昆 山 金 成 功 电 子 有 限 公 司
KUNSHAN GOLDEN SUCCESS ELECTRONICS CO.，LTD

承 認 書
SPECIFICATION FOR APPROVAL

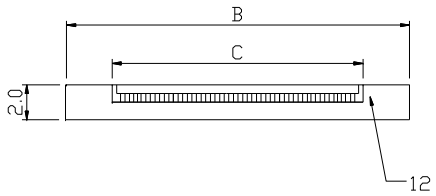
客戶名稱 CUSTOMER NAME	华 凌 光 电		
品 名 DESCRIPTION	FPC CABLE CONNECTOR	客 户 料 号 CUSTOMER PATR NO	CNT5231XXXXXXXXXXX00
圖面編號 MODELNO	SD-F-A0.5-024-S-B		
客戶承認 APPROVED BY			

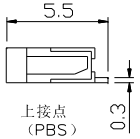
核 准 APPROVAL	審 核 CHECK	制 作 MAKE
		周福生
日期 DATE： 2010. 03. 25	日期 DATE： 2010. 03. 25	

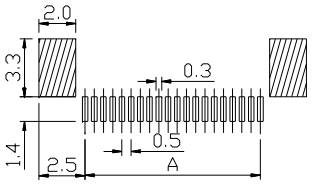
地址：昆山市柏庐南路中茵广场 A 座 T：0512-5733947
Http://www.kscgic.com E-mail:kscg@kscgic.com 5

Represented by:
first FC components
FIRST Components srl Via Cavour 69, 21020 Buguggiate (VA)
T. +39 0332 1888005 web: www.first-components.com

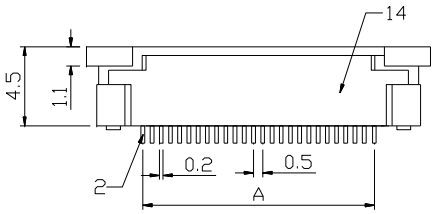
NO	SUB PART NAME OR DN	MATERIAL	MANUFACTURE TPYE & FINISH
2	CONTACT	BRASS	TIN PLATED t=0.3mm
12	HOUSING(COLOR:BLACK)	PA66	UL94V-0
14	HOUSING(COLOR:WHITE)	PA66	UL94V-0

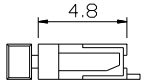


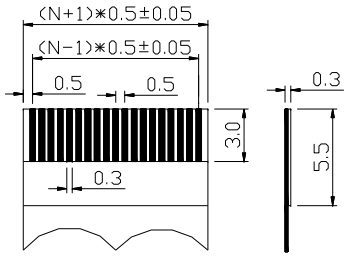




PCB LAYOUT







APPLICABLE FPC

孔位N	A	B	C
4	1.5	7.5	2.5
5	2.0	8.0	3.0
6	2.5	8.5	3.5
7	3.0	9.0	4.0
8	3.5	9.5	4.5
9	4.0	10.0	5.0
10	4.5	10.5	5.5
11	5.0	11.0	6.0
12	5.5	11.5	6.5
13	6.0	12.0	7.0
14	6.5	12.5	7.5
15	7.0	13.0	8.0
16	7.5	13.5	8.5
17	8.0	14.0	9.0
18	8.5	14.5	9.5
19	9.0	15.0	10.0
20	9.5	15.5	10.5
21	10.0	16.0	11.0
22	10.5	16.5	11.5
23	11.0	17.0	12.0
24	11.5	17.5	12.5
25	12.0	18.0	13.0
26	12.5	18.5	13.5
27	13.0	19.0	14.0
28	13.5	19.5	14.5
29	14.0	20.0	15.0
30	14.5	20.5	15.5
31	15.0	21.0	16.0
32	15.5	21.5	16.5
33	16.0	22.0	17.0
34	16.5	22.5	17.5

孔位N	A	B	C
35	17.0	23.0	18.0
36	17.5	23.5	18.5
37	18.0	24.0	19.0
38	18.5	24.5	19.5
39	19.0	25.0	20.0
40	19.5	25.5	20.5
41	20.0	26.0	21.0
42	20.5	26.5	21.5
43	21.0	27.0	22.0
44	21.5	27.5	22.5
45	22.0	28.0	23.0
46	22.5	28.5	23.5
47	23.0	29.0	24.0
48	23.5	29.5	24.5
49	24.0	30.0	25.0
50	24.5	30.5	25.5
51	25.0	31.0	26.0
52	25.5	31.5	26.5
53	26.0	32.0	27.0
54	26.5	32.5	27.5
55	27.0	33.0	28.0
56	27.5	33.5	28.5
57	28.0	34.0	29.0
58	28.5	34.5	29.5
59	29.0	35.0	30.0
60	29.5	35.5	30.5

