

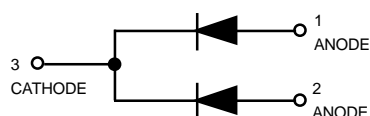
# Monolithic Dual Switching Diode

This switching diode has the following features:

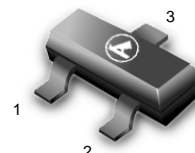
- Low Leakage Current Applications
- Medium Speed Switching Times
- Available in 8 mm Tape and Reel

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 <sup>(1)</sup> $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	225	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Total Device Dissipation Alumina Substrate <sup>(2)</sup> $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	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

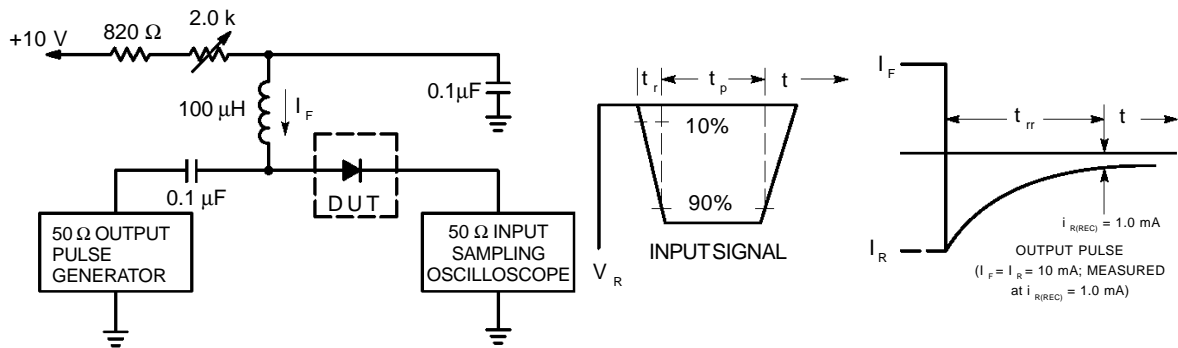
### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted) (EACH DIODE)

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	$\mu\text{s}$

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 $\Omega$  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**