

# 深圳市宇聯盛電子有限公司

广东省深圳市龙华区观澜桂花路305号展成工业园A栋

TEL:+086755-29164816 /81298981 FAX:+086755-28087856

E-mail: candy@ylscn.com , 2896691986@qq.com

網址: http://www.ylscn.com, www.ylschn.com

## 承 认 书

SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER :

客户料号 PART NO :

产品名称 DESC : PHSD 2\*NP AW Y T

日 期 DATE : 2013/8/19

| 项目<br>ITEM | 承认书<br>DATA SHEET | 样 品<br>SAMPLE | 客户承认 |
|------------|-------------------|---------------|------|
| 数量 QTY     | 一份                | ( 5 ) 只       |      |

## PHSD SERIES

Scope: This specification covers the 2.0mm spacing WIRE TO BOARD Connector series.

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Note: 以上测试视公司之测试条件/能力而定。

|          |          |          |       |         |
|----------|----------|----------|-------|---------|
| FILE NO  | ENS008   | APPROVAL | CHECK | DRAWING |
| ECR/N NO | New spec |          |       |         |

## [1. Product name and part number]

|                          |                         |
|--------------------------|-------------------------|
| Product Name             | Part Number             |
| Terminal                 | PHSD2.0-3-TE            |
| Housing                  | PHSD-2xNY               |
| Wafer Assembly ST. (DIP) | PHSD-2xNA               |
| Wafer Assembly R.A (DIP) | PHSD-2xNAW/PHSD-2xNAW-N |

## [2. Ratings and applicable wires]

|                     |              |
|---------------------|--------------|
| ITEM                | STANDARD     |
| Rated Voltage       | 250V DC,AC   |
| Rated Current       | 3A           |
| Applicable Wires    | AWG#22~#28   |
| Ambient Temperature | -25°C~+85°C* |

\* : Including terminal temperature rise.

## [3. Performance]

### 3-1. Electrical Performance

| ITEM  |                                       | Test condition                                                                                                                      | Requirement                |
|-------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| 3-1-1 | Contact resistance                    | Mate connectors, measure by dry circuit, 20mV MAX., 10mA.<br>Mated Length : 50mm (AWG #22)<br>(Based upon JIS C5402 5.4)            | 30mΩ(max.)                 |
| 3-1-2 | Insulation resistance                 | Mate connectors, apply 500V DC between adjacent terminals or ground. (Based upon JIS C5402 5.2/MIL-STD-202 method 302 condition B)  | 1000MΩ(min.)               |
| 3-1-3 | Dielectric strength                   | Mate connectors, apply 1000V AC for 1 minute between adjacent terminal or ground. (Based upon JIS C5402 5.1/MIL-STD-202 Method 301) | No breakdown and flashover |
| 3-1-4 | Contact resistance on crimped portion | Crimp the maximum applicable wire on to the terminal, measure by dry circuit, 20mV MAX., 10mA.<br>Wire Length : 50mm (AWG #22)      | 30mΩ(max.)                 |

### 3-2. Mechanical Performance

| ITEM  |                                      | Test condition                                                                                                           | Requirement                                                                                  |         |      |
|-------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---------|------|
| 3-2-1 | Insertion force and withdrawal force | Insert and withdraw connectors at a speed of 25±3mm/minute                                                               | Single PIN                                                                                   |         |      |
|       |                                      |                                                                                                                          | Insertion (max.)                                                                             | Initial | 220g |
|       |                                      |                                                                                                                          | Withdrawal (min.)                                                                            | Initial | 120g |
|       |                                      |                                                                                                                          |                                                                                              | 10th    | 100g |
|       |                                      |                                                                                                                          |                                                                                              | 30th    | 100g |
| 3-2-2 | Crimping pull out force              | Fix the crimped terminal, apply axial pull out force on the wire at a speed of 25±3mm/minute (Based upon JIS C5402 6.22) | AWG#22: 2.5kgf(min.)<br>AWG#24: 2.0kgf(min.)<br>AWG#26: 1.5kgf(min.)<br>AWG#28: 1.0kgf(min.) |         |      |
| 3-2-3 | Terminal insertion force             | Insert the crimped terminal into the housing at a speed of 25±3mm/minute                                                 | 1.0 kgf (max.)                                                                               |         |      |
| 3-2-4 | Terminal/Housing retention force     | Apply axial pull out force at a speed of 25±3mm/minute on the terminal assembled in the housing.                         | 1.2kgf (min.)                                                                                |         |      |
| 3-2-5 | Pin retention force                  | Apply axial push force at a speed of 25±3mm/minute on the contact pin assembled in the base wafer.                       | 1.5 kgf (min.)                                                                               |         |      |

