

深圳市华灿天禄电子有限公司

物料承认书

SPECIFICATION FOR APPROVAL

客户名称:

Customer: _____

产品名称:

Description: _____

规格型号:

Modelno: _____

1. 2MM系列

物料编号:

Cust P/N: _____

出厂签章

校 对 Issuer

审 核 Engineer

批 准 Approver

李攀进

/

罗观彬

承认签章 CUSTOMER

校 对 Issuer

审 核 Engineer

批 准 Approver

地址: 深圳市宝安区40区安乐科技创新园B栋726

TEL:0755-27204342 FAX:0755-29785862

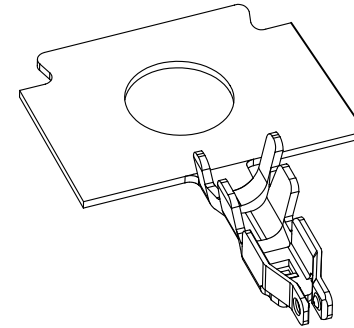
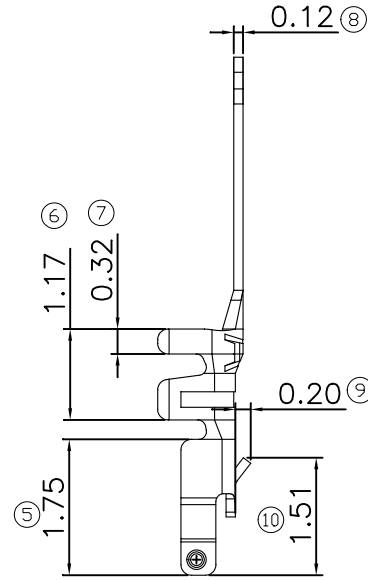
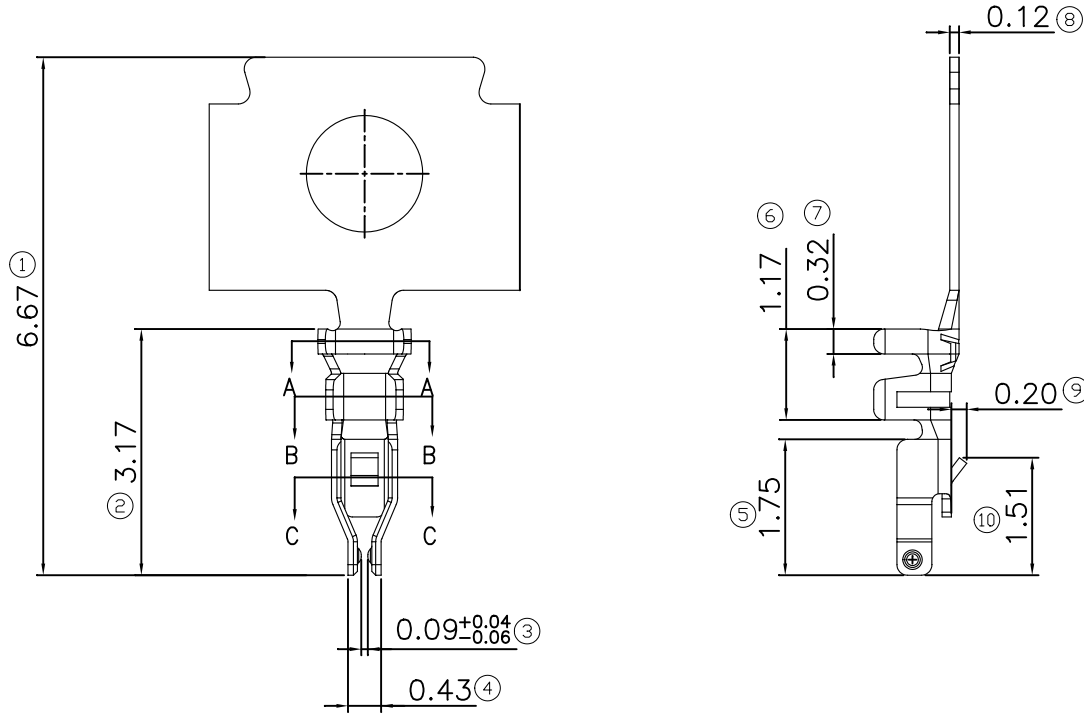
Http://www.HCTLDZ.com

E-mail: jinpan.hu@hctldz.com

确认合格后烦请回签一份给我司存档, 谢谢!

