



ICP Test Report Certification Packet

Company name: Littelfuse, Inc.

Product Series: SMBJ, P6SMB, SACB, 3T, 1KSMB, HTVSB7.0CA-100 Series

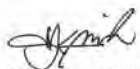
Product #: TVS Diode

Issue Date: August 15, 2011

It is hereby certified by Littelfuse, Inc. that there is neither RoHS (EU Directive 2002/95/EC)-restricted substance nor such use, for materials to be used for unit parts, for packing/packaging materials, and for additives and the like in the manufacturing processes.

In addition, it is hereby reported to you that the parts and sub-materials, the materials to be used for unit parts, the packing/packaging materials, and the additives and the like in the manufacturing processes, are all composed of the following components.

Issued by:


KRISTEEN BACILA

<Global EHS Engineer>

(1) Parts, sub-materials and unit parts

This document covers the SMBJ, P6SMB, SACB, 3T, 1KSMB RoHS-Compliant series products manufactured by Littelfuse, Inc.

< Raw Materials Used

Please see Table 1

(2) The ICP data on all measurable substances

Please see appropriate pages as identified in Table 1

Remarks : RoHS Exemptions 5 (7c-1 in the New RoHS exemption) and 7a apply to these products.



Table 1: List of Raw Materials covered by this report

Total Parts	Raw Material Part Number	Raw Material Description	Page(s)
1	NA	Chip	3-7
2	NA	Silicon Wafer	8-12
3	NA	Wafer Passivation	13-19
4	NA	Lead Frame	20-23
5	NA	Solder Paster	24-30
6	NA	Epoxy Molding Compound	31-37
7	NA	Tin Plating	38-41
8	NA	Clip	41-45



TEST REPORT

Number : WUXH00005706S1

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.
EAST 1#, ZHENFA 6 ROAD, SHUO FANG
INDUSTRIAL PARK WUXI NATIONAL HIGH-TECH
DEVELOPMENT ZONE, WUXI, JIANGSU, CHINA
Attn : ZHANG XIAOPENG

Date : Aug 10, 2011
THIS IS TO SUPERSEDE REPORT
NO. WUXH00005706 DATED
AUG 04, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Silvery Grey Metal.**

Item Name : Chip.
Vendor : Littelfuse Concord.
Component Or Part No. : Silicon+Nickel+Glass.
Test Item : Cd,Pb,Hg,CrVI,PBBs,PBDEs.

Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

Prepared And Checked By:
For Intertek Testing Services Wuxi Ltd.

Jessica Lu
General Manager



TEST REPORT

Number : WUXH00005706S1

Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	6110
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI) (Cr ⁶⁺) Content (mg/kg)(For Non-Metal)	ND
Polybrominated Biphenyls (PBBs)(mg/kg)	
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)(mg/kg)	
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

Remark:

mg/kg = Milligram Per Kilogram = ppm

ND = Not Detected



TEST REPORT

Number : WUXH00005706S1

Tests Conducted (As Requested By The Applicant)

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

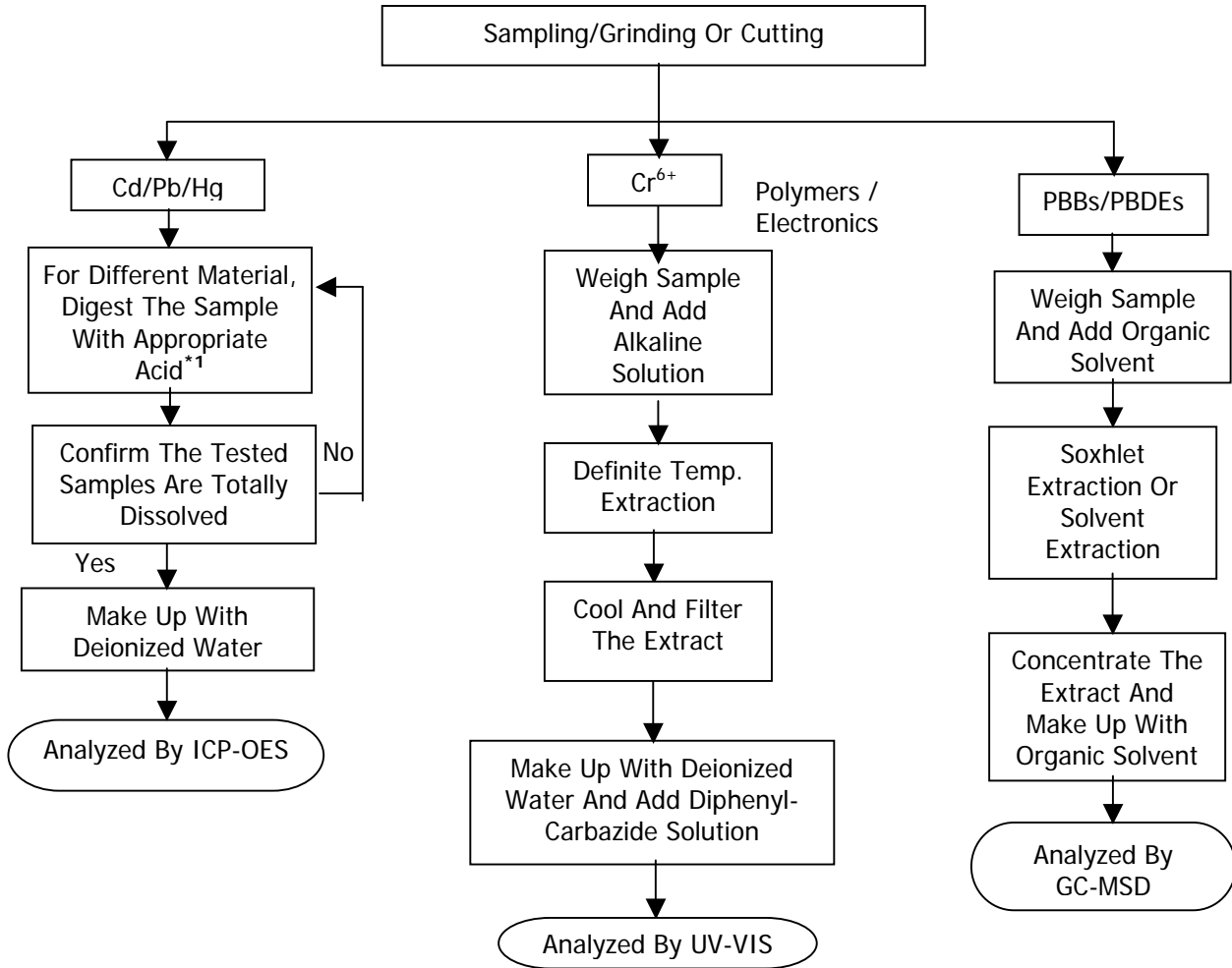
Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr ⁶⁺) Content (For Non-Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Alkaline Digestion And Determined By UV-VIS Spectrophotometer	1 mg/kg
Polybrominated Biphenyls (PBBs)& Polybrominated Diphenyl Ethers (PBDEs)	With Reference To IEC IEC 62321 Edition 1.0: 2008, By Solvent Extraction And Determined By GC/MS And Further HPLC Confirmation When Necessary.	5 mg/kg

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:
Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)
Organic (Jenny Xu/Cherry Sun)

Remarks:

*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO ₃ , HCL, HF, H ₂ O ₂ , H ₃ BO ₃
Metals	HNO ₃ , HCL, HF
Electronics	HNO ₃ , HCL, H ₂ O ₂ , HBF ₄

Tests Conducted (As Requested By The Applicant)

Photo





TEST REPORT

Number : WUXH00005703

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.
EAST 1#, ZHENFA 6 ROAD, SHUO FANG
INDUSTRIAL PARK WUXI NATIONAL HIGH-TECH
DEVELOPMENT ZONE, WUXI, JIANGSU, CHINA
Attn : ZHANG XIAOPENG

Date : Aug 04, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Silvery Grey Metal.**

Item Name : Silicon Wafer With Nickel Plating.

Vendor : Concord.

Component Or Part No. : Silicon+Nickel.

Test Item : Cd,Pb,Hg,CrVI,PBBs,PBDEs.

Remark : As Requested By The Applicant, Tested As A Whole And Sampled Randomly.

Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

Prepared And Checked By:
For Intertek Testing Services Wuxi Ltd.

