Small Signal Product

200mW, 120V - 250V High Voltage SMD Switching Diode

FEATURES

- Surface mount device type
- Moisture sensitivity level 1
- Matte tin (Sn) lead finish
- Pb free version and RoHS compliant
- Packing code with suffix "G" means green compound (halogen-free)

SOD-323F

Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

- Case: Flat lead SOD-323F 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: 4.5 ± 0.5 mg

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER		SYMBOL	VALUE	UNIT
Power Dissipation		P_D	200	mW
Repetitive Peak Reverse Voltage	BAV19WS	V_{RRM}	120	V
	BAV20WS		200	
	BAV21WS		250	
Average Rectified Forward Current		$I_{F(AV)}$	200	mA
Non-Repetitive Peak Forward Surge Current	Pulse Width = 1 μs	I_{FSM}	2.5	A
	Pulse Width = 1 s		0.5	
Junction and Storage Temperature Range		T_J , T_{STG}	-65 to 150	°C

PARAMETER		SYMBOL	MIN	MAX	UNIT
Breakdown Voltage (Note 1)	BAV19WS	V_R	120	-	V
	BAV20WS		200	-	
	BAV21WS		250	-	
Forward Voltage	I_F=100mA	V_F	-	1.00	V
	I_F=200mA		-	1.25	
Reverse Leakage Current (Note 2)	BAV19WS	I_R	-	100	nA
	BAV20WS				
	BAV21WS				
Junction Capacitance	V_R=0, f=1.0MHz	C_J	-	5	pF
Reverse Recovery Time (Note 3)		t_{rr}	-	50	ns

Note 1: Test condition : I_R= 100μA

Note 2: Test condition : BAV19WS @ V_R=100V, BAV20WS @ V_R=150V, BAV21WS @ V_R=200V

