

# 东莞市高钺达电子有限公司

**DONGGUAN GYUEDA ELECTRONICS CO.,LTD**

## 承 认 书 SPECIFICATION FOR APPROVAL

Customer : \_\_\_\_\_

Description : MNNI HDMI 12板上

Part No. : HDC12-F1F1-2000-A

Customer P/N : \_\_\_\_\_

| 高钺达电子有限公司             |  | 客 户                   |  |
|-----------------------|--|-----------------------|--|
| 工程<br>承<br>认<br>章     |  | 工程<br>承<br>认<br>章     |  |
| 品<br>管<br>承<br>认<br>章 |  | 品<br>管<br>承<br>认<br>章 |  |

TAIWAN FACTORY: 協昌精密工業股份有限公司

ADD: NO. 95 Twopart Southharbour road, Taipei, Taiwan. CHINA

地址: 中国臺灣台北市南港路二段 95 號

TEL: 02-27884666 FAX: 02-26535492

<http://www.twshetime.com>

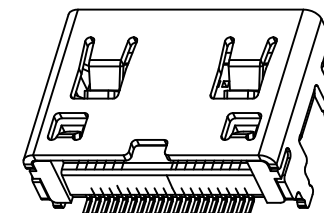
CHINA FACTORY: 东莞市高钺达电子科技有限公司

地址 东莞市虎门镇路东长元一路 2 号

TEL: 0769-85108085 FAX: 0769-6891569

E-mail: szgaosuda@163.com

| REV. | DESCRIPTION   | APPD | DATE     |
|------|---------------|------|----------|
|      | 外壳脚1.15改为0.95 | 刘静   | 20110308 |
|      |               |      |          |
|      |               |      |          |



- NOTES:
- 1.MATERIAL:  
HOUSING: HIGH TEMPERATURE THERMOPLASTIC UL94V\_0,COLOR:BLACK.  
CONTACT: COPPER ALLOYS.  
COVER: COPPER ALLOYS OR STEEL.
  - 2.PLATING:  
UNDERPLATE: NICKEL.  
CONTACT AREA: GOLD OVER NICKEL.  
SOLDER AREA: GOLD OVER NICKEL.
  - 3.MULTIMEDIA CARD COMPATIBLE

订购需知: HDCXX-XXXX-2000-A

|             |
|-------------|
| F2 端子镀全金3U" |
| S1 端子镀半金雾锡  |
| NI 外壳镀全镍    |
| F1 外壳镀全金    |

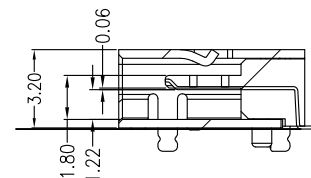
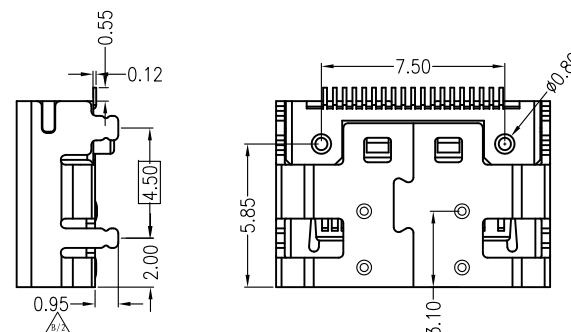
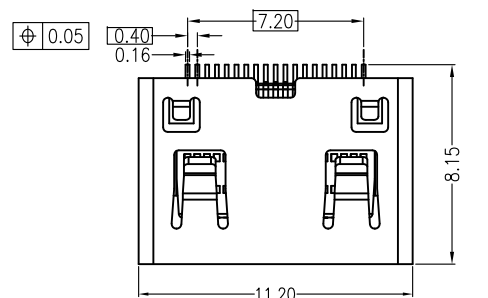
- 11 主体,外壳定位柱未偏移,外壳底面一个凸点
- 13 主体,外壳定位柱未偏移,外壳底面四个凸点
- 22 主体,外壳定位柱偏移0.8mm,外壳底面一个凸点
- 24 主体,外壳定位柱偏移0.8mm,外壳底面四个凸点

