

检测报告
Test Report报告编号 A2250463884101ER1
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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	铝线 Al Wire
005	铜框架 Lead Frame
006	环氧树脂成型材料 Epoxy Molding Compound
007	镀层 Tin Plating
008	环氧树脂成型材料 (无卤) Epoxy Molding Compound (Halogen-free)

样品接收日期 2025.07.07
Sample Received Date Jul. 7, 2025
样品检测日期 2025.07.07-2025.07.12
Testing Period Jul. 7, 2025 to Jul. 12, 2025

检测要求/检测依据/检测结果 请参见下页。
Test Requested/Test Method/Test Result(s) Please refer to the following page(s).

摘要 根据分析结果, 所提交样品 006,008 中 4,4'-二羟基二苯甲烷浓度 > 0.1%(w/w)。
Summary According to the analytical results, concentration(s) of 4,4'-methylenediphenol is(are) > 0.1% (w/w) in the submitted sample(s) 006,008.

批 准
Approved by日 期
Date

2025.07.17

夏清

授权签字人 Lab Authorized

Signatory

No. R294341185

广东省深圳市宝安区新安街道兴东社区华测检测大楼

华测检测认证集团股份有限公司
Centre Testing International Group Co., Ltd.
检验检测专用章
Inspection & Testing Services

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

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检测要求

- 1.根据客户要求, 参照法规(EC) No 1907/2006(REACH), 对所提交样品中 1 种高关注物质(SVHC)进行筛选测试。
- 2.根据客户要求, 对由欧盟成员国向欧盟化学管理局(ECHA)所提交的 1 种于 2025 年 6 月 27 日公布意向成为法规(EC) No 1907/2006(REACH)中高关注度物质(SVHC)的候选物质进行筛选测试。
- 3.根据客户要求, 对由欧盟成员国向欧盟化学管理局(ECHA)所提交的 1 种于 2021 年 6 月 1 日公布意向成为法规(EC) No 1907/2006(REACH)中高关注度物质(SVHC)的候选物质进行筛选测试。
- 4.根据客户要求, 对 4 种潜在意向 SVHC 物质进行筛选测试。

Test Requested

- 1.As specified by client, to screen the 1 substances of very high concern (SVHC) under Regulation (EC) No 1907/2006 of REACH in the submitted sample(s).
- 2.As specified by client, to screen the 1 substance published on June 27th 2025 submitted by EU Member States to ECHA for intention for identification of substance of very high concern (SVHC) under Regulation (EC) No 1907/2006 of REACH in the submitted sample(s).
- 3.As specified by client, to screen the 1 substance published on June 1st 2021 submitted by EU Member States to ECHA for intention for identification of substance of very high concern (SVHC) under Regulation (EC) No1907/2006 of REACH in the submitted sample(s).
- 4.As specified by client, to screen the 4 potential intentional substances for identification of SVHC in the submitted sample(s).

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检测结果1 Test Result(s) 1

物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
		001	
活性棕 51 Tetra(sodium/potassium) 7-[(E)-{2-acetamido-4-[(E)-(4-[[4-chloro-6-({2-[(4-fluoro-6-[[4-(vinylsulfonyl)phenyl]amino)-1,3,5-triazine-2-yl]amino]propyl)amino]-1,3,5-triazine-2-yl]amino)-5-sulfonato-1-naphthyl]diazenyl]-5-methoxyphenyl} diazenyl]-1,3,6-naphthalenetrisulfonate; Reactive Brown 51	-	N.D.	0.05

物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
		002	
活性棕 51 Tetra(sodium/potassium) 7-[(E)-{2-acetamido-4-[(E)-(4-[[4-chloro-6-({2-[(4-fluoro-6-[[4-(vinylsulfonyl)phenyl]amino)-1,3,5-triazine-2-yl]amino]propyl)amino]-1,3,5-triazine-2-yl]amino)-5-sulfonato-1-naphthyl]diazenyl]-5-methoxyphenyl} diazenyl]-1,3,6-naphthalenetrisulfonate; Reactive Brown 51	-	N.D.	0.05

