



检测报告

Test Report

报告编号 A2250695317101E
Report No. A2250695317101E

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报告抬头公司名称 山东芯诺电子科技股份有限公司
Company Name SHANDONG XINNUO ELECTRONIC SCIENCE AND TECHNOLOGY CO., LTD
shown on Report
地 址 中国山东省济宁市兖州区经济开发区创业路 7 号
Address NO.7 CHUANGYE ROAD, ECONOMIC DEVELOPMENT ZONE, YANZHOU DISTRICT, JINING CITY, SHANDONG PROVINCE, P.R.CHINA

以下测试之样品及样品信息由申请者提供并确认

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

CTI 样品 ID CTI Sample ID	样品名称 Sample Name(s)
001	芯片 Chip (GPP & Triac)
002	芯片 Chip (SKY & MOS)
003	焊料 Solder
004	环氧树脂成型材料 Epoxy Molding Compound
005	环氧树脂成型材料 (无卤) Epoxy Molding Compound (Halogen-free)

样品接收日期 2025.09.18
Sample Received Date Sep. 18, 2025
样品检测日期 2025.09.18-2025.09.23
Testing Period Sep. 18, 2025 to Sep. 23, 2025

测试内容 Test Conducted:

根据客户的申请要求, 具体要求详见下一页。

As requested by the applicant. For details refer to next page(s).

批 准

郑晴涛

日 期

2025.09.23

Approved by

Date

郑晴涛

技术经理 Technical Manager

No. R294347866

华测检测认证集团股份有限公司

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华测检测认证集团股份有限公司

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

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测试摘要 Executive Summary:

测试要求

TEST REQUEST

美国环保署有毒物质控制法(TSCA)第 6(h)部分关于持久性、生物累积性和毒性 (PBT)化学物质的管控
Persistent, Bioaccumulative, and Toxic (PBT) Chemicals under US EPA Toxic Substances Control Act (TSCA) Section 6(h)

- 十溴二苯醚
Decabromodiphenyl Ether (DecaBDE)
- 异丙基化磷酸三苯酯
Phenol, Isopropylated Phosphate (PIP (3:1))
- 2,4,6-三叔丁基苯酚
2,4,6-tris(tert-butyl) phenol (2,4,6-TTBP)
- 六氯丁二烯
Hexachlorobutadiene (HCBd)
- 五氯苯硫酚
Pentachlorothiophenol (PCTP)

测试结果

CONCLUSION

符合
PASS
符合
PASS
符合
PASS
符合
PASS

*****详细结果, 请见下页*****

***** For further details, please refer to the following page(s) *****

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美国环保署有毒物质控制法(TSCA)第 6(h)部分关于持久性、生物累积性和毒性(PBT)化学物质的管控
Persistent, Bioaccumulative, and Toxic (PBT) Chemicals under US EPA Toxic Substances Control Act (TSCA) Section 6(h)

▼ **十溴二苯醚 Decabromodiphenyl Ether (DecaBDE)**

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

测试项目 Tested Item(s)	结果 Result (mg/kg)			方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
	001	002	003		
十溴二苯醚 Decabromodiphenyl Ether (DecaBDE)	N.D.	N.D.	N.D.	5	1000

测试项目 Tested Item(s)	结果 Result (mg/kg)		方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
	004	005		
十溴二苯醚 Decabromodiphenyl Ether (DecaBDE)	N.D.	N.D.	5	1000

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million
- 此限值适用于在产品中非有意添加十溴二苯醚(DecaBDE)的情况, 建议结合供应链确认物质的添加情况。

The limit applies to the situation where Decabromodiphenyl Ether (DecaBDE) is not intentionally added to the product or article. It is recommended to verify the addition of these substances through the supply chain.

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▼ **异丙基化磷酸三苯酯 Phenol, Isopropylated Phosphate (PIP (3:1))**

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

测试项目 Tested Item(s)	结果 Result (mg/kg)			方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
	001	002	003		
异丙基化磷酸三苯酯 Phenol, Isopropylated Phosphate (PIP (3:1))	N.D.	N.D.	N.D.	5	1000

测试项目 Tested Item(s)	结果 Result (mg/kg)		方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
	004	005		
异丙基化磷酸三苯酯 Phenol, Isopropylated Phosphate (PIP (3:1))	N.D.	N.D.	5	1000

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million
- 此限值适用于在产品和物品中非有意添加异丙基化磷酸三苯酯(PIP (3:1))的情况, 建议结合供应链确认物质的添加情况。

The limit applies to the situation where Phenol, Isopropylated Phosphate (PIP (3:1)) is not intentionally added to the product or article. It is recommended to verify the addition of these substances through the supply chain.

