

Vibration Sensor Switch

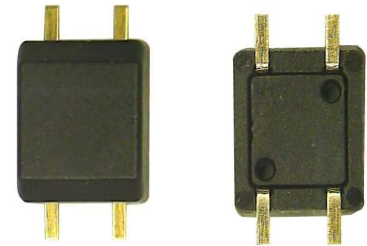
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● FUNCTION

Vibration detection in horizontal position.

● APPLICATIONS

1. Wireless mouse
2. Anti-theft / Anti-tamper devices
3. Alarm system
4. Toys \ entertainment devices



● FEATURES

1. Suitable for horizontal PCB.
2. Switch State:
RBS100612T acts like a normally open switch which chatters closed and open as it is tilted or vibrated. Note that the RBS100612T is not guaranteed to be open --- occasionally the sensing mechanism may remain close 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. Small size & compact space.
4. Housing made of high insulation plastic material, free from electric conduction and rust problem.
5. Terminals and balls are gold plated to enhance the life.
6. All plastic material subject to industrial purpose meets high temperature and fireproof function.
7. Simple switch signal, easy for circuit design.
8. Comply with RoHS , complete replacement of mercury switch and meet environmental protection.
9. More economic than IC design.
10. All made in Taiwan and examined before shipment.



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● PATENTS

1. Taiwan Patent No. I 239025
2. Taiwan Patent No. I 261280
3. Taiwan Patent No. M 455971
4. Taiwan Patent No. I 505313
5. U.S.A. Patent No. US 7,045,724 B1
6. U.S.A. Patent No. US 7,473,857 B2
7. U.S.A. Patent No. US 8,969,747 B2
8. China Patent No. ZL 200410091589.7
9. China Patent No. ZL 200610078234.3
10. China Patent No. ZL 201220661492.5
11. China Patent No. ZL 201210510604.1

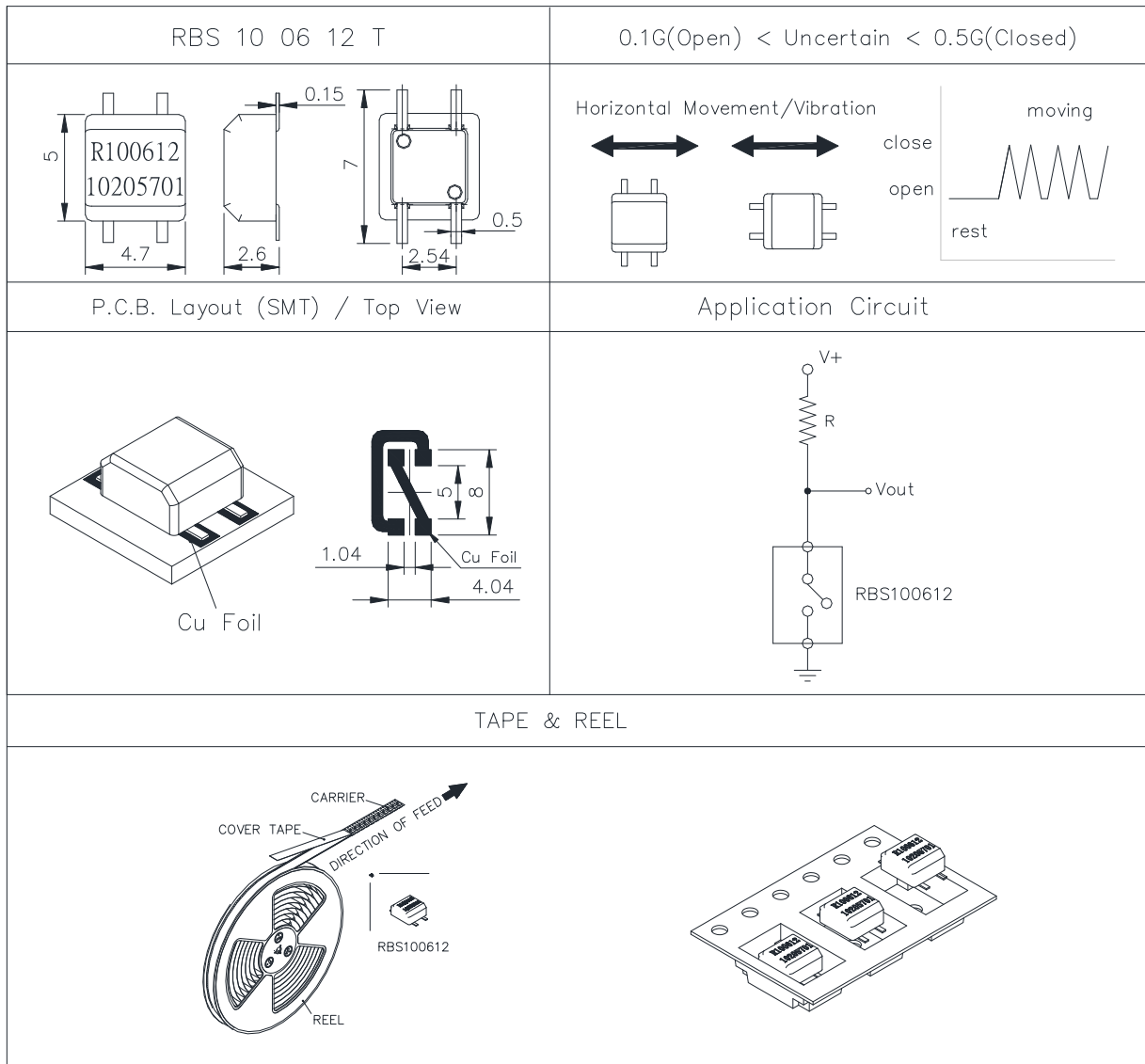


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● DIMENSIONS / OPERATION / P.C.B. LAYOUT (Unit: mm, Tolerance: ±0.25mm)

Fig. 1



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● Current/Voltage Suggested

Input Current (mA)	Operating Voltage (V)	Condition
1.0	5~12	--

● ELECTRICAL CHARACTERISTICS

1.	Contact Rating	10 mA , 5VDC
2.	Insulation Resistance	50 MΩ min. At 100 VDC
3.	Dielectric Strength	50 VDC min. for 1 minute
4.	Capacitance	5 pF max
5.	Conductive Rate	85% min.



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● RELIABLE TEST ITEMS

Test Item	Standard	Contents
Operating Temperature	MIL-STD-202G, TEST METHOD 107G, TEST A	-25°C ~85°C
Storage Temperature	MIL-STD-202G, TEST METHOD 107G, TEST A	-40°C ~85°C
Mechanical Life	--	2 Hz horizontal 1,000,000 times
Electrical Life	--	100,000 times
Humidity	MIL-STD-202G, TEST METHOD 103B	40 °C/95 %RH

● SOLDERING CONDITION

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

Condition Operation Method	Soldering Temperature	Soldering Time	Wattage of Manual Soldering	Suitable Production Process
Manual Soldering	300±5°C	< 3 seconds max.	30W or Temperature-controlled manual soldering	SMT



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● PACKAGE

	Parts No.	Package	Quantity	Total Quantity	Dimension(mm)
3.	RBS100612T	Tape & Reel	2,500 pcs	2,500 pcs	φ330*12.5H
		Inner box	2 Reels	5,000 pcs	355L*340W*68H
		Carton	4 Boxes	20,000pcs	373L*358W*309H

※ Package shown as below for reference.



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● NOTES

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. Don't 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. If soldering temperature exceeds our specification, sensor switch could get apart.
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.).

