

# BAV23S

## HIGH VOLTAGE GENERAL PURPOSE DIODE

**P<sub>D</sub>** . . . .350 mW @ T<sub>A</sub> = 25 Deg C  
**B<sub>V</sub>** . . . .250 V (MIN) @ I<sub>R</sub> = 100 uA  
**T<sub>RR</sub>** . . . 50 nS @ I<sub>F</sub>=I<sub>R</sub> = 30 mA I<sub>RR</sub> = 3.0 mA

### ABSOLUTE MAXIMUM RATINGS (NOTE 1)

#### TEMPERATURES

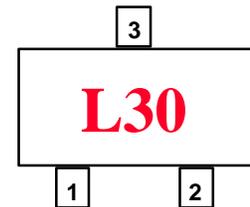
Storage Temperature 150 Degrees C  
 Operating Junction Temperature 150 Degrees C

#### POWER DISSIPATION (NOTES 2 & 3)

Total Device Dissipation at T<sub>A</sub> = 25 Deg C 350 mW  
 Derating Factor per Degree C 2.8 mW

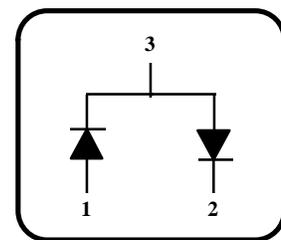
#### VOLTAGES & CURRENTS

V <sub>RRM</sub>	Repetitive Peak Reverse Voltage (Single Device)	250 V
V <sub>RRM</sub>	Repetitive Peak Reverse Voltage (Series Connection)	500 V
V <sub>RWM</sub>	Continuous Peak Reverse Voltage (Single Device)	200 V
V <sub>RWM</sub>	Continuous Peak Reverse Voltage (Series Connection)	400 V
I <sub>O</sub>	Average Rectified Current	200 mA
I <sub>F</sub>	DC Forward Current	400 mA
i <sub>f</sub>	Recurrent Peak Forward Current	700 mA
i <sub>f</sub> (surge)	Peak Forward Surge Current	
	Pulse Width = 1.0 microsec	9.0 A
	Pulse Width = 100 microsec	3.0 A
	Pulse Width = 10 millisec	1.7 A



