



中国认可  
国际互认  
检测  
TESTING  
CNAS L3572

REPORT No.: SZ23120220D01

# UN38.3 测试报告

## UN38.3 Test Report

申请商 : 万魔声学股份有限公司  
APPLICANT : Tiinlab Corporation  
产品名称 : 充电盒  
PRODUCT NAME : Charging Case  
型号/MODEL NAME : XT2443-1  
商标/TRADE NAME : MOTOROLA  
品牌/BRAND NAME : MOTOROLA  
额定值/RATING : 3.8 V, 460 mAh, 1.75 Wh  
接收日期 : 2023-12-19  
RECEIPT DATE : 2023-12-19  
测试日期 : 2023-12-19 to 2024-01-09  
TEST DATE : 2023-12-19 to 2024-01-09  
签发日期 : 2024-01-10  
ISSUE DATE : 2024-01-10



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Edited by:

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备注: 此报告由深圳市摩尔环宇通信技术有限公司签发, 未经深圳市摩尔环宇通信技术有限公司的书面许可不得复制。本报告的测试结果只适用于特定的样品和具体测试, 此报告的信息可在我们的网站进行验证和确认。

MORLAB

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## 测试报告声明 Test Report Declaration

申请商/Applicant	万魔声学股份有限公司 Tiinlab Corporation	
申请商地址 Applicant Address	深圳市南山区留仙大道 3333 号塘朗城 A 座 35 楼 No. 3333, Liuxian Avenue, Tower A, 35th Floor, Tanglang City, Nanshan District, Shenzhen, Guangdong, China	
产品名称/ Product Name	充电盒 Charging Case	
型号/ Model Name	XT2443-1	
额定值/ Rating	3.8 V, 460 mAh, 1.75 Wh	
制造商信息 Manufacturer information	制造商 Manufacturer	万魔声学股份有限公司 Tiinlab Corporation
	制造商地址 Manufacturer Address	深圳市南山区留仙大道 3333 号塘朗城 A 座 35 楼 No. 3333, Liuxian Avenue, Tower A, 35th Floor, Tanglang City, Nanshan District, Shenzhen, Guangdong, China
工厂信息 Factory information	工厂 Factory	万魔声学股份有限公司 Tiinlab Corporation
	工厂地址 Factory Address	深圳市南山区留仙大道 3333 号塘朗城 A 座 35 楼 No. 3333, Liuxian Avenue, Tower A, 35th Floor, Tanglang City, Nanshan District, Shenzhen, Guangdong, China
尺寸/Size	59.78×48.58×24.33mm	
电池信息 Battery information	内含电芯数量/Cells number	1pcs(1S1P)
	电芯型号/Cell model	751536
	物理特性/Physical description	棱形固体/ Prismatic solid
检验方法及判定标准 Test Method and Criterion	联合国《关于危险货物运输的建议书试验和标准手册》第七版修正1第38.3节 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS, Manual of Tests and Criteria" ST/SG/AC.10/11/Rev.7/Amend.1, section 38.3	
测试项目 Test Items	高度模拟试验；温度试验；振动试验；冲击试验；外短路试验；挤压试验；过充电试验；强制放电 Altitude simulation, Thermal test, Vibration, Shock, External short circuit, Crush, Overcharge, Force discharge	
测试结论 Conclusion	受检样品通过 UN 38.3 各项检测，检测结果合格 The sample has passed the test items of UN38.3	



<b>备注/ Remarks</b>	测试结果为临限值时, 我司将出具测量不确定度,并依据 95%的置信区间, 给出判定结果。 When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% Confidence intervals.
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## 深圳市摩尔环宇通信技术有限公司检验报告

## Shenzhen Morlab Communications Technology Co., Ltd. Test Report

序号 No.	检验项目名称 Name of test items	标准要求或标准款号 Standard Requirement or the Clause Number of Standard	检测结果 Test Result	本项结论 Test Conclusion	备注 Remarks
1	高度模拟试验 Altitude simulation	联合国《关于危险货物运输的建议书 试验和标准手册》(以下简称:试验和标准手册) UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7/Amend.1, 38.3 试验 T.1 Test T.1	见附表 1 See Appendix 1	合格 Passed	/
2	温度试验 Thermal Test	试验和标准手册 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7/Amend.1, 38.3 试验 T.2 Test T.2	见附表 2 See Appendix 2	合格 Passed	/
3	振动试验 Vibration	试验和标准手册 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7/Amend.1, 38.3 试验 T.3 Test T.3	见附表 3 See Appendix 3	合格 Passed	/
4	冲击试验 Shock	试验和标准手册 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7/Amend.1, 38.3 试验 T.4 Test T.4	见附表 4 See Appendix 4	合格 Passed	/
5	外短路试验 External short circuit	试验和标准手册 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7/Amend.1, 38.3 试验 T.5 Test T.5	见附表 5 See Appendix 5	合格 Passed	/
6	挤压试验 Crush	试验和标准手册 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7/Amend.1, 38.3 试验 T.6 Test T.6	见附表 6 See Appendix 6	合格 Passed	/
7	过充电试验 Overcharge	试验和标准手册 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7/Amend.1, 38.3 试验 T.7 Test T.7	见附表 7 See Appendix 7	合格 Passed	/
8	强制放电 Force discharge	试验和标准手册 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7/Amend.1, 38.3 试验 T.8 Test T.8	见附表 8 See Appendix 8	合格 Passed	/
检验环境条件 Test Environment Condition		环境温度: 15~25℃ Ambient Temperature: 15~25℃			



