

## **ICP Test Report Certification Packet**

Company name:	Littelfuse, Inc.
Product Series:	L60030 Series – Fuse Block
Product #:	L60030M*1C(*2C*3C) L60030*M3SQ (M1SQ—M2SQ) L60030*M3PQ (M1PQ—M2PQ) L60030*C1C(*C2C *C3C) L60030C*1SQ(*2SQ*3SQ) L60030C*1PQ(*2PQ*3PQ)
Issue Date:	October 5, 2011
2002/95/EC)-restricted spacking/packaging mater In addition, it is hereby refor unit parts, the packing	by Littelfuse, Inc. that there is neither RoHS (EU Directive substance nor such use, for materials to be used for unit parts, for rials, and for additives and the like in the manufacturing processes. eported to you that the parts and sub-materials, the materials to be used packaging materials, and the additives and the like in the manufacturing osed of the following components.    Issued by:   KRISTEEN BACILA   Clobal EHS Manager >
(1) Parts, sub-materials  This document co  manufactured by L	vers the L60030 Fuse Block Series RoHS-Compliant series products
< Raw Materials l Please see Tal	
. ,	measurable substances propriate pages as identifed in Table 1
Remarks :	



Table 1: List of Raw Materials covered by this report

Total Parts	Raw Material Part Number	Raw Material Description	Page(s)
1	868-069	Fuse Block (PBT Valox)	3-8
		Rejection Member (PBT Valox)	
2	882-649	(same with 868-069)	3-8
3	100060	Fuse Clip (Cu Alloy)	9-13
4	100069	Fuse Clip (Cu Alloy)	9-13
5	902-122	Self Tapping Phillips screw (Zinc Plated Steel)	14-18
6	902-119	Type B Self Tapping Screw (Zinc Plated Steel)	14-18
7	903-117	Square Nut (Steel)	14-18
8	902-139	Binding Head Screw (Zinc Plated Steel)	14-18
9	902-140	Pressure Plate Screw (Zinc Plated Steel)	14-18
10	N/A	Printing Ink - ROHS	19-25
11	N/A	Printing Ink - Halogens	26-28
12	929-023	Guide Spring (304 Steel)	29-33
13	N/A	Tin Plating of Cu Alloy	34-37
14	N/A	Zinc Plating of 304 Steel	38-41



Test Report Number: TWNC00216853

Applicant: Littelfuse Inc. Date : Jul 25, 2011

LIMA Technology Center, Lipa City,

Malvar, Batangas

Sample Description:

One (1) group of submitted samples said to be :

Part Description : PBT Valox

Part Number :

Date Sample Received : Jul 19, 2011
Date Test Started : Jul 19, 2011

Test Conducted :

As requested by the applicant, for details please refer to attached pages.

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Test Conducted

### ( I ) Test Result Summary :

) lest Result Summary :	Result (ppm)
<u>Test Item</u>	Black Plastic
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	28
Mercury (Hg) content	ND
Chromium VI (Cr <sup>6+</sup> ) content	ND
Polybrominated Biphenyls (PBBs)	
Monobrominated Biphenyls (MonoBB)	ND
Dibrominated Biphenyls (DiBB)	ND
Tribrominated Biphenyls (TriBB)	ND
Tetrabrominated Biphenyls (TetraBB)	ND
Pentabrominated Biphenyls (PentaBB)	ND
Hexabrominated Biphenyls (HexaBB)	ND
Heptabrominated Biphenyls (HeptaBB)	ND
Octabrominated Biphenyls (OctaBB)	ND
Nonabrominated Biphenyls (NonaBB)	ND
Decabrominated Biphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDEs)	
Monobrominated Diphenyl Ethers (MonoBDE)	ND
Dibrominated Diphenyl Ethers (DiBDE)	ND
Tribrominated Diphenyl Ethers (TriBDE)	ND
Tetrabrominated Diphenyl Ethers (TetraBDE)	ND
Pentabrominated Diphenyl Ethers (PentaBDE)	ND
Hexabrominated Diphenyl Ethers (HexaBDE)	ND
Heptabrominated Diphenyl Ethers (HeptaBDE)	ND
Octabrominated Diphenyl Ethers (OctaBDE)	ND
Nonabrominated Diphenyl Ethers (NonaBDE)	ND
Decabrominated Diphenyl Ether (DecaBDE)	ND
Halogen Content	
Fluorine (F)	ND
Chlorine (Cl)	ND
Bromine (Br)	ND
Iodine (I)	ND

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg

ND = Not detected

Responsibility of Chemist : Irene Chiou / Kevin Liu / Cathy Chen

Date Sample Received : Jul 19, 2011

Test Period : Jul 19, 2011 To Jul 22, 2011



### Test Conducted

### (Ⅱ) RoHS Requirement:

, 1	
Restricted Substances	<u>Limits</u>
Cadmium (Cd) Content	0.01% (100ppm)
Lead (Pb) Content	0.1% (1000ppm)
Mercury (Hg) Content	0.1% (1000ppm)
Chromium VI (Cr <sup>6+</sup> ) Content	0.1% (1000ppm)
Polybrominated Biphenyls (PBBs)	0.1% (1000ppm)
Polybrominated Diphenyl Ehters (PBDEs)	0.1% (1000ppm)

The above limits were quoted from 2002/95/EC and amendment 2005/618/EC for homogeneous material.

