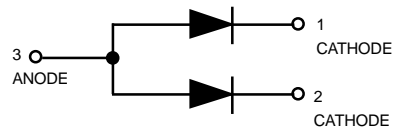
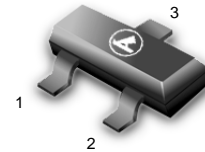


# Monolithic Dual Switching Diode Common Anode



## BAW56LT1



CASE 318-08, STYLE12  
SOT- 23 (TO-236AB)

### 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) $T_A = 25\text{ }^\circ\text{C}$	$P_D$	225	mW
Derate above $25\text{ }^\circ\text{C}$		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Total Device Dissipation Alumina Substrate, <sup>(2)</sup> $T_A = 25\text{ }^\circ\text{C}$	$P_D$	300	mW
Derate above $25\text{ }^\circ\text{C}$		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	$^\circ\text{C}$

### DEVICE MARKING

BAW56LT1 = A1

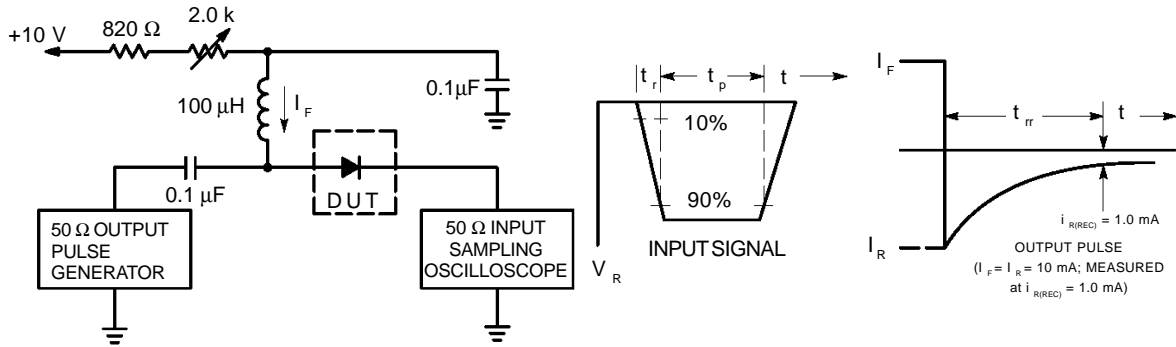
### ELECTRICAL CHARACTERISTICS ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted) (EACH DIODE)

Characteristic	Symbol	Min	Max	Unit
<b>OFF CHARACTERISTICS</b>				
Reverse Breakdown Voltage ( $I_{(BR)} = 100\text{ }\mu\text{Adc}$ )	$V_{(BR)}$	70	–	Vdc
Reverse Voltage Leakage Current ( $V_R = 25\text{ Vdc}, T_J = 150\text{ }^\circ\text{C}$ )	$I_R$	–	30	$\mu\text{Adc}$
( $V_R = 70\text{ Vdc}$ )		–	2.5	
( $V_R = 70\text{ Vdc}, T_J = 150\text{ }^\circ\text{C}$ )		–	50	
Diode Capacitance ( $V_R = 0, f = 1.0\text{ MHz}$ )	$C_D$	–	2.0	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 ( $I_F = I_R = 10\text{ mAdc}, I_{R(REC)} = 1.0\text{ mAdc}$ ) (Figure 1) $R_L = 100\Omega$	$t_{rr}$	–	6.0	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.

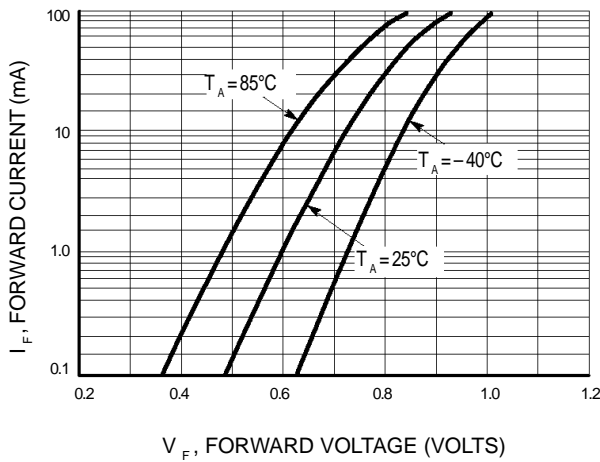
**BAW 5 6 IT 1**



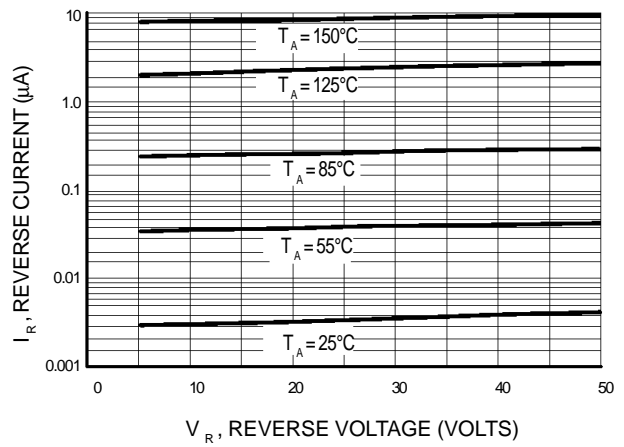
- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 10mA.
- 2. Input pulse is adjusted so  $I_{R(peak)}$  is equal to 10mA.
- 3.  $t_p \gg t_{rr}$

**Figure 1. Recovery Time Equivalent Test Circuit**

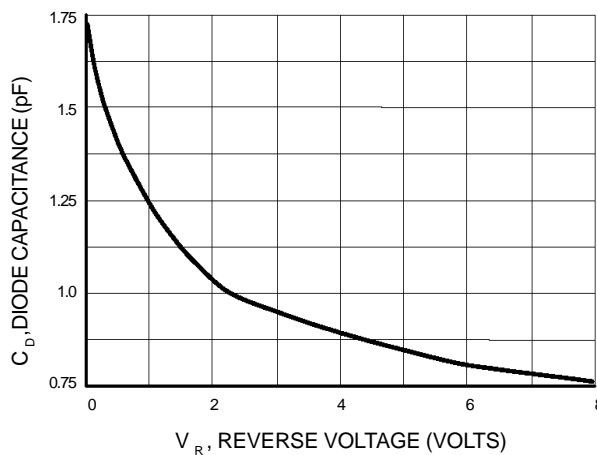
**CURVES APPLICABLE TO EACH CATHODE**



**Figure 2. Forward Voltage**



**Figure 3. Leakage Current**



**Figure 4. Capacitance**