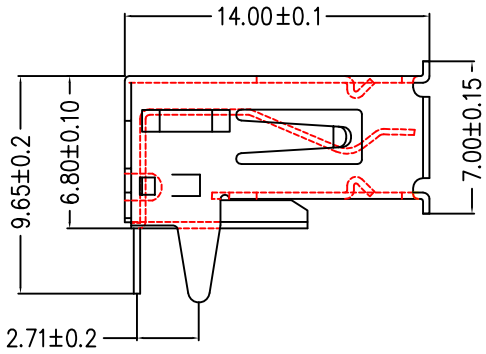
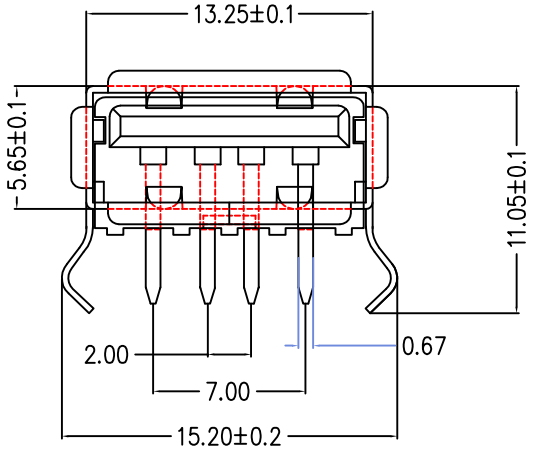
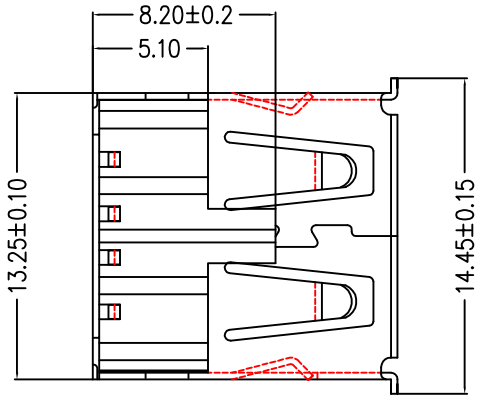
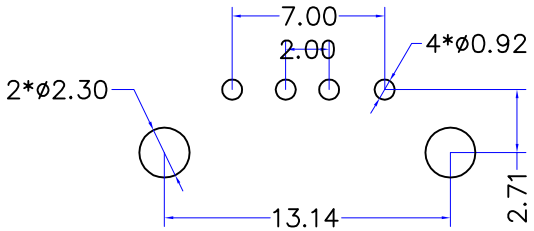








PCB.LAYOUT

特性:Specifications:

电器:Electrical:

接触阻抗:Contact Resistance
30 milliohms MAX

耐电压:Dielectric Withstanding Voltage:
500V AC AT Sea Level

绝缘阻抗:Insulation Resistance:
100 MEGA ohms MIN

材料:Material:

塑胶:Housing:PBT

端子:Contact:Copper Alloy C2680H

铜壳/铁壳:Shell: Copper Alloy C2680H/Spcc

电镀:Finish:

端子:Contact: Plated Gold in Mating Area;
Tin/ On Solder Tails
接触点镀金.脚镀锡

铜壳/铁壳:Shell:
Nickel Plating 镀镍

变更内容 Midify content	签名 Sign by	审核 Checked by	日期 Date
4			
3			
2			
1			

Unless otherwise specified tolerances are 未注尺寸公差

X	±0.3
X.X	±0.2
X.XX	±0.1
X.XXX	±0.05
X.XXXX	±--

ANGLES ±2° SURFACE TEXTURE √

客户 Customer		编号 NO.		图号 Drawing NO.	设计 Designed by	审核 Checked by	批准 Approved by	Third Angle Project 第三角投影
品名 Item	USB AF 90° 有盖弯脚白铁			装配图	冷中明			

版本 REV	材质 Material	厚度 MAT. THICK	数量 Amount	表面处理	交期	单位 Unit	比例 Scale
A						mm	FREE

深圳市华联威电子科技有限公司
HUA LIAN WEI TECHNOLOGY ELECTRONICS CO;LTD.

深圳市华联威电子科技有限公司

USB2.0系列產品SPEC

TEST ITEM		REQUIREMENT	PROCEDURE
1	Examination of Product	Meets requirements of product drawing. No physical damage.	Visual inspection.
2	Operating Temperature	0℃ to 50 ℃	
3	Storage Temperature	-20℃ to 60 ℃	
ELECTRICAL REQUIREMENT			
4	Rating Voltage	30VAC max	on any signal pin with respect to the shield
5	Rating Current	1.5 A per contact	55℃,maximum ambient 85℃,maximum temperature change
6	Contact Resistance	30 mΩ maximum when measured at 20 mV maximum open circuit at 100 mA. Mated test contacts must be in a connector housing.	EIA 364-23 The object of this test is to detail a standard method to measure the electrical resistance across a pair of mated contacts such that the insulating films, if present, will not be broken or asperity melting will not occur.
7	Dielectric withstanding Voltage	The dielectric must withstand 500 V AC for one minute at sea level.	EIA 364-20 The object of this test procedure is to detail a test method to prove that a USB connector can operate safely at its rated voltage and withstand momentary over potentials due to switching,surges, and/or other similarphenomena.
8	Insulation Resistance	1,000 MΩ minimum.	EIA 364-21 The object of this test procedure is to detail a standard method to assess the insulation resistance of USB connectors. This test procedure is used to determine the resistance offered by the insulation materials and the various seals of a connector to a DC potential tending to produce a leakage of current through or on the surface of these members.
9	Temperature Rising	30℃ Max. Under loaded rating current	Contact series-wired, apply test current of loaded rating current to the circuit, and measure the temperature rising by probing on soldered areas of contacts, after the temperature becomes stabilized deduct ambient temperature from the measured value.
Mechanical Requirement			
10	Connector Mating Force	35 Newtons maximum at a maximum rate of 12.5 mm (0.492”) per minute.	The object of this test is to detail a standard method for determining the mechanical forces required for inserting a USB connector. EIA 364-13

TEST ITEM		REQUIREMENT	PROCEDURE
11	Connector Unmating Force	10 Newtons minimum at a maximum rate of 12.5 mm(0.492”) per minute.	The object of this test is to detail a standard method for determining the mechanical forces required for extracting a USB connector. EIA 364-13
12	Durability	1,500 insertion/extraction cycles at a maximum rate of 200 cycles per hour.	The object of this test procedure is to detail a uniform test method for determining the effects caused by subjecting a USB connector to the conditioning action of insertion and extraction, simulating the expected life of the connectors. Durability cycling with a gauge is intended only to produce mechanical stress. Durability performed with mating components is intended to produce both mechanical and wear stress. EIA 364-09
13	Vibration	No discontinuities of 1 μs or longer duration when mated USB connectors are subjected to 5.35 Gs RMS. 15 minutes in each of three mutually perpendicular planes.	Test Condition V Test Letter A This test procedure is applicable to USB connectors that may, in service, be subjected to conditions involving vibration. Whether a USB connector has to function during vibration or merely to survive conditions of vibration should be clearly stated by the detailed product specification. In either case, the relevant specification should always prescribe the acceptable performance tolerances. EIA 364-28
14	Mechanical Shock	No discontinuities of 1 μs or longer duration when mated USB connectors are subjected to 11 ms duration 30 Gs half-sine shock pulses. Three shocks in each direction applied along three mutually perpendicular planes for a total of 18 shocks.	Test Condition H The object of this test procedure is to detail a standard method to assess the ability of a USB connector to withstand specified severity of mechanical shock. EIA 364-27
15	Solder ability	USB contact solder tails must pass 95% coverage after one hour steam aging as specified in Category 2.	1)Temperature of fused solder: 245+5℃. 2)Dipping time:5+0.5s EIA 364-52
Environmental Requirements			
16	Resistance to Solder Heat	Forming resin shall not be distorted, and terminations shall not be separated.	1) Depth of dipping termination: the distance between the mounting surface and solder surface shall be 1 mm to 2mm. 2)Temperature:245±5℃. 3) Dipping time: 10±1s Socket EIA 364-56
17	Thermal Shock	10 cycles – 55 ˚C and +85 ˚C. The USB connectors under test must be mated.	Test Condition I The object of this test is to determine the resistance of a USB connector to exposure at extremes of high and low temperatures and to the shock of alternate exposures to these extremes, simulating the worst case conditions for storage, transportation, and application. EIA 364-32

