



# 检测报告

## Test Report

报告编号 A2240135697101004E  
Report No. A2240135697101004E

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报告抬头公司名称 厦门吉顺芯微电子有限公司  
Company Name XIAMEN JAYSUN SEMICONDUCTOR CO., LTD.  
shown on Report  
地址 福建省厦门市集美北部工业区环珠路 501 号  
Address NO.501,HUANZHURoad,NORTH INDUSTRIAL PARK,JIMEI DISTRICT,XIAMEN,FUJIAN,CHINA

以下测试之样品及样品信息由申请者提供并确认

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

样品名称 硅片  
Sample Name SILICON WAFER  
样品型号 一般产品  
Model No. 一般产品  
材料名称 主要成份：硅、铝  
Material 主要成份：硅、铝  
样品接收日期 2024.03.16  
Sample Received Date Mar. 16, 2024  
样品检测日期 2024.03.16-2024.03.21  
Testing Period Mar. 16, 2024 to Mar. 21, 2024  
检测要求

1.根据客户要求,对所提交样品中的砷(As),铍(Be),锑(Sb),磷(P),六溴环十二烷(HBCDD),氟(F),氯(Cl),溴(Br),碘(I),全氟辛酸(PFOA),全氟辛酸磺酸(PFOS),红磷进行测试。  
2.根据客户要求,对所提交样品中的三氧化二锑( $Sb_2O_3$ )进行筛选测试。  
3.根据客户要求,对所提交样品中的硫(S)进行筛选测试。

### Test Requested

1.As specified by client, to test Arsenic(As), Beryllium(Be), Antimony(Sb), Phosphorus(P), Hexabromocyclododecane (HBCDD), Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I), Perfluorooctanoic Acid(PFOA), Perfluorooctane Sulfonates(PFOS), Red phosphorus in the submitted sample(s).  
2.As specified by client, to screen Antimony trioxide ( $Sb_2O_3$ ) in the submitted sample(s).  
3.As specified by client, to screen Sulfur (S) in the submitted sample(s).

### 检测依据/检测结果

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

批准  
Approved by

刘琳慧

日期  
Date

2024.03.21

刘琳慧

授权签字人 Lab Authorized Signatory

No. R338851525

广东省深圳市宝安区新安街道兴东社区华测检测大楼

华测检测认证集团股份有限公司  
Centre Testing International Group Co.,Ltd.  
检验检测专用章  
Inspection & Testing Services  
CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

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### 检测依据 Test Method

测试项目 Tested Item(s)	测试方法 Test Method	测试仪器 Measured Equipment(s)
砷 Arsenic(As)	参考 US EPA 3052:1996 & US EPA 6010D:2018 Refer to US EPA 3052:1996 & US EPA 6010D:2018	ICP-OES
铍 Beryllium(Be)	参考 US EPA 3052:1996 & US EPA 6010D:2018 Refer to US EPA 3052:1996 & US EPA 6010D:2018	ICP-OES
锑 Antimony(Sb)	参考 US EPA 3052:1996 & US EPA 6010D:2018 Refer to US EPA 3052:1996 & US EPA 6010D:2018	ICP-OES
磷 Phosphorus(P)	参考 US EPA 3050B:1996 & US EPA 6010D:2018 Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
六溴环十二烷 Hexabromocyclododecane (HBCDD)	IEC 62321-9:2021	GC-MS
氟 Fluorine (F)	参考 EN 14582:2016 Refer to EN 14582:2016	IC
氯 Chlorine (Cl)	参考 EN 14582:2016 Refer to EN 14582:2016	IC
溴 Bromine (Br)	参考 EN 14582:2016 Refer to EN 14582:2016	IC
碘 Iodine (I)	参考 EN 14582:2016 Refer to EN 14582:2016	IC
硫 Sulfur(S) <sup>#1</sup>	参考 EN 14582:2016 Refer to EN 14582:2016	IC
三氧化二锑 Antimony trioxide (Sb <sub>2</sub> O <sub>3</sub> ) <sup>#/*</sup>	参考 US EPA 3052:1996 & US EPA 6010D:2018 Refer to US EPA 3052:1996 & US EPA 6010D:2018	ICP-OES
全氟辛酸 Perfluorooctanoic Acid(PFOA)*	CEN/TS 15968:2010	LC-MS-MS
全氟辛烷磺酸 Perfluorooctane Sulfonates(PFOS)*	CEN/TS 15968:2010	LC-MS-MS
红磷 Red phosphorus*	参考 GB/T 6040-2002, GB/T 9722-2006, GB/T 17359-2012, EPA 6010D:2014 Refer to GB/T 6040-2002, GB/T 9722-2006, GB/T 17359-2012, EPA 6010D:2014	ICP-OES, PY-GC-MS, FTIR, EM

