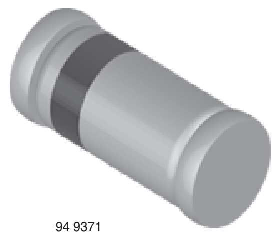
Small Signal Schottky Barrier Diodes

Features

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


94 9371

Applications

HF-Detector
Protection circuit
Small battery charger
AC-DC/ DC-Dc converters

Mechanical Data

Case: MiniMELF Glass Case (SOD-80)
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	Remarks
LL103A	V_R = 40 V, V_F @ I_F = 20 mA max. 0.37 V	LL103A-GS08 or LL103A-GS18	Tape and Reel
LL103B	V_R = 30 V, V_F @ I_F = 20 mA max. 0.37 V	LL103B-GS08 or LL103B-GS18	Tape and Reel
LL103C	V_R = 20 V, V_F @ I_F = 20 mA max. 0.37 V	LL103C-GS08 or LL103C-GS18	Tape and Reel

Absolute Maximum Ratings

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

Parameter	Test condition	Part	Symbol	Value	Unit
Reverse voltage		LL103A	V_R	40	V
		LL103B	V_R	30	V
		LL103C	V_R	20	V
Forward current			I_{FAV}	200	mA
Peak forward surge curent	t_p = 300 µs, square pulse		I_{FSM}	15	mW
Power dissipation	l = 4 mm, T_L = constant		P_{tot}	400	mW

Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Junction temperature		T_j	125	°C
Storage temperature range		T_{stg}	- 65 to + 150	°C
Junction ambient	l = 4 mm, T_L = constant	R_{thJA}	250	K/W

Electrical Characteristics

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

Parameter	Test condition	Part	Symbol	Min	Typ.	Max	Unit
Reverse breakdown voltage	I_R = 50 µA	LL103A	I_R	40			V
		LL103B	I_R	30			V
		LL103C	I_R	20			V
Leakage current	V_R = 30 V	LL103A	I_R			5	µA
	V_R = 20 V	LL103B	I_R			5	µA
	V_R = 10 V	LL103C	I_R			5	µA
Forward voltage drop	I_F = 20 mA		V_F			0.37	V
	I_F = 200 mA		V_F			0.6	V
Junction capacitance	V_R = 0 V, f = 1 MHz		C_{tot}		50		pF
Reverse recovery time	$I_F = I_R$ = 50 to 200 mA, recover to 0.1 I_R		t_{rr}		10		ns

