

检测报告

编号: SHAEC2210115904

日期: 2022年08月11日 第1页,共12页

客户名称: 捷捷半导体有限公司

客户地址: 江苏省南通市苏通科技产业园井冈山路6号

样品名称: 台面器件芯片

以上样品及信息由客户提供。

SGS工作编号: SP22-014506 - SH

样品接收日期: 2022年07月18日

检测周期: 2022年07月18日 - 2022年07月22日

检测要求: 根据客户要求检测

检测方法: 请参见下一页

检测结果: 请参见下一页

结论: 基于所送样品进行的检测, 镉、铅、汞、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、邻苯二甲酸酯(如邻苯二甲酸二丁酯(DBP)、邻苯二甲酸丁苯酯(BBP)、邻苯二甲酸二(2-乙基己基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP))的检测结果显示符合欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863的限值要求。

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授权签名

刘盈妹

Annie Liu 刘盈妹
批准签署人

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检测结果:

检测样品描述:

| 样品编号 | SGS样品ID | 描述 |
|------|------------------|---------|
| SN1 | SHA22-101159.002 | 银色/灰色芯片 |

备注:

- (1) 1 mg/kg = 0.0001%
- (2) MDL = 方法检测限
- (3) ND = 未检出 (< MDL)
- (4) "-" = 未规定

RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863

检测方法: 参考IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015和IEC 62321-8:2017, 采用ICP-OES, AAS, UV-Vis和GC-MS进行分析。

| 检测项目 | 限值 | 单位 | MDL | 002 |
|----------------|------|-------|-----|-------|
| 镉(Cd) | 100 | mg/kg | 2 | ND |
| 铅(Pb) | 1000 | mg/kg | 2 | 8541▲ |
| 汞(Hg) | 1000 | mg/kg | 2 | ND |
| 六价铬 (Cr(VI)) | 1000 | mg/kg | 8 | ND |
| 多溴联苯之和(PBBs) | 1000 | mg/kg | - | ND |
| 一溴联苯 | - | mg/kg | 5 | ND |
| 二溴联苯 | - | mg/kg | 5 | ND |
| 三溴联苯 | - | mg/kg | 5 | ND |
| 四溴联苯 | - | mg/kg | 5 | ND |
| 五溴联苯 | - | mg/kg | 5 | ND |
| 六溴联苯 | - | mg/kg | 5 | ND |
| 七溴联苯 | - | mg/kg | 5 | ND |
| 八溴联苯 | - | mg/kg | 5 | ND |
| 九溴联苯 | - | mg/kg | 5 | ND |
| 十溴联苯 | - | mg/kg | 5 | ND |
| 多溴二苯醚之和(PBDEs) | 1000 | mg/kg | - | ND |
| 一溴二苯醚 | - | mg/kg | 5 | ND |
| 二溴二苯醚 | - | mg/kg | 5 | ND |
| 三溴二苯醚 | - | mg/kg | 5 | ND |
| 四溴二苯醚 | - | mg/kg | 5 | ND |



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| 检测项目 | 限值 | 单位 | MDL | 002 |
|-----------------------|------|-------|-----|-----|
| 五溴二苯醚 | - | mg/kg | 5 | ND |
| 六溴二苯醚 | - | mg/kg | 5 | ND |
| 七溴二苯醚 | - | mg/kg | 5 | ND |
| 八溴二苯醚 | - | mg/kg | 5 | ND |
| 九溴二苯醚 | - | mg/kg | 5 | ND |
| 十溴二苯醚 | - | mg/kg | 5 | ND |
| 邻苯二甲酸二丁酯 (DBP) | 1000 | mg/kg | 50 | ND |
| 邻苯二甲酸丁苄酯(BBP) | 1000 | mg/kg | 50 | ND |
| 邻苯二甲酸二(2-乙基己基)酯(DEHP) | 1000 | mg/kg | 50 | ND |
| 邻苯二甲酸二异丁酯(DIBP) | 1000 | mg/kg | 50 | ND |

备注:

(1) 最大允许极限值引用自RoHS指令(EU) 2015/863。
IEC 62321系列等同于 EN 62321 系列

(2) 2021年7月22号开始, DEHP, BBP, DBP 和 DIBP的限制适用于医疗器械, 包括体外医疗器械, 监控仪表, 包括工业监测和控制仪器。

(3)▲根据客户提供的声明, 编号002中的铅(Pb)被欧盟RoHS指令2011/65/EU豁免, 相应豁免条文(请以英文原文为准) |ANNEX III 7(c)-II|: 电子电气元件中玻璃或陶瓷材料(电容中陶瓷介质除外)所含的铅, 如压电设备、玻璃或陶瓷基复合元件。

卤素

检测方法: 参照EN 14582: 2016方法 测定, 采用 IC进行分析.

| 检测项目 | 单位 | MDL | 002 |
|--------|-------|-----|-----|
| 氟 (F) | mg/kg | 50 | ND |
| 氯 (Cl) | mg/kg | 50 | ND |
| 溴 (Br) | mg/kg | 50 | ND |
| 碘 (I) | mg/kg | 50 | ND |

六溴环十二烷(HBCDD)

检测方法: 参考IEC 62321:2008, 采用GC-MS分析六溴环十二烷含量.

| 检测项目 | 单位 | MDL | 002 |
|---------------|-------|-----|-----|
| 六溴环十二烷(HBCDD) | mg/kg | 10 | ND |



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全氟辛烷磺酸及其衍生物(PFOS)和全氟辛酸(PFOA)及其盐

检测方法: 参考 CEN/TS 15968: 2010方法, 采用HPLC-MS进行分析。

| 检测项目 | CAS NO. | 单位 | MDL | 002 |
|----------------------------|------------|-------|-----|-----|
| 全氟辛烷磺酸 (PFOS) 及衍生物 | - | mg/kg | - | ND |
| 全氟辛烷磺酸 (PFOS) ^ | 1763-23-1 | mg/kg | 10 | ND |
| N-乙基全氟辛烷磺酰胺 (EtFOSA) | 4151-50-2 | mg/kg | 10 | ND |
| N-甲基全氟辛烷磺酰胺 (MeFOSA) | 31506-32-8 | mg/kg | 10 | ND |
| 2-(N-乙基全氟辛基磺酰胺)乙醇 (EtFOSE) | 1691-99-2 | mg/kg | 10 | ND |
| 2-(N-甲基全氟辛基磺酰胺)乙醇 (MeFOSE) | 24448-09-7 | mg/kg | 10 | ND |
| 全氟辛基磺酰胺 (PFOSA) | 754-91-6 | mg/kg | 10 | ND |
| 全氟辛酸 (PFOA) 及其盐+ | - | mg/kg | 10 | ND |

备注:

- (1) ^ 全氟辛烷磺酸 (PFOS) 包含 PFOS-K (CAS No.: 2795-39-3), PFOS-Li (CAS No.: 29457-72-5), PFOS-NH4 (CAS No.: 29081-56-9), PFOS-NH(OH)2 (CAS No.: 70225-14-8), PFOS-N(C2H5)4 (CAS No.: 56773-42-3), PFOS-DDA (CAS No.:251099-16-8) 和 POSF (CAS No.: 307-35-7)
- (2) PFOA 及其盐+是指其酸/盐, 包括全氟辛酸(CAS No.: 335-67-1), 全氟辛酸钠 (CAS No.: 335-95-5), 全氟辛酸钾 (CAS No.: 2395-00-8), 全氟辛酸银 (CAS No.: 335-93-3), 全氟辛酰氟 (CAS No.: 335-66-0) 和 全氟辛酸铵 (CAS No.: 3825-26-1)。

除非另有说明, 参照ILAC-G8:09/2019, 使用简单接受 ($w=0$) 的二元判定规则进行符合性判定。
 除非另有说明, 此报告结果仅对检测的样品负责。本报告未经本公司书面许可, 不可部分复制。
 检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。

