

# 承认书

Approval Sheet

客户 (Customer): /

客户料号 (Cus .P/N): /

华联威料号 (HLW P/N): U221-H031-G61018

品名规格 (PronameSpec): 2.0 AF10.0 H6.8 后两脚

送样日期 (Delivery Date): 2022/08/17

承认日期 (Acknowledge Date): 2022/08/17

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.			
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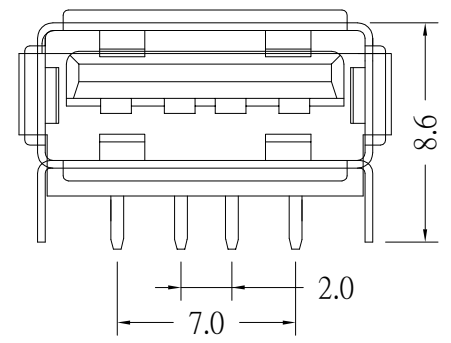
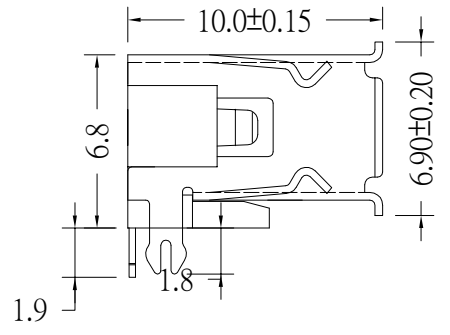


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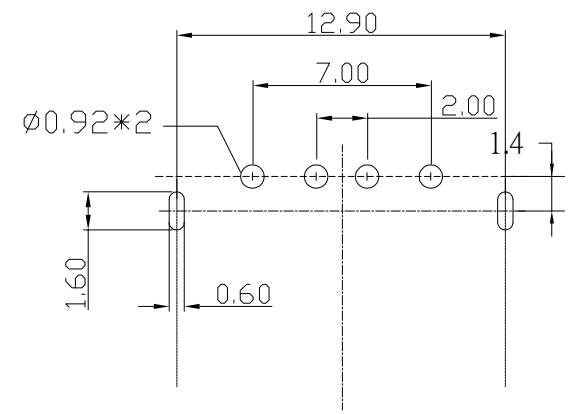
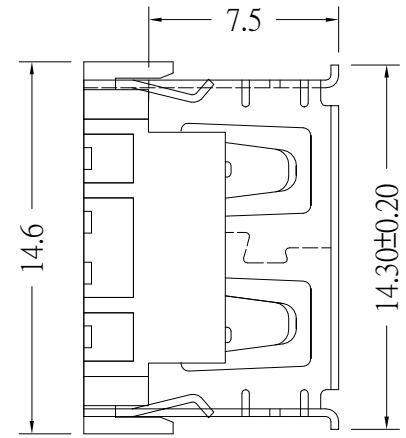
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REV.	ECN.NO.	APPD.
A	XXXXXXXXXX	yangguifeng



- NOTES:
- MATERIAL:
    - Housing:thermoplastic plastics
    - terminals:Copper Alloy  
Gold plated in contact area:  
Tin plated in termination  
Nickel Plated overall
    - Shell:Steel&Copper Alloy  
Nickel Plated overall
  - ELECTRICAL CHARACTERISTICS:
    - Rating Current :1.5 Ampere
    - Rating Voltage :30 V Max
    - Contact Resistance:30 Milli ohms
    - Insulation Resistance:1000 Mega ohms Min.
  - MECHANICAL CHARACTERISTICS:
    - Connector Mating force: 35N MAX(3.57Kgf)
    - Connector Unmating force:10N min(1.02Kgf)
    - Durability:1500Cycles.
  - ENVIRONMENT CHARACTERISTICS:
    - Operating temperature:-0°C to +50°C
    - Storage temperature:-20°C to +60°C



RECOMMENDED P.C.B LAYOUT

U221-H03X-XXX0X8

1:铁壳镀镍  
1:吸塑盒  
1:黑色  
G:半金G/Fu  
6:LCP

TOLERANCE UNLESS OTHERWISE SPECIFIED		<b>FLW 深圳市华联威电子科技有限公司</b>			
.XXX ±0.10 .XX ±0.20 .X ±0.30		HUA LIAN WEI TECHNOLOGY ELECTRONICS CO.;LTD.			
.X' ±3' .XX' ±2'		PART NAME:	USB AF10.0 高度6.8后两脚		
APPROVED		PART No:	U221-H031-G61018		C
CHECKED		PROJECTION:	UNIT:	SCALE:	SHEET:
DRAWN	yangguifeng	mm	1:1	1 OF 1	REV. A
DATE	2021.12.01				

