

Small Signal Product

410mW High Voltage SMD Switching Diode

FEATURES

- These diodes are also available in DO-35, LL34 Package
- Surface Mount Device Type
- Moisture sensitivity level 1
- Matte Tin (Sn) lead finish with Nickel (Ni) underplate
- Pb free version and RoHS compliant
- Packing code with suffix "G" means green compound (halogen-free)



SOD-123F



MECHANICAL DATA

- Case: Flat lead SOD-123F 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: 4.85 ± 0.5mg



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	P _D	410	mW
Repetitive Peak Reverse Voltage	V _{RRM}	250	V
Repetitive Peak Forward Current	I _{FRM}	625	mA
Mean Forward Current	I _O	200	mA
Non-Repetitive Peak Forward Surge Current Pulse Width = 1 μs Pulse Width = 1 s	I _{FSM}	4	A
		1	
Thermal Resistance (Junction to Ambient)	R _{θJA}	375	°C/W
Junction and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	V _(BR)	BAV19W 120	-	V
		BAV20W 200	-	
		BAV21W 250	-	
Forward Voltage	V _F	I _F = 100 mA -	1	V
		I _F = 200 mA -	1.25	
Reverse Leakage Current (Note 2)	I _R	BAV19W -	100	nA
		BAV20W		
		BAV21W		
Junction Capacitance	C _J	-	5	pF
Reverse Recovery Time (Note 3)	t _{rr}	-	50	ns

Note 1 : Test condition : I_R= 100μA

Note 2 : Test condition : BAV19W @ V_R=100V, BAV20W @ V_R=150V, BAV21W @ V_R=200V

Note 3 : Test condition : I_F= I_R= 30mA , R_L=100Ω , I_{rr}=3mA

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RATINGS AND CHARACTERISTICS CURVES

