

Dual Switching Diodes

BAV70WT1

DEVICE MARKING

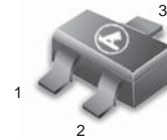
BAV70WT1 = A4

MAXIMUM RATINGS (T_A = 25°C)

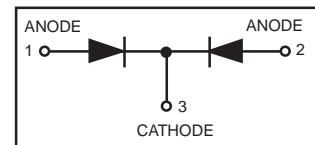
Rating	Symbol	Max	Unit
Reverse Voltage	V _R	70	Vdc
Forward Current	I _F	200	mAdc
Peak Forward Surge Current	I _{FM(surge)}	500	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board ⁽¹⁾ T _A = 25°C	P _D	200	mW
Derate above 25°C		1.6	mW/°C
Thermal Resistance, Junction to Ambient	R _{θJA}	0.625	°C/W
Total Device Dissipation Alumina Substrate ⁽²⁾ T _A = 25°C	P _D	300	mW
Derate above 25°C		2.4	mW/°C
Thermal Resistance, Junction to Ambient	R _{θJA}	417	°C/W
Junction and Storage Temperature	T _J , T _{stg}	-55 to +150	°C



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



ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Reverse Breakdown Voltage (I _{BR} = 100 μAdc)	V _(BR)	70	—	Vdc
Reverse Voltage Leakage Current (V _R = 70 Vdc)	I _{R1}	—	5.0	μAdc
(V _R = 50 Vdc)	I _{R2}	—	100	nAdc
Diode Capacitance (V _R = 0, f = 1.0 MHz)	C _D	—	1.5	pF
Forward Voltage (I _F = 1.0 mAdc)	V _F	—	715	mVdc
(I _F = 10 mAdc)		—	855	
(I _F = 50 mAdc)		—	1000	
(I _F = 150 mAdc)		—	1250	
Reverse Recovery Time (I _F = I _R = 10 mAdc, R _L = 100Ω, I _{R(REC)} = 1.0 mAdc) (Figure 1)	t _{rr}	—	6.0	ns
Forward Recovery Voltage (I _F = 10 mAdc, t _r = 20 ns) (Figure 2)	V _{RF}	—	1.75	V

1. FR-5 = 1.0 × 0.75 × 0.062 in.

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

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

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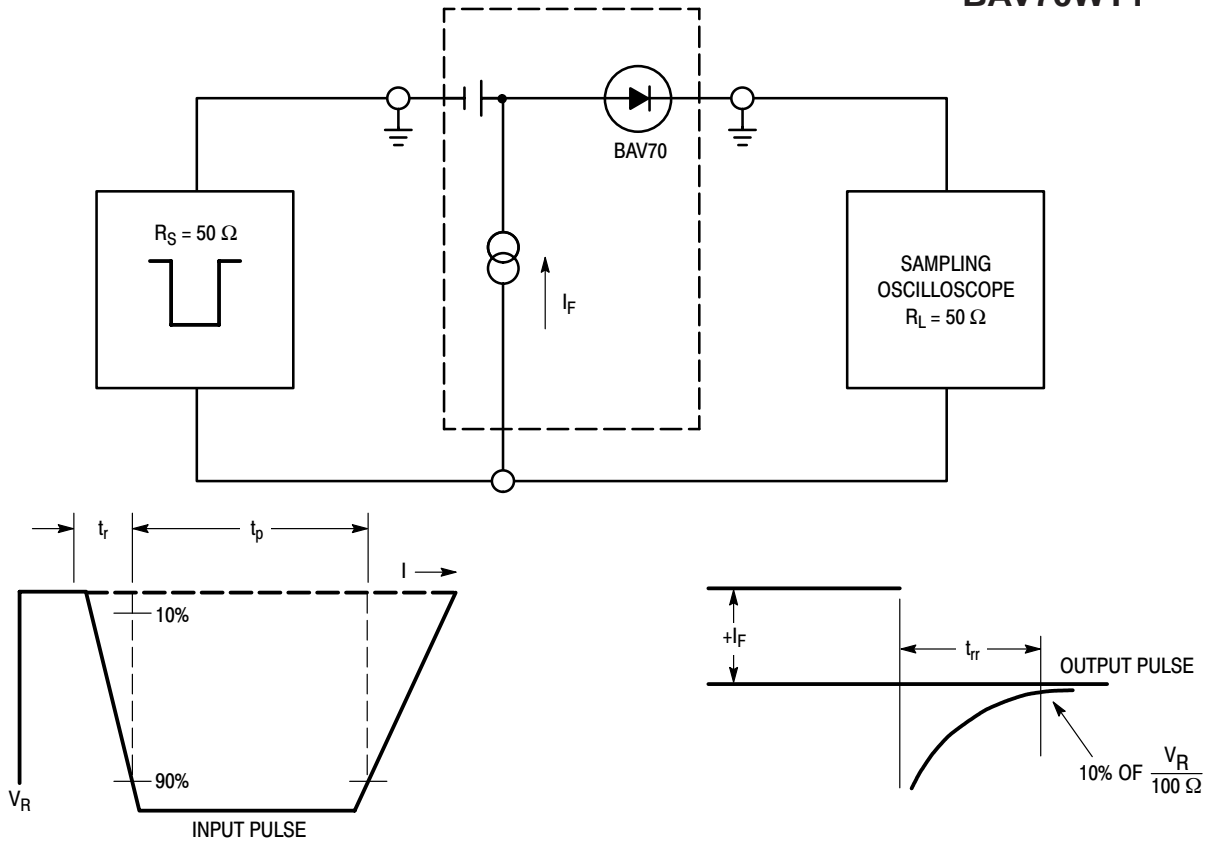


