

BAV19WS, BAV20WS, BAV21WS

Silicon Epitaxial Planar Diodes

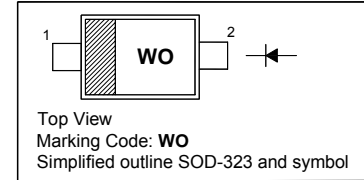
High Voltage Switching Diode

Features

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

PINNING

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

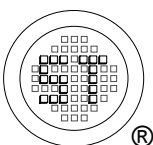


Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Value | Unit | |
|---|----------------|------------------------|------------------|---|
| Repetitive Peak Reverse Voltage | V_{RRM} | 120 | V | |
| | | 200 | | |
| | | 250 | | |
| Reverse Voltage | V_R | 100 | V | |
| | | 150 | | |
| | | 200 | | |
| 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 | I_{FSM} | at $t = 1 \mu\text{s}$ | 2.5 | A |
| | | at $t = 1 \text{ s}$ | 0.5 | |
| Power Dissipation | P_{tot} | 200 | mW | |
| Operating and Storage Temperature Range | T_j, T_{stg} | - 65 to + 150 | $^\circ\text{C}$ | |

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

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



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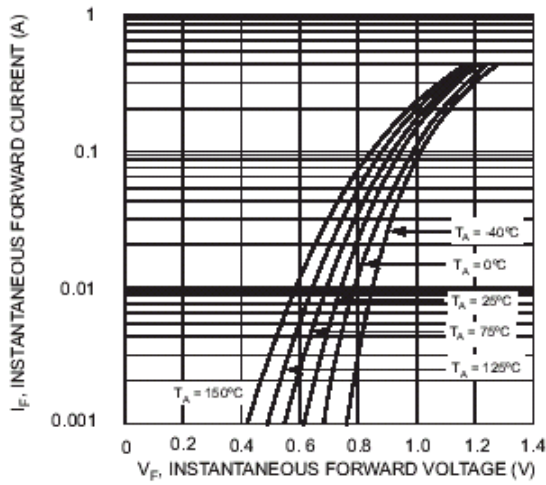


