

测试报告

No. SHAEC2026173102

日期: 2021年01月04日 第1页,共9页

江苏海德半导体有限公司
江阴市临港街道东徐路3号

以下测试之样品是由申请者所提供及确认: 三极管

SGS工作编号: SP20-041834 - SH
型号: SOT-23
客户参考信息: DFN/SOD-123/323/523/723/923;SOP8/14/16/18;SOT-23/89/143/223/323/343/353/363/523/553/563/723、SOT-23-XL、TO-92、TSSOP8、FBP、CSP、QFN
样品接收日期: 2020年12月29日
测试周期: 2020年12月29日 - 2021年01月04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

结论: 基于所送样品进行的测试, 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)、邻苯二甲酸丁苄酯(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))的测试结果符合欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863的限值要求。

通标标准技术服务(上海)有限公司
授权签名

Lucy Yu 俞君屏
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	SHA20-261731.001	黑色本体带银色金属

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: 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。

测试项目	限值	单位	MDL	001
镉(Cd)	100	mg/kg	2	ND
铅(Pb)	1000	mg/kg	2	ND
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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测试项目	限值	单位	MDL	001
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

https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25

(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) DEHP, BBP, DBP 和 DIBP的限制不适用于玩具产品, 因为No.1907/2006附录XVII第51条已对玩具产品中的DEHP, BBP, DBP 和 DIBP含量进行了限制。

卤素

测试方法: 参照EN 14582: 2016方法 测定, 采用 IC进行分析。

测试项目	单位	MDL	001
氟 (F)	mg/kg	50	ND
氯 (Cl)	mg/kg	50	90
溴 (Br)	mg/kg	50	ND
碘 (I)	mg/kg	50	ND

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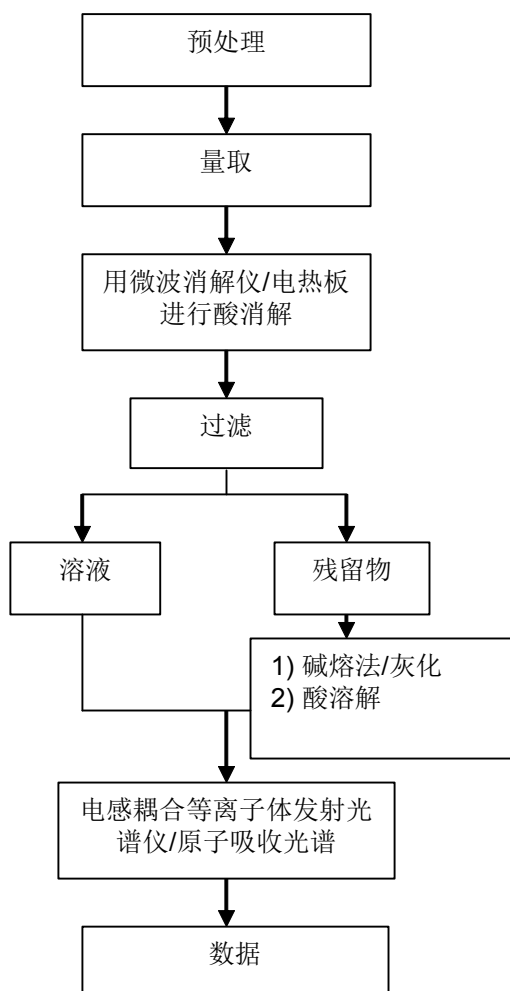
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附件

