

BAS70LT1

Schottky Barrier Diodes

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction loss. Miniature surface mount package is excellent for hand held and portable applications where space is limited.

Features

- Pb-Free Package is Available
- Extremely Fast Switching Speed
- Low Forward Voltage

MAXIMUM RATINGS ($T_J = 150^\circ\text{C}$ unless otherwise noted)

| Rating | Symbol | Value | Unit |
|--|----------------|-------------|----------------------------|
| Reverse Voltage | V_R | 70 | V |
| Forward Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C | P_F | 225 1.8 | mW mW/ $^\circ\text{C}$ |
| Operating Junction and Storage Temperature Range | T_J, T_{stg} | -55 to +150 | $^\circ\text{C}$ |

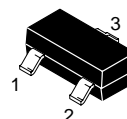
Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.



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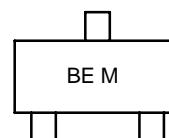
<http://onsemi.com>

70 VOLTS SCHOTTKY BARRIER DIODES



SOT-23
CASE 318
STYLE 8

MARKING DIAGRAM



BE Specific Device Code
M = Date Code

ORDERING INFORMATION

| Device | Package | Shipping† |
|-----------|---------------------|--------------------|
| BAS70LT1 | SOT-23 | 3000 / Tape & Reel |
| BAS70LT1G | SOT-23 (Pb-Free) | 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.

BAS70LT1

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

| Characteristic | Symbol | Min | Max | Unit |
|---|-------------|--------|-----------|------------------|
| Reverse Breakdown Voltage – ($I_R = 10 \mu\text{A}$) | $V_{(BR)R}$ | 70 | – | V |
| Total Capacitance – ($V_R = 0 \text{ V}$, $f = 1.0 \text{ MHz}$) | C_T | – | 2.0 | pF |
| Reverse Leakage ($V_R = 50 \text{ V}$) ($V_R = 70 \text{ V}$) | I_R | – – | 0.1 10 | μA dc |
| Forward Voltage – ($I_F = 1.0 \text{ mA}$) | V_F | – | 410 | mVdc |
| Forward Voltage – ($I_F = 10 \text{ mA}$) | V_F | – | 750 | mVdc |
| Forward Voltage – ($I_F = 15 \text{ mA}$) | V_F | – | 1.0 | Vdc |