物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
		003	
活性棕 51 Tetra(sodium/potassium) 7-[(E)-{2-acetamido-4-[(E)-(4-[[4-chloro-6-({2-[(4-fluoro-6-[[4-(vinylsulfonyl)phenyl]amino)-1,3,5-triazine-2-yl]amino]propyl)amino]-1,3,5-triazine-2-yl]amino)-5-sulfonato-1-naphthyl]diazenyl]-5-methoxyphenyl} diazenyl]-1,3,6-naphthalenetrisulfonate; Reactive Brown 51	-	N.D.	0.05

物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
		004	
活性棕 51 Tetra(sodium/potassium) 7-[(E)-{2-acetamido-4-[(E)-(4-[[4-chloro-6-({2-[(4-fluoro-6-[[4-(vinylsulfonyl)phenyl]amino)-1,3,5-triazine-2-yl]amino]propyl)amino]-1,3,5-triazine-2-yl]amino)-5-sulfonato-1-naphthyl]diazenyl]-5-methoxyphenyl} diazenyl]-1,3,6-naphthalenetrisulfonate; Reactive Brown 51	-	N.D.	0.05

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物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
		005	
活性棕 51 Tetra(sodium/potassium) 7-[(E)-{2-acetamido-4-[(E)-(4-[[4-chloro-6-({2-[(4-fluoro-6-[[4-(vinylsulfonyl)phenyl]amino)-1,3,5-triazine-2-yl]amino]propyl)amino]-1,3,5-triazine-2-yl]amino)-5-sulfonato-1-naphthyl]diazenyl]-5-methoxyphenyl} diazenyl]-1,3,6-naphthalenetrisulfonate; Reactive Brown 51	-	N.D.	0.05

物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
		006	
活性棕 51 Tetra(sodium/potassium) 7-[(E)-{2-acetamido-4-[(E)-(4-[[4-chloro-6-({2-[(4-fluoro-6-[[4-(vinylsulfonyl)phenyl]amino)-1,3,5-triazine-2-yl]amino]propyl)amino]-1,3,5-triazine-2-yl]amino)-5-sulfonato-1-naphthyl]diazenyl]-5-methoxyphenyl} diazenyl]-1,3,6-naphthalenetrisulfonate; Reactive Brown 51	-	N.D.	0.05

物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
		007	
活性棕 51 Tetra(sodium/potassium) 7-[(E)-{2-acetamido-4-[(E)-(4-[[4-chloro-6-({2-[(4-fluoro-6-[[4-(vinylsulfonyl)phenyl]amino)-1,3,5-triazine-2-yl]amino]propyl)amino]-1,3,5-triazine-2-yl]amino)-5-sulfonato-1-naphthyl]diazenyl]-5-methoxyphenyl} diazenyl]-1,3,6-naphthalenetrisulfonate; Reactive Brown 51	-	N.D.	0.05

物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
		008	
活性棕 51 Tetra(sodium/potassium) 7-[(E)-{2-acetamido-4-[(E)-(4-[[4-chloro-6-({2-[(4-fluoro-6-[[4-(vinylsulfonyl)phenyl]amino)-1,3,5-triazine-2-yl]amino]propyl)amino]-1,3,5-triazine-2-yl]amino)-5-sulfonato-1-naphthyl]diazenyl]-5-methoxyphenyl} diazenyl]-1,3,6-naphthalenetrisulfonate; Reactive Brown 51	-	N.D.	0.05

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检测结果 2 Test Result(s) 2

批次 Batch	序号 No.	物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
				001	
-	-	所有意向/潜在意向 SVHC 物质 (见意向/潜在意向 SVHC 物质清单) All tested intention/potential intention for identification of SVHC (See the list of intention/potential intention for identification of SVHC)	-	N.D.	-

批次 Batch	序号 No.	物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
				002	
-	-	所有意向/潜在意向 SVHC 物质 (见意向/潜在意向 SVHC 物质清单) All tested intention/potential intention for identification of SVHC (See the list of intention/potential intention for identification of SVHC)	-	N.D.	-

