

BAS16HT1

Preferred Device

Switching Diode



ON Semiconductor®

<http://onsemi.com>

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	75	Vdc
Peak Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	500	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board (Note 1) $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	200 1.57	mW mW/ $^\circ\text{C}$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	635	$^\circ\text{C/W}$
Junction and Storage Temperature	T_J, T_{stg}	-55 to 150	$^\circ\text{C}$

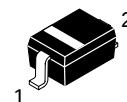
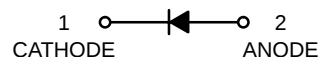
1. FR-4 Minimum Pad.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Reverse Voltage Leakage Current ($V_R = 75\text{ Vdc}$) ($V_R = 75\text{ Vdc}, T_J = 150^\circ\text{C}$) ($V_R = 25\text{ Vdc}, T_J = 150^\circ\text{C}$)	I_R	- - -	1.0 50 30	μAdc
Reverse Breakdown Voltage ($I_{BR} = 100\text{ }\mu\text{Adc}$)	$V_{(BR)}$	75	-	Vdc
Forward Voltage ($I_F = 1.0\text{ mAdc}$) ($I_F = 10\text{ mAdc}$) ($I_F = 50\text{ mAdc}$) ($I_F = 150\text{ mAdc}$)	V_F	- - - -	715 855 1000 1250	mV
Diode Capacitance ($V_R = 0, f = 1.0\text{ MHz}$)	C_D	-	2.0	pF
Forward Recovery Voltage ($I_F = 10\text{ mAdc}, t_r = 20\text{ ns}$)	V_{FR}	-	1.75	Vdc
Reverse Recovery Time ($I_F = I_R = 10\text{ mAdc}, R_L = 50\text{ }\Omega$)	t_{rr}	-	6.0	ns
Stored Charge ($I_F = 10\text{ mAdc}$ to $V_R = 5.0\text{ Vdc}$, $R_L = 500\text{ }\Omega$)	Q_S	-	45	pC



SOD-323
CASE 477
STYLE 1

MARKING DIAGRAM



A6 = Specific Device Code
M = Date Code

ORDERING INFORMATION

Device	Package	Shipping†
BAS16HT1	SOD-323	3000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

Preferred devices are recommended choices for future use and best overall value.

