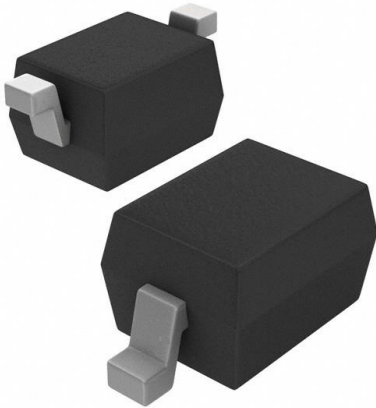


BAV20WS-G3-18 Datasheet

www.digi-electronics.com



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	BAV20WS-G3-18-DG
Manufacturer	Vishay General Semiconductor - Diodes Division
Manufacturer Product Number	BAV20WS-G3-18
Description	DIODE GEN PURP 150V 250MA SOD323
Detailed Description	Diode 150 V 250mA Surface Mount SOD-323

This model BAV20WS-G3-18 is available at DiGi Electronics.

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Purchase and inquiry

Manufacturer Product Number:

BAV20WS-G3-18

Series:

-

Technology:

Standard

Current - Average Rectified (Io):

250mA

Speed:

Fast Recovery =< 500ns, > 200mA (Io)

Current - Reverse Leakage @ Vr:

100 nA @ 150 V

Mounting Type:

Surface Mount

Supplier Device Package:

SOD-323

Base Product Number:

BAV20

Manufacturer:

Vishay General Semiconductor - Diodes Division

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

150 V

Voltage - Forward (Vf) (Max) @ If:

1.25 V @ 200 mA

Reverse Recovery Time (trr):

50 ns

Capacitance @ Vr, F:

1.5pF @ 0V, 1MHz

Package / Case:

SC-76, SOD-323

Operating Temperature - Junction:

150°C (Max)

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0070

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

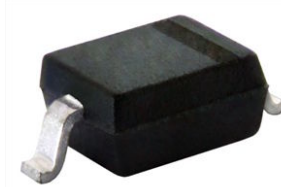
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BAV19WS-G, BAV20WS-G, BAV21WS-G

Vishay Semiconductors

Small Signal Switching Diodes, High Voltage


DESIGN SUPPORT TOOLS click logo to get started


MECHANICAL DATA

Case: SOD-323

Weight: approx. 4 mg

Packaging codes / options:

18/10K per 13" reel (8 mm tape), 10K/box

08/3K per 7" reel (8 mm tape), 15K/box

FEATURES

- Silicon epitaxial planar diodes
- For general purpose
- AEC-Q101 qualified
- Base P/N-G3 - green, commercial grade
- Base P/N-HG3 - green, AEC-Q101 qualified (part number available on request)
- Material categorization:
for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

PARTS TABLE

PART	TYPE DIFFERENTIATION	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS
BAV19WS-G	$V_R = 100\text{ V}$	BAV19WS-G3-08 or BAV19WS-G3-18	AS	Single	Tape and reel
BAV20WS-G	$V_R = 150\text{ V}$	BAV20WS-G3-08 or BAV20WS-G3-18	AT	Single	Tape and reel
BAV21WS-G	$V_R = 200\text{ V}$	BAV21WS-G3-08 or BAV21WS-G3-18	AU	Single	Tape and reel

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ }^\circ\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	SYMBOL	VALUE	UNIT
Continuous reverse voltage		BAV19WS-G	V_R	100	V
		BAV20WS-G	V_R	150	V
		BAV21WS-G	V_R	200	V
Repetitive peak reverse voltage		BAV19WS-G	V_{RRM}	120	V
		BAV20WS-G	V_{RRM}	200	V
		BAV21WS-G	V_{RRM}	250	V
Forward continuous current ⁽¹⁾			I_F	250	mA
Rectified current (average) half wave rectification with resistive load ⁽¹⁾			$I_{F(AV)}$	200	mA
Repetitive peak forward current ⁽¹⁾	$f \geq 50\text{ Hz}$, $\theta = 180^\circ$		I_{FRM}	625	mA
Surge forward current	$t < 1\text{ s}$, $T_J = 25\text{ }^\circ\text{C}$		I_{FSM}	1	A
Power dissipation			P_{tot}	200	mW

