

Dual Switching Diodes

BAV70WT1

DEVICE MARKING

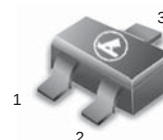
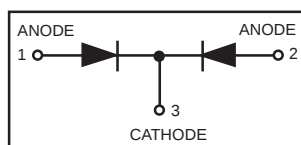
BAV70WT1 = A4

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

Rating	Symbol	Max	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 ⁽¹⁾ $T_A = 25^\circ\text{C}$	P_D	200	mW
Derate above 25°C		1.6	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	0.625	$^\circ\text{C/W}$
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}	-55 to +150	$^\circ\text{C}$


 CASE 419-04, STYLE 5
SOT-323 (SC-70)


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

Characteristic	Symbol	Min	Max	Unit
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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_{R1}	—	5.0	μAdc
($V_R = 50 \text{ Vdc}$)	I_{R2}	—	100	nAdc
Diode Capacitance ($V_R = 0, f = 1.0 \text{ MHz}$)	C_D	—	1.5	pF
Forward Voltage ($I_F = 1.0 \text{ mAdc}$)	V_F	—	715	mVdc
($I_F = 10 \text{ mAdc}$)		—	855	
($I_F = 50 \text{ mAdc}$)		—	1000	
($I_F = 150 \text{ mAdc}$)		—	1250	
Reverse Recovery Time ($I_F = I_R = 10 \text{ mAdc}, R_L = 100\Omega, I_{R(REC)} = 1.0 \text{ mAdc}$) (Figure 1)	t_{rr}	—	6.0	ns
Forward Recovery Voltage ($I_F = 10 \text{ mAdc}, t_r = 20 \text{ ns}$) (Figure 2)	V_{RF}	—	1.75	V

 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.

