

编号: SHAEC24000195804

日期: 2024年01月19日 第1页,共29页

客户名称: 扬州扬杰电子科技股份有限公司 客户地址: 扬州市邗江区荷叶西路6号

样品名称: 功率器件

客户参考信息: 1. 锡球; 3. 无卤塑封料 1; 4. 玻钝芯片; 5. 肖特基芯片; 7. 无卤塑封料 2; 8. 无卤

> 塑封料 3; 9.无卤塑封料 4; 10.框架/跳线/引线; 14.铝线/铝带; 26.锡膏/焊片/焊 锡丝; 27.铜线; 28.镀金钯铜线; 29.镀钯铜线; 31.框架(铜铁银); 34.无卤塑 封料 5; 35.框架(铜) 1; 36.无卤塑封料 6; 37.无卤塑封料 7; 38.无卤塑封料 8; 39. 无卤塑封料 9; 40. 无卤塑封料 10; 41. 无卤塑封料 11; 42. 框架(铜银)

1; 43.框架(铜) 2; 44.框架(铜银) 2

以上样品及信息由客户提供。

SGS 工作编号: SHP24-000085

样品接收时间: 2024年01月03日

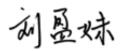
检测周期: 2024年01月03日~2024年01月15日

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 (PBB)、多溴二苯醚 (PBDE)、邻苯二甲酸二(2-乙基己基)酯	符合
(DEHP)、邻苯二甲酸丁苄酯 (BBP)、邻苯二甲酸二丁酯 (DBP)和邻苯二甲酸二	付百
异丁酯 (DIBP)	
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	符合
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	付百
酯(DIBP)	

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Annie Liu 刘盈妹 批准签署人





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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 (PBB)、多溴二苯醚 (PBDE)、邻苯二甲酸二(2-乙基己基)酯	符合
(DEHP)、邻苯二甲酸丁苄酯 (BBP)、邻苯二甲酸二丁酯 (DBP)和邻苯二甲酸二	付合
异丁酯 (DIBP)	

### 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	SHA24-0001958-0001.C001	银色金属
SN2	А3	SHA24-0001958-0001.C003	灰色固体
SN3	A4	SHA24-0001958-0001.C004	灰色/黑色固体片
SN4	A5	SHA24-0001958-0001.C005	彩色固体片
SN5	A7	SHA24-0001958-0001.C007	灰色固体
SN6	A8	SHA24-0001958-0001.C008	灰色固体
SN7	A9	SHA24-0001958-0001.C009	灰色固体
SN8	A10	SHA24-0001958-0001.C010	铜色金属
SN9	A14	SHA24-0001958-0001.C014	银色金属丝
SN10	A26	SHA24-0001958-0001.C026	银色金属丝
SN11	A27	SHA24-0001958-0001.C027	铜色金属丝
SN12	A28	SHA24-0001958-0001.C028	银色金属丝
SN13	A29	SHA24-0001958-0001.C029	银色金属丝
SN14	A31	SHA24-0001958-0001.C031	铜色金属
SN15	A34	SHA24-0001958-0001.C034	灰色固体
SN16	A35	SHA24-0001958-0001.C035	铜色金属
SN17	A36	SHA24-0001958-0001.C036	灰色固体
SN18	A37	SHA24-0001958-0001.C037	灰色固体
SN19	A38	SHA24-0001958-0001.C038	灰色固体
SN20	A39	SHA24-0001958-0001.C039	灰色固体



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样品序号	样品编号	SGS 样品 ID	样品描述
SN21	A40	SHA24-0001958-0001.C040	灰色固体
SN22	A41	SHA24-0001958-0001.C041	灰色固体
SN23	A42	SHA24-0001958-0001.C042	铜色金属
SN24	A43	SHA24-0001958-0001.C043	铜色金属
SN25	A44	SHA24-0001958-0001.C044	铜色金属

