DESCRIPTION

The BAV70W is available in SC-70 package

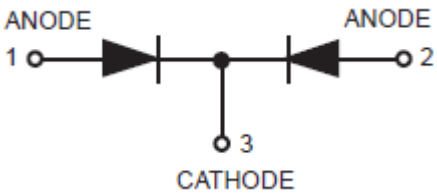
FEATURES

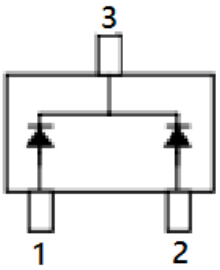
- Small plastic SMD package.
- For high-speed switching applications.
- Available in SC-70 package

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	$R_{\theta JA}$	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	$R_{\theta JA}$	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

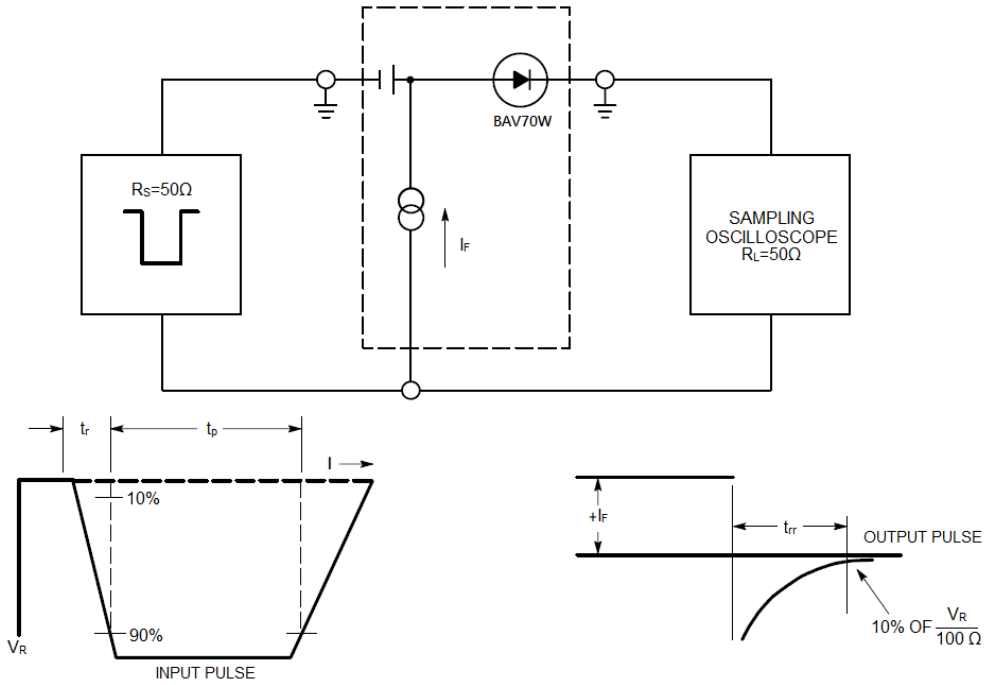
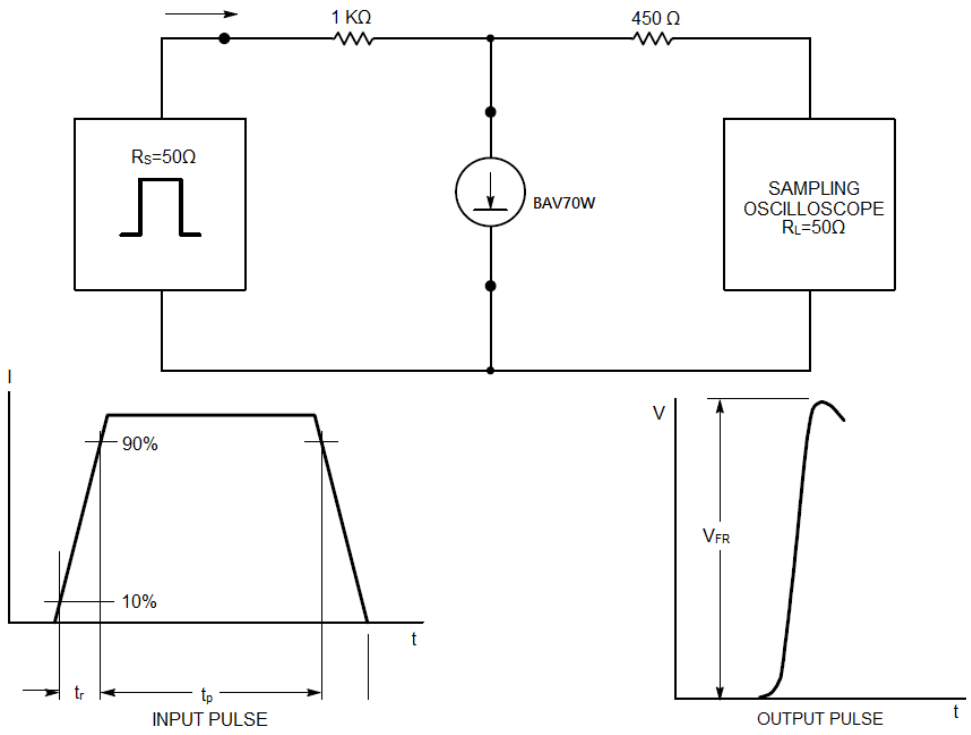


Figure 2.