### (Ⅲ) Test Method:

Test Method:			
Test Item	<u>Test Method</u>	Reporting Limit	
Cadmium (Cd) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm	
Lead (Pb) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm	
Mercury (Hg) content	With reference to IEC 62321 edition 1.0:2008 in clause 7, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm	
Chromium VI (Cr <sup>6+</sup> ) content	With reference to IEC 62321 edition 1.0:2008 in annex C, by alkaline digestion and determined by UV-Vis spectrophotometer.	1 ppm	
Polybrominated Biphenyls (PBBs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MSD and further HPLC confirmation when necessary.	5 ppm	
Polybrominated Diphenyl Ethers (PBDEs)	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MSD and further HPLC confirmation when necessary.	5 ppm	
Halogen Content	With reference to EN 14582:2007 by calorimetric bomb with oxygen and determined by ion chromatography	50 ppm	

Remark: Reporting limit = Quantitation limit of analyte in sample

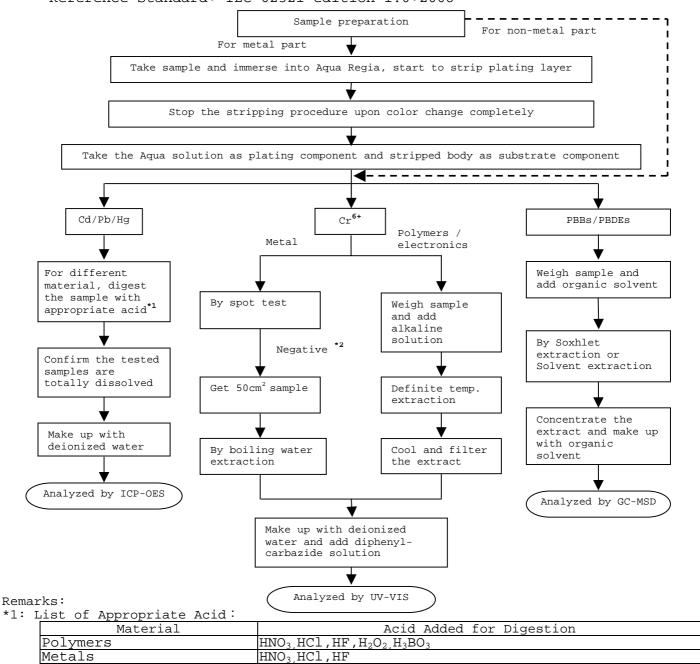


#### Test Conducted

#### (IV) Measurement Flowchart:

Electronics

Test for Cd/Pb/Hg/Chromium (VI)/PBBS/PBDES Contents Reference Standard: IEC 62321 edition 1.0:2008



\*2: If the result of spot test is positive, Chromium VI would be determined as detected.

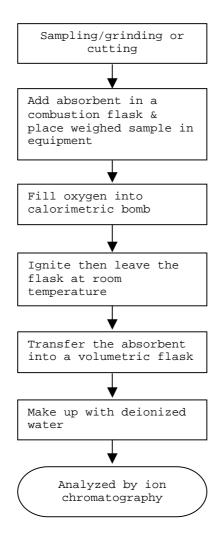
HNO3, HCl, H2O2, HBF4



### Test Conducted

### (IV) Measurement Flowchart:

Test for Halogen Content Reference Standard: EN 14582



End of Report



Test Conducted

Number: TWNC00216853

### Photo







Test Report Number: TWNC00216856

Applicant: Littelfuse Inc.

LIMA Technology Center, Lipa City,

Malvar, Batangas

Sample Description:

One (1) group of submitted samples said to be :

Part Description : Copper Alloy
Date Sample Received : Jul 19, 2011
Date Test Started : Jul 20, 2011

Test Conducted:

As requested by the applicant, for details please refer to attached pages.

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K. Y. Liang
Director

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Date : Jul 25, 2011

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### Test Conducted

### ( I ) Test Result Summary :

Test Item	Result (ppm)
<u>iest item</u>	Coppery Metal
Heavy Metal	
Cadmium (Cd) content	ND
Lead (Pb) content	46
Mercury (Hg) content	ND
Chromium VI ( $Cr^{6+}$ ) content ( $mg/kg$ with $50cm^2$ )	Negative(< 0.02)(#)

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg

ND = Not detected
< = Less than</pre>

mg/kg with  $50cm^2$  = milligram per kilogram with 50 square centimetre Negative = A negative test result indicated positive observation

was not found at the time of Test.

# = Due to the insufficient sample area, reduced total sample surface of 10 cm<sup>2</sup> was used and the dilution factor was adjusted accordingly.

Responsibility of Chemist : Irene Chiou / Kevin Liu / Cathy Chen

Date Sample Received : Jul 19, 2011

Test Period : Jul 20, 2011 To Jul 25, 2011

### ( $\Pi$ ) RoHS Requirement:

· /	
Restricted Substances	<u>Limits</u>
Cadmium (Cd) Content	0.01% (100ppm)
Lead (Pb) Content	0.1% (1000ppm)
Mercury (Hg) Content	0.1% (1000ppm)
Chromium VI (Cr <sup>6+</sup> ) Content	0.1% (1000ppm)

The above limits were quoted from 2002/95/EC and amendment 2005/618/EC for homogeneous material.