深圳市华联威电子科技有限公司

USB2.0系列產品SPEC

TEST ITEM		REQUIREMENT	PROCEDURE
18	Steady State Humidity	168 hours minimum (seven complete cycles). The USB connectors under test must be tested in accordance with EIA 364-31.	Test Condition A Method III The object of this test procedure is to detail a standard test method for the evaluation of the properties of materials used in USB connectors as they are influenced by the effects of high humidity and heat. EIA 364-31
19	Temperature Life (Heat Aging)	Must meet the minimum requirements specified by the most current version of Chapter 6 of the USB Specification and must be free of cosmetic and/or mechanical imperfections that will prevent normal use.	Test Condition 4 - Method A.The object of this test procedure is to detail a standard method to assess the ability of a USB connector to withstand +85º C± 2 temperatures without applied voltage for 500 hours. EIA 364-17
20	Salt Spray	Visual Inspection-No physical damageLLCR-50 m Ω max per contact	Mated connector expose to 5% salt concentration for 12 hours at temperature 35+2 ℃.After the test specimens shall be washed with running water and dried naturally EIA 364-26

Product Qualification and Requalification test

Test or Examination	Test Group									
	A	B	C	D	E	F	G	H	I	J
	Test Sequence（a）									
Examination of Product	1, 7	1, 9	1, 6	1, 5	1, 5	1, 5	1, 5	1, 3	1, 3	1, 3
Contact Resistance		2, 8	2, 5	2, 4	2, 4	2, 4	2, 4			
Dielectric withstanding	3, 6									
Insulation Resistance	2, 5									
Temperature Rising								2		
Mating Force		3, 7								
Unmating Force		4, 6								
Durability		5								
Vibration			3							
Mechanical Shock			4							
Solderability										2
Resistance to Soldering									2	
Thermal Shock				3						
Humidity Temperature	4				3					
Temperature Life						3				
Salt Spray							3			
備注	無客戶指定增加測試項目外，依照此標准進行產品可靠性評估。									

審核：　　制定： Hexing

深圳市华联威电子科技有限公司

SHENZHENHUALIANWEIELECTRONICS CO., LTD.

測 試 報 告

TEST REPORT

產品名稱 Part Name	AM 鱼叉	測試日期 Date of Testing	2013.12.01~ 2013.12.02	報告編號 Report NO.	MD20131202-01
產品型號 Part Name	91-US01-034	樣品數量 Quantity	5PCS	測試環境 Measuring Environment	濕 度Temp:18~21℃ 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	測試記錄Testing Result					判定Judge	
					1	2	3	4	5	Pass	Fail
1	Contact resistance	Test current:100mA max	DIGITAL MICRO-OHMMETER	30 mΩ Max	14.25 mΩ	13.26 mΩ	13.18 mΩ	12.32 mΩ	13.42 mΩ	P	
2	Insulation resistance	Test voltage500VDC Operation stated:1min	ULTRA HIGH RESISTANCE METER	1000 MΩ Min	1548 MΩ	1528 MΩ	1436 MΩ	1348 MΩ	1370 MΩ	P	
3	Dielectric 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	測試記錄Testing Result					判定Judge	
					1	2	3	4	5	Pass	Fail
1	Durability test	Rate:200cycles/hour Total: 1500 cycles	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	3.5kgf Max	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	1.0kgf.min	Pass	Pass	Pass	Pass	Pass	P	

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	Humidity-Temperature cycle	Temperature: 40±2℃ Humidity: 90~95% Duration:168H	PROGRAM CONTROLLED TEMP. & HUMIDTY CHAMBER	No physical damage	Pass	Pass	Pass	Pass	Pass	P	
2	Heat test	Temperature: 70±2℃ Duration:168H	OVEN	No physical damage	Pass	Pass	Pass	Pass	Pass	P	

3	Cold test	Temperature: −25±3℃ Duration:168H	PROGRAM CONTROLLED TEMP. & HUMIDTY CHAMBER	No physical damage	Pass	Pass	Pass	Pass	Pass	P	
4	Temperature cycling test	Temperature: 70~−25 ℃ 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℃ Concentration:5±1 % Duration:12H	SALT SPRAY TESTER	No Oxidation	Pass	Pass	Pass	Pass	Pass	P	
2	Resistance to soldering heat test	Temperature: 245±5℃ Duration:10±1sec	OVEN	No physical damage	Pass	Pass	Pass	Pass	Pass	P	
3	Solder ability test	Temperature: 245±5℃ Duration:5±0.5 sec	CONTROLLED CONSTANT-TEMP SOLDER POT	Soldering area ≥95%	Pass	Pass	Pass	Pass	Pass	P	
判 定 Result		■合格 (ACCEPT)		□ 不合格 (REJECT)							

審核(Approver): 耿运宏　　測試(Tester): 蔡念

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 2013年12月01日 版次:A0

料號	91-US01-034	制令單號	/	送檢單位	工程部	首件製作者	裝配
品名	AM 鱼叉	客戶代號	/	批 量	/	送檢時間	/
				數 量	5PCS	確認時間	/

抽 樣 標 準	■單次 □雙次	抽样数	AQL	CRI:0	MAJ:0.40	MIN:0.65
MIL-STD-105E(II)	■正常 □加嚴 □減量	(5PCS)	ACC/REJ	0	/	/

不 良 数: CRI (/) MAJ (/) MIN (/) 不良率(%) /

NO.	檢驗項目	檢測儀器	驗 記 錄				品管判定			CRI	MAJ	MIN	備注
尺寸測量	單位:MM/G		1	2	3	4	5	AC	RE				
	7.00±0.20	D	7.02	7.05	6.98	7.00	7.03	√					
	2.00±0.20	D	2.02	1.98	2.00	2.03	1.98	√					
	20.15±0.20	A	20.18	20.17	20.15	20.18	20.17	√					
	18.70±0.20	A	18.79	18.80	18.78	18.81	18.76	√					
	7.00±0.20	D	7.04	7.05	7.03	7.00	7.01	√					
	6.00±0.20	D	6.02	6.00	5.96	6.01	6.03	√					
	12.00±0.20	A	12.01	12.03	11.98	12.02	12.00	√					
	13.75±0.20	D	13.67	13.77	13.75	13.73	13.80	√					
	4.20±0.20	A	4.23	4.25	4.22	4.21	4.26	√					
	0.05±0.20	D	0.07	0.08	0.05	0.07	0.06	√					
	17.05±0.20	D	17.08	17.04	17.05	17.10	17.06	√					
	1.95±0.20	D	1.89	1.91	1.93	1.97	1.95	√					
	4.50±0.20	A	4.51	4.52	4.48	4.50	4.49	√					
	14.80±0.20	A	14.85	14.87	14.89	14.80	14.83	√					
	15.20±0.20	A	15.25	15.23	15.20	15.18	15.16	√					
	0.80±0.20	D	0.83	0.85	0.83	0.85	0.82	√					
	4.85±0.20	D	4.87	4.83	4.85	4.88	4.82	√					

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 APP	耿运宏	審 核 CHK	/	檢驗員 INSPBY	蔡念

保存期限:三年 保存部門：品保部 QR-M-003

深圳市华联威电子科技有限公司

电镀报告表

品名:AM 鱼叉（端子）		版次:A.0
电镀规格:Au1u″,Ni40u″,Sn40u″	日期:2013-12-11	页次:1/1

厂商:尚笠五金电镀厂

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	63.8u″	OK	2013-12-11	8:30:02
2	40u″MIN	65.3u″	OK	2013-12-11	8:30:04
3	40u″MIN	67.5u″	OK	2013-12-11	8:30:06
4	40u″MIN	64.2u″	OK	2013-12-11	8:30:08

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	85.9u″	OK	2013-12-11	8:45:08
2	40u″MIN	71.7u″	OK	2013-12-11	8:45:10
3	40u″MIN	73.1u″	OK	2013-12-11	8:45:12
4	40u″MIN	77.5u″	OK	2013-12-11	8:45:14

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	1u″MIN	1.12u″	OK	2013-12-11	9:00:05
2	1u″MIN	1.05u″	OK	2013-12-11	9:00:07
3	1u″MIN	1.13u″	OK	2013-12-11	9:00:09
4	1u″MIN	1.07u″	OK	2013-12-11	9:00:11

核准：胡红元2013/12/11　　审核：余凤涛2013/12/11　检验员：张勇2013/12/11

深圳市华联威电子科技有限公司

电镀报告表

品名:USB AM 鱼叉(外壳)		版次:A.0
电镀规格:Cu:40u″MIN,Ni:40u″MIN	日期:2013-12-12	页次:1/1

厂商:尚笠五金电镀厂

测试设备:CMI X-射线膜厚测试仪

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	40u″MIN	57.7u″	OK	2013-12-12	14:20:22
2	40u″MIN	56.2u″	OK	2013-12-12	14:20:24
3	40u″MIN	55.6u″	OK	2013-12-12	14:20:26
4	40u″MIN	53.3u″	OK	2013-12-12	14:20:28

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	40u″MIN	77.8u″	OK	2013-12-12	14:30:11
2	40u″MIN	76.7u″	OK	2013-12-12	14:30:13
3	40u″MIN	78.5u″	OK	2013-12-12	14:30:15
4	40u″MIN	75.9u″	OK	2013-12-12	14:30:17

核准：胡红元2013/12/12　　审核：余凤涛2013/12/12　检验员：张勇2013/12/12

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-1344
METHOD	NEUTRL SALT SPRAY CORROSION TEST	REF	
客户		试验起始日期	2013年 12月12日 20:00 时起
		DATE	2013年 12月13日 08:00 时止
样品名称	AM 鱼叉	试验数量	5PCS
P/N	91-US01-034	QTY	

试验条件 （TEST CONDDITION）

1、盐水溶解（SALT SOLUTION：浓度50±10g/L，PH值6.5-7.2.

