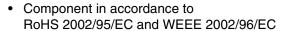


Vishay Semiconductors

RF PIN Diodes - Single in MiniMELF SOD80

Features

- Wide frequency range 10 MHz to 1 GHz
- Lead (Pb)-free component





Applications

Current controlled HF resistance in adjustable attenuators



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	$Z_R > 5 \text{ k}\Omega$	BA679-GS18 or BA679-GS08	-	Tape and Reel	
BA679S	$Z_R > 9 \text{ k}\Omega$	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		Tj	125	°C	
Storage temperature range		T _{stg}	- 55 to + 125	°C	

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Electrical Characteristics

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

Parameter	Test condition	Part	Symbol	Min	Тур.	Max	Unit
Forward voltage	I _F = 20 mA		V _F			1000	mV
Reverse current	V _R = 30 V		I _R			50	nA
Diode capacitance	$f = 100 \text{ MHz}, V_{R} = 0$		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	$I_F = 10 \text{ mA}, I_R = 10 \text{ mA}$		τ		4		μs

Typical Characteristics

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

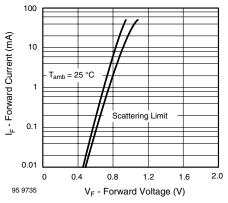


Figure 1. Forward Current vs. Forward Voltage

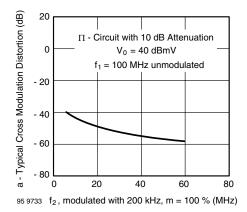


Figure 3. Typ. Cross Modulation Distortion vs. Frequency f₂

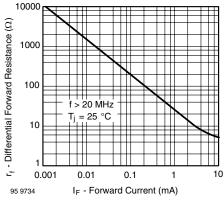
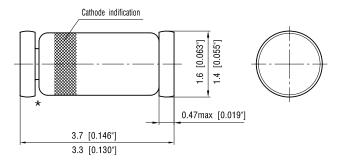


Figure 2. Differential Forward Resistance vs. Forward Current

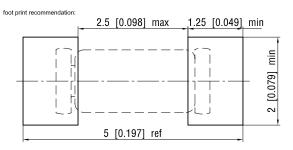


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Package Dimensions in mm (Inches): SOD80



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



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BA679/BA679S

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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.

> We reserve the right to make changes to improve technical design and may do so without further notice.

Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. Should the buyer use Vishay Semiconductors products for any unintended or unauthorized application, the buyer shall indemnify Vishay Semiconductors against all claims, costs, damages, and expenses, arising out of, directly or indirectly, any claim of personal damage, injury or death associated with such unintended or unauthorized use.

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