

# FC TEST REPORT

**Applicant:** Shenzhen Qicaiguohong Technology Co., Ltd  
Floor 1-4, Building B, E District, Democratic West Industrial Zone, Shajing Street,  
Baoan District, Shenzhen

**Manufacturer:** Shenzhen Qicaiguohong Technology Co., Ltd  
Floor 1-4, Building B, E District, Democratic West Industrial Zone, Shajing Street,  
Baoan District, Shenzhen

**Factory:** Shenzhen Qicaiguohong Technology Co., Ltd  
Floor 1-4, Building B, E District, Democratic West Industrial Zone, Shajing Street,  
Baoan District, Shenzhen

**Product Name :** Portable Air Compressor

**Trade mark :** N/A

**Model :** D2  
Shenzhen RCT Testing Technology Service Co., Ltd.  
1507, 15th Floor, Zone C, NO.8 Building , Hengda Shishang Huigu Center, Fulong  
Road, Shanghengleng Community, Dalang Street, Longhua District, Shenzhen,  
Guandong

**Prepared By :**

**Test Date:** May 09, 2024 - May 22, 2024

**Date of Report :** May 22, 2024

**Report No.:** RCT202405090302R

**Applicable Standards:** 47 CFR FCC Part 15 Subpart B

The tested sample(s) and the sample information are provided by the client.

The above equipment has been tested by Shenzhen RCT Testing Technology Service Co., Ltd. and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Prepared by :

Allen Shi  
Assistant

Reviewer :

Taylor Wang  
Supervisor

Approved :

Hannah Li  
Manager



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## 1. GENERAL INFORMATION

<b>Product Name :</b>	Portable Air Compressor
<b>Trade mark :</b>	N/A
<b>Model :</b>	D2
<b>Tset Voltage:</b>	DC 5V= 2A Battery:2200mAh
<b>Applicant:</b>	Shenzhen Qicaiquohong Technology Co., Ltd Floor 1-4, Building B, E District, Democratic West Industrial Zone, Shajing Street, Baoan District, Shenzhen
<b>Manufacturer:</b>	Shenzhen Qicaiquohong Technology Co., Ltd Floor 1-4, Building B, E District, Democratic West Industrial Zone, Shajing Street, Baoan District, Shenzhen
<b>Test Date:</b>	May 09, 2024 - May 22, 2024
<b>Date of Report :</b>	May 22, 2024

## 2. TEST SUMMARY

The Product has been tested according to the following specifications:

Standard	Test Item	Test Method	Test
FCC 15.107	Conducted Emission	ANSI C63.4:2014	N/A*
FCC 15.109	Radiated Emission	ANSI C63.4:2014	Yes

## 3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Value (dB)
Radiated Emission	4.9

## 4. PRODUCT INFORMATION AND TEST SETUP

### 4.1. PRODUCT INFORMATION

<b>Rating:</b>	DC 5V= 2A Battery:2200mAh
<b>Models:</b>	D2

**Models different:** All models are identical except the color and model names agent and marketing purposes. The test model is D2 and the test results are applicable to the others.

### 4.2. SUPPORT EQUIPMENT

Device Type	Brand	Model	Series No.	Data Cable	Power Cord
Notebook	---	A1367	C3LH61W3DT75	---	---
Mouse	Lenovo	DOK-M680	60280683	Unshielded 1.50m	---
Adapter	---	A1436	---	---	---

**Notes:**

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

## 5. FACILITIES AND ACCREDITATIONS

### 5.1. TEST FACILITY

All test facilities used to collect the test data are located at 1507, 15th Floor, Zone C, NO.8 Building , Hengda Shishang Huigu Center, Fulong Road, Dalang Street, Longhua District, Shenzhen. The site and apparatus are constructed in conformance with the requirements of CISPR 16-1-1 and other equivalent standards.

