

# BAV70TT1

Preferred Device

## Dual Switching Diode

### Features

- Pb-Free Package May be Available.\* The G-Suffix Denotes a Pb-Free Lead Finish

### 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

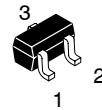
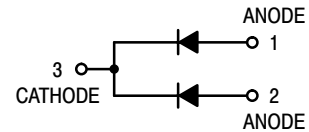
Characteristic	Symbol	Max	Unit
Total Device Dissipation, FR-4 Board (1) T <sub>A</sub> = 25°C Derated above 25°C	P <sub>D</sub>	225	mW
Thermal Resistance, Junction to Ambient (1)	R <sub>θJA</sub>	555	°C/W
Total Device Dissipation, FR-4 Board (2) T <sub>A</sub> = 25°C Derated above 25°C	P <sub>D</sub>	360	mW
Thermal Resistance, Junction-to-Ambient (2)	R <sub>θJA</sub>	345	°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	-55 to +150	°C

- FR-4 @ Minimum Pad
- FR-4 @ 1.0 × 1.0 Inch Pad



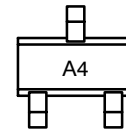
ON Semiconductor®

<http://onsemi.com>



CASE 463  
SOT-416/SC-75  
STYLE 3

### DEVICE MARKING



### ORDERING INFORMATION

Device	Package	Shipping†
BAV70TT1	SOT-416	3000 / Tape & Reel
BAV70TT1G	SOT-416 (Pb-Free)	3000 / Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

\*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

Preferred devices are recommended choices for future use and best overall value.

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

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 (Note 3) ( $V_R = 70 \text{ Vdc}$ ) ( $V_R = 50 \text{ Vdc}$ )	$I_R$ $I_R$	- -	5.0 100	$\mu\text{Adc}$ $\text{nAdc}$
Diode Capacitance ( $V_R = 0, f = 1.0 \text{ MHz}$ )	$C_D$	-	1.5	pF
Forward Voltage ( $I_F = 1.0 \text{ mAdc}$ ) ( $I_F = 10 \text{ mAdc}$ ) ( $I_F = 50 \text{ mAdc}$ ) ( $I_F = 150 \text{ mAdc}$ )	$V_F$	- - - -	715 855 1000 1250	mVdc
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

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

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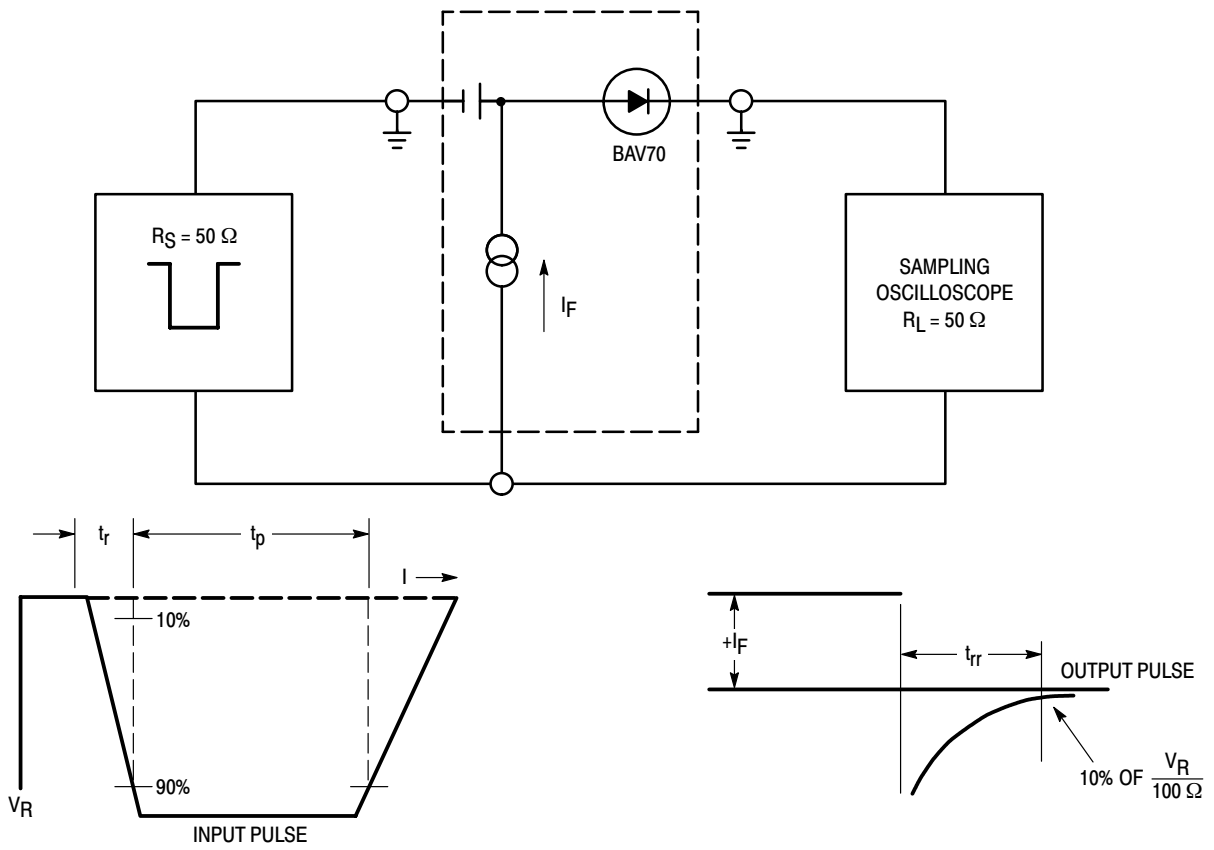


