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[BAV203-GS08](#)

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www.vishay.com

## BAV200, BAV201, BAV202, BAV203

Vishay Semiconductors

### Small Signal Switching Diodes, High Voltage



#### FEATURES

- Silicon epitaxial planar diodes
- AEC-Q101 qualified
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



RoHS  
COMPLIANT

#### APPLICATIONS

- General purposes

#### MECHANICAL DATA

Case: QuadroMELF SOD-80

Weight: approx. 34 mg

Cathode band color: black

Packaging codes/options:

GS18/10K per 13" reel (8 mm tape), 10K/box

GS08/2.5K per 7" reel (8 mm tape), 12.5K/box

PARTS TABLE					
PART	TYPE DIFFERENTIATION	ORDERING CODE	TYPE MARKING	INTERNAL CONSTRUCTION	REMARKS
BAV200	$V_{RRM} = 60\text{ V}$	BAV200-GS18 or BAV200-GS08	-	Single	Tape and reel
BAV201	$V_{RRM} = 120\text{ V}$	BAV201-GS18 or BAV201-GS08	-	Single	Tape and reel
BAV202	$V_{RRM} = 200\text{ V}$	BAV202-GS18 or BAV202-GS08	-	Single	Tape and reel
BAV203	$V_{RRM} = 250\text{ V}$	BAV203-GS18 or BAV203-GS08	-	Single	Tape and reel

ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)					
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		BAV200	$V_{RRM}$	60	V
		BAV201	$V_{RRM}$	120	V
		BAV202	$V_{RRM}$	200	V
		BAV203	$V_{RRM}$	250	V
Reverse voltage		BAV200	$V_R$	50	V
		BAV201	$V_R$	100	V
		BAV202	$V_R$	150	V
		BAV203	$V_R$	200	V
Forward continuous current			$I_F$	250	mA
Peak forward surge current	$t_p = 1\text{ s}, T_j = 25\text{ }^{\circ}\text{C}$		$I_{FSM}$	1	A
Repetitive peak forward current	$f = 50\text{ Hz}$		$I_{FRM}$	625	mA
Power dissipation			$P_{tot}$	500	mW

THERMAL CHARACTERISTICS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	On PC board 50 mm x 50 mm x 1.6 mm	$R_{thJA}$	500	K/W
Junction temperature		$T_j$	175	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	- 65 to + 175	$^{\circ}\text{C}$



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ELECTRICAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I <sub>F</sub> = 100 mA		V <sub>F</sub>			1	V
Reverse current	V <sub>R</sub> = 50 V	BAV200	I <sub>R</sub>			100	nA
	V <sub>R</sub> = 100 V	BAV201	I <sub>R</sub>			100	nA
	V <sub>R</sub> = 150 V	BAV202	I <sub>R</sub>			100	nA
	V <sub>R</sub> = 200 V	BAV203	I <sub>R</sub>			100	nA
	T <sub>j</sub> = 100 °C, V <sub>R</sub> = 50 V	BAV200	I <sub>R</sub>			15	μA
	T <sub>j</sub> = 100 °C, V <sub>R</sub> = 100 V	BAV201	I <sub>R</sub>			15	μA
	T <sub>j</sub> = 100 °C, V <sub>R</sub> = 150 V	BAV202	I <sub>R</sub>			15	μA
Breakdown voltage	I <sub>R</sub> = 100 μA, t <sub>p</sub> /T = 0.01, t <sub>p</sub> = 0.3 ms	BAV200	V <sub>(BR)</sub>	60			V
		BAV201	V <sub>(BR)</sub>	120			V
		BAV202	V <sub>(BR)</sub>	200			V
		BAV203	V <sub>(BR)</sub>	250			V
Diode capacitance	V <sub>R</sub> = 0, f = 1 MHz		C <sub>D</sub>		1.5		pF
Differential forward resistance	I <sub>F</sub> = 10 mA		r <sub>f</sub>		5		Ω
Reverse recovery time	I <sub>F</sub> = I <sub>R</sub> = 30 mA, i <sub>R</sub> = 3 mA, R <sub>L</sub> = 100 Ω		t <sub>rr</sub>			50	ns

