

测试报告

No. SHAEC1517305804

日期: 2015年09月24日 第1页,共7页

无锡东海旭日电子实业有限公司
无锡市兴源北路600号凤凰大厦1号11层

以下测试之样品是由申请者所提供及确认: 二极管

SGS工作编号: SP15-029153 - SUZ
型号: DO-201AD
客户参考信息: DO-41、DO-15、DO-27、R-1、R-3、R-6、SMA、SMB、SMC、
样品接收日期: 2015年08月27日
测试周期: 2015年08月27日 - 2015年09月24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

通标标准技术服务(上海)有限公司
授权签名



Marry Ma 马广媛
批准签署人

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测试结果:

测试样品描述:

| 样品编号 | SGS样品ID | 描述 |
|------|------------------|------------------|
| SN1 | SHA15-173058.003 | 银色金属 |
| SN2 | SHA15-173058.004 | 黑色本体带银色印字 (混合测*) |

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

- 测试方法:
- (1) 参考IEC 62321-5:2013, 用ICP-OES测定镉的含量
 - (2) 参考IEC 62321-5:2013, 用ICP-OES测定铅的含量
 - (3) 参考IEC 62321-4:2013, 用ICP-OES测定汞的含量
 - (4) 参考IEC 62321:2008, 用紫外-可见分光光度计比色法测定六价铬的含量
 - (5) 参考IEC 62321-6:2015, 用GC-MS测定PBBs(多溴联苯)和PBDEs(多溴二苯醚) 的含量
 - (6) 参考IEC 62321-8 (111/321/CD), 用GC-MS测定邻苯二甲酸酯的含量

| 测试项目 | 限值 | 单位 | MDL | 004 |
|----------------|------|-------|-----|-------|
| 镉(Cd) | 100 | mg/kg | 2 | ND |
| 铅(Pb) | 1000 | mg/kg | 2 | 5584▲ |
| 汞(Hg) | 1000 | mg/kg | 2 | ND |
| 六价铬(CrVI) | 1000 | mg/kg | 2 | 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 |



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测试报告

No. SHAEC1517305804

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| 测试项目 | 限值 | 单位 | MDL | 004 |
|-----------------------|------|-------|-----|-----|
| 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 |
| 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 | 30 | ND |
| 邻苯二甲酸丁苄酯(BBP) | 1000 | mg/kg | 30 | ND |
| 邻苯二甲酸二(2-乙基己基)酯(DEHP) | 1000 | mg/kg | 30 | ND |
| 邻苯二甲酸二异丁酯(DIBP) | 1000 | mg/kg | 30 | ND |

备注:

- (1) 最大允许极限值引用自RoHS指令(EU) 2015/863。
- (2)▲根据客户提供的声明, 编号004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(a)]: 高熔点型焊料中的铅(即铅含量等于或大于85%的铅基合金焊料)。

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

- 测试方法:
- (1) 参考IEC 62321-5:2013, 用ICP-OES测定镉的含量
 - (2) 参考IEC 62321-5:2013, 用AAS测定铅的含量
 - (3) 参考IEC 62321-4:2013, 用ICP-OES测定汞的含量
 - (4) 参考IEC 62321:2008, 用点测试法/紫外-可见分光光度计比色法测定六价铬的含量

| 测试项目 | 限值 | 单位 | MDL | 003 |
|-----------|------|-------|-----|-----|
| 镉 (Cd) | 100 | mg/kg | 2 | ND |
| 铅(Pb) | 1000 | mg/kg | 2 | ND |
| 汞 (Hg) | 1000 | mg/kg | 2 | ND |
| 六价铬(CrVI) | - | - | ◇ | 阴性 |

备注:

- (1) 最大允许极限值引用自RoHS指令(EU) 2015/863.
- (2)◇点测试法:
阴性= 未检测到六价铬, 阳性= 检测到六价铬;
(当点测试结果为阴性或无法确定时,将采用沸水萃取法作进一步的结果验证.)
◇沸水萃取法:



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阴性= 未检测到六价铬

阳性= 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
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能代表测试时样品含六价铬的状态。

