

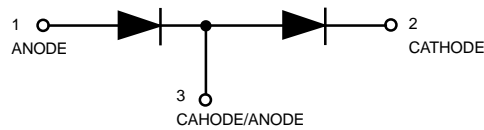
Dual Series Switching Diode

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}	$t = 1.0 \mu s$	2.0	Adc
		$t = 1.0 ms$	1.0	
		$t = 1.0 A$	0.5	

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR- 5 Board ⁽¹⁾ $T_A = 25^\circ C$	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 ⁽²⁾ $T_A = 25^\circ C$	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

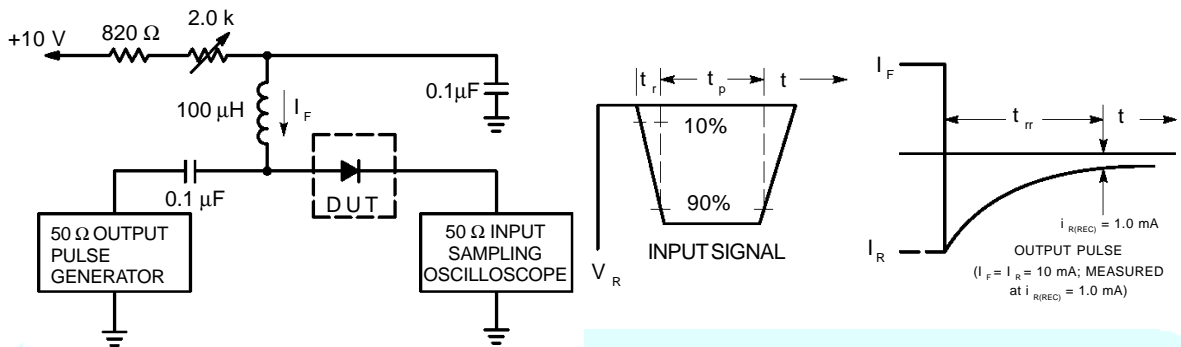
BAV199LT1 = JY

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.

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 ($I_F = 1.0 \text{ mAdc}$)	V_F	—	900	mVdc
($I_F = 10 \text{ mAdc}$)		—	1000	
($I_F = 50 \text{ mAdc}$)		—	1100	
($I_F = 150 \text{ mAdc}$)		—	1250	
Reverse Recovery Time ($I_F = I_R = 10 \text{ mAdc}$) (Figure 1)	t_{rr}	—	3.0	μs



Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10mA.

Notes: 2. Input pulse is adjusted so $I_{R(\text{peak})}$ is equal to 10mA.

Notes: 3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

