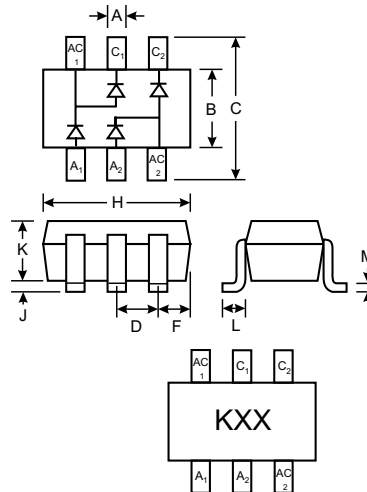


**Features**

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance
- Two “BAV99” Circuits In One Package
- Easily Connected As F.W. Bridge



| SOT-363              |              |      |
|----------------------|--------------|------|
| Dim                  | Min          | Max  |
| A                    | 0.10         | 0.30 |
| B                    | 1.15         | 1.35 |
| C                    | 2.00         | 2.20 |
| D                    | 0.65 Nominal |      |
| E                    | 0.30         | 0.40 |
| G                    | 1.80         | 2.20 |
| H                    | 1.80         | 2.20 |
| J                    | —            | 0.10 |
| K                    | 0.90         | 1.00 |
| L                    | 0.25         | 0.40 |
| M                    | 0.10         | 0.25 |
| All Dimensions in mm |              |      |

**Mechanical Data**

- Case: SOT-363, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: KGJ
- Weight: 0.006 grams (approx.)

**Maximum Ratings** @  $T_A = 25^\circ\text{C}$  unless otherwise specified

| Characteristic  | Symbol          | BAV99DW     | Unit             |
|---|-----------------|-------------|------------------|
| Non-Repetitive Peak Reverse Voltage   | $V_{RM}$        | 100         | V                |
| Peak Repetitive Reverse Voltage   | $V_{RRM}$       | 75          | V                |
| Working Peak Reverse Voltage  | $V_{RWM}$       |             |                  |
| DC Blocking Voltage   | $V_R$           |             |                  |
| RMS Reverse Voltage   | $V_{R(RMS)}$    | 53          | V                |
| Forward Continuous Current (Note 1)   | $I_{FM}$        | 300         | mA               |
| Average Rectified Output Current (Note 1)   | $I_O$           | 150         | mA               |
| Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$<br>@ $t = 1.0\text{s}$ | $I_{FSM}$       | 2.0<br>1.0  | A                |
| Power Dissipation (Note 1)  | $P_d$           | 200         | mW               |
| Thermal Resistance Junction to Ambient Air (Note 1)                                     | $R_{\theta JA}$ | 625         | K/W              |
| Operating and Storage Temperature Range   | $T_j, T_{STG}$  | -65 to +150 | $^\circ\text{C}$ |

**Electrical Characteristics** @  $T_A = 25^\circ\text{C}$  unless otherwise specified

| Characteristic               | Symbol   | Min | Max                           | Unit  | Test Condition   |
|------------------------------|----------|-----|-------------------------------|---|--|
| Maximum Forward Voltage      | $V_{FM}$ | —   | 0.715<br>0.855<br>1.0<br>1.25 | V   | $I_F = 1.0\text{mA}$<br>$I_F = 10\text{mA}$<br>$I_F = 50\text{mA}$<br>$I_F = 150\text{mA}$   |
| Maximum Peak Reverse Current | $I_{RM}$ | —   | 2.5<br>50<br>30<br>25         | $\mu\text{A}$<br>$\mu\text{A}$<br>$\mu\text{A}$<br>nA | $V_R = 75\text{V}$<br>$V_R = 75\text{V}, T_j = 150^\circ\text{C}$<br>$V_R = 25\text{V}, T_j = 150^\circ\text{C}$<br>$V_R = 20\text{V}$ |
| Junction Capacitance         | $C_j$    | —   | 2.0                           | pF  | $V_R = 0, f = 1.0\text{MHz}$   |
| Reverse Recovery Time        | $t_{rr}$ | —   | 4.0                           | ns  | $I_F = I_R = 10\text{mA}$ ,<br>$t_{rr} = 0.1 \times I_R, R_L = 100\Omega$  |

Notes: 1. Valid provided that terminals are kept at ambient temperature.

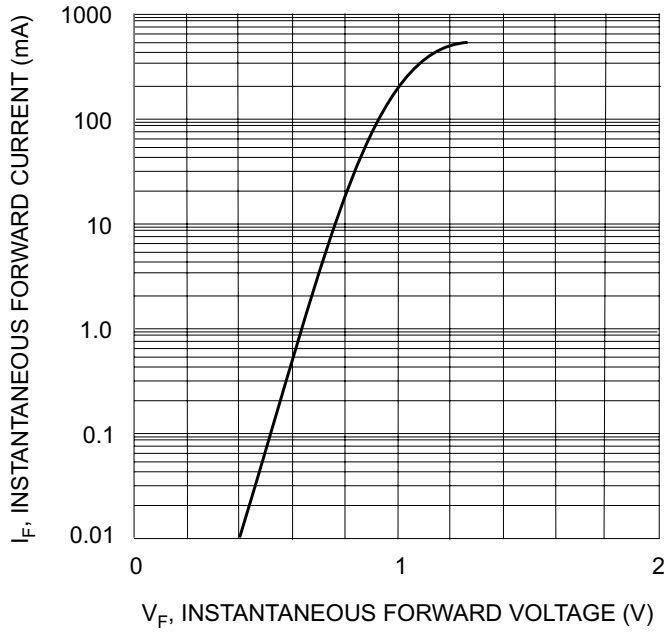


Fig. 1 Forward Characteristics

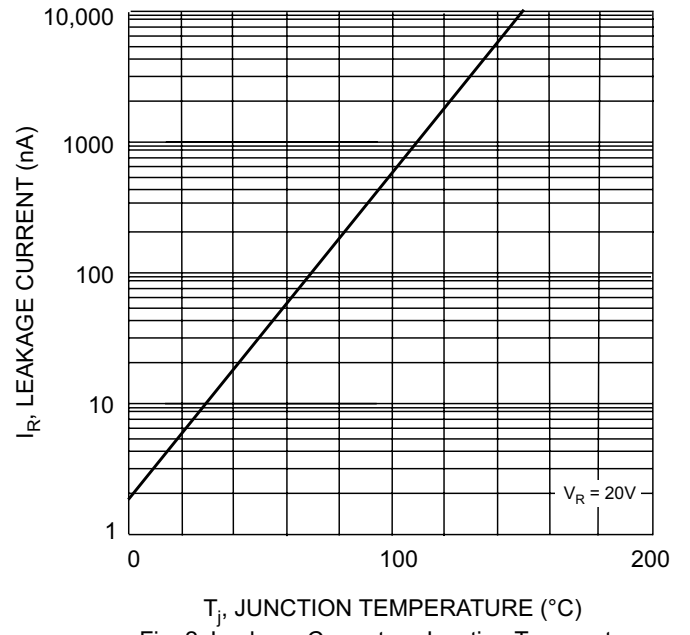


Fig. 2 Leakage Current vs Junction Temperature