变更记录 Change History		
版本 Version	日期 Date	变更原因 Reason for change
1.0	2024-01-10	初版 First edition



## 检验报告-附件 1

### Test Report-Appendix 1

序号 No.	1	检测项目名称 Name of test items		高度模拟试验 Altitude simulation				
样品 编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损 失 Mass Loss/%	剩余 电压 Residual OCV/%	其他 现象 Other Event
		质量 Weight/g	开路 电压 OCV/V	质量 Weight/g	开路 电压 OCV/V			
1	首次充满 Fully charged at first cycle	37.9711	4.916	37.9698	4.915	0.0034	99.98	O
2	首次充满 Fully charged at first cycle	38.1932	4.933	38.1918	4.930	0.0037	99.94	O
3	首次充满 Fully charged at first cycle	38.0718	4.935	38.0705	4.933	0.0034	99.96	O
4	首次充满 Fully charged at first cycle	38.1438	4.915	38.1424	4.914	0.0037	99.98	O
5	首次充满 Fully charged at first cycle	38.2445	4.914	38.2432	4.913	0.0034	99.98	O
6	25 次循环后充满 Fully charged after 25 cycles	38.1664	4.927	38.1651	4.925	0.0034	99.96	O
7	25 次循环后充满 Fully charged after 25 cycles	38.0836	4.920	38.0823	4.919	0.0034	99.98	O
8	25 次循环后充满 Fully charged after 25 cycles	37.9815	4.941	37.9802	4.939	0.0034	99.96	O
9	25 次循环后充满 Fully charged after 25 cycles	38.1207	4.906	38.1193	4.906	0.0037	100.00	O
10	25 次循环后充满 Fully charged after 25 cycles	38.2144	4.922	38.2130	4.921	0.0037	99.98	O

备注: L-漏液, V-漏气, D-解体, R-破裂, F-起火, O-无漏液, 无解体, 无破裂, 无起火;

Remark: L-Leakage, V-Venting, D-Disassembly, R-Rupture, F-Fire, O-No Leakage, No Venting, No Disassembly, No Rupture, No Fire



## 检验报告-附件 2

## Test Report-Appendix 2

序号 No.	2	检测项目名称 Name of test items		温度试验 Thermal Test				
样品 编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss/%	剩余 电压 Residual OCV/%	其他 现象 Other Event
		质量 Weight/g	开路 电压 OCV/V	质量 Weight/g	开路 电压 OCV/V			
1	首次充满 Fully charged at first cycle	37.9698	4.915	37.9683	4.904	0.0040	99.78	O
2	首次充满 Fully charged at first cycle	38.1918	4.930	38.1902	4.921	0.0042	99.82	O
3	首次充满 Fully charged at first cycle	38.0705	4.933	38.0691	4.923	0.0037	99.80	O
4	首次充满 Fully charged at first cycle	38.1424	4.914	38.1409	4.905	0.0039	99.82	O
5	首次充满 Fully charged at first cycle	38.2432	4.913	38.2417	4.902	0.0039	99.78	O
6	25次循环后充满 Fully charged after 25 cycles	38.1651	4.925	38.1635	4.915	0.0042	99.80	O
7	25次循环后充满 Fully charged after 25 cycles	38.0823	4.919	38.0807	4.910	0.0042	99.82	O
8	25次循环后充满 Fully charged after 25 cycles	37.9802	4.939	37.9786	4.928	0.0042	99.78	O
9	25次循环后充满 Fully charged after 25 cycles	38.1193	4.906	38.1178	4.897	0.0039	99.82	O
10	25次循环后充满 Fully charged after 25 cycles	38.2130	4.921	38.2114	4.911	0.0042	99.80	O

备注: L-漏液, V-漏气, D-解体, R-破裂, F-起火, O-无漏液, 无解体, 无破裂, 无起火;  
Remark: L-Leakage, V-Venting, D-Disassembly, R-Rupture, F-Fire, O-No Leakage, No Venting, No Disassembly, No Rupture, No Fire



