

## 承 认 书

Approval Sheet

客户 (Customer): /

客户料号 (Cus .P/N): /

华联威料号 (HLW P/N): U328-111B-G27017

品名规格 (PronameSpec): USB AF 3.0 沉板2.56斜口

送样日期 (Delivery Date): 2022/07/18

承认日期 (Acknowledge Date): 2022/07/18

|   |                  |                           |                    |
|---|------------------|---------------------------|--------------------|
| Approved No:  |                  | 客 户<br>Customer           |                    |
| 采 购 部<br>Purchasing Dept  | 品 质 部<br>QC Dept | 工 程 部<br>Engineering Dept | 确 认<br>Approved By |
|   |                  |                           |                    |
| 深 圳 市 华 联 威 电 子 科 技 有 限 公 司<br>SHEN ZHEN SHI HUA LIAN WEI ELECTRONICS TECHNOLOGY CO; LTD. |                  |                           |                    |
| 业 务 部<br>Sales Dept   | 品 管 部<br>QC Dept | 工 程 部<br>Engineering Dept | 核 准<br>Checked By  |
| 吴鑫萍   | 欠必锋              | 陈建辉                       | 唐竹君                |

地址: 深圳市龙华区观澜街道桂香社区观澜桂花路 307 号

TEL: 0755-28888886 28888866

邮箱: hua@hlwconn.com

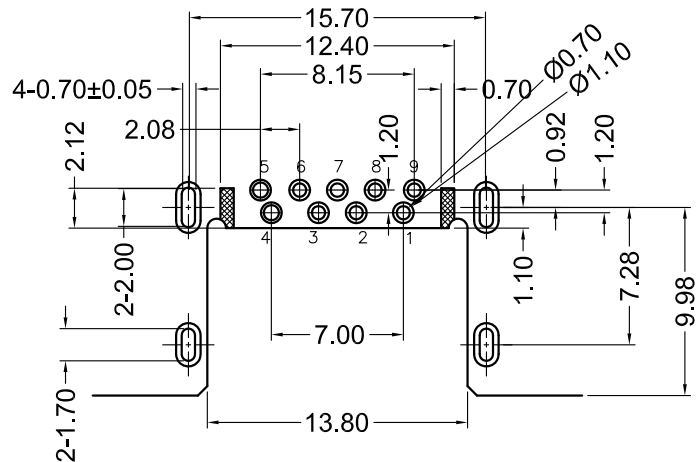
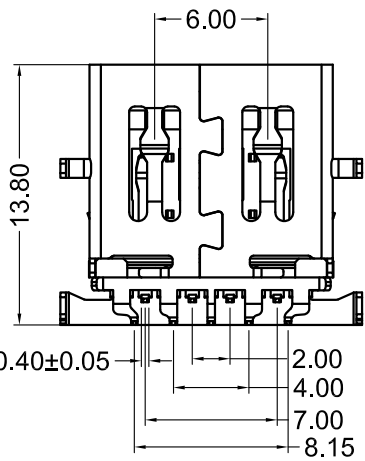
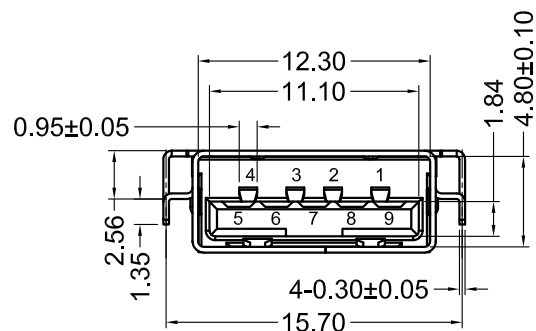
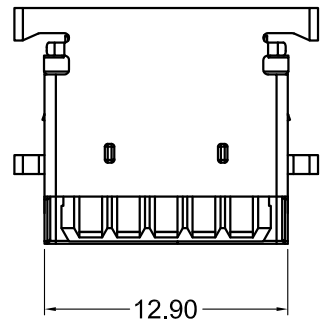
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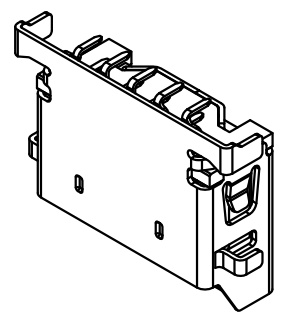
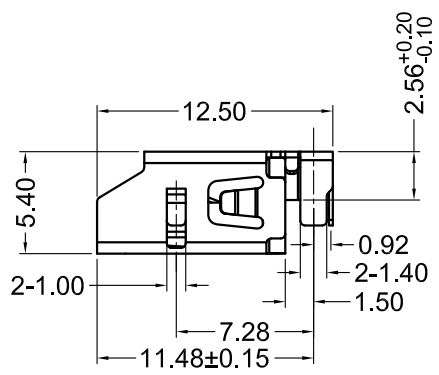
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| REV. | ECN.NO. | APPD. |
|------|---------|-------|
| A    | /       | /     |



