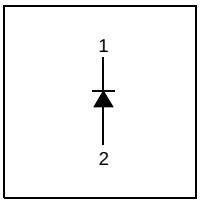
FAIRCHILD SEMICONDUCTOR®

March 2010

BAS16HT1G
Small Signal Diode

SOD-323

Connection Diagram



Absolute Maximum Ratings * T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{RRM}	Maximum Repetitive Reverse Voltage	85	V
$I_{F(AV)}$	Average Rectified Forward Current	200	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current Pulse Width = 1.0 second	600	mA
T_{STG}	Storage Temperature Range	-65 to +150	°C
T_J	Operating Junction Temperature	-55 to +150	°C

* These ratings are limiting values above which the serviceability of the diode may be impaired.

NOTES:

1) These ratings are based on a maximum junction temperature of 150 degrees C.

2) These are steady limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	600	°C/W

Electrical Characteristics T_A = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Max.	Units
V_R	Breakdown Voltage	I_R = 5.0μA	85		V
V_F	Forward Voltage	I_F = 0.1mA I_F = 10mA I_F = 50mA I_F = 150mA		715 855 1.0 1.25	mV mV V V
I_R	Reverse Leakage	V_R = 75V V_R = 25V, T_A = 150°C V_R = 75V, T_A = 150°C		1.0 30 50	μA μA μA
C_T	Total Capacitance	V_R = 0, f = 1.0MHz		2.0	pF
t_{rr}	Reverse Recovery Time	I_F = I_R = 10mA, I_{RR} = 1.0mA, R_L = 100Ω		6.0	ns

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Typical Performance Characteristics

