BAS40-06LT1G, SBAS40-06LT1G

Common Anode 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
- S 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

| Rating | Symbol | Value | Unit |
|-----------------|----------------|-------|------|
| Reverse Voltage | V _R | 40 | V |

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.

THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|---|-----------------------------------|-------------|-------------|
| 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 |
| $ \begin{array}{l} \mbox{Single Forward Current} \\ t \leq 1 s \\ t \leq 10 \mbox{ms} \end{array} $ | I _{FSM} | 200 600 | mA |
| Thermal Resistance (Note 1) Junction–to–Ambient (Note 2) | R_{\thetaJA} | 508 311 | °C/W |

1. FR-4 @ minimum pad.

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



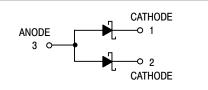
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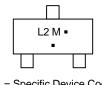
40 VOLTS SCHOTTKY BARRIER DIODE



SOT-23 (TO-236) CASE 318 STYLE 12



MARKING DIAGRAM



L2 = 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 [†] |
|---------------|---------------------|------------------------|
| BAS40-06LT1G | SOT–23 (Pb–Free) | 3,000 / Tape & Reel |
| SBAS40-06LT1G | SOT–23 (Pb–Free) | 3,000 / Tape & Reel |

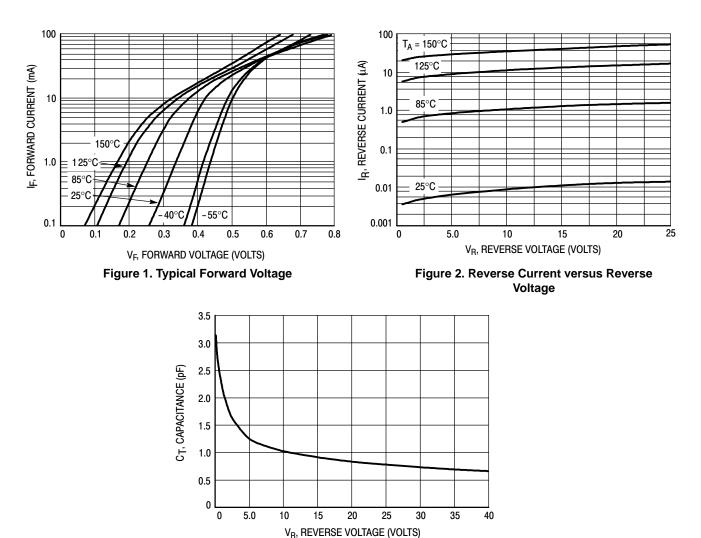
+For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

BAS40-06LT1G, SBAS40-06LT1G

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

| Characteristic | Symbol | Min | Max | Unit |
|---|--------------------|-----|-----|------|
| Reverse Breakdown Voltage $(I_R = 10 \ \mu A)$ | V _{(BR)R} | 40 | _ | V |
| Total Capacitance ($V_R = 1.0 V, f = 1.0 MHz$) | CT | _ | 5.0 | pF |
| Reverse Leakage $(V_R = 25 \text{ V})$ | ۱ _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 |

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.



TYPICAL CHARACTERISTICS

Figure 3. Typical Capacitance





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