

MMBD4448

DISCRETE POWER AND SIGNAL TECHNOLOGIES

General Description:

The high breakdown voltage, fast switching speed and high forward conductance of this diode packaged in a SOT-23 Surface Mount package makes it desirable also as a general purpose diode.

High Conductance Fast Diode

Features:

- 350 milliwatt Power Dissipation package.
- High Breakdown Voltage, Fast Switching Speed.
- Typical capacitance less than 1.5 picofarad.

Ordering:

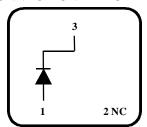
• 7 inch reel (178 mm); 8 mm Tape; 3,000 units per reel.

Absolute Maximum Ratings* TA = 25°C unless otherwise noted

Sym	Parameter	Value	Units
T_{stg}	Storage Temperature	-55 to +150	°C
T _J	Operating Junction Temperature	-55 to +150	οС
P_D	Total Power Dissipation at T _A = 25 ^o C	350	W
	Linear Derating Factor from T _A = 25°C	2.8	mW/ ^o C
R _{OJA}	Thermal Resistance Junction-to-Ambient	357	°C/W
W_{iv}	Working Inverse Voltage	75	V
Ιo	Average Rectified Current	200	mA
I _F	DC Forward Current (IF)	600	mA
i _f	Recurrent Peak Forward Current (IF)	700	mA
i _{F(surge)}	Peak Forward Surge Current (IFSM) Pulse Width = 1.0 second	1.0	Amp
	Pulse Width = 1.0 microsecond	2.0	Amp

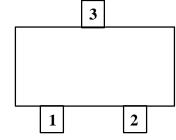
^{*}These ratings are limiting values above which the serviceability of any semiconductor device may be impaired

CONNECTION DIAGRAMS



PACKAGE TO-236AB (Low)

