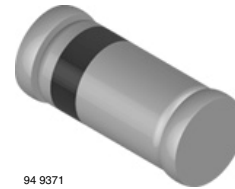# RF PIN Diodes - Single in MiniMELF SOD80

Features

- Wide frequency range 10 MHz to 1 GHz
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

Applications

- Current controlled HF resistance in adjustable attenuators

94 9371

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	Type Marking	Remarks
BA679	$Z_R > 5\ k\Omega$	BA679-GS18 or BA679-GS08	-	Tape and Reel
BA679S	$Z_R > 9\ k\Omega$	BA679S-GS18 or BA679S-GS08	-	Tape and Reel

Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Reverse voltage		V_R	30	V
Forward continuous current		I_F	50	mA

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	125	°C
Storage temperature range		T_{stg}	- 55 to + 125	°C

BA679/BA679S

Vishay Semiconductors

Electrical Characteristics

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

Parameter	Test condition	Part	Symbol	Min	Typ.	Max	Unit
Forward voltage	I_F = 20 mA		V_F			1000	mV
Reverse current	V_R = 30 V		I_R			50	nA
Diode capacitance	f = 100 MHz, V_R = 0		C_D			0.5	pF
Differential forward resistance	f = 100 MHz, I_F = 1.5 mA		r_f			50	Ω
Reverse impedance	f = 100 MHz, V_R = 0	BA679	z_r	5			kΩ
		BA679S	z_r	9			kΩ
Minority carrier lifetime	I_F = 10 mA, I_R = 10 mA		τ		4		µs

Typical Characteristics

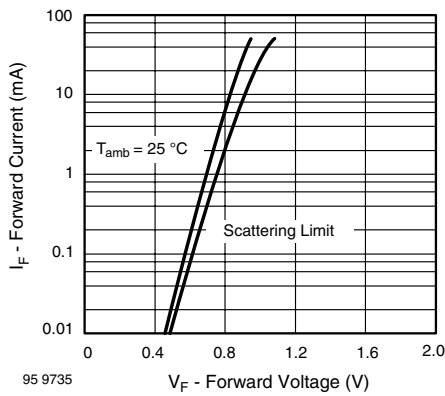T_{amb} = 25 °C, unless otherwise specified
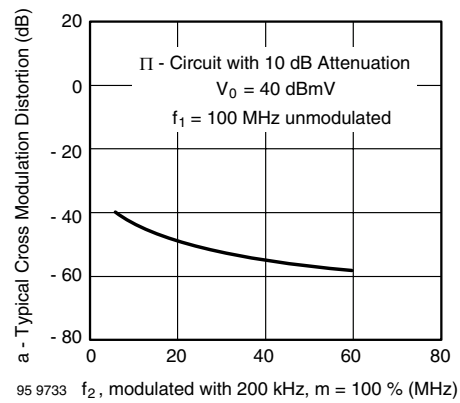

Figure 1. Forward Current vs. Forward Voltage

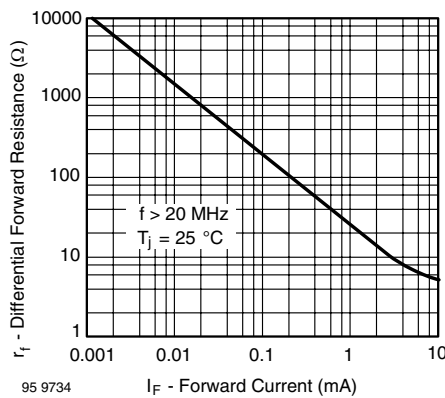Figure 3. Typ. Cross Modulation Distortion vs. Frequency f_2

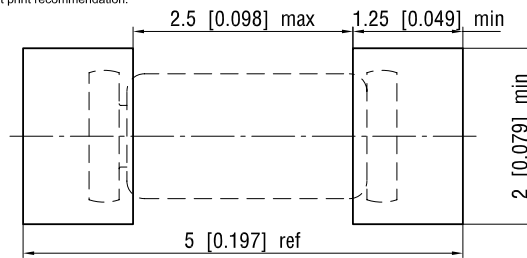Figure 2. Differential Forward Resistance vs. Forward Current

Package Dimensions in mm (Inches): SOD80

Cathode indification

1.6 [0.063"]
1.4 [0.055"]

0.47max [0.019"]

3.7 [0.146"]
3.3 [0.130"]
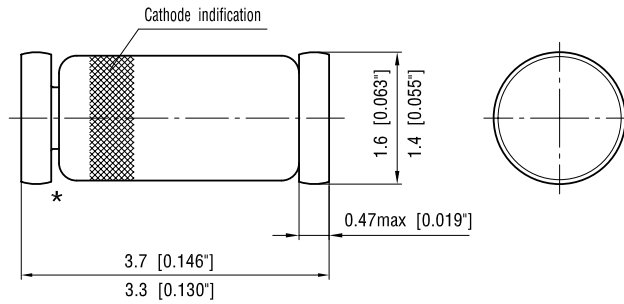
★ The gap between plug and glass can
be either on cathode or anode side

foot print recommendation:

2.5 [0.098] max   1.25 [0.049] min

2 [0.079] min

5 [0.197] ref

Document no.:6.560-5005.01-4
Rev. 8 - Date: 07.June.2006
96 12070

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.

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