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检测
TESTING
CNAS L13752



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Test Report

No.: EGZ2204260112C00102RM1

Date: May. 07, 2022

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Applicant : RENERGY MICRO-TECHNOLOGIES(SHENZHEN)CO.,LTD
委托单位 : 深圳市锐能微科技有限公司
Address : ROOM 401、402,BUILDING5,SHENZHEN SOFTWARE INDUSTRY BASE,NO.13
HAITIAN 1ST ROAD,NANSHAN DISTRICT,SHENZHEN
地 址 : 深圳市南山区深圳软件产业基地第 5 栋裙楼 401、402 室

Sample Name : Chip
样品名称 : 芯片
Model : RN7213
型号 :

Received Date : Apr. 26, 2022
接收日期 : 2022 年 04 月 26 日
Test Period : Apr. 26, 2022~ May. 05, 2022
检测日期 : 2022 年 04 月 26 日~2022 年 05 月 05 日
Revise Date : May. 07, 2022
修订日期 : 2022 年 05 月 07 日

Test Requested : As requested by client, according to RoHS Directive(EU) 2015/863 amending Annex II to Directive 2011/65/EU, to determine:
检测要求 :

根据客户要求, 依据欧盟 RoHS 指令 2011/65/EU 附录 II 的修订指令(EU) 2015/863, 检测以下项目:

- 1) the content of Lead(Pb), Cadmium (Cd) and Mercury(Hg) in the submitted sample;
样品中的铅(Pb), 镉(Cd)和汞(Hg)的含量;
- 2) the content of Hexavalent Chromium(Cr(VI)) in the submitted sample;
样品中的六价铬(Cr(VI))的含量;
- 3) the content of Polybrominated Biphenyls(PBBs) and Polybrominated Diphenyl-Ethers(PBDEs) in the submitted sample;
样品中的多溴联苯(PBBs)以及多溴二苯醚(PBDEs)的含量;
- 4) the content of Bis(2-ethylhexyl)phthalate(DEHP), Dibutyl phthalate(DBP), Benzylbutyl phthalate(BBP), and Diisobutyl phthalate(DIBP) in the submitted sample.
样品中的邻苯二甲酸二(2-乙基己)酯(DEHP)、邻苯二甲酸二丁酯(DBP)、邻苯二甲酸丁苄酯(BBP)和邻苯二甲酸二异丁酯(DIBP)的含量。

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Test Results : Please refer to next page (s).
检测结果 : 请参看随后页面。

Executive Summary:
执行测试总结:

STANDARD 标 准	CONCLUSION 结 论
RoHS Directive(EU) 2015/863 amending Annex II to Directive 2011/65/EU 欧盟 RoHS 指令 2011/65/EU 附录 II 的修订指令(EU) 2015/863	PASS 合 格

Prepared by:

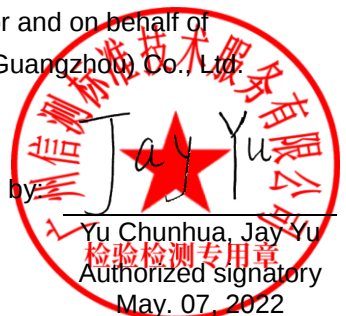

Yan Ruixuan, Lemon
Assistant engineer

Reviewed by:


Sun Wei, Ethan
Technical supervisor

Signed for and on behalf of
EMTEK(Guangzhou) Co., Ltd.

Approved by:


Yu Chunhua, Jay Yu
Authorized signatory
May. 07, 2022

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Test Sample List: 检测样品清单:

Sample No. 样品编号	Sample Description 样品描述
2	Black chip 黑色芯片

Test Results: 检测结果:

Test Method : 检测方法:

- 1) to refer to IEC 62321-5: 2013, determine the Lead, Cadmium content by ICP-OES.
参照 IEC 62321-5: 2013, 用 ICP-OES 测定铅、镉的含量。
- 2) to refer to IEC 62321-4: 2013+A1:2017, determine the Mercury content by ICP-OES.
参照 IEC 62321-4: 2013+A1:2017, 用 ICP-OES 测定汞的含量。
- 3) to refer to IEC 62321-7-2:2017, determine the Hexavalent Chromium content by UV-VIS.
参照 IEC 62321-7-2:2017, 用 UV-VIS 测定六价铬的含量。
- 4) to refer to IEC 62321-6: 2015, determine the Polybrominated Biphenyls(PBBs) and Polybrominated Diphenyl Ethers(PBDEs) by GC-MS.
参照 IEC 62321-6: 2015, 用 GC-MS 测定多溴联苯(PBBs)和多溴二苯醚(PBDEs)的含量。
- 5) to refer to IEC 62321-8:2017, determine the Bis(2-ethylhexyl)phthalate (DEHP), Dibutyl phthalate(DBP), Benzylbutyl phthalate(BBP) and Diisobutyl phthalate(DIBP) by GC-MS.
参照 IEC 62321-8:2017, 用 GC-MS 测定邻苯二甲酸二(2-乙基己)酯(DEHP)、邻苯二甲酸二丁酯(DBP)、邻苯二甲酸丁基酯(BBP)和邻苯二甲酸二异丁酯(DIBP)的含量。