|                                                       |  |                                           |  |
|-------------------------------------------------------|--|-------------------------------------------|--|
| PART NO:<br>HDCXX-XXXX-2000-A                         |  | MATERIAL:                                 |  |
| LOT NO:                                               |  | FINSH:                                    |  |
| UNIT: MM                                              |  | COLOR:                                    |  |
| SIZE: A4                                              |  | DR: PENTIUM 0408'10                       |  |
| TOLERANCES:<br>X.X=±0.35<br>X.XX=±0.25<br>X.XXX=±0.15 |  | GENERAL ANGLE:<br>X.X=±3.0°<br>X.XX=±2.0° |  |
| CHK:                                                  |  | DWG NO: FP-100064                         |  |
| APP:                                                  |  | SCALE: 1 : 1                              |  |
|                                                       |  | SHEET: 1 OF 2                             |  |
|                                                       |  | REV:                                      |  |

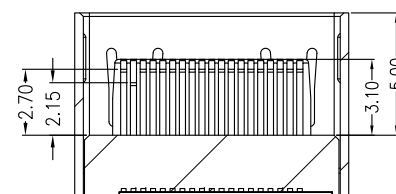
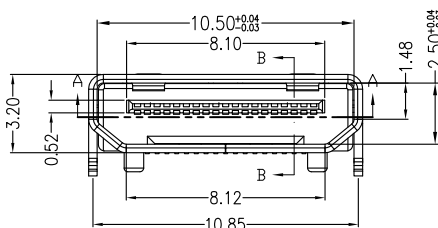
东莞市高钺达电子科技有限公司

TITLE:  
MINI HDMI ( C TYPE ) F

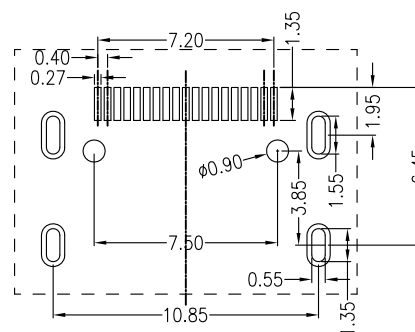
RECOMMENDED P.C.B HOLE LAYOUT  
COMPONENT SIDE VIEW(TOLERANCE: +/-0.05)

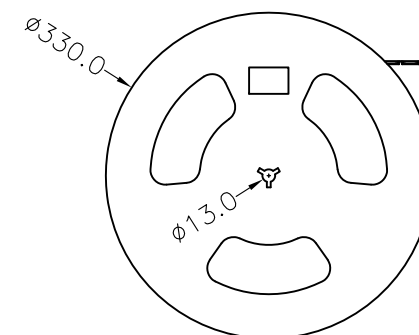
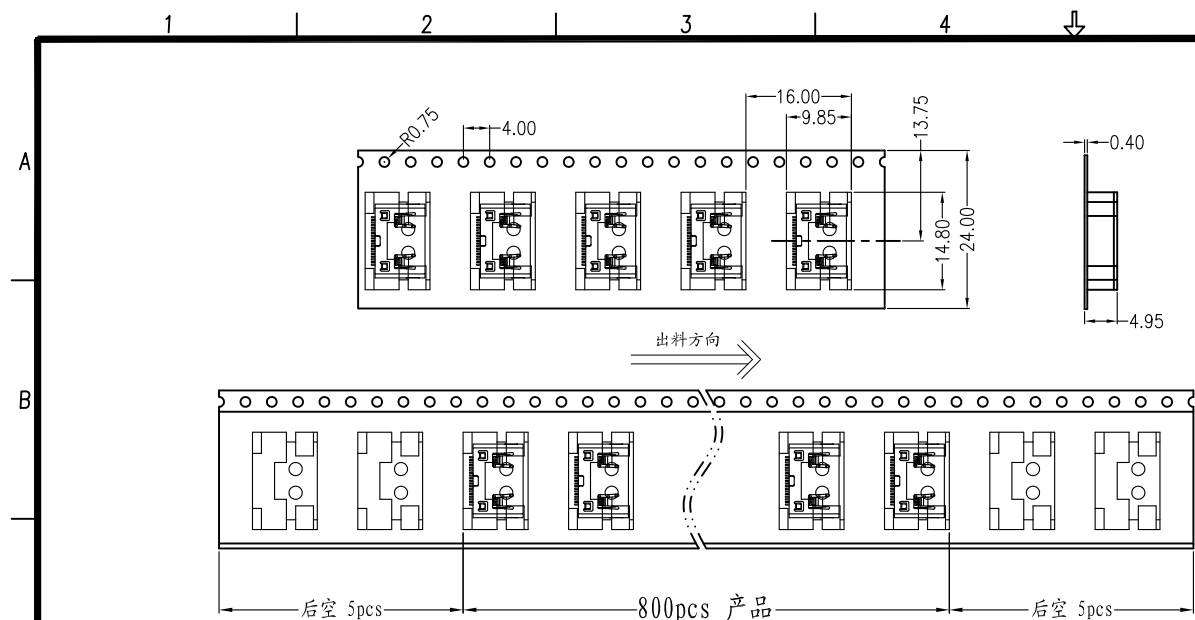


