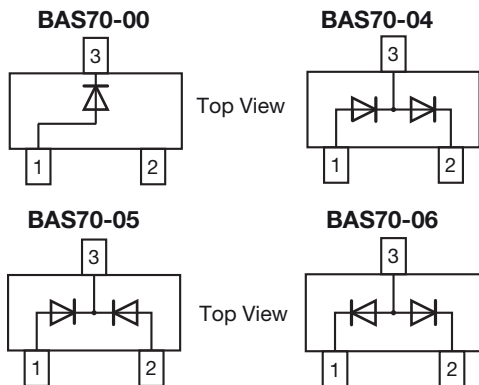
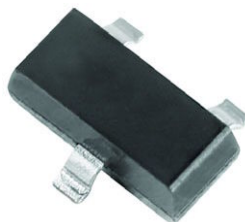


## Small Signal Schottky Diodes, Single and Dual



### FEATURES

- These diodes feature very low turn-on voltage and fast switching
- These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- AEC-Q101 qualified available
- Base P/N-E3 - RoHS-compliant, commercial grade
- Base P/N-HE3 - RoHS-compliant, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### MECHANICAL DATA

**Case:** SOT-23

**Weight:** approx. 8.8 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       |
| BAS70-00    | BAS70-00-E3-08 or BAS70-00-E3-18   | Single                | 73           | Tape and reel |
|             | BAS70-00-HE3-08 or BAS70-00-HE3-18 |                       |              |               |
| BAS70-04    | BAS70-04-E3-08 or BAS70-04-E3-18   | Dual serial           | 74           |               |
|             | BAS70-04-HE3-08 or BAS70-04-HE3-18 |                       |              |               |
| BAS70-05    | BAS70-05-E3-08 or BAS70-05-E3-18   | Common cathode        | 75           |               |
|             | BAS70-05-HE3-08 or BAS70-05-HE3-18 |                       |              |               |
| BAS70-06    | BAS70-06-E3-08 or BAS70-06-E3-18   | Common anode          | 76           |               |
|             | BAS70-06-HE3-08 or BAS70-06-HE3-18 |                       |              |               |

| ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified) |                    |                           |       |      |
|-----------------------------------------------------------------------------------------|--------------------|---------------------------|-------|------|
| PARAMETER                                                                               | TEST CONDITION     | SYMBOL                    | VALUE | UNIT |
| Repetitive peak reverse voltage                                                         |                    | $V_{RRM} = V_{RRM} = V_R$ | 70    | V    |
| Forward continuous current <sup>(1)</sup>                                               |                    | $I_F$                     | 200   | mA   |
| Surge forward current <sup>(1)</sup>                                                    | $t_p < 1\text{ s}$ | $I_{FSM}$                 | 600   | mA   |
| Power dissipation <sup>(1)</sup>                                                        |                    | $P_{tot}$                 | 200   | mW   |

#### Note

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

| THERMAL CHARACTERISTICS ( $T_{amb} = 25^{\circ}\text{C}$ , unless otherwise specified) |                |            |             |                    |
|----------------------------------------------------------------------------------------|----------------|------------|-------------|--------------------|
| PARAMETER                                                                              | TEST CONDITION | SYMBOL     | VALUE       | UNIT               |
| Thermal resistance junction to ambient air <sup>(1)</sup>                              |                | $R_{thJA}$ | 500         | K/W                |
| Junction temperature                                                                   |                | $T_j$      | 125         | $^{\circ}\text{C}$ |
| Storage temperature range                                                              |                | $T_{stg}$  | -65 to +150 | $^{\circ}\text{C}$ |
| Operating temperature range                                                            |                | $T_{op}$   | -55 to +125 | $^{\circ}\text{C}$ |

#### Note

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



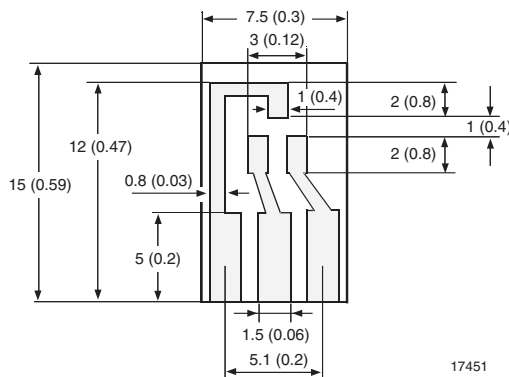
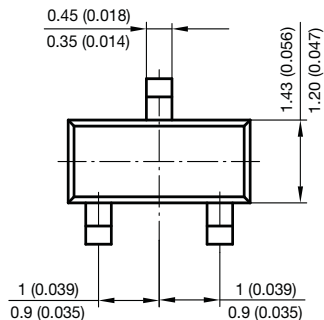
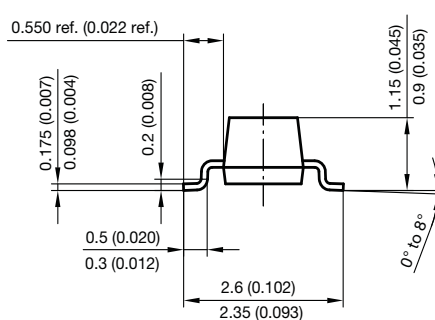
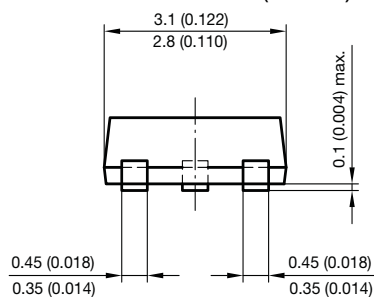
| <b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified) |                                                                                 |            |      |      |      |      |
|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------|------|------|------|------|
| PARAMETER                                                                                                | TEST CONDITION                                                                  | SYMBOL     | MIN. | TYP. | MAX. | UNIT |
| Reverse breakdown voltage                                                                                | $I_R = 10\text{ }\mu\text{A}$ (pulsed)                                          | $V_{(BR)}$ | 70   |      |      | V    |
| Leakage current                                                                                          | $V_R = 50\text{ V}$                                                             | $I_R$      |      | 20   | 100  | nA   |
| Forward voltage                                                                                          | $I_F = 1.0\text{ mA}$                                                           | $V_F$      |      |      | 410  | mV   |
| Forward voltage <sup>(1)</sup>                                                                           | $I_F = 15\text{ mA}$                                                            | $V_F$      |      |      | 1000 | mV   |
| Diode capacitance                                                                                        | $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$                                         | $C_D$      |      | 1.5  | 2    | pF   |
| Reverse recovery time                                                                                    | $I_F = I_R = 10\text{ mA}$ , $i_R = 1\text{ mA}$ ,<br>$R_L = 100\text{ }\Omega$ | $t_{rr}$   |      |      | 5    | ns   |

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

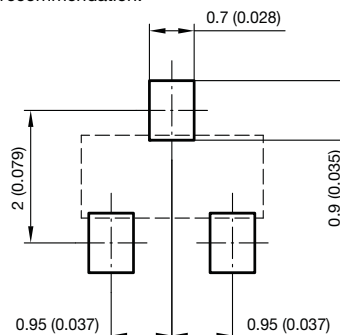
Thickness:

Fiberglass 1.5 mm (0.059")

Copper leads 0.3 mm (0.012")

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

Foot print recommendation:





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