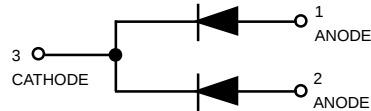


Monolithic Dual Switching Diode Common Cathode

BAV70LT1



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

DEVICE MARKING

BAV70LT1 = A4

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) $T_A = 25^\circ\text{C}$	P_D	225	mW
Derate above 25°C		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Total Device Dissipation Alumina Substrate, (2) $T_A = 25^\circ\text{C}$	P_D	300	mW
Derate above 25°C		2.4	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C/W}$
Junction and Storage Temperature	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted) (EACH DIODE)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Reverse Breakdown Voltage ($I_{(BR)} = 100 \mu\text{Adc}$)	$V_{(BR)}$	70	—	Vdc
Reverse Voltage Leakage Current ($V_R = 25 \text{ Vdc}, T_J = 150^\circ\text{C}$)	I_R	—	60	μAdc
($V_R = 70 \text{ Vdc}$)		—	2.5	
($V_R = 70 \text{ Vdc}, T_J = 150^\circ\text{C}$)		—	100	
Diode Capacitance ($V_R = 0, f = 1.0 \text{ MHz}$)	C_D	—	1.5	pF
Forward Voltage ($I_F = 1.0 \text{ mAdc}$)	V_F	—	715	mVdc
($I_F = 10 \text{ mAdc}$)		—	855	
($I_F = 50 \text{ mAdc}$)		—	1000	
($I_F = 150 \text{ mAdc}$)		—	1250	
Reverse Recovery Time ($I_F = I_R = 10 \text{ mAdc}, V_R = 5.0 \text{ Vdc}, I_{R(REC)} = 1.0 \text{ mAdc}$) (Figure 1)	t_{rr}	—	6.0	ns

1. FR-5 = $1.0 \times 0.75 \times 0.062 \text{ in.}$

2. Alumina = $0.4 \times 0.3 \times 0.024 \text{ in.}$ 99.5% alumina.