Pls. sign acknowledge and re-turn document to us after confirming, thank you !

| REV. | DATE | ECN NO. | MODIFICATION | APPROVER |
|------|------------|---------|--------------|----------|
| A | 2020/10/09 | / | NEW | Vicky |



3D视图(SCALE .1:1)

SPECIFICATIONS

Rated voltage: 50V DC/AC

Rated current: 1.5A(28AWG),

1.0A(30AWG) AC,DC

Withstand voltage: 500V AC/minute

Working Temperature: -25°C~+85°C

Contact resistance: 20mΩ Max

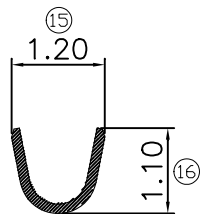
MATERIAL

Material: Copper Alloy

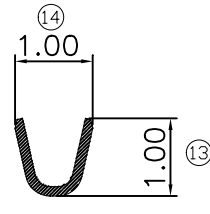
Finish: Gold Flash over Nickel

Applicable Wires:AWG#28~#30

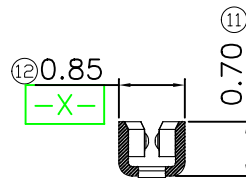
Insulation O.D.:0.75mm MAX



SECTION.A-A



SECTION.B-B



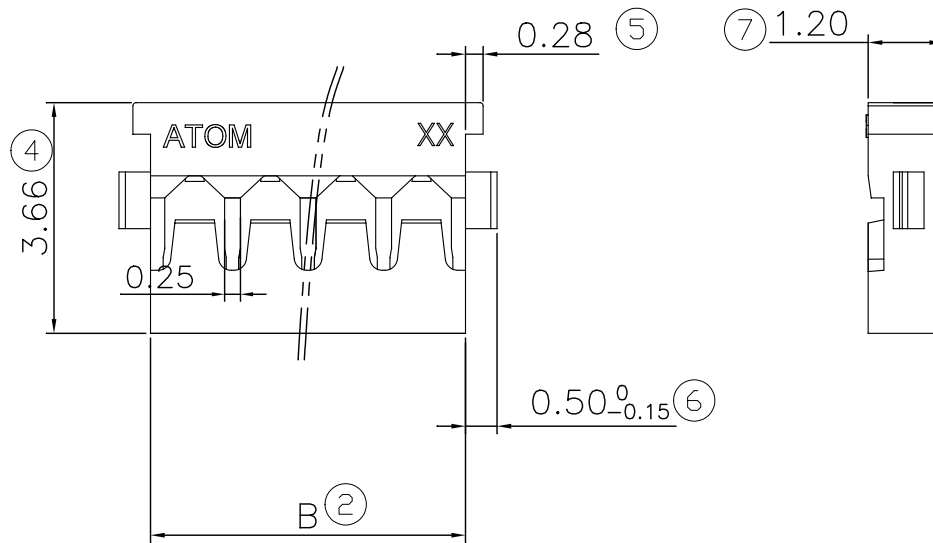
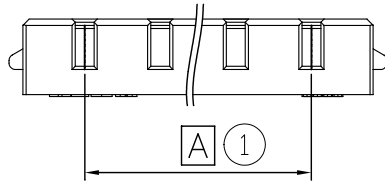
SECTION.C-C

| | | | | | | | | |
|-------------------|-------|-------|-------|--------|------------------------|------------------------------------|---------------|------|
| GENERAL TOLERANCE | | | | UNITS | mm | NAME(INTENDED USE) | 深圳市华灿天禄电子有限公司 | |
| SELECT | ✓ | | | MAT'L | 1.2mm 单排 柳线端子 | TITLE: | | |
| ON. | 1 | 2 | 3 | FINISH | PART NO.(INTENDED USE) | CUSTOMER DRAWING FOR 1.2mm 单排 柳线端子 | | |
| X.XXX | ±0.15 | ±0.05 | ±0.15 | | TR12001303 | APPD: JASON | DWG NO.: | |
| X.XX | ±0.20 | ±0.13 | ±0.25 | Q'TY | CHKD: ABEL | HC-1.2-T | | |
| X.X | ±0.25 | ±0.25 | ±0.50 | | DR: TOM | SCALE | SHEET | REV. |
| X. | ±0.30 | ±0.38 | ±1.00 | | | 1:1 | 1/1 | A |
| ANGLE | ±3' | | | | | | | |

| REV | DATE | MODIFICATION | APPROVER |
|-----|------------|--------------|----------|
| A0 | 2021/01/14 | NEW | Jason |
| A1 | 2021/06/03 | 增加无齿标示 | Jason |

HF

(A1)



1. Material:

1.1. Housing: Material: PA Nylon UL94V-0
Color: Black

2. Electrical performance:

2.1. Insulation resistance: 100MΩ MIN

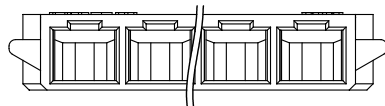
3. The product environmental requirements.

