

# BAS16HT1G

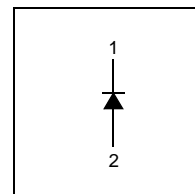
## Small Signal Diode



SOD-323



Connection Diagram



### Absolute Maximum Ratings \* $T_A = 25^\circ\text{C}$ 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	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-55 to +150	$^\circ\text{C}$

\* 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	$^\circ\text{C/W}$

### Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

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

## Typical Performance Characteristics

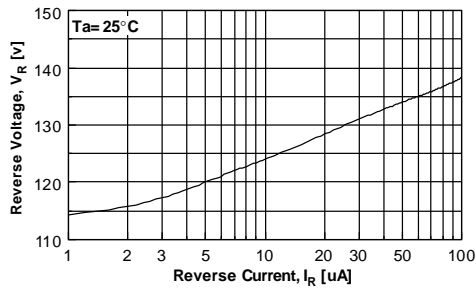


Figure 1. Reverse Voltage vs Reverse Current  
BV - 1.0 to 100 $\mu$ A

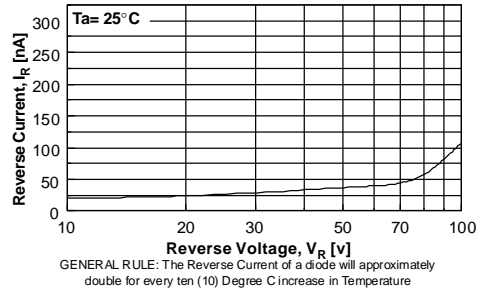


Figure 2. Reverse Current vs Reverse Voltage  
IR - 10 to 100V

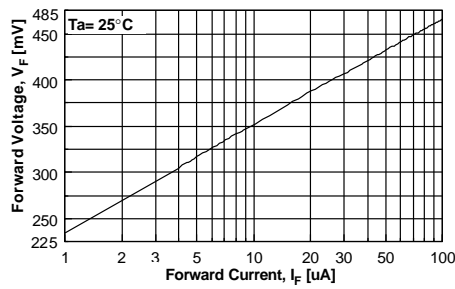


Figure 3. Forward Voltage vs Forward Current  
VF - 1.0 to 100 $\mu$ A

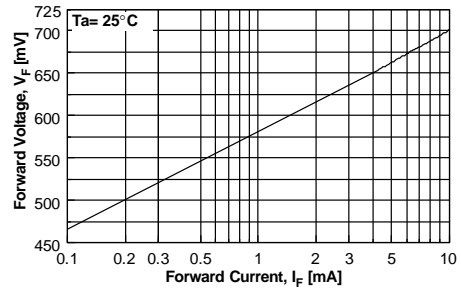


Figure 4. Forward Voltage vs Forward Current  
VF - 0.1 to 10mA

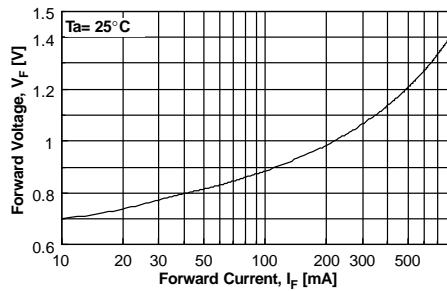


Figure 5. Forward Voltage vs Forward Current  
VF - 10 - 800mA

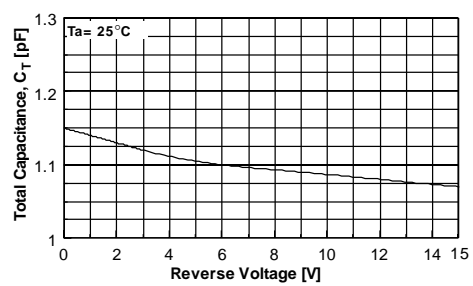


Figure 6. Total Capacitance

## Typical Performance Characteristics (Continued)

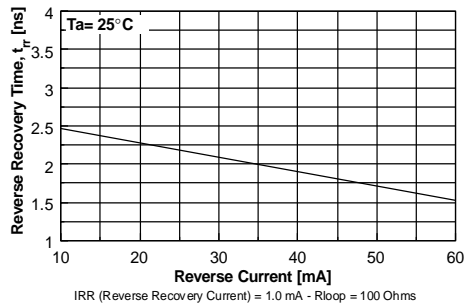


Figure 1. Reverse Recovery Time vs Reverse Current  
TRR - IR 10mA vs 60mA

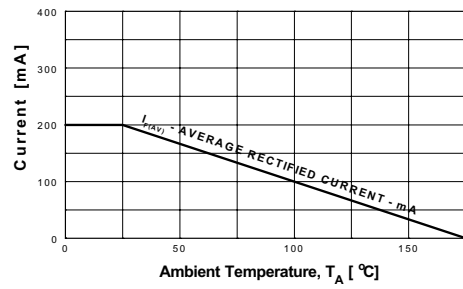


Figure 2. Average Rectified Current ( $I_{F(AV)}$ ) vs  
Ambient Temperature ( $T_A$ )

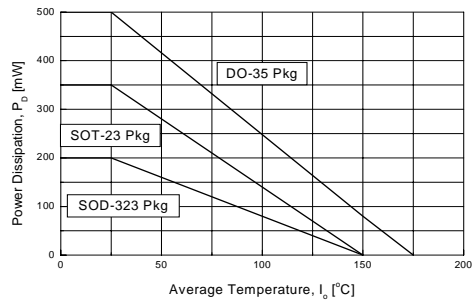






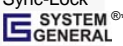
Figure 3. Power Derating Curve





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