BAS16HT1

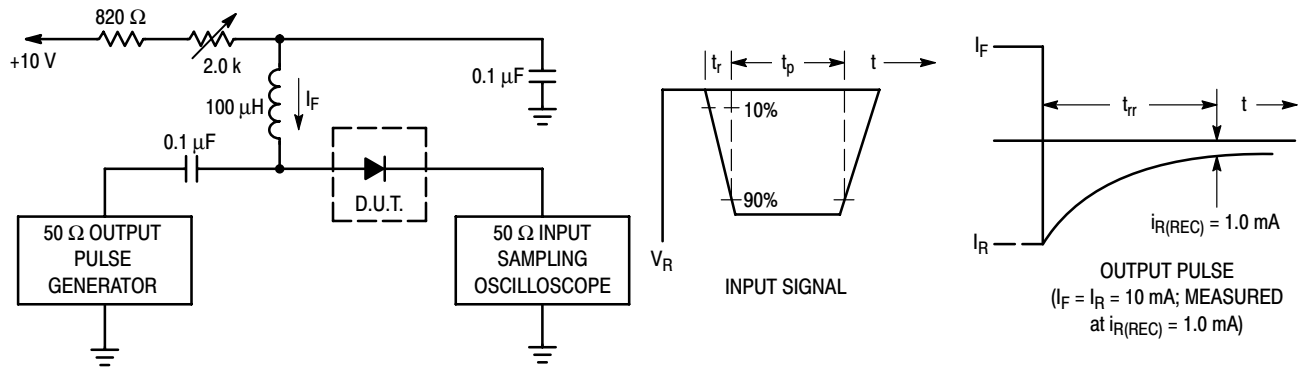


Figure 1. Recovery Time Equivalent Test Circuit

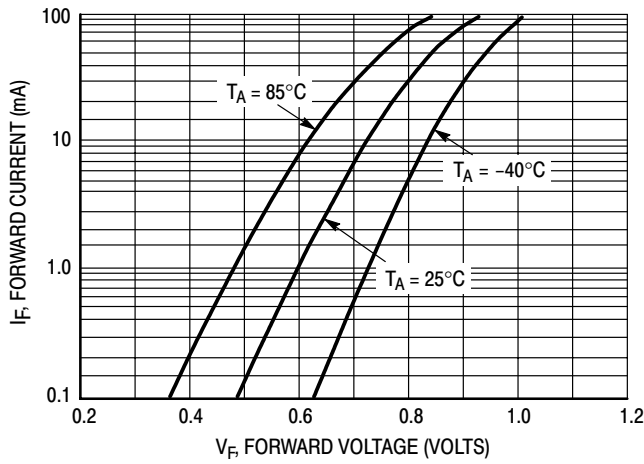


Figure 2. Forward Voltage

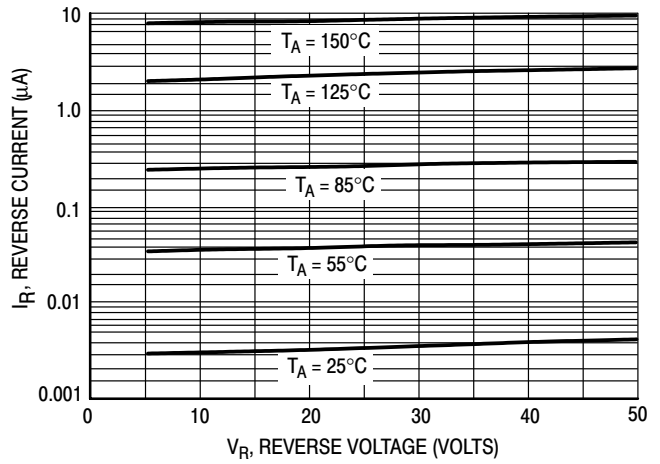


Figure 3. Leakage Current

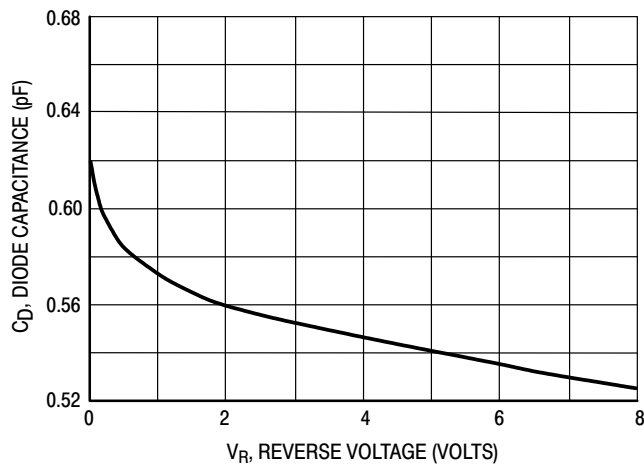
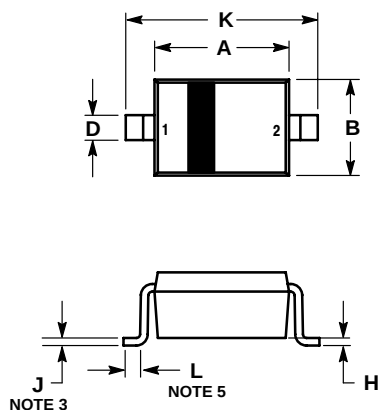


Figure 4. Capacitance

BAS16HT1

PACKAGE DIMENSIONS

SOD-323
CASE 477-02
ISSUE D



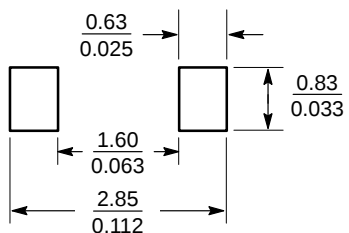
NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DIMENSION L IS MEASURED FROM END OF RADIUS.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.80	0.063	0.071
B	1.15	1.35	0.045	0.053
C	0.80	1.00	0.031	0.039
D	0.25	0.40	0.010	0.016
E	0.15 REF		0.006 REF	
H	0.00	0.10	0.000	0.004
J	0.089	0.177	0.0035	0.0070
K	2.30	2.70	0.091	0.106
L	0.075	---	0.003	---

STYLE 1:
PIN 1. CATHODE
2. ANODE

SOLDERING FOOTPRINT*



*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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