Jessica Lu
General Manager



TEST REPORT

Number : WUXH00005703

Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	48
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI) (Cr ⁶⁺) Content (mg/kg)(For Non-Metal)	ND
Polybrominated Biphenyls (PBBs)(mg/kg)	
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)(mg/kg)	
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

Remark:

mg/kg = Milligram Per Kilogram = ppm

ND = Not Detected



TEST REPORT

Number : WUXH00005703

Tests Conducted (As Requested By The Applicant)

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

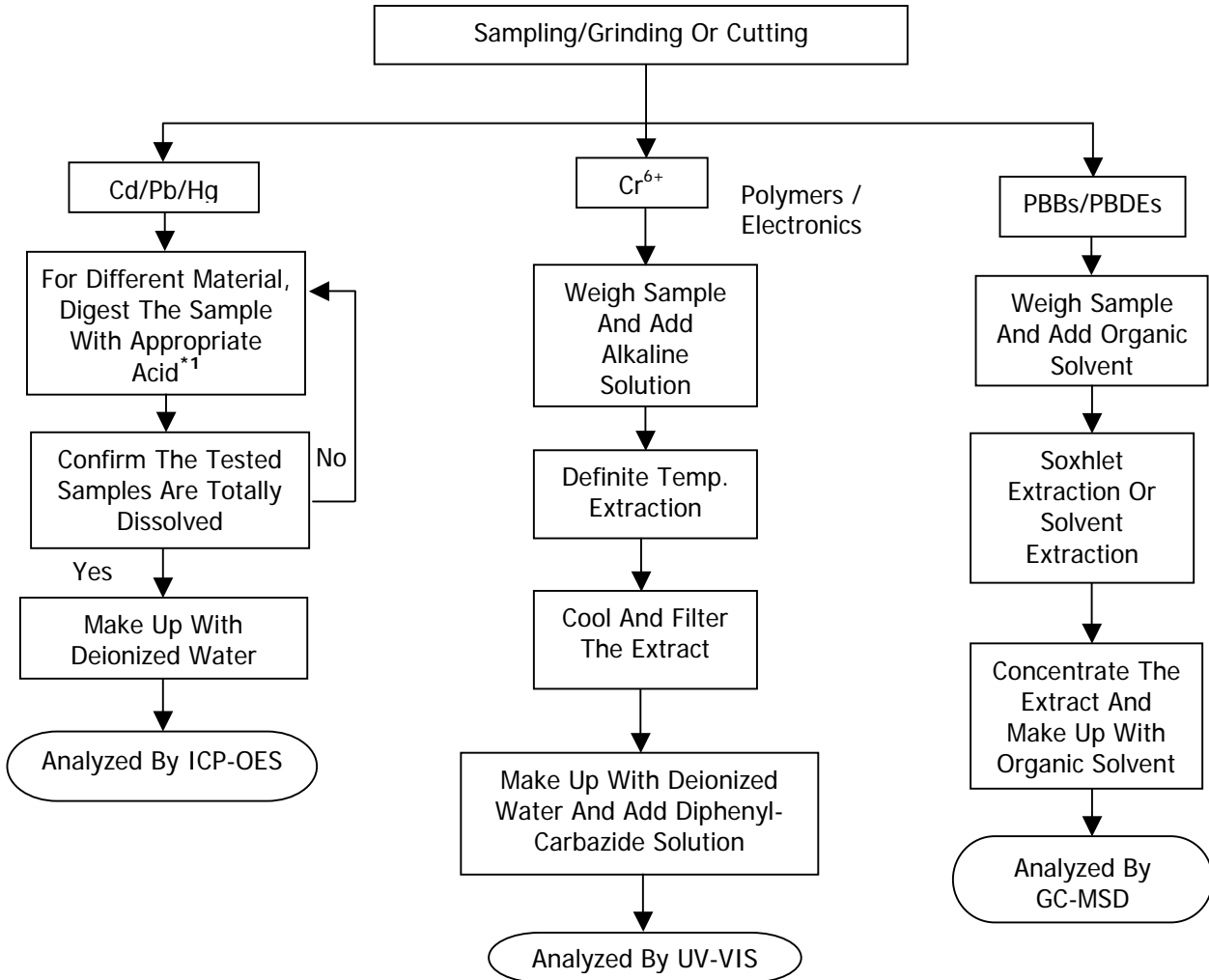
Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr ⁶⁺) Content (For Non-Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Alkaline Digestion And Determined By UV-VIS Spectrophotometer	1 mg/kg
Polybrominated Biphenyls (PBBs)& Polybrominated Diphenyl Ethers (PBDEs)	With Reference To IEC IEC 62321 Edition 1.0: 2008, By Solvent Extraction And Determined By GC/MS And Further HPLC Confirmation When Necessary.	5 mg/kg

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:
Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)
Organic (Jenny Xu/Cherry Sun)

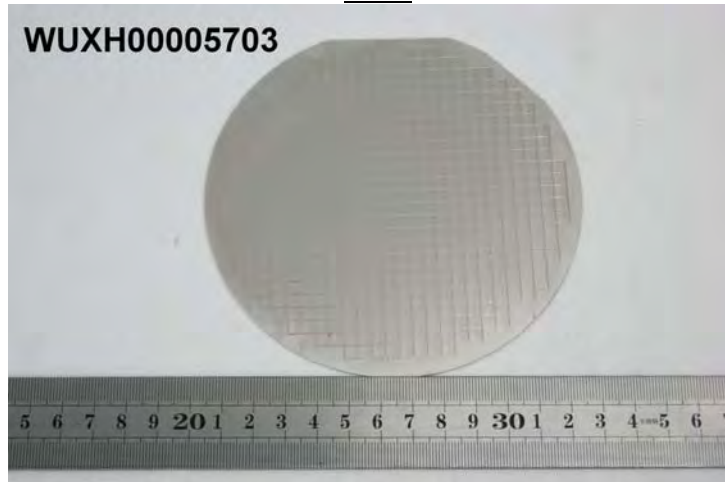
Remarks:

*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO ₃ , HCL, HF, H ₂ O ₂ , H ₃ BO ₃
Metals	HNO ₃ , HCL, HF
Electronics	HNO ₃ , HCL, H ₂ O ₂ , HBF ₄

Tests Conducted (As Requested By The Applicant)

Photo





TEST REPORT

Number : WUXH00005704S1

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.
EAST 1#, ZHENFA 6 ROAD, SHUO FANG INDUSTRIAL PARK
WUXI NATIONAL HIGH-TECH DEVELOPMENT ZONE,
WUXI, JIANGSU, CHINA
Attn : ZHANG XIAOPENG

Date : Aug 11, 2011
THIS IS TO SUPERSEDE REPORT
NO. WUXH00005704 DATED
AUG 05, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **White Powder.**

Item Name : Wafer Passivation.
Vendor : Propriety.
Component Or Part No. : Propriety.
Test Item : Cd,Pb,Hg,CrVI,PBBs,PBDEs,F,Cl,Br,I.

Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

Prepared And Checked By:
For Intertek Testing Services Wuxi Ltd.

Jessica Lu
General Manager



Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	185100
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI) (Cr ⁶⁺) Content (mg/kg)(For Non-Metal)	ND
Polybrominated Biphenyls (PBBs)(mg/kg)	
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)(mg/kg)	
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

Remark:

mg/kg = Milligram Per Kilogram = ppm

ND = Not Detected

#=The Result Is For Reference Only.