### 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 (PBB)、多溴 ニ苯醚 (PBDE)、邻苯二甲酸二(2-乙基已基)酯 (DEHP)、邻苯二甲酸丁苄酯 (BBP)、邻苯二甲酸二丁酯 (DBP)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	А3	A4	A5
铅 (Pb)	1000	mg/kg	2	ND	32265▲	ND
汞 (Hg)	1000	mg/kg	2	ND	ND	ND
镉 (Cd)	100	mg/kg	2	ND	ND	ND
六价铬 (Cr(VI))	1000	mg/kg	8	ND	ND	ND
多溴联苯之和 (PBB)	1000	mg/kg	-	ND	ND	ND
一溴联苯 (MonoBB)	-	mg/kg	5	ND	ND	ND
二溴联苯 (DiBB)	-	mg/kg	5	ND	ND	ND
三溴联苯 (TriBB)	-	mg/kg	5	ND	ND	ND
四溴联苯 (TetraBB)	-	mg/kg	5	ND	ND	ND
五溴联苯 (PentaBB)	-	mg/kg	5	ND	ND	ND
六溴联苯 (HexaBB)	-	mg/kg	5	ND	ND	ND
七溴联苯 (HeptaBB)	-	mg/kg	5	ND	ND	ND
八溴联苯 (OctaBB)	-	mg/kg	5	ND	ND	ND
九溴联苯 (NonaBB)	-	mg/kg	5	ND	ND	ND
十溴联苯 (DecaBB)	-	mg/kg	5	ND	ND	ND
多溴二苯醚之和 (PBDE)	1000	mg/kg	•	ND	ND	ND
一溴二苯醚 (MonoBDE)	-	mg/kg	5	ND	ND	ND
二溴二苯醚 (DiBDE)	-	mg/kg	5	ND	ND	ND
三溴二苯醚 (TriBDE)	-	mg/kg	5	ND	ND	ND
四溴二苯醚 (TetraBDE)	-	mg/kg	5	ND	ND	ND
五溴二苯醚 (PentaBDE)	-	mg/kg	5	ND	ND	ND



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检测项目	限值	单位	MDL	А3	A4	A5
六溴二苯醚 (HexaBDE)	-	mg/kg	5	ND	ND	ND
七溴二苯醚 (HeptaBDE)	-	mg/kg	5	ND	ND	ND
八溴二苯醚 (OctaBDE)	-	mg/kg	5	ND	ND	ND
九溴二苯醚 (NonaBDE)	-	mg/kg	5	ND	ND	ND
十溴二苯醚 (DecaBDE)	-	mg/kg	5	ND	ND	ND
邻苯二甲酸二(2-乙基己基)酯 (DEHP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸丁苄酯 (BBP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸二异丁酯 (DIBP)	1000	mg/kg	50	ND	ND	ND

检测项目	限值	单位	MDL	A7	A8	A9
铅 (Pb)	1000	mg/kg	2	ND	ND	ND
汞 (Hg)	1000	mg/kg	2	ND	ND	ND
镉 (Cd)	100	mg/kg	2	ND	ND	ND
六价铬 (Cr(VI))	1000	mg/kg	8	ND	ND	ND
多溴联苯之和 (PBB)	1000	mg/kg	-	ND	ND	ND
一溴联苯 (MonoBB)	-	mg/kg	5	ND	ND	ND
二溴联苯 (DiBB)	-	mg/kg	5	ND	ND	ND
三溴联苯 (TriBB)	-	mg/kg	5	ND	ND	ND
四溴联苯 (TetraBB)	-	mg/kg	5	ND	ND	ND
五溴联苯 (PentaBB)	-	mg/kg	5	ND	ND	ND
六溴联苯 (HexaBB)	-	mg/kg	5	ND	ND	ND
七溴联苯 (HeptaBB)	-	mg/kg	5	ND	ND	ND
八溴联苯 (OctaBB)	-	mg/kg	5	ND	ND	ND
九溴联苯 (NonaBB)	-	mg/kg	5	ND	ND	ND
十溴联苯 (DecaBB)	-	mg/kg	5	ND	ND	ND
多溴二苯醚之和 (PBDE)	1000	mg/kg	-	ND	ND	ND
一溴二苯醚 (MonoBDE)	-	mg/kg	5	ND	ND	ND
二溴二苯醚 (DiBDE)	-	mg/kg	5	ND	ND	ND
三溴二苯醚 (TriBDE)	-	mg/kg	5	ND	ND	ND
四溴二苯醚 (TetraBDE)	-	mg/kg	5	ND	ND	ND
五溴二苯醚 (PentaBDE)	-	mg/kg	5	ND	ND	ND
六溴二苯醚 (HexaBDE)	-	mg/kg	5	ND	ND	ND
七溴二苯醚 (HeptaBDE)	-	mg/kg	5	ND	ND	ND
八溴二苯醚 (OctaBDE)	-	mg/kg	5	ND	ND	ND
九溴二苯醚 (NonaBDE)	-	mg/kg	5	ND	ND	ND
十溴二苯醚 (DecaBDE)	-	mg/kg	5	ND	ND	ND
邻苯二甲酸二(2-乙基己基)酯 (DEHP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸丁苄酯 (BBP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸二异丁酯 (DIBP)	1000	mg/kg	50	ND	ND	ND



