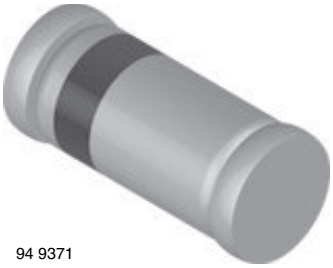
Small Signal Schottky Diodes

Features

- Integrated protection ring against static discharge
- Low capacitance
- Low leakage current
- Low forward voltage drop
- Very low switching time
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

RoHS COMPLIANT



94 9371

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: MiniMELF 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
BAS81	V_R = 40 V	BAS81-GS18 or BAS81-GS08	Tape and Reel
BAS82	V_R = 50 V	BAS82-GS18 or BAS82-GS08	Tape and Reel
BAS83	V_R = 60 V	BAS83-GS18 or BAS83-GS08	Tape and Reel

Absolute Maximum Ratings

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

Parameter	Test condition	Part	Symbol	Value	Unit
Reverse voltage		BAS81	V_R	40	V
		BAS82	V_R	50	V
		BAS83	V_R	60	V
Peak forward surge current	t_p = 1 s		I_{FSM}	500	mA
Repetitive peak forward current			I_{FRM}	150	mA
Forward continuous current			I_F	30	mA

For technical questions within your region, please contact one of the following:
DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

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	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	I_F = 0.1 mA	V_F			330	mV
	I_F = 1 mA	V_F			410	mV
	I_F = 15 mA	V_F			1000	mV
Reverse current	$V_R = V_{Rmax}$	I_R			200	nA
Diode capacitance	V_R = 1 V, f = 1 MHz	C_D			1.6	pF

Typical Characteristics

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

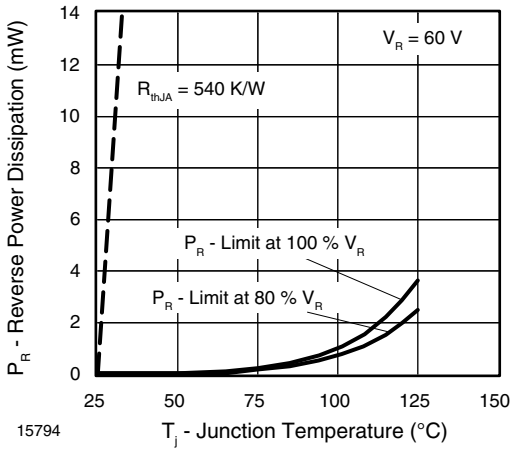


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

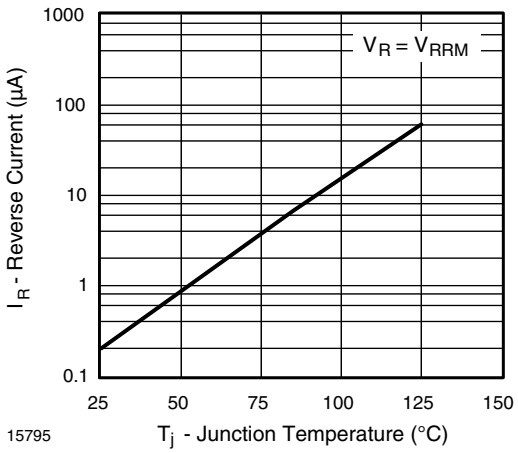


Figure 2. Reverse Current vs. Junction Temperature

For technical questions within your region, please contact one of the following:
DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