TEST REPORT

Number : WUXH00005704S1

Tests Conducted (As Requested By The Applicant)

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

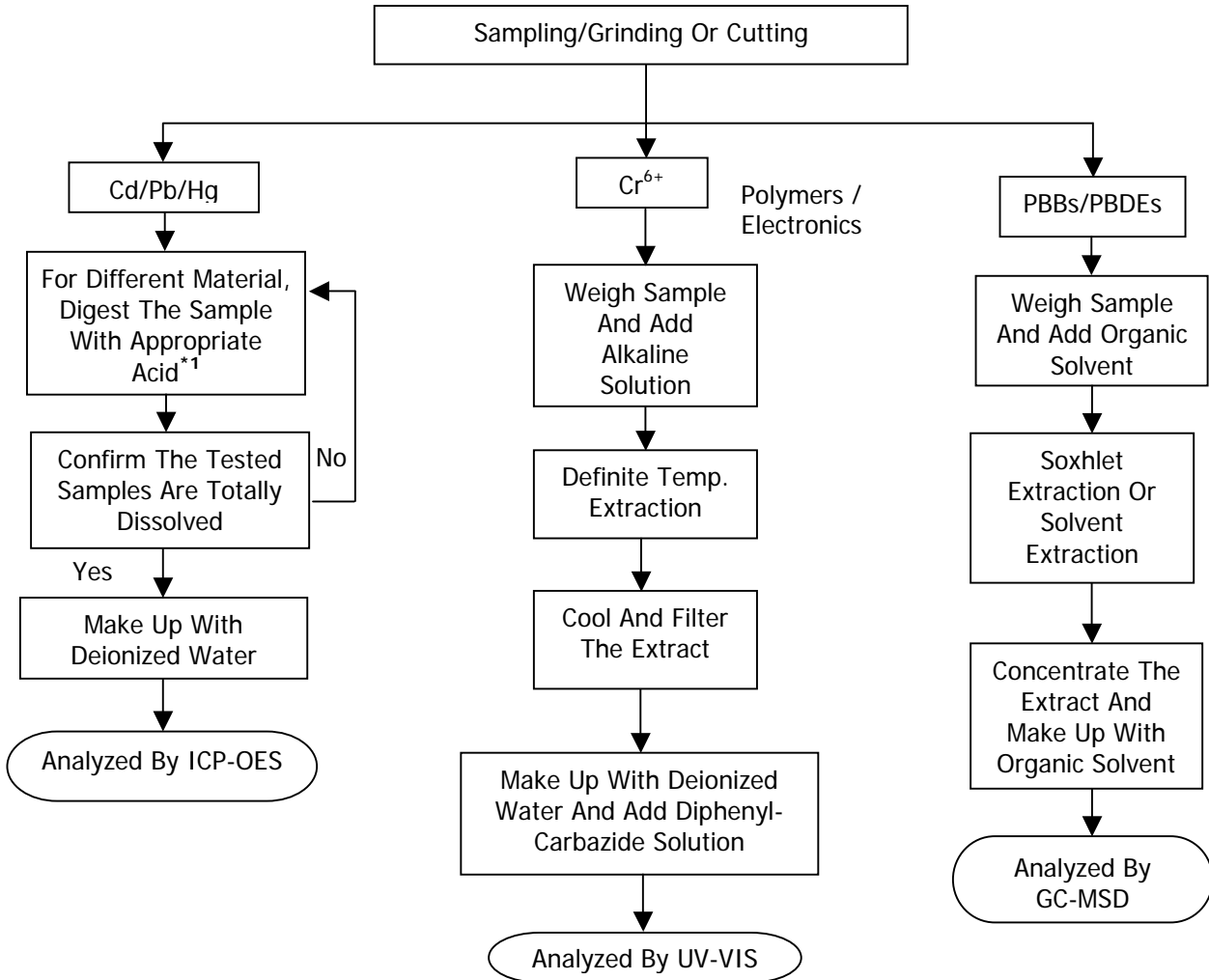
Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr ⁶⁺) Content (For Non-Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Alkaline Digestion And Determined By UV-VIS Spectrophotometer	1 mg/kg
Polybrominated Biphenyls (PBBs)& Polybrominated Diphenyl Ethers (PBDEs)	With Reference To IEC IEC 62321 Edition 1.0: 2008, By Solvent Extraction And Determined By GC/MS And Further HPLC Confirmation When Necessary.	5 mg/kg

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:
Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)
Organic (Jenny Xu/Cherry Sun)

Remarks:

*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO ₃ , HCL, HF, H ₂ O ₂ , H ₃ BO ₃
Metals	HNO ₃ , HCL, HF
Electronics	HNO ₃ , HCL, H ₂ O ₂ , HBF ₄

2 Halogen Test
(I) Test Result Summary :



TEST REPORT

Number : WUXH00005704S1

Tests Conducted (As Requested By The Applicant)

Halogen Content:

<u>Testing Item</u>	<u>Result (ppm)</u>
Fluorine (F) Content	ND
Chlorine (Cl) Content	ND
Bromine (Br) Content	ND
Iodine (I) Content	ND

Remarks : ppm = Parts Per Million = mg/kg
ND = Not Detected

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 05, 2011

(II) Test Method :

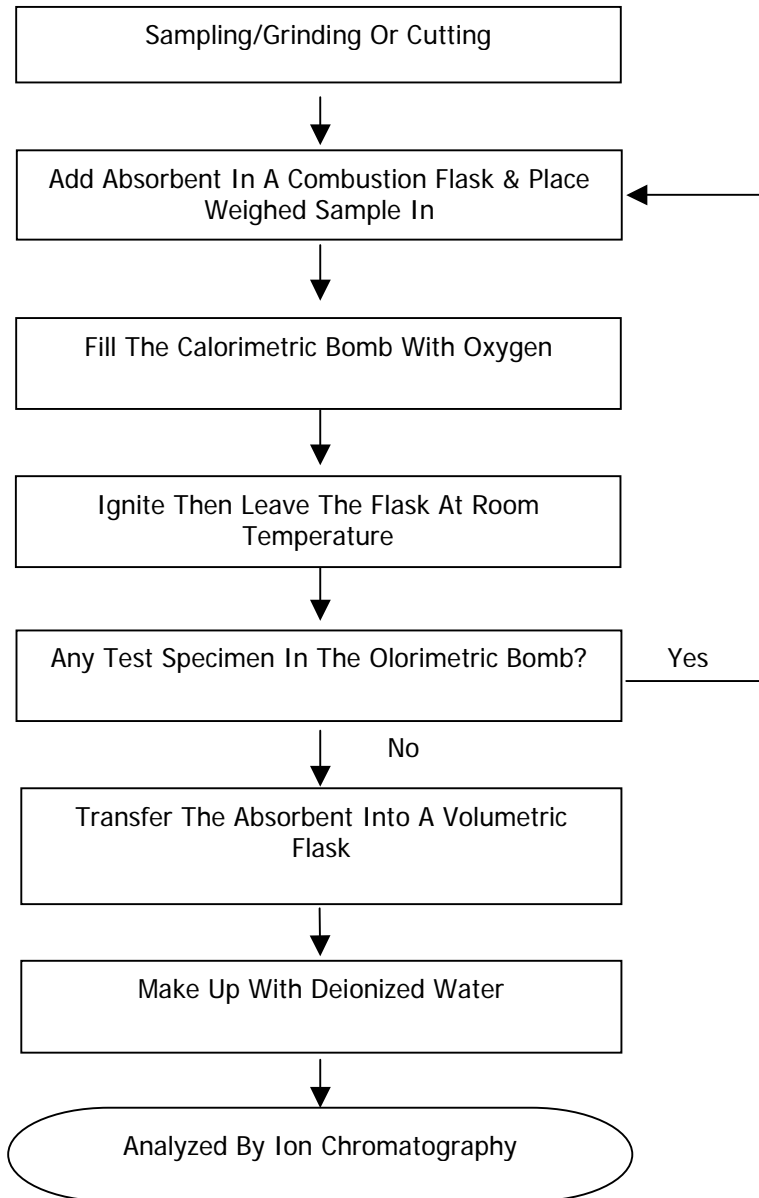
<u>Testing Item</u>	<u>Testing Method</u>	<u>Reporting Limit</u>
Halogen (F, Cl, Br, I) Content	With Reference To EN 14582:2007 By Combustion In A Calorimetric Bomb And Determined By Ion Chromatography	50 ppm

Remarks : Reporting Limit = Quantitation Limit Of Analyte In Sample

Tests Conducted (As Requested By The Applicant)

(III) Measurement Flowchart:

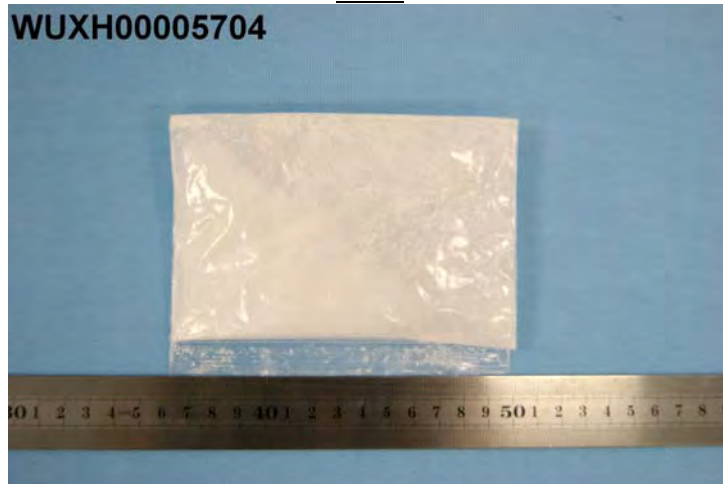
Test For Halogen Content Reference Method: EN 14582:2007



Chemist: Fred Wang/ Ally Wan Ally Wan

Tests Conducted (As Requested By The Applicant)

Photo





TEST REPORT

Number : WUXH00005713

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.
EAST 1#, ZHENFA 6 ROAD, SHUO FANG INDUSTRIAL PARK
WUXI NATIONAL HIGH-TECH DEVELOPMENT ZONE,
WUXI, JIANGSU, CHINA
Attn : ZHANG XIAOPENG

Date : Aug 04, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Golden Yellow Metal.**
Item Name : Lead Frame/Lead Frame Matrix/TO-220 Lead Frame/Heatsink.
Vendor : Jinag Jihlong Technology CO., LTD.
Component Or Part No. : Copper.
Test Item : Cd, Pb, Hg, CrVI.