3.1. Work temperature: -25 ℃ ~ +85℃

4. Product environmental protection level:

4.1. Products comply with RoHS standards

| 极数 | 尺寸 | |
|------|------|------|
| | A | B |
| 2PIN | 1.20 | 2.60 |
| 3PIN | 2.40 | 3.80 |
| 4PIN | 3.60 | 5.00 |
| 5PIN | 4.80 | 6.20 |
| 6PIN | 6.00 | 7.40 |
| 7PIN | 7.20 | 8.60 |

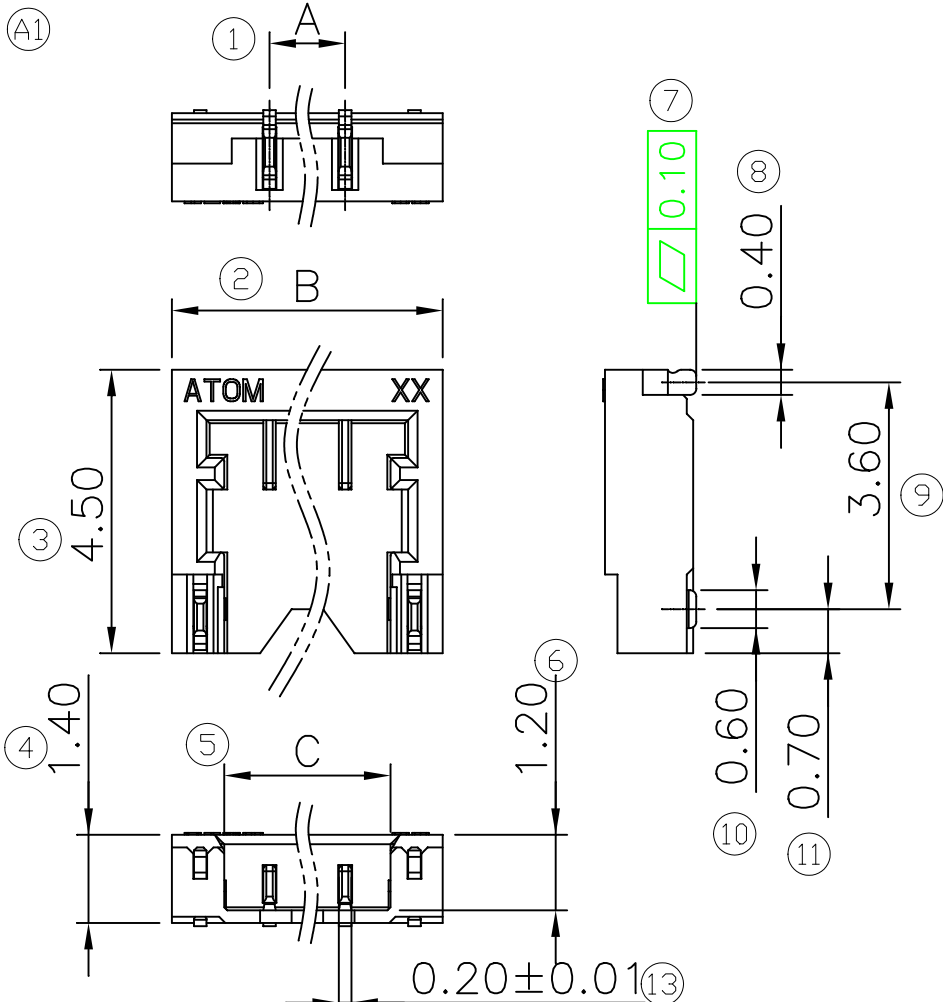


| GENERAL TOLERANCE | | | UNITS | NAME (INTENDED USE) | |
|-------------------|-------|-------------|--------|-------------------------|-------|
| SELECT | ✓ | | mm | 1. 2 CONN. REC. HOUSING | |
| TOL. | | | MAT'L | PART NO. (INTENDED USE) | |
| ON. | 1 | 2 3 | | H0120**-01*** | |
| X.XXX | ±0.10 | ±0.15 ±0.20 | FINISH | APPD: | JASON |
| X.XX | ±0.15 | ±0.20 ±0.25 | | CHKD: | ABEL |
| X.X | ±0.20 | ±0.25 ±0.30 | Q'TY | DR: | TOM |
| X. | ±0.25 | ±0.30 ±0.50 | | | |
| ANGLE | ±2' | | | | |

