

BAV19WS, BAV20WS, BAV21WS

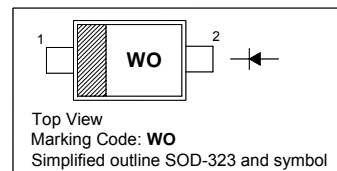
SURFACE MOUNT FAST SWITCHING DIODE

Features

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

PINNING

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

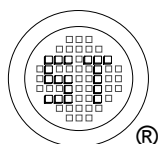


Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

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

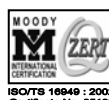
Characteristics at $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Min. | Max. | Unit |
|--|----------|------|------|------|
| Reverse Breakdown Voltage at $I_R = 100 \mu\text{A}$ | BAV19WS | 120 | - | V |
| | BAV20WS | 200 | - | |
| | BAV21WS | 250 | - | |
| Reverse Current at $V_R = 100 \text{ V}$ at $V_R = 150 \text{ V}$ at $V_R = 200 \text{ V}$ | BAV19WS | - | 100 | nA |
| | BAV20WS | - | 100 | |
| | BAV21WS | - | 100 | |
| Forward Voltage at $I_F = 100 \text{ mA}$ at $I_F = 200 \text{ mA}$ | V_F | - | 1 | V |
| | | - | 1.25 | |
| Total Capacitance at $f = 1 \text{ MHz}$ | 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 |



