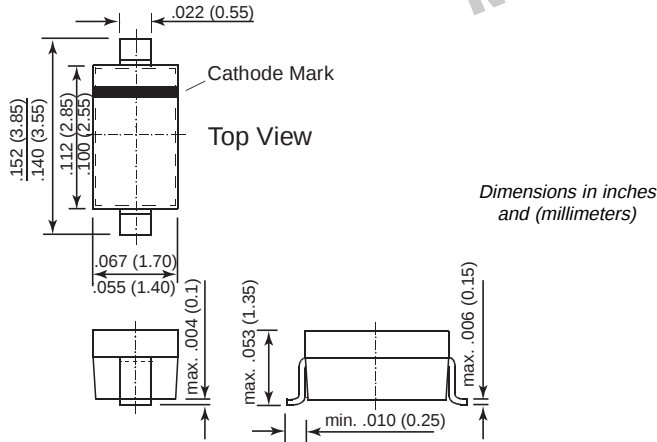


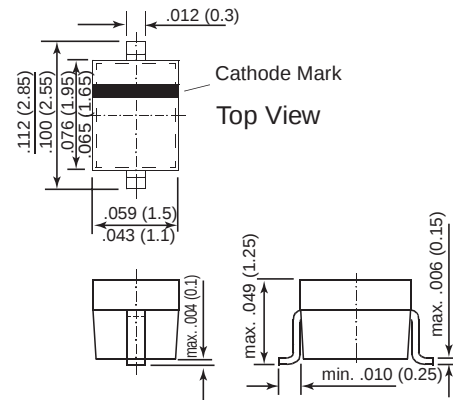


New Product

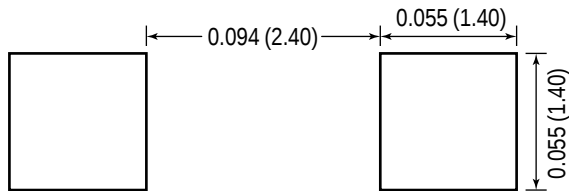
**SOD-123 (BAS16D)**



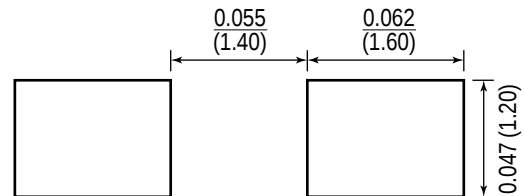
**SOD-323 (BAS16WS)**



**Mounting Pad Layout  
SOD-123**



**Mounting Pad Layout  
SOD-323**



### Mechanical Data

|              | BAS16D                  | BAS16WS                 |
|--------------|-------------------------|-------------------------|
| Case         | SOD-123<br>Plastic Case | SOD-323<br>Plastic Case |
| Weight       | approx. 0.01 g          | approx. 0.004 g         |
| Marking Code | A6                      | A6                      |

### Features

- Silicon Epitaxial Planar Diode
- Fast switching diode
- Also available in case SOT-23 with designation BAS16

### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

| Parameter                                                                 | Symbol           | Value                                    | Unit |
|---------------------------------------------------------------------------|------------------|------------------------------------------|------|
| Reverse Voltage                                                           | V <sub>R</sub>   | 75                                       | V    |
| Peak Reverse Voltage                                                      | V <sub>RM</sub>  | 100                                      | V    |
| Forward Current (continuous)                                              | I <sub>F</sub>   | 250                                      | mA   |
| Non-Repetitive Peak Forward Current at t = 1μs<br>at t = 1ms<br>at t = 1s | I <sub>FSM</sub> | 2.0<br>1.0<br>0.5                        | A    |
| Power Dissipation at T <sub>amb</sub> = 25°C                              | P <sub>tot</sub> | 350 <sup>(1)</sup><br>200 <sup>(1)</sup> | mW   |
| Maximum Junction Temperature                                              | T <sub>j</sub>   | 150                                      | °C   |
| Storage Temperature Range                                                 | T <sub>s</sub>   | -65 to +150 <sup>(1)</sup>               | °C   |

**Note:** (1) Valid provided electrodes are kept at ambient temperature

### Electrical Characteristics (T<sub>J</sub> = 25°C unless otherwise noted)

| Parameter                                                                                                                   | Symbol           | Min | Typ | Max                | Unit |
|-----------------------------------------------------------------------------------------------------------------------------|------------------|-----|-----|--------------------|------|
| Forward Voltage at I <sub>F</sub> = 1mA                                                                                     | V <sub>F</sub>   | —   | —   | 715                | mV   |
| I <sub>F</sub> = 10mA                                                                                                       |                  | —   | —   | 855                | mV   |
| I <sub>F</sub> = 50mA                                                                                                       |                  | —   | —   | 1.00               | V    |
| I <sub>F</sub> = 150mA                                                                                                      |                  | —   | —   | 1.25               | V    |
| Leakage Current at V <sub>R</sub> = 25V, T <sub>J</sub> = 150°C                                                             | I <sub>R</sub>   | —   | —   | 30                 | μA   |
| at V <sub>R</sub> = 75V                                                                                                     |                  | —   | —   | 1                  |      |
| at V <sub>R</sub> = 75V, T <sub>J</sub> = 150 °C                                                                            |                  | —   | —   | 50                 |      |
| Capacitance<br>at V <sub>R</sub> = 0; f = 1 MHz                                                                             | C <sub>tot</sub> | —   | —   | 2                  | pF   |
| Reverse Recovery Time<br>from I <sub>F</sub> = 10mA to I <sub>R</sub> = 10mA<br>I <sub>R</sub> = 1mA, R <sub>L</sub> = 100Ω | t <sub>rr</sub>  | —   | —   | 6                  | ns   |
| Thermal Resistance<br>Junction to Ambient Air                                                                               | R <sub>θJA</sub> | —   | —   | 375 <sup>(1)</sup> | °C/W |
| <b>BAS16D</b><br><b>BAS16WS</b>                                                                                             |                  |     |     | 650 <sup>(1)</sup> | °C/W |

(1) Valid provided that electrodes are kept at ambient temperature