

DATA SHEET

MMBD6050WS

SURFACE MOUNT SWITCHING DIODES

VOLTAGE	80 Volts	POWER	200mWatts
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SOD-323	Unit : inch(mm)
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FEATURES

- Very fast reverse recovery ($t_{rr} < 2.0$ ns typical)
- Low capacitance (< 2.5 pF @ 0V)
- Surface mount package ideally suited for automatic insertion.
- Lead free in comply with EU RoHS 2002/95/EC directives. .
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

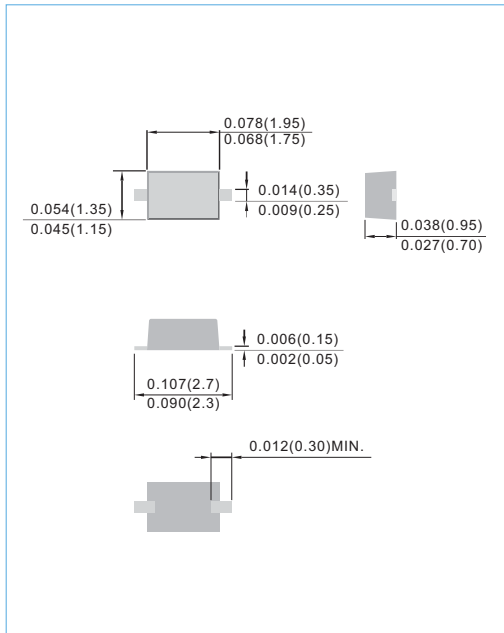
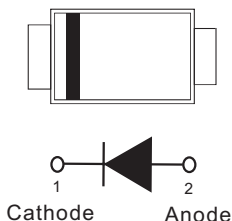
Case: SOD-323 plastic

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

Approx weight : 0.0001 ounces , 0.004 grams

Polarity : Color band cathode

Marking : T2



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 $t=1.0$ μ s	I_{FSM}	4.0	A

THERMAL CHARACTERISTICS

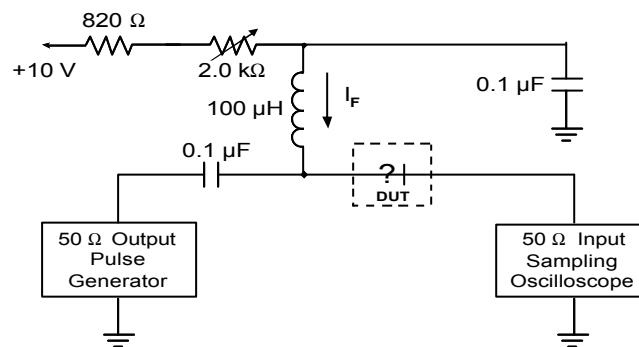
PARAMETER	SYMBOL	VALUE	UNITS
Power Dissipation ⁽¹⁾	P_{TOT}	200	mW
Thermal Resistance, Junction to Ambient ⁽¹⁾	$R_{\theta JA}$	625	$^{\circ}C/W$
Junction Temperature	T_J	-55 to 150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}C$

NOTE:

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

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	$I_F = 1\text{mA}$ $I_F = 100\text{mA}$	0.55 0.85	-	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 $2.0\text{k}\Omega$ 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