Test Conducted

### (Ⅲ) Test Method:

Test Item	Test Method	Reporting Limit
Cadmium (Cd) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Lead (Pb) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Mercury (Hg) content	With reference to IEC 62321 edition 1.0:2008 in clause 7, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Chromium VI (Cr <sup>6+</sup> ) content	With reference to IEC 62321 edition 1.0:2008 in annex B, by boiling water extraction and determined by UV-Vis spectrophotometer.	0.02 mg/kg with 50cm <sup>2</sup>

Remark: Reporting limit = Quantitation limit of analyte in sample

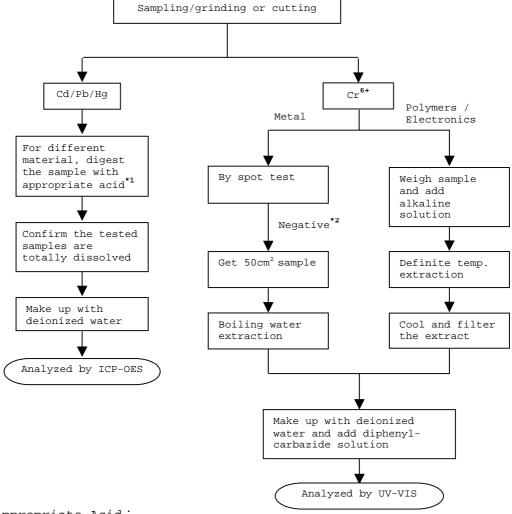


### Test Conducted

### (IV) Measurement Flowchart:

Test For Cd/Pb/Hg/Chromium (VI)

Reference Standard: IEC 62321 edition 1.0:2008



#### Remarks:

\*1: List Of Appropriate Acid:

<u>Material</u>	Acid Added For Digestion
Polymers	HNO <sub>3</sub> ,HCl,HF,H <sub>2</sub> O <sub>2</sub> ,H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3,</sub> HCl,HF
Electronics	HNO <sub>3</sub> ,HCl,H <sub>2</sub> O <sub>2</sub> ,HBF <sub>4</sub>

\*2: If the result of spot test is positive, Chromium VI would be determined as detected.

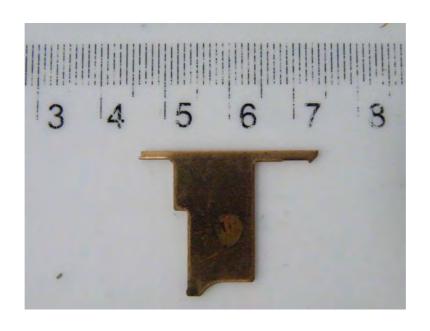
End of Report



Test Conducted

### Photo







Test Report Number: TWNC00216854

Applicant: Littelfuse Inc.

Littelfuse Inc. Date : Jul 27, 2011 LIMA Technology Center, Lipa City,

Malvar, Batangas.

Sample Description:

One (1) group of submitted samples said to be :

Part Description : Steel

Date Sample Received : Jul 19, 2011
Date Test Started : Jul 19, 2011

Test Conducted :

As requested by the applicant, for details please refer to attached pages.

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On Behalf Of Intertek Testing Services
Taiwan Limited



K. Y. Liang
Director

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#### Test Conducted

### ( I ) Test Result Summary :

Togt Itom	Result (ppm)	
<u>Test Item</u>	(1)	(2)
Heavy Metal		
Cadmium (Cd) content	ND	ND
Lead (Pb) content	ND	ND
Mercury (Hg) content	ND	ND
Chromium VI ( $Cr^{6+}$ ) content ( $mg/kg$ with $50cm^2$ )	Negative (< 0.02)	Negative (< 0.02)

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg

ND = Not detected
< = Less than</pre>

mg/kg with 50cm<sup>2</sup> = milligram per kilogram with 50 square centimetre
Negative = A negative test result indicated positive observation
was not found at the time of Test.

# = Due to the insufficient sample area, reduced total sample surface of 10 cm<sup>2</sup> was used and the dilution factor was adjusted accordingly.

### Tested Components

- (1) Black Plating Layer
- (2) Silvery Metal Base Material

Responsibility of Chemist : Irene Chiou / Kevin Liu / Cathy Chen

Date Sample Received : Jul 19, 2011

Test Period : Jul 19, 2011 To Jul 27, 2011

#### (Ⅱ) RoHS Requirement:

Restricted Substances	<u>Limits</u>
Cadmium (Cd) Content	0.01% (100ppm)
Lead (Pb) Content	0.1% (1000ppm)
Mercury (Hg) Content	0.1% (1000ppm)
Chromium VI (Cr <sup>6+</sup> ) Content	0.1% (1000ppm)

The above limits were quoted from 2002/95/EC and amendment 2005/618/EC for homogeneous material.



