



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,  
KWUN TONG, KOWLOON, HONG KONG.

TEL: 2790-0314 FAX: 2790-0206

**FAIRCHILD**  
SEMICONDUCTOR™

# 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

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

Sym	Parameter	Value	Units
T <sub>stg</sub>	Storage Temperature	-55 to +150	°C
T <sub>J</sub>	Operating Junction Temperature	-55 to +150	°C
P <sub>D</sub>	Total Power Dissipation at T <sub>A</sub> = 25°C	350	W
	Linear Derating Factor from T <sub>A</sub> = 25°C	2.8	mW/°C
R <sub>ΘJA</sub>	Thermal Resistance Junction-to-Ambient	357	°C/W
W <sub>IV</sub>	Working Inverse Voltage	75	V
I <sub>O</sub>	Average Rectified Current	200	mA
I <sub>F</sub>	DC Forward Current (IF)	600	mA
i <sub>f</sub>	Recurrent Peak Forward Current (IF)	700	mA
i <sub>F(surge)</sub>	Peak Forward Surge Current (IFSM) Pulse Width = 1.0 second	1.0	Amp
		Pulse Width = 1.0 microsecond	2.0

**Features:**

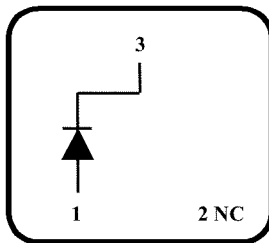
- 350 milliwatt Power Dissipation package.
- High Breakdown Voltage, Fast Switching Speed.
- Typical capacitance less than 1.5 picofarad.

**Ordering:**

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

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

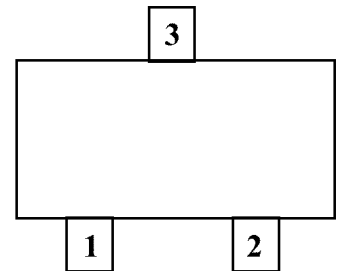
**CONNECTION DIAGRAMS**



**PACKAGE**

TO-236AB (Low)

Top Mark: RAB



### Electrical Characteristics TA = 25°C unless otherwise noted

SYM	CHARACTERISTICS	MIN	MAX	UNITS	TEST CONDITIONS
B <sub>V</sub>	Breakdown Voltage 75	100		V	I <sub>R</sub> = 100 uA
				V	I <sub>R</sub> = 5.0 uA
I <sub>R</sub>	Reverse Leakage		25	nA	V <sub>R</sub> = 20 V
			50	uA	V <sub>R</sub> = 20 V T <sub>A</sub> = 150 Deg C
			5.0	uA	V <sub>R</sub> = 75 V
V <sub>F</sub>	Forward Voltage	620	720	mV	I <sub>F</sub> = 5 mA
			1.0	V	I <sub>F</sub> = 100 mA
C <sub>T</sub>	Capacitance		2.0	pF	V <sub>R</sub> = 0.0 V, f = 1.0 MHz
T <sub>RR</sub>	Reverse Recovery Time		4.0	ns	I <sub>F</sub> = 10 mA I <sub>R</sub> = 10 mA I <sub>RR</sub> = 1.0 Ma, R <sub>L</sub> = 100 ohms
V <sub>FM</sub>	Peak Forward Recovery Voltage		2.5	V	I <sub>F</sub> = 50 mA Pk Square Wave