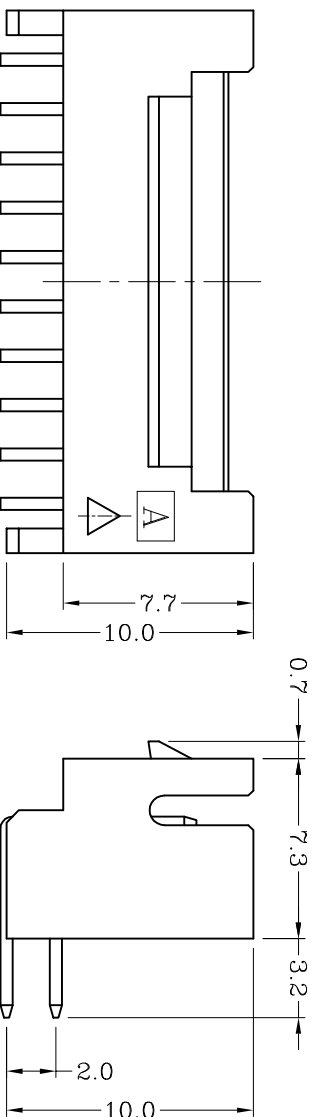
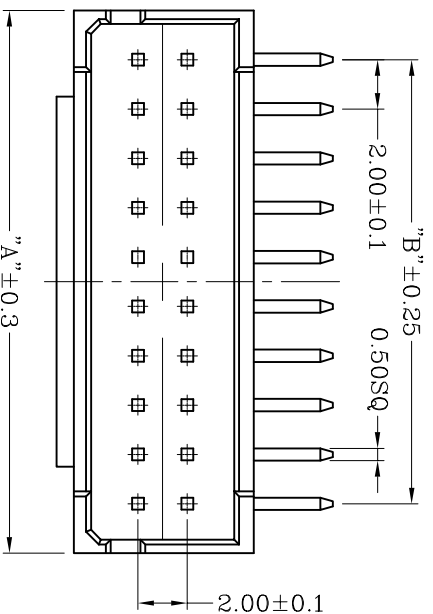
### 3-3. Environmental Performance and Others

| ITEM  |                               | Test condition                                                                                                                                                   | Requirement        |             |
|-------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------|
| 3-3-1 | Repeated insertion/withdrawal | Mate connector up to 30 cycles repeatedly at a rate of 10 cycles/minute. After which test the contact resistance                                                 | Contact resistance | 50mΩ (max.) |
| 3-3-2 | Temperature rise              | Apply rated current load on mated connector in series-connection. Measure change of temperature on contact using thermocouples for 4 hours. (Based upon UL 1977) |                    | 30°C (max.) |

|       |                     |                                                                                                                                                                                                                                        |                       |                 |
|-------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------|
| 3-3-3 | Vibration           | Amplitude: 1.52mm<br>Sweep time: 10-55-10Hz/minute<br>Duration: 2 Hours in each X.Y.Z axlals<br>(Based upon MIL-STD-202 method 201)                                                                                                    | Appearance            | No Damage       |
|       |                     |                                                                                                                                                                                                                                        | Contact Resistance    | 50mΩ (max.)     |
|       |                     |                                                                                                                                                                                                                                        | Discontinui-ty        | 1μ sec (max.)   |
| 3-3-4 | Shock               | 50G, 3 strokes in each X.Y.Z. axlals.<br>(based upon JIS C0041)                                                                                                                                                                        | Appearance            | No Damage       |
|       |                     |                                                                                                                                                                                                                                        | Contact Resistance    | 50mΩ (max.)     |
|       |                     |                                                                                                                                                                                                                                        | Discontinui-ty        | 1μ sec (max.)   |
| 3-3-5 | Heat resistance     | Mated connector shall be placed in an oven for 96±4 hours at +85±2°C.<br>(based upon JIS C5402 7.8)                                                                                                                                    | Appearance            | No Damage       |
|       |                     |                                                                                                                                                                                                                                        | Contact Resistance    | 50mΩ (max.)     |
| 3-3-6 | Cold resistance     | Mated connector shall be placed in a temperature chamber for 96hours at -25±3°C<br>(based upon JIS C5402 7.9)                                                                                                                          | Appearance            | No Damage       |
|       |                     |                                                                                                                                                                                                                                        | Contact Resistance    | 50mΩ (max.)     |
| 3-3-7 | Humidity            | Mated connector shall be placed in a humidity chamber on the following conditions.<br>Temperature: 40±2°C<br>Relative humidity: 90~95%<br>Duration : 240 Hours<br>(Based upon MIL-STD-202 Method 103 conditions.A)                     | Appearance            | No Damage       |
|       |                     |                                                                                                                                                                                                                                        | Contact Resistance    | 50mΩ (max.)     |
|       |                     |                                                                                                                                                                                                                                        | Dielectric strength   | Must meet 3-1-3 |
|       |                     |                                                                                                                                                                                                                                        | Insulation resistance | 500MΩ (min.)    |
| 3-3-8 | Temperature cycling | Mated connector shall be set to temperature cycling for 5 cycles of which 1 cycle consists of:<br><br>1>. +25°C ~ 3 minutes<br>2>. -25°C ~ 30 minutes<br>3>. +25°C ~ 3 minutes<br>4>. +85°C ~ 30 minutes<br>(Based upon JIS C5402 7.2) | Appearance            | No Damage       |
|       |                     |                                                                                                                                                                                                                                        | Contact Resistance    | 50mΩ (max.)     |
|       |                     |                                                                                                                                                                                                                                        | Dielectric strength   | Must meet 3-1-3 |
|       |                     |                                                                                                                                                                                                                                        | Insulation resistance | 500MΩ (min.)    |

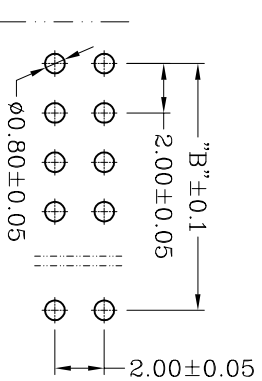
|        |                              |                                                                                                                                                                                                                                         |                                                        |             |
|--------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|
| 3-3-9  | Salt spray                   | Mated connector shall be placed in a salt spray chamber on the following conditions.<br>Salt Solution Density : 5±1%<br>Temperature : 35±2°C<br>Duration : 12±4 Hours<br>(Based upon JIS C5402 7.1 /MIL-STD-202 Method 101 Condition B) | Appearance                                             | No Damage   |
|        |                              |                                                                                                                                                                                                                                         | Contact Resistance                                     | 50mΩ (max.) |
| 3-3-10 | Solderability                | Immerse fluxed soldered section of contact pin into a solder bath for 3±0.5sec, temperature:230±5°C                                                                                                                                     | 95% of immersed area must show no voids nor pin holes. |             |
| 3-3-11 | Resistance to soldering heat | Mated connector shall be dipped on solder bath for 5±1sec, temperature:260±5°C                                                                                                                                                          | No Damage in appearance                                |             |

[4. Product shape, Dimensions and materials]  
Refer to the drawing



|       |      |      |       |       |       |       |       |       |       |       |       |
|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|       | 2x2P | 2x3P | 2x4P  | 2x5P  | 2x6P  | 2x7P  | 2x8P  | 2x9P  | 2x10P | 2x11P | 2x12P |
| DIM.A | 6.00 | 8.00 | 10.00 | 12.00 | 14.00 | 16.00 | 18.00 | 20.00 | 22.00 | 24.00 | 26.00 |
| DIM.B | 2.00 | 4.00 | 6.00  | 8.00  | 10.00 | 12.00 | 14.00 | 16.00 | 18.00 | 20.00 | 22.00 |

|       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|       | 2x13P | 2x14P | 2x15P | 2x16P | 2x17P | 2x18P | 2x19P | 2x20P | 2x30P |
| DIM.A | 28.00 | 30.00 | 32.00 | 34.00 | 36.00 | 38.00 | 40.00 | 42.00 | 62.00 |
| DIM.B | 24.00 | 26.00 | 28.00 | 30.00 | 32.00 | 34.00 | 36.00 | 38.00 | 58.00 |



