



# MMBD914TS

## SURFACE MOUNT SWITCHING DIODES

**Voltage**

**100 V**

**Power**

**200 mW**

**SOD-523**

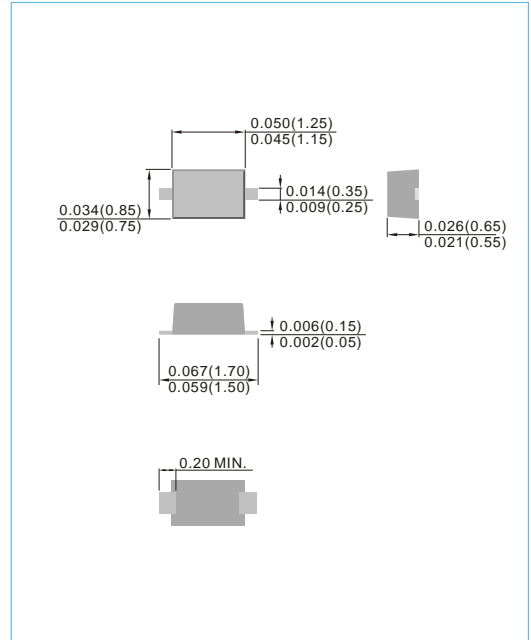
Unit : inch(mm)

### Features

- Very fast reverse recovery ( $T_{rr} < 2\text{ns}$  typical)
- Low capacitance (2pF @0V typical)
- Surface mount package Ideally suited for automatic insertion
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std.  
(Halogen Free)

### Mechanical Data

- Case: SOD-523 plastic case
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00005 ounces, 0.0014 grams
- Marking: T1



### ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
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 $t=1\mu\text{s}$	$I_{FSM}$	4	A

### THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation (Note 1)	$P_{TOT}$	200	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	635	$^{\circ}\text{C/W}$
Junction Temperature Range	$T_J$	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^{\circ}\text{C}$

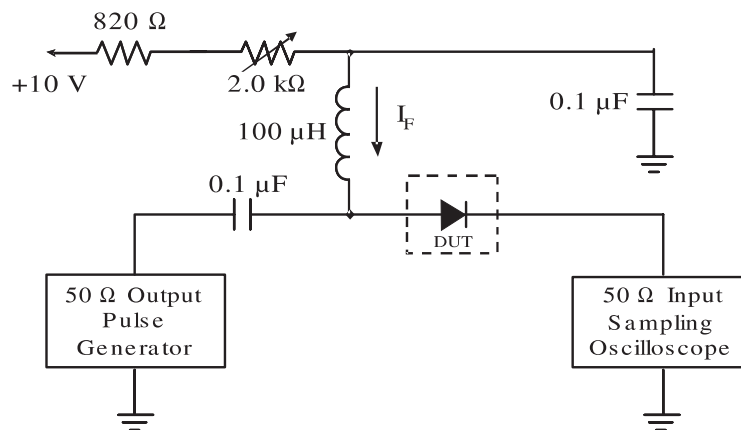
Note : 1.FR-4 Board = 70 x 60 x 1mm



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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP	MAX.	UNIT
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	100	-	-	V
Reverse Current	$I_R$	$V_R=20\text{V}$ $V_R=75\text{V}$	-	-	0.025 5	$\mu\text{A}$
Forward Voltage	$V_F$	$I_F=10\text{mA}$	-	-	1	V
Total Capacitance	$C_J$	$V_R=0\text{V}$ $f=1\text{MHz}$	-	-	4	pF
Reverse Recovery Time (Figure 1)	$T_{RR}$	$I_F = I_R=10\text{mA}$ $R_L=100\Omega$	-	-	4	ns



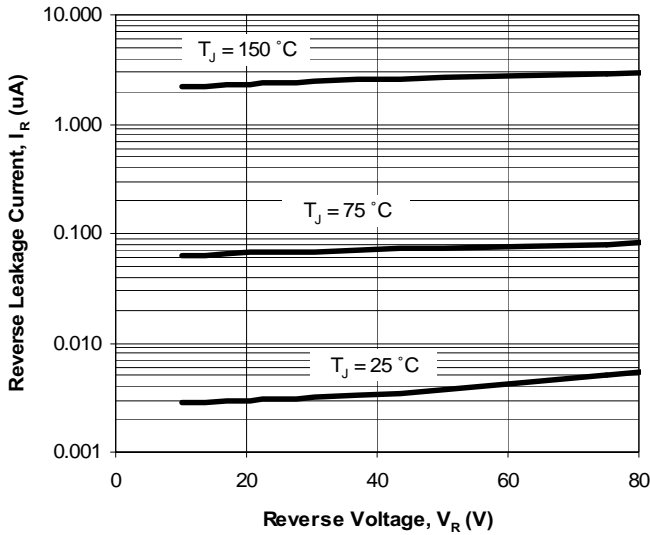
- Notes:
1. A 2.0k $\Omega$  variable resistor adjusted for a forward current ( $I_F$ ) to 10mA
  2. Input pulse is adjusted to  $I_{R(\text{peak})}$  is equal to 10mA