## USB2.0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 USB2.0 Connector.

(此份产品规格适用于USB2.0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):0°C to +50°C

## 3. Test Condition(测试条件):

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

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
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## 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)
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4.2.2	Dielectric Withstanding Voltage (耐电压)	(EIA-364-20C) Unmated connectors, apply 500V 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500V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	1000MΩ min (unmated)  没有配对需大于1000 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 force 35N 插入力不超过35N(3.57kg) Withdrawal force 9.8N min 10N max 拔出力最小10N (1.02kg)
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 9.8N min 8N max 拔出力最小8N (1.02kg)
4.3.3	Vibration 振动	(EIA-364-28条件3) Amplitude:1.52mm P-P or 147m/s <sup>2</sup> {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 <sup>2</sup> {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 Shell Part: Change from initial Value:50mΩ Max.  间断性: 不超过1微秒

4.3.4	Physical shock 冲击性	<p>(EIA-364-27条件A)</p> <p>Pulse width: 11msec</p> <p>Waveform: Half-sine</p> <p>490m/s<sup>2</sup> (50G) 3 strokes in each X, Y, Z axes.</p> <p>(ANSI/EIA-364-27 condition A)</p> <p>周期: 11msec</p> <p>冲击波形: 正弦半波490m/s<sup>2</sup> (50G) 3 循环在X, Y, Z 轴</p>	<p>Appearance: No damage</p> <p>外观: 无损坏</p> <p>Contact Resistance 接触阻抗</p> <p>Contact: Change from initial Value 30mΩ Max</p> <p>端子: 从初始值开始变化量小于30mΩ</p> <p>Discontinuity: 1μ sec Max.</p> <p>间断性: 不超过1微秒</p>
4.4 Environmental Performance			
4.4..1	Thermal shock test 冷热冲击	<p>EIA-364-32C条件1)</p> <p>10 cycles of:</p> <p>a)-55±3°C for 30 minutes</p> <p>b) +85±3°C for 30 minutes</p> <p>10个循环,</p> <p>a)-55±3°C 30 分钟</p> <p>b) +85±3°C 30 分钟</p>	<p>Appearance: No Damage.</p> <p>外观: 没有损坏</p> <p>Contact Resistance 接触阻抗</p> <p>Contact: Change from initial Value 30mΩ Max</p> <p>端子: 从初始值开始变化量小于30mΩ</p>
4.4..2	Solder ability 焊锡性	<p>(EIA-364-52)</p> <p>To be sipped in the solder bath 245±5°C</p> <p>Coverage for 3 seconds.</p> <p>将焊锡脚浸在260±5°C的锡炉中&lt;3秒</p>	<p>The inspected area of each lead must have 90% solder coverage minimum</p>
4.4..3	Humidity 恒温恒湿	<p>(EIA-364-31B)</p> <p>(A) Mate connectors together and perform the test as follows</p> <p>配对的连接器测试条件</p> <p>Temperature: +25°C to +85°C(温度: +25°C到+85°C)</p> <p>Relative Humidity: 90% to 95%(相对湿度: 90%到95%)</p> <p>Duration:4 cycles(96 hours) (持续时间: 4个循环共96小时)</p> <p>Upon completion of the test, specimens shall be conditioned ambient room conditions for 24 hours, after which the specified measurements shall be performed.</p> <p>试验完成后, 样品放置于室温条件中24小时后再进行测试</p>	<p>Appearance: No Damage</p> <p>外观, 没有损坏</p> <p>Contact Resistance 接触阻抗</p> <p>Contact: Change from initial Value 30mΩ Max</p> <p>端子: 从初始值开始变化量小于30mΩ</p>

