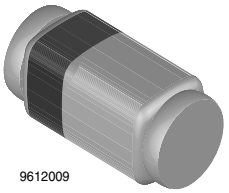
Small Signal Schottky Diodes

Features

- Integrated protection ring against static discharge
- Low capacitance
- Low leakage current
- Low forward voltage drop
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



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 SOD80
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 at I_F = 1 mA max. 410 mV	LS101A-GS18 or LS101A-GS08	Tape and Reel
LS101B	V_R = 50 V, V_F at I_F = 1 mA max. 400 mV	LS101B-GS18 or LS101B-GS08	Tape and Reel
LS101C	V_R = 40 V, V_F at I_F = 1 mA max. 390 mV	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 continuous current			I_F	30	mA

Thermal Characteristics

T_{amb} = 25 °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}	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			410	mV
		LS101B	V_F			400	mV
		LS101C	V_F			390	mV
	I_F = 15 mA	LS101A	V_F			1000	mV
		LS101B	V_F			950	mV
		LS101C	V_F			900	mV
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

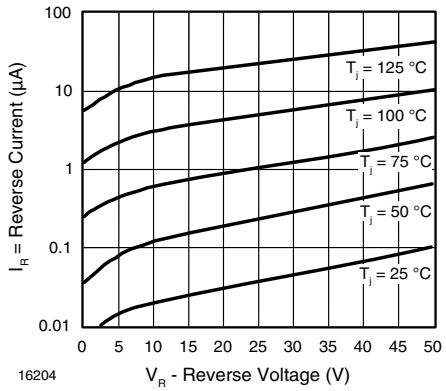


Figure 1. Reverse Current vs. Reverse Voltage

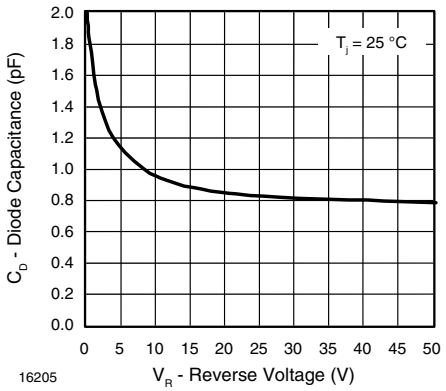


Figure 2. Diode Capacitance vs. Reverse Voltage

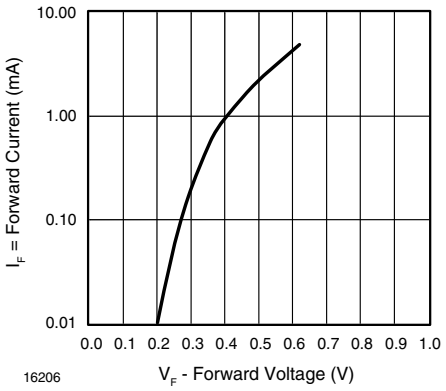
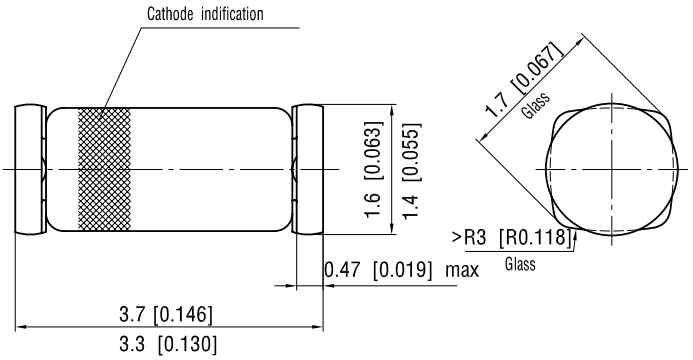
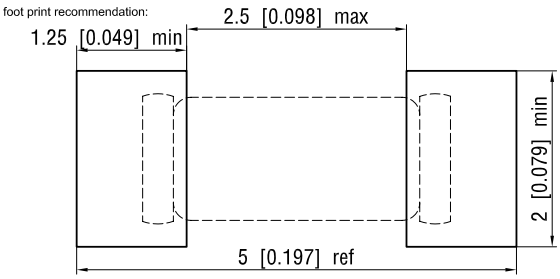


Figure 3. Forward Current vs. Forward Voltage

Package Dimensions in mm (Inches)





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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.

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

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