

Silicon Epitaxial Planar Switching Diode

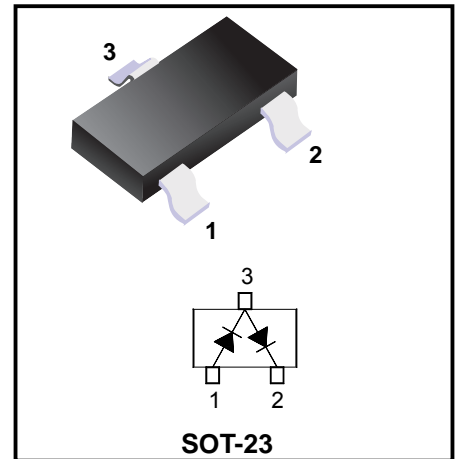
Features

- ◆Fast switching speed
- ◆High Conductance

Applications

- ◆For general purpose switching

Marking Code	
MMBD7000	A7



Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Reverse Voltage	V_R	100	V
Forward Current	I_F	200	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	1 2	A
		at t = 1 s at t = 1 μ s	
Power Dissipation	P_d	350	mW
Junction and Storage Temperature Range	T_j, T_{stg}	- 65 to + 150	°C

Characteristics at Ta = 25°C

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100 \mu A$	$V_{(BR)R}$	100	-	V
Forward Voltage at $I_F = 1 \text{ mA}$ at $I_F = 10 \text{ mA}$ at $I_F = 100 \text{ mA}$ at $I_F = 150 \text{ mA}$	V_F	0.55 0.67 0.75 -	0.7 0.82 1.1 1.25	V
Reverse Current at $V_R = 50 \text{ V}$ at $V_R = 100 \text{ V}$ at $V_R = 50 \text{ V}, T_j = 125^\circ C$	I_R	- - -	1 3 100	μA
Total Capacitance at $V_R = 0 \text{ V}, f = 1 \text{ MHz}$	C_T	-	2	pF
Reverse Recovery Time at $I_F = I_R = 10 \text{ mA}, I_{tr} = 0.1 \times I_R, R_L = 100 \Omega$	t_{rr}	-	4	ns

Typical Characteristics

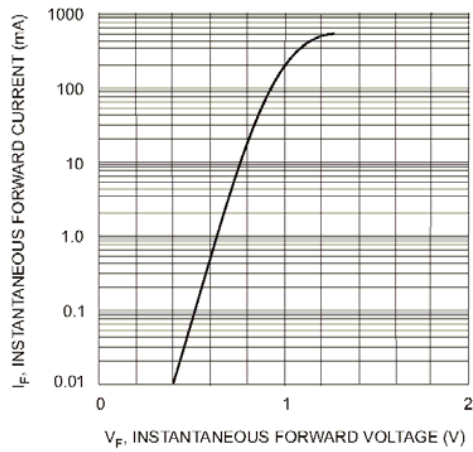


Fig. 1 Forward Characteristics

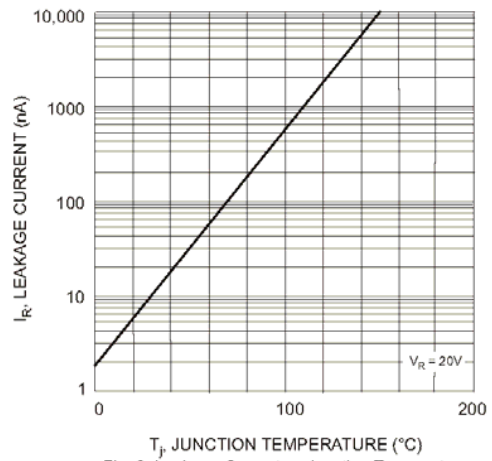


Fig. 2 Leakage Current vs Junction Temperature

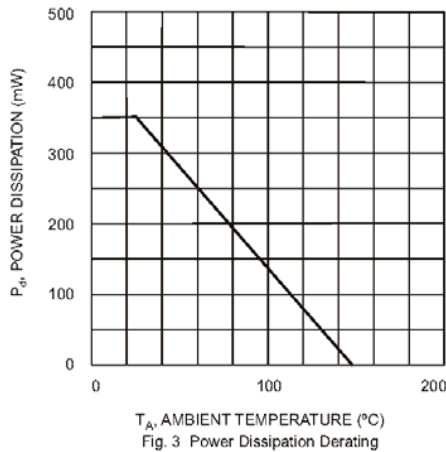


Fig. 3 Power Dissipation Derating

Ordering information

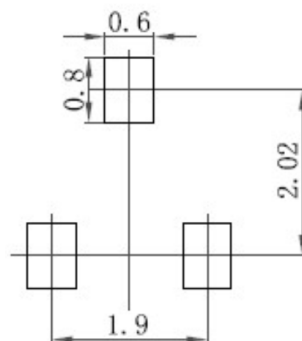
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-23

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



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