

## BAV105

### FEATURES :

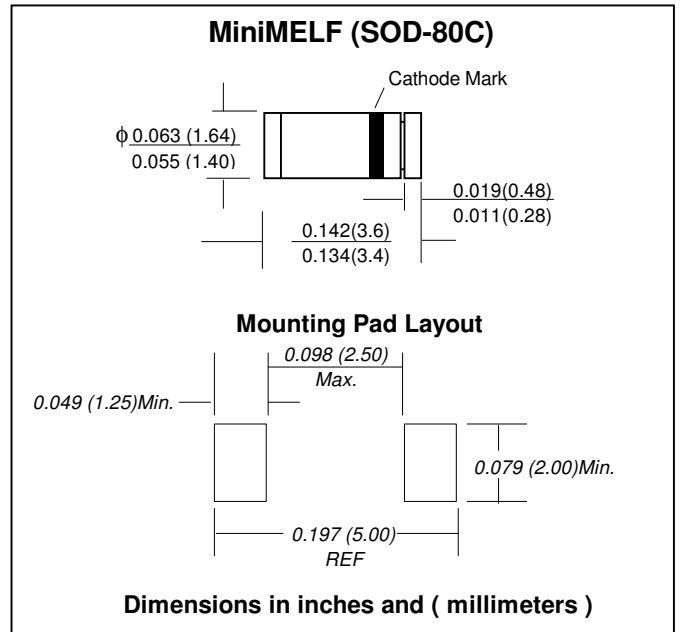
- High switching speed: max. 6 ns
- General application
- Continuous reverse voltage: max. 60 V
- Repetitive peak reverse voltage: max. 60 V
- Repetitive peak forward current: max. 600 mA.
- Pb / RoHS Free

### MECHANICAL DATA :

**Case:** MiniMELF Glass Case (SOD-80)

**Weight:** approx. 0.05g

## HIGH SPEED SWITCHING DIODE



### Maximum Ratings and Thermal Characteristics (Rating at 25 °C ambient temperature unless otherwise specified.)

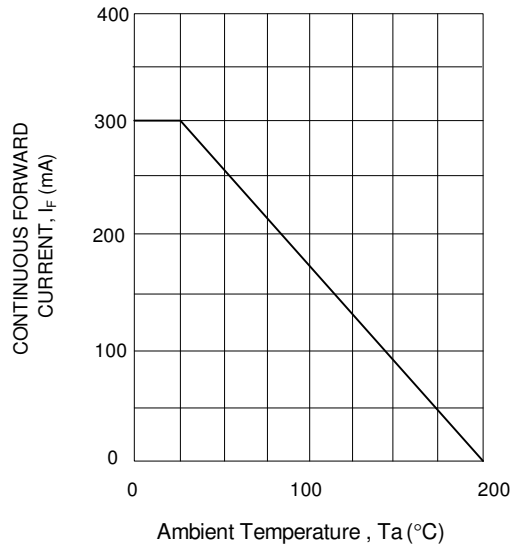
| Parameter  | Symbol    | Value        | Unit       |
|--|-----------|--------------|------------|
| Maximum Repetitive Peak Reverse Voltage                        | $V_{RM}$  | 60           | V          |
| Maximum Continuous Reverse Voltage                             | $V_R$     | 60           | V          |
| Maximum Continuous Forward Current                             | $I_F$     | 300          | mA         |
| Maximum Repetitive Peak Forward Current                        | $I_{FRM}$ | 600          | mA         |
| Maximum Surge Forward Current at $t < 1s$ , $T_J = 25^\circ C$ | $I_{FSM}$ | 0.5          | A          |
| Maximum Power Dissipation                                      | $P_D$     | 500          | mW         |
| Maximum Junction Temperature                                   | $T_J$     | 200          | $^\circ C$ |
| Storage Temperature Range                                      | $T_S$     | -65 to + 200 | $^\circ C$ |

### Electrical Characteristics ( $T_J = 25^\circ C$ unless otherwise noted)

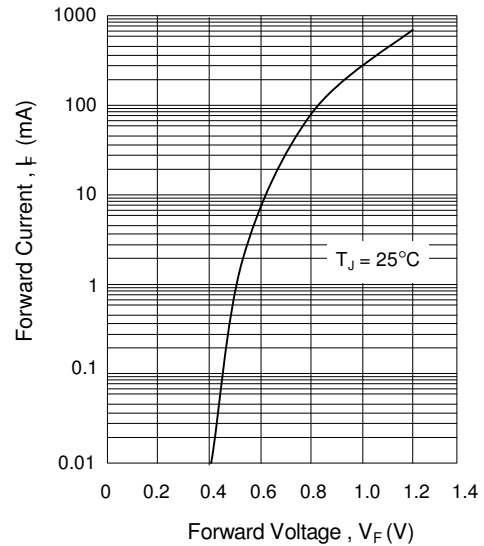
| Parameter             | Symbol   | Test Condition  | Min. | Typ. | Max. | Unit    |
|-----------------------|----------|---|------|------|------|---------|
| Reverse Current       | $I_R$    | $V_R = 60 V$  | -    | -    | 100  | nA      |
|                       |          | $V_R = 60 V$ , $T_J = 150^\circ C$  | -    | -    | 100  | $\mu A$ |
| Forward Voltage       | $V_F$    | $I_F = 100 mA$  | -    | -    | 0.75 | V       |
|                       |          | $I_F = 200 mA$  | -    | -    | 1.00 |         |
|                       |          | $I_F = 500 mA$  | -    | -    | 1.25 |         |
| Diode Capacitance     | $C_d$    | $f = 1MHz$ ; $V_R = 0$  | -    | -    | 2.5  | pF      |
| Reverse Recovery Time | $T_{rr}$ | $I_F = 400 mA$ to $I_R = 400mA$<br>$R_L = 100\Omega$ ; measured<br>at $I_R = 40 mA$ | -    | -    | 6.0  | ns      |

## RATING AND CHARACTERISTIC CURVES ( BAV105 )

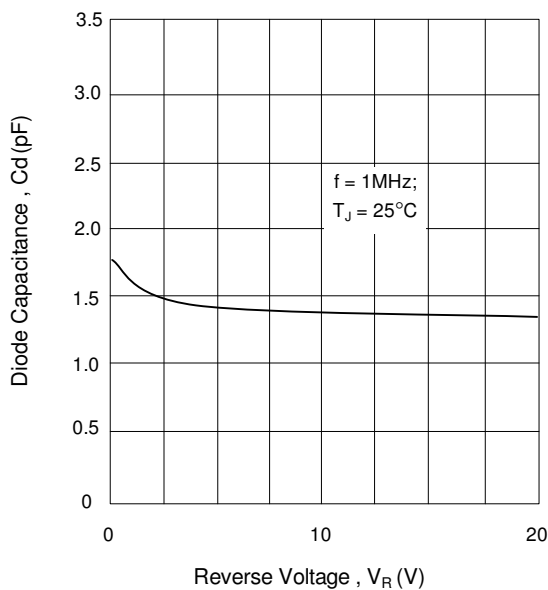
**FIG. 1 MAXIMUM FORWARD CURRENT VERSUS AMBIENT TEMPERATURE**



**FIG. 2 TYPICAL FORWARD VOLTAGE**



**FIG. 3 TYPICAL DIODE CAPACITANCE AS A FUNCTION OF REVERSE VOLTAGE**



**FIG. 4 TYPICAL REVERSE CURRENT VERSUS JUNCTION TEMPERATURE**