**RECOMMENDED PCB LAYOUT**



- Remark:
- MATERIAL:
    - Housing:thermoplastic plastics.
    - terminals:Copper Alloy
    - Front Shell:Copper Alloy/SPCC.  
Middle Shell:SPCC
  - characteristics:
    - Rating Voltage : 30V AC.
    - Rating Current:PIN1&PIN4(Vbus&Correponding ground PIN)  
1.8A MAX Other PINS 0.25A min.
    - Contact Resistance:PIN1&PIN4:30 mΩ MAX. Other PINS: 50 mΩ
    - Insulation Resistance:100 MΩ MIN.
    - Withstanding Voltage:AC 100V between adjacent contacts
    - Mating force: 3.57Kgf MAX(35N MAX)
    - Extraction force:1Kgf Min(9.8N Min)
    - Life test:1500Cycles MIN.
    - Temperature Range: -30°C~+80°C.

U328-111X-XXX0X7

- B: 不锈钢镀镍
- G: 半金G/Fu
- 1: 吸塑盒
- 2: PBT
- 7: 蓝色

|                                      |            |                           |                        |   |       |      |
|--------------------------------------|------------|---------------------------|------------------------|---|-------|------|
| TOLERANCE UNLESS OTHERWISE SPECIFIED |            | <b>FLW</b> 深圳市华联威电子科技有限公司 |                        |   |       |      |
| .XXX ±0.10<br>.XX ±0.20<br>.X ±0.30  |            | .X' ±3'<br>.X' ±2'        |                        | HUA LIAN WEI TECHNOLOGY ELECTRONICS CO;LTD. |       |      |
| APPROVED                             |            | PART NAME:                | USB AF 3.0 沉板2.56斜口90度 |   |       |      |
| CHECKED                              |            | PART No:                  | U328-111B-G27017       |   |       | C    |
| DRAWN                                | weihong    | PROJECTION:               | UNIT:                  | SCALE                                       | SHEET | REV. |
| DATE                                 | 2021.11.06 |                           | mm                     | 1:1   | 10F1  | A    |

## USB3.0系列产品SPEC

版本版次: C

制定日期 20200707

适用范围 通用

## 1. Scope (范围)

## 1.1 Contents(内容)

This specification covers the performance, tests and quality requirements for the Electronics USB3.0 Connector.  
(此份产品规格适用于USB3.0连接器的产品功能, 测试方法及质量要求)

## 2. Requirements (要求):

## 2.1 Rating(额定条件)

A. Voltage rating(额定电压):30V AC

B. Current rating(额定电流):1.5A

C. Operation Temperature Range(操作温度范围):-25℃ to +85℃

## 3. Test Condition(测试条件):

3.1 Temperature range(温度范围):-+15℃ to +35℃

3.2 Humidity range (湿度范围):25% to 85%

## 4. Test Methods and Requirements:(测试方法及要求)

## 4.1 Examination of product (产品外观)

|       |                                |              |   |
|-------|--------------------------------|--------------|---|
| 4.1.1 | Examination of Product<br>产品外观 | Visual<br>目视 | No peeling off the plating deformation of the base or damage. 不得有电镀层剥落, 塑料变形或破损 |
|-------|--------------------------------|--------------|---|

## 4.2. Electrical Performance(电气性能)

|       |  |   |   |
|-------|--|---|---|
| 4.2.1 | Contact Resistance<br>接触阻抗               | (EIA-364-06B)<br>Mated connectors,<br>Contact: measure by dry circuit, 30 m Volts maximum,20 mA<br>配对的连接器,<br>端子: 测试端子在回路中施加直流最大30mV<br>20mA的电流再测端子的电阻值 | Initial Contact resistance Excluding conductor Resistance:30 mΩ max (Target design value)<br>接触电阻初始值最大不能超过30 mΩ (目标设计值) |
| 4.2.2 | Dielectric Withstanding Voltage<br>(耐电压) | (EIA-364-20C)<br>Unmated connectors, apply 100V AC (RMS.) for 1 minute between adjacent terminals of ground.<br>没有配对的连接器在相邻的端子或接地之间通上100V的交流电压1分钟       | 1. No Breakdown or flashover<br>2. Leakage current:0.5mA Max<br>1. 不能有损坏或跳火花<br>2. 漏电流<0.5mA                            |
| 4.2.3 | Insulation Resistance<br>绝缘阻抗            | (EIA-364-21C)<br>Unmated connectors, apply 500V DC for 1 minute between adjacent terminals of ground.<br>没有配对的连接器在相邻的端子或接地之间通上500V的直流电压1分钟              | 100MΩ min (unmated)<br>没有配对需大于100 MΩ  |

