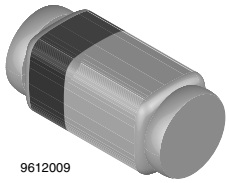
Small Signal Switching Diodes, High Voltage

Features

- Silicon epitaxial planar diodes
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



Applications

- General purposes

Mechanical Data

Case: Quadro MELF glass case (SOD80)
Weight: approx. 34 mg
Cathode band color: black
Packaging codes/options:
GS18/10 k per 13" reel (8 mm tape), 10 k/box
GS08/2.5 k per 7" reel (8 mm tape), 12.5 k/box

Parts Table

Part	Type differentiation	Ordering code	Type marking	Remarks
BAV200	V_{RRM} = 60 V	BAV200-GS18 or BAV200-GS08	-	Tape and reel
BAV201	V_{RRM} = 120 V	BAV201-GS18 or BAV201-GS08	-	Tape and reel
BAV202	V_{RRM} = 200 V	BAV202-GS18 or BAV202-GS08	-	Tape and reel
BAV203	V_{RRM} = 250 V	BAV203-GS18 or BAV203-GS08	-	Tape and reel

Absolute Maximum Ratings

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Part	Symbol	Value	Unit
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 s, T_j = 25 °C		I_{FSM}	1	A
Forward peak current	f = 50 Hz		I_{FM}	625	mA
Power dissipation			P_{tot}	500	mW

Thermal Characteristics

T_{amb} = 25 °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	°C
Storage temperature range		T_{stg}	- 65 to + 175	°C

Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Part	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	I_F = 100 mA		V_F			1000	mV
Reverse current	V_R = 50 V	BAV200	I_R			100	nA
	V_R = 100 V	BAV201	I_R			100	nA
	V_R = 150 V	BAV202	I_R			100	nA
	V_R = 200 V	BAV203	I_R			100	nA
	T_j = 100 °C, V_R = 50 V	BAV200	I_R			15	µA
	T_j = 100 °C, V_R = 100 V	BAV201	I_R			15	µA
	T_j = 100 °C, V_R = 150 V	BAV202	I_R			15	µA
	T_j = 100 °C, V_R = 200 V	BAV203	I_R			15	µA
Breakdown voltage	I_R = 100 µA, t_p/T = 0.01, t_p = 0.3 ms	BAV200	$V_{(BR)}$	60			V
		BAV201	$V_{(BR)}$	120			V
		BAV202	$V_{(BR)}$	200			V
		BAV203	$V_{(BR)}$	250			V
Diode capacitance	V_R = 0, f = 1 MHz		C_D		1.5		pF
Differential forward resistance	I_F = 10 mA		r_f		5		Ω
Reverse recovery time	I_F = I_R = 30 mA, i_R = 3 mA, R_L = 100 Ω		t_{rr}			50	ns

Typical Characteristics

T_{amb} = 25 °C, unless otherwise specified

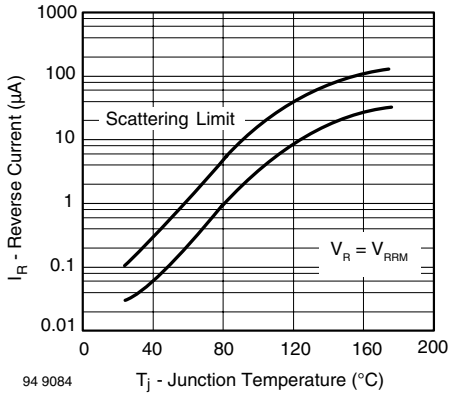


Figure 1. Reverse Current vs. Junction Temperature

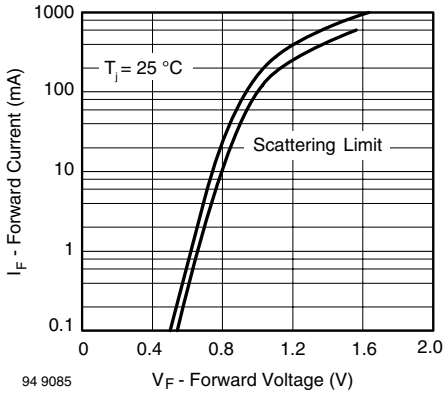


Figure 2. Forward Current vs. Forward Voltage

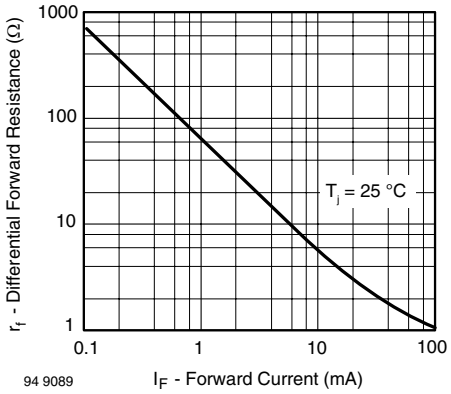
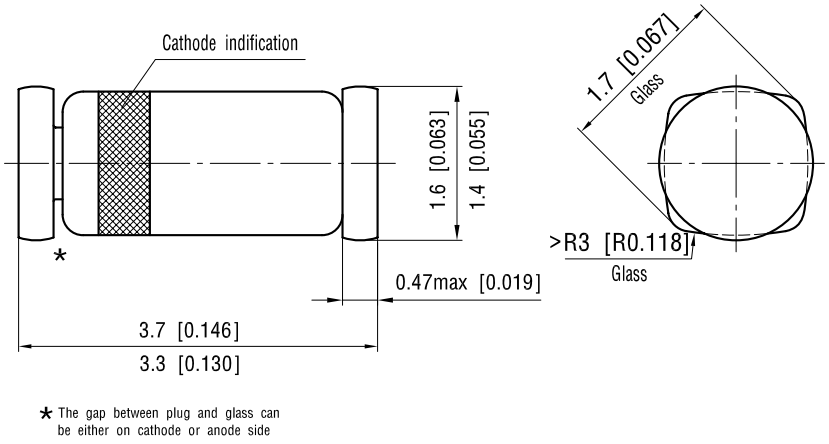
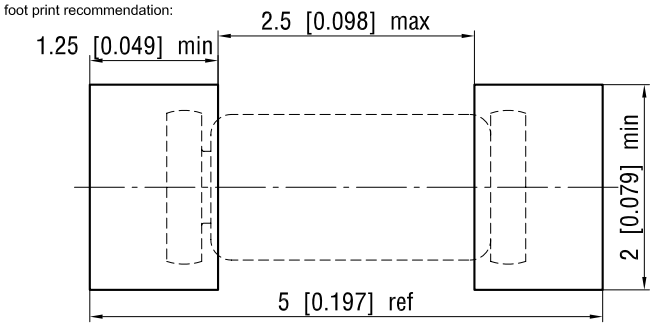


Figure 3. Differential Forward Resistance vs. Forward Current

Package Dimensions in millimeters (inches): **Quadro MELF SOD80**





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Ozone Depleting Substances Policy Statement

It is the policy of Vishay Semiconductor GmbH to

1. Meet all present and future national and international statutory requirements.
2. Regularly and continuously improve the performance of our products, processes, distribution and operating systems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

Vishay Semiconductor GmbH has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively.
2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA.
3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

Vishay Semiconductor GmbH can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

Vishay Semiconductor GmbH, P.O.B. 3535, D-74025 Heilbronn, Germany

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