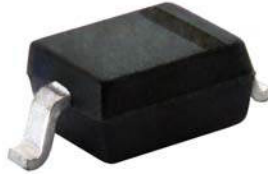




## Small Signal Switching Diodes, High Voltage



### 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](http://www.vishay.com/doc?99912)



PARTS TABLE					
PART	TYPE DIFFERENTIATION	ORDERING CODE	TYPE MARKING	INTERNAL CONSTRUCTION	REMARKS
BAV19WS-G	V <sub>R</sub> = 100 V	BAV19WS-G3-08 or BAV19WS-G3-18	AS	Single diode	Tape and reel
BAV20WS-G	V <sub>R</sub> = 150 V	BAV20WS-G3-08 or BAV20WS-G3-18	AT	Single diode	Tape and reel
BAV21WS-G	V <sub>R</sub> = 200 V	BAV21WS-G3-08 or BAV21WS-G3-18	AU	Single diode	Tape and reel

ABSOLUTE MAXIMUM RATINGS (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	SYMBOL	VALUE	UNIT
Continuous reverse voltage		BAV19WS-G	V <sub>R</sub>	100	V
		BAV20WS-G	V <sub>R</sub>	150	V
		BAV21WS-G	V <sub>R</sub>	200	V
Repetitive peak reverse voltage		BAV19WS-G	V <sub>RRM</sub>	120	V
		BAV20WS-G	V <sub>RRM</sub>	200	V
		BAV21WS-G	V <sub>RRM</sub>	250	V
Forward continuous current <sup>(1)</sup>			I <sub>F</sub>	250	mA
Rectified current (average) half wave rectification with resistive load <sup>(1)</sup>			I <sub>F(AV)</sub>	200	mA
Repetitive peak forward current <sup>(1)</sup>	f ≥ 50 Hz, θ = 180°		I <sub>FRM</sub>	625	mA
Surge forward current	t < 1 s, T <sub>J</sub> = 25 °C		I <sub>FSM</sub>	1	A
Power dissipation			P <sub>tot</sub>	200	mW

### Note

<sup>(1)</sup> Valid provided that leads are kept at ambient temperature

THERMAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air		R <sub>thJA</sub>	625	K/W
Thermal resistance junction to lead		R <sub>thJL</sub>	450	K/W
Junction temperature		T <sub>J</sub>	150	°C
Storage temperature range		T <sub>stg</sub>	-65 to +150	°C
Operating temperature range		T <sub>op</sub>	-55 to +150	°C



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	$\mu\text{A}$
	$V_R = 150\text{ V}$	BAV20WS-G	$I_R$			100	nA
	$V_R = 150\text{ V}, T_J = 100\text{ }^{\circ}\text{C}$	BAV20WS-G	$I_R$			15	$\mu\text{A}$
	$V_R = 200\text{ V}$	BAV21WS-G	$I_R$			100	nA
	$V_R = 200\text{ V}, T_J = 100\text{ }^{\circ}\text{C}$	BAV21WS-G	$I_R$			15	$\mu\text{A}$
Dynamic Forward resistance	$I_F = 10\text{ mA}$		$r_f$		5		$\Omega$
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)