## 检验报告-附件 3

## Test Report-Appendix 3

序号 No.	3	检测项目名称 Name of test items		振动试验 Vibration				
样品 编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损 失 Mass Loss/%	剩余 电压 Residual OCV/%	其他 现象 Other Event
		质量 Weight/g	开路 电压 OCV/V	质量 Weight/g	开路 电压 OCV/V			
1	首次充满 Fully charged at first cycle	37.9683	4.904	37.9680	4.903	0.0008	99.98	O
2	首次充满 Fully charged at first cycle	38.1902	4.921	38.1900	4.920	0.0005	99.98	O
3	首次充满 Fully charged at first cycle	38.0691	4.923	38.0688	4.921	0.0008	99.96	O
4	首次充满 Fully charged at first cycle	38.1409	4.905	38.1405	4.904	0.0010	99.98	O
5	首次充满 Fully charged at first cycle	38.2417	4.902	38.2413	4.901	0.0010	99.98	O
6	25次循环后充满 Fully charged after 25 cycles	38.1635	4.915	38.1631	4.913	0.0010	99.96	O
7	25次循环后充满 Fully charged after 25 cycles	38.0807	4.910	38.0804	4.910	0.0008	100.00	O
8	25次循环后充满 Fully charged after 25 cycles	37.9786	4.928	37.9783	4.927	0.0008	99.98	O
9	25次循环后充满 Fully charged after 25 cycles	38.1178	4.897	38.1175	4.897	0.0008	100.00	O
10	25次循环后充满 Fully charged after 25 cycles	38.2114	4.911	38.2110	4.910	0.0010	99.98	O

备注: L-漏液, V-漏气, D-解体, R-破裂, F-起火, O-无漏液, 无解体, 无破裂, 无起火;

Remark: L-Leakage, V-Venting, D-Disassembly, R-Rupture, F-Fire, O-No Leakage, No Venting, No Disassembly, No Rupture, No Fire





### 检验报告-附件 4

#### Test Report-Appendix 4

序号 No.	4	检测项目名称 Name of test items		冲击试验 Shock				
样品 编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss/%	剩余 电压 Residual OCV/%	其他 现象 Other Event
		质量 Weight/g	开路 电压 OCV/V	质量 Weight/g	开路 电压 OCV/V			
1	首次充满 Fully charged at first cycle	37.9680	4.903	37.9678	4.903	0.0005	100.00	O
2	首次充满 Fully charged at first cycle	38.1900	4.920	38.1899	4.919	0.0003	99.98	O
3	首次充满 Fully charged at first cycle	38.0688	4.921	38.0686	4.921	0.0005	100.00	O
4	首次充满 Fully charged at first cycle	38.1405	4.904	38.1403	4.903	0.0005	99.98	O
5	首次充满 Fully charged at first cycle	38.2413	4.901	38.2412	4.901	0.0003	100.00	O
6	25 次循环后充满 Fully charged after 25 cycles	38.1631	4.913	38.1629	4.912	0.0005	99.98	O
7	25 次循环后充满 Fully charged after 25 cycles	38.0804	4.910	38.0802	4.910	0.0005	100.00	O
8	25 次循环后充满 Fully charged after 25 cycles	37.9783	4.927	37.9781	4.927	0.0005	100.00	O
9	25 次循环后充满 Fully charged after 25 cycles	38.1175	4.897	38.1174	4.896	0.0003	99.98	O
10	25 次循环后充满 Fully charged after 25 cycles	38.2110	4.910	38.2109	4.909	0.0003	99.98	O

备注: L-漏液, V-漏气, D-解体, R-破裂, F-起火, O-无漏液, 无解体, 无破裂, 无起火;  
Remark: L-Leakage, V-Venting, D-Disassembly, R-Rupture, F-Fire, O-No Leakage, No Venting, No Disassembly, No Rupture, No Fire



### 检验报告-附件 5

#### Test Report-Appendix 5

序号 No.	5	检测项目名称 Name of test items	外短路试验 External short circuit
样品编号 Sample No.	样品状态 Sample status	样品表面最高温度 Max. External Test Items / °C	其他现象 Other Event
1	首次充满 Fully charged at first cycle	56.9	O
2	首次充满 Fully charged at first cycle	57.0	O
3	首次充满 Fully charged at first cycle	57.2	O
4	首次充满 Fully charged at first cycle	56.7	O
5	首次充满 Fully charged at first cycle	56.9	O
6	25次循环后充满 Fully charged after 25 cycles	57.1	O
7	25次循环后充满 Fully charged after 25 cycles	56.5	O
8	25次循环后充满 Fully charged after 25 cycles	56.7	O
9	25次循环后充满 Fully charged after 25 cycles	56.9	O
10	25次循环后充满 Fully charged after 25 cycles	56.3	O