Note 3: Test condition : I_F= I_R= 30mA , R_L=100Ω , Irr=3mA

Small Signal Product

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

Fig. 1 Typical Forward Characteristics

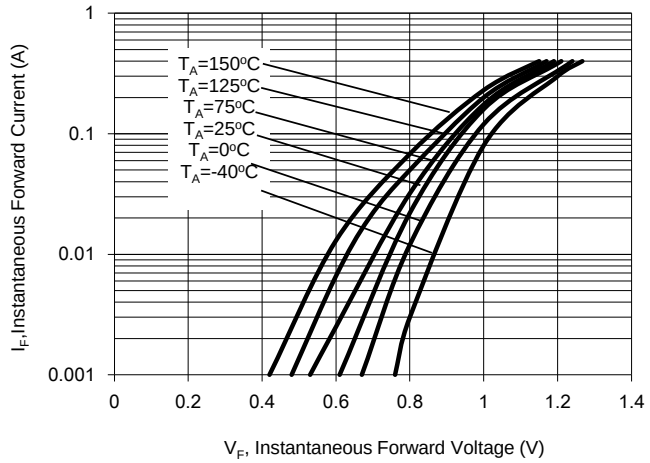


Fig. 2 Typical Reverse Characteristics

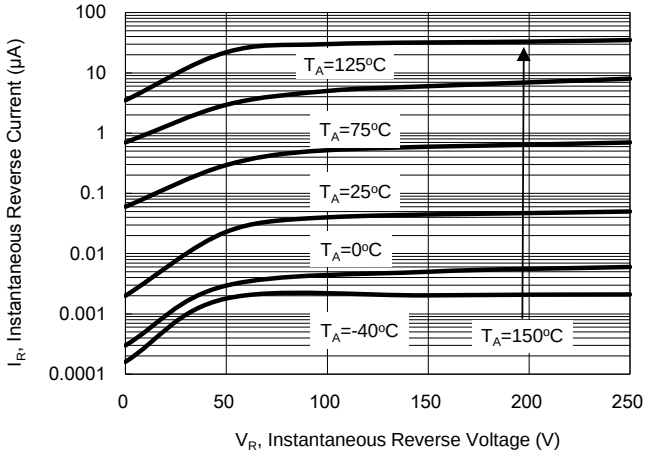


Fig. 3 Typical Capacitance VS. Reverse Voltage

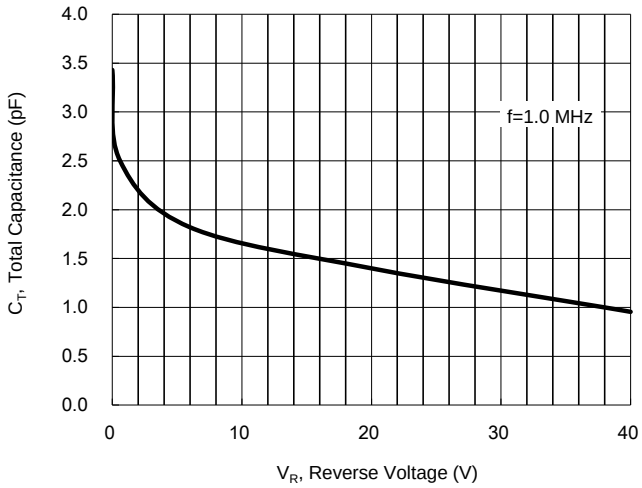
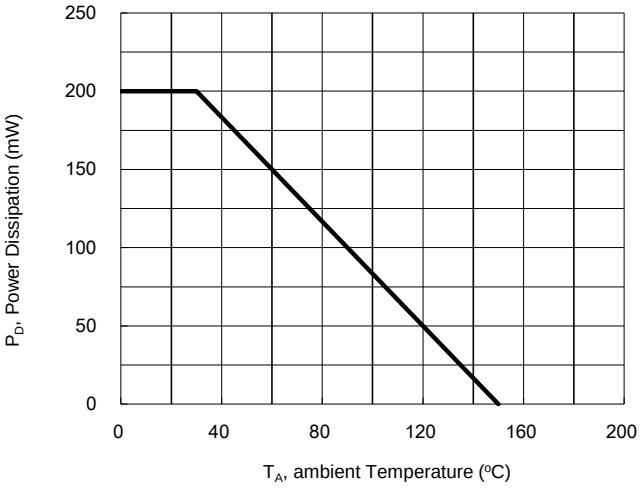


Fig. 4 Power Derating Curve



Small Signal Product

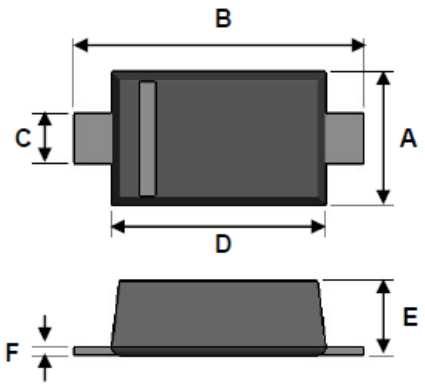
ORDERING INFORMATION				
PART NO.	**PACKING CODE**	**PACKING CODE SUFFIX**	**PACKAGE**	**PACKING**
BAVxxWS (Note 1)	RR	G	SOD-323F	3K / 7" Reel

Note 1 : "xx" is Device Code from "BAV19WS" to "BAV21WS".

EXAMPLE				
PREFERRED P/N	**PART NO.**	**PACKING CODE**	**PACKING CODE SUFFIX**	**DESCRIPTION**
BAV19WS RRG	BAV19WS	RR	G	Green compound

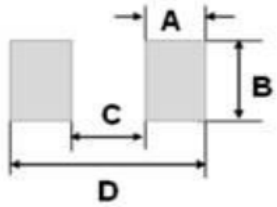
DIMENSIONS

SOD-323F



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.15	1.35	0.045	0.053
B	2.30	2.80	0.091	0.110
C	0.25	0.40	0.010	0.016
D	1.60	1.80	0.063	0.071
E	0.80	1.10	0.031	0.043
F	0.05	0.25	0.002	0.010

SUGGESTED PAD LAYOUT



DIM.	Unit(mm)	Unit(inch)
	Typ.	Typ.
A	0.630	0.025
B	0.830	0.033
C	1.600	0.063
D	2.860	0.113

Note: 1. The suggested land pattern dimensions have been provided for refernece only, as actual pad layouts may vary depending on application.

MARKING

Part No.	Marking
BAV19WS	S5
BAV20WS	S6
BAV21WS	S7

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.