批次 Batch	序号 No.	物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
				003	
-	-	所有意向/潜在意向 SVHC 物质 (见意向/潜在意向 SVHC 物质清单) All tested intention/potential intention for identification of SVHC (See the list of intention/potential intention for identification of SVHC)	-	N.D.	-

批次 Batch	序号 No.	物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
				004	
-	-	所有意向/潜在意向 SVHC 物质 (见意向/潜在意向 SVHC 物质清单) All tested intention/potential intention for identification of SVHC (See the list of intention/potential intention for identification of SVHC)	-	N.D.	-

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批次 Batch	序号 No.	物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
				005	
-	-	所有意向/潜在意向 SVHC 物质 (见意向/潜在意向 SVHC 物质清单) All tested intention/potential intention for identification of SVHC (See the list of intention/potential intention for identification of SVHC)	-	N.D.	-

批次 Batch	序号 No.	物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
				006	
**	5	4,4'-二羟基二苯甲烷 4,4'-methylenediphenol	620-92-8	0.240	0.05
-	-	其他意向/潜在意向 SVHC 物质 (见意向/潜在意向 SVHC 物质清单) Other tested intention/potential intention for identification of SVHC (See the list of intention/potential intention for identification of SVHC)	-	N.D.	-

批次 Batch	序号 No.	物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
				007	
-	-	所有意向/潜在意向 SVHC 物质 (见意向/潜在意向 SVHC 物质清单) All tested intention/potential intention for identification of SVHC (See the list of intention/potential intention for identification of SVHC)	-	N.D.	-

批次 Batch	序号 No.	物质名称 Substance Name(s)	CAS 号 CAS No.	浓度 Concentration (%)	RL (%)
				008	
**	5	4,4'-二羟基二苯甲烷 4,4'-methylenediphenol	620-92-8	0.443	0.05
-	-	其他意向/潜在意向 SVHC 物质 (见意向/潜在意向 SVHC 物质清单) Other tested intention/potential intention for identification of SVHC (See the list of intention/potential intention for identification of SVHC)	-	N.D.	-

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检测依据 Test Method:

参考 US EPA 3550C:2007, 内部方法进行样品预处理。

Refer to US EPA 3550C:2007, In house method for sample pretreatment.

采用 GC-MS, LC-QTOF, HPLC-DAD 及 LC-MS-MS 分析。

Analyzed by GC-MS, LC-QTOF, HPLC-DAD and LC-MS-MS.

样品/部位描述 Sample/Part Description

序号 No.	CTI 样品 ID CTI Sample ID	描述 Description	测试 SVHC 物质数 Number of SVHC
1	001	芯片 (整体测试) Chip (Tested as a whole) [#]	1 项(候选物质)+ 6 项(意向/ 潜在意向物质) 1 (Candidate) + 6 (Intention/potential intention for identification)
2	002	芯片 (整体测试) Chip (Tested as a whole) [#]	1 项(候选物质)+ 6 项(意向/ 潜在意向物质) 1 (Candidate) + 6 (Intention/potential intention for identification)
3	003	灰色膏体 Grey paste	1 项(候选物质)+ 6 项(意向/ 潜在意向物质) 1 (Candidate) + 6 (Intention/potential intention for identification)
4	004	银白色金属线 Silvery white metal wire	1 项(候选物质)+ 6 项(意向/ 潜在意向物质) 1 (Candidate) + 6 (Intention/potential intention for identification)
5	005	铜色金属 Cupreous metal	1 项(候选物质)+ 6 项(意向/ 潜在意向物质) 1 (Candidate) + 6 (Intention/potential intention for identification)
6	006	黑色固体 Black solid	1 项(候选物质)+ 6 项(意向/ 潜在意向物质) 1 (Candidate) + 6 (Intention/potential intention for identification)

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序号 No.	CTI 样品 ID CTI Sample ID	描述 Description	测试 SVHC 物质数 Number of SVHC
7	007	银色金属 Silvery metal	1 项(候选物质)+ 6 项(意向/ 潜在意向物质) 1 (Candidate) + 6 (Intention/potential intention for identification)
8	008	黑色固体 Black solid	1 项(候选物质)+ 6 项(意向/ 潜在意向物质) 1 (Candidate) + 6 (Intention/potential intention for identification)