备注: D-解体, R-破裂, F-起火, O-无解体, 无破裂, 无起火;  
Remark: D-Disassembly, R-Rupture, F-Fire, O-No Disassembly, No Rupture, No Fire



### 检验报告-附件 6

#### Test Report-Appendix 6

序号 No.	6	检测项目名称 Name of test items	挤压试验 Crush
样品编号 Sample No.	样品状态 Sample status	样品表面最高温度 Max. External Test Items/ °C	其他现象 Other Event
11	首次 50%容量 50% of capacity at first cycle	22.7	O
12	首次 50%容量 50% of capacity at first cycle	22.6	O
13	首次 50%容量 50% of capacity at first cycle	22.7	O
14	首次 50%容量 50% of capacity at first cycle	22.5	O
15	首次 50%容量 50% of capacity at first cycle	22.7	O
16	25 次循环后 50%容量 50% of capacity after25 cycles	22.9	O
17	25 次循环后 50%容量 50% of capacity after25 cycles	23.5	O
18	25 次循环后 50%容量 50% of capacity after25 cycles	22.8	O
19	25 次循环后 50%容量 50% of capacity after25 cycles	22.8	O
20	25 次循环后 50%容量 50% of capacity after25 cycles	22.9	O

备注: D-解体, F-起火, O-无解体, 无起火;  
Remark: D-Disassembly, F-Fire, O-No Disassembly, No Fire



### 检验报告-附件 7

#### Test Report-Appendix 7

序号 No.	7	检测项目名称 Name of test items	过充电试验 Overcharge
样品编号 Sample No.	样品状态 Sample status	其他现象 Other Event	
21	首次充满 Fully charged at first cycle		O
22	首次充满 Fully charged at first cycle		O
23	首次充满 Fully charged at first cycle		O
24	首次充满 Fully charged at first cycle		O
25	25 次循环后充满 Fully charged after 25 cycles		O
26	25 次循环后充满 Fully charged after 25 cycles		O
27	25 次循环后充满 Fully charged after 25 cycles		O
28	25 次循环后充满 Fully charged after 25 cycles		O

备注: D-解体, F-起火, O-无解体, 无起火;  
Remark: D-Disassembly, F-Fire, O-No Disassembly, No Fire



### 检验报告-附件 8

#### Test Report-Appendix 8

序号 No.	8	检测项目名称 Name of test items	强制放电 Force discharge
样品编号 Sample No.	样品状态 Sample status	放电时间 (H) Discharge time	其他现象 Other Event
29	首次完全放电 Fully discharged at first cycle	1	O
30	首次完全放电 Fully discharged at first cycle	1	O
31	首次完全放电 Fully discharged at first cycle	1	O
32	首次完全放电 Fully discharged at first cycle	1	O
33	首次完全放电 Fully discharged at first cycle	1	O
34	首次完全放电 Fully discharged at first cycle	1	O
35	首次完全放电 Fully discharged at first cycle	1	O
36	首次完全放电 Fully discharged at first cycle	1	O
37	首次完全放电 Fully discharged at first cycle	1	O
38	首次完全放电 Fully discharged at first cycle	1	O
39	25 次循环后完全放电 Fully discharged after 25 cycles	1	O
40	25 次循环后完全放电 Fully discharged after 25 cycles	1	O