### 5.2. TEST EQUIPMENT LIST

**Instrumentation:** The following list contains equipment used at RCT for testing. The calibrations of the measuring instruments, including any accessories that may effect such calibration, are checked frequently to assure their accuracy. Adjustments are made and correction factors applied in accordance with instructions contained in the manual for the measuring instrument.

Equipment used during the tests:

3M Semi-anechoic Chamber		(2)- Radiated disturbance Test		
Equipment	Manufacturer	Model	Serial No.	Due Date
3M Chamber & Accessory Equipment	TDK	SAC-3	---	Dec. 20, 2024
Receiver	R&S	ESCI	100009	Dec. 20, 2024
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	401	Dec. 20, 2024
Multi device Controller	maturio	NCD/070/10711 112	---	---

### 5.3. LABORATORY ACCREDITATIONS AND LISTINGS

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

## 6. CONDUCTED EMISSION TEST

### 6.1. LIMITS

Conducted Emission Test Limit (Class A)

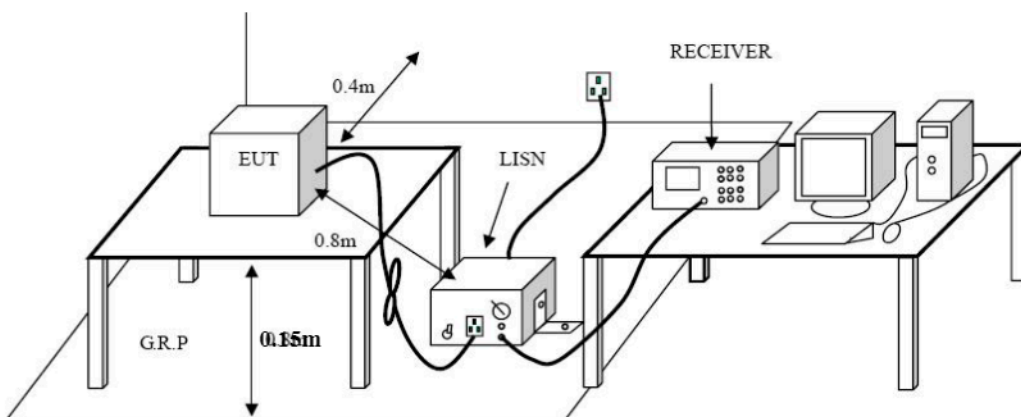
Frequency (MHz)	Maximum RF Line Voltage (dB $\mu$ V)	
	Quasi-peak Level	Average Level
0.15~0.50	79	66
0.50~30	73	60

Conducted Emission Test Limit (Class B)

Frequency (MHz)	Maximum RF Line Voltage (dB $\mu$ V)	
	Quasi-peak Level	Average Level
0.15~0.5	66 ~ 56 *	56 ~ 46 *
0.50~5	56	46
5~30	60	50

\*decreasing linearly with logarithm of the frequency

### 6.2. BLOCK DIAGRAM OF TEST SETUP



### 6.3. PROCEDURE OF CONDUCTED EMISSION TEST

The EUT was placed 0.15 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

The cables shall be insulated (by up to 15 cm) from the horizontal ground reference plane, and shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

LISN at least 80 cm from nearest part of EUT chassis.

#### 6.4. TEST RESULTS

Note: This test isn't applicable because the EUT doesn't have relative function.



## 7. RADIATED EMISSION TEST

### 7.1. LIMITS

For unintentional device , according to §15.109 (a ) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values.

And according to §15.109 (2 )measurements below 1000 MHz provided the limits in paragraphs (a) and (b) of this section are extrapolated to the new measurement distance using an inverse linear distance extrapolation factor (20 dB/decade).

