

检测报告

编号: CANEC25002788402

日期: 2025 年 03 月 05 日

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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: TO-3P
客户参考信息: 见附件
以上样品及信息由客户提供。

SGS 工作编号: GZP25-003242
参考编号: SHP25-003102
样品接收时间: 2025 年 02 月 19 日
检测周期: 2025 年 02 月 19 日 ~ 2025 年 03 月 04 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
聚氯乙烯(PVC)	见检测结果
卤素	见检测结果

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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	CAN25-0027884-0001.C001	黑色物料
SN2	A2	CAN25-0027884-0001.C002	银色金属脚
SN3	A3	CAN25-0027884-0001.C003	带铜色表面,芯片,焊锡和白色物料的银色金属片

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	A1
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



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检测项目	限值	单位	MDL	A1
五溴二苯醚 (PentaBDE)	-	mg/kg	25	ND
六溴二苯醚 (HexaBDE)	-	mg/kg	25	ND
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	A2	A3
铅 (Pb)	1000	mg/kg	2	10	96068▲
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

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) ▼ = 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。

聚氯乙烯(PVC)

检测方法: SGS 内部方法 (SGS-CCL-TOP-194-01), 采用 Py-GC-MS / IC 进行分析。



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检测项目	CAS No.	单位	MDL	A1
聚氯乙烯 (PVC)	9002-86-2	%	0.05	ND

备注:

(1) 聚氯乙烯成分包括共聚物中的聚氯乙烯。

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	20	ND
氯 (Cl)	mg/kg	50	ND
溴 (Br)	mg/kg	50	ND
碘 (I)	mg/kg	50	ND

备注 ▲: 根据客户提供的声明, 样品 A3 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:

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

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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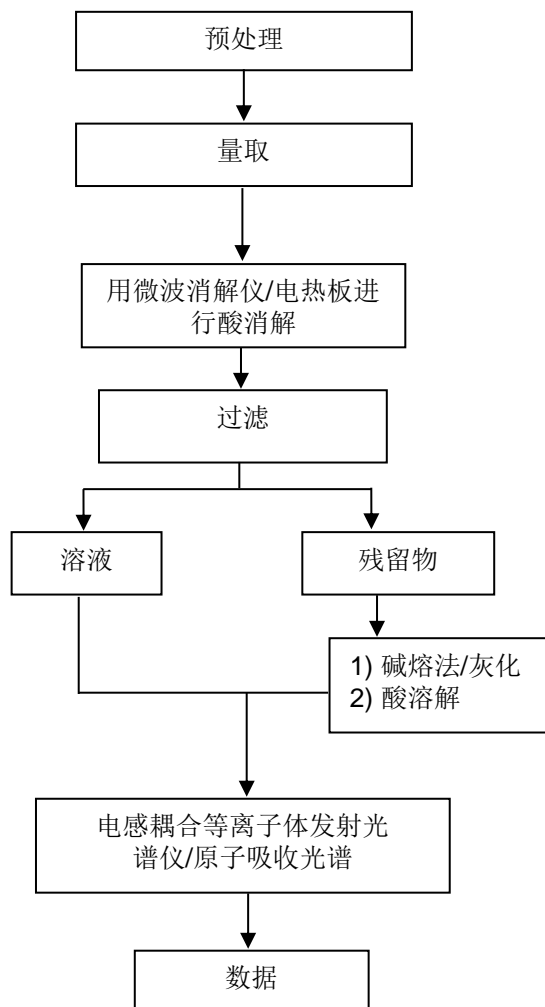
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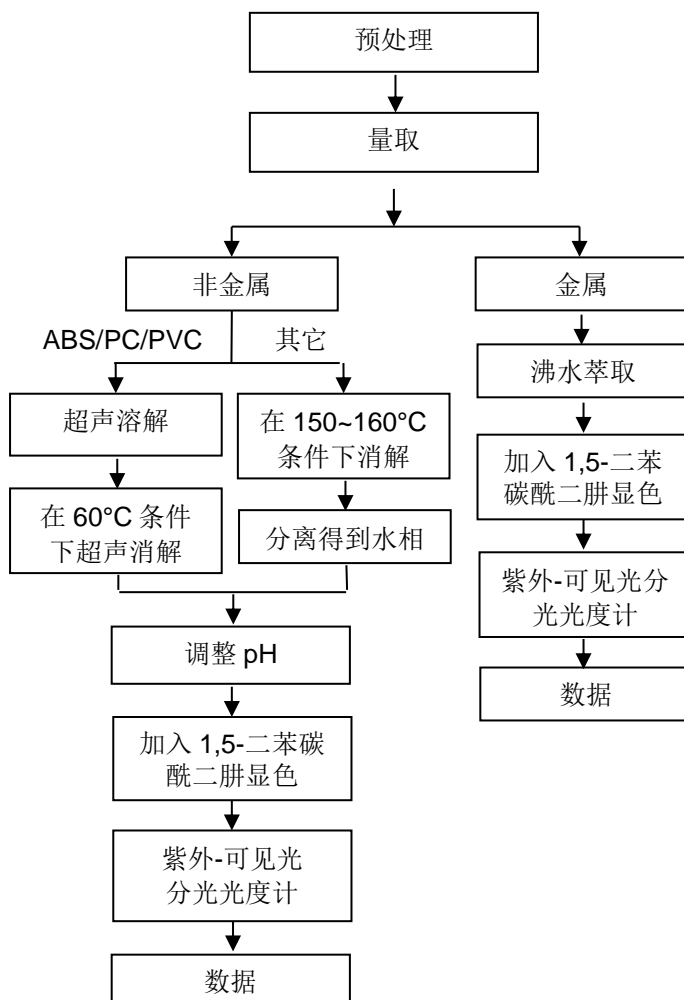
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元素检测流程图

