



Silicon Epitaxial Planar Diodes High Voltage Switching Diode

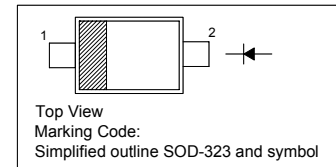
Features

- Fast switching speed
- Surface mount package ideally suited for automatic insertion

| | | | |
|---------|---------|---------|---------|
| | BAV19WS | BAV20WS | BAV21WS |
| MARKING | JX | T2 | T3 |

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |



Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|---|--|--------------------------------|------------------|
| Repetitive Peak Reverse Voltage | BAV19WS BAV20WS BAV21WS | V_{RRM} 120 200 250 | V |
| Reverse Voltage | BAV19WS BAV20WS BAV21WS | V_R 100 150 200 | V |
| Average Rectified Forward Current | $I_{F(AV)}$ | 200 | mA |
| Forward Continuous Current | I_{FM} | 400 | mA |
| Repetitive Peak Forward Current | I_{FRM} | 625 | mA |
| Non-Repetitive Peak Forward Surge Current | at $t = 1\text{ }\mu\text{s}$ at $t = 1\text{ s}$ | I_{FSM} 2.5 0.5 | A |
| Power Dissipation | P_{tot} | 200 | mW |
| Operating and Storage Temperature Range | T_J, T_{stg} | - 65 to + 150 | $^\circ\text{C}$ |

Characteristics at $T_a = 25\text{ }^\circ\text{C}$

| Parameter | Symbol | Min. | Max. | Unit |
|--|-------------------------------|----------------------------------|-------------------|------|
| Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$ | BAV19WS BAV20WS BAV21WS | $V_{(BR)R}$ 120 200 250 | - - - | V |
| Reverse Current at $V_R = 100\text{ V}$ at $V_R = 150\text{ V}$ at $V_R = 200\text{ V}$ | BAV19WS BAV20WS BAV21WS | I_R - - - | 100 100 100 | nA |
| Forward Voltage at $I_F = 100\text{ mA}$ at $I_F = 200\text{ mA}$ | V_F | - - | 1 1.25 | V |
| Total Capacitance at $V_R = 0, f = 1\text{ MHz}$ | C_T | - | 5 | pF |
| Reverse Recovery Time at $I_F = I_R = 30\text{ mA}, I_{RR} = 0.1 \times I_R, R_L = 100\text{ }\Omega$ | t_{rr} | - | 50 | ns |

