

## Tilt Sensor Switch

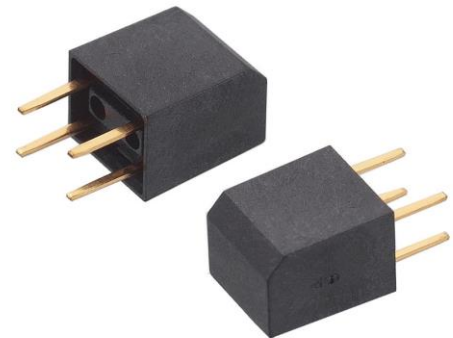
|          |           |             |              |               |    |
|----------|-----------|-------------|--------------|---------------|----|
| Item No. | RBS151100 | Description | Ball-Contact | Version       | 10 |
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### ● FUNCTIONS

One Axis 15° Tilt Detecting in horizontal position

### ● APPLICATIONS

1. Wake up systems for power saving, such like remote controllers.
2. One Axis 15° tilt Detecting in horizontal position installed above or under PCB.



### ● FEATURES

1. Suitable for horizontal PCB.
2. Switch state: DIP Normal Open.
3. Housing made of high insulation plastic material, free from electric conduction and rust problem.
4. Gold-plated ball and terminals, low possibility of oxidization.
5. All plastic materials subject to industrial purpose, resist high temperature and meet fireproof function.
6. Simple ON and OFF signals, easy for design.
7. RoHS compliance, an ideal substitute for mercury switch.
8. A more economical tilt detection option than IC design solution.
9. All made in Taiwan and examined before shipment.

