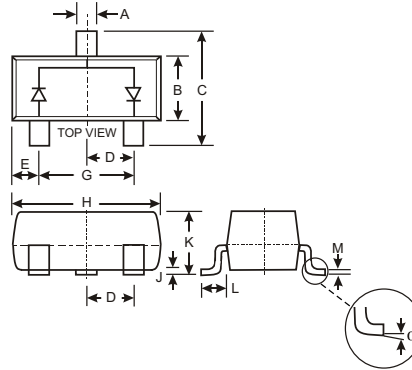


### Features

Fast Switching Speed  
 Surface Mount Package Ideally Suited for Automatic Insertion  
 For General Purpose Switching Applications  
 High Conductance

### Mechanical Data

Case: SOT-23, Molded Plastic  
 Case material - UL Flammability Rating Classification 94V-0  
 Moisture sensitivity: Level 1 per J-STD-020A  
 Terminals: Solderable per MIL-STD-202, Method 208  
 Polarity: See Diagram  
 Marking: KJH (See Page 2)  
 Weight: 0.008 grams (approx.)



SOT-23		
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
	0	8
All Dimensions in mm		

### Maximum Ratings @ $T_A = 25\text{ C}$ unless otherwise specified

Characteristic	Symbol	MMBD7000	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	75	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current (Note 1)	$I_{FM}$	300	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\text{ s}$ @ $t = 1.0\text{ s}$	$I_{FSM}$	2.0 1.0	A
Power Dissipation (Note 1)	$P_d$	350	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{JA}$	357	C/W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150	C

### Electrical Characteristics @ $T_A = 25\text{ C}$ unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	75		V	$I_R = 100\text{ A}$
Forward Voltage (Note 2)	$V_F$	0.55 0.67 0.75	0.70 0.82 1.10 1.25	V	$I_F = 1.0\text{ mA}$ $I_F = 10\text{ mA}$ $I_F = 50\text{ mA}$ $I_F = 150\text{ mA}$
Reverse Current (Note 2)	$I_R$		1.0 3.0 100 25	A A A nA	$V_R = 50\text{ V}$ $V_R = 100\text{ V}$ $V_R = 50\text{ V}, T_j = 125\text{ C}$ $V_R = 20\text{ V}$
Total Capacitance	$C_T$		2.0	pF	$V_R = 0, f = 1.0\text{ MHz}$
Reverse Recovery Time	$t_{rr}$		4.0	ns	$I_F = I_R = 10\text{ mA}$ , $I_{rr} = 0.1 \times I_R, R_L = 100$

Notes: 1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.  
 2. Short duration test pulse used to minimize self-heating effect.

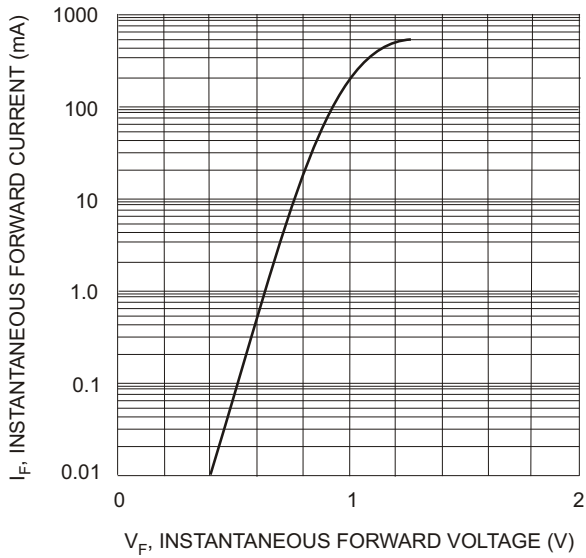


Fig. 1 Forward Characteristics

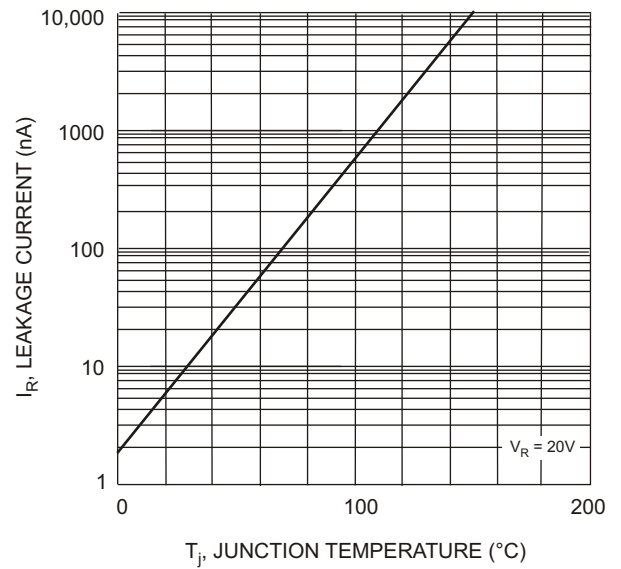


Fig. 2 Leakage Current vs Junction Temperature

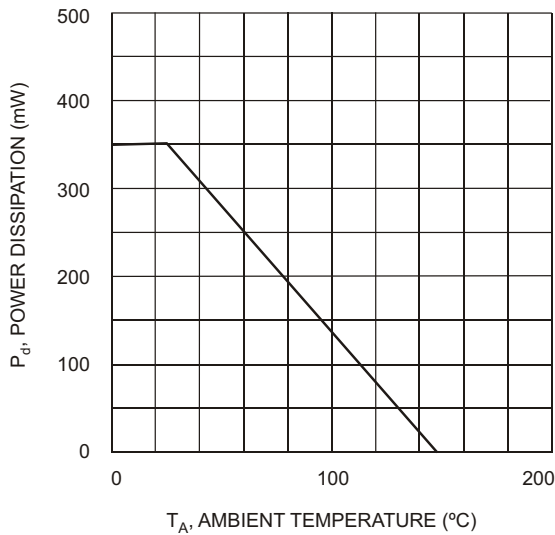


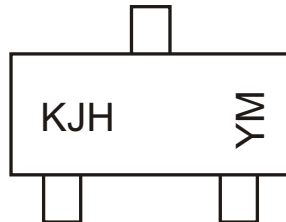
Fig. 3 Power Dissipation Derating

## Ordering Information (Note 3)

Device	Packaging	Shipping
MMBD7000-7	SOT-23	3000/Tape & Reel

Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

## Marking Information



KJH = Product Type Marking Code  
 YM = Date Code Marking  
 Y = Year ex: N = 2002  
 M = Month ex: 9 = September

Date Code Key

Year	1999	2000	2001	2002	2003	2004	2005
Code	K	L	M	N	P	R	S

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D