Test Conducted

### (Ⅲ) Test Method:

Test Item	Test Method	Reporting Limit
Cadmium (Cd) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Lead (Pb) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Mercury (Hg) content	With reference to IEC 62321 edition 1.0:2008 in clause 7, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Chromium VI (Cr <sup>6+</sup> ) content	With reference to IEC 62321 edition 1.0:2008 in annex B, by boiling water extraction and determined by UV-Vis spectrophotometer.	0.02 mg/kg with 50cm <sup>2</sup>

Remark: Reporting limit = Quantitation limit of analyte in sample

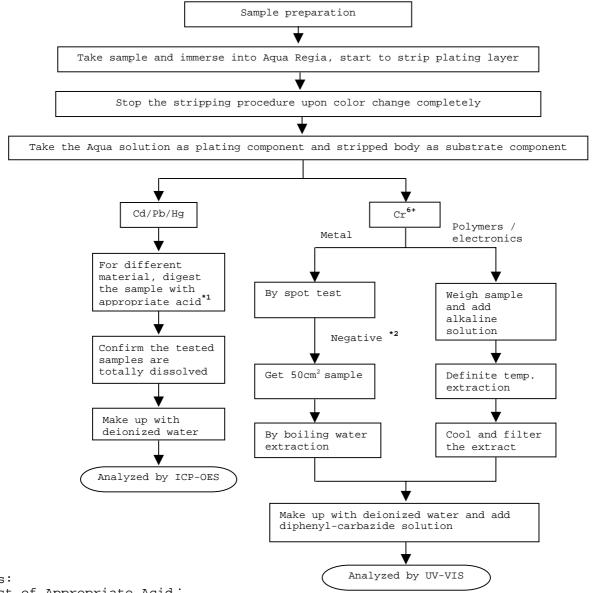


### Test Conducted

### (IV) Measurement Flowchart:

Test for Cd/Pb/Hg/Chromium (VI)

Reference Standard: IEC 62321 edition 1.0:2008



### Remarks:

\*1: List of Appropriate Acid:

dist of Appropriate Acid:	
Material	Acid Added for Digestion
Polymers	$HNO_3$ , $HC1$ , $HF$ , $H_2O_2$ , $H_3BO_3$
Metals	HNO <sub>3</sub> ,HCl,HF
Electronics	HNO <sub>3</sub> ,HCl,H <sub>2</sub> O <sub>2</sub> ,HBF <sub>4</sub>

\*2: If the result of spot test is positive, Chromium VI would be determined as detected.

End of Report

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Test Conducted

Number: TWNC00216854

### Photo







Report No.: RLSD1103151026401014

Page 1 of 7

Applicant : FOSHAN MEGA INK AND COATING CO., LTD.

ess :GENGHE ROAD, GENGHE TOWN, GAOMING DISTRICT, FOSHAN CITY,

GUANGDONG PROVINCE, CHINA

Report on the submitted sample(s) said to be:

Sample Name

:丝网油墨混合物

Sample Description

liquid

Sample Received Date

:Mar.15, 2011

Testing Period

:Mar.15, 2011 to Mar.15, 2011

**Test Requested** 

:As specified by client, to determine the Lead(Pb), Cadmium(Cd),

Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated biphenyl(PBBs) and Polybrominateddiphenylether(PBDEs) contents in the submitted sample.

### Test Method:

Tested Item(s)	Test Method	Measured Equipment(s)	MDL
Lead (Pb)	IEC 62321:2008 Ed.1 Sec.10	ICP-OES	2 mg/kg
Cadmium (Cd)	IEC 62321:2008 Ed.1 Sec.10	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 C	UV-Vis	2 mg/kg
Polybrominated Biphenyls (PBBs)	IEC 62321:2008 Ed.1 Annex A	GC-MS	5 mg/kg
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321:2008 Ed.1 Annex A	GC-MS	5 mg/kg

Test Result(s)

:Please refer to the following page(s)

Tested

by

Inspected by

WangWerju

Approved by

Date

Mar.15, 2011

No.34238287



Report No.:RLSD1103151026401014
Test Result(s):

Page 2 of 7

Tested Item(s)	Content
Lead (Pb)	N.D.
Cadmium (Cd)	N.D.
Mercury (Hg)	N.D.
Hexavalent Chromium (Cr(VI))	N.D.
Polybrominated Biphenyls(PBBs)	
Monobromobiphenyl	N.D.
Dibromobiphenyl	N.D.
Tribromobiphenyl	N.D.
Tetrabromobiphenyl	N.D.
Pentabromobiphenyl	N.D.
Hexabromobiphenyl	N.D.
Heptabromobiphenyl	N.D.
Octabromobiphenyl	N.D.
Nonabromobiphenyl	N.D.
Decabromobiphenyl	N.D.
Polybrominated Diphenyl Ethers(PBDEs)	
Monobromodiphenyl ether	N.D.
Dibromodiphenyl ether	N.D.
Tribromodiphenyl ether	N.D.
Tetrabromodiphenyl ether	N.D.
Pentabromodiphenyl ether	N.D.
Hexabromodiphenyl ether	N.D.
Heptabromodiphenyl ether	N.D.
Octabromodiphenyl ether	N.D.
Nonabromodiphenyl ether	N.D.
Decabromodiphenyl ether	N.D.

