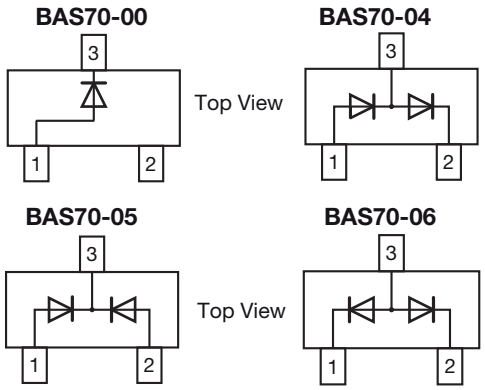
# Small Signal Schottky Diodes, Single and Dual




## 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
- 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

Pb-free

e3

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

## PARTS TABLE

| PART | ORDERING CODE | INTERNAL CONSTRUCTION | TYPE MARKING | REMARKS |
|---|---|---|---|---|
| BAS70-00 | BAS70-00-E3-08 or BAS70-00-E3-18 | Single diode | 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 diodes serial | 74 | |
| | BAS70-04-HE3-08 or BAS70-04-HE3-18 | | | |
| BAS70-05 | BAS70-05-E3-08 or BAS70-05-E3-18 | Dual diodes common cathode | 75 | |
| | BAS70-05-HE3-08 or BAS70-05-HE3-18 | | | |
| BAS70-06 | BAS70-06-E3-08 or BAS70-06-E3-18 | Dual diodes common anode | 76 | |
| | BAS70-06-HE3-08 or BAS70-06-HE3-18 | | | |

## ABSOLUTE MAXIMUM RATINGS ($T_{amb}$ = 25 °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 (1) | | $I_F$ | 200 | mA |
| Surge forward current (1) | $t_p < 1$ 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.



For technical questions within your region: DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

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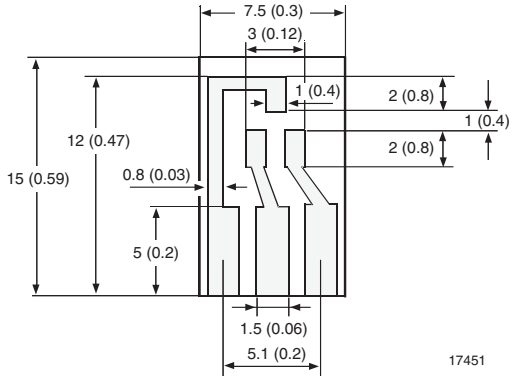
| **ELECTRICAL CHARACTERISTICS** ($T_{amb}$ = 25 °C, unless otherwise specified) | | | | | | |
|---|---|---|---|---|---|---|
| **PARAMETER** | **TEST CONDITION** | **SYMBOL** | **MIN.** | **TYP.** | **MAX.** | **UNIT** |
| Reserve beakdown voltage | $I_R$ = 10 µA (pulsed) | $V_{(BR)}$ | 70 | | | V |
| Leakage current | $V_R$ = 50 V | $I_R$ | | 20 | 100 | nA |
| Forward voltage | $I_F$ = 1.0 mA | $V_F$ | | | 410 | mV |
| Forward voltage (1) | $I_F$ = 15 mA | $V_F$ | | | 1000 | mV |
| Diode capacitance | $V_R$ = 0 V, f = 1 MHz | $C_D$ | | 1.5 | 2 | pF |
| Reserve recovery time | $I_F$ = $I_R$ = 10 mA, $i_R$ = 1 mA, $R_L$ = 100 Ω | $t_{rr}$ | | | 5 | ns |

**Note**

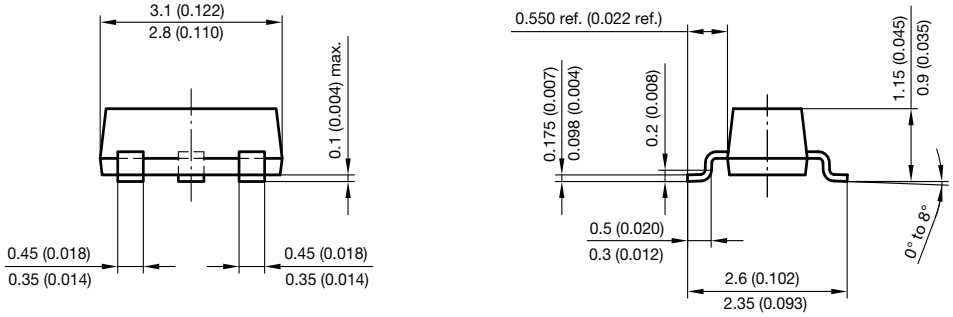
(1) Pulse test; $t_p \leq 300$ µs

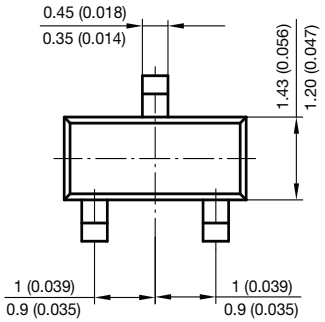
## LAYOUT FOR $R_{thJA}$ TEST

Thickness:
Fiberglass 1.5 mm (0.059")
Copper leads 0.3 mm (0.012")

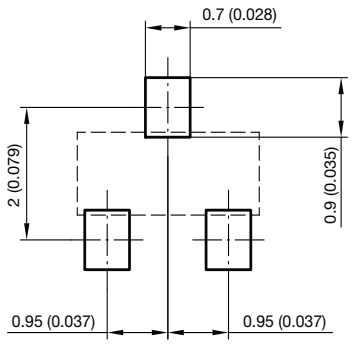



## PACKAGE DIMENSIONS in millimeters (inches): SOT-23




Foot print recommendation:

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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
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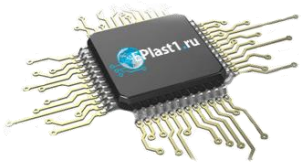


**Как с нами связаться**

**Телефон:** 8 (812) 309 58 32 (многоканальный)
**Факс:** 8 (812) 320-02-42
**Электронная почта:** org@eplast1.ru
**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.