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°C unless otherwise noted)

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

ON Semiconductor®

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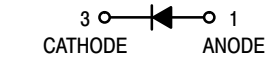
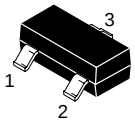
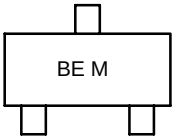
70 VOLTS SCHOTTKY BARRIER DIODES





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.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage − (I_R = 10 μA)	$V_{(BR)R}$	70	−	V
Total Capacitance − (V_R = 0 V, f = 1.0 MHz)	C_T	−	2.0	pF
Reverse Leakage (V_R = 50 V) (V_R = 70 V)	I_R	 − −	 0.1 10	μAdc
Forward Voltage − (I_F = 1.0 mAdc)	V_F	−	410	mVdc
Forward Voltage − (I_F = 10 mAdc)	V_F	−	750	mVdc
Forward Voltage − (I_F = 15 mAdc)	V_F	−	1.0	Vdc

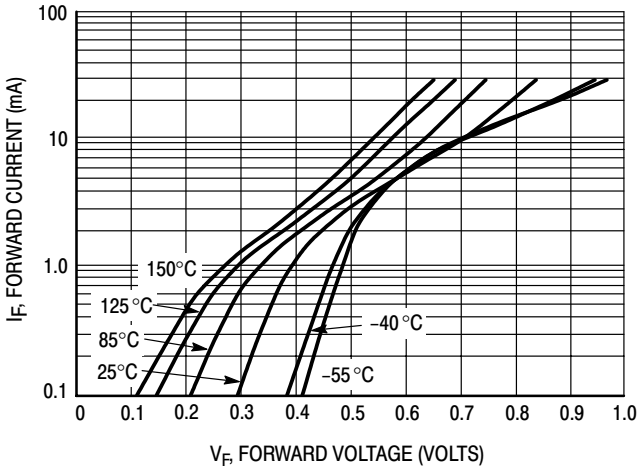


Figure 1. Typical Forward Voltage

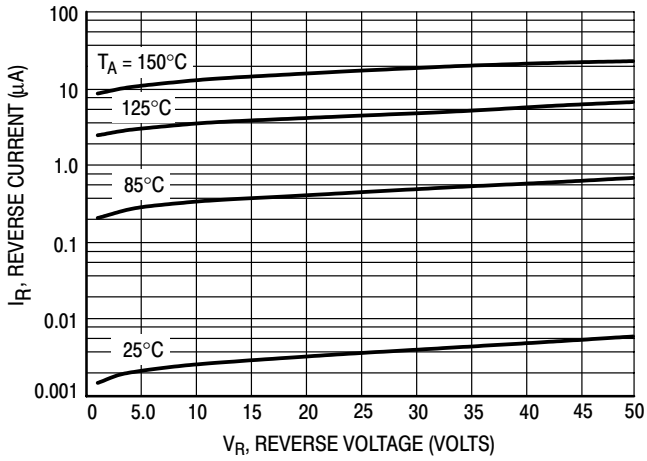


Figure 2. Reverse Current versus Reverse Voltage

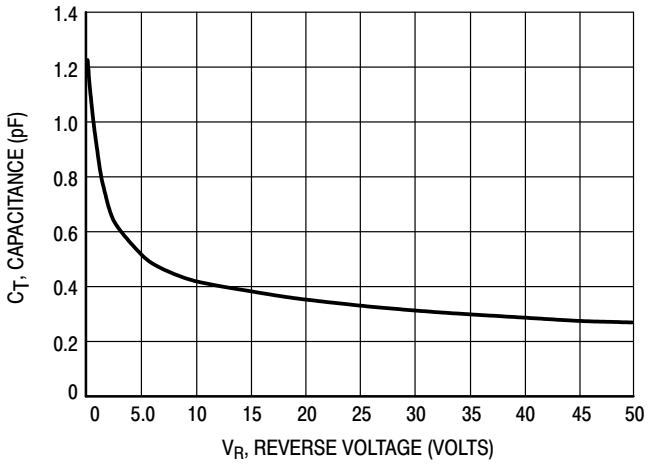
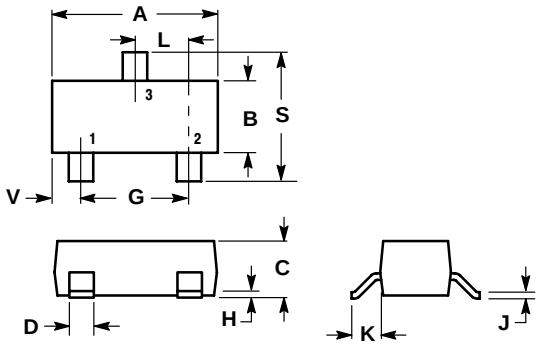


Figure 3. Typical Capacitance

PACKAGE DIMENSIONS

SOT−23 (TO−236)
CASE 318−08
ISSUE AH

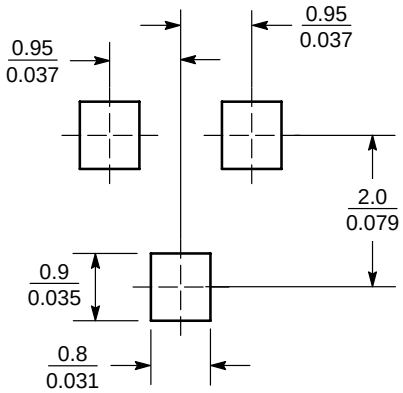


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. 318−03 AND −07 OBSOLETE, NEW STANDARD 318−08.

	INCHES		MILLIMETERS	
DIM	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
2. NO CONNECTION
3. CATHODE

SOLDERING FOOTPRINT*



SCALE 10:1 $\left(\frac{\text{mm}}{\text{inches}}\right)$

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

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
P.O. Box 61312, Phoenix, Arizona 85082−1312 USA
Phone: 480−829−7710 or 800−344−3860 Toll Free USA/Canada
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2−9−1 Kamimeguro, Meguro−ku, Tokyo, Japan 153−0051
Phone: 81−3−5773−3850

ON Semiconductor Website: http://onsemi.com

Order Literature: http://www.onsemi.com/litorder

For additional information, please contact your local Sales Representative.