

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

Small Signal Product

RATINGS AND CHARACTERISTICS CURVES

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

Fig. 1 Admissible Power Dissipation Curve

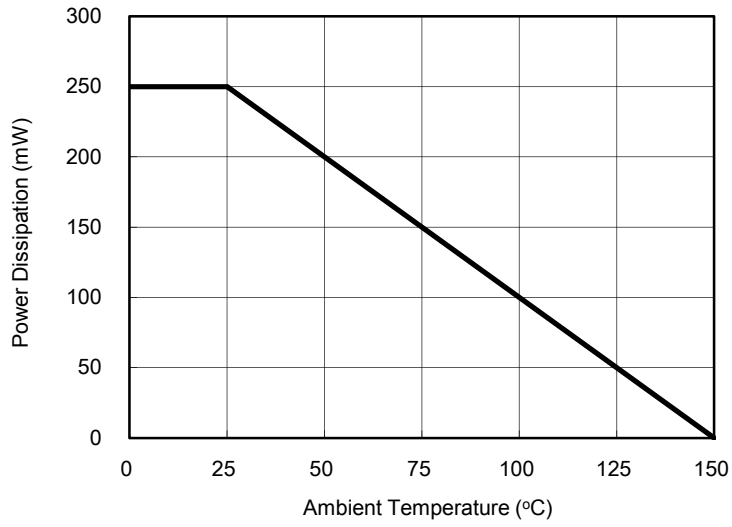


Fig. 2 Typical Forward Characteristics

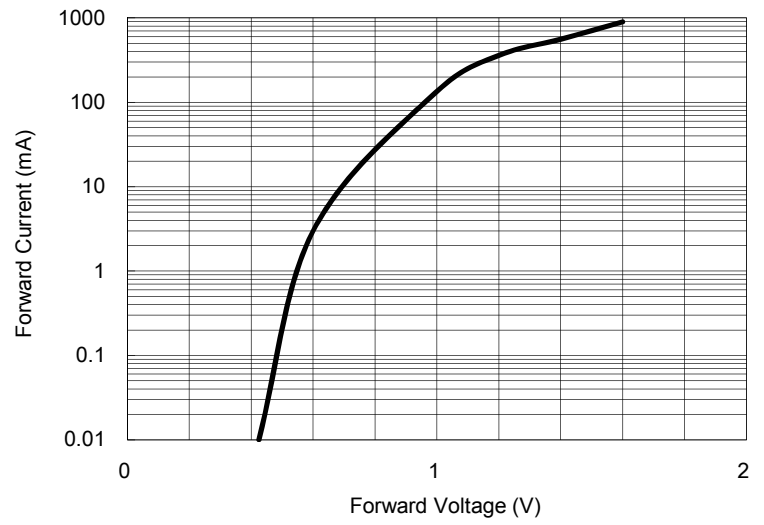
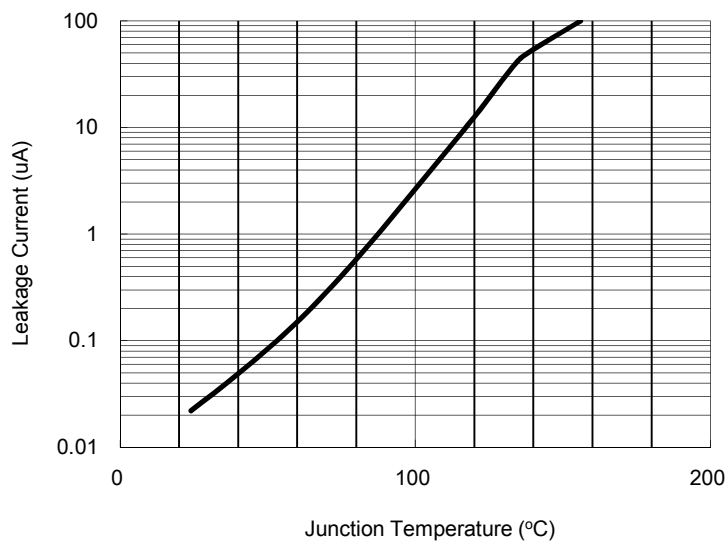


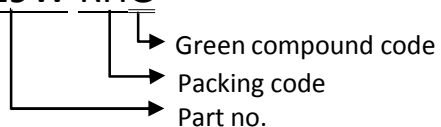
Fig. 3 Leakage Current VS. Junction Temperature



Small Signal Product

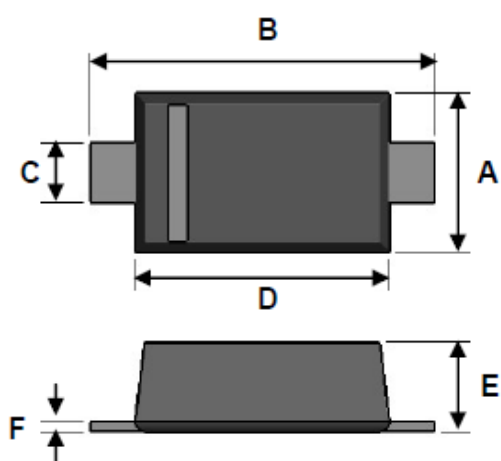
ORDER INFORMATION (EXAMPLE)

BAV19W RHG



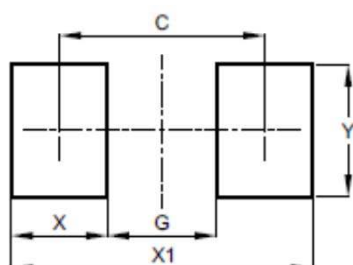
PACKAGE OUTLINE DIMENSIONS

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

Small Signal Product

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.