

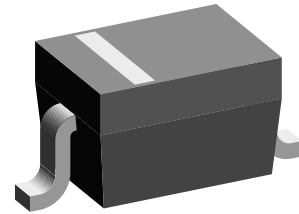
## Small Signal Schottky Diode

### Features

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



**RoHS**  
COMPLIANT



20145

### 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

### Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Repetitive peak reverse voltage		$V_{RRM}$	30	V
Forward continuous current		$I_F$	200 <sup>1)</sup>	mA
Repetitive peak forward current		$I_{FRM}$	300 <sup>1)</sup>	mA
Surge forward current	$t_p < 1\text{ s}$	$I_{FSM}$	600 <sup>1)</sup>	mA
Power dissipation <sup>1)</sup>		$P_{tot}$	150 <sup>1)</sup>	mW

Note

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature

### Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		$R_{thJA}$	650 <sup>1)</sup>	K/W
Maximum junction temperature		$T_j$	125	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	- 65 to + 150	$^{\circ}\text{C}$

Note

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature

## Electrical Characteristics

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

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	tested with 100 $\mu\text{A}$ pulses	$V_{(BR)}$	30			V
Leakage current <sup>1)</sup>	$V_R = 25\text{ V}$	$I_R$			2	$\mu\text{A}$
Forward voltage <sup>1)</sup>	$I_F = 0.1\text{ mA}$	$V_F$			240	mV
	$I_F = 1\text{ mA}$	$V_F$			320	mV
	$I_F = 10\text{ mA}$	$V_F$			400	mV
	$I_F = 30\text{ mA}$	$V_F$			500	mV
	$I_F = 100\text{ mA}$	$V_F$			800	mV
Diode capacitance	$V_R = 1\text{ V}$ , $f = 1\text{ MHz}$	$C_D$			10	pF
Reverse recovery time	$I_F = I_R = 10\text{ mA}$ ; $I_R = 1\text{ mA}$ ; $R_L = 100\text{ }\Omega$	$t_{rr}$			5	ns

Note

<sup>1)</sup> Pulse test:  $t_p < 300\text{ }\mu\text{s}$ ,  $\theta < 2\%$

## Typical Characteristics

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

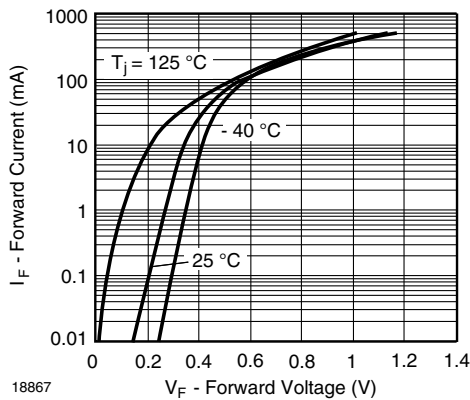


Figure 1. Typical Forward Current vs. Forward Voltage vs. Various Temperatures

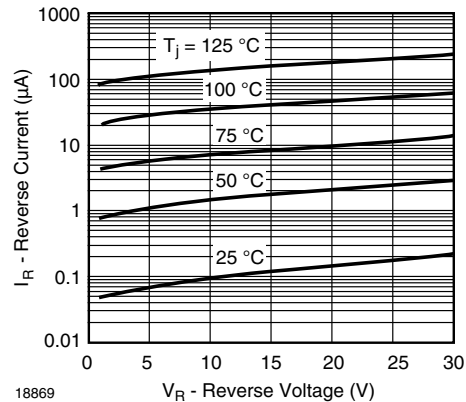


Figure 3. Typical Reverse Current vs. Reverse Voltage vs. Various Temperatures

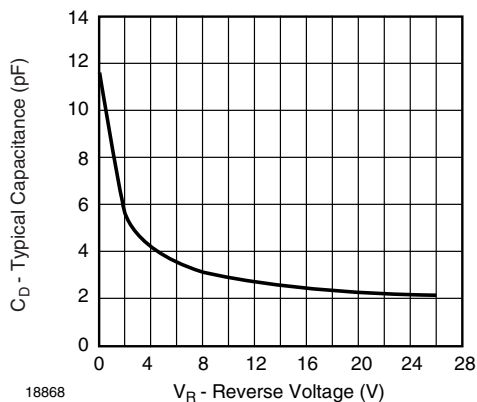
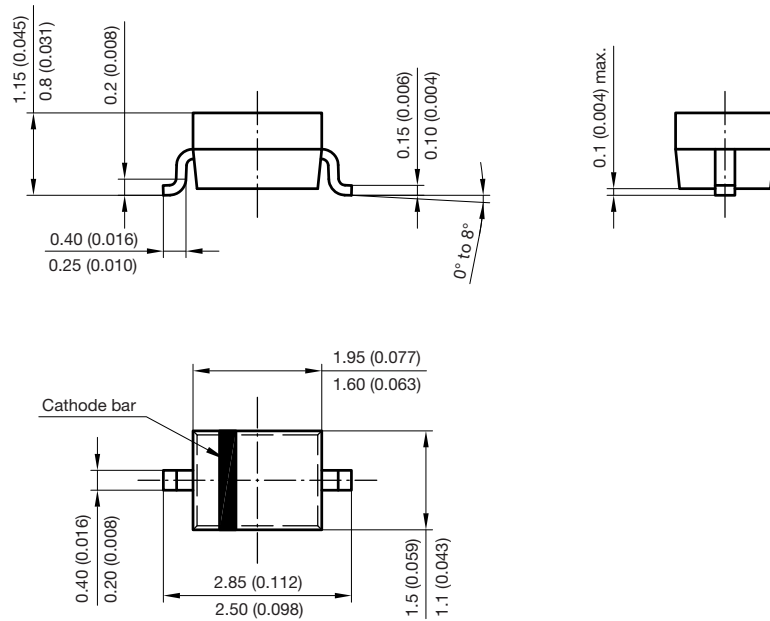
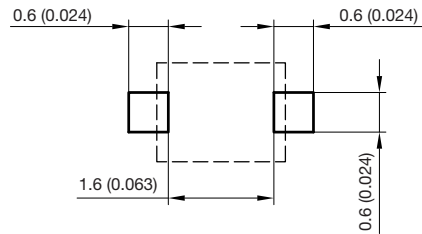


Figure 2. Typical Capacitance vs. Reverse Applied Voltage

Package Dimensions in millimeters (inches): **SOD-323**



Foot print recommendation:



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 17443



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