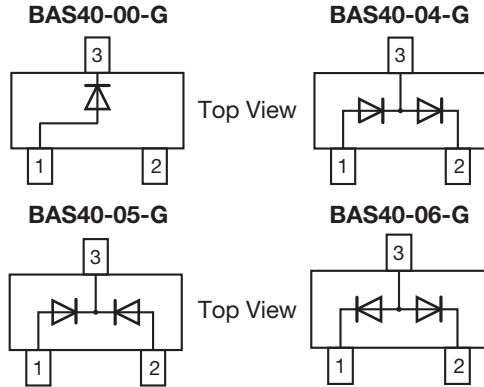




### Small Signal Schottky Diodes, Single and Dual



#### FEATURES

- These diodes feature very low turn-on voltage and fast switching
- These devices are protected by a PN junction guarding against excessive voltage, such as electrostatic discharges
- AEC-Q101 qualified available (part number on request)
- Base P/N-G3 - green, commercial grade
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

#### MECHANICAL DATA

Case: SOT-23

Weight: approx. 8.1 mg

#### Packaging codes/options:

18/10K per 13" reel (8 mm tape), 10K/box  
08/3K per 7" reel (8 mm tape), 15K/box

**DESIGN SUPPORT TOOLS** click logo to get started



| PARTS TABLE |                                  |                       |              |               |
|-------------|----------------------------------|-----------------------|--------------|---------------|
| PART        | ORDERING CODE                    | CIRCUIT CONFIGURATION | TYPE MARKING | REMARKS       |
| BAS40-00-G  | BAS40-00-G3-08 or BAS40-00-G3-18 | Single                | 43G          | Tape and reel |
| BAS40-04-G  | BAS40-04-G3-08 or BAS40-04-G3-18 | Dual serial           | 44G          |               |
| BAS40-05-G  | BAS40-05-G3-08 or BAS40-05-G3-18 | Common cathode        | 45G          |               |
| BAS40-06-G  | BAS40-06-G3-08 or BAS40-06-G3-18 | Common anode          | 46G          |               |

| ABSOLUTE MAXIMUM RATINGS (T <sub>amb</sub> = 25 °C, unless otherwise specified) |                      |  |       |      |
|---|----------------------|--|-------|------|
| PARAMETER   | TEST CONDITION       | SYMBOL   | VALUE | UNIT |
| Repetitive peak reverse voltage   |                      | V <sub>RRM</sub> = V <sub>RWM</sub> = V <sub>R</sub> | 40    | V    |
| Forward continuous current <sup>(1)</sup>                                       |                      | I <sub>F</sub>                                       | 200   | mA   |
| Surge forward current <sup>(1)</sup>  | t <sub>p</sub> < 1 s | I <sub>FSM</sub>                                     | 600   | mA   |
| Power dissipation <sup>(1)</sup>  |                      | P <sub>tot</sub>                                     | 200   | mW   |

#### Note

<sup>(1)</sup> Device on fiberglass substrate, see layout on next page

| THERMAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified) |                |                   |             |      |
|--|----------------|-------------------|-------------|------|
| PARAMETER  | TEST CONDITION | SYMBOL            | VALUE       | UNIT |
| Thermal resistance junction to ambient air <sup>(1)</sup>                      |                | R <sub>thJA</sub> | 500         | K/W  |
| Junction temperature   |                | T <sub>j</sub>    | 125         | °C   |
| Storage temperature range  |                | T <sub>stg</sub>  | -65 to +150 | °C   |
| Operating temperature range  |                | T <sub>op</sub>   | -55 to +125 | °C   |

#### Note

<sup>(1)</sup> Device on fiberglass substrate, see layout on next page

| <b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified) |  |            |      |      |      |      |
|--|--|------------|------|------|------|------|
| PARAMETER  | TEST CONDITION   | SYMBOL     | MIN. | TYP. | MAX. | UNIT |
| Reverse breakdown voltage  | $I_R = 10\text{ }\mu\text{A}$ (pulsed)                                       | $V_{(BR)}$ | 40   |      |      | V    |
| Leakage current  | $V_R = 30\text{ V}$  | $I_R$      |      | 20   | 100  | nA   |
| Forward voltage  | $I_F = 1\text{ mA}$  | $V_F$      |      |      | 380  | mV   |
| Forward voltage <sup>(1)</sup>   | $I_F = 40\text{ mA}$   | $V_F$      |      |      | 1000 | mV   |
| Diode capacitance  | $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$                                      | $C_D$      |      | 4    | 5    | 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   |

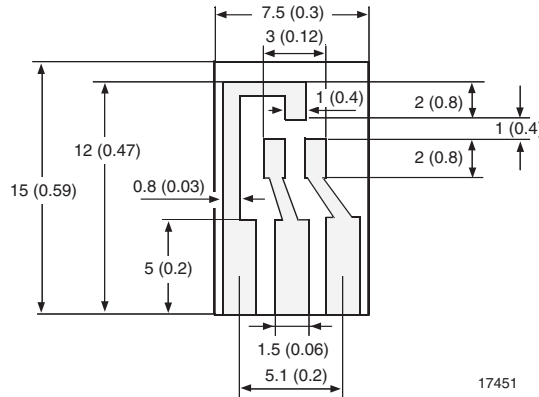
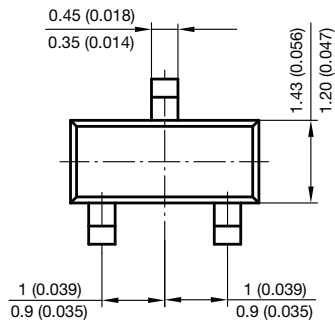
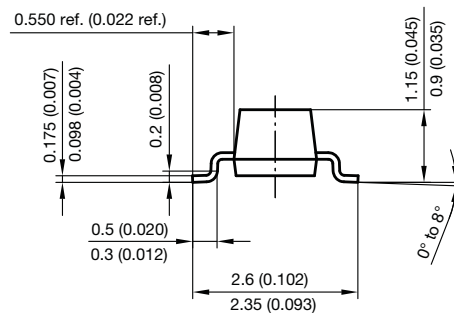
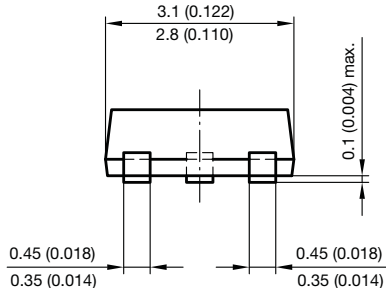
**Note**

 (1) Pulse test  $t_p < 300\text{ }\mu\text{s}$ 
**LAYOUT FOR  $R_{thJA}$  TEST**

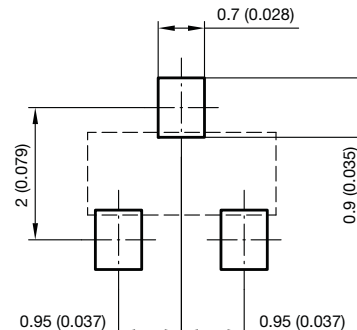
Thickness:

Fiberglass 1.5 mm (0.059 inches)

Copper leads 0.3 mm (0.012 inches)


**PACKAGE DIMENSIONS** in millimeters (inches): **SOT-23**


Foot print recommendation:


 Document no.: 6.541-5014.01-4  
 Rev. 8 - Date: 23.Sept.2009  
 17418



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