Top Mark: RAB

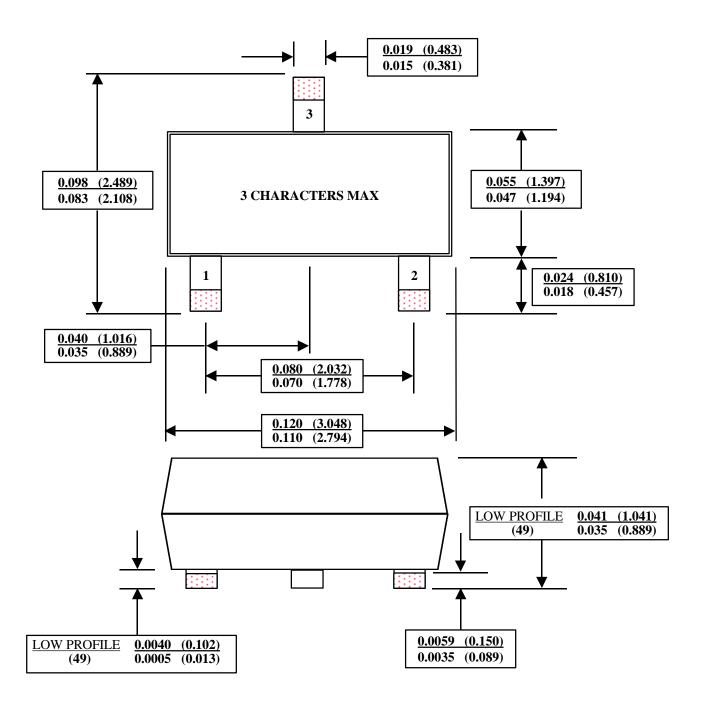


Electrical Characteristics

TA = 25°C unless otherwise noted

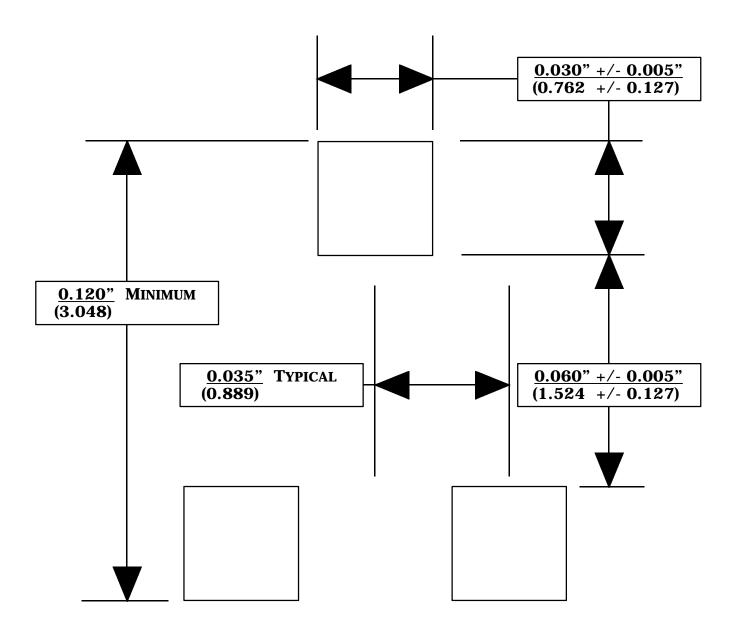
SYM	CHARACTERISTICS	MIN	MAX	UNITS	TEST CONDITIONS
B _V	Breakdown Voltage 75	100		V V	$I_{R} = 100 \text{ uA}$ $I_{R} = 5.0 \text{ uA}$
I _R	Reverse Leakage		25 50 5.0	nA uA uA	$V_{R} = 20 V$ $V_{R} = 20 V$ $T_{A} = 150 Deg C$ $V_{R} = 75 V$
V _F	Forward Voltage	620	720 1.0	mV V	I _F = 5 mA I _F = 100 mA
C _T	Capacitance		2.0	pF	V _R = 0.0 V, f = 1.0 MHz
T _{RR}	Reverse Recovery Time		4.0	ns	$I_F = 10 \text{ mA} \ I_R = 10 \text{ mA}$ $I_{RR} = 1.0 \text{ Ma}, \ R_L = 100 \text{ ohms}$
V_{FM}	Peak Forward Recovery Voltage		2.5	V	I _F = 50 mA Pk Square Wave





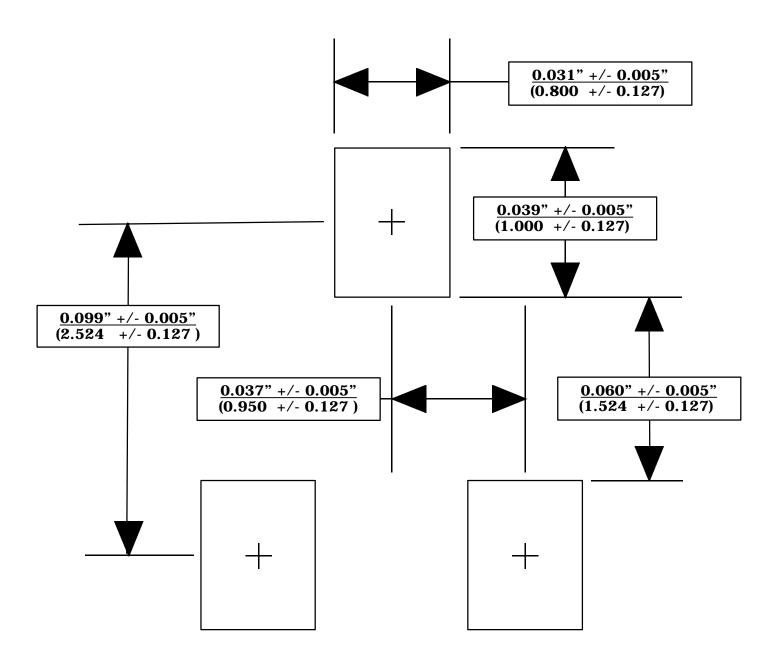
SOT-23
Diode (pinout)
TO-236AB (LOW PROFILE)
22-August-1994





RECOMMENDED SOLDER PADS FOR SOT-23





RECOMMENDED SOLDER PADS FOR U.S. & European SOT-23 & Japanese SC-59

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