

承 认 书

Approval Sheet

客户 (Customer): /

客户料号 (Cus .P/N): /

华联威料号 (HLW P/N): U321-0421-G27017

品名规格 (PronameSpec): 3.0AF90 度双层无卷边

送样日期 (Delivery Date): 2021/12/01

承认日期 (Acknowledge Date): 2021/12/07

| | | | |
|---|------------------|---------------------------|--------------------|
| Approved No: | | 客 户 Customer | |
| 采 购 部 Purchasing Dept | 品 质 部 QC Dept | 工 程 部 Engineering Dept | 确 认 Approved By |
| | | | |
| 深 圳 市 华 联 威 电 子 科 技 有 限 公 司 SHEN ZHEN SHI HUA LIAN WEI ELECTRONICS TECHNOLOGY CO; LTD. | | | |
| 业 务 部 Sales Dept | 品 管 部 QC Dept | 工 程 部 Engineering Dept | 核 准 Checked By |
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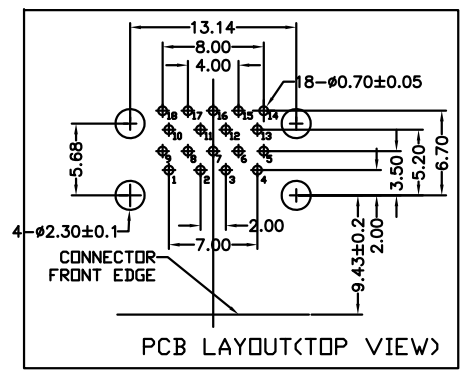
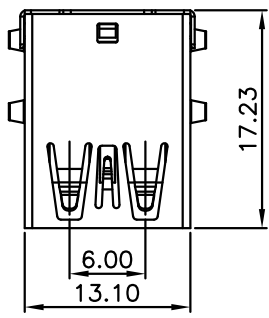
[Http://www.hlwconn.com](http://www.hlwconn.com)

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| REV. | ECN.NO. | APPD. |
|------|---------|-------|
| A | / | pcy |
| A1 | / | LJF |



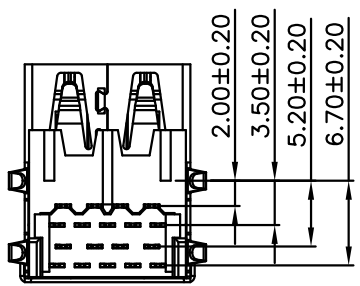
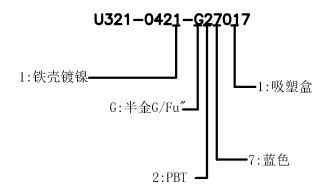
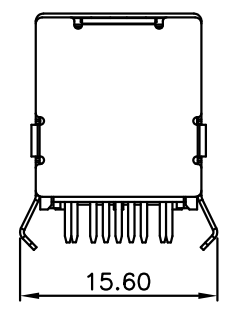
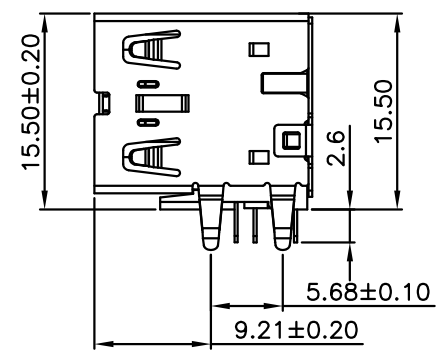
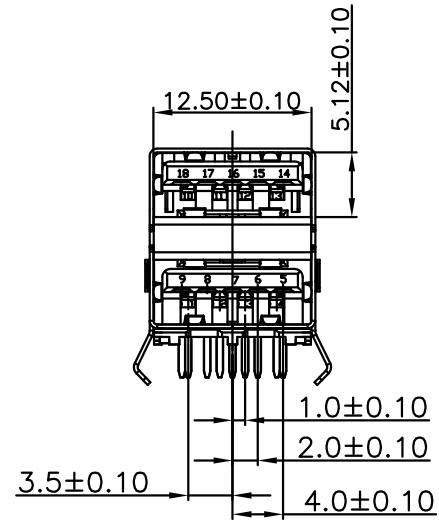
Remark:

1.MATERIAL:

- Housing:thermoplastic plastics.
- terminals:Copper Alloy
- Front Shell:Copper Alloy/SPCC.
Middle Shell:SPCC

2.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℃~+80℃.