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检测项目	限值	单位	MDL	A34	A36	A37
铅 (Pb)	1000	mg/kg	2	ND	ND	ND
汞 (Hg)	1000	mg/kg	2	ND	ND	ND
镉 (Cd)	100	mg/kg	2	ND	ND	ND
六价铬 (Cr(VI))	1000	mg/kg	8	ND	ND	ND
多溴联苯之和 (PBB)	1000	mg/kg	-	ND	ND	ND
一溴联苯 (MonoBB)	-	mg/kg	5	ND	ND	ND
二溴联苯 (DiBB)	-	mg/kg	5	ND	ND	ND
三溴联苯 (TriBB)	-	mg/kg	5	ND	ND	ND
四溴联苯 (TetraBB)	-	mg/kg	5	ND	ND	ND
五溴联苯 (PentaBB)	-	mg/kg	5	ND	ND	ND
六溴联苯 (HexaBB)	-	mg/kg	5	ND	ND	ND
七溴联苯 (HeptaBB)	-	mg/kg	5	ND	ND	ND
八溴联苯 (OctaBB)	-	mg/kg	5	ND	ND	ND
九溴联苯 (NonaBB)	-	mg/kg	5	ND	ND	ND
十溴联苯 (DecaBB)	-	mg/kg	5	ND	ND	ND
多溴二苯醚之和 (PBDE)	1000	mg/kg	-	ND	ND	ND
一溴二苯醚 (MonoBDE)	-	mg/kg	5	ND	ND	ND
二溴二苯醚 (DiBDE)	-	mg/kg	5	ND	ND	ND
三溴二苯醚 (TriBDE)	-	mg/kg	5	ND	ND	ND
四溴二苯醚 (TetraBDE)	-	mg/kg	5	ND	ND	ND
五溴二苯醚 (PentaBDE)	-	mg/kg	5	ND	ND	ND
六溴二苯醚 (HexaBDE)	-	mg/kg	5	ND	ND	ND
七溴二苯醚 (HeptaBDE)	-	mg/kg	5	ND	ND	ND
八溴二苯醚 (OctaBDE)	-	mg/kg	5	ND	ND	ND
九溴二苯醚 (NonaBDE)	-	mg/kg	5	ND	ND	ND
十溴二苯醚 (DecaBDE)	-	mg/kg	5	ND	ND	ND
邻苯二甲酸二(2-乙基己基)酯 (DEHP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸丁苄酯 (BBP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸二异丁酯 (DIBP)	1000	mg/kg	50	ND	ND	ND

检测项目	限值	单位	MDL	A38	A39	A40
铅 (Pb)	1000	mg/kg	2	ND	ND	ND
汞 (Hg)	1000	mg/kg	2	ND	ND	ND
镉 (Cd)	100	mg/kg	2	ND	ND	ND
六价铬 (Cr(VI))	1000	mg/kg	8	ND	ND	ND
多溴联苯之和 (PBB)	1000	mg/kg	•	ND	ND	ND
一溴联苯 (MonoBB)	-	mg/kg	5	ND	ND	ND
二溴联苯 (DiBB)	-	mg/kg	5	ND	ND	ND
三溴联苯 (TriBB)	-	mg/kg	5	ND	ND	ND
四溴联苯 (TetraBB)	-	mg/kg	5	ND	ND	ND
五溴联苯 (PentaBB)	-	mg/kg	5	ND	ND	ND
六溴联苯 (HexaBB)	-	mg/kg	5	ND	ND	ND



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检测项目	限值	单位	MDL	A38	A39	A40
七溴联苯 (HeptaBB)	-	mg/kg	5	ND	ND	ND
八溴联苯 (OctaBB)	-	mg/kg	5	ND	ND	ND
九溴联苯 (NonaBB)	-	mg/kg	5	ND	ND	ND
十溴联苯 (DecaBB)	-	mg/kg	5	ND	ND	ND
多溴二苯醚之和 (PBDE)	1000	mg/kg	-	ND	ND	ND
一溴二苯醚 (MonoBDE)	-	mg/kg	5	ND	ND	ND
二溴二苯醚 (DiBDE)	-	mg/kg	5	ND	ND	ND
三溴二苯醚 (TriBDE)	-	mg/kg	5	ND	ND	ND
四溴二苯醚 (TetraBDE)	-	mg/kg	5	ND	ND	ND
五溴二苯醚 (PentaBDE)	-	mg/kg	5	ND	ND	ND
六溴二苯醚 (HexaBDE)	-	mg/kg	5	ND	ND	ND
七溴二苯醚 (HeptaBDE)	-	mg/kg	5	ND	ND	ND
八溴二苯醚 (OctaBDE)	-	mg/kg	5	ND	ND	ND
九溴二苯醚 (NonaBDE)	-	mg/kg	5	ND	ND	ND
十溴二苯醚 (DecaBDE)	-	mg/kg	5	ND	ND	ND
邻苯二甲酸二(2-乙基己基)酯 (DEHP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸丁苄酯 (BBP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸二异丁酯 (DIBP)	1000	mg/kg	50	ND	ND	ND