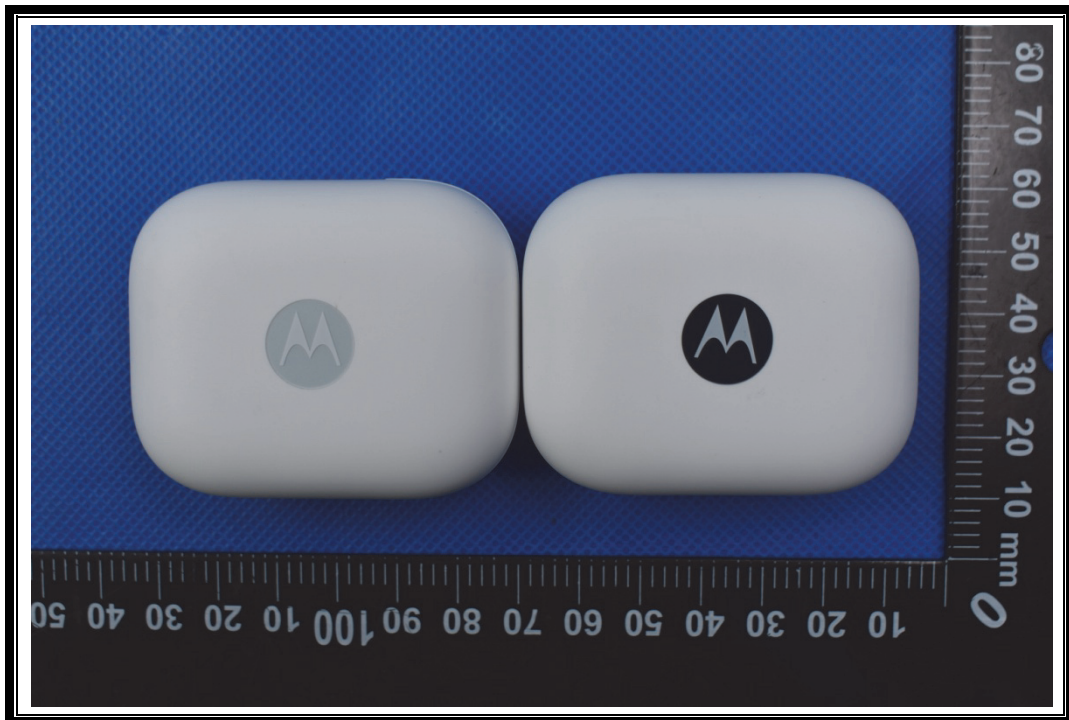
41	25 次循环后完全放电 Fully discharged after 25 cycles	1	O
42	25 次循环后完全放电 Fully discharged after 25 cycles	1	O
43	25 次循环后完全放电 Fully discharged after 25 cycles	1	O
44	25 次循环后完全放电 Fully discharged after 25 cycles	1	O
45	25 次循环后完全放电 Fully discharged after 25 cycles	1	O
46	25 次循环后完全放电 Fully discharged after 25 cycles	1	O
47	25 次循环后完全放电 Fully discharged after 25 cycles	1	O
48	25 次循环后完全放电 Fully discharged after 25 cycles	1	O
备注: D-解体, F-起火, O-无解体, 无起火; Remark: D-Disassembly, F-Fire, O-No Disassembly, No Fire 最大放电电流/ Max Continuous Discharge Current: <u>460</u> mA			

