

## 检测报告

编号: CANEC2303705908

日期: 2023年03月24日 第1页,共10页

客户名称: 捷捷半导体有限公司  
客户地址: 南通市苏通科技产业园井冈山路6号

样品名称: TO-3P  
型号: TO-3P  
客户参考信息: 见备注  
以上样品及信息由客户提供。

SGS工作编号: CP23-011599 - GZ  
内部编号: 16298690  
样品接收日期: 2023年03月15日  
检测周期: 2023年03月15日 - 2023年03月24日  
检测要求: 根据客户要求检测  
检测方法: 请参见下一页  
检测结果: 请参见下一页

## 检测结果概要:

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), 邻苯二甲酸丁苯酯(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
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)成分	见检测结果
卤素	见检测结果

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## 检测报告

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日期: 2023年03月24日 第2页,共10页

检测结果:

### 检测样品描述:

样品编号	SGS样品ID	描述
SN1	CAN23-037059.001	黑色物料
SN2	CAN23-037059.002	银色金属脚
SN3	CAN23-037059.003	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 = 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+A1:2017, 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	001
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	-	mg/kg	5	ND
二溴联苯	-	mg/kg	5	ND
三溴联苯	-	mg/kg	5	ND
四溴联苯	-	mg/kg	5	ND
五溴联苯	-	mg/kg	5	ND
六溴联苯	-	mg/kg	5	ND
七溴联苯	-	mg/kg	5	ND
八溴联苯	-	mg/kg	5	ND
九溴联苯	-	mg/kg	5	ND
十溴联苯	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1000	mg/kg	-	ND
一溴二苯醚	-	mg/kg	5	ND
二溴二苯醚	-	mg/kg	5	ND



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检测项目	限值	单位	MDL	001
三溴二苯醚	-	mg/kg	5	ND
四溴二苯醚	-	mg/kg	5	ND
五溴二苯醚	-	mg/kg	5	ND
六溴二苯醚	-	mg/kg	5	ND
七溴二苯醚	-	mg/kg	5	ND
八溴二苯醚	-	mg/kg	5	ND
九溴二苯醚	-	mg/kg	5	ND
十溴二苯醚	-	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。

### 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+A1:2017, IEC62321-5:2013, IEC 62321-7-1:2015, 采用 ICP-OES 和 UV-Vis 进行分析。

检测项目	限值	单位	MDL	002	003
镉 (Cd)	100	mg/kg	2	ND	ND
铅 (Pb)	1000	mg/kg	2	5	81515▲
汞 (Hg)	1000	mg/kg	2	ND	ND
六价铬(Cr(VI))▼	-	µg/cm <sup>2</sup>	0.10	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
- (3) ▼=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。



**聚氯乙烯(PVC)成分**

检测方法: SGS内部方法(GZTC CHEM-TOP-194-01), 采用Pyrolysis-GC-MS进行分析。

检测项目	CAS NO.	单位	MDL	001
聚氯乙烯成分	9002-86-2	%(w/w)	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, 用 IC分析。

检测项目	单位	MDL	001
氟 (F)	mg/kg	50	ND
氯 (Cl)	mg/kg	50	68
溴 (Br)	mg/kg	50	ND
碘 (I)	mg/kg	50	ND

备注1▲: 根据客户提供的声明, 样品003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)。

备注2: 本报告中的检测结果和照片引用自报告CANEC2303705901。

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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日期: 2023年03月24日 第5页,共10页

## 备注:

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, GBJ, GBL, GBU, ITO-247, ITO-247-XX, KBL, KBP, LSOP-4, MBF, MBS, 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, 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-247, TO-247-XX, 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-92, TO-92-XX, TO-92CR, TO-92KR, TO-92KRF, TO-92UR, TOLL9.9x10.38-8L, TSSOP-8