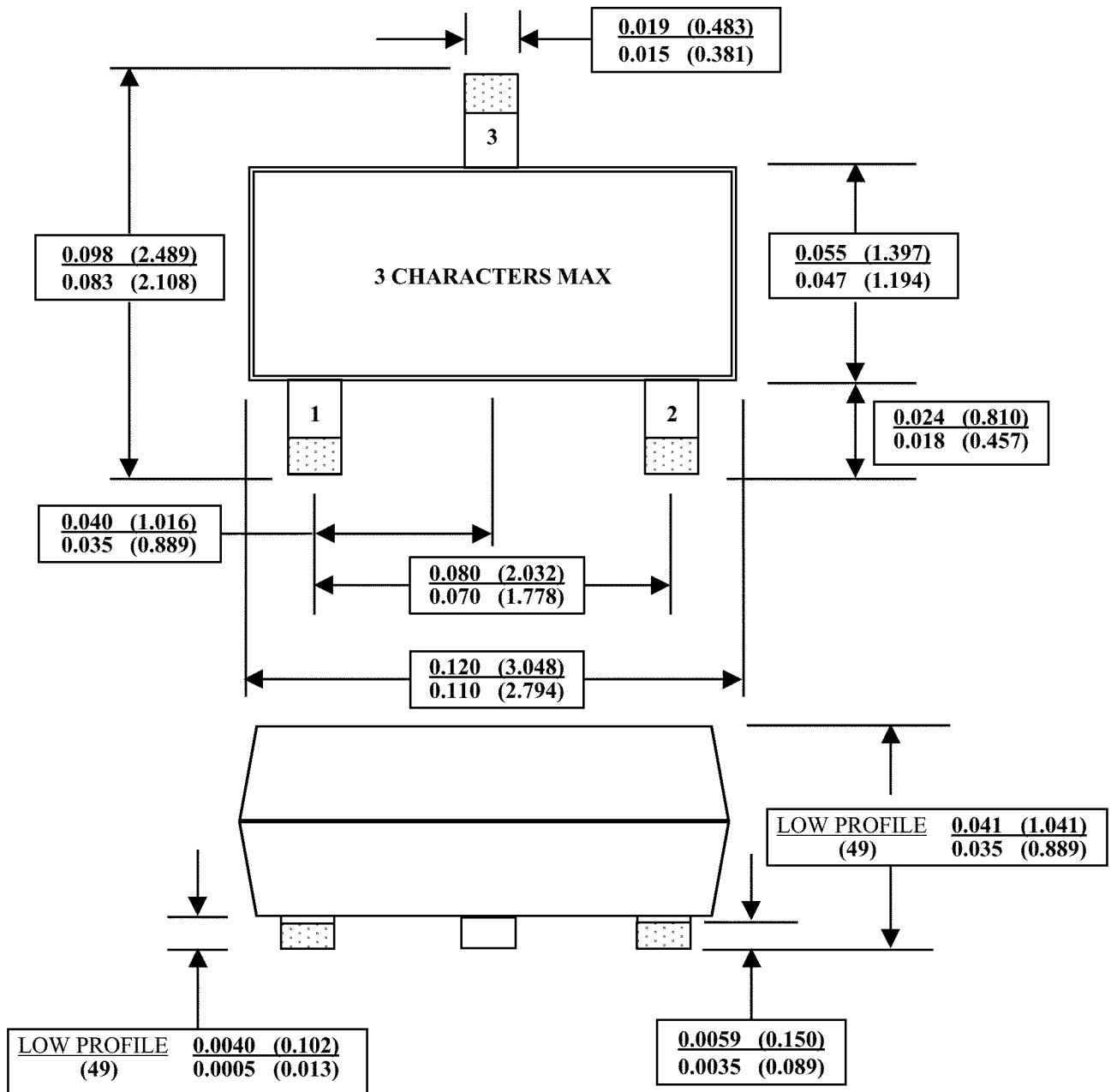
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**SOT-23**  
**Diode (pinout)**  
**TO-236AB (LOW PROFILE)**  
 22-August-1994



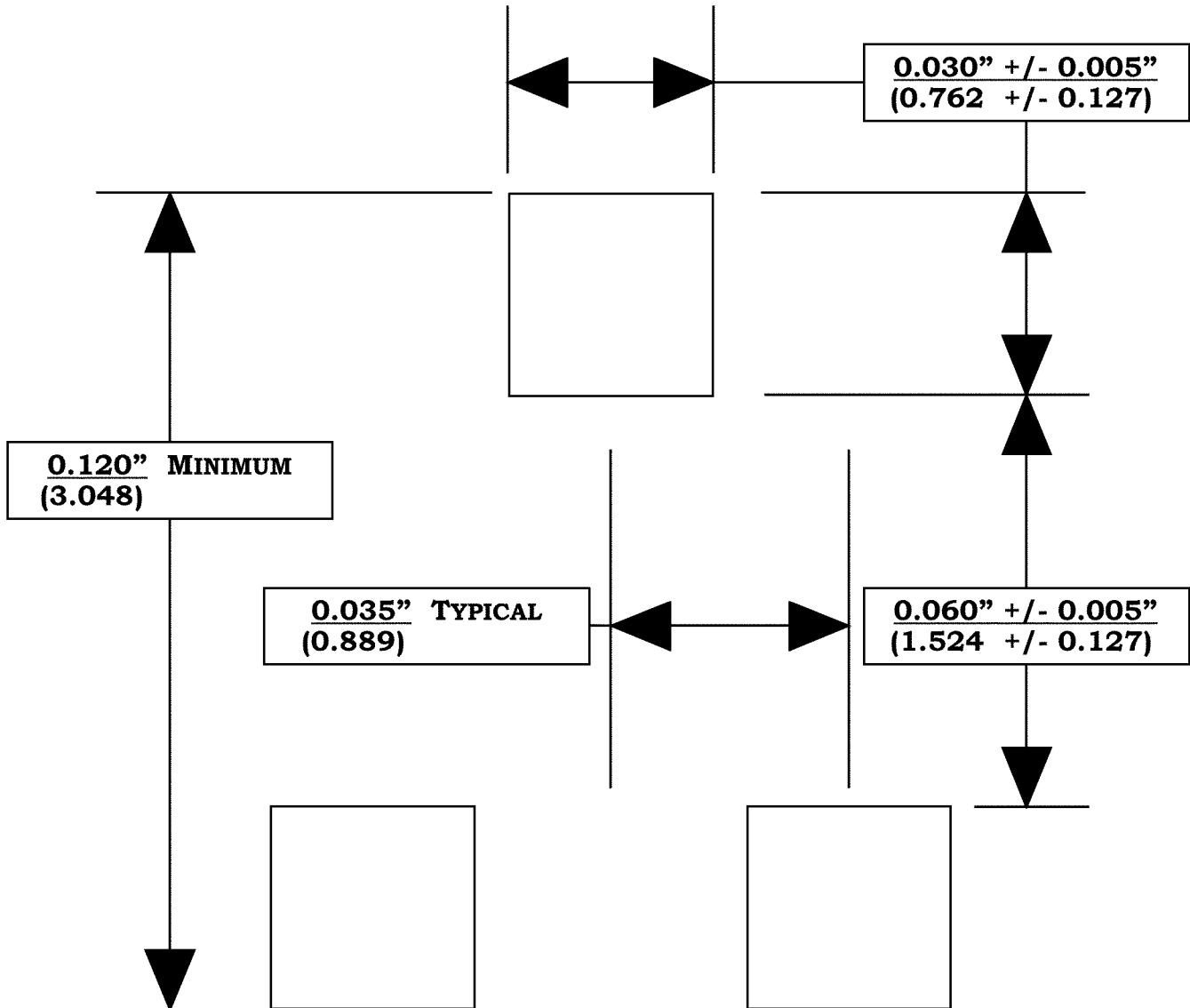
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**RECOMMENDED SOLDER PADS  
FOR  
SOT-23**