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

Fig. 1 Admissible Power Dissipation Curve

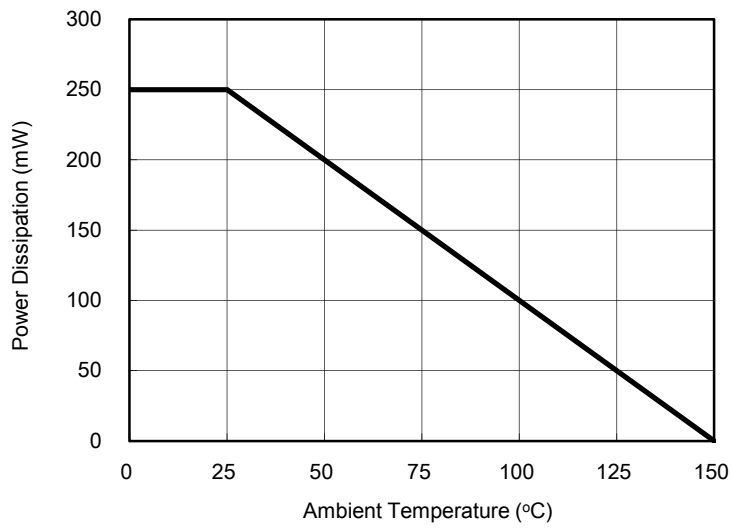


Fig. 2 Typical Forward Characteristics

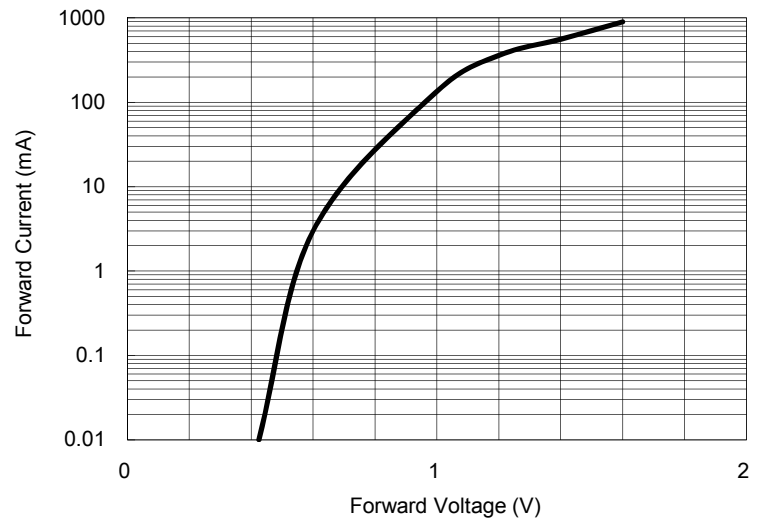
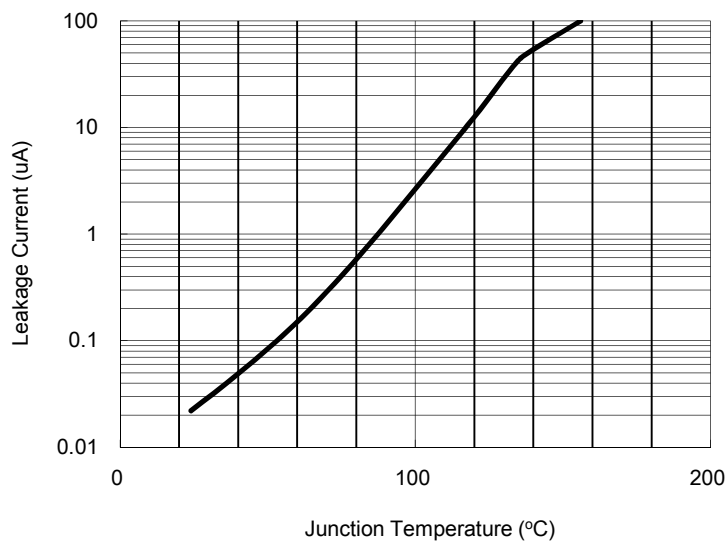


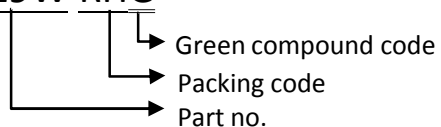
Fig. 3 Leakage Current VS. Junction Temperature



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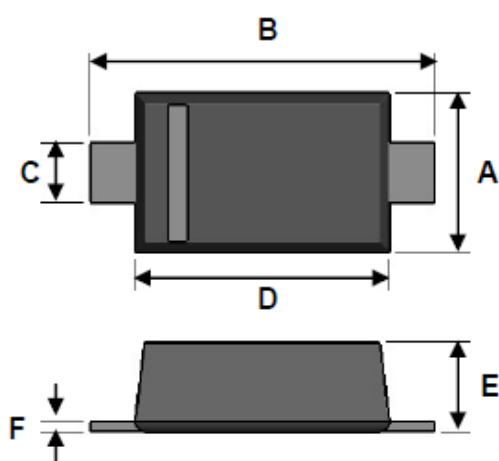
ORDER INFORMATION (EXAMPLE)

BAV19W RHG



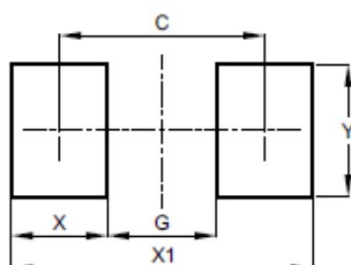
PACKAGE OUTLINE DIMENSIONS

SOD-123F



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.50	1.70	0.059	0.067
B	3.30	3.90	0.130	0.154
C	0.50	0.70	0.020	0.028
D	2.50	2.70	0.098	0.106
E	0.80	1.15	0.031	0.045
F	0.05	0.20	0.002	0.008

SUGGEST PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
C	2.86	0.113
G	1.52	0.060
X	1.34	0.053
X1	4.20	0.165
Y	1.80	0.071

MARKING CODE

Part no.	Marking
BAV19W	H1
BAV20W	H2
BAV21W	H3

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