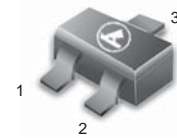


# Dual Switching Diodes

## BAW56WT1



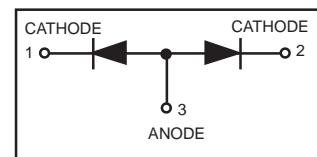
CASE 419-04, STYLE 4  
SOT-323 (SC-70)

### DEVICE MARKING

BAW56WT1 = A1

### MAXIMUM RATINGS (T<sub>A</sub> = 25°C)

Rating	Symbol	Max	Unit
Reverse Voltage	V <sub>R</sub>	70	Vdc
Forward Current	I <sub>F</sub>	200	mAdc
Peak Forward Surge Current	I <sub>FM(surge)</sub>	500	mAdc



### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board <sup>(1)</sup> T <sub>A</sub> = 25°C	P <sub>D</sub>	200	mW
Derate above 25°C		1.6	mW/°C
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	0.625	°C/W
Total Device Dissipation Alumina Substrate <sup>(2)</sup> T <sub>A</sub> = 25°C	P <sub>D</sub>	300	mW
Derate above 25°C		2.4	mW/°C
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	417	°C/W
Junction and Storage Temperature	T <sub>J</sub> , T <sub>stg</sub>	-55 to +150	°C

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
----------------	--------	-----	-----	------

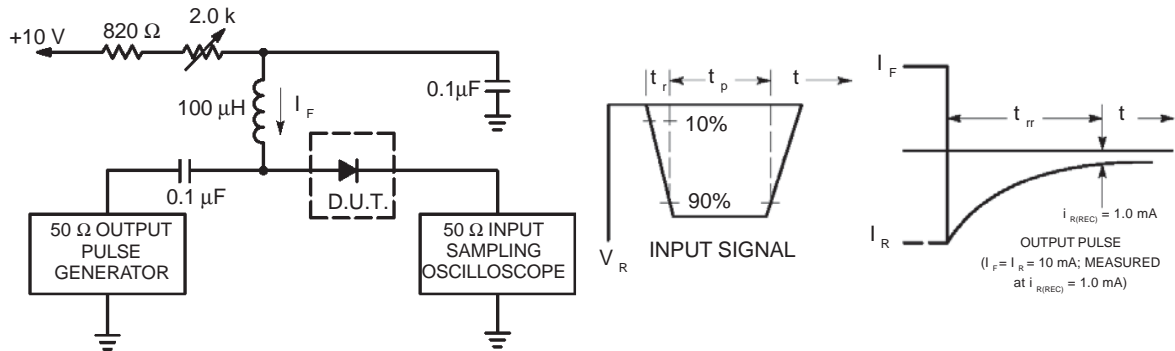
### OFF CHARACTERISTICS

Reverse Breakdown Voltage (I <sub>BR</sub> ) = 100 μAdc)	V <sub>(BR)</sub>	70	—	Vdc
Reverse Voltage Leakage Current (V <sub>R</sub> = 25 Vdc, T <sub>J</sub> = 150°C)	I <sub>R</sub>	—	30	μAdc
(V <sub>R</sub> = 70 Vdc)		—	2.5	
(V <sub>R</sub> = 70 Vdc, T <sub>J</sub> = 150°C)		—	50	
Diode Capacitance (V <sub>R</sub> = 0, f = 1.0 MHz)	C <sub>D</sub>	—	2.0	pF
Forward Voltage (I <sub>F</sub> = 1.0 mAdc)	V <sub>F</sub>	—	715	mVdc
(I <sub>F</sub> = 10 mAdc)		—	855	
(I <sub>F</sub> = 60 mAdc)		—	1000	
(I <sub>F</sub> = 150 mAdc)		—	1250	
Reverse Recovery Time (I <sub>F</sub> = I <sub>R</sub> = 10 mAdc, R <sub>L</sub> = 100 Ω, I <sub>R(REC)</sub> = 1.0 mAdc) (Figure 1)	t <sub>rr</sub>	—	6.0	ns

1. FR-5 = 1.0 × 0.75 × 0.062 in.

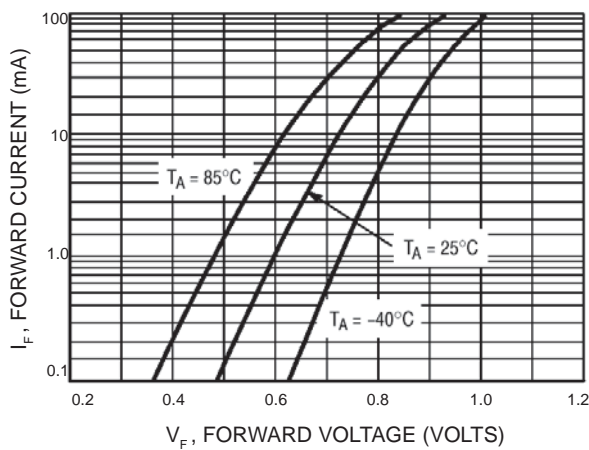
2. Alumina = 0.4 × 0.3 × 0.024 in. 99.5% alumina.

**BAW56WT1**

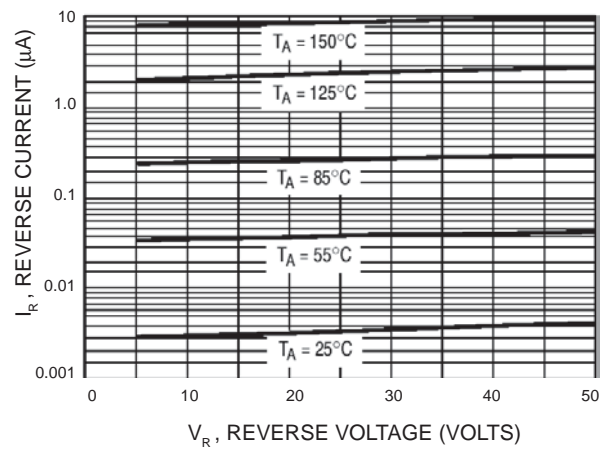


- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 10mA.  
 2. Input pulse is adjusted so  $I_{R(\text{peak})}$  is equal to 10mA.  
 3.  $t_p \gg t_{rr}$

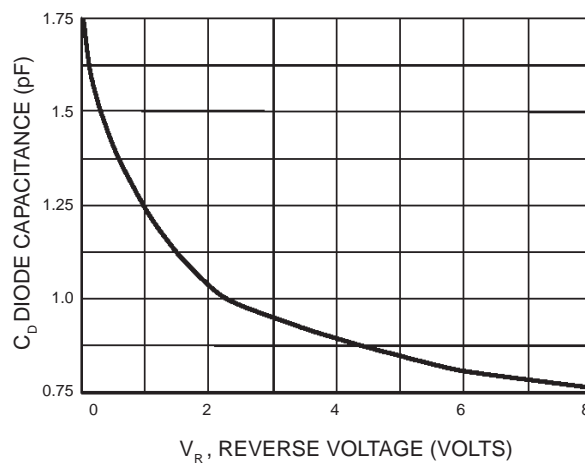
**Figure 1. Recovery Time Equivalent Test Circuit**



**Figure 2. Forward Voltage**



**Figure 3. Leakage Current**



**Figure 4. Capacitance**