

Surface mount switching diode

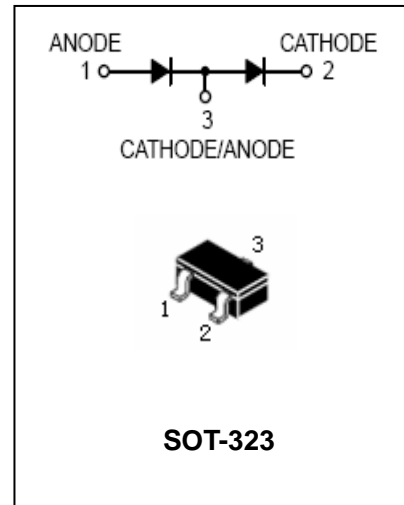
MMBD2004SW

FEATURES

- Fast Switching Speed.
- Surface Mount Package Ideally Suited for Automatic Insertion.
- High Reverse Breakdown Voltage.
- Dual Series Configuration.



Lead-free



APPLICATIONS

- Ultra high speed switching.

ORDERING INFORMATION

Type No.	Marking	Package Code
MMBD2004SW	KA9	SOT-323

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Parameter	Symbol	Limits	Unit
Recurrent Peak reverse voltage	V_{RRM}	300	V
Working Peak Reverse Voltage DC Blocking voltage	V_{RWM} V_R	240	V
RMS voltage	V_{RMS}	170	V
Forward Continuous Current	I_{FM}	225	mA
Peak Repetitive Forward Current	I_{FRM}	625	mA
Peak Forward Surge Current	I_{FSM}	4 1	A
		@ $T_p=1\mu s$ @ $T_p=1S$	
Power Dissipation	P_d	350	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	357	°C/W
Operating and storage temperature range	T_j, T_{STG}	-65 to +150	°C



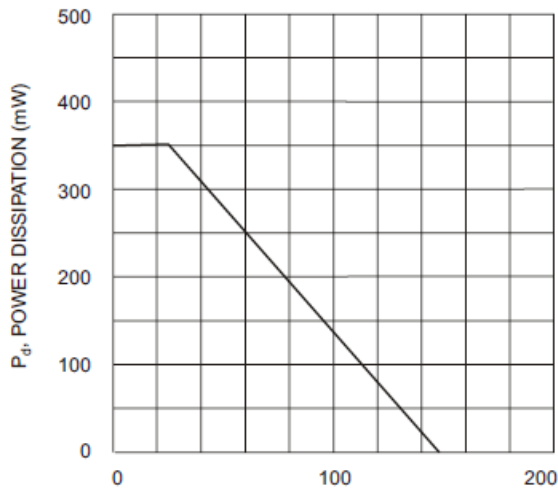
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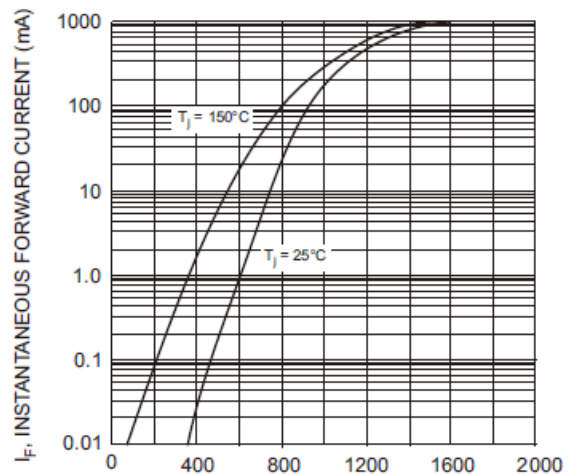
ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	$V_{R(BR)}$	$I_R=100\mu A$	300	-	-	V
Maximum Forward voltage	V_F	$I_F=20mA$ $I_F=100mA$	-	-	0.87 1	V
Reverse current	I_R	$V_R=240V$ $V_R=240V, T_A=150^\circ C$	-	-	100 100	nA uA
Total Capacitance	C_T	$V_R=0V, f=1MHz$	-	-	5	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=30mA,$ $I_{rr}=3mA, R_L=100\Omega$	-	-	50	ns