2、试验室温度（TEMP.IT THE SPRAY DHAMBR):35±1℃.

3、盐水桶温度（TEMP.OF SALE SOL′N TANK)：35±1℃.

4、 压力桶温度 （TEMP.OF SAR SUPPLIERY）：47±1℃.

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±0.01Kg/cm^2.

7、 样品放置位置（SPECIMEN SUPPORTED ANGLE ）：尼龙绳吊挂70°-90°.

8、 喷雾收集量（COLLECT RATE OF SALT SOL′N）1-2mL/(8 cm^2hr).

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，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:胡红元 2013.12.13 审核:何静 2013.12.13 试验员:孟蕊 2013.12.13

东莞市翔骏塑胶制品有限公司

地　　址：东莞市常平镇朗洲工业二路

TEL:0769-83811691　FAX:0769-83811692

网址：http//www.xiangjunsj.com　E-mail:china_pbt@126.com

材质证明（物性表）

PBTHB+25%GF NC（不防火加纤25%白色）

性能	测试方法METHOD	单位	参数
玻　纤　含 PERCENT OF FIBRE-GALSS	燃烧法	%	25
比　重 SPECJFIC GRAVITY	ASTMD -792	/	1.55
模 收 缩 率 MOLD SHRINKAGE	ASTMD -955	%	0.3-0.4
拉 伸 强 度 TENSILE YIELD STRENGTH	ASTMD-638	Kg/mm²	10
伸　长　率 ELONGATTON AT BREAK	ASTMD-638	%	6.8
弯 曲 强 度 FLEXURAL STRENGTH	STMD-790	Kg/mm²	14.5
缺口冲击强度 IZOD IMPACK STRENGTH	ASTMD-256	J	6.5
燃　烧　性 FLAMMABTLITY	UL94	/	HB

PBT特性：本产品具有优良之耐化学学性、耐腐性;结晶快、易成型 、耐热性好。

审核：张德成　　主管：罗冰　　制表：周小龙

REPORT OF MATERIAL TEST

怡程金属（深圳）有限公司
地址：深圳市龙岗区坪山镇深圳出口加工区
TEL：0755-61291589 FAX：0755-61291289

DATE：NOV.24.06

Customer:	Commodity: C 2680 R BRASS STRIP (H)	INVOICE/NO:L0951124
Applied Standard:CNS 4383 Brass Sheets, Plates and Strips		

Chemical Analysis Test

I/No.	Size of Product			Cu(%)	Fe(%)	Pb(%)	Zn(%)			
	Thickness (mm)	Width (mm)	Length (mm)							
	Standard			64.00 - 68.00	max. 0.050	max. 0.070	REM.			
6	0.2	27.8		65.61	0.035	0.007	REM.			
7	0.2	19		65.61	0.035	0.007	REM.			
8	0.2	32		65.61	0.035	0.007	REM.			
9	0.2	32.8		65.61	0.035	0.007	REM.			
10	0.2	68		65.61	0.035	0.007	REM.			

Mechanical & Physical Test

I/No.	Size of Product			Dimension Test		Tension Test		Hardness Test HV	Grain Size (mm)	Electric Conductirity (%)
	Thickness (mm)	Width (mm)	Length (mm)	Thickness (mm)	Width (mm)	TensileStrength (kgf/mm2)	Elongation (%)			
	Standard				(-)0.10 ~ (+) 0.00	42-55	-	min-	-	-
6	0.2	27.8		G00D.	G00D.	49.32	7.55	148-158	-	24.03
7	0.2	19		G00D.	G00D.	49.32	7.55	148-158	-	24.03
8	0.2	32		G00D.	G00D.	49.32	7.55	148-158	-	24.03
9	0.2	32.8		G00D.	G00D.	49.32	7.55	148-158		24.03
10	0.2	68		G00D.	G00D.	49.32	7.55	148-158		24.03

QC Supervisor: 余会

佛山市宏森金属材料有限公司
Foshan HongSen Metal Materials Co., LTD

产 品 质 量 证 明 书
MILL TEST CERTIFICATE

客户名称 （Customer）：

产品名称（Product）：冷轧带钢　　日 期：　2011年2月20日

交货状态(Supply Condition)：硬卷

序号	牌号	规格（mm）	化学成分（Chemical Composition %）						力学试验(Tensile Test)			冷弯(Bend)	硬度	屈强比
NO.	Steel Grade	Size +0 −0.02	C	Si	Mn	P	S	Alt	抗拉强度 T.S.Mpa	屈服强度 Y.S.Mpa	伸长 EL%	180°	Hardness (Hw)	Y.S/T.S
1	SPCC-SD	0.3*1200	0.020-0.040	0.008	0.11	0.011	0.005	0.03	320	290	≥40	合格	110-130	
2														
3														
4														
5														
6														
注释 Notes		Y.S=Yield Strength　T.S=Tensile Strength　EL=Elongation												
执行标准Standard		企业标准												

本产品已按上述标准要求制造和检验，其结果符合要求，特此声明.贵方查询有关问题，请与我公司联系.

We hereby certify that material described herin has manufactured and tested with satisfactory results in accordance with the requirements of the above material specification .If you have any questions,please contact our company.

测试报告

No. CANEC1314314607　　日期: 2013年09月24日　　第1页,共7页

深圳市华联威电子科技有限公司

深圳市龙华新区观澜丹坑村润塘工业区6栋

以下测试之样品是由申请者所提供及确认 : PBT 白胶芯

SGS工作编号 :	CP13-044668 - GZ
型号 :	USB AF 直插长体胶芯
客户参考信息 :	USB系列
样品接收日期 :	2013年09月11日
测试周期 :	2013年09月11日 - 2013年09月17日
测试要求 :	根据客户要求测试
测试方法 :	请参见下一页
测试结果 :	请参见下一页
结论 :	基于所送样品进行的测试，镉、铅、汞、六价铬、多溴联苯(PBB)、多溴二苯醚(PBDE)的测试结果符合欧盟RoHS指令2002/95/EC的重订指令2011/65/EU附录II的限值要求。

通标标准技术服务有限公司

授权签名

Merry Lv吕爱凤

批准签署人

备注: 根据客户申请, SGS出具了此中文报告, 英文版本可根据客户要求提供. (The Chinese test report is issued according to the applicant's request. The English version is available from SGS if further needed)

SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch Testing Center
198 Kezhu Road,Scientech Park Guangzhou Economic & Technology Development District,Guangzhou,China 510663 t (86-20) 82155555 f (86-20) 82075113 www.sgsgroup.com.cn
中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075113 e sgs.china@sgs.com
Member of the SGS Group (SGS SA)

测试结果 :

测试样品描述 :

样品编号	SGS样品ID	描述
1	CAN13-143146.007	浅蓝色塑胶

备注 :

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = 方法检测限

(3) ND = 未检出 (< MDL)

(4) "-" = 未规定

RoHS指令2011/65/EU

测试方法 : (1)参考IEC 62321-5:2013，用ICP-OES测定镉的含量
(2)参考IEC 62321-5:2013，用ICP-OES测定铅的含量
(3)参考IEC 62321-4:2013，用ICP-OES测定汞的含量
(4)参考IEC 62321:2008，用紫外-可见分光光度计比色法测定六价铬的含量
(5)参考IEC 62321:2008，用GC-MS测定PBBs(多溴联苯)和PBDEs(多溴二苯醚) 的含量

测试项目	限值	单位	MDL	*007*
镉 (Cd)	100	mg/kg	2	ND
铅 (Pb)	1,000	mg/kg	2	ND
汞 (Hg)	1,000	mg/kg	2	ND
六价铬(Cr(VI))	1,000	mg/kg	2	ND
多溴联苯之和(PBBs)	1,000	mg/kg	-	ND
一溴联苯	-	mg/kg	5	ND
二溴联苯	-	mg/kg	5	ND
三溴联苯	-	mg/kg	5	ND
四溴联苯	-	mg/kg	5	ND
五溴联苯	-	mg/kg	5	ND
六溴联苯	-	mg/kg	5	ND
七溴联苯	-	mg/kg	5	ND
八溴联苯	-	mg/kg	5	ND
九溴联苯	-	mg/kg	5	ND
十溴联苯	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1,000	mg/kg	-	ND
一溴二苯醚	-	mg/kg	5	ND
二溴二苯醚	-	mg/kg	5	ND

测试项目	限值	单位	MDL	*007*
三溴二苯醚	-	mg/kg	5	ND
四溴二苯醚	-	mg/kg	5	ND
五溴二苯醚	-	mg/kg	5	ND
六溴二苯醚	-	mg/kg	5	ND
七溴二苯醚	-	mg/kg	5	ND
八溴二苯醚	-	mg/kg	5	ND
九溴二苯醚	-	mg/kg	5	ND
十溴二苯醚	-	mg/kg	5	ND

备注 :

(1) 最大允许极限值引用自指令2011/65/EU 附录II.