3. For each individual diode while the second diode is unbiased.

BAV70WT1

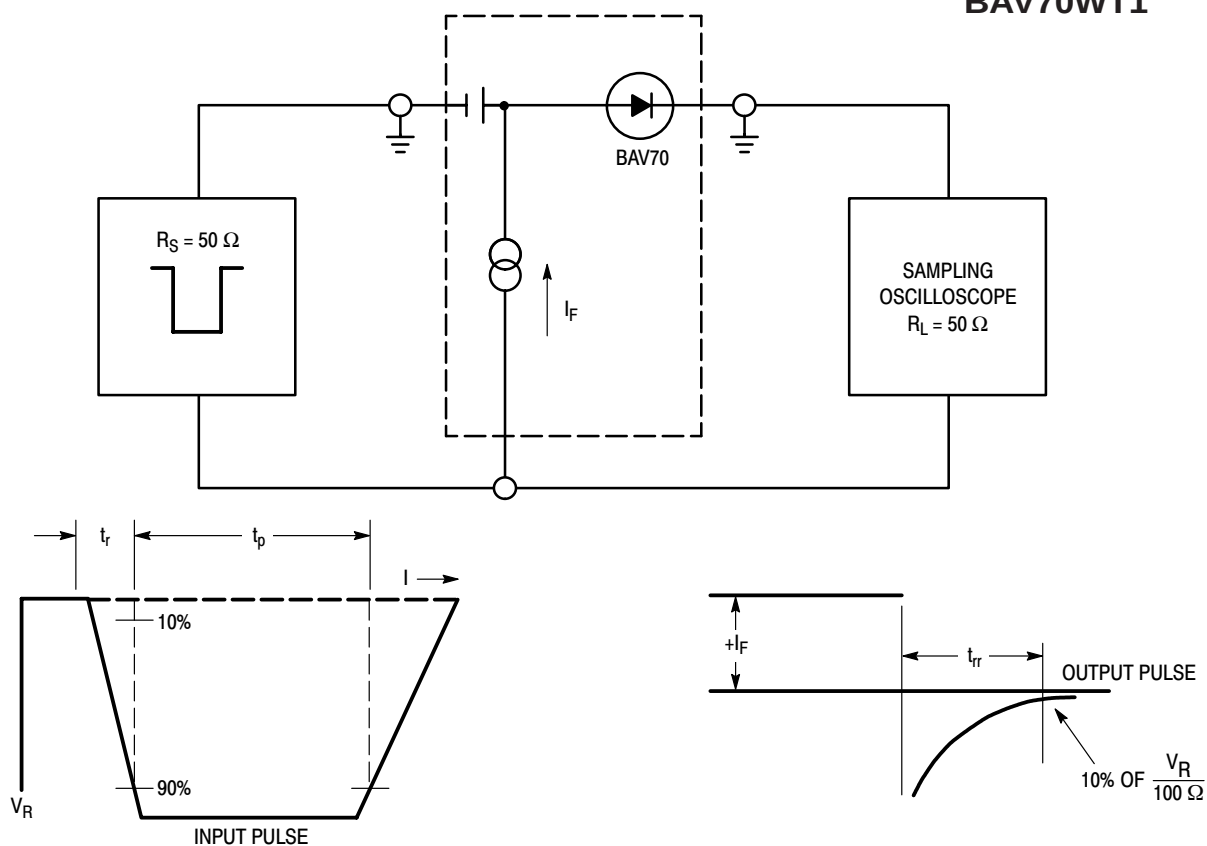


Figure 1. Recovery Time Equivalent Test Circuit

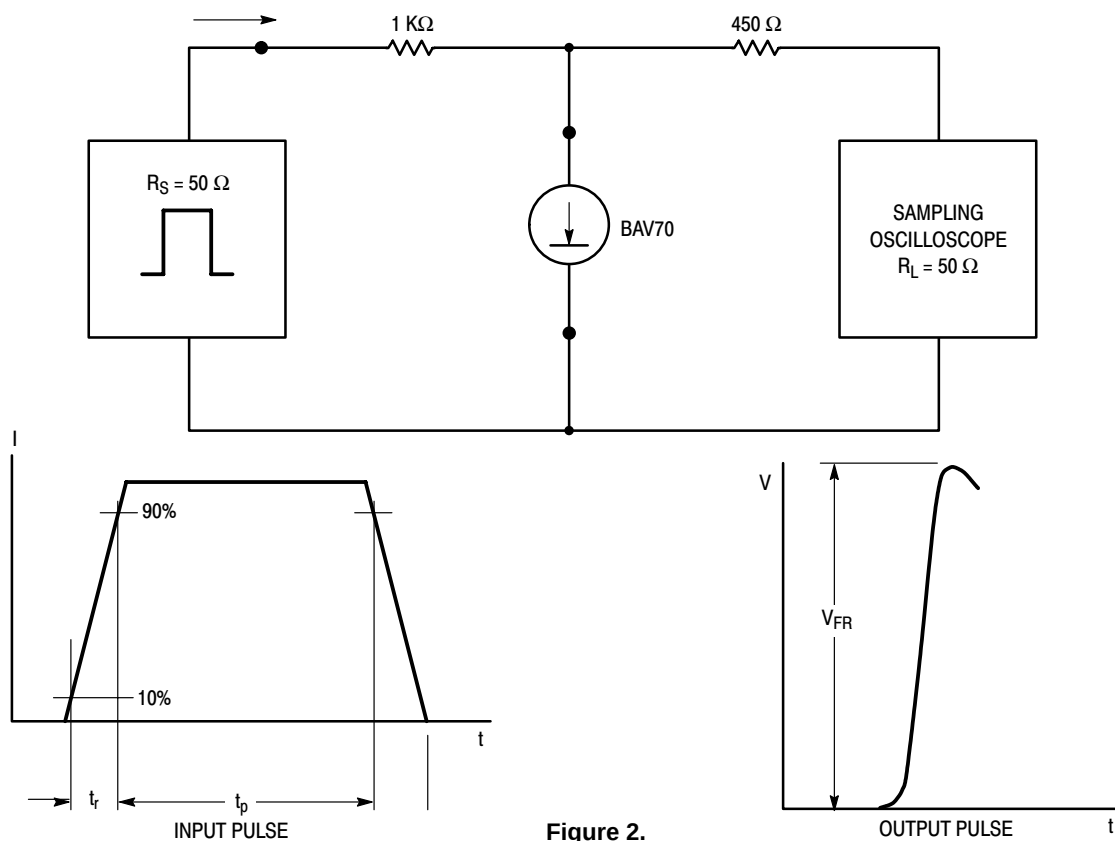


Figure 2.

