



# FCC Test Report

**Test Report  
On Behalf of  
Shantou Chenghai Bozhisu Toy Factory**

**For  
RC car**

**Model No.: S817, 553-01, 553-02, 553-03, 553-04, 553-05, 553-06, 553-07,  
553-08, 553-09, 553-10, 553-11, 553-12, 553-13, 553-14, 553-15, 553-16,  
553-17, 553-18, 553-19, 553-20, 33652, 33653, S915, S916, S805, S806,  
S807, S808, S809, S803, S814**

**FCC ID: 2BQXM-S817**

**Prepared For: Shantou Chenghai Bozhisu Toy Factory**

**No. 1 Yangzhong North Wuheng, Qianxi Village Lianxia Town, Chenghai  
District, Shantou City, China**

**Prepared By: Shenzhen HUAK Testing Technology Co., Ltd.**

**1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping,  
Fuhai Street, Bao'an District, Shenzhen, Guangdong, China**

**Date of Test: Aug. 06, 2025 ~ Aug. 21, 2025**

**Date of Report: Aug. 21, 2025**

**Report Number: HK2508064326-E**

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## Test Result Certification

**Applicant's Name** : Shantou Chenghai Bozhisu Toy Factory

Address : No. 1 Yangzhong North Wuheng, Qianxi Village Lianxia Town, Chenghai District, Shantou City, China

**Manufacturer's Name** : Shantou Chenghai Bozhisu Toy Factory

Address : No. 1 Yangzhong North Wuheng, Qianxi Village Lianxia Town, Chenghai District, Shantou City, China

### Product Description

Trade Mark : N/A

Product Name : RC car

S817, 553-01, 553-02, 553-03, 553-04, 553-05, 553-06, 553-07,

Model and/or Type Reference : 553-08, 553-09, 553-10, 553-11, 553-12, 553-13, 553-14, 553-15, 553-16, 553-17, 553-18, 553-19, 553-20, 33652, 33653, S915, S916, S805, S806, S807, S808, S809, S803, S814

### FCC Rules and Regulations Part 15 Subpart C Section 15.249

**Standards** : **ANSI C63.10: 2020**

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**Date of Test** :

Date (s) of Performance of Tests : **Aug. 06, 2025 ~ Aug. 21, 2025**

Date of Issue : **Aug. 21, 2025**

Test Result : **Pass**

Testing Engineer

*Len Liao*

(Len Liao)

Technical Manager

*Sliver Wan*

(Sliver Wan)

Authorized Signatory

*Jason Zhou*

(Jason Zhou)



## Table of Contents

	Page
1 . Test Summary	5
1.1 Test Procedures and Results	5
1.2 Information of the Test Laboratory	5
1.3 Measurement Uncertainty	5
2 . General Information	6
2.1 General Description of EUT	6
2.2 Carrier Frequency of Channels	7
2.3 Operation of EUT during Testing	7
2.4 Description of Test Setup	8
2.5 Description of Support Units	9
2.5 Measurement Instruments List	10
3 . AC Conducted Emissions Test	11
3.1 AC Conducted Power Line Emission Limit	11
3.2 Test Setup	11
3.3 Test Procedure	11
3.4 Test Result	12
4 . Radiated Emission Test	13
4.1 Radiation Limit	13
4.2 Test Setup	13
4.3 Test Procedure	14
4.4 Test Result	14
5 . Band Edge	20
5.1 Limits	20
5.2 Test Procedure	20
5.3 Test Result	21
6 . Occupied Bandwidth Measurement	23
6.1 Test Setup	23
6.2 Test Procedure	23
6.3 Measurement Equipment Used	23
6.4 Test Result	23
7 . Antenna Requirement	25
8 . Photographs of Test	26
9 . Photos of the EUT	28

