

**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>OJA</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	Amp

**Features:**

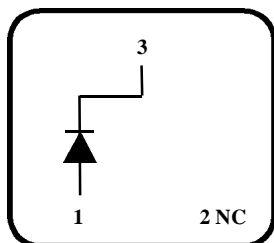
- 350 milliwatt Power Dissipation package.
- High Breakdown Voltage, Fast Switching Speed.
- Typical capacitance less than 1.5 picofarad.

**Ordering:**

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

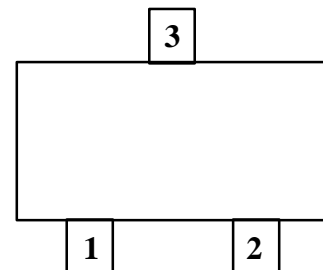
\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired

**CONNECTION DIAGRAMS**



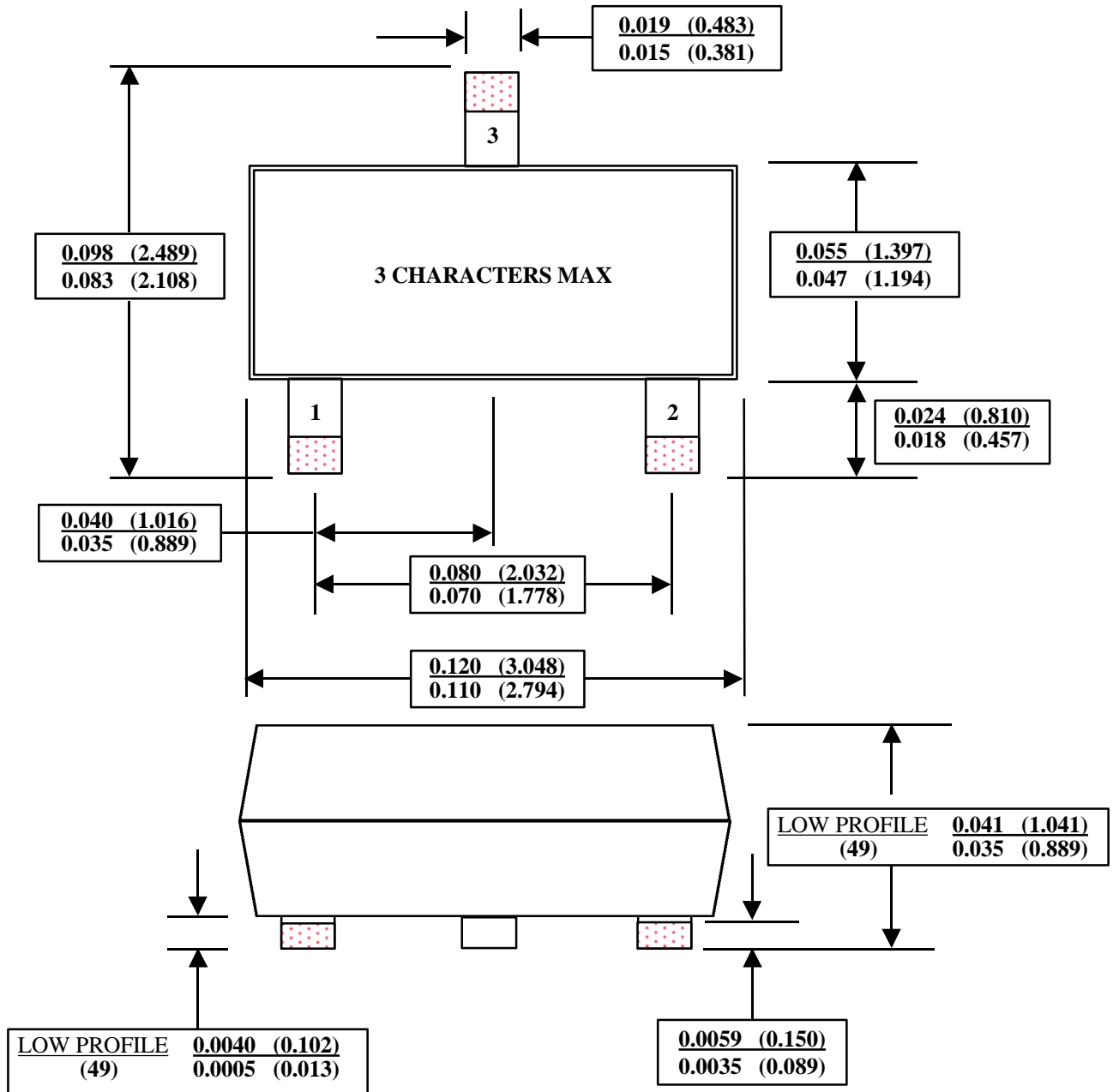
**PACKAGE**  
TO-236AB (Low)

