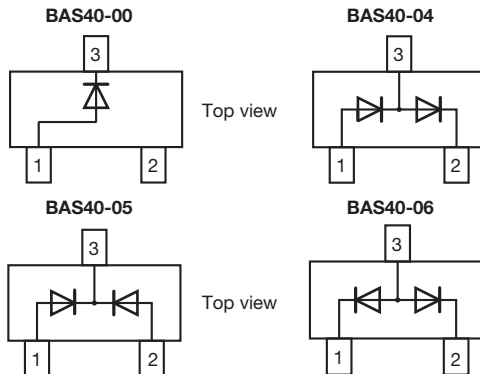


Small Signal Schottky Diodes, Single and Dual



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
- 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


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 |
| BAS40-00 | BAS40-00-E3-08 or BAS40-00-E3-18 | Single | 43 | Tape and reel |
| | BAS40-00-HE3-08 or BAS40-00-HE3-18 | | | |
| BAS40-04 | BAS40-04-E3-08 or BAS40-04-E3-18 | Dual serial | 44 | |
| | BAS40-04-HE3-08 or BAS40-04-HE3-18 | | | |
| BAS40-05 | BAS40-05-E3-08 or BAS40-05-E3-18 | Common cathode | 45 | |
| | BAS40-05-HE3-08 or BAS40-05-HE3-18 | | | |
| BAS40-06 | BAS40-06-E3-08 or BAS40-06-E3-18 | Common anode | 46 | |
| | BAS40-06-HE3-08 or BAS40-06-HE3-18 | | | |

| ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | |
|---|--------------------|---------------------------|-------|------|
| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
| Repetitive peak reverse voltage | | $V_{RRM} = V_{RWM} = V_R$ | 40 | V |
| Forward continuous current ⁽¹⁾ | | I_F | 200 | mA |
| Surge forward current ⁽¹⁾ | $t_p < 1\text{ s}$ | I_{FSM} | 600 | mA |
| Power dissipation ⁽¹⁾ | | P_{tot} | 200 | mW |

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



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

Note

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

| ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified) | | | | | | |
|---|--|-------------------|------|------|------|------|
| PARAMETER | TEST CONDITION | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Reverse breakdown voltage | I _R = 10 μA (pulsed) | V _(BR) | 40 | | | V |
| Leakage current | V _R = 30 V | I _R | | 20 | 100 | nA |
| Forward voltage | I _F = 1 mA | V _F | | | 380 | mV |
| Forward voltage ⁽¹⁾ | I _F = 40 mA | V _F | | | 1000 | mV |
| Diode capacitance | V _R = 0 V, f = 1 MHz | C _D | | 4 | 5 | pF |
| Reverse recovery time | I _F = I _R = 10 mA, i _R = 1 mA, R _L = 100 Ω | t _{rr} | | | 5 | ns |

Note

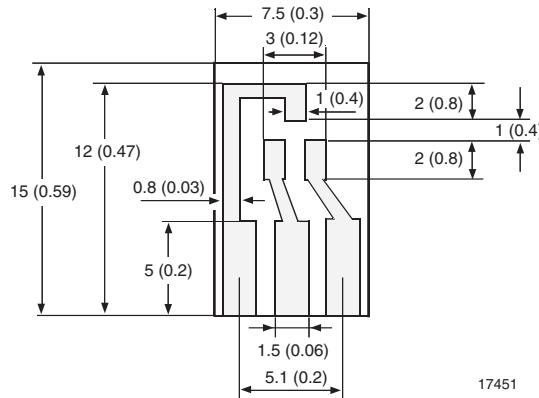
(1) Pulse test t_p < 300 μs

LAYOUT FOR R_{thJA} TEST

Thickness:

Fiberglass 1.5 mm (0.059 inches)

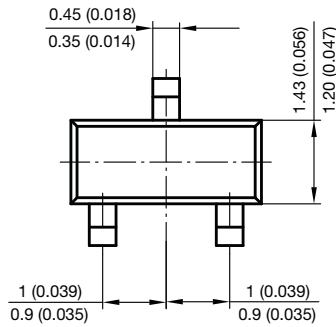
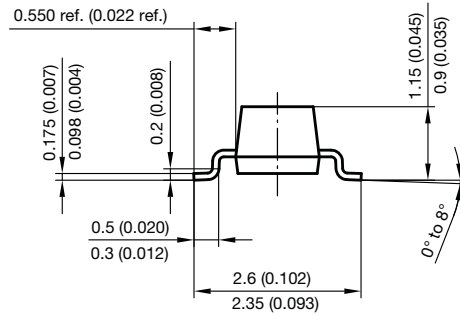
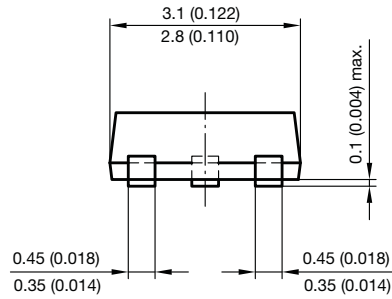
Copper leads 0.3 mm (0.012 inches)



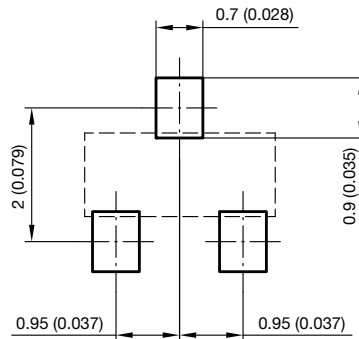
17451



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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