

Small Signal Product

## Surface Mount Fast Switching Diode

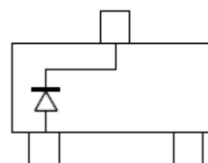
### FEATURES

- Fast switching speed
- Surface mount device type
- High conductance
- For general purpose switching applications
- 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
- BAS19 Marking Code: JP
- BAS20 Marking Code: JR



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)				
PARAMETER	SYMBOL	BAS19	BAS20	UNIT
Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RM</sub>	100	150	V
Average Rectifier Output Current	I <sub>O</sub>	200		mA
Power Dissipation	P <sub>D</sub>	250		mW
Thermal Resistance Junction to Ambient Air	R <sub>θJA</sub>	500		°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150		°C

### Electrical Characteristics

PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage BAS19 I <sub>R</sub> = 100 μA BAS20 I <sub>R</sub> = 100 μA	V <sub>R(BR)</sub>	100	-	V
		150		
Peak Reverse Current BAS19 V <sub>R</sub> = 100 V BAS20 V <sub>R</sub> = 150 V	I <sub>R</sub>	-	0.1	μA
Forward Voltage I <sub>F</sub> = 100 mA I <sub>F</sub> = 200 mA	V <sub>F</sub>	-	1.0	V
			1.25	
Junction Capacitance V <sub>R</sub> = 0 V, f = 1.0 MHz	C <sub>J</sub>	-	5	pF
Reverse Recovery Time I <sub>F</sub> = I <sub>R</sub> = 30 mA, I <sub>RR</sub> = 0.1 × I <sub>R</sub>	t <sub>rr</sub>	-	50.0	ns

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RATINGS AND CHARACTERISTICS CURVES

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

Fig. 1 Forward Characteristics

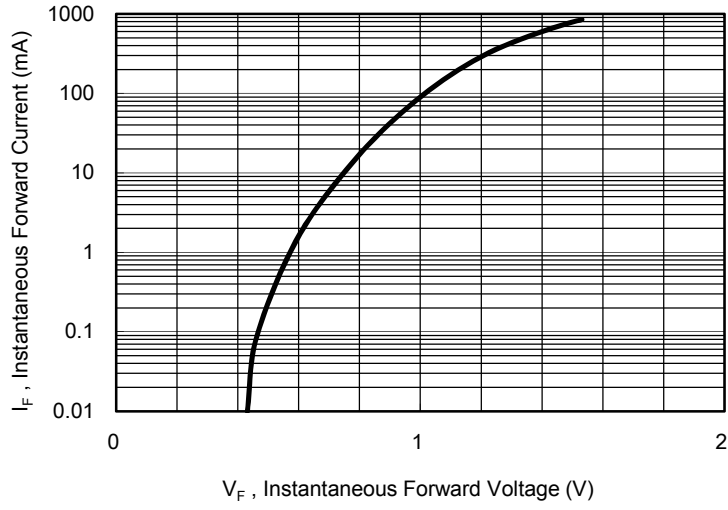
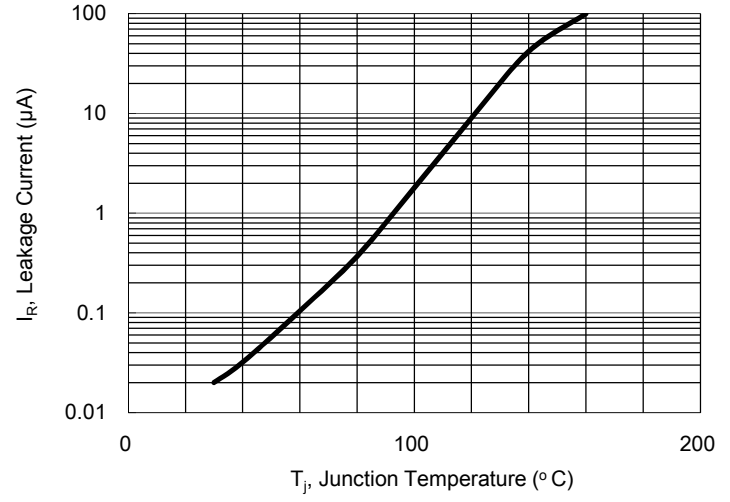


Fig. 2 Leakage Current VS. Junction temperature



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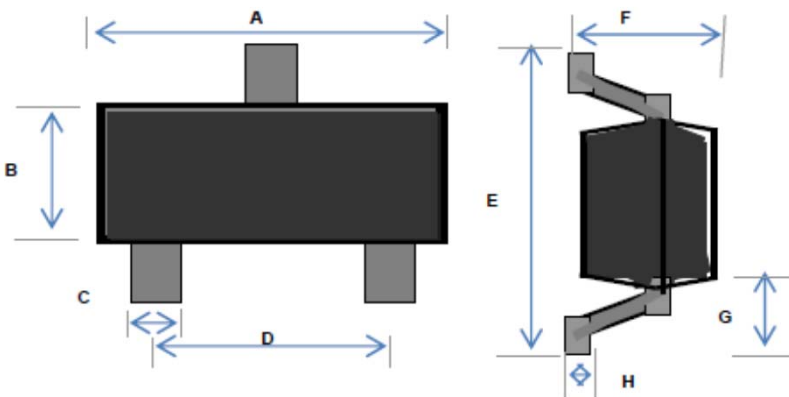
ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX (Note 2)	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
BASxx (Note 1)	-xx	RF R5	G	SOT-23	3K / 7" Reel 10K / 13" Reel

Note 1: "xx" is Device Code from "19" thru "20".

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

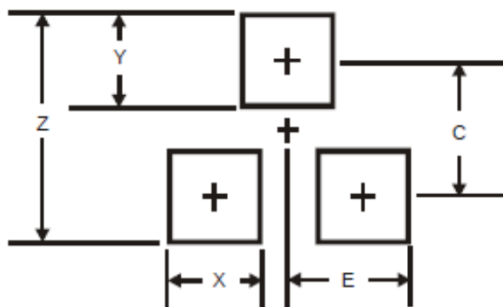
EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
BAS19 RF	BAS19		RF		Multiple manufacture source
BAS19 RFG	BAS19		RF	G	Multiple manufacture source Green compound
BAS19-B0 RFG	BAS19	-B0	RF	G	Defined manufacture source Green compound

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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