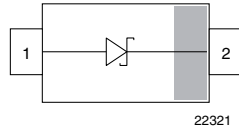


## Small Signal Schottky Diode



### 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](http://www.vishay.com/doc?99912)



### 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/10 s at terminals

**Packaging codes / options:**

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

### PARTS TABLE

| PART      | ORDERING CODE    | AEC-Q101 QUALIFIED | CIRCUIT CONFIGURATION | TYPE MARKING | REMARKS       |
|-----------|------------------|--------------------|-----------------------|--------------|---------------|
| BAS70-02V | BAS70-02V-G3-08  | no                 | Single                | :X           | Tape and reel |
|           | BAS70-02V-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 |   | $V_{RRM}$ | 70    | V    |
| Forward continuous current      |   | $I_F$     | 100   | 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               | on FR-4 board with recommended soldering footprint                                  | $P_{tot}$ | 150   | mW   |

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

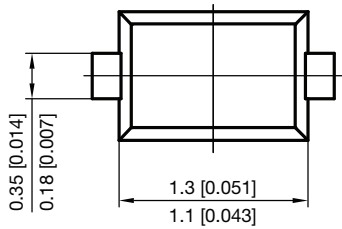
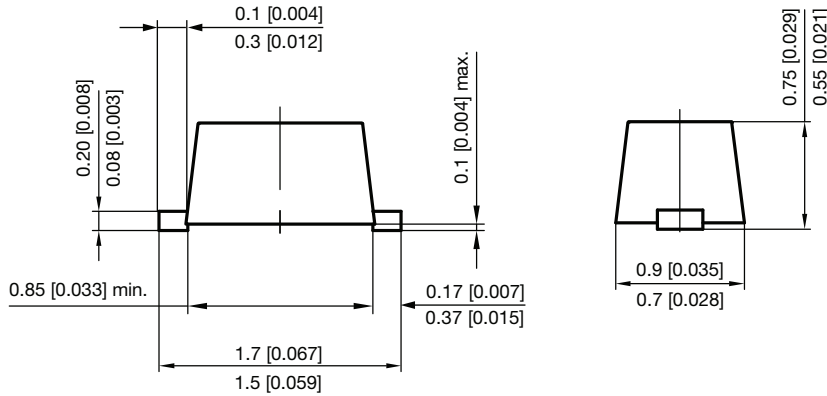
| PARAMETER                                  | TEST CONDITION  | SYMBOL     | VALUE       | UNIT               |
|--|---|------------|-------------|--------------------|
| Thermal resistance junction to ambient air | on FR-4 board according to JEDEC® 51-3 with recommended soldering footprint | $R_{thJA}$ | 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                  |   | $T_{stg}$  | -65 to +150 | $^{\circ}\text{C}$ |

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

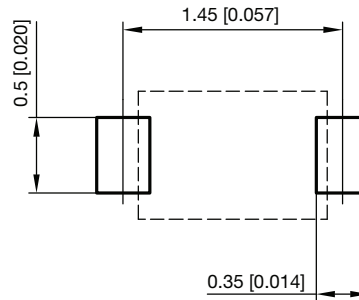
| PARAMETER                 | TEST CONDITION   | SYMBOL     | MIN. | TYP. | MAX. | UNIT |
|---------------------------|--|------------|------|------|------|------|
| Reverse breakdown voltage | $I_R = 10\text{ }\mu\text{A}$ (pulsed)   | $V_{(BR)}$ | 70   |      |      | V    |
| Leakage current           | $V_R = 50\text{ V}$ , $t_p < 300\text{ }\mu\text{s}$   | $I_R$      |      | 20   | 100  | nA   |
| Forward voltage           | $t_p < 300\text{ }\mu\text{s}$ , $I_F = 1.0\text{ mA}$   | $V_F$      |      |      | 410  | mV   |
|                           | $t_p < 300\text{ }\mu\text{s}$ , $I_F = 15\text{ mA}$  | $V_F$      |      |      | 1000 | mV   |
| Diode capacitance         | $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$  | $C_D$      |      | 1.5  | 2    | pF   |
| Reverse recovery time     | $I_F = 10\text{ mA}$ , $I_R = 10\text{ mA}$ ,<br>$i_R = 1\text{ mA}$ , $R_L = 100\text{ }\Omega$ | $t_{rr}$   |      |      | 5    | ns   |



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



Footprint recommendation:



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 Created - Date: 04. April 2017  
 Rev. 4 - Date: 03. Aug. 2020  
 23093



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