Figure 1. Recovery Time Equivalent Test Circuit

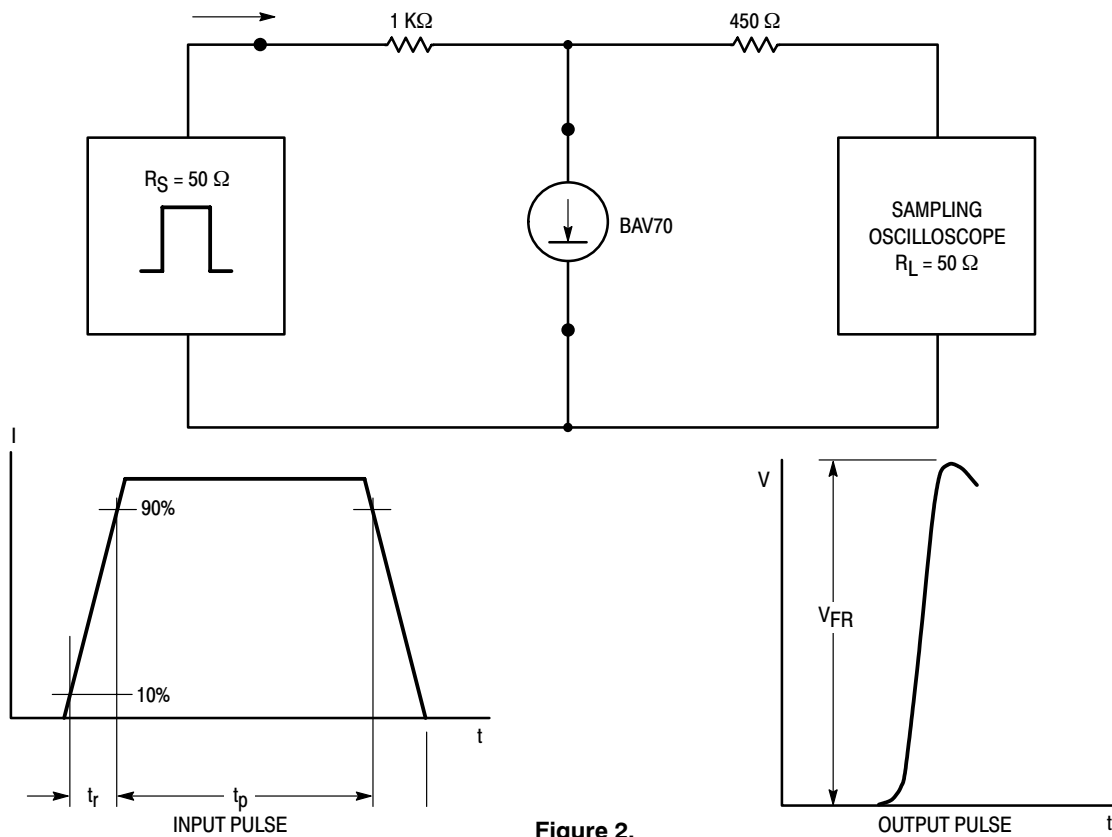


Figure 2.

