

# Dual Switching Diodes

## BAV70WT1

### DEVICE MARKING

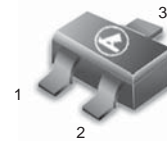
BAV70WT1 = A4

### MAXIMUM RATINGS (T<sub>A</sub> = 25°C)

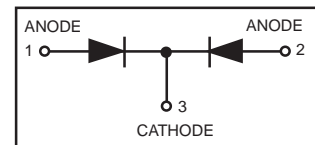
Rating	Symbol	Max	Unit
Reverse Voltage	V <sub>R</sub>	70	Vdc
Forward Current	I <sub>F</sub>	200	mAdc
Peak Forward Surge Current	I <sub>FM(surge)</sub>	500	mAdc

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board <sup>(1)</sup> T <sub>A</sub> = 25°C	P <sub>D</sub>	200	mW
Derate above 25°C		1.6	mW/°C
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	0.625	°C/W
Total Device Dissipation Alumina Substrate <sup>(2)</sup> T <sub>A</sub> = 25°C	P <sub>D</sub>	300	mW
Derate above 25°C		2.4	mW/°C
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	417	°C/W
Junction and Storage Temperature	T <sub>J</sub> , T <sub>stg</sub>	-55 to +150	°C



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



### ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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### OFF CHARACTERISTICS

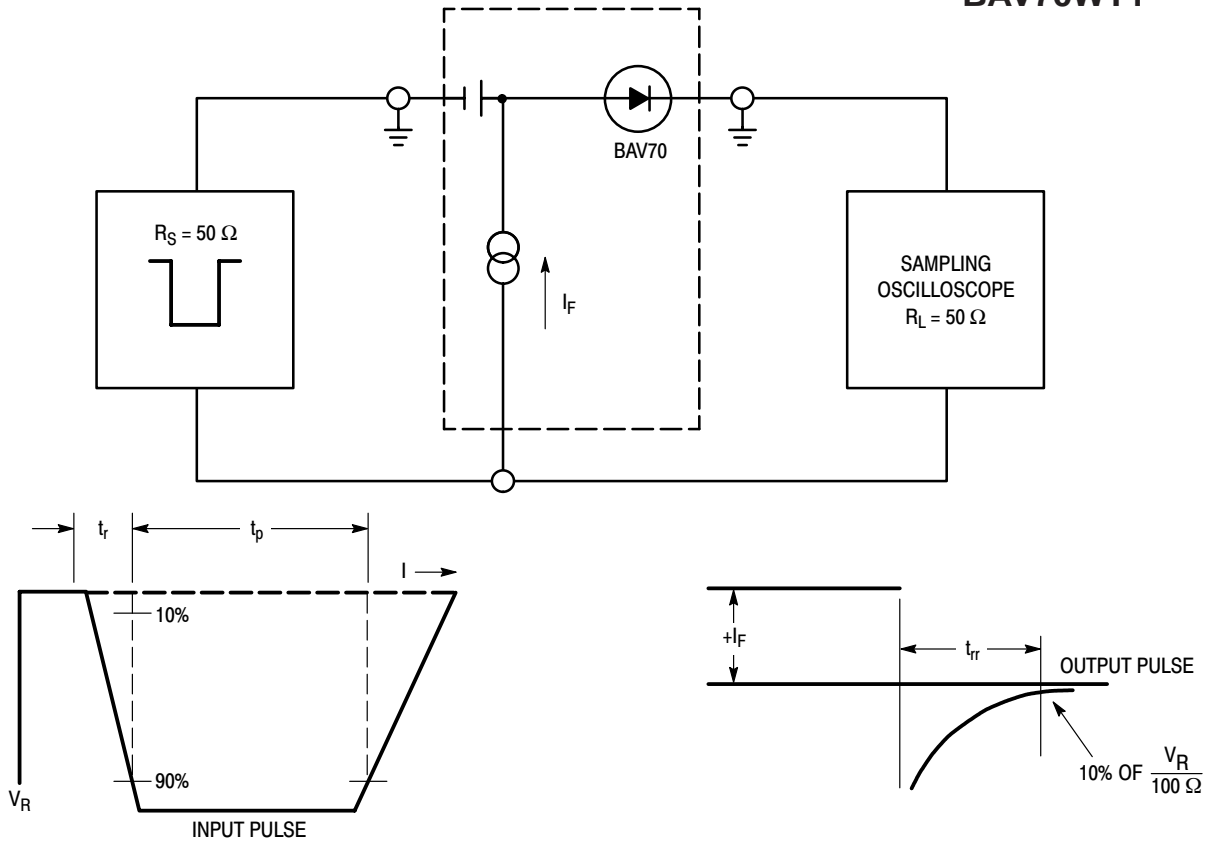
Reverse Breakdown Voltage (I <sub>BR</sub> = 100 μAdc)	V <sub>(BR)</sub>	70	—	Vdc
Reverse Voltage Leakage Current (V <sub>R</sub> = 70 Vdc)	I <sub>R1</sub>	—	5.0	μAdc
(V <sub>R</sub> = 50 Vdc)	I <sub>R2</sub>	—	100	nAdc
Diode Capacitance (V <sub>R</sub> = 0, f = 1.0 MHz)	C <sub>D</sub>	—	1.5	pF
Forward Voltage (I <sub>F</sub> = 1.0 mAdc)	V <sub>F</sub>	—	715	mVdc
(I <sub>F</sub> = 10 mAdc)		—	855	
(I <sub>F</sub> = 50 mAdc)		—	1000	
(I <sub>F</sub> = 150 mAdc)		—	1250	
Reverse Recovery Time (I <sub>F</sub> = I <sub>R</sub> = 10 mAdc, R <sub>L</sub> = 100Ω, I <sub>R(REC)</sub> = 1.0 mAdc) (Figure 1)	t <sub>rr</sub>	—	6.0	ns
Forward Recovery Voltage (I <sub>F</sub> = 10 mAdc, t <sub>r</sub> = 20 ns) (Figure 2)	V <sub>RF</sub>	—	1.75	V

