

Surface Mount Switching Diode

(Pb) Lead(Pb)-Free

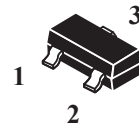
Features:

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

Mechanical Data:

- *Case: SOT-23 Molded Plastic
- *Terminals: Solderable Per MIL-STD-202, Method 208
- *Polarity: See Equivalent Circuit Diagram
- *Weight: 0.008grams(approx)

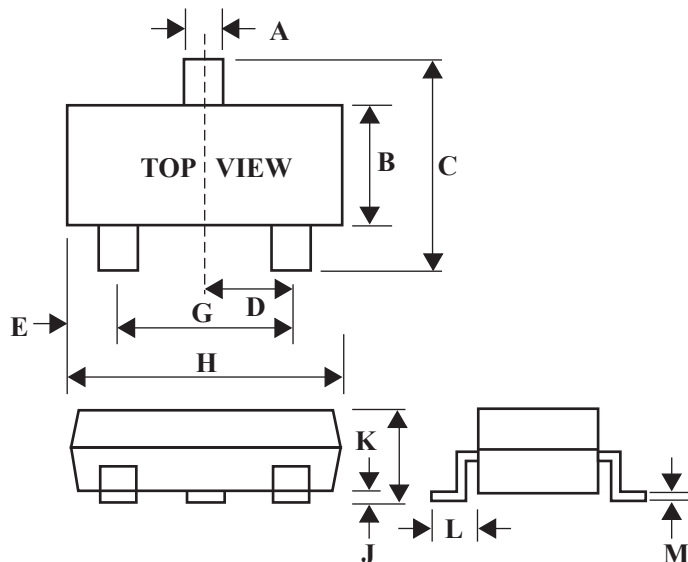
SWITCHING DIODE
225mAMPERS
300VOLTS



SOT-23

SOT-23 Outline Dimensions

Unit:mm



Dim	Min	Max
A	0.35	0.51
B	1.19	1.40
C	2.10	3.00
D	0.85	1.05
E	0.46	1.00
G	1.70	2.10
H	2.70	3.10
J	0.01	0.13
K	0.89	1.10
L	0.30	0.61
M	0.076	0.25


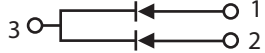
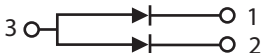
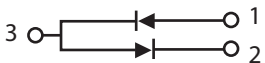
Maximum Ratings ($T_A=25\text{ }^{\circ}\text{C}$ Unless otherwise noted)

Characteristic	Symbol	MMBD2004/C/A/S	Unit
Working Peak Reverse Voltage	V_{RRM}	300	Volts
Peak Repetitive Reverse Voltage	V_{RWM}	240	Volts
DC Blocking Voltage	V_R		
Forward Continuous Current	I_F	225	mA
Repetitive Peak Forward Current	I_{FRM}	625	mA
Non-Repetitive Peak Forward Surge Current @ $t=1.0\mu\text{s}$ @ $t=1.0\text{s}$	I_{FSM}	4.0 1.0	A
Power Dissipation	P_d	350	mW
Thermal Resistance Junction to Ambient Air	R_{qJA}	357	K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25\text{ }^{\circ}\text{C}$ Unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage $I_R=100\mu\text{A}$	$V_{(BR)R}$	300	-	Volts
Forward Voltage $I_F=100\text{mA}$	V_F	-	1.0	Volts
Reverse Leakage @Rated DC Blocking Voltage	I_R	-	100	nA _{dc}
Total Capacitance ($V_R=0\text{V}$, $f=1.0\text{MHz}$)	C_j	-	5.0	Pf
Reverse Recovery Time $I_F=I_R=30\text{mA}$ $I_{rr}=3.0\text{mA}$, $I_R, R_L=100\text{ }\Omega$	t_{rr}		50	nS

Device Marking

Item	Marking	Equivalent Circuit diagram
MMBD2004	DB3	
MMBD2004C	DB4	
MMBD2004A	DB5	
MMBD2004S	DB6	

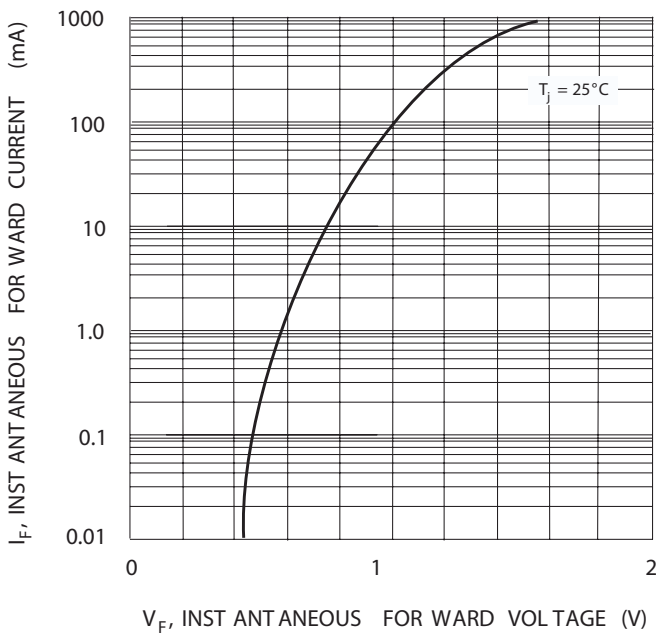


Fig. 1 Forward Characteristics

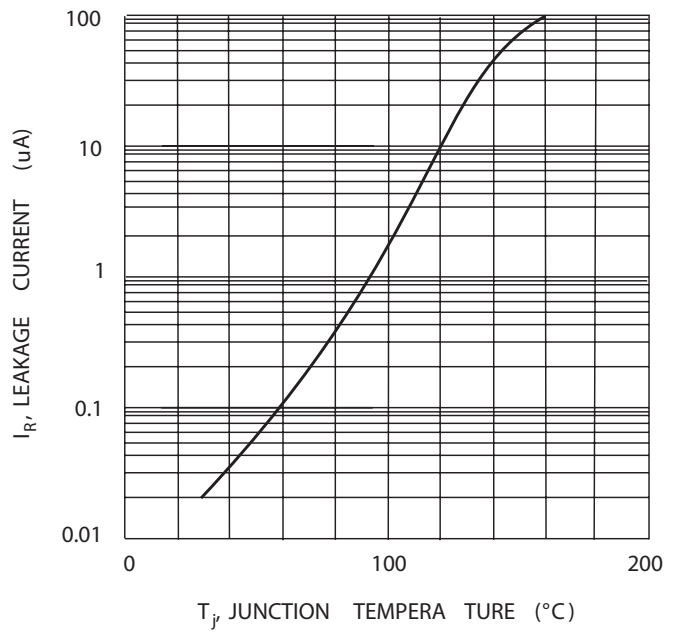


Fig. 2 Leakage Current vs Junction Temperature