Elektronische Bauelemente

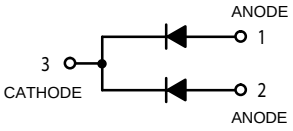
BAV70W

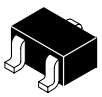
Dual Chips Common Cathode Surface Mount Switching Diode

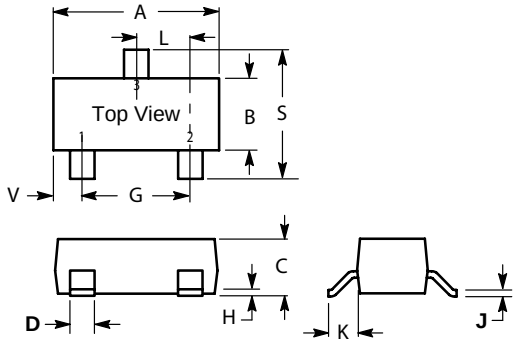
RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance







MAXIMUM RATINGS (EACH DIODE)

Rating	Symbol	Value	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 Derate above 25°C	P_D	200 1.6	mW mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	0.625	°C/W
Total Device Dissipation Alumina S ubstrate,(2) AT=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, Tstg	–55to+150	°C

SOT-323(SC-70)		
Dim	Min	Max
A	1.800	2.200
B	1.150	1.350
C	0.800	1.000
D	0.300	0.400
G	1.200	1.400
H	0.000	0.100
J	0.100	0.250
K	0.350	0.500
L	0.590	0.720
S	2.000	2.400
V	0.280	0.420
All Dimension in mm		

DEVICE MARKING

BAV70W = A4, KJA

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted) (EACH DIODE)

