

检测报告

编号: SZXEC23000730102

日期: 2023年05月08日

第1页, 共10页

客户名称: 深圳真茂佳半导体有限公司
客户地址: 深圳市龙岗区中环大道中科谷产业园6栋14楼

样品名称: 场效应管(银胶产品)
以上样品及信息由客户提供。

SGS 工作编号: RP23-010346
样品接收时间: 2023年04月28日
检测周期: 2023年04月28日~2023年05月08日
检测要求: 根据客户要求检测
检测方法: 见后续页。
检测结果: 见后续页。

检测要求	结论
欧盟 RoHS 指令 2011/65/EU 附录 II 的修正指令(EU) 2015/863- 铅、汞、镉、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、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)	符合
美国环保署有毒物质控制法 (TSCA) 第 6 (h) 节规定的持久性、生物累积性和毒性 (PBT) 化学物质	符合
卤素	见检测结果

通标标准技术服务有限公司深圳分公司
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Mescal Ye 叶晓键
批准签署人

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检测结果:

检测部件外观描述:

样品序号	样品编号	SGS 样品 ID	样品描述
SN1	A1	SZX23-0007301-0001.C001	"场效应管 (银胶产品)"

备注:

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

欧盟 RoHS 指令 2011/65/EU 附录 II 的修正指令(EU) 2015/863- 铅、汞、镉、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、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)

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, UV-Vis 和 GC-MS 进行分析。

检测项目	限值	单位	MDL	A1
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(MonoBB)	-	mg/kg	5	ND
二溴联苯(DiBB)	-	mg/kg	5	ND
三溴联苯(TriBB)	-	mg/kg	5	ND
四溴联苯(TetraBB)	-	mg/kg	5	ND
五溴联苯(PentaBB)	-	mg/kg	5	ND
六溴联苯(HexaBB)	-	mg/kg	5	ND
七溴联苯(HeptaBB)	-	mg/kg	5	ND
八溴联苯(OctaBB)	-	mg/kg	5	ND
九溴联苯(NonaBB)	-	mg/kg	5	ND
十溴联苯(DecaBB)	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1000	mg/kg	-	ND
一溴二苯醚(MonoBDE)	-	mg/kg	5	ND
二溴二苯醚(DiBDE)	-	mg/kg	5	ND
三溴二苯醚(TriBDE)	-	mg/kg	5	ND
四溴二苯醚(TetraBDE)	-	mg/kg	5	ND
五溴二苯醚(PentaBDE)	-	mg/kg	5	ND
六溴二苯醚(HexaBDE)	-	mg/kg	5	ND
七溴二苯醚(HeptaBDE)	-	mg/kg	5	ND
八溴二苯醚(OctaBDE)	-	mg/kg	5	ND



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检测项目	限值	单位	MDL	A1
九溴二苯醚(NonaBDE)	-	mg/kg	5	ND
十溴二苯醚(DecaBDE)	-	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) 最大允许限值引用自 RoHS 指令(EU) 2015/863。
- (2) IEC 62321 系列等同于 EN 62321 系列。
- (3) 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。

美国环保署有毒物质控制法 (TSCA) 第 6 (h) 节规定的持久性、生物累积性和毒性 (PBT) 化学物质

检测方法: 参考 US EPA 3550C:2007, 采用 GC-MS 进行分析。

检测项目	CAS No.	限值	单位	MDL	A1
十溴二苯醚 (Deca-BDE) ^{Δ1}	1163-19-5	禁用	mg/kg	5	ND
异丙基化磷酸三苯酯 (PIP 3:1) ^{Δ2}	68937-41-7	禁用	mg/kg	5	ND
2,4,6-三叔丁基苯酚 (2,4,6-TTBP) ^{Δ3}	732-26-3	3000	mg/kg	5	ND
六氯丁二烯 (HCBd)	87-68-3	禁用	mg/kg	5	ND
五氯苯硫酚 (PCTP)	133-49-3	10000	mg/kg	5	ND
结论					符合

