



Small Signal Switching Diodes, High Voltage



FEATURES

- Silicon epitaxial planar diodes
• For general purpose
• AEC-Q101 qualified
• Base P/N-E3 - RoHS-compliant, commercial grade
• Base P/N-HE3 - RoHS-compliant, AEC-Q101 qualified
• Material categorization:



RoHS COMPLIANT

For definitions of compliance please see www.vishay.com/doc?99912

MECHANICAL DATA

Case: SOD-123

Weight: approx. 10.3 mg

Packaging codes/options:

18/10K per 13" reel (8 mm tape), 10K/box

08/3K per 7" reel (8 m tape), 15K/box

Table with 6 columns: PART, TYPE DIFFERENTIATION, ORDERING CODE, TYPE MARKING, INTERNAL CONSTRUCTION, REMARKS. Rows include BAV19W, BAV20W, and BAV21W with their respective specifications.

Table titled ABSOLUTE MAXIMUM RATINGS (Tamb = 25 °C, unless otherwise specified) with 6 columns: PARAMETER, TEST CONDITION, PART, SYMBOL, VALUE, UNIT. Rows include Continuous reverse voltage, Repetitive peak reverse voltage, DC Forward current, etc.

Table titled THERMAL CHARACTERISTICS (Tamb = 25 °C, unless otherwise specified) with 5 columns: PARAMETER, TEST CONDITION, SYMBOL, VALUE, UNIT. Rows include Thermal resistance junction to ambient air, Junction temperature, Storage temperature range, Operating temperature range.

Note

(1) Valid provided that leads are kept at ambient temperature



| ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | | | | |
|--|---|--------|----------|------|------|------|---------------|
| PARAMETER | TEST CONDITION | PART | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Forward voltage | $I_F = 100\text{ mA}$ | | V_F | | | 1 | V |
| | $I_F = 200\text{ mA}$ | | V_F | | | 1.25 | V |
| Leakage current | $V_R = 100\text{ V}$ | BAV19W | I_R | | | 100 | nA |
| | $V_R = 100\text{ V}, T_j = 100\text{ }^{\circ}\text{C}$ | BAV19W | I_R | | | 15 | μA |
| | $V_R = 150\text{ V}$ | BAV20W | I_R | | | 100 | nA |
| | $V_R = 150\text{ V}, T_j = 100\text{ }^{\circ}\text{C}$ | BAV20W | I_R | | | 15 | μA |
| | $V_R = 200\text{ V}$ | BAV21W | I_R | | | 100 | nA |
| | $V_R = 200\text{ V}, T_j = 100\text{ }^{\circ}\text{C}$ | BAV21W | I_R | | | 15 | μA |
| Dynamic forward resistance | $I_F = 10\text{ mA}$ | | r_f | | 5 | | Ω |
| Diode capacitance | $V_R = 0, f = 1\text{ MHz}$ | | C_D | | 1.5 | | pF |
| Reverse recovery time | $I_F = 30\text{ mA}, I_R = 30\text{ mA},$ $i_R = 3\text{ mA}, R_L = 100\text{ }\Omega$ | | t_{rr} | | | 50 | ns |

TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

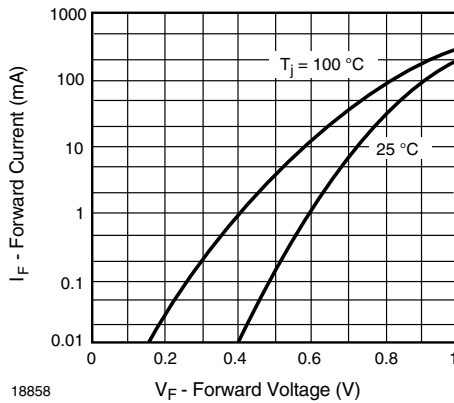


Fig. 1 - Forward Current vs. Forward Voltage

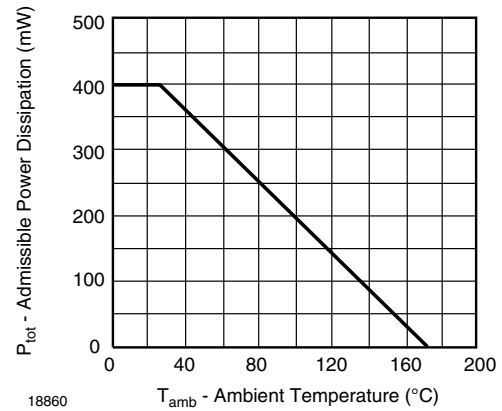


Fig. 3 - Admissible Power Dissipation vs. Ambient Temperature

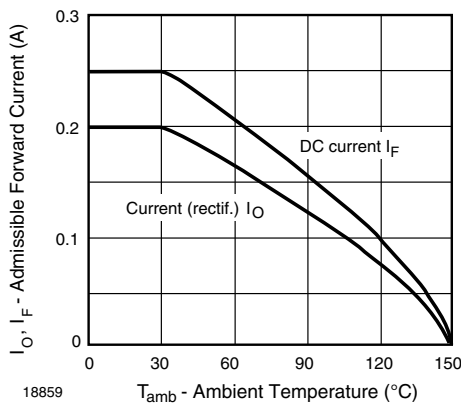


Fig. 2 - Admissible Forward Current vs. Ambient Temperature

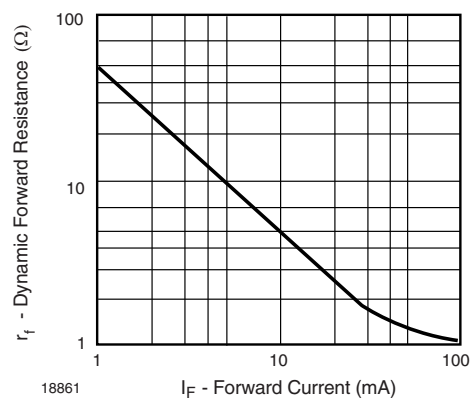


Fig. 4 - Dynamic Forward Resistance vs. Forward Current

