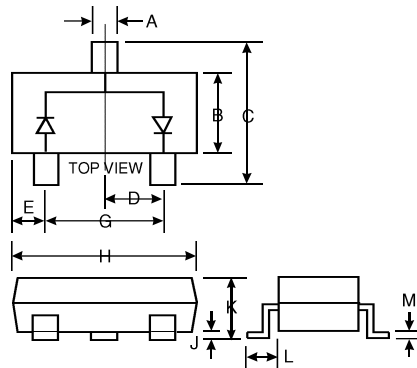


### Features

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  
 Terminals: Solderable per MIL-STD-202, Method 208  
 Polarity: See Diagram  
 Weight: 0.008 grams (approx.)



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.19	1.40
C	2.10	2.50
D	0.89	1.05
E	0.45	0.61
G	1.78	2.05
H	2.65	3.05
J	0.013	0.15
K	0.89	1.10
L	0.45	0.61
M	0.076	0.178
All Dimensions in mm		

### Maximum Ratings @ T<sub>A</sub> = 25 C unless otherwise specified

Characteristic	Symbol	MMBD7000	Unit
Non-Repetitive Peak Reverse Voltage	V <sub>RM</sub>	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	75	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	53	V
Forward Continuous Current (Note 1)	I <sub>FM</sub>	300	mA
Average Rectified Output Current (Note 1)	I <sub>O</sub>	150	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0 s @ t = 1.0s	I <sub>FSM</sub>	2.0 1.0	A
Power Dissipation (Note 1)	P <sub>d</sub>	350	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R <sub>JA</sub>	357	K/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	C

### Electrical Characteristics @ T<sub>A</sub> = 25 C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V <sub>(BR)R</sub>	75		V	I <sub>R</sub> = 100 A
Forward Voltage	V <sub>FM</sub>	0.55 0.67 0.75	0.70 0.82 1.10 1.25	V	I <sub>F</sub> = 1.0mA I <sub>F</sub> = 10mA I <sub>F</sub> = 50mA I <sub>F</sub> = 150mA
Peak Reverse Current	I <sub>RM</sub>		1.0 3.0 100 25	A A A nA	V <sub>R</sub> = 50V V <sub>R</sub> = 100V V <sub>R</sub> = 50V, T <sub>j</sub> = 125 C V <sub>R</sub> = 20V
Junction Capacitance	C <sub>j</sub>		2.0	pF	V <sub>R</sub> = 0, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>		4.0	ns	I <sub>F</sub> = I <sub>R</sub> = 10mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100

Notes: 1. Valid provided that terminals are kept at ambient temperature.  
 2. Test Period <3000 s.

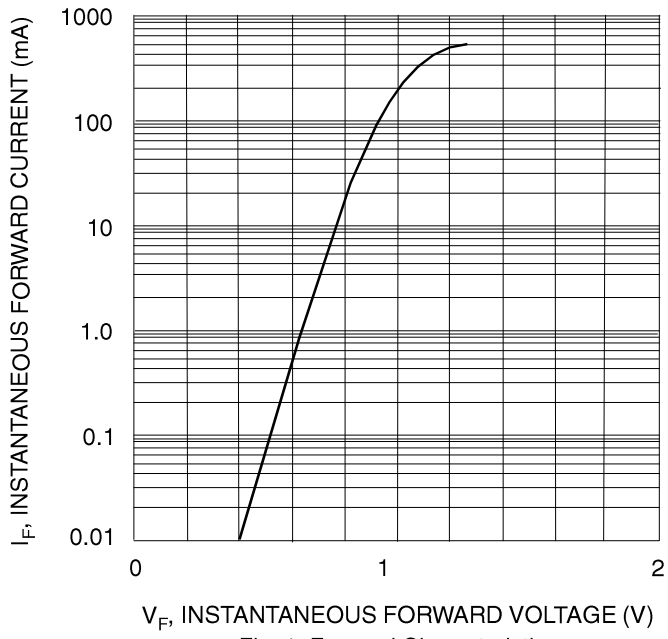


Fig. 1 Forward Characteristics

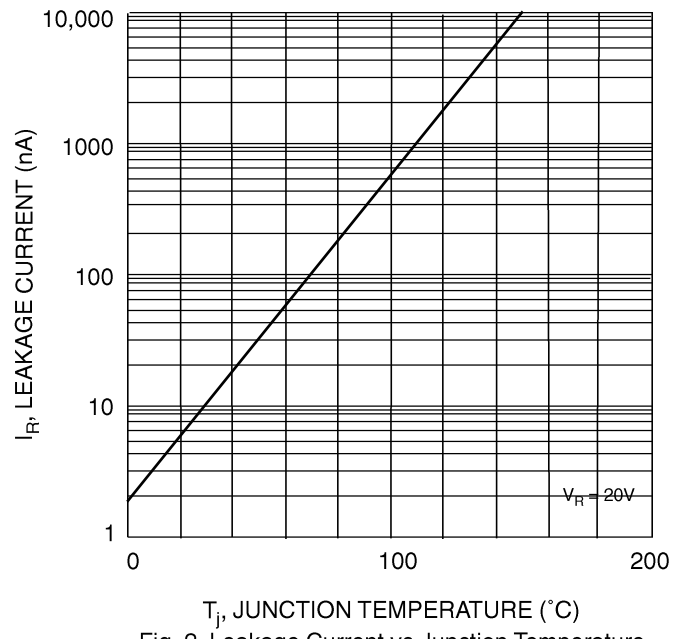


Fig. 2 Leakage Current vs Junction Temperature