技术参数 SPECIFICATIONS

- ◆ 适用线规: AWG#28~#22
  - ◆ Applicable Wire: AWG#28~#22
  - ◆ 额定电压: 250V DC,AC
  - ◆ Rated voltage: 250V DC,AC
  - ◆ 额定电流: 3A
  - ◆ Rated Current: 3A
  - ◆ 耐压值: 1000V AC/minute
  - ◆ Withstand voltage: 1000V AC/min.
  - ◆ 工作温度:  $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$
  - ◆ Working Temp :  $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$
  - ◆ 绝缘电阻:  $\geq 1000\text{ M}\Omega$
  - ◆ Insulation resistance:  $\geq 1000\text{ M}\Omega$
  - ◆ 接触电阻:  $\leq 30\text{m}\Omega$
  - ◆ Contact resistance:  $\leq 30\text{m}\Omega$
- 材料 MATERIAL
- ◆ 绝缘体: 尼龙46, UL94-V0
  - ◆ Insulator: Nylon46, UL94-V0
  - ◆ 接触针: 黄铜
  - ◆ Contact PIN: Brass

■材料 MATERIAL

- ◆ 绝缘体: 尼龙46, UL94-V0
- Insulator: Nylon46, UL94-V0
- ◆ 接触针: 黄铜
- Contact PIN: Brass

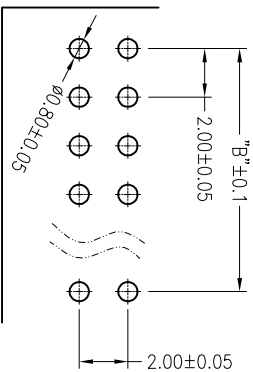
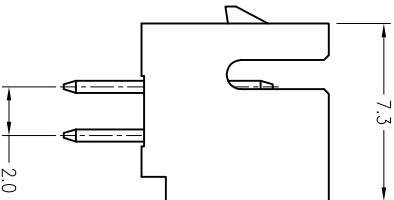
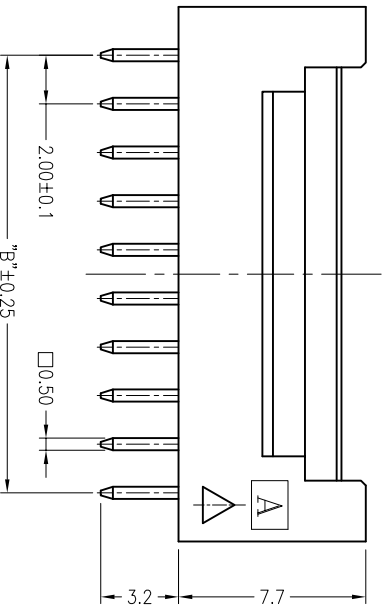
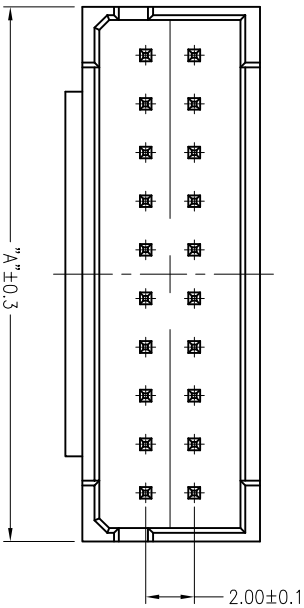
## P.C.B LAYOUT

深圳市宇联盛电子有限公司

Shenzhen Yuliansheng Electronics Co., Ltd.

| GENERAL TOLERANCE |                   | SCALE:                                                                            | DRAWN   | DATE:      | DWG. NO. :             | TITLE: | REV.   |
|-------------------|-------------------|-----------------------------------------------------------------------------------|---------|------------|------------------------|--------|--------|
| XX $\pm 0.40$     |                   | 3.5:1                                                                             | 张朋      | 2011.11.16 | E:\DWG\Production\PHSD | 成品图    | A      |
| XX $\pm 0.30$     | UNIT:             | mm                                                                                | CHECK:  | 2011.11.16 | PARTS NO. :            |        | SHEET: |
| X $\pm 0.25$      | SIZE:             |                                                                                   | APPROVE | 2011.11.16 | PHSD -2xNAW            |        | 1/1    |
| XX $\pm 0.15$     | X.° $\pm 2^\circ$ |  |         |            |                        |        |        |
| X.° $\pm 1^\circ$ | X.° $\pm 1^\circ$ |  |         |            |                        |        |        |

