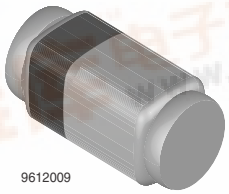
Small Signal Schottky Barrier Diodes

Features

- Integrated protection ring against static discharge
- Low capacitance
- Low leakage current
- Low forward voltage drop



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Applications

HF-Detector

Protection circuit

Diode for low currents with a low supply voltage

Small battery charger

Power supplies

DC / DC converter for notebooks

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
LS101A	V_R = 60 V, V_F @ I_F1 mA max. 0.41 V	LS101A-GS18 or LS101A-GS08	Tape and Reel
LS101B	V_R = 50 V, V_F @ I_F1 mA max. 0.4 V	LS101B-GS18 or LS101B-GS08	Tape and Reel
LS101C	V_R = 40 V, V_F @ I_F1 mA max. 0.39 V	LS101C-GS18 or LS101C-GS08	Tape and Reel

Absolute Maximum Ratings

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

Parameter	Test condition	Part	Symbol	Value	Unit
Reverse voltage		LS101A	V_R	60	V
		LS101B	V_R	50	V
		LS101C	V_R	40	V
Peak forward surge current	t_p = 10 µs		I_{FSM}	2	A
Repetitive peak forward current			I_{FRM}	150	mA
Forward current			I_F	30	mA

Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Junction ambient	on PC board 50 mmx50 mmx1.6 mm	R_{thJA}	320	K/W
Junction temperature		T_j	125	°C
Storage temperature range		T_{stg}	- 65 to + 150	°C

Electrical Characteristics

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

Parameter	Test condition	Part	Symbol	Min	Typ.	Max	Unit
Reverse Breakdown Voltage	I_R = 10 µA	LS101A	$V_{(BR)R}$	60			V
		LS101B	$V_{(BR)R}$	50			V
		LS101C	$V_{(BR)R}$	40			V
Leakage current	V_R = 50 V	LS101A	I_R			200	nA
	V_R = 40 V	LS101B	I_R			200	nA
	V_R = 30 V	LS101C	I_R			200	nA
Forward voltage drop	I_F = 1 mA	LS101A	V_F			0.41	V
		LS101B	V_F			0.4	V
		LS101C	V_F			0.39	V
	I_F = 15 mA	LS101A	V_F			1	V
		LS101B	V_F			0.95	V
		LS101C	V_F			0.9	V
Diode capacitance	V_R = 0 V, f = 1 MHz	LS101A	C_D			2.0	pF
		LS101B	C_D			2.1	pF
		LS101C	C_D			2.2	pF

Typical Characteristics (T_{amb} = 25 °C unless otherwise specified)