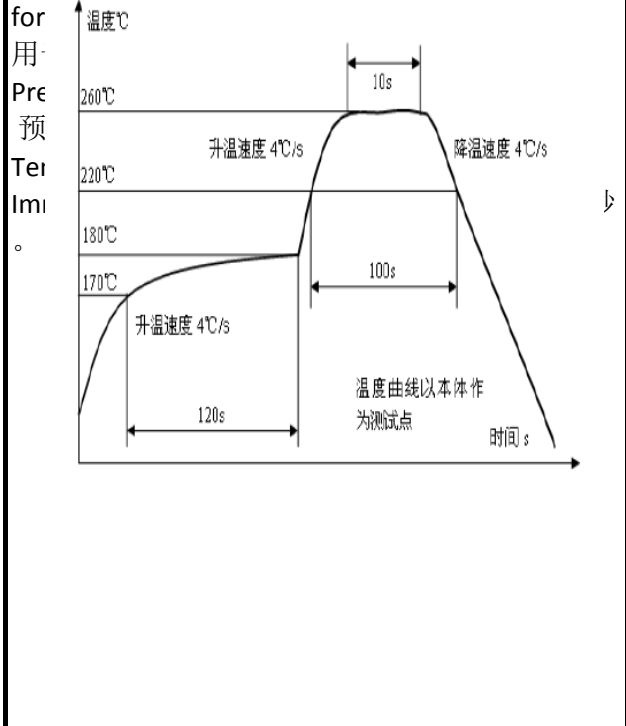
## 4.3 Mechanical Performance(机械性能)

|       |                                       |  |   |
|-------|---------------------------------------|--|---|
| 4.3.1 | Insertion/Withdrawal Force<br>插入力/拔出力 | (EIA-364-13)<br>Insertion and withdrawal speed:<br>25mm/minute.<br>插入和拔出的速度为25mm/分 | Maximum insertion force35N ;<br>插入力不超过35N(3.57kg);<br>Withdrawal force 10N Min;<br>拔出力最小10N (1.02kg);<br>EXTRACTION FORCE(AFTER TEST):8N MIN<br>拔出力(耐久测试后):8N最小 |
|-------|---------------------------------------|--|---|

|                               |                            |   |  |
|-------------------------------|----------------------------|---|--|
| 4.3.2                         | Durability<br>寿命测试         | (EIA-364-09)<br>Measure contact and shell resistance after the Following.<br>Automatic cycling:1500 cycles at 100±5 Cycles per hour.<br>以每小时100±5插拔次数测试1500循环后测量端子和外壳的接触阻抗  | Contact Resistance 接触阻抗<br>Contact: Change from initial Value: 30 milliohms maximum.<br>端子: 从初始值开始变化量小于30mΩ<br>Maximum insertion force 35N 插入力不超过35N(3.57kg)<br>Withdrawal force 8N min<br>拔出力最小8N(0.82kg) |
| 4.3.3                         | Vibration<br>振动            | (EIA-364-28条件3)<br>Amplitude:1.52mm P-P or 147m/s <sup>2</sup> {15G}<br>Sweep time: 50-2000-50Hz in 20 minutes.<br>Duration: 12 times in each (total of 36 times) X, Y, Z, axes.<br>Electrical load DC 100mA current shall be flowed during the test.(ANSI/EIA-364-28 Condition III)<br>在直流100毫安通电状态下测试, 在X,Y,Z垂直3方向上, 频率50-2000-50赫兹(加速度往复20分钟), 全振幅1.52mm P-P或147 m/s <sup>2</sup> {15G}, 每轴12回计36回                               | Appearance: No damage<br>外观: 无损坏<br>Contact Resistance 接触阻抗<br>Contact: Change from initial Value:30mΩ Max.<br>端子: 从初始值开始变化量小于30mΩ<br>间断性: 不超过1微秒  |
| 4.3.4                         | Physical shock<br>冲击性      | (EIA-364-27条件A)<br>Pulse width: 11msec<br>Waveform: Half-sine<br>490m/s <sup>2</sup> (50G) 3 strokes in each X, Y, Z axes.<br>(ANSI/EIA-364-27 condition A)<br>周期: 11msec<br>冲击波形: 正弦半波490m/s <sup>2</sup> (50G) 3循环在X, Y, Z轴   | Appearance: No damage<br>外观: 无损坏<br>Contact Resistance 接触阻抗<br>Contact: Change from initial Value 30mΩ Max<br>端子: 从初始值开始变化量小于30mΩ<br>Discontinuity: 1μ sec Max.<br>间断性: 不超过1微秒                             |
| 4.4 Environmental Performance |                            |   |  |
| 4.4..1                        | Thermal shock test<br>冷热冲击 | EIA-364-32C条件1)<br>10 cycles of:10个循环,<br>a) -55±3°C for 30 minutes<br>b) +85±3°C for 30 minutes  | Appearance: No Damage.<br>外观: 没有损坏<br>Contact Resistance 接触阻抗<br>Contact: Change from initial Value 30mΩ Max<br>端子: 从初始值开始变化量小于30mΩ  |
| 4.4..2                        | Solder ability<br>焊锡性      | (EIA-364-52)<br>To be sipped in the solder bath 260±5°C Coverage for 3 seconds.<br>将焊锡脚浸在260±5°C的锡炉中<3秒   | The inspected area of each lead must have 90% solder coverage minimum<br>表面粘锡面积不少于90%  |
| 4.4..3                        | Humidity<br>恒温恒湿           | (EIA-364-31B)<br>(A) Mate connectors together and perform the test as follows配对的连接器测试条件<br>Temperature: +25°C to +85°C(温度: +25°C到+85°C)<br>Relative Humidity: 90% to 95%(相对湿度: 90%到95%)<br>Duration:4 cycles(96 hours) (持续时间: 4个循环共96小时)<br>Upon completion of the test, specimens shall be conditioned ambient room conditions for 24 hours, after which the specified measurements shall be performed.试验完成后, 样品放置于室温条件中24小时后再进行测试 | Appearance: No Damage<br>外观, 没有损坏<br>Contact Resistance 接触阻抗<br>Contact: Change from initial Value 30mΩ Max<br>端子: 从初始值开始变化量小于30mΩ   |