| Poles | DIM.A | DIM.B |
|-------|-------|-------|
| 2x2P  | 6.0   | 2.0   |
| 2x3P  | 8.0   | 4.0   |
| 2x4P  | 10.0  | 6.0   |
| 2x5P  | 12.0  | 8.0   |
| 2x6P  | 14.0  | 10.0  |
| 2x7P  | 16.0  | 12.0  |
| 2x8P  | 18.0  | 14.0  |
| 2x9P  | 20.0  | 16.0  |
| 2x10P | 22.0  | 18.0  |
| 2x11P | 24.0  | 20.0  |
| 2x12P | 26.0  | 22.0  |
| 2x13P | 28.0  | 24.0  |
| 2x14P | 30.0  | 26.0  |
| 2x15P | 32.0  | 28.0  |
| 2x16P | 34.0  | 30.0  |
| 2x17P | 36.0  | 32.0  |
| 2x18P | 38.0  | 34.0  |
| 2x19P | 40.0  | 36.0  |
| 2x20P | 42.0  | 38.0  |
| 2x30P | 62.0  | 58.0  |



P.C.B LAYOUT

■ 技术参数 SPECIFICATIONS

- ◆ 适用线规: AWG#28~#22  
Applicable Wire: AWG#28~#22
  - ◆ 额定电压: 250V DC,AC  
Rated voltage: 250V DC,AC
  - ◆ 额定电流: 3A  
Rated Current: 3A
  - ◆ 耐压值: 1000V AC/minute  
Withstand voltage: 1000V AC/min.
  - ◆ 工作温度: -25℃ ~ +85℃  
Working Temp : -25℃ ~ +85℃
  - ◆ 绝缘电阻: ≥1000 MΩ  
Insulation resistance: ≥1000 MΩ
  - ◆ 接触电阻: ≤30mΩ  
Contact resistance: ≤30mΩ
- 材料 MATERIAL
- ◆ 绝缘体: 尼龙46, UL94-V0  
Insulator: Nylon46, UL94-V0
  - ◆ 接触针: 黄铜  
Contact PIN: Brass

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| GENERAL TOLERANCE |           |
|-------------------|-----------|
| XX. ±0.40         |           |
| X. ±0.30          |           |
| .X ±0.25          | X.* ± 2°  |
| .XX ±0.15         | .X.* ± 1° |

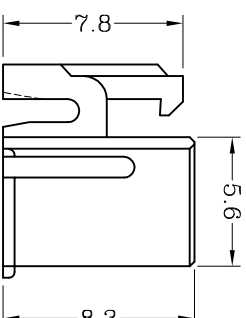
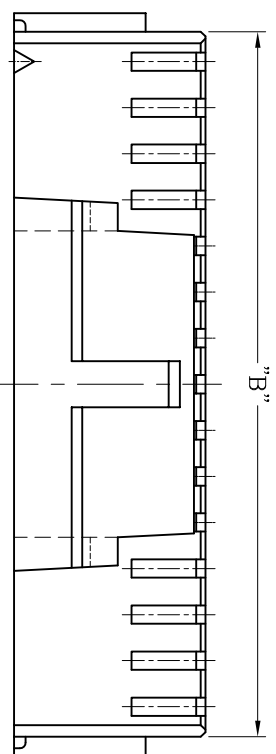
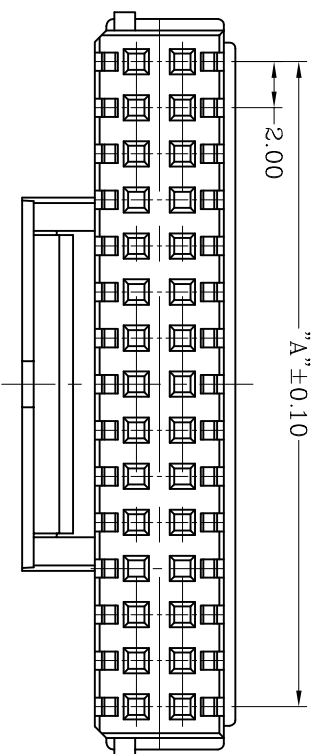
|              |           |
|--------------|-----------|
| SCALE: 3.5:1 | DRAWN: 张朋 |
| UNIT: mm     | CHECK:    |
| SIZE: A4     | APPROVE:  |