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▼ **2,4,6-三叔丁基苯酚 2,4,6-tris(tert-butyl) phenol (2,4,6-TTBP)**

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

测试项目 Tested Item(s)	结果 Result (mg/kg)			方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
	001	002	003		
2,4,6-三叔丁基苯酚 2,4,6-tris(tert-butyl) phenol (2,4,6-TTBP)	N.D.	N.D.	N.D.	5	3000

测试项目 Tested Item(s)	结果 Result (mg/kg)		方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
	004	005		
2,4,6-三叔丁基苯酚 2,4,6-tris(tert-butyl) phenol (2,4,6-TTBP)	N.D.	N.D.	5	3000

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
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▼ **六氯丁二烯 Hexachlorobutadiene (HCBD)**

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

测试项目 Tested Item(s)	结果 Result (mg/kg)			方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
	001	002	003		
六氯丁二烯 Hexachlorobutadiene (HCBD)	N.D.	N.D.	N.D.	5	N.D.

测试项目 Tested Item(s)	结果 Result (mg/kg)		方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
	004	005		
六氯丁二烯 Hexachlorobutadiene (HCBD)	N.D.	N.D.	5	N.D.

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

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▼ **五氯苯硫酚 Pentachlorothiophenol (PCTP)**

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018; Test Equipment: GC-MS

测试项目 Tested Item(s)	结果 Result (mg/kg)			方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
	001	002	003		
五氯苯硫酚 Pentachlorothiophenol (PCTP)	N.D.	N.D.	N.D.	5	10000

测试项目 Tested Item(s)	结果 Result (mg/kg)		方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
	004	005		
五氯苯硫酚 Pentachlorothiophenol (PCTP)	N.D.	N.D.	5	10000

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

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样品/部位描述 Sample/Part Description

序号 No.	CTI 样品 ID CTI Sample ID	描述 Description
1	001	芯片（整体测试） Chip(Tested as a whole) #
2	002	芯片（整体测试） Chip(Tested as a whole) #
3	003	灰色膏体（干重） Grey paste(dry weight) #1
4	004	黑色固体 Black solid
5	005	黑色固体 Black solid

注释 Note:

- #按照目前手段，样品无法进一步拆分，样品整体测试，测试结果不代表整体测试样品中任何一种单一材质的含量。The sample(s) was tested as a whole, because it's impossible to disassemble or separate it by current equipment and technology. The result(s) shown on this report may be different from the content of any homogeneous material.
- #1 测试样品经过 105℃ 烘烤 2 小时后测试。
The sample was tested after drying for 2 hours under 105° C.
- 本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。
The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.

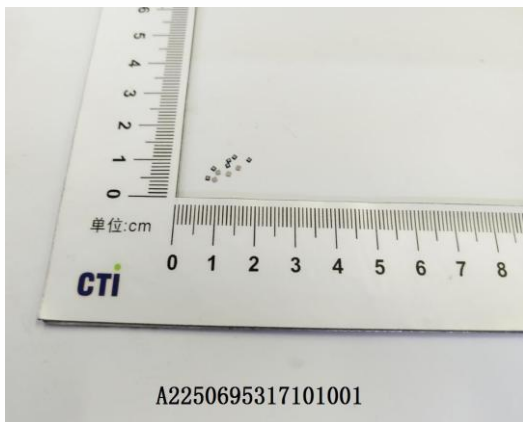
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样品图片

Photo(s) of the sample(s)