Top Mark: RAB

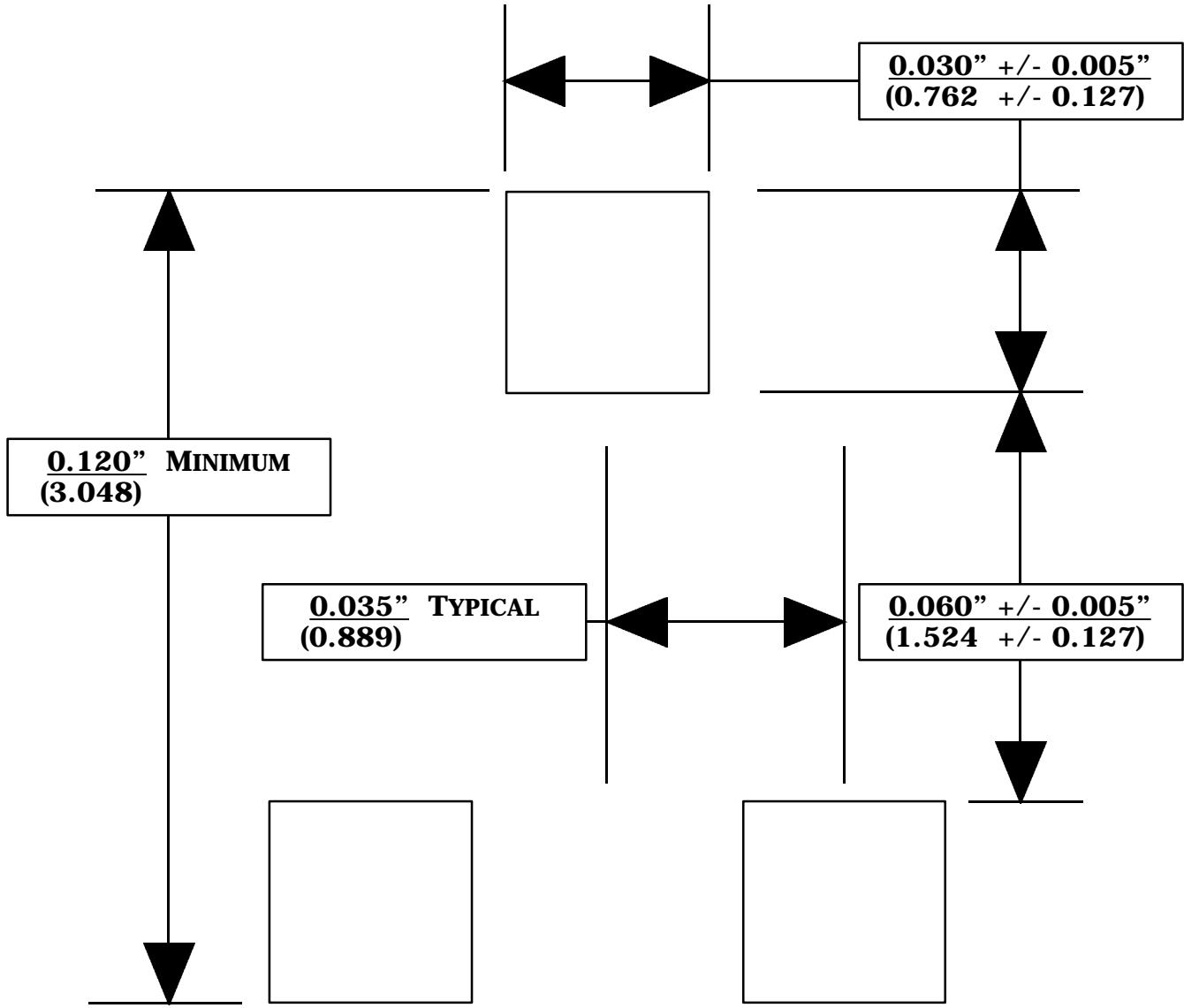


### Electrical Characteristics TA = 25°C unless otherwise noted

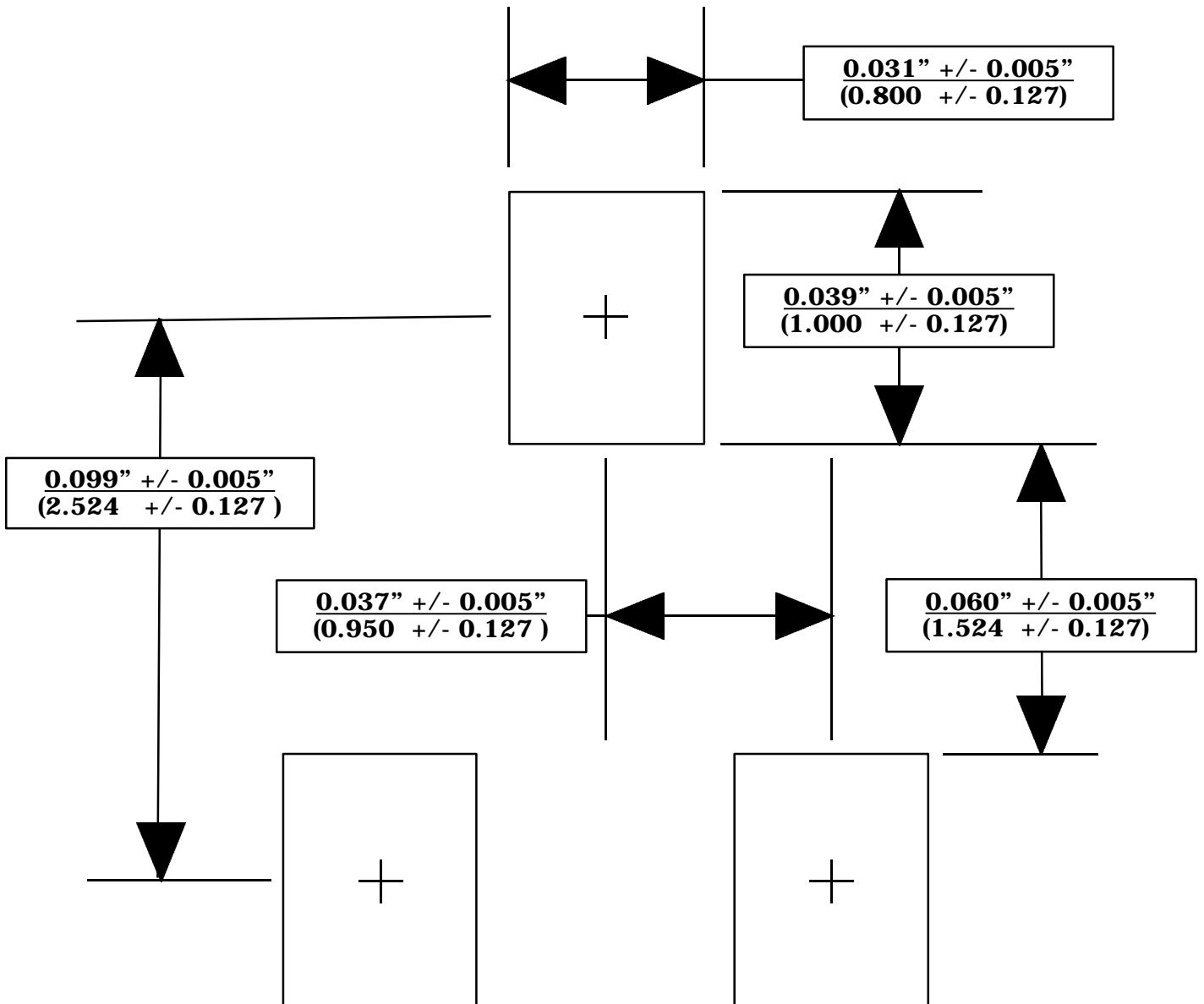
SYM	CHARACTERISTICS	MIN	MAX	UNITS	TEST CONDITIONS
B <sub>V</sub>	Breakdown Voltage	100		V	I <sub>R</sub> = 100 uA
			75		V
I <sub>R</sub>	Reverse Leakage		25	nA	V <sub>R</sub> = 20 V
			50	uA	V <sub>R</sub> = 20 V T <sub>A</sub> = 150 Deg C
			5.0	uA	V <sub>R</sub> = 75 V
V <sub>F</sub>	Forward Voltage	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



**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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FACT™	QFET™	
FACT Quiet Series™	QS™	
FAST®	Quiet Series™	
FASTr™	SuperSOT™-3	
GTO™	SuperSOT™-6	
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