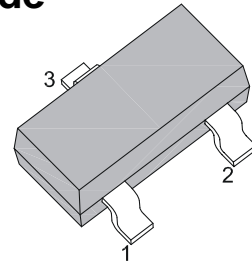


## Three Terminals SMD Low Leakage Switching Diode

### Features

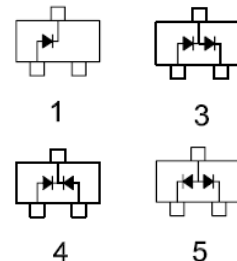
- Surface mount package ideally suited for automatic insertion
- Very low leakage current
- Low capacitance
- RoHS Compliant



SOT-23

### Mechanical Data

<b>Case:</b>	SOT-23, Plastic Package
<b>Terminals:</b>	Solderable per MIL-STD-202G, Method 208
<b>Weight:</b>	Approx. 0.008 gram



### Maximum Ratings\* ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	BAS116	BAW156	BAV170	BAV199	Unit	Conditions
	Pinout Figure	1	5	4	3		
	Marking Code	PA	P4	P3	PB		
<b>V<sub>R</sub></b>	Reverse Voltage	75				V	
<b>V<sub>RRM</sub></b>	Peak Reverse Voltage	100				V	
<b>I<sub>F(AV)</sub></b>	Average Rectified Continuous Forward Current	0.2				A	
<b>I<sub>FSM</sub></b>	Non-Repetitive Peak Forward Surge Current at t=1μS	2.0				A	
<b>P<sub>D</sub></b>	Power Dissipation FR-5 Board	250				mW	Note 1
<b>R<sub>thJA</sub></b>	Thermal Resistance, Junction to Ambient	500				° C/W	Note 1
<b>T<sub>J</sub>, T<sub>STG</sub></b>	Operating Junction and Storage Temperature Range	-55 to +150				° C	

**Note:** 1: FR-5=1.0X0.75X0.062"

# Three Terminals SMD Low Leakage Switching Diode

## BAS116/BAW156/BAV170/BAV199

### Electrical Characteristics ( $T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	Min.	Typ.	Max.	Unit	Conditions
<b>V<sub>R</sub></b>	Reverse Breakdown Voltage	75	-	-	V	I <sub>R</sub> =100μA
<b>V<sub>F</sub></b>	Forward Voltage	-	-	0.9	V	I <sub>F</sub> =1.0mA
				1.0		I <sub>F</sub> =10mA
				1.1		I <sub>F</sub> =50mA
				1.25		I <sub>F</sub> =150mA
<b>I<sub>R</sub></b>	Reverse Current	-	0.002	5	nA	V <sub>R</sub> =75V
			8.0	80		V <sub>R</sub> =75V, T <sub>J</sub> =150° C
<b>C<sub>T</sub></b>	Total Capacitance	-	-	2.0	pF	V <sub>R</sub> =0V, f=1MHz
<b>T<sub>rr</sub></b>	Reverse Recovery Time	-	-	3.0	μS	I <sub>F</sub> =I <sub>R</sub> =10mA, R <sub>L</sub> =100Ω

### Typical Characteristics Curves

Fig.1- Instantaneous Forward Characteristics

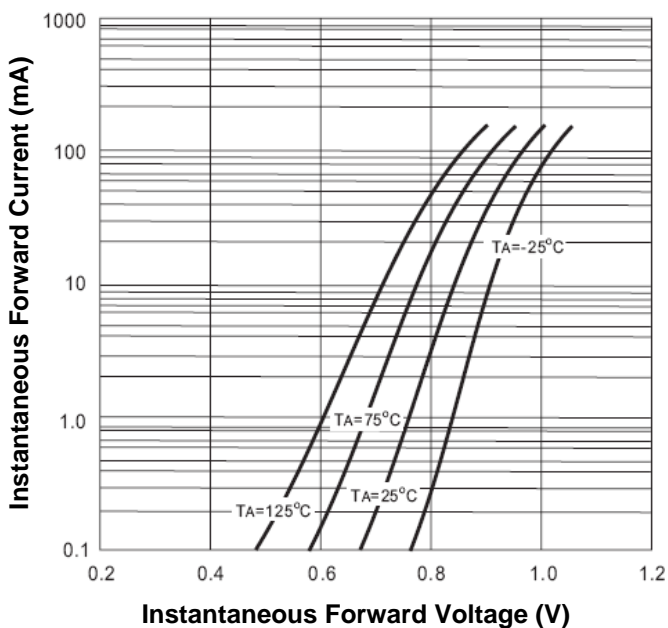
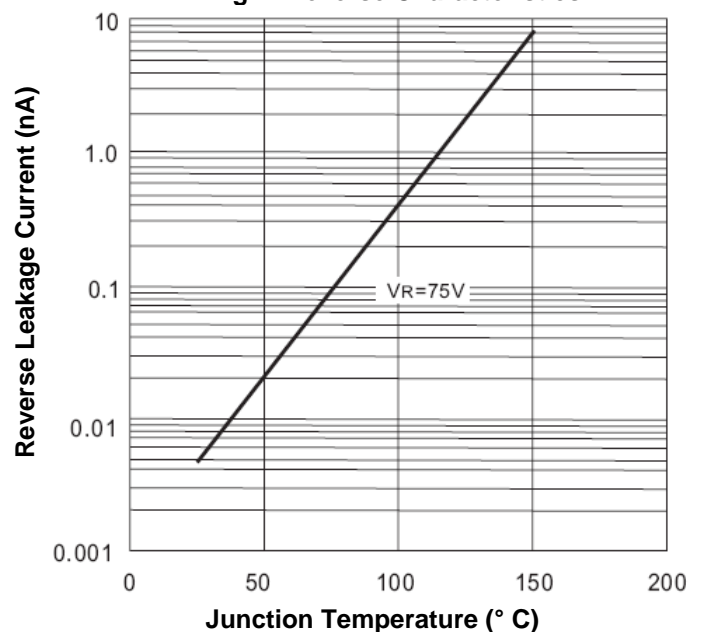


