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# DATA SHEET 数据表

**BONSDA CODE :** TSR-08  
代码

**DESCRIPTION :** ROTARY DIP SWITCH  
描述

**CUSTOMER APPROVAL**  
客户确认

**PART NO. :** \_\_\_\_\_  
料号

**SIGNATURES :** \_\_\_\_\_  
签章

## SHENZHEN ZIGENG TECHNOLOGY CO. , LTD

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## 1. Style:

This specification describes "Rotary Switch" mainly used as signal switch of electric devices with the general requirements of mechanical and electrical characteristics.

1.1 Operating / Storage Temperature Range : -40℃ ~ +85℃

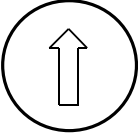
## 2. Current Range:

2.1 None-Switching : 200mA, 42V

2.2 Switching : 150mA, 42V

## 3. Type of Actuation : Rotating

## 4. Test Sequence :

| E<br>L<br>E<br>C<br>T<br>R<br>I<br>C<br><br>P<br>E<br>R<br>F<br>O<br>R<br>M<br>A<br>N<br>C<br>E | ITEM | DESCRIPTION                     | TEST CONDITIONS                                                                                                                                                | REQUIREMENTS                                                            |
|-------------------------------------------------------------------------------------------------|------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
|                                                                                                 | 1    | Visual Examination              | By visual examination check without any out pressure & testing.                                                                                                | There shall be no defects that affect the serviceability of the product |
|                                                                                                 | 2    | Contact Resistance              | ① To be measured between the two terminals associated with each switch pole<br>② Measurements shall be made with a 1kHz shall current contact resistance meter | 80mΩ max                                                                |
|                                                                                                 | 3    | Insulation Resistance           | 250V DC, 1minute ±5seconds                                                                                                                                     | 100MΩ min                                                               |
|                                                                                                 | 4    | Dielectric withstanding Voltage | 250V AC(50Hz or 60Hz)shall be applied between all the adjacent terminal and between the terminal and the frame For 1 minute                                    | There shall be no breakdown or flash over                               |
| M<br>A<br>C<br>H<br>I<br>N                                                                      | 5    | Operation Force                 | Applied in the direction of operation<br>                                   | 700gf/cm. max                                                           |