Note:

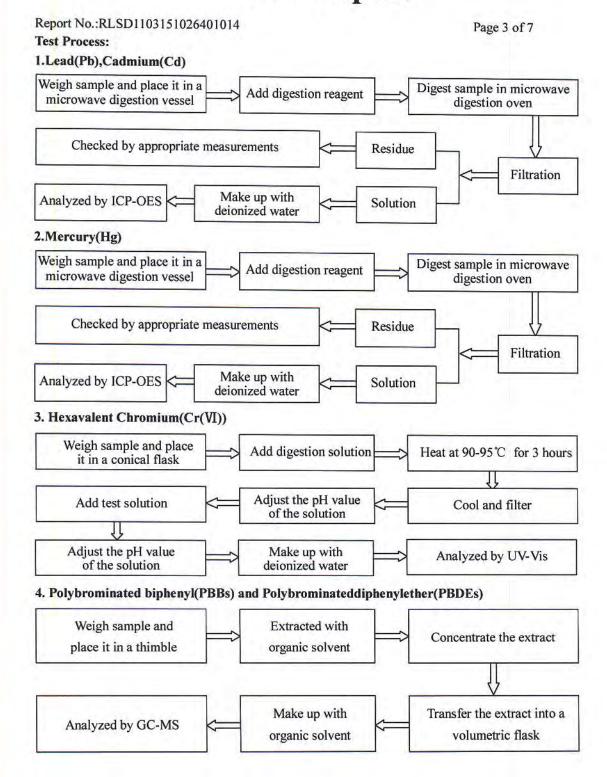
-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL)

-mg/kg = ppm = parts per million









Report No.:RLSD1103151026401014

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Photo(s) of the sample(s)





Report No.: RLSD1103151026401014

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### Attached page:

### ROHS 其他颜色:

- 10 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 186; T2257; T2255; T2256; T2306; T 6742; T 7148; T 7147; T 7149; T 7317; K100-B;
- 11 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195; T2369
- 12 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 14 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 21 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 22 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;C191
- 25 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195; T 5682; K500;
- 26 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 27 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 28\*系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195; W100-B-3; K100-B-3; T9771;
- 29 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 31(PCT)系列: W100; W100-3; R100; M100; Q100; B100; B500;G100; G100-B; V100;V100-B;K100; K500; K555; 195; 777; 895; T8877; T8878; T8879; T8880; T8886; T8390; T8391; T8395;T2369; T9486;T9835;T8797;T8798; T2168(德怡); T2141(德怡)
- 32 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 38 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 43 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195; T2791; T2985; T5885; T6124; T7380;
- 46 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 47 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 48 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195; C191
- 49 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195; C191; T8872; T9220:
- 51 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 54 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195; C191
- 56 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 57 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 59 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 66 系列: W100; W100-3; R100; M100; Q100; V100; E100; B100; G100; K100; K100-3; 195;
- 8116 系列: P35; P42; P50; P52; P53; P57; P59; P63; P75; P83; P83-3; P195; P198; T3189;
- 7118 系列: P35: P42: P50: P52: P53: P57; P59: P63: P75; P83: P83-3; P195: P198;





