

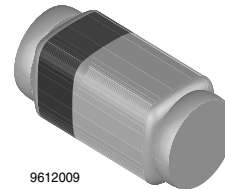
## RF PIN Diodes

### Features

- Wide frequency range 10 MHz to 1 GHz

### Applications

Current controlled HF resistance in adjustable attenuators



9612009

### Mechanical Data

**Case:**QuadroMELF Glass Case (SOD-80)

**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	Remarks
BA979	$V_R = 30 \text{ V}$ , $Z_r > 5 \text{ k}\Omega$	BA979-GS18 or BA979-GS08	Tape and Reel
BA979S	$V_R = 30 \text{ V}$ , $Z_r > 9 \text{ k}\Omega$	BA979S-GS18 or BA979S-GS08	Tape and Reel

### Absolute Maximum Ratings

$T_{amb} = 25^\circ\text{C}$ , unless otherwise specified

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

### Thermal Characteristics

$T_{amb} = 25^\circ\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Junction ambient	on PC board 50 mm x 50 mm x 1.6 mm	$R_{thJA}$	500	K/W
Junction temperature		$T_j$	125	$^\circ\text{C}$
Storage temperature range		$T_{stg}$	- 55 to + 125	$^\circ\text{C}$

### Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Part	Symbol	Min	Typ.	Max	Unit
Forward voltage	$I_F = 20\text{ mA}$		$V_F$			1	V
Reverse current	$V_R = 30\text{ V}$		$I_R$			50	nA
Diode capacitance	$f = 100\text{ MHz}, V_R = 0$		$C_D$			0.5	pF
Differential forward resistance	$f = 100\text{ MHz}, I_F = 1.5\text{ mA}$		$r_f$			50	$\Omega$
Reverse impedance	$f = 100\text{ MHz}, V_R = 0$	BA979	$z_r$	5			k $\Omega$
		BA979S	$z_r$	9			k $\Omega$
Minority carrier lifetime	$I_F = 10\text{ mA}, I_R = 10\text{ mA}$		$\tau$		4		$\mu\text{s}$

### Typical Characteristics ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

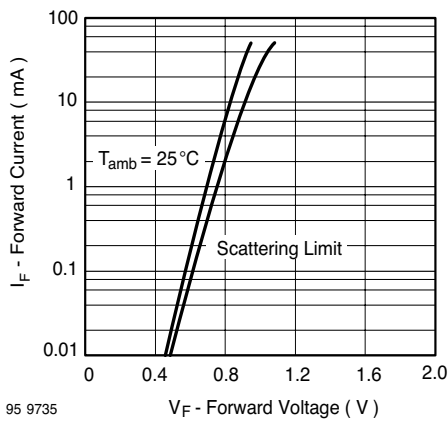


Fig. 1 Forward Current vs. Forward Voltage

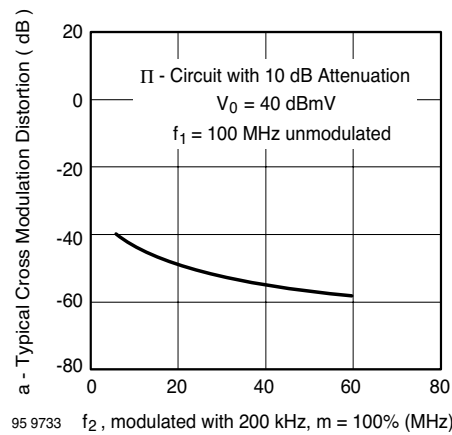


Fig. 3 Typ. Cross Modulation Distortion vs. Frequency  $f_2$

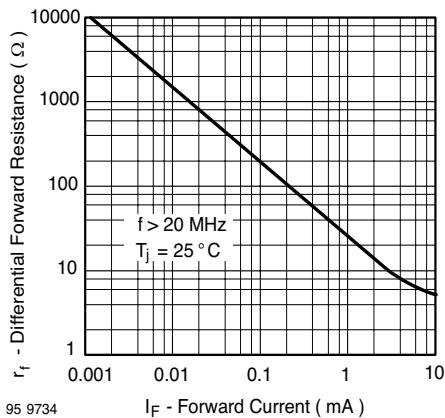
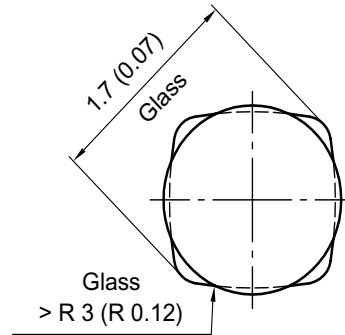
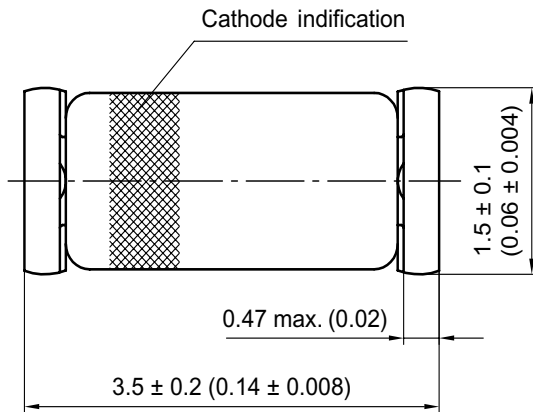
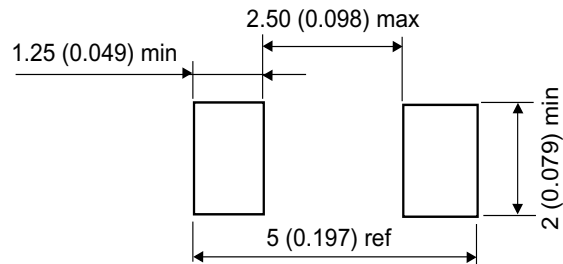
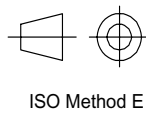


Fig. 2 Differential Forward Resistance vs. Forward Current

## Package Dimensions in mm (Inches)



### Mounting Pad Layout



Glass case  
Quadro Melf / SOD 80  
JEDEC DO 213 AA

96 12071

### 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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