### 样品图片 Photographs of the EUT

1

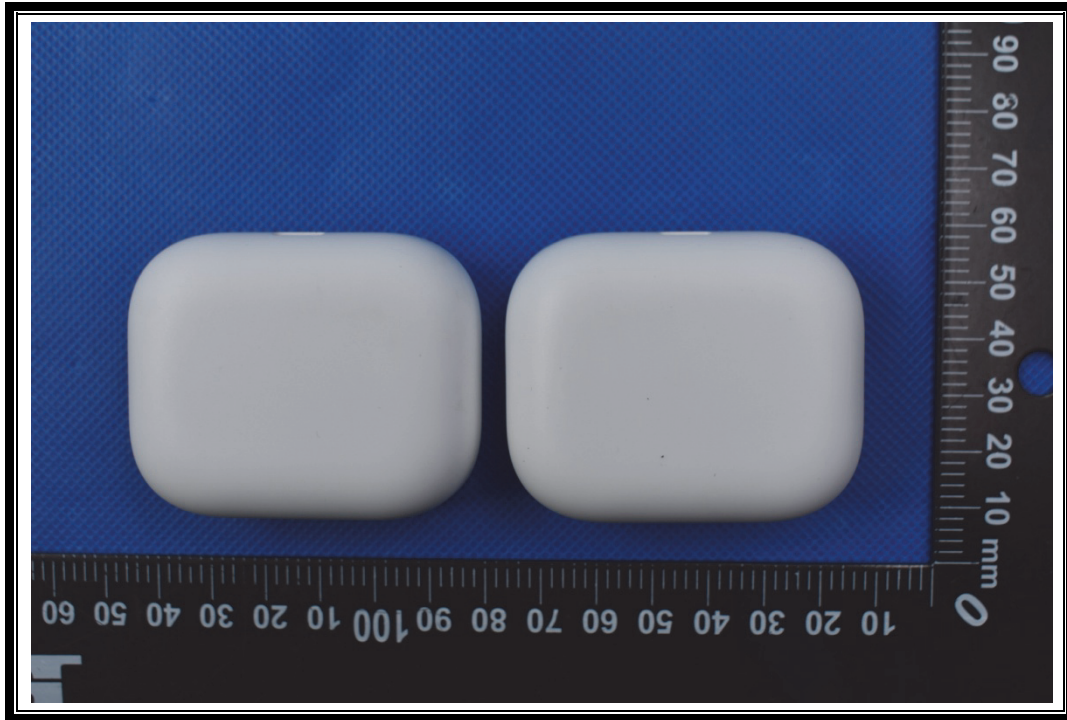


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3



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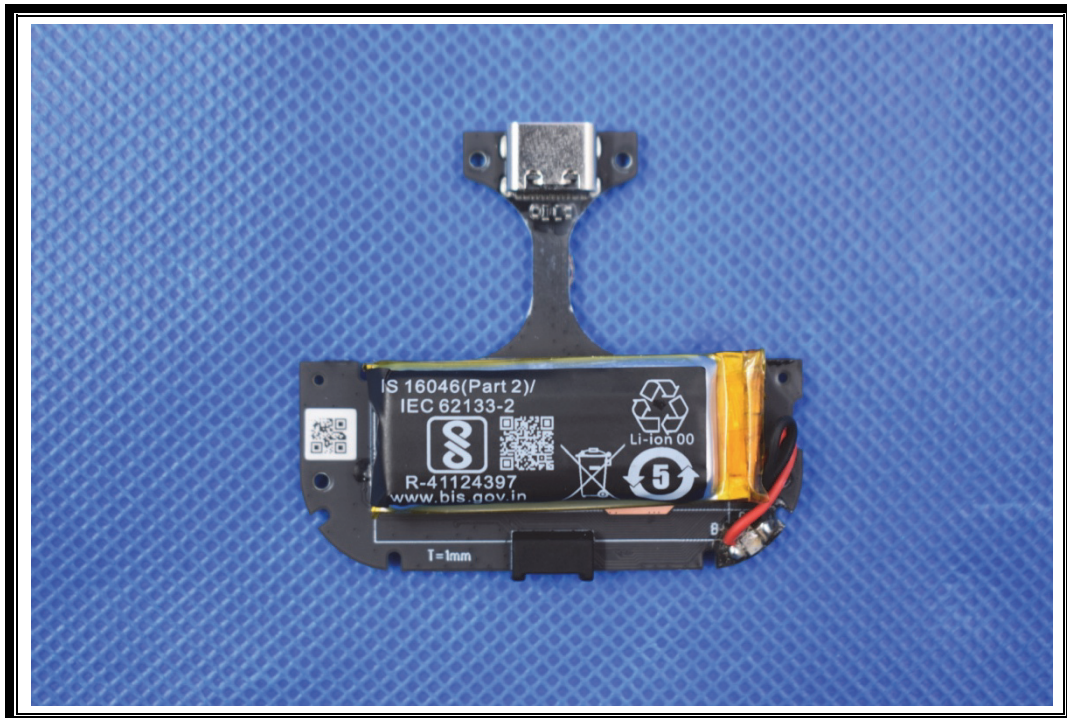




