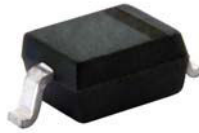




Small Signal Schottky Diode



MECHANICAL DATA

Case: SOD-323

Weight: approx. 4.3 mg

Packaging codes/options:

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

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

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
- Base P/N-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3 - RoHS-compliant, AEC-Q101 qualified
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912



RoHS COMPLIANT

PARTS TABLE				
PART	ORDERING CODE	INTERNAL CONSTRUCTION	TYPE MARKING	REMARKS
BAT54WS	BAT54WS-E3-08 or BAT54WS-E3-18	Single diode	L4	Tape and reel
	BAT54WS-HE3-08 or BAT54WS-HE3-18			

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
Reverse 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, θ < 2 %

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

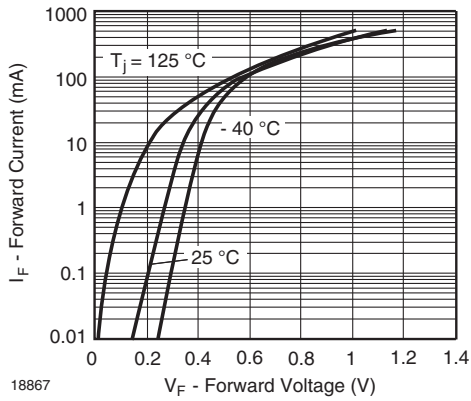


Fig. 1 - Typical Forward Current vs. Forward Voltage vs. Various Temperatures

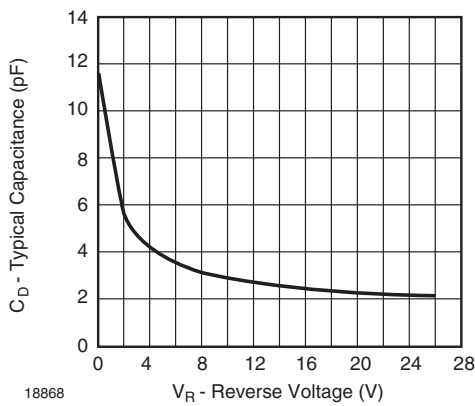


Fig. 2 - Typical Capacitance vs. Reverse Applied Voltage

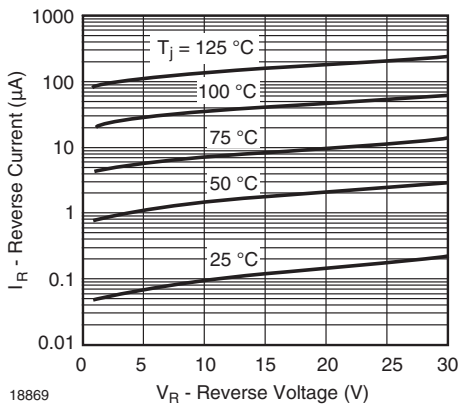
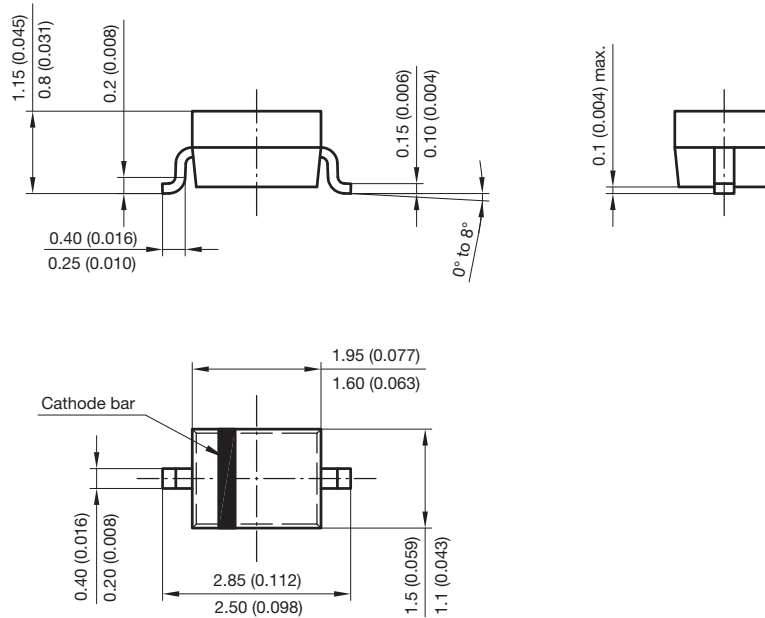


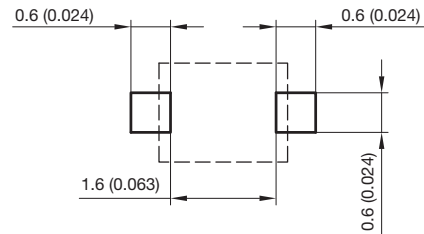
Fig. 3 - Typical Reverse Current vs. Reverse Voltage vs. Various Temperatures



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



Foot print recommendation:



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 Rev. 5 - Date: 23.Sept.2009
 17443



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