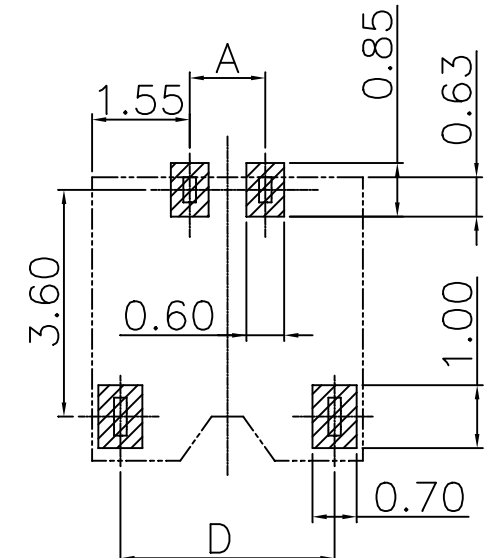
| | | |
|--|-------|------|
| 深圳市华灿天禄电子有限公司 | | |
| TITLE: Customer drawing for 1.2(无齿) XP Housing | | |
| DWG NO.: HC-1.2-NY | | |
| SCALE | SHEET | REV. |
| 1:1 | 1/1 | A1 |

HF

| REV | DATE | MODIFICATION | APPROVER |
|-----|------------|--------------|----------|
| A0 | 2021/01/11 | NEW | Jason |
| A1 | 2021/06/03 | 增加无齿标示 | Jason |
| A2 | 2021/08/17 | 电流分段管控 | Jason |



- Material:
 - INSULATOR: PA NYLON UL94V-0, COLOR: BLACK.
 - TERMINAL: C5191 T=0.20MM,
 - FITTING NAIL: C2680 T=0.20MM
- Plating of Contact
 - Terminal: Au 1U" Min Plated.
 - Fitting Nail: Matte Tin Plated.
- Electrical performance:
 - Current rating: 2P~4P: 1.5A(AWG#28~#30), 2.0A(AWG#28) 5P~7P: 1.5A(AWG#28~#30).
 - Voltage rating: 50V AC, DC
 - Insulation resistance: 100MΩ Min. at 500 V DC.
 - Terminal contact resistance: 20mΩ Max.
 - Withstanding voltage: 500V AC at 1mA Max. for 1 minute.
- Environment performance
 - Operating temperature: -25℃ ~ +85℃
- Products comply with RoHS standards



| PIN | A | B | C | D |
|-----|------|-------|------|------|
| 2P | 1.20 | 4.30 | 2.64 | 3.40 |
| 3P | 2.40 | 5.50 | 3.84 | 4.60 |
| 4P | 3.60 | 6.70 | 5.04 | 5.80 |
| 5P | 4.80 | 7.90 | 6.24 | 7.00 |
| 6P | 6.00 | 9.10 | 7.44 | 8.20 |
| 7P | 7.20 | 10.30 | 8.64 | 9.40 |

| GENERAL TOLERANCE | | | UNITS mm | | NAME (INTENDED USE) | |
|-------------------|-------|-------|----------|--|-------------------------|--|
| SELECT | ✓ | | | | Wafer 1.2mm 连接器 | 深圳市华灿天禄电子有限公司 |
| TOL. | 1 | 2 | 3 | | PART NO. (INTENDED USE) | TITLE: Customer drawing WAFER1.2mm XP 卧式 H=1.40 (无齿) 连接器 |
| X.XXX | ±0.10 | ±0.15 | ±0.20 | | WF120**~01*** | DWG NO.: HC-1.2-NPWT |
| X.XX | ±0.15 | ±0.20 | ±0.25 | | APPD: | |
| X.X | ±0.20 | ±0.25 | ±0.30 | | CHKD: | |
| X. | ±0.25 | ±0.30 | ±0.50 | | DR: ming | |
| ANGLE | ±2' | | | | | |

| SCALE | SHEET | REV. |
|-------|-------|------|
| 1:1 | 1/1 | A2 |

PRODUCT SPECIFICATION

1. 产规/Product name and part number

| | |
|------------------------------|--|
| Product Name | 1.2mm PITCH WIRE TO BOARD CONNECTOR |
| Terminal | Copper alloy |
| Housing | REC:High-temp Plastic;Color : Black. lammability |
| Wafer Assembly ST. (DIP/SMT) | Rating :UL94 V-0 |
| Wafer Assembly R.A (DIP/SMT) | SMT |

2. 额定电压电流及使用线径/Ratings and applicable wires

| | | |
|--|-----------------|------|
| ITEM | STANDARD | |
| Rated Voltage (Max) 额定电压 (最高) | 50V DC/AC (rms) | |
| | AWG. #28 | 1.5A |
| | AWG. #30 | 1.0A |
| Applicable wires 使用线径 | #30~ #28 | |
| Insulation O.D 绝缘外径 | Φ0.6~Φ0.7mm | |
| Ambient Temperature 使用温度范围 | -25℃~+85℃ | |

