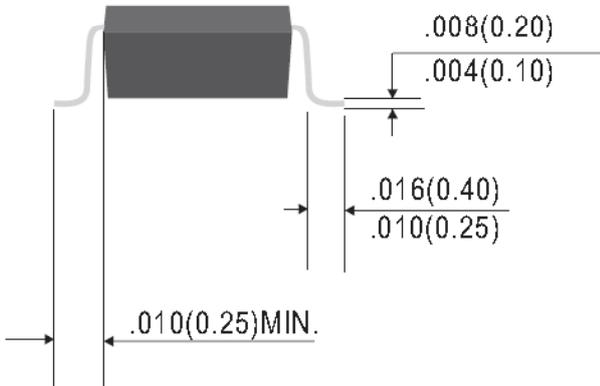
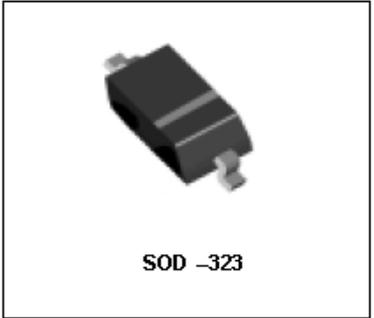
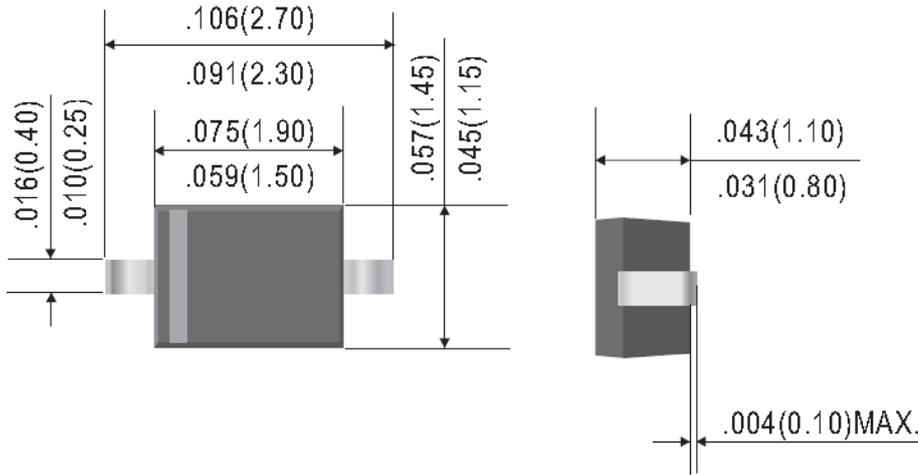




MMDL6050



Surface Mount Switching Diode



Dimensions in inches and (millimeters)

FEATURES

- Small plastic SMD package
- Pb-Free package is available
- RoHS product for packing code suffix "G"
- Halogen free product for packing code suffix "H"
- Moisture Sensitivity Level 1
- Polarity: Color band denotes cathode end

MARKING: 5A

**MMDL6050****Surface Mount Switching Diode**

Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)			
Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	70	Vdc
Peak Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	500	mAdc

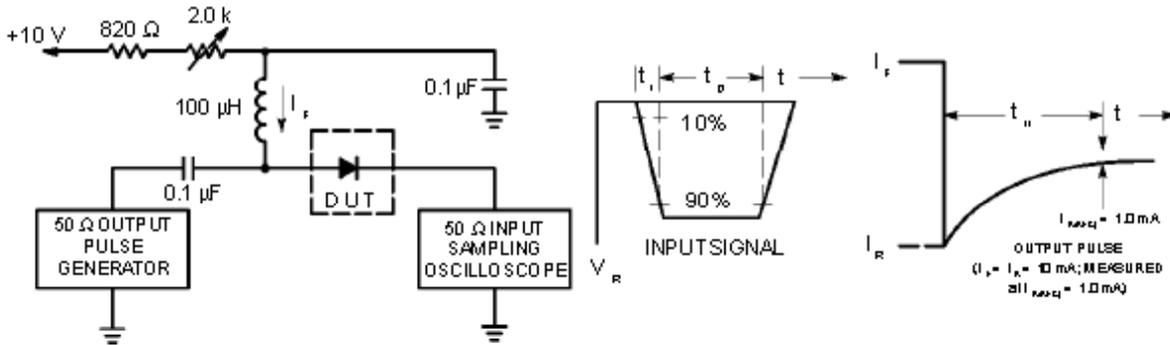
Thermal Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)			
Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board ⁽¹⁾ Derate above 25°C	P_D	200	mW
$T_A = 25^\circ\text{C}$			
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	635	$^\circ\text{C/W}$
Operating/ Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^\circ\text{C}$