备注:

- (1) 法规信息请参见下链接
<https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/persistent-bioaccumulative-and-toxic-pbt-chemicals-under>
- (2) ^{Δ1}:若送测样品来自于产品或物品含有十溴二苯醚的产品或物品的回收塑料, 则可豁免;
- (3) ^{Δ2}: 提交的样品有下列情形之一的, 不在法规的管控范围内:
 - 用于航空或军事用途的液压油;
 - 润滑剂和润滑脂;
 - 汽车和航空航天车辆的新零件和替换零件;
 - 生产氰基丙烯酸酯胶粘剂的中间体;
 - 机车和船用专用发动机空气滤清器;
 - 来自于含有 PIP (3:1) 的产品或物品的回收塑料;
 - 用含有 PIP (3:1) 回收产品或物品的塑料制成的产品或物品
- (4) ^{Δ3}: 提交的样品如果不是机油或润滑油, 则不在法规的管控范围内;

卤素

检测方法: 参考 EN 14582:2016, 采用 IC 进行分析。



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Shenzhen Branch Testing Center-Chemical Laboratory

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检测项目	单位	MDL	A1
氟 (F)	mg/kg	20	ND
氯 (Cl)	mg/kg	50	ND
溴 (Br)	mg/kg	50	ND
碘 (I)	mg/kg	50	ND

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。
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 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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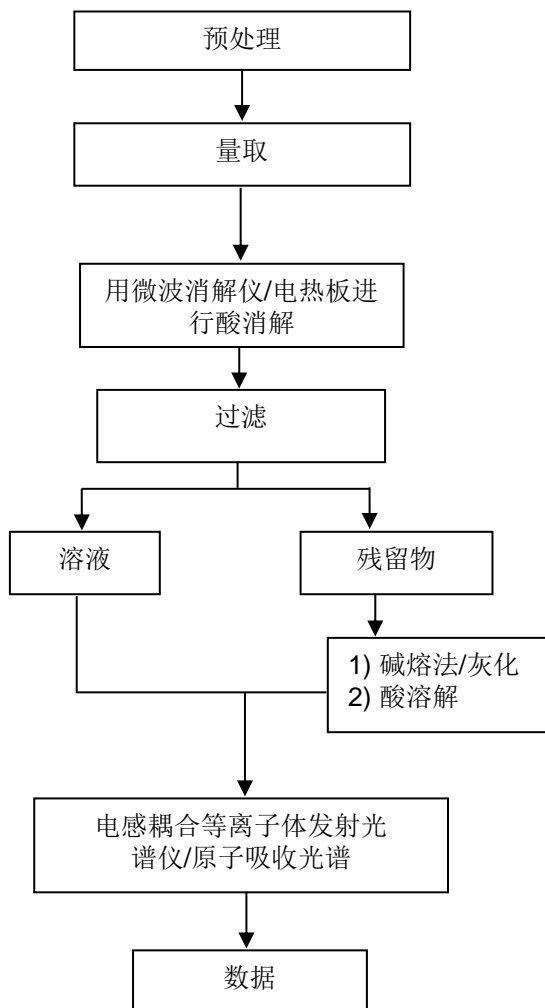
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附件