Tests Conducted:
As Requested By The Applicant, For Details Refer To Attached Pages

Summary:

<u>Tested Sample</u>	<u>Standard</u>	<u>Result</u>
Submitted Sample	With Reference To Test Method Of IEC 62321 Edition 1.0: 2008 And Maximum Concentration Limits Quoted From RoHS Directives 2002/95/EC And Amendment 2005/618/EC	PASS

Prepared And Checked By:
For Intertek Testing Services Wuxi Ltd.

Jessica Lu
General Manager



TEST REPORT

Number : WUXH00005713

Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	20
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI)(Cr ⁶⁺) Result (By Boiling Water Extraction On Metal) (mg/kg With 50cm ²)	N

Remark:

mg/kg = Milligram Per Kilogram = ppm

mg/kg With 50cm² = Milligram Per Kilogram With 50 Square Centimeter

ND = Not Detected

N=Negative

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

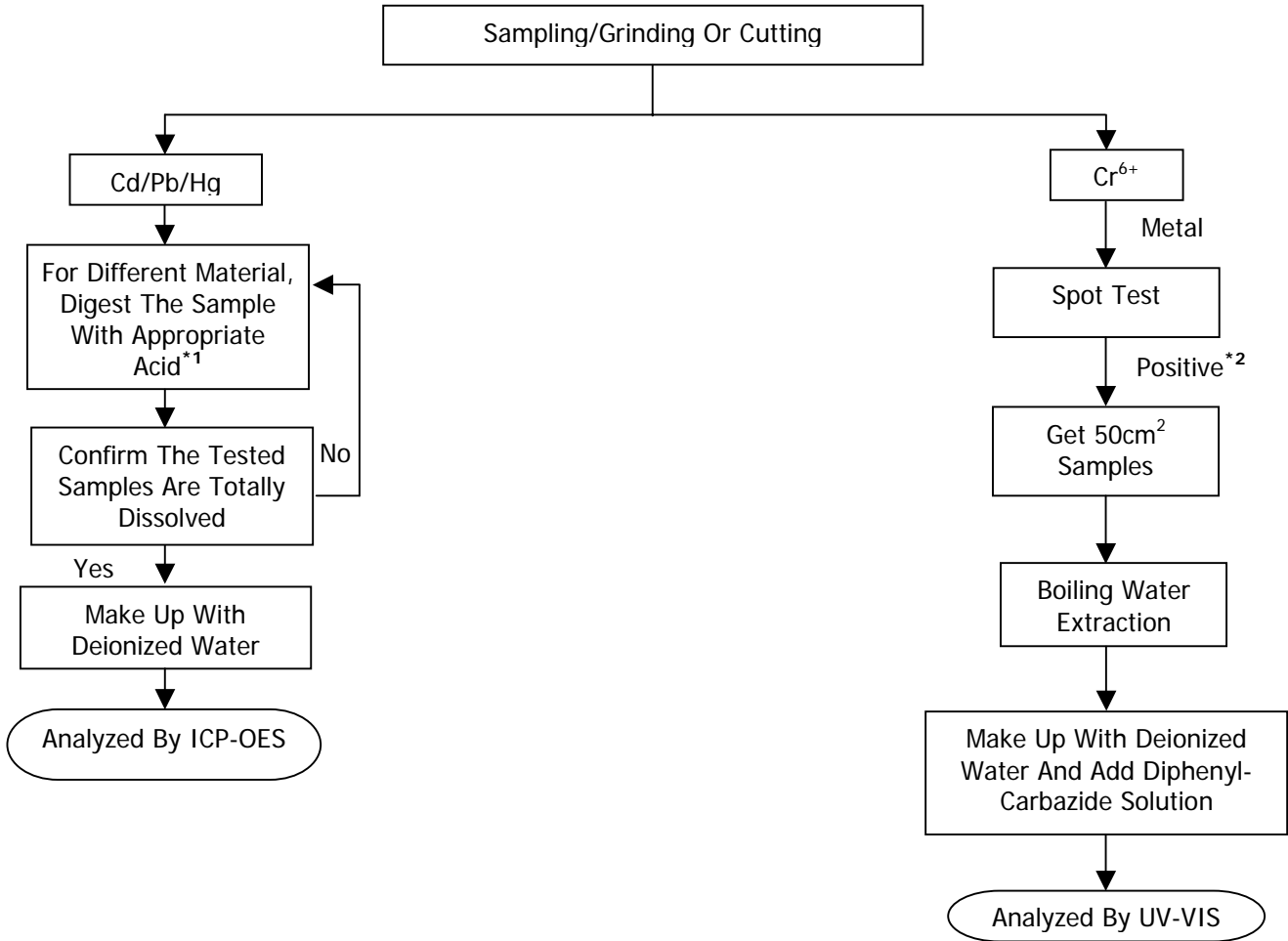
(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr ⁶⁺) Content (For Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Boiling Water Extraction And Determined By UV-VIS Spectrophotometer	0.02mg/kg With 50cm ² (In Testing Solution)

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 03, 2011

Tests Conducted (As Requested By The Applicant)
 (D) Measurement Flowchart:
 Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)

Remarks:

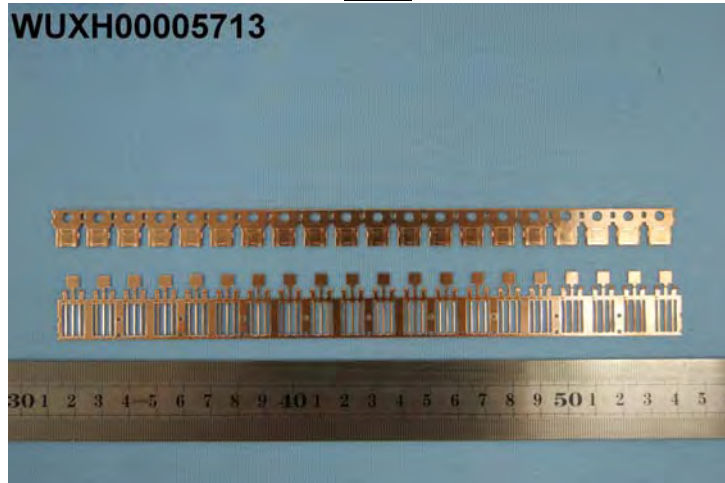
*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO ₃ , HCL, HF, H ₂ O ₂ , H ₃ BO ₃
Metals	HNO ₃ , HCL, HF
Electronics	HNO ₃ , HCL, H ₂ O ₂ , HBF ₄

*2: If The Result Of Spot Test Is Positive, Chromium VI Would Be Determined As Detected.

Tests Conducted (As Requested By The Applicant)

Photo





TEST REPORT

Number : WUXH00005720S1

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.
EAST 1#, ZHENFA 6 ROAD, SHUO FANG
INDUSTRIAL PARK WUXI NATIONAL HIGH-TECH
DEVELOPMENT ZONE, WUXI, JIANGSU, CHINA
Attn : ZHANG XIAOPENG

Date : Aug 12, 2011
THIS IS TO SUPERSEDE REPORT
NO. WUXH00005720 DATED
AUG 05, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Gray Paste.**

Item Name : Solder Paste.

Vendor : Heraeus Materials Technology Shanghai Ltd.

Component Or Part No. : F367SN10-90Pb.

Test Item : Cd,Pb,Hg,CrVI,PBBs,PBDEs,F,Cl,Br,I.

Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

Prepared And Checked By:
For Intertek Testing Services Wuxi Ltd.

