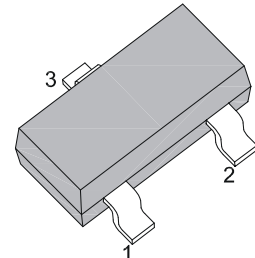


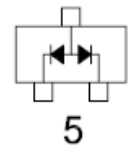
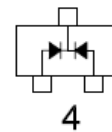
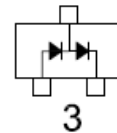
## Three Terminals SMD Switching Diodes

### Features

- High reverse breakdown voltage
- Fast switching speed
- Low reverse leakage current
- Surface mount package ideally suited for automatic insertion
- Galvanically isolated dual configurations to save board space
- RoHS compliant



SOT-23



### Mechanical Data

<b>Case:</b>	SOT-23, Plastic Case
<b>Terminals:</b>	Solderable per MIL-STD-750, Method 2026
<b>Weight:</b>	Approx. 0.008 gram

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

Symbol	Description	BAS21A	BAS21C	BAS21S	Unit	Conditions
	Pinout Figure	5	4	3		
	Marking Code	21A	21C	21S		
<b>V<sub>R</sub></b>	Reverse Voltage	250			V	
<b>V<sub>RRM</sub></b>	Peak Reverse Voltage	250			V	
<b>I<sub>F(AV)</sub></b>	Average Forward Rectified Current	0.2			A	T <sub>A</sub> =25° C
<b>I<sub>FSM</sub></b>	Non-repetitive Peak Forward Surge Current	4			A	t=1.0μs
<b>P<sub>D</sub></b>	Power Dissipation	250			mW	
<b>R<sub>thJA</sub></b>	Thermal Resistance from Junction to Ambient Air	357			° C/W	
<b>T<sub>J</sub>, T<sub>STG</sub></b>	Operating Junction and Storage Temperature Range	-55 to +150			° C	

# Three Terminals SMD Switching

## BAS21A/C/S

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

Symbol	Description	Min.	Typ.	Max.	Unit	Conditions
<b>V(BR)</b>	Reverse Breakdown Voltage	-	-	250	V	$I_R=100\mu A$
<b>V<sub>F</sub></b>	Forward Voltage	-	-	0.7	V	$I_F=1.0mA$
				1.0		$I_F=100mA$
<b>I<sub>R</sub></b>	Reverse Current	-	-	0.1	$\mu A$	$V_R=200V$
				100	$\mu A$	$V_R=200V, T_J=150^{\circ}C$
<b>C<sub>T</sub></b>	Total Capacitance	-	-	5.0	pF	$V_R=0V, f=1.0MHz$
<b>T<sub>rr</sub></b>	Reverse Recovery Time	-	-	50	nS	$I_F=I_R=30mA, R_L=100\Omega$