BAV70WT1

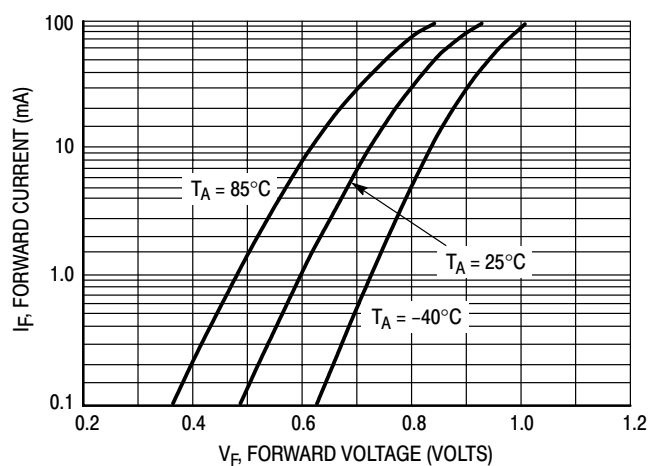


Figure 3. Forward Voltage

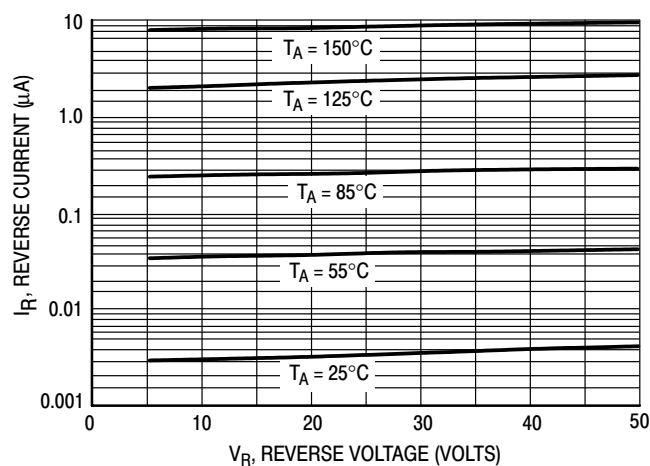


Figure 4. Leakage Current

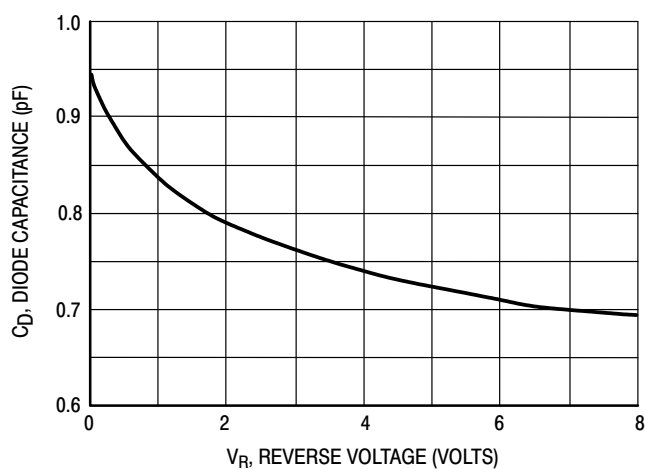


Figure 5. Capacitance