TOLERANCE: UNLESS OTHERWISE SPECIFIED		
UNOVER1.5±0.1	1.5~10±0.2	OVER10.0±0.3

GOLD SUCCESS ELECTRONICS CO.,LTD	日期 DATE	单位UNITS	审核CHECK	FPC CABLE CONNECTOR
金成功电子有限公司	2002/09/25	mm	jianwen	
	比例SCALE	制图 DRAW	设计DESIGN	SD-F-A0.5-024-S-B
	1/1	Qiqi	Airv	

FIRST Components s.r.l. Via Cavour, 69 21020 Buguggiate (VA) Italy Tel. +39 0332 1888005 Fax +39 0332 320856
web: www.first-components.com

產 品 規 格 書

PRODUCT SPECIFICATION

1 、適用範圍 SCOPE

本規格書適用於：0.5 間距柔性扁平電纜連接器

This specification covers the 0.5mm Pitch FPC/FFC Connectors series.

2、產品名稱及型號 PRODUCT NAME AND PART NUMBER

產品名稱 Product Name	產品型號 Part Number
FFC/FPC 扁平電纜連接器	0.5A-24PBS-B

3、定格 RATINGS

專案 Item	規格 Requirement	
最大容許電壓 Rated Voltage(MAX)	50V	AC(有效值 rms) DC
最大容許電流 Rated Current(MAX)	0.5A	
使用溫範圍 Ambient temperature Range	-20℃~+85℃	

4、性能 PERFORMANCE

4.1 電氣性能 Electrical Performance

專案 Item		條件 Test condition	規格 Requirement
4.1.1	接觸電阻 Contact Resistance	適合 FPC/FFC 嵌合；開放電壓 20mv 以下；短路電流 10mA 的狀態下測定。 Mate applicable FPC/FFC and measure by dry circuit,20m V MAX,10MA.	30mΩMAX
4.1.2	絕緣電阻 Insulation resistance	適合 FPC/FFC 嵌合；相鄰端子間或端子與地面間加 DC500V 下測定。 Mate applicable FPC/FFC and apply 500V DC between adjacent terminal or ground.	500mΩMIN
4.1.3	耐電壓 Dielectric	適合 FPC/FFC 嵌合。相鄰端子間或端子與地面間加 AV 500V（有效值）歷時 1 分鐘下測定。 Mate applicable FPC/FFC and apply 500V AC(rms)for 1minute between adjacent terminal or ground.	無擊穿現象 No Breakdown

4.2 機械性能 Mechanical Performance

專案 Item		條件 Test condition	規格 Requirement
4.2.1	插入力及拔出力 Insertion and withdrawal force	適合 0.3mm 厚的 FFC；用每分鐘 25±3mm 的速度；平行地插入、拔出。 Insert and extract applicable FFC at the speed rate of 25±3mm/ninute	插入力 Insertion 1.96*n(N)MAX 拔出力 Withdrawal 0.49*n(N)MIN
4.2.2	端子保持力 Terminal Retention Force	單一端子；以用每分鐘 25±3mm 的速度平行向外拉 Pull the terminal at the speed rate of 25±3mm per minute	3.92N MIN

