

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 @ $T_A = 25^\circ\text{C}$ 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 | $^\circ\text{C}$ |
| Forward Continuous Current | I_{FM} | 120 | mA |
| Single Forward Current $t \leq 1 \text{ s}$ $t \leq 10 \text{ ms}$ | I_{FSM} | 200 600 | mA |
| Thermal Resistance Junction-to-Ambient | $R_{\theta JA}$ | 508 (Note 1) 311 (Note 2) | $^\circ\text{C/W}$ |

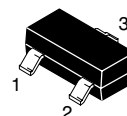
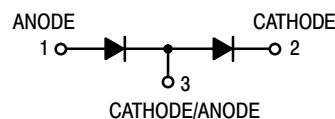
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

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



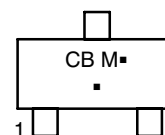
ON Semiconductor®

40 VOLTS SCHOTTKY BARRIER DIODES



SOT-23 (TO-236AB)
CASE 318
STYLE 11

MARKING DIAGRAM



CB = 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† |
|--------------|---------------------|-------------------|
| 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.

BAS40-04L T1

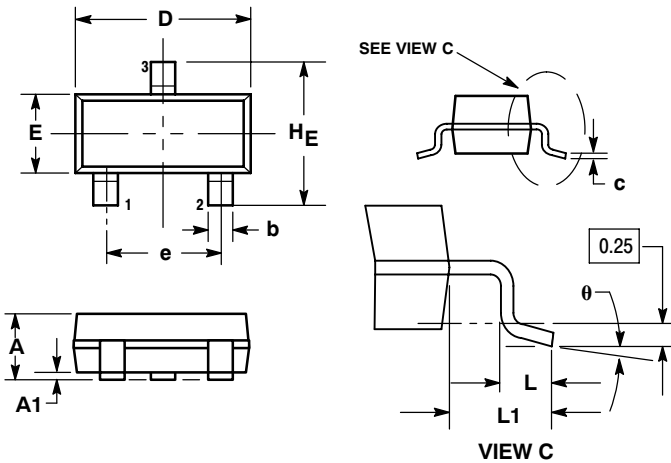
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| Characteristic | Symbol | Min | Max | Unit |
|---|-------------|-----|-----|---------------|
| Reverse Breakdown Voltage ($I_R = 10\ \mu\text{A}$) | $V_{(BR)R}$ | 40 | - | V |
| Total Capacitance ($V_R = 1.0\ \text{V}$, $f = 1.0\ \text{MHz}$) | C_T | - | 5.0 | pF |
| Reverse Leakage ($V_R = 25\ \text{V}$) | I_R | - | 1.0 | μA |
| Forward Voltage ($I_F = 1.0\ \text{mA}$) | V_F | - | 380 | mV |
| Forward Voltage ($I_F = 10\ \text{mA}$) | V_F | - | 500 | mV |
| Forward Voltage ($I_F = 40\ \text{mA}$) | V_F | - | 1.0 | V |

BAS40-04L T1

PACKAGE DIMENSIONS

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



NOTES:

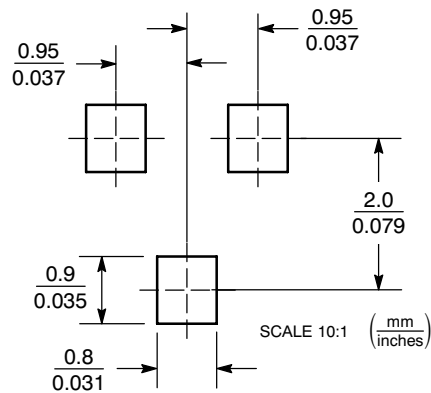
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. 318-01 THRU -07 AND -09 OBSOLETE, NEW STANDARD 318-08.

| 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 11:

- PIN 1. ANODE
- CATHODE
- CATHODE-ANODE

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.