

SENSOR SWITCH

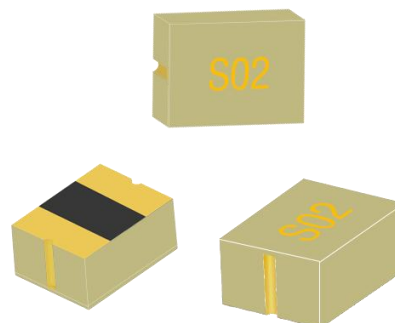
Item No.	S02	Description	VIBRATION SWITCH	Version	4
Page	1 of 6		Date	Oct.28.2021	

● FUNCTIONS

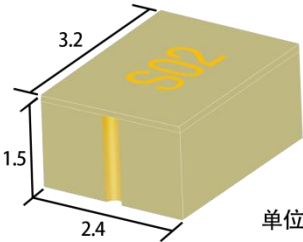
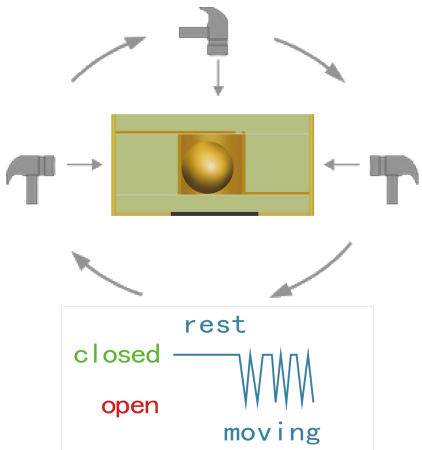
Omni-directional Vibration Detecting

● APPLICATIONS

1. GPS Tracker
2. TPMS
3. Alarm system, Anti-theft、 Anti-tampered devices
4. Bicycle computer
5. RFID
6. Toys
7. Home automation
8. Wake up systems for power saving, Suck like remote controllers