元素(IEC62321) 测试流程图

- 1) 分析人员: 金叶/宋珂静
- 2) 项目负责人: 徐亮/张小波
- 3) 样品按照下述流程被完全消解



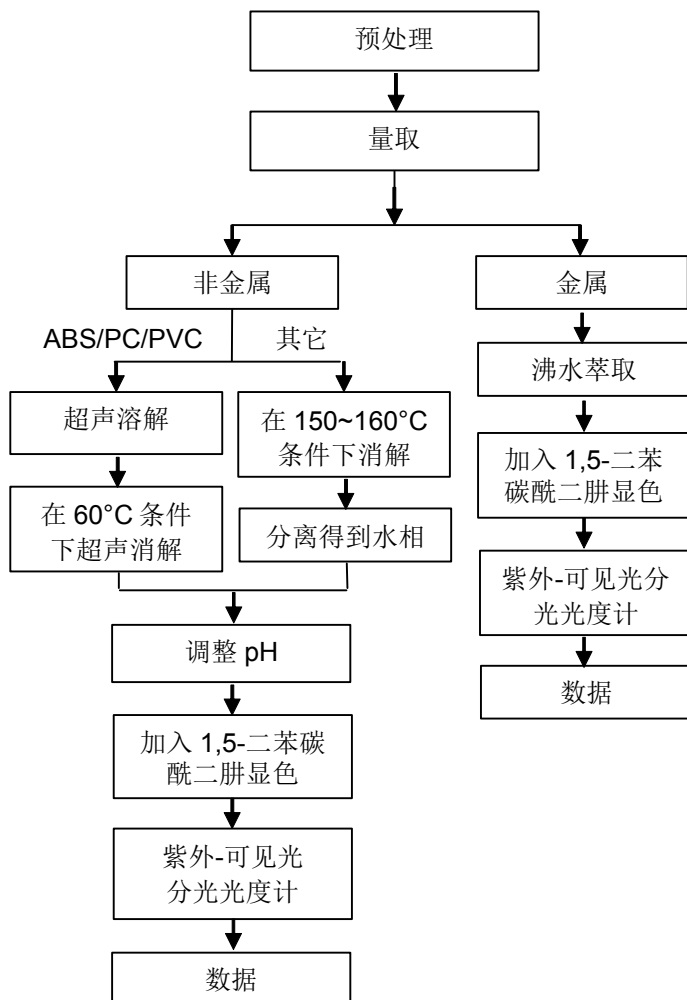
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六价铬测试流程图

- 1) 分析人员: 王永旭
- 2) 项目负责人: 杨小龙



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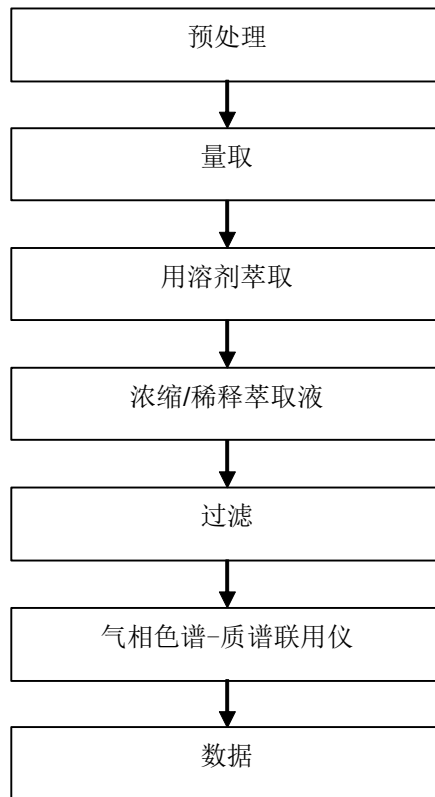
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PBBs/PBDEs 测试流程图

