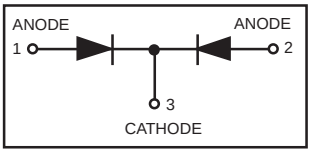
Dual Switching Diodes

LBAV70WT1

SOT–323 (SC–70)



FEATURE

- Small plastic SMD package.
- For high-speed switching applications.
- Pb-Free Package is available.

DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LBAV70WT1	A4	3000/Tape&Reel
LBAV70WT1G	A4 (Pb-Free)	3000/Tape&Reel

MAXIMUM RATINGS (T_A = 25°C)

Rating	Symbol	Max	Unit
Reverse Voltage	V_R	70	Vdc
Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	500	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR–5 Board[1] T_A = 25°C	P_D	200	mW
Derate above 25°C		1.6	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	0.625	°C/W
Total Device Dissipation Alumina Substrate[2] T_A = 25°C	P_D	300	mW
Derate above 25°C		2.4	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)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Breakdown Voltage ($I_{(BR)}$ = 100 µAdc)	$V_{(BR)}$	70	—	Vdc
Reverse Voltage Leakage Current				
(V_R = 70 Vdc)	I_{R1}	—	5.0	µAdc
(V_R = 50 Vdc)	I_{R2}	—	100	nAdc
Diode Capacitance (V_R = 0, f = 1.0 MHz)	C_D	—	1.5	pF
Forward Voltage	V_F			mVdc
(I_F = 1.0 mAdc)		—	715	
(I_F = 10 mAdc)		—	855	
(I_F = 50 mAdc)		—	1000	
(I_F = 150 mAdc)		—	1250	
Reverse Recovery Time (I_F= I_R=10 mAdc, R_L= 100Ω, $I_{R(REC)}$= 1.0 mAdc) (Figure 1)	t_{rr}	—	6.0	ns
Forward Recovery Voltage (I_F = 10 mAdc, t_r = 20 ns) (Figure 2)	V_{RF}	—	1.75	V

1. FR–5 = 1.0 × 0.75 × 0.062 in.
2. Alumina = 0.4 × 0.3 × 0.024 in. 99.5% alumina.
3. For each individual diode while the seeond diode is unbiased.