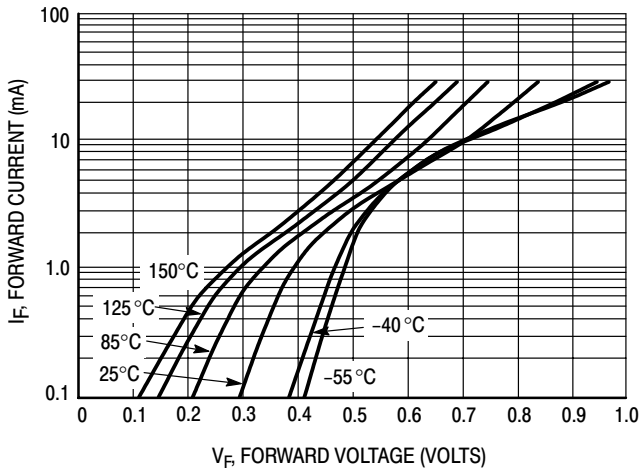


Figure 1. Typical Forward Voltage

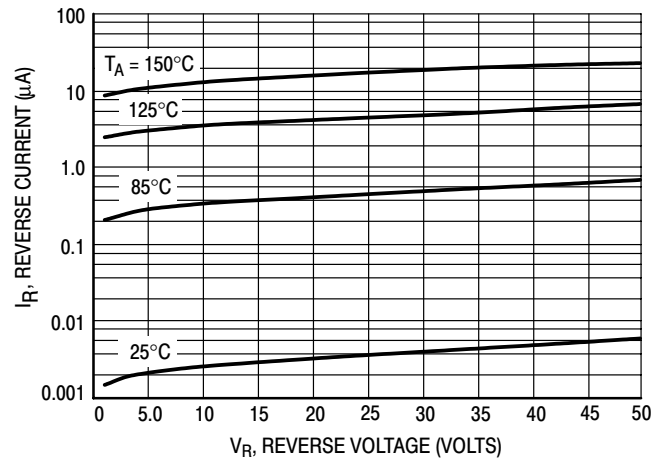


Figure 2. Reverse Current versus Reverse Voltage

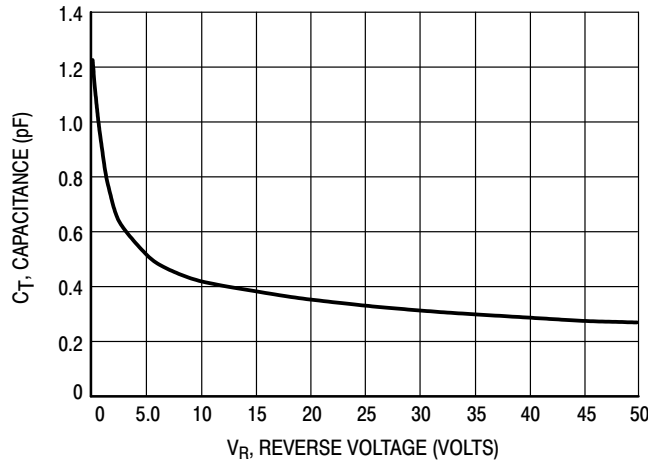
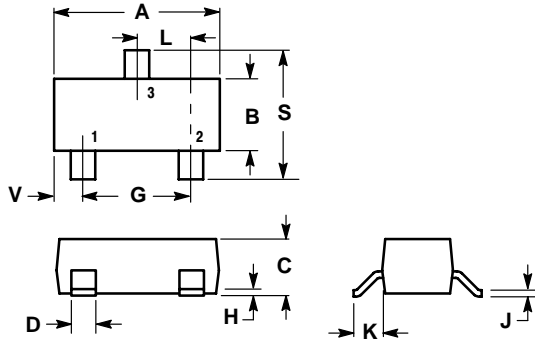


Figure 3. Typical Capacitance

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PACKAGE DIMENSIONS

SOT-23 (TO-236)
CASE 318-08
ISSUE AH



NOTES:

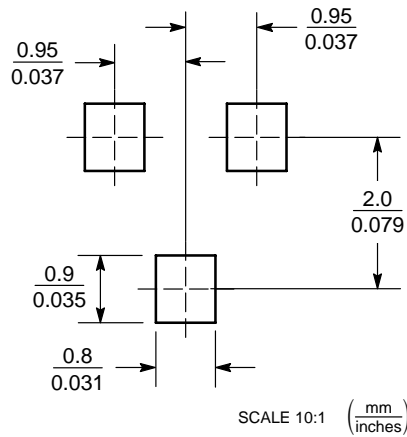
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. 318-03 AND -07 OBSOLETE, NEW STANDARD 318-08.

| DIM | INCHES | | MILLIMETERS | |
|-----|--------|--------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.1102 | 0.1197 | 2.80 | 3.04 |
| B | 0.0472 | 0.0551 | 1.20 | 1.40 |
| C | 0.0350 | 0.0440 | 0.89 | 1.11 |
| D | 0.0150 | 0.0200 | 0.37 | 0.50 |
| G | 0.0701 | 0.0807 | 1.78 | 2.04 |
| H | 0.0005 | 0.0040 | 0.013 | 0.100 |
| J | 0.0034 | 0.0070 | 0.085 | 0.177 |
| K | 0.0140 | 0.0285 | 0.35 | 0.69 |
| L | 0.0350 | 0.0401 | 0.89 | 1.02 |
| S | 0.0830 | 0.1039 | 2.10 | 2.64 |
| V | 0.0177 | 0.0236 | 0.45 | 0.60 |

STYLE 8:

- PIN 1. ANODE
- NO CONNECTION
- CATHODE

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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