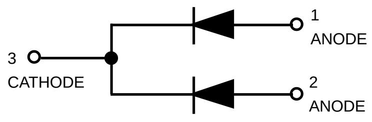
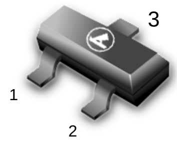
Monolithic Dual Switching Diode

BAV74LT1





CASE 318–08, STYLE 9
SOT–23 (TO–236AB)

DEVICE MARKING

BAV74LT1 = JA

MAXIMUM RATINGS (EACH DIODE)

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	50	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	225	mW
Derate above 25°C		1.8	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°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) (EACH DIODE)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Breakdown Voltage ($I_{(BR)}$ = 5.0 µAdc)	$V_{(BR)}$	50	—	Vdc
Reverse Voltage Leakage Current	I_R			µAdc
(V_R = 50 Vdc, T_J = 125°C)		—	100	
(V_R = 50Vdc)		—	0.1	
Diode Capacitance (V_R = 0, f = 1.0 MHz)	C_D	—	2.0	pF
Forward Voltage	V_F			Vdc
(I_F = 100 mAdc)		—	1.0	
Reverse Recovery Time (I_F=I_R=10mAdc, $I_{R(REC)}$=1.0mAdc, measured at I_R= 1.0 mA, R_L=100Ω)	t_{rr}	—	4.0	ns

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.

Curves Applicable to Each Anode

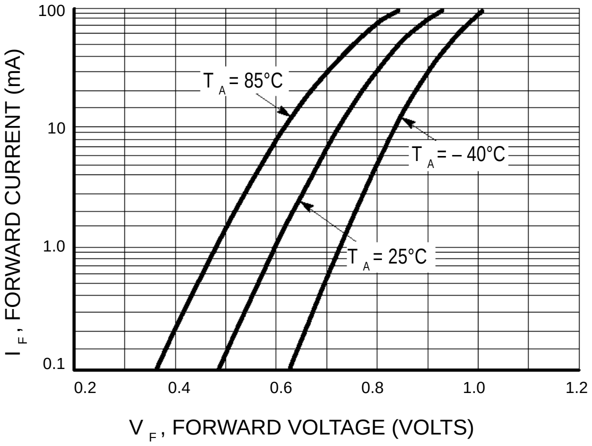


Figure 1. Forward Voltage

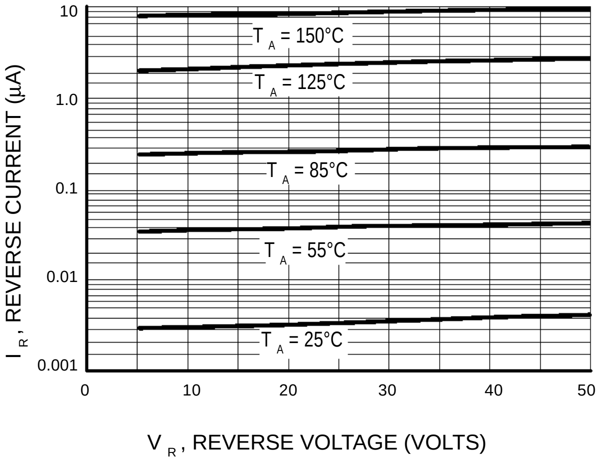


Figure 3. Leakage Current

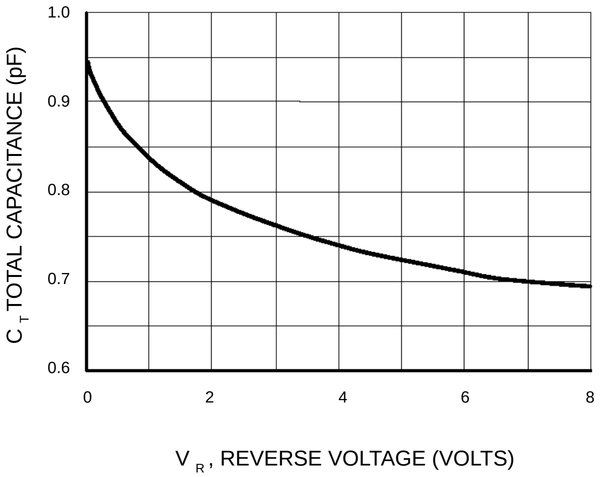


Figure 3. Capacitance