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**检测结果 Test Result(s)**

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	004	
砷 Arsenic (As)	N.D.	10 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	004	
铍 Beryllium (Be)	N.D.	2 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	004	
锑 Antimony (Sb)	N.D.	5 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	004	
磷 Phosphorus (P)	29 mg/kg	20 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	004	
六溴环十二烷 Hexabromocyclododecane (HBCDD)	N.D.	20 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	004	
氟 Fluorine (F)	N.D.	10 mg/kg
氯 Chlorine (Cl)	N.D.	10 mg/kg
溴 Bromine (Br)	N.D.	10 mg/kg
碘 Iodine (I)	N.D.	10 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	004	
硫 Sulfur (S) #1	N.D.	50 mg/kg

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测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	004	
三氧化二锑 Antimony trioxide (Sb <sub>2</sub> O <sub>3</sub> ) <sup>#/*</sup>	N.D.	6 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	004	
全氟辛酸 Perfluorooctanoic Acid (PFOA)*	N.D.	0.010 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	004	
全氟辛烷磺酸 Perfluorooctane Sulfonates (PFOS)*	N.D.	0.010 mg/kg

测试项目 Tested Item(s)	结果 Result	方法检出限 MDL
	004	
红磷 Red phosphorus*	N.D.	500 mg/kg

### 样品/部位描述 Sample/Part Description

序号	CTI 样品 ID	描述
No.	CTI Sample ID	Description
1	004	晶圆 (整体测试) Wafer(Tested as a whole)

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- 备注:**
- 对于检测砷, 铍, 镉, 磷之样品已消解完全。
  - 按照目前手段, 样品无法进一步拆分, 样品整体测试, 测试结果不代表整体测试样品中任何一种单一材质的含量。
  - #该项目的检测结果由其特征元素的测试结果换算而来。
  - #1 该项目的检测结果由硫酸根离子(SO<sub>4</sub><sup>2-</sup>)的测试结果换算而来。
  - N.D. = 未检出 (小于方法检出限)
  - mg/kg = ppm = 百万分之一
- Remark:**
- The sample(s) had been dissolved totally tested for Arsenic, Beryllium, Antimony, Phosphorus.
  - The sample(s) was tested as a whole, because it' s impossible to disassemble or separate it by current equipment and technology. The result(s) shown on this report may be different from the content of any homogeneous material.
  - #The test result of the item is converted from the test result of certain element.
  - #1The test result of the item is converted from the test result of Sulfate ion (SO<sub>4</sub><sup>2-</sup>).
  - MDL = Method Detection Limit
  - N.D. = Not Detected (<MDL)
  - mg/kg = ppm = parts per million
- 注释:**
- “\*”表示该项目/方法不在 CNAS 认可范围内。
  - 本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。
- Note:**
- “\*” indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.
  - The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.