		<p>(EIA-364-31B)</p> <p>(B) Unmated each connector and perform the test as follows.          没有配对的连接器测试条件          Temperature: +25°C to +85°C(温度: +25°C到+85°C)          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)</p> <p>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</p>	<p>Appearance: No Damage          外观, 没有损坏</p> <p>Conform to item of dielectric withstanding Voltage and Insulation Resistance.          符合耐电压及绝缘阻抗要求</p>
4.4..4	Salt Spray 盐水喷雾	<p>EIA-364-26B)</p> <p>Temperature: 35±2°C 温度: 35±2°C          Concentration for salt: 50g±10g/1L 盐水浓度: 50±10g/L          (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 material of shell for steel          端子镀金厚度小于15u" 且/或壳体材质是铁材</p>	<p>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)</p> <p>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</p>
4.4..5	Cold resistance (Unmated) 冷阻抗	<p>(EIA-364-17B)</p> <p>Unmated connectors and expose to -25±3°C for 250 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250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</p>	<p>Appearance: No Damage.          外观: 没有损坏</p> <p>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</p>

4.4..6	Heat resistance (Unmated) 热阻抗	<p>(EIA-364-17B)</p> <p>Mated connectors and expose to 85±2°C for 250 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.</p> <p>配对的连接器放置于85±2°C温度中250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</p>	<p>Appearance: No Damage.</p> <p>外观：没有损坏</p> <p>Contact Resistance 接触阻抗</p> <p>Contact: Change from initial Value 30mΩ Max</p> <p>Shell Part: Change from initial Value 50mΩ Max</p> <p>端子：从初始值开始变化量小于30mΩ</p> <p>外壳：从初始值开始变化量小于50mΩ</p>
4.4..7	Thermal Aging 高温老化	<p>(EIA-364-31B, Condition 4, Method A)</p> <p>Unmated connectors and expose to +85±2°C for 250 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.</p> <p>没配对的连接器放置于+85±2°C温度中250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</p>	<p>Appearance: No Damage.</p> <p>外观：没有损坏</p> <p>Contact Resistance 接触阻抗</p> <p>Contact: Change from initial Value 30mΩ Max</p> <p>Shell Part: Change from initial Value 50mΩ Max</p> <p>端子：从初始值开始变化量小于30mΩ</p> <p>外壳：从初始值开始变化量小于50mΩ</p>
4.4.8	Resistance to Soldering Heat	<p>for wave soldering : mil-std-202f,method 210 A,test condition B</p> <p>波峰焊：mil-std-202f, method 210 A, 试验条件B</p> <p>Pre-heat : 80°C, 60 Seconds 预热:80°C, 60秒</p> <p>Temperature : 260 ± 5 °C 温度:260±5°C</p> <p>Immersion duration : 10 ± 1 sec. 浸泡时间:10±1秒。</p>	<p>No physical damage shall occur.</p> <p>不可有损坏</p>



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

**TEST REPORT**

品名稱 Part Name	2.0 AF10.0 H6.8 后两脚	測試日期 Date of Testing	2022-08-17 2022-08-17	報告編號 Report NO.	MD20220817-10
產品型號 Part Name	U221-H031-G61018	樣品數量 Quan tity	5PCS	測試環境 Measuring Environment	濕度 Temp:18~21°C 相對 濕度 R.H.:49%~57%

**一. 電性測試 ELECTRICAL 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 UTesting Result					判定 Judge	
					1	2	3	4	5	Pass	Fail
1	Contact resis tance	Test current:100mA max	DIGITAL MICROOHMMETER	30m Ω Max	18.36 m Ω	17.55 m Ω	18.29 m Ω	16.72 m Ω	16.18 m Ω	P	
2	Insula tion resis tance	Test voltage:500VDC Operation stated:1min	ULTRA HIGH RESISTANCE METER	1000M Ω Min	Pass	Pass	Pass	Pass	Pass	P	
3	Dielec tric withstand voltage	Test voltage:500VAC Cut-off current:0.5mA Operation stated:1 min	BREAKDOWN TESTER	No discharge or flashover occur	Pass	Pass	Pass	Pass	Pass	P	

**二. 機械特性測試 MECHANICAL 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 UTesting Result					判定 Judge	
					1	2	3	4	5	Pass	Fail
1	Durability test	Rat e:200cycles/hour Total: 1500cycles	LIFE TESTER FOR CONNECTOR	No physical damage	Pass	Pass	Pass	Pass	Pass	P	
2	Mating Force	35 Newtons maximum at a maximum rare of 12.5mm(0.492") per minute	Insertion force testing machine	No physical damage	Pass	Pass	Pass	Pass	Pass	P	
3	Un-Mating Force	10 Newtons minimum at a maximum rare of 12.5mm(0.492") per minute	Insertion force testing machine	No physical damage	Pass	Pass	Pass	Pass	Pass	P	