4.3 環境和其他性能 Environmental Performance and Others

專案 Item		條件 Test condition	規格 Requirement	
4.3.1	重複插拔 Repeated Insertion and withdrawal	無通電狀態：以 10 次/分鐘速度插拔 20 次 Insertion and withdrawal catuator up to 20 cycles at the speed rate of less than 10 cyclea/minute	接觸抵抗 Contact Resistance	60MΩ MAX
4.3.2	溫度上升 Temperature Rise	適合 FPC/FFC 嵌合；最大容許電流通電，溫度測定。(UL498) Carrying rated current load.(UL498)	溫度上升 Temperature Rise	30℃MAX
4.3.3	耐振動性 Vibration	DC 1mA 通電狀態下；嵌合軸沿 XYZ 三個方向振動；振幅 1.5mm；頻率 10-55-10HZ/分；歷時 2 小時 Amplitude;1.5mm P-P Sweep time ;10-55-10HZ in 1 minute Duration;2hours in each X.Y.Z.axes	外觀 Appearance	無損壞 No Damage
			接觸抵抗 Contact Resistance	60MΩ MAX
			瞬斷 Discontinuity	1ms.MAX
4.3.4	耐衝擊性 Shock	DC 1mA 通電狀態下；嵌合軸沿相互垂直的 6 個方向；以 490m/s2{50G}衝擊；各 3 次 490m/s2{50G},3strokes in each X.Y.Z.axes	外觀 Appearance	無損壞 No Damage
			接觸抵抗 Contact Resistance	60MΩ MAX
4.3.5	耐熱性 Heat Resistance	適合 FPC/FFC 嵌合；85±2℃ 的空氣中；放置 96 小時；再回到室溫中放置 1-2 小時 85±2℃，96 hour	外觀 Appearance	無損壞 No Damage
			接觸抵抗 Contact Resistance	60MΩ MAX
4.3.6	耐寒性 Cold Resistance	適合 FPC/FFC 嵌合；-40±2℃ 的空氣中；放置 96 小時；再回到室溫中放置 1-2 小時 -40±2℃，96 hour	外觀 Appearance	無損壞 No Damage
			接觸抵抗 Contact Resistance	60MΩ MAX
4.3.7	耐濕性 Humidity	適合 FPC/FFC 嵌合；40±2℃、相對濕度 90-95%的空氣中；放置 96 小時；再回到室溫中放置 0.5 小時 Temperature :40±2℃ Relative Humidity: 90-95% Duration: 96 hour	外觀 Appearance	無損壞 No Damage
			接觸抵抗 Contact Resistance	60MΩ MAX
			耐電壓 Dielectric Strength	必須滿足 4.1.3 Must meet 4.1.3
			絕緣抵抗 Insulation Resistance	50 MΩ MIN

專案 Item		條件 Test condition	規格 Requirement	
4.3.8	溫度迴圈 Temperature Cycling	適合 FPC/FFC 嵌合；-55±3℃ 30 分鐘；常溫常濕 10-15 分鐘；85±2℃ 30 分鐘；常溫常濕 10-15 分鐘，迴圈 5 次。	外觀 Appearance	無損壞 No Damage

		5cycles of: a)-55±3℃ 30 minutes b)85±2℃ 30 minutes	接觸抵抗 Contact Resistance	60MΩ MAX
4.3.9	耐鹽霧性 Salt Spray	適合 FPC/FFC 嵌合；35±2℃、5±1%的鹽水噴霧 48 小時；試驗後常溫水洗；再室溫乾燥。 48±4 hours exposure to a salt spray from the 5±1% solution at 35±2℃.	外觀 Appearance	無損壞 No Damage
			接觸抵抗 Contact Resistance	60MΩ MAX
4.3.10	耐亞硫酸 SO2 Gas	適合 FPC/FFC 嵌合；40±2℃、50±5ppm 的亞硫酸中放置 24 小時 24 hours exposure to 50±5ppm.So2 gas at 40±2℃.	接觸抵抗 Contact Resistance	60MΩ MAX
4.3.11	耐氨性 NH3 Gas	適合 FPC/FFC 嵌合；濃爲 28%的氨水容器中；放置 40 分鐘。 40 minutes exposure to NH3 gas evaporating from 28% Ammonia solution	外觀 Appearance	無損壞 No Damage
			接觸抵抗 Contact Resistance	60MΩ MAX
4.3.12	可焊性 Solderability	端子前端基準面 0.2mm 處浸入 235±5℃ 的惕槽中；歷時 2±0.5sec. Soldering Time:2±0.5 sec Soldering Temperature;235±5℃ 0.2mm from terminal tip	沾敷性 Solder Wetting	沾敷面積 95%以上
4.3.13	耐焊接熱 Resistance to Soldering heat	端子前端基準面 0.2mm 處浸入 260±5℃ 的惕槽中；歷時 5±0.5sec. Soldering Time:5±0.5 sec Soldering Temperature;260±5℃ 0.2mm from terminal tip	外觀 Appearance	無損壞 No Damage

( )：參考規格 Reference Standard
{ }：參考單位 Reference Unit

5、外觀形狀、寸法及材質 PRODUCT SHAPE，DIMENSIONS MATERIALS
圖面參照 Refer to the drawing.

