

## Tilt Sensor Switch

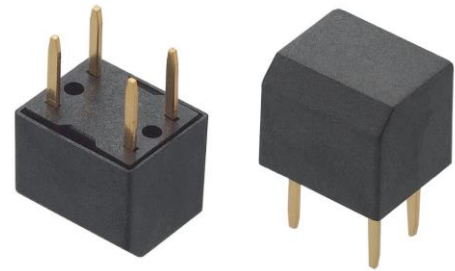
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● **FUNCTIONS**

One Axis 15° Tilt Detecting in horizontal position

● **APPLICATIONS**

1. Wake up systems for power saving, such like remote controllers
2. Solar underground light
3. One Axis tilt detecting under PCB



● **FEATURES**

1. Suitable for horizontal PCB.
2. Switch state: DIP Normal Open.
3. Gold-plated ball and terminals, low possibility of oxidization.
4. Housing made of high insulation plastic material, free from electric conduction and rust problem.
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 and rotation detection option than IC design solution.
9. All made in Taiwan and examined before shipment.



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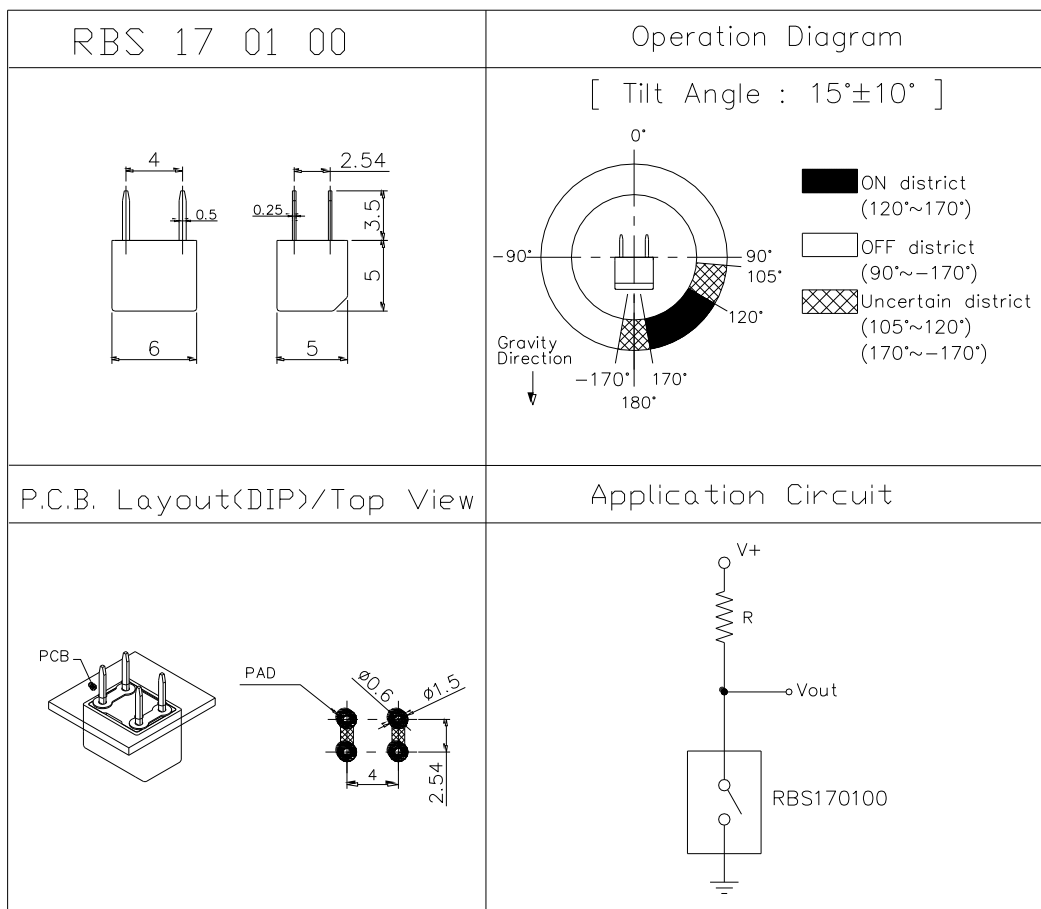
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● PATENTS

1. U.S.A. Patent No. US 7,323,649 B2
2. U.S.A. Patent No. US 7,319,200 B2
3. Taiwan Patent No. I 297159
4. Taiwan Patent No. I 297160
5. China Patent No. ZL 200610072317.1
6. China Patent No. ZL 200610073028.3

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

Fig. 1



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



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● RELIABLE TEST ITEMS

Reliable Test for RBS170100

	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 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
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.	RBS170100	IC Tube	84 pcs	84 pcs	525L*10W*17.5H
		Inner Box	198 Tubes	16,632 pcs	539L*130W*130H
		Carton	4 Boxes	66,528 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 product 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: relay, transformers, etc.).