SECTION B-B



SECTION A-A





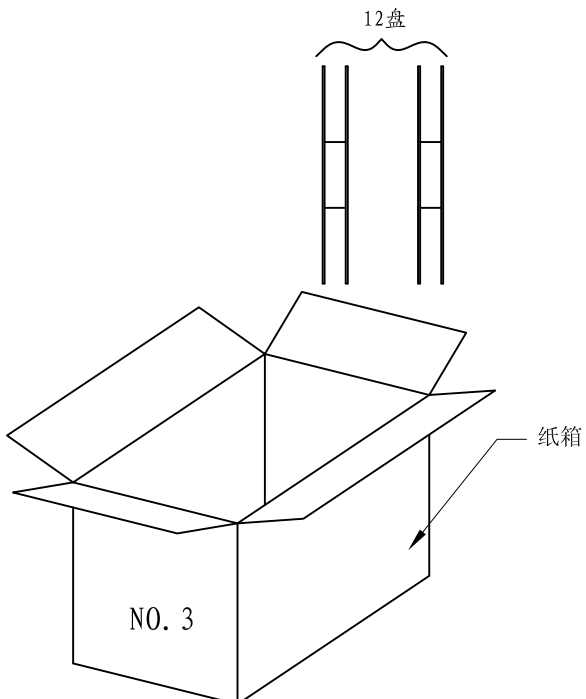
NO. 2

1. 材质要求:
  - 1.1 纸箱的材质为B=B; 外形尺寸为33\*33\*38.5;
  - 1.2 卷盘的材质为PVC, 卷盘的外形尺寸为 $\varnothing 330 \times 30.4$ ;
  - 1.3 卷带的材质为PVC, 卷带的外形尺寸为12960\*24\*4.0mm;
2. 包装方式:
  - 2.1 将卷带放入包装机后, 前空5PCS, 后放产品800PCS, 再后空5PCS; 上带留300MM长度。
  - 2.2 将包装好的产品从包装机上取下并包装好;
  - 2.3 把累叠好的12盘叠放入纸箱中共计9.6Kset  
整箱重4.8KG
  - 2.4 把包装好的成品打包封箱, 并在纸箱外贴上标签

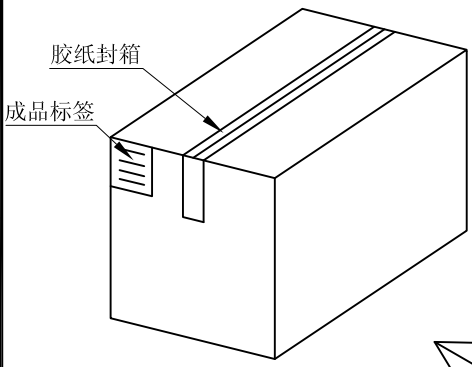
订购需知: HDCXX-XXXX-2000-A

|    |          |
|----|----------|
| F2 | 端子镀全金3U" |
| S1 | 端子镀半金雾锡  |
| N1 | 外壳镀全镍    |
| F1 | 外壳镀全金    |

