

BAS16HT1

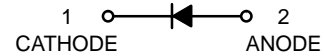
Preferred Device

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 | mW |
| | | 1.57 | mW/ $^\circ\text{C}$ |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 635 | $^\circ\text{C}/\text{W}$ |
| Junction and Storage Temperature | T_J, T_{stg} | -55 to 150 | $^\circ\text{C}$ |

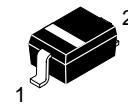
1. FR-4 Minimum Pad.

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

| Characteristic | Symbol | Min | Max | Unit |
|----------------|--------|-----|-----|------|
|----------------|--------|-----|-----|------|

OFF CHARACTERISTICS

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



SOD-323
CASE 477
STYLE 1

MARKING DIAGRAM



A6 = Specific Device Code
M = Date Code

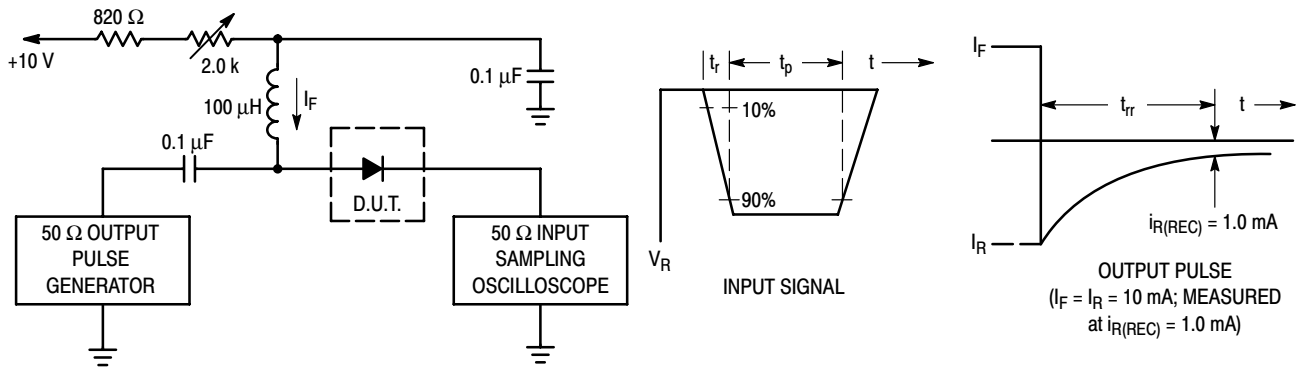
ORDERING INFORMATION

| 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.

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- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
 2. Input pulse is adjusted so $I_{R(\text{peak})}$ is equal to 10 mA.
 3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

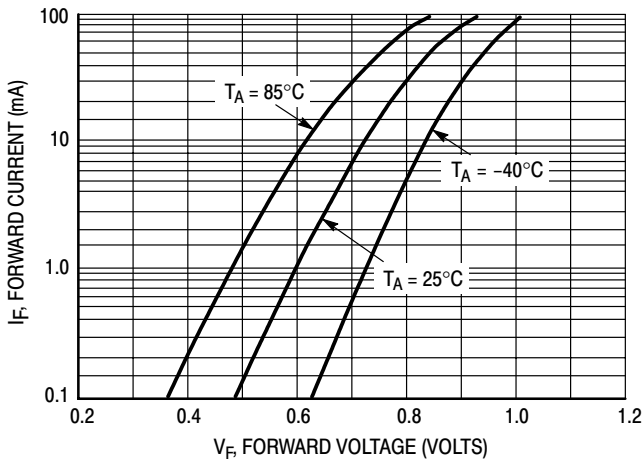


Figure 2. Forward Voltage

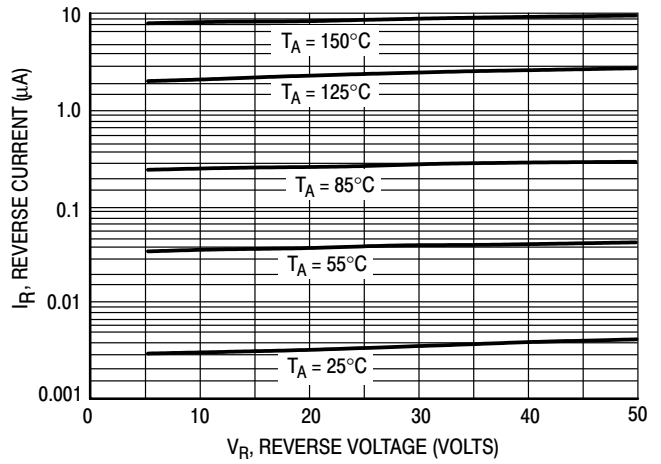


Figure 3. Leakage Current

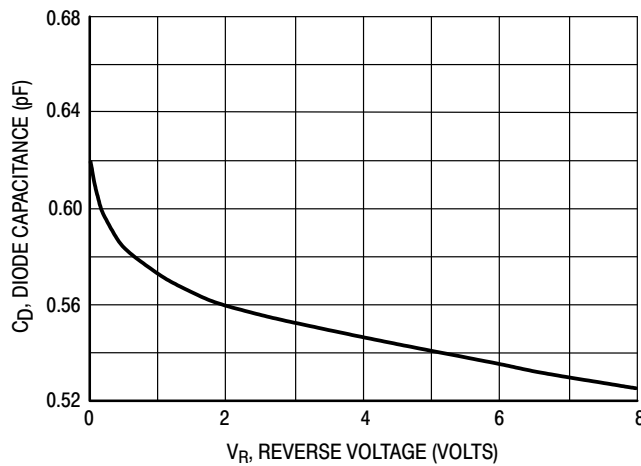
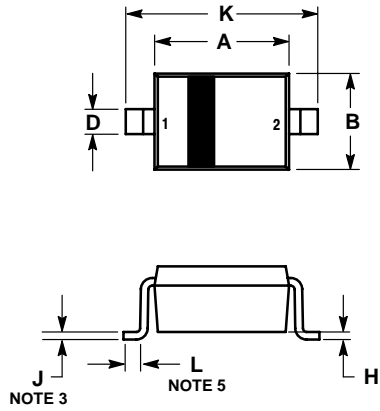


Figure 4. Capacitance

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PACKAGE DIMENSIONS

SOD-323
CASE 477-02
ISSUE D



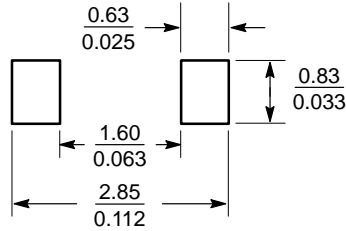
NOTES:

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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