### Typical Characteristics Curves

Fig.1- Power Derating Curve

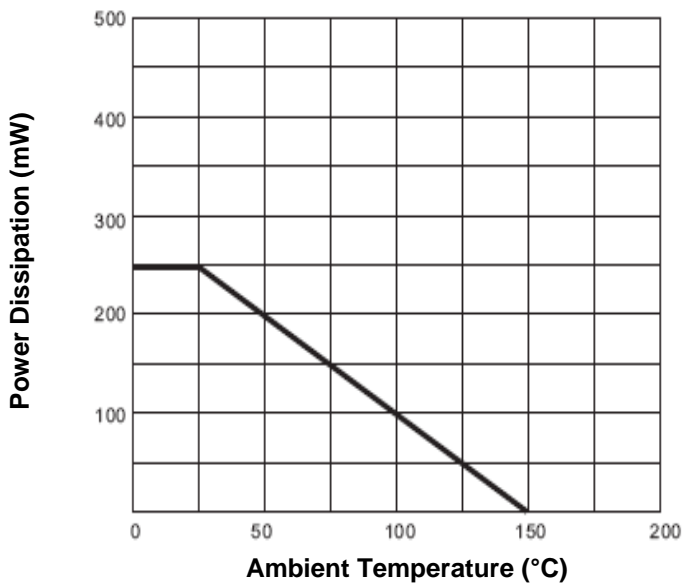


Fig.2- Typical Forward Characteristics

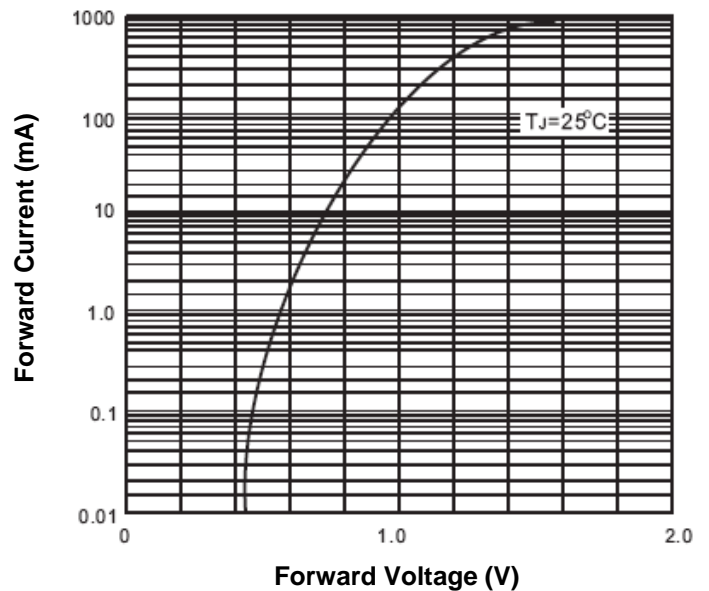


