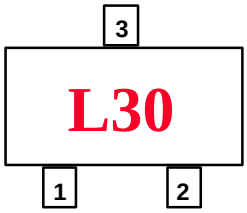
FAIRCHILD SEMICONDUCTOR™

DISCRETE POWER AND SIGNAL TECHNOLOGIES

BAV23S

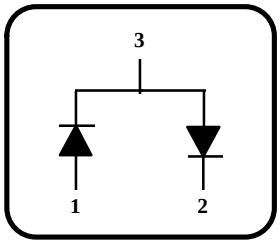
HIGH VOLTAGE GENERAL PURPOSE DIODE

PD . . . .350 mW @ TA = 25 Deg C
BV . . . .250 V (MIN) @ IR = 100 uA
TRR . . . 50 nS @ IF=IR = 30 mA IRR = 3.0 mA



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

CONNECTION DIAGRAMS



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 TA = 25 Deg C	350 mW
Derating Factor per Degree C	2.8 mW

VOLTAGES & CURRENTS

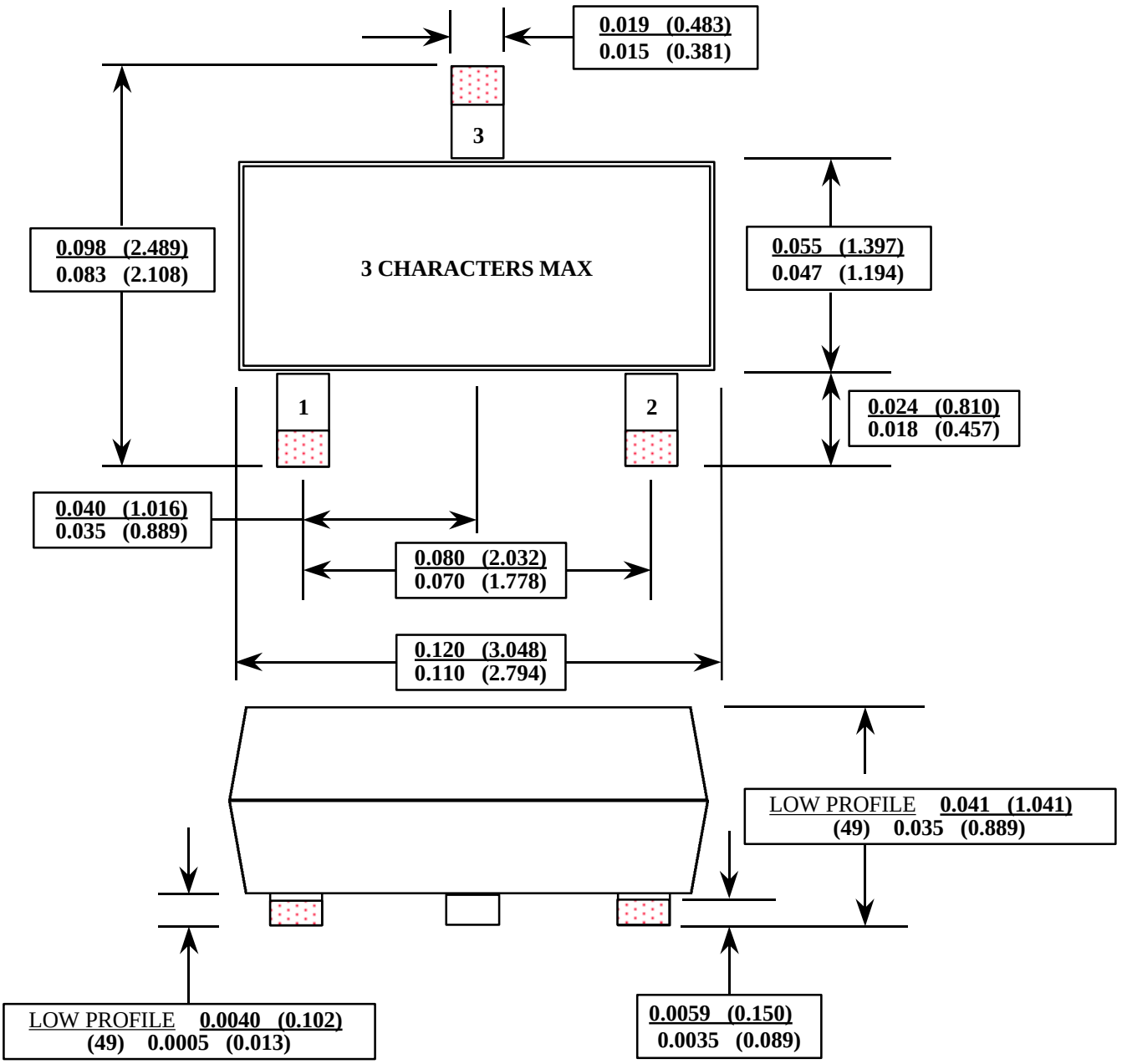
V_{RRM}	Repetitive Peak Reverse Voltage (Single Device)	250 V
V_{RRM}	Repetitive Peak Reverse Voltage (Series Connection)	500 V
V_{RWM}	Continuous Peak Reverse Voltage (Single Device)	200 V
V_{RWM}	Continuous Peak Reverse Voltage (Series Connection)	400 V
IO	Average Rectified Current	200 mA
IF	DC Forward Current	400 mA
if	Recurrent Peak Forward Current	700 mA
if (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