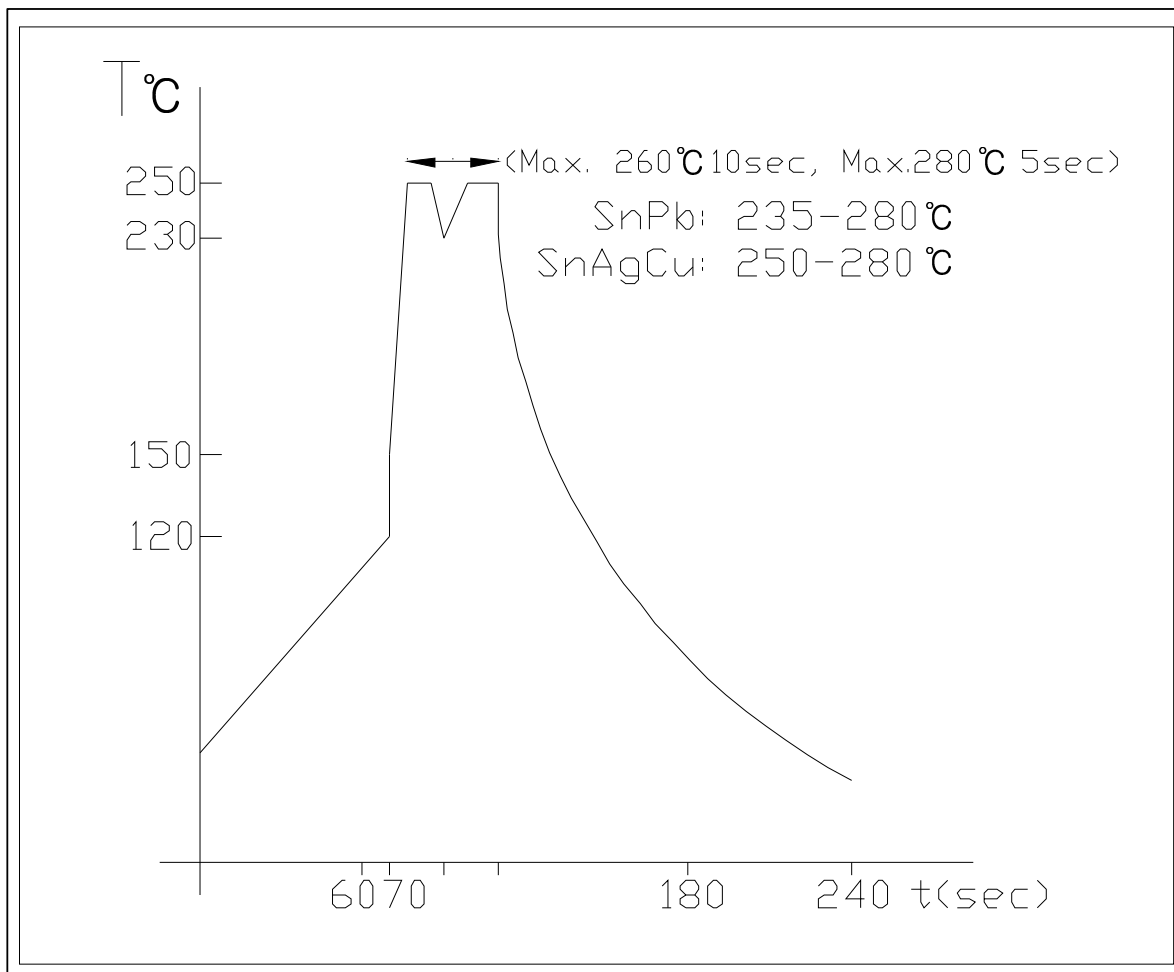
# ROTARY DIP SWITCH SPECIFICATION

Rev. A  
P: 2/4

|                                                     |   |                                   |                                                                                                                                                                                                                                               |                                                                                                               |
|-----------------------------------------------------|---|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| P<br>E<br>R<br>F<br>O<br>R<br>M<br>A<br>N<br>C<br>E | 6 | Operation<br>Life                 | <p>Measurements shall be made following the test set forth below:</p> <p>1)150mA, 42V DC resistive load<br/>2)Rate of operation: 15~20 cycles/ minute<br/>3)Step of operation: 10,000 steps</p>                                               | <p>1)As shown in item 3,4<br/>2)Contact Resistance:<br/>200mΩ max<br/>3)Final-after test</p>                  |
|                                                     | 7 | Resistance<br>Low<br>Temperature  | <p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made:</p> <p>1)Temperature: -40℃ ±3℃<br/>2)Time: 96 hours</p>                                | As shown in item 2~5                                                                                          |
|                                                     | 8 | Resistance<br>High<br>Temperature | <p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made:</p> <p>1)Temperature: 85℃ ±2℃<br/>2)Time: 96 hours</p>                                 | <p>1)As shown in item 3~5<br/>2)Contact Resistance:<br/>200mΩ max</p>                                         |
|                                                     | 9 | Resistance<br>Humidity            | <p>Following the test set forth below the sample shall be left in normal temperature and humidity conditions for an hour before measurements are made:</p> <p>1)Temperature: 40℃ ±2℃<br/>2)Relative humidity: 90~95%<br/>3)Time: 96 hours</p> | <p>1)As shown in item 4<br/>2)Contact Resistance:<br/>200mΩ max<br/>3)Insulation Resistance:<br/>10MΩ min</p> |

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## 5. Wave Soldering Conditions:



## 6. manual Soldering

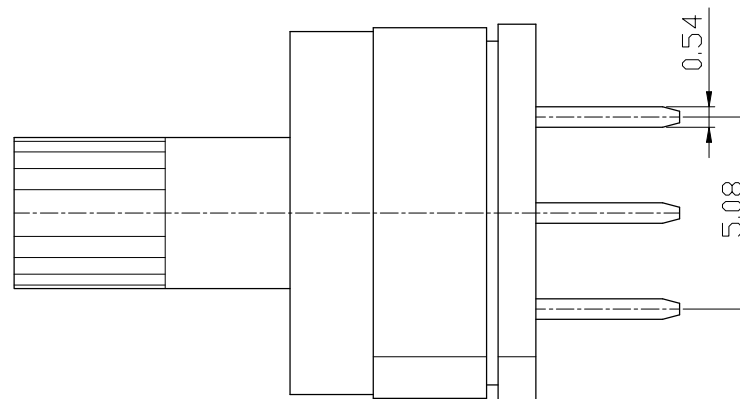
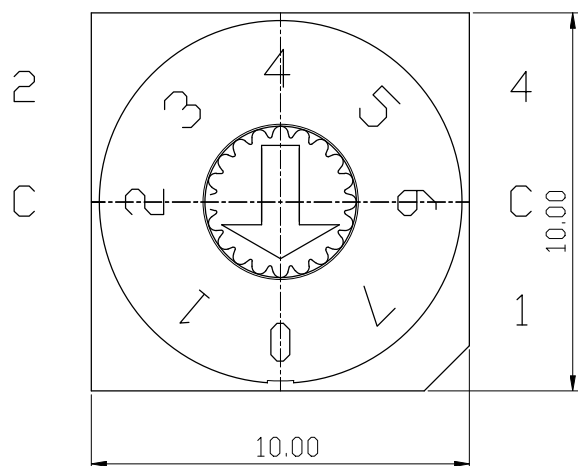
: Max. 350°C Max. 3sec

