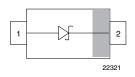


Vishay Semiconductors

Small Signal Schottky Diode





DESIGN SUPPORT TOOLS click logo to get started



MECHANICAL DATA

Case: SOD-523

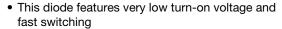
Weight: approx. 1.4 mg

Molding compound flammability rating: UL94 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 device is protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges



• Space saving SOD-523 package

 Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

ROHS
COMPLIANT
HALOGEN
FREE
GREEN

(5-2008)

| PARTS TABLE | | | | | |
|---------------|--------------------------------------|-----------------------|--------------|---------------|--|
| PART | ORDERING CODE | CIRCUIT CONFIGURATION | TYPE MARKING | REMARKS | |
| BAT54-02V-V-G | BAT54-02V-V-G-18 or BAT54-02V-V-G-08 | Single | .V | Tape and reel | |

| ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °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 | | I _{FSM} | 600 | mA | |
| Power dissipation | | P _{tot} | 150 | mW | |

| THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified) | | | | | |
|--|----------------------------|-------------------|-------------|------|--|
| PARAMETER | TEST CONDITION SYMBOL VALU | | | UNIT | |
| Thermal resistance junction to ambient air | | R _{thJA} | 680 | K/W | |
| Junction temperature | | Tj | 125 | °C | |
| Storage temperature range | | T _{stg} | -65 to +150 | °C | |



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| ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °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 $t_p < 300 \ \mu s$, $\delta < 2 \ \%$ at $V_R = 25 \ V$ | I _R | | | 2 | μΑ |
| | $I_F=0.1 mA,\ t_p<300\ \mu s,\ \delta<2\ \%$ | V_{F} | | | 240 | mV |
| | $I_F = 1$ mA, $t_p < 300$ µs, $\delta < 2$ % | V _F | | | 320 | mV |
| Forward voltage | I_F = 10 mA, t_p < 300 $\mu s, \delta < 2 $ % | V _F | | | 400 | mV |
| | I_F = 30 mA, t_p < 300 $\mu s, \delta < 2 $ % | V _F | | | 500 | mV |
| | I_F = 100 mA, t_p < 300 μ s, δ < 2 % | V _F | | | 800 | mV |
| Diode capacitance | V _R = 1 V, f = 1 MHz | C _D | | | 10 | рF |
| Reverse recovery time | $I_F = 10 \text{ mA}, I_R = 10 \text{ mA}, I_R = 1 \text{ mA}, I_L = 100 \Omega$ | t _{rr} | | | 5 | ns |

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

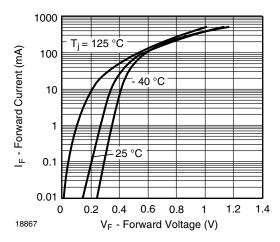


Fig. 1 - Typical Forward Voltage Forward Current vs. Various Temperatures

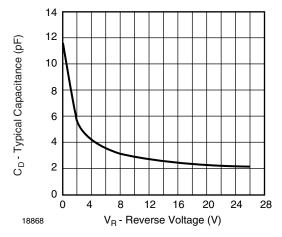


Fig. 3 - Typical Capacitance vs. Reverse Applied Voltage V_R

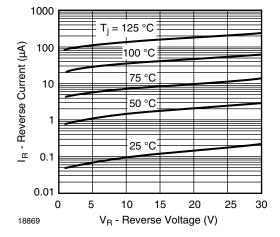
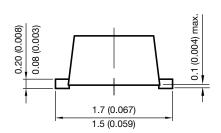


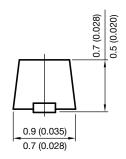
Fig. 2 - Typical Variation of Reverse Current vs. Various Temperatures

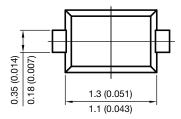


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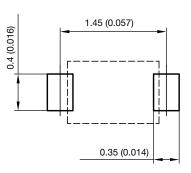
PACKAGE DIMENSIONS in millimeters (inches): SOD-523







foot print recommendation:



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

Rev. h - Date: 13. Oct. 2010

16864



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