|        |                                     |  |  |
|--------|-------------------------------------|--|--|
| 4.4..4 | Salt Spray<br>盐水喷雾                  | EIA-364-26B)<br>Temperature: 35±2°C 温度: 35±2°C<br>Concentration for salt: 5% 盐水浓度: 5%<br>(1)Duration: 24H 持续时间: 24小时<br>Condition(条件):<br>Contact plated gold more than 15u" (include 15 u" ),and the material of shell for copper alloy, or stainless.端子镀金厚度大于等于15 u" 且壳体材质是铜合金或是不锈钢<br>(2) Duration: 24H 持续时间: 24小时<br>Condition(条件):<br>Contact plated gold less than 15 u" ,and/or the aterial of shell for steel 端子镀金厚度小于15u" 且 /或壳体材质是铁材 | No detrimental corrosion( Terminal solder tail unrequested)<br>产品无氧化, 锈蚀 (端子焊脚镀锡处不作要求)<br><br>Contact Resistance 接触阻抗<br>Contact: Change from initial Value 30mΩ Max<br>Shell Part: Change from initial Value 50mΩ Max<br>端子: 从初始值开始变化量小于30mΩ<br>外壳: 从初始值开始变化量小于50mΩ |
| 4.4..5 | Cold resistance<br>(Unmated)<br>冷阻抗 | (EIA-364-17B)<br>Unmated connectors and expose to -25±3°C for 168 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed.<br>没配对的连接器放置于-25±3°C温度中168小时, 当完成实验后, 样品放置一般环境中1到2小时后, 在进行测试  | Appearance: No Damage.<br>外观: 没有损坏<br>Contact Resistance 接触阻抗<br>Contact: Change from initial Value 30mΩ Max<br>Shell Part: Change from initial Value 50mΩ Max<br>端子: 从初始值开始变化量小于30mΩ<br>外壳: 从初始值开始变化量小于50mΩ   |
| 4.4..6 | Heat resistance<br>(Unmated)<br>热阻抗 | (EIA-364-17B)<br>Mated connectors and expose to 85±2°C for 168 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed.<br><br>配对的连接器放置于85±2°C温度中168小时, 当完成实验后, 样品放置一般环境中1到2小时后, 在进行测试   | Appearance: No Damage.<br>外观: 没有损坏<br>Contact Resistance 接触阻抗<br>Contact: Change from initial Value 30mΩ Max<br>Shell Part: Change from initial Value 50mΩ Max<br>端子: 从初始值开始变化量小于30mΩ<br>外壳: 从初始值开始变化量小于50mΩ   |
| 4.4..7 | Thermal Aging<br>高温老化               | (EIA-364-31B, Condition 4, Method A)<br>Unmated connectors and expose to +85±2°C for 168 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed.<br>没配对的连接器放置于+85±2°C温度中168小时, 当完成实验后, 样品放置一般环境中1到2小时后, 在进行测试   | Appearance: No Damage.<br>外观: 没有损坏<br>Contact Resistance 接触阻抗<br>Contact: Change from initial Value 30mΩ Max<br>Shell Part: Change from initial Value 50mΩ Max<br>端子: 从初始值开始变化量小于30mΩ<br>外壳: 从初始值开始变化量小于50mΩ   |
| 4.4.8  | Resistance to Soldering Heat        | for wave soldering : mil-std-202f,method 210 A,test condition B<br>波峰焊: mil-std-202f, method 210 A, 试验条件B<br>Pre-heat : 80°C, 60 Seconds 预热:80°C, 60秒<br>Temperature : 260 ± 5 °C 温度:260±5°C<br>Immersion duration : 10 ± 1 sec. 浸泡时间:10±1秒  | No physical damage shall occur.<br>不可有损坏   |

for manual soldering :手动焊接:  
 mil-std-202f,method 210 A,test condition A  
 Pre-heat : No 预热:没有  
 Temperature : 350 ± 10 °C 温度:350±10°C  
 Immersion duration :3.5±0.5 sec. 浸泡时间:3.5±0.5 秒