检测项目	限值	单位	MDL	A41
铅 (Pb)	1000	mg/kg	2	ND
汞 (Hg)	1000	mg/kg	2	ND
镉 (Cd)	100	mg/kg	2	ND
六价铬 (Cr(VI))	1000	mg/kg	8	ND
多溴联苯之和 (PBB)	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 (PBDE)	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



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检测项目	限值	单位	MDL	A41
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(2-乙基己基)酯 (DEHP)	1000	mg/kg	50	ND
邻苯二甲酸丁苄酯 (BBP)	1000	mg/kg	50	ND
邻苯二甲酸二丁酯 (DBP)	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 A4 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。

更多豁免相关信息,可以从以下链接获取:

https://rohs.sgsonline.com.cn/PDFLinks/zh-cn/RSTS-TP-037%20RoHS%20Exemption%20%28CN%29.pdf

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: 参考滴定法, IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, 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	A26
镉 (Cd)	100	mg/kg	2	ND
铅(Pb)	0.1	%	-	92.1▲
汞 (Hg)	1000	mg/kg	2	ND
六价铬 (Cr(VI))▼	-	μg/cm²	0.10	ND
多溴联苯之和 (PBB)	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 (PBDE)	1000	mg/kg	•	ND
一溴二苯醚 (MonoBDE)	-	mg/kg	5	ND



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检测项目	限值	单位	MDL	A26
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) ▼ = a. 当六价铬的浓度高于0.13 μg/cm²时,样品为阳性,即含有六价铬;
- b. 当六价铬的浓度为ND(低于 $0.10 \mu g/cm^2$ )时,样品为阴性,即未检测到六价铬;
- c. 当六价铬的浓度介于0.10 μg/cm²与0.13 μg/cm²之间时,无法直接判定是否检测到六价铬,因不同个体的样品表面差异可能会影 响测定结果;
- 由于未获知样品的存储条件和生产日期,样品的六价铬检测结果仅能代表检测时样品含六价铬的状态。
- (4)▲根据客户提供的声明,编号A26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)。

更多豁免相关信息,可以从以下链接获取:

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## 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 (PBB)、多溴 二苯醚 (PBDE)、邻苯二甲酸二(2-乙基已基)酯 (DEHP)、邻苯二甲酸丁苄酯 (BBP)、邻苯二甲酸二丁酯 (DBP)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 62321-7-1:2015, 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	A10	A14
铅 (Pb)	1000	mg/kg	2	31	7	ND
汞 (Hg)	1000	mg/kg	2	ND	ND	ND
镉 (Cd)	100	mg/kg	2	ND	ND	ND
六价铬 (Cr(VI))▼	-	μg/cm²	0.10	ND	ND	ND
多溴联苯之和 (PBB)	1000	mg/kg	ı	ND	ND	ND
一溴联苯 (MonoBB)	-	mg/kg	5	ND	ND	ND
二溴联苯 (DiBB)	-	mg/kg	5	ND	ND	ND
三溴联苯 (TriBB)	-	mg/kg	5	ND	ND	ND
四溴联苯 (TetraBB)	-	mg/kg	5	ND	ND	ND
五溴联苯 (PentaBB)	-	mg/kg	5	ND	ND	ND



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检测项目	限值	单位	MDL	A1	A10	A14
六溴联苯 (HexaBB)	-	mg/kg	5	ND	ND	ND
七溴联苯 (HeptaBB)	-	mg/kg	5	ND	ND	ND
八溴联苯 (OctaBB)	-	mg/kg	5	ND	ND	ND
九溴联苯 (NonaBB)	-	mg/kg	5	ND	ND	ND
十溴联苯 (DecaBB)	-	mg/kg	5	ND	ND	ND
多溴二苯醚之和 (PBDE)	1000	mg/kg	-	ND	ND	ND
一溴二苯醚 (MonoBDE)	-	mg/kg	5	ND	ND	ND
二溴二苯醚 (DiBDE)	-	mg/kg	5	ND	ND	ND
三溴二苯醚 (TriBDE)	-	mg/kg	5	ND	ND	ND
四溴二苯醚 (TetraBDE)	-	mg/kg	5	ND	ND	ND
五溴二苯醚 (PentaBDE)	-	mg/kg	5	ND	ND	ND
六溴二苯醚 (HexaBDE)	-	mg/kg	5	ND	ND	ND
七溴二苯醚 (HeptaBDE)	-	mg/kg	5	ND	ND	ND
八溴二苯醚 (OctaBDE)	-	mg/kg	5	ND	ND	ND
九溴二苯醚 (NonaBDE)	-	mg/kg	5	ND	ND	ND
十溴二苯醚 (DecaBDE)	-	mg/kg	5	ND	ND	ND
邻苯二甲酸二(2-乙基己基)酯 (DEHP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸丁苄酯 (BBP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸二异丁酯 (DIBP)	1000	mg/kg	50	ND	ND	ND