Figure 1. Recovery Time Equivalent Test Circuit

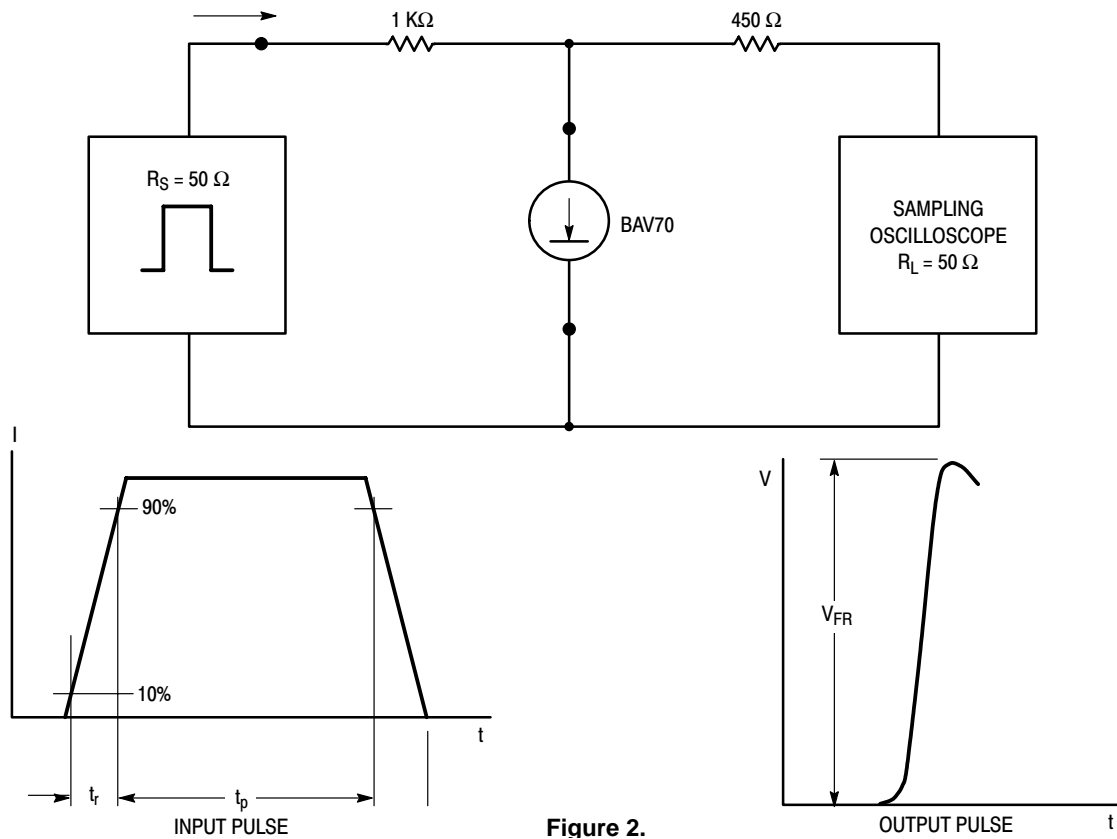


Figure 2.

BAV70WT1

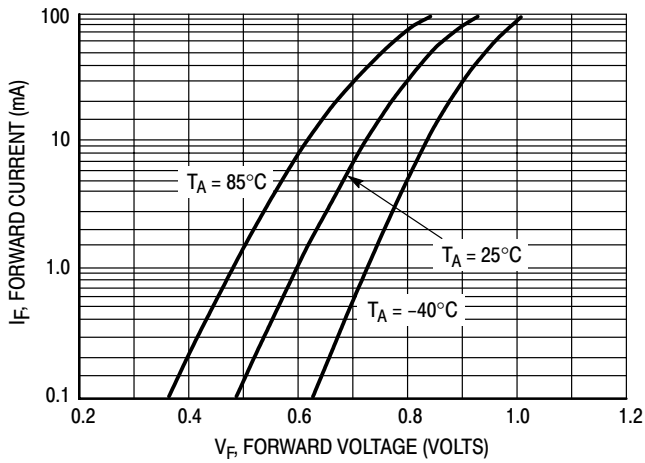


