

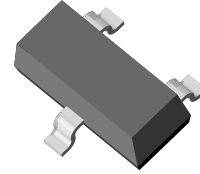
Small Signal Schottky Diodes, Single & Dual

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
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



RoHS
COMPLIANT



Mechanical Data

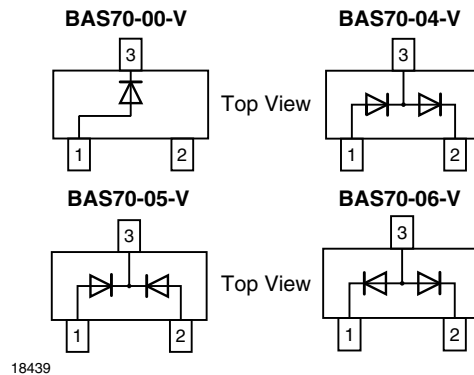
Case: SOT-23

Weight: approx. 8.8 mg

Packaging Codes/Options:

GS18 / 10 k per 13" reel (8 mm tape), 10 k/box

GS08 / 3 k per 7" reel (8 mm tape), 15 k/box



Parts Table

| Part | Ordering code | Type Marking | Remarks |
|------------|------------------------------------|--------------|---------------|
| BAS70-00-V | BAS70-00-V-GS18 or BAS70-00-V-GS08 | 73 | Tape and Reel |
| BAS70-04-V | BAS70-04-V-GS18 or BAS70-04-V-GS08 | 74 | Tape and Reel |
| BAS70-05-V | BAS70-05-V-GS18 or BAS70-05-V-GS08 | 75 | Tape and Reel |
| BAS70-06-V | BAS70-06-V-GS18 or BAS70-06-V-GS08 | 76 | Tape and Reel |

Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

| Parameter | Test condition | Symbol | Value | Unit |
|---------------------------------|--------------------|---------------------------|-------------------|------|
| Repetitive peak reverse voltage | | $V_{RRM} = V_{RWM} = V_R$ | 70 | V |
| Forward continuous current | | I_F | 200 ¹⁾ | mA |
| Surge forward current | $t_p < 1\text{ s}$ | I_{FSM} | 600 ¹⁾ | mA |
| Power dissipation ¹⁾ | | P_{tot} | 200 ¹⁾ | mW |

¹⁾ Device on fiberglass substrate, see layout on next page

Thermal Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

| Parameter | Test condition | Symbol | Value | Unit |
|--|----------------|------------|-------------------|--------------------|
| Thermal resistance junction to ambient air | | R_{thJA} | 500 ¹⁾ | K/W |
| Junction temperature | | T_j | 125 | $^{\circ}\text{C}$ |
| Storage temperature range | | T_{stg} | - 65 to + 150 | $^{\circ}\text{C}$ |

¹⁾ Device on fiberglass substrate, see layout on next page

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 | $V_R = 50\text{ V}$ | I_R | | 20 | 100 | nA |
| Forward voltage | $I_F = 1.0\text{ mA}$ | V_F | | | 410 | mV |
| Forward voltage ¹⁾ | $I_F = 15\text{ mA}$, | V_F | | | 1000 | mV |
| Diode capacitance | $V_R = 0\text{ V}$, $f = 1\text{ MHz}$ | C_D | | 1.5 | 2 | pF |
| Reverse recovery time | $I_F = I_R = 10\text{ mA}$, $i_R = 1\text{ mA}$, $R_L = 100\text{ }\Omega$ | t_{rr} | | | 5 | ns |

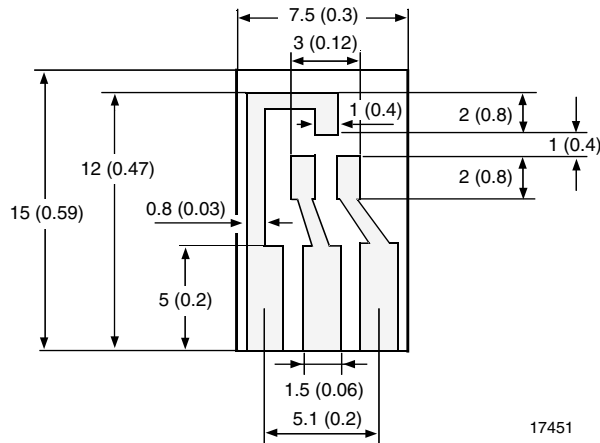
¹⁾ Pulse test; $t_p \leq 300\text{ }\mu\text{s}$

Layout for R_{thJA} test

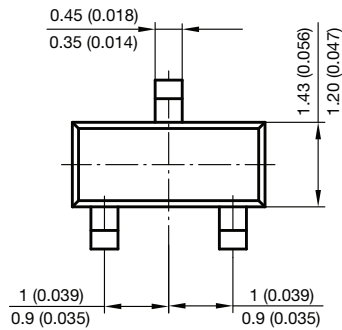
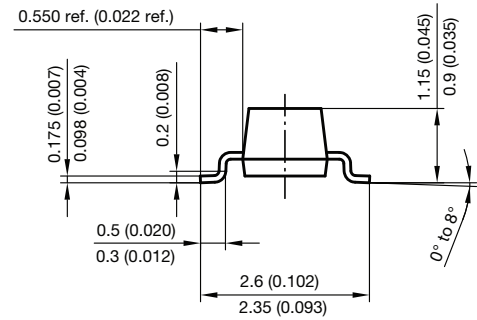
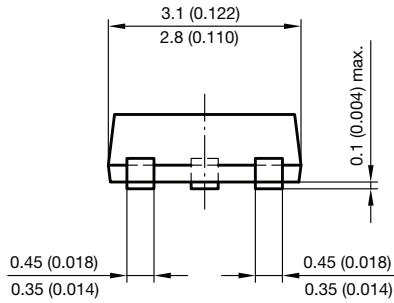
Thickness:

Fiberglass 1.5 mm (0.059 in.)

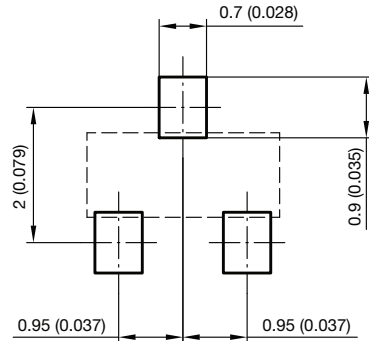
Copper leads 0.3 mm (0.012 in.)



Package Dimensions in millimeters (inches): SOT-23



Foot print recommendation:



Document no.: 6.541-5014.01-4

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