|       |       |
|-------|-------|
| DATE: | DATE: |
| DATE: | DATE: |

|          |           |
|----------|-----------|
| DOC. NO: | PARTS NO: |
|          | PHSD-2xNA |

|            |
|------------|
| TITLE: 工程图 |
|------------|

|            |
|------------|
| REV. A     |
| SHEET: 1/1 |



### 技术参数 SPECIFICATIONS

- ◆ 极数: 12~60 Poles: 12~60
- ◆ 额定电压: AC, DC, 250V
- ◆ Rated voltage: AC, DC, 250V
- ◆ 额定电流: 3.0A AC, DC
- ◆ Rated Current: 3.0A AC, DC
- ◆ 耐压值: 1000V AC/minute
- ◆ Withstand voltage: 1000V AC/minute
- ◆ 工作温度: -25° C ~ +85° C
- ◆ Working Temperature: -25° C ~ +85° C
- ◆ 绝缘电阻:  $\geq 1000\text{ M}\Omega$
- ◆ Insulation resistance:  $\geq 1000\text{ M}\Omega$
- ◆ 接触电阻:  $\leq 30\text{m}\Omega$
- ◆ Contact resistance:  $\leq 30\text{m}\Omega$

### 材料 MATERIAL

- ◆ 塑胶: 尼龙66 (Nylon66), UL94V-0

### 包装方式 PACKAGE

- ◆ 袋装 Bag Package

### 料号 Part No.

PHSD 2.0 - 3 - 2xN Y

间距: (Pitch) \_\_\_\_\_

线数: (Hole location) \_\_\_\_\_

胶壳: (Housing) \_\_\_\_\_

|   |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |
|---|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|   | 2x6P | 2x7P | 2x8P | 2x9P | 2x10P | 2x11P | 2x12P | 2x13P | 2x14P | 2x15P | 2x16P | 2x17P | 2x18P | 2x19P | 2x20P | 2x30P |
| A | 10.0 | 12.0 | 14.0 | 16.0 | 18.0  | 20.0  | 22.0  | 24.0  | 26.0  | 28.0  | 30.0  | 32.0  | 34.0  | 36.0  | 38.0  | 58.0  |
| B | 12.6 | 14.6 | 16.6 | 18.6 | 20.6  | 22.6  | 24.6  | 26.6  | 28.6  | 30.6  | 32.6  | 34.6  | 36.6  | 38.6  | 40.6  | 60.6  |

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### GENERAL TOLERANCE

XX.  $\pm 0.25$  XXX.  $\pm 0.40$

X.  $\pm 0.20$  .XXX  $\pm 0.05$

.X  $\pm 0.15$  X°  $\pm 2^\circ$

.XX  $\pm 0.08$  X°  $\pm 1^\circ$

### SCALE

3=1

UNIT

MM

SIZE

A4

### DRAWN 张朋

CHECK

APPROVE

### DATE

DATE

DATE

### DWG. NO.

G:\DWG\Production

PARTS NO.