Analyte 被分析物	Test Result (mg/kg) 检测结果	MDL (mg/kg)	Limit 限值 (mg/kg)
	2		
Lead (Pb) 铅 (Pb)	ND	2	1000
Cadmium (Cd) 镉 (Cd)	ND	2	100
Mercury (Hg) 汞 (Hg)	ND	2	1000
Hexavalent Chromium (Cr(VI)) 六价铬 (Cr(VI))	ND	8	1000

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Analyte 被分析物	Test Result (mg/kg) 检测结果	MDL (mg/kg)	Limit 限值 (mg/kg)
	2		
Polybrominated Biphenyls (Mono – Deca) (PBBs) 多溴联苯 (1 – 10) (PBBs)	ND	--	1000
Monobromobiphenyl 一溴联苯	ND	5	--
Dibromobiphenyl 二溴联苯	ND	5	--
Tribromobiphenyl 三溴联苯	ND	5	--
Tetrabromobiphenyl 四溴联苯	ND	5	--
Pentabromobiphenyl 五溴联苯	ND	5	--
Hexabromobiphenyl 六溴联苯	ND	5	--
Heptabromobiphenyl 七溴联苯	ND	5	--
Octabromobiphenyl 八溴联苯	ND	5	--
Nonabromobiphenyl 九溴联苯	ND	5	--
Decabromobiphenyl 十溴联苯	ND	5	--
Polybrominated Diphenylethers (Mono – Deca) (PBDEs) 多溴二苯醚 (1 – 10) (PBDEs)	ND	--	1000
Monobromodiphenyl ether 一溴二苯醚	ND	5	--
Dibromodiphenyl ether 二溴二苯醚	ND	5	--
Tribromodiphenyl ether 三溴二苯醚	ND	5	--
Tetrabromodiphenyl ether 四溴二苯醚	ND	5	--
Pentabromodiphenyl ether 五溴二苯醚	ND	5	--
Hexabromodiphenyl ether 六溴二苯醚	ND	5	--
Heptabromodiphenyl ether 七溴二苯醚	ND	5	--
Octabromodiphenyl ether 八溴二苯醚	ND	5	--
Nonabromodiphenyl ether 九溴二苯醚	ND	5	--
Decabromodiphenyl ether 十溴二苯醚	ND	5	--
Bis(2-ethylhexyl)phthalate(DEHP) 邻苯二甲酸二(2-乙基己)酯(DEHP)	ND	30	1000
Dibutyl phthalate(DBP) 邻苯二甲酸二丁酯 (DBP)	ND	30	1000
Benzylbutyl phthalate(BBP) 邻苯二甲酸丁苄酯 (BBP)	ND	30	1000
Diisobutyl phthalate (DIBP) 邻苯二甲酸二异丁酯(DIBP)	ND	30	1000

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Note:

备注:

(1). mg/kg = milligram per kilogram = ppm

mg/kg = 毫克/千克 = 百万分之一

ND = Not Detected (Less than MDL)

ND = 未检测到 (小于 MDL)

MDL = Method Detection Limit

MDL = 方法检测限

(2). Specimens, which requested to determine Cadmium, Mercury and Lead Content, have been digested thoroughly.

对于测试铅、镉、汞的样品已完全消解。

Declaration: Report EGZ2204260112C00102R was repealed and replaced by Report EGZ2204260112C00102RM1.

声明: 报告 EGZ2204260112C00102R 作废, 由报告 EGZ2204260112C00102RM1 所取代。

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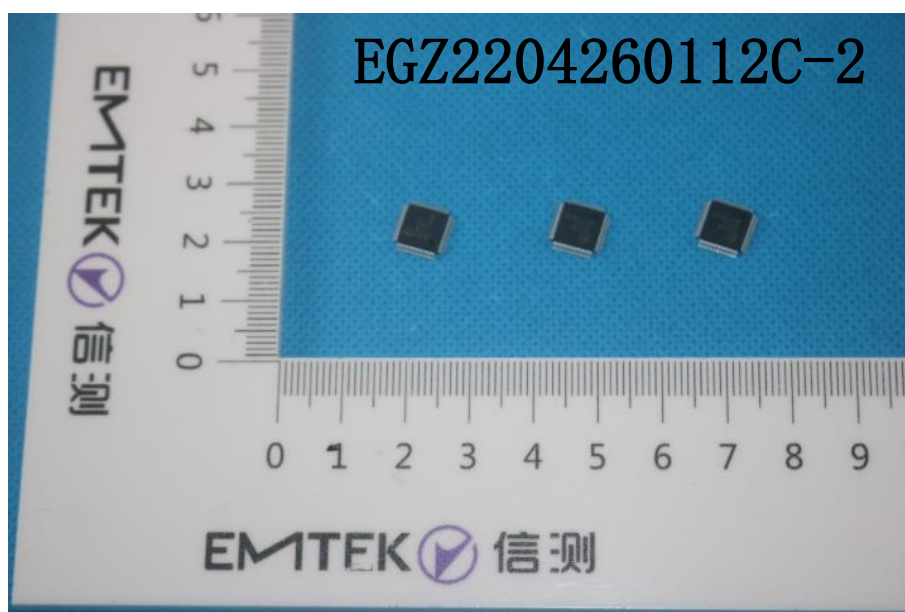
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Sample Photo:
样品照片:



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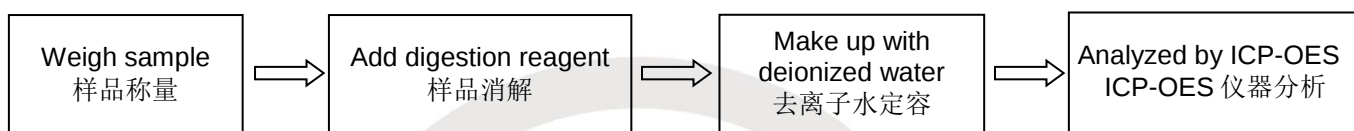
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Test Flowchart:

检测流程图:

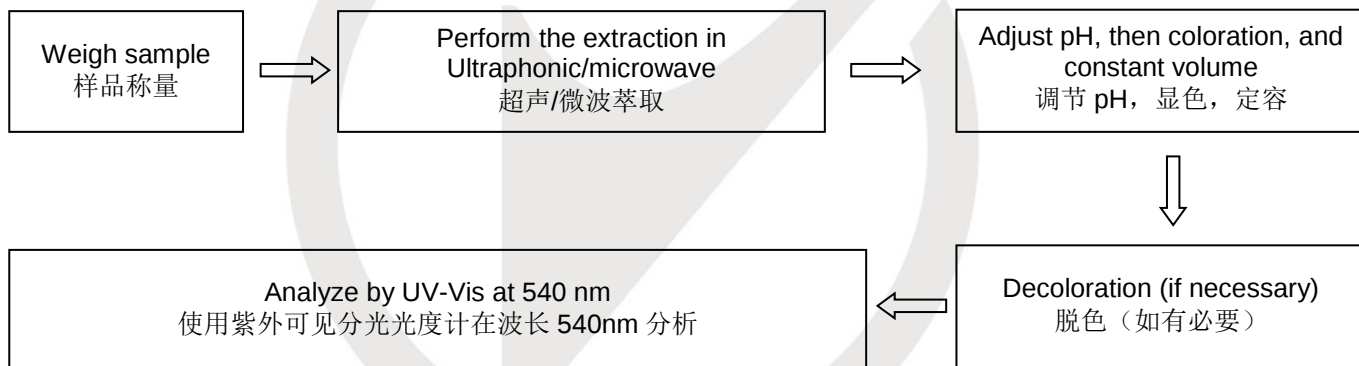
Pb/Cd/Hg Test Process :

Pb/Cd/Hg 检测流程:



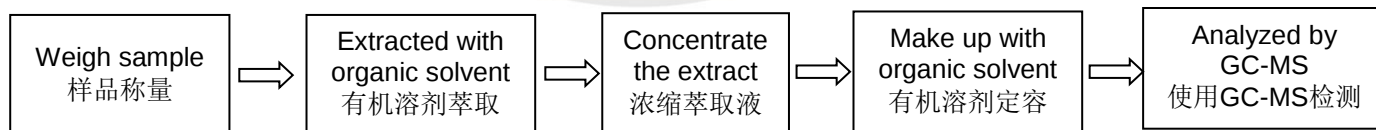
Cr(VI) Test Process:

Cr(VI) 检测流程:



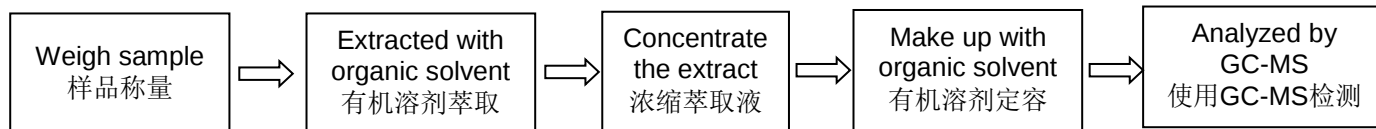
PBBs & PBDEs Test Process:

PBBs & PBDEs 检测流程:



DEHP, DBP, BBP, DIBP Test Process:

DEHP, DBP, BBP 和 DIBP 检测流程:



*** End of Report ***

*** 报告结束 ***

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1. 本检测报告首页所列信息中除样品来源、接样日期、检测日期、检测结果和检测结论外，均由委托方提供，委托方对样品的代表性和资料的真实性负责，本实验室不承担任何相关责任。
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Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
6. 如因使用本公司中心任何报告内的资料，或任何传播信息所描述与之有关的测试或研究导致的任何损失或损害，本公司概不负责。
The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
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