Note

⁽¹⁾ Valid provided that leads are kept at ambient temperature

THERMAL CHARACTERISTICS ($T_{amb} = 25\text{ }^\circ\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air		R_{thJA}	625	K/W
Thermal resistance junction to lead		R_{thJL}	450	K/W
Junction temperature		T_J	150	$^\circ\text{C}$
Storage temperature range		T_{stg}	-65 to +150	$^\circ\text{C}$
Operating temperature range		T_{op}	-55 to +150	$^\circ\text{C}$



BAV19WS-G, BAV20WS-G, BAV21WS-G

Vishay Semiconductors

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 100\text{ mA}$		V_F			1	V
	$I_F = 200\text{ mA}$		V_F			1.25	V
Reverse leakage current	$V_R = 100\text{ V}$	BAV19WS-G	I_R			100	nA
	$V_R = 100\text{ V}, T_J = 100\text{ }^{\circ}\text{C}$	BAV19WS-G	I_R			15	μA
	$V_R = 150\text{ V}$	BAV20WS-G	I_R			100	nA
	$V_R = 150\text{ V}, T_J = 100\text{ }^{\circ}\text{C}$	BAV20WS-G	I_R			15	μA
	$V_R = 200\text{ V}$	BAV21WS-G	I_R			100	nA
	$V_R = 200\text{ V}, T_J = 100\text{ }^{\circ}\text{C}$	BAV21WS-G	I_R			15	μA
Dynamic Forward resistance	$I_F = 10\text{ mA}$		r_f		5		Ω
Diode capacitance	$V_R = 0\text{ V}, f = 1\text{ MHz}$		C_D			1.5	pF
Reverse recovery time	$I_F = 30\text{ mA}, I_R = 30\text{ mA},$ $i_R = 3\text{ mA}, R_L = 100\text{ }\Omega$		t_{rr}			50	ns

TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

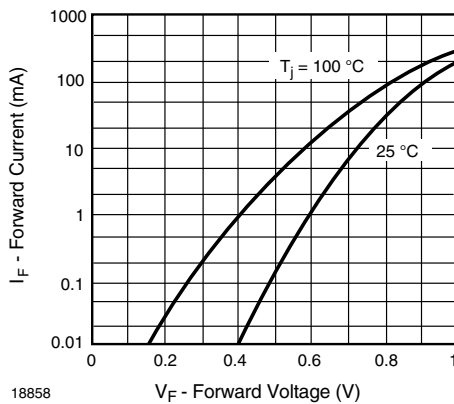


Fig. 1 - Forward Current vs. Forward Voltage

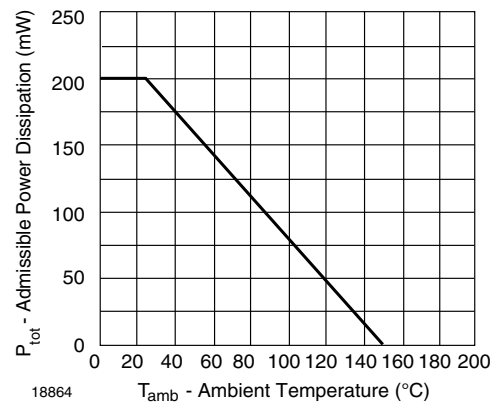


Fig. 3 - Admissible Power Dissipation vs. Ambient Temperature

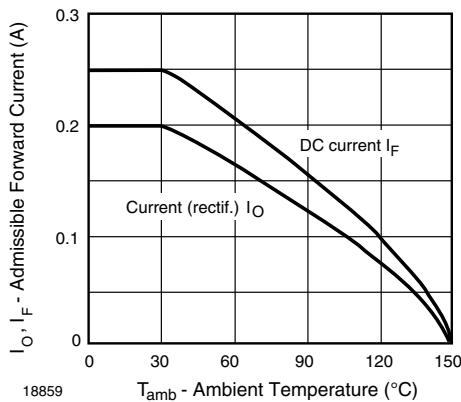


Fig. 2 - Admissible Forward Current vs. Ambient Temperature

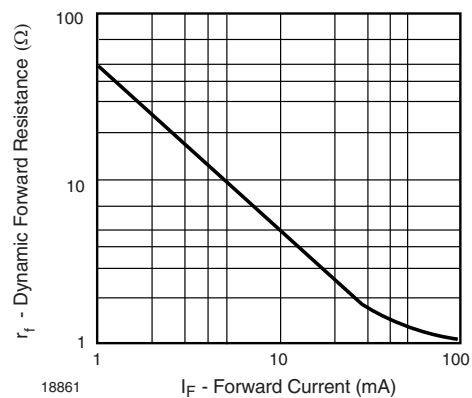


Fig. 4 - Dynamic Forward Resistance vs. Forward Current



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BAV19WS-G, BAV20WS-G, BAV21WS-G