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Report No.: RLSD1103151026401014
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80 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3;
70 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3;
          1095; 1098;
SS10 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3;
          1075-3; 1095; 1098;
$$20 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3;
          1075-3; 1095; 1098;
$$70 系列: 141; 112; 057; 003; 791; 385; 037; 391; 083; 113; 911; 611; 810;
SS80 系列: 141; 112; 057; 003; 791; 385; 037; 391; 083; 113; 911; 611; 810;
EG 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
EM 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
EA 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
EB 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
NY 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3;
           1095;1091;
NYG 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
PS 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
PSG 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
PE 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
PEG 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3;
           1095;1091
PP 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
PPG 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
PPE 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
PET*系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
PCT 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
MT 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3;
          1095:1091
MTS 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
GS 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095;
          GS-000;
```



Report No.: RLSD1103151026401014

Page 7 of 7

GV 系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3;

ACT 贴花系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095; ACT-700; ACT-777;

VK7 贴花系列: 1035; 1042; 1046; 1048; 1050; 1052; 1053; 1057; 1059; 1063; 1075; 1083; 1083-3; 1075-3; 1095:

UV 油墨: R800; Q800; V800; B800; G800; K800; W800; UV-TC;

SSPPNK 系列: 611; 003; 057; 112; 113; 037; 391; 385; 791; 083; 911; 611S; SSPPNK-00; T3974; T5250;

SS16 系列: 611; 003; 057; 112; 113; 037; 391; 385; 791; 083; 911; 611S; SS16-000;

911 系列: 911-B100; 911-W100; 911-K100; 911-V100; 911-E100; 911-G100; 911-R100; 911-Q100; 911-M100; 911-W100(恒晖); 911-K100(恒晖); 快干 2000#(恒晖); 911-V100(恒晖); 911-B100(恒晖); 911-R100(恒晖); 911-E100(恒晖); 911-G100(恒晖);

其他: 99-956B; 395; 300Y; 300B; 300R; 300K; 300P; 300M; M901; M902; M903; M905; M906; T710; T720; T730; T740; T750; T760; T770; T780; F840; F850; F860; F870; F880; SS777; TUVC;

助剂及溶剂: PPS-01; S907; S909; 2000#; 2200#; 2600#; 3000#; 3000# (万家乐); 840#; 721#; 7000#; 7200#; 7600#; 5000#; 5500#; 8000#; 888#; 777#;783#; GP1006;GP1007;GP1008; 783#; S407#; S408#;719#; 718#; S408#; S482#; 842#; 3000#; 861#; 862#; UR-100B;GRU-200B;

### \*\*\* End of report \*\*\*

This report is considered invalidated without the Special Seal for Inspection of the CTl, This report shall not be altered, increased or deleted. The results shown in this test report refer only to the sample(s) tested. Without written approval of CTI, this test report shall not be copied except in full and published as advertisement.

Floor 9, Yongying Building, NO. 8 Rongqi Boulevard East, Ronggui, Shunde, Foshan





Report No. RLNBD000044550001

Page 1 of 3

Applicant

WENZHOU JANDA ELECTRONIC CO.,LTD

Address

NO2, WANGLIN INDUSTRY ZONE, BEIBAIXIANG TOWN, YUEQING CITY.

ZHEJIANG PROVINCE, CHINA. 325603

Report on the submitted sample(s) said to be

Sample Name

Sample Description

White ink

Part No.

PEG 1083

Color