According to FCC 15.31 section(1), at frequencies at or above 30 MHz measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

According to FCC 15.31 section(2), frequencies below 30 MHz, performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

According to 15.35 Measurement detector functions and bandwidths section (b). Unless otherwise specified, e.g., see §§15.250, 15.252, 15.253(d), 15.255, 15.256, and 15.509 through

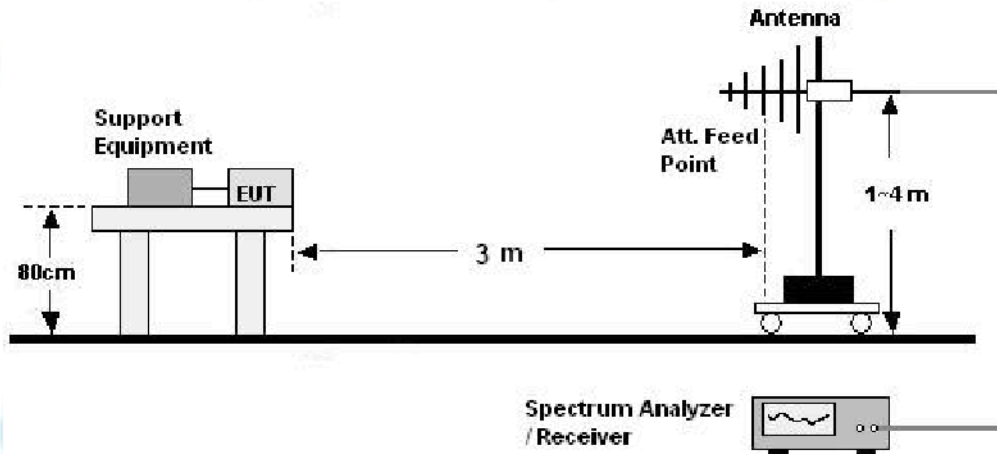
15.519 of this part, the limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.

**Limits for Class B digital devices**

Frequency (MHz)	limits at 3m dB( $\mu$ V/m)
30-88	40.0
88-216	43.5
216-960	46.0
Above 960	54.0

- NOTE:**
1. The lower limit shall apply at the transition frequency.
  2. The limits shown above are based on measuring equipment employing a CISPR quasi-peak detector function for frequencies below or equal to 1000MHz.
  3. The limits shown above are based on measuring equipment employing an average detector function for frequencies above 1000MHz.

## 7.2. BLOCK DIAGRAM OF TEST SETUP

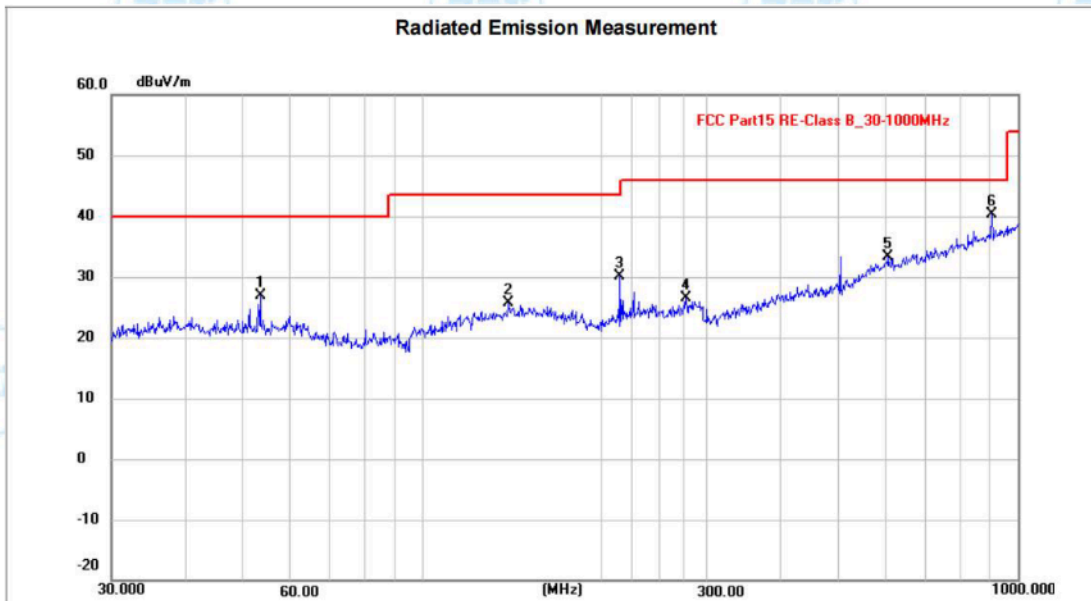


## 7.3. PROCEDURE OF RADIATED EMISSION TEST

- The Product was placed on the non-conductive turntable 0.8 m above the ground at a chamber.
- Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
- For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