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

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

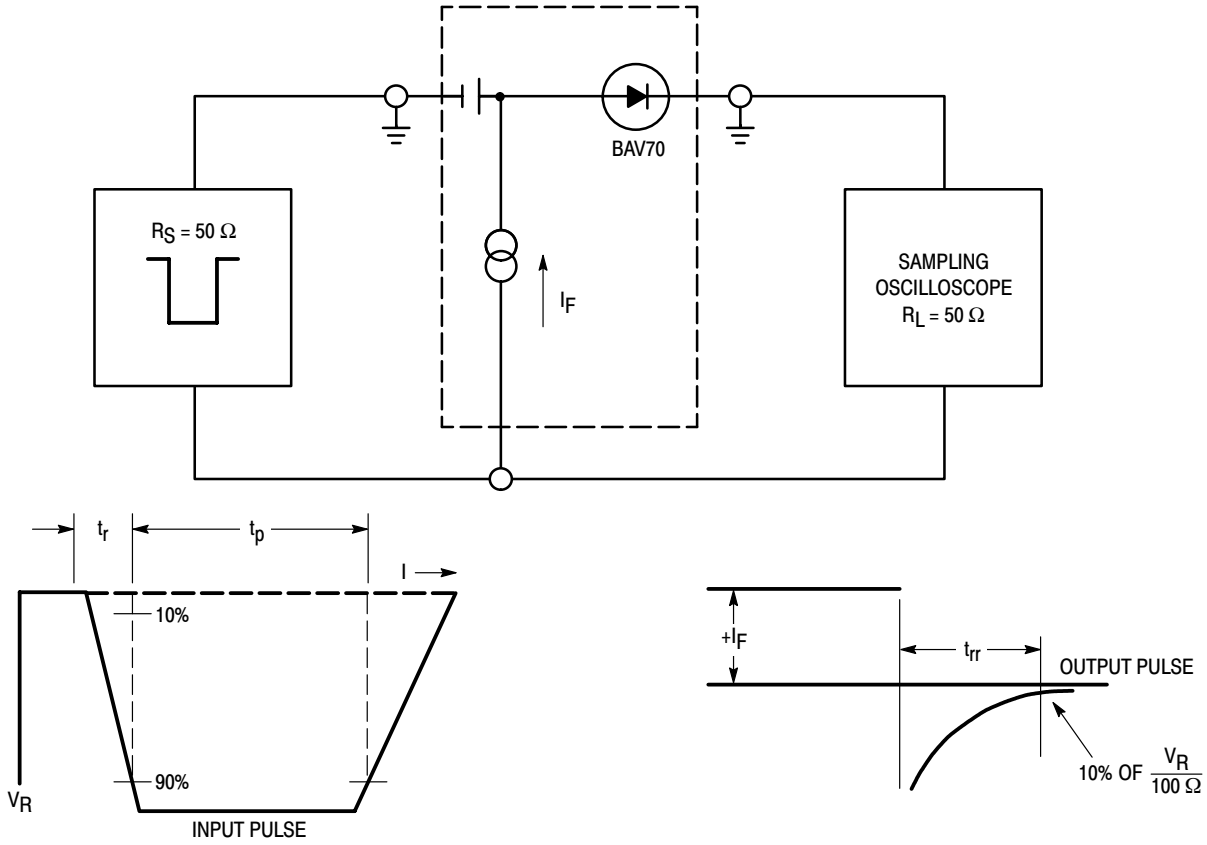


Figure 1. Recovery Time Equivalent Test Circuit

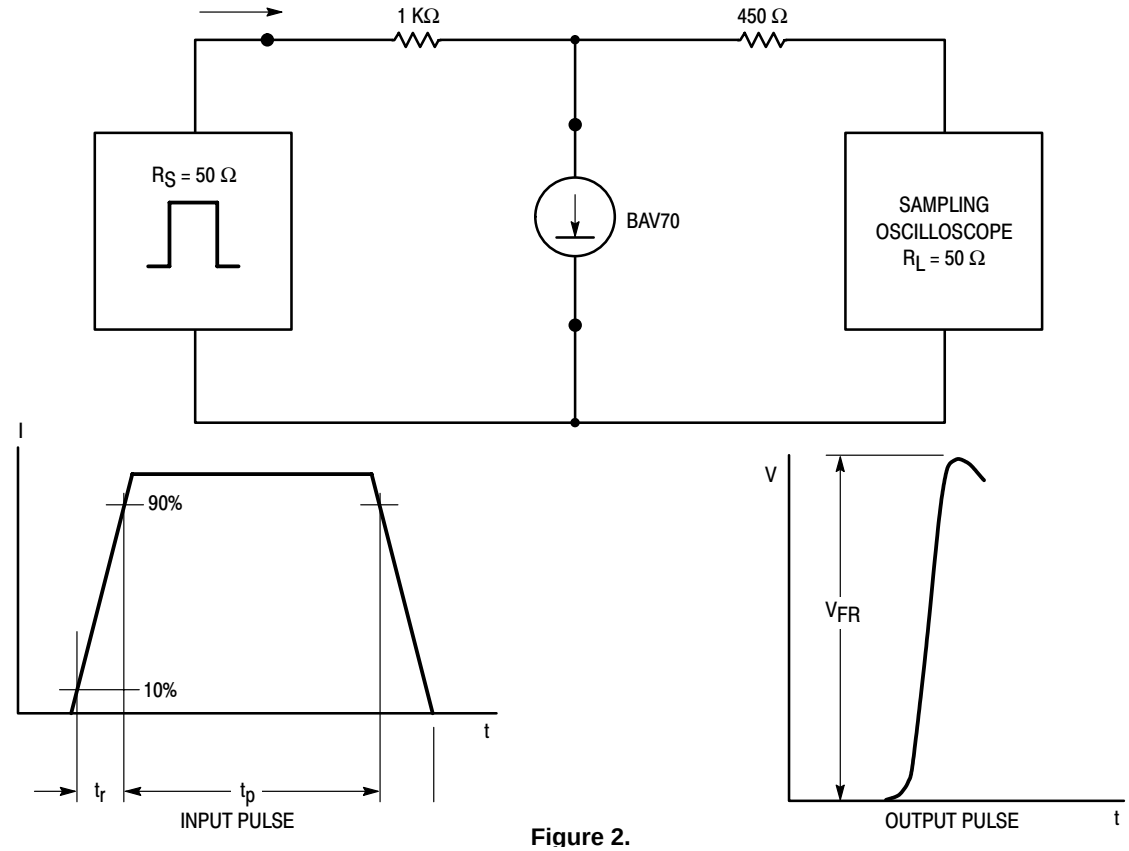


Figure 2.

