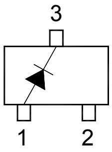
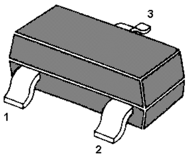
MMBD6050

Silicon Epitaxial Planar Switching Diode

Features

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





Marking Code: **5D**
TO-236 Plastic Package

Applications

- Ultra high speed switching application

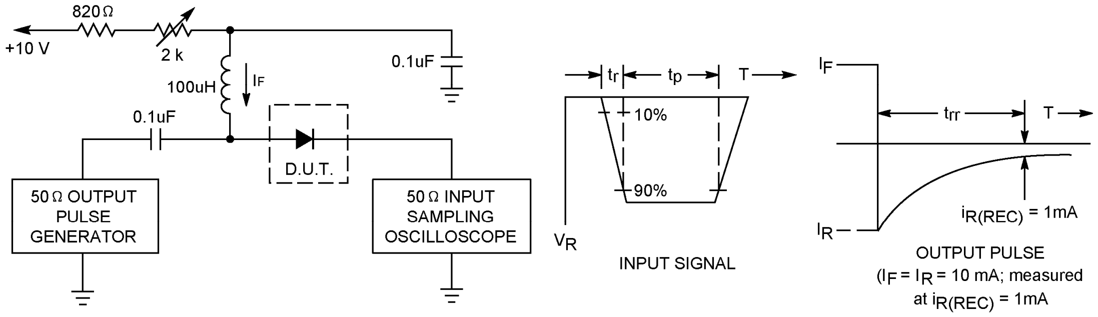
Absolute Maximum Ratings (T_a = 25 °C)

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

Characteristics at T_a = 25 °C

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

FIGURE 1. RECOVERY TIME EQUIVALENT TEST CIRCUIT



Notes: 1. A 2.0k Ω 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 » t_{rr}

FIGURE 2. FORWARD VOLTAGE

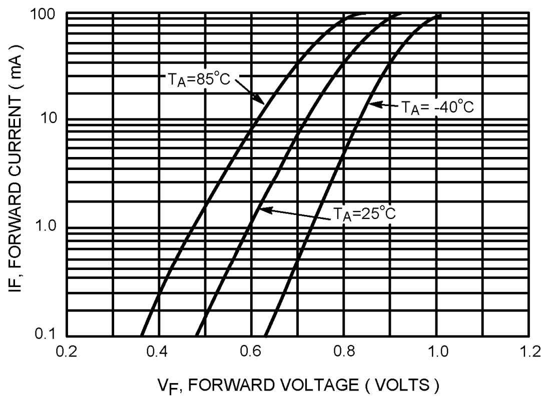


FIGURE 3. LEAKAGE CURRENT

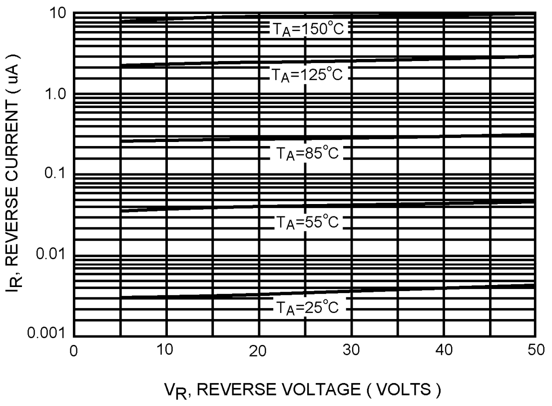
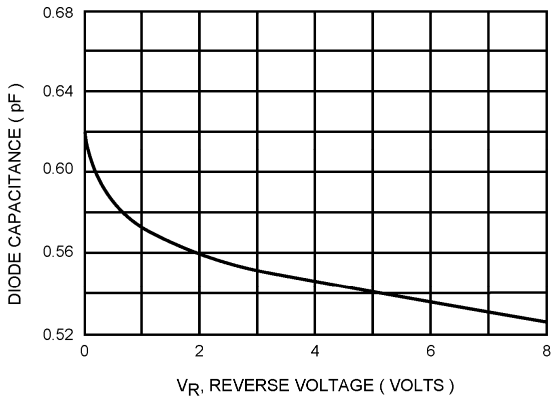


FIGURE 4. CAPACITANCE



Dated : 15/06/2009