ELECTRICAL CHARACTERISTIC CURVES

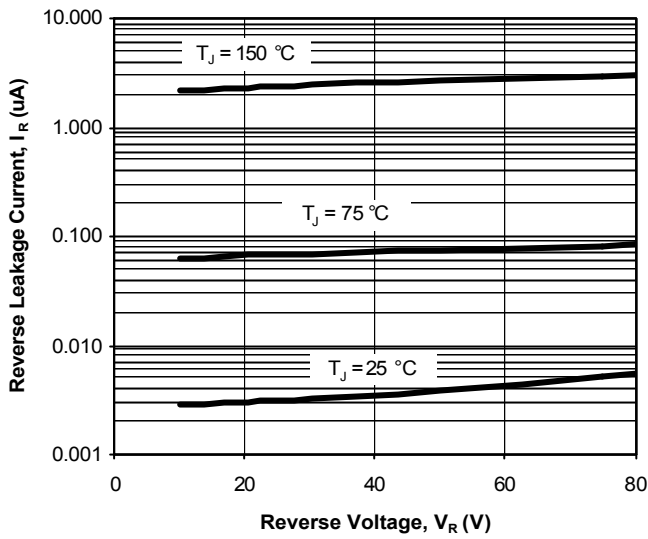


Fig. 2. Reverse Current vs. Reverse Voltage

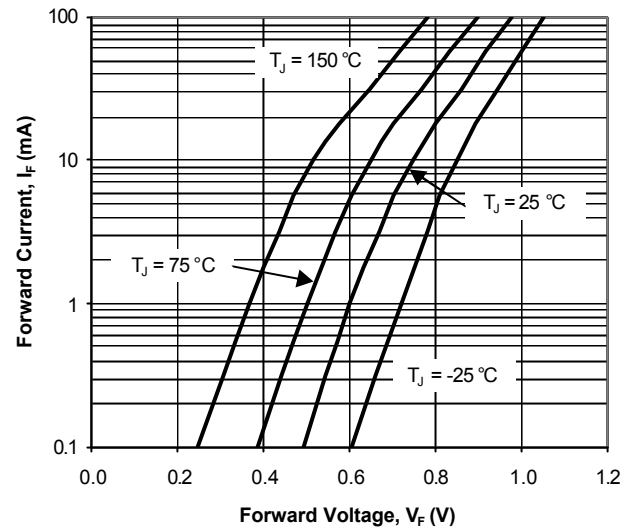


Fig. 3. Forward Current vs. Forward Voltage

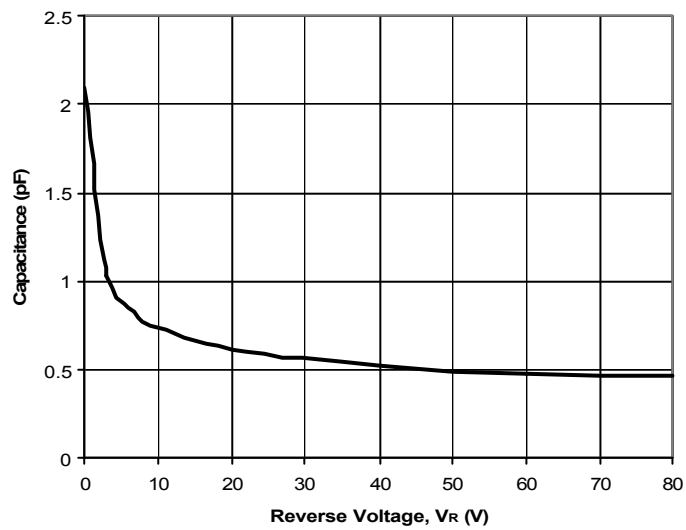
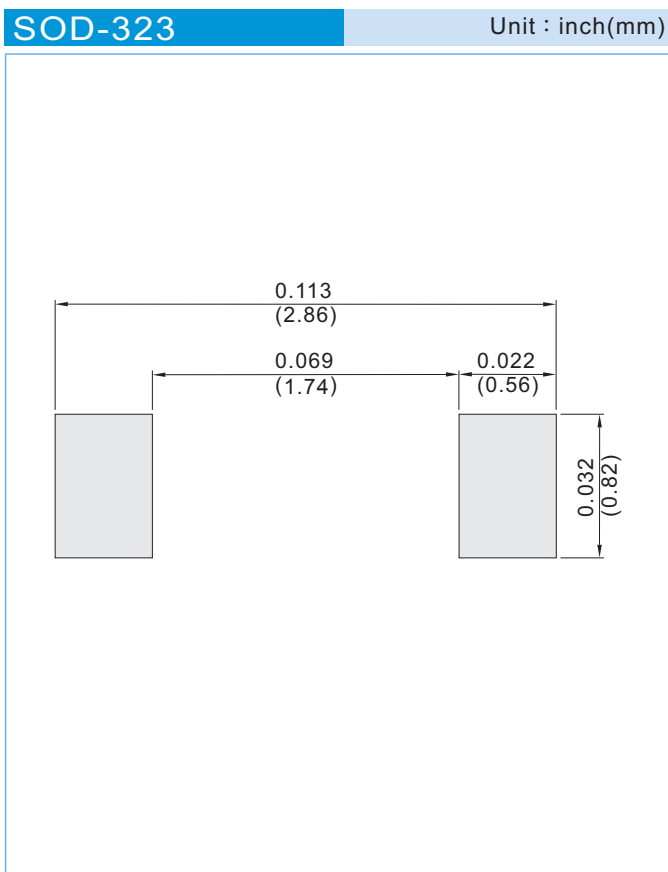


Fig. 4. Capacitance vs. Reverse Voltage

MOUNTING PAD LAYOUT



ORDER INFORMATION

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

LEGAL STATEMENT

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For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
T/B	A	N/A	0	HF	0	serial number
T/R	R	7"	1	RoHS	1	serial number
B/P	B	13"	2			
T/P	T	26mm	X			
TRR	S	52mm	Y			
TRL	L	PBCU	U			
FORMING	F	PBCD	D			

Part No_packing code_Version

MMBD6050WS_R1_00001

MMBD6050WS_R2_00001