1. FR-5 = 1.0 × 0.75 × 0.062 in.

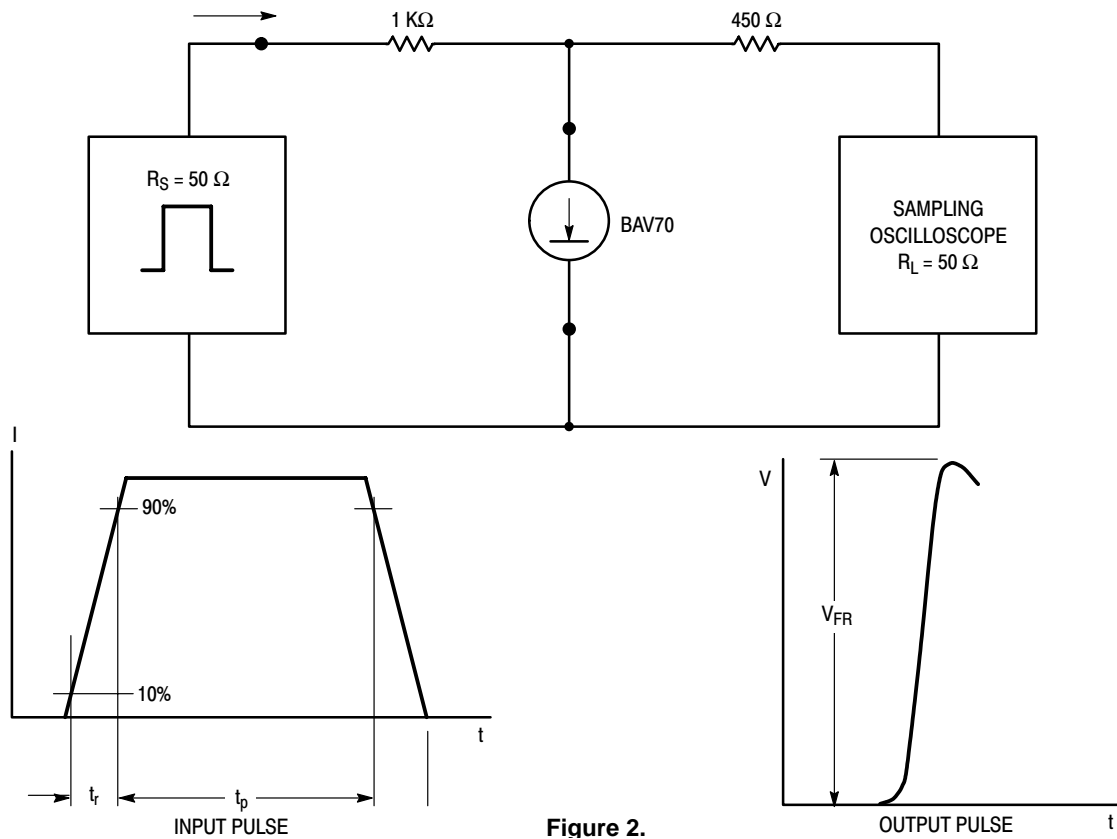
2. Alumina = 0.4 × 0.3 × 0.024 in. 99.5% alumina.