备注: *样品基于申请人要求为混合测试。报告中的混合测试结果不代表其中个别单一材质的含量, 该测试数据仅供参考

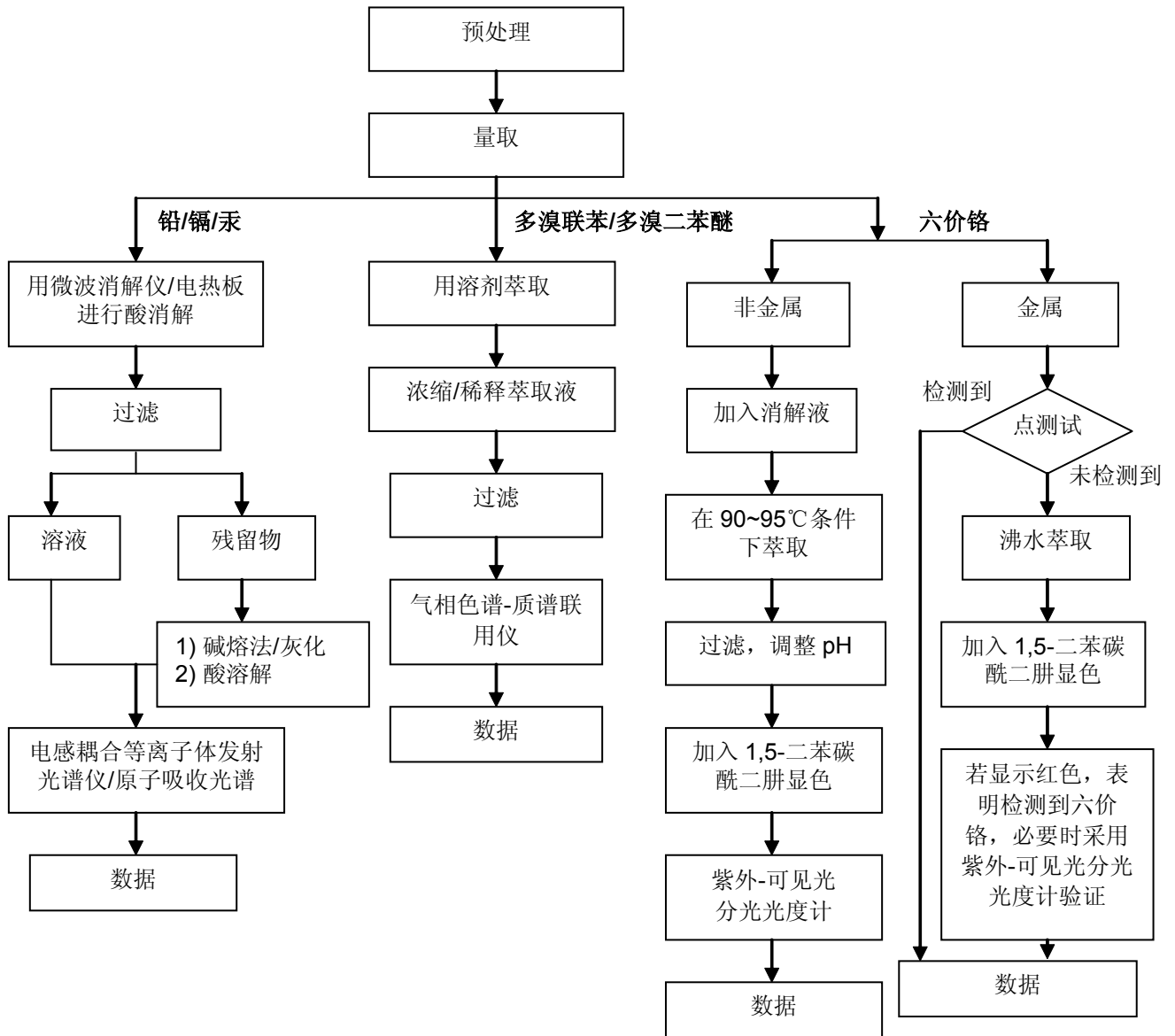


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附件

RoHS 测试流程图

- 1) 分析人员: 张小波/徐刚/朱增珍/秦兴章
- 2) 项目负责人: 施青/金黎霞/黄婷/陈怀磊
- 3) 样品按照下述流程被完全消解(六价铬和多溴联苯/多溴二苯醚测试除外)。



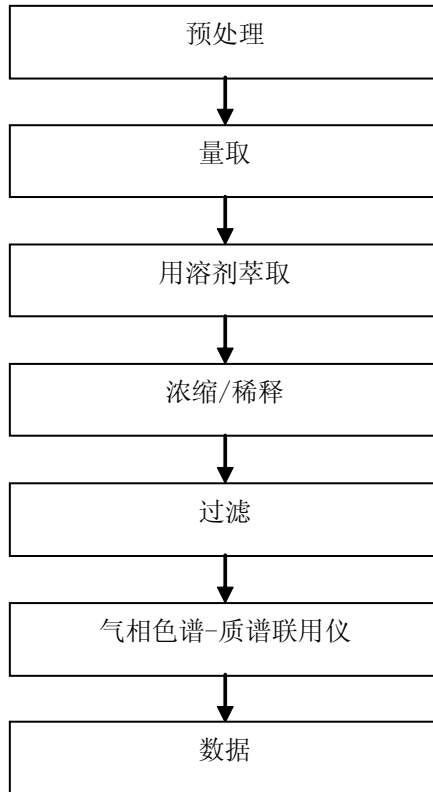
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附件

Phthalates 测试流程图

- 1) 分析人员: 高仰景
- 2) 项目负责人: 马永存



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