Fig.3-Leakage Current vs. Junction Temperature

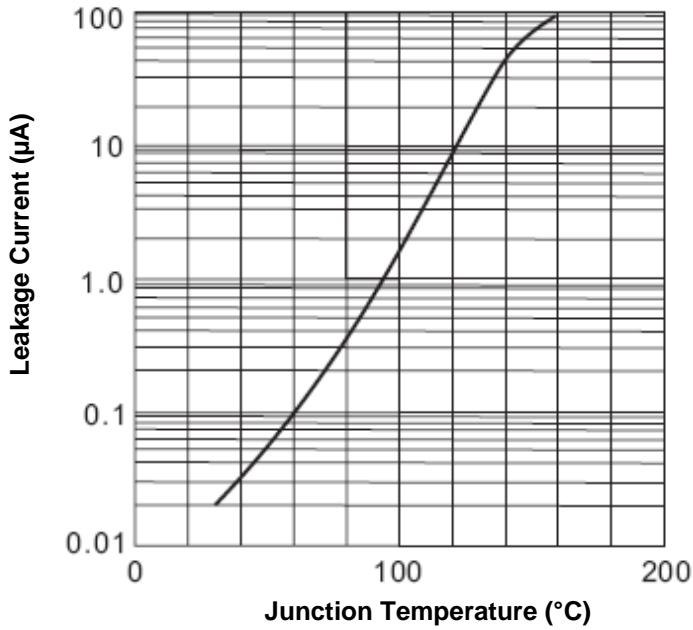
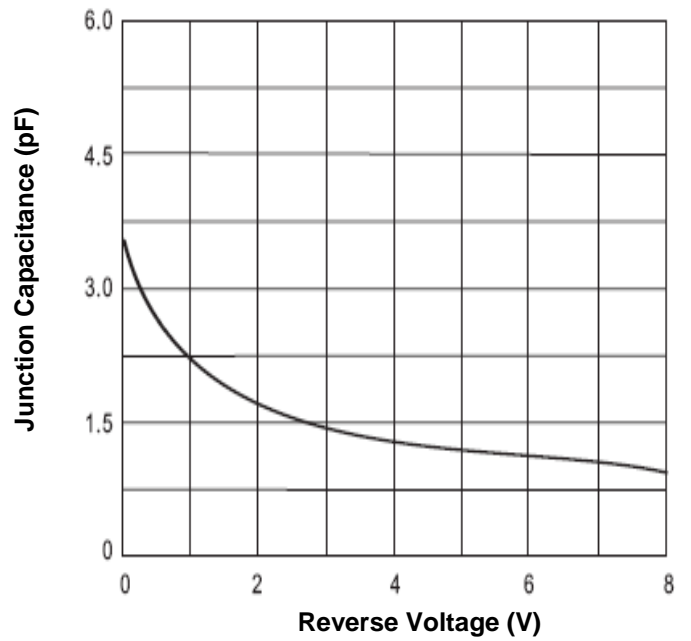
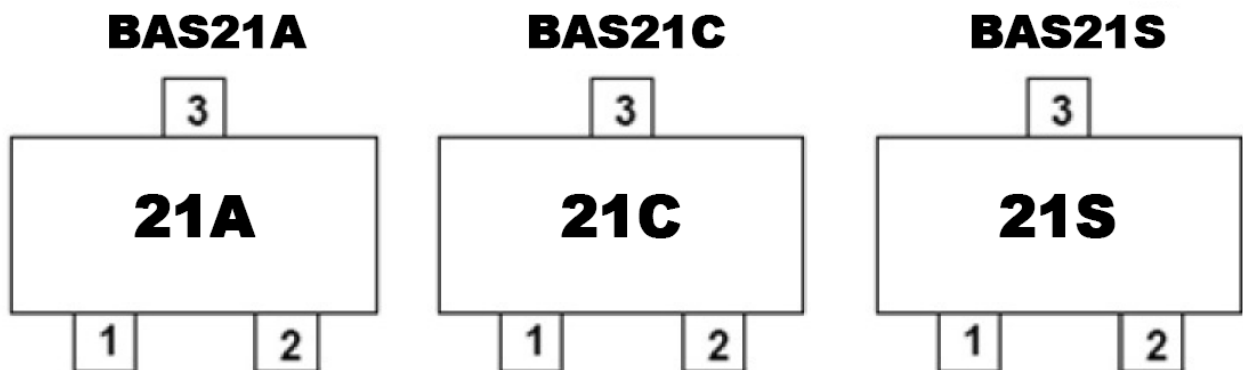


