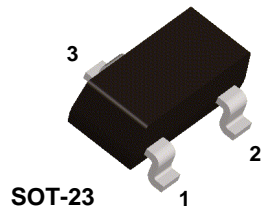
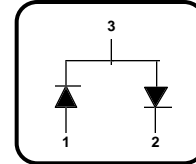


BAS31



CONNECTION DIAGRAM



High Voltage General Purpose Diode

Sourced from Process 1H. See BAV19 / 20 / 21 for characteristics.

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
W_{IV}	Working Inverse Voltage	90	V
I_O	Average Rectified Current	200	mA
I_F	DC Forward Current	600	mA
i_f	Recurrent Peak Forward Current	700	mA
$i_{f(surge)}$	Peak Forward Surge Current Pulse width = 1.0 second Pulse width = 1.0 microsecond	1.0 2.0	A A
T_{stg}	Storage Temperature Range	-50 to +150	°C
T_J	Operating Junction Temperature	150	°C

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

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		BAS31	
P_D	Total Device Dissipation Derate above 25°C	350	mW
		2.8	mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

High Voltage General Purpose Diode

(continued)

BAS31

Electrical Characteristics

TA = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
B _V	Breakdown Voltage	I _R = 1.0 mA	120		V
I _R	Reverse Current	V _R = 90 V V _R = 90 V, T _A = 150°C		100 100	nA μA
V _F	Forward Voltage	I _F = 10 mA I _F = 50 mA I _F = 100 mA I _F = 200 mA I _F = 400 mA		750 840 900 1.0 1.25	mV mV mV V V
C _O	Diode Capacitance	V _R = 0, f = 1.0 MHz		35	pF
T _{RR}	Reverse Recovery Time	I _F = I _R = 30 mA, V _R = 6.0 V, I _{RR} = 3.0 mA, R _L = 100Ω		50	nS