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备注 Remark:

1. 结果仅显示检出的 SVHC，低于 RL 的 SVHC 没有列出。所有测试的 SVHC 见下页的意向/潜在意向 SVHC 清单。The table of tested result(s) only shows detected SVHC, and SVHC that below RL are not reported. Please refer to the List of intention/potential intention for identification of SVHC on next pages.
2. w/w % = 重量百分比 weight by weight; 0.1% = 1000mg/kg = 1000ppm
3. N.D. = 未检出 Not Detected (< RL)
4. RL = 报告检出限 Report Limit (当浓度值 \geq RL 时显示数据。RL 不同于法规限值。Concentration value will be shown if it \geq RL. RL is not regulatory limit.)
5. ※ = 意向 SVHC (Intention for identification of SVHC)
6. ⚡ = 潜在意向 SVHC (Potential intention for identification of SVHC)
7. #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.

注释 Note:

1. 本报告于原报告(报告编号 A2250463884101E)基础上增加了“客户参考信息”。本报告替换原报告 A2250463884101E，自本报告签发之日起，原报告 A2250463884101E 作废。
This testing report added “Client Reference Information” based on the original report of No. A2250463884101E. This testing report displaces the original one which was invalid since the date of this testing report released.
2. 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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意向/潜在意向 SVHC 物质清单 List of intention/potential intention for identification of SVHC

批次 Batch	序号 No.	物质名称 Substance Name(s)	CAS 号 CAS No.	RL (%)
XXXIV	1	1,1'-(1,2-亚乙基)双[五溴苯] 1,1'-(ethane-1,2-diyl)bis[pentabromobenzene]	84852-53-9	0.05
※	2	间苯二酚 Resorcinol	108-46-3	0.05
**	3	十二甲基五硅氧烷 Dodecamethylpentasiloxane	141-63-9	0.05
**	4	正己烷 N-hexane	110-54-3	0.05
**	5	4,4'-二羟基二苯甲烷 4,4'-methylenediphenol	620-92-8	0.05
**	6	4,4'-[2,2,2-三氟-1-(三氟甲基)亚乙基]双酚及其盐 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and its salts	-	0.05

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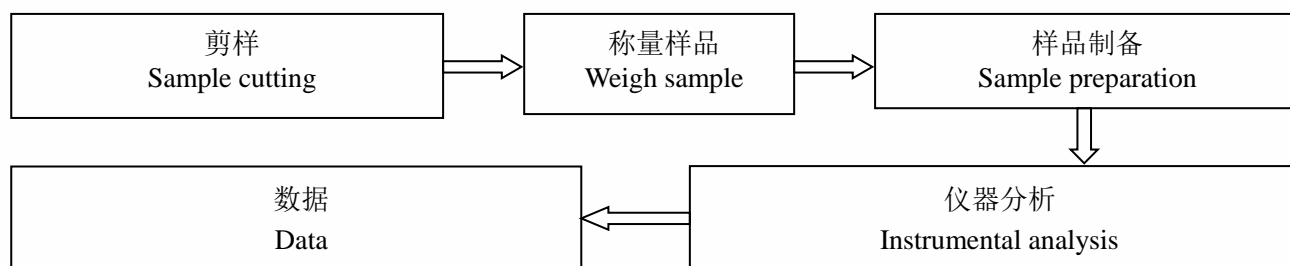
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附加信息 Appendix:

1. 根据欧盟 REACH 法规（编号 1907/2006）第 33 条款之规定，物品类产品如果含有候选列表上的高度关注物质且在物品中的质量百分比超过 0.1% 时，物品供应方需履行相关信息传递义务：
Any supplier of an article containing a substance that is included in the Candidate List in a concentration above 0.1 % weight by weight (w/w) has the duty to communicate information in accordance with Article 33 of European Union regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).
 - 1) 物品供应方应提供给接收方关于产品的足够信息以确保物品的安全使用，至少需提供所含高度关注物质的名称。Any supplier shall provide the recipient of the article with sufficient information to allow safe use of the article including, as a minimum, the name of that substance.
 - 2) 应消费者请求，物品供应方应在 45 天内免费提供关于产品的足够信息以确保物品的安全使用，至少需提供所含高度关注物质的名称。On request by a consumer any supplier shall provide the consumer with sufficient information to allow safe use of the article including, as a minimum, the name of that substance within 45 days of receipt of the request, free of charge.
2. 根据欧盟 REACH 法规（编号 1907/2006）第 31 条款及附件 2 之规定，提供高度关注物质的物质类产品供应方，应免费提供接收方该物质的安全数据表。The supplier of a substance that is included in the Candidate List on their own shall provide the recipient of the substance with a safety data sheet for free compiled in accordance with Article 3 and Annex II of REACH.
3. 根据欧盟 REACH 法规（编号 1907/2006）第 31、32 条款及附件 2 之规定，提供含有高度关注物质的混合物产品供应方需传递相关信息：
The supplier of a mixture that containing a substance that is included in the Candidate List shall exchange information in accordance with Article 31, Article 32, and Annex II of REACH.
 - 1) 如果混合物产品按照 1999/45/EC 被判定为危险品时，供应方应免费提供产品的安全数据表。
Any supplier shall provide the recipient of the mixture with a safety data sheet for free where a preparation meets the criteria for classification as dangerous in accordance with Directives 1999/45/EC.
 - 2) 如果混合物产品按照 1999/45/EC 判定并非危险品，但是任一高度关注物质在非气体混合物中质量分数超过 0.1% 或在气体混合物中体积分数超过 0.2%，供应方也应免费提供产品的安全数据表。
Any supplier shall provide the recipient of the mixture with a safety data sheet for free where a preparation does not meet the criteria for classification as dangerous in accordance with Directive 1999/45/EC, but contains any substance that is included in the Candidate List in an individual concentration of ≥ 0.1 % by weight for non-gaseous mixtures or ≥ 0.2 % by volume for gaseous mixtures.

检测流程 Test Process



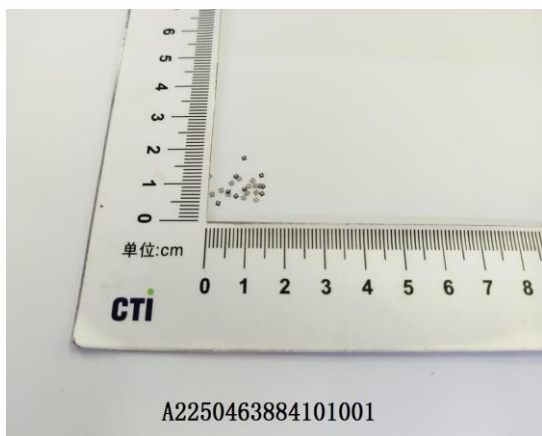
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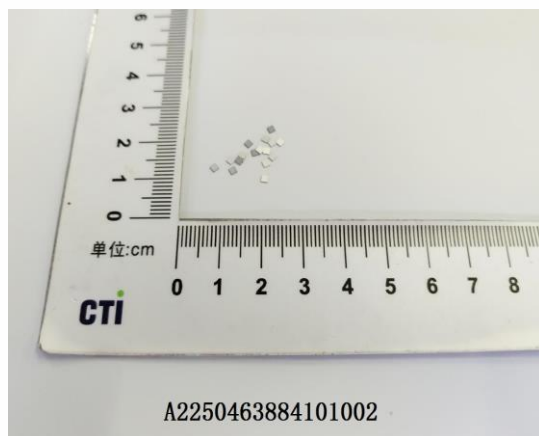
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样品图片

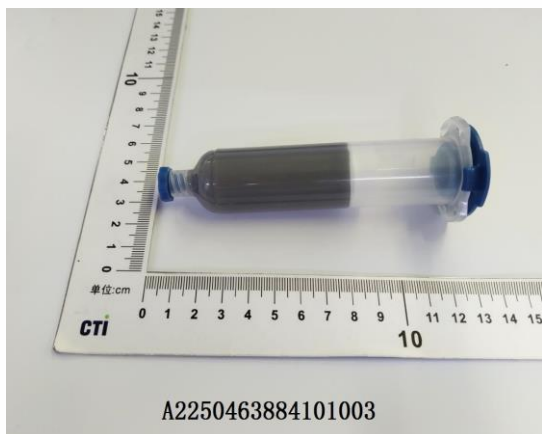
Photo(s) of the sample(s)



