

## 检测报告

编号: SZXEC25004810714

日期: 2025 年 12 月 15 日

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客户名称: 深圳市永源微电子科技有限公司  
客户地址: 深圳市宝安区福海和秀西路 44 号锐明工业园 C2 栋

样品名称: 半导体元器件  
型号: TO252-3L  
客户参考信息: TO263-3L、TO263-6L、TOLLA-8L、STOLL-5L、  
TO220F-3L、TO220-3L、TO251S-3L、TO247-3L、PDFN3\*3-8L、  
PDFN5\*6-8L、TO252-4L、TO264-3L、TO262-3L、TO251L-3L、  
TO247S-3L、TO3P-3L、DIP8

以上样品及信息由客户提供。

SGS 工作编号: SZP25-062988  
样品接收时间: 2025 年 12 月 09 日  
检测周期: 2025 年 12 月 09 日 ~ 2025 年 12 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 (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)	符合
欧盟 RoHS 指令 2011/65/EU 附录 II 的修正指令(EU) 2015/863-铅、汞、镉和六价铬	符合

通标标准技术服务有限公司深圳分公司  
授权签名

贝瑞瑞

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SGS-CS Standards Technical Services Co., Ltd.  
Shenzhen Branch

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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	A2	SZX25-0048107-0001.C002	带米色印字和芯片的黑色塑胶
SN2	A3	SZX25-0048107-0001.C003	银色金属引脚

## 备注:

- (1) 1 mg/kg = 1 ppm = 0.0001%  
 (2) MDL = 方法检出限  
 (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)、多溴二苯醚 (PBDE)、邻苯二甲酸二(2-乙基己基)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 和 IEC 62321-12:2023, 采用 ICP-OES/AAS, UV-Vis 和 GC-MS 进行分析。

检测项目	限值	单位	MDL	A2
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	25	ND
二溴联苯 (DiBB)	-	mg/kg	25	ND
三溴联苯 (TriBB)	-	mg/kg	25	ND
四溴联苯 (TetraBB)	-	mg/kg	25	ND
五溴联苯 (PentaBB)	-	mg/kg	25	ND
六溴联苯 (HexaBB)	-	mg/kg	25	ND
七溴联苯 (HeptaBB)	-	mg/kg	25	ND
八溴联苯 (OctaBB)	-	mg/kg	25	ND
九溴联苯 (NonaBB)	-	mg/kg	25	ND
十溴联苯 (DecaBB)	-	mg/kg	25	ND
多溴二苯醚之和 (PBDE)	1000	mg/kg	-	ND
一溴二苯醚 (MonoBDE)	-	mg/kg	25	ND
二溴二苯醚 (DiBDE)	-	mg/kg	25	ND
三溴二苯醚 (TriBDE)	-	mg/kg	25	ND
四溴二苯醚 (TetraBDE)	-	mg/kg	25	ND
五溴二苯醚 (PentaBDE)	-	mg/kg	25	ND
六溴二苯醚 (HexaBDE)	-	mg/kg	25	ND



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检测项目	限值	单位	MDL	A2
七溴二苯醚 (HeptaBDE)	-	mg/kg	25	ND
八溴二苯醚 (OctaBDE)	-	mg/kg	25	ND
九溴二苯醚 (NonaBDE)	-	mg/kg	25	ND
十溴二苯醚 (DecaBDE)	-	mg/kg	25	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。

## 欧盟 RoHS 指令 2011/65/EU 附录 II 的修正指令(EU) 2015/863-铅、汞、镉和六价铬

检测方法: 参考 IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013 和 IEC 62321-7-1:2015, 采用 ICP-OES/AAS 和 UV-Vis 进行分析。

