



DESCRIPTION

The BAV70W is available in SC-70 Package

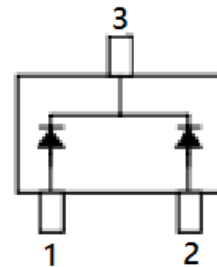
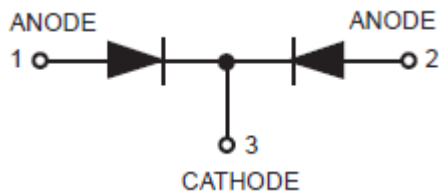
FEATURES

- Small plastic SMD package.
- For high-speed switching applications.
- Available in SC-70 Package

ORDERING INFORMATION

Package Type	Part Number
SC-70	BAV70W
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION





ABSOLUTE MAXIMUM RATINGS

T_A = 25°C

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

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

THERMAL CHARACTERISTICS

Parameter	Symbol	Max.	Unit
Total Device Dissipation FR-5 Board ^{NOTE1} T _A = 25°C Derate above 25°C	P _D	200 1.6	mW mW/°C
Thermal Resistance, Junction to Ambient	R _{θJA}	625	°C/W
Total Device Dissipation Alumina Substrate ^{NOTE2} T _A = 25°C Derate above 25°C	P _D	300 2.4	mW mW/°C
Thermal Resistance, Junction to Ambient	R _{θJA}	417	°C/W
Junction and Storage Temperature	T _J , T _{STG}	-55 to +150	°C



ELECTRICAL CHARACTERISTICS

T_A = 25°C unless otherwise noted

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

NOTE1: FR-5 = 1.0 × 0.75 × 0.062 in.

NOTE2: Alumina = 0.4 × 0.3 × 0.024 in. 99.5% alumina.

NOTE3: For each individual diode while the second diode is unbiased.

Figure 1. Recovery Time Equivalent Test Circuit

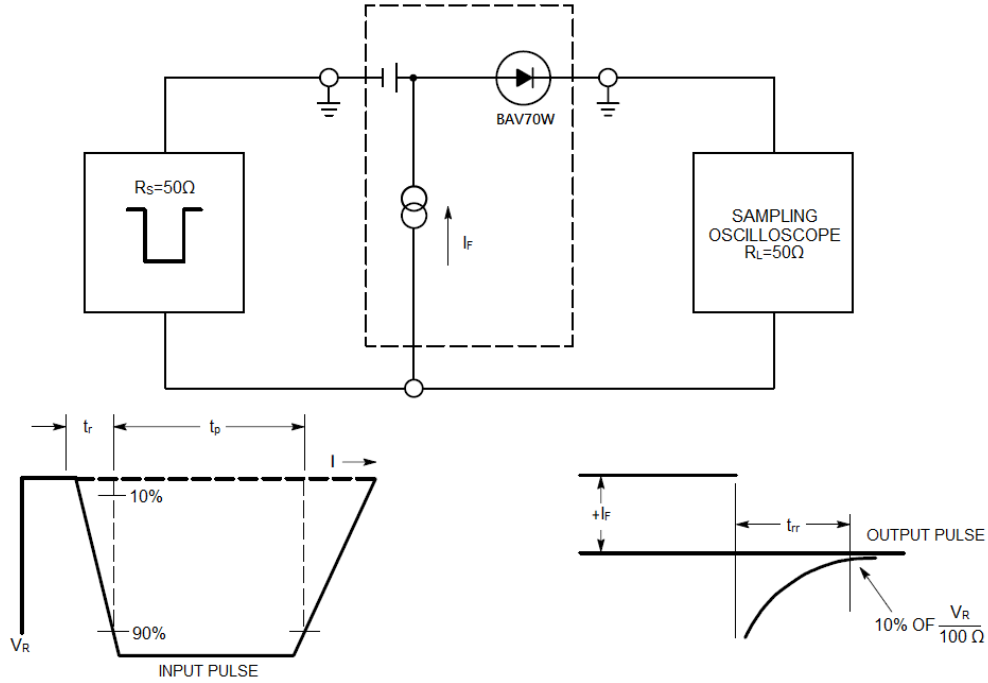
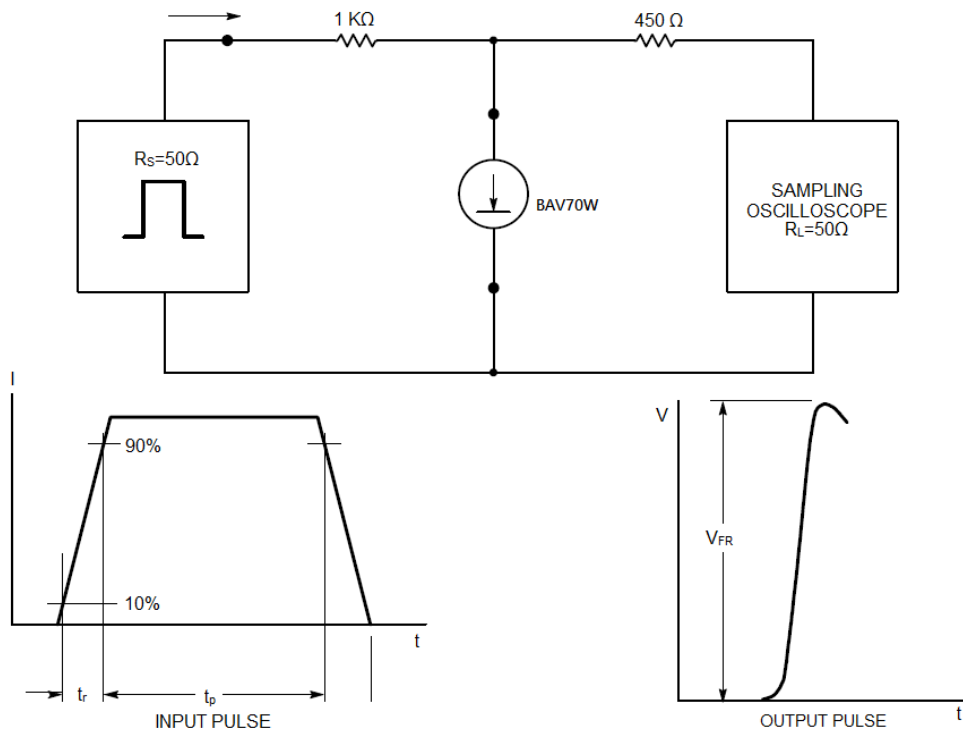


