

## Small Signal Product

## High Voltage Switching Diode

**FEATURES**

- Fast switching device ( $t_{rr} < 4.0\text{ns}$ )
- Through-hole device type mounting
- Hermetically sealed glass
- Solder hot dip tin (Sn) lead finish
- All external surfaces are corrosion resistant and leads are readily solderable
- Packing code with suffix "G" means Halogen free


**DO-35**

**MECHANICAL DATA**

- Case: DO-35 package
- High temperature soldering guaranteed:  $260^{\circ}\text{C}/10\text{s}$
- Polarity: Indicated by black cathode band
- Weight:  $109 \pm 4\text{ mg}$

Hermetically Sealed Glass

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ( $T_A = 25^{\circ}\text{C}$ unless otherwise noted) |                 |             |                             |
|---|-----------------|-------------|-----------------------------|
| PARAMETER   | SYMBOL          | VALUE       | UNIT                        |
| Power Dissipation   | $P_D$           | 500         | mW                          |
| Peak Forward Surge Current  | $I_{FSM}$       | 1<br>4      | A                           |
| Average Forward Current   | $I_O$           | 200         | mA                          |
| Thermal Resistance (Junction to Ambient)  | $R_{\theta JA}$ | 300         | $^{\circ}\text{C}/\text{W}$ |
| Junction and Storage Temperature Range  | $T_J, T_{STG}$  | -65 to +200 | $^{\circ}\text{C}$          |

| PARAMETER                 | SYMBOL                | MIN | MAX  | UNIT |
|---------------------------|-----------------------|-----|------|------|
| Reverse Breakdown Voltage | BAV19                 | 120 | -    | V    |
|                           | BAV20                 | 200 | -    |      |
|                           | BAV21                 | 250 | -    |      |
| Forward Voltage           | $I_F = 100\text{ mA}$ | -   | 1.00 | V    |
|                           | $I_F = 200\text{ mA}$ | -   | 1.25 |      |
| Reverse Leakage Current   | BAV19                 | -   | 100  | nA   |
|                           | BAV20                 | -   | 100  |      |
|                           | BAV21                 | -   | 100  |      |
| Junction Capacitance      | $C_J$                 | -   | 5    | pF   |
| Reverse Recovery Time     | $t_{rr}$              | -   | 50   | ns   |

 Note 1: Test condition :  $I_F = I_R = 30\text{mA}$  ,  $R_L = 100\Omega$  ,  $I_{RR} = 3\text{mA}$

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RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^\circ\text{C}$  unless otherwise noted)

