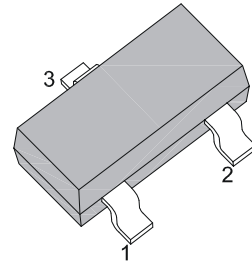


## Three Terminals SMD Switching Diode

### Features

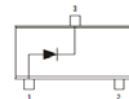
- Silicon Epitaxial Planar Diode
- Ultra Fast Switching Speed
- High Conductance
- Surface Mount Package Ideally Suited for Automatic Insertion
- RoHS Compliant



### Mechanical Data

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

### SOT-23



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

Symbol	Description	BAS16	Unit	Conditions
	Marking Code	A6		
<b>V<sub>RRM</sub></b>	Maximum Repetitive Reverse Voltage	85	V	
<b>I<sub>F(AV)</sub></b>	Average Rectified Forward Current	200	mA	
<b>I<sub>FSM</sub></b>	Non-Repetitive Peak Forward Surge Current	Pulse Width=1.0s	1	A
		Pulse Width=1.0 $\mu$ s	2	
<b>P<sub>D</sub></b>	Power Dissipation	350	mW	
<b>R<sub>thJA</sub></b>	Thermal Resistance, Junction to Ambient	357	$^{\circ}C/W$	
<b>T<sub>J</sub>, T<sub>STG</sub></b>	Operating Junction and Storage Temperature Range	-55 to +150	$^{\circ}C$	

**Note:** \* These ratings are limited values above which the serviceability of any semiconductor device may be impaired.

1: These ratings are based on a maximum junction temperature of 150 degree C.

2: These are steady state limits. The factory should be consulted on applications involving pulse or low cycle operations.

# Three Terminals SMD Switching Diode

## BAS16

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

Symbol	Description	Min.	Max.	Unit	Conditions
$V_R$	Breakdown Voltage	85	-	V	$I_R=5.0\mu\text{A}$
$V_F$	Forward Voltage	-	0.715	V	$I_F=1.0\text{mA}$
			0.855		$I_F=10\text{mA}$
			1.0		$I_F=50\text{mA}$
			1.25		$I_F=150\text{mA}$
$I_R$	Reverse Current	-	1.0	$\mu\text{A}$	$V_R=75\text{V}$
			30		$V_R=25\text{V}, T_A=150^{\circ}\text{C}$
			50		$V_R=75\text{V}, T_A=150^{\circ}\text{C}$
$C_T$	Total Capacitance	-	2.0	pF	$V_R=0\text{V}, f=1\text{MHz}$
$T_{rr}$	Reverse Recovery Time	-	6.0	ns	$I_F=I_R=10\text{mA}, I_{RR}=1.0\text{mA}, R_L=100\Omega$

### Typical Characteristics Curves

Fig.1- Average Rectified Current vs Ambient Temperature

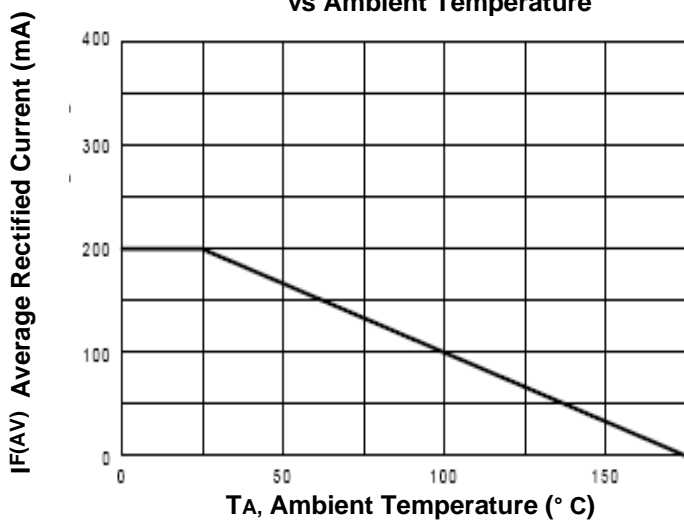
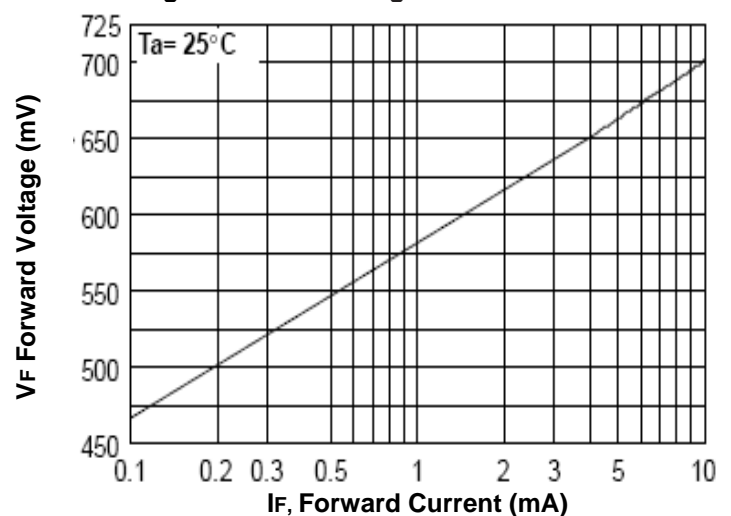