元素检测流程图

样品按照下述流程被完全消解



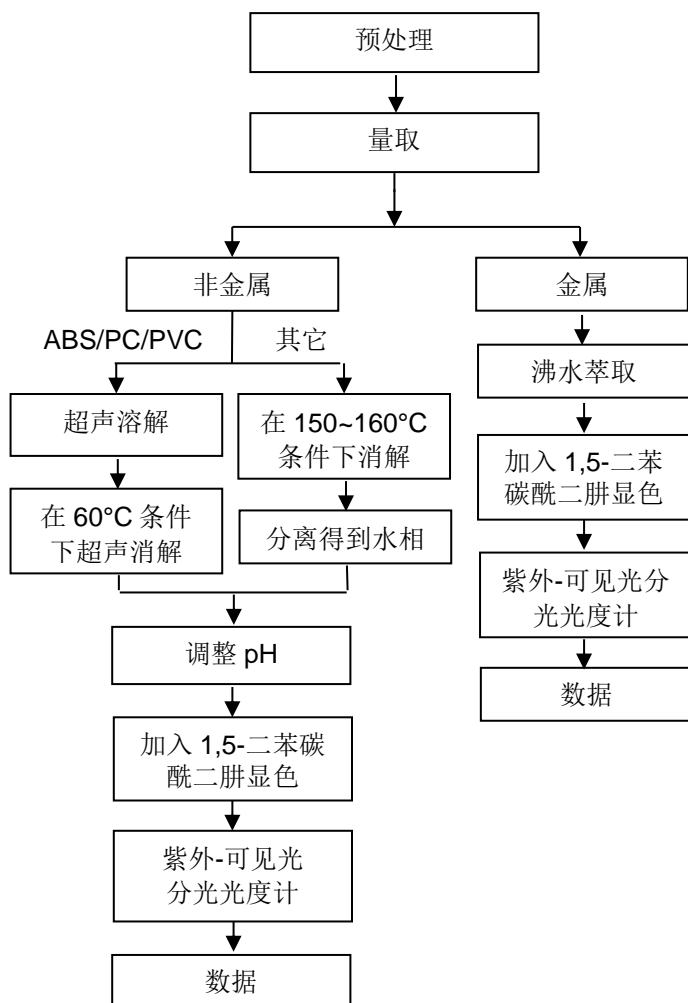
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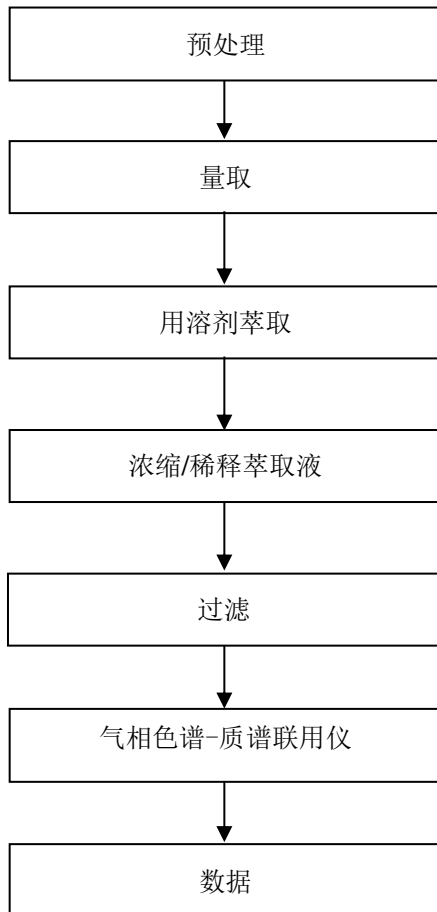
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六价铬检测流程图



PBBs/PBDEs 检测流程图



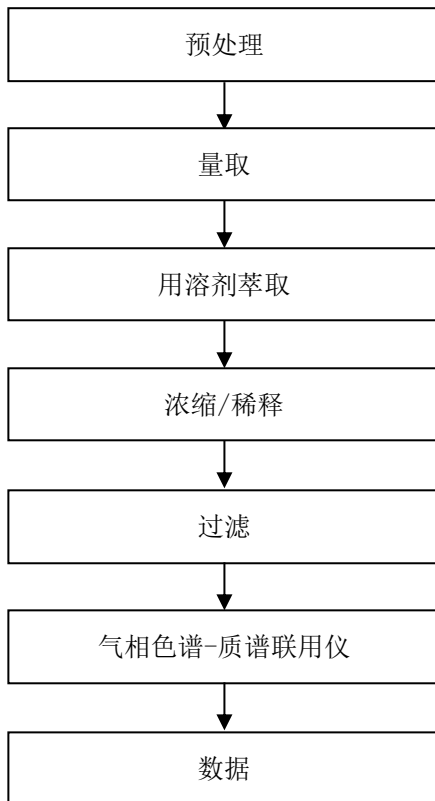
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Phthalates 检测流程图



