DESCRIPTION

The BAS16H is available in SOD-323 Package

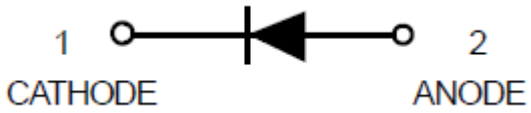
FEATURES

- Small plastic SMD package.
- Continuous reverse voltage: max. 75V.
- High-speed switching in hybrid thick and thin-film circuits.
- RoHS Compliant
- Available in SOD-323 Package

ORDERING INFORMATION

Package Type	Part Number
SOD-323	BAS16H
Note	3,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION



ABSOLUTE MAXIMUM RATINGS

V_R, Continuous Reverse Voltage	75Vdc
I_F, Peak Forward Current	200mAdc
$I_{FM(surge)}$, Peak Forward Surge Current	500mAdc
P_D, Total Device Dissipation FR-5 Board[NOTE1]	200mW
T_A=25°C	
Derate above 25°C	1.57mW/°C
$R_{\theta JA}$, Thermal Resistance Junction to Ambient	635℃/W
T_J, T_{STG}, Junction and Storage Temperature	-55℃ ~ +150℃

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

NOTE1: FR-4 Minimum Pad

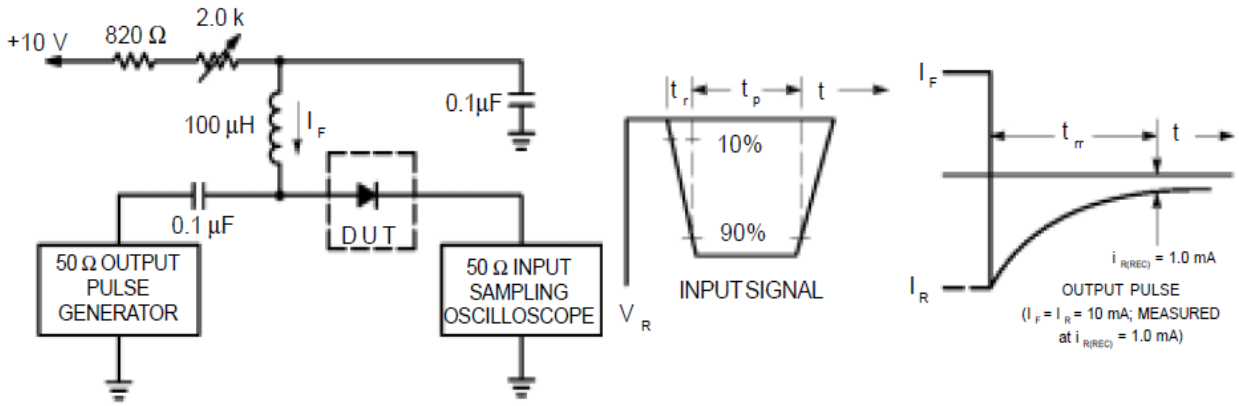
ELECTRICAL CHARACTERISTICS

T_A=25℃, unless otherwise noted

Parameter	Symbol	Conditions	Min	Tye	Max	Unit
OFF CHARACTERISTICS						
Reverse Voltage Leakage Current	I_R	V_R=75Vdc			1.0	uAdc
		V_R =75Vdc, T_J=150°C			50	
		V_R =25Vdc, T_J=150°C			30	
Reverse Breakdown Voltage	$V_{(BR)}$	I_{BR} = 100μAdc	75			Vdc
Forward Voltage	V_F	I_F=1.0mAdc			715	mV
		I_F=10mAdc			855	
		I_F=50mAdc			1000	
		I_F=150mAdc			1250	
Diode Capacitance	C_D	V_R=0, f=1.0MHz			2.0	pF
Forward Recovery Voltage	V_{FR}	I_F=10mAdc, t_r=20ns			1.75	Vdc
Reverse Recovery Time	t_{rr}	I_F=I_R=10mAdc, R_L=50Ω			4.0	ns
Stored Charge	Q_S	I_F=10mAdc to V_R=5.0Vdc, R_L=500Ω			45	pC

TEST CIRCUIT

Figure 1. Recovery Time Equivalent Test Circuit



NOTE1: A 2.0kΩ variable resistor adjusted for a Forward Current (I_F) of 10mA.
NOTE2: Input pulse is adjusted so $I_{R(peak)}$ is equal to 10mA.
NOTE3: t_p » t_{rr}