Fig.2- Forward Voltage vs Forward Current



# Three Terminals SMD Switching Diode

## BAS16

Fig.3- Reverse Current vs Reverse Voltage

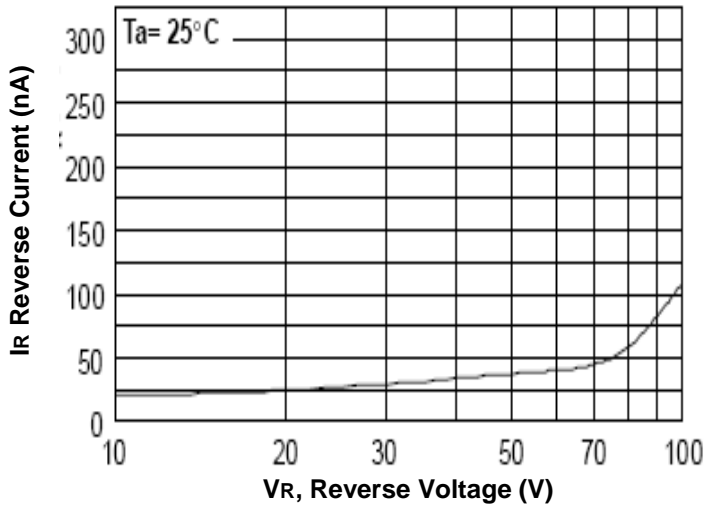
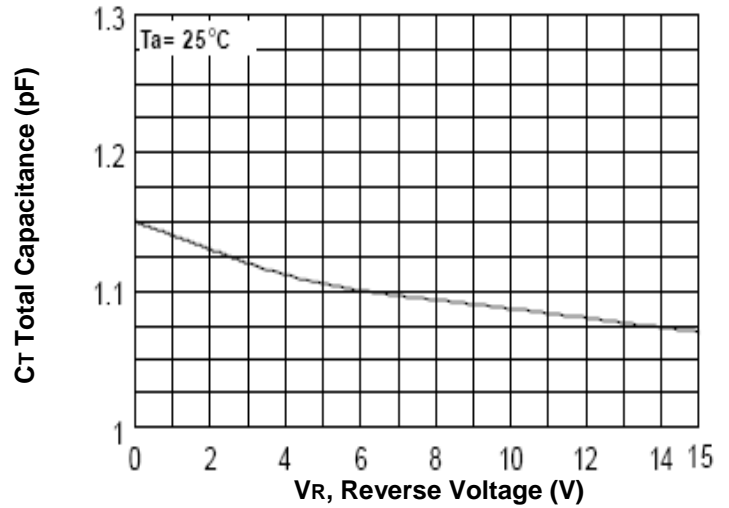


Fig.4- Total Capacitance



General Pule: The reverse current of a diode will approximately double for every ten (10) Degree C increase in Temperature

### Marking Information

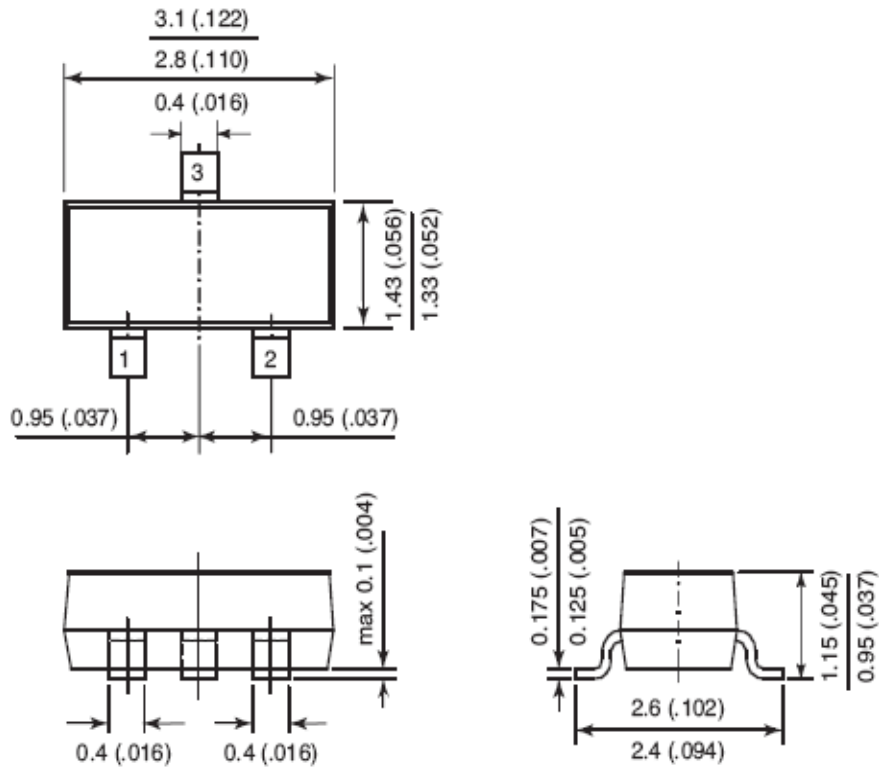


# Three Terminals SMD Switching Diode

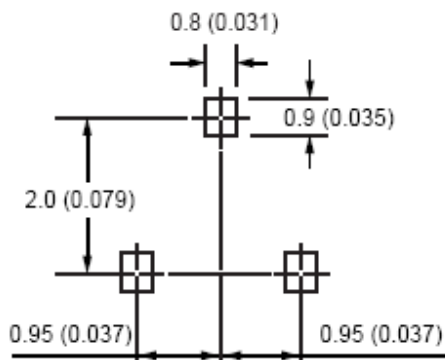
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Dimensions in mm (inch)

SOT-23



Mounting Pad Layout in mm (inch)



# Three Terminals SMD Switching Diode

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**BAS16**

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