## TYPICAL CHARACTERISTICS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

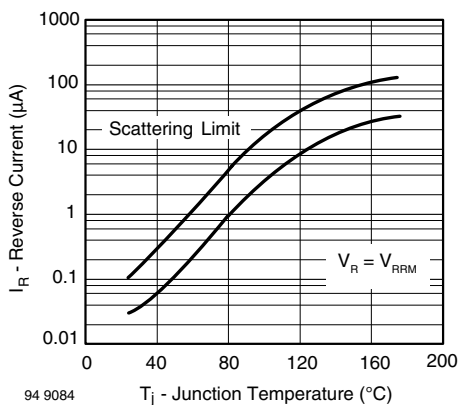


Fig. 1 - Reverse Current vs. Junction Temperature

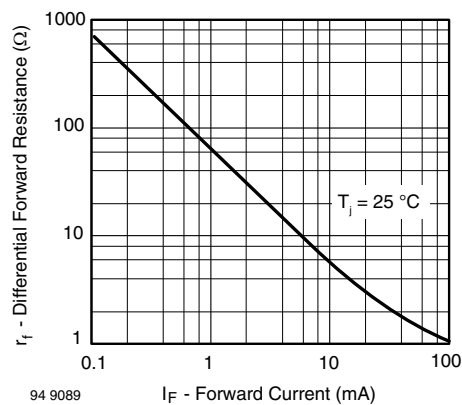


Fig. 3 - Differential Forward Resistance vs. Forward Current

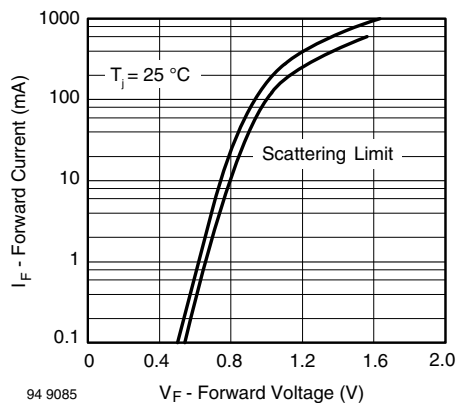


Fig. 2 - Forward Current vs. Forward Voltage

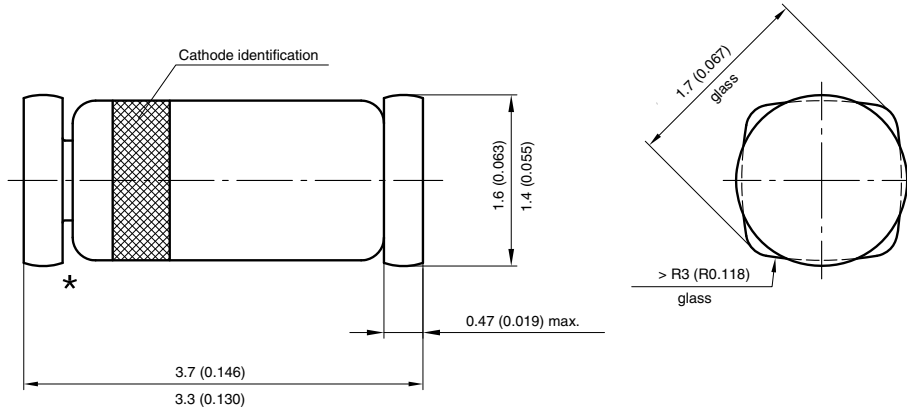


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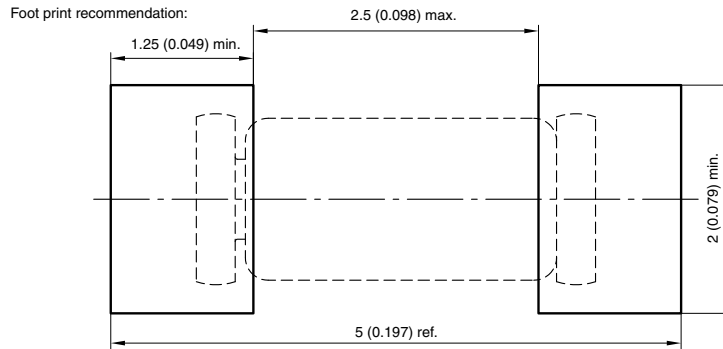
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**PACKAGE DIMENSIONS** in millimeters (inches): **QuadroMELF SOD-80**



★ The gap between plug and glass can be either on cathode or anode side



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