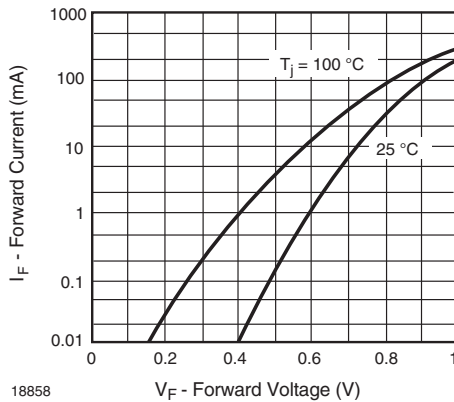


Fig. 1 - Forward Current vs. Forward Voltage

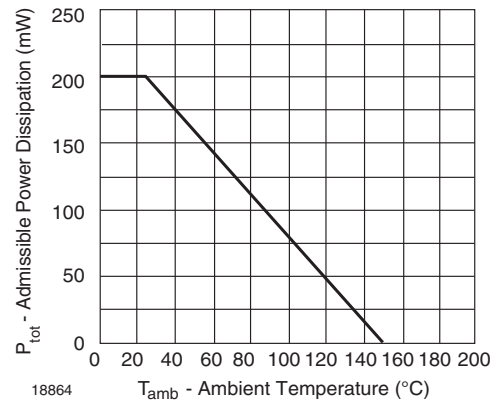


Fig. 3 - Admissible Power Dissipation vs. Ambient Temperature

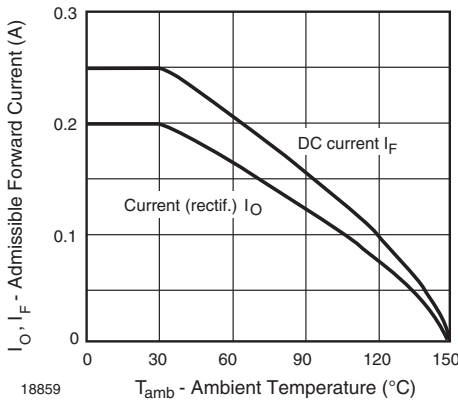


Fig. 2 - Admissible Forward Current vs. Ambient Temperature

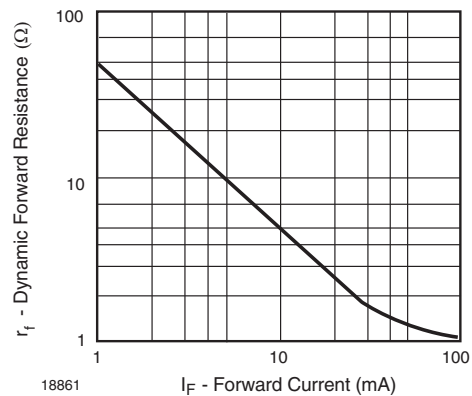


Fig. 4 - Dynamic Forward Resistance vs. Forward Current

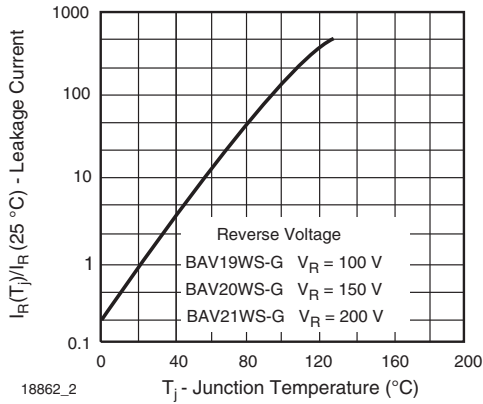


Fig. 5 - Leakage Current vs. Junction Temperature

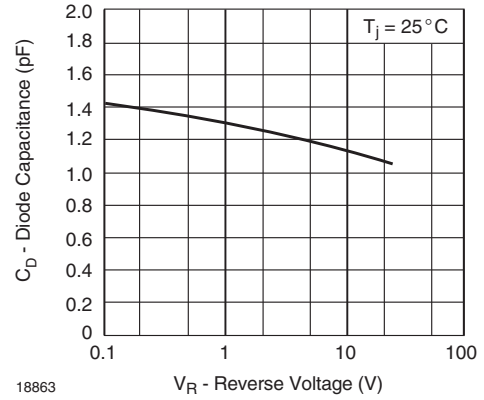
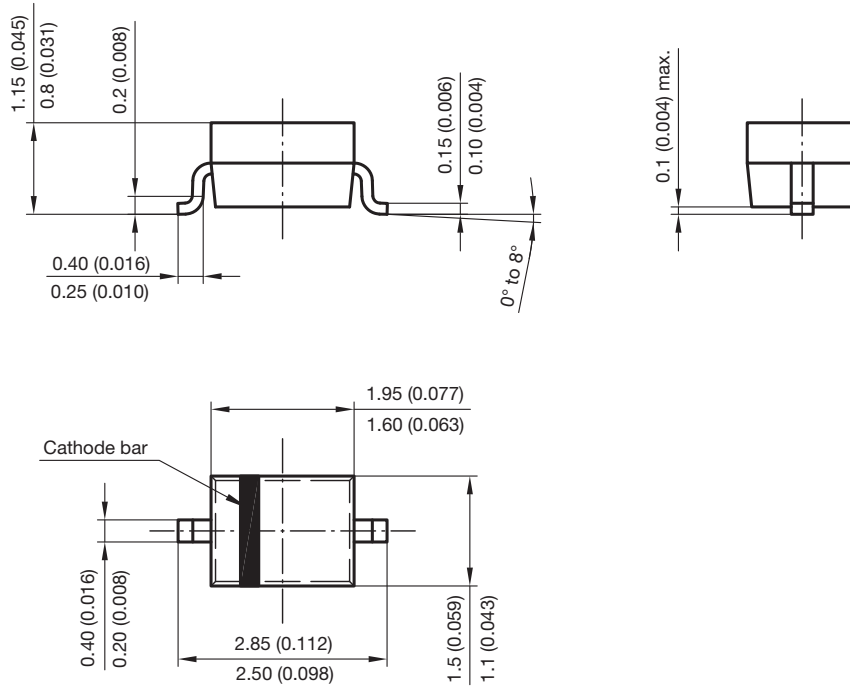
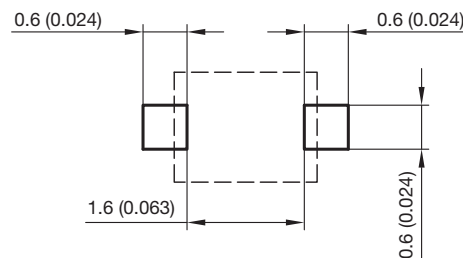


Fig. 6 - Capacitance vs. Reverse Voltage

**PACKAGE DIMENSIONS** in millimeters (inches): **SOD-323**



Foot print recommendation:



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 17443



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