Jessica Lu
General Manager

Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	912000
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI) (Cr ⁶⁺) Content (mg/kg)(For Non-Metal)	ND
Polybrominated Biphenyls (PBBs)(mg/kg)	
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)(mg/kg)	
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

Remark:

mg/kg = Milligram Per Kilogram = ppm

ND = Not Detected

= The Result Is For Reference Only.



TEST REPORT

Number : WUXH00005720S1

Tests Conducted (As Requested By The Applicant)

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr ⁶⁺) Content (For Non-Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Alkaline Digestion And Determined By UV-VIS Spectrophotometer	1 mg/kg
Polybrominated Biphenyls (PBBs)& Polybrominated Diphenyl Ethers (PBDEs)	With Reference To IEC 62321 Edition 1.0: 2008, By Solvent Extraction And Determined By GC-MSD And Further HPLC Confirmation When Necessary.	5 mg/kg

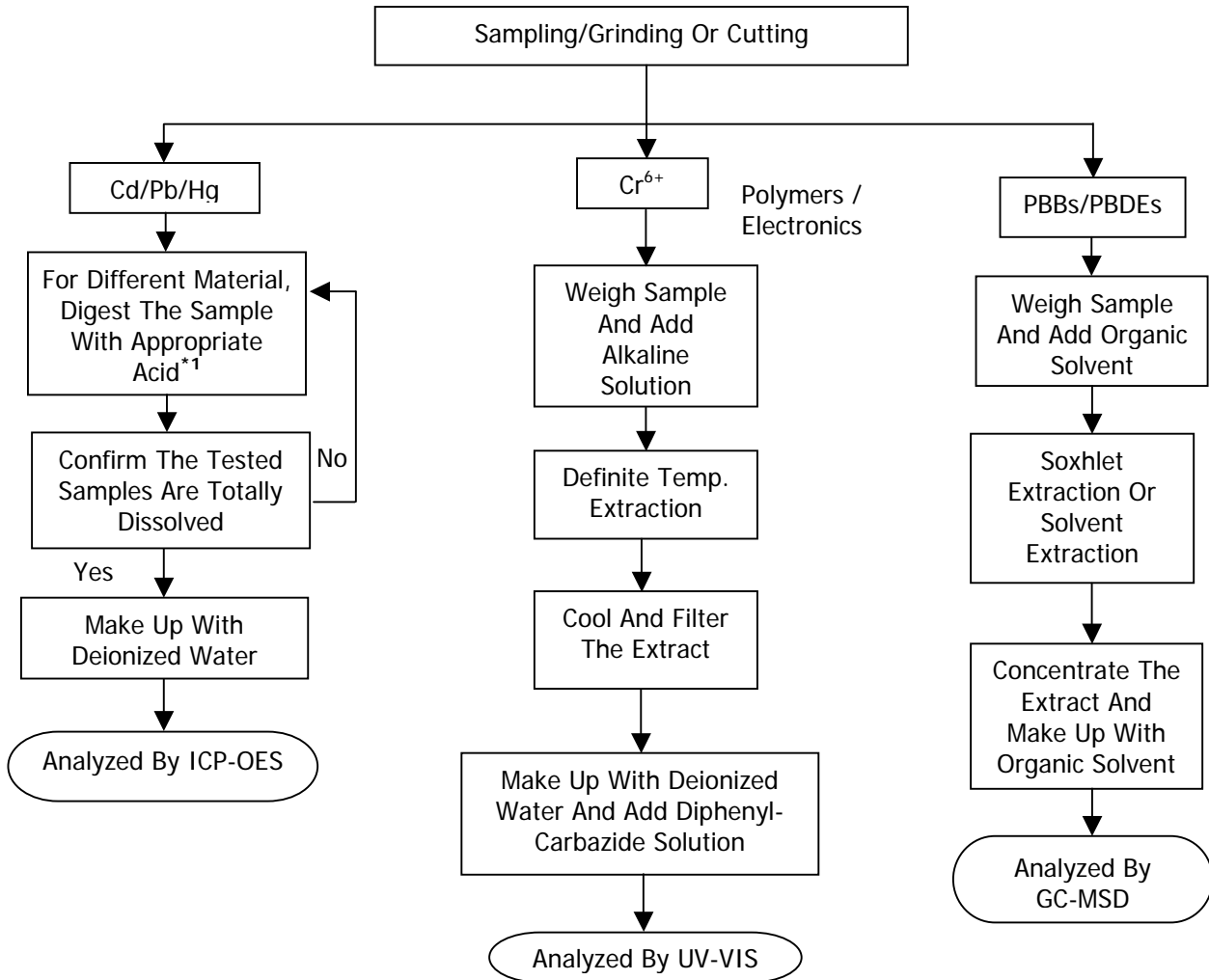
Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 05, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:

Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)
Organic (Jenny Xu/Cherry Sun)

Remarks:

*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO ₃ , HCL, HF, H ₂ O ₂ , H ₃ BO ₃
Metals	HNO ₃ , HCL, HF
Electronics	HNO ₃ , HCL, H ₂ O ₂ , HBF ₄



TEST REPORT

Number : WUXH00005720S1

Tests Conducted (As Requested By The Applicant)

2 Halogen Test

(I) Test Result Summary :

Halogen Content:

<u>Testing Item</u>	<u>Result (ppm)</u>
Fluorine (F) Content	ND
Chlorine (Cl)Content	ND
Bromine (Br) Content	ND
Iodine (I) Content	ND

Remarks : ppm = Parts Per Million = mg/kg
ND = Not Detected

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 05, 2011

(II) Test Method :

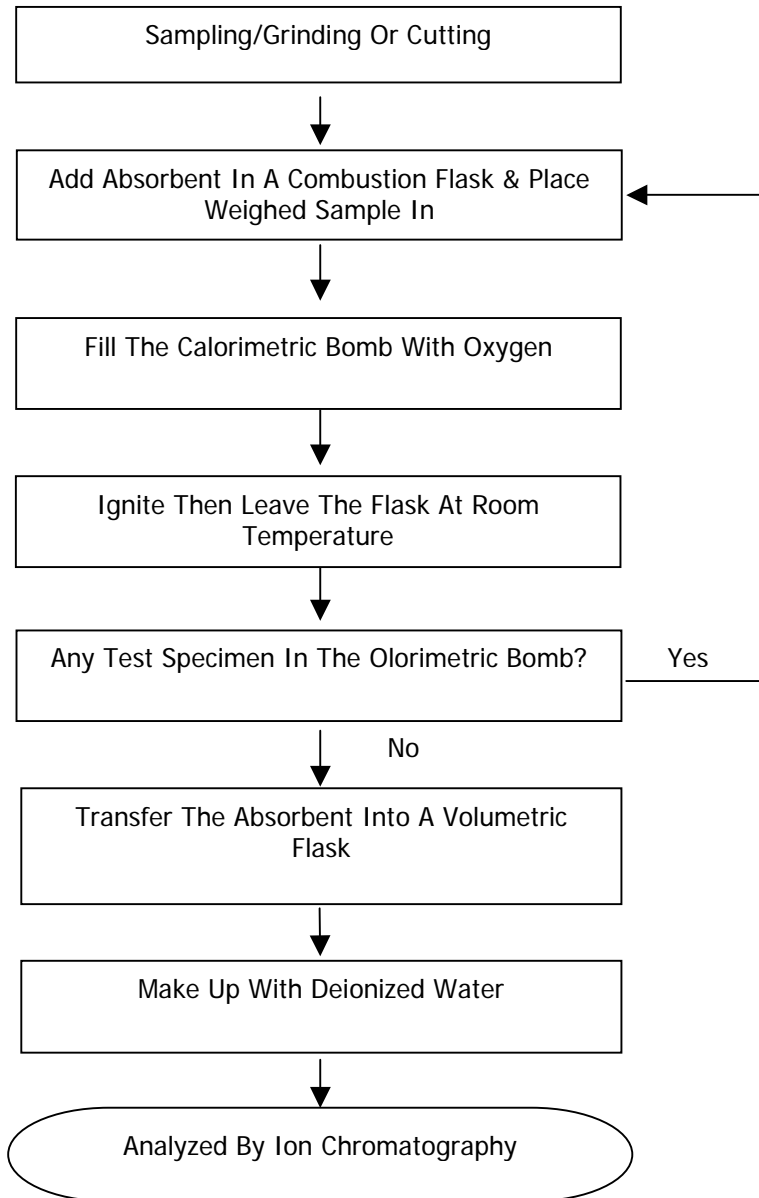
<u>Testing Item</u>	<u>Testing Method</u>	<u>Reporting Limit</u>
Halogen (F,Cl, Br,I) Content	With Reference EN 14582:2007 By Combustion In A Calorimetric Bomb And Determined By Ion Chromatography	50 ppm