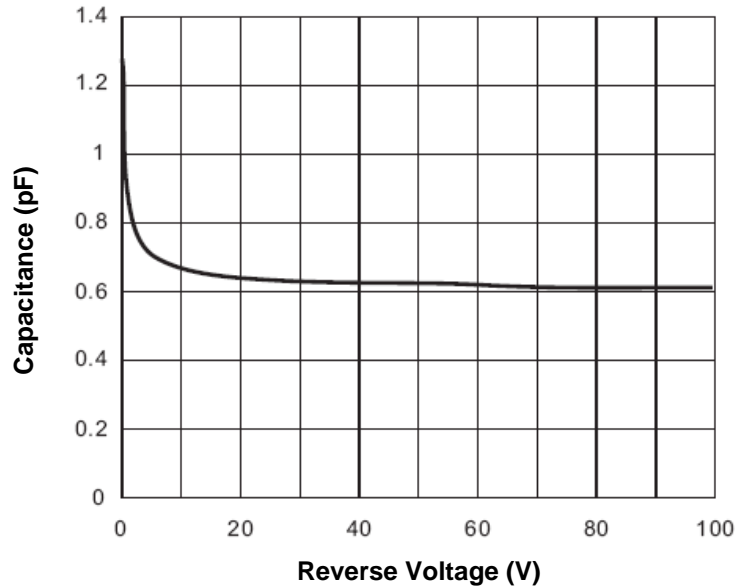
Fig.2- Reverse Characteristics



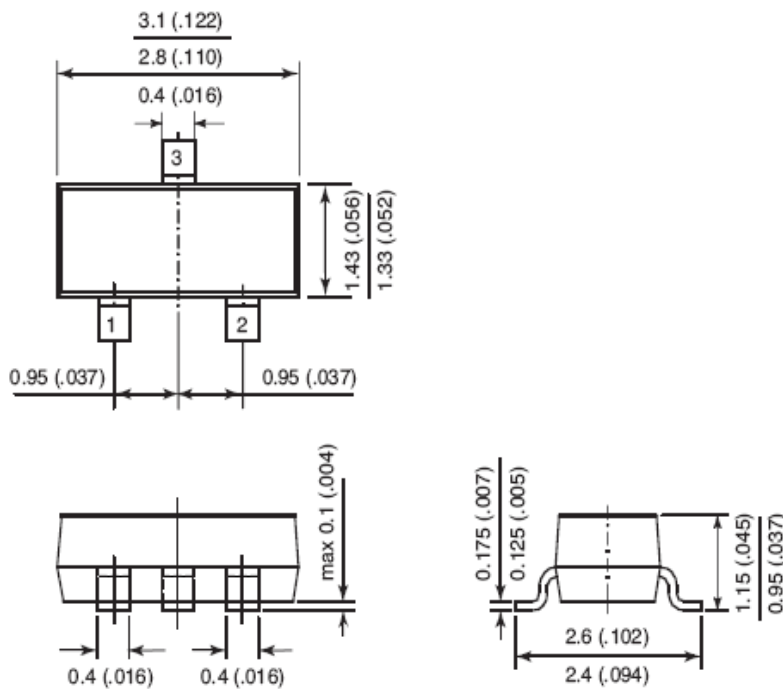
# Three Terminals SMD Low Leakage Switching Diode

## BAS116/BAW156/BAV170/BAV199

Fig.3- Junction Capacitance



### Dimensions in mm (inch)

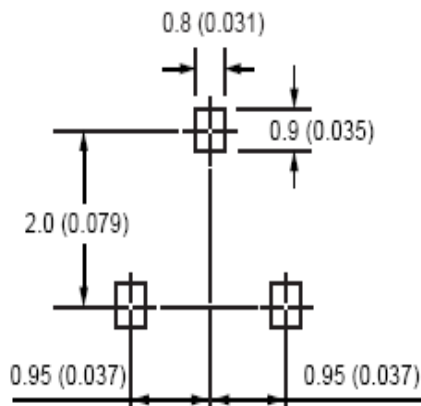


### SOT-23

# Three Terminals SMD Low Leakage Switching Diode

## BAS116/BAW156/BAV170/BAV199

### Mounting Pad Layout in mm (inch)



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