

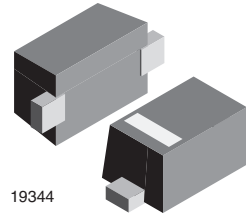
Small Signal Schottky Diode

Features

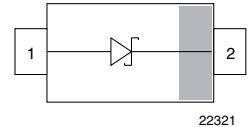
- This diode features very low turn-on voltage and fast switching
- This device is protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- Space saving SOD-523 package
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC



RoHS
COMPLIANT
GREEN
[5-2008]**



19344



22321

Mechanical Data

Case: SOD-523

Weight: approx. 1.4 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:

18/3K per 13" reel (8 mm tape), 10K/box

08/3K per 7" reel (8 mm tape), 15K/box

Parts Table

Part	Ordering code	Type marking	Remarks
BAT54-02V-V-G	BAT54-02V-V-G-18 or BAT54-02V-V-G-08	.V	Tape and reel

Absolute Maximum Ratings

T_{amb} = 25 °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}	150	mW

Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		R _{thJA}	680	K/W
Junction temperature		T _j	125	°C
Storage temperature range		T _{stg}	- 65 to + 150	°C

** Please see document "Vishay Material Category Policy": www.vishay.com/doc?99902

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

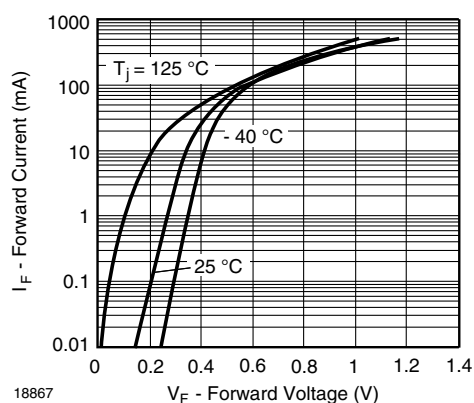


Figure 1. Typical Forward Voltage Forward Current vs. Various Temperatures

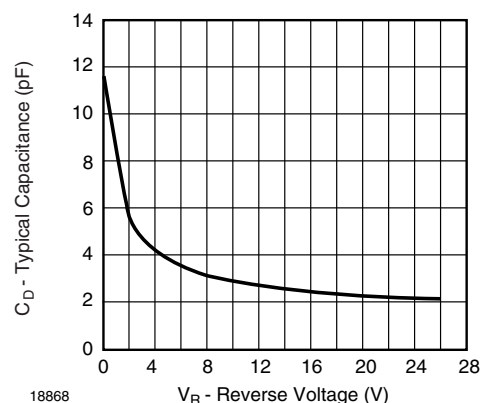


Figure 3. Typical Capacitance $^{\circ}\text{C}$ vs. Reverse Applied Voltage V_R

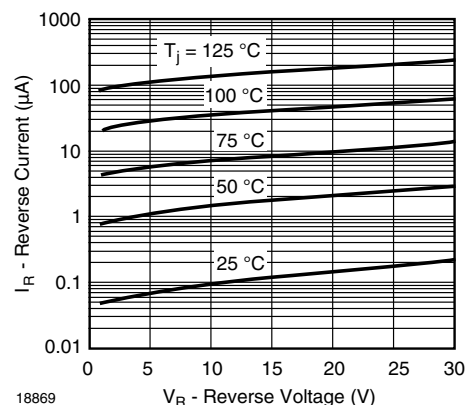
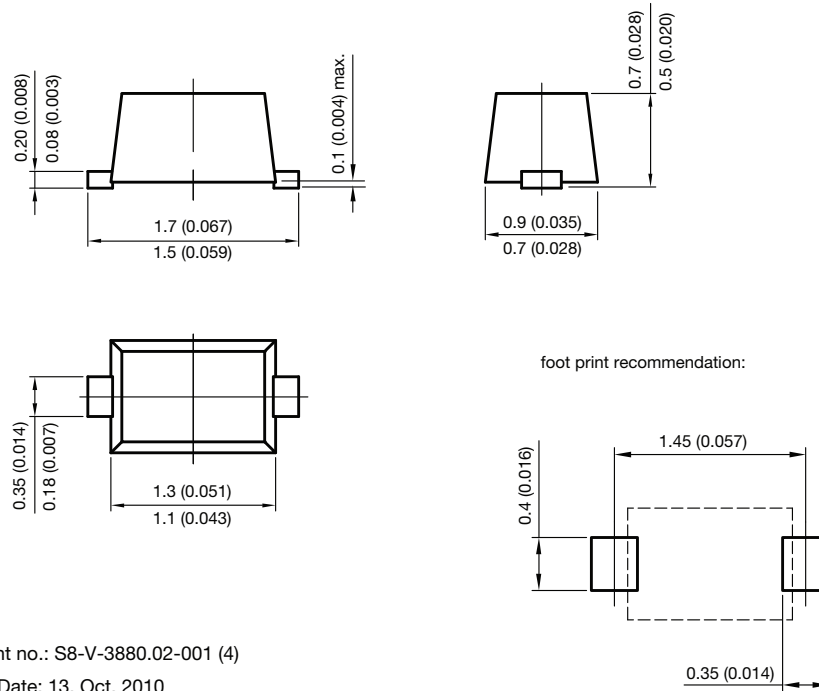


Figure 2. Typical Variation of Reverse Current vs. Various Temperatures

Package Dimensions in millimeters (inches): SOD-523



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