检测项目	限值	单位	MDL	A27	A28	A29
铅 (Pb)	1000	mg/kg	2	ND	ND	ND
汞 (Hg)	1000	mg/kg	2	ND	ND	ND
镉 (Cd)	100	mg/kg	2	ND	ND	ND
六价铬 (Cr(VI))▼	-	μg/cm²	0.10	ND	ND	ND
多溴联苯之和 (PBB)	1000	mg/kg	-	ND	ND	ND
一溴联苯 (MonoBB)	-	mg/kg	5	ND	ND	ND
二溴联苯 (DiBB)	-	mg/kg	5	ND	ND	ND
三溴联苯 (TriBB)	-	mg/kg	5	ND	ND	ND
四溴联苯 (TetraBB)	-	mg/kg	5	ND	ND	ND
五溴联苯 (PentaBB)	-	mg/kg	5	ND	ND	ND
六溴联苯 (HexaBB)	-	mg/kg	5	ND	ND	ND
七溴联苯 (HeptaBB)	-	mg/kg	5	ND	ND	ND
八溴联苯 (OctaBB)	-	mg/kg	5	ND	ND	ND
九溴联苯 (NonaBB)	-	mg/kg	5	ND	ND	ND
十溴联苯 (DecaBB)	-	mg/kg	5	ND	ND	ND
多溴二苯醚之和 (PBDE)	1000	mg/kg	-	ND	ND	ND
一溴二苯醚 (MonoBDE)	-	mg/kg	5	ND	ND	ND
二溴二苯醚 (DiBDE)	-	mg/kg	5	ND	ND	ND
三溴二苯醚 (TriBDE)	-	mg/kg	5	ND	ND	ND
四溴二苯醚 (TetraBDE)	-	mg/kg	5	ND	ND	ND
五溴二苯醚 (PentaBDE)	-	mg/kg	5	ND	ND	ND



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检测项目	限值	单位	MDL	A27	A28	A29
六溴二苯醚 (HexaBDE)	-	mg/kg	5	ND	ND	ND
七溴二苯醚 (HeptaBDE)	-	mg/kg	5	ND	ND	ND
八溴二苯醚 (OctaBDE)	-	mg/kg	5	ND	ND	ND
九溴二苯醚 (NonaBDE)	-	mg/kg	5	ND	ND	ND
十溴二苯醚 (DecaBDE)	-	mg/kg	5	ND	ND	ND
邻苯二甲酸二(2-乙基己基)酯 (DEHP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸丁苄酯 (BBP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸二异丁酯 (DIBP)	1000	mg/kg	50	ND	ND	ND

检测项目	限值	单位	MDL	A31	A35	A42
铅 (Pb)	1000	mg/kg	2	7	7	7
汞 (Hg)	1000	mg/kg	2	ND	ND	ND
镉 (Cd)	100	mg/kg	2	ND	ND	ND
六价铬 (Cr(VI))▼	-	μg/cm²	0.10	ND	ND	ND
多溴联苯之和 (PBB)	1000	mg/kg	1	ND	ND	ND
一溴联苯 (MonoBB)	-	mg/kg	5	ND	ND	ND
二溴联苯 (DiBB)	-	mg/kg	5	ND	ND	ND
三溴联苯 (TriBB)	-	mg/kg	5	ND	ND	ND
四溴联苯 (TetraBB)	-	mg/kg	5	ND	ND	ND
五溴联苯 (PentaBB)	-	mg/kg	5	ND	ND	ND
六溴联苯 (HexaBB)	-	mg/kg	5	ND	ND	ND
七溴联苯 (HeptaBB)	-	mg/kg	5	ND	ND	ND
八溴联苯 (OctaBB)	-	mg/kg	5	ND	ND	ND
九溴联苯 (NonaBB)	-	mg/kg	5	ND	ND	ND
十溴联苯 (DecaBB)	-	mg/kg	5	ND	ND	ND
多溴二苯醚之和 (PBDE)	1000	mg/kg	-	ND	ND	ND
一溴二苯醚 (MonoBDE)	-	mg/kg	5	ND	ND	ND
二溴二苯醚 (DiBDE)	-	mg/kg	5	ND	ND	ND
三溴二苯醚 (TriBDE)	-	mg/kg	5	ND	ND	ND
四溴二苯醚 (TetraBDE)	-	mg/kg	5	ND	ND	ND
五溴二苯醚 (PentaBDE)	-	mg/kg	5	ND	ND	ND
六溴二苯醚 (HexaBDE)	-	mg/kg	5	ND	ND	ND
七溴二苯醚 (HeptaBDE)	-	mg/kg	5	ND	ND	ND
八溴二苯醚 (OctaBDE)	-	mg/kg	5	ND	ND	ND
九溴二苯醚 (NonaBDE)	-	mg/kg	5	ND	ND	ND
十溴二苯醚 (DecaBDE)	-	mg/kg	5	ND	ND	ND
邻苯二甲酸二(2-乙基己基)酯 (DEHP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸丁苄酯 (BBP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND	ND	ND
邻苯二甲酸二异丁酯 (DIBP)	1000	mg/kg	50	ND	ND	ND



