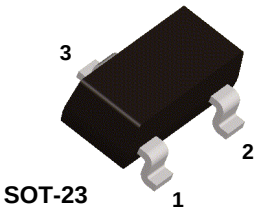
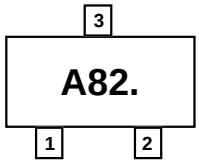
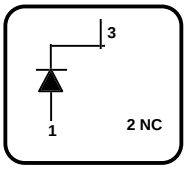
FAIRCHILD
SEMICONDUCTOR TM

BAS21





CONNECTION DIAGRAM



General Purpose High Voltage Diode

Sourced from Process 1H. See MMBD1401 for characteristics.

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
W_{IV}	Working Inverse Voltage	250	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	-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.

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
		BAS21	
P_D	Total Device Dissipation Derate above 25°C	350 2.8	mW mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

General Purpose High Voltage Diode
(continued)

Electrical Characteristics
TA = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
B_V	Breakdown Voltage	I_R = 100 μA	250		V
I_R	Reverse Voltage Leakage Current	V_R = 200 V V_R = 200 V, T_A = 150 °C		100 100	nA μA
V_F	Forward Voltage	I_F = 100 mA I_F = 200 mA		1.0 1.25	V V
C_O	Diode Capacitance	V_R = 0, f = 1.0 MHz		5.0	pF
T_{RR}	Reverse Recovery Time	I_F = I_R = 30 mA, I_{RR} = 3.0 mA, R_L = 100 Ω		50	nS

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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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Definition of Terms

Datasheet Identification	Product Status	Definition
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