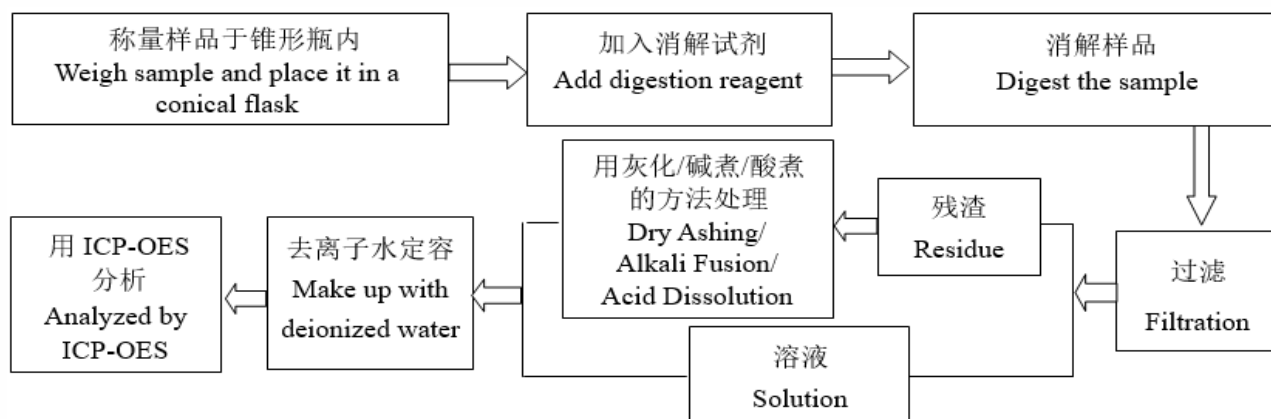
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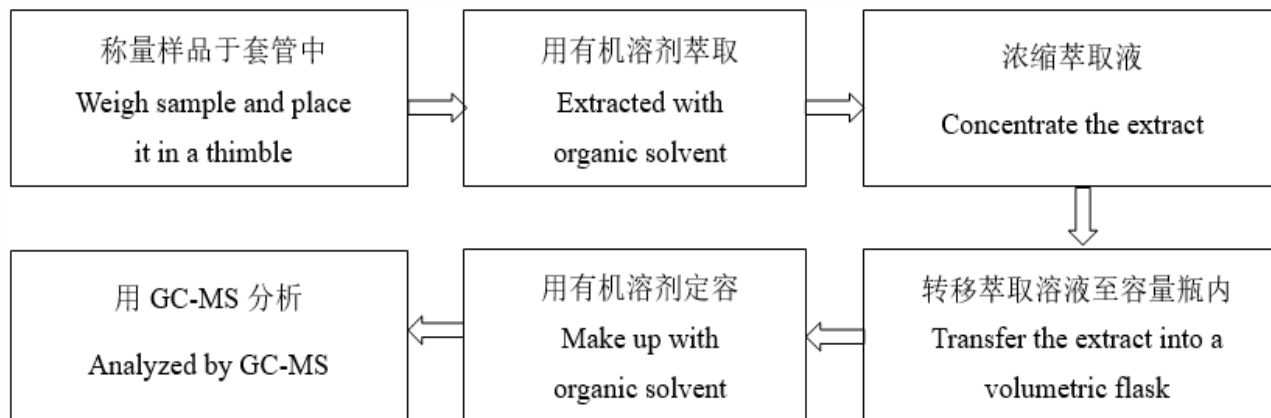
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## 检测流程 Test Process

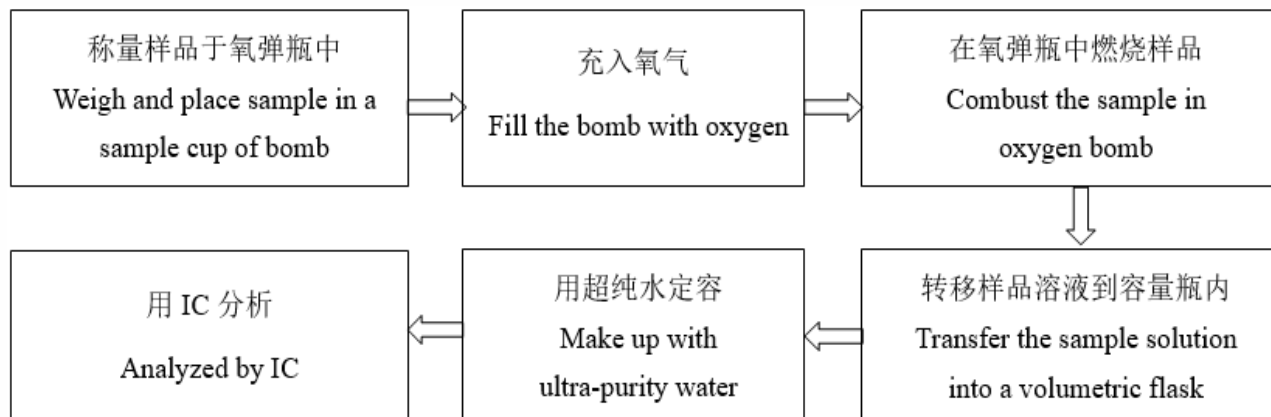
### 1. 磷 Phosphorus(P)