Figure 3. Forward Voltage

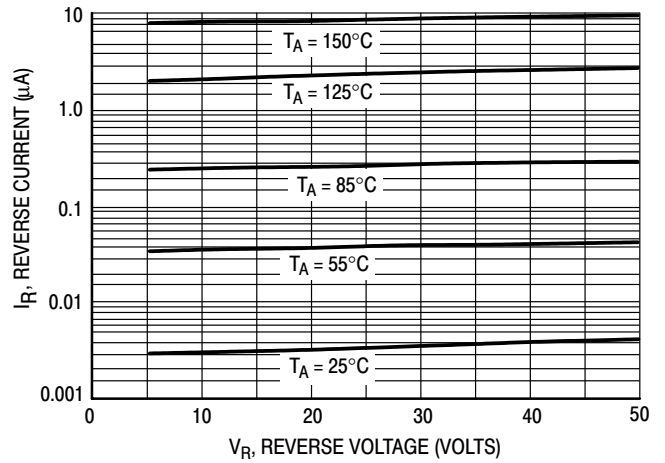


Figure 4. Leakage Current

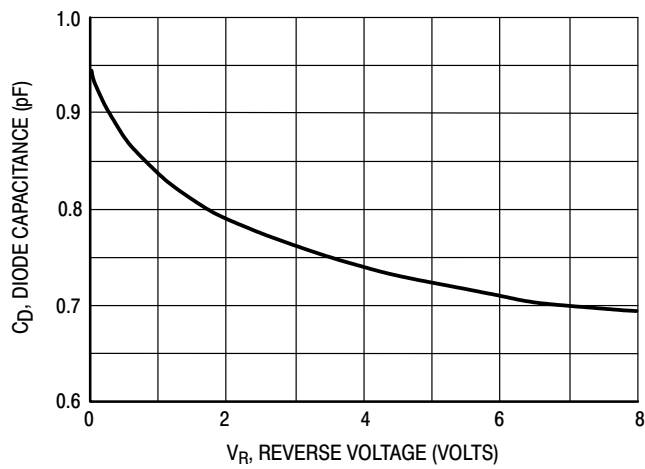


Figure 5. Capacitance