名稱 NAME	材質 MATERIALS
基座右銘 Housing	PA66(本色) UL 94V-0
插簧 Contact	黃銅 Brass
備註 Remark	金屬表面鍍錫 5-8 um

6、包裝方式
卷盤包裝

PA66 物质性能表

试验条件 测试方法 测试数据 单位

基本性能

密度：23℃，RH50% GB1033 . g/cm3

熔体流动速率：275℃,5.00kg GB3682 . %

机械性能

拉伸强度：23℃，RH50% GB1040 126.9 MPa

拉伸模量：23℃，RH50% GB1040 . MPa

断裂伸长率：23℃，RH50% GB1040 8.1 %

弯曲强度：23℃，RH50% GB9341 174.5 MPa

弯曲模量：23℃，RH50% GB9341 6056.6 MPa

简支梁缺口冲击强度：23℃，RH50% GB1043 13.9 KJ/m2

简支梁缺口冲击强度：GB1043 . .

球压痕硬度：23℃，RH50% GB3398 . N/mm2

热性能

热变形温度：1.81N/mm2 GB1634 278.5 ℃

阻燃性：UL94 . .

其它性能

填充量 . . 30 .%

黄铜材质证明

Article & Temper JIS H62		Tensile Strength (N/mm$^{2)}$)	Yield Strength ( )	Elongation (%)	Hardness (HV500g)	Kb ( )	Grain Size (mm)	Erichsen Test (mm)	Electrical Conductivity (%ACS)	Plating(u m) Cu	Plating(u m) Sn	Bending Test GoudWay ( )	Bending Test Bad Way ’80
Lot No	Spcc Min Max / Size	410.0		12.8	135							R/T=	R/T=1.5
		540.0			150							No Crack	No Crack
OAPB3A	0.30*XX	472.0		24.0	146								Good

Element / Spcc:	Chemical Composition (In Wt%) Cu	Zn	Pb	Fe				Size Thickness	Width	Length	Length		
Min	64.000							0.240	31.850			Surface	Weight (Kg)
Max	68.000	R	0.0500	0.0500				0.260	32.000				
Lot No.													
	65.270	R	0.0027	0.0890				0.252 0.253	304.890 304.920			GOOD	

Remarks We hereby cethfy that above maternal has been
Tested to comply with the specification

SGS

Test Report No. CANML0901279605 Date: 25 Mar 2009 Page 1 of 3

YUAN XIN PLASTIC INDUSTRY CO.,LTD
PLASTIC MARKET,ZHANG MU TOU TOWN,DONG GUAN,GUANG DONG
CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as :
PA66 NC VO GF30.15

SGS Job No.	:	11692232 - GZ
SGS Internal Reference No.	:	GC090301070
SGS Internal Reference No.	:	6.5
Date of Sample Received	:	18 Mar 2009
Testing Period	:	18 Mar 2009 - 25 Mar 2009
Test Requested	:	Selected test(s) as requested by client.
Test Method	:	Please refer to next page(s).
Test Results	:	Please refer to next page(s).
Conclusion	:	Based on the performed tests on submitted sample(s), the results **comply with** the RoHS Directive 2002/95/EC and its subsequent amendments.

Signed for and on behalf of
SGS-CSTC Ltd.

Huang Fang, Sunny
Sr. Engineer

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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

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Test Report No. CANML0901279605 Date: 25 Mar 2009 Page 2 of 3

Test Results:

ID for specimen 1 : CAN09-012796.003

Description for specimen 1 : White plastic grains

RoHS Directive 2002/95/EC

Test Item(s)	Unit	Test Method (Reference)	Result	MDL	Limit
Cadmium (Cd)	mg/kg	IEC 62321:2008, ICP-OES	N.D.	2	100
Lead (Pb)	mg/kg	IEC 62321:2008, ICP-OES	N.D.	2	1000
Mercury (Hg)	mg/kg	IEC 62321:2008, ICP-OES	N.D.	2	1000
Hexavalent Chromium (CrVI) by alkaline extraction	mg/kg	IEC 62321:2008, UV-Vis	N.D.	2	1000
Sum of PBBs	mg/kg	-	N.D.	-	1000
Monobromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Dibromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Tribromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Tetrabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Pentabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Hexabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Heptabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Octabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Nonabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Decabromobiphenyl	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Sum of PBDEs	mg/kg	-	N.D.	-	1000
Monobromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Dibromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Tribromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Tetrabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Pentabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Hexabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Heptabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Octabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Nonabromodiphenyl ether	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	
Decabromodiphenyl ether ##	mg/kg	IEC 62321:2008, GC-MS	N.D.	5	

Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit
4. ## = The exemption of DecaBDE in polymeric application according 2005/717/EC was overruled by the European Court of Justice by its decision of 01.04.2008. Subsequently DecaBDE is included in the sum of PBDE after 01.07.2008
5. "-" = Not regulated

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Test Report No. CANML0901279605 Date: 25 Mar 2009 Page 3 of 3

Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***

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Test Report No. CANML0901541301 Date: 02 Apr 2009 Page 1 of 4

GUANGZHOU COPPER MATERIAL CO.,LTD
CONGHUA ECONOMIC AND TECHNOLOGICAL DEVELOPMENT DISTRICT,TAIPING TOWN,CONGHUA,GUANGZHOU
CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as :
H62 (C2800)

SGS Job No.	:	11719753 - GZ
SGS Internal Reference No.	:	GC090301274-7.1
Client Reference Information	:	081001
Date of Sample Received	:	30 Mar 2009
Testing Period	:	30 Mar 2009 - 02 Apr 2009
Test Requested	:	Selected test(s) as requested by client.
Test Method	:	Please refer to next page(s).
Test Results	:	Please refer to next page(s).
Conclusion	:	Based on the performed tests on submitted sample(s), the results **comply with** the RoHS Directive 2002/95/EC and its subsequent amendments.

Signed for and on behalf of
SGS-CSTC Ltd.

Huang Fang, Sunny
Sr. Engineer

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Test Report

No. CANML0901541301 Date: 02 Apr 2009 Page 2 of 4

Test Results:

ID for specimen 1 : CAN09-015413.001
Description for specimen 1 : Brassy metal

RoHS Directive 2002/95/EC

Test Item(s)	Unit	Test Method (Reference)	Result	MDL	Limit
Cadmium (Cd)	mg/kg	IEC 62321:2008, ICP-OES	N.D.	2	100
Lead (Pb)	mg/kg	IEC 62321:2008, ICP-OES	18	2	1000
Mercury (Hg)	mg/kg	IEC 62321:2008, ICP-OES	N.D.	2	1000
Hexavalent Chromium (CrVI) by boiling water extraction	-	IEC 62321:2008, UV-Vis	Negative	◇	#

Note:
1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit
4. ◇ = Spot-Test:
   Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;
   (The tested sample should be further verified by boiling-water-extraction method if the spot test result is negative or cannot be confirmed.)
   Boiling-water-extraction:
   Negative = Absence of CrVI coating
   Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.
   Storage conditions and production date of the tested sample are unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.
5. # = Positive indicates the presence of CrVI on the tested areas.
   Negative indicates the absence of CrVI on the tested areas.
6. "-" = Not regulated

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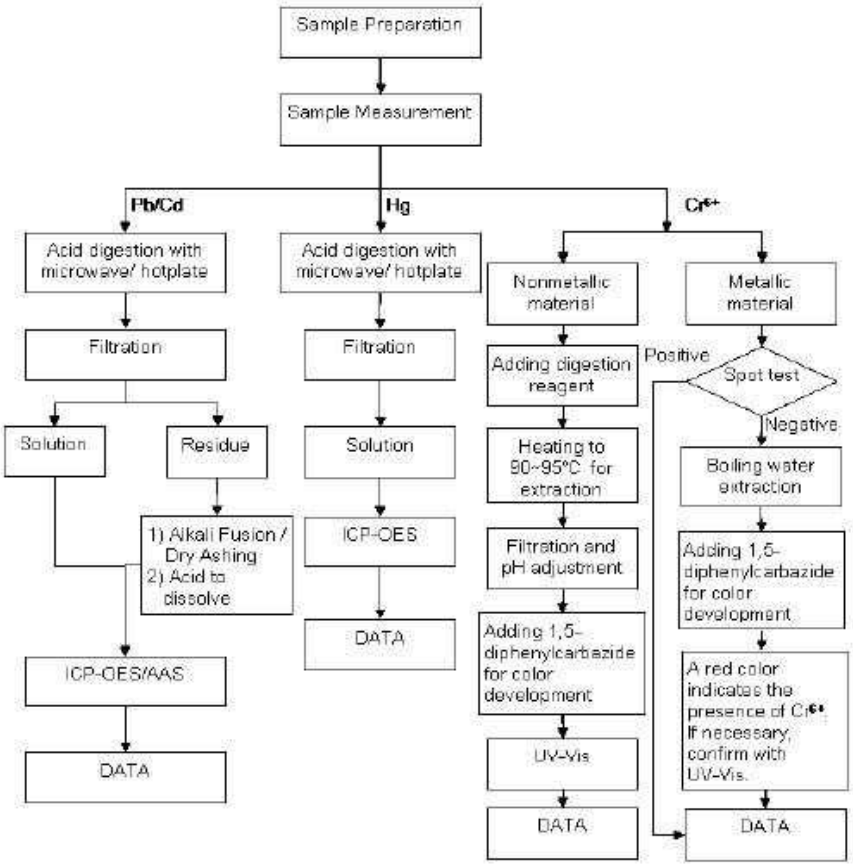
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ATTACHMENTS

