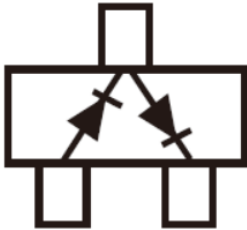




DESCRIPTION

The MMBD7000 is available in SOT-23 package.



Style C

ORDERING INFORMATION

Package Type	Part Number
SOT-23	MMBD7000
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

FEATURES

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance
- Available in SOT-23 package

MECHANICAL DATA

Case: SOT-23, Molded Plastic

Case material-UL Flammability Rating

Classification 94V-0

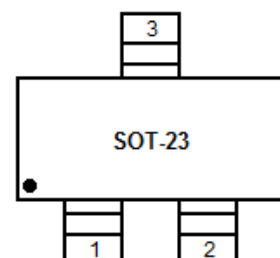
Moisture sensitivity: Level 1 per J-STD-020A

Terminals: Solder per MIL-STD-202, Method 208

Polarity: See Diagram

Weight: 0.008 grams (approx.)

PIN DESCRIPTION





ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise specified

V _{RM} , Non-Repetitive Peak Reverse Voltage	100V	
V _{RRM} , Peak Repetitive Reverse Voltage	75V	
V _{RWM} , Working Peak Reverse Voltage		
V _R , DC Blocking Voltage		
V _{R(RMS)} , RMS Reverse Voltage	53V	
I _{FM} , Forward Continuous Current ^{NOTE1}	300mA	
I _{FSM} , Non-Repetitive Peak Forward Surge Current	@ t = 1.0μs	2.0A
	@ t = 1.0s	1.0A
P _D , Power Dissipation ^{NOTE1}	350mW	
R _{θJA} , Thermal Resistance Junction to Ambient Air ^{NOTE1}	357°C/W	
T _J , T _{STG} , Operating and Storage Temperature Range	-65°C ~ +150°C	

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise specified

Parameter	Symbol	Characteristic	Min	Max	Unit
Reverse Breakdown Voltage ^{NOTE2}	V _(BR)	I _R = 100μA	75	-	V
Forward Voltage ^{NOTE2}	V _F	I _F = 1.0mA	0.55	0.70	V
		I _F = 10mA	0.67	0.82	
		I _F = 50mA	0.75	1.10	
		I _F = 150mA	-	1.25	
Reverse Current	I _R	V _R = 50V	-	1.0	μA
		V _R = 100V	-	3.0	μA
		V _R = 50V, T _J = 125°C	-	100	μA
		V _R = 20V	-	25	nA
Total Capacitance	C _T	V _R = 0V, f = 1.0MHz	-	2.0	pF
Reverse Recovery Time	t _{rr}	I _F = I _R = 10mA I _{tr} = 0.1 x I _R , R _L = 100Ω	-	4.0	ns

NOTE1: Part mounted on FR-4 board with recommended pad layout.

NOTE2: Short duration test pulse used to minimize self-heating effect.



TYPICAL PERFORMANCE CHARACTERISTICS

Figure. 1 Forward Characteristics

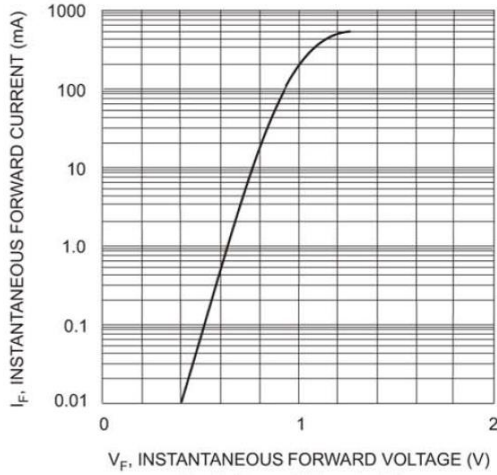


Figure. 2 Leakage Current vs. Junction Temperature

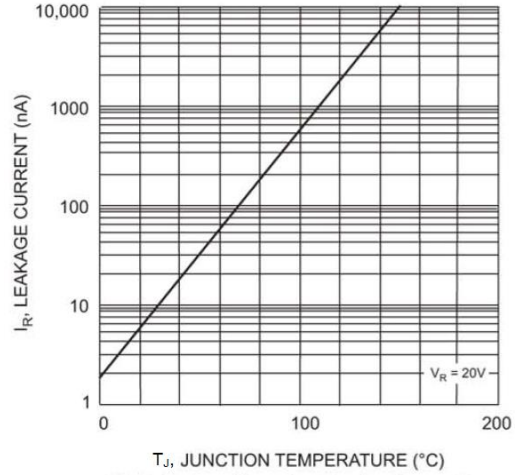
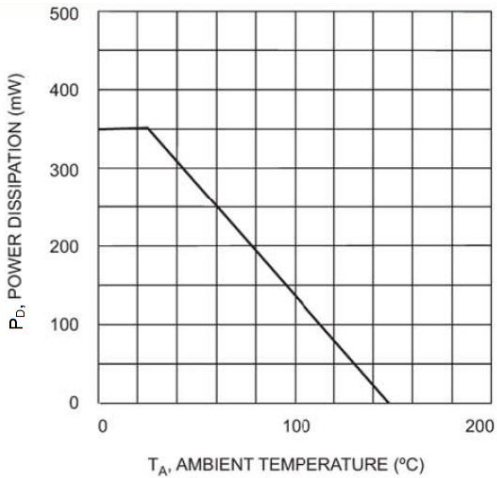


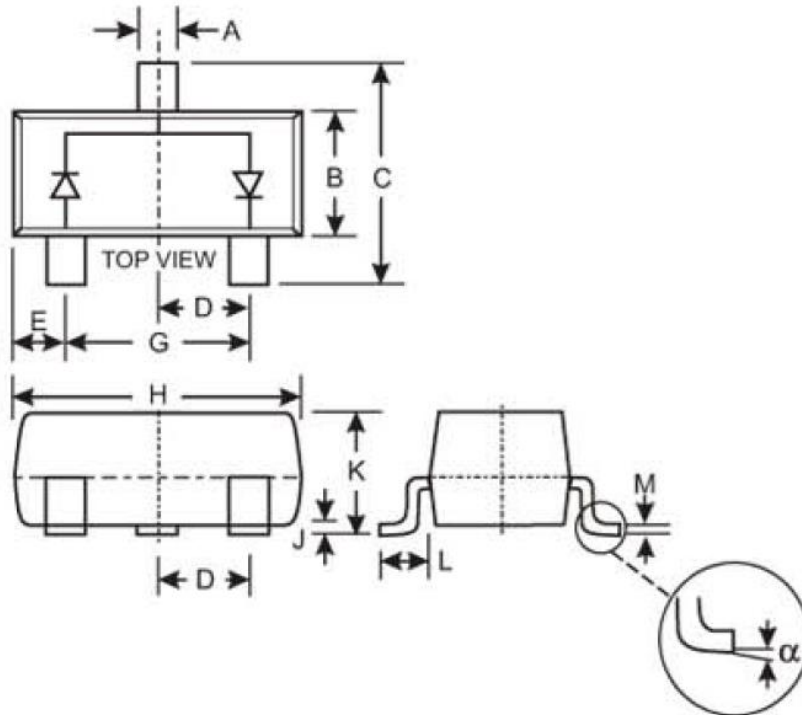
Figure. 3 Power Dissipation Derating





PACKAGE INFORMATION

Dimension in SOT-23 Package (Unit: mm)



DIM	MIN	MAX
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.85	0.80
α	0°	8°



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