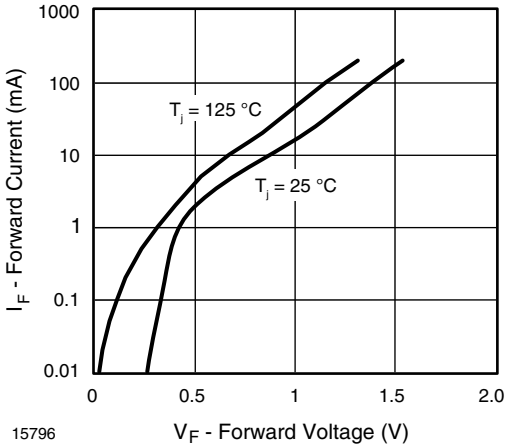


Figure 3. Forward Current vs. Forward Voltage

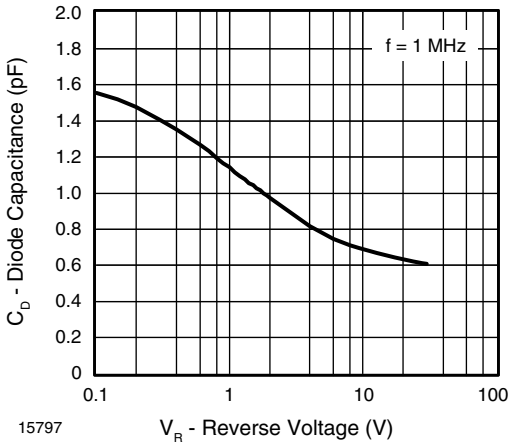
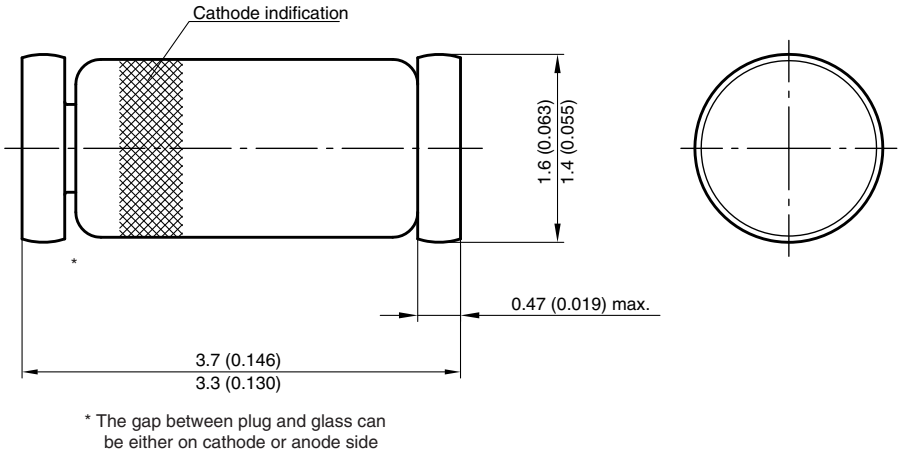


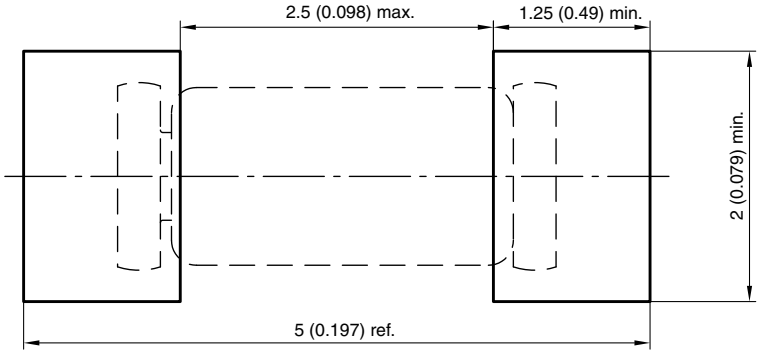
Figure 4. Diode Capacitance vs. Reverse Voltage

Package Dimensions in millimeters (inches): **MiniMELF SOD-80**



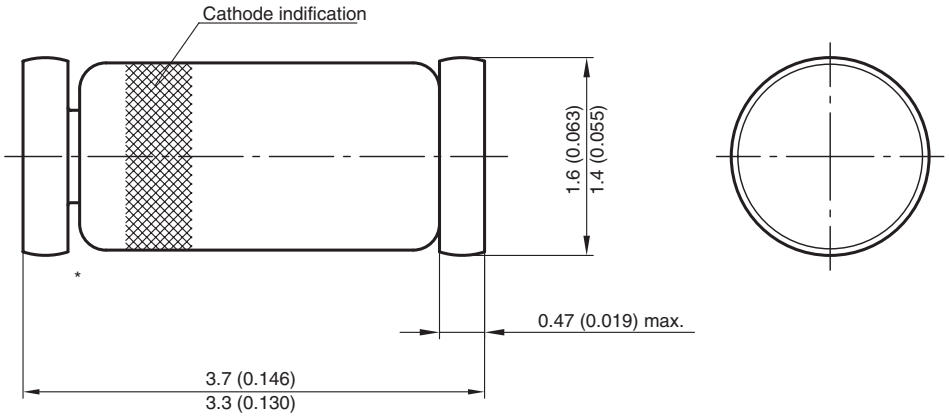
* The gap between plug and glass can be either on cathode or anode side

Foot print recommendation:



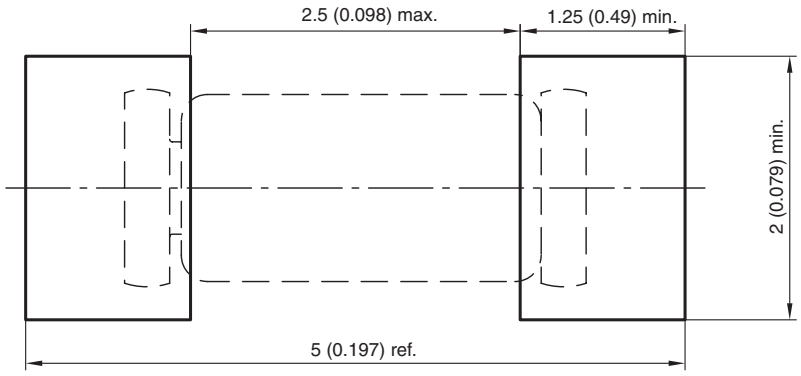
Document no.:6.560-5005.01-4
Rev. 8 - Date: 07.June.2006
96 12070

PACKAGE DIMENSIONS in millimeters (inches)



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

Foot print recommendation:



Document no.:6.560-5005.01-4
Rev. 8 - Date: 07.June.2006
96 12070

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

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 in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay’s knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer’s responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer’s technical experts. Product specifications do not expand or otherwise modify Vishay’s terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk and agree to fully indemnify and hold Vishay and its distributors harmless from and against any and all claims, liabilities, expenses and damages arising or resulting in connection with such use or sale, including attorneys fees, even if such claim alleges that Vishay or its distributor was negligent regarding the design or manufacture of the part. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

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