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

SYM	CHARACTERISTICS	MIN	MAX	UNITS	TEST CONDITIONS
BV	Breakdown Voltage	250		V	IR = 100 uA
IR	Reverse Current (single device)		100	nA	VR = 200 V
			100	uA	VR = 200 V TA = +150 Deg C
	Reverse Current (series connection)		100	nA	VR = 400 V
			100	uA	VR = 400 V TA = +150 Deg C
VF	Forward Voltage (single device)		1.00	V	IF = 100 mA
			1.25	V	IF = 200 mA
	Forward Voltage (series connection)		2.00	V	IF = 100 mA
			2.50	V	IF = 200 mA
TRR	Reverse Recovery Time		50	nS	IF = IR = 30 mA IRR = 3.0 mA RL = 100 ohms

NOTES:

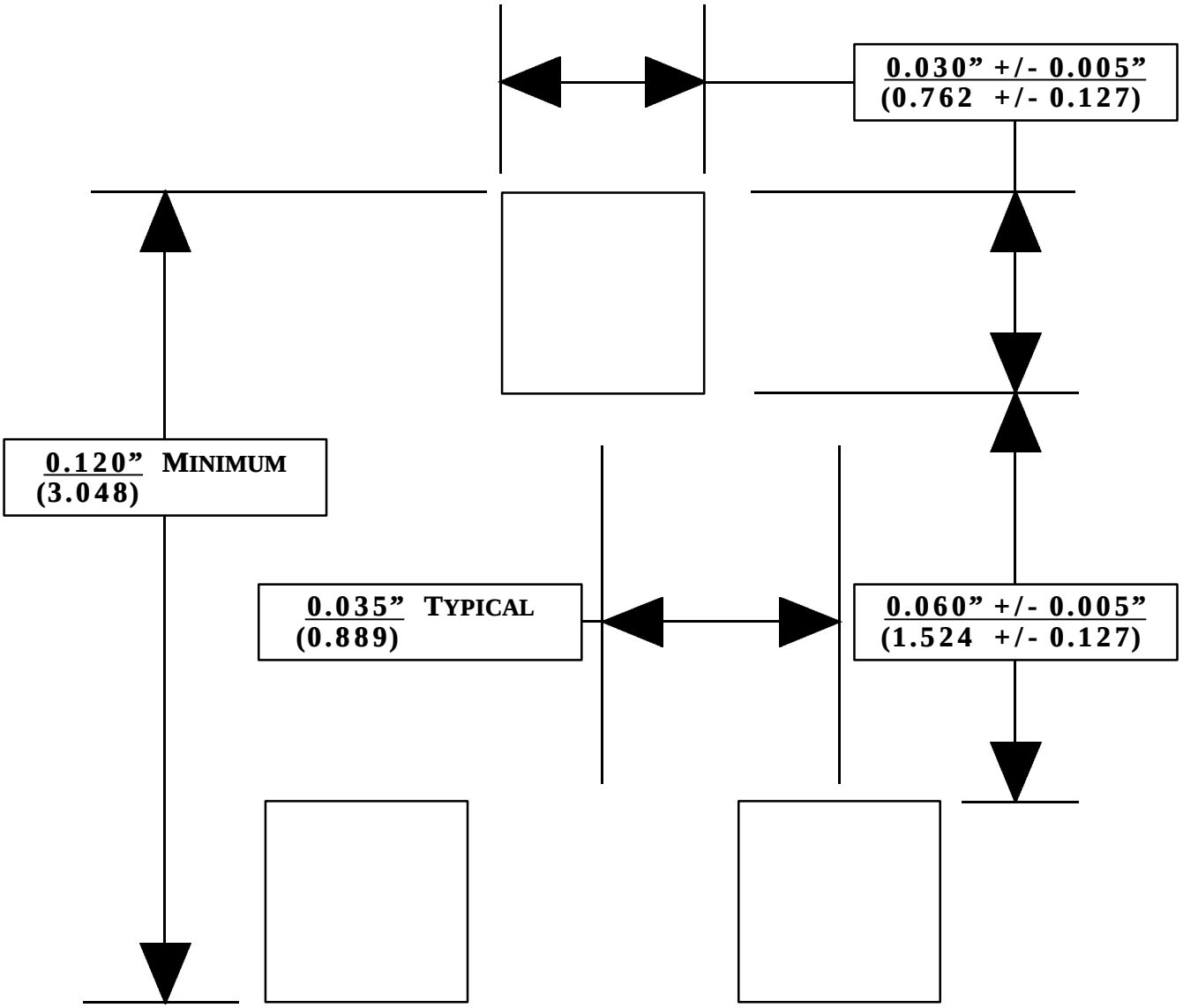
1. These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
3. These ratings give a maximum junction temperature of 150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



