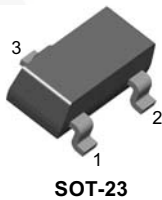




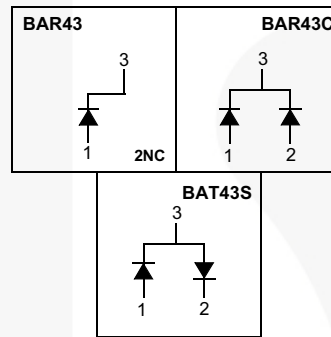
February 2015

BAR43 / BAR43C / BAR43S Schottky Diodes

BAR43 / BAR43C / BAR43S — Schottky Diodes



Connection Diagram



Ordering Information

| Part Number | Top Mark | Package | Packing Method |
|-------------|----------|-----------|----------------|
| BAR43 | D95 | SOT-23 3L | Tape and Reel |
| BAR43C | DB2 | SOT-23 3L | Tape and Reel |
| BAR43S | DA5 | SOT-23 3L | Tape and Reel |

Absolute Maximum Ratings

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 | 30 | V |
| $I_{F(AV)}$ | Average Rectified Forward Current | 200 | mA |
| I_{FSM} | Non-Repetitive Peak Forward Surge Current Pulse Width = 1.0 second | 750 | mA |
| T_{STG} | Storage Temperature Range | -55 to +150 | $^\circ\text{C}$ |
| T_J | Operating Junction Temperature | 150 | $^\circ\text{C}$ |

Thermal Characteristics

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

| Symbol | Parameter | Value | Unit |
|-----------------|---|-------|---------------------------|
| P_D | Power Dissipation | 290 | mW |
| $R_{\theta JA}$ | Thermal Resistance, Junction-to-Ambient | 430 | $^\circ\text{C}/\text{W}$ |

Electrical Characteristics

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

| Symbol | Parameter | Conditions | Min. | Max. | Unit |
|----------|---------------------------------|--|------|------|---------------|
| V_R | Breakdown Voltage | $I_R = 100 \mu\text{A}$ | 30 | | V |
| V_F | Forward Voltage | $I_F = 2.0 \text{ mA}$ | 260 | 330 | mV |
| | | $I_F = 15 \text{ mA}$ | | 450 | mV |
| | | $I_F = 100 \text{ mA}$ | | 0.8 | V |
| I_R | Reverse Current | $V_R = 25 \text{ V}$ | | 0.5 | μA |
| | | $V_R = 25 \text{ V}, T_A = 100^\circ\text{C}$ | | 100 | |
| t_{rr} | Reverse Recovery Time | $I_F = I_R = 10 \text{ mA}, I_{RR} = 1.0 \text{ mA}, R_L = 100 \Omega$ | | 5.0 | ns |
| | Minimum Detection Recovery Time | $I_F = I_R = 10 \text{ mA}, I_{RR} = 1.0 \text{ mA}, R_L = 100 \Omega$ | | 80 | % |

