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Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation, and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!


## Contact us

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A PIERCED EARRING SIZE DETECTION SWITCH

\author{

- Ultra-miniature size ( $3.4 \times 3.4 \times 2.4 \mathrm{~mm} .134 \times .134 \times .094$ inch $)$ Meet the market requirements of FDD miniaturization <br> - Low operating force Max. 0.3 N <br> - SMD type available
}


## ORDERING INFORMATION

| Type | Part No. |
| :---: | :---: |
| Type I | ABP811161P |
| Type II | ABP811261P |

Remarks: Standard packaging
1 reel: 2,000 pcs.
1 case: 5 reels ( 10,000 pcs.)

## TYPICAL APPLICATIONS

- Floppy Disk Drivers
- Optical Disk Drivers
- CD-ROM Drivers
- Notebook Personal Computers
- Portable Handy Phones
- VCR
- Printers


## SPECIFICATIONS

1. Contact rating

| Standard rating | 0.1 A 10 V DC |
| :--- | :---: |
| Low-level circuit rating | 0.01 mA 5 V DC |

2. Characteristics

| Expected electrical life <br> (Min. operations) | $0.1 \mathrm{~A} \mathrm{10V} \mathrm{DC} \mathrm{resistive}$ | Min. $5 \times 10^{4}$ |
| :--- | :--- | :---: |
|  | 10 mA 5 V DC resistive | Min. $10^{5}$ |
| Insulation resistance <br> (by 100V DC insulation resistance meter) | $\mathrm{Min} .100 \mathrm{M} \Omega$ |  |
| Dielectric Strength | 100 Vrms for 1 min. |  |
| Vibration resistance | $14.7 \mathrm{~m} / \mathrm{s}^{2} 8$ to 500 Hz (contact opening: Max. $\left.10 \mu \mathrm{sec}.\right)$ |  |
| Shock resistance | $\mathrm{Min} .294 \mathrm{~m} / \mathrm{s}^{2}$ (contact opening: Max. $\left.10 \mu \mathrm{sec}.\right)$ |  |
| Ambient temperature | $-25^{\circ} \mathrm{C}$ to $+80^{\circ} \mathrm{C}-13^{\circ} \mathrm{F}$ to $+176^{\circ} \mathrm{F}$ (not freezing below $0^{\circ} \mathrm{C} 32^{\circ} \mathrm{F}$ ) |  |
| Initial contact resistance | $\mathrm{Max} .3 \Omega$ (by HP4328A) |  |

3. Operating characteristics

|  |  | Type I | Type II |
| :--- | :--- | :---: | :---: | :---: |
| Operating force Max. |  | 0.3 N |  |
| Free position Max. | mm inch | 3.7 .146 | 4.9 .193 |
| Operating position | mm inch | $3.3 \pm 0.2 .130 \pm .008$ | $3.5 \pm 0.2 .177 \pm .008$ |
| Total travel position Max. | mm inch | 2.3 .091 | 3.138 |
| Total stroke | mm inch |  | 1.2 .047 |

## DIMENSIONS

Type I


Type II


Recommended PC board pattern
(Top view)


Schematic
SPST-NO


## NOTES

## 1. Soldering operations

1) For manual soldering;

By using 18W Max. (iron tip temperature: $320^{\circ} \mathrm{C} 608^{\circ} \mathrm{F}$ Max.) soldering should be completed within 3 seconds.
2) For reflow soldering;

Perform soldering reflow at a peak surface temperature of the PC board not to exceed $245^{\circ} \mathrm{C} 473^{\circ}$. See the below recommended temperature profile.

3) During soldering, care should be taken not to apply excessive stress to the terminals as the resulting deformation may cause malfunction. Excessively high solder tab temperature and soldering iron wattage should also be avoided as these factors may harm switching performance.

## 2. Setting of the operation object

In setting the operation object; keep the following distance between the switch bottom and the operation object at T.T.P. (Total Travel Position)

ABP811161P: 2.3 to 2.9 mm
.091 to .114 inch
ABP811261P: 3.5 to 4.1 mm

## 138 to .161 inch

## 3. Quality Check under Actual Loading Conditions

To assure reliability, check the switch under actual loading conditions. Avoid any situation that may adversely affect switching performance.

## 4. Environment

1) These switches do not have a sealed construction. As such, the construction of the equipment in which the switches are to be installed should be given careful consideration when the switches are to be used in locations where corrosive gases, silicon or other substances which will adversely affect the contacts are used, where there is a high concentration of dust or where the switches may be exposed to condensation or water. Using switches in locations like these may cause malfunctioning.
2) Avoid using this switch in high-temperature, high-humidity or condensationforming environments and avoid allowing droplets of water to remain on the switch or come into contact with it. These conditions may interfere with the performance of the switch (resulting in short-circuiting,
migration, etc.). Use the type with the gold contacts in applications involving trains, aircraft, motor vehicles or medical equipment where the switch must satisfy safety and high reliability requirements. Please consult with us for the applications required high reliability.
3) Because the humidity range differs depending on the ambient temperature, the humidity range indicated below should be used. Continuous operation of the switch is possible within this range, but continuous use near the limit of the range should be avoided.

- This humidity range does not guarantee permanent performance.


