

DESCRIPTION

The BAV70W is available in SC-70 Package

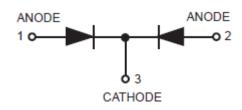
FEATURES

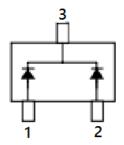
- Small plastic SMD package.
- For high-speed switching applications.
- Available in SC-70 Package

ORDERING INFORMATION

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

PIN DESCRIPTION





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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	P_D	200	mW
Derate above 25°C		1.6	mW/°C
Thermal Resistance, Junction to Ambient	Reja	625	°C/W
Total Device Dissipation Alumina Substrate NOTE2			
T _A = 25°C	P_D	300	mW
Derate above 25°C		2.4	mW/°C
Thermal Resistance, Junction to Ambient	R ₀ JA	417	°C/W
Junction and Storage Temperature	TJ, Tstg	-55 to +150	°C

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ELECTRICAL CHARACTERISTICS

T_A = 25°C unless otherwise noted

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

NOTE1: FR-5 = $1.0 \times 0.75 \times 0.062$ in.

NOTE2: Alumina = $0.4 \times 0.3 \times 0.024$ in. 99.5% alumina.

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

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Figure 1. Recovery Time Equivalent Test Circuit

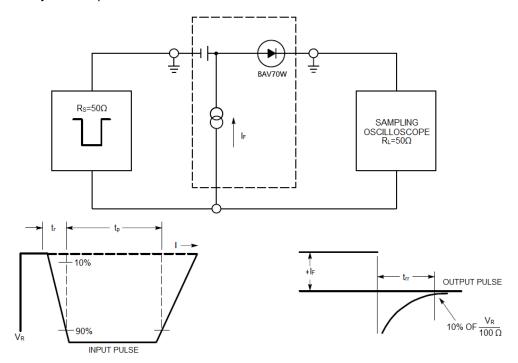
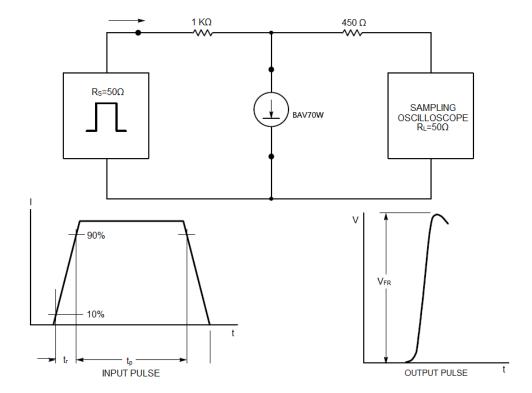


Figure 2.



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TYPICAL CHARACTERISTICS

Figure 3. Forward Voltage

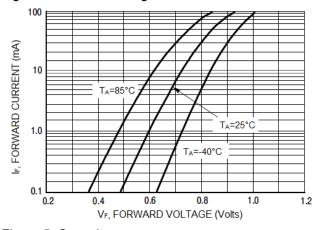


Figure 5. Capacitance

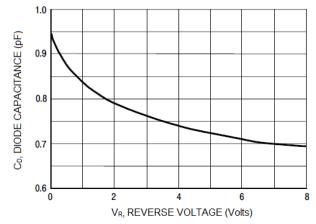
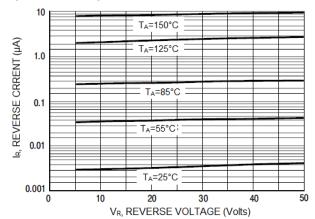


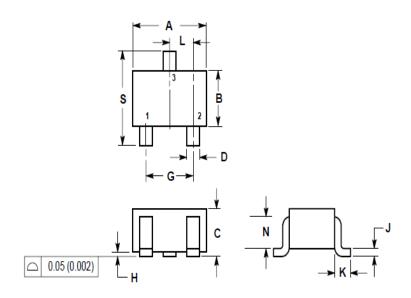
Figure 4. Leakage Current

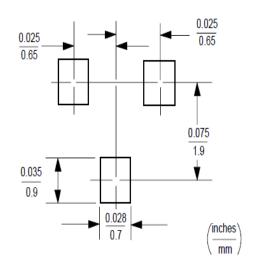


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PACKAGE INFORMATION

Dimension in SC-70 (Unit: mm)





DIM	MILLIMETERS		INCHES		
	MIN	MAX	MIN	MAX	
Α	1.80	2.20	0.071	0.087	
В	1.15	1.35	0.045	0.053	
С	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	
Н	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	

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