

Small Signal Product

200mA, 120V - 250V Switching Diodes

FEATURES

- Fast Switching Speed
- Surface Mount Package Ideally Suited For Automatic Insertion
- High Conductance
- Packing code with suffix "G" means green compound (halogen-free)
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21


SOD-323


APPLICATION

Surface mount fast switching diode
General purpose small signal switching



MECHANICAL DATA

- Case: SOD-323 small outline plastic package
- Moisture sensitivity level 1
- Polarity: Indicated by cathode band
- Weight: 4.36 ± 0.5 mg

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)					
PARAMETER	SYMBOL	BAV19WS-G	BAV20WS-G	BAV21WS-G	UNIT
Average Rectified Output Current	I _O	200			mA
Repetitive Peak Reverse Voltage	V _{RRM}	120	200	250	V
DC Reverse Voltage	V _R	100	150	200	V
Non-Repetitive Peak Forward Surge Current Pulse Width = 1 μs	I _{FSM}	2.5			A
Surge Current Pulse Width = 1 s		0.5			
Repetitive Peak Forward Surge Current	I _{FRM}	625			mA
Power Dissipation	P _D	200			mW
Thermal Resistance Junction to Ambient	R _{θJA}	625			°C/W
Junction and Storage Temperature Range	T _J , T _{STG}	-65 to 150			°C

PARAMETER	SYMBOL	MIN	MAX	UNIT
Breakdown Voltage (Note 1)	V _{(BR)R}	120	-	V
BAV19WS-G		200	-	
BAV20WS-G		250	-	
Forward Voltage	V _F	-	1.00	V
I _F =100mA		-	1.25	
I _F =200mA				
Reverse Leakage Current (Note 2)	I _R	-	100	nA
BAV19WS-G				
BAV20WS-G				
BAV21WS-G				
Junction Capacitance	C _J	-	5	pF
V _R =0, f=1.0MHz				
Reverse Recovery Time (Note 3)	t _{rr}	-	50	ns

Note 1: Test condition : I_R= 100μA

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

Note 3: Test condition : I_F= I_R= 30mA , R_L=100Ω , I_{rr}=0.1xI_R

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RATINGS AND CHARACTERISTICS CURVES