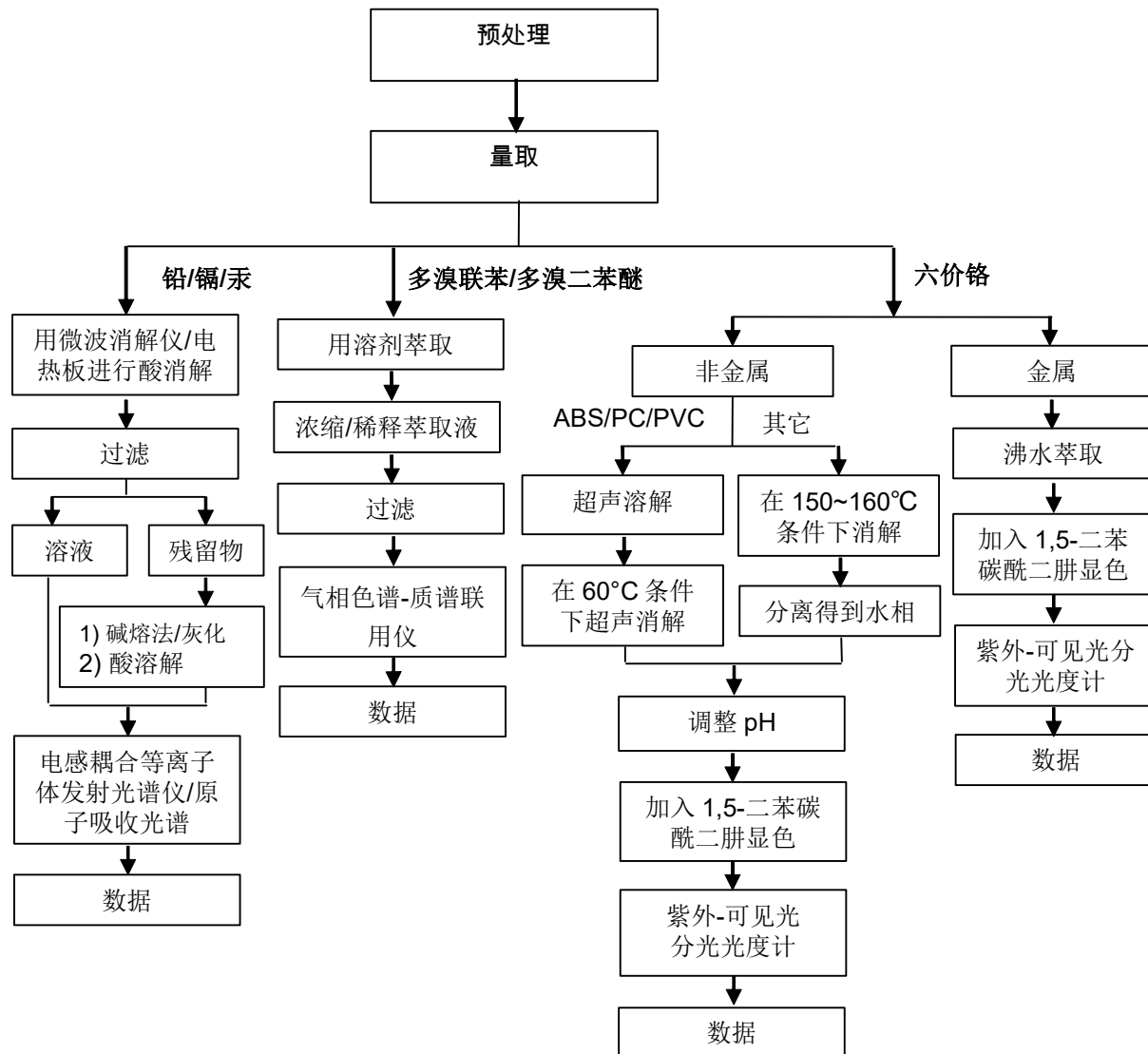


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附件

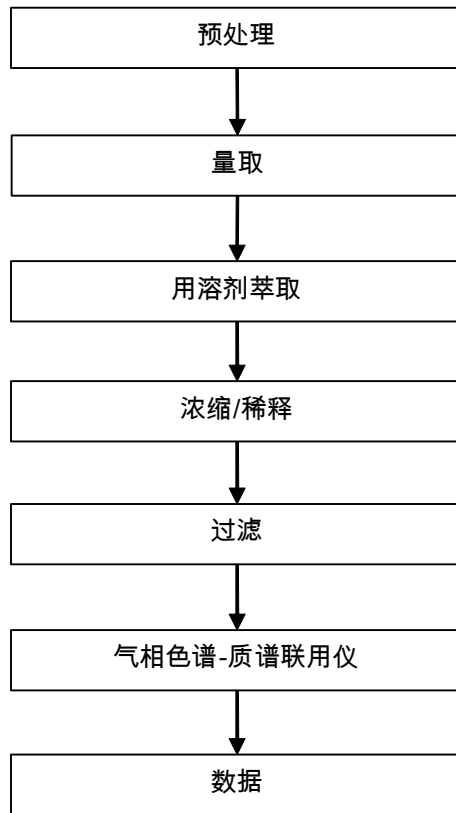
## Pb/Cd/Hg/Cr<sup>6+</sup>/PBBs/PBDEs 检测流程图

