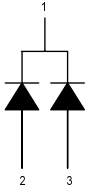


# SOT23 HIGH SPEED SWITCHING DIODE PAIR COMMON CATHODE

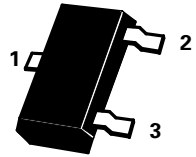
ISSUE 2 – JANUARY 1995

## BAV74

### PIN CONFIGURATION



PARTMARKING DETAIL  
BAV74 – JA



SOT23

### ABSOLUTE MAXIMUM RATINGS.

| PARAMETER  | SYMBOL         | VALUE       | UNIT             |
|--|----------------|-------------|------------------|
| Continuous Reverse Voltage                                     | $V_R$          | 50          | V                |
| Average Output Rectified Current<br>( $t_{av} = 10\text{ms}$ ) | $I_o$          | 100         | mA               |
| Continuous Forward Current                                     | $I_F$          | 150         | mA               |
| Peak Forward Current ( $t = 15\text{ms}$ )                     | $I_{FM}$       | 200         | mA               |
| Forward Surge Current ( $t=1\mu\text{s}$ )                     | $I_{FS}$       | 1000        | mA               |
| Power Dissipation at $T_{amb}=25^\circ\text{C}$                | $P_{tot}$      | 330         | mW               |
| Operating and Storage Temperature Range                        | $T_j; T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

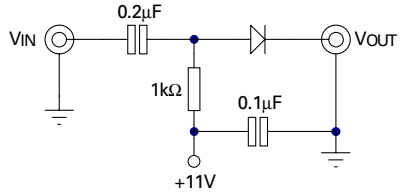
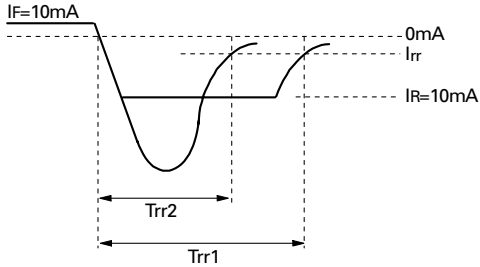
### ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$ unless otherwise stated).

| PARAMETER             | SYMBOL   | MIN. | MAX.       | UNIT                           | CONDITIONS.  |
|-----------------------|----------|------|------------|--------------------------------|--|
| Breakdown Voltage     | $V_{BR}$ | 51   |            | V                              | $I_R = 5\mu\text{A}$   |
| Forward Voltage       | $V_F$    |      | 1.0        | V                              | $I_F = 100\text{mA}$   |
| Reverse current       | $I_R$    |      | 0.1<br>100 | $\mu\text{A}$<br>$\mu\text{A}$ | $V_R = 50\text{V}$<br>$V_R = 50\text{V}, T_{amb} = 125^\circ\text{C}$  |
| Capacitance           | $C_o$    |      | 2.0        | pF                             | $V_R = 0$  |
| Reverse Recovery Time | $t_{rr}$ |      | 4<br>2     | ns<br>ns                       | $I_F = I_R = 10\text{mA}, I_{RR} = 1\text{mA}$<br>$I_F = 10\text{mA}, V_R = 6\text{V},$<br>$R_L = 100\Omega$ |

Spice parameter data is available upon request for this device

# BAV74

## Circuit For Measuring Switching Time

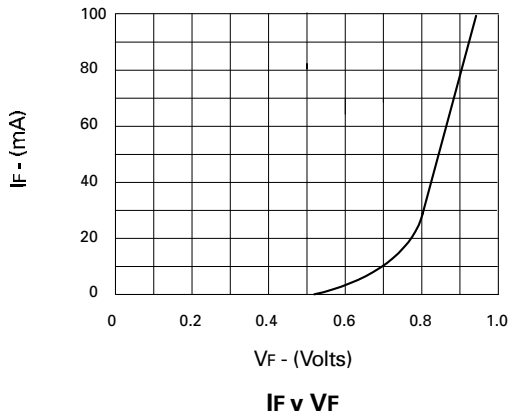


Pulse is supplied by a generator with the following characteristics:

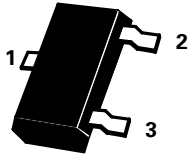
Output impedance =  $50\Omega$   
 Rise time  $\leq 0.5\text{ns}$   
 Pulse width =  $100\text{ns}$

Output is monitored on a sampling oscilloscope with the following characteristics:

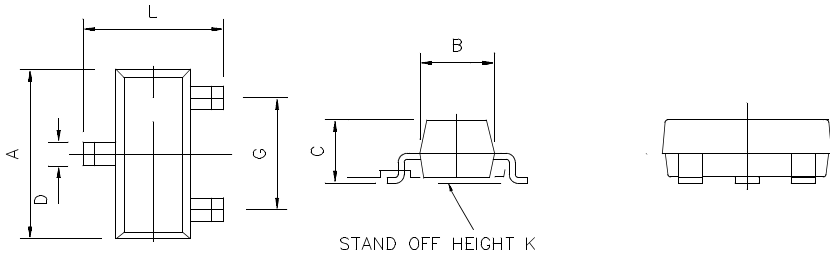
Input impedance =  $50\Omega$   
 Rise time  $\leq 0.6\text{ns}$



# BAV74



| DIM | Millimeters |      | Inches    |        |
|-----|-------------|------|-----------|--------|
|     | Min         | Max  | Min       | Max    |
| A   | 2.67        | 3.05 | 0.105     | 0.120  |
| B   | 1.20        | 1.40 | 0.047     | 0.055  |
| C   | -           | 1.10 | -         | 0.043  |
| D   | 0.37        | 0.53 | 0.0145    | 0.021  |
| F   | 0.085       | 0.15 | 0.0033    | 0.0059 |
| G   | NOM 1.9     |      | NOM 0.075 |        |
| K   | 0.01        | 0.10 | 0.0004    | 0.004  |
| L   | 2.10        | 2.50 | 0.0825    | 0.0985 |
| N   | NOM 0.95    |      | NOM 0.37  |        |



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