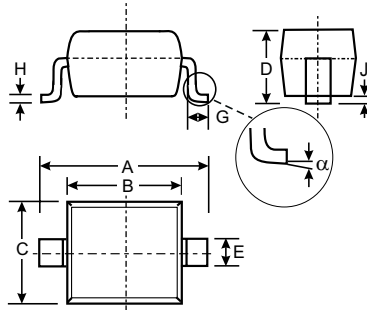


Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

Mechanical Data

- Case: SOD-323, Molded Plastic
- Case material - UL Flammability Rating Classification 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Terminal Connections: Cathode Band, See Page 2
- BAV19WS Marking: A8 or T2 or T3
- BAV20WS Marking: T2 or T3
- BAV21WS Marking: T3
- Weight: 0.004 grams (approx.)



| SOD-323 | | |
|----------------------|--------------|------|
| Dim | Min | Max |
| A | 2.30 | 2.70 |
| B | 1.60 | 1.80 |
| C | 1.20 | 1.40 |
| D | 1.05 Typical | |
| E | 0.25 | 0.35 |
| G | 0.20 | 0.40 |
| H | 0.10 | 0.15 |
| J | 0.05 Typical | |
| α | 0° | 8° |
| All Dimensions in mm | | |

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | BAV19WS | BAV20WS | BAV21WS | Unit |
|---|--------------------|---------|-------------|---------|--------------------|
| Repetitive Peak Reverse Voltage | V_{RRM} | 120 | 200 | 250 | V |
| Working Peak Reverse Voltage DC Blocking Voltage | V_{RWM} V_R | 100 | 150 | 200 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 71 | 106 | 141 | V |
| Forward Continuous Current (Note 1) | I_{FM} | | 400 | | mA |
| Average Rectified Output Current (Note 1) | I_O | | 200 | | mA |
| Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$ | I_{FSM} | | 2.5 0.5 | | A |
| Repetitive Peak Forward Surge Current | I_{FRM} | | 625 | | mA |
| Power Dissipation | P_d | | 200 | | mW |
| Thermal Resistance Junction to Ambient Air (Note 1) | $R_{\theta JA}$ | | 625 | | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_j, T_{STG} | | -65 to +150 | | $^\circ\text{C}$ |

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | Min | Max | Unit | Test Condition |
|---|-------------|-------------------|-------------|---------------------|--|
| Reverse Breakdown Voltage (Note 2) | $V_{(BR)R}$ | 120 200 250 | — | V | $I_R = 100\mu\text{A}$ |
| Forward Voltage (Note 2) | V_{FM} | — | 1.0 1.25 | V | $I_F = 100\text{mA}$ $I_F = 200\text{mA}$ |
| Peak Reverse Current @ Rated DC Blocking Voltage (Note 2) | I_{RM} | — | 100 15 | NA μA | $T_j = 25^\circ\text{C}$ $T_j = 100^\circ\text{C}$ |
| Total Capacitance | C_t | — | 5.0 | pF | $V_R = 0, f = 1.0\text{MHz}$ |
| Reverse Recovery Time | t_{rr} | — | 50 | ns | $I_F = I_R = 30\text{mA},$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$ |

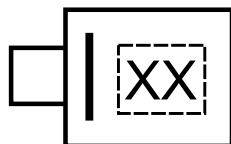
- Note:
1. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 2. Short duration pulse test used to minimize self-heating effect.

Ordering Information (Note 3)

| Device | Packaging | Shipping |
|-----------|-----------|------------------|
| BAV19WS-7 | SOD-323 | 3000/Tape & Reel |
| BAV20WS-7 | SOD-323 | 3000/Tape & Reel |
| BAV21WS-7 | SOD-323 | 3000/Tape & Reel |

Notes: 3. For Packaging Details, go to our website at: <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



XX = Product Type Marking Code
(See Page 1)

