

## Surface Mount Switching Diode

### Features:

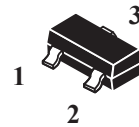
- \*Fast Switching Speed
- \*Surface Mount Package Ideally Suited for Automatic Insertion
- \*High Conductance
- \*For General Purpose Switching Applications

### SWITCHING DIODE

**225mAMPERS**  
**300VOLTS**

### Mechanical Data:

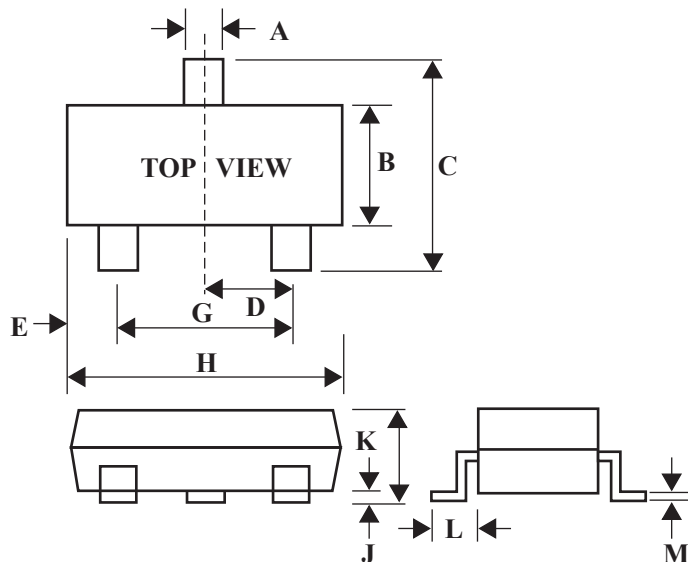
- \*Case: SOT-23 Molded Plastic
- \*Terminals: Solderable Per MIL-STD-202, Method 208
- \*Polarity: See Equivalent Circuit Diagram
- \*Weight: 0.008grams(approx)



**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


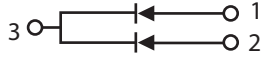
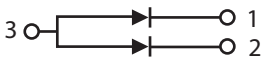
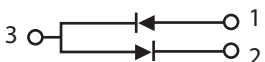
**Maximum Ratings** ( $T_A=25\text{ }^{\circ}\text{C}$  Unless otherwise noted)

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 <sub>dc</sub>
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	

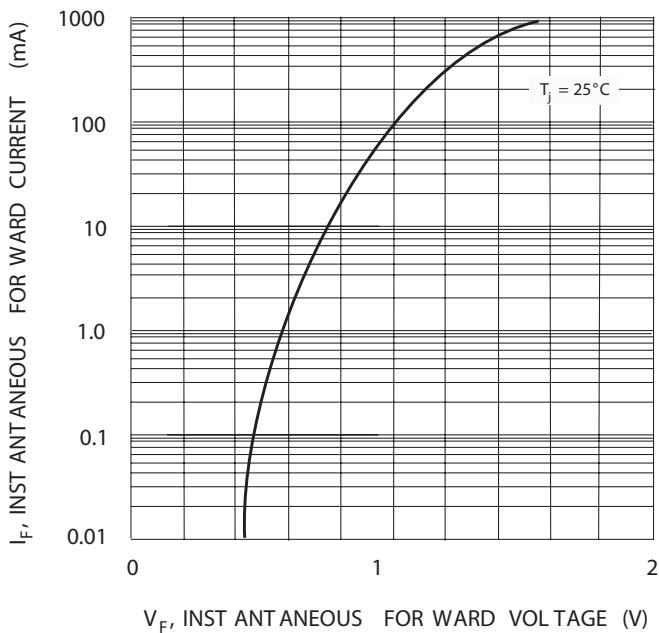


Fig. 1 Forward Characteristics

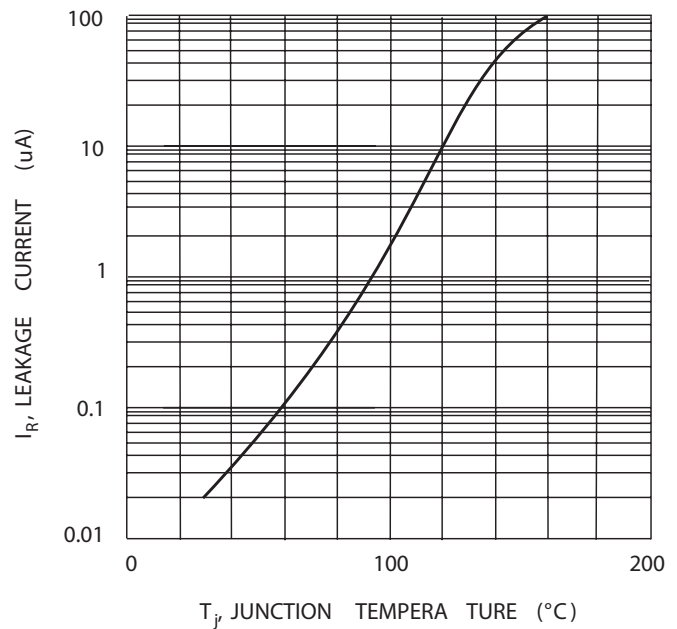


Fig. 2 Leakage Current vs Junction Temperature