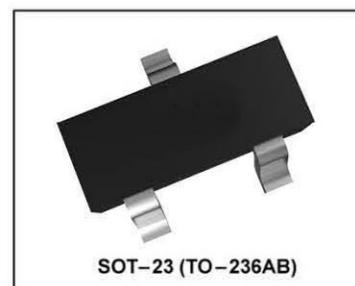
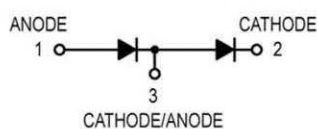


## Dual Series Switching Diode

This switching diode has the following features:

- ① Low Leakage Current Applications
- ① Medium Speed Switching Times
- ① Available in 8 mm Tape and Reel



### ● MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	$V_R$	70	Vdc
Forward Current	$I_F$	215	mAdc
Peak Forward Surge Current	$I_{FM}(\text{surge})$	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 1.0 0.5	Adc
		$t = 1.0 \mu\text{s}$ $t = 1.0 \text{ms}$ $t = 1.0 \text{A}$	

### ● THERMAL CHARACTERISTICS

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

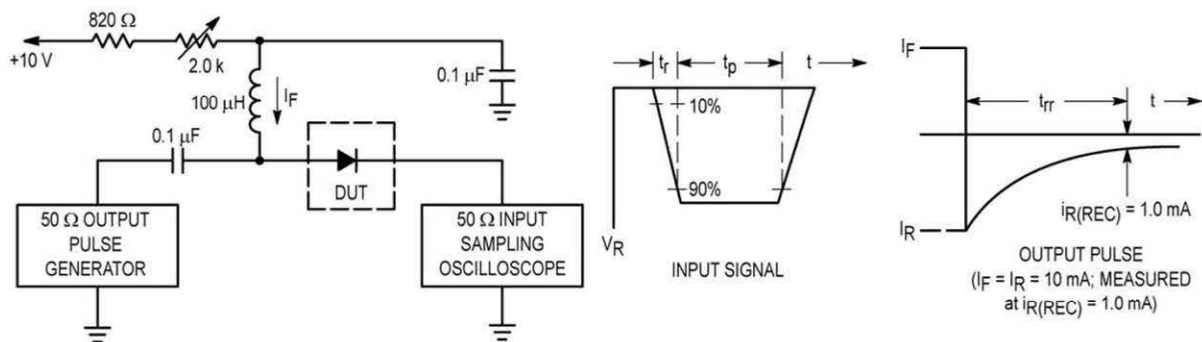
### ● DEVICE MARKING

BAV199= JY

1. FR-5 = 1.0 × 0.75 × 0.062 in.
2. Alumina = 0.4 × 0.3 × 0.024 in. 99.5% alumina.

**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 ( $I_{(BR)} = 100 \mu\text{Adc}$ )	$V_{(BR)}$	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)	$t_{rr}$	—	3.0	$\mu\text{s}$



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

**Figure 1. Recovery Time Equivalent Test Circuit**