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

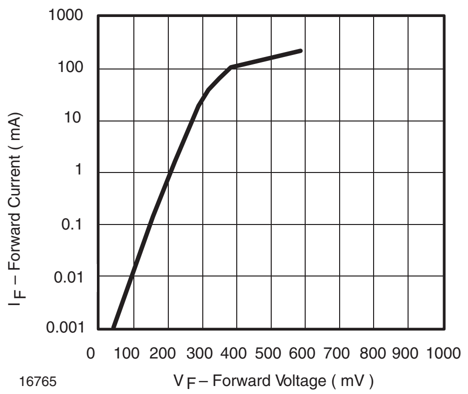


Fig. 1 Forward Current vs. Forward Voltage

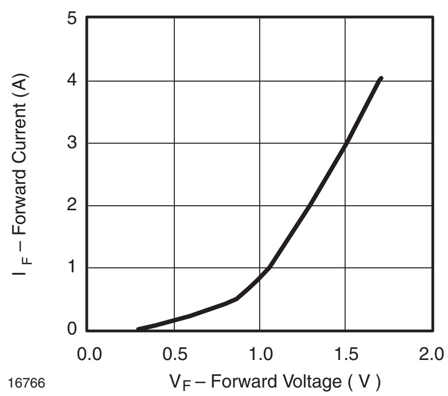


Fig. 2 Forward Current vs. Forward Voltage

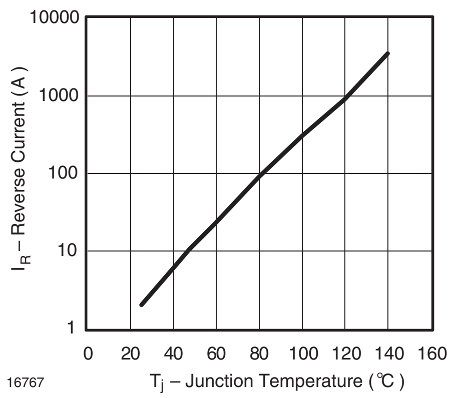


Fig. 3 Reverse Current vs. Junction Temperature

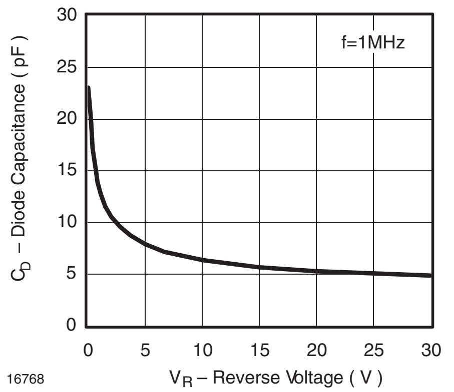


Fig. 4 Diode Capacitance vs. Reverse Voltage

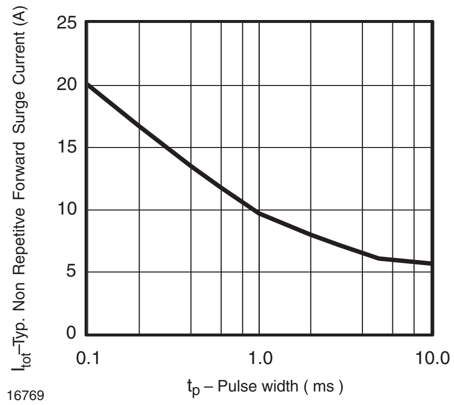
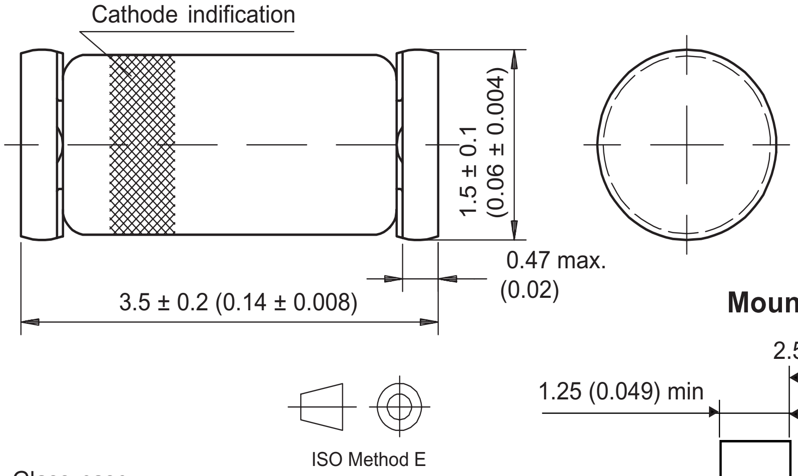


Fig. 5 Typ. Non Repetitive Forward Surge Current vs. Pulse width

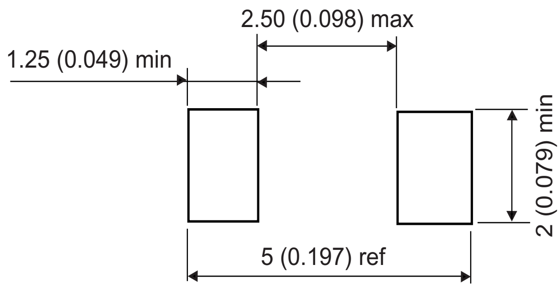
Package Dimensions in mm (Inches)



Glass case
Mini Melf / SOD 80
JEDEC DO 213 AA

96 12070

Mounting Pad Layout



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.

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