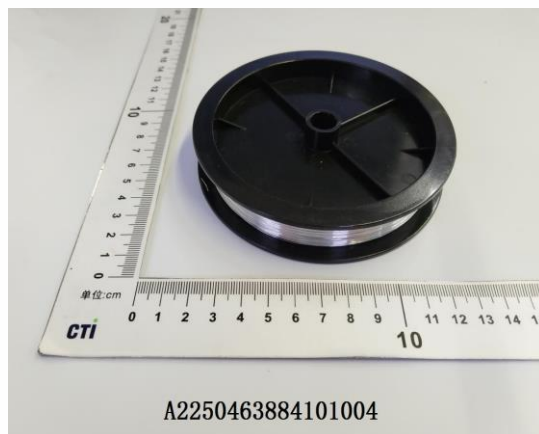
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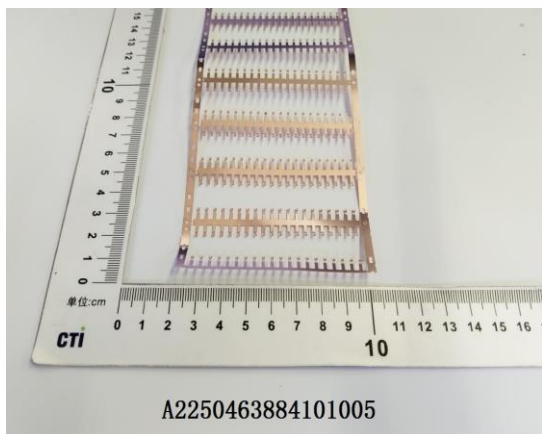
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A2250463884101004



A2250463884101005

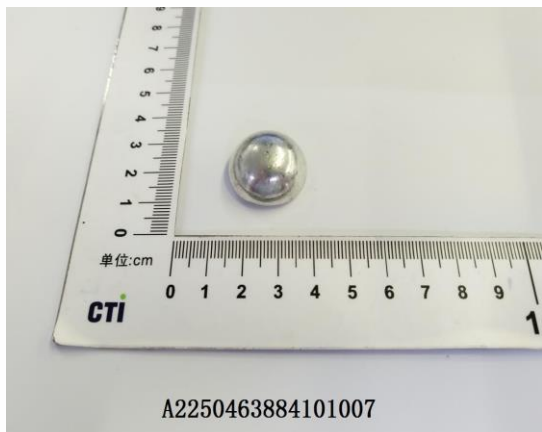


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声明 Statement:

1. 检测报告无批准人签字、“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;
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In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

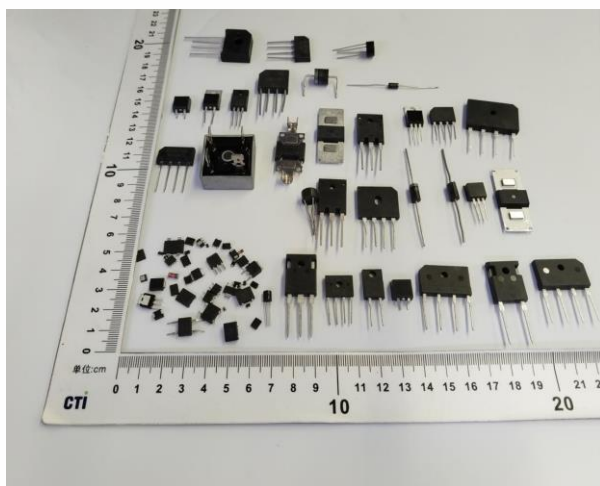
*** 报告结束 ***
*** End of Report ***

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

客户参考图片（非测试样品） 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 A2250463884101ER1 报告的补充。
The Appendix Information is/are the supplement(s) for the Report A2250463884101ER1.