



DESCRIPTION

The BAV70L is available in SOT-23 Package

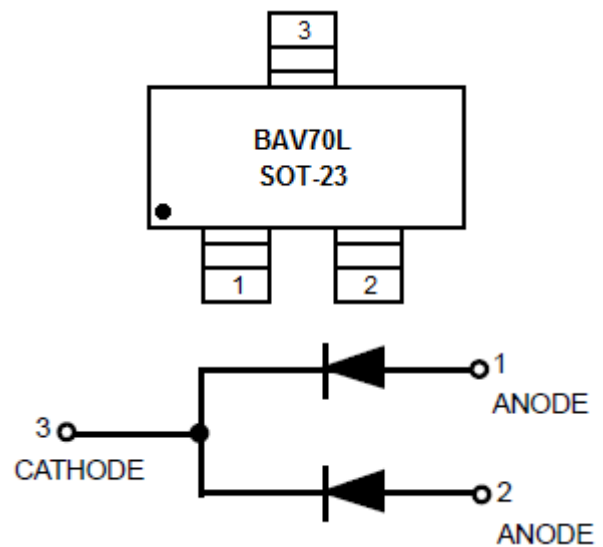
FEATURES

- Available in SOT-23 Package

ORDERING INFORMATION

Package Type	Part Number
SOT-23	BAV70L
Note	3,000pcs/ Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION





ABSOLUTE MAXIMUM RATINGS

$T_A = 25^\circ\text{C}$

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} $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	225 1.8	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate ^{NOTE2} $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	300 2.4	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

NOTE1: FR-5 = 1.0 x 0.75 x 0.062 in

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



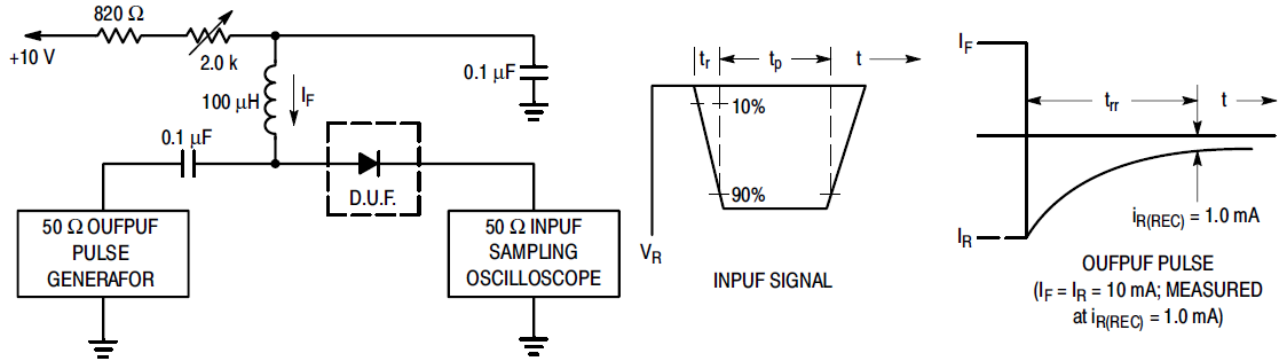
ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise specified

Parameter	Symbol	Conditions	Min.	Max.	Unit
OFF CHARACTERISTICS					
Reverse Breakdown Voltage	V _(BR)	I _(BR) = 100μA _{dc}	70	-	V _{dc}
Reverse Voltage Leakage Current	I _R	V _R = 25V _{dc} , T _J = 150 °C	-	60	μA _{dc}
		V _R = 70V _{dc}		2.5	
		V _R = 70V _{dc} , T _J = 150 °C)		100	
Diode Capacitance	C _D	V _R = 0, f = 1.0 MHz	-	1.5	pF
Forward Voltage	V _F	I _F = 1.0mA _{dc}	-	715	mV _{dc}
		I _F = 10mA _{dc}		855	
		I _F = 50mA _{dc}		1000	
		I _F = 150mA _{dc}		1250	
Reverse Recovery Time R _L =100Ω	t _{rr}	I _F = I _R =10mA _{dc} , V _R =5.0V _{dc} , I _{R(REC)} = 1.0mA _{dc} (Figure 1)	-	6.0	ns

TYPICAL CHARACTERISTICS

Figure 1. Recovery Time Equivalent Test Circuit



Note1: A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
 Note2: Input pulse is adjusted so $I_{R(peak)}$ is equal to 10 mA.
 Note3: $t_p \gg t_{rr}$