**三. 環境特性測試 ENVIRONMENTAL 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 UTesting Result					判定 Judge	
					1	2	3	4	5	Pass	Fail

1	Humidity-Temperature cycle	Temperature: 40±2°C Humidity: 90-95% Duration:168H	PROGRAM CONTROLLED TEMP. & HUMIDITY CHAMBER	No physical damage	Pass	Pass	Pass	Pass	Pass	P	
2	Heat test	Temperature: 70±2°C Duration:168H	OVEN	No physical damage	Pass	Pass	Pass	Pass	Pass	P	
3	Cold test	Temperature: -25±3°C Duration:168H	PROGRAM CONTROLLED TEMP. & HUMIDITY CHAMBER	No physical damage	Pass	Pass	Pass	Pass	Pass	P	
4	Temperature cycling test	Temperature: 70—25°C Duration:5 cycle	PROGRAM CONTROLLED TEMP. & HUMIDITY 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: 260±5°C Duration:10 ±1 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
 2022年08月15日 版次:A1

料號	U221-H031-G61018	制令單號	/	送檢單位	工程部	首件製作者	裝配	
品名	2.0 AF10.0 H6.8后两脚	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	10.0±0.15	D	9.99	10.01	10.03	10.05	10.07	√					
	6.90±0.20	D	6.88	6.90	6.92	6.94	6.96	√					
	6.80±0.20	D	6.81	6.82	6.83	6.84	6.85	√					
	1.93±0.20	D	1.90	1.92	1.94	1.96	1.98	√					
	1.60±0.20	D	1.58	1.60	1.62	1.64	1.66	√					
	1.80±0.20	D	1.79	1.81	1.83	1.85	1.87	√					
	2.00±0.20	D	1.97	1.99	2.01	2.03	2.05	√					
	7.00±0.20	D	6.96	6.98	7.00	7.02	7.04	√					
	14.60±0.20	D	14.55	14.58	14.61	14.64	14.67	√					
	14.30±0.20	D	14.28	14.30	14.32	14.34	14.36	√					

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: 李娟 檢驗員: 但芬

## 电镀报告表

品名:2.0 AF10.0 H6.8后两脚(外壳)		版次:A.0			
电镀规格:Cu:40u",Ni:30u"	日期:2022/8/12	页次:1/1			
厂商:同华					
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	30u"min	110.2u"	OK	2022/8/12	11:35:05
2	30u"min	105.9u"	OK	2022/8/12	11:36:07
3	30u"min	108.6u"	OK	2022/8/12	11:37:09
4	30u"min	109.8u"	OK	2022/8/12	11:38:11
2、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	30u"min	86.5u"	OK	2022/8/12	11:35:05
2	30u"min	72.3u"	OK	2022/8/12	11:36:07
3	30u"min	84.7u"	OK	2022/8/12	11:37:09
4	30u"min	81.1u"	OK	2022/8/12	11:38:11

