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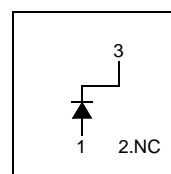
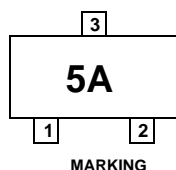
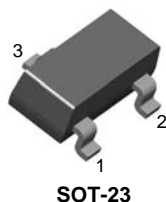
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MMBD6050

Small Signal Diode



Connection Diagram



Absolute Maximum Ratings * T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V _{RRM}	Maximum Repetitive Reverse Voltage	70	V
I _{F(AV)}	Average Rectified Forward Current	200	mA
I _{FSM}	Non-repetitive Peak Forward Surge Current Pulse Width = 1.0 second Pulse Width = 1.0 microsecond	1.0	A
		2.0	A
T _{STG}	Storage Temperature Range	-55 to +150	°C
T _J	Operating Junction Temperature	-55 to +150	°C

* These ratings are limiting values above which the serviceability of the diode may be impaired.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

Symbol	Parameter	Value	Units
P _D	Power Dissipation	350	mW
R _{θJA}	Thermal Resistance, Junction to Ambient	357	°C/W

Electrical Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Max.	Units
V _R	Breakdown Voltage	I _R = 100μA	70		V
V _F	Forward Voltage	I _F = 1mA	0.55	0.7	V
		I _F = 100mA	0.85	1.1	
I _R	Reverse Leakage	V _R = 50V		100	nA
C _T	Total Capacitance	V _R = 0V, f = 1.0MHz		2.5	pF
t _{rr}	Reverse Recovery Time	I _F = I _R = 10mA, I _{RR} = 1.0mA, R _L = 100Ω		4.0	ns