Curves Applicable to Each Anode

Figure 2. Forward Voltage

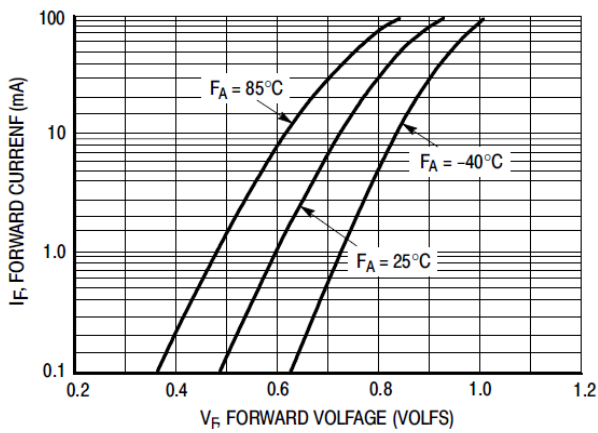


Figure 3. Leakage Current

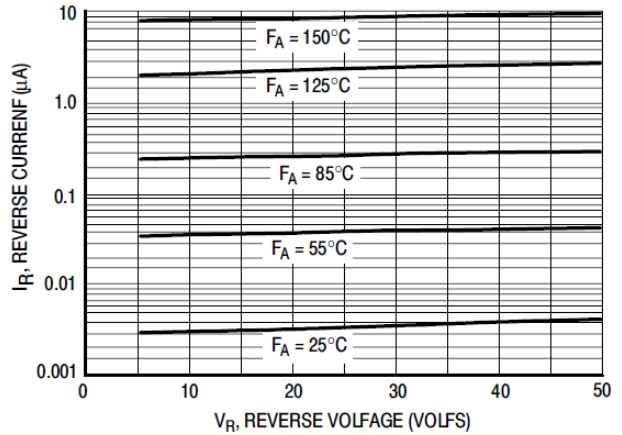
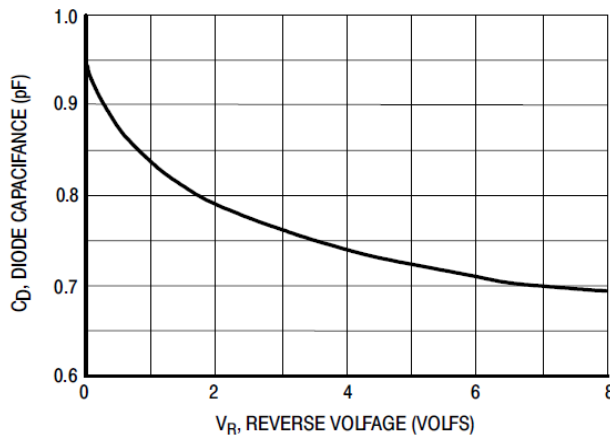


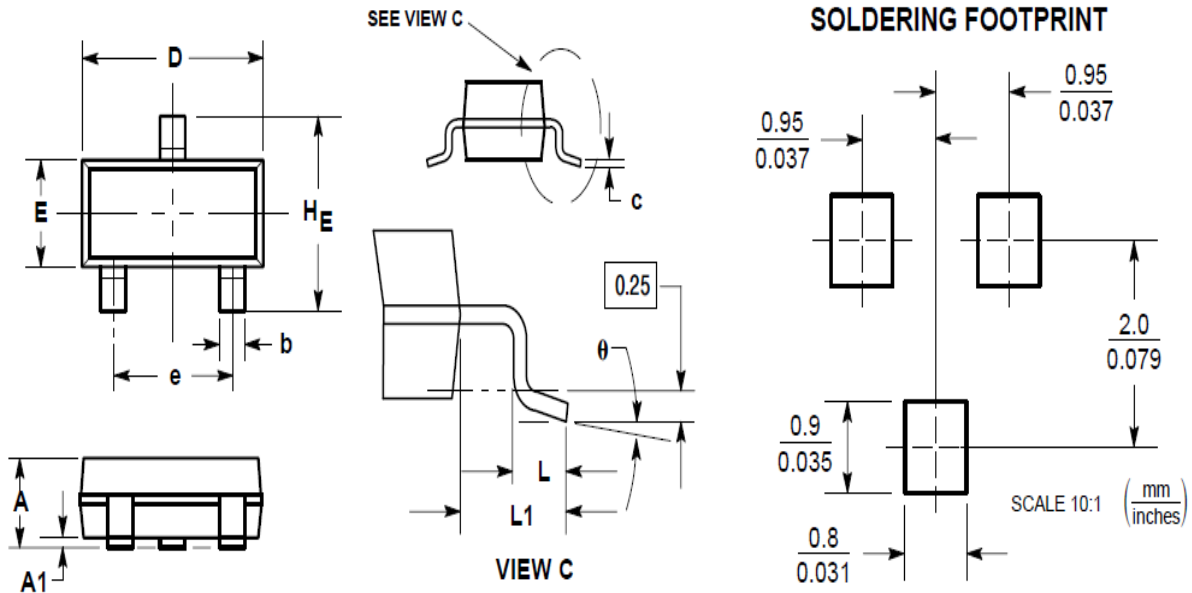
Figure 4. Capacitance





PACKAGE INFORMATION

Dimension in SOT-23 Package (Unit: mm)



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.035	0.044	0.89	1.11
A1	0.001	0.004	0.01	0.10
b	0.015	0.020	0.37	0.50
c	0.003	0.007	0.09	0.18
D	0.110	0.120	2.80	3.04
E	0.047	0.055	1.20	1.40
e	0.070	0.081	1.78	2.04
L	0.004	0.012	0.10	0.30
L1	0.014	0.029	0.35	0.69
HE	0.083	0.104	2.10	2.64



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