3. 特性测试/Performance

3-1. 电气特性/Electrical performance

| ITEM | Test condition | Requirement |
|---|--|---|
| 3-1-1 接触阻抗 Contact Resistance | 将公母对插，二头接上微电流电压测试。 Mate connectors, reassure by dry circuit ,20mV MAX, 10mA. (EIA-364-23) | 20mΩ (MAX) |
| 3-1-2 绝缘阻抗 Insulation resistance | 将公母对插，二头接上电压测试 Mate connectors, apply 500V DC between adjacent terminal or ground. (EIA-364-21) | 100MΩ (MIN) |
| 3-1-3 高压测试 Dielectric strength | 将公母对插，相邻的二支端子接上高压测试 Mate connectors, apply 500V AC for 1 minute between adjacent terminal or ground. (EIA-364-20) | 没有损坏/没有电弧产生 No breakdown and flashover |
| 3-1-4 铆线端子接触 阻抗 Contact Resistance on Crimped Portion | 将铆线端子，二头接上微电流电压测试。 Crimp the applicable wire to the terminal, measured by dry circuits, 20mV MAX., 10mA MAX. | 5 milliohms MAX |

| | | | | | |
|---------------------|---------------|---------|-----------------------|------------|----------|
| Product Description | Wafer1.2mm 系列 | | Product NO: WF-12-001 | | |
| | | | REVISION | DATE | SHEET NO |
| APPROVED BY | CHECKED BY | MADE BY | A/0 | 2018.10.25 | 1/8 |
| JASON | ABEL | TOM | DOCUMENT NO | WF-12-001 | |

PRODUCT SPECIFICATION

3-2. 机械特性/Mechanical performance

| ITEM | | Test condition | Requirement | | |
|-------|---|--|--------------------------------|----------------------|--------------------|
| 3-2-1 | Insertion force and withdrawal force 整组插拔力测试 | 公母对插插拔 10 次，机器行走速度 25±3mm/分钟。 Insert and withdraw connectors at the speed rate of 25 ± 3mm/minute (EIA-364-13) | 第 5 参照 Refer to paragraph 5 | | |
| 3-2-2 | Crimping pull out force 导体保持力（铆线端子） | 端子固定住，将端子从线材拔出，机器行走速度 25±3mm/分钟。 Fix the crimped terminal, apply axial pull out force on the wire at the speed rate of 25 ± 3mm/minute (EIA 364-35) | Wire Size (AWG) | 28 | 30 |
| | | | Crimp Strength (kgf) | 10N (1.0kgf) MIN | 5N (0.5kgf) MIN |
| 3-2-3 | Terminal insertion force 插入力(铆线端子) | 将端子插入塑胶，测试插入值 Insert the crimped terminal into the housing (EIA-364-13) | 14.7N (1.5kgf) MAX | | |
| 3-2-4 | Terminal/Housing retention force 塑胶保持力（铆线端子） | 将端子从塑胶中拔出，测试拔出值 Apply axial pull out force at the speed rate of 25±3mm/minute on the terminal assembled in the housing. | 4N (0.4kgf) MIN | | |
| 3-2-5 | Pin retention force (单 PIN 保持力) | 将铜针从塑胶中推出，测试推出值 Apply axial push force at the speed rate of 25±3mm/minute. | 2N (0.2kgf) MIN | | |

3-3. 环境特性测试/Environmental performance and others

| ITEM | | Test condition | Requirement | |
|--------|---------------------------------------|---|----------------------------|----------|
| 3-3-1 | 重复插拔 Repeated insertion withdrawal | 十次插拔后，测量接触阻抗 When mated up to 10 cycles repeatedly by the rate of 10 cycles per minute | 接触阻抗 Contact Resistance | 20mΩ MAX |
| 3-3-2. | 温升测试 Temperature Rise (按需测试) | 最大容许电流通电，温度测定。 (EIA-364-70 METHOD 2) Carrying rated current load. | 温度上升 Temperature Rise | 30°C MAX |

| | | | | | |
|---------------------|----------------|---------|-----------------------|------------|----------|
| Product Description | Wafer 1.2mm 系列 | | Product NO: WF-12-001 | | |
| | | | REVISION | DATE | SHEET NO |
| APPROVED BY | CHECKED BY | MADE BY | A/0 | 2018.10.25 | 2/8 |
| JASON | ABEL | TOM | DOCUMENT NO | WF-12-001 | |