white

Sample Received Date

Aug. 22, 2011

Testing Period

Aug. 22, 2011 to Aug. 25, 2011

**Test Requested** 

As specified by client, to determine the Fluorine(F), Chlorine(Cl), Bromine(Br),

Iodine(I) content in the submitted sample.

### **Test Method**

Test Item(s)	Test Method	Measured Equipment(s)	MDL
Fluorine(F)	Refer to BS EN 14582:2007	IC	10 mg/kg
Chlorine(C1)	Refer to BS EN 14582:2007	IC	10 mg/kg
Bromine(Br)	Refer to BS EN 14582:2007	IC	10 mg/kg
Iodine(I)	Refer to BS EN 14582:2007	IC	10 mg/kg

Test Result(s)

Please refer to the following page(s).

Tested

Approved by

Technical Manager

Inspected by

Date

Aug. 25, 2011

No. 13431882



Report No. RLNBD000044550001 Test Result(s)

Page 2 of 3

Tested Item(s)	
Halogen(s)	Content
Fluorine (F)	
Chlorine(Cl)	N.D.
Bromine(Br)	204 mg/kg
	N.D.
Iodine(I)	N.D.

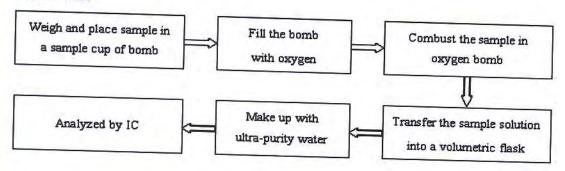
Note:

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL)

-mg/kg = ppm = parts per million

### **Test Process**





Report No. RLNBD000044550001

Page 3 of 3

Photo(s) of the sample(s)



\*\*\* End of report \*\*\*

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A Building 7 and 8F, No.750, Chuangyuan Road, High-tech zone, Ningbo, Zhejiang, China





Test Report Number: TWNC00216855

Applicant: Littelfuse Inc.

LIMA Technology Center, Lipa City,

Malvar, Batangas

Sample Description:

One (1) group of submitted samples said to be :

Part Description : 304 Steel

Date Sample Received : Jul 19, 2011

Date Test Started : Jul 20, 2011

Test Conducted:

As requested by the applicant, for details please refer to attached pages.

Authorized By: On Behalf Of Intertek Testing Services Taiwan Limited



K. Y. Liang
Director

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Date : Jul 25, 2011

Page 1 of 5



### Test Conducted

### ( I ) Test Result Summary :

Test Item	Result (ppm)
Heavy Metal	Silvery Metal
Cadmium (Cd) content	ND
Lead (Pb) content	ND
Mercury (Hg) content	ND
Chromium VI (Cr <sup>6+</sup> ) content (mg/kg with 50cm <sup>2</sup> )	Negative(< 0.02)(#)

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg

ND = Not detected
< = Less than</pre>

mg/kg with  $50cm^2$  = milligram per kilogram with 50 square centimetre Negative = A negative test result indicated positive observation

was not found at the time of Test.

# = Due to the insufficient sample area, reduced total sample surface of 10 cm<sup>2</sup> was used and the dilution factor was adjusted accordingly.

Responsibility of Chemist : Irene Chiou / Kevin Liu / Cathy Chen

Date Sample Received : Jul 19, 2011

Test Period : Jul 20, 2011 To Jul 25, 2011

### ( $\Pi$ ) RoHS Requirement:

· · · · · · · · · · · · · · · · · · ·	
Restricted Substances	<u>Limits</u>
Cadmium (Cd) Content	0.01% (100ppm)
Lead (Pb) Content	0.1% (1000ppm)
Mercury (Hg) Content	0.1% (1000ppm)
Chromium VI (Cr <sup>6+</sup> ) Content	0.1% (1000ppm)

The above limits were quoted from 2002/95/EC and amendment 2005/618/EC for homogeneous material.



Test Conducted

### (Ⅲ) Test Method:

Test Item	Test Method	Reporting Limit
Cadmium (Cd) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Lead (Pb) content	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Mercury (Hg) content	With reference to IEC 62321 edition 1.0:2008 in clause 7, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES.	2 ppm
Chromium VI (Cr <sup>6+</sup> ) content	With reference to IEC 62321 edition 1.0:2008 in annex B, by boiling water extraction and determined by UV-Vis spectrophotometer.	0.02 mg/kg with 50cm <sup>2</sup>

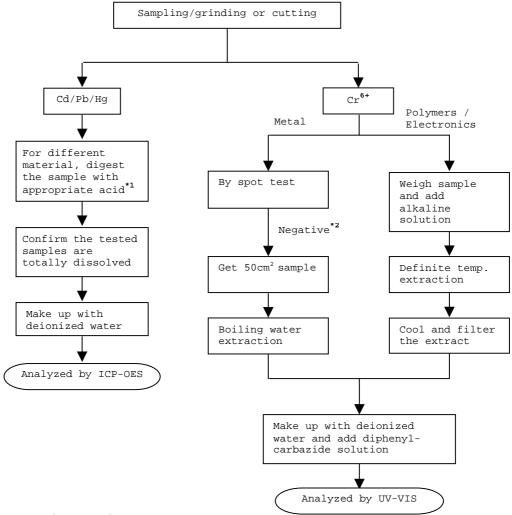
Remark: Reporting limit = Quantitation limit of analyte in sample



