

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 ($T_A=25^\circ\text{C}$ 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	I_{FSM}		2.5		A
Pulse Width = 1 μs			0.5		
Pulse Width = 1 s					
Repetitive Peak Forward Surge Current	I_{FRM}		625		mA
Power Dissipation	P_D	200			mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$		625		$^\circ\text{C}/\text{W}$
Junction and Storage Temperature Range	T_J, T_{STG}		-65 to 150		$^\circ\text{C}$

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

Note 1: Test condition : $I_R = 100\mu\text{A}$

Note 2: Test condition : BAV19WS-G @ $V_R=100\text{V}$, BAV20WS-G @ $V_R=150\text{V}$, BAV21WS-G @ $V_R=200\text{V}$

Note 3: Test condition : $I_F = I_R = 30\text{mA}$, $R_L = 100\Omega$, $I_{rr} = 0.1 \times I_R$

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RATINGS AND CHARACTERISTICS CURVES

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

Fig. 1 Typical Forward Characteristics

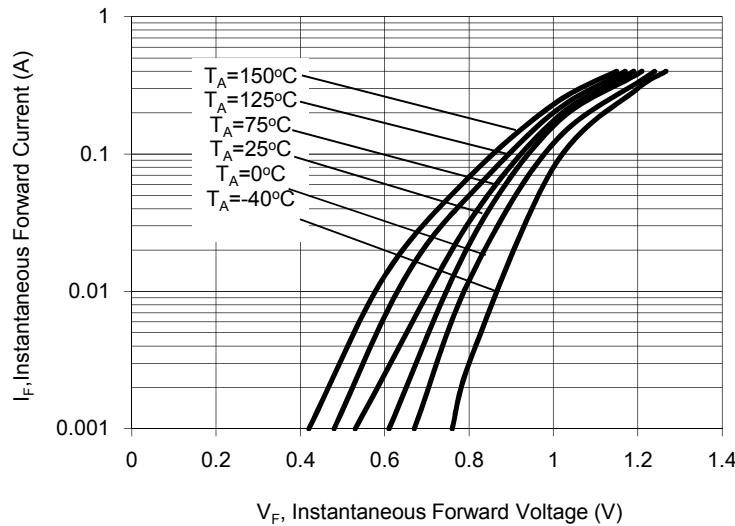


Fig. 2 Typical Reverse Characteristics

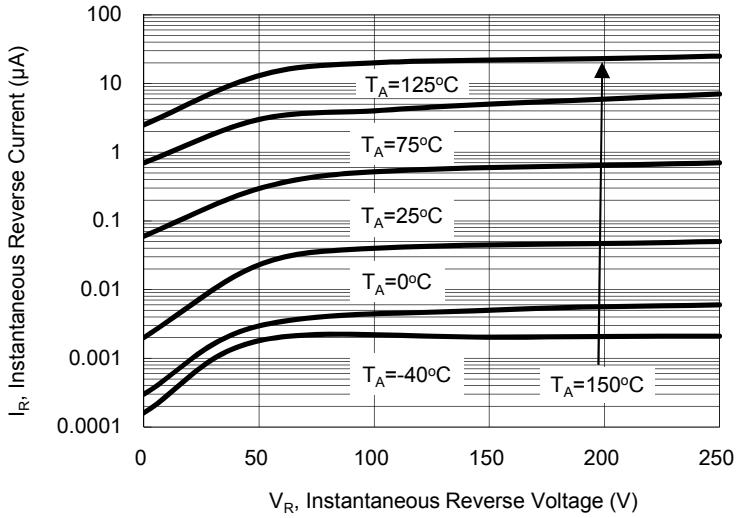


Fig. 3 Typical Capacitance VS. Reverse Voltage

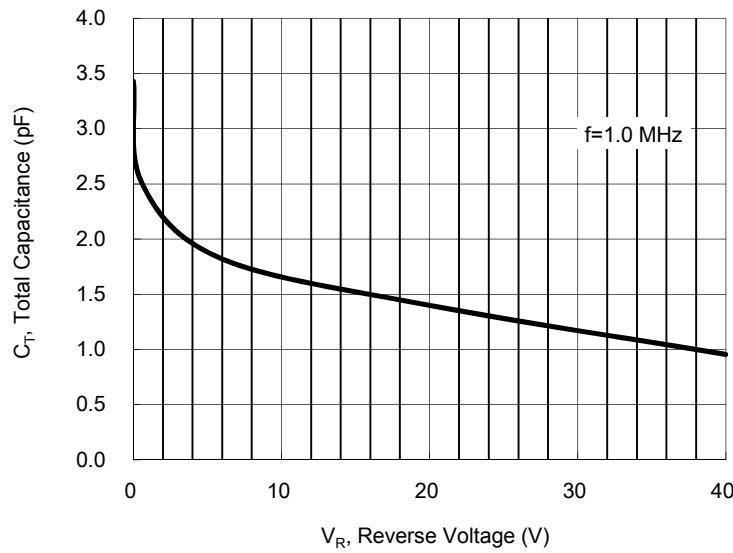
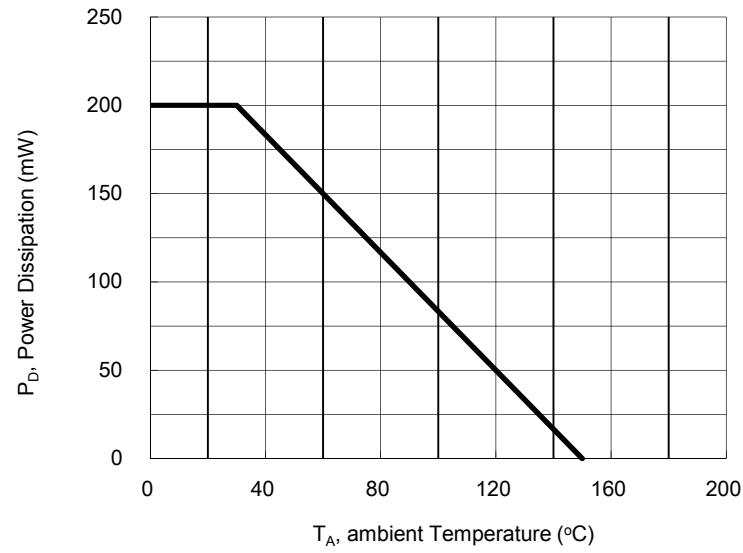


Fig. 4 Power Derating Curve



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ORDERING INFORMATION

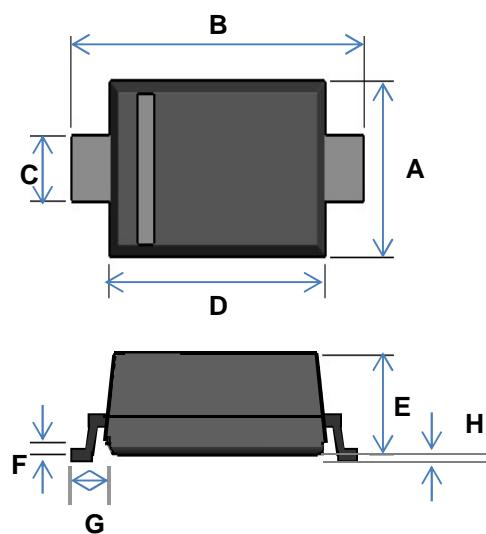
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
BAVxxWS-G (Note 1, 2)	RR	G	SOD-323	3K / 7" Reel

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

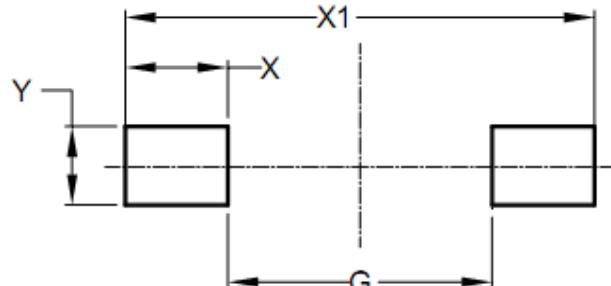
Note 2: Whole series with green compound

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.	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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