PRODUCT SPECIFICATION

| ITEM | | Test condition | Requirement | |
|-------|-----------------------------------|--|----------------------------|---------------------------|
| 3-3-3 | 振动测试 Vibration (按需测试) | DC 1mA 通电状态下; 嵌合轴沿 XYZ 三个方向振动; 振幅 1.5mm; 频率 10-55-10Hz/分; 历时 2 小时 Amplitude: 1.5mm P-P Sweep time: 10-55-10Hz in 1 minute Duration : 2 hours in each X.Y.Z. axes (EIA-364-28) | 外观 Appearance | No Damage |
| | | | 接触阻抗 Contact Resistance | 20mΩ MAX |
| | | | 瞬间 Discontinuity | 1.0 microsecond MAX |
| 3-3-4 | 高温测试 Heat Resistance (按需测试) | 将公座与母座连接至于环境温度85±2℃测试时间 96小时, 再放置与室温下1~2小时 85±2℃, 96hours (EIA-364-17) | 外观 Appearance | No Damage |
| | | | 接触阻抗 Contact Resistance | 20mΩ MAX |
| 3-3-5 | 低温测试 Cold Resistance (按需测试) | 将公座与母座连接至于环境温度-25±3℃测试时 间 96 小时, 再放置于室温下 1~2 小时 -25±3℃, 96hours (EIA-364-17) | 外观 Appearance | No Damage |
| | | | 接触阻抗 Contact Resistance | 20mΩ MAX |
| 3-3-6 | 恒温恒湿测试 Humidity (按需测试) | 温度 60±2℃, 湿度 90~95%, 时间 96 小时。 Temperature:60±2℃, Relative humidity:90~95% (RH) (EIA-364-31B) | Appearance | No Damage |
| | | | 接触阻抗 Contact Resistance | 20mΩ MAX |
| | | | 耐电压 Dielectric Strength | 没有损坏/没 有电弧产生 |
| 3-3-7 | 盐雾测试 Salt spray | 时间 12 小时, 盐水体比例 5±1%, 温度 35±2℃。 12 hours exposure to a salt spray from the 5 ±1% solution at 35±2℃. (EIA-364-26) | 外观 Appearance | No Damage |
| | | | 接触阻抗 Contact Resistance | 20mΩ MAX |
| 3-3-8 | 沾锡性测试 Solderability | 时间: 3±0.5 秒, 温度: 245±5℃ Soldering time:3±0.5sec, solder temperature:245±5℃ (EIA-364-52) | 95%以上沾锡面积 | |

| | | | | | |
|---------------------|---------------|---------|-----------------------|------------|----------|
| Product Description | Wafer1.2mm 系列 | | Product NO: WF-12-001 | | |
| | | | REVISION | DATE | SHEET NO |
| APPROVED BY | CHECKED BY | MADE BY | A/0 | 2018.10.25 | 3/8 |
| JASON | ABEL | TOM | DOCUMENT NO | WF-12-001 | |

PRODUCT SPECIFICATION

| ITEM | Test condition | Requirement |
|--|--|--|
| 2-3-9 Resistance to soldering heat 焊热性测试 | 1). Reflow part $260 \pm 5^{\circ}\text{C}$ Peak 220°C MIN. 60sec. MAX. 2). Pre-heat part 180°C , 0~120sec. * Refer to reflow temperature profile. <p style="text-align: center;">265°C MAX. (Peak temperature)</p> <p style="text-align: center;">Average range up: 1.8°C/s MAX</p> <p style="text-align: center;">90-120 秒 90-120 sec (预热 150~180°C) (Pre-heat 150~180°C)</p> <p style="text-align: center;">40-60 秒 40-60sec. (220°C MIN.) (220°C以上)</p> | Appearance 外观 No Damage 无 损坏、变形 |

4. 产品规格尺寸及材质请参考工程图面/Product shape, Dimensions and materials

5. 整组插拔力/Insertion force and withdrawal force (UNIT:N/Kgf)

| 极数 NO. OF CKT | 单位: UNIT | 插入力 (最大值) : Insertion (MAX) | | | 拔出力 (最小值) : Withdrawal (MIN) | | |
|---------------|----------|-----------------------------|----------|-----------|------------------------------|------------|------------|
| | | 初始: 1ST | 3次: 3ST | 10次: 10ST | 初始: 1ST | 3次: 3ST | 10次: 10ST |
| 2 | N{kgf} | 18 {1.8} | 18 {1.8} | 18 {1.8} | 4.0 {0.41} | 1.8 {0.18} | 1.2 {0.12} |
| 3 | N{kgf} | 21 {2.1} | 21 {2.1} | 21 {2.1} | 4.0 {0.41} | 1.8 {0.18} | 1.2 {0.12} |
| 4 | N{kgf} | 24 {2.4} | 24 {2.4} | 24 {2.4} | 4.0 {0.41} | 1.8 {0.18} | 1.2 {0.12} |
| 5 | N{kgf} | 27 {2.8} | 27 {2.8} | 27 {2.8} | 2.5 {0.26} | 1.8 {0.18} | 1.2 {0.12} |
| 6 | N{kgf} | 30 {3.1} | 30 {3.1} | 30 {3.1} | 2.5 {0.26} | 1.8 {0.18} | 1.2 {0.12} |
| 7 | | | | | | | |

