

# BAV19 ~ BAV21

## FEATURES :

- switching speed: max. 50 ns
- For general purpose
- This diode is also available in other case styles including: the MiniMELF case with the type designation BAV101 to BAV103, the SOT-23 case with the type designation BAS19 to BAS21

\* Pb / RoHS Free

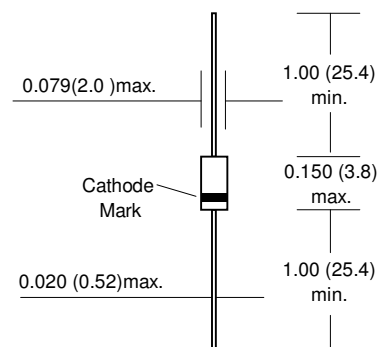
## MECHANICAL DATA :

**Case:** DO-35 Glass Case

**Weight:** approx. 0.13g

## SWITCHING DIODES

### DO - 35 Glass (DO-204AH)



Dimensions in inches and ( millimeters )

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

| Parameter                                                                        | Symbol                  | Value             | Unit |
|----------------------------------------------------------------------------------|-------------------------|-------------------|------|
| Maximum Repetitive Peak Reverse Voltage                                          | BAV19<br>BAV20<br>BAV21 | 120<br>200<br>250 | V    |
| Maximum Continuous Reverse Voltage                                               | BAV19<br>BAV20<br>BAV21 | 100<br>150<br>200 | V    |
| Maximum Rectified Current (Average)<br>Half Wave Rectification with Resist. Load | $I_{F(AV)}$             | 200               | mA   |
| Maximum Continuous Current <sup>(1)</sup>                                        | $I_F$                   | 250               | mA   |
| Maximum Power Dissipation <sup>(1)</sup>                                         | $P_D$                   | 500               | mW   |
| Maximum Repetitive Peak Forward Current <sup>(1)</sup>                           | $I_{FRM}$               | 625               | mA   |
| Maximum Non-repetitive Peak Forward Current at t = 1 s                           | $I_{FSM}$               | 1.0               | A    |
| Maximum Junction Temperature <sup>(1)</sup>                                      | $T_J$                   | 175               | °C   |
| Storage Temperature Range <sup>(1)</sup>                                         | $T_S$                   | -65 to + 175      | °C   |

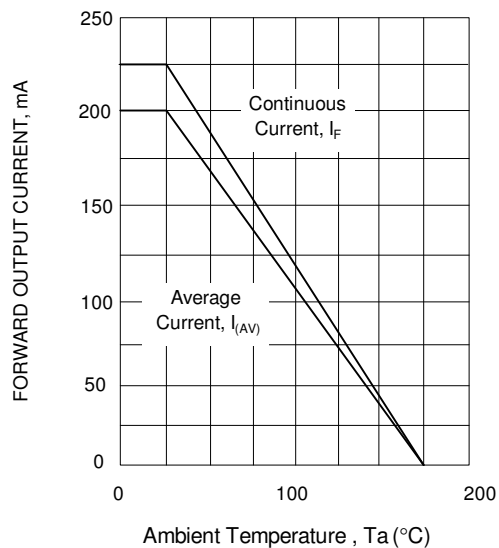
**Note :** (1) Valid provided that leads are kept at ambient temperature at a distance of 8mm from case.

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

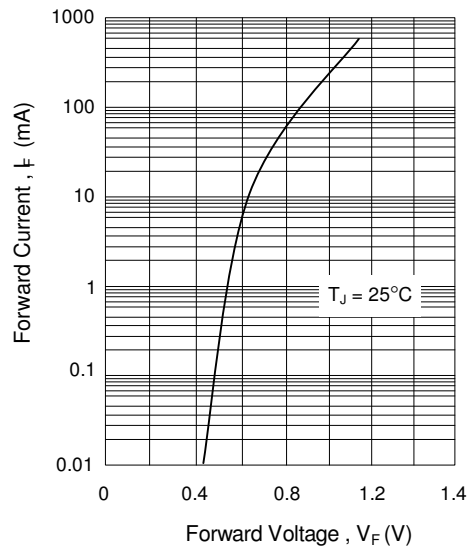
| Parameter             | Symbol                  | Test Condition                                                                          | Min.                                                                 | Typ.        | Max.              | Unit |
|-----------------------|-------------------------|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------|-------------------|------|
| Reverse Current       | BAV19<br>BAV20<br>BAV21 | $I_R$                                                                                   | $V_R = 100\text{ V}$<br>$V_R = 150\text{ V}$<br>$V_R = 200\text{ V}$ | -<br>-<br>- | 100<br>100<br>100 | nA   |
| Forward Voltage       | $V_F$                   | $I_F = 100\text{ mA}$                                                                   | -                                                                    | -           | 1.0               | V    |
| Diode Capacitance     | $C_d$                   | $f = 1\text{ MHz} ; V_R = 0$                                                            | -                                                                    | 1.5         | -                 | pF   |
| Reverse Recovery Time | $T_{rr}$                | $I_F = 30\text{ mA} , I_R = 30\text{ mA}$<br>$I_{RR} = 3\text{ mA} , R_L = 100\ \Omega$ | -                                                                    | -           | 50                | ns   |

## RATING AND CHARACTERISTIC CURVES ( BAV19 ~ BAV21 )

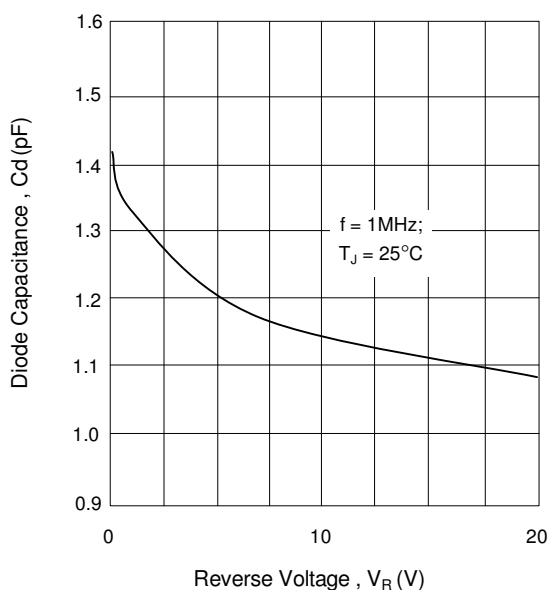
**FIG. 1 ADMISSIBLE FORWARD CURRENT  
VERSUS AMBIENT TEMPERATURE**



**FIG. 2 TYPICAL FORWARD VOLTAGE**



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



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