检测项目	限值	单位	MDL	A3
铅 (Pb)	1000	mg/kg	2	7
汞 (Hg)	1000	mg/kg	2	ND
镉 (Cd)	100	mg/kg	2	ND
六价铬 (Cr(VI)) <sup>▼</sup>	-	μg/cm <sup>2</sup>	0.10	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) <sup>▼</sup> = a. 当六价铬的浓度高于0.13 μg/cm<sup>2</sup>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/cm<sup>2</sup>) 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/cm<sup>2</sup>与0.13 μg/cm<sup>2</sup>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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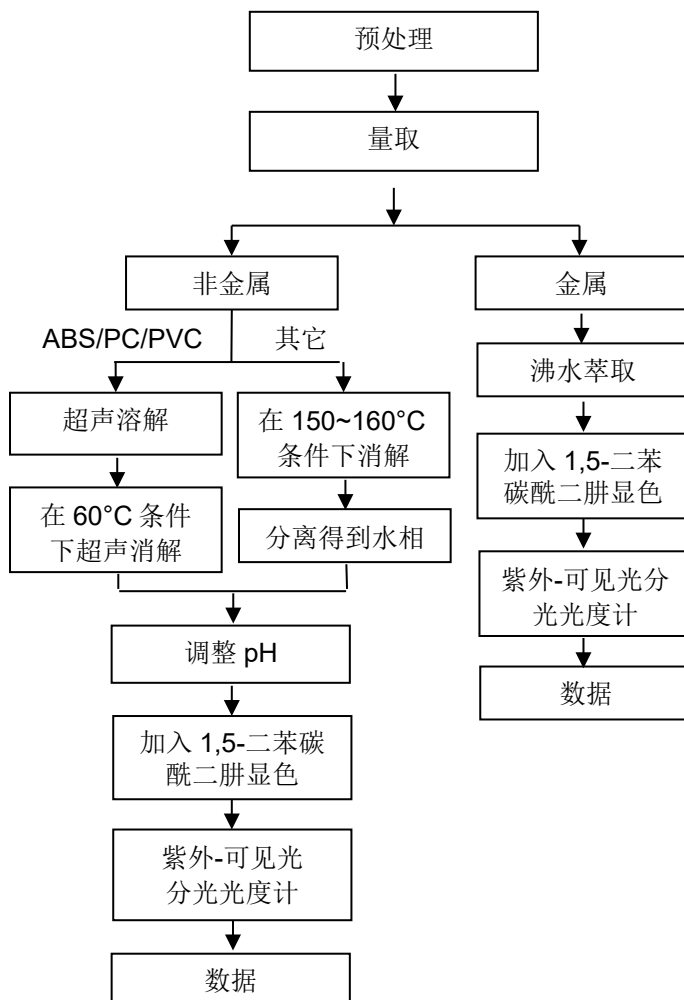
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## 元素检测流程图