### 2. 六溴环十二烷 Hexabromocyclododecane (HBCDD)



### 3. 氟 Fluorine (F), 氯 Chlorine (Cl), 溴 Bromine (Br), 碘 Iodine (I), 硫 Sulfur(S)

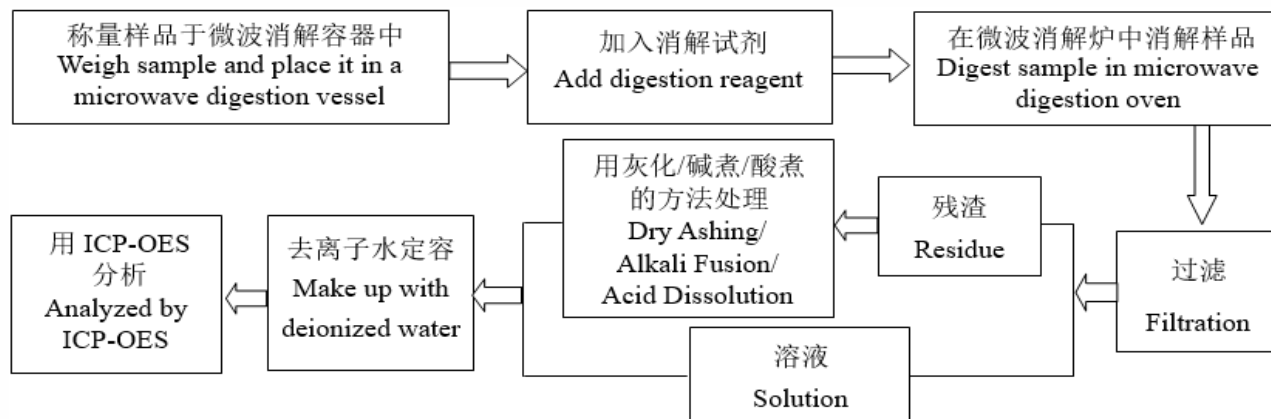


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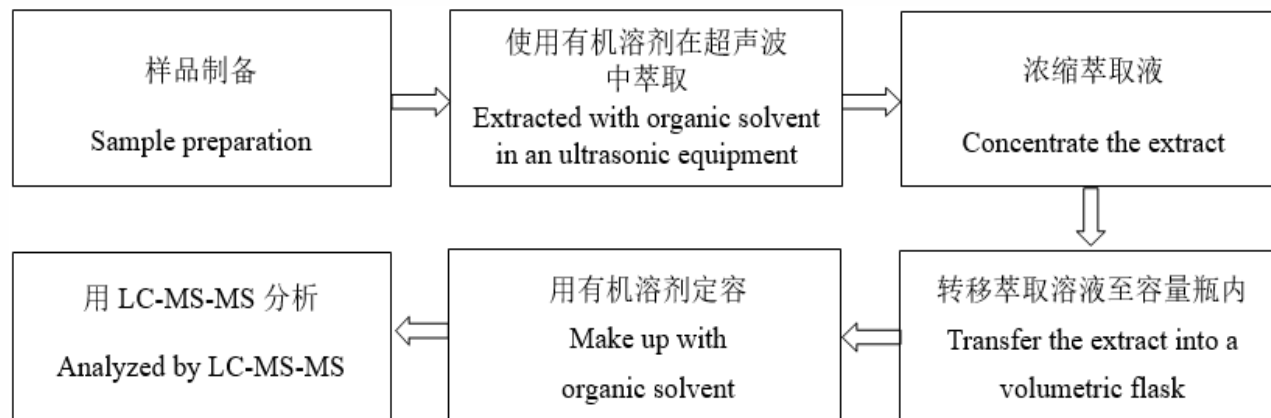
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## 4. 砷 Arsenic(As), 铍 Beryllium(Be), 锑 Antimony(Sb), 三氧化二锑 Antimony trioxide ( $Sb_2O_3$ )



