

检测报告 编号: SHAEC22003767502 日期: 2022年11月25日 第1页,共12页

客户名称: 江苏捷捷微电子股份有限公司

客户地址: 江苏省启东市经济开发区钱塘江路 3000 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: SP22-027633

样品接收时间: 2022年11月18日

检测周期: 2022年11月18日-2022年11月25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
六溴环十二烷(HBCDD)	见检测结果
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-乙基已基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP)	符合
卤素	见检测结果
全氟辛烷磺酸 (PFOS)及衍生物和全氟辛酸(PFOA)	见检测结果

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Dora Hu 胡敏 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	SHA22-0037675-0001.C001	银色芯片

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

六溴环十二烷(HBCDD)

检测方法: 参考 IEC 62321-9:2021,采用 GC-MS 进行分析。

检测项目	CAS No.	单位	MDL	A1
六溴环十二烷 (HBCDD)	134237-50-6 /134237-51-7 /134237-52-8	mg/kg	20	ND
	/25637-99-4 /3194-55-6			

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-乙基已基)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, AAS, 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	24739▲
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



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检测项目	限值	单位	MDL	A1
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
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) 最大允许极限值引用自 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。
- (4) ▲根据客户提供的声明,编号 A1 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)-I|: 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: 参考 EN 14582:2016, 采用 IC 进行分析。

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

全氟辛烷磺酸 (PFOS)及衍生物和全氟辛酸(PFOA)

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

检测项目	单位	MDL	A1
全氟辛烷磺酸(PFOS)及其衍生物	mg/kg	-	ND
全氟辛烷磺酸(PFOS)^	mg/kg	0.01	ND
N-乙基全氟辛烷磺酰胺(N-Et-FOSA)	mg/kg	0.01	ND
N-甲基全氟辛烷磺酰胺(N-Me-FOSA)	mg/kg	0.01	ND
N-乙 基全氟辛烷磺酰胺乙醇(EtFOSE)	mg/kg	0.01	ND
2-(N-甲基全氟辛基磺酰胺)乙醇(MeFOSE)	mg/kg	0.01	ND



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检测项目	单位	MDL	A1
全氟辛基磺酰胺(PFOSA)	mg/kg	0.01	ND
全氟辛酸(PFOA)及其盐+	mg/kg	0.01	ND

备注:

- (1) + PFOA 及其盐包含 PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) 和 APFO (CAS No.: 3825-26-1);
- (2) ^ 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).

除非另有说明,否则本检测报告中所示的检测结果仅对来样负责。本报告未经本公司书面许可,不可部分复

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。 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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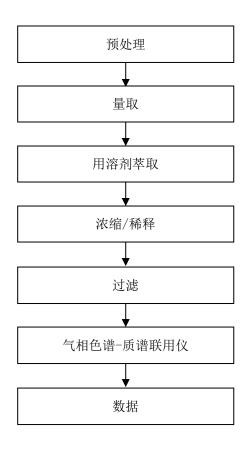
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HBCDD 检测流程图





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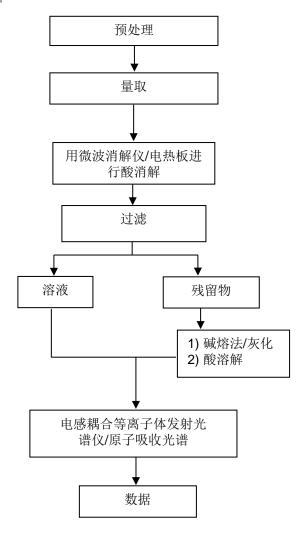
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附件

元素检测流程图

样品按照下述流程被完全消解





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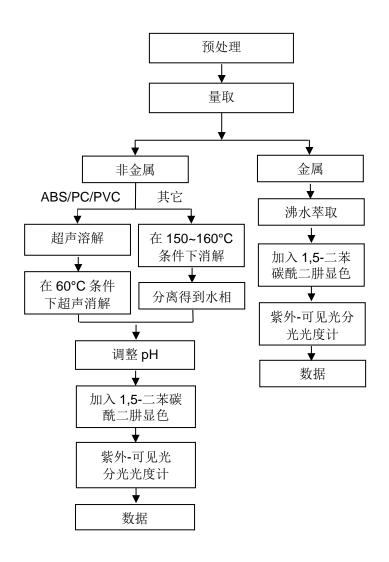


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六价铬检测流程图





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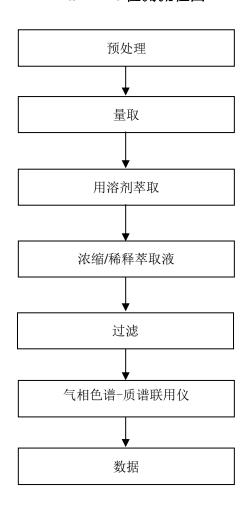
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PBBs/PBDEs 检测流程图





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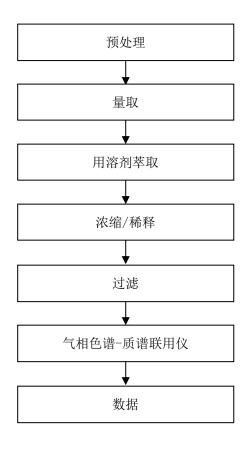


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Phthalates 检测流程图





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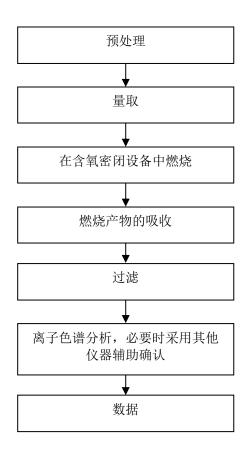


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卤素检测流程图





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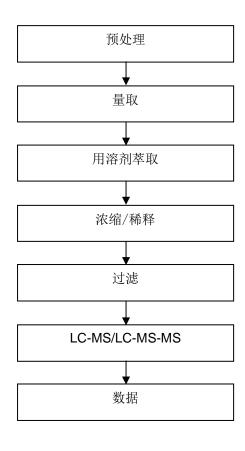


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PFASs/ PFOS/PFOA 检测流程图





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