样品按照下述流程被完全消解

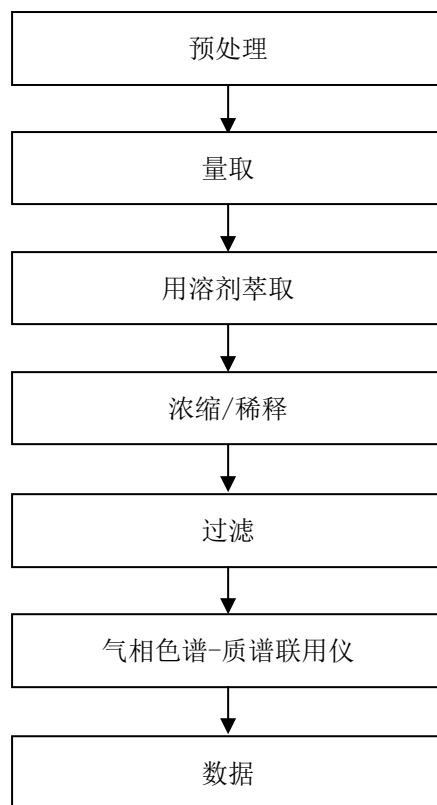


## 六价铬检测流程图





### PBB(s)/PBDE(s)/Phthalates 检测流程图



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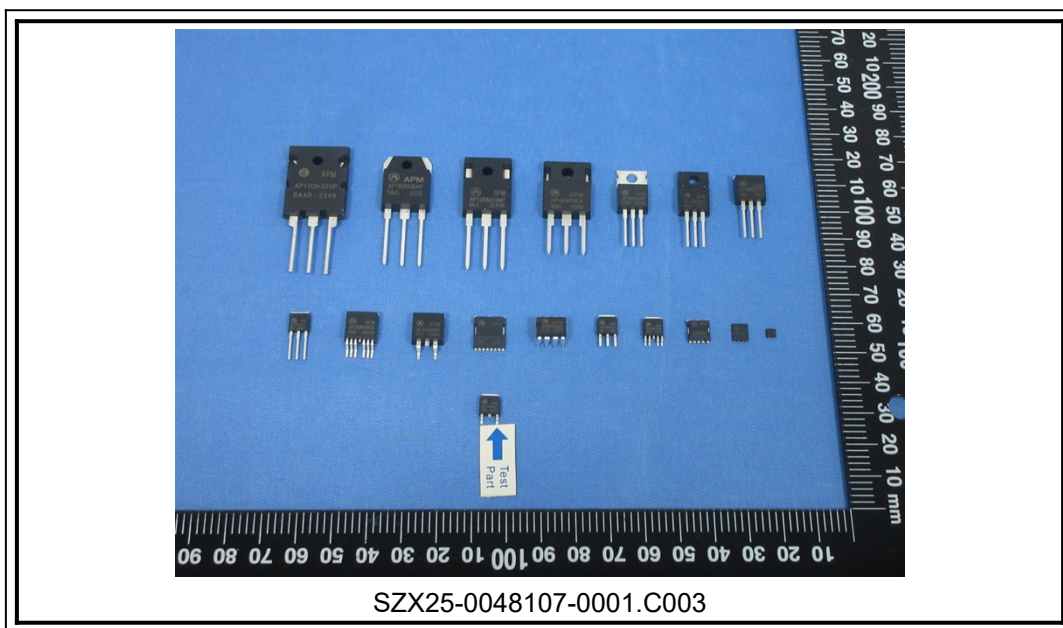
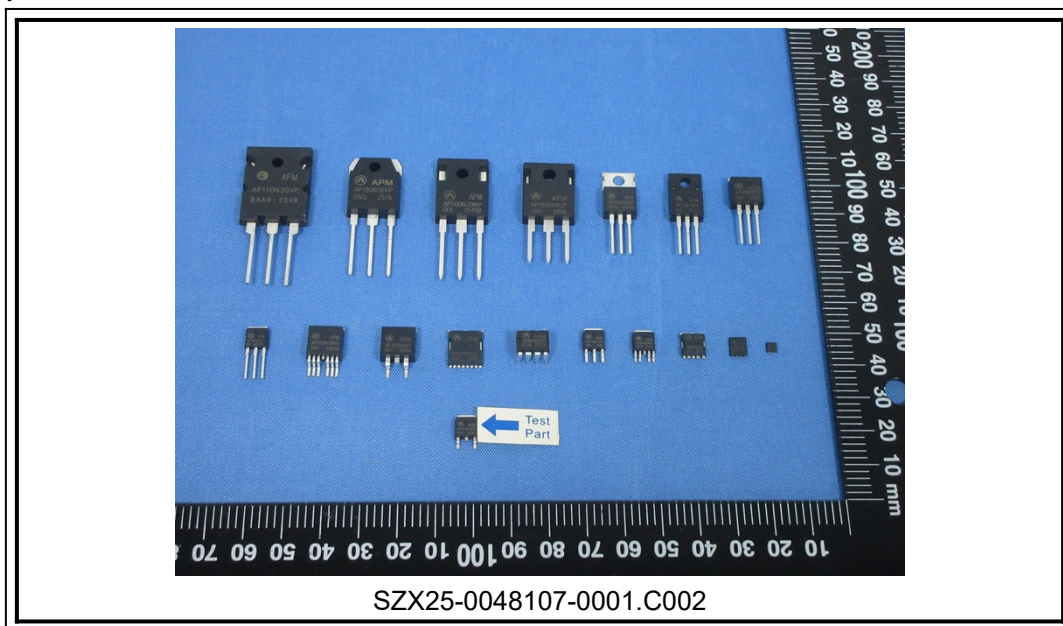
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