

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 _A =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	P _D	225	mW
Repetitive Peak Reverse Voltage	V _{RRM}	250	V
Repetitive Peak Forward Current	I _{FRM}	625	mA
Mean Forward Current	I _O	200	mA
Non-Repetitive Peak Forward Surge Current (Note 1)	I _{FSM}	1	A
Thermal Resistance (Junction to Ambient) (Note 2)	R _{θJA}	500	°C/W
Junction and Storage Temperature Range	T _J , T _{STG}	-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 _R = 100 μA	V _{R(BR)}	250	-	V
Forward Voltage I _F = 100 mA	V _F	-	1.00	V
			1.25	
Reverse Leakage Current V _R = 200 V	I _R	-	0.1	μA
Junction Capacitance V _R = 1 V, f = 1.0 MHz	C _J	-	5	pF
Reverse Recovery Time I _F = I _R = 30mA, R _L = 100Ω, I _{RR} = 1mA	trr	-	50	ns

Small Signal Product

RATINGS AND CHARACTERISTICS CURVES

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

Fig. 1 Typical Forward Characteristics

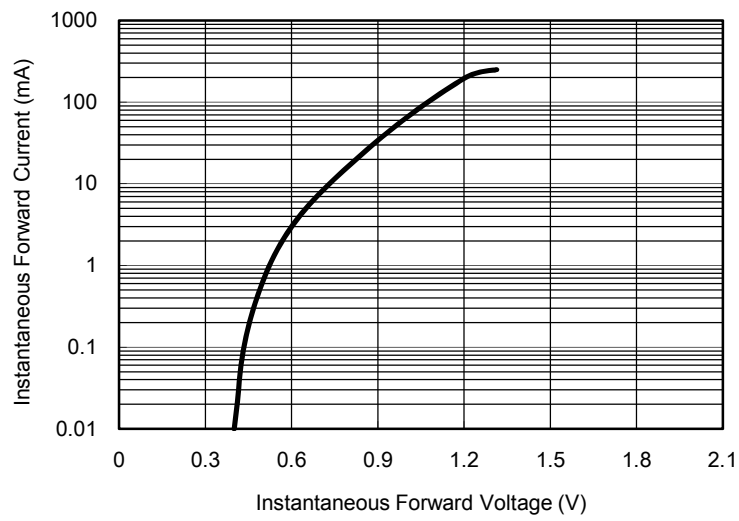


Fig. 2 Reverse Current VS. Junction temperature

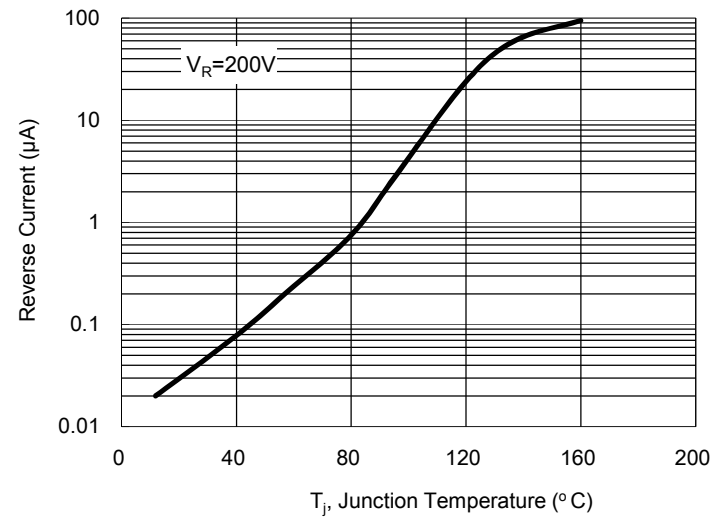
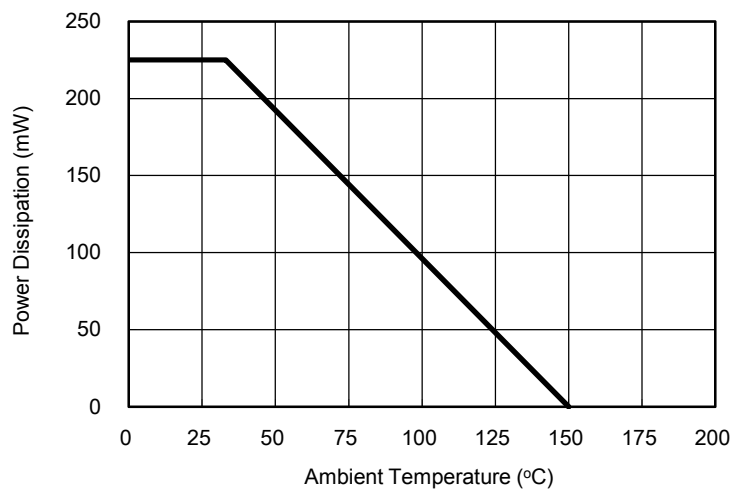