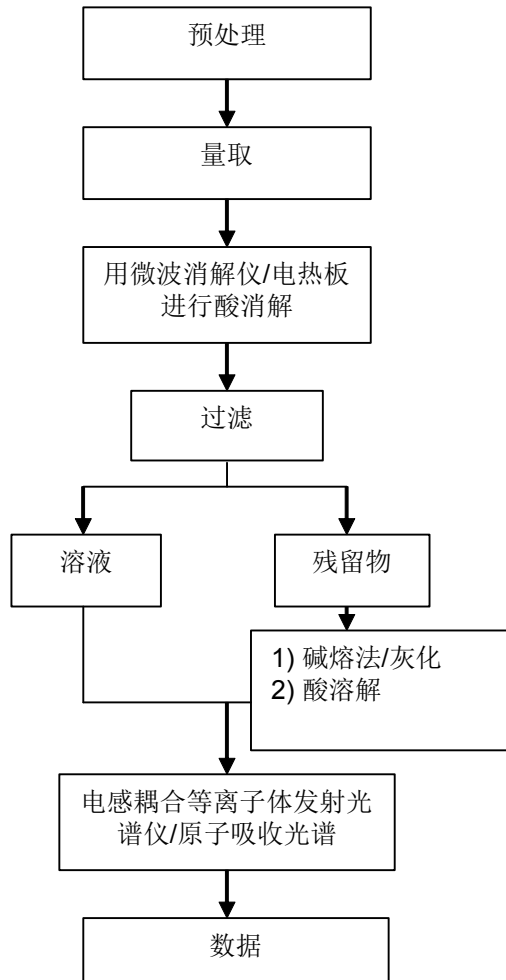


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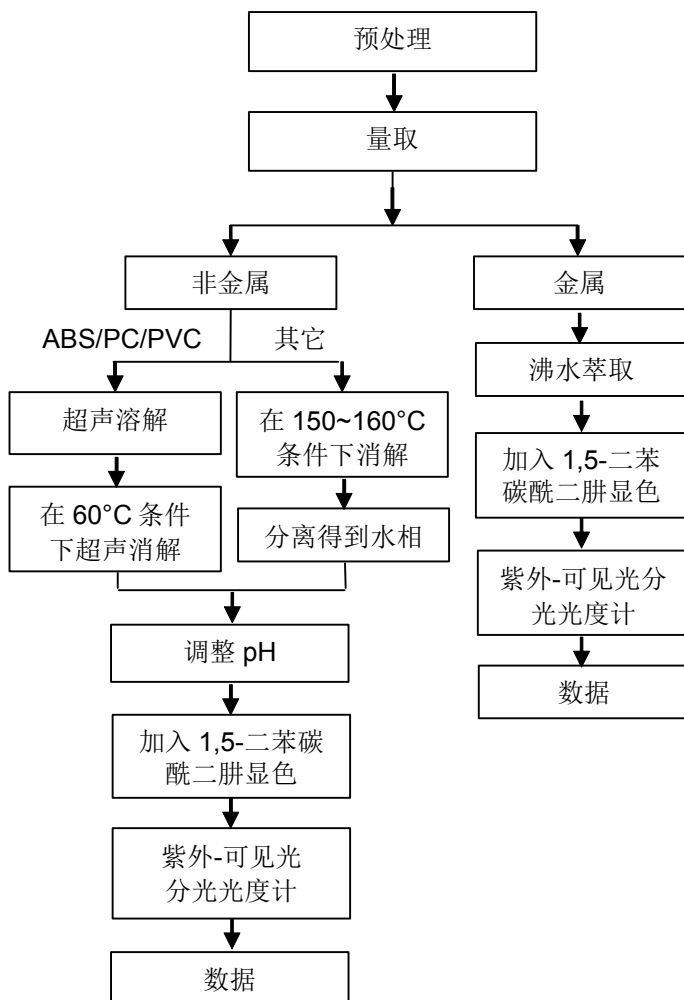
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元素(IEC62321) 检测流程图

