

**Small Signal Product**
**SOT-323 100-250V/200mA Switching Diode**
**FEATURES**

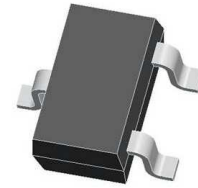
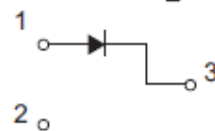
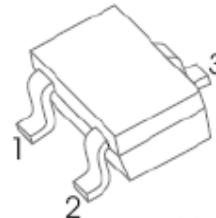
- Fast Switching Speed
- Surface Mounted Device
- Moisture sensitivity level 1
- Pb free and RoHS compliant

**MECHANICAL DATA**

- Case: SOT-323 package
- High temperature soldering guaranteed: 260°C/10s
- Weight: 5mg (approximately)

**APPLICATION**

- General purpose switching application


**SOT-323**


<b>MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</b> ( $T_A=25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	VALUE			UNIT
		BAS19W	BAS20W	BAS21W	
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	150	250	V
DC Blocking Voltage	$V_R$	100	150	250	V
Average Rectified Output Current	$I_O$	200			mA
Power Dissipation	$P_D$	200			mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625			$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	125			$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 55 to + 150			$^\circ\text{C}$

PARAMETER	TEST CONDITION	SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage	at $I_R = 100 \mu\text{A}$	$V_{(BR)}$	BAS19W	100	V
			BAS20W	150	
			BAS21W	250	
Reverse Voltage Leakage Current	at $V_R = 100 \text{ V}$ at $V_R = 150 \text{ V}$ at $V_R = 200 \text{ V}$	$I_R$	BAS19W	--	0.1
			BAS20W	--	
			BAS21W	--	
Forward Voltage	at $I_F = 30 \text{ mA}$ at $I_F = 100 \text{ mA}$	$V_F$		1	V
				1.25	
Diode Capacitance	$V_R=0\text{V}$ , $f=1.0\text{MHz}$	$C_D$	--	5	pF
Reverse Recovery Time	at $I_F=I_R=30\text{mA}$ , $I_{rr}=0.1 \times I_R$	$t_{rr}$	--	50	ns

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**RATINGS AND CHARACTERISTICS CURVES**