6. 产品符合 ROHS/HF 要求/Lead free and ROHS/HF compliant product

| | | | | | |
|---------------------|----------------|---------|-----------------------|------------|----------|
| Product Description | Wafer 1.2mm 系列 | | Product NO: WF-12-001 | | |
| | | | REVISION | DATE | SHEET NO |
| APPROVED BY | CHECKED BY | MADE BY | | 2018.10.25 | 4/8 |
| JASON | ABEL | TOM | DOCUMENT NO | WF-12-001 | |

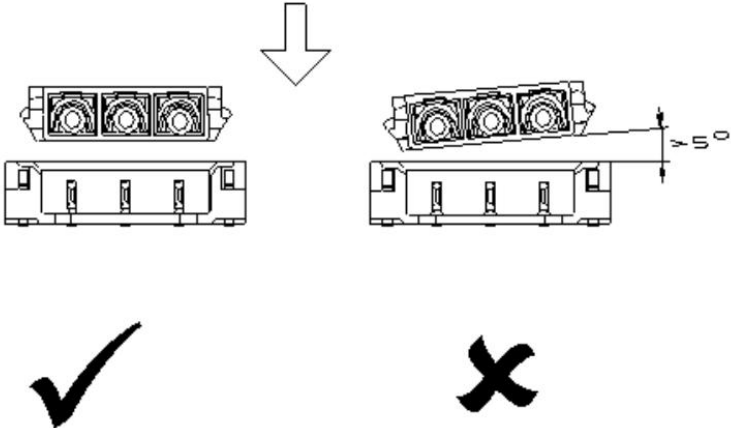
PRODUCT SPECIFICATION

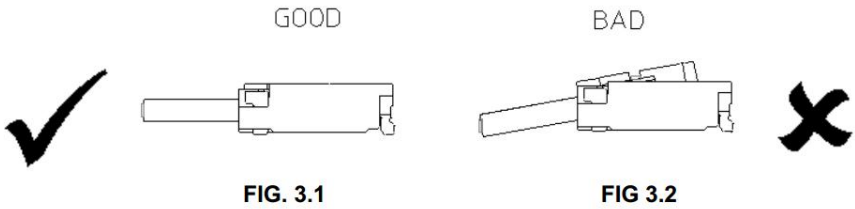
7. 连接器操作标准/CONNECTOR HANDLING CRITERIA

| ITEM | 操作图示标准/Operating standards here |
|--|---|
| <p>7-1-1</p> <p>Align plug on top of receptacle as per datum shown in fig. 1. Press down the plug at ighlighted area toward the eceptacle to mate the connectors.</p> | <p style="text-align: right;">FIG. 1</p> |
| <p>7-1-2</p> <p>During mating process, If incase the plug is angle mated towards the straight part of mating entrance as in fig. 2, the allow angle must not exceed 5°</p> | |

| | | | | | |
|---------------------|---------------|---------|-----------------------|------------|----------|
| Product Description | Wafer1.2mm 系列 | | Product NO: WF-12-001 | | |
| | | | REVISION | DATE | SHEET NO |
| APPROVED BY | CHECKED BY | MADE BY | | 2018.10.25 | 5/8 |
| JASON | ABEL | TOM | DOCUMENT NO | WF-12-001 | |