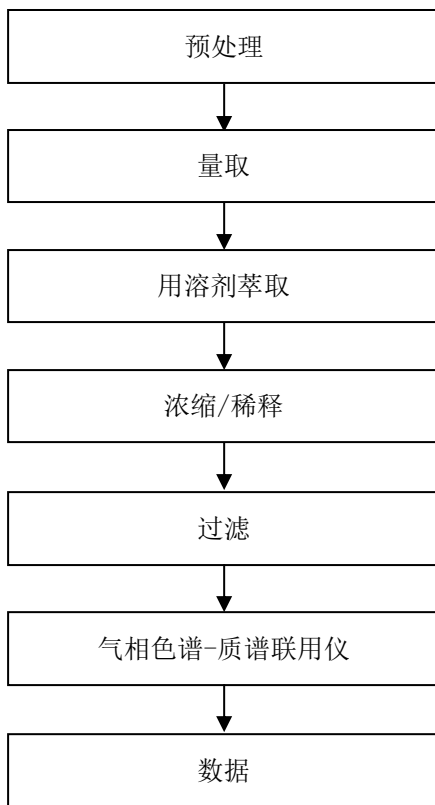
样品按照下述流程被完全消解



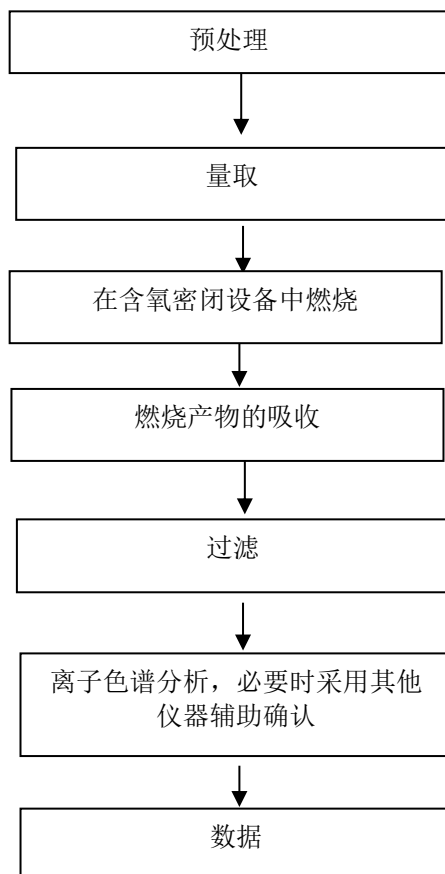
六价铬检测流程图



PBB/PBDE/Phthalates 检测流程图



卤素检测流程图



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附件:

62mm、ABS、DBS、DFN0603-2L、DFN1006-2L、DFN1006-3L、DFN10x15-5L-XX、DFN1610-2L、DFN1610-6L、DFN2010-5L、DFN2010-8L、DFN2020-2L、DFN2020-3L、DFN2020-6L、DFN2020-6L-XX、DFN2510-10L、DFN2626-10L、DFN2x2-3L、DFN2x2-6L、DFN2x2-6L-D、DFN3.0x3.0-8L-XX、DFN3.3x3.3-8L、DFN3.3x3.3-8L (Type B)、DFN3.0x3.0-8L-SD (Type B) DFN3.3x3.3-8L-XX、DFN3020-10L、DFN3030-8L、DFN3030-8L-XX、DFN3333-2L、DFN3333-8L、DFN3810-9L、DFN3x3-8L-XX、DFN5060-8L、DFN5060-8L-XX、DFN5x6-8L、DFN5x6-8L-XX、DFN8080-2L、DFN8080-4L、DFN8x8-2L、DFN8x8-4L、DIP-4、DO-15、DO-218AB、DO-27、DO-41、EasyPack1B、EconoDual、ESOP-8、GBJ、GBL、GBU、ITO-247、ITO-247-XX、KBL、KBP、LSOP-4、MBF、MBS、P6、PDFN3.3x3.3-8L、PDFN3.3x3.3-8L-XX、PDFN3x3-8L、PDFN3x3-8L-XX、PDFN5x6-8L、PDFN5x6-8L-XX、PowerJE10x12、PowerJE5x6、PowerJE7x8、PowerJE8x8、PPTC、R6、SGBJ、SMA、SMAF、SMB、SMBF、SMC、SMC-3、SMD-3225、SMD-4032、SMT、SMT-4、SMTF、SMTJ、SMTO-218Tab、SOD-123、SOD-123FL、SOD-123FLT、SOD-323、SOD-323FL、SOD-523、SOD-723、SOD-923、SOP-10、SOP-16、SOP-4、SOP-5、SOP-7、SOP-8、SOT-143-XX、SOT-223、SOT-223-XX、SOT-227、SOT-227-XX、SOT-23、SOT-23-XX、SOT-323-XX、SOT-353-XX、SOT-363-XX、SOT-523-XX、SOT-563-XX、SOT-723-XX、SOT-82、SOT-89、SOT-89-XX、SOT-89R-XX、SSOP-4、STOLL7x8-5L、T2B、TO-126、TO-202、TO-202-XX、TO-220-XX、TO-220A、TO-220A-2D-XX、TO-220A-XX、TO-220AB、TO-220B、TO-220B-XX、TO-220C、TO-220C-XX、TO-220F、TO-220FA、TO-220FA-XX、TO-220FP、TO-220FP-XX、TO-220H-XX、TO-220HF、TO-220MF-3L、TO-247、TO-247-XX、TO-247i-XX、TO-247iPS-2L、TO-247iPS-3L、TO-247J、TO-247J-XX、TO-247plus、TO-247S、TO-247S-XX、TO-251、TO-251-XX、TO-251L-XX、TO-251S、TO-252、TO-252-XX、TO-262、TO-262-XX、TO-263、TO-263-XX、TO-277B、TO-3P、TO-3P-3L、TO-3PF-3L、TO-3PN-3L、TO-92、TO-92-XX、TO-92CR、TO-92KR、TO-92KRF、TO-92UR、TOLL9.9x10.38-8L、TSSOP-8



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