| | | | | | |
|--------------------------------------|------------|---------------------------|--------------------|--|---------|
| TOLERANCE UNLESS OTHERWISE SPECIFIED | | FLW 深圳市华联威电子科技有限公司 | | | |
| .XXX ±0.10 .XX ±0.20 .X ±0.30 | | .X' ±3' .XX' ±2' | | HUA LIAN WEI TECHNOLOGY ELECTRONICS CO.,LTD. | |
| APPROVED | | PART NAME: | USB 3.0AF 90度双层无卷边 | | |
| CHECKED | | PART No: | U321-0421-G27017 | C | |
| DRAWN | Lijinfeng | PROJECTION: | UNIT: | SCALE | SHEET |
| DATE | 2021.08.03 | | mm | 1:1 | 10F1 |
| | | | | | REV. A1 |

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 产品外观 | Visual 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 接触阻抗 | (EIA-364-06B) Mated connectors, Contact: measure by dry circuit, 30 m Volts maximum,20 mA 配对的连接器, 端子: 测试端子在回路中施加直流最大30mV 20mA的电流再测端子的电阻值 | Initial Contact resistance Excluding conductor Resistance:30 mΩ max (Target design value) 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 (耐电压) | (EIA-364-20C) Unmated connectors, apply 100V AC (RMS.) for 1 minute between adjacent terminals of ground. 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 2. Leakage current:0.5mA Max 1. 不能有损坏或跳火花 2. 漏电流<0.5mA |
|-------|--|---|--|

| | | | |
|-------|-------------------------------|--|--------------------------------------|
| 4.2.3 | Insulation Resistance 绝缘阻抗 | (EIA-364-21C) Unmated connectors, apply 500V DC for 1 minute between adjacent terminals of ground. 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) 没有配对需大于100 MΩ |
|-------|-------------------------------|--|--------------------------------------|

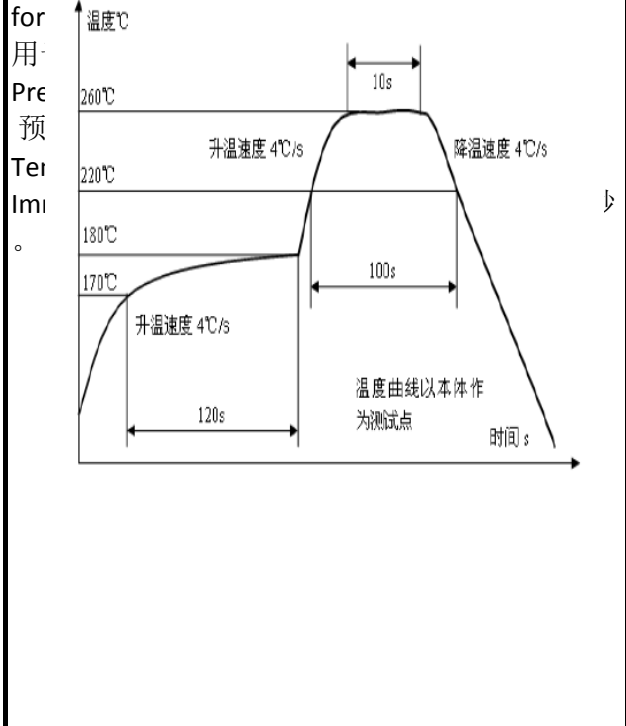
4.3 Mechanical Performance(机械性能)

