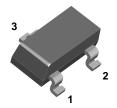
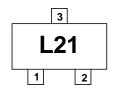
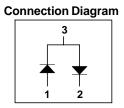


BAS31







SOT-23

Small Signal Diode

Absolute Maximum Ratings*

 $T_{\Delta} = 25$ °C unless otherwise noted

Symbol	Parameter	Value	Units
V _{RRM}	Maximum Repetitive Reverse Voltage	120	V
I _{F(AV)}	Average Rectified Forward Current	200	mA
I _{FSM}	Non-repetitive 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	-55 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.

Thermal Characteristics

Symbol	Parameter	Value	Units
P_{D}	Power Dissipation	350	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

Electrical Characteristics T_A = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
V_R	Breakdown Voltage	I _R = 1.0 mA	120		V
V _F	Forward Voltage	$I_F = 10 \text{ mA}$ $I_F = 50 \text{ mA}$ $I_F = 100 \text{ mA}$ $I_F = 200 \text{ mA}$ $I_F = 400 \text{ mA}$		750 840 900 1.0 1.25	mV mV mV V
I _R	Reverse Current	V _R = 90 V V _R = 90 V, T _A = 150°C		100 100	nA μA
C _T	Total Capacitance	V _R = 0, f = 1.0 MHz		35	pF
t _{rr}	Reverse Recovery Time	$I_F = I_R = 30 \text{ mA}, I_{RR} = 3.0 \text{ mA},$ $R_L = 100 \Omega$		50	ns

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.

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Definition of Terms

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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