

# BAS70-04LT1

Preferred Device

## Dual Series Schottky Barrier Diode

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
- Pb-Free Package is Available

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

Rating	Symbol	Value	Unit
Reverse Voltage	$V_R$	70	V
Non-Repetitive Peak Forward Surge Current ( $t \leq 1.0$ s)	$I_{FSM}$	100	mA

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Forward Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_F$	225 1.8	mW mW/ $^\circ\text{C}$
Operating Junction and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150	$^\circ\text{C}$
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	508 (Note 1) 311 (Note 2)	$^\circ\text{C}/\text{W}$

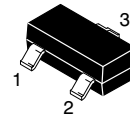
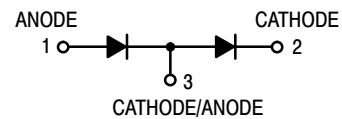
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. FR-4 @ minimum pad.
2. FR-4 @ 1.0 x 1.0 in pad.



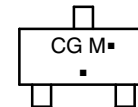
ON Semiconductor®

## 70 VOLTS SCHOTTKY BARRIER DIODE



SOT-23  
(TO-236AB)  
CASE 318

### MARKING DIAGRAM



CG = Specific Device Code  
M = Date Code

(Note: Microdot may be in either location)

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

### ORDERING INFORMATION

Device	Package	Shipping†
BAS70-04LT1	SOT-23	3000 / Tape & Reel
BAS70-04LT1G	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 Specification Brochure, BRD8011/D.

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

# BAS70-04LT1

## 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	$\mu\text{A}$
Forward Voltage ( $I_F = 1.0 \text{ mA}$ )	$V_F$	-	410	mV
Forward Voltage ( $I_F = 10 \text{ mA}$ )	$V_F$	-	750	mV
Forward Voltage ( $I_F = 15 \text{ mA}$ )	$V_F$	-	1.0	V

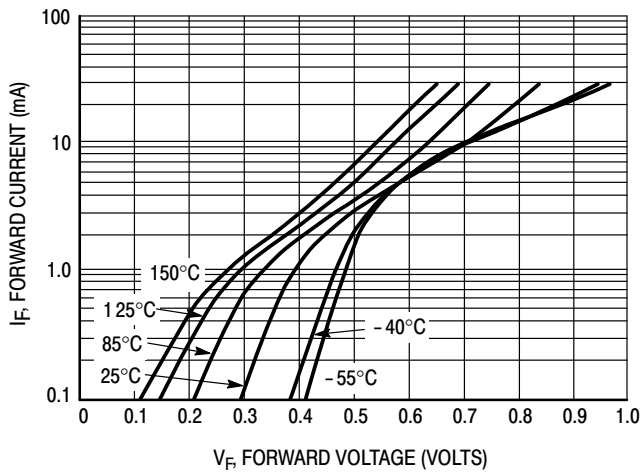


Figure 1. Typical Forward Voltage

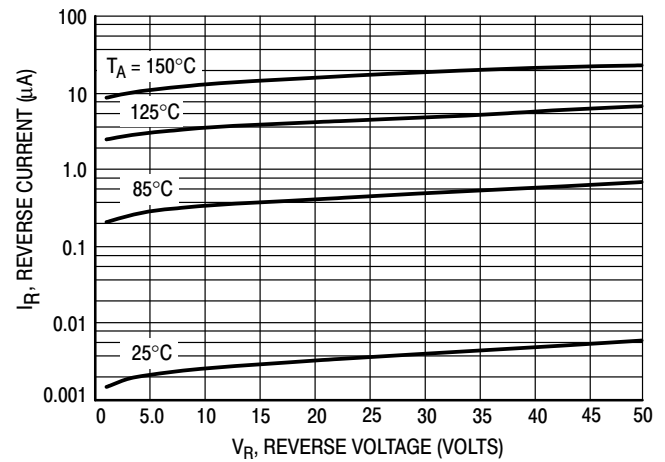


Figure 2. Reverse Current versus Reverse Voltage

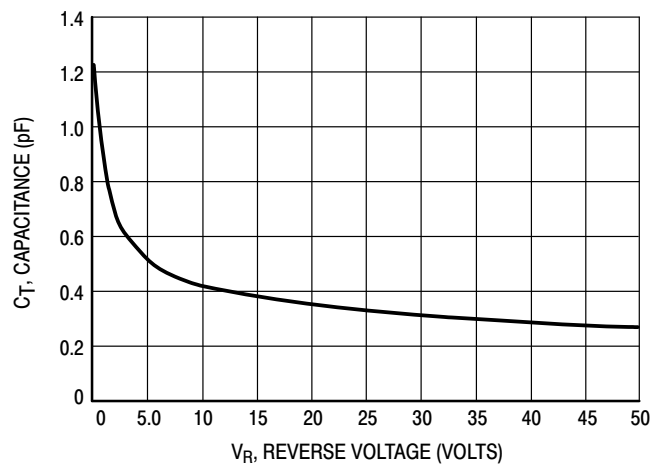
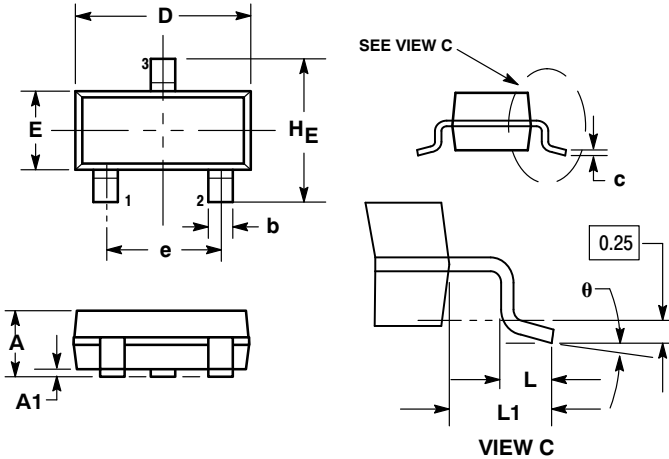


Figure 3. Typical Capacitance

# BAS70-04LT1

## PACKAGE DIMENSIONS

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

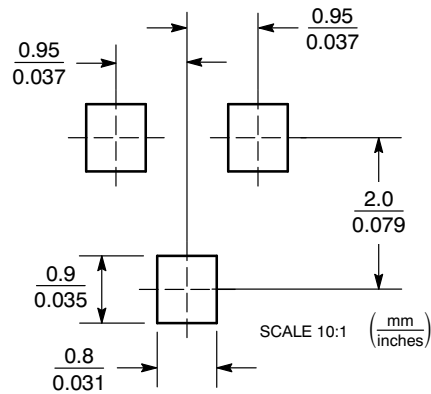


- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
  2. CONTROLLING DIMENSION: INCH.
  3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
  4. 318-01 THRU -07 AND -09 OBSOLETE, NEW STANDARD 318-08.

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

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