

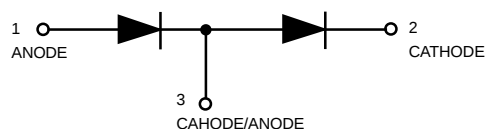
Dual Series Switching Diode

This switching diode has the following features:

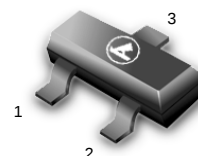
- Low Leakage Current Applications
- Medium Speed Switching Times
- Available in 8 mm Tape and Reel

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 ⁽¹⁾ (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
		1.0	
		0.5	

THERMAL CHARACTERISTICS

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

DEVICE MARKING

BAV199LT1 = JY

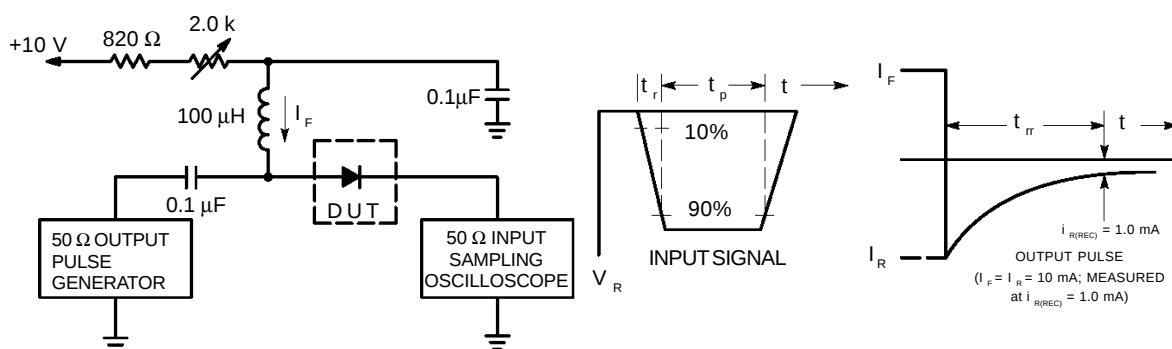
1. FR-5 = 1.0 x 0.75 x 0.062 in.

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
OFF CHARACTERISTICS				
Reverse Breakdown Voltage ($I_{(BR)} = 100\ \mu\text{Adc}$)	$V_{(BR)}$	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	μs



- 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