

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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ 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	V_{BR}	120	-	V
	BAV20W-G		200	-	
	BAV21W-G		250	-	
Reverse leakage current	BAV19W-G $V_R=100\text{V}$	I_R	-	0.1	μA
	BAV20W-G $V_R=150\text{V}$		-		
	BAV21W-G $V_R=200\text{V}$		-		
Forward voltage	$I_F = 100\text{ mA}$	V_F	-	1.00	V
	$I_F = 200\text{ mA}$		-	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: $I_F = I_R = 30\text{mA}$, $R_L = 100\Omega$, $I_{RR} = 3\text{mA}$

Small Signal Product

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

Fig.1 Typical Forward Characteristics

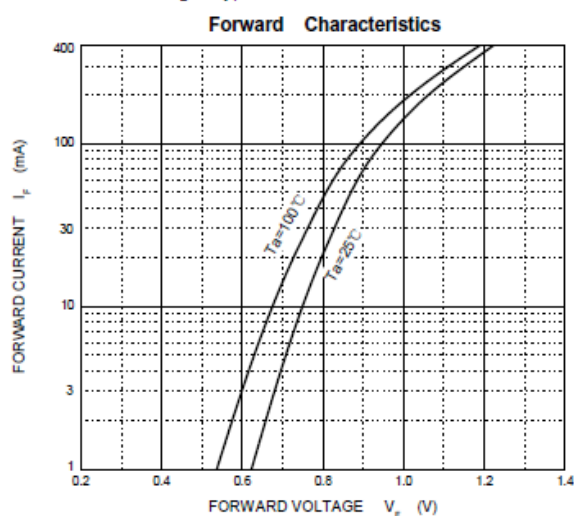


Fig. 2 Reverse Current VS. Reverse Voltage

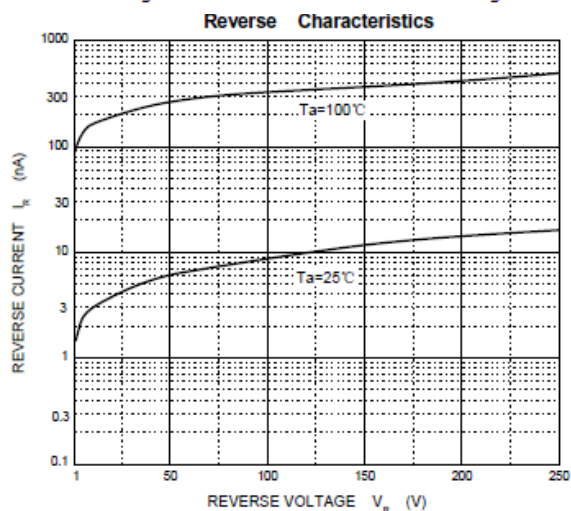


Fig. 3 Admissible Power Dissipation Curve

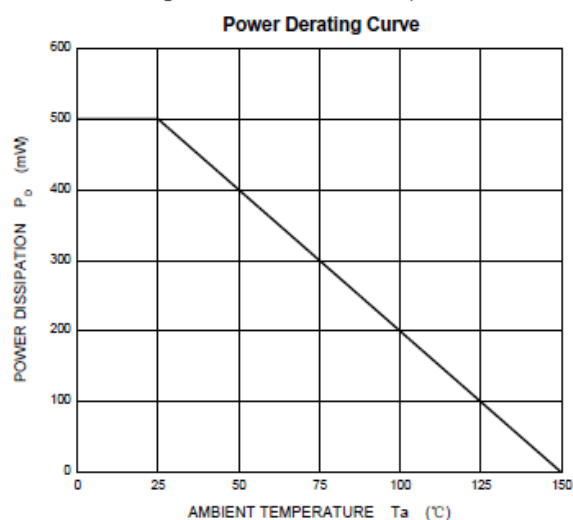
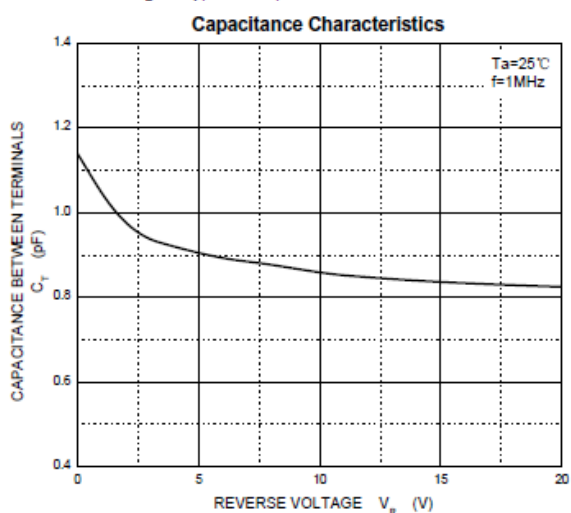


Fig. 4 Typical Capacitance Characteristics



Small Signal Product

ORDERING INFORMATION

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

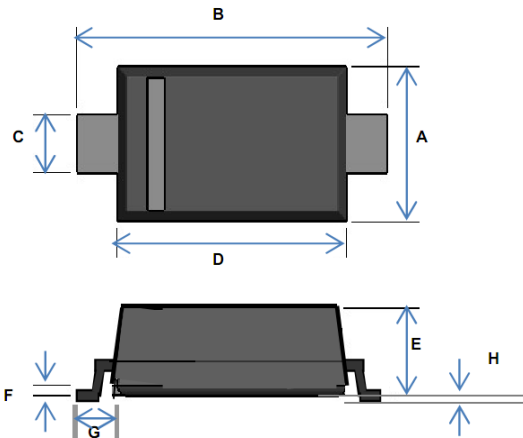
Note: Manufacture special control, if empty means no special control requirement.

EXAMPLE

PREFERRED P/N	PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND	DESCRIPTION
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

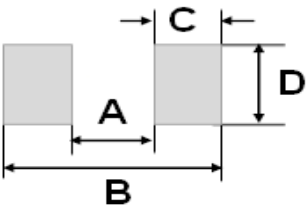
Small Signal Product

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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