Note 1: Shall meet visual requirements, show no physical damage, and meet requirement of additional tests as specified in the test sequence in Figures 2

说明1: 测试要求不能有物理损坏, 测试依据表格二的顺序进行

3.Product Qualification And Requalification Test:产品测试顺序表 Figure 2

| Test or Examination                   | Test Group |     |     |   |     |     |     |     |     |     |     |     |     |   |
|---------------------------------------|------------|-----|-----|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|
|                                       | A          | B   | C   | D | E   | F   | G   | H   | I   | J   | K   | L   | M   | N |
| Test Sequence                         |            |     |     |   |     |     |     |     |     |     |     |     |     |   |
| 4.1.1.Examination of Product 产品外观     | 1,9        | 1,3 | 1,5 | 1 | 1,5 | 1,5 | 1,5 | 1,3 | 1,5 | 1,5 | 1,5 | 1,5 | 1,5 | 1 |
| 4.2.1.Contact Resistance 接触阻抗         | 2,8        |     | 2,4 |   | 2,4 | 2,4 | 2,4 |     | 2,4 | 2,4 | 2,4 | 2,4 | 2,4 |   |
| 4.2.2.Dielectric Withstanding Voltage | 3,7        |     |     |   |     |     |     |     |     |     |     |     |     |   |
| 4.2.3.Insulation Resistance 绝缘阻抗      | 4,6        |     |     |   |     |     |     |     |     |     |     |     |     |   |
| 4.3.1.Insertion/Withdrawal force 插拔力  |            | 2   |     |   |     |     |     |     |     |     |     |     |     |   |
| 4.3.2.Durability 寿命测试                 |            |     | 3   |   |     |     |     |     |     |     |     |     |     |   |
| 4.3.3.Vibration 振动性                   |            |     |     |   | 3   |     |     |     |     |     |     |     |     |   |
| 4.3.4.Physical shock 冲击性              |            |     |     |   |     | 3   |     |     |     |     |     |     |     |   |
| 4.4.1.Thermal shock test 冷热冲击         |            |     |     |   |     |     | 3   |     |     |     |     |     |     |   |
| 4.4.2.Solderability 焊锡性               |            |     |     |   |     |     |     | 2   |     |     |     |     |     |   |

|                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.4.3.Humidity 恒温恒湿           | 5 |   |   |   |   |   |   |   | 3 |   |   |   |   |   |
| 4.4.4.Salt Spray 盐水喷雾         |   |   |   |   |   |   |   |   |   | 3 |   |   |   |   |
| 4.4.5.Cold resistance 冷阻抗     |   |   |   |   |   |   |   |   |   |   | 3 |   |   |   |
| 4.4.6.Heat resistance 热阻抗     |   |   |   |   |   |   |   |   |   |   |   | 3 |   |   |
| 4.4.7.Thermal Aging 高温老化      |   |   |   |   |   |   |   |   |   |   |   |   | 3 |   |
| 4.4.8.IR-reflow 回流焊测试         |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |
| NO. of Test samples(Min.) 测试样 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |

NOTE 2: (a) Numbers indicate sequence in which tests are performed.  
 (b) Discontinuities shall not take place in this test group, during tests.  
 说明 2: (a)测试依照矩阵要求数量进行。  
 (b)在测试中，群组测试不能间断

核准：唐竹君

制作人：魏红





|   |                          |   |  |                    |      |      |      |      |      |   |  |
|---|--------------------------|---|--|--------------------|------|------|------|------|------|---|--|
| 4 | Temperature cycling test | Temperature: 7025°C<br>Duration:5 cycle | PROGRAM CONTROLLED TEMP. & HUMIDTY CHAMBER | No physical damage | Pass | Pass | Pass | Pass | Pass | P |  |
|---|--------------------------|---|--|--------------------|------|------|------|------|------|---|--|

**四. 物理測試 PHYSICAL TEST**

| 序號 NO. | 測試項目 Testing Item                 | 測試條件 Testing Conditions                                     | 測試設備 Testing Equipment              | 規格 SPEC             | 測試記錄 Testing Result |      |      |      |      | 判定 Judge |      |
|--------|-----------------------------------|---|-------------------------------------|---------------------|---------------------|------|------|------|------|----------|------|
|        |                                   |   |                                     |                     | 1                   | 2    | 3    | 4    | 5    | Pass     | Fail |
| 1      | Salt spray test                   | Temperature: 35±2°C<br>Concentration: 5±1 %<br>Duration:24H | SALT SPRAY TESTER                   | No Oxidation        | Pass                | Pass | Pass | Pass | Pass | P        |      |
| 2      | Resistance to soldering heat test | Temperature: 260±5°C<br>Duration:10±1sec                    | OVEN                                | No physical damage  | Pass                | Pass | Pass | Pass | Pass | P        |      |
| 3      | Solder ability test               | Temperature: 260±5°C<br>Duration:3 sec                      | CONTROLLED CONSTANT-TEMP SOLDER POT | Soldering area 295% | Pass                | Pass | Pass | Pass | Pass | P        |      |

|           |   |  |  |  |  |  |  |  |  |  |  |
|-----------|---|--|--|--|--|--|--|--|--|--|--|
| 判定 Result | <input checked="" type="checkbox"/> 合格 (ACCEPT) <input type="checkbox"/> 不合格 (REJECT) |  |  |  |  |  |  |  |  |  |  |
|-----------|---|--|--|--|--|--|--|--|--|--|--|