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

| | | | |
|-------------------------------|----------------------------|---|--|
| 4.3.2 | Durability 寿命测试 | (EIA-364-09) Measure contact and shell resistance after the Following. Automatic cycling:1500 cycles at 100±5 Cycles per hour. 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 Contact: Change from initial Value: 30 milliohms maximum. 端子: 从初始值开始变化量小于30mΩ Maximum insertion force 35N 插入力不超过35N(3.57kg) Withdrawal force 8N min 拔出力最小8N(0.82kg) |
| 4.3.3 | Vibration 振动 | (EIA-364-28条件3) Amplitude:1.52mm P-P or 147m/s ² {15G} Sweep time: 50-2000-50Hz in 20 minutes. Duration: 12 times in each (total of 36 times) X, Y, Z, axes. Electrical load DC 100mA current shall be flowed during the test.(ANSI/EIA-364-28 Condition III) 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 ² {15G}, 每轴12回计36回 | Appearance: No damage 外观: 无损坏 Contact Resistance 接触阻抗 Contact: Change from initial Value:30mΩ Max. 端子: 从初始值开始变化量小于30mΩ 间断性: 不超过1微秒 |
| 4.3.4 | Physical shock 冲击性 | (EIA-364-27条件A) Pulse width: 11msec Waveform: Half-sine 490m/s ² (50G) 3 strokes in each X, Y, Z axes. (ANSI/EIA-364-27 condition A) 周期: 11msec 冲击波形: 正弦半波490m/s ² (50G) 3循环在X, Y, Z轴 | Appearance: No damage 外观: 无损坏 Contact Resistance 接触阻抗 Contact: Change from initial Value 30mΩ Max 端子: 从初始值开始变化量小于30mΩ Discontinuity: 1μ sec Max. 间断性: 不超过1微秒 |
| 4.4 Environmental Performance | | | |
| 4.4..1 | Thermal shock test 冷热冲击 | EIA-364-32C条件1) 10 cycles of:10个循环, a)-55±3℃ for 30 minutes b) +85±3℃ for 30 minutes | Appearance: No Damage. 外观: 没有损坏 Contact Resistance 接触阻抗 Contact: Change from initial Value 30mΩ Max 端子: 从初始值开始变化量小于30m |
| 4.4..2 | Solder ability 焊锡性 | (EIA-364-52) To be sipped in the solder bath 245±5℃ Coverage for 3 seconds. 将焊锡脚浸在245±5℃的锡炉中<3秒 | The inspected area of each lead must have 90% solder coverage minimum 表面粘锡面积不少于90% |
| 4.4..3 | Humidity 恒温恒湿 | (EIA-364-31B) (A) Mate connectors together and perform the test as follows配对的连接器测试条件 Temperature: +25℃ to +85℃(温度: +25℃到+85℃) Relative Humidity: 90% to 95%(相对湿度: 90%到95%) Duration:4 cycles(96 hours) (持续时间: 4个循环共96小时) 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 外观, 没有损坏 Contact Resistance 接触阻抗 Contact: Change from initial Value 30mΩ Max 端子: 从初始值开始变化量小于30mΩ |

| | | | |
|--------|-------------------------------------|--|--|
| 4.4..4 | Salt Spray 盐水喷雾 | EIA-364-26B) Temperature: 35±2°C 温度: 35±2°C Concentration for salt: 5% 盐水浓度: 5% (1)Duration: 24H 持续时间: 24小时 Condition(条件): 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 (2) Duration: 12H 持续时间: 12小时 Condition(条件): 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) 产品无氧化, 锈蚀 (端子焊脚镀锡处不作要求) Contact Resistance 接触阻抗 Contact: Change from initial Value 30mΩ Max Shell Part: Change from initial Value 50mΩ Max 端子: 从初始值开始变化量小于30mΩ 外壳: 从初始值开始变化量小于50mΩ |
| 4.4..5 | Cold resistance (Unmated) 冷阻抗 | (EIA-364-17B) 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. 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. 外观: 没有损坏 Contact Resistance 接触阻抗 Contact: Change from initial Value 30mΩ Max Shell Part: Change from initial Value 50mΩ Max 端子: 从初始值开始变化量小于30mΩ 外壳: 从初始值开始变化量小于50mΩ |
| 4.4..6 | Heat resistance (Unmated) 热阻抗 | (EIA-364-17B) 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. 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. 外观: 没有损坏 Contact Resistance 接触阻抗 Contact: Change from initial Value 30mΩ Max Shell Part: Change from initial Value 50mΩ Max 端子: 从初始值开始变化量小于30mΩ 外壳: 从初始值开始变化量小于50mΩ |
| 4.4..7 | Thermal Aging 高温老化 | (EIA-364-31B, Condition 4, Method A) 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. 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. 外观: 没有损坏 Contact Resistance 接触阻抗 Contact: Change from initial Value 30mΩ Max Shell Part: Change from initial Value 50mΩ Max 端子: 从初始值开始变化量小于30mΩ 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 波峰焊: mil-std-202f, method 210 A, 试验条件B Pre-heat : 80°C, 60 Seconds 预热:80°C, 60秒 Temperature : 260 ± 5 °C 温度:260±5°C Immersion duration : 10 ± 1 sec. 浸泡时间:10±1秒 | No physical damage shall occur. 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：覃裕华

| | | | | | | | | | | | |
|---|--------------------------|---|--|--------------------|------|------|------|------|------|---|--|
| 4 | Temperature cycling test | Temperature: 7025°C 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 Concentration: 5±1 % Duration:12H | SALT SPRAY TESTER | No Oxidation | Pass | Pass | Pass | Pass | Pass | P | |
| 2 | Resistance to soldering heat test | Temperature: 260±5°C Duration:10±1sec | OVEN | No physical damage | Pass | Pass | Pass | Pass | Pass | P | |
| 3 | Solder ability test | Temperature: 265±5°C 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