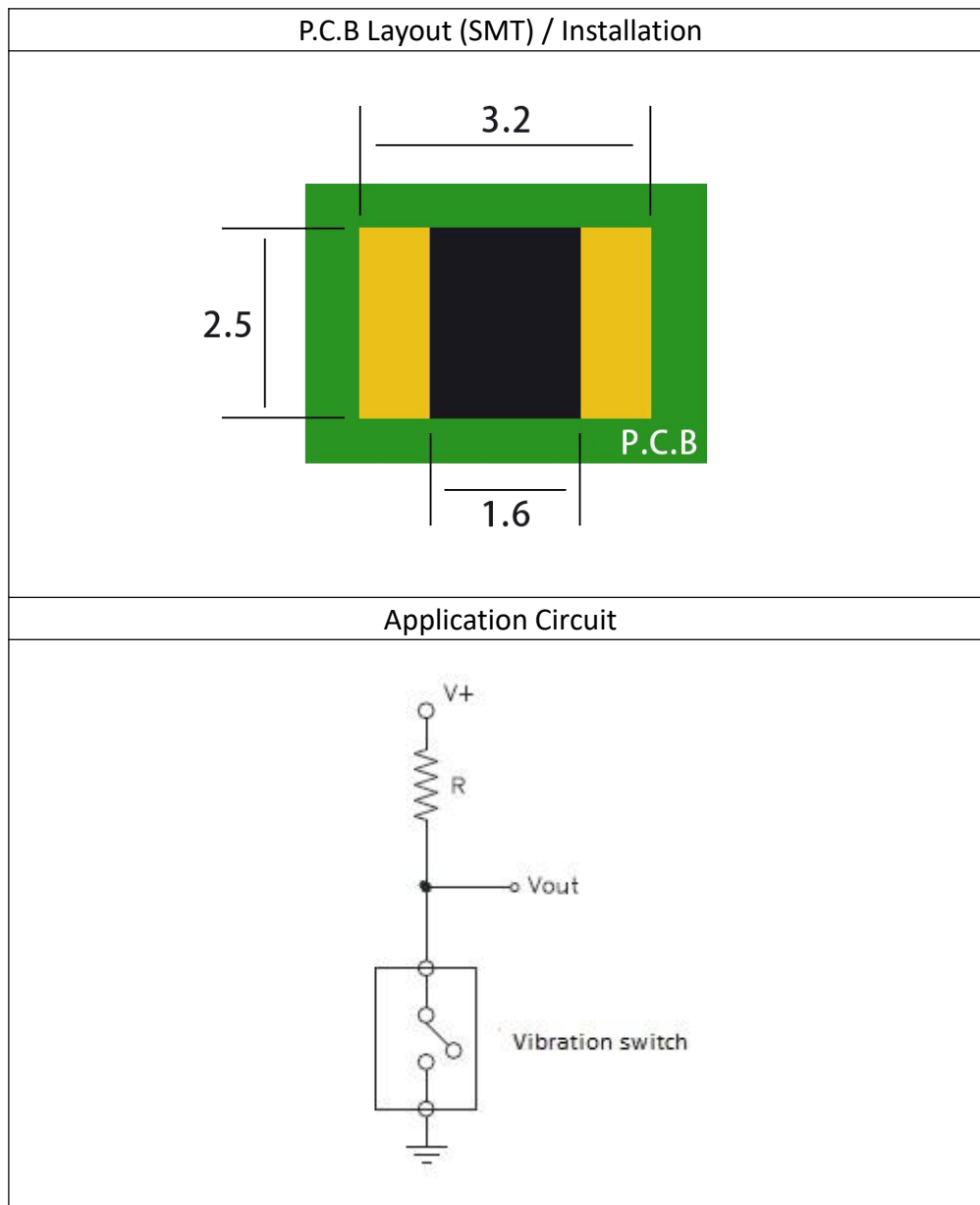
● DIMENSIONS / OPERATION

S02	Fleetingly Open When Being Vibrated From Any Position
 单位: mm 公差: $\pm 0.1\text{mm}$	

SENSOR SWITCH

Item No.	S02	Description	VIBRATION SWITCH	Version	4
Page	2 of 6		Date	Oct.28.2021	

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



SENSOR SWITCH

Item No.	S02	Description	VIBRATION SWITCH	Version	4
Page	3 of 6		Date	Oct.28.2021	

- Current / Voltage Suggested

Input Current (mA)	Operating Voltage (V)	Condition
<10	0.5 ~ 24	--

- ELECTRICAL CHARACTERISTICS

1	Contact Rating	10 mA, 5 V DC
2	Insulation Resistance	1,000 M Ω min., 100V DC
3	Dielectric Strength	500 V DC min. for 1 minute
4	Capacitance	5 pF Max.
5	Average Conductive Rate	98% min.

- RELIABLE TEST ITEMS

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

SENSOR SWITCH

Item No.	S02	Description	VIBRATION SWITCH	Version	4
Page	4 of 6		Date	Oct.28.2021	

● 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℃	< 5 seconds max.	--	SMT
Manual Soldering	320±5℃	< 3 seconds max.	20 W or Temperature-controlled manual soldering	DIP、SMT

● PACKAGE

Part Number	Package	Quantity
S02	Tape & Reel	2500 pcs

SENSOR SWITCH

Item No.	S02	Description	VIBRATION SWITCH	Version	4
Page	5 of 6		Date	Oct.28.2021	

● FEATURES

1. Both Suitable for horizontal and vertical PCB.
2. The S02 acts like a normally closed switch chatters open and closed as it is vibrated. Note that the S02 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. 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 vibration detection option than IC design solution.
10. All made in China and examined before shipment.

SENSOR SWITCH

Item No.	S02	Description	VIBRATION SWITCH	Version	4
Page	6 of 6		Date	Oct.28.2021	

● 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.