

TILT SWITCH - BALL CONTACT

● FEATURES

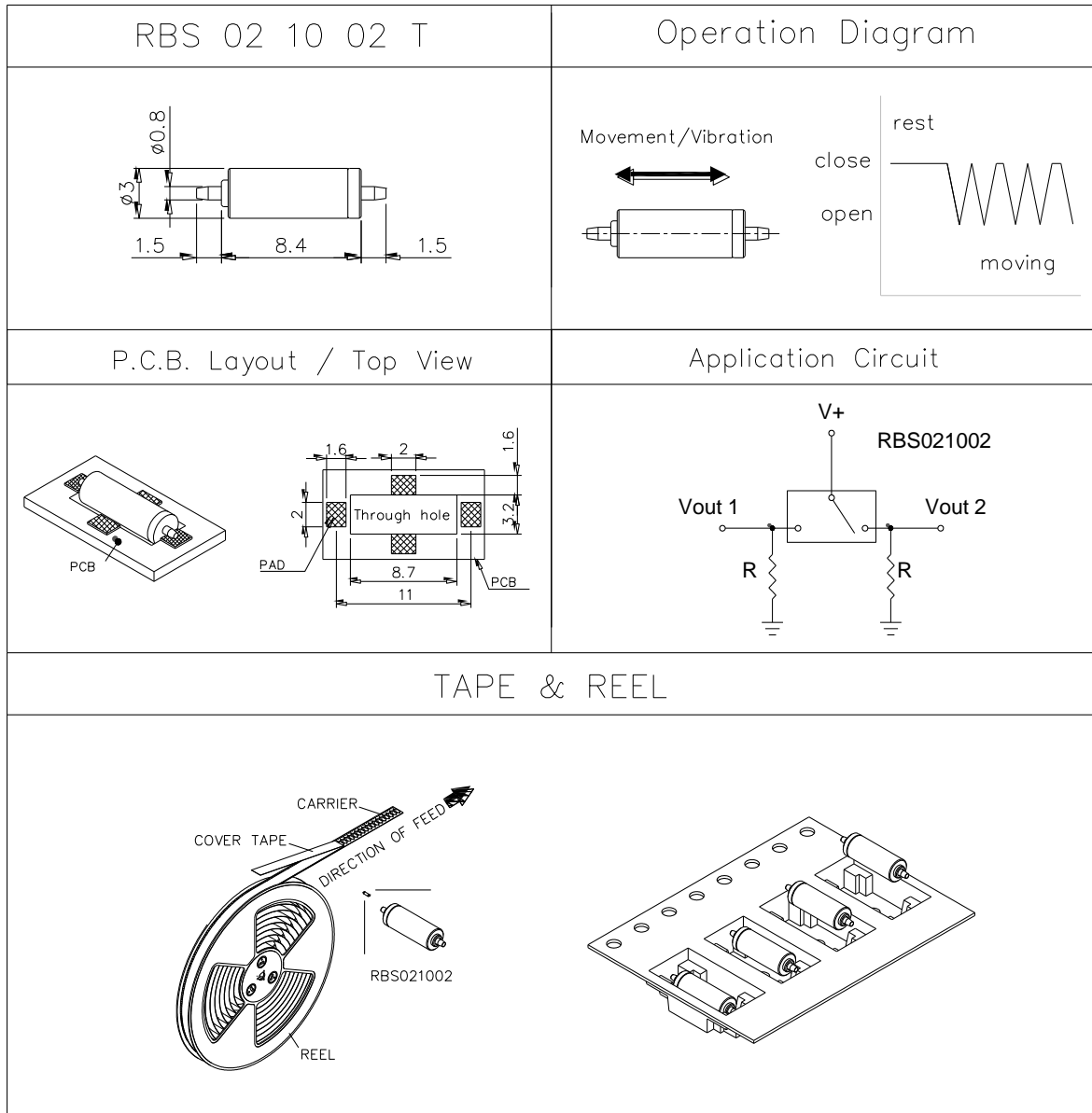
1. Suitable for horizontal PCB.
2. Switch state:
The RBS021002 acts like a normally closed switch which chatters open and closed as it is tilted or vibrated. Note that the RBS021002T is not guaranteed to be closed --- occasionally the sensing mechanism may remain open when at rest. The engineer should design his or her software to look for high-to-low and low-to-high edge transitions rather than an open or closed state of the switch.
3. Tiny size, suitable for small space.
4. Wing-shaped terminals, a feature enables half body of the sensor switch to be buried into PCB.
5. Gold-plated ball and terminals, low possibility of oxidization.
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 rotation detection option than IC design solution.
10. All made in Taiwan and examined before shipment.

● PATENTS

1. Taiwan Patent No. I 390563
2. Taiwan Patent No. 195196
3. U.S.A Patent No. US 7,829,804 B2
4. China Patent No. ZL 200710123228.X

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

Fig. 1



● Current/Voltage Suggested

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

● ELECTRICAL CHARACTERISTICS

| | | |
|----|-----------------------|-----------------------------|
| 1. | Contact Rating | 10mA, 5VDC |
| 2. | Insulation Resistance | 50M Ω min. at 100VDC |
| 3. | Dielectric Strength | 50VDC min. for 1 minute |
| 4. | Capacitance | 5pF max. |
| 5. | Conductive Rate | 90% min. |

● RELIABLE TEST ITEMS

Reliable Test for RBS021002T

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