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

Fig. 1 Typical Forward Characteristics

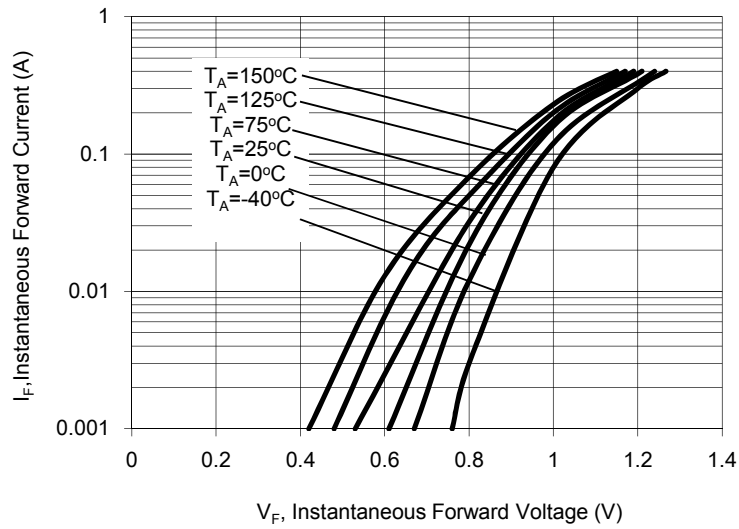


Fig. 2 Typical Reverse Characteristics

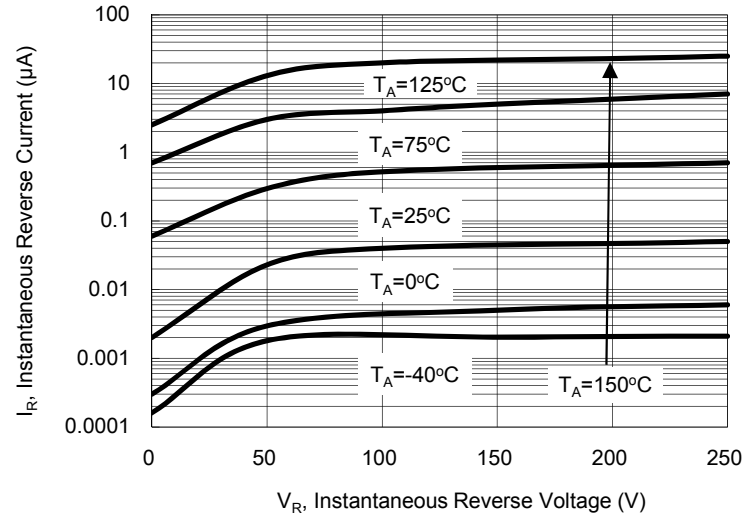


Fig. 3 Typical Capacitance VS. Reverse Voltage

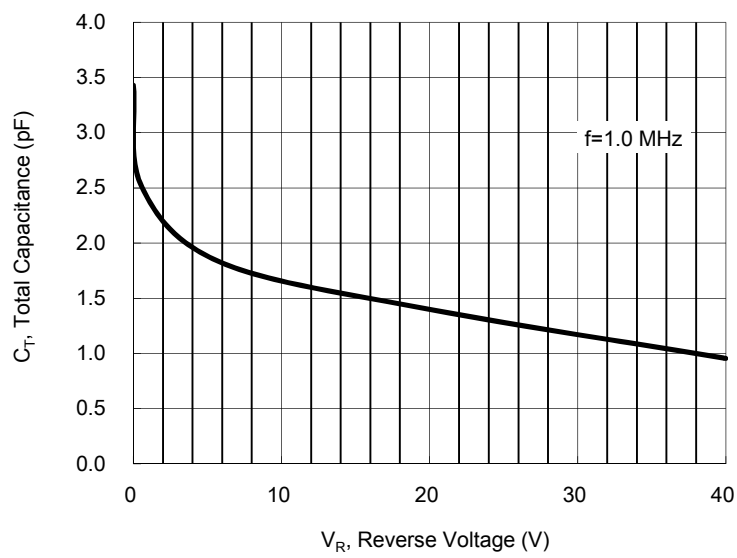
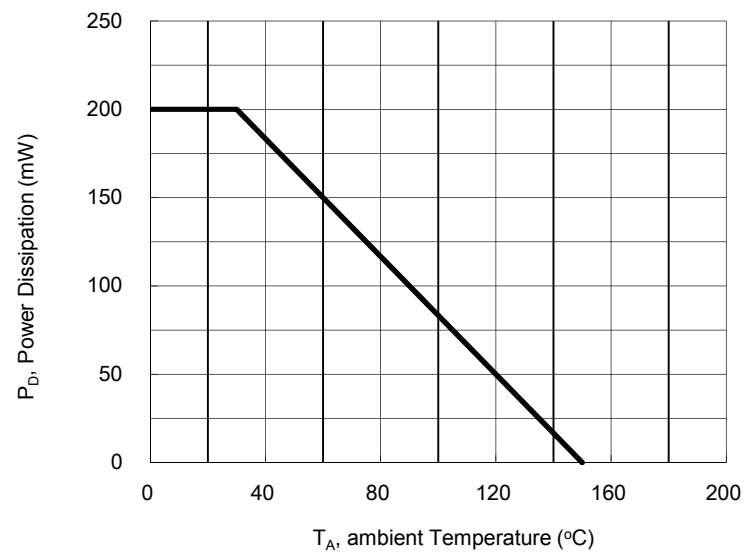


Fig. 4 Power Derating Curve



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ORDERING INFORMATION

PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
BAVxxWS-G (Note 1, 2)	RR	G	SOD-323	3K / 7" Reel

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

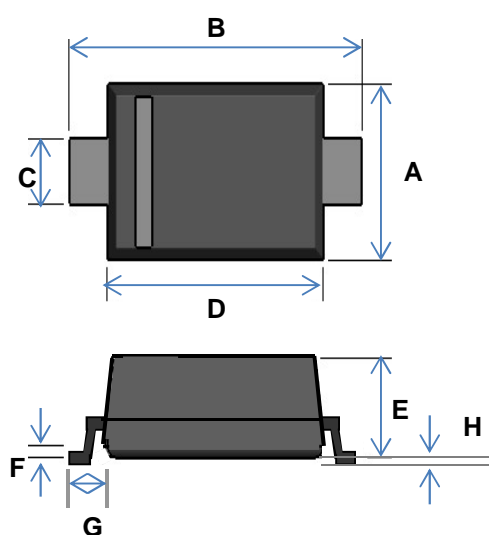
Note 2: Whole series with green compound

EXAMPLE

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

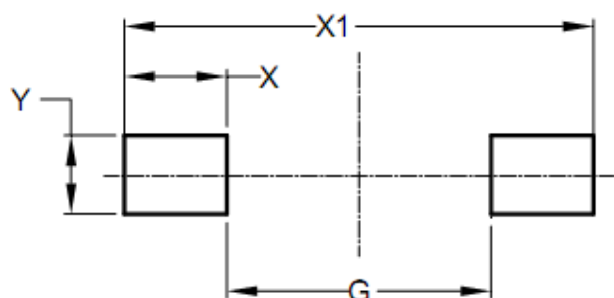
DIMENSIONS

SOD-323



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.150	1.400	0.045	0.055
B	2.300	2.700	0.091	0.106
C	0.250	0.450	0.010	0.018
D	1.600	1.800	0.063	0.071
E	0.800	1.000	0.031	0.039
F	0.050	0.177	0.002	0.007
G	0.475 REF		0.019 REF	
H	-	0.100	-	0.004

SUGGESTED PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
G	1.600	0.063
X	0.630	0.025
X1	2.850	0.112
Y	0.830	0.033

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

MARKING

Part No.	Marking
BAV19WS-G	A8
BAV20WS-G	T2
BAV21WS-G	T3

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