

## Features

- Silicon epitaxial planar diodes
- For general purpose

## Mechanical Data

- Case: MiniMELF glass case (SOD-80)
- Cathode band color: Yellow



SOD-80 (MINI MELF)

## Maximum Ratings (T<sub>A</sub>=25°C unless otherwise noted)

| Parameter  | Symbol             | BAV100      | BAV101 | BAV102 | BAV103 | Unit |
|--|--------------------|-------------|--------|--------|--------|------|
| Continuous Reverse Voltage   | V <sub>R</sub>     | 50          | 100    | 150    | 200    | V    |
| Repetitive Peak Reverse Voltage  | V <sub>RRM</sub>   | 60          | 120    | 200    | 250    | V    |
| Forward DC Current   | I <sub>F</sub>     | 250         |        |        |        | mA   |
| Rectified Current (Average) Half Wave Rectification with Resist. Load at f ≥50Hz | I <sub>F(AV)</sub> | 200         |        |        |        | mA   |
| Repetitive Peak Forward Current at f ≥50Hz                                       | I <sub>FRM</sub>   | 625         |        |        |        | mA   |
| Surge Forward Current at t<1s  | I <sub>FSM</sub>   | 1           |        |        |        | A    |
| Power Dissipation  | P <sub>tot</sub>   | 400         |        |        |        | mW   |
| Thermal Resistance Junction to Ambient Air <sup>1</sup>                          | R <sub>θJA</sub>   | 500         |        |        |        | °C/W |
| Junction Temperature   | T <sub>J</sub>     | 175         |        |        |        | °C   |
| Storage Temperature Range  | T <sub>STG</sub>   | -65 to +175 |        |        |        | °C   |

Note:

1. Mounted on 50mm x 50mm x 1.6mm PC board.

## Electrical Characteristics (T<sub>J</sub>=25°C unless otherwise noted)

| Parameter                  | Symbol           | Test Condition  | Min. | Typ. | Max. | Unit |
|----------------------------|------------------|---|------|------|------|------|
| Forward Voltage            | V <sub>F</sub>   | I <sub>F</sub> =100mA   | -    | -    | 1.00 | V    |
|                            |                  | I <sub>F</sub> =200mA   | -    | -    | 1.25 | V    |
| Leakage Current            | I <sub>R</sub>   | BAV100<br>V <sub>R</sub> =50V   | -    | -    | 100  | nA   |
|                            |                  | BAV100<br>V <sub>R</sub> =50V, T <sub>J</sub> =100°C                                      | -    | -    | 15   | uA   |
|                            |                  | BAV101<br>V <sub>R</sub> =100V  | -    | -    | 100  | nA   |
|                            |                  | BAV101<br>V <sub>R</sub> =100V, T <sub>J</sub> =100°C                                     | -    | -    | 15   | uA   |
|                            |                  | BAV102<br>V <sub>R</sub> =150V  | -    | -    | 100  | nA   |
|                            |                  | BAV102<br>V <sub>R</sub> =150V, T <sub>J</sub> =100°C                                     | -    | -    | 15   | uA   |
|                            |                  | BAV103<br>V <sub>R</sub> =200V  | -    | -    | 100  | nA   |
|                            |                  | BAV103<br>V <sub>R</sub> =200V, T <sub>J</sub> =100°C                                     | -    | -    | 15   | uA   |
| Dynamic Forward Resistance | r <sub>f</sub>   | I <sub>F</sub> =10mA  | -    | 5    | -    | Ω    |
| Capacitance                | C <sub>tot</sub> | V <sub>R</sub> =0V, f=1MHz  | -    | 1.5  | -    | pF   |
| Reverse Recovery Time      | t <sub>rr</sub>  | I <sub>F</sub> =30mA, I <sub>R</sub> =30mA,<br>I <sub>rr</sub> =3mA, R <sub>L</sub> =100Ω | -    | -    | 50   | ns   |

