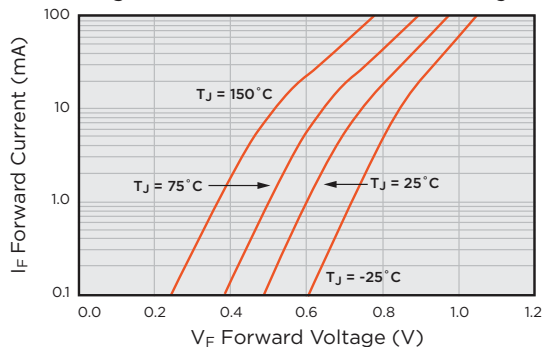
- NOTES:**
1. A 2.0kΩ variable resistor adjusted for a forward current ( $I_F$ )  $T_O$  10mA
  2. Input pulse is adjusted to  $I_{R(peak)}$  is equal to 10mA

### GRAPHS

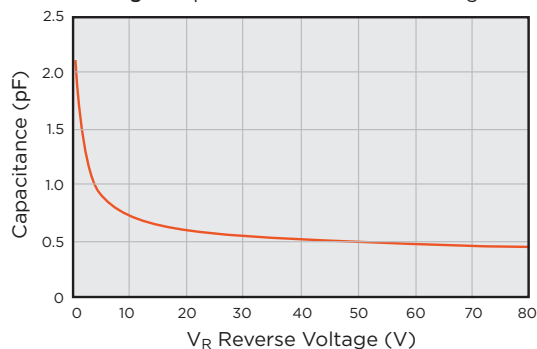
**Fig.1 Reverse Current vs. Reverse Voltage**



**Fig.2 Forward Current vs. Forward Voltage**



**Fig.3 Capacitance vs. Reverse Voltage**



### MOUNTING PAD LAYOUT

Units: inch (mm)