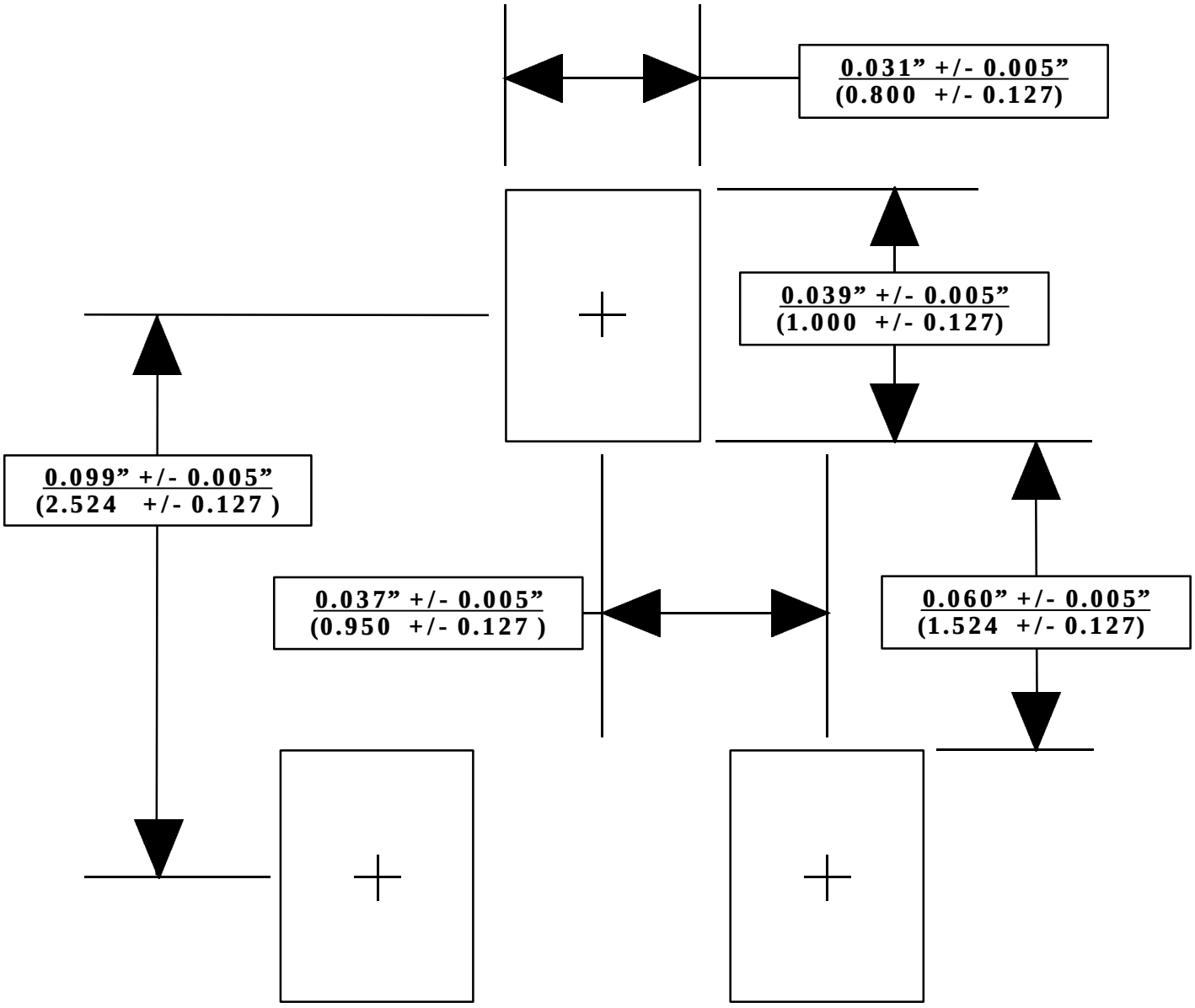
SOT-23

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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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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