核准(Approver): 欠必鋒

測試(Tester): 但芬

## 檢驗報告

首件檢驗
 入庫檢驗
 出貨檢驗
 客退檢驗
 退料檢驗
 其他

2022年07月18日 版次:A1

|                                    |                  |  |   |                 |         |                |          |   |
|------------------------------------|------------------|--|---|-----------------|---------|----------------|----------|---|
| 料號                                 | U328-111B-G27017 | 制令單號   | / | 送檢單位            | 工程部     | 首件製作者          | 裝配       |   |
| 品名                                 | USB AF 3.0 沉板    | 客戶代號   | / | 批 量             | /       | 送檢時間           | /        |   |
|                                    |                  |  |   | 數 量             | 5PCS    | 確認時間           | /        |   |
| 抽樣標準                               |                  | <input checked="" type="checkbox"/> 單次 <input type="checkbox"/> 雙次                             |   | 抽樣數<br>( 5PCS ) | AQL     | CRI:0 MAJ:0.40 | MIN:0.65 |   |
| MIL-STD-105E(II)                   |                  | <input checked="" type="checkbox"/> 正常 <input type="checkbox"/> 加嚴 <input type="checkbox"/> 減量 |   |                 | ACC/REJ | 0              | /        | / |
| 不良數: CRI ( / ) MAJ ( / ) MIN ( / ) |                  |  |   |                 |         | 不良率(%)         |          | / |

| NO. | 檢驗項目<br>單位:MM/G | 檢測<br>儀器 | 檢 驗 記 錄 |       |       |       |       | 品管判定 |    | CRI | MAJ | MIN | 備注 |
|-----|-----------------|----------|---------|-------|-------|-------|-------|------|----|-----|-----|-----|----|
|     |                 |          | 1       | 2     | 3     | 4     | 5     | AC   | RE |     |     |     |    |
|     | 12.30±0.20      | D        | 12.32   | 12.30 | 12.31 | 12.34 | 12.34 | √    |    |     |     |     |    |
|     | 11.10±0.20      | D        | 11.12   | 11.10 | 11.13 | 11.12 | 11.12 | √    |    |     |     |     |    |
|     | 1.84±0.20       | D        | 1.85    | 1.85  | 1.84  | 1.86  | 1.82  | √    |    |     |     |     |    |
|     | 4.80±0.10       | D        | 4.82    | 4.83  | 4.82  | 4.80  | 4.81  | √    |    |     |     |     |    |
|     | 0.30±0.05       | D        | 0.32    | 0.32  | 0.30  | 0.32  | 0.32  | √    |    |     |     |     |    |
|     | 15.70±0.20      | D        | 15.72   | 15.73 | 15.72 | 15.72 | 15.70 | √    |    |     |     |     |    |
|     | 1.35±0.20       | D        | 1.36    | 1.37  | 1.38  | 1.36  | 1.35  | √    |    |     |     |     |    |
|     | 2.56±0.20       | D        | 2.58    | 2.54  | 2.54  | 2.56  | 2.56  | √    |    |     |     |     |    |
|     | 0.95±0.05       | D        | 0.96    | 0.94  | 0.94  | 0.95  | 0.95  | √    |    |     |     |     |    |
|     | 6.00±0.20       | D        | 6.04    | 6.03  | 6.03  | 6.02  | 6.00  | √    |    |     |     |     |    |
|     | 13.80±0.20      | D        | 13.84   | 13.82 | 13.82 | 13.80 | 13.80 | √    |    |     |     |     |    |
|     | 0.40±0.05       | D        | 0.42    | 0.42  | 0.40  | 0.40  | 0.41  | √    |    |     |     |     |    |
|     | 13.80±0.20      | D        | 13.81   | 13.80 | 13.82 | 13.84 | 13.80 | √    |    |     |     |     |    |
|     | 12.50±0.20      | D        | 12.52   | 12.51 | 12.51 | 12.52 | 12.50 | √    |    |     |     |     |    |
|     |                 |          |         |       |       |       |       |      |    |     |     |     |    |
|     |                 |          |         |       |       |       |       |      |    |     |     |     |    |
|     |                 |          |         |       |       |       |       |      |    |     |     |     |    |
|     |                 |          |         |       |       |       |       |      |    |     |     |     |    |

 檢驗依據: 《工程圖紙》 《檢驗規範》 《承認書》 樣品 其它

檢測儀器:A游標卡尺 B千分尺 C厚薄儀 D投影鏡 E放大鏡 F顯微鏡 G錫爐 H插拔力器 I間位尺 J其它

品保判定:

|            |     |            |   |               |    |
|------------|-----|------------|---|---------------|----|
| 核 准<br>APP | 欠必鋒 | 審 核<br>CHK | / | 檢驗員<br>INSPBY | 但芬 |
|------------|-----|------------|---|---------------|----|