Figure 2.





TYPICAL CHARACTERISTICS

Figure 3. Forward Voltage

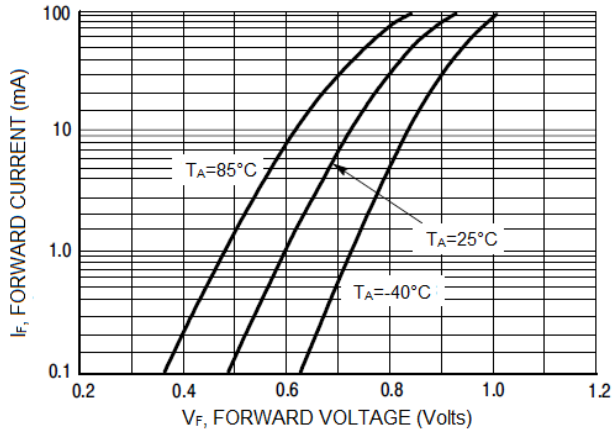


Figure 4. Leakage Current

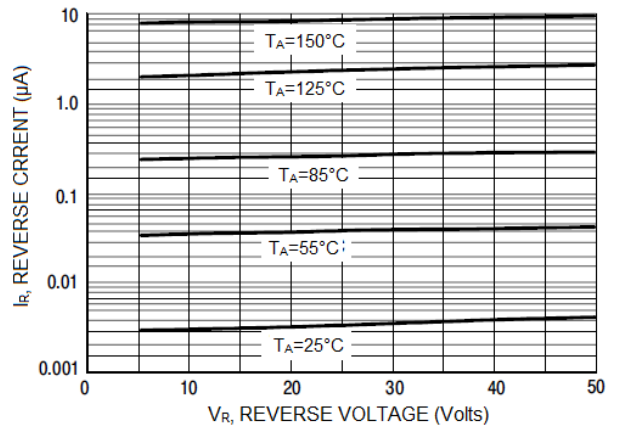
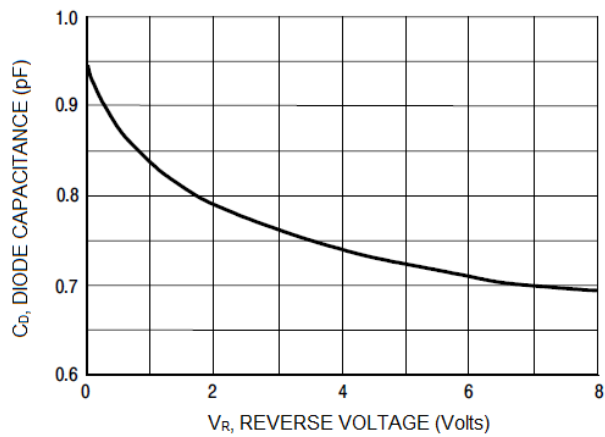