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



BAV19WS, BAV20WS, BAV21WS

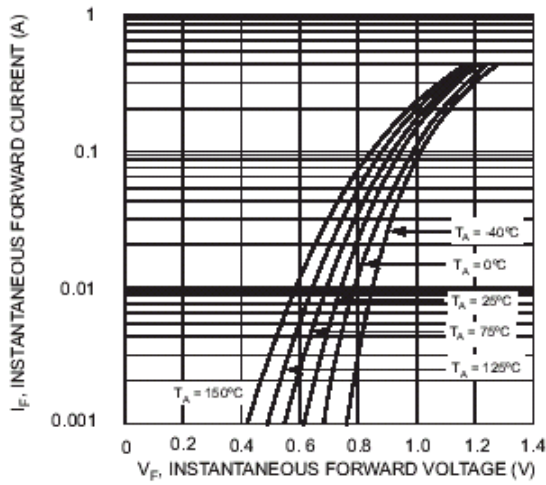


Fig. 1 Typical Forward Characteristics

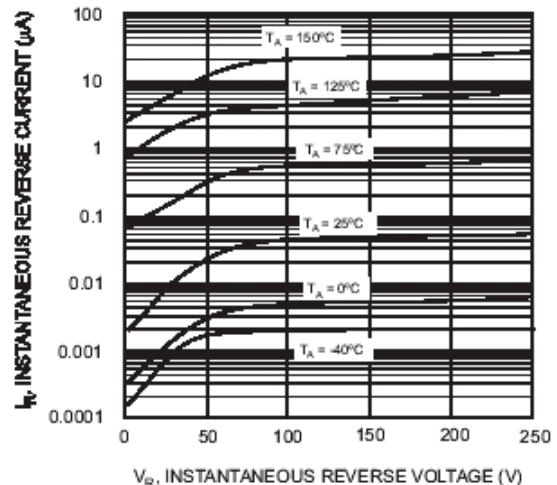


Fig. 2 Typical Reverse Characteristics

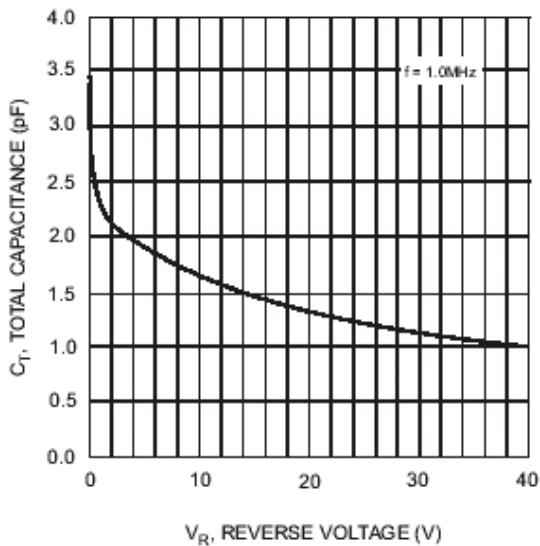


Fig. 3 Typical Capacitance vs. Reverse Voltage

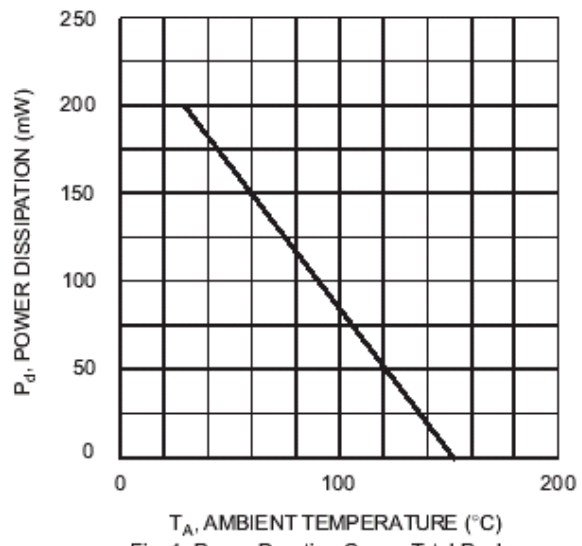
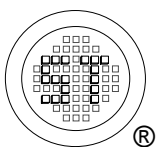
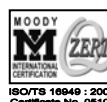


Fig. 4 Power Derating Curve, Total Package



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949:2002
Certificate No. 05103

ISO 14001:2004
Certificate No. 7116

ISO 9001:2000
Certificate No. 0506098

BS-OHSAS 18001:2007
Certificate No. 7116

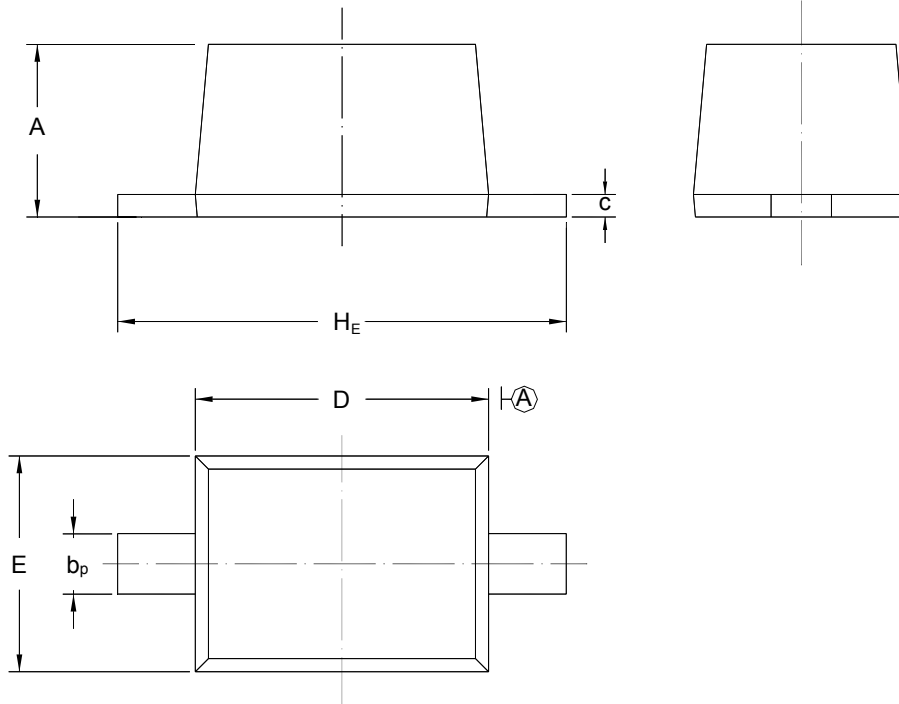
IECQ QC 080000
Certificate No. 0506098

BAV19WS, BAV20WS, BAV21WS

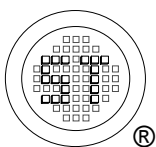
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

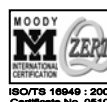
SOD-323



| UNIT | A | b _p | C | D | E | H _E |
|------|--------------|----------------|--------------|--------------|--------------|----------------|
| mm | 1.10 0.80 | 0.40 0.25 | 0.15 0.00 | 1.80 1.60 | 1.35 1.15 | 2.80 2.30 |



SEMTECH ELECTRONICS LTD.
 (Subsidiary of Sino-Tech International Holdings Limited, a company
 listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949:2002
 Certificate No. 05103

ISO 14001:2004
 Certificate No. 7116

ISO 9001:2000
 Certificate No. 0506098

BS-OHSAS 18001:2007
 Certificate No. 7116

IECQ QC 080000
 Certificate No. 7116

Dated : 07/04/2009