- |    |                             |
|----|-----------------------------|
| 11 | 主体, 外壳定位柱未偏移, 外壳底面一个凸点      |
| 13 | 主体, 外壳定位柱未偏移, 外壳底面四个凸点      |
| 22 | 主体, 外壳定位柱偏移 0.8mm, 外壳底面一个凸点 |
| 24 | 主体, 外壳定位柱偏移 0.8mm, 外壳底面四个凸点 |



NO. 1



纸箱规格: 330\*330\*385

NO. 4

|                                                       |             |                     |                                |                |                                                                                       |
|-------------------------------------------------------|-------------|---------------------|--------------------------------|----------------|---------------------------------------------------------------------------------------|
| PART NO:<br>HDCXX-XXXX-2000-A                         |             | MATERIAL:           |                                | 东莞市高钺达电子科技有限公司 |                                                                                       |
| LOT NO:                                               |             | FINSH:              |                                |                |                                                                                       |
| UNIT:<br>MM                                           | SIZE:<br>A4 | COLOR:              | TITLE:<br>MINI HDMI ( C TYPE ) |                |                                                                                       |
| TOLERANCES:<br>X.X=±0.35<br>X.XX=±0.25<br>X.XXX=±0.15 |             | DR: PENTIUM 0408'10 |                                |                |                                                                                       |
| GENERAL<br>ANGLE:<br>X.X=±3.0°<br>X.XX=±2.0°          |             | CHK:                | DWG NO:<br>FP-100064           |                | REV:<br>A                                                                             |
| APP:                                                  |             | SCALE:<br>1 : 1     | SHEET:<br>2 OF 2               |                |  |

|                |         |      |   |
|----------------|---------|------|---|
| 东莞市高钺达电子科技有限公司 | 产品规格书   | 文件编号 |   |
|                | Product | 页次:  | 3 |

## 1. 范围 Scope

USB C Type 连接器之功能要求及测试方法

## 2. 标准文件 Related Standards

2-1 IEC512

2-2 MIL-STD 202

2-3 EIA-364

## 3. 等级 Rating

3-1 额定电流: 5A

Current Rating: 5 A 3-2

3-2 温度范围:存储:-20℃+ 60℃

Temperature Range: storage : -20℃ to +60℃

工作:-30℃+ 80℃

operating : -30℃ to +80℃

正常: : +20℃

Nominal : +20℃

## 4. 测试要求 Test Condition

4-1 所有的测试应当执行详见下表条件, 除非另有说明

All tests shall be performed as bellow conditions unles sotherwise specified

4-2 温度范围:+ 15℃+ 35℃

Temperature range : +15℃ to +35℃

4-3 湿度范围:25% - 85%

Humidity range: 25% to 85%

|                |  |         |  |      |   |
|----------------|--|---------|--|------|---|
| 东莞市高钺达电子科技有限公司 |  | 产品规格书   |  | 文件编号 |   |
|                |  | Product |  | 页次:  | 4 |

5. 产品外观 PRODUCT APPEARANCE

|      |                        |                                                                            |                                                                                                                                          |
|------|------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 项目   | 描述                     | 测试方法                                                                       | 测试规格                                                                                                                                     |
| ITEM | Description            | Test Methods                                                               | Test Specification                                                                                                                       |
| 5-1  | 产品外观                   | 依据 EIA364-18 测试 肉眼观察，产品外形必须符合图纸要求                                          | 产品外观良好，无外观不良情形，产品结构及尺寸须符合图纸设计要求                                                                                                          |
|      | Examination of Product | EIA364-18<br>Shall be confirmed with eyes in accordance with each drawing. | Outward appearance shall be good without such injurious problem and structure shall meet the design and dimension requirement of drawing |