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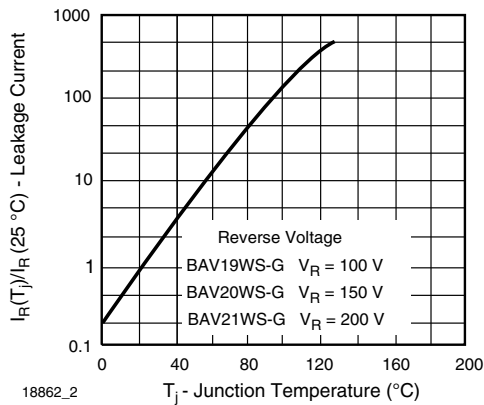


Fig. 5 - Leakage Current vs. Junction Temperature

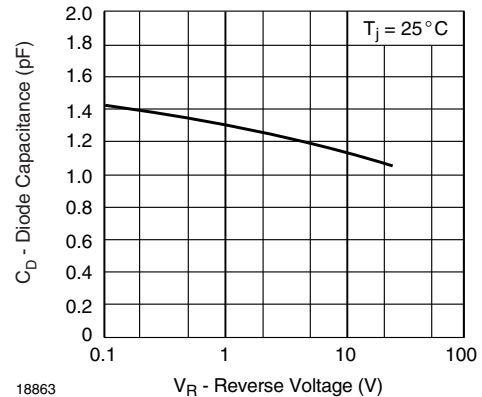
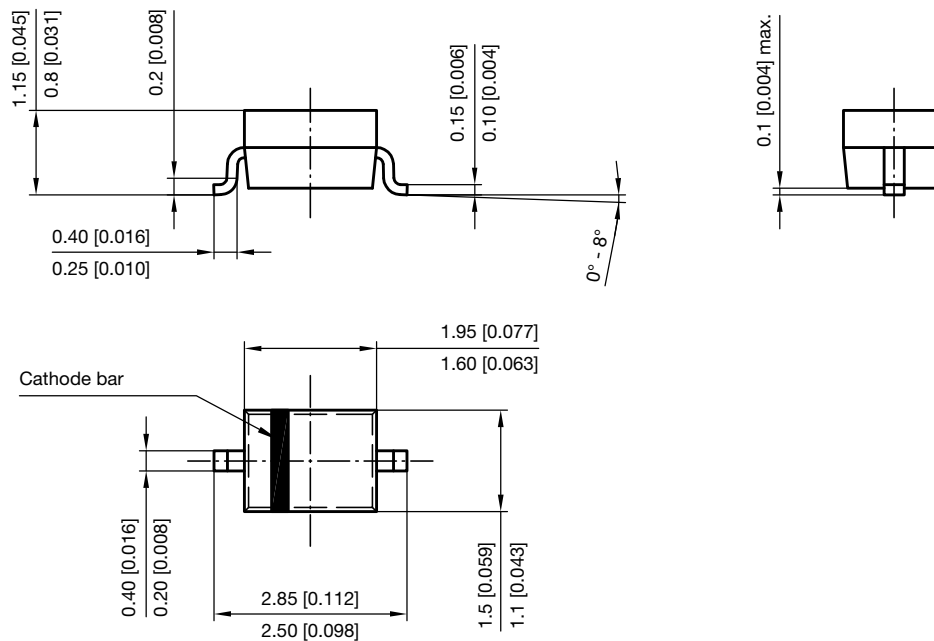
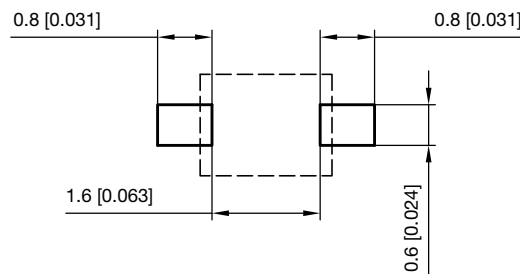


Fig. 6 - Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-323



Footprint recommendation:



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 Created - Date: 24.August.2004
 Rev. 6 - Date: 23.Sept.2016
 17443



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