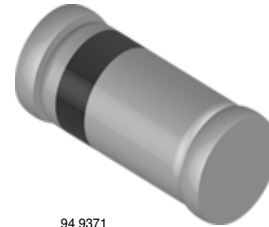


RF PIN Diode - Single in MiniMELF SOD-80

Features

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



94 9371

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:

GS08 / 2.5 k per 7" reel (8 mm tape), 12.5 k/box

Parts Table

Part	Type differentiation	Ordering code	Remarks
S391D	$V_R = 30\text{ V}$	S391D-GS08	Tape and Reel

Absolute Maximum Ratings

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

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

Thermal Characteristics

$T_{amb} = 25\text{ }^\circ\text{C}$, 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	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	Symbol	Min	Typ.	Max	Unit
Forward voltage	$I_F = 20\text{ mA}$	V_F			1000	mV
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	40		60	Ω
Reverse impedance	$f = 100\text{ MHz}, V_R = 0$	z_r	5			k Ω
Minority carrier lifetime	$I_F = 10\text{ mA}, I_R = 10\text{ mA}$	τ		4		μs

Typical Characteristics

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

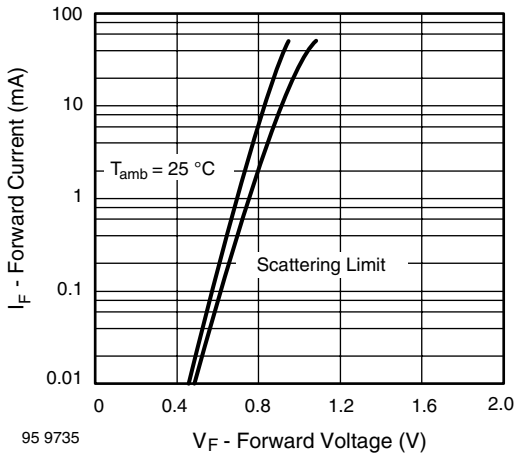
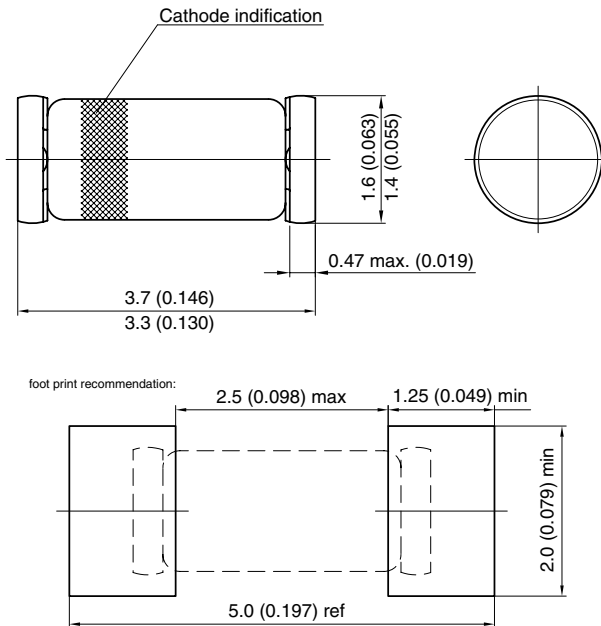


Figure 1. Forward Current vs. Forward Voltage

Package Dimensions in mm (Inches)



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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.

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.

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



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