6. 机械性能 MECHANICAL PERFORMANCE

|      |                      |                                                                           |                                                                                                  |
|------|----------------------|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 项目   | 描述                   | 测试方法                                                                      | 测试规格                                                                                             |
| ITEM | Description          | Test Methods                                                              | Test Specification                                                                               |
| 6-1  | 插入力 Insertion force  | 依据 EIA 364-13 测试方式，操作速度 12.5mm /min.                                      | 插拔力的范围：5N-20 N                                                                                   |
|      |                      | EIA 364-13<br>Measure force at maximum rate of 12.5mm (0.492") per minute | The connector insertion force shall be the range from 5N to 20N                                  |
| 6-2  | 拔出力 Extraction force | 依据 EIA 364-13 测试方式，测量力的速度达到最大 12.5 mm /min.                               | 拔出力的范围：8N-20 N                                                                                   |
|      |                      | EIA 364-13<br>Measure force at maximum rate of 12.5mm (0.492") per minute | The connector extraction force shall be the range from 5N to 20N                                 |
| 6-3  | 耐插拔 Durability       | 依据 EIA 364-13 测试方式，插拔 10000 次循环，手动插拔速度 操作速度 200周期 /小时.                    | 必须满足以下条件后循环测试完成后:接触电阻 (40 mΩ,变化量 10 mΩ (Max) 后测试) 插入力 (5 到 20N) 拔出力 (8 到 20 N) 产品外观符合需求，无破损及外形损伤 |

产品规格书  
Product

文件编号  
Doc. No.

版本  
Rev.

A

页次  
Sheet

EIA 364-09  
Type C :10000 cycles cycle rate of 200cycles per hour manually

Must meet the following criteria after the cycle test is completed:  
- Contact resistance (40mΩ , delta 10mΩ (Max) after test)  
- Insertion force (5N to 20N)  
- Extraction force (8N to 20N)  
- Visual inspection (no exposed base metal on contacts)

6-4 Cabl

e 摇摆弯曲  
Cable Flexing

依据 EIA 364-41 测试方式  
电缆组件与尺寸 X =电缆外径 3.7, 并在两个平面 120 度来回 100 个循环。

弯曲过程中没有物理损坏或不连续  
  
1ms 以上应发生在

EIA 364-41  
100 cycles in each of 2 planes 120 degree.  
Dimension x=3.7x cable diameter

No discontinuity over 1 micorsecont  
  
During flexing or physical damage allowed

6-5 Cabl

e 负重测试  
Cable Pull-Out

依据 EIA-364-38 测试方式  
经受 40 N 轴向负荷为最小为 1 分钟

组件没有损伤和物理损坏

6-6

四轴向测试  
4-axes continuity test

EIA-364-38  
40N steady state axial load for 1 minute  
  
8N 拉力一段 10 秒钟;标本必须服从 0°、90°、180°、270°四个方向。

No discontinuity or physical damage allowed  
  
组件没有间断大于 1us,没有物理损害

8N tensile force for a period of 10 seconds Min;the specimen must subject to 0°,90°,180°,270°direction.  
  
Force to be applied at end of overmold

No discontinuity greater than 1us and no physical damage to the specimen(one cable per test)

EIA364-18  
105°C without applied voltage for 120 hours. 105°C without applied voltage for 72 hours when used as preconditioning in EIA 364-1000.01

Visual inspection,Test shall be done in sequences defined in EIA364-1000.01

产品规格书  
Product

文件编号  
Doc. No.

版本  
Rev.

