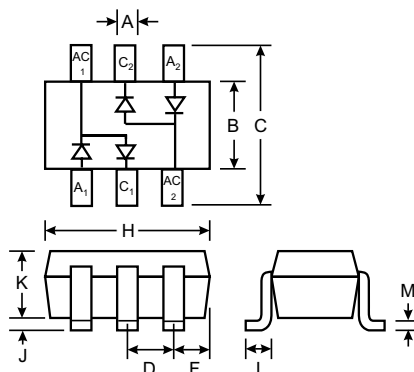


### Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance
- Two "BAV99" Circuits In One Package

### Mechanical Data

- Case: SOT-363, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: KJG
- Weight: 0.006 grams (approx.)
- Case Material - UL Flammability Rating Classification 94V-0



| 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 |              |      |

### 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<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                             | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 75                | V                  |
| RMS Reverse Voltage                                                                                                | $V_{R(RMS)}$                    | 53                | V                  |
| Forward Continuous Current                                                                                         | $I_{FM}$                        | 215               | mA                 |
| Non-Repetitive Peak Forward Surge Current<br>@ $t = 1.0\mu\text{s}$<br>@ $t = 1.0\text{ms}$<br>@ $t = 1.0\text{s}$ | $I_{FSM}$                       | 2.0<br>1.0<br>0.5 | A                  |
| Power Dissipation (Note 1)                                                                                         | $P_d$                           | 200               | mW                 |
| Thermal Resistance Junction to Ambient Air (Note 1)                                                                | $R_{\theta JA}$                 | 625               | $^\circ\text{C/W}$ |
| Power Dissipation (Note 2)                                                                                         | $P_d$                           | 300               | mW                 |
| Thermal Resistance Junction to Ambient Air (Note 2)                                                                | $R_{\theta JA}$                 | 417               | $^\circ\text{C/W}$ |
| 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

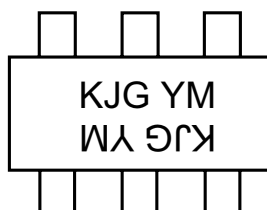
| Characteristic               | Symbol   | Min | Max                           | Unit                                                  | Test Condition                                                                                                                         |
|------------------------------|----------|-----|-------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 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>$I_{rr} = 0.1 \times I_R, R_L = 100\Omega$                                                              |

- Notes:
1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  2. Device mounted on Alumina PCB, 0.4 inch x 0.3 inch x 0.024 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.

**Ordering Information** (Note 3)

| Device    | Packaging | Shipping         |
|-----------|-----------|------------------|
| BAV99DW-7 | SOT-363   | 3000/Tape & Reel |

Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**

KJG = Product Type Marking Code

YM = Date Code Marking

Y = Year ex: N = 2002

M = Month ex: 9 = September

## Date Code Key

| Year | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|------|------|------|------|------|------|------|------|
| Code | J    | K    | L    | M    | N    | O    | P    |

| Month | Jan | Feb | March | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------|-----|-----|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Code  | 1   | 2   | 3     | 4   | 5   | 6   | 7   | 8   | 9   | O   | N   | D   |

