

Vishay Semiconductors



Small Signal Schottky Diode

Features

- · These diodes feature very low turn-on voltage and fast switching
- These devices are protected by a PN junction guard ring against excessive RoHS voltage, such as electrostatic discharges COMPLIANT
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



Mechanical Data

Case: SOD-323 Weight: approx. 4.3 mg 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	
BAT54WS-V	BAT54WS-V-GS18 or BAT54WS-V-GS08	L4	Tape and reel	

eЗ

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		١ _F	200 ¹⁾	mA
Repetitive peak forward current		I _{FRM}	300 ¹⁾	mA
Surge forward current	t _p < 1 s	I _{FSM}	600 ¹⁾	mA
Power dissipation 1)		P _{tot}	150 ¹⁾	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		R _{thJA}	650 ¹⁾	K/W
Maximum junction temperature		Тj	125	°C
Storage temperature range		T _{stg}	- 65 to + 150	°C

Note

¹⁾ Valid provided that electrodes are kept at ambient temperature

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Electrical Characteristics

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

Parameter	Test condition	Symbol	Min.	Тур.	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
	l _F = 100 mA	V _F			800	mV
Diode capacitance	V _R = 1 V, f = 1 MHz	CD			10	pF
Reverse recovery time	$I_F = I_R = 10 \text{ mA}; I_R = 1 \text{ mA}; R_L = 100 \Omega$	t _{rr}			5	ns

Note

¹⁾ Pulse test: t_p < 300 µs, θ < 2 %

Typical Characteristics

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



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



Figure 2. Typical Capacitance vs. Reverse Applied Voltage



Figure 3. Typical Reverse Current vs. Reverse Voltage vs. Various Temperatures



BAT54WS-V

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Package Dimensions in millimeters (inches): SOD-323







Foot print recommendation:



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