Testing Flow Chart

1) Name of the person who made measurement: Luke Xu / Lily Lee
2) Name of the person in charge of measurement: Adams Yu / Leo Wang



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Sample photo:



CAN09-015413.001

SGS authenticate the photo on original report only

*** End of Report ***

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CTI

检测报告

报告编号 RLSHE000093470005C 第 1 页 共 3 页

申请单位 新丰电镀-浙江新丰控股有限公司

地 址 浙江乐清市蒲岐镇东门工业区

样品信息

样品名称 镀锡合金、亚光锡产品

样品描述 银色镀层

样品接收日期 2009.07.15

样品检测日期 2009.07.15－2009.07.18

检测要求 根据客户要求，测定所提交样品中的铅(Pb)，镉(Cd)，汞(Hg)，六价铬(Cr(VI))的含量。

检测依据

测试项目	前处理方法	测试仪器	检出限
铅(Pb)	镀层测试法(内部方法)及IEC 62321:2008 Ed.1 Sec.9	ICP-OES	2mg/kg
镉(Cd)	镀层测试法(内部方法)及IEC 62321:2008 Ed.1 Sec.9	ICP-OES	2mg/kg
汞(Hg)	镀层测试法(内部方法)及IEC 62321:2008 Ed.1 Sec.7	ICP-OES	2mg/kg
六价铬(Cr(VI))	IEC 62321:2008 Ed.1 Annex B	UV-Vis	/

检测结果 请参见下页

主 检： Chen Lijuan 审 核： Zhong Yijun

签 发： Chen Lijuan 签发日期： 2009.07.18

技术经理

No. 94224988

CENTRE TESTING INTERNATIONAL CORPORATION www.cti-cert.com E-mail:info@cti-cert.com Hotline 400-6788-333

检测报告

报告编号 RLSHB000093470005C 第 2 页 共 3 页

检测结果

测试项目	含量
铅(Pb)	72 mg/kg
镉(Cd)	N.D.
汞(Hg)	N.D.
六价铬(Cr(VI))	Negative

注释: 对于检测铅，汞，镉之样品已完全溶解。
-N.D. = 未检出（小于检出限）
-mg/kg = ppm = 百万分之几
-Negative表示阴性
阴性=不含有六价铬

备注: 报告编号中“C”表示此报告为中文版本。

检测流程

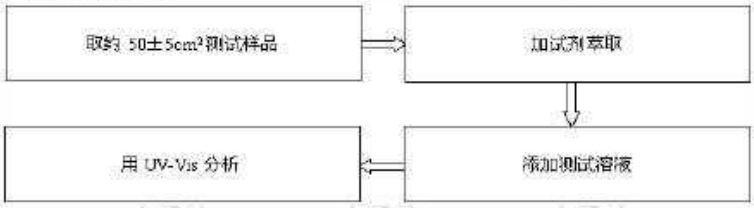
1. 铅(Pb)，镉(Cd)



2. 汞(Hg)



3. 六价铬(Cr(VI))

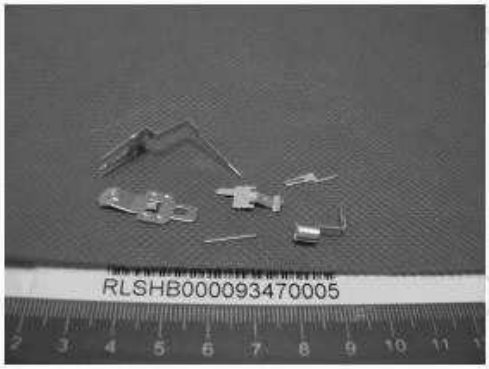


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检测报告

报告编号 RLSHB000093470005C 第 3 页 共 3 页

样品图片



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