# Silicon Bi-directional Trigger Device BR100/03 LLD

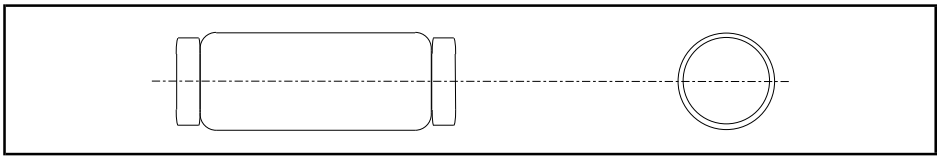
## GENERAL DESCRIPTION

Silicon bidirectional trigger device in a glass envelope suitable for surface mounting. The device is intended for use in triac and thyristor trigger circuits.

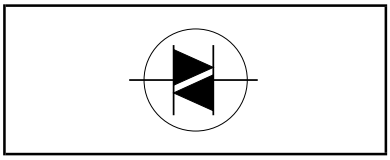
## QUICK REFERENCE DATA

| SYMBOL | PARAMETER | MIN. | MAX. | UNIT |
|---|---|---|---|---|
| $V_{(BO)}$ | Breakover voltage | 28 | 36 | V |
| $V_O$ | Output voltage | 7 | - | V |
| $I_{FRM}$ | Repetitive peak forward current | - | 2 | A |

## OUTLINE - SOD80



## SYMBOL



## LIMITING VALUES

Limiting values in accordance with the Absolute Maximum System (IEC 134).

| SYMBOL | PARAMETER | CONDITIONS | MIN. | MAX. | UNIT |
|---|---|---|---|---|---|
| $I_{FRM}$ | Repetitive peak forward current | $t \leq 10$ µs, $T_{tp} \leq 50$˚C; f = 60 Hz | - | 2 | A |
| $P_{tot}$ | Total power dissipation | $T_{tp}$ = 50˚C | - | 150 | mW |
| $T_{stg}$ | Storage temperature | | -55 | 125 | ˚C |
| $T_j$ | Operating junction temperature | | - | 100 | ˚C |

## THERMAL RESISTANCES

| SYMBOL | PARAMETER | CONDITIONS | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|
| $R_{th\ j\text{-}tp}$ | Thermal resistance junction to tie point | PCB mounted | - | 330 | - | K/W |

## CHARACTERISTICS

$T_a$ = 25 ˚C unless otherwise stated.

| SYMBOL | PARAMETER | CONDITIONS | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BO)}$ | Breakover voltage | $I = I_{(BO)}$ | 28 | 32 | 36 | V |
| $\|V_{(BO)+}\| - \|V_{(BO)-}\|$ | Breakover voltage symmetry | $I = I_{(BO)}$, see fig: 1 | - | - | 3.5 | V |
| $V_O$ | Output voltage | $R_L$ = 20 Ω; Circuit of fig: 2 | 7 | - | - | V |
| $I_{(BO)}$ | Breakover current | $V = V_{(BO)}$ | - | - | 50 | µA |
| $dV_{(BO)}/dT$ | Temperature coefficient of $V_{(BO)}$ | | - | 0.1 | - | %/K |
| $t_r$ | Risetime | $I_p$ = 0.5 A; Circuit of fig: 2 | - | 1.5 | | µs |

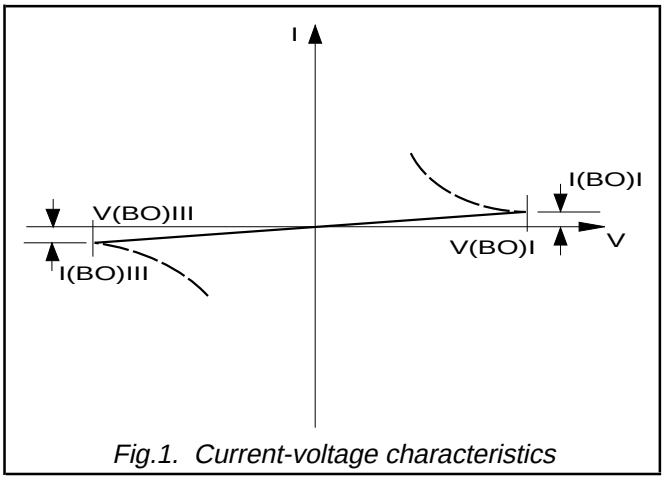



*Fig.1. Current-voltage characteristics*

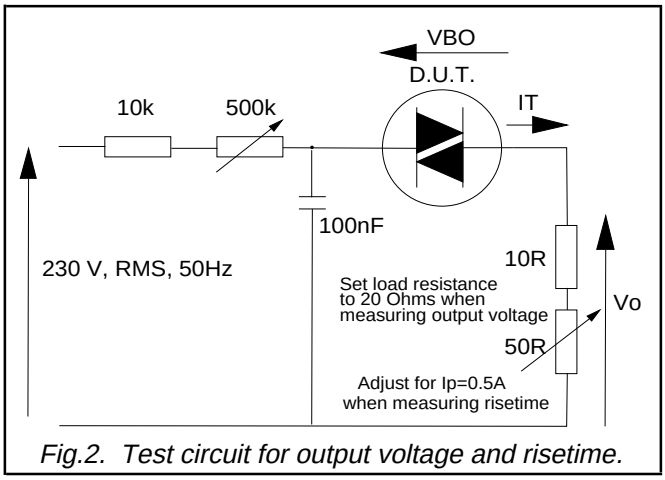



*Fig.2. Test circuit for output voltage and risetime.*

## MECHANICAL DATA

*Dimensions in mm*

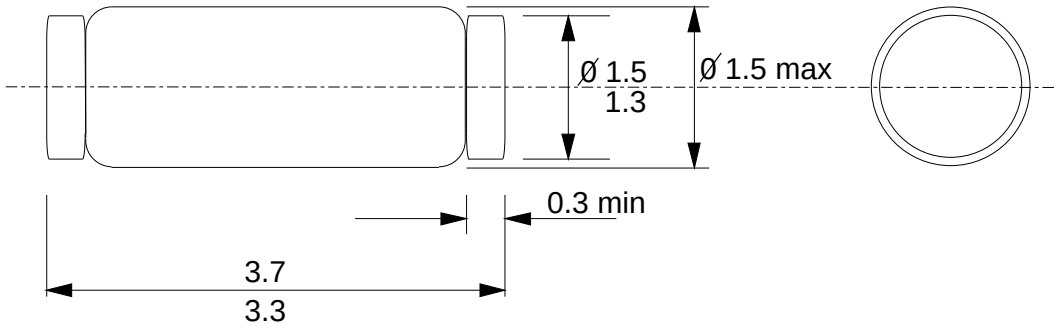



*Fig.3. SOD80*

## DEFINITIONS

| **Data sheet status** | |
|---|---|
| Objective specification | This data sheet contains target or goal specifications for product development. |
| Preliminary specification | This data sheet contains preliminary data; supplementary data may be published later. |
| Product specification | This data sheet contains final product specifications. |
| **Limiting values** | |
| Limiting values are given in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of this specification is not implied. Exposure to limiting values for extended periods may affect device reliability. | |
| **Application information** | |
| Where application information is given, it is advisory and does not form part of the specification. | |
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## LIFE SUPPORT APPLICATIONS

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