## 7.4. GRAPHS AND DATA

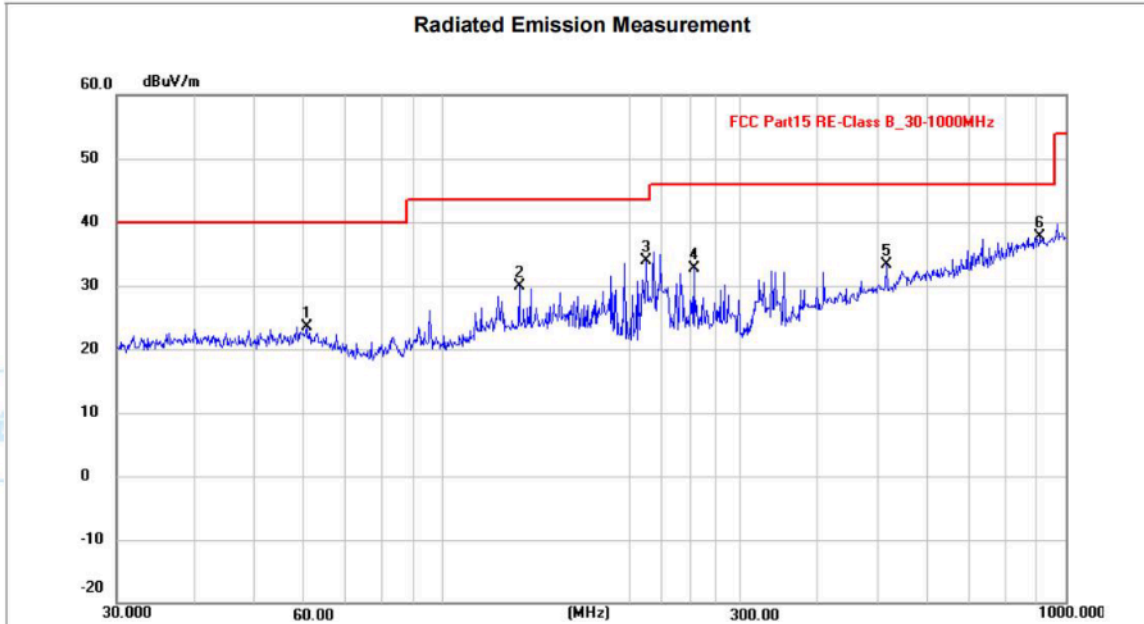
Model No. :	D2	Test Mode :	Normal working
Temperature & Humidity:	24 °C 62% RH	Test Result :	Pass
Polarization :	Vertical	Test By	Allen Shi



Site: Polarization: **Vertical** Temperature: (C)  
 Limit: FCC Part15 RE-Class B\_30-1000MHz Power: Humidity: %RH  
 EUT: Distance: 3m  
 M/N:  
 Mode: Working mode  
 Note:

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	53.3179	3.27	23.64	26.91	40.00	-13.09	peak	100	243	P	
2	139.3611	1.72	23.90	25.62	43.50	-17.88	peak	100	54	P	
3	214.5142	7.86	22.21	30.07	43.50	-13.43	peak	100	123	P	
4	277.0935	2.42	24.12	26.54	46.00	-19.46	peak	100	215	P	
5	605.6592	0.87	32.47	33.34	46.00	-12.66	peak	100	301	P	
6 *	903.3093	3.48	36.80	40.28	46.00	-5.72	peak	100	3	P	