Figure 1. REVERSE RECOVERY TIME EQUIVALENT TEST CIRCUIT

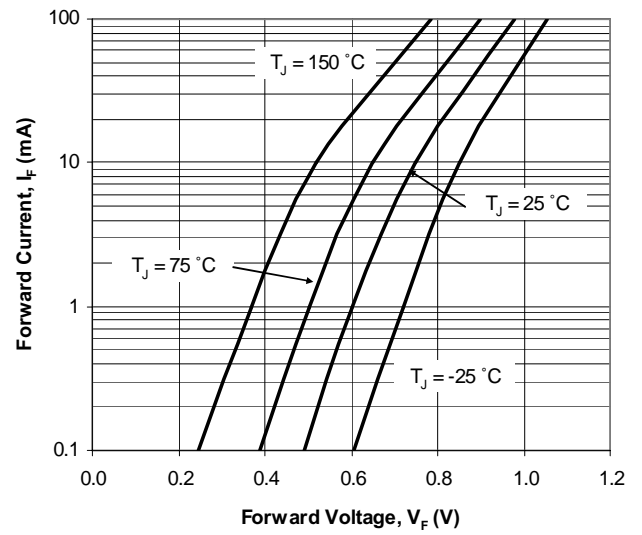


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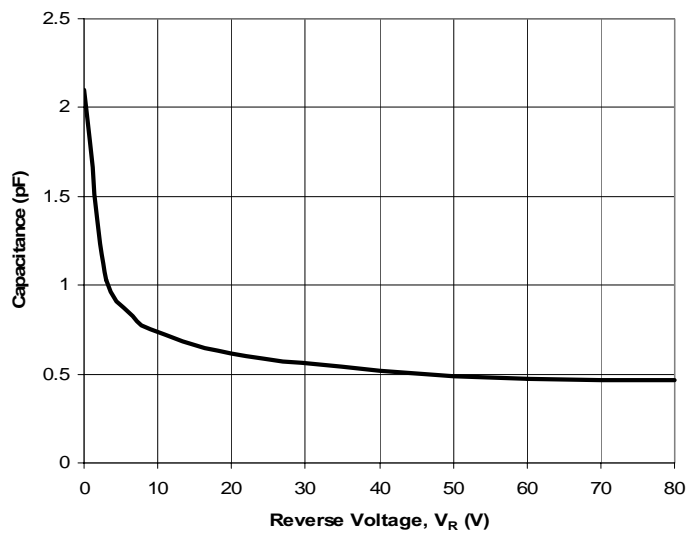
## ELECTRICAL CHARACTERISTICS CURVE



**Fig. 2. Reverse Current vs. Reverse Voltage**



**Fig. 3. Forward Current vs. Forward Voltage**

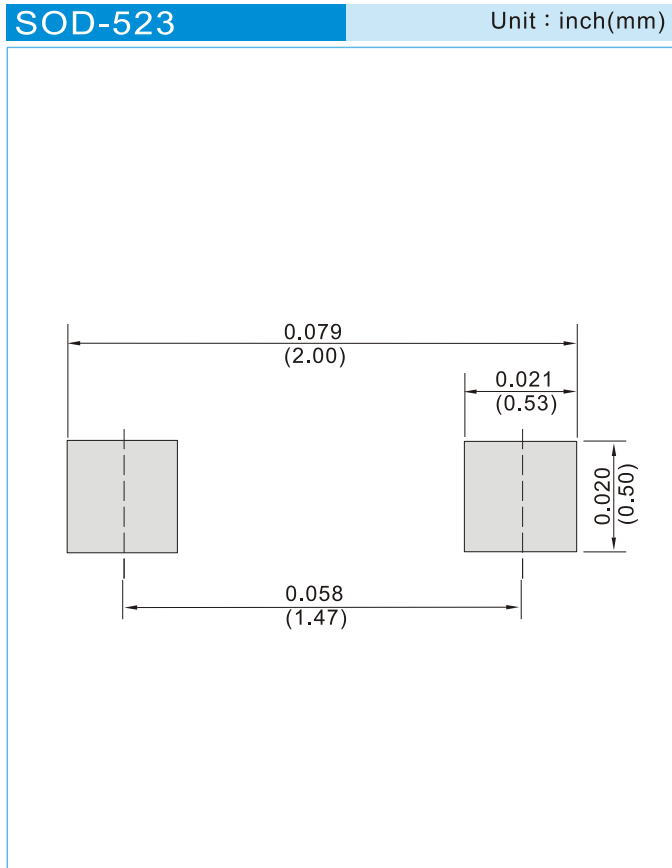


**Fig. 4. Capacitance vs. Reverse Voltage**



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information  
T/R – 12K per 13" plastic Reel  
T/R – 5K per 7" plastic Reel



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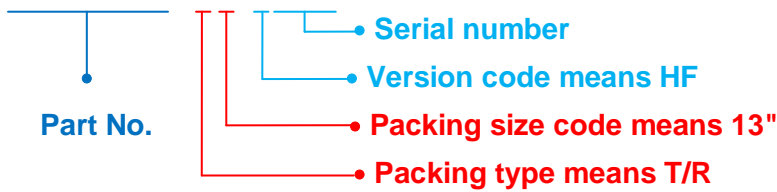
**Part No\_packing code\_Version**

MMBD914TS\_R1\_00001

MMBD914TS\_R2\_00001

**For example :**

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> -5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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