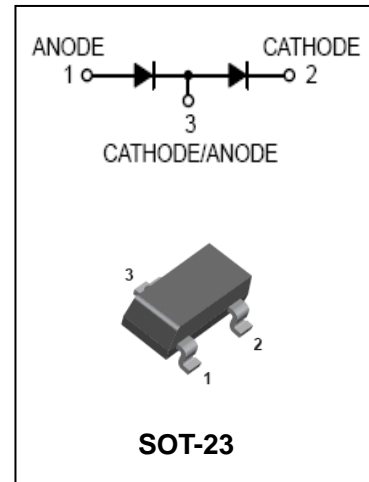


Surface mount switching diode

**MMBD4004**

**FEATURES**

- High speed.
- Small surface mounting type.
- Suitable for high packing density.
- Maximum total power dissipation is 350mW.
- Peak forward current is 625mA.
- High voltage capability.



**APPLICATIONS**

- Ultra high speed switching.

**ORDERING INFORMATION**

Type No.	Marking	Package Code
MMBD4004	10D	SOT-23

**MAXIMUM RATING @ Ta=25°C unless otherwise specified**

Parameter	Symbol	Limits	Unit
Recurrent Peak reverse voltage	$V_{RRM}$	400	V
DC Blocking voltage	$V_{DC}$	330	V
RMS voltage	$V_{RMS}$	231	V
Peak Forward Surge Current @ $T_p=1\mu S$ @ $T_p=1S$	$I_{FSM}$	4 1	A
Average Forward Rectified Current	$I_o$	225	mA
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



Surface mount switching diode

**MMBD4004**

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse breakdown voltage	$V_{R(BR)}$	400			V	$I_R=300\mu A$
Maximum Forward voltage	$V_F$			1	V	$I_F=100mA$
Reverse current	$I_R$			100	nA	$V_R=240V, T_A=25^\circ C$
				100	uA	$V_R=240V, T_A=150^\circ C$
Typical Junction Capacitance between Terminal	$C_J$			5	pF	$V_R=0V, f=1MHz$
Reverse Recovery Time	$t_{rr}$			50	ns	$I_F=I_R=30mA, I_{rr}=-0.1$ * $I_R, R_L=100\Omega$

