

## **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)







# ROHS

#### 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 mgBAS19 Marking Code: JPBAS20 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	$V_{RM}$	100	150	V	
Average Rectifier Output Current	I <sub>o</sub>	200		mA	
Power Dissipation	P <sub>D</sub>	250 r		mW	
Thermal Resistance Junction to Ambient Air	$R_{ heta JA}$	500		°C/W	
Operating and Storage Temperature Range	$T_1, T_{STG}$	-65 to +150		°C	

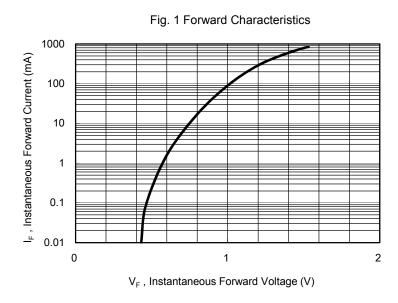
## **Electrical Characteristics**

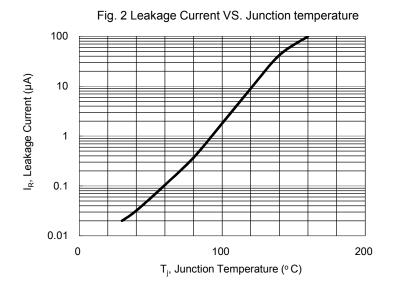
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PARA	SYMBOL	MIN	MAX	UNIT		
Doverse Prockdown Voltage	BAS19 $I_R = 100 \mu A$	W	100	-	V	
Reverse Breakdown Voltage	BAS20 $I_R = 100 \mu A$	$V_{R(BR)}$	150		V	
Dook Doverno Current	BAS19 V <sub>R</sub> = 100 V	I <sub>R</sub>		0.1		
Peak Reverse Current	BAS20 $V_R = 150 V$		-		μA	
Famusard Voltage	I <sub>F</sub> = 100 mA	V <sub>F</sub> -	V		1.0	V
Forward Voltage	$I_F = 200 \text{ mA}$		-	1.25	]	
Junction Capacitance $V_R = 0 \text{ V}$ , $f = 1.0 \text{ MHz}$		CJ	-	5	pF	
Reverse Recovery Time $I_F = I_R = 30 \text{ mA}$ , $I_{RR} = 0.1 \times I_R$		t <sub>rr</sub>	-	50.0	ns	



## RATINGS AND CHARACTERISTICS CURVES

(T<sub>A</sub>=25°C unless otherwise noted)







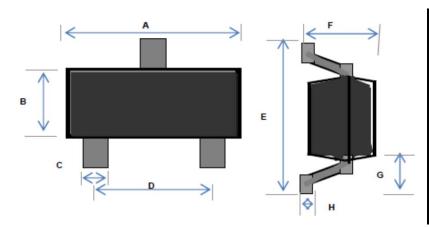
ORDERING INFORMATION						
PART NO.	PART NO.	PACKING	PACKING CODE	DACKACE	PACKING	
	SUFFIX (Note 2)	CODE	SUFFIX	PACKAGE	PACKING	
BASxx	VV	RF	G	RF	SOT-23	3K / 7" Reel
(Note 1)	-XX	R5		301-23	10K / 13" Reel	

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

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

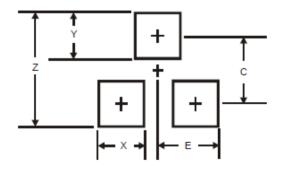
EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
BAS19 RF	BAS19		RF		Multiple manufacture source
BAS19 RFG	BAS19		RF	G	Multiple manufacture source Green compound
BAS19-B0 RFG	BAS19	-B0	RF	G	Defined manufacture source Green compound

#### PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
DIIVI.	Min	Max	Min	Max
Α	2.70	3.10	0.106	0.122
В	1.10	1.50	0.043	0.059
С	0.30	0.51	0.012	0.020
D	1.78	2.04	0.070	0.080
Е	2.10	2.64	0.083	0.104
F	0.89	1.30	0.035	0.051
G	0.55 REF		0.022 REF	
Н	0.10 REF		0.004 REF	

## SUGGEST PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
DIIVI.	Тур.	Тур.
Z	2.8	0.110
Х	0.7	0.028
Υ	0.9	0.035
С	1.9	0.075
E	1.0	0.039





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