

Small Signal Product

## High Voltage Fast Switching Diode

### FEATURES

- Fast switching device( $t_{rr}<50ns$ )
- Surface mount device type
- Moisture sensitivity level 1
- Low reverse leakage
- Pb free and RoHS compliant
- Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code


**SOD-123**


### MECHANICAL DATA

- Case: Bend lead SOD-123 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
- Polarity: Indicated by cathode band
- Weight: 10.5 ± 0.5 mg



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)					
PARAMETER	SYMBOL	VALUE			UNIT
		BAV19W-G	BAV20W-G	BAV21W-G	
Reverse voltage	V <sub>R</sub>	100	150	200	V
Peak reverse voltage	V <sub>RM</sub>	120	200	250	V
Power dissipation	P <sub>D</sub>	500			mW
Average rectified output current	I <sub>O</sub>	200			mA
Repetitive peak forward current	I <sub>FM</sub>	400			mA
Non-repetitive peak forward surge current @ tp=1.0ms; T <sub>A</sub> =25°C	I <sub>FSM</sub>	2.5			A
Thermal Resistance (Junction to Ambient)	R <sub>θJA</sub>	250			°C/W
Junction and Storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150			°C

PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse voltage	V <sub>BR</sub>	120	-	V
		200	-	
		250	-	
Reverse leakage current	I <sub>R</sub>	-	0.1	μA
		-		
		-		
Forward voltage	V <sub>F</sub>	-	1.00	V
		-	1.25	
Junction capacitance	C <sub>j</sub>	-	5.0	pF
Reverse Recovery Time	t <sub>rr</sub>	-	50	ns

 Note: Test condition: I<sub>F</sub>= I<sub>R</sub>= 30mA , R<sub>L</sub>=100Ω , I<sub>RR</sub>=3mA