邻苯二甲酸盐(或酯)

测试方法 : 参考EN 14372: 2004的方法测定, 采用GC-MS进行分析.

测试项目	CAS NO.	单位	MDL	*007*
邻苯二甲酸二丁酯 (DBP)	84-74-2	%(w/w)	0.003	ND
邻苯二甲酸丁酯苄酯 (BBP)	85-68-7	%(w/w)	0.003	ND
邻苯二甲酸二(2-乙基己基)酯(DEHP)	117-81-7	%(w/w)	0.003	0.069

备注 :

(1) 参考信息： RoHS指令2002/95/EC的重订指令2011/65/EU：
邻苯二甲酸二(2-乙基己基)酯(DEHP)，邻苯二甲酸丁酯苄酯(BBP)和邻苯二甲酸二丁酯(DBP) 被列为需优先进行风险评估和考虑进行限制的物质。

六溴环十二烷(HBCDD)

测试方法 : 参考IEC 62321:2008， 用GC-MS分析。

测试项目	单位	MDL	*007*
六溴环十二烷(HBCDD)	mg/kg	10	ND

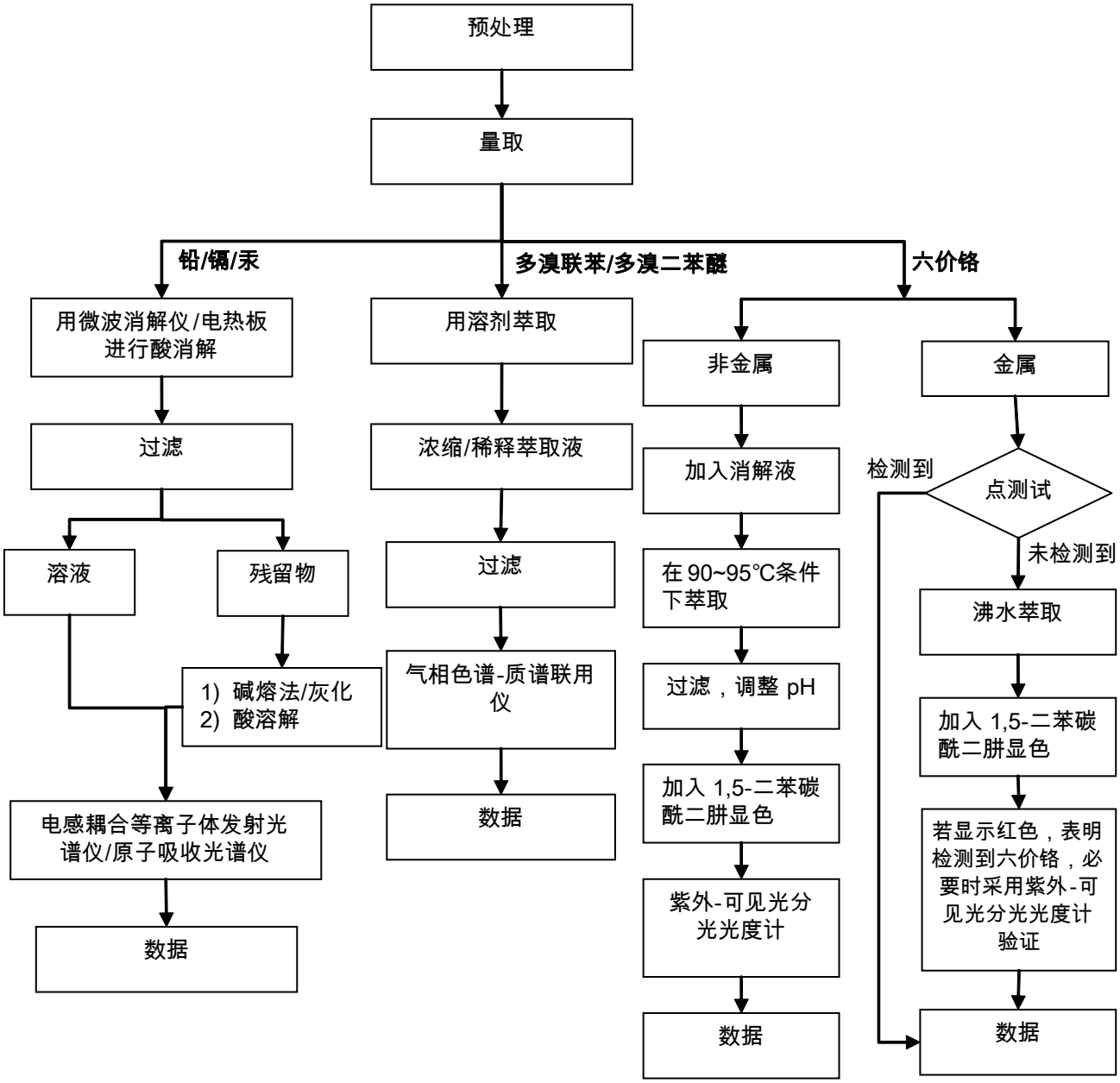
备注 :

(1) 参考信息：RoHS指令2002/95/EC的重订指令2011/65/EU：
六溴环十二烷(HBCDD) 被列为需优先进行风险评估和考虑进行限制的物质。

附件

RoHS 测试流程图

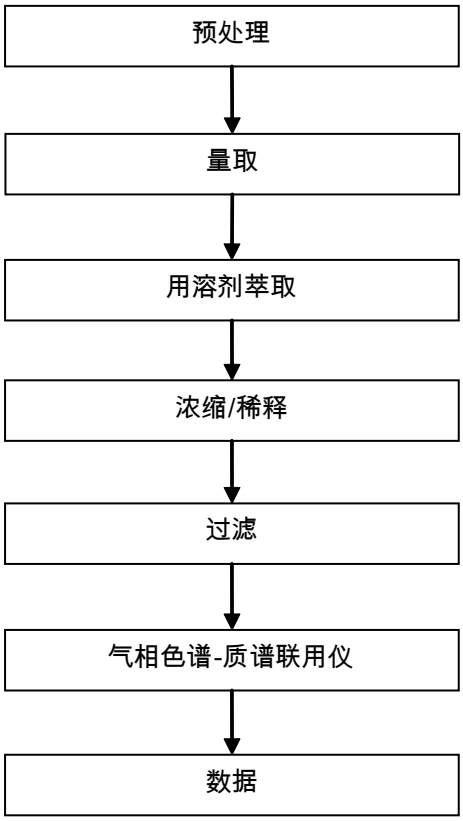
1) 分析人员：曹阳 / 余晓璐
2) 项目负责人：余奕东 / 魏红
3) 样品按照下述流程被完全消解（六价铬和多溴联苯 /多溴二苯醚测试除外）。



附件

Phthalates 测试流程图

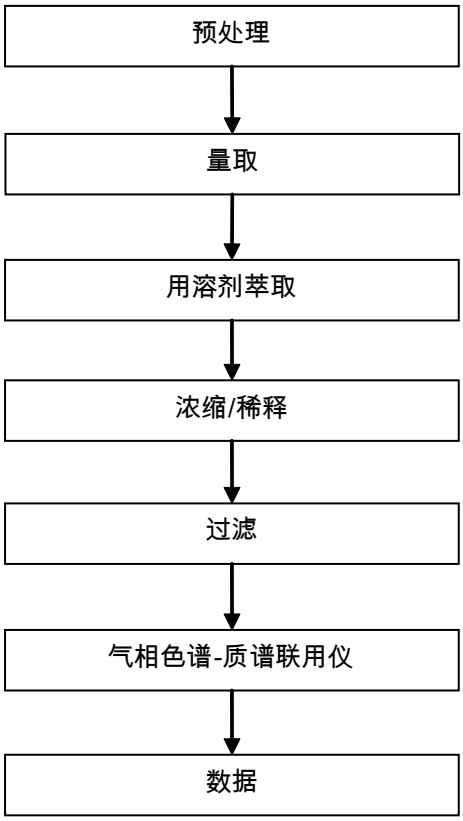
1) 分析人员：刘琼
2) 项目负责人：魏红



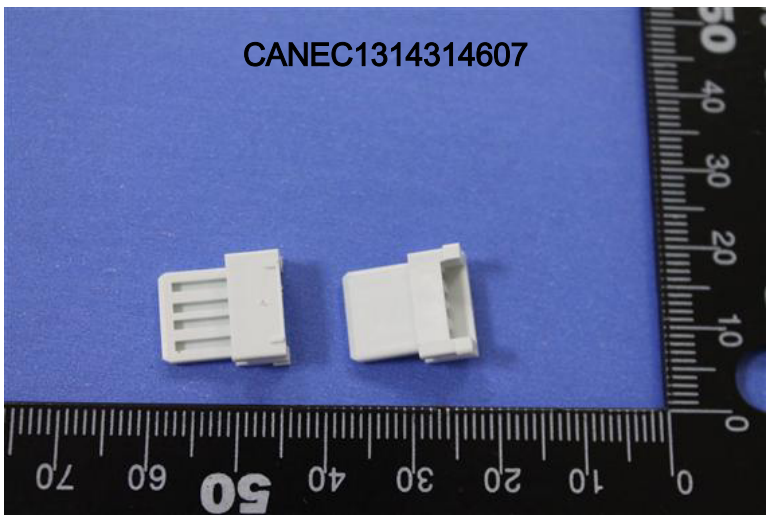
附件

HBCDD 测试流程图

1) 分析人员：余晓璐
2) 项目负责人：魏红



样品照片:



CAN13-143146.007

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198 Kezhu Road,Scientech Park Guangzhou Economic & Technology Development District,Guangzhou,China 510663 t (86-20) 82155555 f (86-20) 82075113 www.sgsgroup.com.cn
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测试报告

No. CANEC1314314601　　日期: 2013年09月24日　　第1页,共4页

深圳市华联威电子科技有限公司

深圳市龙华新区观澜丹坑村润塘工业区6栋

以下测试之样品是由申请者所提供及确认 : C2680 黄铜端子

SGS工作编号 :	CP13-044668 - GZ
型号 :	USB AF 180 度双层长端子
客户参考信息 :	USB系列，1394系列，D-SUB系列，RJ45系列，HDMI系列
样品接收日期 :	2013年09月11日
测试周期 :	2013年09月11日 - 2013年09月17日
测试要求 :	根据客户要求测试
测试方法 :	请参见下一页
测试结果 :	请参见下一页
结论 :	基于所送样品进行的测试，镉、铅、汞、六价铬的测试结果符合欧盟RoHS指令2002/95/EC的重订指令2011/65/EU附录II的限值要求。

通标标准技术服务有限公司

授权签名

Merry Lv吕爱凤

批准签署人

备注: 根据客户申请, SGS出具了此中文报告, 英文版本可根据客户要求提供. (The Chinese test report is issued according to the applicant's request. The English version is available from SGS if further needed)

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Member of the SGS Group (SGS SA)

测试结果 :

测试样品描述 :

样品编号	SGS样品ID	描述
1	CAN13-143146.001	银灰色带黄铜色金属

备注 :

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = 方法检测限

(3) ND = 未检出 (< MDL)

(4) "-" = 未规定

RoHS指令2011/65/EU

测试方法 : (1)参考IEC 62321-5:2013，用ICP-OES测定镉的含量
(2)参考IEC 62321-5:2013，用ICP-OES测定铅的含量
(3)参考IEC 62321-4:2013，用ICP-OES测定汞的含量
(4)参考IEC 62321:2008，用点测试法/紫外-可见分光光度计比色法测定六价铬的含量

测试项目	限值	单位	MDL	*001*
镉 (Cd)	100	mg/kg	2	ND
铅 (Pb)	1,000	mg/kg	2	10
汞 (Hg)	1,000	mg/kg	2	ND
六价铬(Cr(VI))	-	-	◇	阴性

备注 :

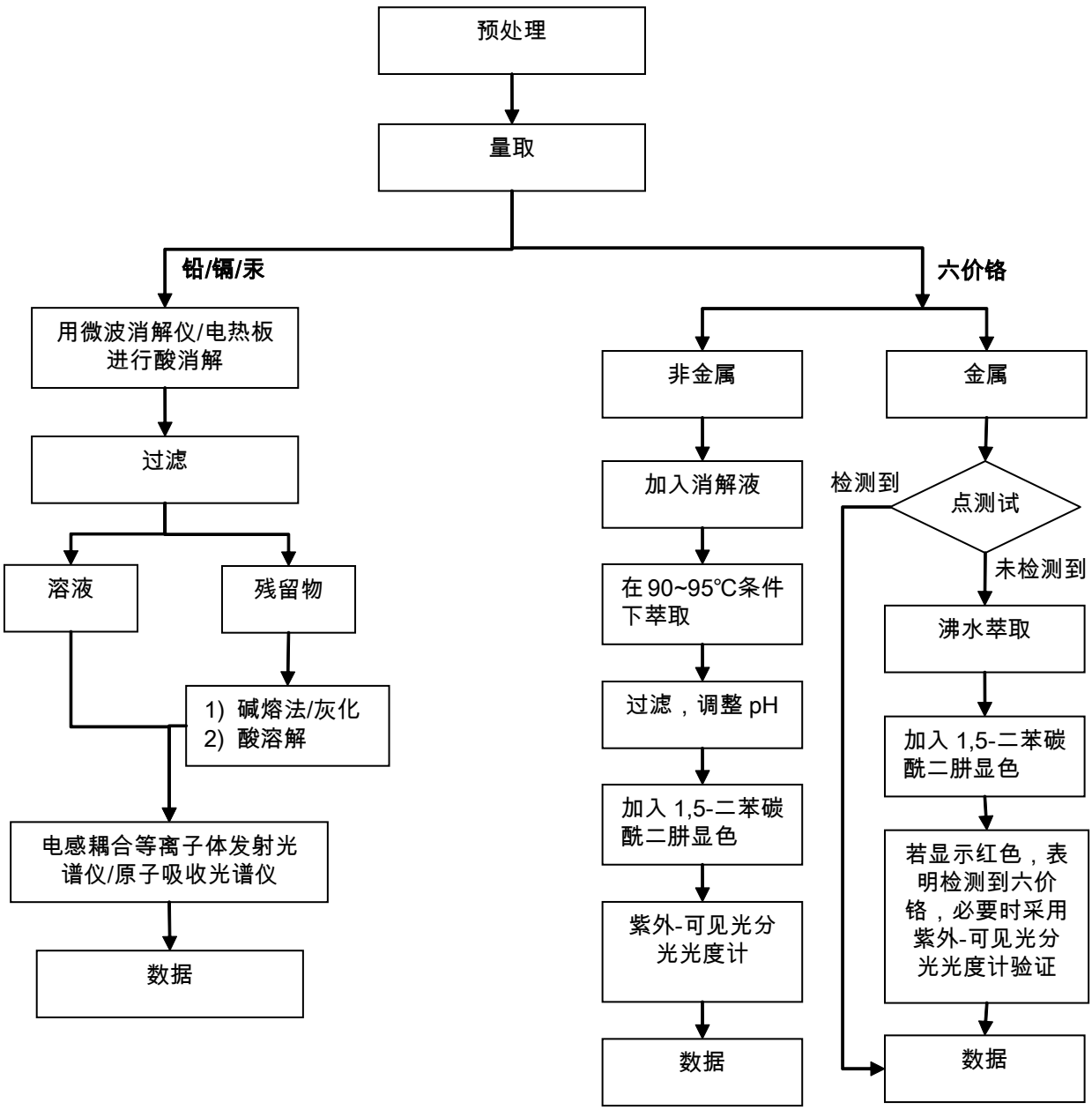
(1) 最大允许极限值引用自指令2011/65/EU 附录II.

(2) ◇点测试法:
阴性= 未检测到六价铬, 阳性= 检测到六价铬;
(当点测试结果为阴性或无法确定时,将采用沸水萃取法作进一步的结果验证.)
◇沸水萃取法:
阴性= 未检测到六价铬
阳性= 检测到六价铬; 表明50 cm²表面积的被测试样品的沸水萃取液中六价铬的浓度等于或大于0.02 mg/kg
由于未获知样品的存储条件和生产日期, 样品的六价铬测试结果仅能代表测试时样品含六价铬的状态。

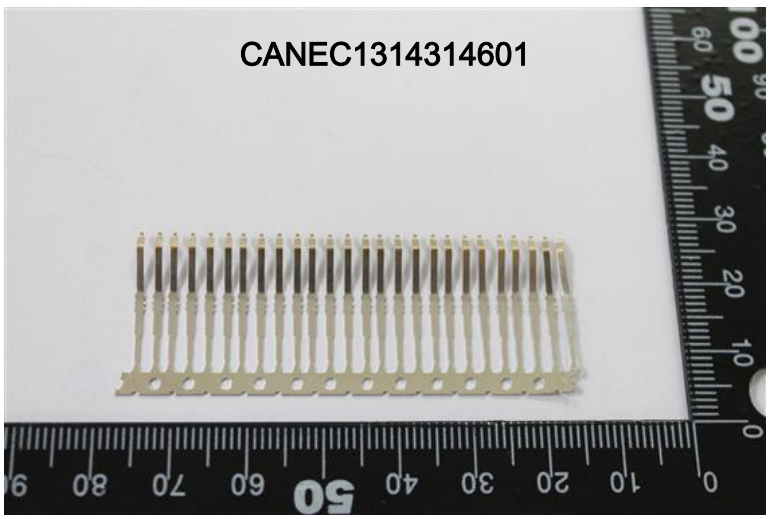
附件

RoHS 测试流程图

1) 分析人员：曹阳
2) 项目负责人：余奕东
3) 样品按照下述流程被完全消解（六价铬测试除外）。



样品照片:



CAN13-143146.001

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测试报告

No. CANEC1314314603　　日期: 2013年09月24日　　第1页,共4页

深圳市华联威电子科技有限公司

深圳市龙华新区观澜丹坑村润塘工业区6栋

以下测试之样品是由申请者所提供及确认 : SPCC 铁壳

SGS工作编号 :	CP13-044668 - GZ
型号 :	USB AF 90度双层半包外壳
客户参考信息 :	USB系列，PS/2系列，音频JACK系列，RJ45系列，HDMI系列，D-SUB系列
样品接收日期 :	2013年09月11日
测试周期 :	2013年09月11日 - 2013年09月17日
测试要求 :	根据客户要求测试
测试方法 :	请参见下一页
测试结果 :	请参见下一页
结论 :	基于所送样品进行的测试，镉、铅、汞、六价铬的测试结果符合欧盟RoHS指令2002/95/EC的重订指令2011/65/EU附录II的限值要求。

通标标准技术服务有限公司

授权签名

Merry Lv吕爱凤

批准签署人

备注: 根据客户申请, SGS出具了此中文报告, 英文版本可根据客户要求提供. (The Chinese test report is issued according to the applicant's request. The English version is available from SGS if further needed)

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Member of the SGS Group (SGS SA)

测试结果 :

测试样品描述 :

样品编号	SGS样品ID	描述
1	CAN13-143146.003	银灰色金属

备注 :

(1) 1 mg/kg = 1 ppm = 0.0001%

(2) MDL = 方法检测限

(3) ND = 未检出 (< MDL)

(4) "-" = 未规定

RoHS指令2011/65/EU

测试方法 : (1)参考IEC 62321-5:2013，用ICP-OES测定镉的含量
(2)参考IEC 62321-5:2013，用ICP-OES测定铅的含量
(3)参考IEC 62321-4:2013，用ICP-OES测定汞的含量
(4)参考IEC 62321:2008，用点测试法/紫外-可见分光光度计比色法测定六价铬的含量

测试项目	限值	单位	MDL	*003*
镉 (Cd)	100	mg/kg	2	ND
铅 (Pb)	1,000	mg/kg	2	ND
汞 (Hg)	1,000	mg/kg	2	ND
六价铬(Cr(VI))	-	-	◇	阴性

备注 :

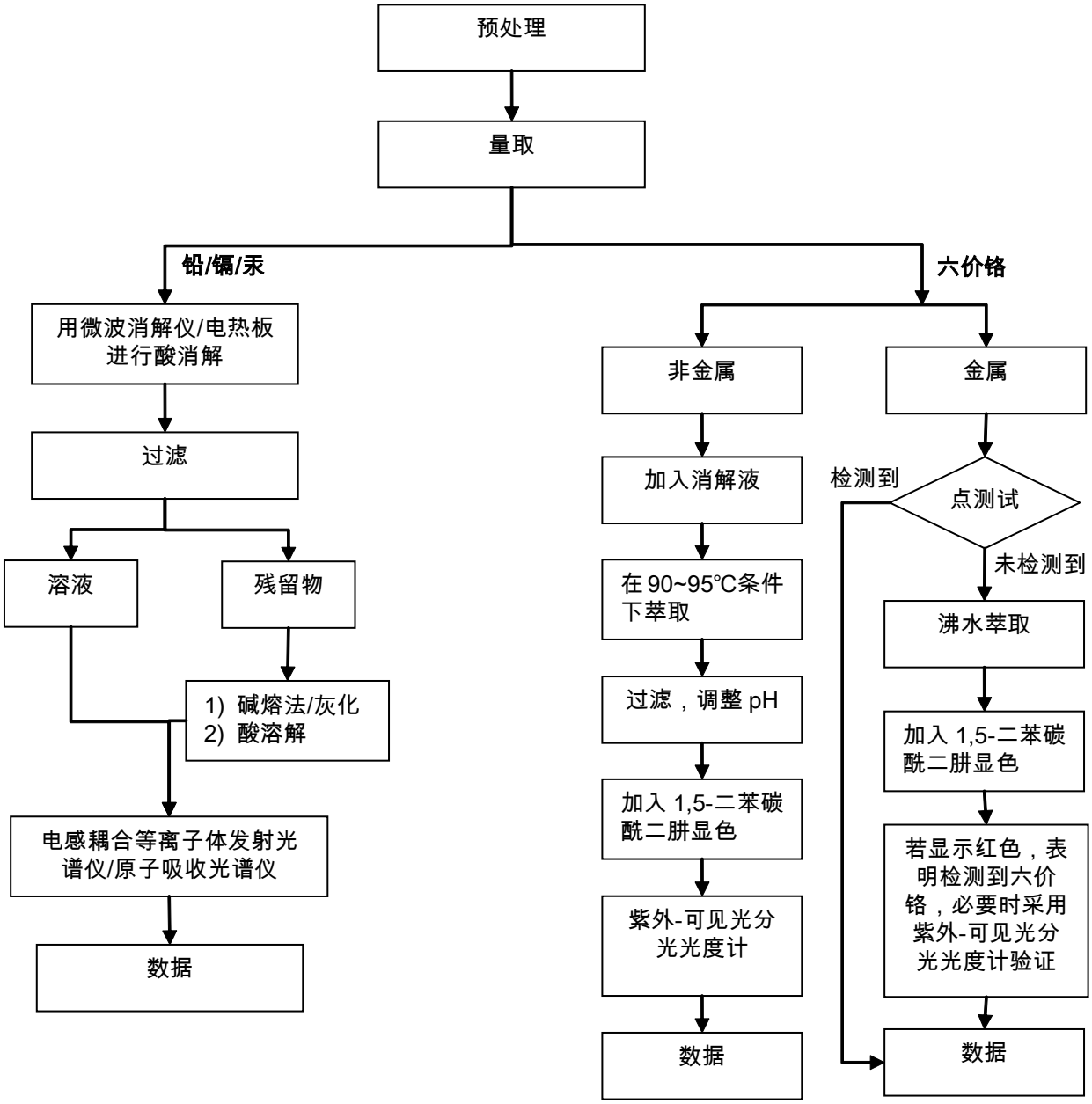
(1) 最大允许极限值引用自指令2011/65/EU 附录II.

(2) ◇点测试法:
阴性= 未检测到六价铬, 阳性= 检测到六价铬;
(当点测试结果为阴性或无法确定时,将采用沸水萃取法作进一步的结果验证.)
◇沸水萃取法:
阴性= 未检测到六价铬
阳性= 检测到六价铬; 表明50 cm²表面积的被测试样品的沸水萃取液中六价铬的浓度等于或大于0.02 mg/kg
由于未获知样品的存储条件和生产日期, 样品的六价铬测试结果仅能代表测试时样品含六价铬的状态。

附件

RoHS 测试流程图

1) 分析人员：曹阳
2) 项目负责人：余奕东
3) 样品按照下述流程被完全消解（六价铬测试除外）。



样品照片:

CAN13-143146.003

此照片仅限于随SGS正本报告使用

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Test Report

Report No. RLSZF001622580004

Applicant SHENZHEN JIN HEYUAN TECHNOLOGY CO., LTD.
Address VENTURE THREE ROAD SHENZHEN CITY BAOAN DISTRICT TOWN INDUSTRIAL ZONE, SONGGANG RIVER

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the client

Sample Name	亮锡镀层(Sn)
Sample Received Date	Mar. 21, 2013
Testing Period	Mar. 21, 2013 to Mar. 26, 2013

Test Requested As specified by client, to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)) in the submitted sample(s).

Test Method Please refer to the following page(s).

Test Result(s) Please refer to the following page(s).

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Conclusion

Tested Sample	According to directive	Result
Submitted Sample	2011/65/EU*	Pass

****

*=July 1, 2011, the EU Official Journal (OJ) released the directive 2011/65/EU which as a new version of RoHS Directive (2002/95/EC). The revised directive has entered into force on the twentieth day after its publication in the OJ.