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检测项目	限值	单位	MDL	A43	A44
铅 (Pb)	1000	mg/kg	2	9	8
汞 (Hg)	1000	mg/kg	2	ND	ND
镉 (Cd)	100	mg/kg	2	ND	ND
六价铬 (Cr(VI))▼	-	μg/cm²	0.10	ND	ND
多溴联苯之和 (PBB)	1000	mg/kg	1	ND	ND
一溴联苯 (MonoBB)	-	mg/kg	5	ND	ND
二溴联苯 (DiBB)	-	mg/kg	5	ND	ND
三溴联苯 (TriBB)	-	mg/kg	5	ND	ND
四溴联苯 (TetraBB)	-	mg/kg	5	ND	ND
五溴联苯 (PentaBB)	-	mg/kg	5	ND	ND
六溴联苯 (HexaBB)	-	mg/kg	5	ND	ND
七溴联苯 (HeptaBB)	-	mg/kg	5	ND	ND
八溴联苯 (OctaBB)	-	mg/kg	5	ND	ND
九溴联苯 (NonaBB)	-	mg/kg	5	ND	ND
十溴联苯 (DecaBB)	-	mg/kg	5	ND	ND
多溴二苯醚之和 (PBDE)	1000	mg/kg	-	ND	ND
一溴二苯醚 (MonoBDE)	-	mg/kg	5	ND	ND
二溴二苯醚 (DiBDE)	-	mg/kg	5	ND	ND
三溴二苯醚 (TriBDE)	-	mg/kg	5	ND	ND
四溴二苯醚 (TetraBDE)	-	mg/kg	5	ND	ND
五溴二苯醚 (PentaBDE)	-	mg/kg	5	ND	ND
六溴二苯醚 (HexaBDE)	-	mg/kg	5	ND	ND
七溴二苯醚 (HeptaBDE)	-	mg/kg	5	ND	ND
八溴二苯醚 (OctaBDE)	-	mg/kg	5	ND	ND
九溴二苯醚 (NonaBDE)	-	mg/kg	5	ND	ND
十溴二苯醚 (DecaBDE)	-	mg/kg	5	ND	ND
邻苯二甲酸二(2-乙基己基)酯 (DEHP)	1000	mg/kg	50	ND	ND
邻苯二甲酸丁苄酯 (BBP)	1000	mg/kg	50	ND	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND	ND
邻苯二甲酸二异丁酯 (DIBP)	1000	mg/kg	50	ND	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。
- a. 当六价铬的浓度高于0.13 μg/cm²时,样品为阳性,即含有六价铬;
  - b. 当六价铬的浓度为ND (低于0.10 μg/cm²) 时,样品为阴性,即未检测到六价铬;
  - c. 当六价铬的浓度介于0.10 μg/cm²与0.13 μg/cm²之间时,无法直接判定是否检测到六价铬,因不 同个体的样品表面差异可能会影响测定结果。

由于未获知样品的存储条件和生产日期,样品的六价铬检测结果仅能代表检测时样品含六价铬的状态。

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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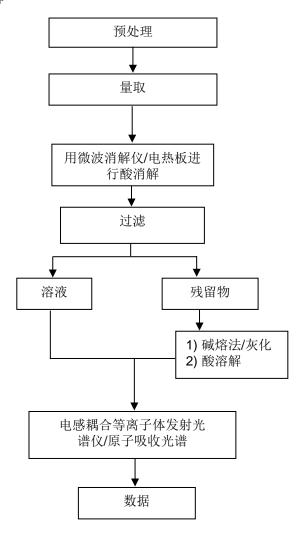
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附件

### 元素检测流程图

样品按照下述流程被完全消解





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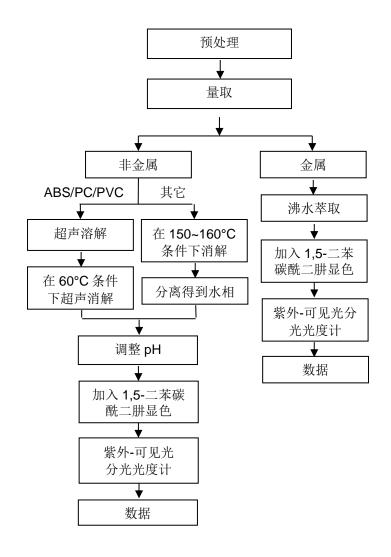
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### 六价铬检测流程图





