

Surface Mount Switching Diode

 Lead(Pb)-Free

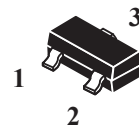
Features:

- *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)

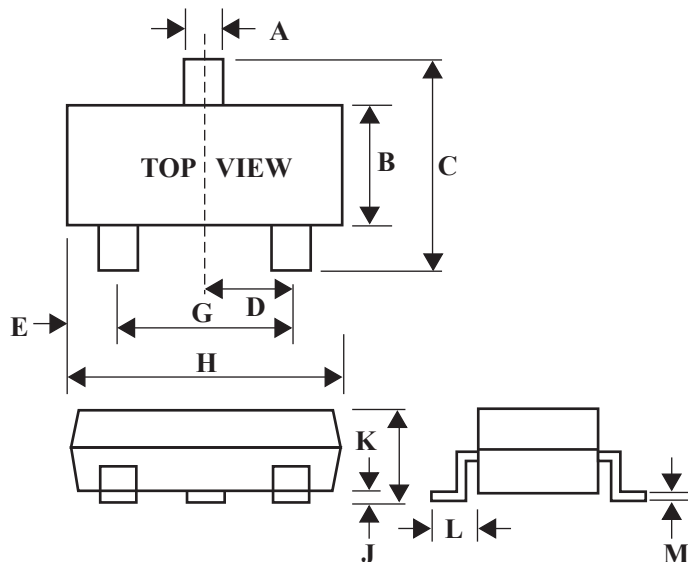
SWITCHING DIODE
225mAMPERS
350VOLTS



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	

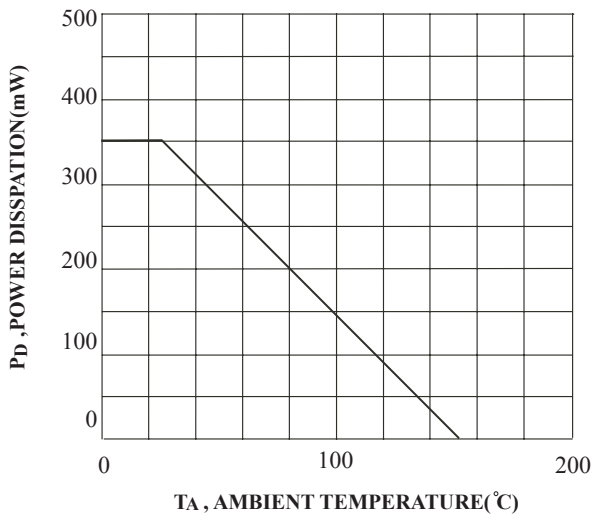


FIG.1 Power Derating Curve, total package

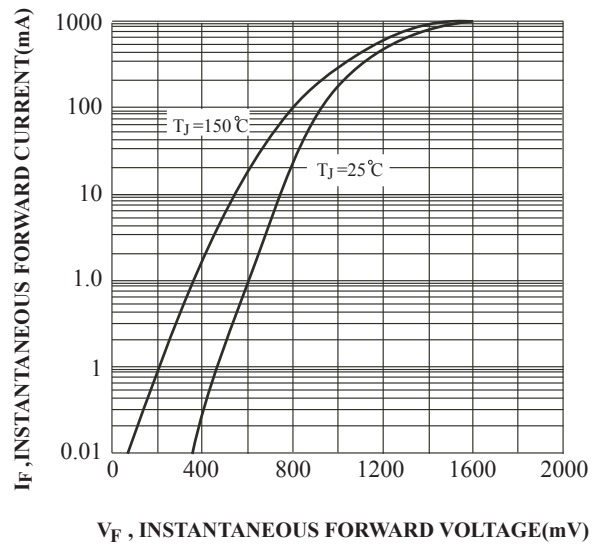


FIG.2 Typical Forward Characteristics, per element

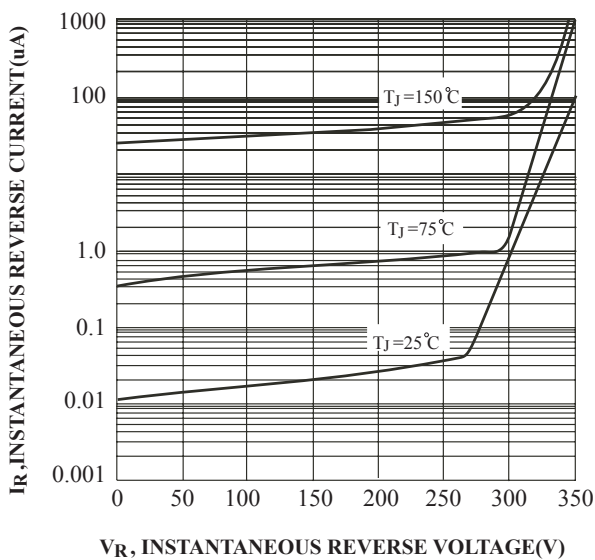


FIG.3 Typical Reverse Characteristics, per element

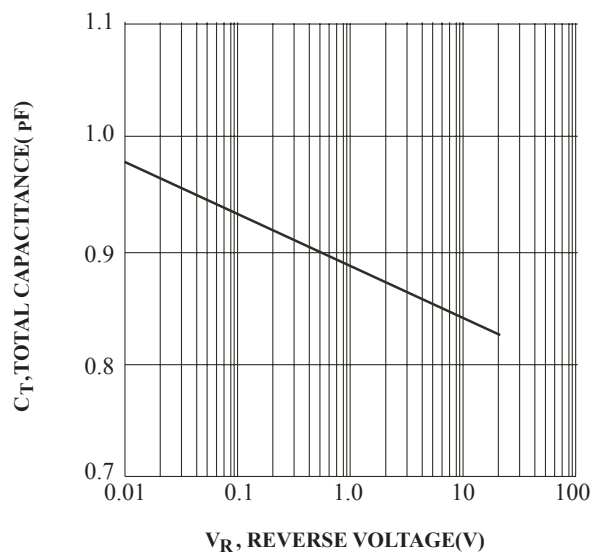


FIG.4 Typical Total Capacitance vs. Reverse Voltage, per element