深圳市华联威电子科技有限公司

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
 2021年12月07日 版次:A1

| 料號 | U321-0421-G27017 | 制令單號 | / | | | | | 送檢單位 | 工程部 | 首件製作者 | 裝配 | | |
|------------------|------------------|--|---------|-----------|-------|-----------|----------|---------|-------|---------|----------|-----|----|
| 品名 | 3.0AF90度双层无卷边 | 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 | AQL | CRI:0 | MAJ:0.4 | MIN:0.65 | | |
| MIL-STD-105E(II) | | <input checked="" type="checkbox"/> 正常 <input type="checkbox"/> 加嚴 <input type="checkbox"/> 減量 | | | | | (5PCS) | ACC/REJ | 0 | / | / | | |
| 不良數: | | CRI (/) | | MAJ (/) | | MIN (/) | | 不良率(%) | | / | | | |
| NO. | 檢驗項目 單位:MM/G | 檢測 儀器 | 檢 驗 記 錄 | | | | | 品管判定 | | CRI | MAJ | MIN | 備注 |
| | | | 1 | 2 | 3 | 4 | 5 | AC | RE | | | | |
| 尺 寸 測 量 | 17.23±0.20 | D | 17.22 | 17.22 | 17.22 | 17.22 | 17.22 | √ | | | | | |
| | 6.00±0.20 | D | 6.01 | 6.01 | 6.01 | 6.01 | 6.01 | √ | | | | | |
| | 13.10±0.20 | D | 13.12 | 13.12 | 13.12 | 13.12 | 13.12 | √ | | | | | |
| | 12.50±0.10 | D | 12.51 | 12.51 | 12.51 | 12.51 | 12.51 | √ | | | | | |
| | 5.12±0.10 | D | 5.13 | 5.13 | 5.13 | 5.13 | 5.13 | √ | | | | | |
| | 1.0±0.10 | D | 1.02 | 1.02 | 1.02 | 1.02 | 1.02 | √ | | | | | |
| | 2.0±0.10 | D | 2.02 | 2.02 | 2.02 | 2.02 | 2.02 | √ | | | | | |
| | 4.0±0.10 | D | 4.02 | 4.02 | 4.02 | 4.02 | 4.02 | √ | | | | | |
| | 3.5±0.10 | D | 3.52 | 3.52 | 3.52 | 3.52 | 3.52 | √ | | | | | |
| | 2.00±0.20 | D | 2.03 | 2.03 | 2.03 | 2.03 | 2.03 | √ | | | | | |
| | 3.50±0.20 | D | 3.53 | 3.53 | 3.53 | 3.53 | 3.53 | √ | | | | | |
| | 5.20±0.20 | D | 5.23 | 5.23 | 5.23 | 5.23 | 5.23 | √ | | | | | |
| | 6.70±0.20 | D | 6.73 | 6.73 | 6.73 | 6.73 | 6.73 | √ | | | | | |
| | 15.60±0.20 | D | 15.64 | 15.64 | 15.64 | 15.64 | 15.64 | √ | | | | | |
| | 15.50±0.20 | D | 15.54 | 15.54 | 15.54 | 15.54 | 15.54 | √ | | | | | |
| | 9.21±0.20 | D | 9.22 | 9.22 | 9.22 | 9.22 | 9.22 | √ | | | | | |
| | 5.68±0.20 | D | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 | √ | | | | | |
| 2.6±0.20 | D | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | √ | | | | | | |

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: 合格Accept 退貨Reject 特采Waive 挑選Sort

核准: 欠必鋒

審核: 刘联英

檢驗員: 但芬

电镀报告表

| | | | | | |
|------------------------|---------------|--------|----|-----------|----------|
| 品名:3.0AF90度双层无卷边(外壳) | | 版次:A.0 | | | |
| 电镀规格:Cu:40u"Ni:50u"MIN | 日期:2021/12/01 | 页次:1/1 | | | |
| 厂商:金和源 | | | | | |
| 测试设备:CMI X-射线膜厚测试仪 | | | | | |
| 1、底层电镀测试(Cu) | | | | | |
| 数据 | 测试标准 | 实测值 | 判定 | 测试日期 | 测试时间 |
| 1 | 40u"min | 45.3u" | OK | 2021/12/1 | 19:55:05 |
| 2 | 40u"min | 48.5u" | OK | 2021/12/1 | 19:55:57 |
| 3 | 40u"min | 44.2u" | OK | 2021/12/1 | 19:56:48 |
| 4 | 40u"min | 45.6u" | OK | 2021/12/1 | 19:57:31 |
| 2、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 | 57.3u" | OK | 2021/12/1 | 19:58:12 |
| 2 | 50u"min | 55.6u" | OK | 2021/12/1 | 19:59:04 |
| 3 | 50u"min | 56.2u" | OK | 2021/12/1 | 20:01:44 |
| 4 | 50u"min | 58.3u" | OK | 2021/12/1 | 20:02:36 |