**PACKAGE**  
TO-236AB (Low)  
(SOT-23)

### CONNECTION DIAGRAMS

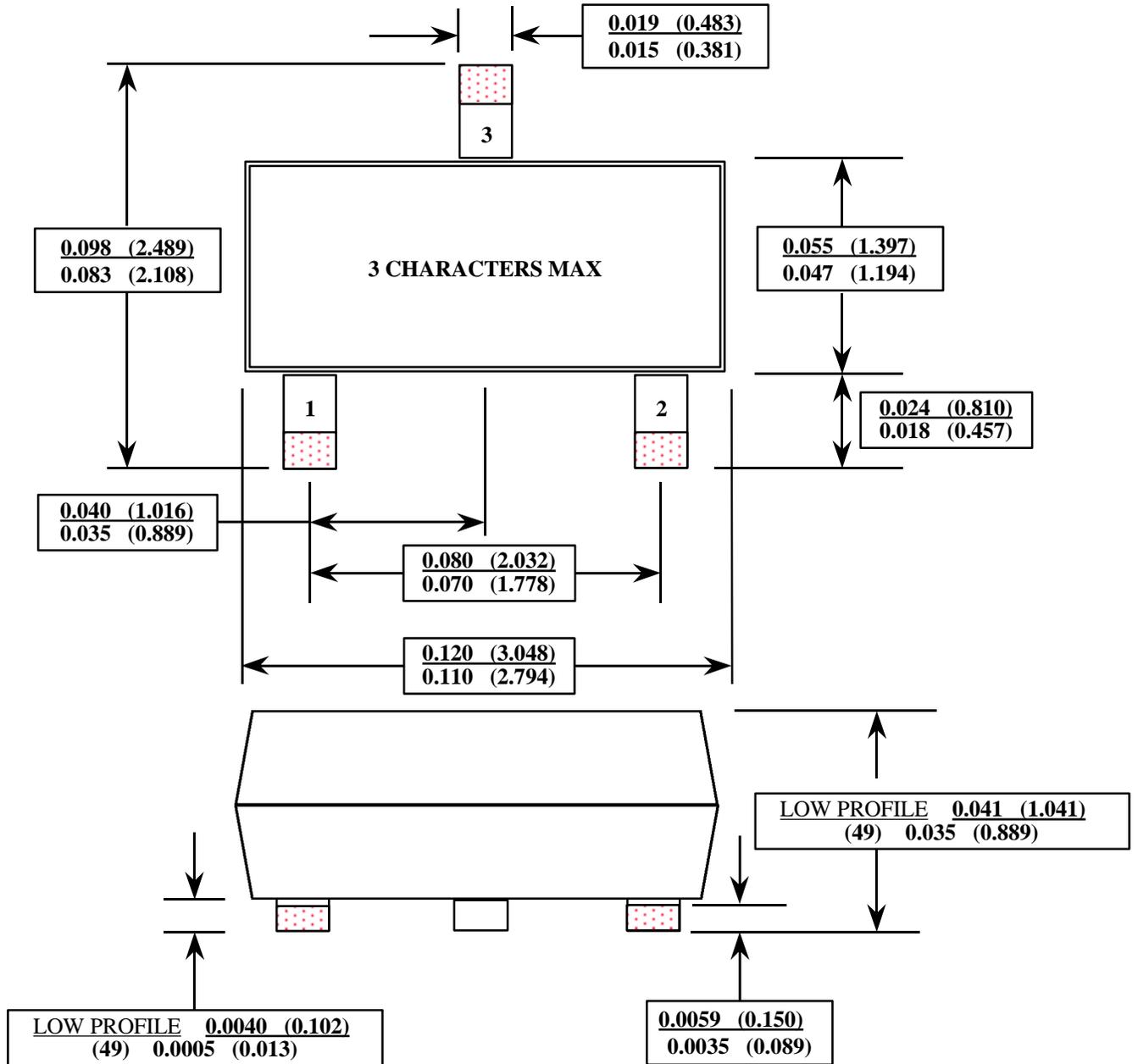


### ELECTRICAL CHARACTERISTICS (25 Degrees C Ambient Temperature unless otherwise stated)

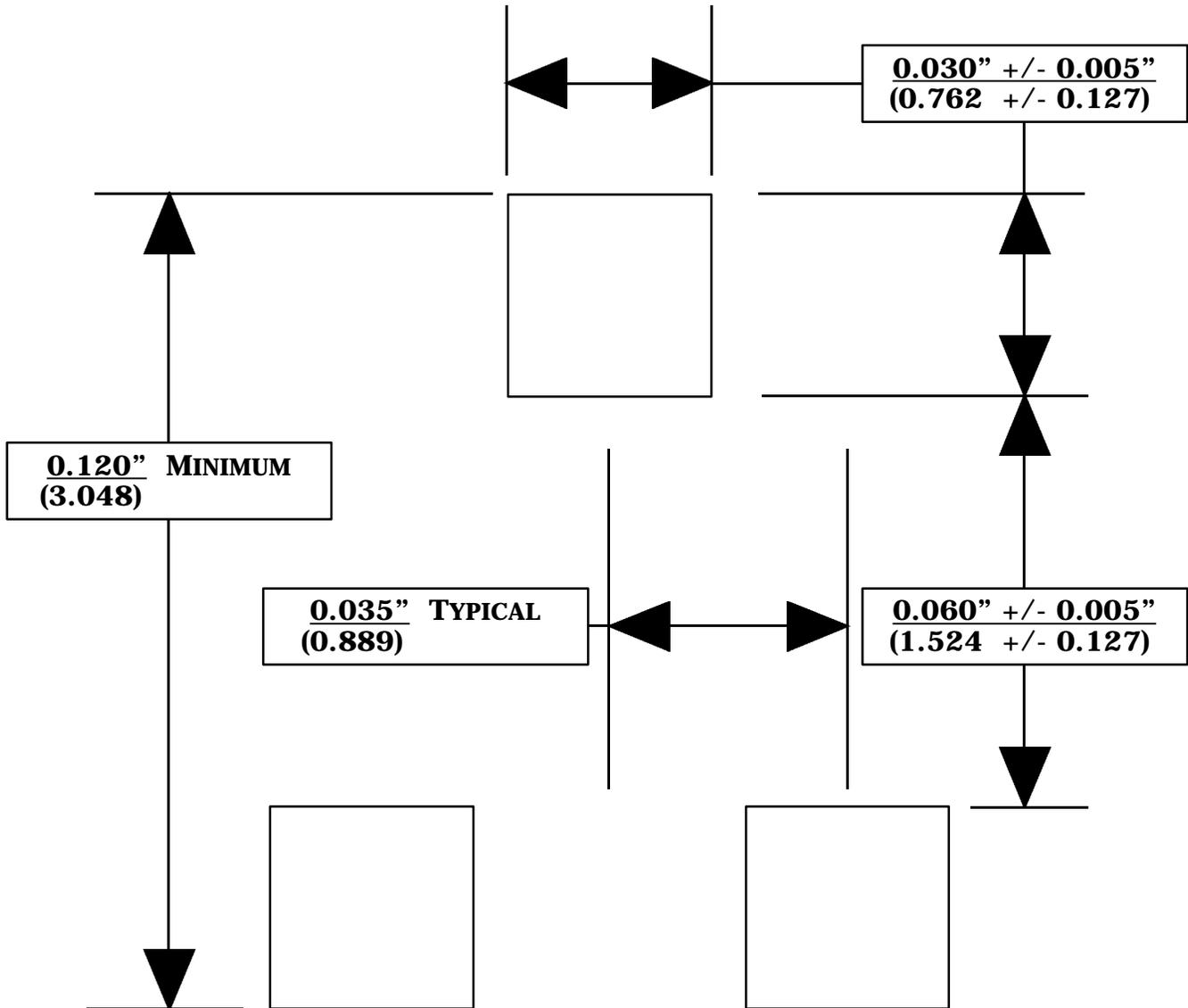
SYM	CHARACTERISTICS	MIN	MAX	UNITS	TEST CONDITIONS
B <sub>V</sub>	Breakdown Voltage	250		V	I <sub>R</sub> = 100 uA
I <sub>R</sub>	Reverse Current (single device)		100	nA	V <sub>R</sub> = 200 V
			100	uA	V <sub>R</sub> = 200 V T <sub>A</sub> = +150 Deg C
	Reverse Current (series connection)		100	nA	V <sub>R</sub> = 400 V
			100	uA	V <sub>R</sub> = 400 V T <sub>A</sub> = +150 Deg C
V <sub>F</sub>	Forward Voltage (single device)		1.00	V	I <sub>F</sub> = 100 mA
			1.25	V	I <sub>F</sub> = 200 mA
	Forward Voltage (series connection)		2.00	V	I <sub>F</sub> = 100 mA
			2.50	V	I <sub>F</sub> = 200 mA
T <sub>RR</sub>	Reverse Recovery Time		50	nS	I <sub>F</sub> = I <sub>R</sub> = 30 mA I <sub>RR</sub> = 3.0 mA R <sub>L</sub> = 100 ohms

