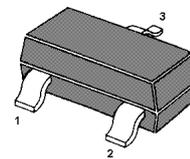
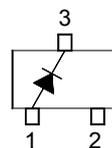


## MMBD6050 Silicon Epitaxial Planar Switching Diode

### Features

- Small package
- Low forward voltage
- Fast reverse recovery time
- Small total capacitance



Marking Code: **5D**  
SOT-23 Plastic Package

### Applications

- Ultra high speed switching application

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

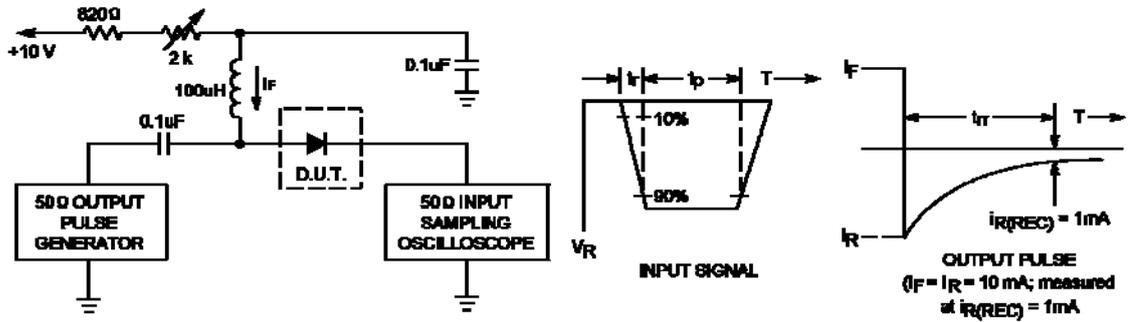
Parameter	Symbol	Value	Unit
Reverse Voltage	$V_R$	70	V
Forward Current	$I_F$	200	mA
Non-repetitive Peak Forward Surge Current ( $t = 1\text{ }\mu\text{s}$ )	$I_{FSM}$	4	A
Power Dissipation	$P_{tot}$	350	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 1\text{ mA}$ at $I_F = 100\text{ mA}$	$V_F$	0.55 0.85	0.7 1.1	V
Reverse Current at $V_R = 50\text{ V}$	$I_R$	-	100	nA
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	70	-	V
Diode Capacitance at $V_R = 0$ , $f = 1\text{ MHz}$	$C_T$	-	2.5	pF
Reverse Recovery Time at $I_F = I_R = 10\text{ mA}$ , $I_{R(REC)} = 1\text{ mA}$	$t_{rr}$	-	4	ns



FIGURE 1. RECOVERY TIME EQUIVALENT TEST CIRCUIT



- Notes: 1. A 2.0kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 10mA.
- 2. Input pulse is adjusted so  $I_{R(peak)}$  is equal to 10mA.
- 3.  $t_p \gg t_{rr}$

FIGURE 2. FORWARD VOLTAGE

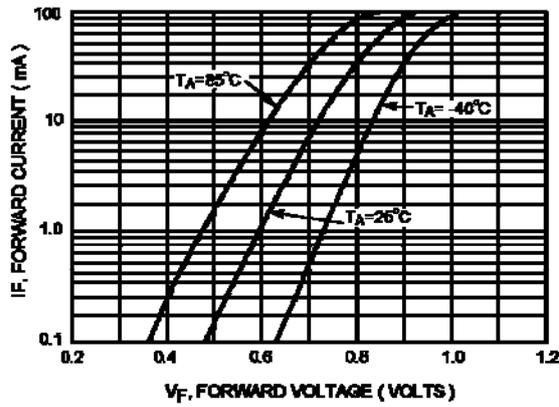


FIGURE 3. LEAKAGE CURRENT

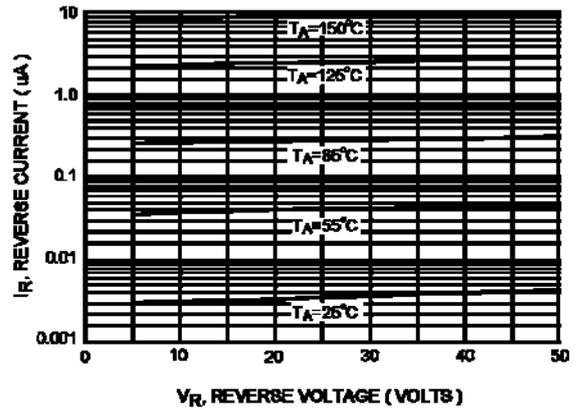
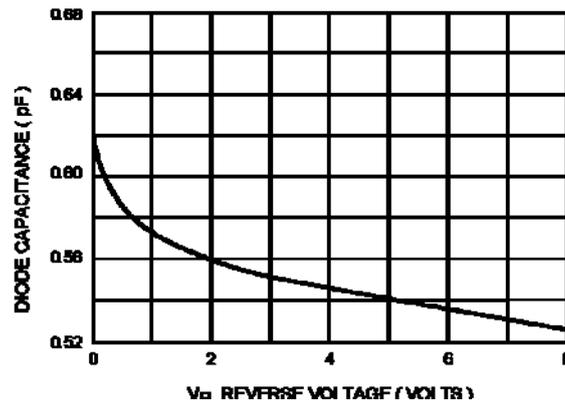


FIGURE 4. CAPACITANCE





## PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23

