

Small Signal Product

**225mW SMD Switching Diode**

FEATURES

- Fast switching speed
- Surface mount device type
- Moisture sensitivity level 1
- Matte Tin (Sn) lead finish with Nickel (Ni) underplate
- Pb free version and RoHS compliant
- Packing code with suffix "G" means green compound (halogen-free)



SOT-23



MECHANICAL DATA

- Case: SOT-23 small outline plastic package
- Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed : 260°C/10s
- Weight: 8 ± 0.5 mg

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	P <sub>D</sub>	225	mW
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	250	V
Repetitive Peak Forward Current	I <sub>FRM</sub>	625	mA
Mean Forward Current	I <sub>O</sub>	200	mA
Non-Repetitive Peak Forward Surge Current (Note 1)	I <sub>FSM</sub>	1	A
Thermal Resistance (Junction to Ambient) (Note 2)	R <sub>θJA</sub>	500	°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

Notes : 1. Test condition : 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) pulse width = 1 μsec

2. Valid provided that electrodes are kept at ambient temperature

PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage I <sub>R</sub> = 100 μA	V <sub>R(BR)</sub>	250	-	V
Forward Voltage I <sub>F</sub> = 100 mA	V <sub>F</sub>	-	1.00	V
			1.25	
Reverse Leakage Current V <sub>R</sub> = 200 V	I <sub>R</sub>	-	0.1	μA
Junction Capacitance V <sub>R</sub> = 1 V, f = 1.0 MHz	C <sub>J</sub>	-	5	pF
Reverse Recovery Time I <sub>F</sub> = I <sub>R</sub> = 30mA, R <sub>L</sub> = 100Ω, I <sub>RR</sub> = 1mA	trr	-	50	ns

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RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^\circ\text{C}$  unless otherwise noted)

Fig. 1 Typical Forward Characteristics

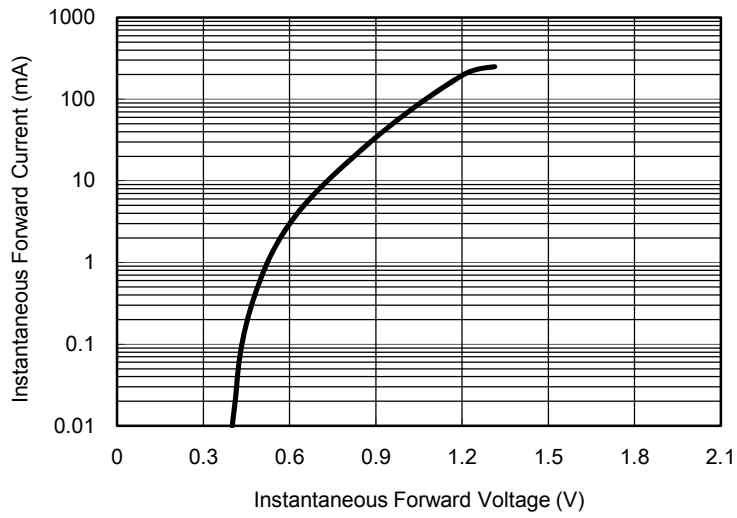


Fig. 2 Reverse Current VS. Junction temperature

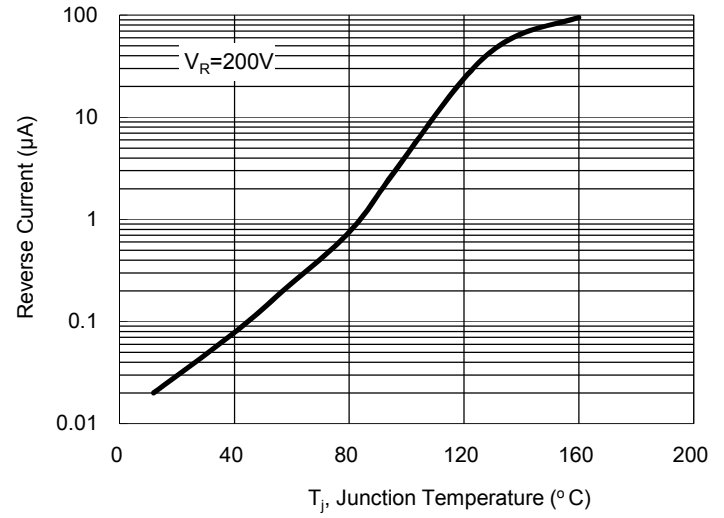
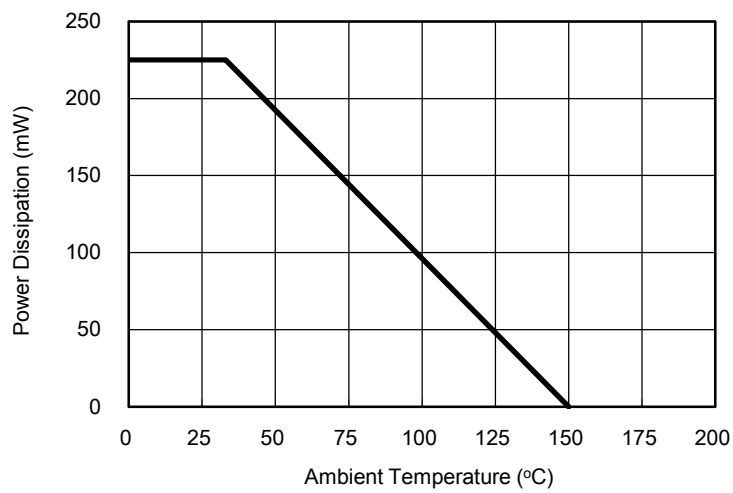