页次

A

7. 电气特性 ELECTRICAL PERFORMANCE

| 项目<br>ITEM | 描述<br>Description                         | 测试方法<br>Test Methods                                                                                                                   | 测试规格<br>Test Specification                                                                                                                                                                                        |
|------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7-1        | 绝缘阻抗<br>Insulation<br>Resistance          | 依据 <b>EIA 364-21C 测试方式</b><br>加 100V DC 的电压于相邻两端子之间.                                                                                   | 未交配和配对连接相邻触点间最低 100mΩ绝缘电阻                                                                                                                                                                                         |
|            |                                           | <b>EIA 364-21C</b><br>Unmated connecrors,apply 100Volts DC between adjacent terminal or ground.                                        | 100MΩminimum(unmated)between adjacent contacts and contacts and shell                                                                                                                                             |
| 7-2        | 低电接触电阻<br>Low Level Contact<br>Resistance | 依据 <b>EIA 364-23b 测试方式</b><br>一组对插好的连接器;<br>测试开路电压:20mV max.;<br>测试短路电流: 100m A max..                                                  | 接触电阻(40 mΩ,测试后变化量 10 mΩ(Max))                                                                                                                                                                                     |
|            |                                           | <b>EIA 364-23b</b><br>20mV Max. open circuit at 100mA Max.                                                                             | 40mΩ(Max) initial for VBUS and GND contacts and all other contacts; delta 10mΩ(Max) after test                                                                                                                    |
| 7-3        | 耐电压<br>Dielectric<br>withstanding Voltage | 依据 <b>EIA 364-20 测试方式</b><br>加 100V AC 的电压于相邻两端子之间 1 分钟.                                                                               | 无击穿和飞弧现象                                                                                                                                                                                                          |
|            |                                           | <b>EIA 364-20</b><br>Subjected to 100VAC (RMS) for 1 minute between adjacent terminals                                                 | There shall be no breakdown                                                                                                                                                                                       |
| 7-4        | 接触额定电流<br>Contact current<br>rating       | 5.0 A 的电流应被共同施加到 VBUS 引脚和 1.25 A 通过相应的 GND 施加到 VCONN 引脚与返回路径引脚。0.25 A 的最小电流也应分别适用于所有的其他联系人                                             | 当电流被施加到触点上，温度上升不超过 30℃的 USB 型-C 下测试，当在 25℃的环境温度下测得的配套插头和插座的任何点                                                                                                                                                    |
|            |                                           | <b>EIA364-70</b><br>5.0A shall be applied collectively to VBUS pins and 1.25 A applied to the VCONN pin and 0.25 A the other contacts. | When the currents are applied to the contacts, the temperature rise shall not exceed 30 °C at any point on the USB Type-C mated plug and receptacle under test, when measured at an ambient temperature of 25 °C. |

|                |                  |                  |   |
|----------------|------------------|------------------|---|
| 东莞市高钺达电子科技有限公司 | 产品规格书<br>Product | 文件编号<br>Doc. No. |   |
|                |                  | 版本<br>Rev.       | A |
|                |                  | 页次<br>Sheet      | 7 |

8. 环境特性 ENVIROMENT PERFORMACE

| 项目<br>ITEM | 描述<br>Description          | 测试方法<br>Test Methods                                                                                                                                                 | 测试规格<br>Test Specification                                                                                                                                             |
|------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8-1        | 温度老化测试<br>temperature Life | 依据 <b>EIA 364-17</b> 测试方式<br>温度寿命试验的温度和持续时间 105℃下 120 小时<br>温度寿命试验的温度和持续时间对预处理 105℃，<br>72 小时                                                                        | 外观：无损伤；<br><br>试验后接触电阻最大: 40m                                                                                                                                          |
|            |                            | <b>EIA 364-17</b><br>105° C without applied voltage for 120 hours.<br>105° C without applied voltage for 72 hours<br>when used as preconditioning in EIA364-1000.01. | Visual inspection,Test shall<br>bedone in sequences defined<br>in EIA 364-1000.01.                                                                                     |
| 8-2        | 冷热冲击测试<br>Thermal Shock    | 依据 <b>EIA 364-32</b> 方式测试<br>10 个周期-55℃+ -55℃。USB 3.0 必须对插配合下<br>测试                                                                                                  | 外观没有损害                                                                                                                                                                 |
|            |                            | <b>EIA 364-32</b><br>10 Cycles – 55℃ and +85℃. The USB 3.0<br><br>connectors under test must be mated.                                                               | There shall be no evidence<br>Of any physical damage.                                                                                                                  |
| 8-3        | 盐水喷雾<br>Salt Spray         | MIL-STD-202F 101d 条件 B 测试<br>对插产品测试环境: 温度: 35±2℃, 盐<br>水浓度:重量比 5±1%, 时间: 48 小时.<br>测试后常温水洗,干燥.                                                                       | 1) 要满足视觉要求 , 没有<br>物理<br>损害。<br>2)要满足的要求，额外的测<br>试中指定在第五节测                                                                                                             |
|            |                            | MIL-STD-202F, Method 101D, Test Condition B<br>Subject mated connectors to 48 hours at 35<br>℃ with 5%-Salt-solution concentration.                                  | 1).Shall meet visual<br>requirement, show no<br>physical<br>damage.<br>2).Shall meet requirements of<br>additional tests as specified in<br>test sequence in Section 5 |
|            | 恒温恒湿                       | 依据 EIA 364-31 方式测试<br>周期 25℃士 3℃之间对插产品在 80%士 3% 湿度<br>和 65℃士 3℃温度 50%士 3% 湿度,时间应 0.5 小<br>时和停顿时间 0.5 小时。24 个周期                                                       | 目视检查,测试应在序列中<br>定义完成<br>EIA 364 - 1000.01                                                                                                                              |

# 产品规格书

## Product

文件编号  
Doc. No.