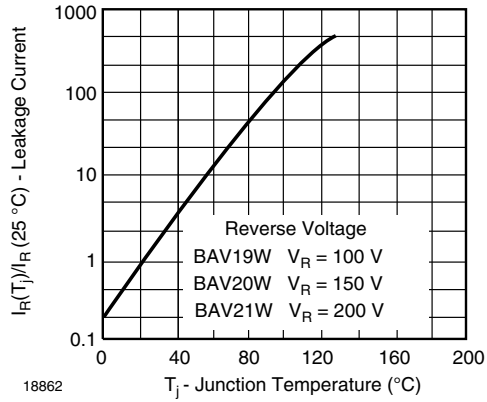


Fig. 5 - Leakage Current vs. Junction Temperature

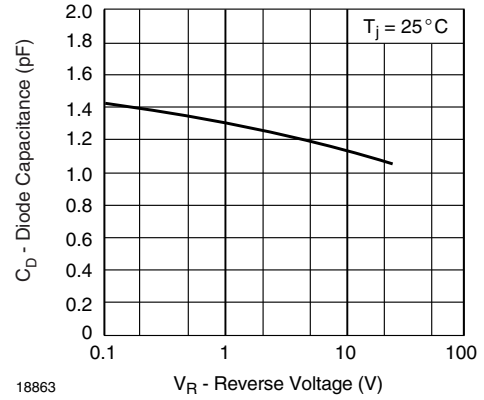


Fig. 6 - Capacitance vs. Reverse Voltage

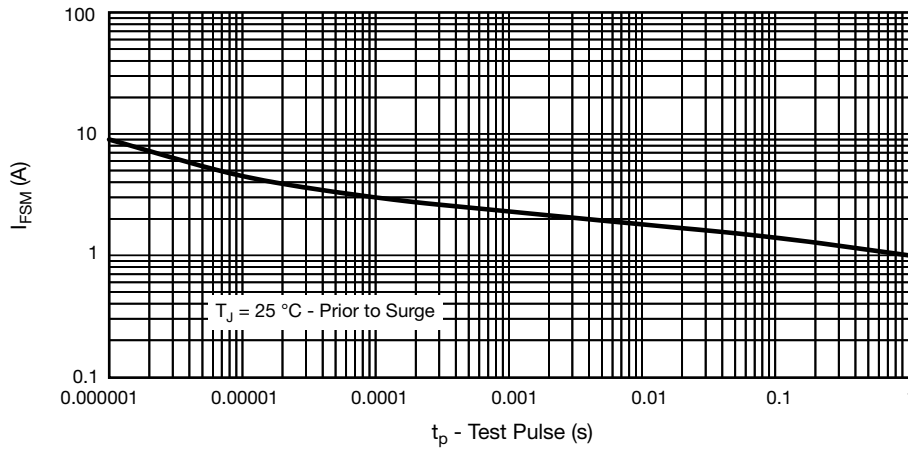
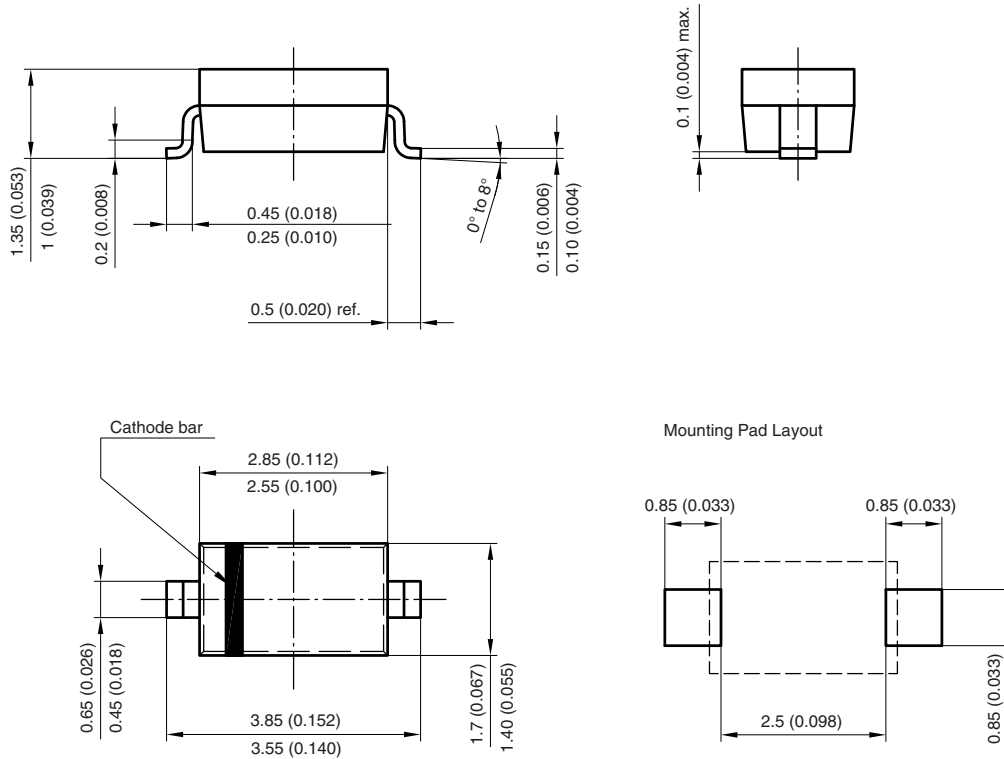


Fig. 7 - Non-Repetitive Peak Forward Current vs. Pulse Duration
Maximum Admissible Values of Square Pulse



PACKAGE DIMENSIONS in millimeters (inches): SOD-123



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