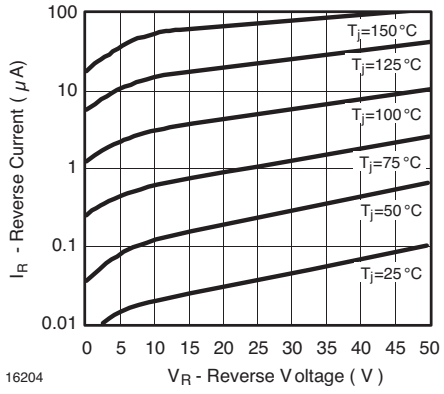


Fig. 1 Reverse Current vs. Reverse Voltage

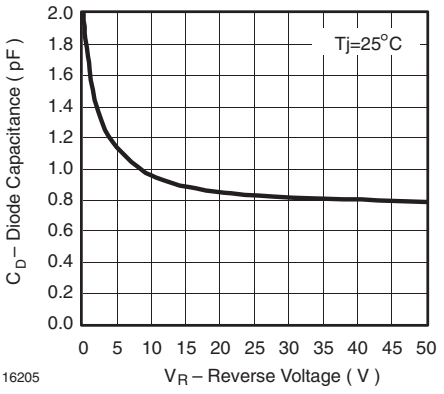


Fig. 2 Diode Capacitance vs. Reverse Voltage

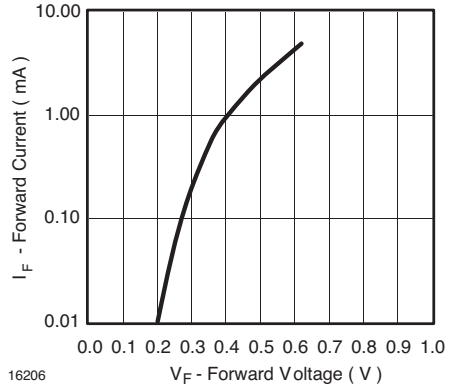
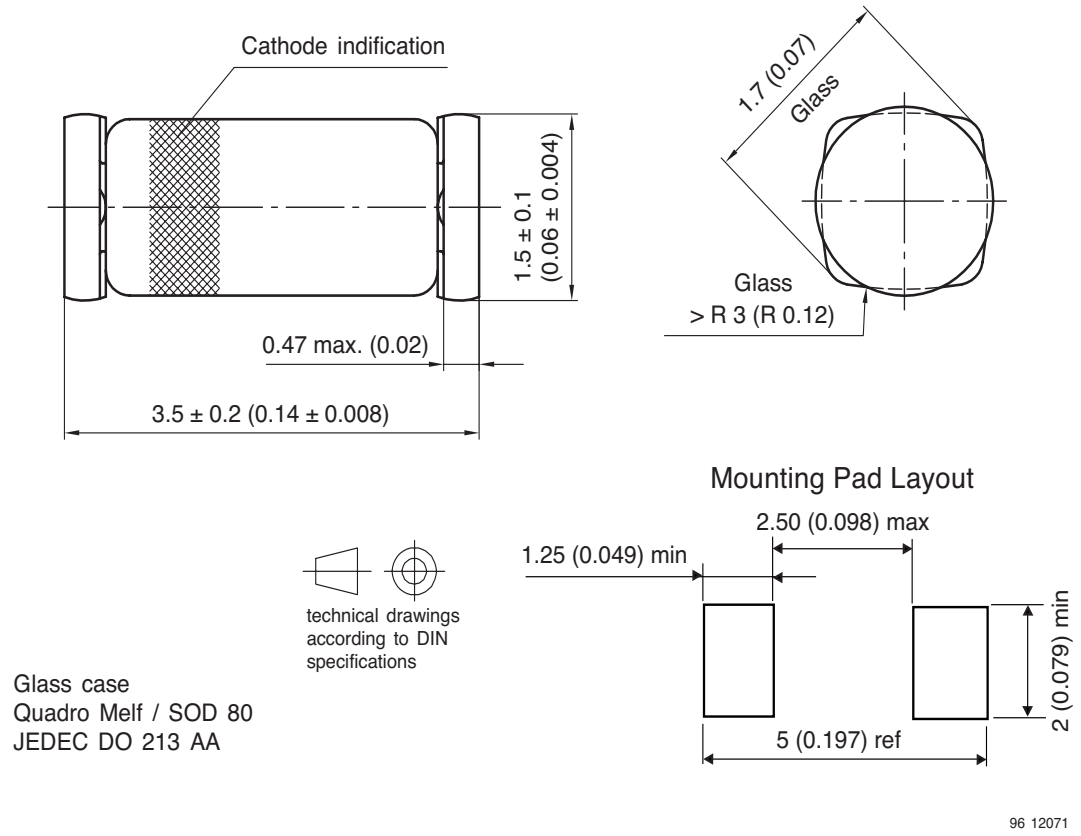


Fig. 3 Forward Current vs. Forward Voltage

Package Dimensions in mm (Inches)



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 operatingsystems 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
Telephone: 49 (0)7131 67 2831, Fax number: 49 (0)7131 67 2423