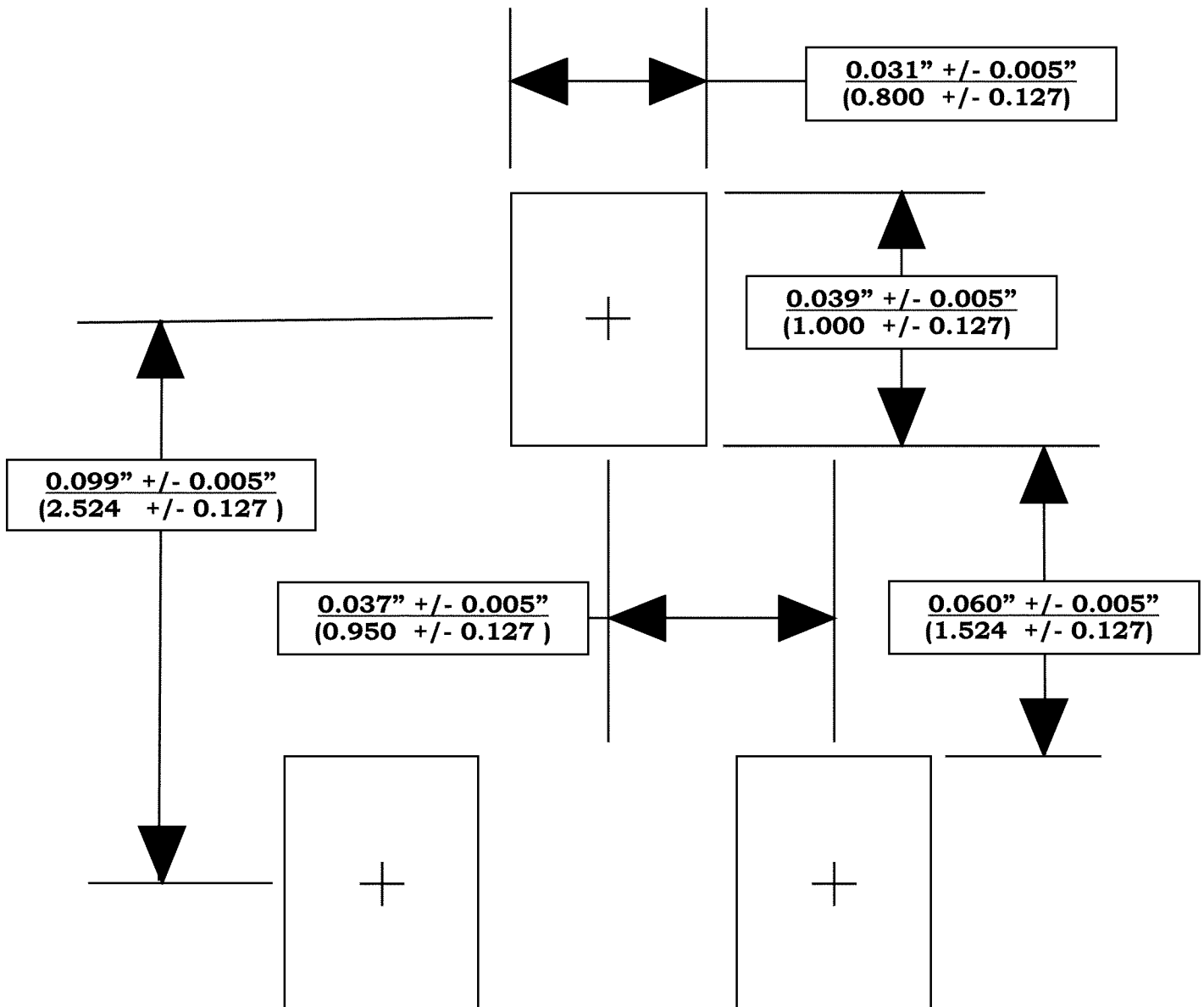
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**RECOMMENDED SOLDER PADS  
FOR  
U.S. & European SOT-23  
&  
Japanese SC-59**