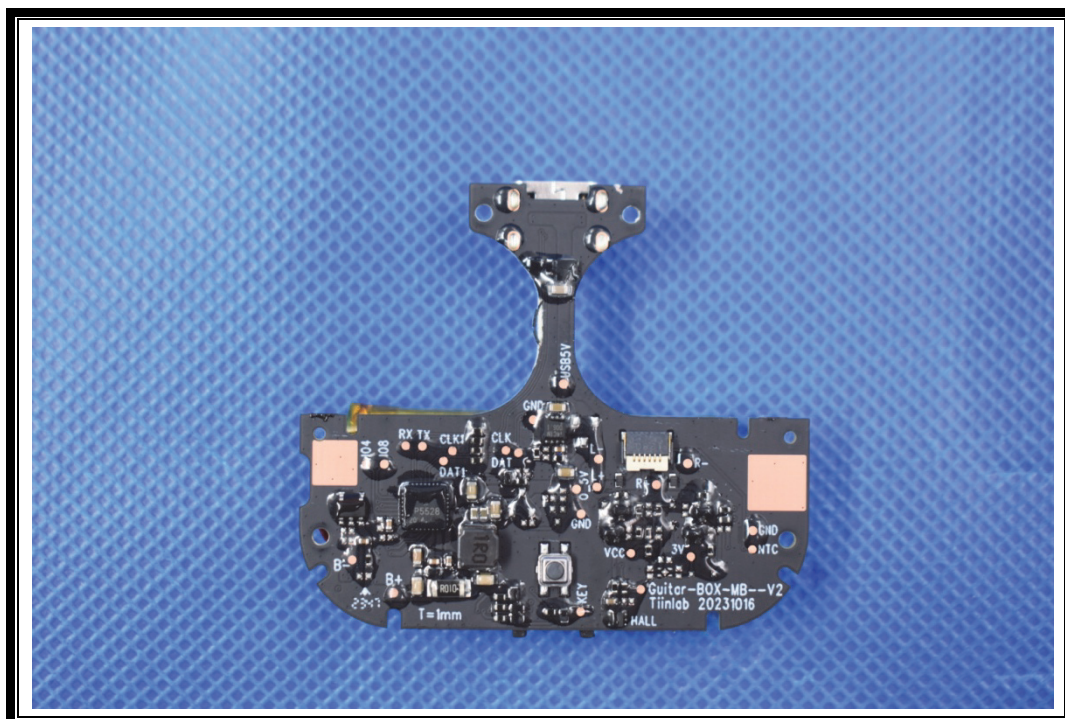
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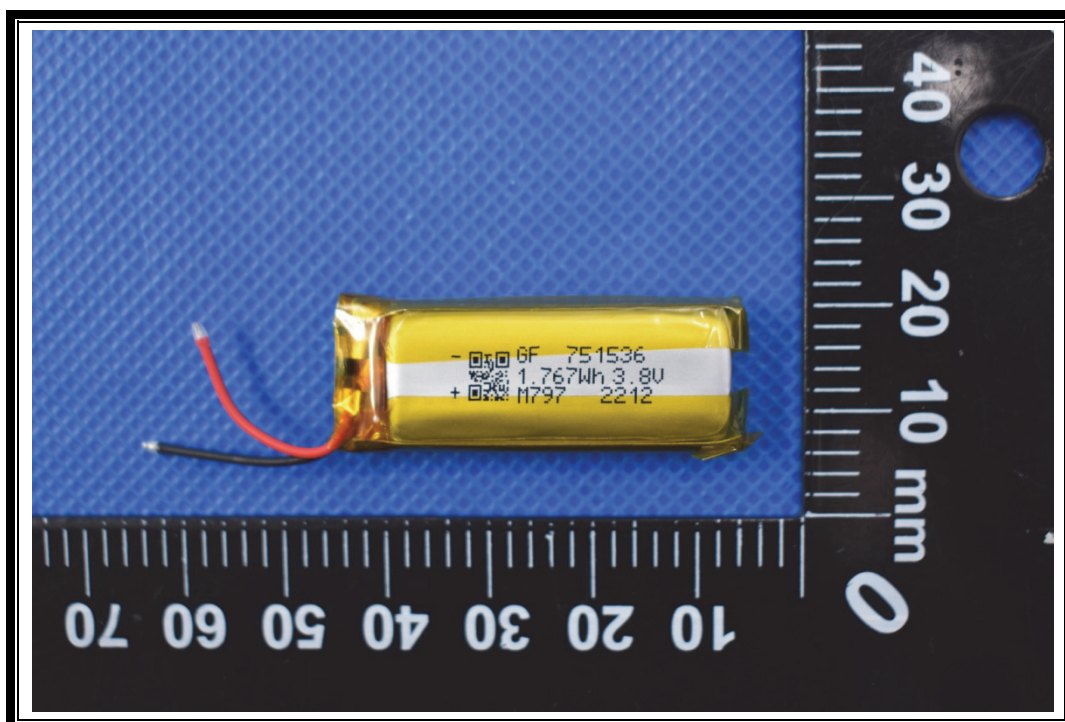
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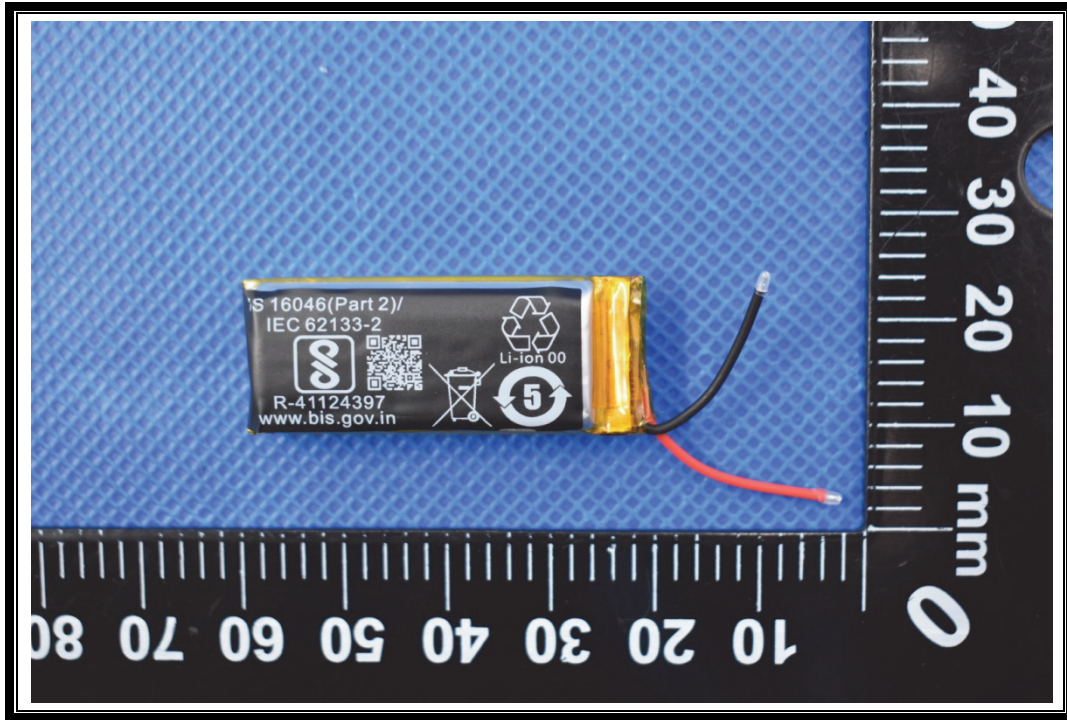