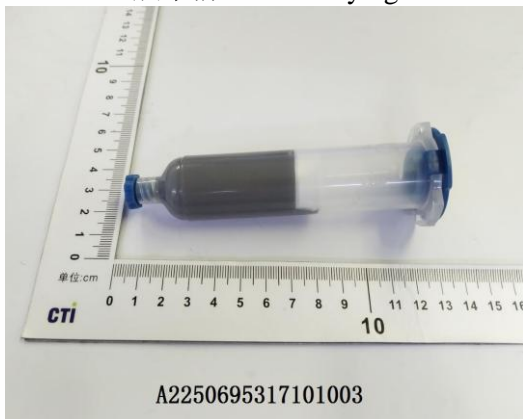
A2250695317101001

烘干前 Before drying



A2250695317101002

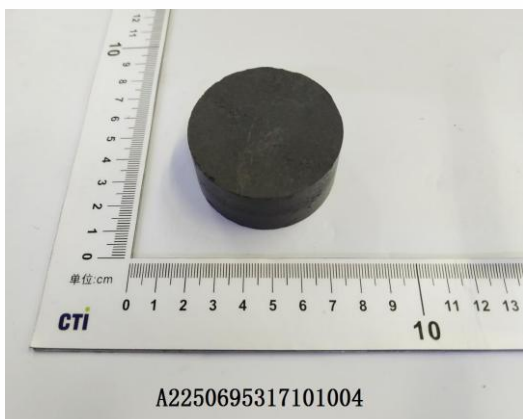
烘干后 After drying



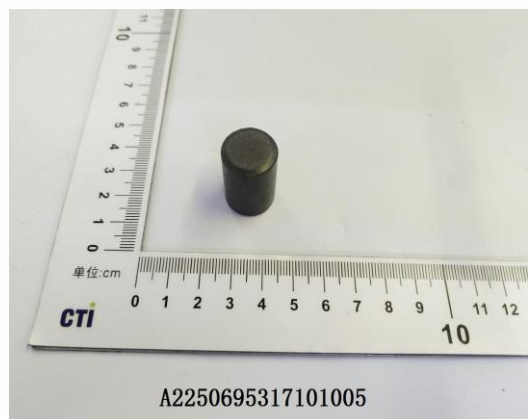
A2250695317101003



A2250695317101003



A2250695317101004



A2250695317101005

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声明 Statement:

1. 本报告无批准人签字、“专用章”及报告骑缝章无效;
This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. 报告抬头公司名称及地址、样品及样品信息由申请者提供, 申请者应对其真实性负责, CTI 未核实其真实性;
The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. 本报告检测结果仅对受测样品负责;
The result(s) shown in this report refer(s) only to the sample(s) tested;
4. 除非另有说明, 报告参照 ILAC-G8:09/2019 / CNAS-GL015:2022 使用简单接受 (w=0) 二元判定规则进行符合性判定; Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
5. 未经 CTI 书面同意, 不得部分复制本报告;
Without written approval of CTI, this report can't be reproduced except in full;
6. 如报告中的英文内容与中文内容有差异, 以中文为准。
In case of any discrepancy between the English version and Chinese version of the reports (if generated), the Chinese version shall prevail.

*** 报告结束 ***
*** End of Report ***

附录 Appendix

客户参考信息 Client Reference Information

R-1/A-405/DO-41/DO-15/DO-201AD/R-6/D3K/KBP/GBU/GBJ/DBS/DBM/DBF/MBF/MBS/MBM/ABS/
ABF/SMA/SMAF/SMB/SMBF/SMC/HBS/JC/QC3Q/GFM/SOD-123FL/TO-277B/GBL/KBL/KBLJ/KBJ/
KBU/KBPC/GBPC/WOB/WOM/DFN/QFN/LBF/LBS/SOT-23/SOT-89/SOT-143/SOT-223/SOT-323/SOT-363/
SOT-553/SOT-563/SOD-123/SOD-323/SOD-523/SOD-723/SOD-923/MELF/DO-35/LL-34/LL-41/ITO-220/
TO-220/TO-262/TO-263/TO-251/TO-252/TO-3P/TO-3PF/TO-126/TO-247/TO-92/SOP-8

成品客户参考图片（非测试样品） Final Product Client Reference Photo (Non-tested sample)



声明 Statement:

1. 附录内容由申请者提供，申请者应对其真实性负责，CTI 未核实其真实性。
The Appendix Information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.
2. 附录内容为 A2250695317101E 报告的补充。
The Appendix Information is/are the supplement(s) for the Report A2250695317101E.