<b>Model No. :</b>	D2	<b>Test Mode :</b>	Normal working
<b>Temperature &amp; Humidity:</b>	24 °C 62% RH	<b>Test Result :</b>	Pass
<b>Polarization :</b>	Horizontal	<b>Test By</b>	Allen Shi



Site: Polarization: **Horizontal** Temperature: (C)  
 Limit: FCC Part15 RE-Class B\_30-1000MHz Power: Humidity: %RH  
 EUT: Distance: 3m  
 M/N:  
 Mode: Working mode  
 Note:

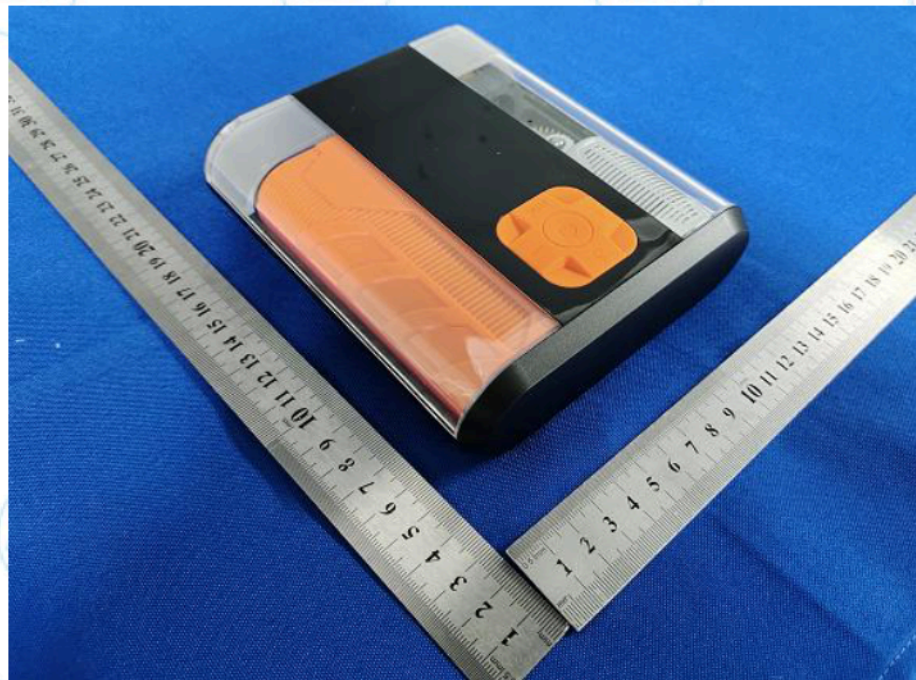
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	60.4917	0.17	23.39	23.56	40.00	-16.44	peak	100	174	P	
2	132.6850	6.23	23.62	29.85	43.50	-13.65	peak	100	171	P	
3	212.2693	11.76	22.05	33.81	43.50	-9.69	peak	100	22	P	
4	252.9481	9.47	23.33	32.80	46.00	-13.20	peak	100	184	P	
5	515.4373	3.48	29.87	33.35	46.00	-12.65	peak	100	101	P	
6 *	909.6666	0.77	36.96	37.73	46.00	-8.27	peak	100	234	P	

