

# Test Report

Report No.: RLSHB000196340001-1

Page 1 of 8

**Applicant** : SHANGHAI SEEFULL ELECTRONIC CO.,LTD  
LITEONSEMICONDUCTOR CORP

**Address** : 6 ZHENYE RD.,DONGJING,SONGJIANG DISTRICT,SHANGHAI,CHINA  
28-1,WUSHIN STREET,TAWU LUNG,KEELUNG 204,TAIWAN,R.O.C

**Report on the submitted sample said to be:**

**Sample Name** SMD: LEAD FREE PLATING  
**Sample Description** 1.BLACK BODY  
2.PLATING OF SILVERY METAL PIN  
3.BLACK PLASTIC  
**Part No.** SMA(TAXXXXL,SMAJ4.O,SMAJXXA,SMAJXXXA,SMAXXXX,SM  
AXXX,B58XX,B1XX,,B1100,B230LHA,BXXXA,BXXXXA,US1X,ES  
1X,FS1X,ES2XA,RSIX,RS2XA,S1X,S2XA ETC)  
**Sample Received Date** Dec.25,2009  
**Testing Period** Dec.25,2009 to Dec.28,2009  
**Test Requested** To determine the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent  
Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated  
Diphenyl Ethers (PBDEs), Perfluorooctanoic Acid (PFOA) and  
Perfluorooctane Sulfonates(PFOS), Polycyclic Aromatic Hydrocarbons  
(PAHs) content in the submitted sample according to the request of  
client.

**Test Method:** Please refer to following pages.

**Test Result:** Please refer to following pages.

Tested by

  
Che  
Approved by  
Technic Manager

Inspected by

Zhong Yijun

Date

Jan.6,2010

No. 116271161

# Test Report

Report No.:RLSHB000196340001-1

Page 2 of 8

## Test Method:

Tested Items(s)	Pretreatment Method	Measured Equipment(s)	M.D.L.
Lead (Pb)/ Cadmium (Cd)	Refer to IEC 62321:2008 Ed.1 Sec.8	ICP-OES	2mg/kg
	Plating layer test method(In-house method)and Refer to IEC 62321:2008 Ed.1 Sec.9		
	Refer to IEC 62321:2008 Ed.1 Sec.10		
Mercury (Hg)	Plating layer test method(In-house method)and Refer to IEC 62321:2008 Ed.1 Sec.7	ICP-OES	2mg/kg
Mercury (Hg)	Refer to IEC 62321:2008 Ed.1 Sec.7	ICP-OES	2 mg/kg
Hexavalent Chromium (Cr(VI))	Refer to IEC 62321:2008 Ed.1 Annex B	UV-Vis	/
	Refer to IEC 62321:2008 Ed.1 Annex C		2mg/kg
Polybrominated Biphenyls (PBBs)	Refer to IEC 62321:2008 Ed.1 Annex A	GC-MS	5mg/kg
Polybrominated Diphenyl Ethers (PBDEs)	Refer to IEC 62321:2008 Ed.1 Annex A	GC-MS	5mg/kg
Perfluorooctanoic Acid (PFOA)	Refer to US EPA 3550C:2007	LC-MS-MS	5 mg/kg
			0.5ug/m <sup>2</sup> (Plating layer)
Perfluorooctane Sulfonates(PFOS)	Refer to US EPA 3550C:2007	LC-MS-MS	5 mg/kg
			0.5ug/m <sup>2</sup> (Plating layer)
Polycyclic Aromatic Hydrocarbons (PAHs)	Refer to US EPA 8270D:2007	GC-MS	0.2 mg/kg

# Test Report

Report No.:RLSHB000196340001-1

Page 3 of 8

## Test Result:

Tested Item(s)	Content		
	1	2*	3
Lead (Pb)	11475mg/kg	80mg/kg	N.D.
Cadmium (Cd)	N.D.	N.D.	/
Mercury (Hg)	N.D.	N.D.	/
Hexavalent Chromium (Cr(VI))	N.D.	Negative	/

Tested Item	Content		
	1	2*	3
<b>Polybrominated Biphenyls(PBBs)</b>			
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.	/	/
<b>Polybrominated Diphenyl Ethers(PBDEs)</b>			
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.	/	/

# Test Report

Report No.:RLSHB000196340001-1

Page 4 of 8

Tested Item	Content		
	1	2*	3
Perfluorooctanoic Acid (PFOA)	N.D.	N.D.	/
Perfluorooctane Sulfonates(PFOS)	N.D.	N.D.	/