Fig. 3 Admissible Power Dissipation Curve



Small Signal Product

ORDERING INFORMATION

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

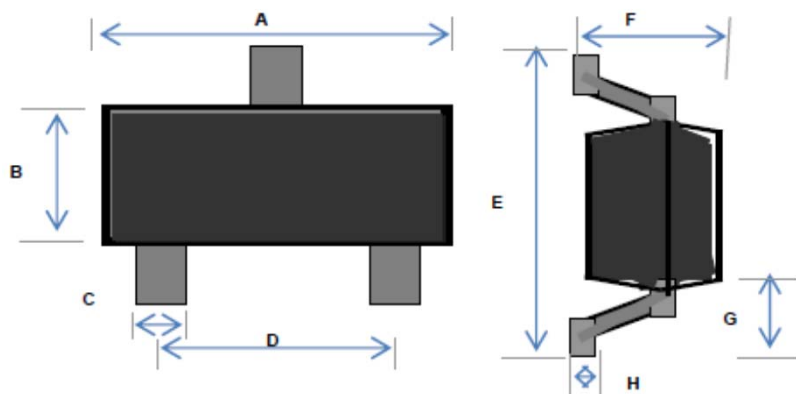
Note 1: "xx" is Device Code "1" thru "1S"

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

EXAMPLE

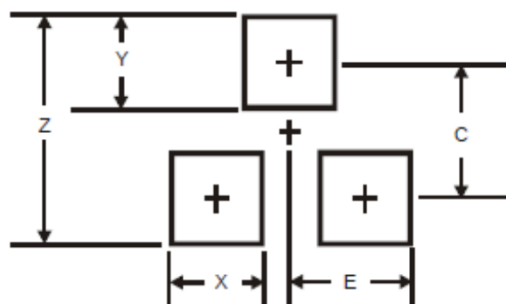
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
BAS21 RF	BAS21		RF		Multiple manufacture source
BAS21 RFG	BAS21		RF	G	Multiple manufacture source Green compound
BAS21-B0 RFG	BAS21	-B0	RF	G	Defined manufacture source Green compound
BAS21-D0 RFG	BAS21	-D0	RF	G	Defined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

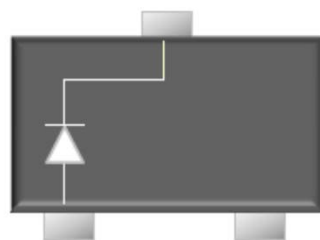
SUGGEST PAD LAYOUT



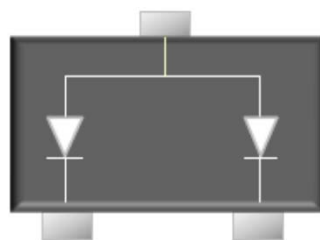
DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
Z	2.8	0.110
X	0.7	0.028
Y	0.9	0.035
C	1.9	0.075
E	1.0	0.039

Small Signal Product

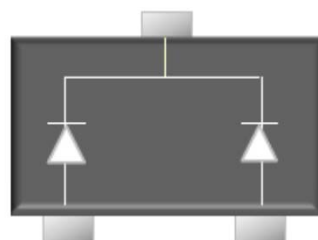
PIN CONFIGURATION



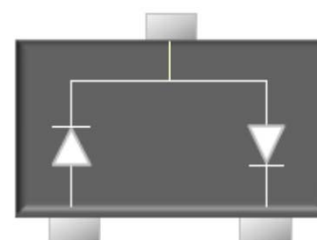
BAS21



BAS21A



BAS21C



BAS21S

MARKING

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

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.