

BAV17-BAV21

Small Signal Switching Diodes

VOLTAGE RANGE: 20-200 V

CURRENT: 250 mA

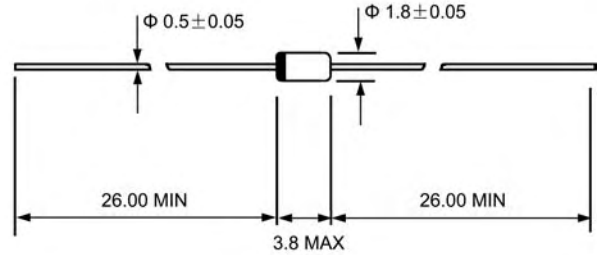
DO - 35(GLASS)

Features

- ◇ Silicon epitaxial planar diode
- ◇ High speed switching diode
- ◇ 500 mW power dissipation

Mechanical Data

- ◇ Case: DO-35, glass case
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.004 ounces, 0.13 grams



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

MAXIMUM RATINGS

| | | BAV17 | BAV18 | BAV19 | BAV20 | BAV21 | UNITS |
|--|-----------------|-------------------|-------|-------|-------|-------|-------|
| Reverse voltage | V_R | 20 | 50 | 100 | 150 | 200 | V |
| Peak reverse voltage | V_{RM} | 25 | 60 | 120 | 200 | 250 | V |
| Average forward rectified current Half wave rectification with resist.load @ $T_A=25^\circ\text{C}$ and $f \geq 50\text{Hz}$ | $I_{(AV)}$ | 250 ¹⁾ | | | | | mA |
| Forward surge current @ $t < 1\text{s}$ and $T_J=25^\circ\text{C}$ | I_{FSM} | 1.0 | | | | | A |
| Power dissipation @ $T_A=25^\circ\text{C}$ | P_{tot} | 500 ¹⁾ | | | | | mW |
| Thermal resistance junction to ambient | $R_{\theta JA}$ | 350 | | | | | K/W |
| Junction temperature | T_J | 175 | | | | | °C |
| Storage temperature range | T_{STG} | -55 --- +175 | | | | | °C |

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

ELECTRICAL CHARACTERISTICS

| | | MIN | TYP | MAX | UNITS |
|--|----------|-----|-----|-----|-------|
| Forward voltage @ $I_F=100\text{mA}$ | V_F | - | - | 1.0 | V |
| Leakage current @ $T_J=25^\circ\text{C}$ | I_R | - | - | 100 | nA |
| at reverse voltage @ $T_J=100^\circ\text{C}$ | | - | - | 15 | μA |
| Capacitance @ $V_F=V_R=0\text{V}$ $f=1\text{MHz}$ | C_J | - | 1.5 | - | pF |
| Reverse recovery time from $I_F=30\text{mA}$ to $I_R=30\text{mA}$ from $I_{RR}=3\text{mA}$, $R_L=100\Omega$. | t_{rr} | - | - | 50 | ns |

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

Ratings AND Characteristic Curves

FIG.1 – FORWARD CHARACTERISTICS

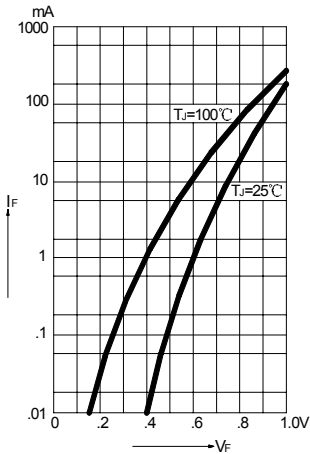


FIG.2 – ADMISSIBLE FORWARD CURRENT VERSUS AMBIENT TEMPERATURE

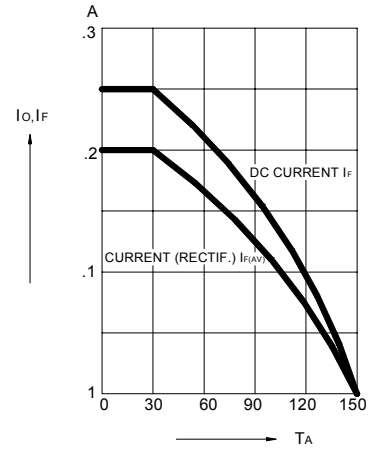


FIG.3 – ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

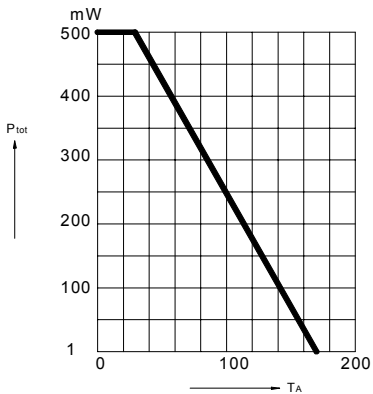


FIG.4 – LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

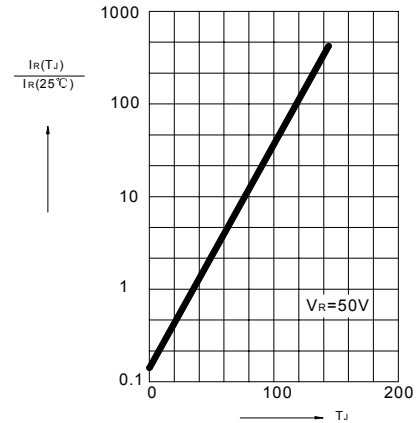


FIG.5 – DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

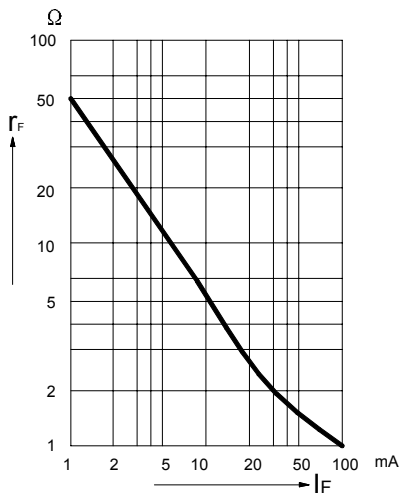


FIG.6 – CAPACITANCE VERSUS REVERSE VOLTAGE