1) 样品按照下述流程被完全消解（六价铬和多溴联苯/多溴二苯醚检测除外）。



附件

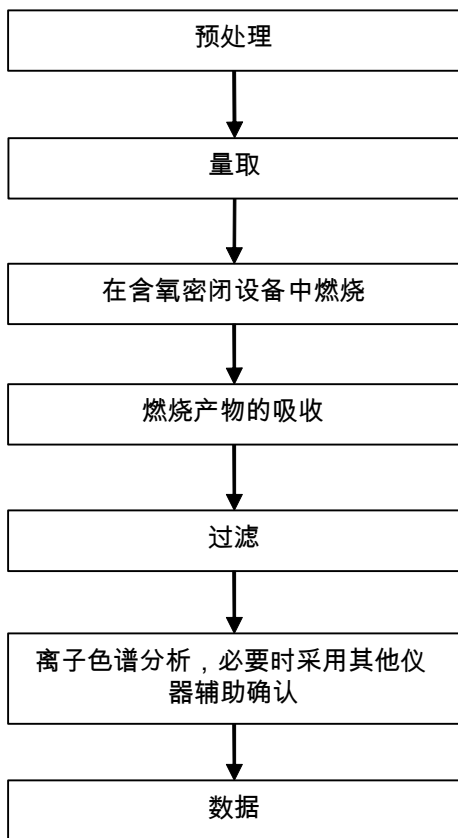
### Phthalates 检测流程图



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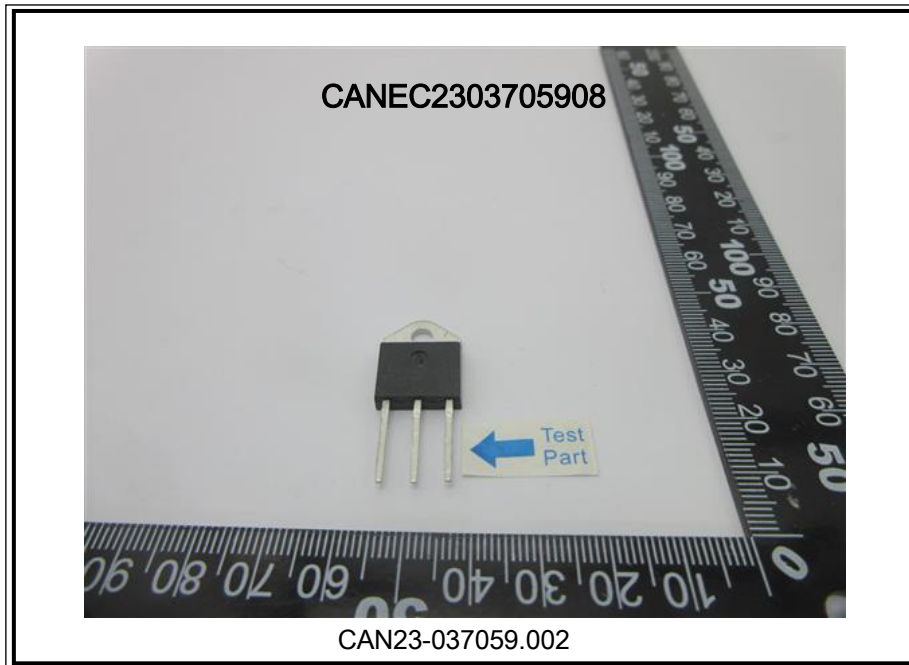
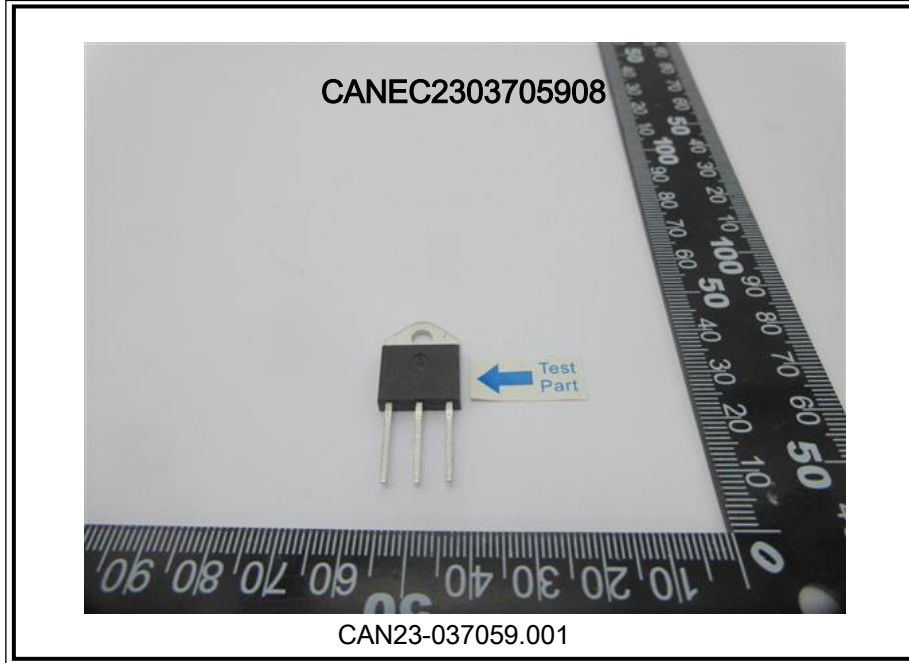
卤素检测流程图



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