版本  
Rev.

页次  
Sheet

A

8

|     |                                              |                                                                                                                                                                                                                                                                                          |                                                                                                                                                         |
|-----|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8-4 | Cyclic Temperature and Humidity              | <b>EIA 364-31</b><br>cycle the connector or socket between $25^{\circ}\text{C} \pm 3^{\circ}\text{C}$ at $80\% \pm 3\% \text{RH}$ and $65^{\circ}\text{C} \pm 3^{\circ}\text{C}$ at $50\% \pm 3\% \text{RH}$ , ramp times should be 0.5hour and dwell times should be 1.0 hour.24 cycles | Visual inspection,Test shall be done in sequences defined in EIA 364-1000.01.                                                                           |
| 8-5 | 焊接性<br>Solder ability                        | <b>EIA 364-52</b><br>将产品 Tail 端浸入 $255^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 的溶锡中 $3 \pm 1$ 秒                                                                                                                                                                                           | 沾锡面积 95%以上, 无针孔。                                                                                                                                        |
|     |                                              | <b>EIA 364-52</b><br>soldered at temperature $255^{\circ}\text{C} \pm 5^{\circ}\text{C}$ at a rate of $25.4\text{mm} \pm 6.35\text{mm}$ per second for in immersion duration 5s.                                                                                                         | solder shall cover a minimum of 95% of the surface being immersed                                                                                       |
| 8-6 | 耐回流焊热<br>Resistance to Reflow Soldering Heat |                                                                                                                                                                                                                                                                                          | 外观应无损伤(端子不应松动,<br>塑胶无变形, 起泡, 溶胶等不良)<br>No damage.                                                                                                       |
| 8-7 | 高温保存<br>Temperature Life                     | EIA 364-17A 测试 3 条件 A TIME<br>对插产品测试环境: 温度: $80^{\circ}\text{C}$ , 时间: 250 小时.<br>测试后常温水洗,干燥.                                                                                                                                                                                            | 1)要满足视觉要求,没有物理损害。<br>2)要满足的要求, 额外的测试中指定在第五节测                                                                                                            |
|     |                                              | EIA 364-17 Test Condition 3 Method A,<br>Subject mated connectors to temperature life at $80^{\circ}\text{C}$ for 250hours                                                                                                                                                               | 1).Shall meet visual requirement, show no physical damage.<br>2).Shall meet requirements of additional tests as specified in test sequence in Section 5 |
| 8-8 | 混合气体测试<br>Mixed Flowing Gas                  | <b>EIA 364-65 Class II A</b><br>$70 \pm 2\%$ 湿度, $30 \pm 1^{\circ}\text{C}$ 温度, $10 \pm 3$ 磅的 $\text{Cl}_2$ , 200 士<br>50 磅的 $\text{NO}_2$ , $10 \pm$<br>5 ppbh2s, $100 \pm 20$ 磅的二氧化硫, 7 天                                                                                              | 接触电阻: $30 \text{ m}\Omega$<br>最大变化从最初的对插产品                                                                                                              |

东莞市高钺达电子科技有限公司

# 产品规格书

## Product

文件编号  
Doc. No.

版本  
Rev.

A

页次  
 Sheet

9

## EIA 364-65 Class II A

70 ± 2 %RH, 30 ± 1 °C Temp, 10 ± 3 ppb Cl<sub>2</sub>, 200 ± 50 ppb NO<sub>2</sub>, 10 ± 5 ppb H<sub>2</sub>S, 100 ± 20 ppb SO<sub>2</sub>, 7-days

Contact Resistance : 30mΩ  
maximum change from initial  
per mated contact

## 9. 产品信赖性测试顺序 ON TEST SEQUECCE

[illegible]