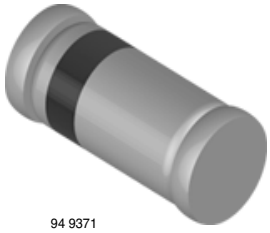
Band Switching Diodes

Features

- Silicon Planar Diodes
- Low differential forward resistance
- Low diode capacitance
- High reverse impedance
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC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Applications

- Band switching in VHF-tuners

Mechanical Data

Case: MiniMELF Glass case SOD80
Weight: approx. 31 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	Remarks
BA682	V_R = 35 V, r_f at I_F 3 mA = max 0.7 Ω	BA682-GS18 or BA682-GS08	Tape and Reel
BA683	V_R = 35 V, r_f at I_F 3 mA = max 1.2 Ω	BA683-GS18 or BA683-GS08	Tape and Reel

Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Reverse voltage		V_R	35	V
Forward continuous current		I_F	100	mA

Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
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	150	°C
Storage temperature range		T_{stg}	- 55 to +150	°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 = 20 V		I_R			50	nA
Diode capacitance	f = 100 MHz, V_R = 1 V		C_D			1.5	pF
	f = 100 MHz, V_R = 3 V	BA682	C_D			1.25	pF
		BA683	C_D			1.2	pF
Differential forward resistance	f = 200 MHz, I_F = 3 mA	BA682	r_f			0.7	Ω
		BA683	r_f			1.2	Ω
	f = 200 MHz, I_F = 10 mA	BA682	r_f			0.5	Ω
		BA683	r_f			0.9	Ω

Typical Characteristics

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

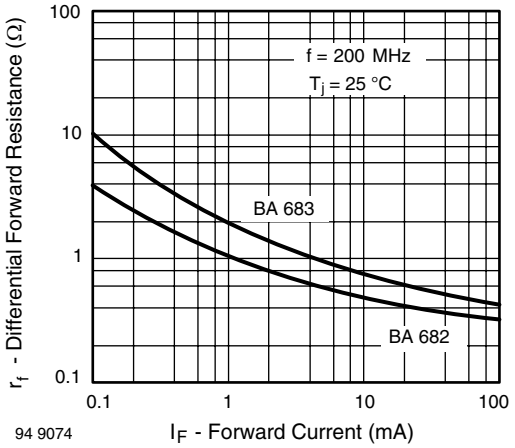


Figure 1. Differential Forward Resistance vs. Forward Current

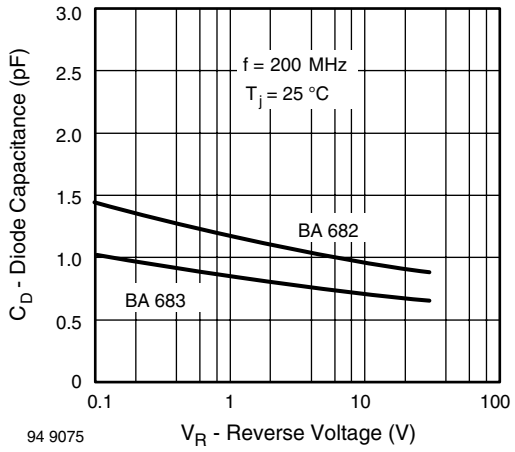
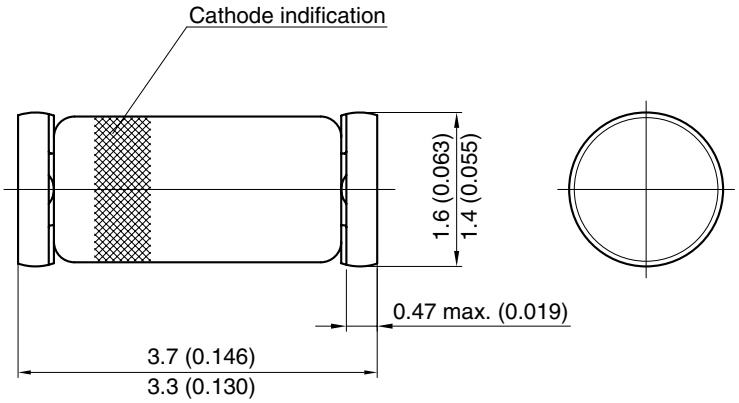
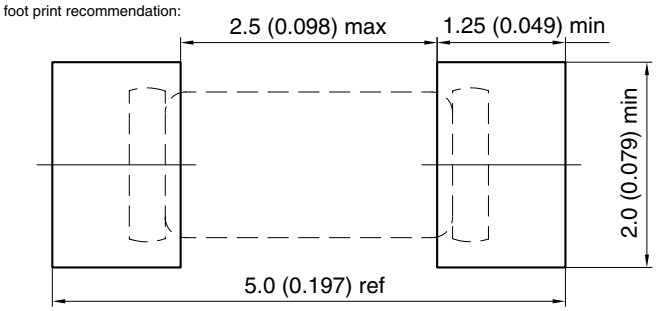


Figure 2. Diode Capacitance vs. Reverse Voltage

Package Dimensions in mm (Inches)





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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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