1) 样品按照下述流程被完全消解



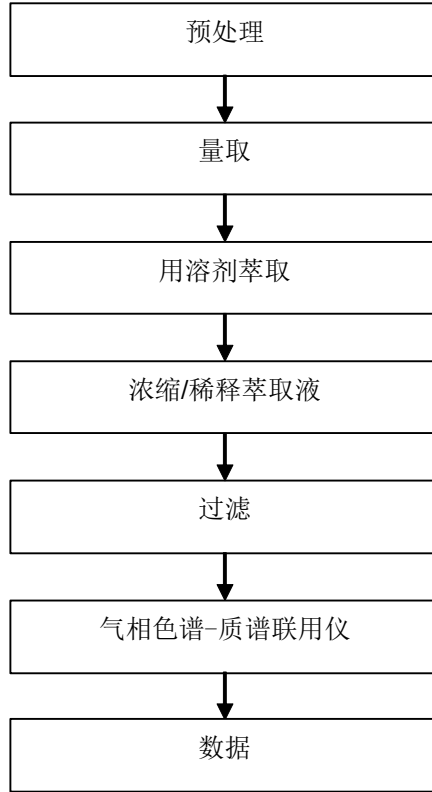
六价铬检测流程图



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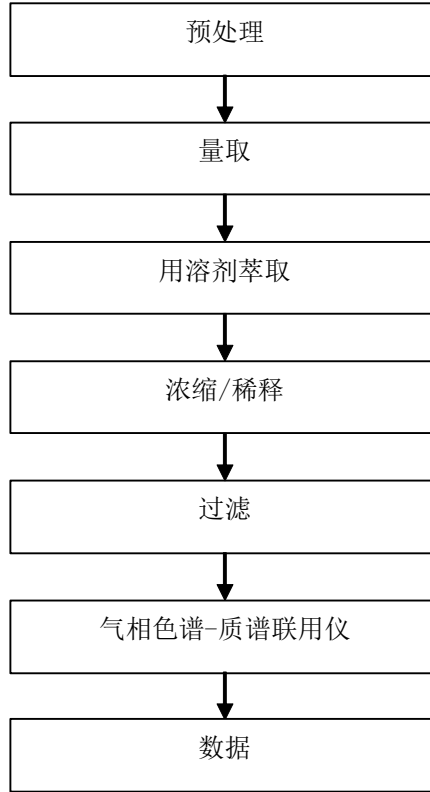
PBBs/PBDEs 检测流程图



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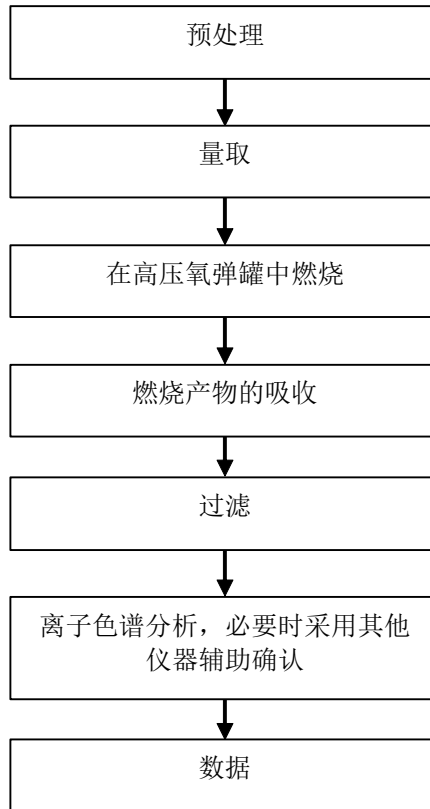
Phthalates 检测流程图