#### NOTES:

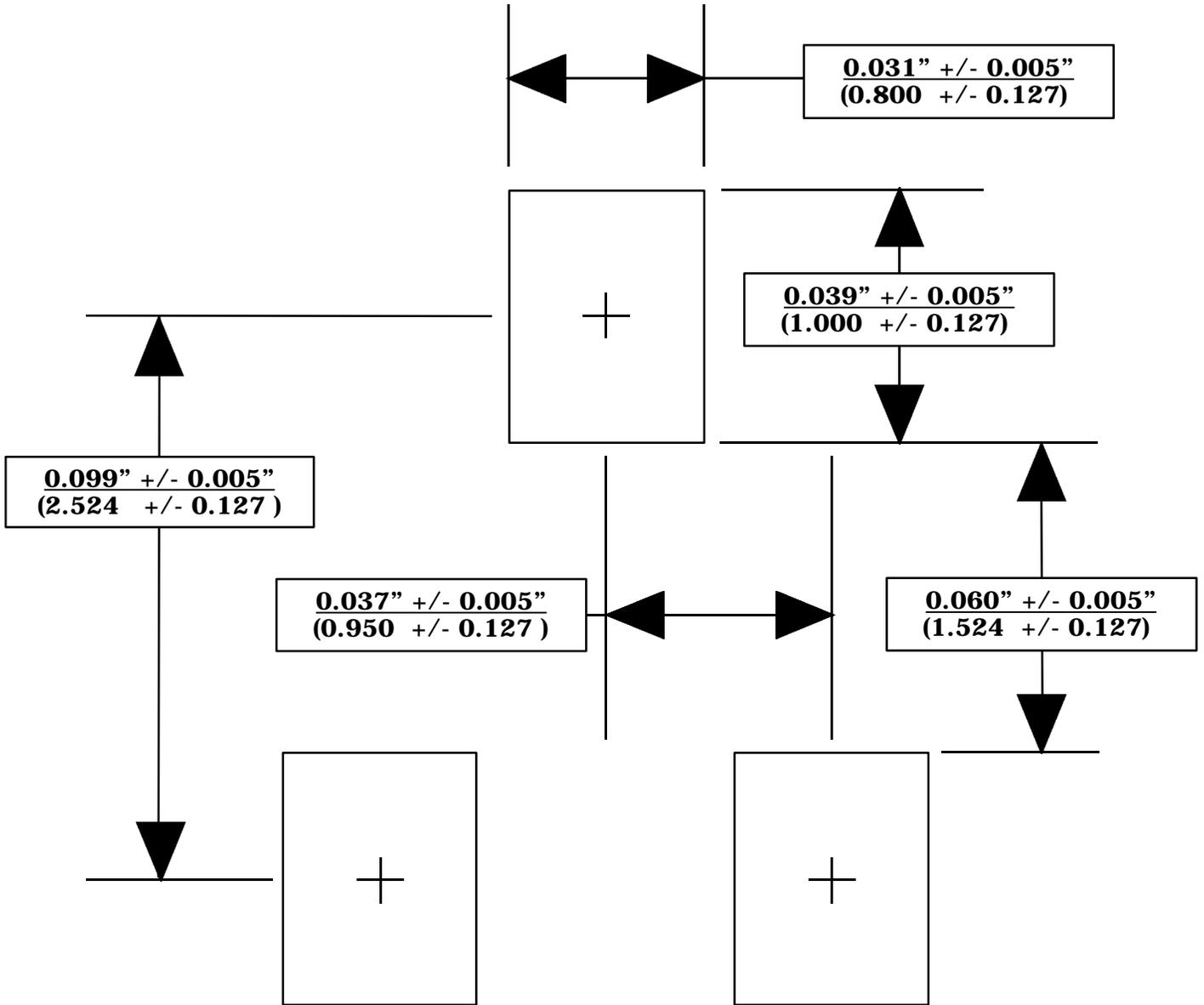
1. These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
3. These ratings give a maximum junction temperature of 150 degrees C and junction-to-ambient thermal resistance of 357 degrees C per Watt. (Derating factor of 2.8 milliwatts per degree C)



**SOT-23**  
**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™	QS™
FACT Quiet Series™	Quiet Series™
FAST®	SuperSOT™-3
FASTr™	SuperSOT™-6
GTO™	SuperSOT™-8
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