

Small Signal Product

## High Voltage Fast Switching Diode

**FEATURES**

- Fast switching device( $t_{rr}<50\text{ns}$ )
- Surface mount device type
- Moisture sensitivity level 1
- Low reverse leakage
- Pb free and RoHS compliant
- Packing code with suffix "G" means green compound (halogen-free)


**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



<b>MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</b> ( $T_A=25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	VALUE			UNIT
		BAV19W-G	BAV20W-G	BAV21W-G	
Reverse voltage	$V_R$	100	150	200	V
Peak reverse voltage	$V_{RM}$	120	200	250	V
Power dissipation	$P_D$	500			mW
Average rectified output current	$I_O$	200			mA
Repetitive peak forward current	$I_{FM}$	400			mA
Non-repetitive peak forward surge current @ $t_p=1.0\text{ms}$ ; $T_A=25^\circ\text{C}$	$I_{FSM}$	2.5			A
Thermal Resistance (Junction to Ambient)	$R_{\theta JA}$	250			$^\circ\text{C/W}$
Junction and Storage temperature range	$T_J, T_{STG}$	-65 to +150			$^\circ\text{C}$

PARAMETER	SYMBOL	MIN	MAX	UNIT		
Reverse voltage	BAV19W-G BAV20W-G BAV21W-G	$I_R=100\mu\text{A}$	$V_{BR}$	120	-	V
				200	-	
				250	-	
Reverse leakage current	BAV19W-G BAV20W-G BAV21W-G	$V_R=100\text{V}$ $V_R=150\text{V}$ $V_R=200\text{V}$	$I_R$	-	0.1	$\mu\text{A}$
				-		
				-		
Forward voltage	$I_F = 100\text{ mA}$ $I_F = 200\text{ mA}$	$V_F$	-	1.00	V	
			-	1.25		
Junction capacitance	$V_R = 0, f = 1.0\text{ MHz}$	$C_J$	-	5.0	pF	
Reverse Recovery Time	(Note)	$t_{rr}$	-	50	ns	

 Note: Test condition:  $I_F=I_R=30\text{mA}$ ,  $R_L=100\Omega$ ,  $I_{RR}=3\text{mA}$

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**RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)