Remarks : Reporting Limit = Quantitation Limit Of Analyte In Sample

Tests Conducted (As Requested By The Applicant)

(III) Measurement Flowchart:

Test For Halogen Content Reference Method: EN 14582:2007



Chemist: Fred Wang/ Ally Wan Ally Wan

Tests Conducted (As Requested By The Applicant)

Photo





TEST REPORT

Number : WUXH00005739

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.
EAST 1#, ZHENFA 6 ROAD, SHUO FANG INDUSTRIAL PARK
WUXI NATIONAL HIGH-TECH DEVELOPMENT ZONE,
WUXI, JIANGSU, CHINA
Attn : ZHANG XIAOPENG

Date : Aug 05, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Brown Epoxy Molding Compound.**

Item Name : Epoxy Molding Compound.
Vendor : Cookson Electronics Semiconductor Products.
Component Or Part No. : CK-2000A/CK-2000C.
Test Item : Cd,Pb,Hg,CrVI,PBBs,PBDEs,F,Cl,Br,I.

Tests Conducted:
As Requested By The Applicant, For Details Refer To Attached Pages

Summary:

<u>Tested Sample</u>	<u>Standard</u>	<u>Result</u>
Submitted Sample	With Reference To Test Method Of IEC 62321 Edition 1.0: 2008 And Maximum Concentration Limits Quoted From RoHS Directives 2002/95/EC And Amendment 2005/618/EC	PASS

Prepared And Checked By:
For Intertek Testing Services Wuxi Ltd.

Jessica Lu
General Manager



TEST REPORT

Number : WUXH00005739

Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	ND
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI) (Cr ⁶⁺) Content (mg/kg)(For Non-Metal)	ND
Polybrominated Biphenyls (PBBs)(mg/kg)	
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)(mg/kg)	
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

Remark:

mg/kg = Milligram Per Kilogram = ppm

ND = Not Detected



TEST REPORT

Number : WUXH00005739

Tests Conducted (As Requested By The Applicant)

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr ⁶⁺) Content (For Non-Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Alkaline Digestion And Determined By UV-VIS Spectrophotometer	1 mg/kg
Polybrominated Biphenyls (PBBs)& Polybrominated Diphenyl Ethers (PBDEs)	With Reference To IEC 62321 Edition 1.0: 2008, By Solvent Extraction And Determined By GC-MSD And Further HPLC Confirmation When Necessary.	5 mg/kg

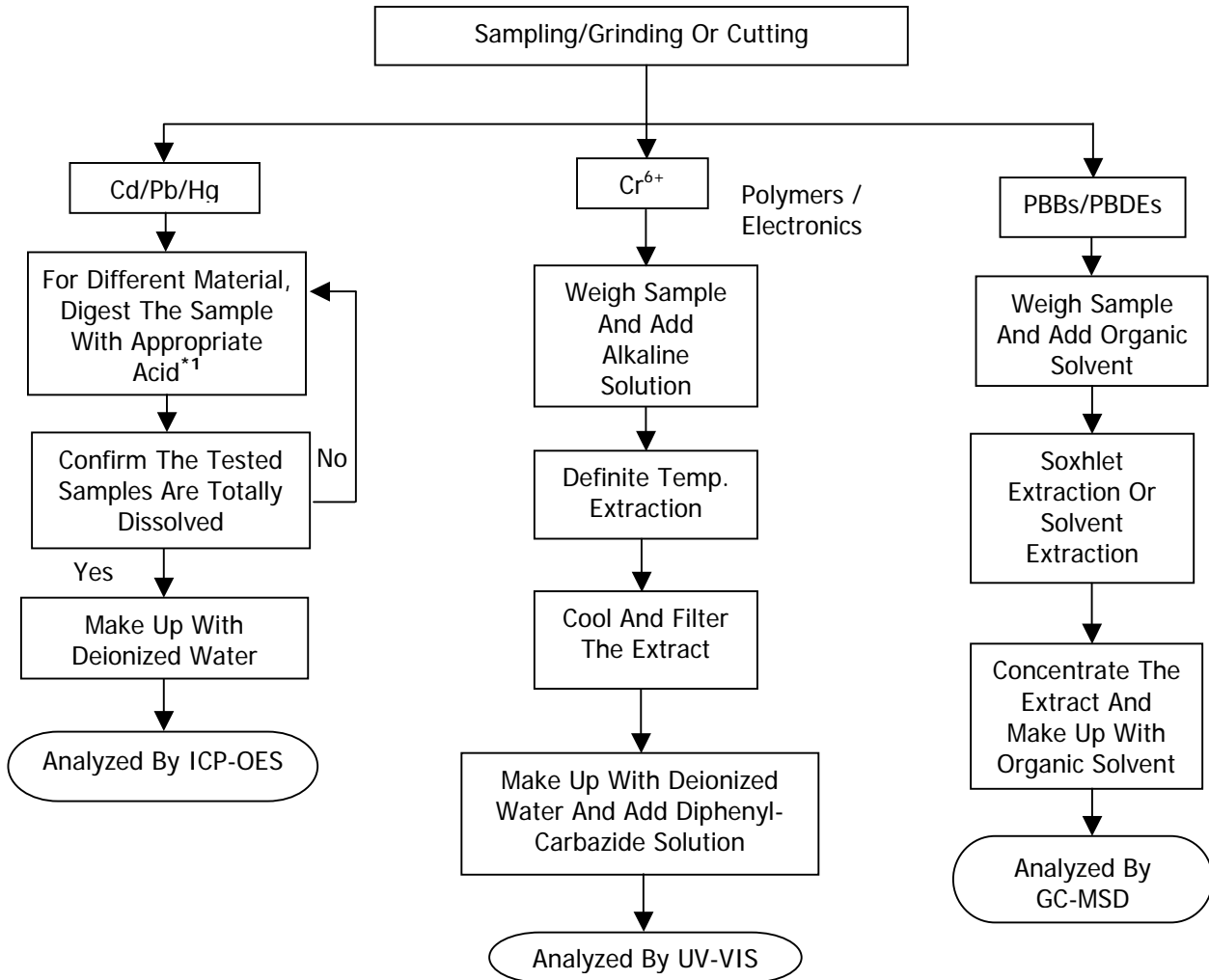
Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 05, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:

Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)
 Organic (Jenny Xu/Cherry Sun)

Remarks:

*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO ₃ , HCL, HF, H ₂ O ₂ , H ₃ BO ₃
Metals	HNO ₃ , HCL, HF
Electronics	HNO ₃ , HCL, H ₂ O ₂ , HBF ₄



TEST REPORT

Number : WUXH00005739

Tests Conducted (As Requested By The Applicant)

2 Halogen Test

(I) Test Result Summary :

Halogen Content:

<u>Testing Item</u>	<u>Result (ppm)</u>
Fluorine (F) Content	ND
Chlorine (Cl)Content	88
Bromine (Br) Content	ND
Iodine (I) Content	ND

Remarks : ppm = Parts Per Million = mg/kg
ND = Not Detected

Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 05, 2011

(II) Test Method :