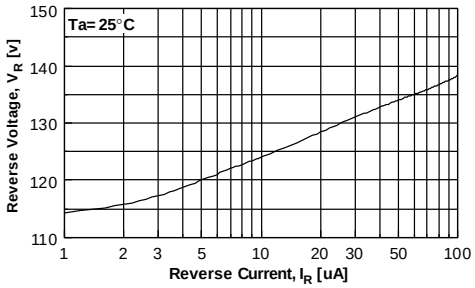

Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100μA

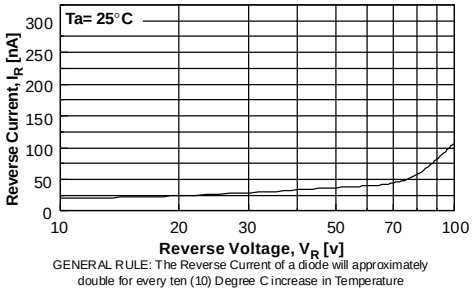

Figure 2. Reverse Current vs Reverse Voltage
IR - 10 to 100V

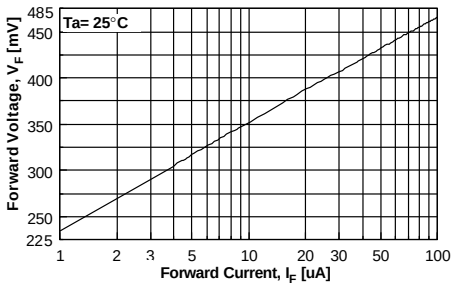

Figure 3. Forward Voltage vs Forward Current
VF - 1.0 to 100μA

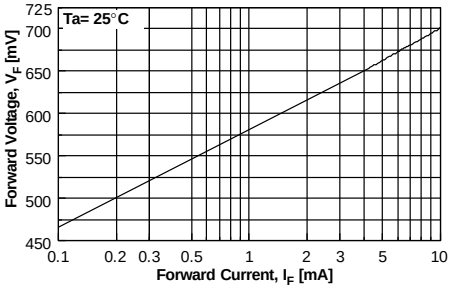

Figure 4. Forward Voltage vs Forward Current
VF - 0.1 to 10mA

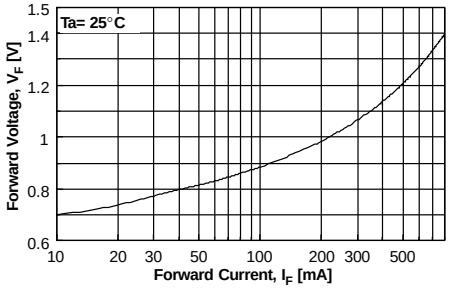

Figure 5. Forward Voltage vs Forward Current
VF - 10 - 800mA

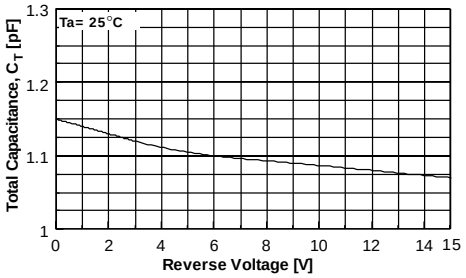

Figure 6. Total Capacitance

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Typical Performance Characteristics (Continued)

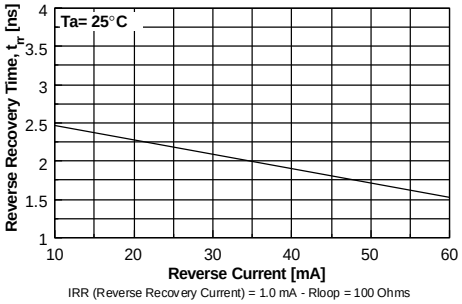

Figure 1. Reverse Recovery Time vs Reverse Current TRR - IR 10mA vs 60mA

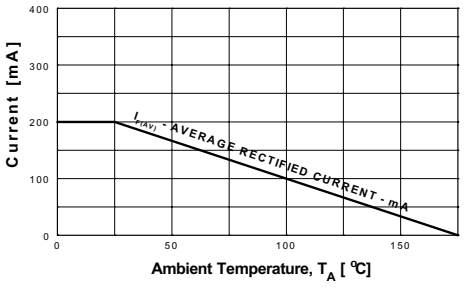

Figure 2. Average Rectified Current ($I_{F(AV)}$) vs Ambient Temperature (T_A)

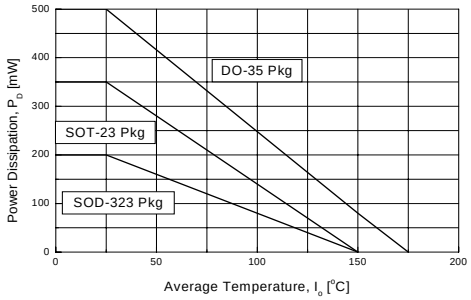

Figure 3. Power Derating Curve

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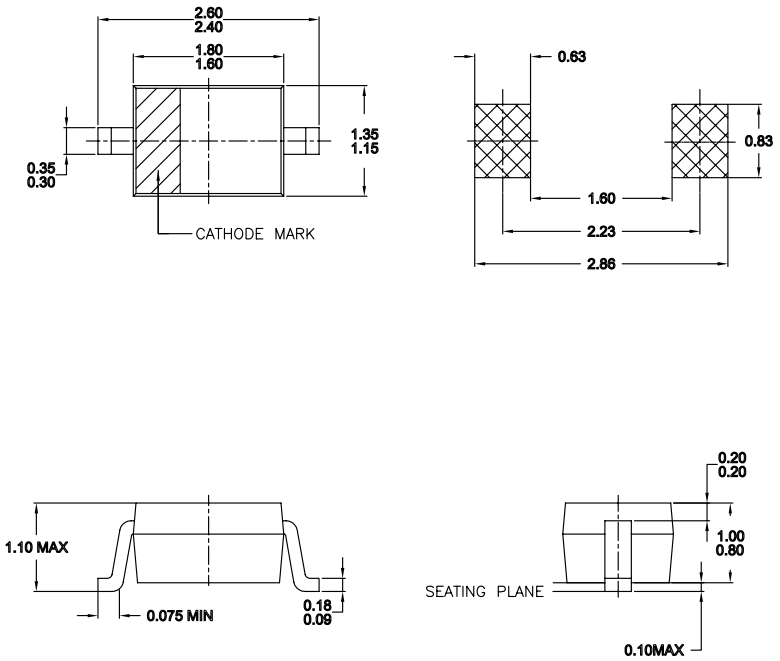
Physical Dimension

SOD-323



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Dimensions in Millimeters

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