PHSD2.0-3-2xNY

### TITLE

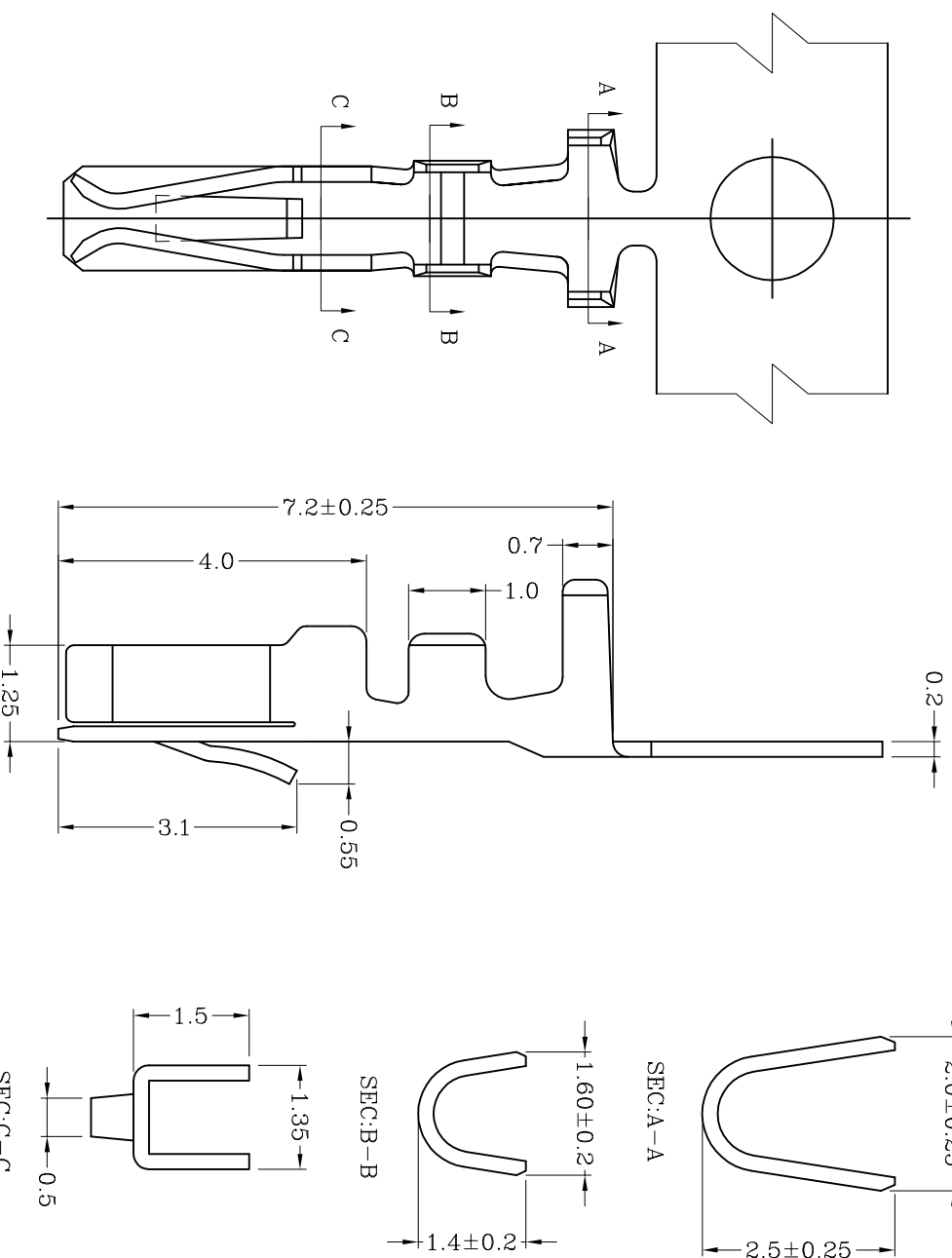
塑胶图

### REV.

A

SHEET

1/1



■ 材料：磷铜  
■ 适用线规：AWG#28-#22

|                    |  |        |  |          |  |       |  |                        |  |        |  |      |  |
|--------------------|--|--------|--|----------|--|-------|--|------------------------|--|--------|--|------|--|
| GENERAL TOLERANCE  |  | SCALE: |  | DRAWN:   |  | DATE: |  | DWG. NO. :             |  | TITLE: |  | REV. |  |
| XX $\pm 0.40$      |  | UNIT:  |  | CHECK:   |  | DATE: |  | E:\DWG\Production\PHSD |  | 端子图    |  | A    |  |
| . $\pm 0.30$       |  | mm     |  | APPROVE: |  | DATE: |  | PARTS NO. :            |  | SHEET: |  | 1/1  |  |
| .X $\pm 0.25$      |  | SIZE:  |  | DATE:    |  | DATE: |  | PHSD2.0-3-TE           |  | SHEET: |  | 1/1  |  |
| .XX $\pm 0.15$     |  | A4     |  | DATE:    |  | DATE: |  | PHSD2.0-3-TE           |  | SHEET: |  | 1/1  |  |
| .X° $\pm 2^\circ$  |  | mm     |  | DATE:    |  | DATE: |  | PHSD2.0-3-TE           |  | SHEET: |  | 1/1  |  |
| .XX° $\pm 1^\circ$ |  | mm     |  | DATE:    |  | DATE: |  | PHSD2.0-3-TE           |  | SHEET: |  | 1/1  |  |

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