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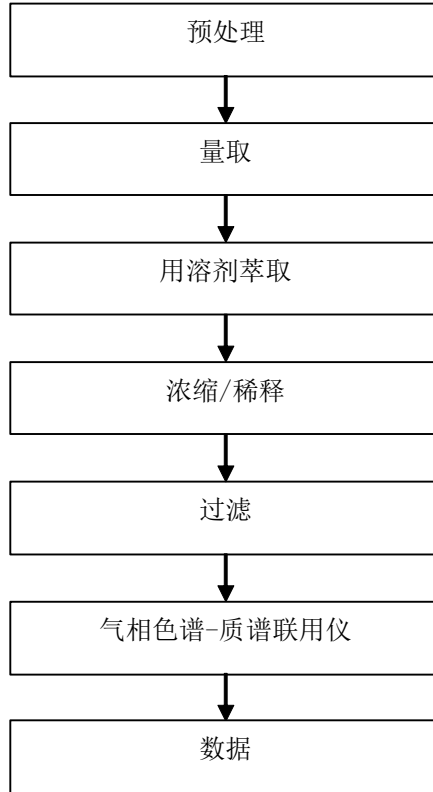
Halogen(氧弹法)检测流程图



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HBCDD 测试流程图



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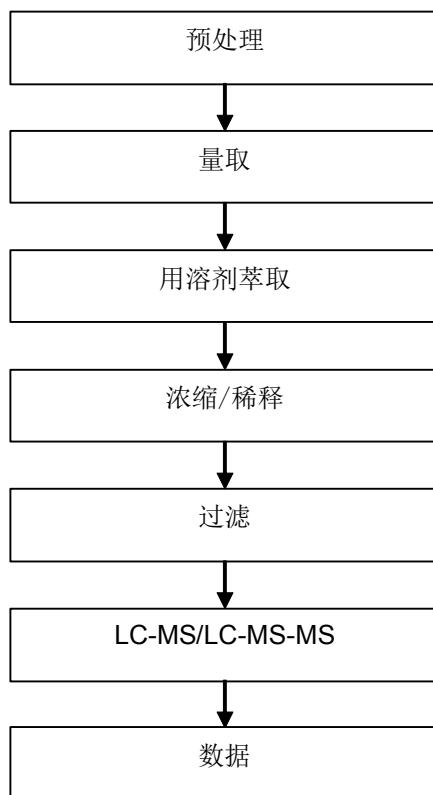
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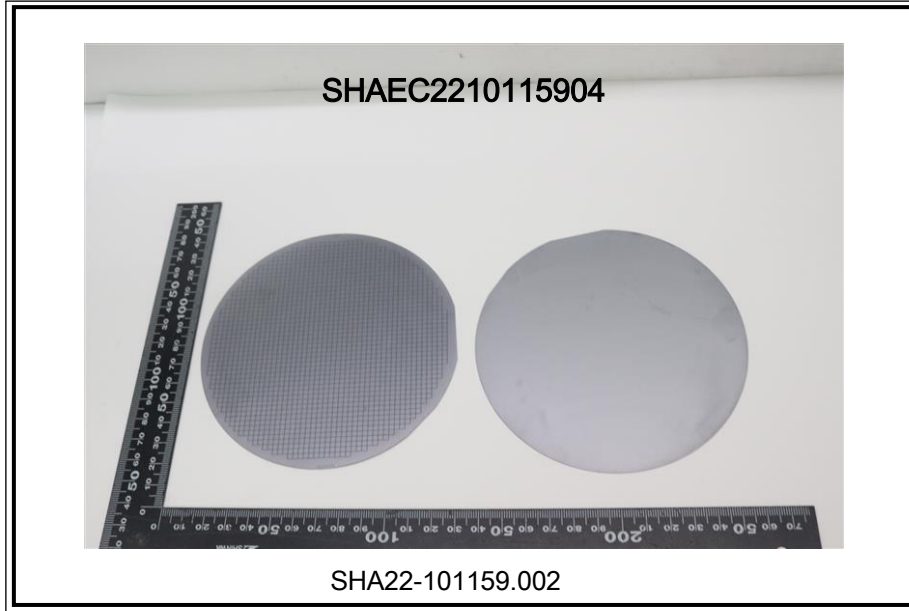
PFASs/ PFOS/PFOA 检测流程图



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