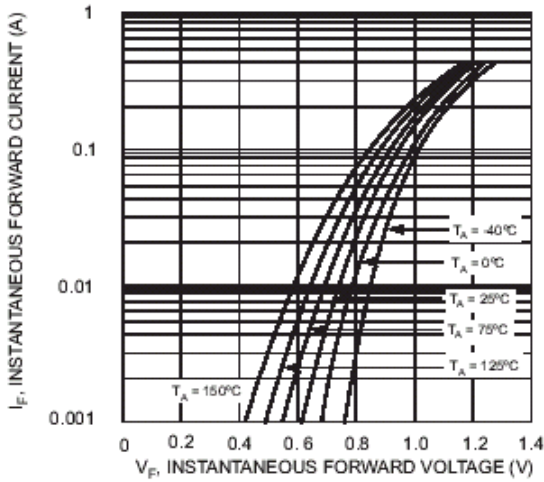


Fig. 1 Typical Forward Characteristics

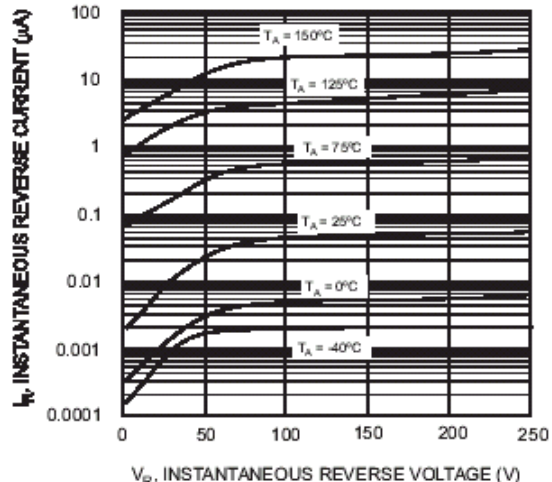


Fig. 2 Typical Reverse Characteristics

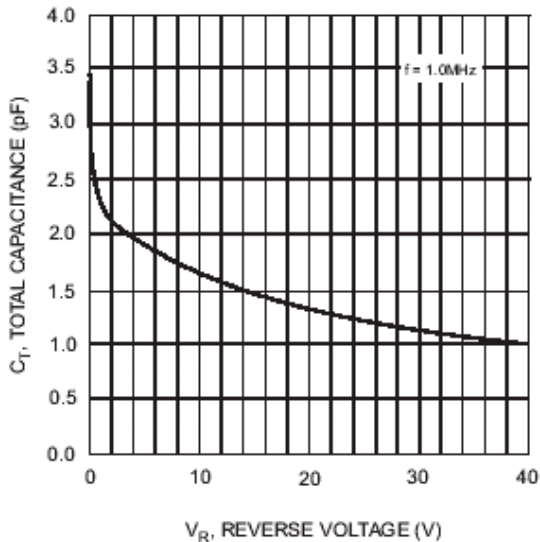


Fig. 3 Typical Capacitance vs. Reverse Voltage

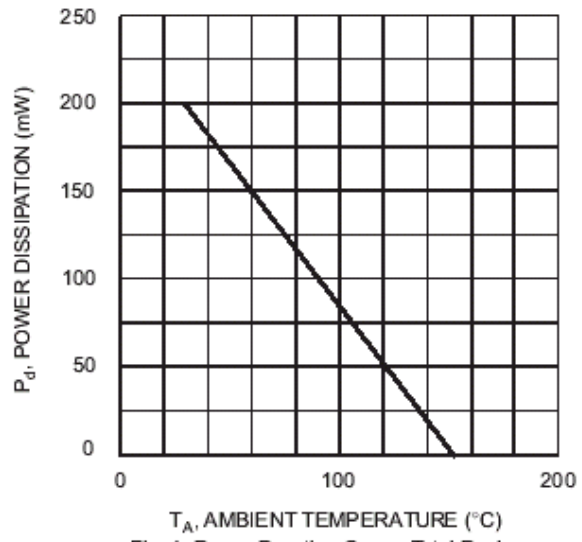


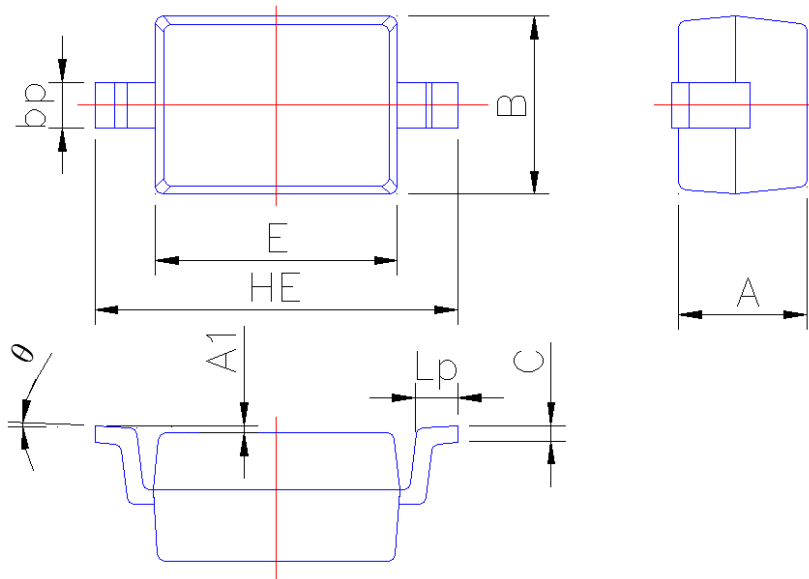
Fig. 4 Power Derating Curve, Total Package



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



| Symbol | Dimension in Millimeters | |
|--------|--------------------------|-------|
| | Min | Max |
| A | 0.95 | 1.15 |
| A1 | 0.010 | 0.100 |
| B | 1.20 | 1.40 |
| bp | 0.25 | 0.40 |
| C | 0.09 | 0.150 |
| E | 1.60 | 1.80 |
| HE | 2.30 | 2.70 |
| Lp | 0.20 | 0.40 |
| θ | 0° | 5° |