保存期限:三年

保存部門:品保部

QR-M-003

|                              |          |               |    |          |          |
|------------------------------|----------|---------------|----|----------|----------|
| 品名:USB AF 3.0 沉板(端子)         |          | 版次:A.0        |    |          |          |
| 电镀规格:Ni30u",Sn100u",Au G/Fu" |          | 日期:2022-07-04 |    |          |          |
| 页次:1/1                       |          |               |    |          |          |
| 厂商:同华                        |          |               |    |          |          |
| 测试设备:CMI X-射线膜厚测试仪           |          |               |    |          |          |
| 1、底层电镀测试(Ni)                 |          |               |    |          |          |
| 数据                           | 测试标准     | 实测值           | 判定 | 测试日期     | 测试时间     |
| 1                            | 30u"MIN  | 50.5u"        | OK | 2022/7/4 | 10:20:15 |
| 2                            | 30u"MIN  | 56.3u"        | OK | 2022/7/4 | 10:20:17 |
| 3                            | 30u"MIN  | 67.5u"        | OK | 2022/7/4 | 10:20:19 |
| 4                            | 30u"MIN  | 62.4u"        | OK | 2022/7/4 | 10:20:21 |
| 2、表层电镀测试(Sn)                 |          |               |    |          |          |
| 数据                           | 测试标准     | 实测值           | 判定 | 测试日期     | 测试时间     |
| 1                            | 100u"MIN | 105.3u"       | OK | 2022/7/4 | 10:25:10 |
| 2                            | 100u"MIN | 104.7u"       | OK | 2022/7/4 | 10:25:12 |
| 3                            | 100u"MIN | 105.9u"       | OK | 2022/7/4 | 10:25:14 |
| 4                            | 100u"MIN | 107.4u"       | OK | 2022/7/4 | 10:25:16 |
| 3、表层电镀测试(Au)                 |          |               |    |          |          |
| 数据                           | 测试标准     | 实测值           | 判定 | 测试日期     | 测试时间     |
| 1                            | 0.5u"MIN | 0.52u"        | OK | 2022/7/4 | 10:30:32 |
| 2                            | 0.5u"MIN | 0.55u"        | OK | 2022/7/4 | 10:30:34 |
| 3                            | 0.5u"MIN | 0.53u"        | OK | 2022/7/4 | 10:30:36 |
| 4                            | 0.5u"MIN | 0.54u"        | OK | 2022/7/4 | 10:30:38 |

核准: 欠必锋

审核: 李娟

检验员: 但芬

## 电镀报告表

|                        |         |              |        |           |          |
|------------------------|---------|--------------|--------|-----------|----------|
| 品名: USB AF 3.0 沉板 (外壳) |         | 版次:A. 0      |        |           |          |
| 电镀规格:Ni:50u" min       |         | 日期:2022/6/26 | 页次:1/1 |           |          |
| 厂商:金和源                 |         |              |        |           |          |
| 测试设备:CMI X-射线膜厚测试仪     |         |              |        |           |          |
| 1、表层电镀测试 (Ni)          |         |              |        |           |          |
| 数据                     | 测试标准    | 实测值          | 判定     | 测试日期      | 测试时间     |
| 1                      | 50u"min | 56.3u"       | OK     | 2022/6/26 | 10:42:14 |
| 2                      | 50u"min | 58.6u"       | OK     | 2022/6/26 | 10:42:16 |
| 3                      | 50u"min | 55.4u"       | OK     | 2022/6/26 | 10:42:18 |
| 4                      | 50u"min | 54.5u"       | OK     | 2022/6/26 | 10:42:20 |

核准: 欠必锋

审核: 李娟

检验员: 但芬



# 深圳市华联威电子科技有限公司

## 盐水喷雾实验报告

|        |                                  |        |                      |
|--------|----------------------------------|--------|----------------------|
| 试验方法   | 盐水喷雾腐蚀试验法                        | 参考资料   | MIL-STD-1345         |
| METHOD | NEUTRL SALT SPRAY CORROSION TEST | REF    |                      |
| 客户     |                                  | 试验起始日期 | 2022年07月17日 20:00 时起 |
|        |                                  | DATE   | 2022年07月18日 20:00 时止 |
| 样品名称   | USB AF 3.0 沉板                    | 试验数量   | 5PCS                 |
| P/N    | U328-111B-G27017                 | QTY    |                      |