**Ratings and Characteristic Curves** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

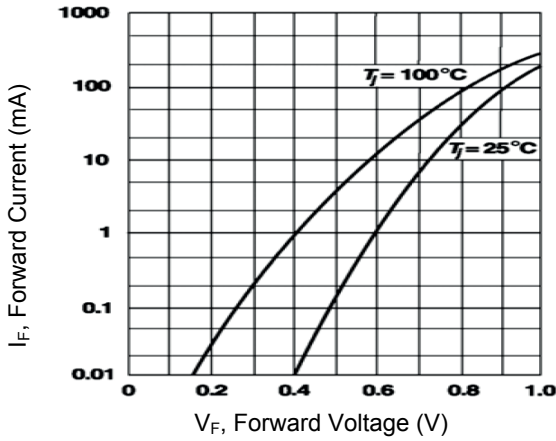


Figure 1. Forward Characteristics

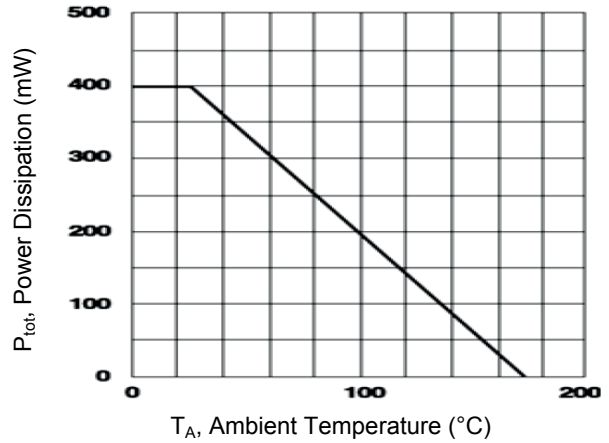


Figure 2. Admissible Power Dissipation vs. Ambient Temperature

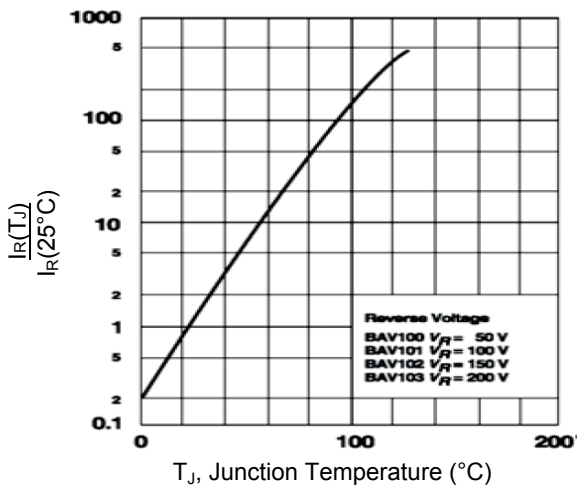


Figure 3. Leakage Current vs. Junction Temperature

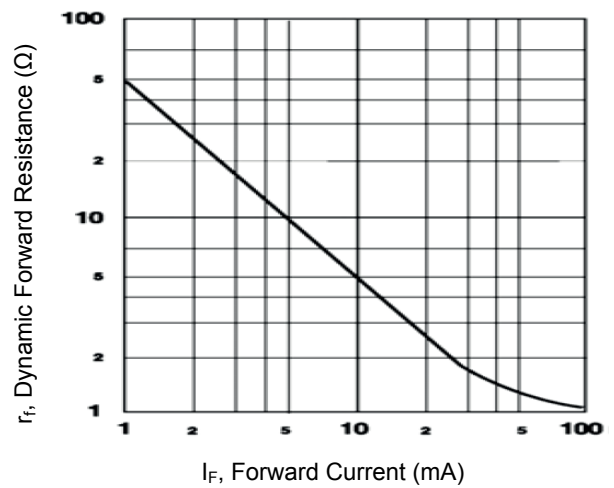


Figure 4. Dynamic Forward Resistance vs. Forward Current

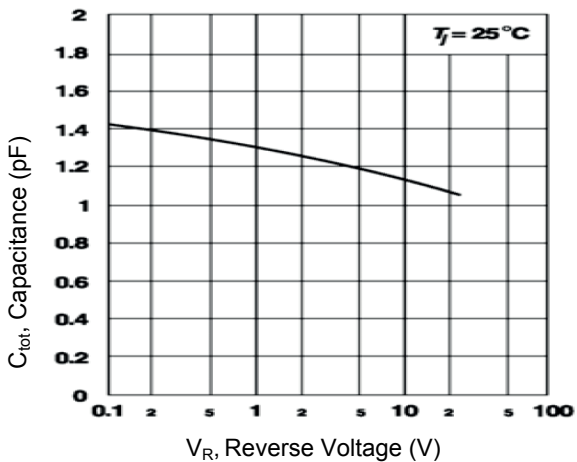
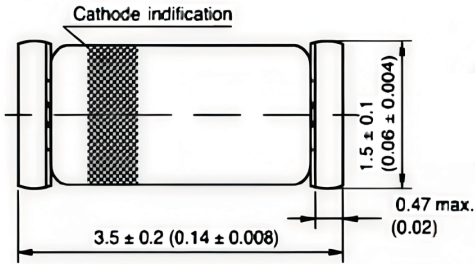


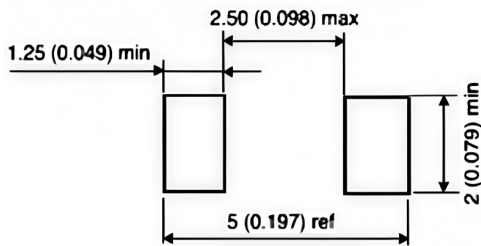
Figure 5. Capacitance vs. Reverse Voltage

**Package Outline Dimensions SOD-80 (MINI MELF)**



Unit: mm (Inch)

**Recommended Pad Layout**



Unit: mm (Inch)

**Order Information**

| Device | Package            | Marking      | Packaging   | SPQ             |
|--------|--------------------|--------------|-------------|-----------------|
| BAV10x | SOD-80 (MINI MELF) | Cathode line | Tape & Reel | 2,500pcs / Reel |

For more information, please contact us at: [inquiry@goodarksemi.com](mailto:inquiry@goodarksemi.com)