



Micro Commercial Components
 21201 Itasca Street Chatsworth
 CA 91311
 Phone: (818) 701-4933
 Fax: (818) 701-4939

BAV19W THRU BAV21W

Features

- Silicon Epitaxial Planar Diodes
- For General Purpose
- This diode is also available in other case.

Mechanical Data

- Case: SOD-123, Molded Plastic
- Weight: approx. 0.01g
- Marking code: BAV19W=A8
BAV20W=T2
BAV21W=T3

Maximum Ratings

| Symbol | Rating | Rating | Unit |
|-------------|--|--|-------------|
| V_R | Continuous Reverse Voltage | BAV19W 100 BAV20W 150 BAV21W 200 | V |
| V_{RRM} | Repetitive Peak Reverse Voltage | BAV19W 120 BAV20W 200 BAV21W 250 | V |
| I_F | Forward DC Current at $T_{amb}=25^{\circ}C^{(1)}$ | 250 | mA |
| $I_{F(AV)}$ | Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_{amb}=25^{\circ}C^{(1)}$ | 200 | mA |
| I_{FRM} | Repetitive Peak Forward Current at $f>50Hz$, $T_{amb}=25^{\circ}C^{(1)}$ | 625 | mA |
| I_{FSM} | Surge Forward Current at $t<1s$, $T_j=25^{\circ}C$ | 1.0 | A |
| P_{Tot} | Power Dissipation at $T_{amb}=25^{\circ}C^{(1)}$ | 410 | mW |
| R_{JA} | Thermal Resistance Junction to Ambient Air | 375 | mW |
| T_j | Junction Temperature | -55 to +150 | $^{\circ}C$ |
| T_{STG} | Storage Temperature | -55 to +150 | $^{\circ}C$ |

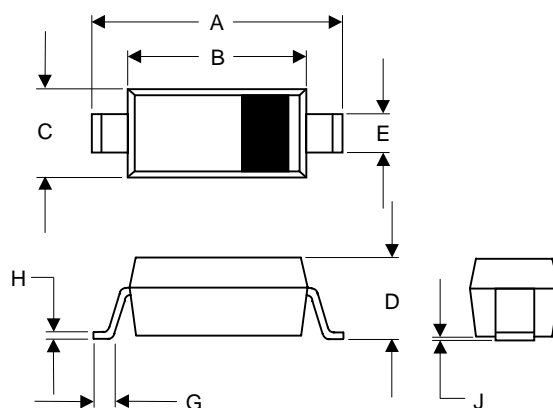
Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter | Min | Typ | Max | Units |
|-----------|--|-----|-----|-------------------------------------|----------------------------------|
| V_F | Forward Voltage ($I_F=100mA$) ($I_F=200mA$) | --- | --- | 1.00 1.25 | V |
| I_R | Leakage Current ($V_R=100V$) ($V_R=100V$, $T_j=100^{\circ}C$) ($V_R=150V$) ($V_R=150V$, $T_j=100^{\circ}C$) ($V_R=200V$) ($V_R=200V$, $T_j=100^{\circ}C$) | --- | --- | 100 15 100 15 100 15 | nA uA nA uA nA uA |
| r_f | Dynamic Forward Resistance ($I_F=10mA$) | --- | 5.0 | --- | OHM |
| C_{tot} | Capacitance ($V_R=0$, $f=1.0MHz$) | --- | 1.5 | --- | pF |
| t_{rr} | Reverse Recovery Time ($I_F=30mA$, $I_R=30mA$) ($I_{rr}=3.0mA$, $R_f=100OHMS$) | --- | --- | 50 | ns |

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

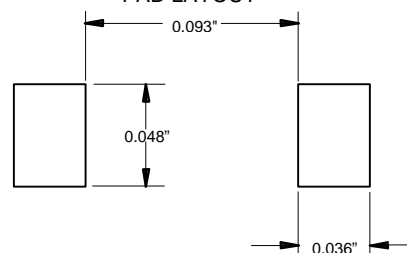
**410mW
Small Signal
Diodes
120 to 250 Volts**

SOD123



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | .140 | .152 | 3.55 | 3.85 | |
| B | .100 | .112 | 2.55 | 2.85 | |
| C | .055 | .071 | 1.40 | 1.80 | |
| D | ---- | .053 | ---- | 1.35 | |
| E | .012 | .031 | 0.30 | .78 | |
| G | .006 | ---- | 0.15 | ---- | |
| H | ---- | .01 | ---- | .25 | |
| J | ---- | .006 | ---- | .15 | |

