

## Tilt Sensor Switch

|          |           |             |              |              |    |
|----------|-----------|-------------|--------------|--------------|----|
| Item No. | RBS200100 | Description | Ball-Contact | Version      | 15 |
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### ● FUNCTIONS

45° Tilt Detecting for 4 directions in vertical mode.

### ● APPLICATIONS

1. Automatically shut off for home appliances
2. Automatically shut off for Sporting equipment
3. Alarm system
4. Anti-theft / Anti-tamper devices
5. Being motion detection (personal locator)



### ● FEATURES

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



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● **PATENTS**

1. Taiwan Patent No. I 239025
2. U.S.A. Patent No. US 7,045,724 B1
3. China Patent No. ZL 2004 1 0091589.7
4. China Patent No. 201220308500.8

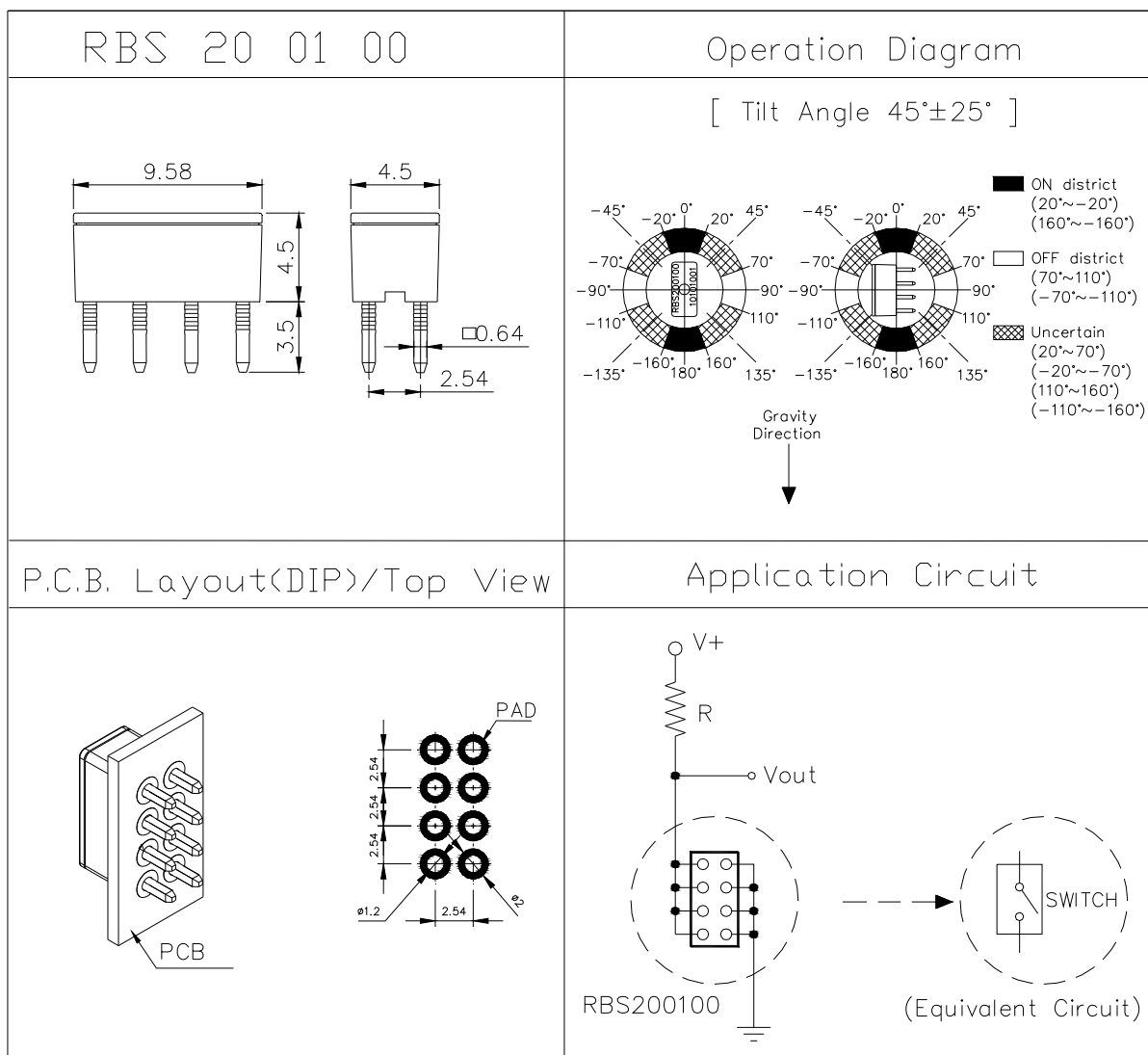


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● DIMENSIONS / OPERATION / P.C.B. LAYOUT (Unit: mm, Tolerance:  $\pm 0.25$ mm)

Fig. 1



## Tilt Sensor Switch

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### ● Current/Voltage Suggested

| Input Current | Operating Voltage | Condition |
|---------------|-------------------|-----------|
| 1.0 mA        | 3 V               | --        |

### ● ELECTRICAL CHARACTERISTICS

|   |                         |                               |
|---|-------------------------|-------------------------------|
| 1 | Maximum Contact Current | 10 mA                         |
| 2 | Contact Resistance      | 10 $\Omega$ max.              |
| 3 | Operation Diagram       | Refer to Fig. 1               |
| 4 | Insulation Resistance   | 1000 M $\Omega$ min., 100 VDC |
| 5 | Dielectric Strength     | 500 VDC min., 1 minute        |
| 6 | Capacitance             | 5 pF max.                     |



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### ● RELIABLE TEST ITEMS

Reliable Test for RBS200100

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

