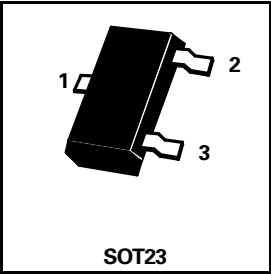
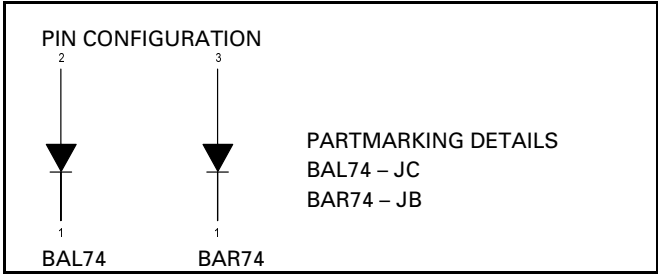


# SOT23 HIGH SPEED SWITCHING DIODES

**BAL74**  
**BAR74**

ISSUE 3 – FEBRUARY 1997



## 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 ( $t = 1\mu\text{s}$ )                   | $I_{FS}$       | 1           | A            |
| Operating and Storage Temperature Range                        | $T_j; T_{stg}$ | -55 to +150 | $^{\circ}$ C |
| Power Dissipation at $T_{amb} = 25^{\circ}\text{C}$            | $P_{tot}$      | 330         | mW           |

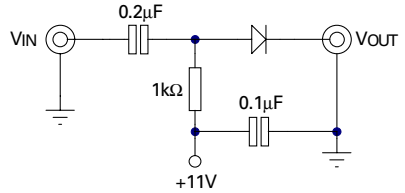
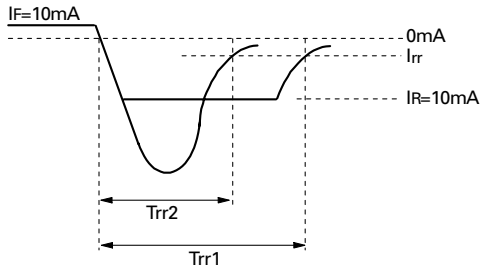
## ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$ unless otherwise stated).

| PARAMETER             | SYMBOL   | MIN. | TYP. | 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

# BAL74 BAR74

## Circuit For Measuring Switching Time

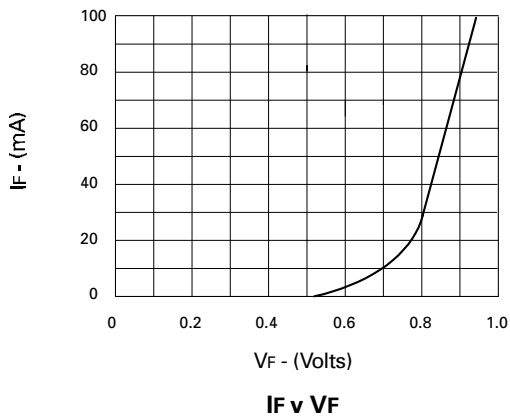


Pulse is supplied by a generator with the following characteristics:

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  $\leq 0.6\text{ns}$





LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

[LittleDiode.com](http://LittleDiode.com)

Looking forward to providing you with the best possible service.