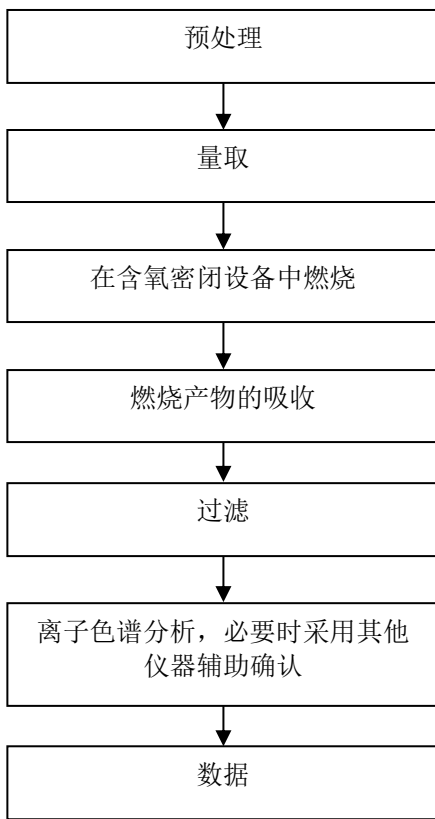
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卤素检测流程图



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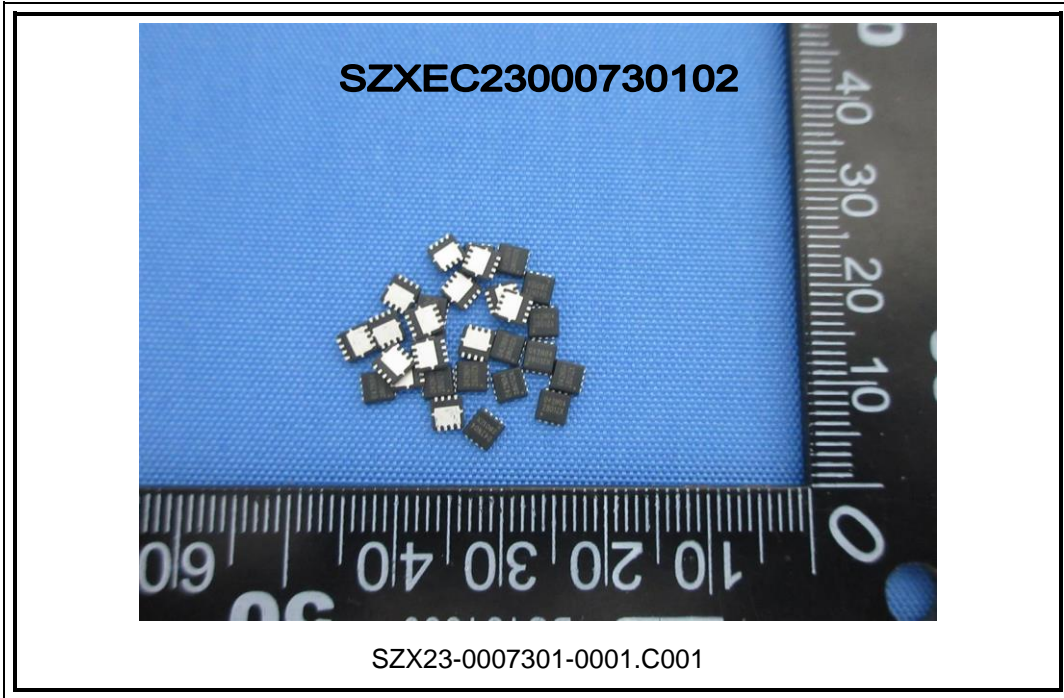
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