

## Surface Mount Switching Diode

 Lead(Pb)-Free

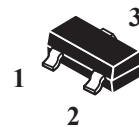
### Features:

- \*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)

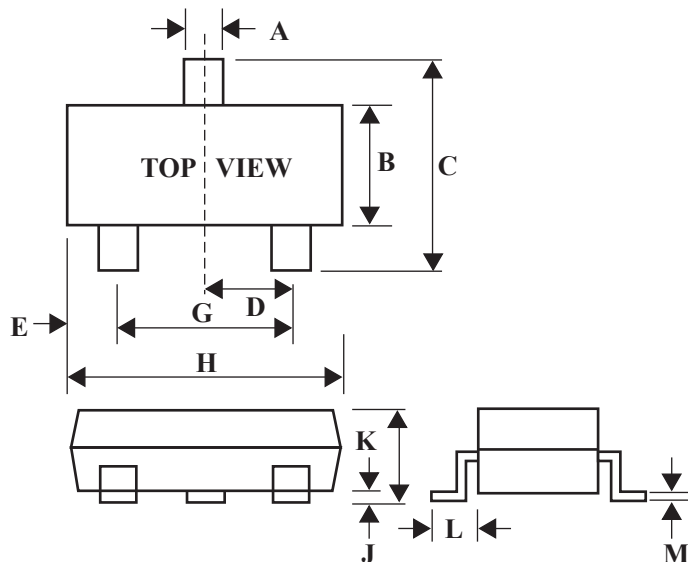
**SWITCHING DIODE**  
**225mAMPERS**  
**350VOLTS**



**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


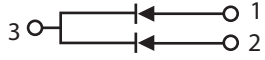

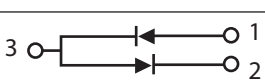
**Maximum Ratings** ( $T_A=25^\circ\text{C}$  Unless otherwise noted)

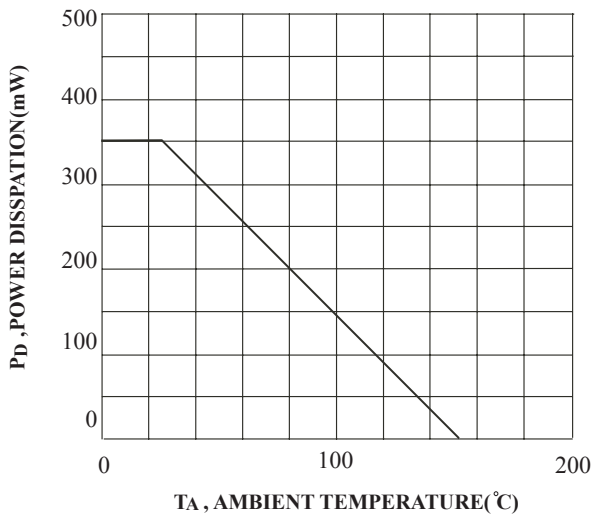
Characteristic	Symbol	MMBD3004/C/A/S	Unit
Working Peak Reverse Voltage	$V_{RRM}$	350	Volts
Peak Repetitive Reverse Voltage DC Blocking Voltage	$V_{RWM}$ $V_R$	300	Volts
Forward Continuous Current	$I_F$	225	mA
Repetitive Peak Forward Current	$I_{FRM}$	625	mA
Non-Repetitive Peak Forward Surge Current @ $t=1.0\mu\text{s}$ @ $t=1.0\text{s}$	$I_{FSM}$	4.0 1.0	A
Power Dissipation	$P_d$	350	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	357	K/W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150	$^\circ\text{C}$

