

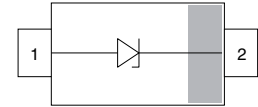
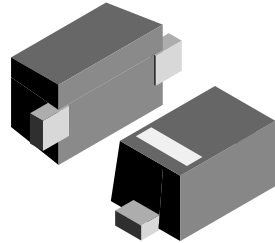
Small Signal Schottky Diode

Features

- This diode features very low turn-on voltage and fast switching
- This device is protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- Space saving SOD-523 package
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



RoHS
COMPLIANT



18554

Mechanical Data

Case: SOD-523

Weight: approx. 1.6 mg

Molding compound flammability rating:

UL 94 V-0

Terminals: high temperature soldering guaranteed:

260 °C/4 x 10 s at terminals

Packaging codes/options:

GS18/10k per 13" reel (8 mm tape), 10k/box

GS08/3k per 7" reel (8 mm tape), 15k/box

Parts Table

Part	Ordering code	Type marking	Remarks
BAT54-02V	BAT54-02V-GS18 or BAT54-02V-GS08	V	Tape and reel

Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Repetitive peak reverse voltage = working peak reverse voltage		V_{RRM}	30	V
Forward continuous current		I_F	200	mA
Repetitive peak forward current		I_{FRM}	300	mA
Surge forward current		I_{FSM}	600	mA
Power dissipation		P_{tot}	230	mW

Thermal Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Junction soldering point		R_{thJS}	100	K/W
Junction temperature		T_j	125	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	- 65 to + 150	$^{\circ}\text{C}$

Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown voltage	100 μA pulses	$V_{(BR)}$	30			V
Leakage current	Pulse test $t_p < 300\text{ }\mu\text{s}$, $\delta < 2\%$ at $V_R = 25\text{ V}$				2	μA
Forward voltage	$I_F = 0.1\text{ mA}$, $t_p < 300\text{ }\mu\text{s}$, $\delta < 2\%$	V_F			240	mV
	$I_F = 1\text{ mA}$, $t_p < 300\text{ }\mu\text{s}$, $\delta < 2\%$	V_F			320	mV
	$I_F = 10\text{ mA}$, $t_p < 300\text{ }\mu\text{s}$, $\delta < 2\%$	V_F			400	mV
	$I_F = 30\text{ mA}$, $t_p < 300\text{ }\mu\text{s}$, $\delta < 2\%$	V_F			500	mV
	$I_F = 100\text{ mA}$, $t_p < 300\text{ }\mu\text{s}$, $\delta < 2\%$	V_F			800	mV
Diode capacitance	$V_R = 1\text{ V}$, $f = 1\text{ MHz}$	C_D			10	pF
Reverse recovery time	$I_F = 10\text{ mA}$, $I_R = 10\text{ mA}$ to $I_R = 1\text{ mA}$, $R_L = 100\text{ }\Omega$	t_{rr}			5	ns

Typical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

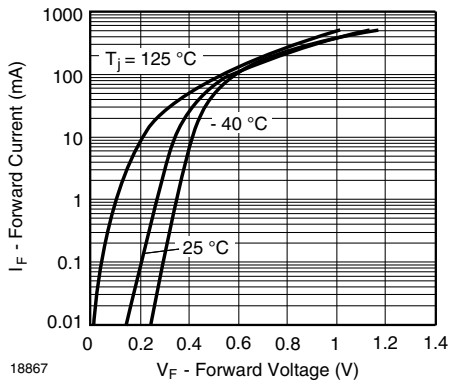


Figure 1. Typical Forward Voltage Forward Current vs. Various Temperatures

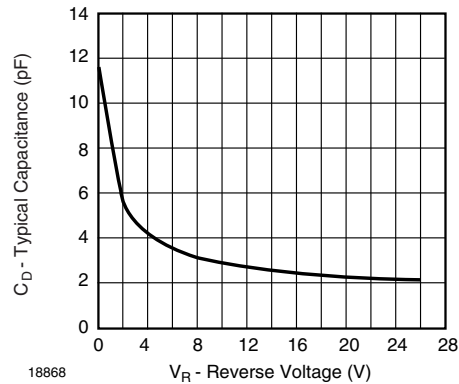


Figure 3. Typical Capacitance $^{\circ}\text{C}$ vs. Reverse Applied Voltage V_R

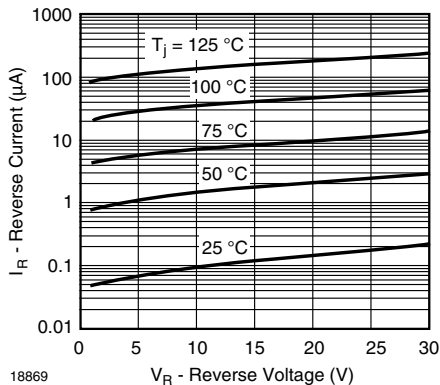
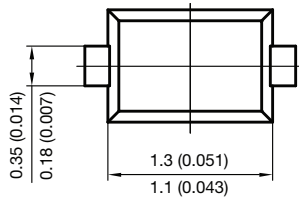
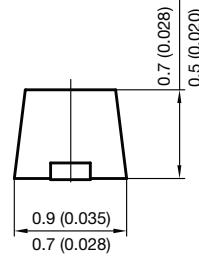
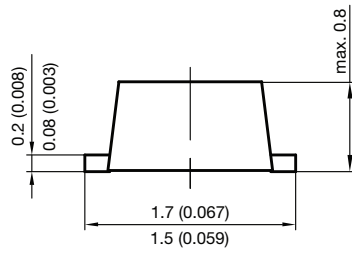
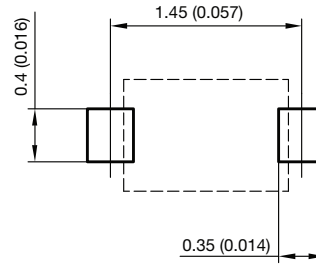


Figure 2. Typical Variation of Reverse Current vs. Various Temperatures

Package Dimensions in millimeters (inches): **SOD-523**



foot print recommendation:



Document no.: S8-V-3880.02-001 (4)

Rev. g - Date: 13.April 2010

16864



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.