

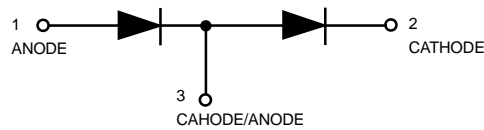
# Dual Series Switching Diode

This switching diode has the following features:

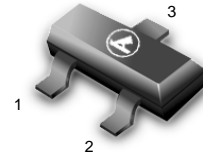
- Low Leakage Current Applications
- Medium Speed Switching Times
- Available in 8 mm Tape and Reel

Use BAV199LT1 to order the 7 inch/3,000 unit reel

Use BAV199LT3 to order the 13 inch/10,000 unit reel



## BAV199LT1



CASE 318-08, STYLE 11  
SOT- 23 (TO-236AB)

### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	$V_R$	70	Vdc
Forward Current	$I_F$	215	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	500	mAdc
Repetitive Peak Reverse Voltage	$V_{RRM}$	70	Vdc
Average Rectified Forward Current <sup>(1)</sup> (averaged over any 20 ms period)	$I_{F(AV)}$	715	mAdc
Repetitive Peak Forward Current	$I_{FRM}$	450	mAdc
Non-Repetitive Peak Forward Current	$I_{FSM}$	2.0	Adc
	$t = 1.0 \mu s$		
	$t = 1.0 ms$	1.0	
	$t = 1.0 A$	0.5	

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR- 5 Board <sup>(1)</sup> $T_A = 25^\circ C$	$P_D$	225	mW
Derate above 25°C		1.8	mW°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation Alumina Substrate <sup>(2)</sup> $T_A = 25^\circ C$	$P_D$	300	mW
Derate above 25°C		2.4	mW°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction and Storage Temperature	$T_J, T_{stg}$	-65 to +150	°C

### DEVICE MARKING

BAV199LT1 = JY

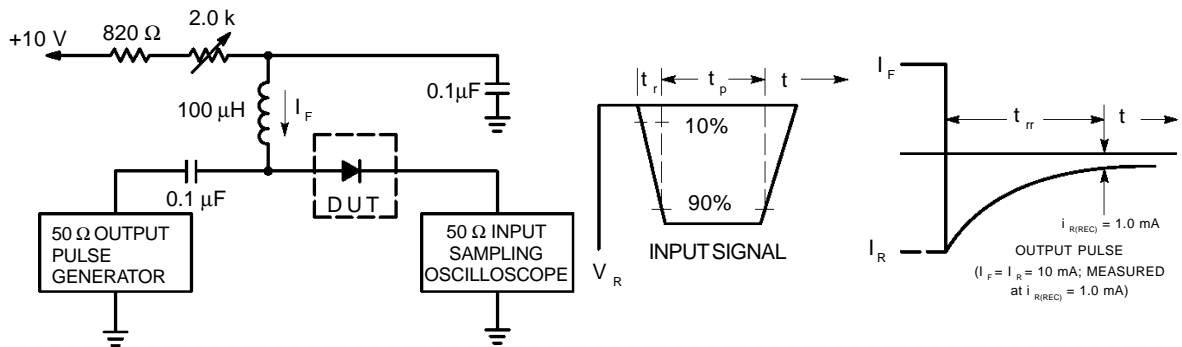
1. FR-5 = 1.0 x 0.75 x 0.062 in.

2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

**BAV199LT1**

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

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



- Notes: 1. A 2.0 kΩ 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**