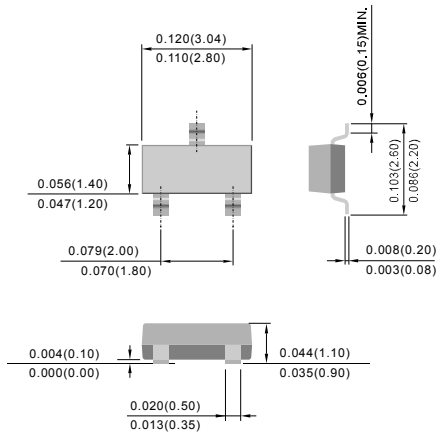
PANJIT SEMI CONDUCTOR

MMBD6050

SURFACE MOUNT SWITCHING DIODES

VOLTAGE 80 Volts **POWER** 225 mWatts

SOT-23 Unit: inch (mm)



FEATURES

- Very fast reverse recovery (trr < 2.0 ns typical)
- Low capacitance (< 2.5pF @ 0V)
- Surface mount package ideally suited for automatic insertion.
- Lead free in comply with EU RoHS 2011/65/EU directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

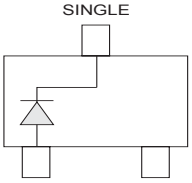
Case: SOT-23 plastic
Terminals : Solderable per MIL-STD-750,Method 2026
Approx weight : 0.0084 grams
Marking : T2

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 µs	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	°C/W
Junction Temperature	T_J	-50 to 150	°C
Storage Temperature	T_{STG}	-50 to 150	°C

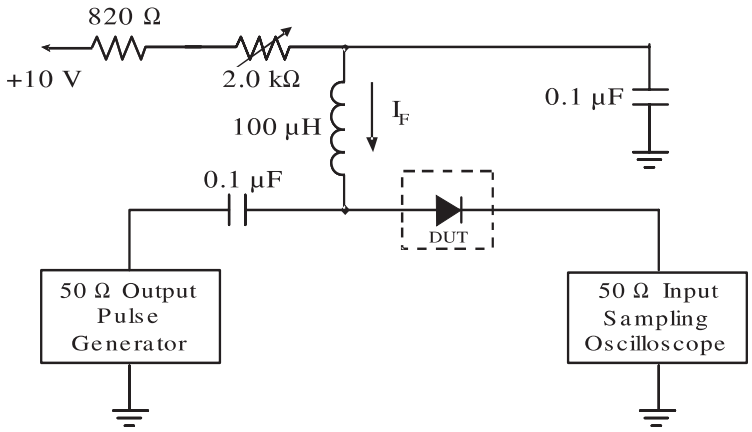


NOTE:
1. FR-4 Board=70 x 60 x 1mm.

MMBD6050

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Reverse Breakdown Voltage	V_{BR}	I_R=100μA	80	-	-	V
Reverse Current	I_R	V_R=50V	–	-	100	nA
Forward Voltage	V_F	I_F=1mA I_F=100mA	0.55 0.85	-	0.7 1.1	V
Total Capacitance	C_T	V_R=0V, f =1MHz	-	-	2.5	pF
Reverse Recovery Time (Figure 1)	trr	I_F=I_R=10mA, R_L=100 Ω	-	-	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 CHARACTERISTIC CURVES