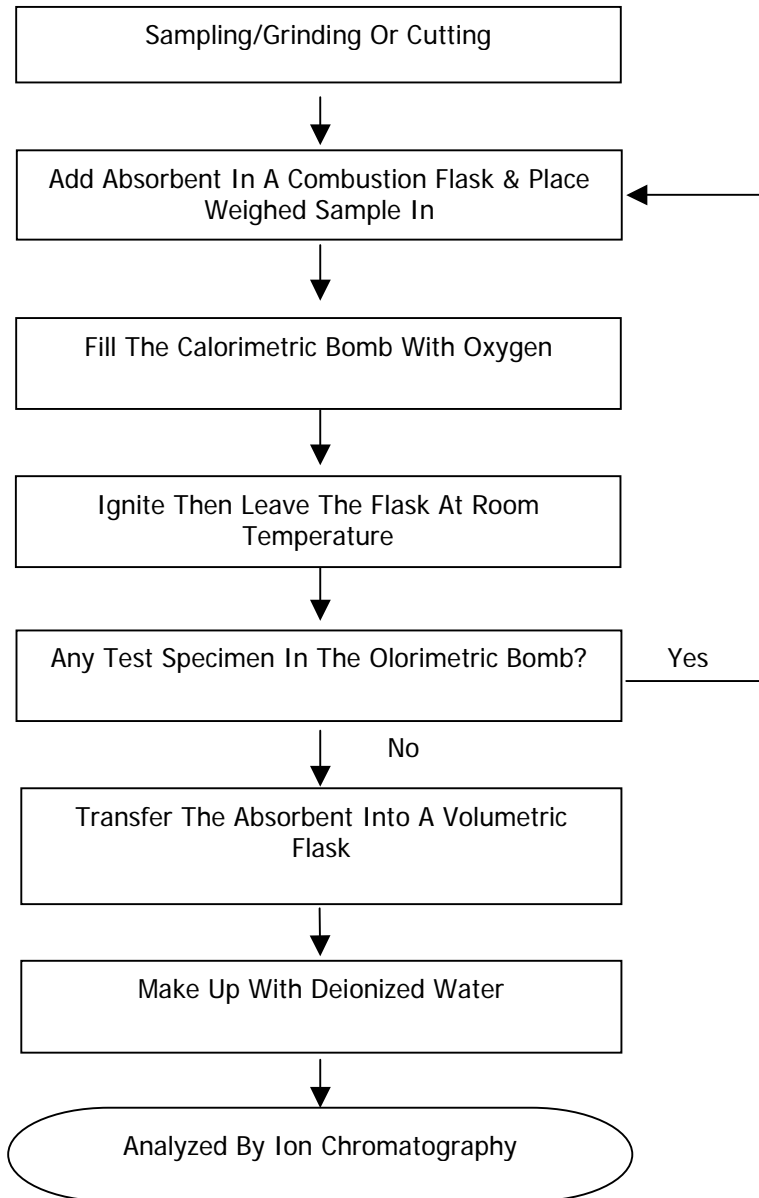
<u>Testing Item</u>	<u>Testing Method</u>	<u>Reporting Limit</u>
Halogen (F,Cl, Br,I) Content	With Reference EN 14582:2007 By Combustion In A Calorimetric Bomb And Determined By Ion Chromatography	50 ppm

Remarks : Reporting Limit = Quantitation Limit Of Analyte In Sample

Tests Conducted (As Requested By The Applicant)

(III) Measurement Flowchart:

Test For Halogen Content Reference Method: EN 14582:2007



Chemist: Fred Wang/ Ally Wan Ally Wan

Tests Conducted (As Requested By The Applicant)

Photo



TEST REPORT

Number : WUXH00005709

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.
EAST 1#, ZHENFA 6 ROAD, SHUO FANG
INDUSTRIAL PARK WUXI NATIONAL HIGH-TECH
DEVELOPMENT ZONE, WUXI, JIANGSU, CHINA
Attn : ZHANG XIAOPENG

Date : Aug 04, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Black Plastic With Silvery Metal Pin.**

Item Name : Tin Plating-SMD.
Vendor : Bandl (Kunshan) International Co.,.
Component Or Part No. : Pure Matte Tin.
Test Item : Cd,Pb,Hg,CrVI.

Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Pages

Prepared And Checked By:
For Intertek Testing Services Wuxi Ltd.



Jessica Lu
General Manager



TEST REPORT

Number : WUXH00005709

Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
	(1)
Cadmium (Cd) Content (mg/kg)/Plating	ND
Lead (Pb) Content (mg/kg)/Plating	29
Mercury (Hg) Content (mg/kg)/Plating	ND
Chromium (VI)(Cr ⁶⁺) Result (By Boiling Water Extraction On Metal) (mg/kg With 50cm ²)	N

Remark:

mg/kg = Milligram Per Kilogram = ppm

mg/kg With 50cm² = Milligram Per Kilogram With 50 Square Centimeter

ND = Not Detected

N=Negative

Tested Component:

(1) Metal Pin Plating.

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr ⁶⁺) Content (For Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Boiling Water Extraction And Determined By UV-VIS Spectrophotometer	0.02mg/kg With 50cm ² (In Testing Solution)

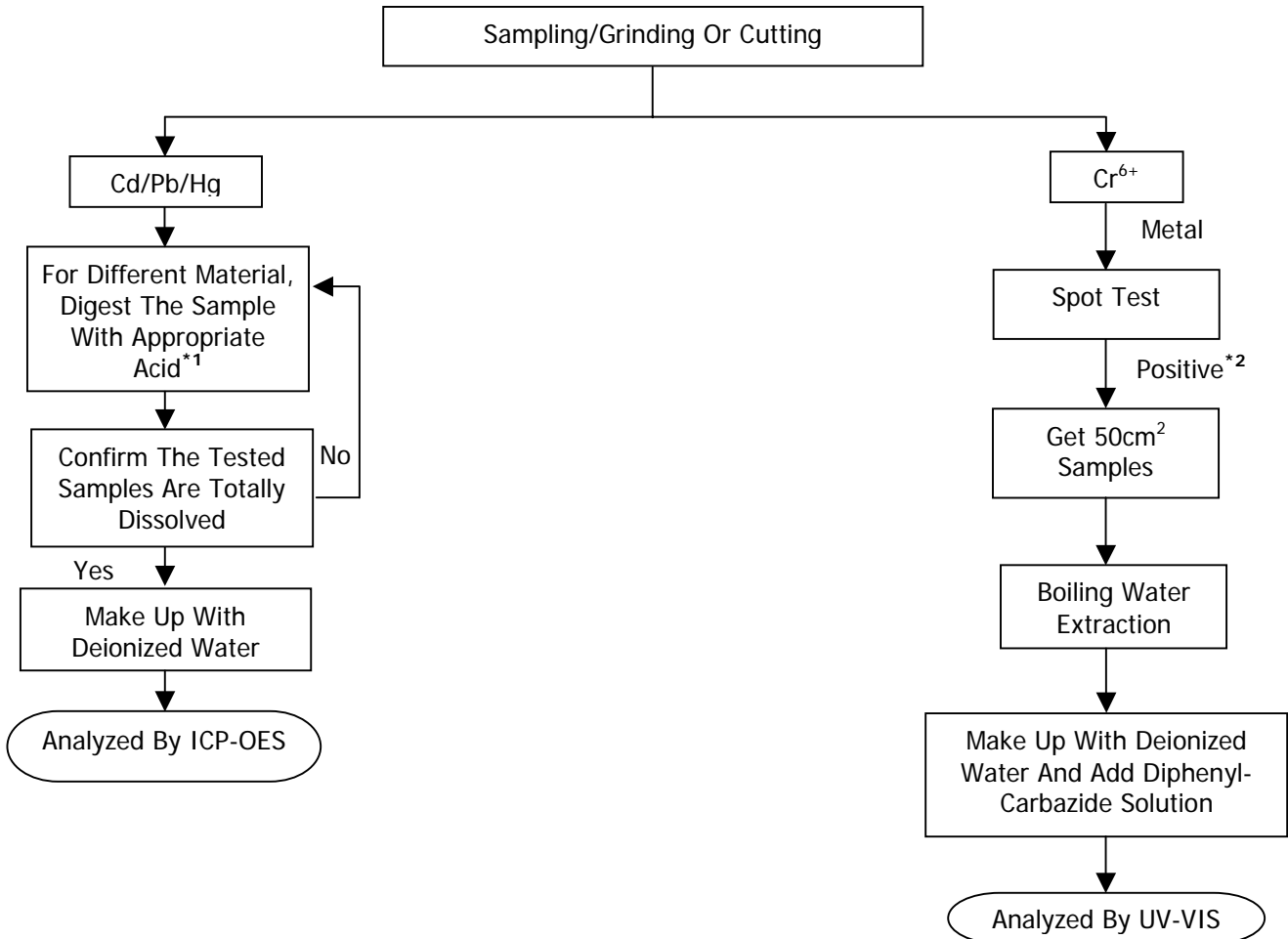
Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:

Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)

Remarks:

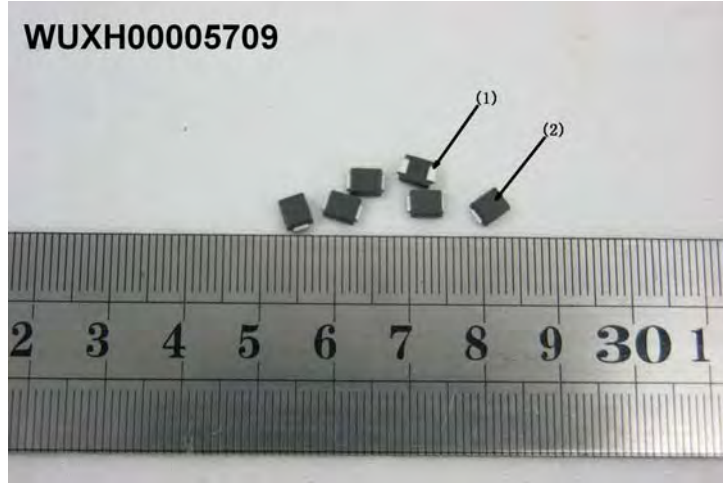
*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO ₃ , HCL, HF, H ₂ O ₂ , H ₃ BO ₃
Metals	HNO ₃ , HCL, HF
Electronics	HNO ₃ , HCL, H ₂ O ₂ , HBF ₄

*2: If The Result Of Spot Test Is Positive, Chromium VI Would Be Determined As Detected.

