

Switching Diode

BAS16HT1

ON Semiconductor Preferred Device

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,* $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	200	mW
		1.57	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}	150	$^\circ\text{C}$

*FR-4 Minimum Pad

DEVICE MARKING

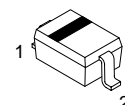
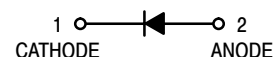
BAS16HT1 = A6

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

CASE 477-02, STYLE 1
SOD323

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

BAS16HT1

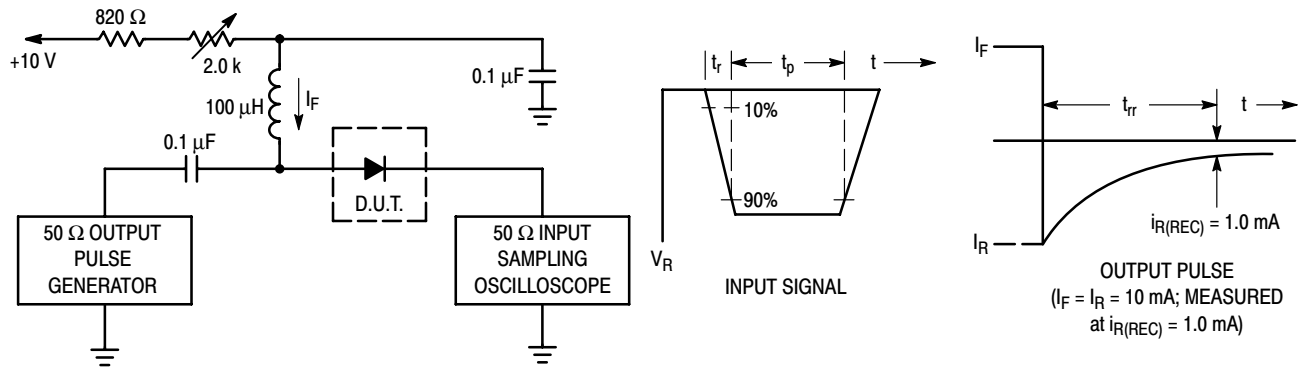


Figure 1. Recovery Time Equivalent Test Circuit

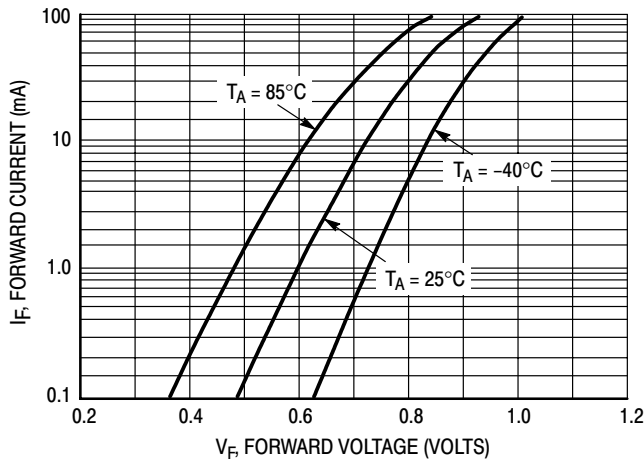


Figure 2. Forward Voltage

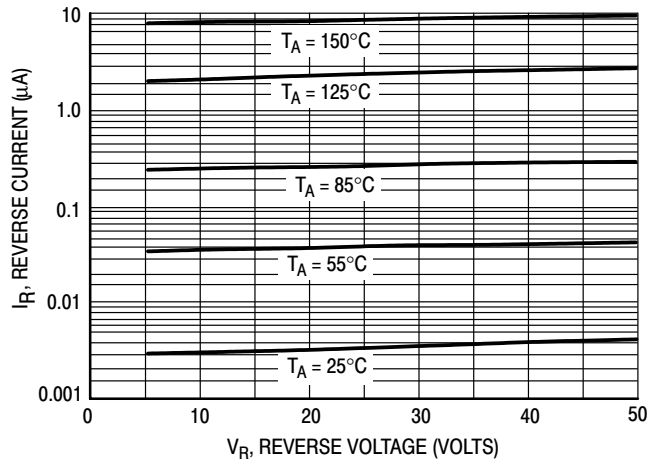


Figure 3. Leakage Current

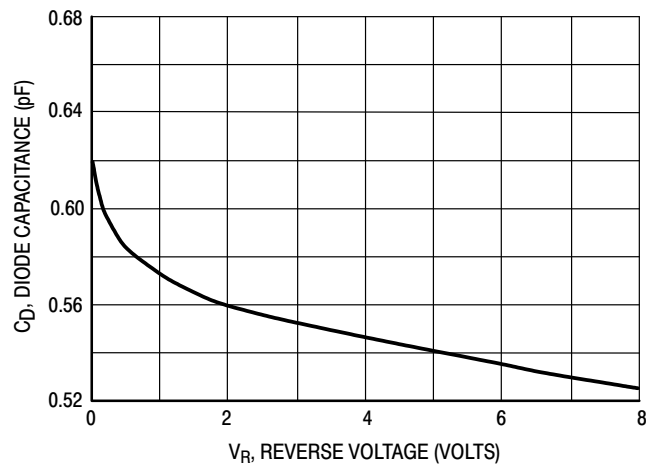
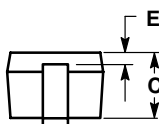
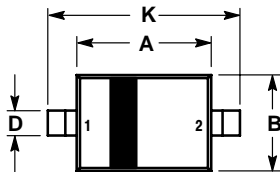


Figure 4. Capacitance

BAS16HT1

PACKAGE DIMENSIONS

SOD-323 CASE 477-02 ISSUE B



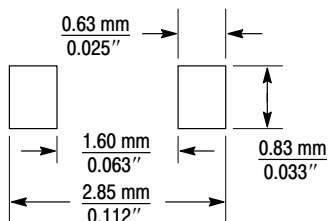
NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.

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


STYLE 1:

- PIN 1. CATHODE
- ANODE



(mm)
(inches)

SOD-323 Soldering Footprint

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