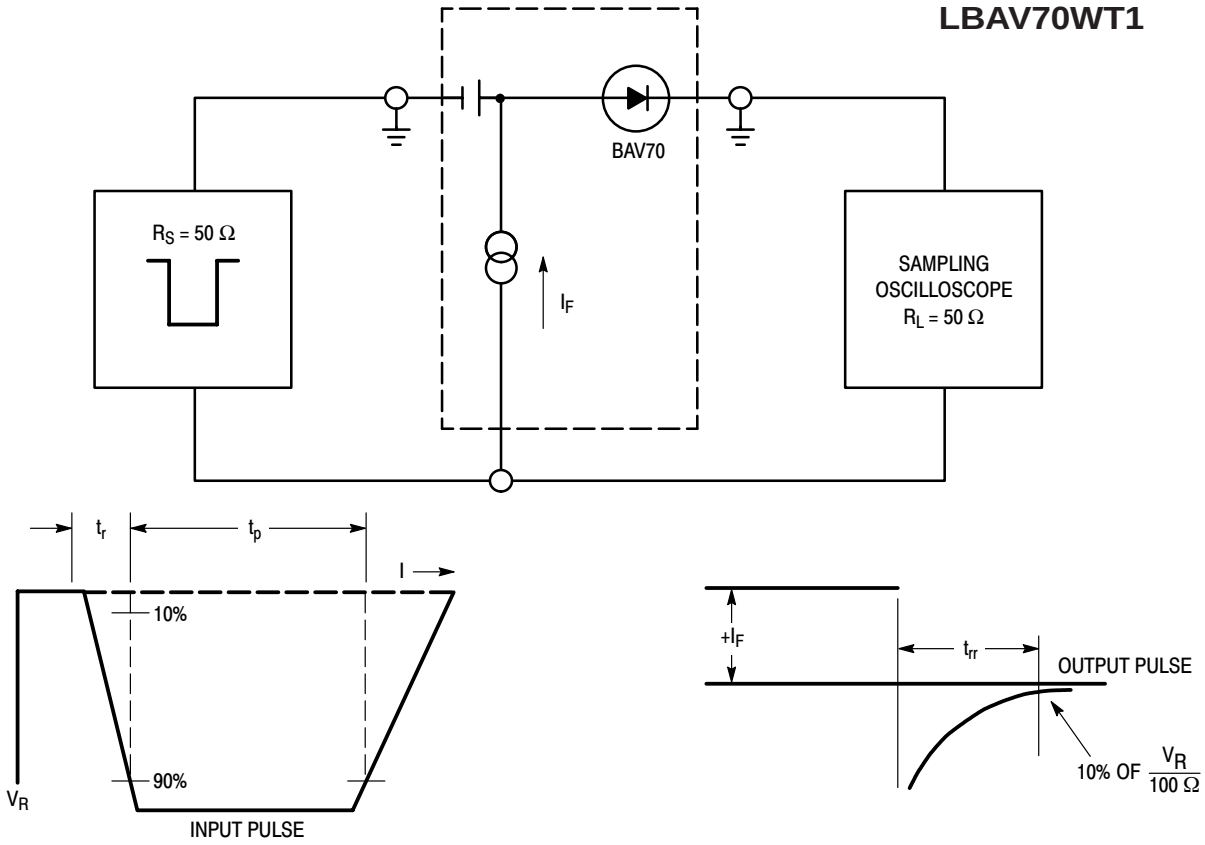


Figure 1. Recovery Time Equivalent Test Circuit

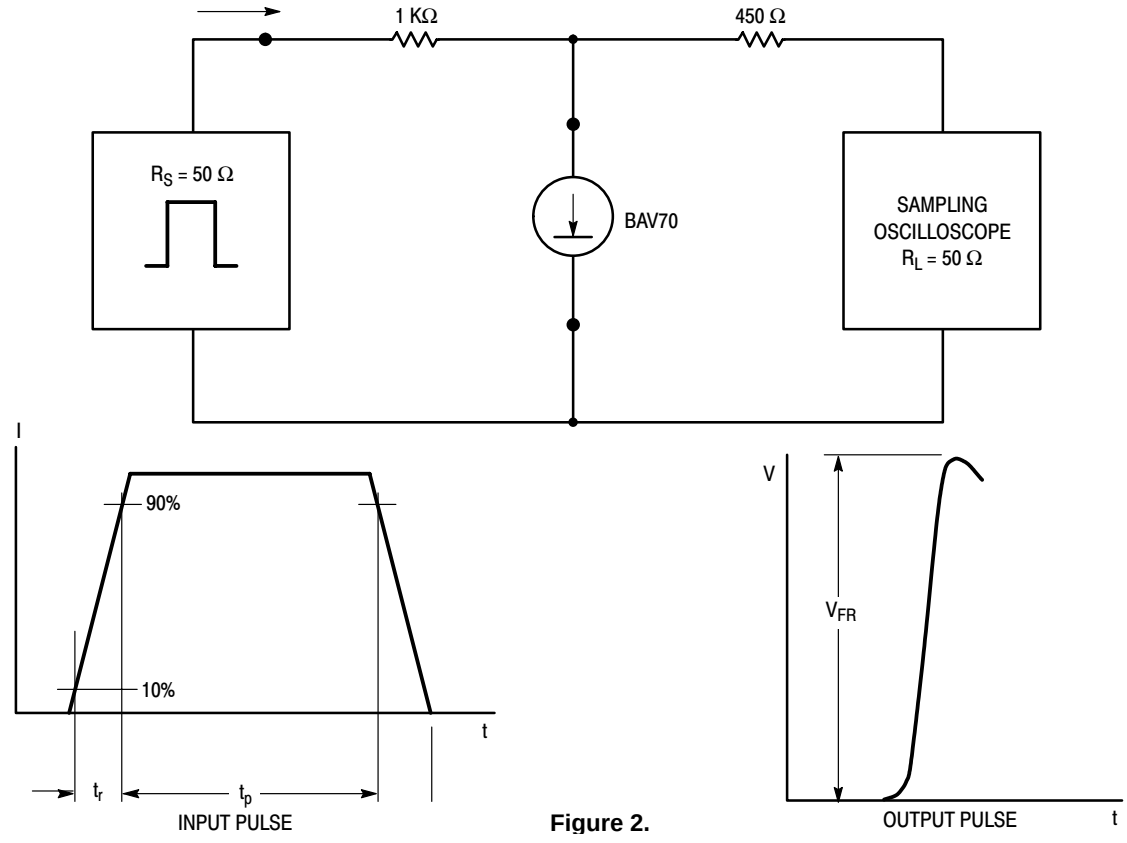


Figure 2.

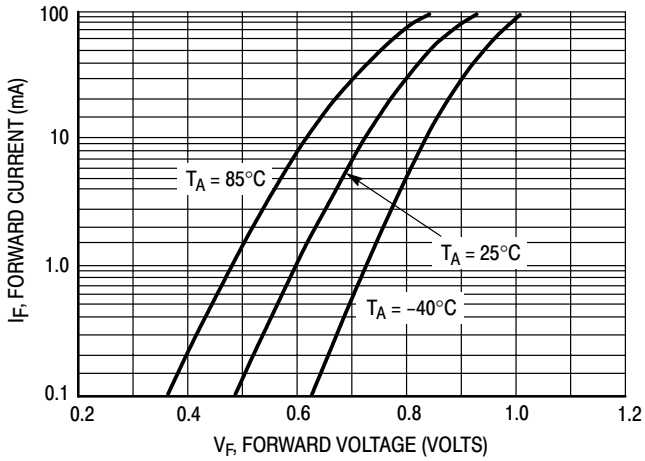


Figure 3. Forward Voltage

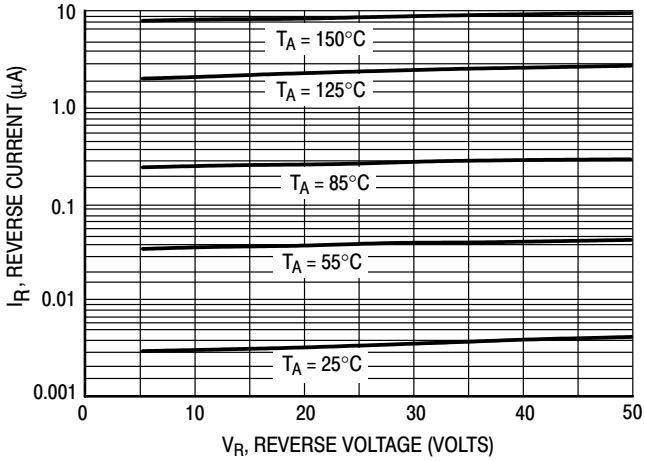


Figure 4. Leakage Current

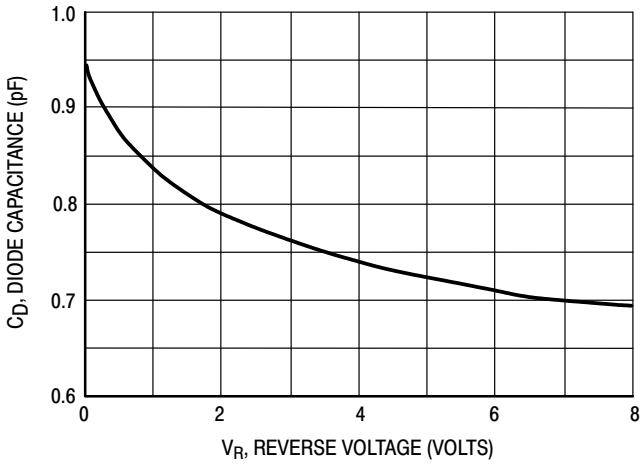


Figure 5. Capacitance

LBAV70WT1

SC–70 / SOT–323

NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

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