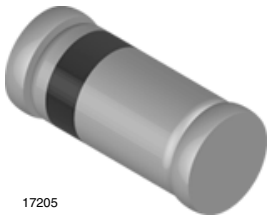
Small Signal Schottky Diode

Features

- For general purpose applications
- This diode features low turn-on voltage and high breakdown voltage
- This device is protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- This diode is also available in the DO35 case with type designation BAT41
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC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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	Ordering code	Type Marking	Remarks
LL41	LL41-GS18 or LL41-GS08	-	Tape and Reel

Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Repetitive peak reverse voltage		V_{RRM}	100	V
Forward continuous current	T_{amb} = 25 °C	I_F	100[1)]	mA
Repetitive peak forward current	t_p < 1 s, δ < 0.5, T_{amb} = 25 °C	I_{FRM}	350[1)]	mA
Surge forward current	t_p = 10 ms, T_{amb} 25 °C	I_{FSM}	750[1)]	mA
Power dissipation	T_{amb} = 65 °C	P_{tot}	200[1)]	mW

1) Valid provided that electrodes are kept at ambient temperature

Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		R_{thJA}	300[1)]	K/W
Junction temperature		T_j	125	°C
Ambient operating temperature range		T_{amb}	- 65 to + 125	°C
Storage temperature range		T_{stg}	- 65 to + 150	°C

1) Valid provided that electrodes are kept at ambient temperature

Electrical Characteristics

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

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Reverse breakdown voltage[2)]	I_R = 100 µA	$V_{(BR)}$	100	110		V
Leakage current[2)]	V_R = 50 V, T_j = 25 °C	I_R			100	nA
	V_R = 50 V, T_j = 100 °C	I_R			20	µA
Forward voltage[2)]	I_F = 1 mA	V_F		400	450	mV
	I_F = 200 mA	V_F			1000	mV
Diode capacitance	V_R = 1 V, f = 1 MHz	C_D		2		pF

2) Pulse test, t_p = 300 µs

Typical Characteristics

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

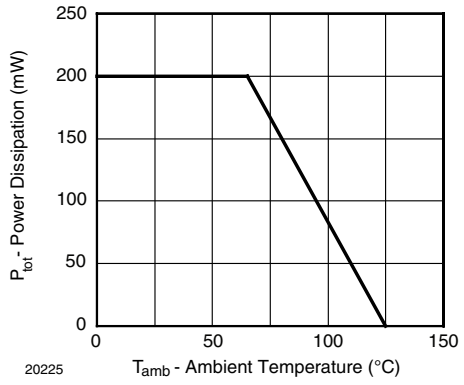


Figure 1. Admissible Power Dissipation vs. Ambient Temperature

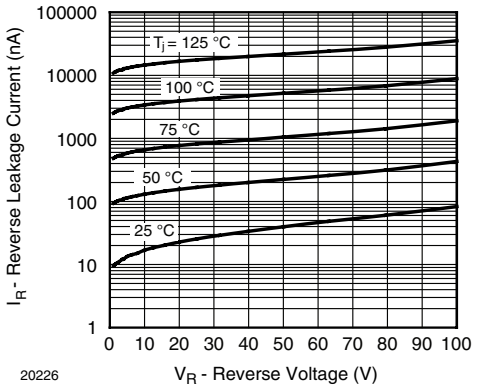


Figure 2. Typical Reverse Characteristics

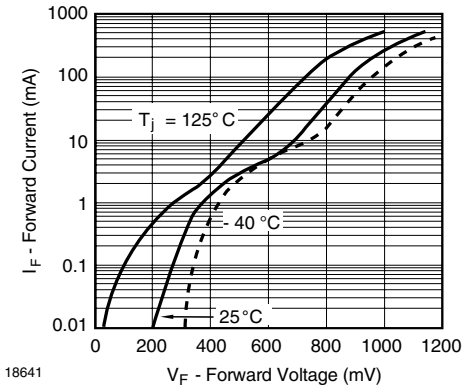


Figure 3. Typical Forward Characteristics

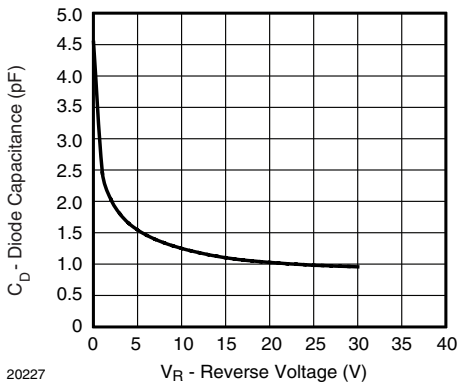
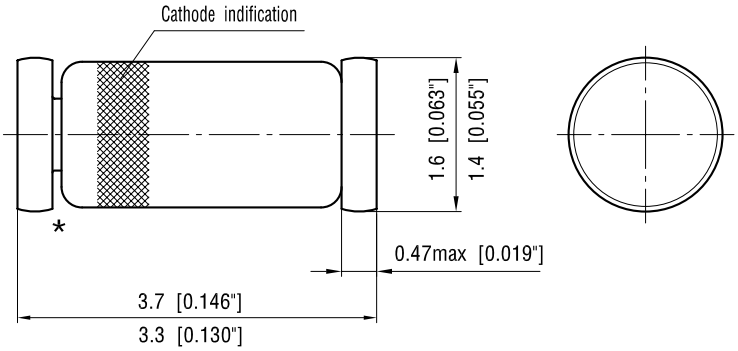


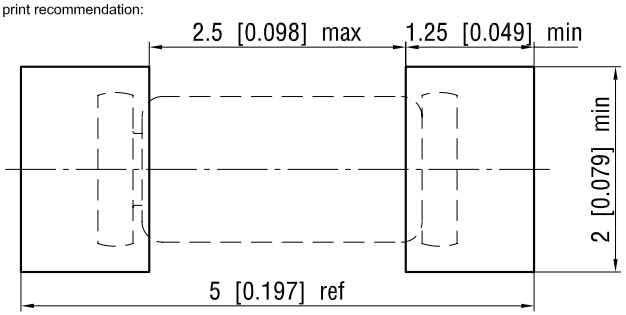
Figure 4. Typical Capacitance vs. Reverse Voltage

Package Dimensions in mm (Inches): MiniMELF SOD80



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

foot print recommendation:



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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.

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

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