TYPICAL CHARACTERISTICS

Figure 1. Forward Voltage

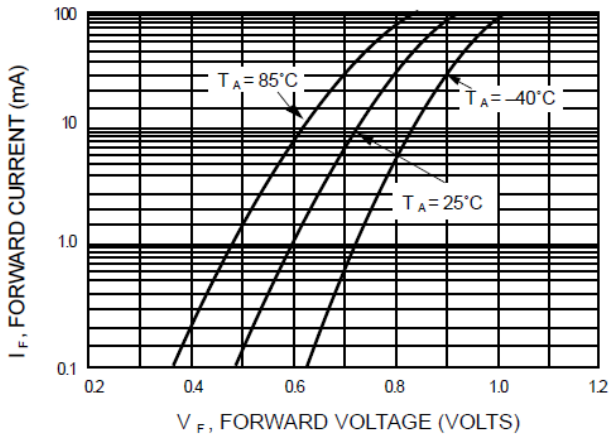


Figure 2. Leakage Current

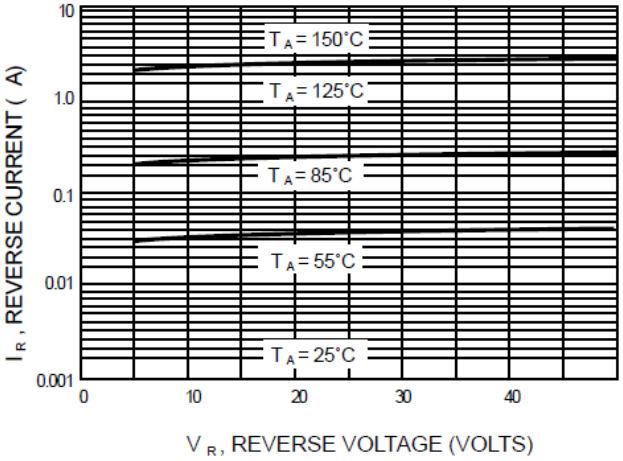
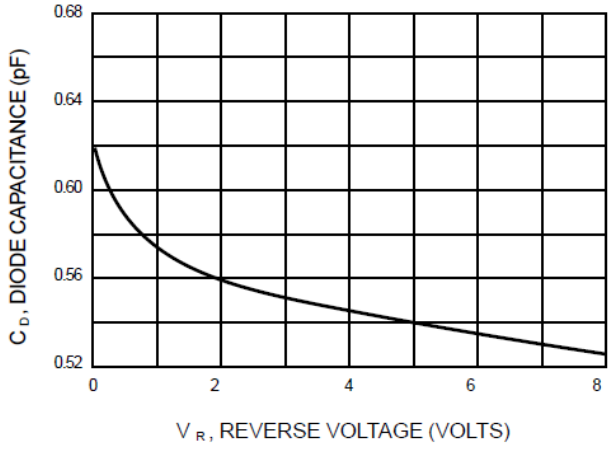
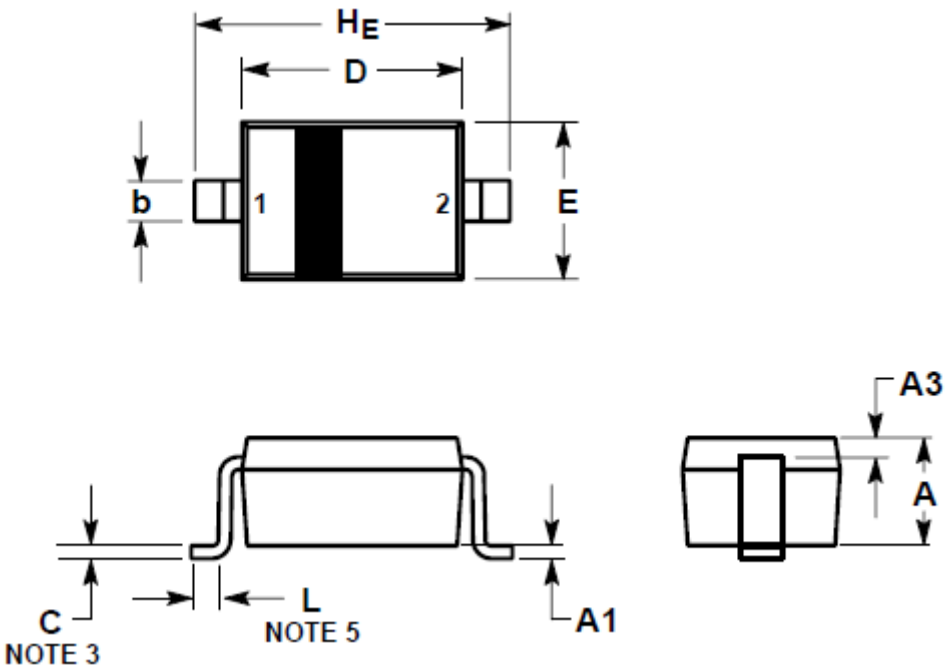


Figure 3. Capacitance



PACKAGE INFORMATION

Dimension in SOD–323 Package (Unit: mm)



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.80	1.00	0.031	0.040
A1	0.00	0.10	0.000	0.004
A3	0.15 REF		0.006 REF	
b	0.25	0.40	0.010	0.016
C	0.089	0.177	0.003	0.007
D	1.60	1.80	0.062	0.070
E	1.15	1.35	0.045	0.053
L	0.08		0.003	
H_E	2.30	2.70	0.090	0.105

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