Fig. 3 Admissible Power Dissipation Curve



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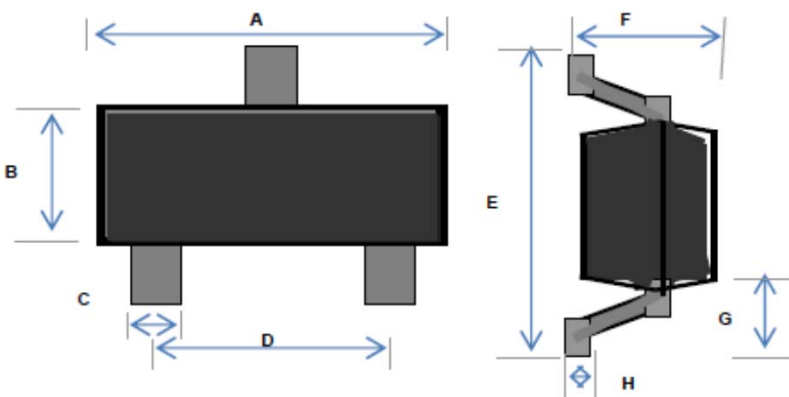
ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX (Note 2)	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
BAS2xx (Note 1)	-xx	RF R5	G	SOT-23	3K / 7" Reel 10K / 13" Reel

Note 1: "xx" is Device Code "1" thru "1S"

Note 2: Part No. Suffix „-xx “ would be used for special requirement

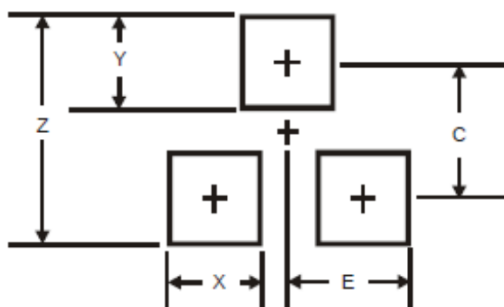
EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
BAS21 RF	BAS21		RF		Multiple manufacture source
BAS21 RFG	BAS21		RF	G	Multiple manufacture source Green compound
BAS21-B0 RFG	BAS21	-B0	RF	G	Defined manufacture source Green compound
BAS21-D0 RFG	BAS21	-D0	RF	G	Defined manufacture source Green compound

PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.70	3.10	0.106	0.122
B	1.10	1.50	0.043	0.059
C	0.30	0.51	0.012	0.020
D	1.78	2.04	0.070	0.080
E	2.10	2.64	0.083	0.104
F	0.89	1.30	0.035	0.051
G	0.55 REF		0.022 REF	
H	0.10 REF		0.004 REF	

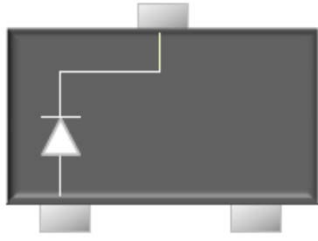
SUGGEST PAD LAYOUT



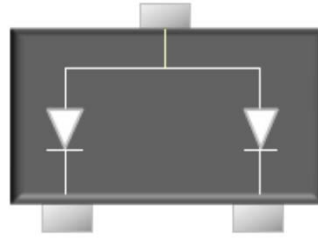
DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
Z	2.8	0.110
X	0.7	0.028
Y	0.9	0.035
C	1.9	0.075
E	1.0	0.039

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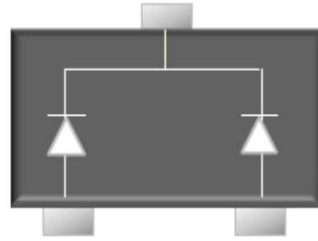
PIN CONFIGURATION



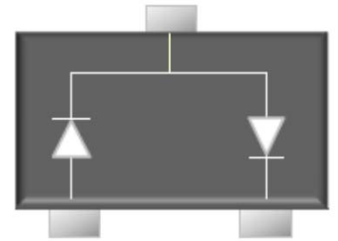
**BAS21**



**BAS21A**



**BAS21C**



**BAS21S**

MARKING

Part NO.	Marking
BAS21	JS
BAS21A	JS2
BAS21C	JS3
BAS21S	JS4

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