8





9





## 仪器设备清单/ List of test equipment used:

条款 Clause	仪器设备名称 equipment	型号 model	系列号 Serial No.	厂商 Manufacturer	校准日期 Date of Calibration	下次校准日期 Date of Next Calibration
样品预处理 Sample pretreatment	移动电源电池循环测试系统 Power bank Battery Charge-discharge Testing System	CTS-20V/10A-GGS	1407001120018 1407001120017	Renergy Electric	2023-02-21	2024-02-20
	电子天平 Electronic scale	JM-B30002	370	Zhuji Chaoze Weighing	2023-09-20	2024-09-19
高度模拟试验 Altitude simulation	低气压箱 Vacuum chamber	CHKX-125	110711	gzgongwen	2023-02-09	2024-02-08
	电子天平 Electronic scale	JM-B30002	370	Zhuji Chaoze Weighing	2023-09-20	2024-09-19
温度试验 Thermal Test	快速温变箱 Rapid temperature change box	QW1070P6W15	12174318	ESPEC	2023-02-09	2024-02-08
	电子天平 Electronic scale	JM-B30002	370	Zhuji Chaoze Weighing	2023-09-20	2024-09-19
振动试验 Vibration	振动试验台 Vibration test bench	ES-30-370	D1203045	donglingtech	2023-09-20	2024-09-19
	电子天平 Electronic scale	JM-B30002	370	Zhuji Chaoze Weighing	2023-09-20	2024-09-19
冲击试验 Shock	冲击碰撞试验台 Shock Test System	SY11-50	5120315/J120315	donglingtech	2023-02-09	2024-02-08
	电子天平 Electronic scale	JM-B30002	370	Zhuji Chaoze Weighing	2023-09-20	2024-09-19
外短路试验 External short circuit	防爆温箱 explosion-proof oven	DE207C	A08351	Chongqing Hanba	2023-04-27	2024-04-26
	微电阻测试仪 Milliohm-meter	TOS8010	TM200445	TOSSTAR	2023-02-09	2024-02-08



	数据采集仪 Data recorder apparatus (Temperature and Voltage recorder)	GM90PS	S5C08022	YOKOGAWA	2023-09-19	2024-09-18
☑ 挤压试验 Crush □ 撞击试验 Impact	☑ 挤压试验机 Crush Apparatus	BE-6045-2 T	2018111300 1	DongGuan Bell	2023-09-20	2024-09-19
	□ 电池冲击试验机 Battery impact Apparatus	BE-5066	2008091034 6	DongGuan Bell	2023-02-21	2024-02-20
	数据采集仪 Data recorder apparatus (Temperature and Voltage recorder)	GM90PS	S5C08022	YOKOGAWA	2023-09-19	2024-09-18
过充电试验 Overcharge	移动电源电池循环测 试系统 Power bank Battery Charge-discharge Testing System	CTS-20V/1 0A-GGS	1407001120 018 1407001120 017	Renegy Electric	2023-02-21	2024-02-20
	防爆温箱 explosion-proof oven	DE207C	A08351	Chongqing Hanba	2023-04-27	2024-04-26
强制放电 Force discharge	直流电源 DC power supply	KXN-6050 D	18K6050D0 40094	zhaoxinpower	2023-09-19	2024-09-18
	电子负载 Electronic load	IT8512A+	8021430107 37010063	ITECH	2023-06-27	2024-06-26



## 注意事项

1. 报告无检测单位印章无效。
2. 报告无编制人、签发人签名无效。
3. 报告涂改无效。
4. 对检测报告若有异议，请于收到报告之日起十五日内向检测单位提出。
5. “P”表示“试验结果符合要求”，“F”表示“试验结果不符合要求”，“N/A”表示“要求不适用于该产品”，“/”表示“未检测”。
6. “\*”表示该项目不在 CNAS 认可范围内。
7. 相关项目未取得资质认定，仅作为科研、教学或内部质量控制之用。

### 测试实验室基本信息

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——报告结束——