Small Signal Product

**RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)

Fig.1 Typical Forward Characteristics

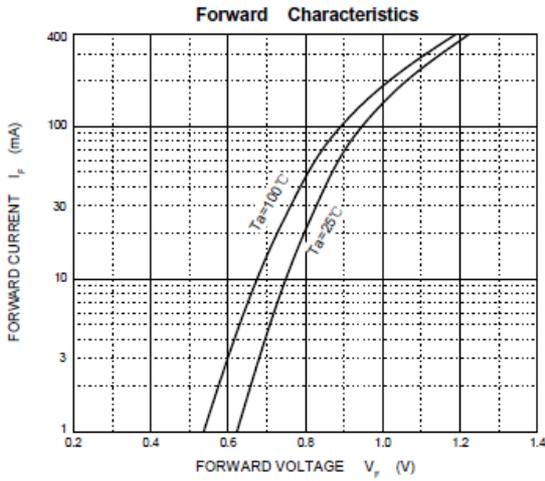


Fig. 2 Reverse Current VS. Reverse Voltage

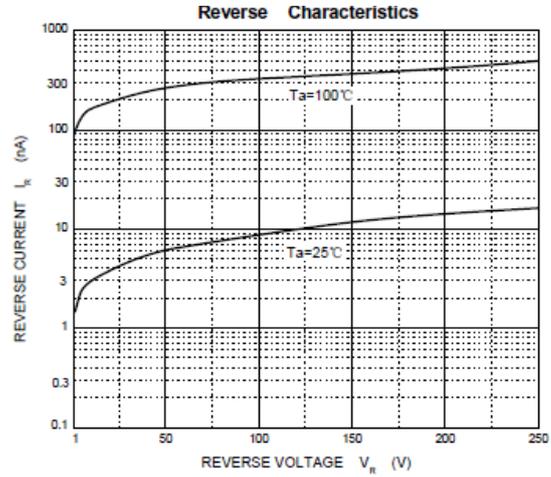


Fig. 3 Admissible Power Dissipation Curve

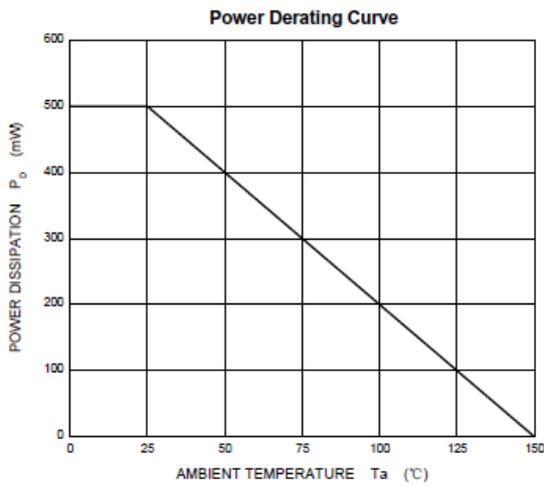
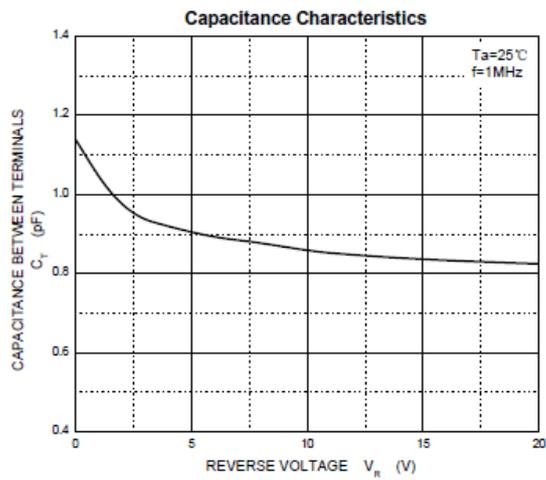


Fig. 4 Typical Capacitance Characteristics



Small Signal Product

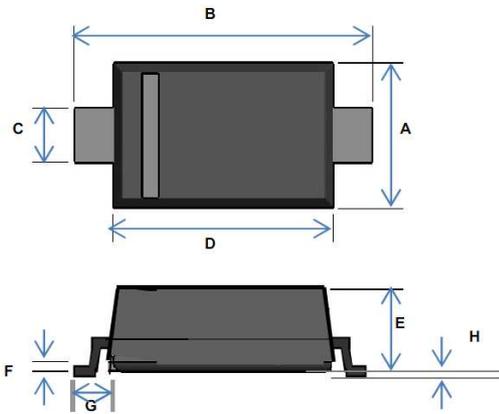
<b>ORDERING INFORMATION</b>						
<b>PART NO.</b>	<b>MANUFACTURE CODE</b>	<b>PACKING CODE</b>	<b>GREEN COMPOUND CODE</b>	<b>PACKAGE</b>	<b>PACKING</b>	<b>MARKING</b>
BAV19W-G	(Note 2)	RB	G	SOD-123	3K / 7" Reel	A8
BAV20W-G						T2
BAV21W-G						T3

Note: 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</b>	<b>DESCRIPTION</b>
BAV19W-G RB	BAV19W-G		RB		
BAV19W-G RBG	BAV19W-G		RB	G	Green compound
BAV19W-G-N0 RB	BAV19W-G	N0	RB		
BAV19W-G-N0 RBG	BAV19W-G	N0	RB	G	Green compound

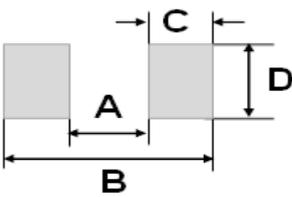
Small Signal Product

**DIMENSIONS**



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.4	1.8	0.055	0.071
B	3.55	3.85	0.140	0.152
C	0.45	0.7	0.018	0.028
D	2.55	2.85	0.100	0.112
E	0.95	1.35	0.037	0.053
F	0.05	0.15	0.002	0.006
G	0.5 REF		0.02 REF	
H	-	0.1	-	0.004

**SUGGESTED PAD LAYOUT**



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
A	2.36	0.093
B	4.19	0.165
C	0.91	0.036
D	1.22	0.048

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