Typical Performance Characteristics

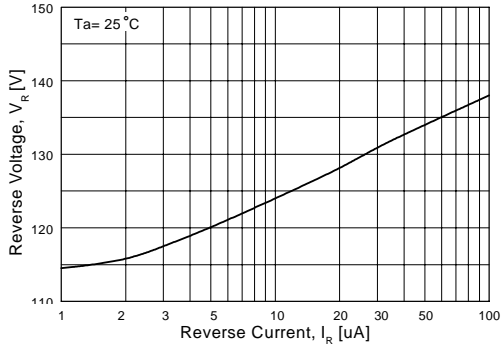


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100uA

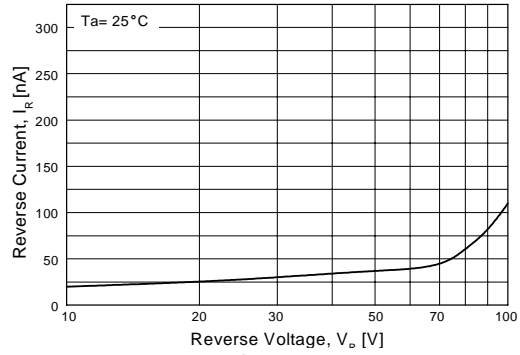


Figure 2. Reverse Current vs Reverse Voltage
IR - 10 to 100 V

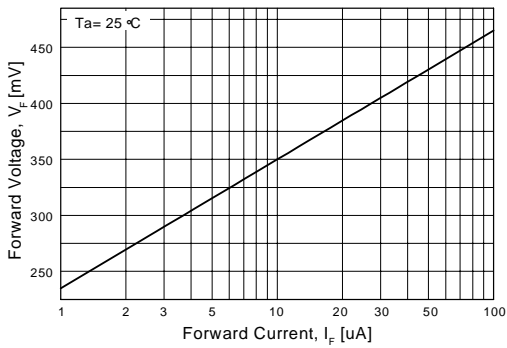


Figure 3. Forward Voltage vs Forward Current
VF - 1.0 to 100 uA

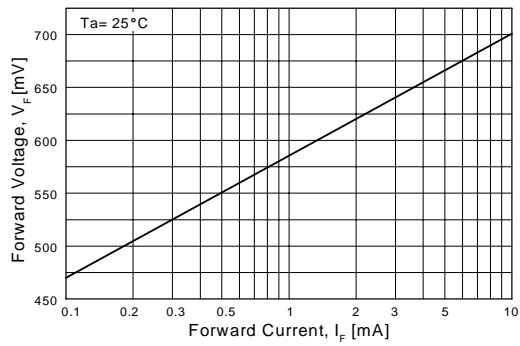


Figure 4. Forward Voltage vs Forward Current
VF - 0.1 to 10 mA

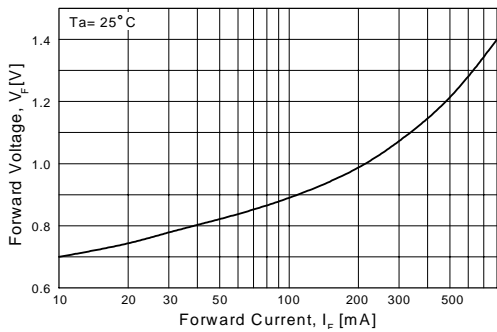


Figure 5. Forward Voltage vs Forward Current
VF - 10 - 800 mA

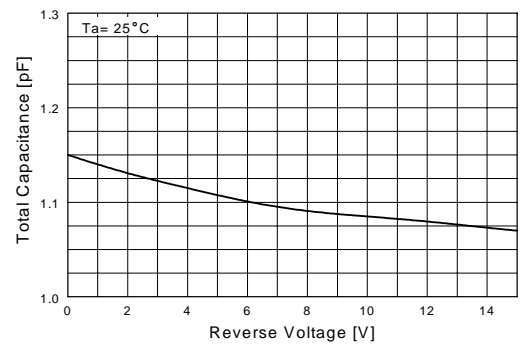


Figure 6. Total Capacitance vs Reverse Voltage

Typical Performance Characteristics (Continued)

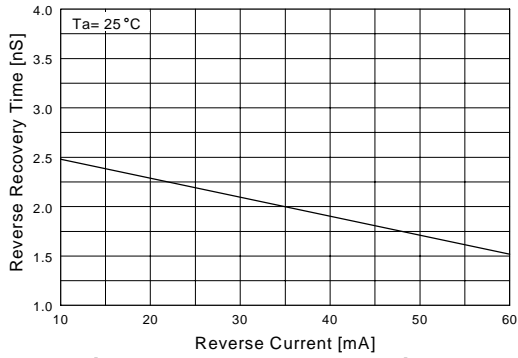


Figure 7. Reverse Recovery Time vs Reverse Current
TRR - IR 10 mA vs 60 mA

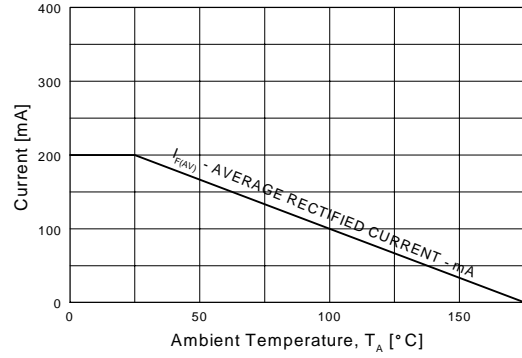
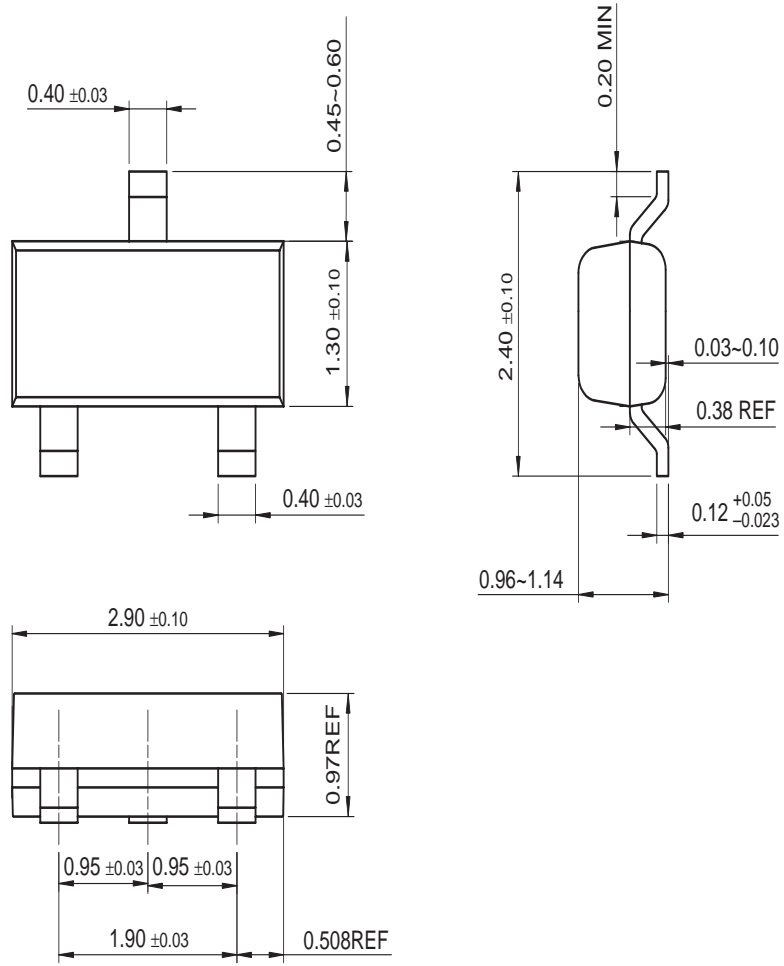


Figure 8. Average Rectified Current ($I_{F(AV)}$) versus Ambient Temperature (T_A)

Mechanical Dimensions

SOT-23





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