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February 2015

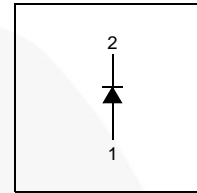
BAS70SL Schottky Barrier Diode

Features

- Low Forward Voltage Drop
- Fast Switching
- Very Small and Thin SMD package
- Profile Height, 0.43 mm Maximum
- Footprint, 1.0 mm x 0.6 mm



Connection Diagram



Ordering Information

| Part Number | Top Mark | Package | Packing Method |
|-------------|----------|-------------|----------------|
| BAS70SL | AC | SOD-923F 2L | Tape and Reel |

Absolute Maximum Ratings^{(1), (2)}

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Value | Unit |
|----------------|--|-------------|------------------|
| V_{RRM} | Maximum Repetitive Reverse Voltage | 70 | V |
| $I_{F(AV)}$ | Average Rectified Forward Current | 70 | mA |
| I_{FSM} | Forward Surge Current (8.3 ms Single Half-Sine-Wave) | 100 | mA |
| T_J, T_{STG} | Operating Junction and Storage Temperature Range | -55 to +150 | $^\circ\text{C}$ |

Notes:

1. These ratings are based on a maximum junction temperature of 150°C .
2. These are steady-state limits. Fairchild Semiconductor should be consulted on applications involving pulsed or low-duty-cycle operations.

Thermal Characteristics

Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Value | Unit |
|-----------------|--|-------|---------------------------|
| P_D | Power Dissipation | 227 | mW |
| $R_{\theta JA}$ | Thermal Resistance, Junction-to-Ambient ⁽³⁾ | 550 | $^\circ\text{C}/\text{W}$ |

Note:

3. Minimum land pad.

Electrical Characteristics

Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Conditions | Min. | Max. | Unit |
|----------|-----------------------|---|------|------|---------------|
| V_R | Breakdown Voltage | $I_R = 100 \mu\text{A}$ | 70 | | V |
| V_F | Forward Voltage | $I_F = 1 \text{ mA}$ | | 410 | mV |
| | | $I_F = 15 \text{ mA}$ | | 1000 | mV |
| I_R | Reverse Leakage | $V_R = 50 \text{ V}$ | | 0.2 | μA |
| t_{rr} | Reverse Recovery Time | $I_F = I_R = 10 \text{ mA}$, $i_{rr} = 0.1I_R$ | | 8.0 | nS |
| C_J | Junction Capacitance | $V_R = 0$, $f = 1.0 \text{ MHz}$ | | 3.0 | pF |