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

Fig.1 Typical Forward Characteristics

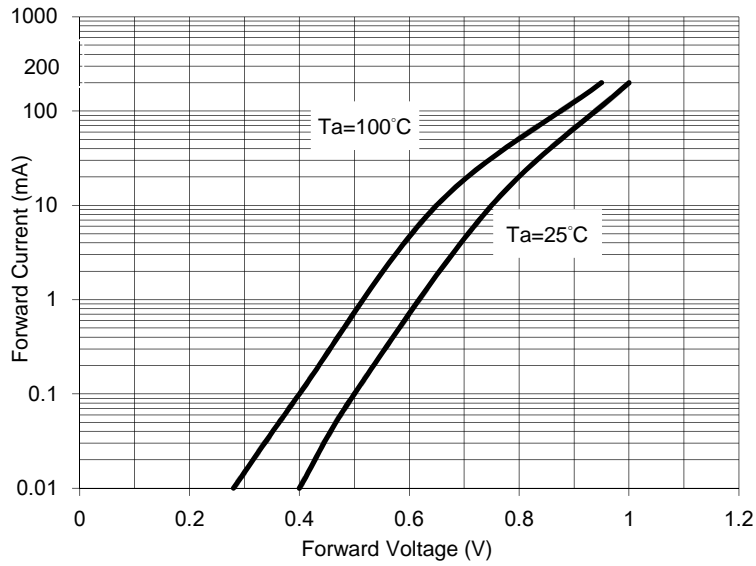


Fig. 2 Typical Reverse Characteristics

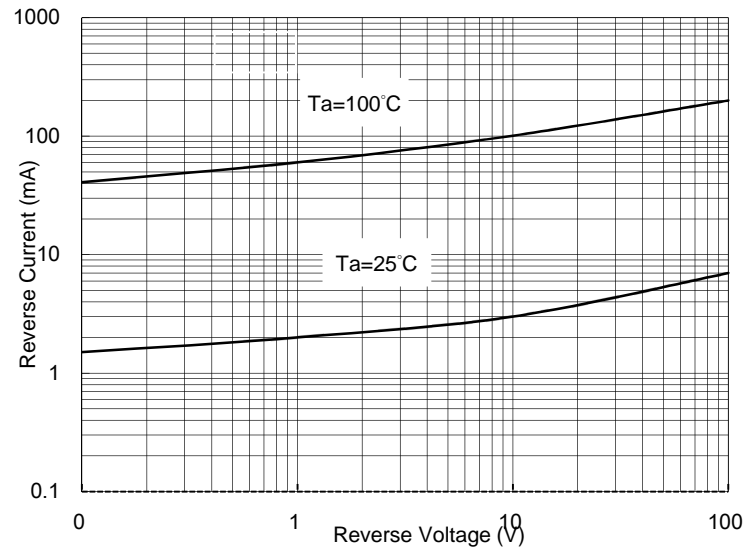


Fig. 3 Power Derating Curve

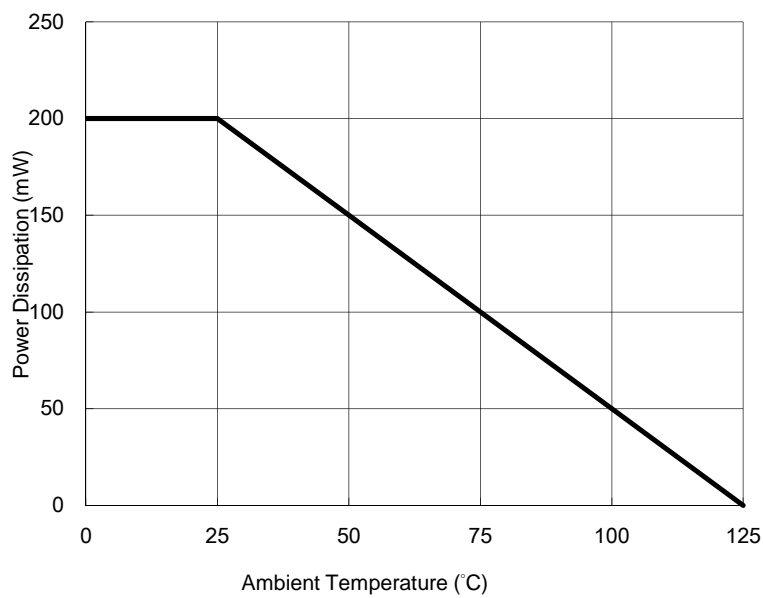
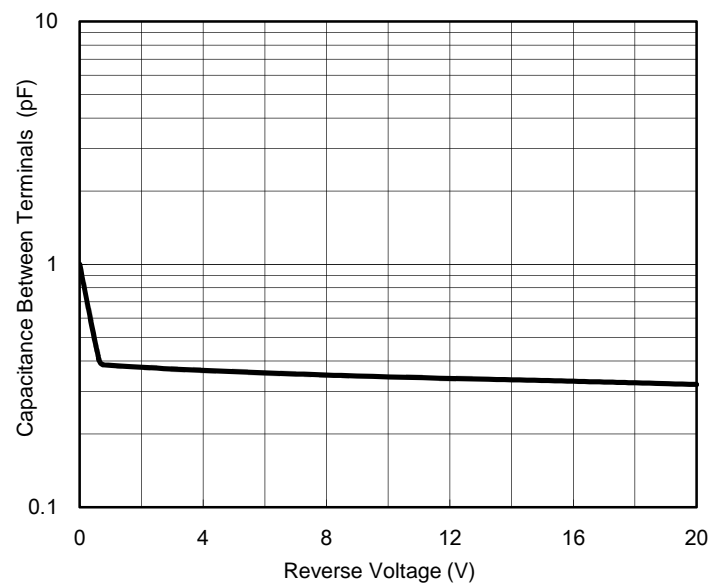


Fig. 4 Typical Capacitance Characteristics



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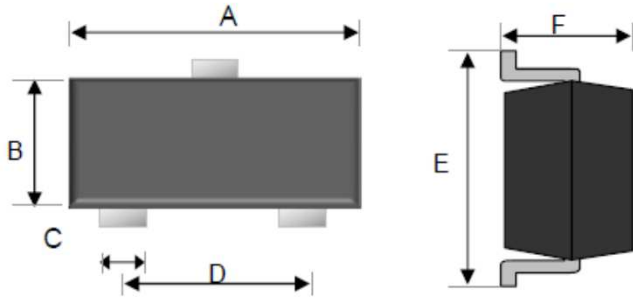
<b>ORDERING INFORMATION</b>						
<b>PART NO.</b>	<b>MANUFACTURE CODE</b>	<b>PACKING CODE</b>	<b>GREEN COMPOUND CODE</b>	<b>PACKAGE</b>	<b>PACKING</b>	<b>MARKING</b>
BAS19W	(Note)	RV	G	SOT-323	3K / 7" Reel	KA8
BAS20W		RV	G	SOT-323	3K / 7" Reel	KT2
BAS21W		RV	G	SOT-323	3K / 7" Reel	KT3

Note: Indicator of manufacturing site for manufacture special control, if empty means no special control requirement

<b>EXAMPLE</b>					
<b>PREFERRED P/N</b>	<b>PART NO.</b>	<b>MANUFACTURE CODE</b>	<b>PACKING CODE</b>	<b>GREEN COMPOUND CODE</b>	<b>DESCRIPTION</b>
BAS19W RVG	BAS19W		RV	G	Green compound
BAS19W-M0 RVG	BAS19W	M0	RV	G	Green compound

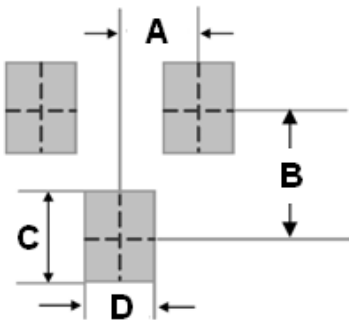
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**PACKAGE OUTLINE DIMENSIONS**  
**SOT-323**



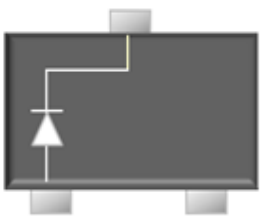
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.80	2.20	0.07	0.09
B	1.15	1.35	0.05	0.05
C	0.15	0.40	0.01	0.02
D	1.20	1.40	0.05	0.06
E	2.00	2.45	0.08	0.10
F	0.80	1.10	0.03	0.04

**SUGGESTED PAD LAYOUT**



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
A	0.65	0.026
B	1.60	0.063
C	0.80	0.031
D	0.80	0.031

**PIN CONFIGURATION**



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