BAS40-04LT1

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.

- Extremely Fast Switching Speed
- Low Forward Voltage

Features

- Pb−Free Package is Available

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	40	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
Forward Continuous Current	I_{FM}	120	mA
Single Forward Current t ≤ 1 s t ≤ 10 ms	I_{FSM}	200 600	mA
Thermal Resistance Junction−to−Ambient	$R_{\theta JA}$	508 (Note 1) 311 (Note 2)	°C/W

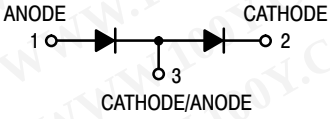
Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur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

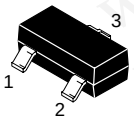
1. FR−4 @ minimum pad.
2. FR−4 @ 1.0 x 1.0 in pad.

ON Semiconductor®

http://onsemi.com

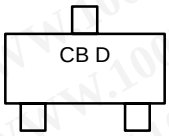
40 VOLTS SCHOTTKY BARRIER DIODES





SOT−23 (TO−236AB)
CASE 318
Style 11

MARKING DIAGRAM



CB = Specific Device Code
D = Date Code

ORDERING INFORMATION

Device	Package	Shipping†
BAS40−04LT1	SOT−23	3000/ Tape & Reel
BAS40−04LT1G	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 Specifications Brochure, BRD8011/D.

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

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

Characteristic		Symbol	Min	Max	Unit
Reverse Breakdown Voltage	(I_R = 10 μA)	$V_{(BR)R}$	40	–	V
Total Capacitance	(V_R = 1.0 V, f = 1.0 MHz)	C_T	–	5.0	pF
Reverse Leakage (V_R = 25 V)		I_R	–	1.0	μAdc
Forward Voltage	(I_F = 1.0 mAdc)	V_F	–	380	mVdc
Forward Voltage	(I_F = 10 mAdc)	V_F	–	500	mVdc
Forward Voltage	(I_F = 40 mAdc)	V_F	–	1.0	Vdc

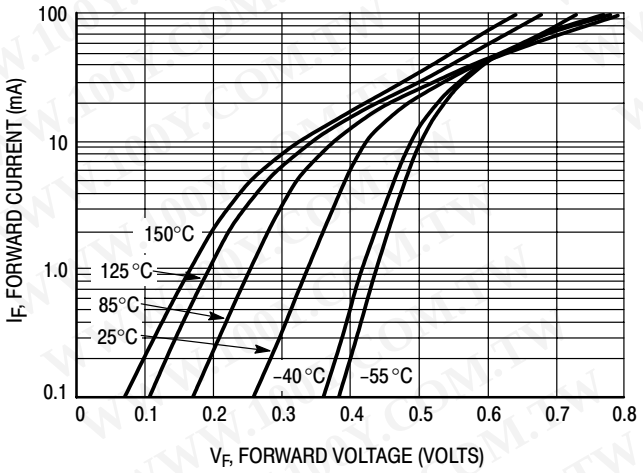


Figure 1. Typical Forward Voltage

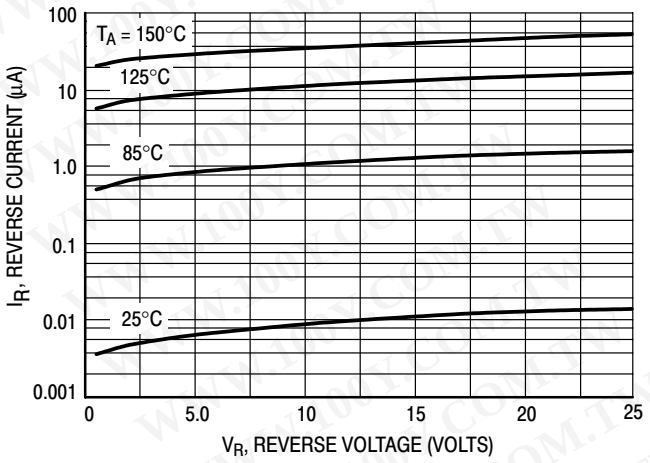


Figure 2. Reverse Current versus Reverse Voltage

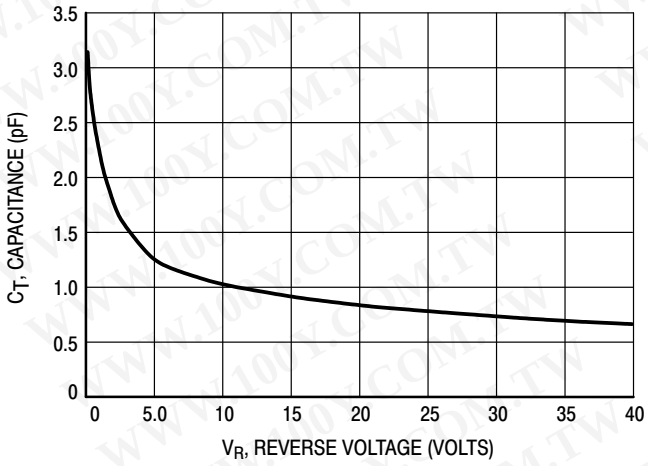
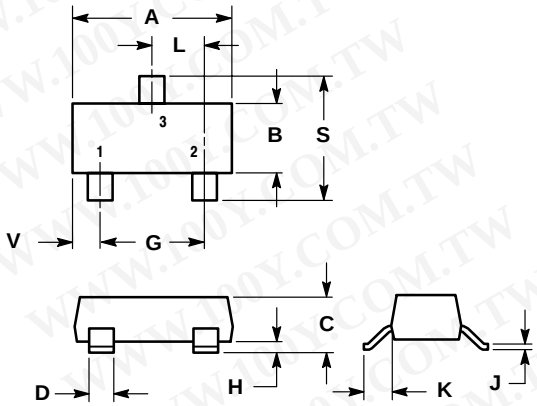


Figure 3. Typical Capacitance

PACKAGE DIMENSIONS

SOT−23 (TO−236AB)
CASE 318−08
ISSUE AH

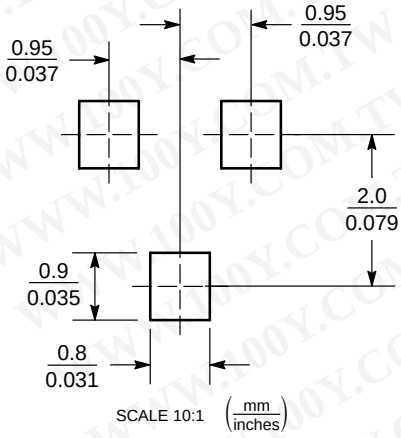


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. 318−01, −02, AND −06 OBSOLETE, NEW STANDARD 318−09.

	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	0.0385	0.0498	0.99	1.26
D	0.0140	0.0200	0.36	0.50
G	0.0670	0.0826	1.70	2.10
H	0.0040	0.0098	0.10	0.25
J	0.0034	0.0070	0.085	0.177
K	0.0180	0.0236	0.45	0.60
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.0984	2.10	2.50
V	0.0177	0.0236	0.45	0.60

STYLE 11:
PIN 1. ANODE
2. CATHODE
3. CATHODE−ANODE

SOLDERING FOOTPRINT*



SOT−123

*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 5163, Denver, Colorado 80217 USA
Phone: 303−675−2175 or 800−344−3860 Toll Free USA/Canada
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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.