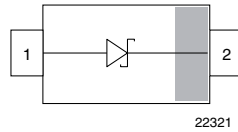


Small Signal Schottky Diode



LINKS TO ADDITIONAL RESOURCES



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:

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

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

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
- AEC-Q101 qualified available
- Space saving SOD-523 package
- Base P/N-G3 - RoHS-compliant, commercial grade
- Base P/N-HG3 - RoHS-compliant, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



PARTS TABLE

| PART | ORDERING CODE | AEC-Q101 QUALIFIED | CIRCUIT CONFIGURATION | TYPE MARKING | REMARKS |
|-----------|------------------|--------------------|-----------------------|--------------|---------------|
| BAT54-02V | BAT54-02V-G3-08 | no | Single | .V | Tape and reel |
| | BAT54-02V-HG3-08 | yes | | | |

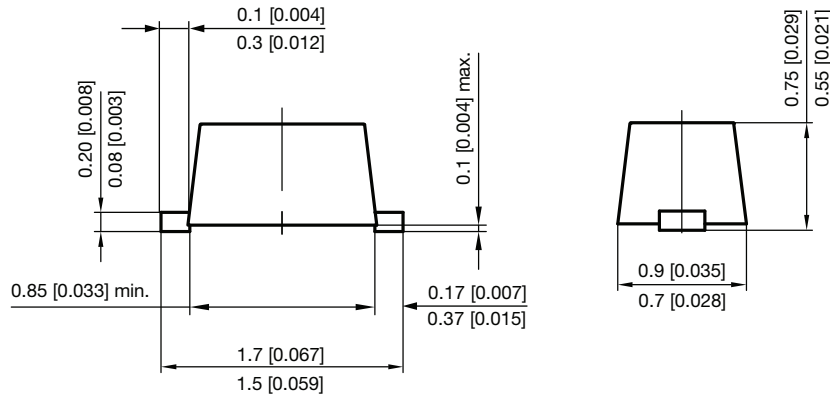
ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

| 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 | $t_p = 10\text{ ms square wave, } T_j = 25\text{ }^{\circ}\text{C prior to surge}$ | I_{FSM} | 600 | mA |
| Power dissipation | | P_{tot} | 150 | mW |

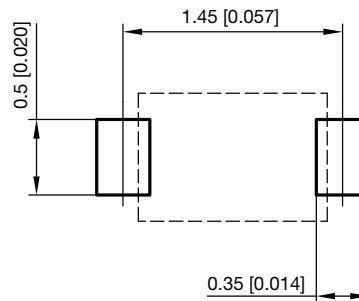
THERMAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
|--|----------------|------------|-------------|--------------------|
| Thermal resistance junction to ambient air | | R_{thJA} | 680 | K/W |
| Thermal resistance junction to lead | | R_{thJL} | 480 | K/W |
| Junction temperature | | T_j | 125 | $^{\circ}\text{C}$ |
| Operating temperature range | | T_{op} | -55 to +125 | $^{\circ}\text{C}$ |
| Storage temperature range | | T_{stg} | -55 to +150 | $^{\circ}\text{C}$ |

| 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 $V_R = 25\text{ V}$ | I_R | | | 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 | $I_F = 10\text{ mA}$, $I_R = 10\text{ mA}$, $i_R = 1\text{ mA}$, $R_L = 100\text{ }\Omega$ | t_{rr} | | | 5 | ns |

PACKAGE DIMENSIONS in millimeters [inches]: **SOD-523**


Footprint recommendation:



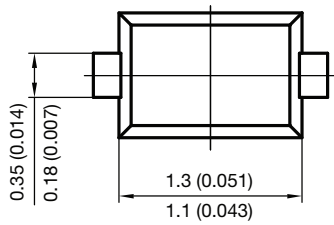
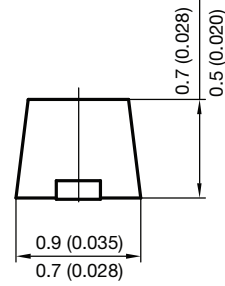
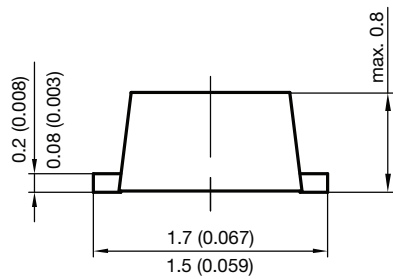
Document no.: S8-V-3880.02-003 (4)

Created - Date: 04. April 2017

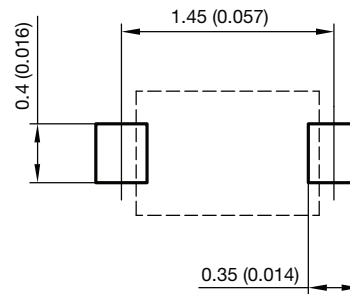
Rev. 4 - Date: 03. Aug. 2020

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PACKAGE DIMENSIONS in millimeters (inches)



foot print recommendation:



Document no.: S8-V-3880.02-001 (4)

Rev. g - Date: 13.April 2010

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