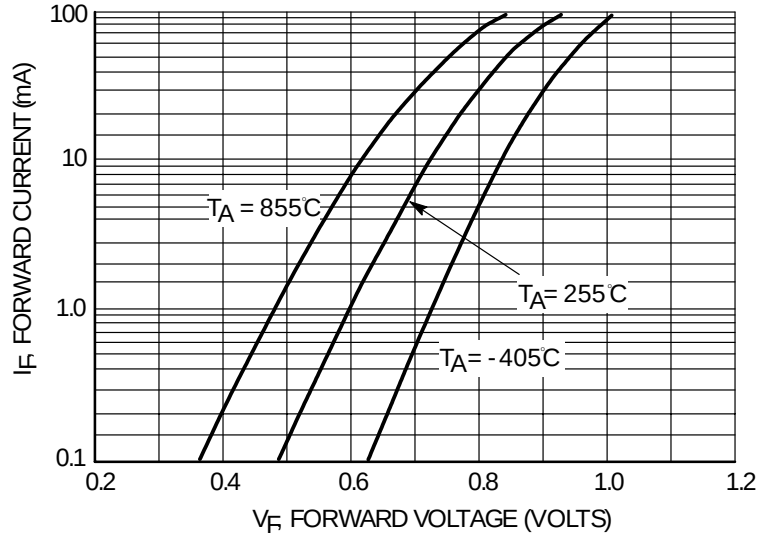


Figure 3. Forward Voltage

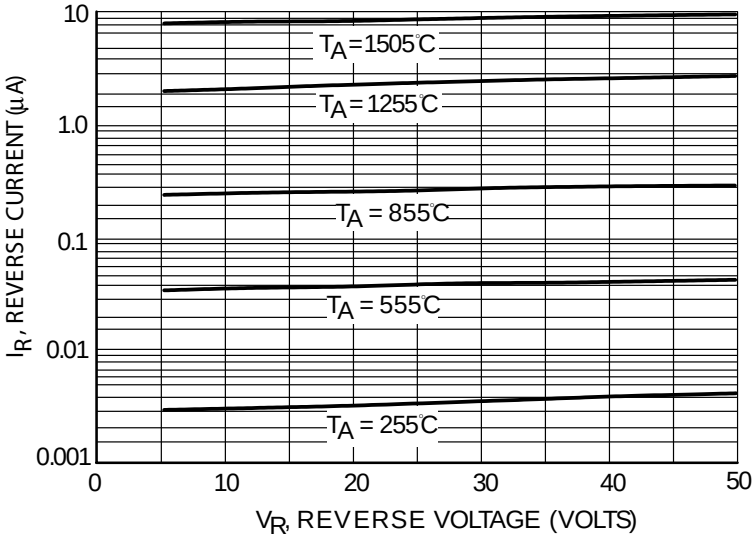


Figure 4. Leakage Current

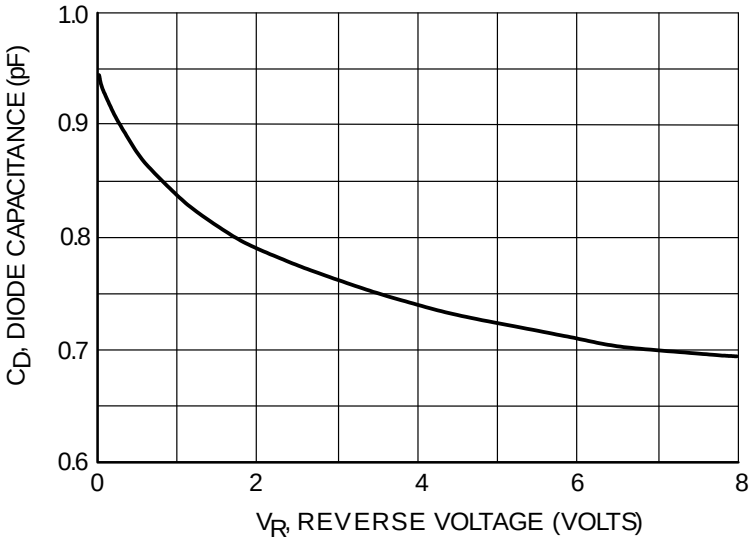


Figure 5. Capacitance