Testing Item	Content		
	1	2*	3
<b>Polycyclic Aromatic Hydrocarbons(PAHs)</b>			
Naphthalene	N.D.	/	/
Acenaphthylene	N.D.	/	/
Acenaphthene	N.D.	/	/
Fluorene	N.D.	/	/
Phenanthrene	N.D.	/	/
Anthracene	N.D.	/	/
Fluoranthene	N.D.	/	/
Pyrene	N.D.	/	/
Benzo[a]anthracene	N.D.	/	/
Chrysene	N.D.	/	/
Benzo[b]fluoranthene	N.D.	/	/
Benzo[[k]fluoranthene	N.D.	/	/
Benzo[a]pyrene	N.D.	/	/
Indenol[1,2,3-cd]pyrene	N.D.	/	/
Dibenz[a,h]anthracene	N.D.	/	/
Benzo[g,h,i]perylene	N.D.	/	/

**Note : The sample had been dissolved totally tested for Lead, Cadmium, Mercury.**

-M.D.L=Method Detection limit

-N.D. = Not Detected (<M.D.L).

-mg/kg = mg/kg=parts per million.

-Negative = Absence of Cr(VI)

-\*According to the client's statement, the sample material is the same as the sample

in report RLSHB000201630001, so the test result is presented in reference to that one.

This report replaces report RLSHB000196340001. Report RLSHB000196340001 is terminated.