### ● PATENTS

1. U.S.A. Patent No. US 7,176,396 B1
2. Taiwan Patent No. I 297161
3. China Patent No. ZL 200610072563.7

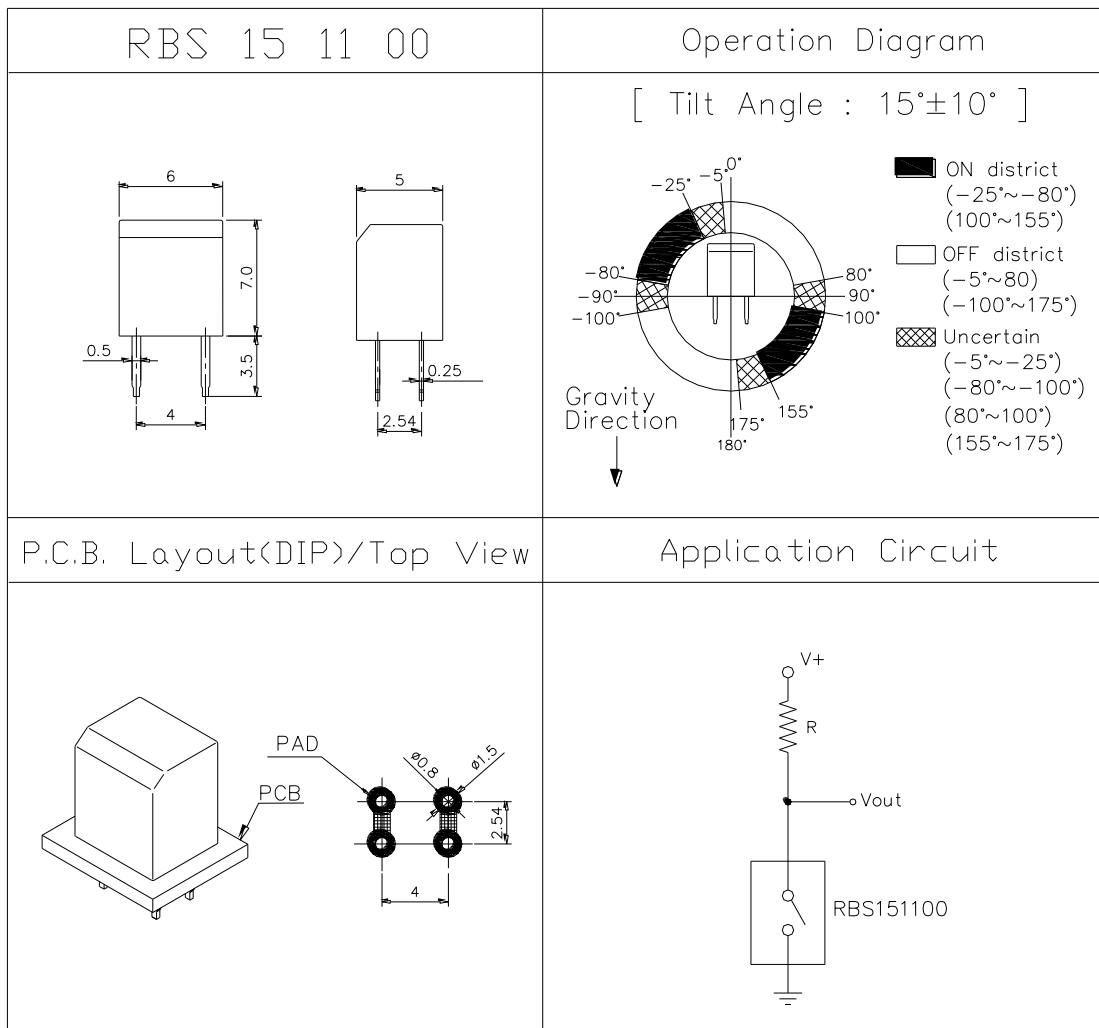


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● DIMENSIONS / OPERATION / P.C.B. LAYOUT (Unit: mm, Tolerance: ±0.25mm)

Fig. 1



## Tilt Sensor Switch

|          |           |             |              |               |    |
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● Current/Voltage Suggested

| Input Current (mA) | Operating Voltage (V) | Condition |
|--------------------|-----------------------|-----------|
| 1.0                | 5                     | --        |

● ELECTRICAL CHARACTERISTICS

|    |                       |                          |
|----|-----------------------|--------------------------|
| 1. | Contact Rating        | 10 mA, 5VDC              |
| 2. | Contact Resistance    | 10Ω max.                 |
| 3. | Operation Diagram     | Refer to Fig. 1          |
| 4. | Insulation Resistance | 10 MΩ min. at 100VDC     |
| 5. | Dielectric Strength   | 500VDC min. for 1 minute |
| 6. | Capacitance           | 5pF max.                 |
| 7. | Conductive Rate       | 90% min.                 |



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● RELIABLE TEST ITEMS

Reliable Test for RBS151100

|   | Test Item             | Contents                           |
|---|-----------------------|------------------------------------|
| 1 | Operating Temperature | -25°C ~ 85°C                       |
| 2 | Storage Temperature   | -40°C ~ 85°C                       |
| 3 | Humidity              | 40 °C / 95 %RH                     |
| 4 | Mechanical Life       | 2 Hz horizontal<br>1,000,000 times |
| 5 | Electrical Life       | 100,000 times                      |

● SOLDERING CONDITION

Following soldering conditions are for reference only, please use soldering information that solder paste manufacturer recommends.

| Condition                   | Soldering Temperature | Soldering Time   | Wattage of Manual Soldering                    | Type |
|-----------------------------|-----------------------|------------------|--|------|
| Suitable Production Process |                       |                  |  |      |
| Wave Soldering              | 260±5°C               | < 5 seconds max. | -  | DIP  |
| Manual Soldering            | 300±5°C               | < 3 seconds max. | 30W or Temperature-controlled manual soldering | DIP  |



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### ● PACKAGE

|    | Part Number | Package   | Quantity  | Total      | Dimension (mm) |
|----|-------------|-----------|-----------|------------|----------------|
| 1. | RBS151100   | IC tube   | 84 pcs    | 84 pcs     | 525L*10W*17.5H |
|    |             | Inner box | 162 tubes | 13,608 pcs | 539L*130W*130H |
|    |             | Carton    | 4 boxes   | 54,432 pcs | 551L*285W*288H |

※ Package shown as below for reference.



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● NOTE

1. Suggestion for usage: For vibration usage or application, we suggest to add hysteresis for IC; if vibration is heavy, optical type of sensor switch is recommended.
2. For the continued product improvement as one of the company policy, specifications may change or update without notice. The latest information can be obtained through our sales offices. Normally, all products are supplied under our standard conditions.
3. If buyer's products will stay in power supply for a long time which needs very high stability, optical sensor switch is strongly recommended.

● PRECAUTIONS FOR USE

1. If the products is intended to be used for other endurance equipment requiring higher safety and reliability such as life support system, space and aviation devices, disaster and safety system, it's necessary to make verification of conformity or contact us for the details before using.
2. Do not try to clean the switch with a solvent or similar substance after the soldering process.
3. Use water-soluble flux may damage the switch.
4. Please follow the soldering instruction accordingly, otherwise might lead to defective.
5. Do not use switch in the environment of high humidity, because such an environment may cause the leakage current between the terminals.
6. Please do not exceed the rated load as there will be a risk of disabling the product function.
7. In the circuit, switch should not be near or directly connected with the magnetic component solder joints (for example: relays, transformers, etc.).