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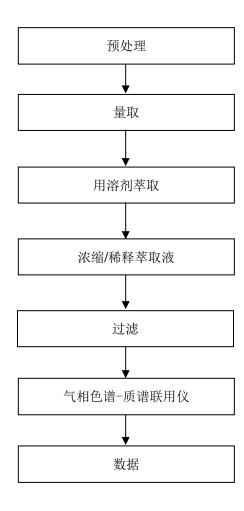
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附件

### PBBs/PBDEs 检测流程图





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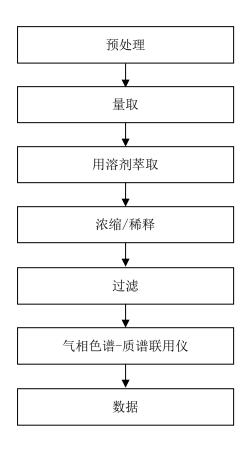
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### Phthalates 检测流程图





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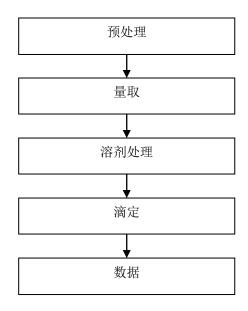
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### 滴定检测流程图





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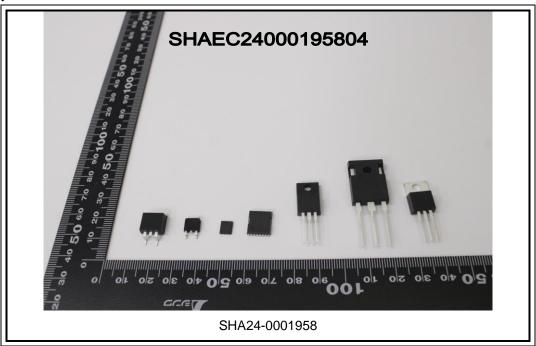


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样品照片:







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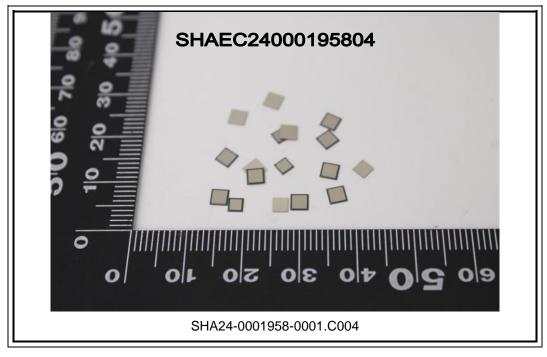


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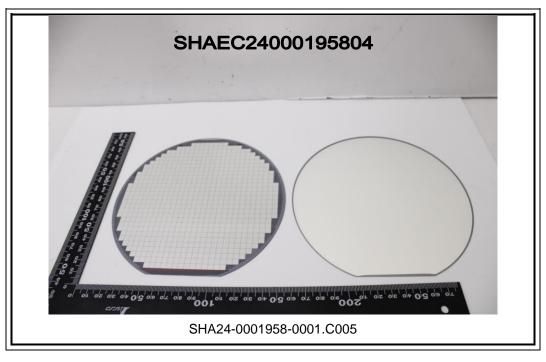
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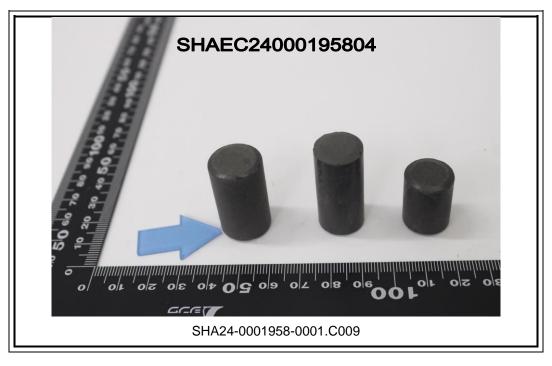