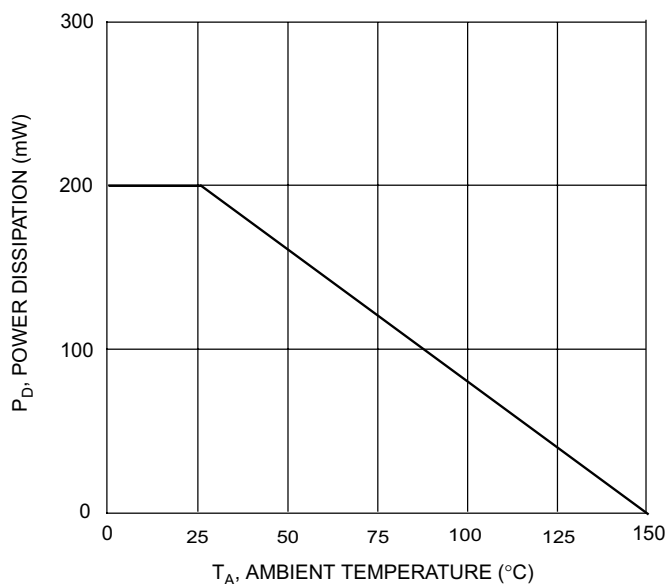


Fig. 1 Power Dissipation vs Ambient Temperature

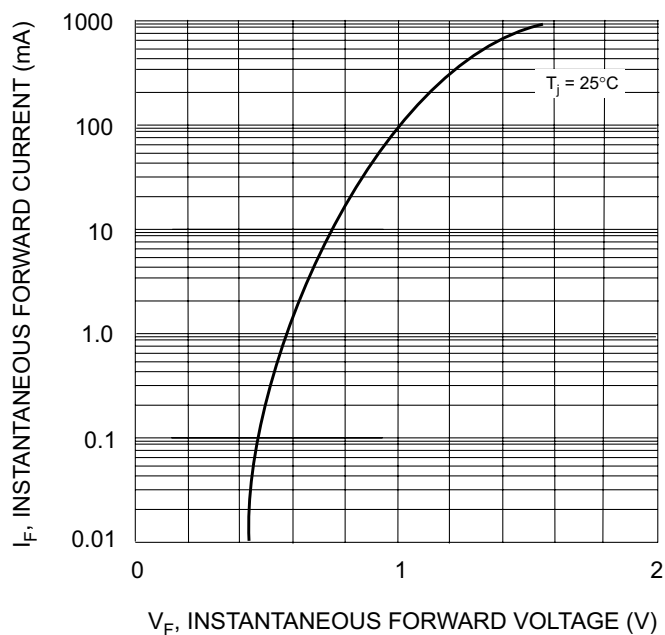


Fig. 2 Forward Characteristics

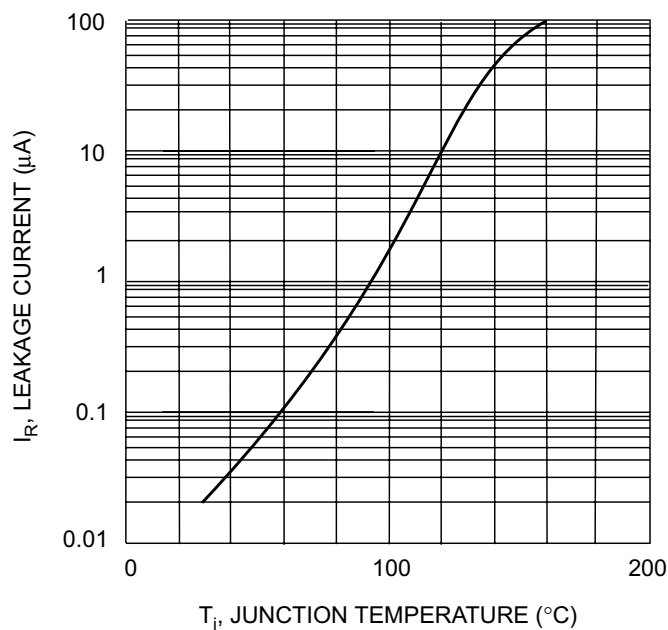


Fig. 3 Leakage Current vs Junction Temperature