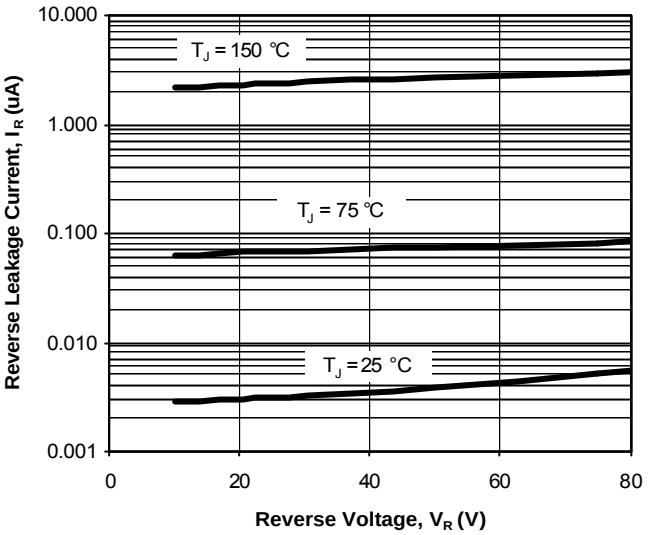


Fig. 2. Reverse Current vs. Reverse Voltage

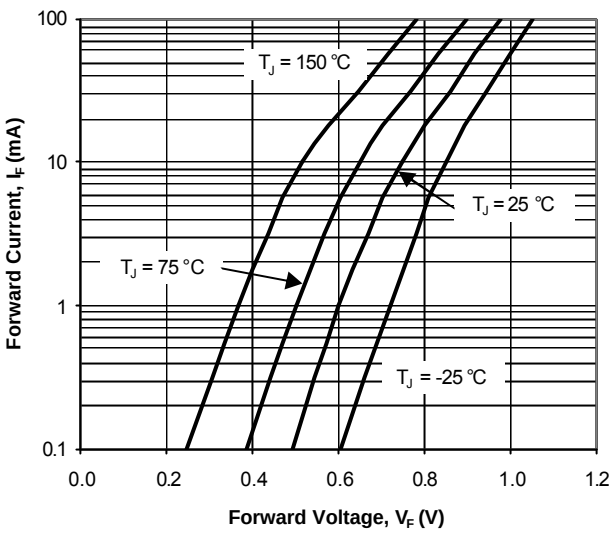


Fig. 3. Forward Current vs. Forward Voltage

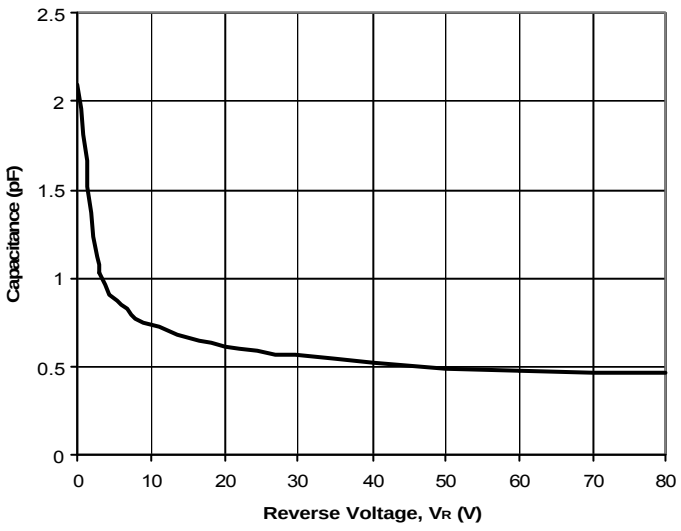
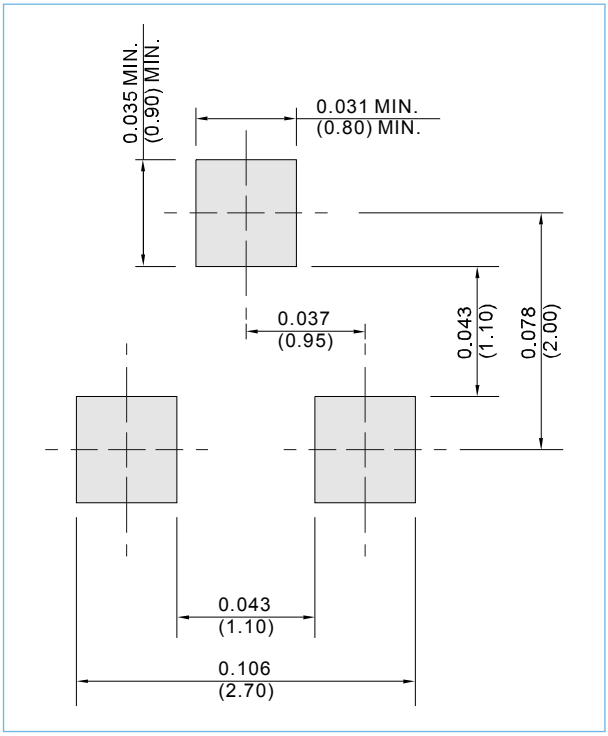


Fig. 4. Capacitance vs. Reverse Voltage

MMBD6050

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

MMBD6050

Part No_packing code_Version

MMBD6050_R1_00001
MMBD6050_R2_00001

For example :

RB500V-40_R2_00001

- Part No.
- Packing type means T/R
- Packing size code means 13"
- Version code means HF
- Serial number

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

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.