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

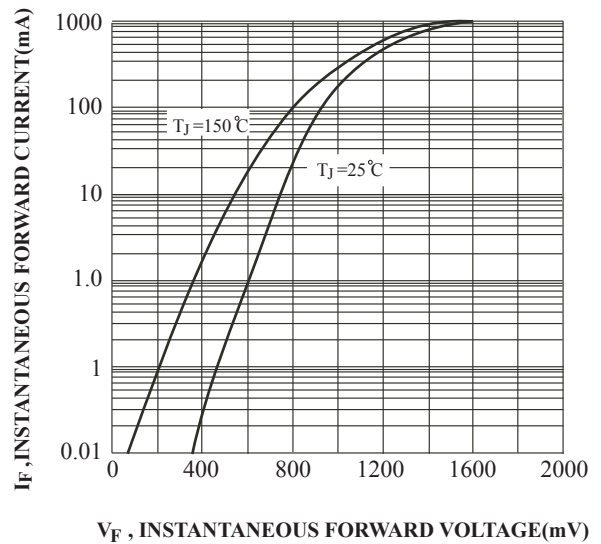
Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage $I_R=150\mu\text{A}$	$V_{(BR)R}$	350	-	Volts
Forward Voltage $I_F=100\text{mA}$	$V_F$	-	1.0	Volts
Reverse Leakage $V_R=240\text{V}, @T_A=25^\circ\text{C}$ $V_R=240\text{V}, @T_A=150^\circ\text{C}$	$I_R$	- -	100 100	nAdc uAdc
Total Capacitance ( $V_R=0\text{V}, f=1.0\text{MHz}$ )	$C_j$	-	5.0	pF
Reverse Recovery Time $I_F=I_R=30\text{mA}$ $I_{rr}=3.0\text{mA} * I_R, R_L=100\Omega$	$t_{rr}$		50	nS

**Device Marking**

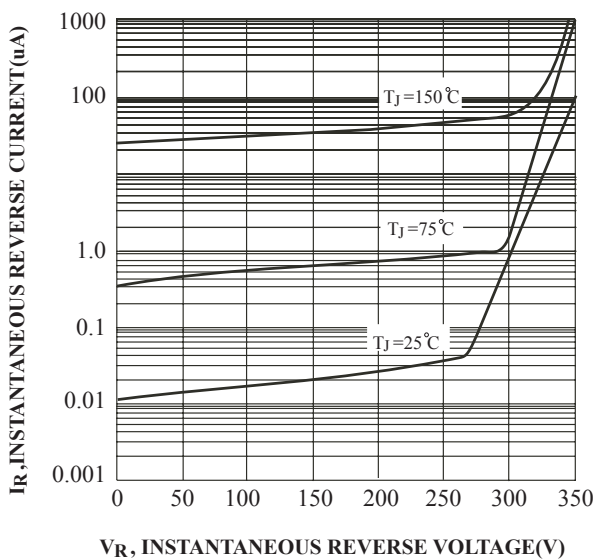
Item	Marking	Equivalent Circuit diagram
MMBD3004	KAB	
MMBD3004C	KAC	
MMBD3004A	KAD	
MMBD3004S	KAE	



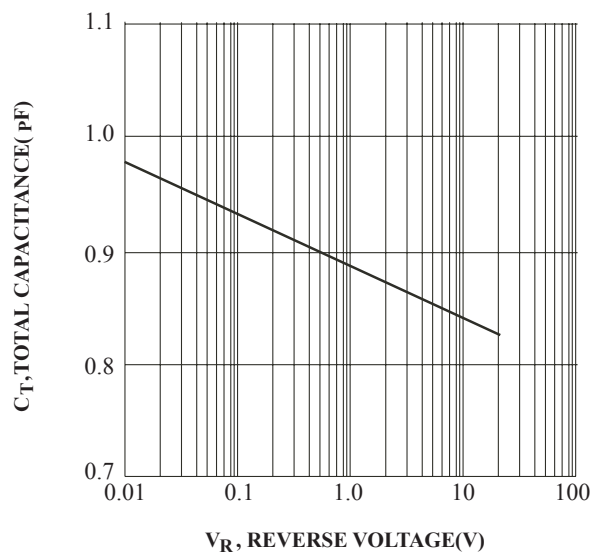
**FIG.1 Power Derating Curve, total package**



**FIG.2 Typical Forward Characteristics, per element**



**FIG.3 Typical Reverse Characteristics, per element**



**FIG.4 Typical Total Capacitance vs. Reverse Voltage, per element**