# BAV70TT1

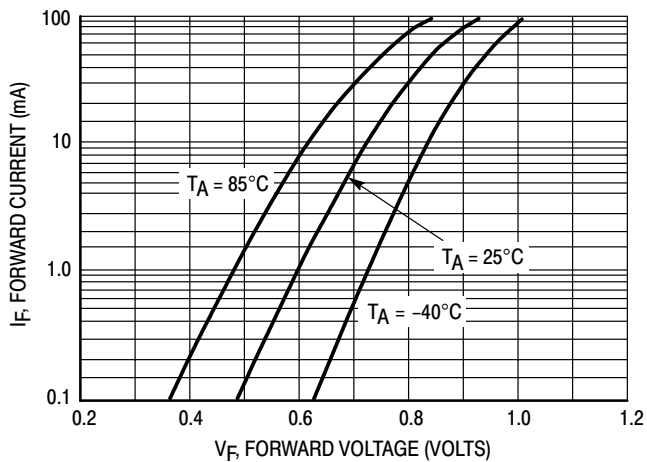


Figure 3. Forward Voltage

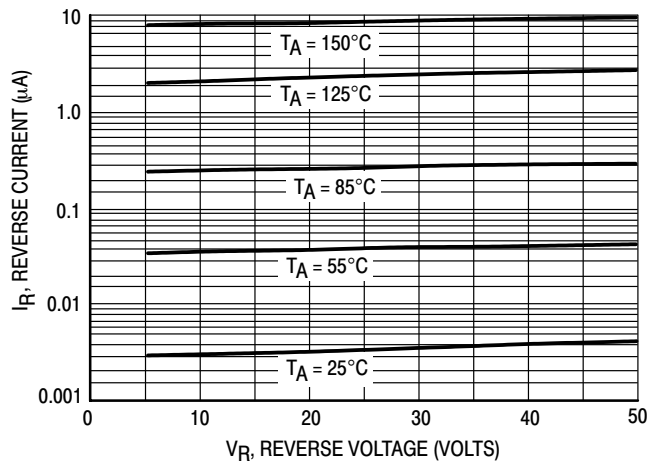


Figure 4. Leakage Current

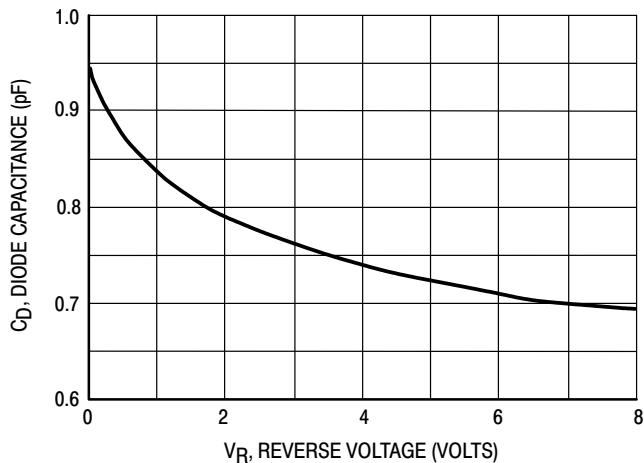


Figure 5. Capacitance

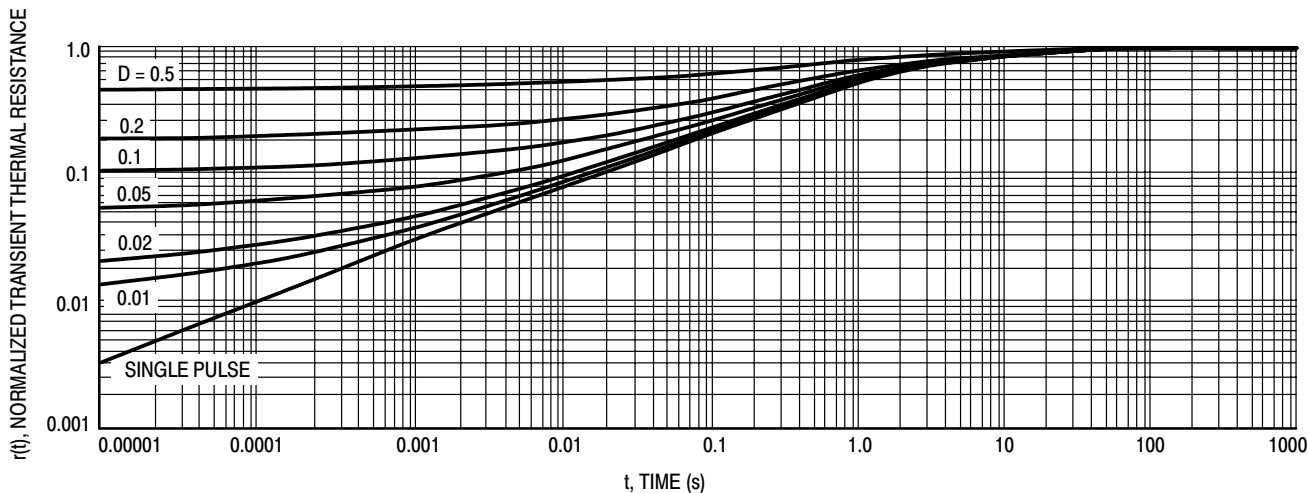


Figure 6. Normalized Thermal Response