

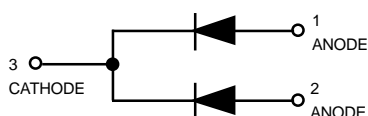
Monolithic Dual Switching Diode

This switching diode has the following features:

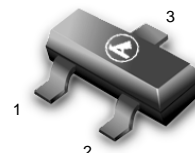
- Low Leakage Current Applications
- Medium Speed Switching Times
- Available in 8 mm Tape and Reel

Use BAV170LT1 to order the 7 inch/3,000 unit reel

Use BAV170LT3 to order the 13 inch/10,000 unit reel



BAV170LT1



CASE 318-08, STYLE 9
SOT-23 (TO-236AB)

MAXIMUM RATINGS

| Rating | Symbol | Value | Unit |
|----------------------------|-----------------|-------|------|
| Reverse Voltage | V_R | 70 | Vdc |
| Forward Current | I_F | 200 | mAdc |
| Peak Forward Surge Current | $I_{FM(surge)}$ | 500 | mAdc |

THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|--|-----------------|-------------|--------------------|
| Total Device Dissipation FR-5 Board ⁽¹⁾ $T_A = 25^\circ\text{C}$ Derate above 25°C | P_D | 225 | mW |
| Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | 556 | $^\circ\text{C/W}$ |
| Total Device Dissipation Alumina Substrate ⁽²⁾ $T_A = 25^\circ\text{C}$ Derate above 25°C | P_D | 300 | mW |
| Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | 417 | $^\circ\text{C/W}$ |
| Junction and Storage Temperature | T_J, T_{stg} | -55 to +150 | $^\circ\text{C}$ |

DEVICE MARKING

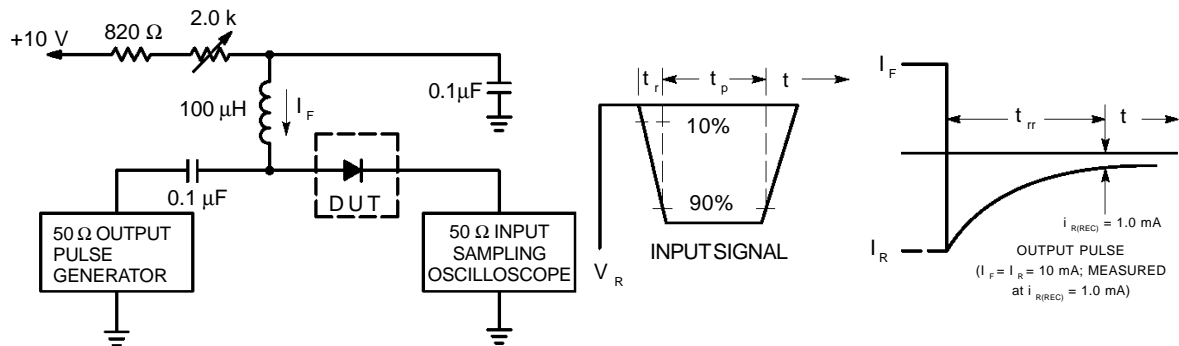
BAV170LT1 = JX

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

| Characteristic | Symbol | Min | Max | Unit |
|--|--------------------------------|-----|-----------------------------|---------------|
| Reverse Breakdown Voltage ($I_{(BR)} = 100 \mu\text{Adc}$) | $V_{(BR)}$ | 70 | — | Vdc |
| Reverse Voltage Leakage Current ($V_R = 70 \text{ Vdc}$) ($V_R = 70 \text{ Vdc}, T_J = 150^\circ\text{C}$) | I_R | — | 5.0 80 | nAdc |
| Diode Capacitance ($V_R = 0 \text{ V}, f = 1.0 \text{ MHz}$) | C_D | — | 2.0 | pF |
| Forward Voltage ($I_F = 1.0 \text{ mAdc}$) ($I_F = 10 \text{ mAdc}$) ($I_F = 50 \text{ mAdc}$) ($I_F = 150 \text{ mAdc}$) | V_F | — | 900 1000 1100 1250 | mVdc |
| Reverse Recovery Time ($I_F = I_R = 10 \text{ mAdc}$) (Figure 1) | $R_L = 100 \Omega$ t_{rr} | — | 3.0 | μs |

1. FR-5 = $1.0 \times 0.75 \times 0.062 \text{ in.}$

2. Alumina = $0.4 \times 0.3 \times 0.024 \text{ in.}$ 99.5% alumina.

BAV170LT1


- Notes: 1. A 2.0 k Ω variable resistor adjusted for a Forward Current (I_F) of 10mA.
 2. Input pulse is adjusted so $I_{R(\text{peak})}$ is equal to 10mA.
 3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit