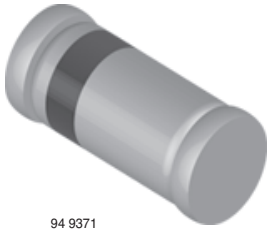
Small Signal Schottky Diode

Features

- For general purpose applications
- This diode features low turn-on voltage. The devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges.
- Metal-on-silicon Schottky barrier device which is protected by a PN junction guard ring.
- The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing and coupling diodes for fast switching and low logic level applications
- This diode is also available in a DO35 case with type designation BAT86.
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



Applications

- Applications where a very low forward voltage is required

Mechanical Data

Case: MiniMELF Glass case SOD80
Weight: approx. 31 mg
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	Marking	Remarks
BAS86	BAS86-GS18 or BAS86-GS08		Tape and Reel

Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Continuous reverse voltage		V_R	50	V
Forward continuous current	T_{amb} = 25 °C	I_F	200[1)]	mA
Repetitive peak forward current	t_p < 1 s, T_{amb} = 25 °C, $\nu \leq 0.5$	I_{FRM}	500[1)]	mA
Power dissipation[1)]	T_{amb} = 25 °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_S	- 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	I_R = 10 µA (pulsed)	$V_{(BR)}$	50			V
Leakage current	V_R = 40 V	I_R			5	µA
Forward voltage	Pulse test t_p < 300 µs, I_F = 0.1 mA, δ < 2 %	V_F		200	300	mV
	Pulse test t_p < 300 µs, I_F = 1 mA, δ < 2 %	V_F		275	380	mV
	Pulse test t_p < 300 µs, I_F = 10 mA, δ < 2 %	V_F		365	450	mV
	Pulse test t_p < 300 µs, I_F = 30 mA, δ < 2 %	V_F		460	600	mV
	Pulse test t_p < 300 µs, I_F = 100 mA, δ < 2 %	V_F		700	900	mV
Diode capacitance	V_R = 1 V, f = 1 MHz	C_{tot}			8	pF
Reverse recovery time	I_F = 10 mA, I_R = 10 mA, I_{rr} = 1 mA,	t_{rr}			5	ns

Typical Characteristics

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

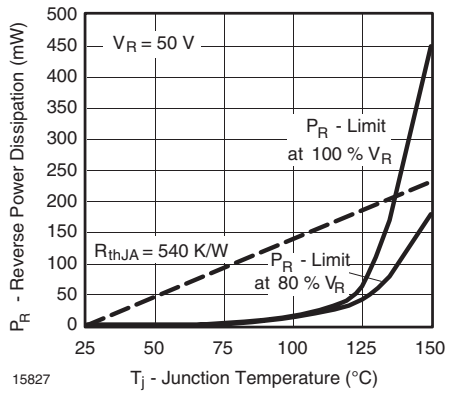


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

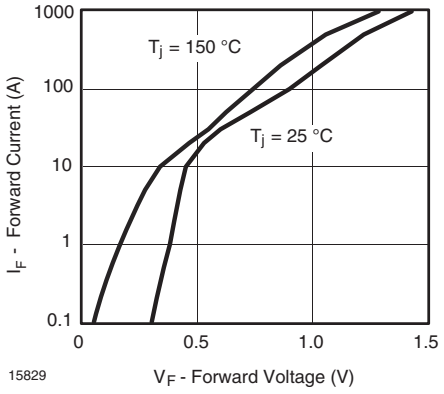


Figure 3. Forward Current vs. Forward Voltage

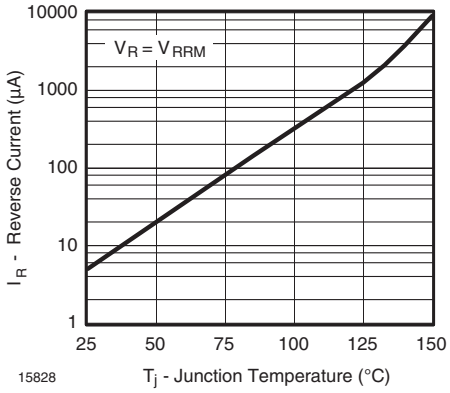


Figure 2. Reverse Current vs. Junction Temperature

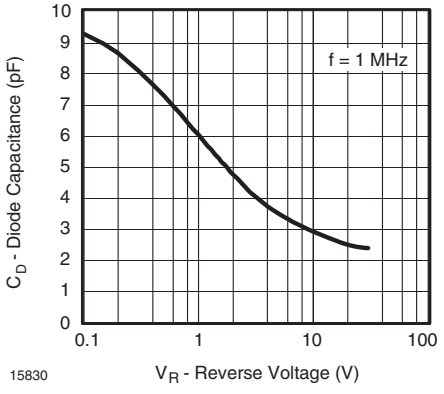
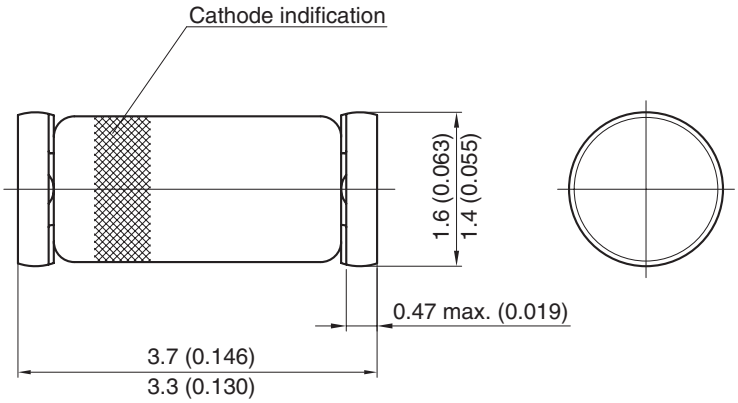
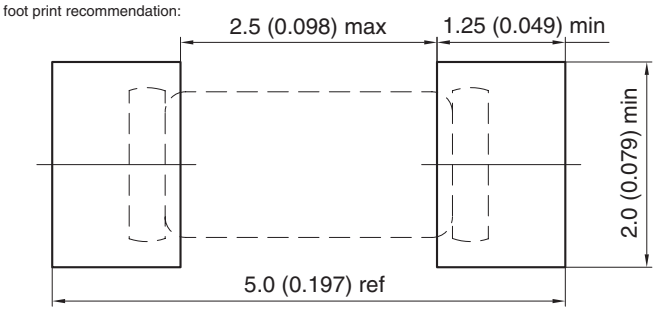


Figure 4. Diode Capacitance vs. Reverse Voltage

Package Dimensions in mm (Inches)





Document no.: 6.560-5005.01-4
Rev. 7 - Date: 07.February.2005
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.

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

Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Vishay”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay’s terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Стандарт Электрон Связь

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

Наши контакты:

Телефон: +7 812 627 14 35

Электронная почта: sales@st-electron.ru

Адрес: 198099, Санкт-Петербург, Промышленная ул, дом № 19, литера Н, помещение 100-Н Офис 331