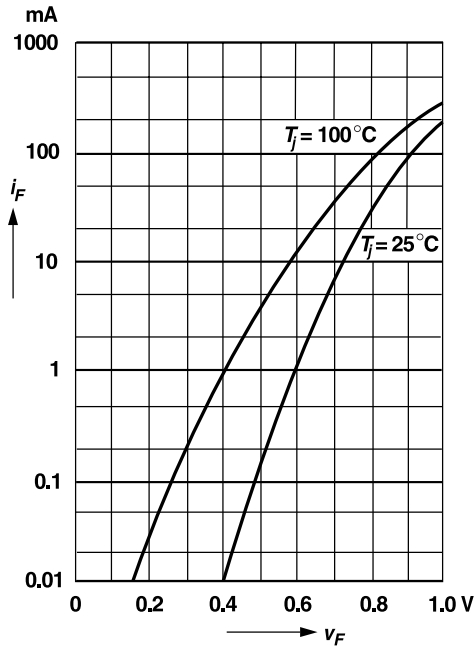
SUGGESTED SOLDER PAD LAYOUT



BAV19W thru BAV21W

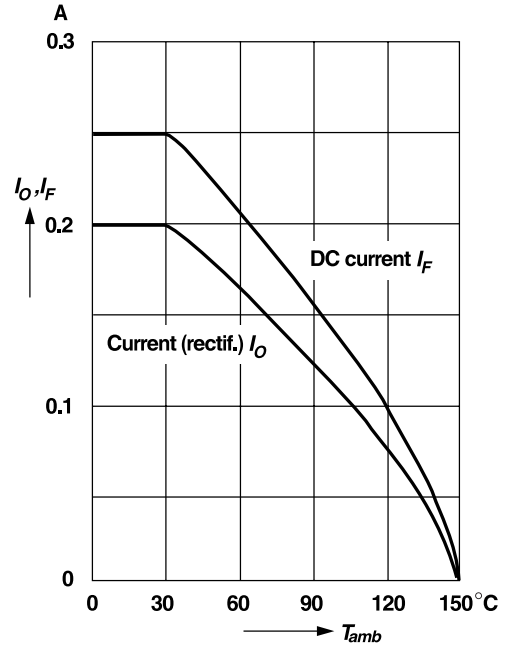


Forward characteristics



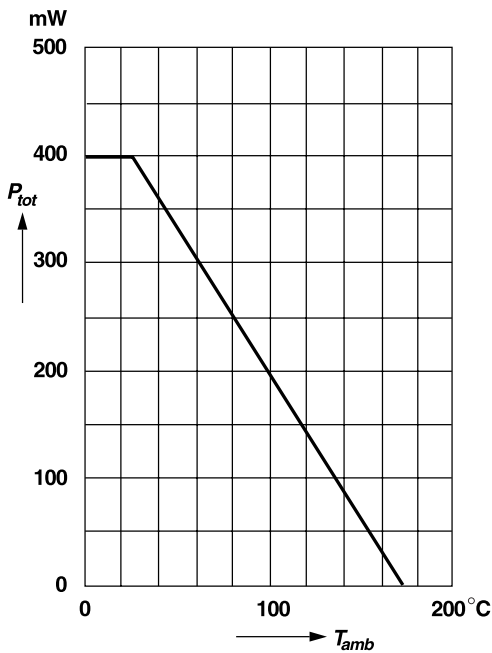
Admissible forward current versus ambient temperature

Valid provided that electrodes are kept at ambient temperature

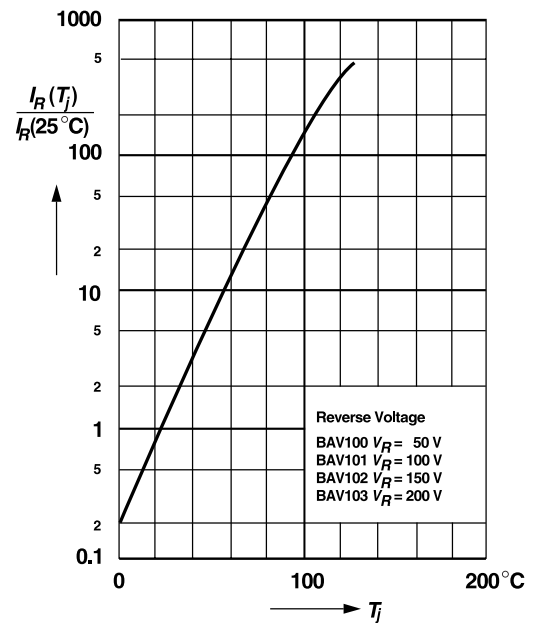


Admissible power dissipation versus ambient temperature

Valid provided that electrodes are kept at ambient temperature



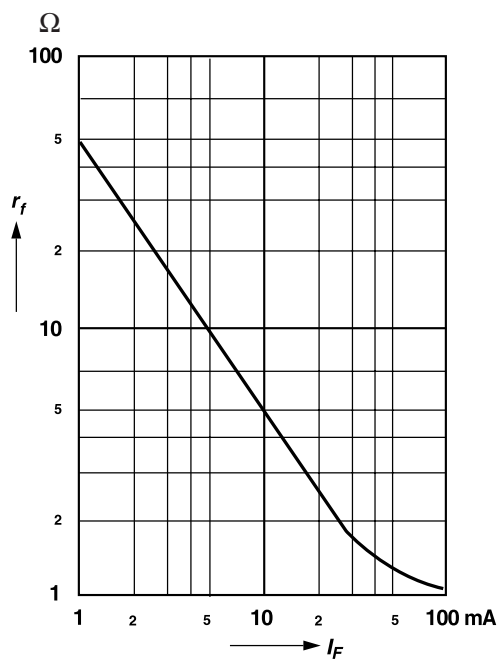
Leakage current versus junction temperature



BAV19W thru BAV21W



Dynamic forward resistance versus forward current



Capacitance versus reverse voltage