- 1) 分析人员: 徐刚
- 2) 项目负责人: 马永存



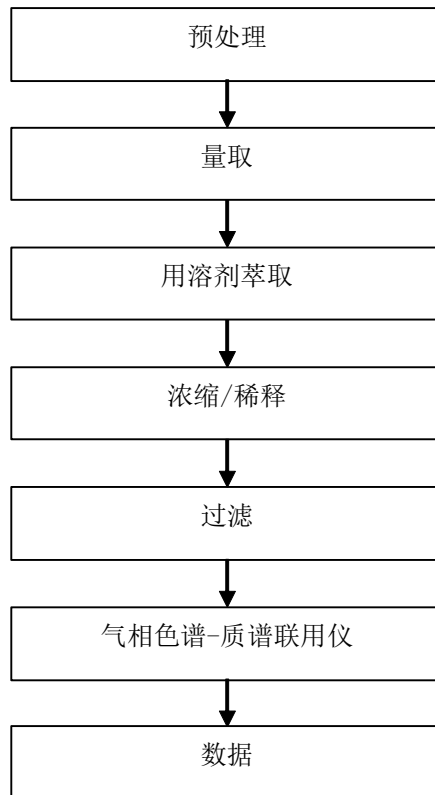
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Phthalates 测试流程图

- 1) 分析人员: 李丹
- 2) 项目负责人: 张玉明



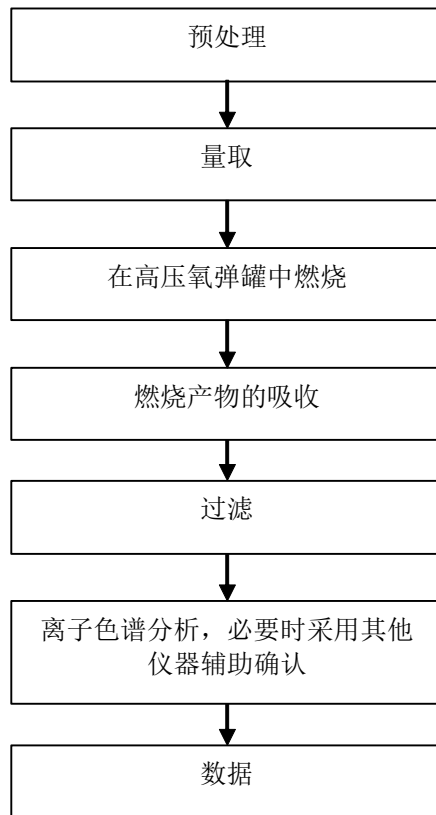
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Halogen(氧弹法)测试流程图

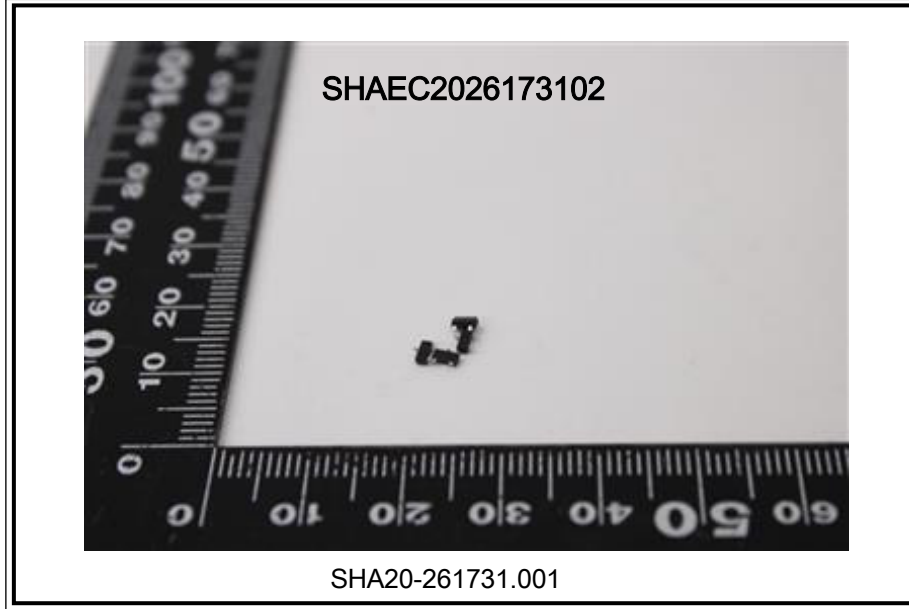
- 1) 分析人员: 徐诚
- 2) 项目负责人: 陈俊烨



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