核准: 欠必锋

审核: 李娟

检验员: 但芬

## 电镀报告表

品名:2.0 AF10.0 H6.8后两脚(端子)																																	
电镀规格:Ni40u", Sn40u", Au G/Fu"	日期:2022/8/12	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)																																	
<table border="1"><thead><tr><th>数据</th><th>测试标准</th><th>实测值</th><th>判定</th><th>测试日期</th><th>测试时间</th></tr></thead><tbody><tr><td>1</td><td>40u"MIN</td><td>45.3u"</td><td>OK</td><td>2022/8/12</td><td>13:50:12</td></tr><tr><td>2</td><td>40u"MIN</td><td>48.5u"</td><td>OK</td><td>2022/8/12</td><td>13:50:14</td></tr><tr><td>3</td><td>40u"MIN</td><td>44.2u"</td><td>OK</td><td>2022/8/12</td><td>13:50:16</td></tr><tr><td>4</td><td>40u"MIN</td><td>45.6u"</td><td>OK</td><td>2022/8/12</td><td>13:50:18</td></tr></tbody></table>				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	2022/8/12	13:50:12	2	40u"MIN	48.5u"	OK	2022/8/12	13:50:14	3	40u"MIN	44.2u"	OK	2022/8/12	13:50:16	4	40u"MIN	45.6u"	OK	2022/8/12	13:50:18
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1	40u"MIN	45.3u"	OK	2022/8/12	13:50:12																												
2	40u"MIN	48.5u"	OK	2022/8/12	13:50:14																												
3	40u"MIN	44.2u"	OK	2022/8/12	13:50:16																												
4	40u"MIN	45.6u"	OK	2022/8/12	13:50:18																												
2、表层电镀测试(Sn)																																	
<table border="1"><thead><tr><th>数据</th><th>测试标准</th><th>实测值</th><th>判定</th><th>测试日期</th><th>测试时间</th></tr></thead><tbody><tr><td>1</td><td>40u"MIN</td><td>43.3u"</td><td>OK</td><td>2022/8/12</td><td>14:10:36</td></tr><tr><td>2</td><td>40u"MIN</td><td>42.4u"</td><td>OK</td><td>2022/8/12</td><td>14:10:38</td></tr><tr><td>3</td><td>40u"MIN</td><td>46.7u"</td><td>OK</td><td>2022/8/12</td><td>14:10:40</td></tr><tr><td>4</td><td>40u"MIN</td><td>43.1u"</td><td>OK</td><td>2022/8/12</td><td>14:10:42</td></tr></tbody></table>				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	2022/8/12	14:10:36	2	40u"MIN	42.4u"	OK	2022/8/12	14:10:38	3	40u"MIN	46.7u"	OK	2022/8/12	14:10:40	4	40u"MIN	43.1u"	OK	2022/8/12	14:10:42
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	2022/8/12	14:10:36																												
2	40u"MIN	42.4u"	OK	2022/8/12	14:10:38																												
3	40u"MIN	46.7u"	OK	2022/8/12	14:10:40																												
4	40u"MIN	43.1u"	OK	2022/8/12	14:10:42																												
3、表层电镀测试(Au)																																	
<table border="1"><thead><tr><th>数据</th><th>测试标准</th><th>实测值</th><th>判定</th><th>测试日期</th><th>测试时间</th></tr></thead><tbody><tr><td>1</td><td>0.5u"MIN</td><td>0.56u"</td><td>OK</td><td>2022/8/12</td><td>14:18:20</td></tr><tr><td>2</td><td>0.5u"MIN</td><td>0.58u"</td><td>OK</td><td>2022/8/12</td><td>14:18:22</td></tr><tr><td>3</td><td>0.5u"MIN</td><td>0.59u"</td><td>OK</td><td>2022/8/12</td><td>14:18:24</td></tr><tr><td>4</td><td>0.5u"MIN</td><td>0.57u"</td><td>OK</td><td>2022/8/12</td><td>14:18:26</td></tr></tbody></table>				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	2022/8/12	14:18:20	2	0.5u"MIN	0.58u"	OK	2022/8/12	14:18:22	3	0.5u"MIN	0.59u"	OK	2022/8/12	14:18:24	4	0.5u"MIN	0.57u"	OK	2022/8/12	14:18:26
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	2022/8/12	14:18:20																												
2	0.5u"MIN	0.58u"	OK	2022/8/12	14:18:22																												
3	0.5u"MIN	0.59u"	OK	2022/8/12	14:18:24																												
4	0.5u"MIN	0.57u"	OK	2022/8/12	14:18:26																												

核准: 欠必锋

审核: 李娟

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	2022年08月17日 08:00 时起
		DATE	2022年08月17日 20:00 时止
样品名称	2.0 AF10.0 H6.8后两脚	试验数量	5PCS
P/N	U221-H031-G61018		

### 试验条件 (TEST CONDITON)

- 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: 李娟

试验员: 但芬



# 东莞市海嵘兴塑胶有限公司

## LCP材质分析报告

品 名	比 例	用 途
杜邦LCP树脂	0.68	构成材料主要成份
抗氧剂	0.003	抗氧化
日本住友TAP	0.002	润滑及增加流动性
大洋安定剂	0.005	稳定机械性能, 方便重复使用
玻纤	0.30	增强
色母	0.01	着色

注：以上数据真实可靠，但并非绝对值，并不做任何商业依据。



# 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: _____ 检验标准SPECIFICATION: <u>JIS G 3141</u>				产品名称: <u>SPCC-SD</u> 检验情况: <u>合格</u>											
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