## 5. 全氟辛酸 (PFOA)Perfluorooctanoic Acid(PFOA), 全氟辛烷磺酸 (PFOS)Perfluorooctane Sulfonates(PFOS)

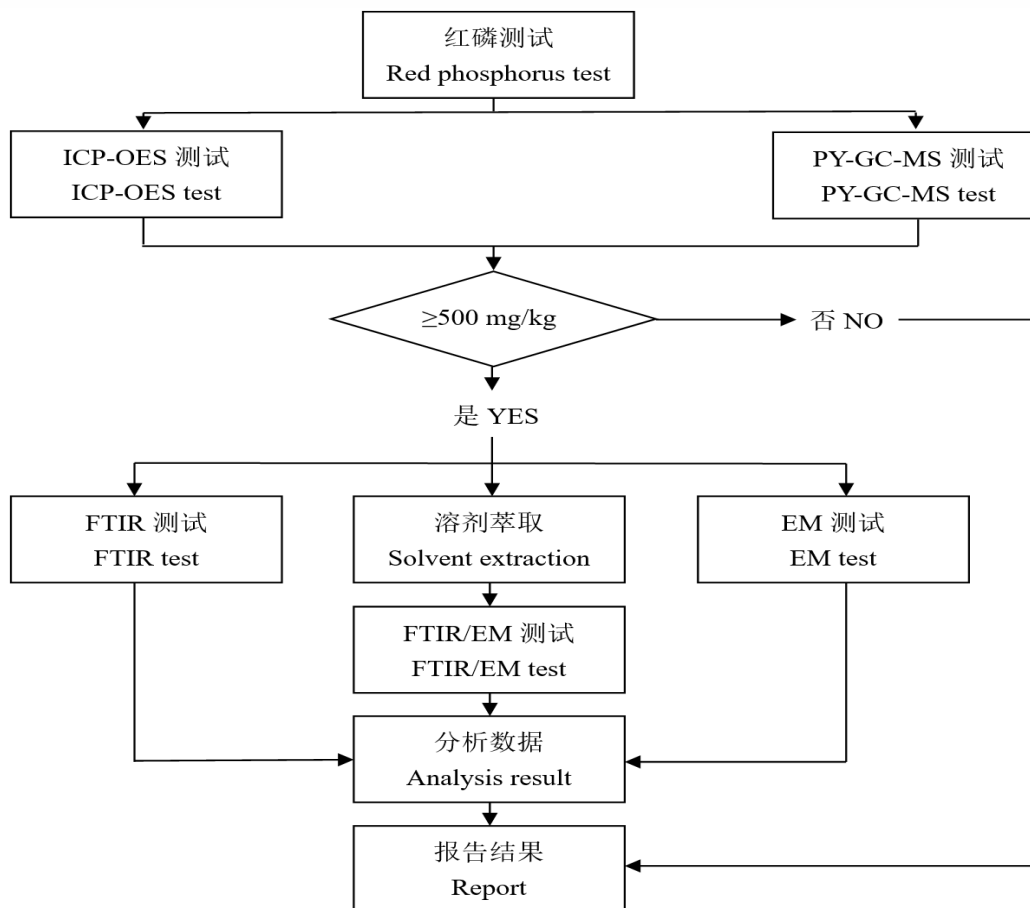


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## 6. 红磷 Red phosphorus





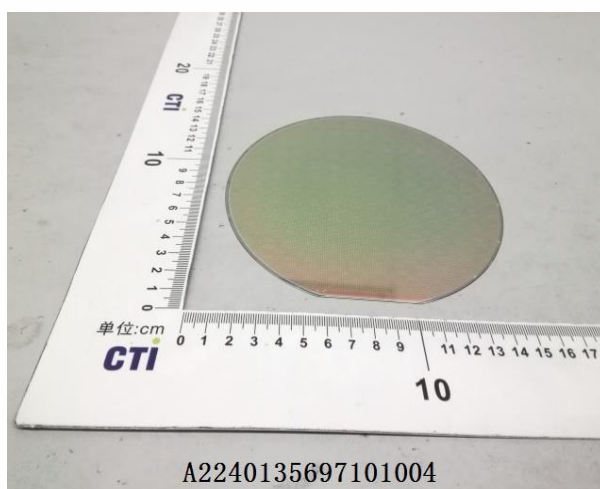
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## 样品图片

### Photo(s) of the sample(s)



#### 声明 Statement:

1. 检测报告无批准人签字、“专用章”及报告骑缝章无效;  
This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. 报告抬头公司名称及地址、样品及样品信息由申请者提供, 申请者应对其真实性负责, CTI 未核实其真实性;  
The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. 本报告检测结果仅对受测样品负责;  
The result(s) shown in this report refer(s) only to the sample(s) tested;
4. 除非另有说明, 报告参照 ILAC-G8:09/2019 / CNAS-GL015:2022 使用简单接受 (w=0) 二元判定规则进行符合性判定; Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
5. 未经 CTI 书面同意, 不得部分复制本报告;  
Without written approval of CTI, this report can't be reproduced except in full;
6. 如检测报告中的英文内容与中文内容有差异, 以中文为准。  
In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

\*\*\* 报告结束 \*\*\*  
\*\*\* End of Report \*\*\*

## 附录 Appendix

### 客户参考信息 Client Reference Information

铝制程

#### 声明 Statement:

1. 附录内容由申请者提供，申请者应对其真实性负责，CTI 未核实其真实性。

The Appendix Information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

2. 附录内容为 A2240135697101004E 报告的补充。

The Appendix Information is/are the supplement(s) for the Report A2240135697101004E.