## 7. This item is "ROHS" Compliant

## 8. Part List

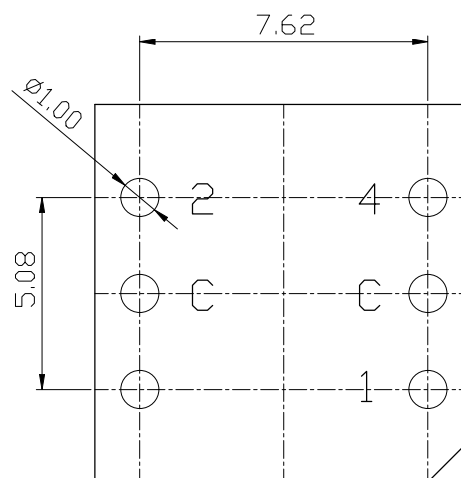
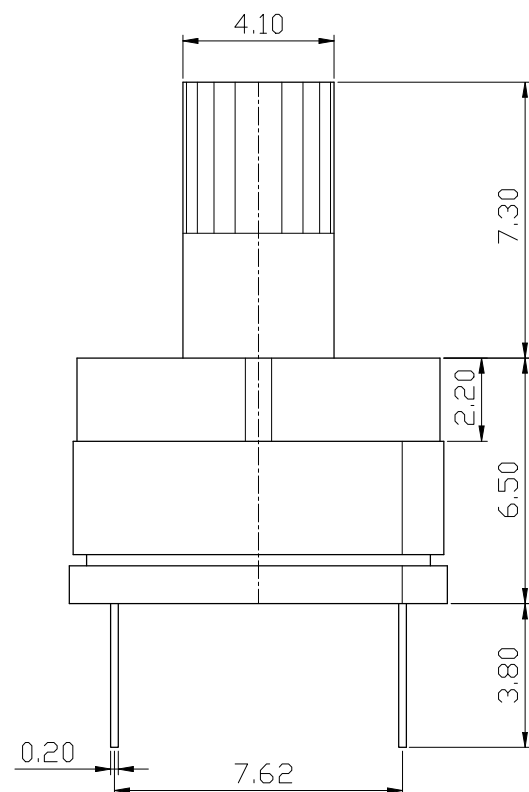
| NO | PART NAME          | Q'TY | MATERIALS       | TREATMENT                                              | REMARK                                  |
|----|--------------------|------|-----------------|--------------------------------------------------------|-----------------------------------------|
| 1  | COVER              | 1    | PA66            |                                                        | Print:Black                             |
| 2  | BASE               | 1    |                 |                                                        |                                         |
| 3  | ACTUATOR           | 1    | POM             |                                                        |                                         |
| 4  | CONTACT & TERMINAL | 1    | PHOSPHOR BRONZE | CONTACT AND TERMINAL PLATING: GOLD PLATING OVER NICKEL | Au0.07 $\mu$ m Min<br>Ni0.1 $\mu$ m Min |
| 5  | PCB                | 1    | EPOXY           | PLATING: GOLD PLATING                                  | Au0.05 $\mu$ m Min                      |
| 6  | O-Ring             | 1    | SILICONE        |                                                        |                                         |

| MARK | DATE | REMARKS |
|------|------|---------|
| △    |      |         |
| △    |      |         |



## SPECIFICATION

- Rating : 150mA, 42V DC (Switching)  
200mA, 42V DC (None-Switching)
- Contact Resistance : 80mΩ Max
- Insulation Resistance : 100MΩ Min
- Operating Force : 700gf Max
- Life cycle : 10,000 steps



## P.C.B DIMENSION

|                                           |   | Real Coded |   |   |   |   |
|-------------------------------------------|---|------------|---|---|---|---|
| 8<br>P<br>o<br>s<br>i<br>t<br>i<br>o<br>n |   | C          | 1 | 2 | 4 | 8 |
|                                           | 0 | ●          |   |   |   |   |
|                                           | 1 | ●          | ● |   |   |   |
|                                           | 2 | ●          |   | ● |   |   |
|                                           | 3 | ●          | ● | ● |   |   |
|                                           | 4 | ●          |   |   | ● |   |
|                                           | 5 | ●          | ● |   | ● |   |
|                                           | 6 | ●          |   | ● | ● |   |
|                                           | 7 | ●          | ● | ● | ● |   |

|         |         |         |                          |     |   |  |
|---------|---------|---------|--------------------------|-----|---|--|
| APPD    | CHKD    | D'SGD   | TITLE. ROTARY DIP SWITCH |     |   |  |
| K.L LEE | J.P ROH | H.S LEE | MODEL NO. TSR-08         | REV | A |  |
|         |         |         | BONSDA 深圳市子庚科技有限公司       |     |   |  |