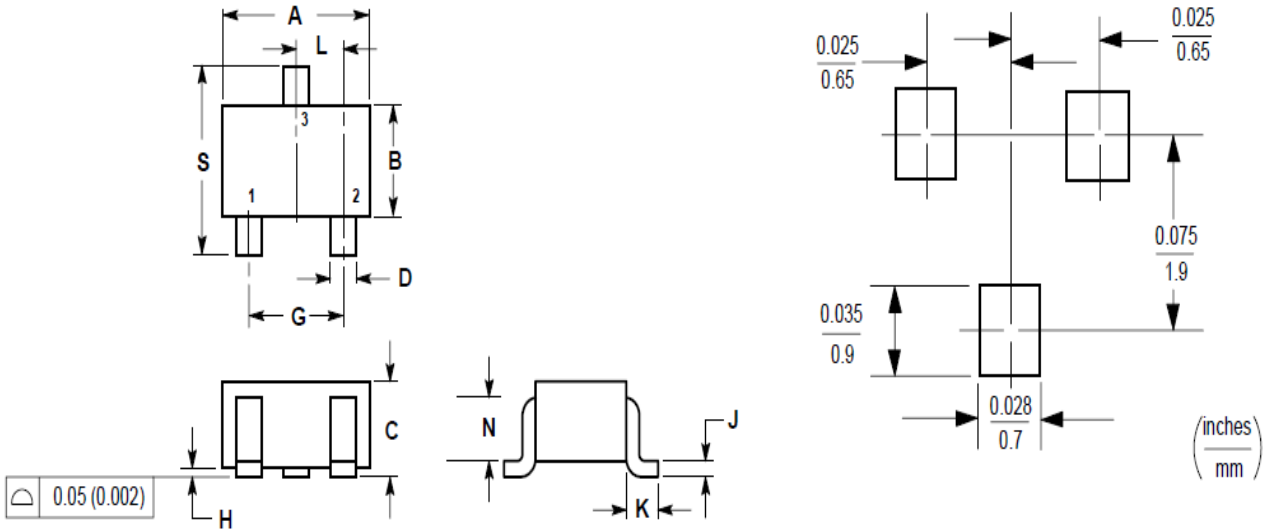
Figure 5. Capacitance





PACKAGE INFORMATION

Dimension in SC-70 (Unit: mm)



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.80	2.20	0.071	0.087
B	1.15	1.35	0.045	0.053
C	0.80	1.00	0.032	0.040
D	0.30	0.40	0.012	0.016
G	1.20	1.40	0.047	0.055
H	0.00	0.10	0.000	0.004
J	0.10	0.25	0.004	0.010
K	0.425 REF		0.017 REF	
L	0.650 BSC		0.026 BSC	
N	0.700 REF		0.028 REF	
S	2.00	2.40	0.079	0.095



IMPORTANT NOTICE

AiT Components (AiT) reserves the right to make changes to any its product, specifications, to discontinue any integrated circuit product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current.

AiT Components' integrated circuit products are not designed, intended, authorized, or warranted to be suitable for use in life support applications, devices or systems or other critical applications. Use of AiT products in such applications is understood to be fully at the risk of the customer. As used herein may involve potential risks of death, personal injury, or severe property, or environmental damage. In order to minimize risks associated with the customer's applications, the customer should provide adequate design and operating safeguards.

AiT Components assumes no liability to customer product design or application support. AiT warrants the performance of its products of the specifications applicable at the time of sale.