Fig. 1 Typical Forward Characteristics

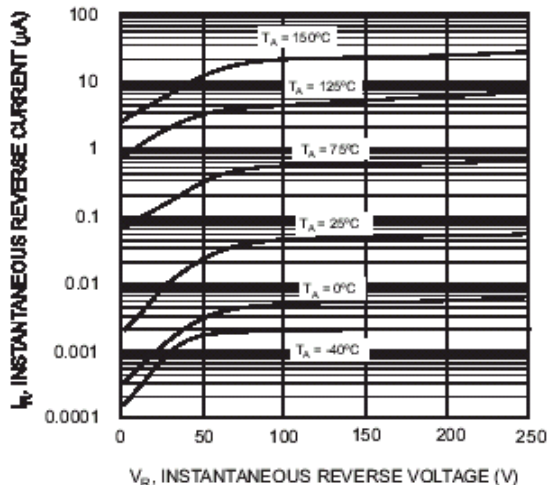


Fig. 2 Typical Reverse Characteristics

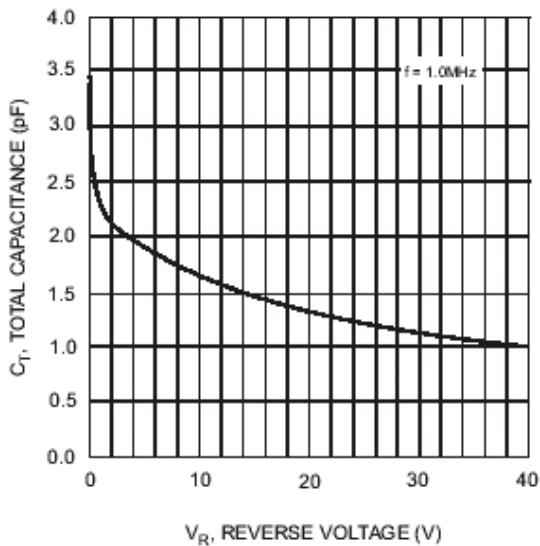


Fig. 3 Typical Capacitance vs. Reverse Voltage

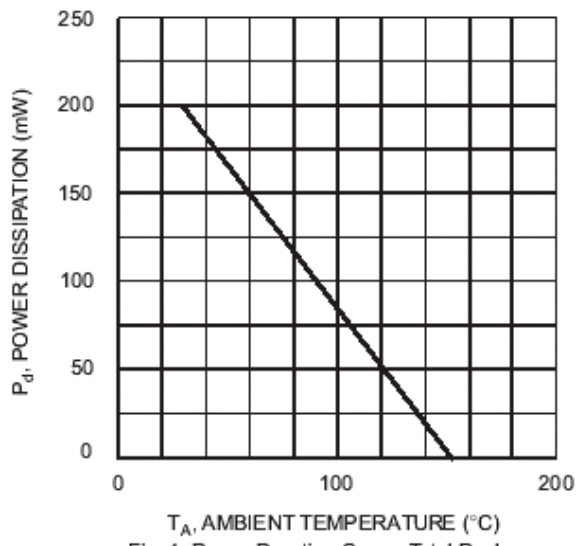
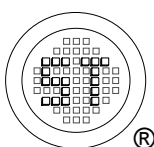


Fig. 4 Power Derating Curve, Total Package



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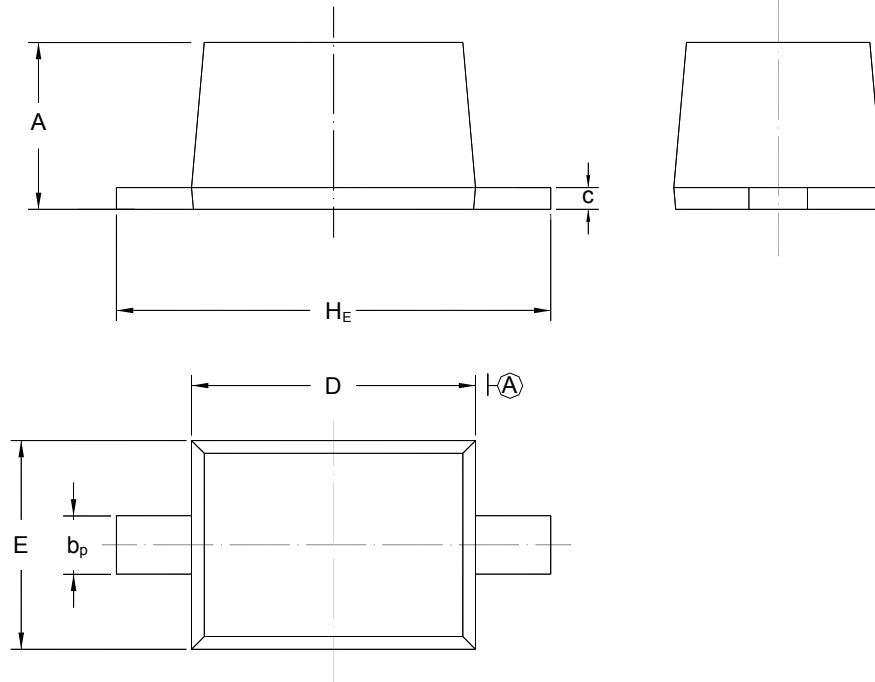
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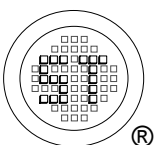
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



| UNIT | A | b _p | C | D | E | H _E |
|------|--------------|----------------|--------------|--------------|--------------|----------------|
| mm | 1.10 0.80 | 0.40 0.25 | 0.15 0.10 | 1.80 1.60 | 1.35 1.15 | 2.80 2.30 |



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