

Surface mount switching diode

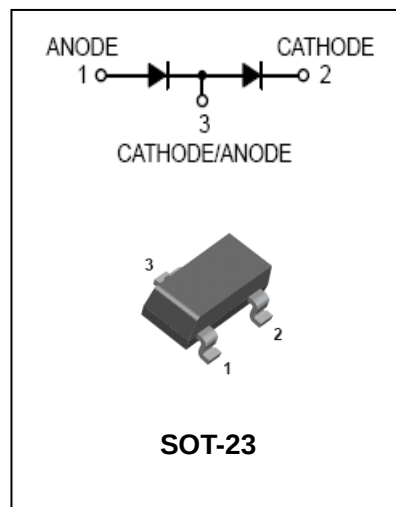
MMBD2004S

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
MMBD2004S	KA9	SOT-23

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 @ $T_P=1\mu s$ @ $T_P=1S$	I_{FSM}	4 1	A
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

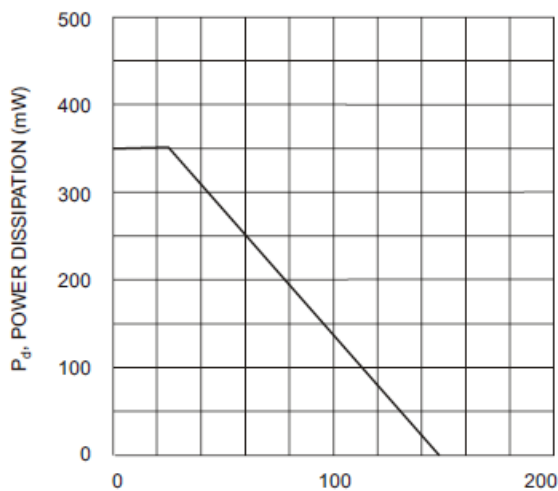
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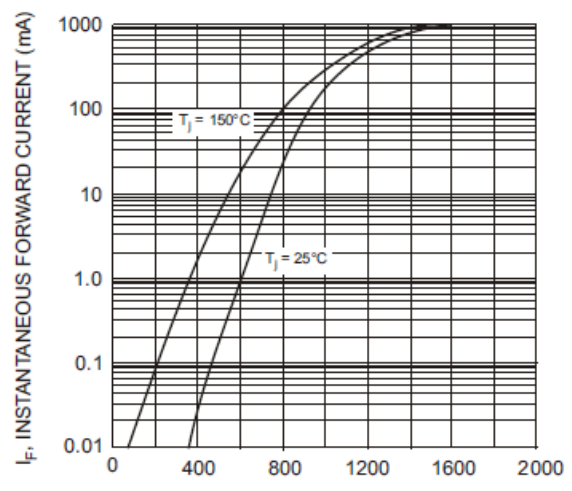
ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

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

TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



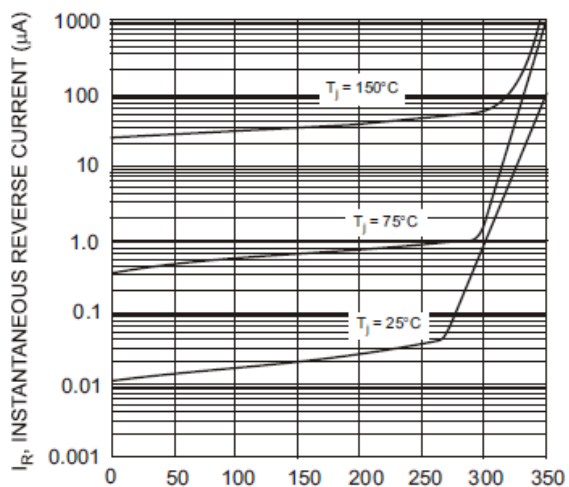
T_A , AMBIENT TEMPERATURE ($^\circ\text{C}$)
Fig. 1 Power Dissipation Derating



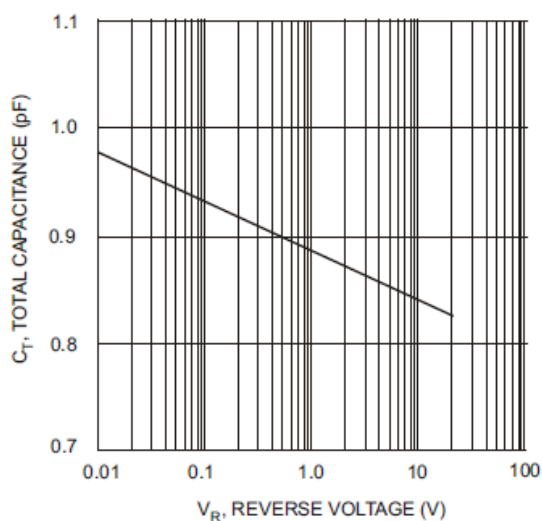
V_F , INSTANTANEOUS FORWARD VOLTAGE (mV)
Fig. 2 Typical Forward Characteristics, per element