核准: 欠必锋

审核: 刘联英

检验员: 但芬

电镀报告表

| | | | | | |
|----------------------------------|----------|---------------|--------|-----------|----------|
| 品名:3.0AF90度双层无卷边(端子) | | | | | |
| 电镀规格:Ni40u", Sn40u"MIN, Au G/Fu" | | 日期:2021/12/01 | 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 | 40u"MIN | 58.2u" | OK | 2021/12/1 | 13:50:12 |
| 2 | 40u"MIN | 60.7u" | OK | 2021/12/1 | 13:50:14 |
| 3 | 40u"MIN | 55.4u" | OK | 2021/12/1 | 13:50:16 |
| 4 | 40u"MIN | 61.5u" | OK | 2021/12/1 | 13:50:18 |
| 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 | 40u"MIN | 43.3u" | OK | 2021/12/1 | 14:10:36 |
| 2 | 40u"MIN | 42.4u" | OK | 2021/12/1 | 14:10:38 |
| 3 | 40u"MIN | 46.7u" | OK | 2021/12/1 | 14:10:40 |
| 4 | 40u"MIN | 43.1u" | OK | 2021/12/1 | 14:10:42 |
| 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 | 0.56u" | OK | 2021/12/1 | 14:18:20 |
| 2 | 0.5u"MIN | 0.58u" | OK | 2021/12/1 | 14:18:22 |
| 3 | 0.5u"MIN | 0.59u" | OK | 2021/12/1 | 14:18:24 |
| 4 | 0.5u"MIN | 0.57u" | OK | 2021/12/1 | 14:18:26 |

核准: 欠必锋

审核: 刘联英

检验员: 但芬

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-1216 |
| METHOD | NEUTRL SALT SPRAY CORROSION TEST | REF | |
| 客户 | / | 试验起始日期 | 2021年12月06日 08:00 时起 |
| | | DATE | 2021年12月07日 20:00 时止 |
| 样品名称 | 3. 0AF90度双层无卷边 | 试验数量 | 5PCS |
| P/N | U321-0421-G27017 | | |

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. IT THE SPRAY DHAMBR): $35 \pm 1^\circ\text{C}$.
- 3、盐水桶温度 (TEMP. OF SALE SOL' N TANK): $35 \pm 1^\circ\text{C}$.
- 4、压力桶温度 (TEMP. OF SAR SUPPLIERY): $47 \pm 1^\circ\text{C}$.
- 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 SOL' N) $1-2\text{mL}/(8 \text{ cm}^2\text{hr})$.
- 9、盐雾测试时间: 12小时 (H)

判定方法 (ADFUSGD 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. (Inspext the ecimen at 20 xmagnification 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: 刘联英

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



佛山市顺德区天硕贸易有限公司

Foshan Shunde Tianshuo Trade Company Limited

日期: 2021-10-19

编号: FB2110136

| 收货单位PURCHASER: _____ | | | | 产品名称: _____ SPCC-SD | | | | | | | | | | | |
|-------------------------------|-----------------|---------------------------------|--------------------|--------------------------|--------|---------|---------|--------|--------|---------|---------------------------|--------------|----------------|------------|------------|
| 检验标准SPECIFICATION: JIS G 3141 | | | | 检验情况: _____ 合格 | | | | | | | | | | | |
| 产品规格 SPECIFICATION MM | 钢卷号 COIL. NO | 材质牌号 SYMBOL OF QUALITY | 净重 WEIGHT KG | 化学成份CHEMICAL COMPOSITION | | | | | | | 力学性能MECHANICAL PROPERTIES | | | | |
| | | | | Fe % | C % | Mn % | Si % | P % | S % | AI % | 抗拉强度T.S Mpa | 延伸率EL (%) | 屈服强度Y.S Mpa | 杯突 (mm) | 硬度 (HV) |
| 0.30x1250 | DL45657 | SPCC-SD | 7835 | 99 | 0.031 | 0.17 | 0.07 | 0.22 | 0.24 | | 361 | 29 | 259 | | 143 |
| 0.30x1250 | DL45658 | SPCC-SD | 7690 | 99 | 0.032 | 0.16 | 0.07 | 0.21 | 0.22 | | 362 | 30 | 256 | | 141 |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

质量控制中心:

审核: 谢和钢

制表人: 胡万银



鉅鼎銅材廠檢驗報告單

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

品質部


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 傳真: 0755-28110077
 送貨專用章