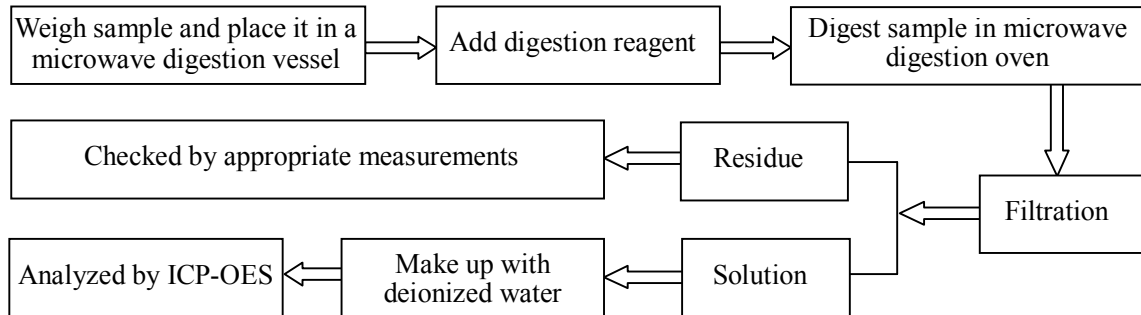
# Test Report

Report No.:RLSHB000196340001-1

Page 5 of 8

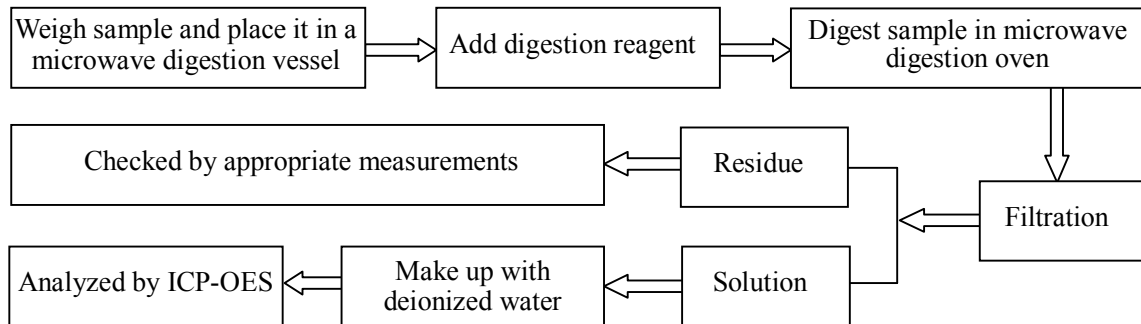
## 1. Test for Pb/Cd Content

IEC 62321:2008 Ed.1 Sec.8/Sec.10



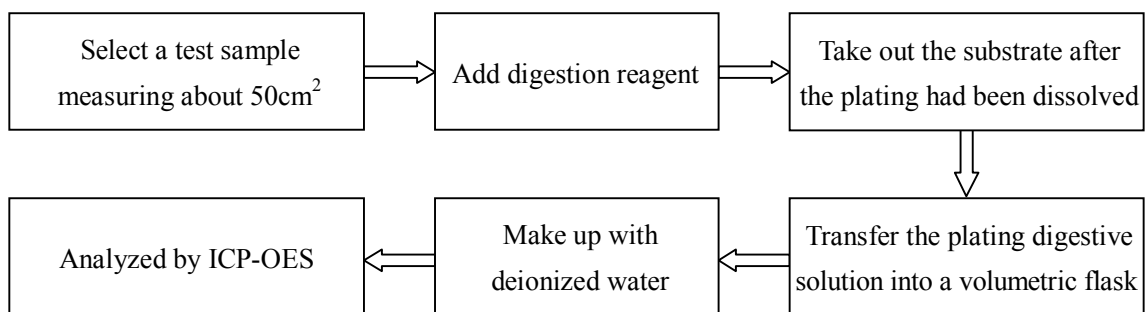
## 2. Test for Hg Content

IEC 62321:2008 Ed.1 Sec.7



## 3. Test for Pb/Cd/ Hg Content

(Plating layer test method(In-house method)and Refer to IEC 62321:2008 Ed.1 Sec.9)