Fig.4- Typical Junction Capacitance



### Marking Information:

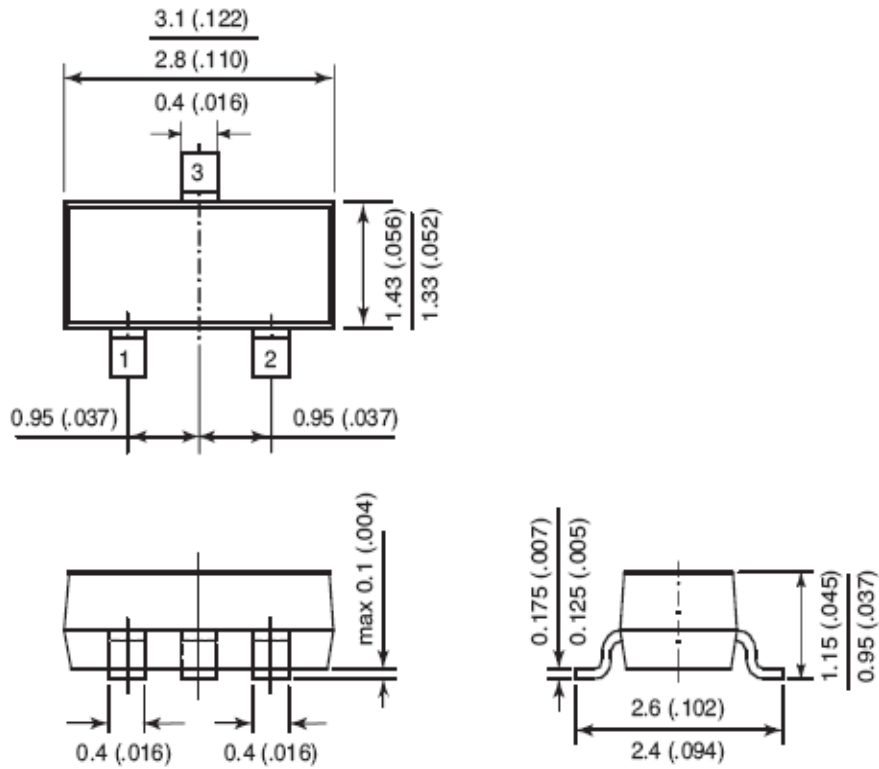


# Three Terminals SMD Switching

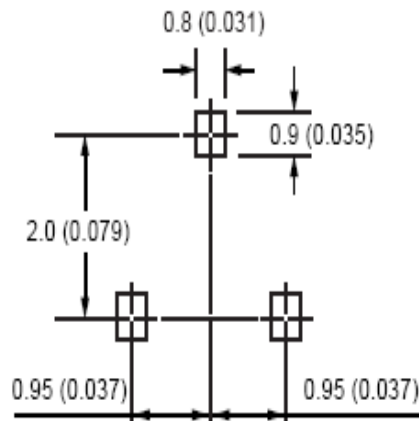
## BAS21A/C/S

Dimensions in mm (inch)

SOT-23



Mounting Pad Layout in mm (inch)

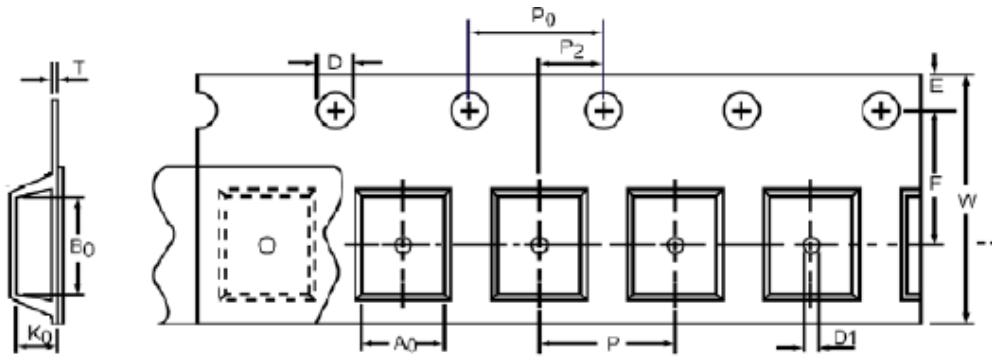


# Three Terminals SMD Switching

## BAS21A/C/S

### Packing Information:

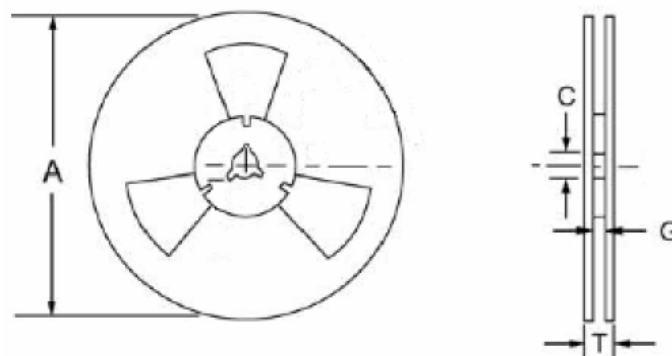
#### Carrier Tape Dimensions (in mm)



Product Type	A0	B0	K0	D	P0	P
	See Note			1.55±0.5	4.0±0.1	4.0±0.1
SOT-23	W	E	T	D1	F	P2
	8.0+0.3/-0.1	1.75±0.1	0.38±0.1	1.0±0.05	3.5±0.5	2.0±0.05

**Note:** Symbol A0, B0, K0 are determined by the maximum dimensions of the component size.  
The clearance between the component and the cavity must be within 0.05 mm (0.002") min. to 0.50 mm (0.02") max. for 8 mm tape.

#### Reel Dimensions (in mm)



A	C	G	T
178.0±2.0	13.0±0.5	8.4±2.0	14.4 max.

## Three Terminals SMD Switching

BAS21A/C/S

### Packing Quantity Information:

Quantity	PCS per Inner Box	PCS per Inner Carton
TR70 Tape & Reel	3000/Reel	240000

### Inner Carton Size Information:

Cartoon Size
390X270X400 (in mm)

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