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

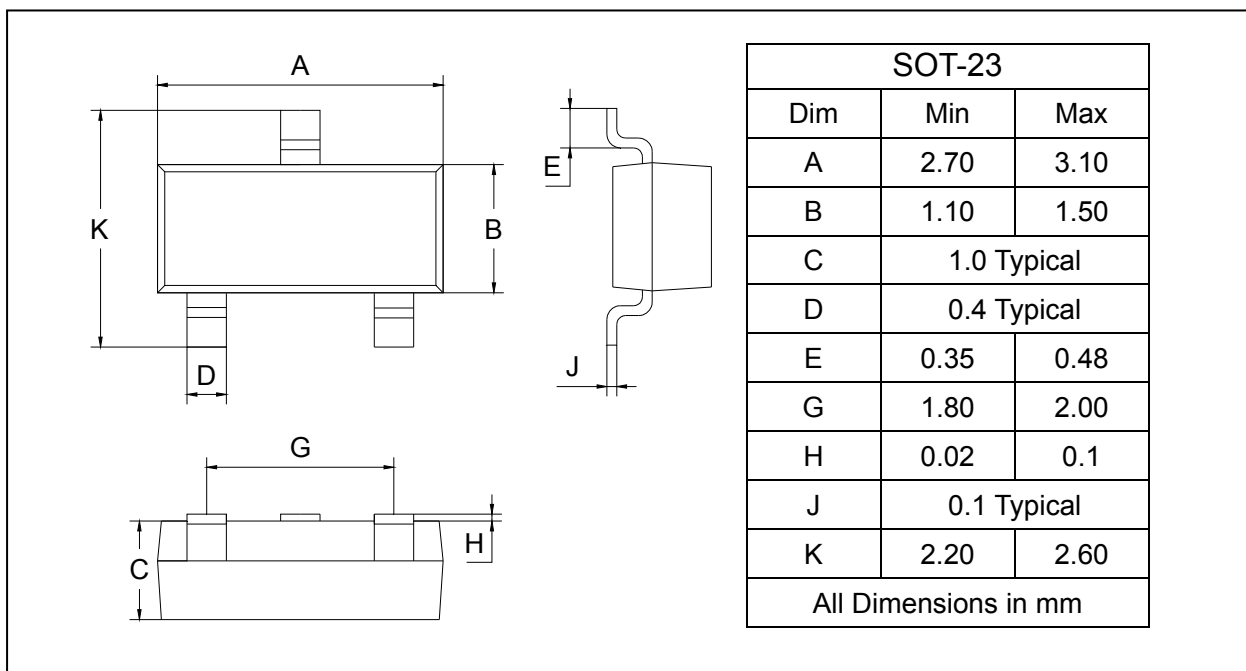


V_R , REVERSE VOLTAGE (V)
Fig. 4 Typical Total Capacitance vs. Reverse Voltage, per element

PACKAGE OUTLINE

Plastic surface mounted package

SOT-23

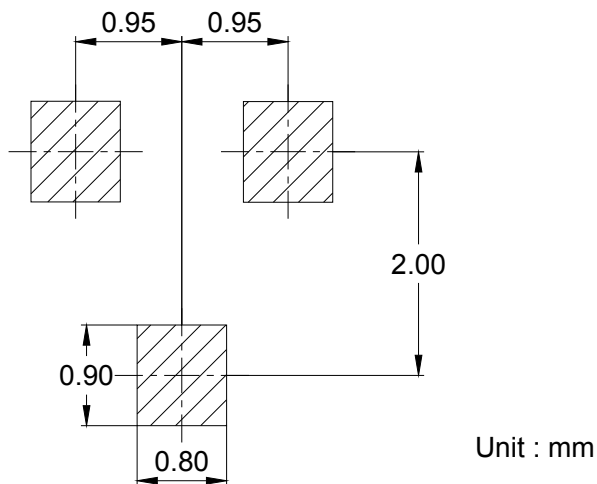




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MMBD2004S

SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
MMBD2004S	SOT-23	3000/Tape&Reel