

MMBD6050

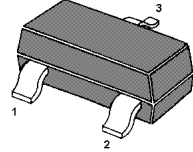
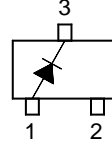
SILICON EPITAXIAL PLANAR SWITCHING DIODE

Features

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

Applications

- Ultra high speed switching application



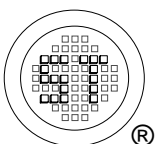
Marking Code: **5D**
SOT-23 Plastic Package

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
Peak Forward Surge Current	I_{FSM}	500	mA
Power Dissipation	P_d	300	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	- 55 to + 150	$^\circ\text{C}$

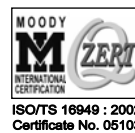
Characteristics at $T_a = 25\text{ }^\circ\text{C}$

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



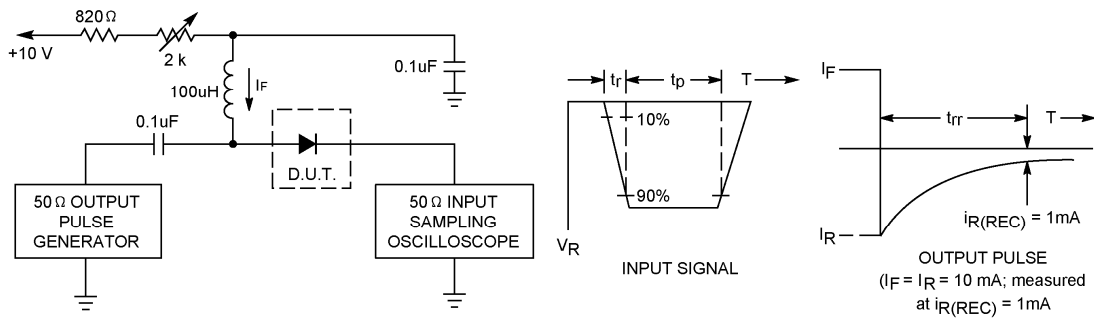
SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



Dated : 10/10/2008

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

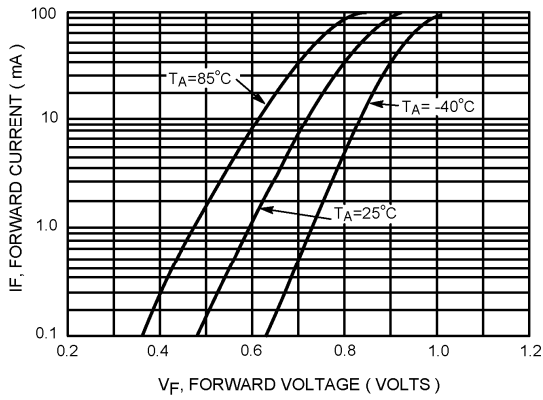


FIGURE 3. LEAKAGE CURRENT

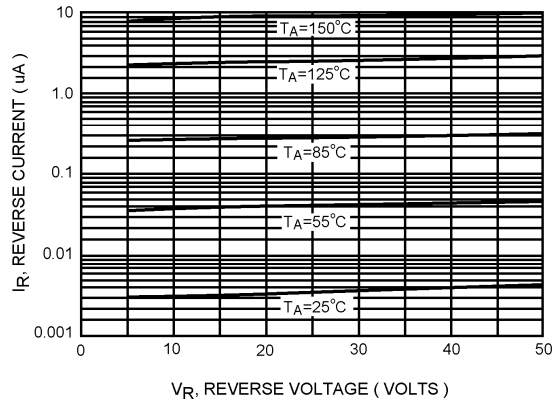
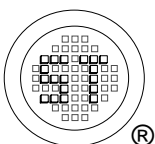
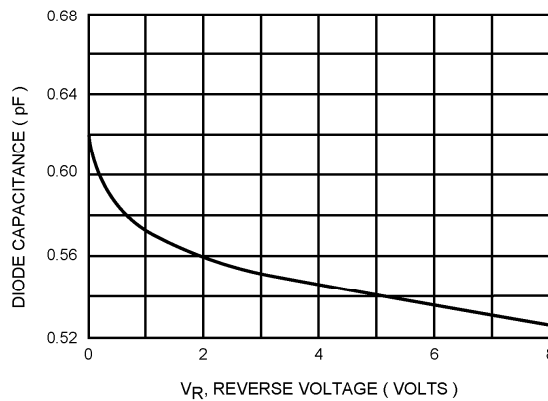


FIGURE 4. CAPACITANCE



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ISO/TS 16949 : 2002
 Certificate No. 05103



ISO 14001:2004
 Certificate No. 71116



ISO 9001:2000
 Certificate No. 0506098