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

**BAV70WT1**

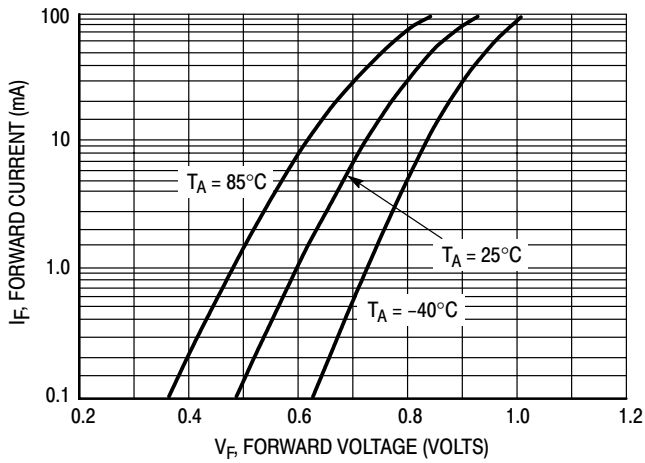


**Figure 1. Recovery Time Equivalent Test Circuit**

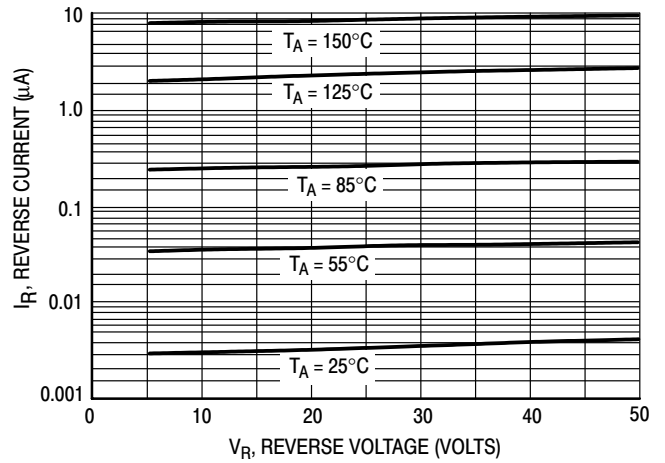


**Figure 2.**

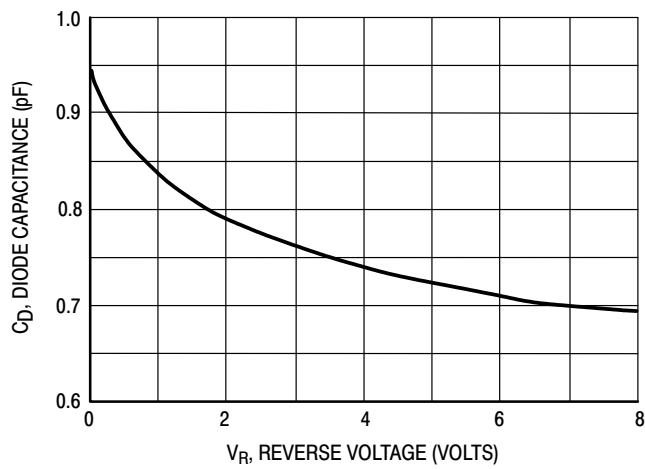
**BAV70WT1**



**Figure 3. Forward Voltage**



**Figure 4. Leakage Current**



**Figure 5. Capacitance**