TYPICAL CHARACTERISTICS

Figure 3. Forward Voltage

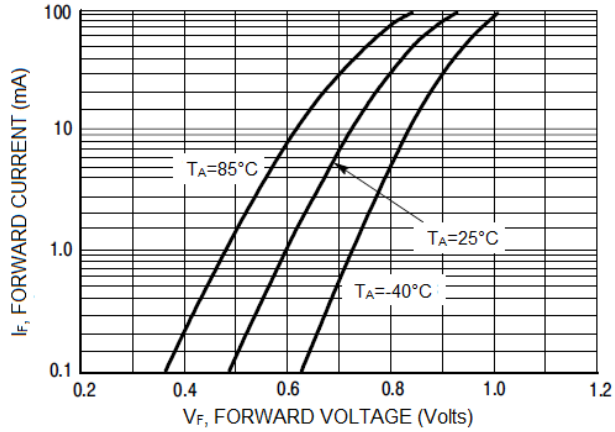


Figure 4. Leakage Current

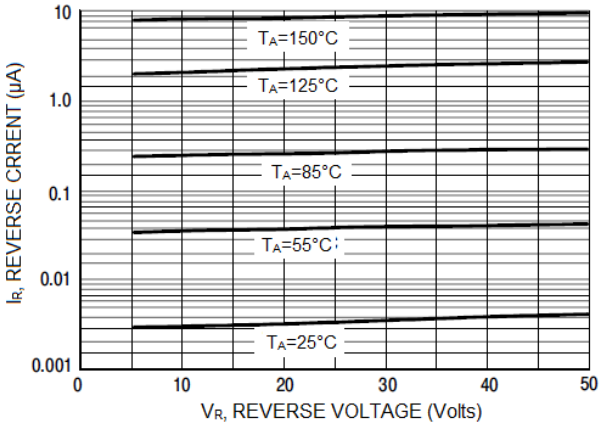
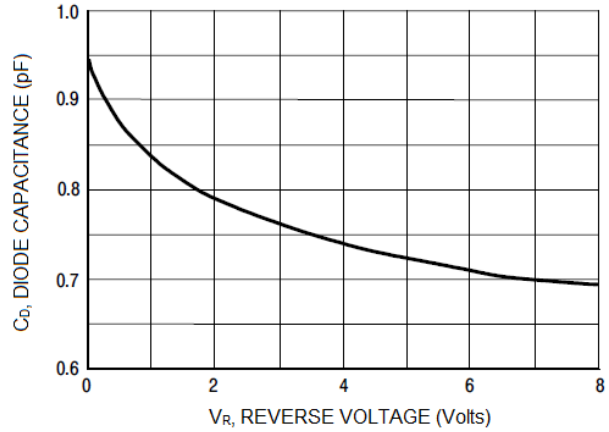
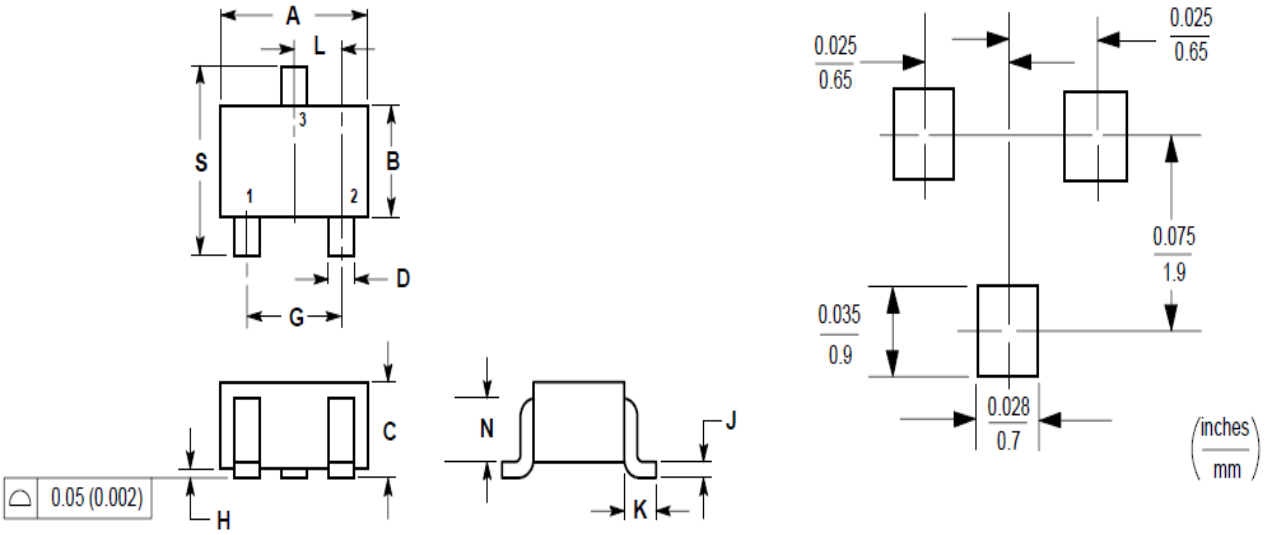


Figure 5. Capacitance



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

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