1. FR-4 Minimum Pad

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)				
Characteristic	Symbol	Min.	Max.	Unit
OFF Characteristics				
Reverse Breakdown Voltage ($I_{(BR)} = 100 \mu\text{Adc}$)	$V_{(BR)}$	70	—	Vdc
Reverse Voltage Leakage Current ($V_R = 50 \text{ Vdc}$)	I_R	—	0.1	μAdc
Forward Voltage ($I_F = 1.0 \text{ mAdc}$) ($I_F = 100 \text{ mAdc}$)	V_F	0.55 0.85	0.7 1.1	Vdc
Diode Capacitance ($V_R = 0, f = 1.0 \text{ MHz}$)	C_D	—	2.5	pF
Reverse Recovery Time ($I_F = I_R = 10 \text{ mAdc}, I_{R(REC)} = 1.0 \text{ mAdc}$)	t_{rr}	—	4	ns



Surface Mount Switching Diode



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

Figure 1. Recovery Time Equivalent Test Circuit

TYPICAL CHARACTERISTICS

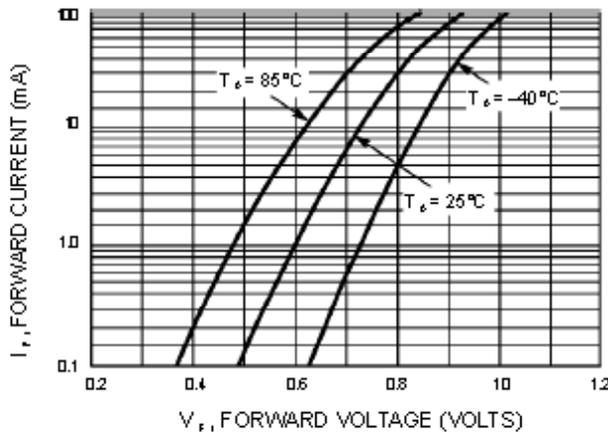


Figure 2. Forward Voltage

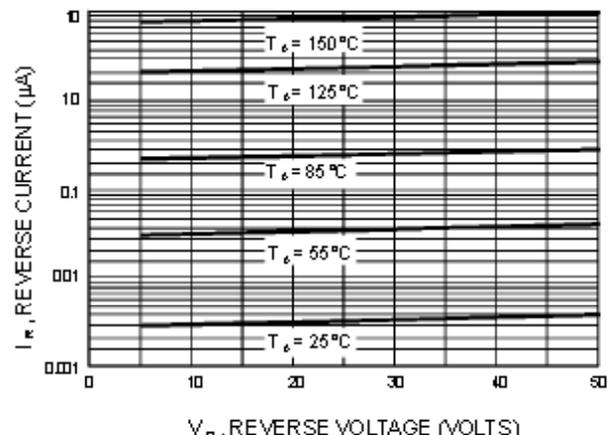


Figure 3. Leakage Current

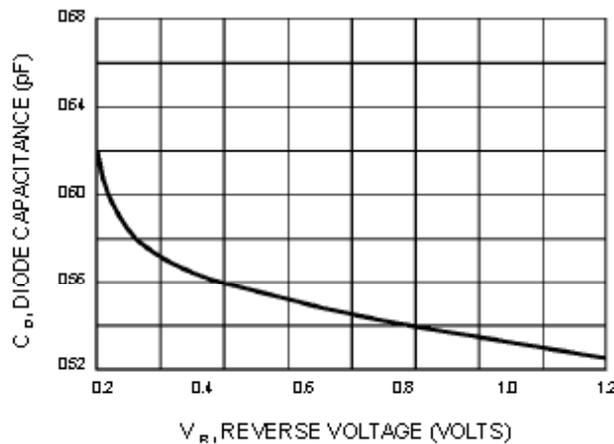


Figure 4. Capacitance