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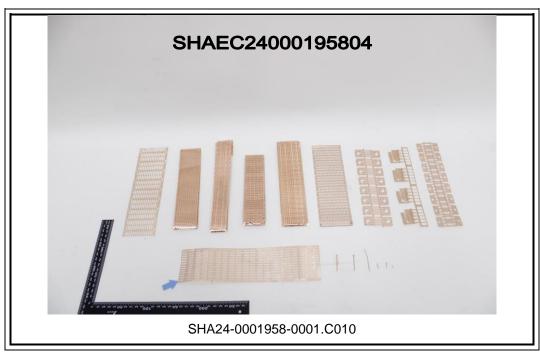
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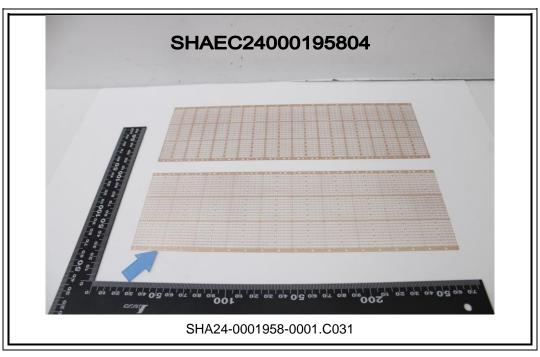
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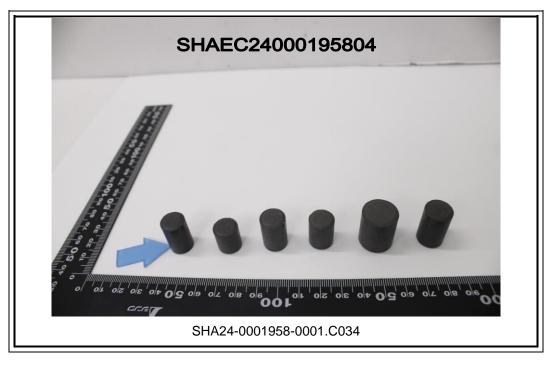


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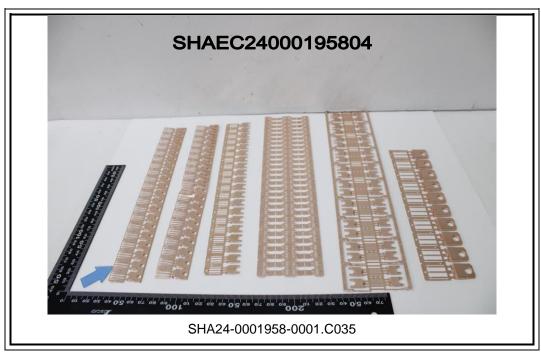
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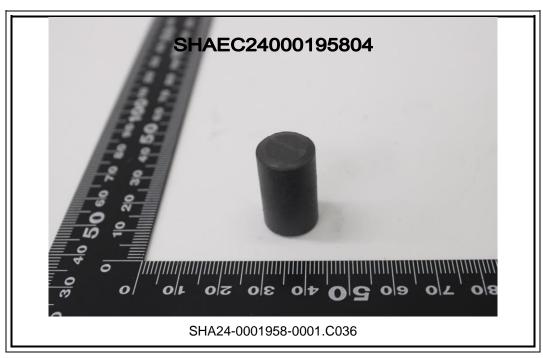


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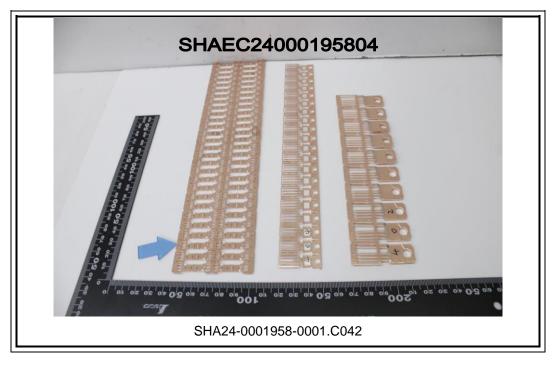


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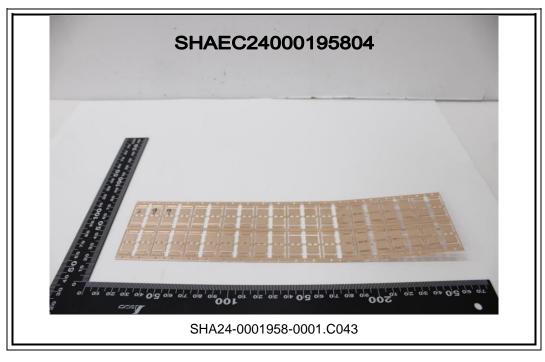
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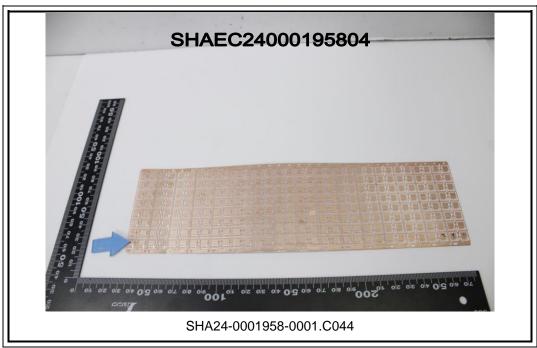


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