Typical Performance Characteristics

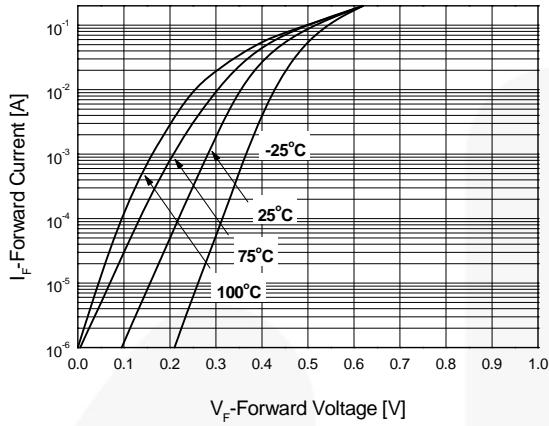


Figure 1. Forward Voltage vs. Temperature

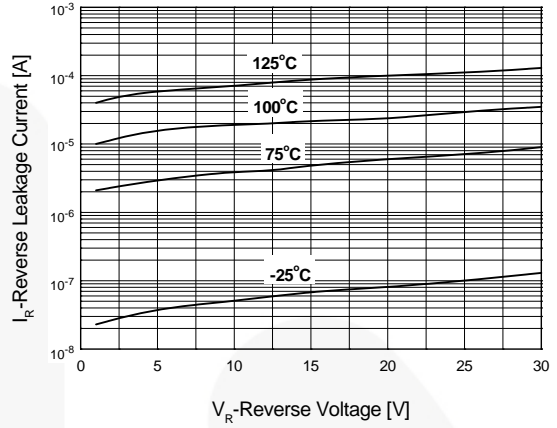


Figure 2. Reverse Leakage Current vs. Temperature

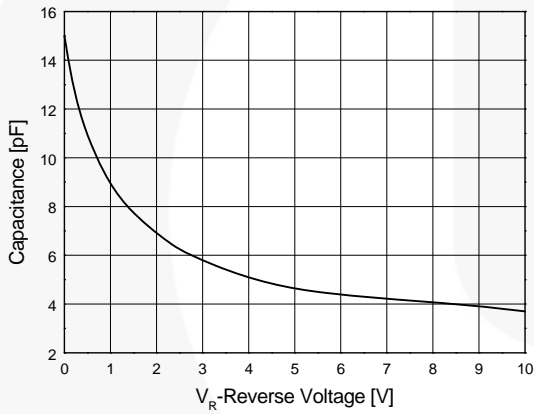


Figure 3. Capacitance vs. Reverse Bias Voltage

Physical Dimensions

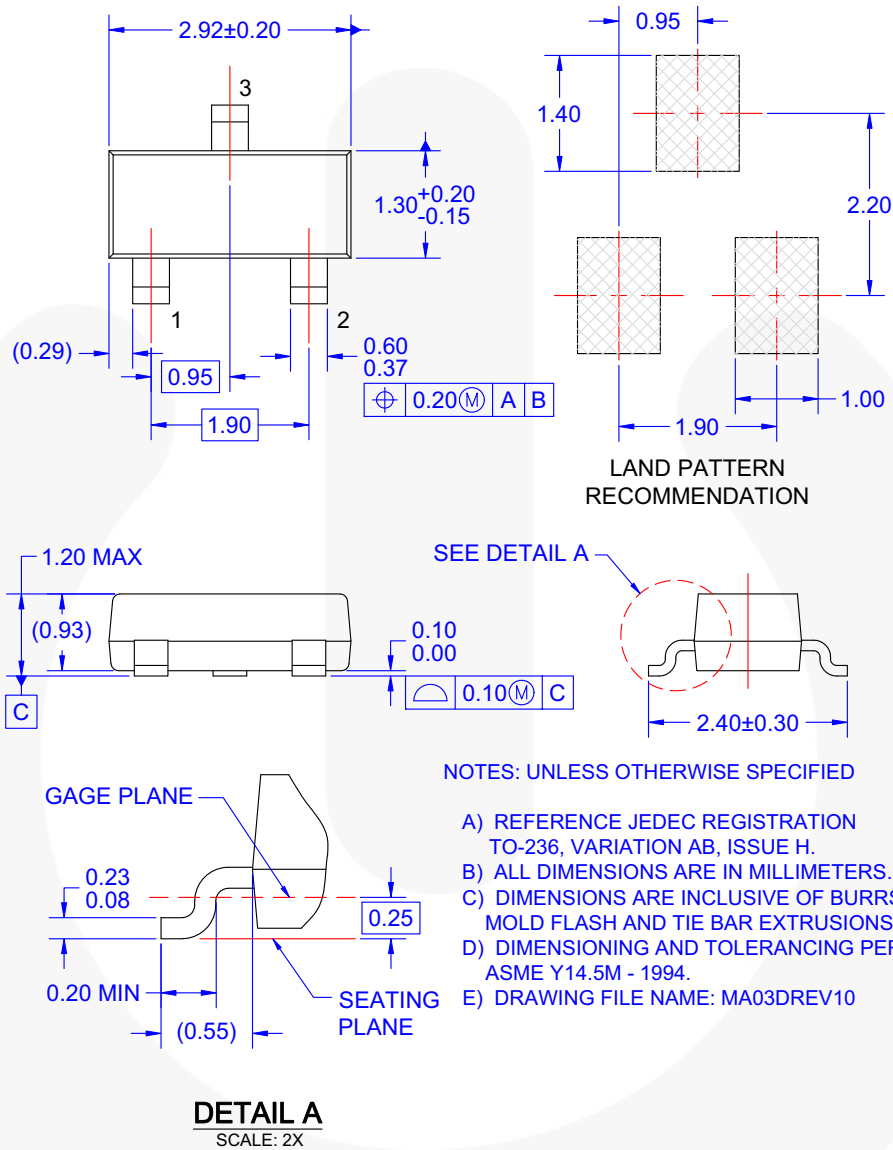







Figure 4. 3-LEAD, SOT23, JEDEC TO-236, LOW PROFILE



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