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



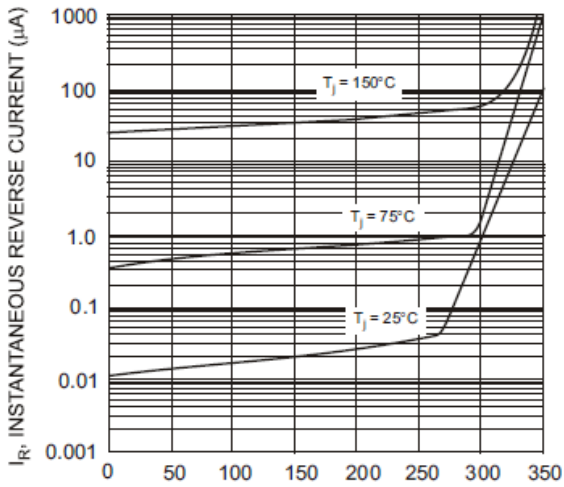
T_A , AMBIENT TEMPERATURE (°C)
Fig. 1 Power Dissipation Derating



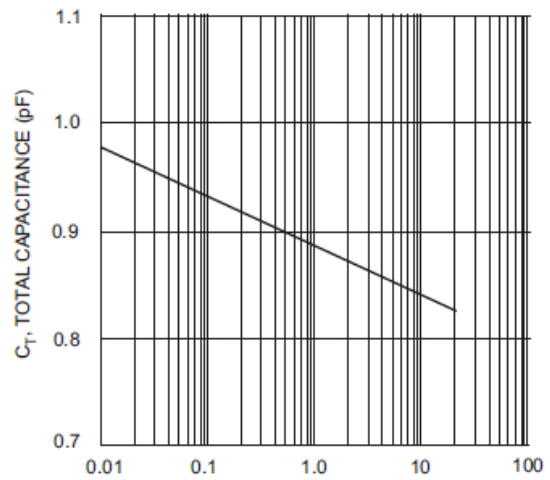
V_F , INSTANTANEOUS FORWARD VOLTAGE (mV)
Fig. 2 Typical Forward Characteristics, per element

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V_R , INSTANTANEOUS REVERSE VOLTAGE (V)
Fig. 3 Typical Reverse Characteristics, per element



V_R , REVERSE VOLTAGE (V)
Fig. 4 Typical Total Capacitance vs. Reverse Voltage, per element

PACKAGE OUTLINE

Plastic surface mounted package

SOT-323

Mechanical drawing of the SOT-323 package showing dimensions A through K. Dimensions A, B, G, and K are shown in the top view; C, D, E, H, and J are shown in the side view.

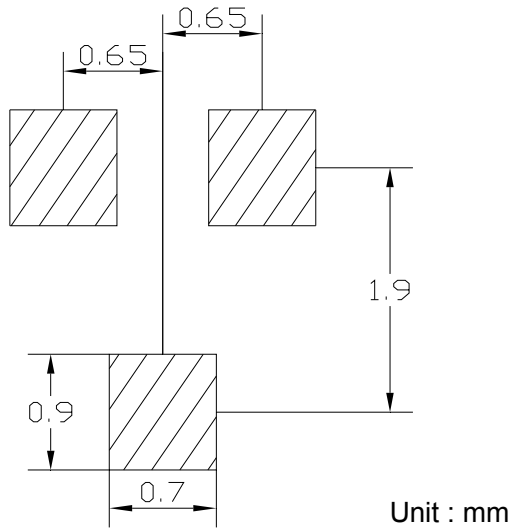
SOT-323		
Dim	Min	Max
A	1.8	2.2
B	1.15	1.35
C	1.0Typical	
D	0.15	0.35
E	0.25	0.40
G	1.2	1.4
H	0.02	0.1
J	0.1Typical	
K	2.2	2.4
All Dimensions in mm		



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MMBD2004SW

SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
MMBD2004SW	SOT-323	3000/Tape&Reel