Tests Conducted (As Requested By The Applicant)

Photo





TEST REPORT

Number : WUXH00005729S1

Applicant : CONCORD SEMICONDUCTOR(WUXI) CO., LTD.
EAST 1#, ZHENFA 6 ROAD, SHUO FANG INDUSTRIAL PARK
WUXI NATIONAL HIGH-TECH DEVELOPMENT ZONE,
WUXI, JIANGSU, CHINA
Attn : ZHANG XIAOPENG

Date : Aug 12, 2011
THIS IS TO SUPERSEDE REPORT
NO. WUXH00005729 DATED
AUG 04, 2011

Sample Description As Declared:

One (1) Piece Of Submitted Sample Said To Be : **Golden Yellow Metal.**

Item Name : Clip.
Vendor : G-SHANK Precision Machinery (Suzhou)CO., LTD.
Component Or Part No. : Copper.
Test Item : Cd,Pb,Hg,CrVI.

Tests Conducted:
As Requested By The Applicant, For Details Refer To Attached Pages

Summary:

<u>Tested Sample</u>	<u>Standard</u>	<u>Result</u>
Submitted Sample	With Reference To Test Method Of IEC 62321 Edition 1.0: 2008 And Maximum Concentration Limits Quoted From RoHS Directives 2002/95/EC And Amendment 2005/618/EC	PASS

Prepared And Checked By:
For Intertek Testing Services Wuxi Ltd.

Jessica Lu
General Manager



TEST REPORT

Number : WUXH00005729S1

Tests Conducted (As Requested By The Applicant)

1 RoHS Directives Test

(A) Test Result Summary:

Testing Item	Result
Cadmium (Cd) Content (mg/kg)	ND
Lead (Pb) Content (mg/kg)	ND
Mercury (Hg) Content (mg/kg)	ND
Chromium (VI)(Cr ⁶⁺) Result (By Boiling Water Extraction On Metal) (mg/kg With 50cm ²)	N

Remark:

mg/kg = Milligram Per Kilogram = ppm

mg/kg With 50cm² = Milligram Per Kilogram With 50 Square Centimeter

ND = Not Detected

N=Negative

(B)RoHS Requirement:

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 mg/kg)

The Above Limits Were Quoted From 2002/95/EC And Amendment 2005/618/EC For Homogeneous Material.

(C) Test Method:

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Lead (Pb)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Mercury (Hg)Content	With Reference To IEC 62321 Edition 1.0: 2008, By Acid Digestion And Determined By ICP-OES	2 mg/kg
Chromium (VI) (Cr ⁶⁺) Content (For Metal)	With Reference To IEC 62321 Edition 1.0: 2008, By Boiling Water Extraction And Determined By UV-VIS Spectrophotometer	0.02mg/kg With 50cm ² (In Testing Solution)

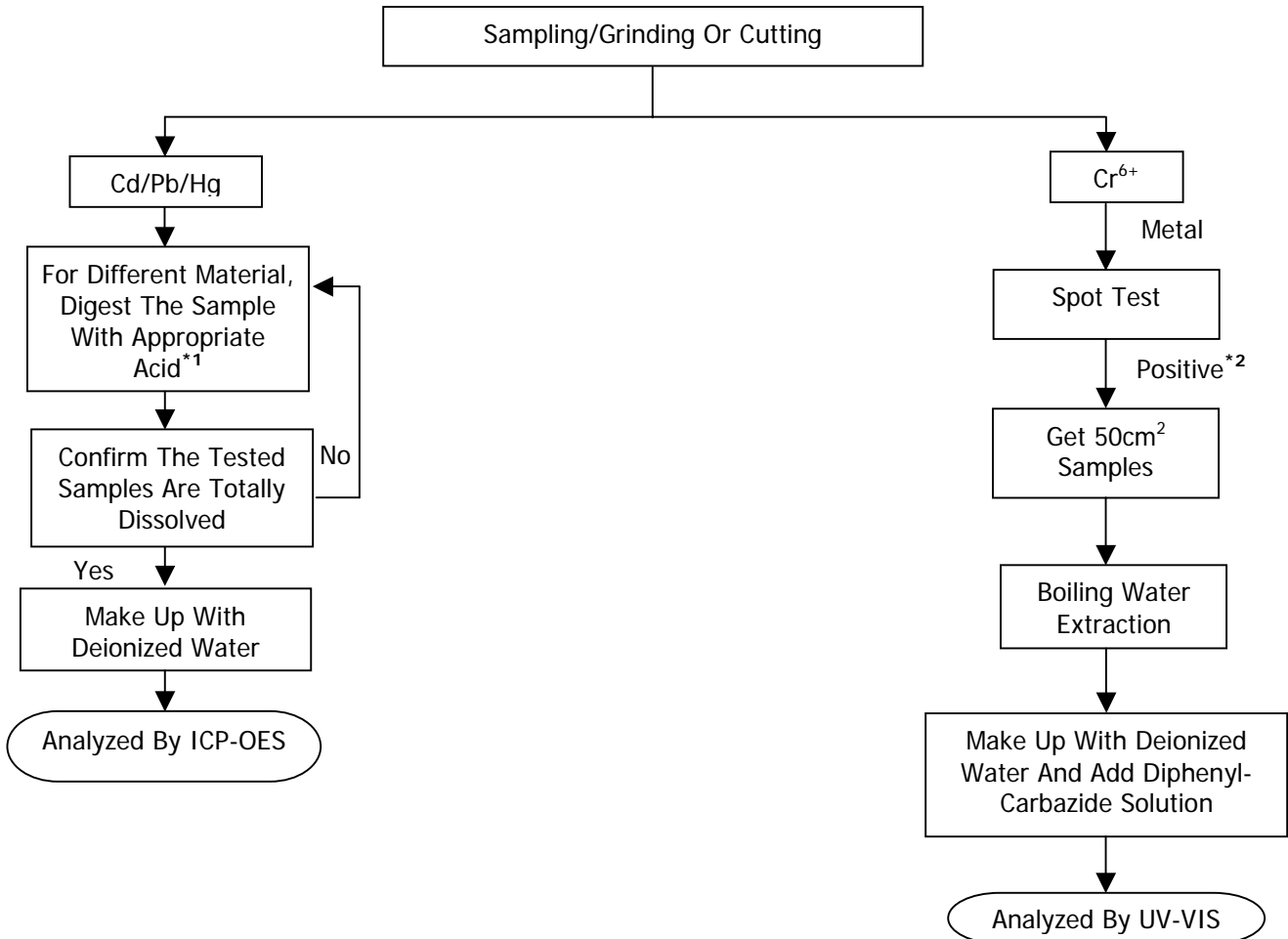
Date Sample Received: Aug 01, 2011

Testing Period: Aug 01, 2011 To Aug 04, 2011

Tests Conducted (As Requested By The Applicant)

(D) Measurement Flowchart:

Reference Standard: IEC 62321 Edition 1.0: 2008



Chemist: Inorganic (Ann Luo/Fred Wang/Ally Wan)

Remarks:

*1: List Of Appropriate Acid:

Material	Acid Added For Digestion
Polymers	HNO ₃ , HCL, HF, H ₂ O ₂ , H ₃ BO ₃
Metals	HNO ₃ , HCL, HF
Electronics	HNO ₃ , HCL, H ₂ O ₂ , HBF ₄

*2: If The Result Of Spot Test Is Positive, Chromium VI Would Be Determined As Detected.

Tests Conducted (As Requested By The Applicant)

Photo

