

SENSOR SWITCH

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|----------|--------|-------------|-------------|---------------|---|
| Item No. | CSX90 | Description | TILT SWITCH | Version | 2 |
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- FUNCTIONS

90° Tilt Detecting within a 360° radius



- APPLICATIONS

1. Automatically shut off for home appliances
2. Wake up systems for power saving, such like remote controllers
3. Automatically shut off for sporting equipment
4. Alarm system
5. Anti-theft / Anti-tamper devices
6. Toys
7. Being motion detection (personal locator)
8. Watches
9. Filter Kettle

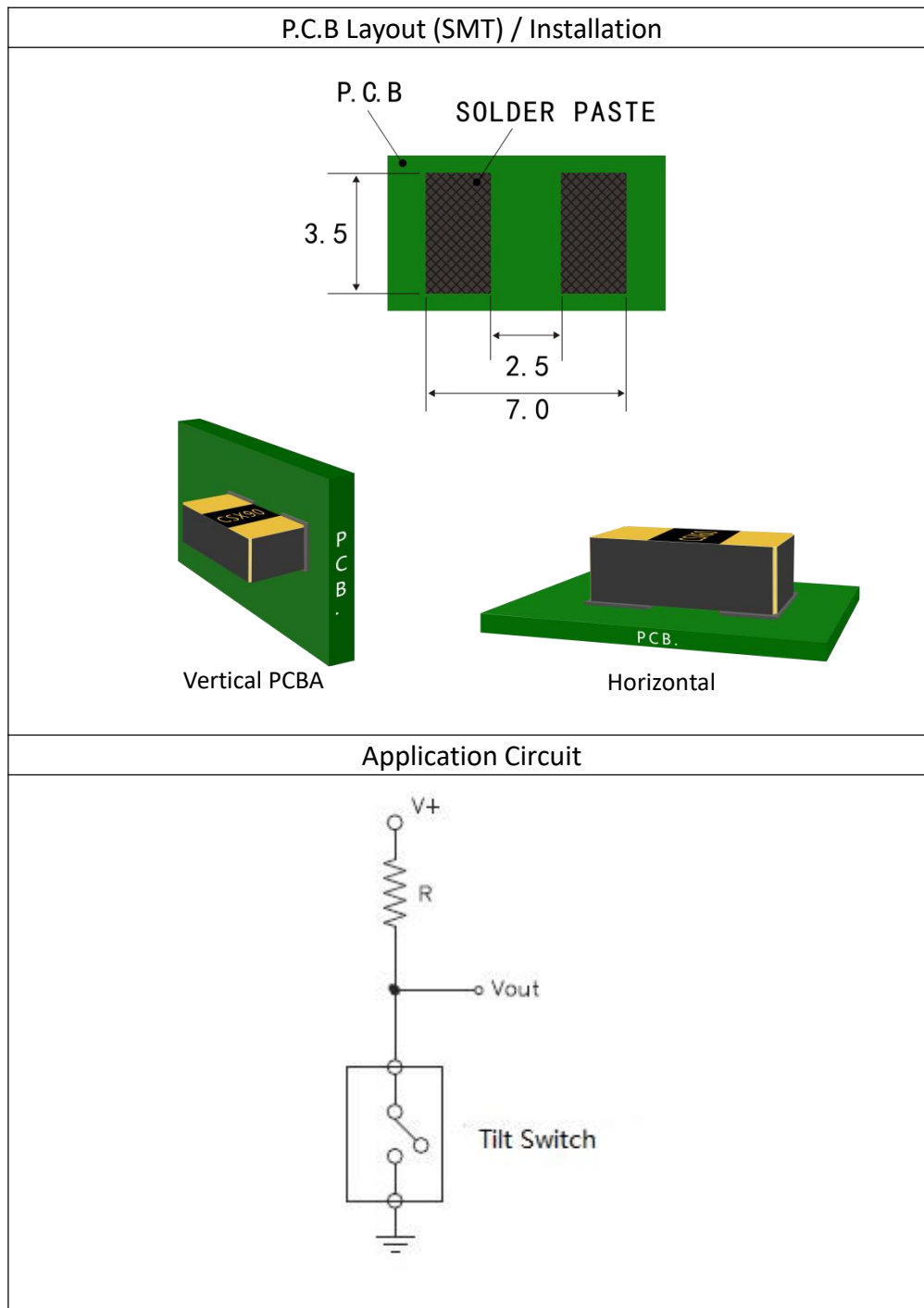
- DIMENSIONS / OPERATION

| CSX90 | Tilt Angle $\theta = 90^\circ \pm 10^\circ$ |
|---|---|
| <p>单位: mm 公差: $\pm 0.1\text{mm}$</p> | |

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- P.C.B LAYOUT (Unit: mm, Tolerance: ± 0.1 mm)



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- Current / Voltage Suggested

| Input Current (mA) | Operating Voltage (V) | Condition |
|--------------------|-----------------------|-----------|
| <10 | 3 ~ 24 | -- |

- ELECTRICAL CHARACTERISTICS

| | | |
|---|-------------------------|--------------------------------|
| 1 | Insulation Resistance | 1,000 M Ω min., 100V DC |
| 2 | Dielectric Strength | 500 V DC min. for 1 minute |
| 3 | Capacitance | 5 pF Max. |
| 4 | Average Conductive Rate | 98% min. |

- RELIABLE TEST ITEMS

| Test Item | Contents |
|-----------------------|--------------------------------------|
| IR Reflow | Peak temp. = 260°C *2 times |
| Operating Temperature | -25 °C ~85 °C |
| Storage Temperature | -40 °C ~85 °C |
| Humidity | 40 °C / 95% RH |
| Mechanical Life | 2 Hz, horizontal 50,000,000 times |
| Electrical Life | 50,000,000 times |

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- 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 |
|-------------------------------|-----------------------|------------------|---|-----------------------------|
| IR Reflow | 260±5 °C | < 5 seconds max. | -- | SMT |
| Manual Soldering | 320±5 °C | < 3 seconds max. | 20 W or Temperature-controlled manual soldering | DIP、SMT |

- PACKAGE

| Part Number | Package | Quantity |
|-------------|-------------|-----------|
| CSX90 | Tape & Reel | 2,500 pcs |

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● FEATURES

1. Suitable for horizontal PCB or Vertical PCB .
2. Switch state: Normal open.
3. Internally integrated with two tilt switches. Higher reliability.
4. Tiny size, suitable for small space.
5. Gold-plated ball and terminals, low possibility of oxidization.
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 China and examined before shipment.

● NOTE

1. Suggestion for usage : For vibration usage or application, we suggest to add hysteresis for IC.
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.

● 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. 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. More than the rated load may cause fire, so do not use more than the load.
7. In the circuit, switch should not be near or directly connected with the magnetic component solder joints(for example: relays, transformers, etc.).