### 试验条件 (TEST CONDITION)

- 1、盐水溶解 (SALT SOLUTION: 浓度 $50 \pm 10\text{g/L}$ , PH值6.5-7.2).
- 2、试验室温度 (TEMP. IN THE SPRAY CHAMBER):  $35 \pm 1^\circ\text{C}$ .
- 3、盐水桶温度 (TEMP. OF SALT SOLUTION TANK):  $35 \pm 1^\circ\text{C}$ .
- 4、压力桶温度 (TEMP. OF AIR SUPPLY):  $47 \pm 1^\circ\text{C}$ .
- 5、试验室相对湿度 (R. H IN THE CHAMBER) 85%.
- 6、压缩空气压力 (COMPRESSED AIR PRESSURE):  $1.00 \pm 0.01\text{Kg/cm}^2$ .
- 7、样品放置位置 (SPECIMEN SUPPORTED ANGLE): 尼龙绳吊挂 $70^\circ - 90^\circ$ .
- 8、喷雾收集量 (COLLECT RATE OF SALT SOLUTION)  $1-2\text{mL}/(8\text{ cm}^2\text{hr})$ .
- 9、盐雾测试时间: 24小时 (H)

### 判定方法 (ADFGD METHOD)

试验后以20倍放大镜观察、无蓝、绿色腐蚀物之现象 (不包含折弯处), 即判定合格. (Inspect the specimen at 20 x magnification no blue or green corrosion products are acceptable)

| 样品序号 | 试验后现象                 | 判定      |
|------|-----------------------|---------|
|      | PHENOMENON AFTER TEST | COMMENT |
| 1    | 无蓝、绿色腐蚀物之现象           | OK      |
| 2    | 无蓝、绿色腐蚀物之现象           | OK      |
| 3    | 无蓝、绿色腐蚀物之现象           | OK      |
| 4    | 无蓝、绿色腐蚀物之现象           | OK      |
| 5    | 无蓝、绿色腐蚀物之现象           | OK      |
|      |                       |         |
|      |                       |         |
|      |                       |         |

核准: 欠必锋

审核: 李娟

试验员: 但芬

# 材 质 证 明

兹有我司邦奇塑料科技有限公司为贵司所提供的产品不防火原料 PBT 不防火加纤 15%300C-1 蓝，由以下物质组成：

物品名称：PBT 不防火加纤 15%300C-1 蓝色

|               |           |
|---------------|-----------|
| 组成物质：PBT 环保树脂 | 65-75%    |
| 玻纤            | 15%       |
| 增韧剂           | 5%        |
| 润滑剂           | 0.2%      |
| 抗氧化剂          | 0.2%-0.3% |
| 偶联剂           | 0.3%      |
| 其他            | 0.5%      |

建议成型：

1. 烘干温度 120-140℃
2. 烘干时间 2-4 小时
3. 成型温度 240-260℃

特此证明！

东莞市邦奇塑料科技有限公司





# 鉅鼎銅材廠檢驗報告單

|                              |                          |                      |                                |                        |                                   |                             |                                      |                       |      |    |
|------------------------------|--------------------------|----------------------|--------------------------------|------------------------|-----------------------------------|-----------------------------|--------------------------------------|-----------------------|------|----|
| 公司名稱<br>Customer             | 鉅鼎銅材廠檢驗報告單               |                      |                                |                        | 重量<br>Weight(kg)                  | 1078                        | 出貨日期<br>Date                         | 2021/11/23            |      |    |
| 品名<br>Article                | 標準<br>Standard No        |                      |                                |                        | 尺寸<br>Dimension                   |                             | 狀態<br>Temper                         | 銅卷編號<br>Coil No       |      |    |
| C2680                        | JISH3100:2017            |                      |                                |                        | 0.18*400                          |                             | EH                                   | 1021-C-08             |      |    |
| 化學成分Chemical Compositions(%) |                          |                      |                                |                        |                                   |                             |                                      |                       |      |    |
| 元素<br>Element                | Cu %                     | Zn%                  | Pb%                            | Fe%                    | \                                 | \                           | \                                    | \                     | 化學成分 | 雜質 |
| 規範<br>Spec                   | 64.0-68.0                | 餘量                   | <0.05                          | <0.05                  | \                                 | \                           | \                                    | \                     | 合格   | 合格 |
| 實測<br>Actual                 | 64.32                    | 餘量                   | 0.0036                         | 0.0136                 | \                                 | \                           | \                                    | \                     | 合格   | 合格 |
| 機械性質Mechanical Properties    |                          |                      |                                |                        |                                   |                             |                                      |                       |      |    |
| 項目<br>Item                   | 結晶粒度<br>Grain Size<br>Mm | 硬度<br>Hardness<br>Hv | 抗拉強度<br>TensionStrength<br>Mpa | 伸長度<br>Elongation<br>% | 導電率<br>Electrical Conduc<br>%IACS | 彎曲試驗<br>Bending Test<br>180 | 表面粗度<br>Surface Roughness<br>Ra(u m) | 彎曲度<br>Camber<br>mm/n |      |    |
| 規範MAX<br>Spec                | \                        | 170-190              | 490-610                        | \                      | \                                 | \                           | \                                    | \                     |      |    |
| 實測<br>Actual                 | \                        | 178                  | 574                            | 5                      | \                                 | \                           | \                                    | \                     |      |    |

品質部