### Test Conducted

### (IV) Measurement Flowchart:

Test For Cd/Pb/Hg/Chromium (VI)
Reference Standard: IEC 62321 edition 1.0:2008



### \*1: List Of Appropriate Acid:

Remarks:

<u>Material</u>	Acid Added For Digestion
Polymers	HNO <sub>3</sub> ,HCl,HF,H <sub>2</sub> O <sub>2</sub> ,H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3,</sub> HCl,HF
Electronics	HNO <sub>3</sub> ,HCl,H <sub>2</sub> O <sub>2</sub> ,HBF <sub>4</sub>

\*2: If the result of spot test is positive, Chromium VI would be determined as detected.

End of Report



Test Conducted

### Photo







No. SHAEC1103841401 日期: 2011年03月31日 第1页,共4页

乐清市精饰电镀厂 浙江省乐清市北白象镇象塔南路42号

以下测试之样品是由申请者所提供及确认:镀锡层

SGS工作编号:

SP11-008489 - SH

配件

2011年03月28日

测试周期:

2011年03月28日 - 2011年03月31日

根据客户要求测试

请参见下一页

刑试结果:

请参见下一页

基于所送样品进行的测试, 测试结果与欧盟RoHS指令2002/95/EC以及后续修正指

令的要求相符



重标标准技术服务有限公司

Fan Jingjie, JJ范晶捷

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CENERAL CONDITIONS OF SERVICE

测试报告

No. SHAEC1103841401

日期: 2011年93月31日

测试结果: •

产品部件外观描述:

样品编号

SGS样品ID

描述

SHA11-038414.001

银色金属

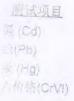
- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = 检测极限值
- (3) ND = 未检出 ( < MDL)
- (4) "-" = 未规定

## RoHS指令2002/95/EC

测试方法:

参照IEC 62321:2008:

- (1) 用ICP-OES测定镉的含量.
- (2) 用ICP-OES测定铅的含量.
- (3) 用ICP-OES测定汞的含量.
- (4) 用点测试法/紫外,可见历光光度计比色法测定六价铬的含量





	1	1	
及原	单位	MDL	001
196	mg/kg	2	ND
1,000	mg/kg	2	ND
1,000	mg/kg	2	ND
- *	-		Negative

- (1) 最大允许极限值引用自2002/95/EC RoHS指令和后继修正指令2005/618/EC.

Negative= 镀层中未检测到六价铬, Positive = 镀层中检测到六价铬;

(当点测试结果为Negative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:

Negative = 镀层中未检测到六价铬

Positive = 镀层中检测到六价铬; 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.

针对金属表面的防腐涂层: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代表测试

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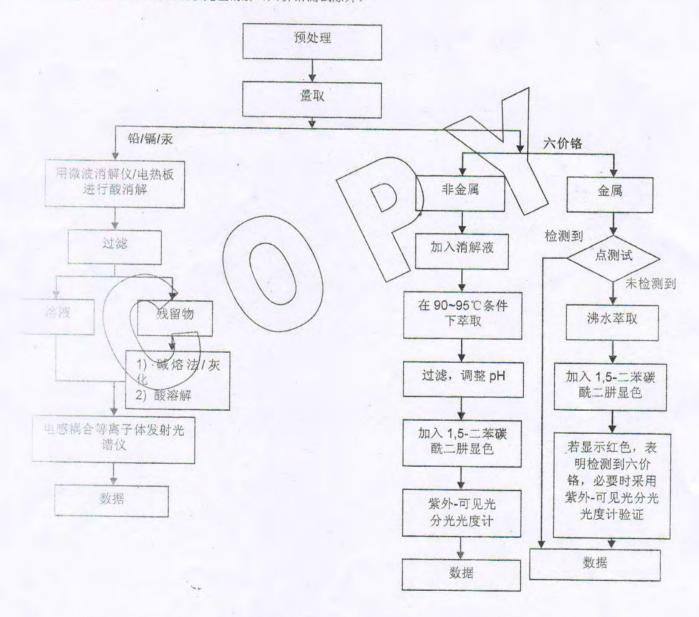
- 日期: 2011年03月31日

第3页,共4页

附件

### RoHS 测试流程图

- 1) 分析人员: 肖飞/徐双/赵旭东
- 2) 项目负责人: 张春华/徐亮
- 3) 样品按照下述流程被完全消解(六价铬测试除外)



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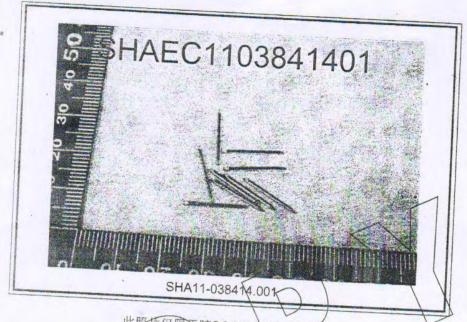
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No. SHAEC1102902201

日期: 2011年03月18日

第1页,共4页

乐清市精饰电镀厂

浙江省乐清市北门象镇象塔南路42号

以下测试之样品是由申请者所提供及确认:镀锌层

SGS工作编号:

SP11-006643 - SH

型号:

配件

样品接收日期:

2011年03月14日

测试周期:

2011年03月14日 - 2011年03月18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,测试结果与欧盟RoHS指令2002/95/EC以及后续修正信

令的要求相符



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No. SHAEC1102902201

日期: 2011年03月18日

第2页,共4页

测试结果:

### 样品部件外观描述:

样品编号

1

SGS样品ID

描述

SHA11-029022.001

银蓝色金属

备注:

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = 检测极限值
- (3) ND = 未检出 ( < MDL )
- (4) "-" = 未规定

### RoHS指令2002/95/EC

测试方法:

参照IEC 62321:2008:

- (1) 用ICP-OES测定镉的含量.
- (2) 用ICP-OES测定铅的含量
- (3) 用ICP-OES测定址的含量.

(4) 用点测试法/紫外-可见分光光度计比色法测定大价格的含量。





限值	单位	MDL	001
100	mg/kg	2	ND
1,000	mg/kg	2	ND
1,000	mg/kg	2	ND
	-	0	Negative

### 备注:

- (1) 最大允许极限值引用自2002/95/EC RoHS指令和后继修正指令2005/618/EC.
- (2) 。 点测试法:

Negative= 镀层中未检测到六价铬, Positive = 镀层中检测到六价铬; (当点测试结果为Negative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:

Negative = 镀层中未检测到六价铬

Positive = 镀层中检测到六价铬; 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.

针对金属表面的防腐涂层: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代表测试时样品的状态.

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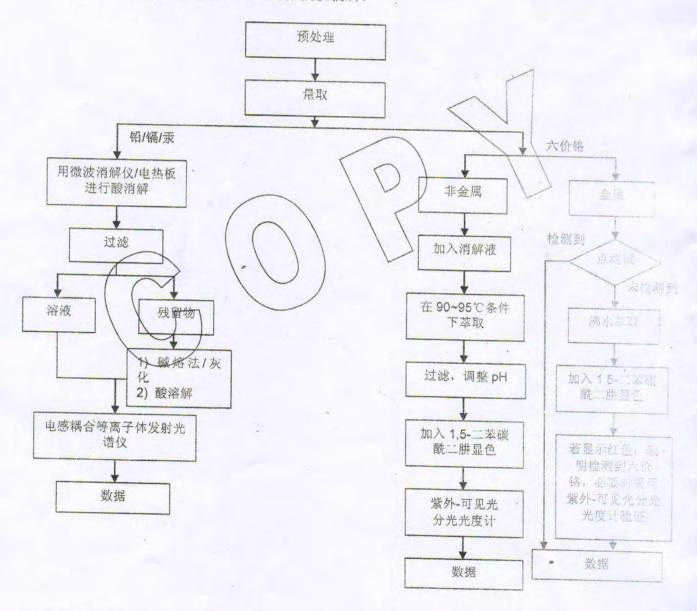
日期: 2011年03月18日

第3页 44市

附件

### RoHS 测试流程图

- 1) 分析人员: 肖飞/徐双/赵旭东
- 2) 项目负责人: 张春华/徐亮
- 3) 样品按照下述流程被完全消解(六价铬测试除外)



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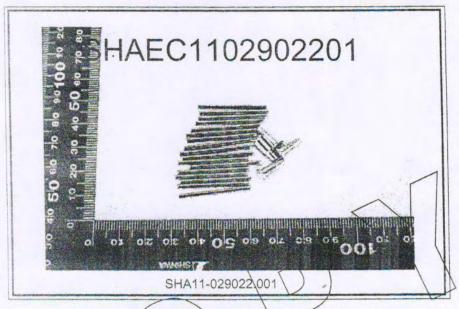


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