Fig. 1 Reverse Voltage VS. Reverse Current

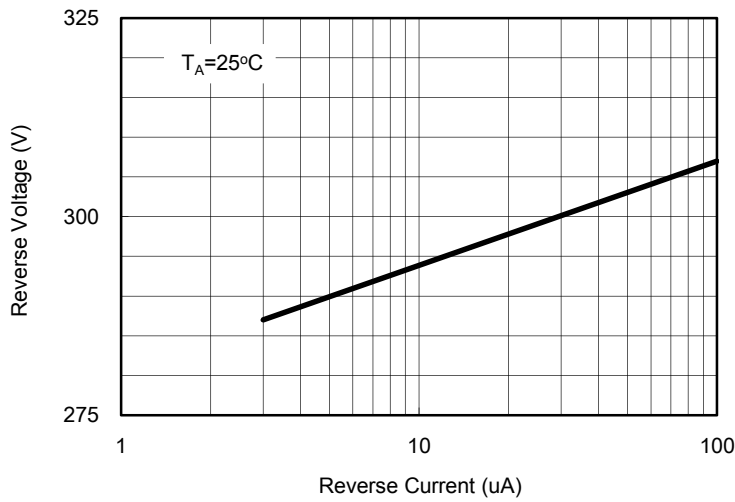


Fig. 2 Reverse Current VS. Reverse Voltage

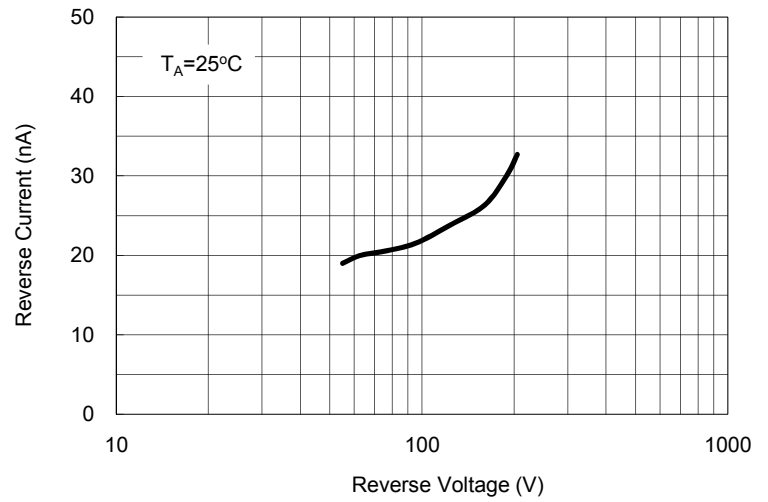


Fig. 3 Reverse Current VS. Reverse Voltage

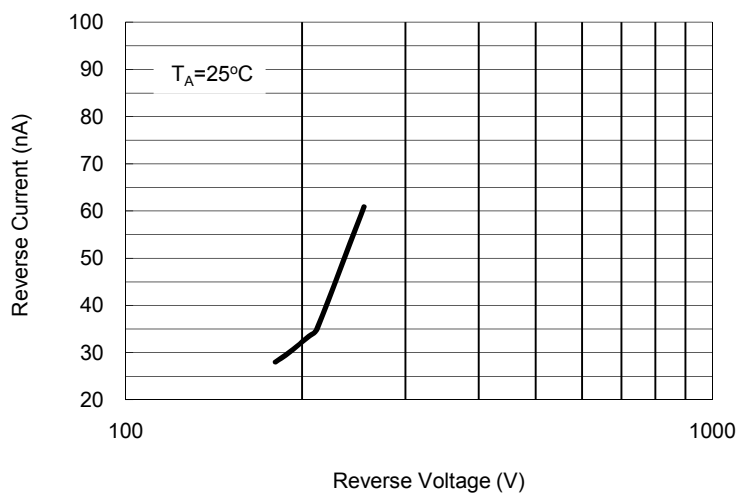


Fig. 4 Forward Voltage VS. Forward Current

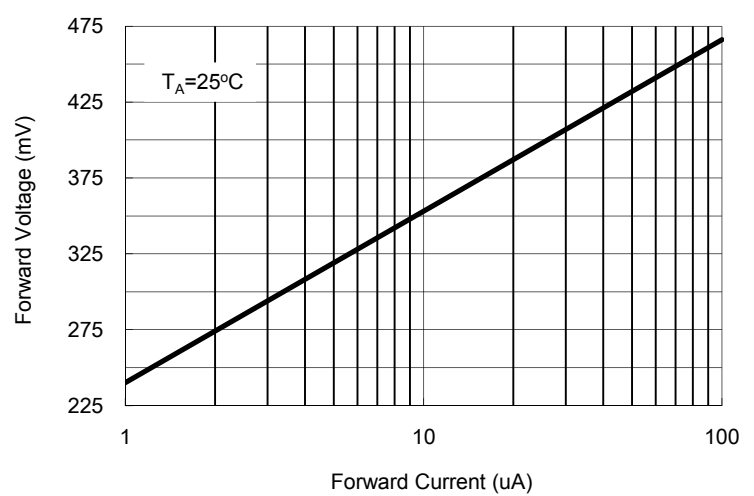


Fig. 5 Forward Volatage VS. Forward Current

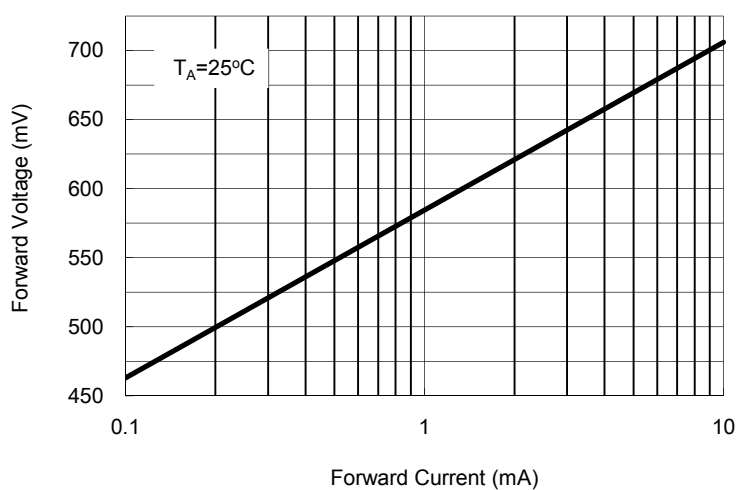
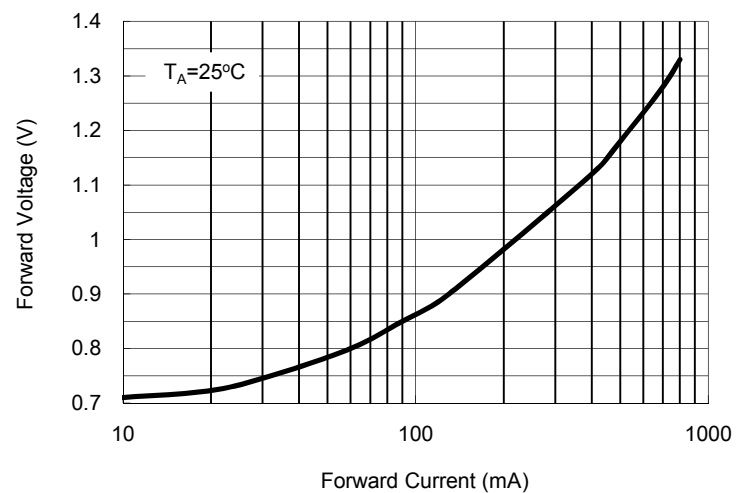


Fig. 6 Forward Volatage VS. Forward Current



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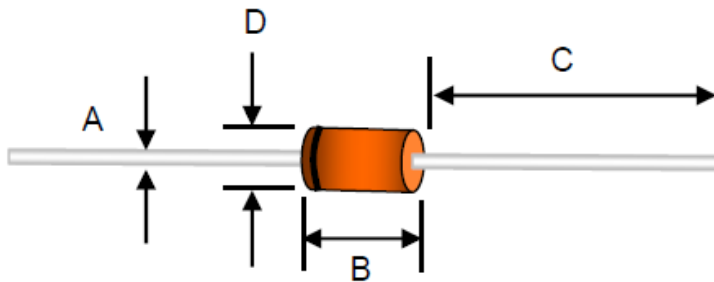
| ORDERING INFORMATION |                          |              |                     |         |                  |
|----------------------|--------------------------|--------------|---------------------|---------|------------------|
| PART NO.             | PART NO. SUFFIX (Note 2) | PACKING CODE | PACKING CODE SUFFIX | PACKAGE | PACKING          |
| BAVxx (Note1)        | -xx                      | R0           | G                   | DO-35   | 10K / 14" Reel   |
|                      |                          | A0           |                     |         | 5K / Box ( Ammo) |

Note 1: "x" is Device Code from "19" thru "21".

Note 2: Part No. Suffix „-xx “ would be used for special requirement

| EXAMPLE            |          |                 |              |                     |   |
|--------------------|----------|-----------------|--------------|---------------------|---|
| PREFERRED PART NO. | PART NO. | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION                                 |
| BAV19 R0G          | BAV19    |                 | R0           | G                   | Multiple manufacture source<br>Halogen free |
| BAV19-L0 R0G       | BAV19    | -L0             | R0           | G                   | Define manufacture source<br>Halogen free   |

PACKAGE OUTLINE DIMENSION



| DIM. | Unit (mm) |       | Unit (inch) |       |
|------|-----------|-------|-------------|-------|
|      | Min       | Max   | Min         | Max   |
| A    | 0.34      | 0.60  | 0.013       | 0.024 |
| B    | 2.90      | 5.08  | 0.114       | 0.200 |
| C    | 25.40     | 38.10 | 1.000       | 1.500 |
| D    | 1.30      | 2.28  | 0.051       | 0.090 |

MARKING DIAGRAM



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