## APPENDIX 1 PHOTOGRAPHS OF PRODUCT

Overview of EUT



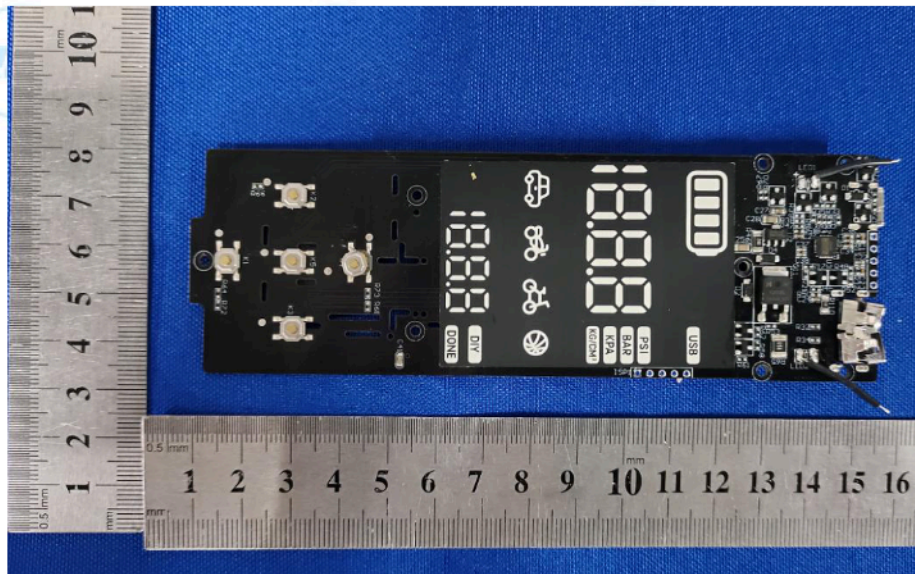
Overview of EUT



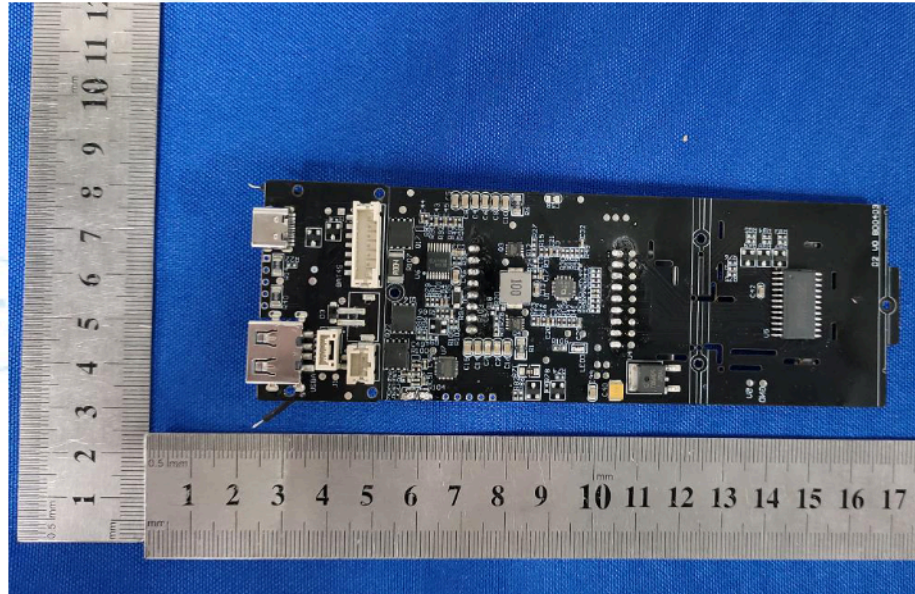
Overview  
of EUT



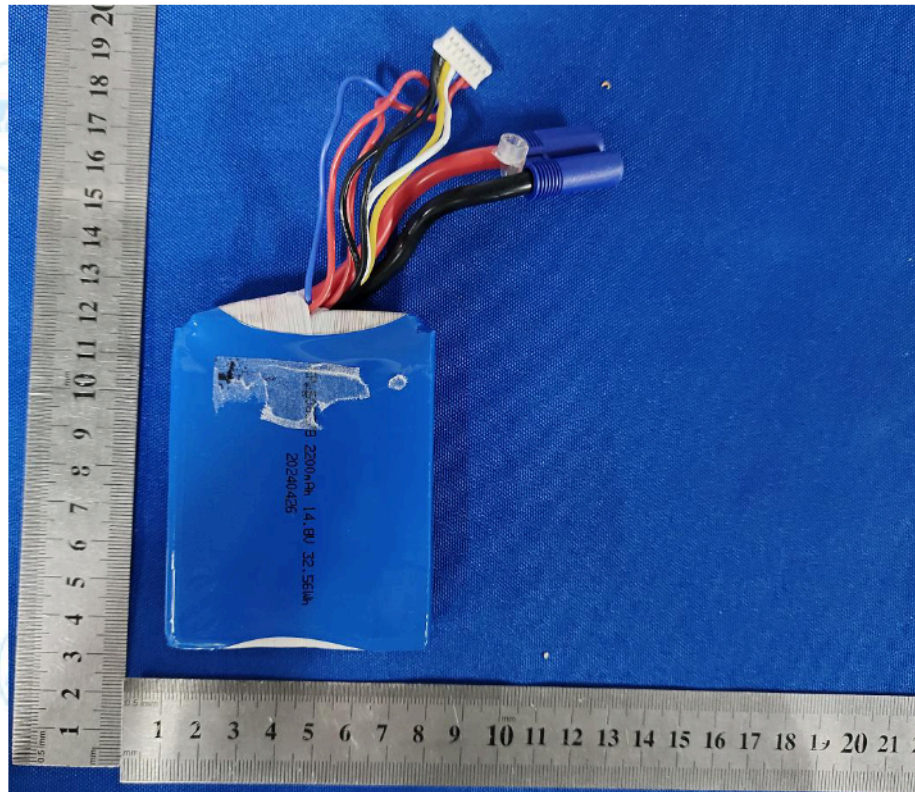
Internal  
view of  
EUT



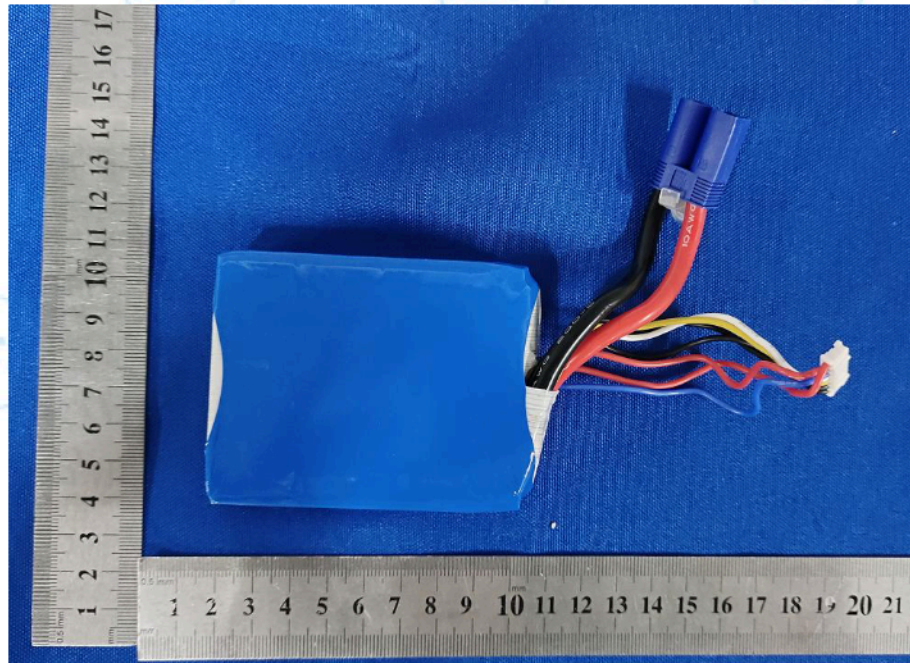
Internal view of EUT



Internal view of EUT



Internal  
view of  
EUT



\*\*\*\*\* (End of report) \*\*\*\*\*



# 声明

## Statement

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The test results or observations are applicable only to tested sample. Client shall be responsible for representativeness of the sample and authenticity of the material.

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The test results or observations are provided in accordance with measured value, without taking risks caused by uncertainty into account. Without explicit stipulation in special agreements, standards or regulations, RCT shall not assume any responsibility.

6. 对本检验报告若有异议, 请于收到报告之日起20日内提出;

Objections shall be raised within 20 days from the date receiving the report.