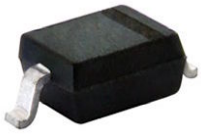
Small Signal Schottky Diode



DESIGN SUPPORT TOOLS click logo to get started

3D Models Available

FEATURES

- These diodes feature very low turn-on voltage and fast switching
- These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- AEC-Q101 qualified available (part number on request)
- Base P/N-G3 - green, commercial grade
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free
e3
RoHS COMPLIANT
HALOGEN FREE
GREEN (5-2008)

MECHANICAL DATA

Case: SOD-323
Weight: approx. 4.0 mg
Packaging codes/options:
18/10K per 13" reel (8 mm tape), 10K/box
08/3K per 7" reel (8 mm tape), 15K/box

PARTS TABLE

PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS
BAT54WS-G	BAT54WS-G3-08 or BAT54WS-G3-18	Single	L8	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}	30	V
Forward continuous current (1)		I_F	200	mA
Repetitive peak forward current (1)		I_{FRM}	300	mA
Surge forward current (1)	$t_p < 1$ s	I_{FSM}	600	mA
Power dissipation (1)		P_{tot}	150	mW

Note
(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 (1)		R_{thJA}	650	K/W
Maximum junction temperature		T_j	125	°C
Storage temperature range		T_{stg}	-65 to +150	°C
Operating temperature range		T_{op}	-55 to +125	°C

Note
(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	Tested with 100 µA pulses	$V_{(BR)}$	30			V
Leakage current (1)	V_R = 25 V	I_R			2	µA
Forward voltage (1)	I_F = 0.1 mA	V_F			240	mV
	I_F = 1 mA	V_F			320	mV
	I_F = 10 mA	V_F			400	mV
	I_F = 30 mA	V_F			500	mV
	I_F = 100 mA	V_F			800	mV
Diode capacitance	V_R = 1 V, f = 1 MHz	C_D			10	pF
Reserve recovery time	I_F = 10 mA, I_R = 10 mA, i_R = 1 mA, R_L = 100 Ω	t_{rr}			5	ns

Note
(1) Pulse test; $t_p < 300$ µs, $\theta < 2$ %

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TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

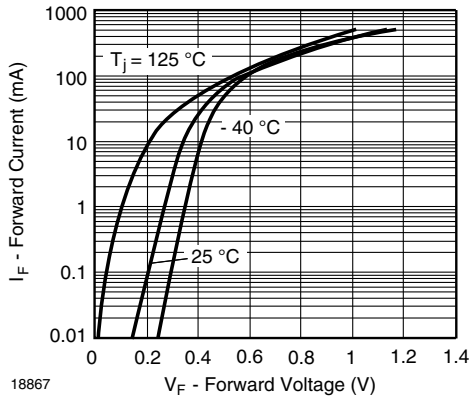

Fig. 1 - Typical Forward Current vs. Forward Voltage vs. Various Temperatures

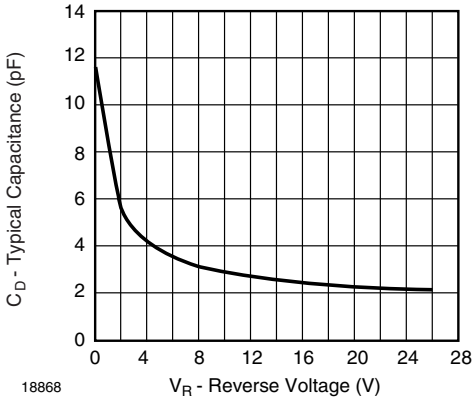

Fig. 2 - Typical Capacitance vs. Reverse Applied Voltage

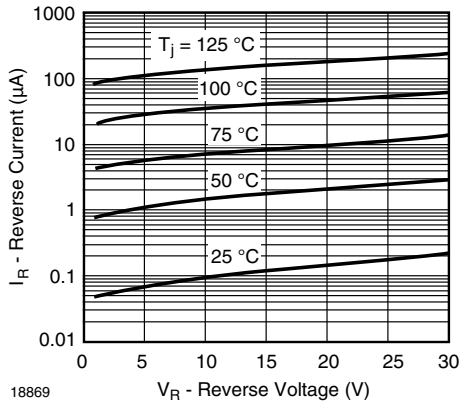

Fig. 3 - Typical Reverse Current vs. Reverse Voltage vs. Various Temperatures

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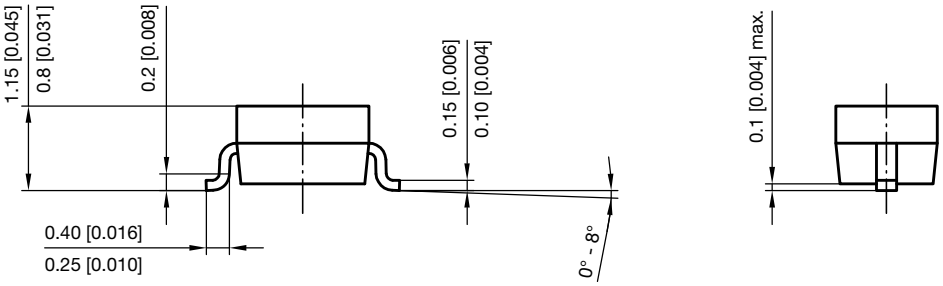
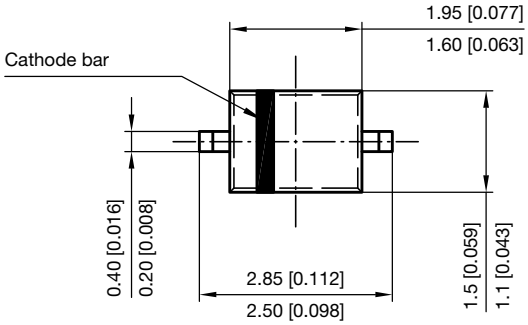
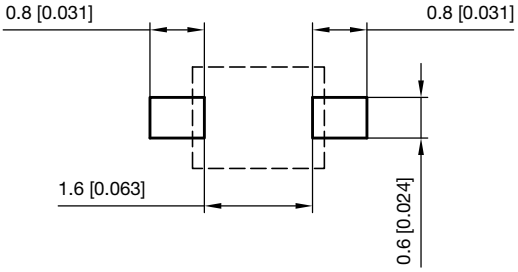
PACKAGE DIMENSIONS in millimeters (inches): **SOD-323**





Footprint recommendation:



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