Typical Performance Characteristics

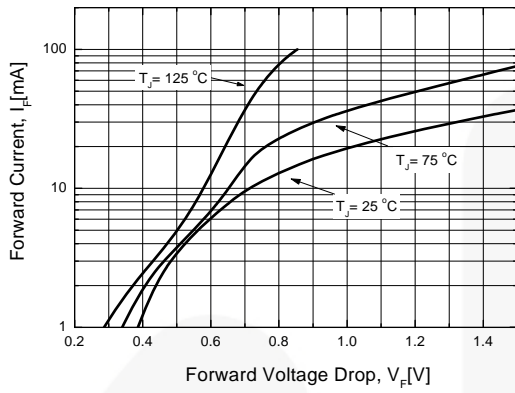


Figure 1. Forward Current Characteristics

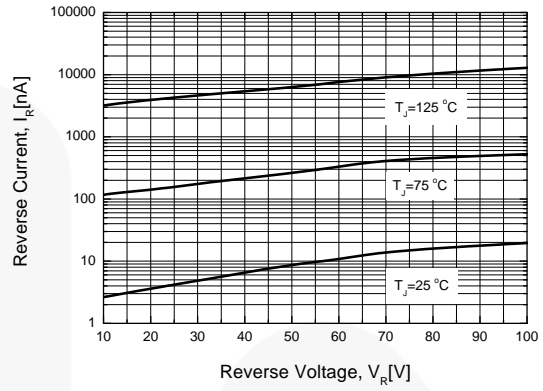


Figure 2. Reverse Leakage Current

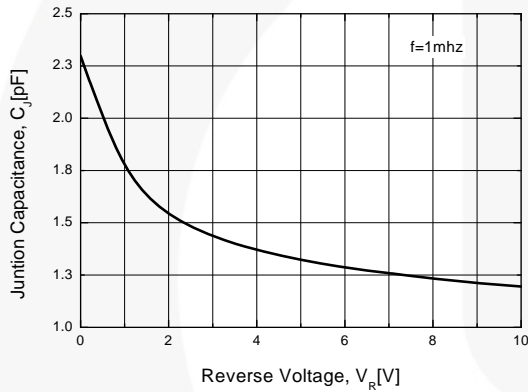


Figure 3. Junction Capacitance

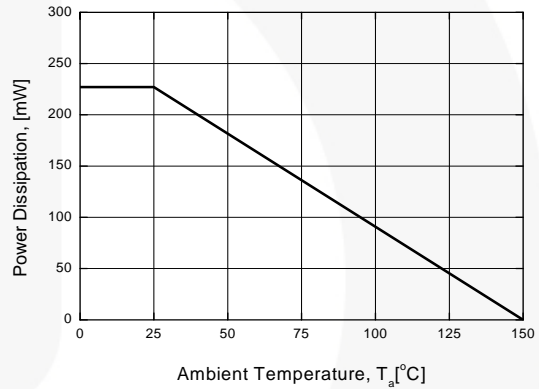
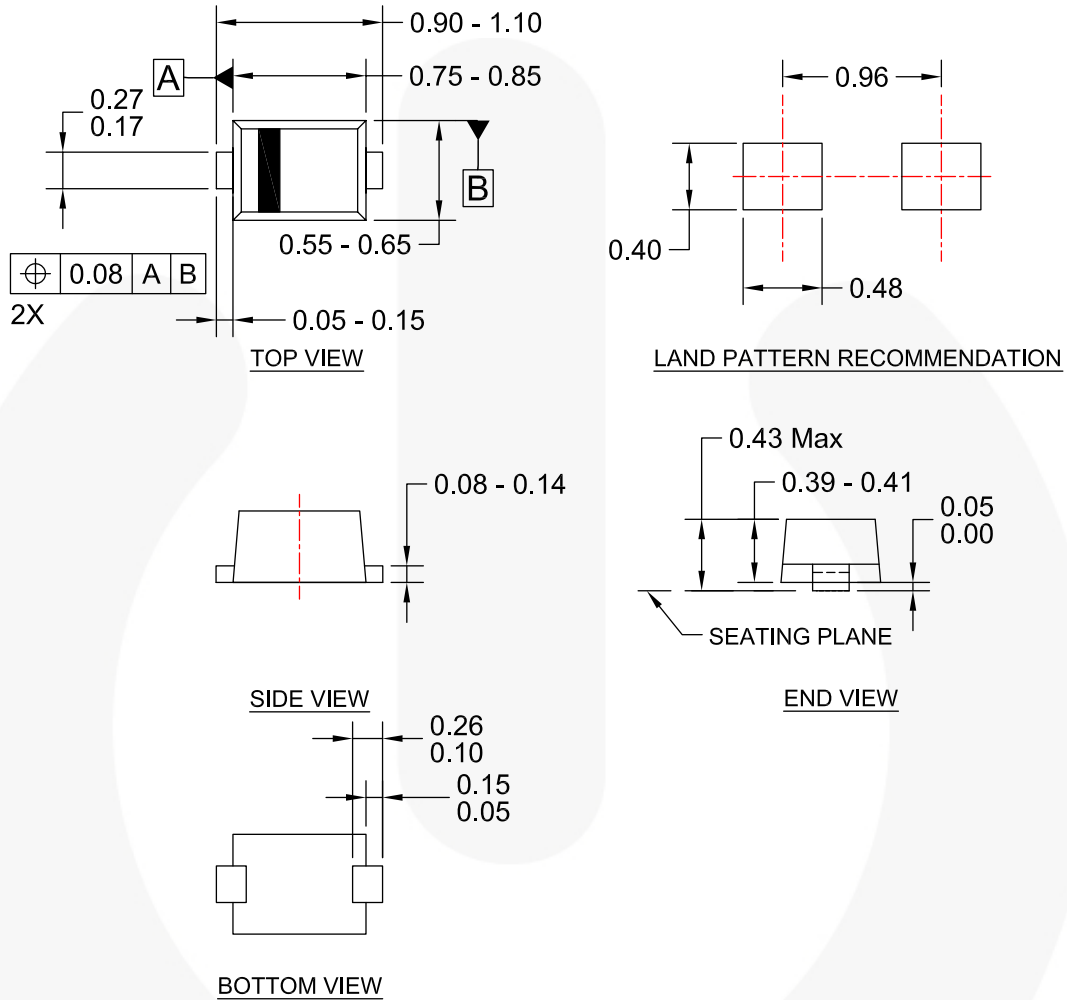


Figure 4. Power Derating

Physical Dimensions



NOTES:






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- B) ALL DIMENSIONS ARE IN MILLIMETERS.
- C) BODY DIMENSIONS ARE INCLUSIVE OF BURRS, AND MOLD FLASH.
- D) DIMENSIONS AND TOLERANCES PER ASME Y14.5M, 2009
- E) LANDPATTERN BASED ON ADJUSTED IPC GUIDELINES
- F) DRAWING FILE NAME : SOD923F1REV3

Figure 5. 2-LEAD, SOD923F, 0.4 mm TALL, FLAT TERMINAL



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