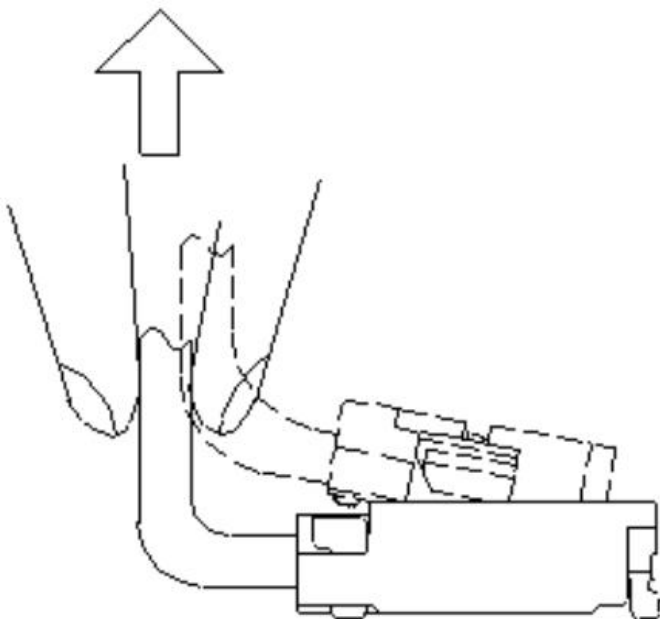
PRODUCT SPECIFICATION

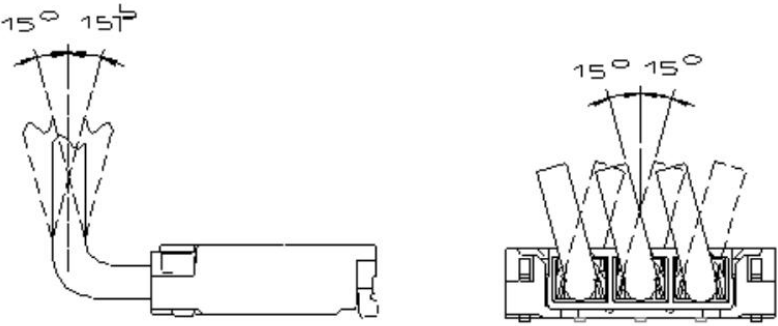
| ITEM | 操作图示标准/Operating standards here | |
|-------|--|--|
| 7-1-2 | <p>Align plug on top of receptacle as per datum shown in fig. 1. Press down the plug at ighlighted area toward the eceptacle to mate the connectors.</p> |  <p style="text-align: right;">FIG. 2</p> |

| | | |
|-------|--|--|
| 7-1-3 | <p>When connector is fully mated, as shown in fig. 3.1, check for any incomplete mating which will cause damaged contacts as shown in fig. 3.2</p> |  <p style="text-align: center;">FIG. 3.1 FIG. 3.2</p> |
|-------|--|--|

| | | | | | |
|---------------------|---------------|---------|-----------------------|------------|----------|
| Product Description | Wafer1.2mm 系列 | | Product NO: WF-12-001 | | |
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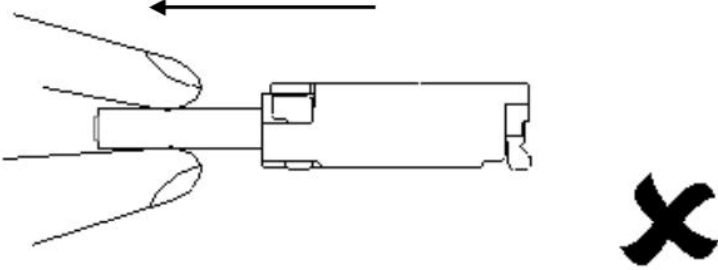
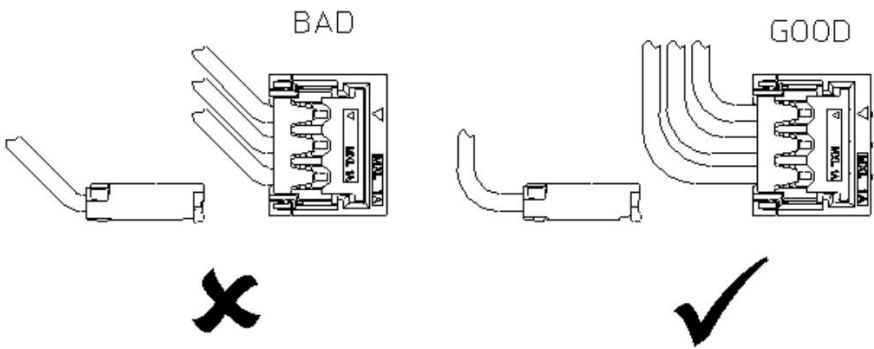
PRODUCT SPECIFICATION

| ITEM | 操作图示标准/Operating standards here | |
|-------|--|--|
| 7-1-4 | <p>Connector unmating method, Hold gently on plug wires and pull up to unmate the connector as per fig. 4 shown.</p> |  <p style="text-align: right;">FIG. 4</p> |

| | | |
|-------|--|--|
| 7-1-5 | <p>For unmating process, plug wires pull and stress angle must be maintained within 15° as per fig.5 shown</p> |  <p style="text-align: right;">FIG. 5</p> |
|-------|--|--|

| | | | | | | |
|---------------------|---------------|------------|-----------------------|-----------|------------|----------|
| Product Description | Wafer1.2mm 系列 | | Product NO: WF-12-001 | | | |
| | APPROVED BY | CHECKED BY | MADE BY | REVISION | DATE | SHEET NO |
| JASON | ABEL | TOM | | | 2018.10.25 | 7/8 |
| | | | DOCUMENT NO | WF-12-001 | | |

PRODUCT SPECIFICATION

| ITEM | 操作图示标准/Operating standards here | |
|-------|---|--|
| 7-1-6 | Connector shall not be unmated horizontally as shown in fig. 6 to prevent part damage |  |
| 7-1-7 | Application consideration Make certain the areas & space where the connector placed are clear and sufficient to prevent over stress on plug wires as example shown in fig. 7 |  |

| | | | | | |
|---------------------|---------------|---------|-----------------------|------------|----------|
| Product Description | Wafer1.2mm 系列 | | Product NO: WF-12-001 | | |
| | | | REVISION | DATE | SHEET NO |
| APPROVED BY | CHECKED BY | MADE BY | | 2018.10.25 | 8/8 |
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