Fig.1 Typical Forward Characteristics

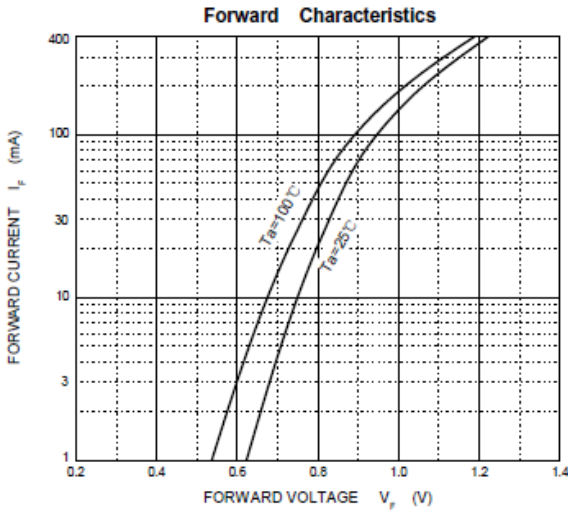


Fig. 2 Reverse Current VS. Reverse Voltage

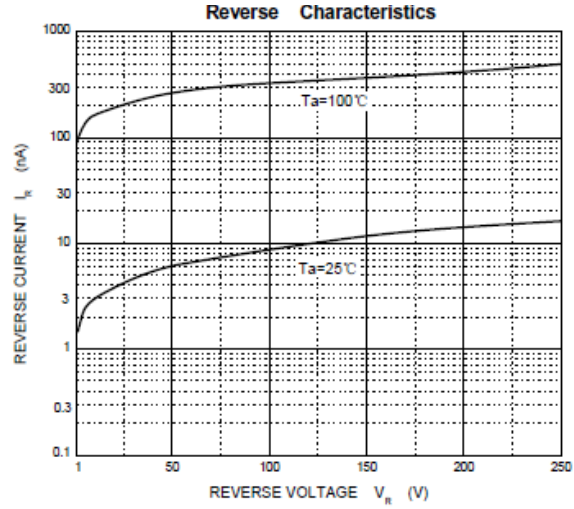


Fig. 3 Admissible Power Dissipation Curve

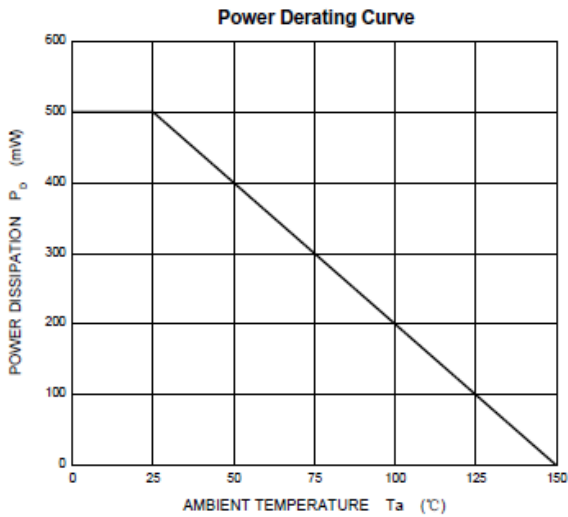
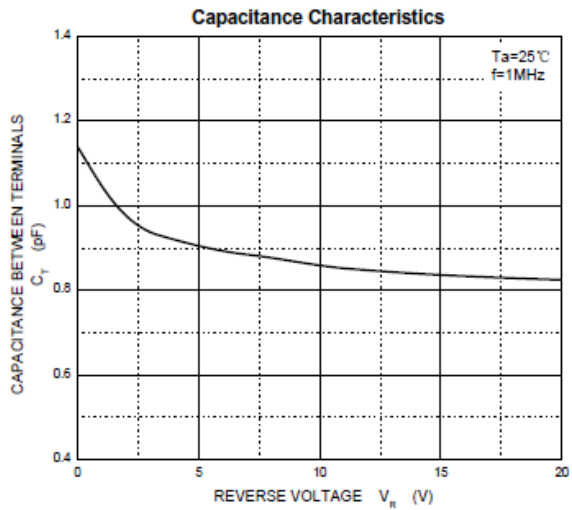


Fig. 4 Typical Capacitance Characteristics



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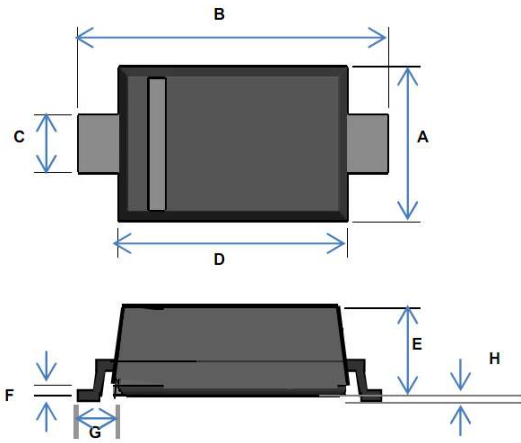
<b>ORDERING INFORMATION</b>						
<b>PART NO.</b>	<b>MANUFACTURE CODE</b>	<b>PACKING CODE</b>	<b>GREEN COMPOUND CODE</b>	<b>PACKAGE</b>	<b>PACKING</b>	<b>MARKING</b>
BAV19W-G	(Note 2)	RH	G	SOD-123	3K / 7" Reel	A8
BAV20W-G						T2
BAV21W-G						T3

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 RH	BAV19W-G		RH		
BAV19W-G RHG				G	Green compound
BAV19W-G-N0 RH		N0			
BAV19W-G-N0 RHG		N0		G	Green compound

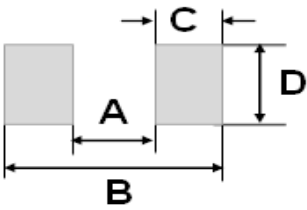
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**DIMENSIONS**



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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