Tested by Rick Li Reviewed by Vargas He

Approved by Danny Liu Date Mar. 26, 2013

Technical Manager

No. 1498398448

Test Report

Test Method

Test Item(s)	Test Method	Measured Equipment(s)	MDL
Lead(Pb)	Refer to IEC 62321:2008 Ed.1	ICP-OES	2 mg/kg
Cadmium(Cd)	Refer to IEC 62321:2008 Ed.1	ICP-OES	2 mg/kg
Mercury(Hg)	Refer to IEC 62321:2008 Ed.1	ICP-OES	2 mg/kg
Hexavalent Chromium(Cr(VI))	IEC 62321:2008 Ed.1 Annex B	UV-Vis	/

Test Result(s)

Tested Item(s)	**Result**	**Limit of Directive 2011/65/EU**
Lead(Pb)	38 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	100 mg/kg
Mercury(Hg)	N.D.	1000 mg/kg
Hexavalent Chromium(Cr(VI))	Negative	1000 mg/kg

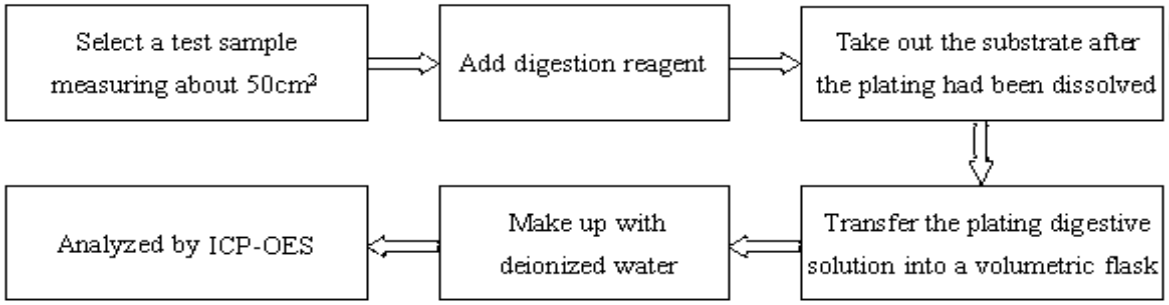
Tested Sample/Part Description Silvery plating

Note: **The washed plating had been dissolved totally tested for Lead, Cadmium, Mercury.**
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL)
-mg/kg = ppm = parts per million
-Negative = Absence of Cr(VI) , the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.02 mg/kg with 50cm² sample surface area used.

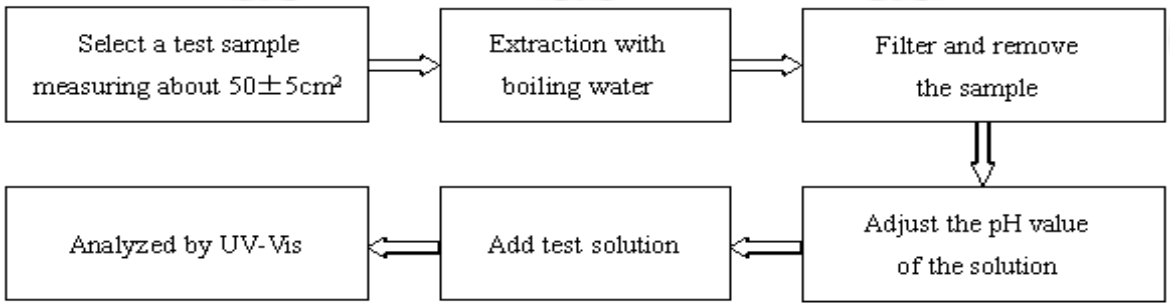
Test Report

Test Process

1. Lead(Pb), Cadmium(Cd), Mercury(Hg)

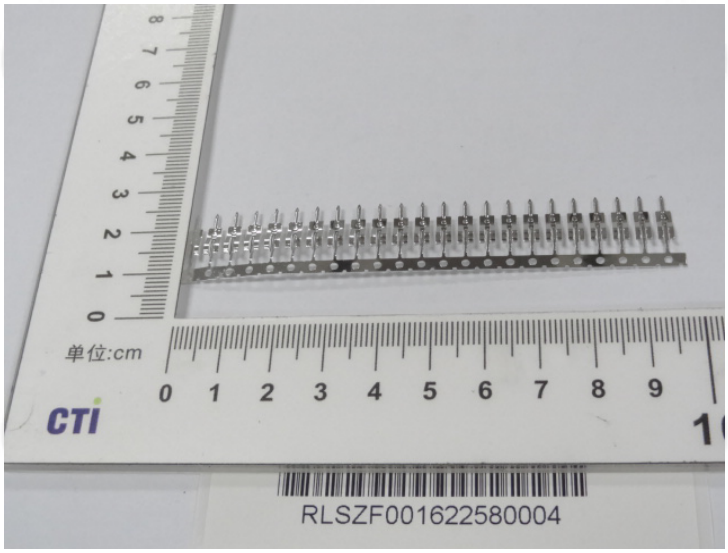


2. Hexavalent Chromium(Cr(VI))



Test Report

Photo(s) of the sample(s)



*** End of report ***

CTI 华测检测 CENTRE TESTING INTERNATIONAL

Test Report

Report No. RLSZF001622580002 Page 1 of 4

Applicant SHENZHEN JIN HEYUAN TECHNOLOGY CO., LTD.
Address VENTURE THREE ROAD SHENZHEN CITY BAOAN DISTRICT TOWN INDUSTRIAL ZONE, SONGGANG RIVER

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the client

Sample Name 金镀层(Au)
Sample Received Date Mar. 21, 2013
Testing Period Mar. 21, 2013 to Mar. 26, 2013

Test Requested As specified by client, to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)) in the submitted sample(s).

Test Method Please refer to the following page(s).

Test Result(s) Please refer to the following page(s).

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Conclusion

Tested Sample	According to directive	Result
Submitted Sample	2011/65/EU*	Pass

****

*=July 1, 2011, the EU Official Journal (OJ) released the directive 2011/65/EU which as a new version of RoHS Directive (2002/95/EC). The revised directive has entered into force on the twentieth day after its publication in the OJ.

Tested by Rick Li Reviewed by Vargas He

Approved by Danny Liu Date Mar. 26, 2013

Technical Manager

CENTRE TESTING INTERNATIONAL SZ03

No. 1498398448

Test Report

Report No. RLSZF001622580002

Test Method

Test Item(s)	Test Method	Measured Equipment(s)	MDL
Lead(Pb)	IEC 62321:2008 Ed.1 Sec.9	ICP-OES	2 mg/kg
Cadmium(Cd)	IEC 62321:2008 Ed.1 Sec.9	ICP-OES	2 mg/kg
Mercury(Hg)	IEC 62321:2008 Ed.1 Sec.7	ICP-OES	2 mg/kg
Hexavalent Chromium(Cr(VI))	IEC 62321:2008 Ed.1 Annex B	UV-Vis	/

Test Result(s)

Tested Item(s)	**Result**	**Limit of Directive 2011/65/EU**
Lead(Pb)	21 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	100 mg/kg
Mercury(Hg)	N.D.	1000 mg/kg
Hexavalent Chromium(Cr(VI))	Negative	1000 mg/kg

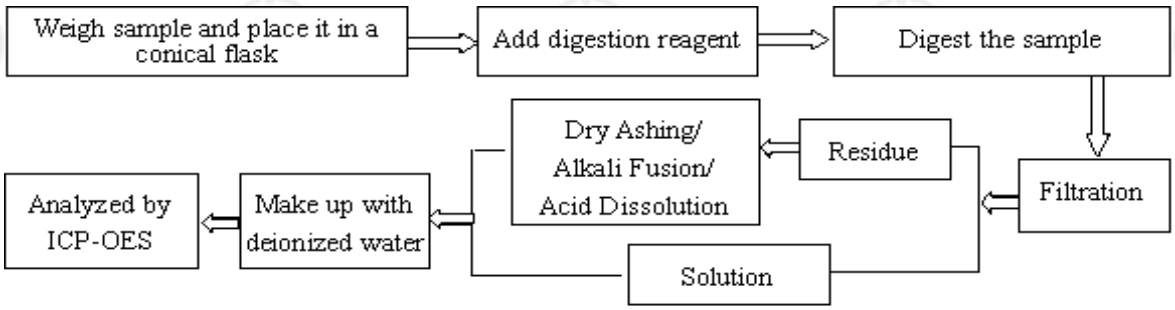
Tested Sample/Part Description Metal with golden/silvery plating

Note: **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL)
-mg/kg = ppm = parts per million
-Negative = Absence of Cr(VI) , the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.02 mg/kg with 50cm² sample surface area used.

