BAS70LT1G, NSVBAS70LT1G

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

- Extremely Fast Switching Speed
- Low Forward Voltage
- NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC−Q101 Qualified and PPAP Capable
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant*

MAXIMUM RATINGS (T_J = 150°C unless otherwise noted)

| Rating	Symbol	Value	Unit
Forward Current	I_F	70	mA
Non−Repetitive Peak Forward Surge Current (t ≤ 1.0 s)	I_{FSM}	100	mA
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

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.
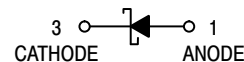
ON Semiconductor®

70 VOLTS SCHOTTKY BARRIER DIODES
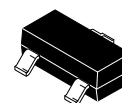
SOT−23 (TO−236)
CASE 318
STYLE 8

3 ○— CATHODE   ANODE —○ 1

MARKING DIAGRAM

BE M ▪

1
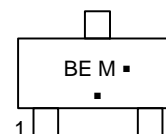
BE Specific Device Code
M = Date Code*
▪ = Pb−Free Package

(Note: Microdot may be in either location)

*Date Code orientation and/or overbar may vary depending upon manufacturing location.

ORDERING INFORMATION

Device	Package	Shipping[†]
BAS70LT1G	SOT−23 (Pb−Free)	3,000 / Tape & Reel
NSVBAS70LT1G	SOT−23 (Pb−Free)	3,000 / 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.

BAS70LT1G, NSVBAS70LT1G

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	μA
Forward Voltage (I_F = 1.0 mA)	V_F	–	410	mV
Forward Voltage (I_F = 10 mA)	V_F	–	750	mV
Forward Voltage (I_F = 15 mA)	V_F	–	1.0	V
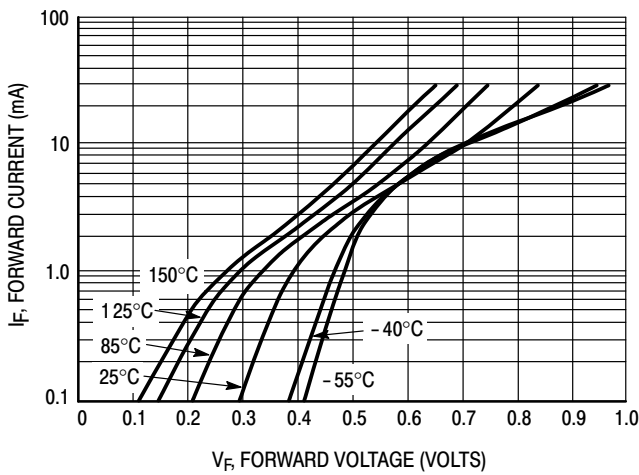
Figure 1. Typical Forward Voltage
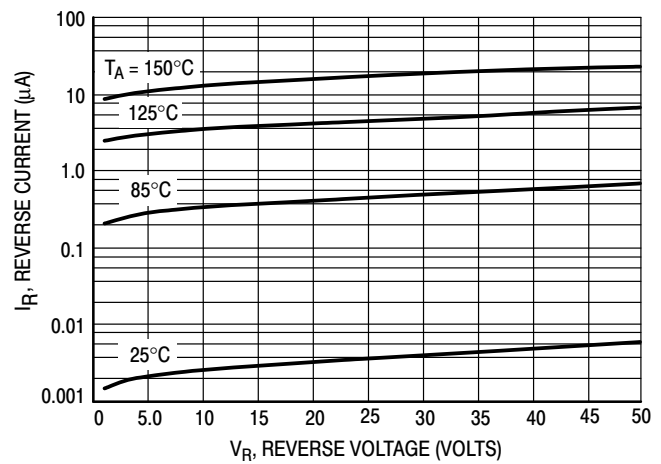
Figure 2. Reverse Current versus Reverse Voltage
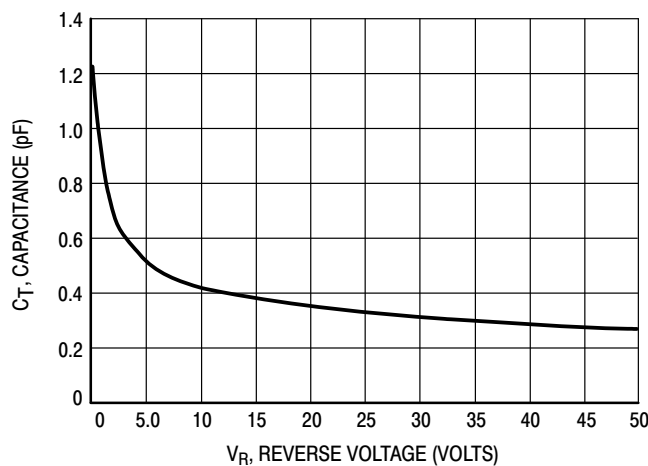
Figure 3. Typical Capacitance

BAS70LT1G, NSVBAS70LT1G

PACKAGE DIMENSIONS

SOT−23 (TO−236)
CASE 318−08
ISSUE AP

SEE VIEW C

VIEW C
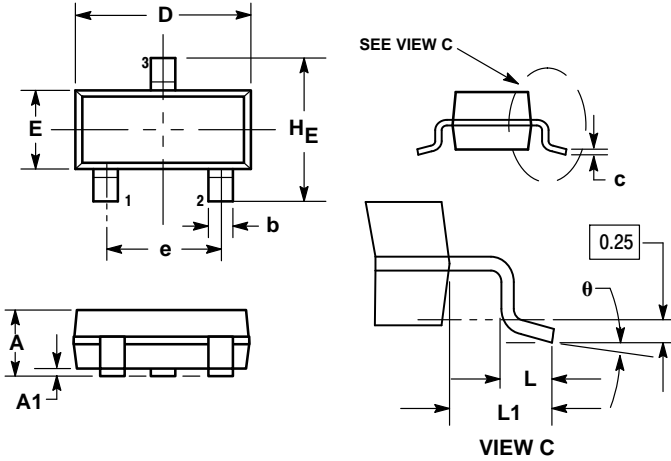
NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.015	0.018	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.10	0.20	0.30	0.004	0.008	0.012
L1	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.40	2.64	0.083	0.094	0.104
θ	0°	―――	10°	0°	―――	10°

STYLE 8:
PIN 1. ANODE
2. NO CONNECTION
3. CATHODE

SOLDERING FOOTPRINT

$\frac{0.95}{0.037}$

$\frac{0.95}{0.037}$

$\frac{2.0}{0.079}$

$\frac{0.9}{0.035}$

$\frac{0.8}{0.031}$

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

BAS70LT1/D