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

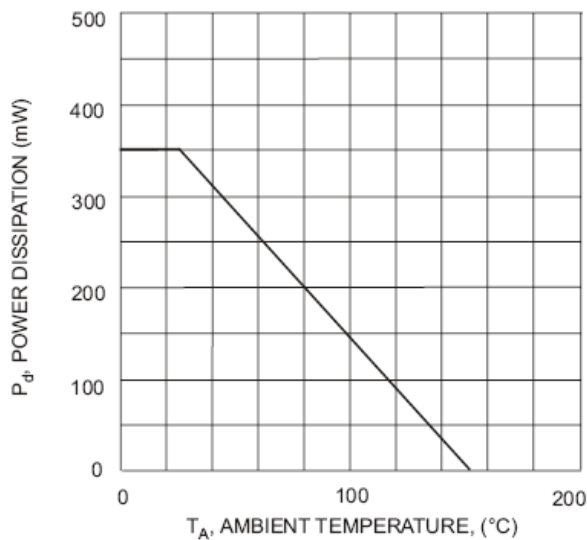


Fig. 1 Power Derating Curve, total package

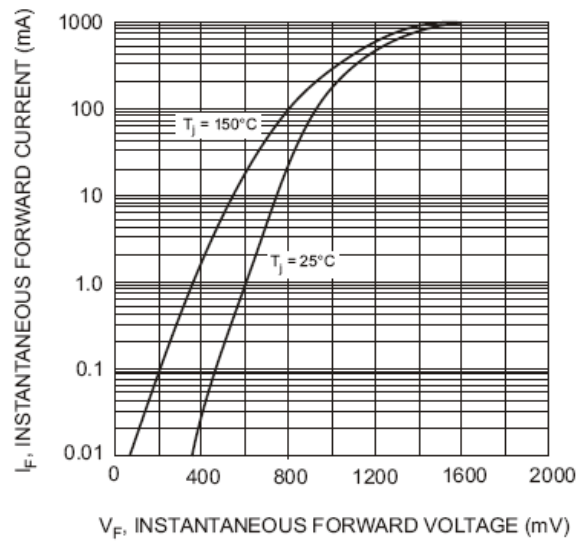


Fig. 2 Typical Forward Characteristics, per element

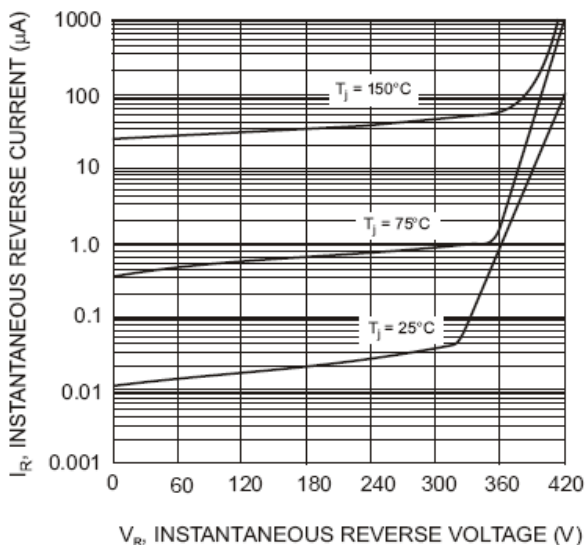


Fig. 3 Typical Reverse Characteristics, per element

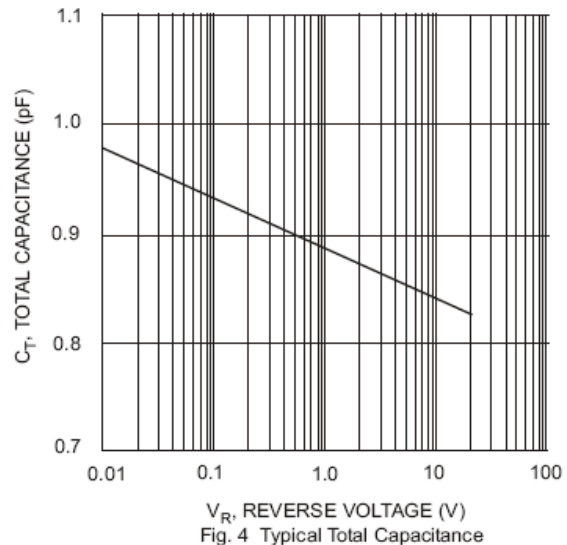


Fig. 4 Typical Total Capacitance vs. Reverse Voltage, per element

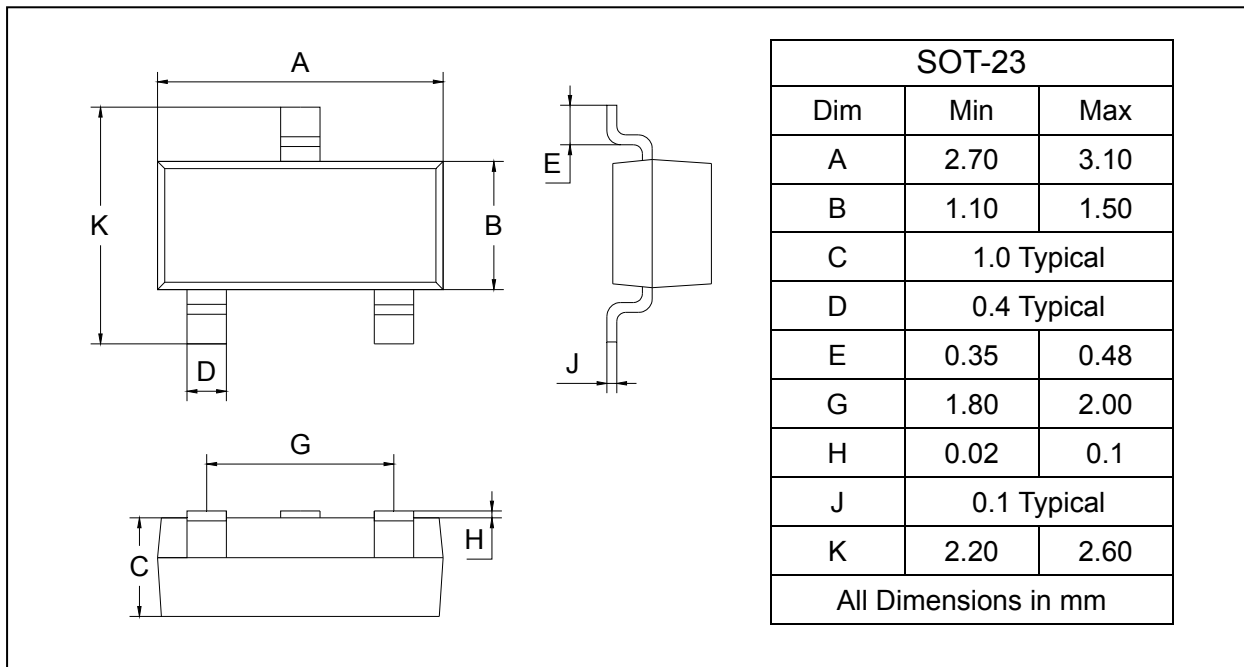
Surface mount switching diode

**MMBD4004**

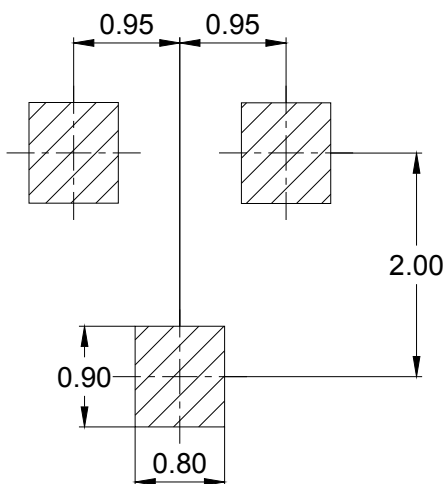
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
MMBD4004	SOT-23	3000/Tape&Reel