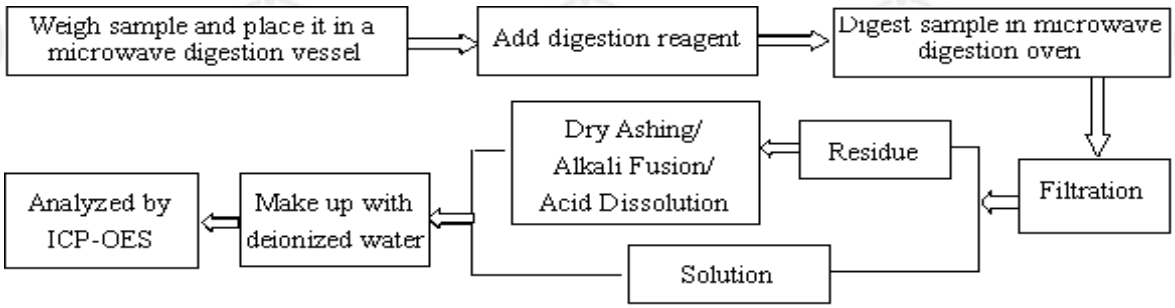
Test Report

Test Process

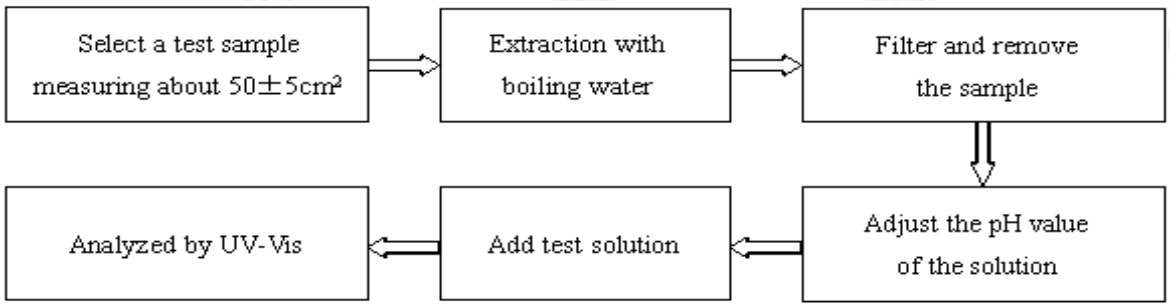
1. Lead(Pb), Cadmium(Cd)



2. Mercury(Hg)

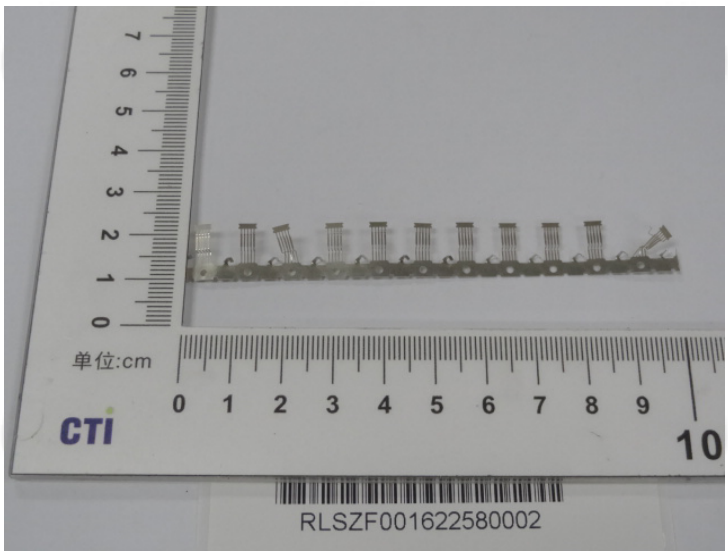


3. Hexavalent Chromium(Cr(VI))



Test Report

Photo(s) of the sample(s)



*** End of report ***

Test Report

Report No. RLSZF001622580003 Page 1 of 4

Applicant SHENZHEN JIN HEYUAN TECHNOLOGY CO., LTD.
Address VENTURE THREE ROAD SHENZHEN CITY BAOAN DISTRICT TOWN INDUSTRIAL ZONE, SONGGANG RIVER

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the client

Sample Name	镍镀层(Ni)
Sample Received Date	Mar. 21, 2013
Testing Period	Mar. 21, 2013 to Mar. 26, 2013

Test Requested As specified by client, to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)) in the submitted sample(s).

Test Method Please refer to the following page(s).

Test Result(s) Please refer to the following page(s).

****

Conclusion

Tested Sample	According to directive	Result
Submitted Sample	2011/65/EU*	Pass

****

*=July 1, 2011, the EU Official Journal (OJ) released the directive 2011/65/EU which as a new version of RoHS Directive (2002/95/EC). The revised directive has entered into force on the twentieth day after its publication in the OJ.

Tested by Rick Li Reviewed by Vargas He

Approved by Danny Liu Date Mar. 26, 2013

Technical Manager

No. 1498398448

Test Report

Test Method

Test Item(s)	Test Method	Measured Equipment(s)	MDL
Lead(Pb)	Refer to IEC 62321:2008 Ed.1	ICP-OES	2 mg/kg
Cadmium(Cd)	Refer to IEC 62321:2008 Ed.1	ICP-OES	2 mg/kg
Mercury(Hg)	Refer to IEC 62321:2008 Ed.1	ICP-OES	2 mg/kg
Hexavalent Chromium(Cr(VI))	IEC 62321:2008 Ed.1 Annex B	UV-Vis	/

Test Result(s)

Tested Item(s)	**Result**	**Limit of Directive 2011/65/EU**
Lead(Pb)	N.D.	1000 mg/kg
Cadmium (Cd)	N.D.	100 mg/kg
Mercury(Hg)	N.D.	1000 mg/kg
Hexavalent Chromium(Cr(VI))	Negative	1000 mg/kg

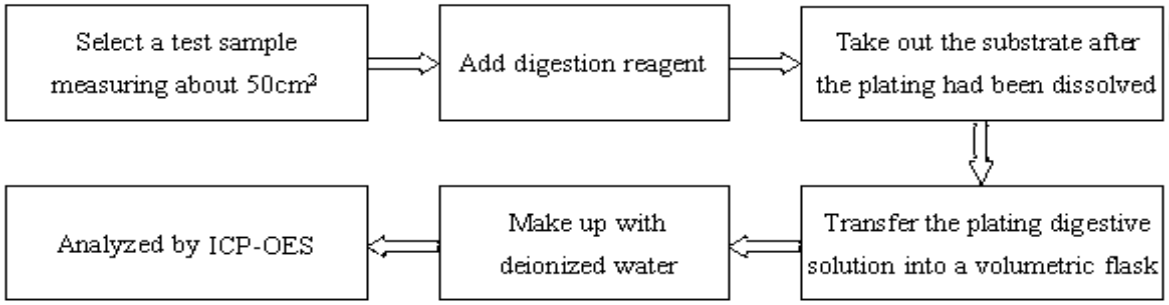
Tested Sample/Part Description Silvery plating

Note: **The washed plating had been dissolved totally tested for Lead, Cadmium, Mercury.**
-MDL = Method Detection Limit
-N.D. = Not Detected (<MDL)
-mg/kg = ppm = parts per million
-Negative = Absence of Cr(VI) , the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.02 mg/kg with 50cm² sample surface area used.

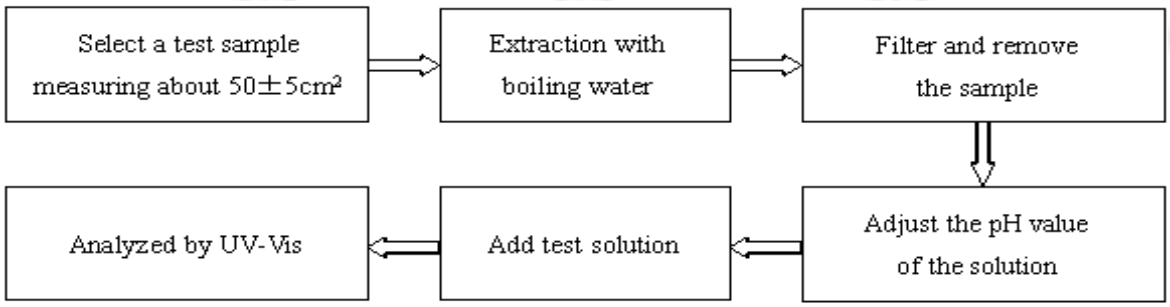
Test Report

Test Process

1. Lead(Pb), Cadmium(Cd), Mercury(Hg)

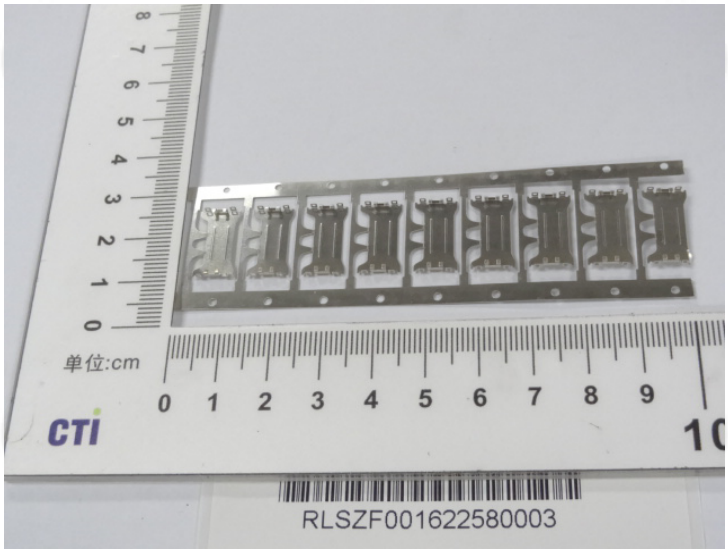


2. Hexavalent Chromium(Cr(VI))



Test Report

Photo(s) of the sample(s)



*** End of report ***