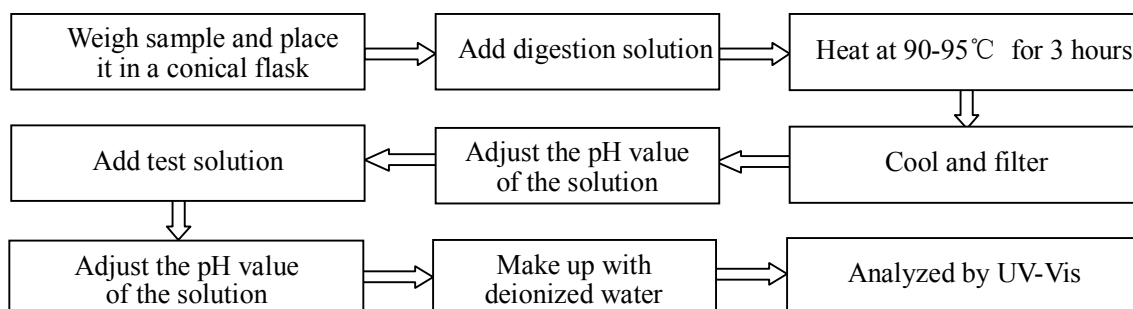
# Test Report

Report No.:RLSHB000196340001-1

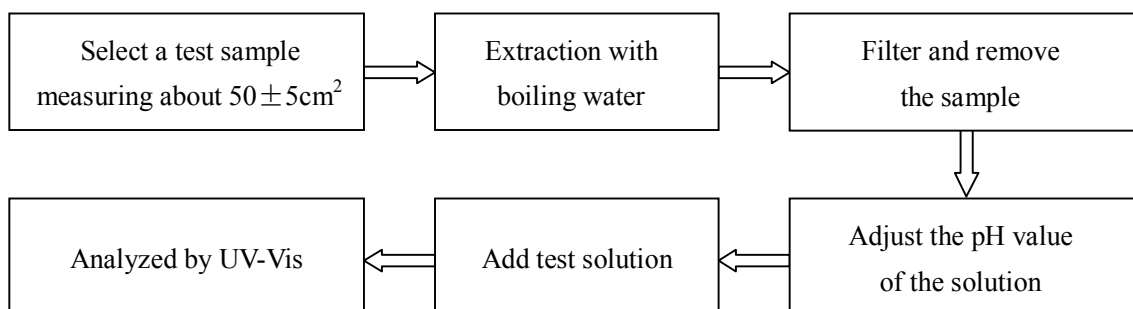
Page 6 of 8

## 4. Test for Chromium(VI) Content

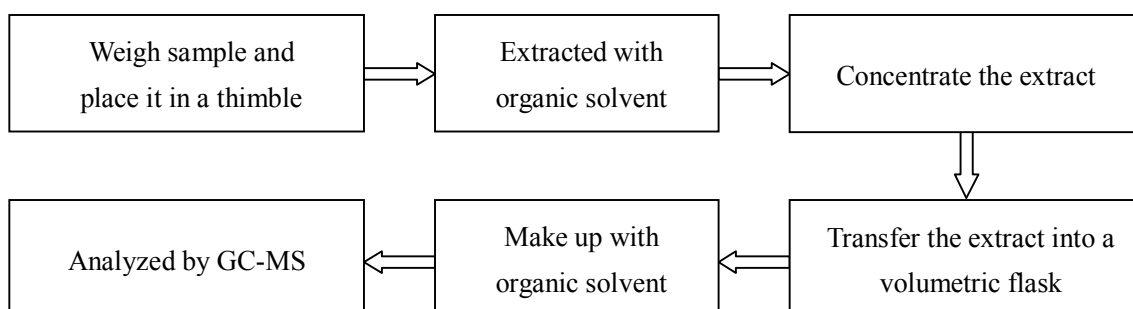
### (1). IEC 62321:2008 Ed.1 Annex C



### (2). IEC 62321:2008 Ed.1 Annex B



## 5. Test for PBBs /PBDEs Content

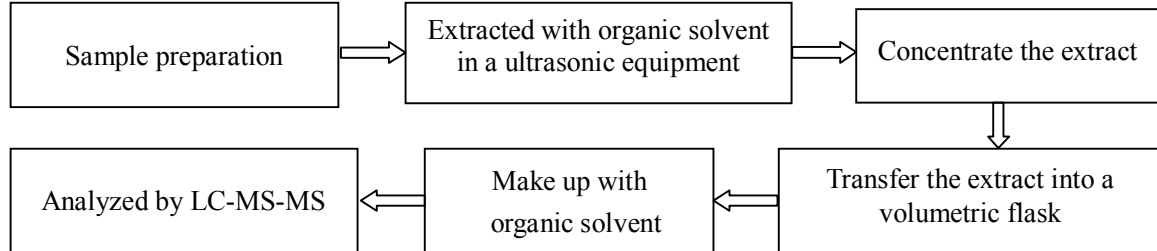


# Test Report

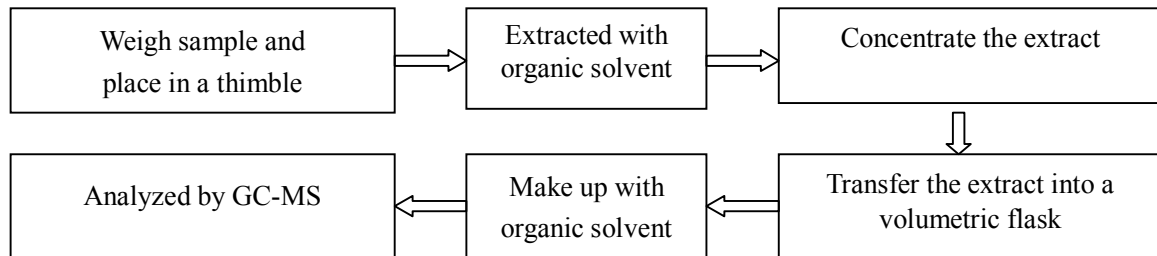
Report No.:RLSHB000196340001-1

Page 7 of 8

## 6 Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonates(PFOS)



## 7. Polycyclic Aromatic Hydrocarbons(PAHs)

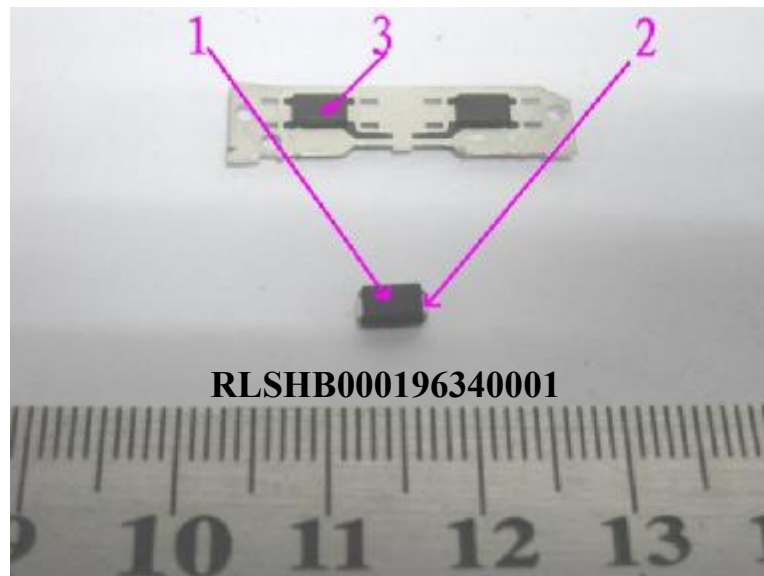


# Test Report

Report No.:RLSHB000196340001-1

Page 8 of 8

## Photo of the sample



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

This report is considered invalidated without the Special Seal for Inspection of the CTI, 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.

No. 1996, Xinjinqiao Road, Pudong, Shanghai