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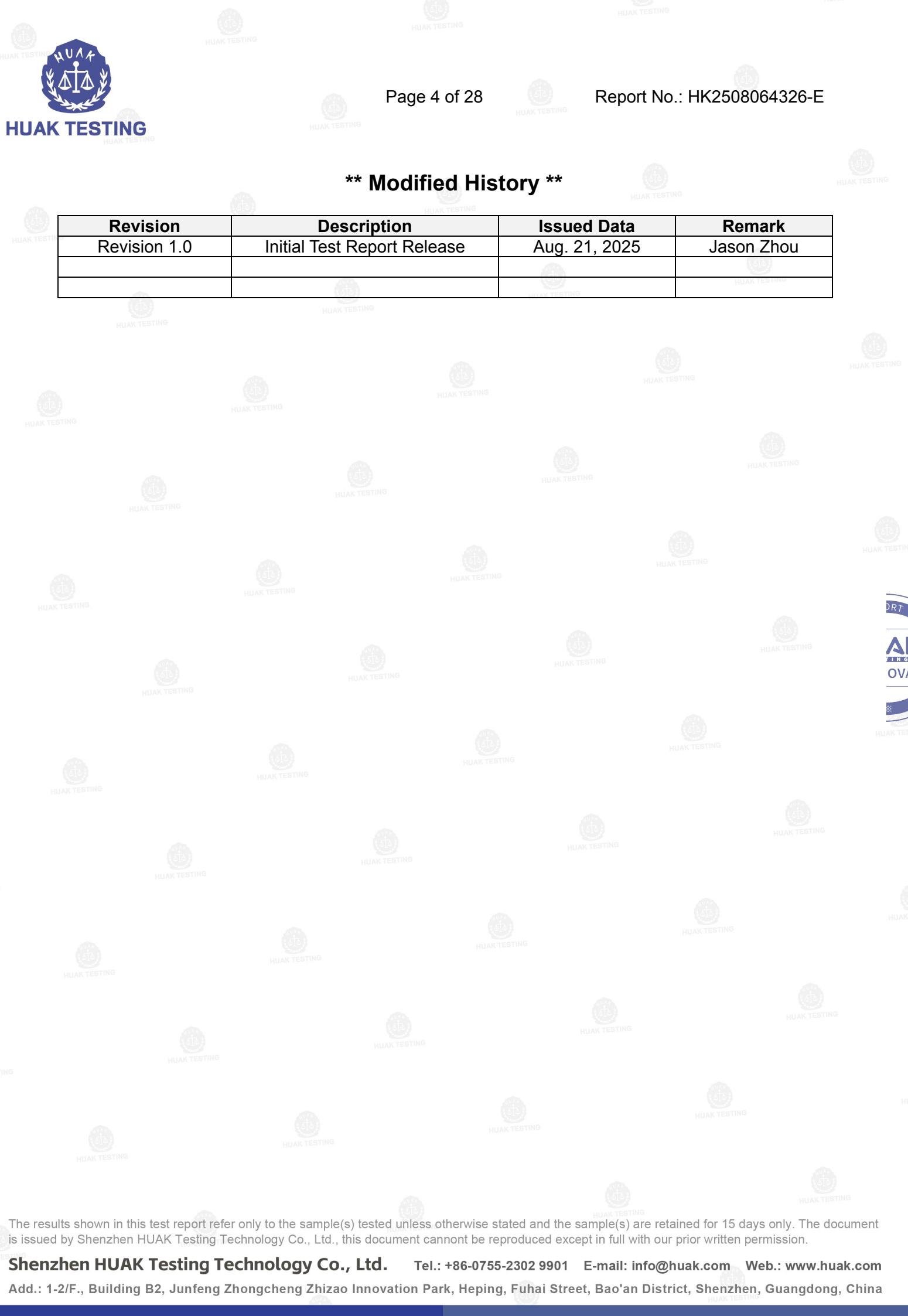
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**\*\* Modified History \*\***

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	Aug. 21, 2025	Jason Zhou



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## 1. Test Summary

### 1.1 Test Procedures and Results

DESCRIPTION OF TEST	SECTION NUMBER	RESULT
AC CONDUCTED EMISSIONS TEST	15.207	N/A
RADIATED EMISSION TEST	15.249(a)/15.209	COMPLIANT
BAND EDGE	15.249(d)/15.205	COMPLIANT
OCCUPIED BANDWIDTH MEASUREMENT	15.215(c)	COMPLIANT
ANTENNA REQUIREMENT	15.203	COMPLIANT

### 1.2 Information of the Test Laboratory

Shenzhen HUAK Testing Technology Co., Ltd.

Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Testing Laboratory Authorization:

A2LA Accreditation Code is 4781.01.

FCC Designation Number is CN1229.

Canada IC CAB identifier is CN0045.

CNAS Registration Number is L9589.

### 1.3 Measurement Uncertainty

#### Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.71dB, k=2

Radiated emission expanded uncertainty(9kHz-30MHz) = 3.90dB, k=2

Radiated emission expanded uncertainty(30MHz-1000MHz) = 3.90dB, k=2

Radiated emission expanded uncertainty(Above 1GHz) = 4.28dB, k=2

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## 2. General Information

### 2.1 General Description of EUT

Equipment:	RC car
Model Name:	S817
Series Model(s):	553-01, 553-02, 553-03, 553-04, 553-05, 553-06, 553-07, 553-08, 553-09, 553-10, 553-11, 553-12, 553-13, 553-14, 553-15, 553-16, 553-17, 553-18, 553-19, 553-20, 33652, 33653, S915, S916, S805, S806, S807, S808, S809, S803, S814
Model Difference:	All model's the function, software and electric circuit are the same, only with product accessories and model named different. Test sample model: S817.
FCC ID:	2BQXM-S817
Antenna Type:	Internal antenna
Antenna Gain:	0.17dBi
Operation Frequency:	2407-2476MHz
Number of Channels:	36CH
Modulation Type:	GFSK
Power Source:	DC3V from Battery
Power Rating:	DC3V from Battery
Note:	<ol style="list-style-type: none"><li>1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.</li><li>2. Antenna gain Refer to the antenna specifications.</li><li>3. The cable loss data is obtained from the supplier.</li><li>4. The test results in the report only apply to the tested sample.</li></ol>



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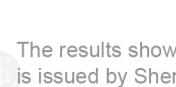
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## 2.5 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

### Note:

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.
3. For conducted measurements (Output Power, 6dB Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.



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**2.5 Measurement Instruments List**

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N.	R&S	ENV216	HKE-002	2025/02/19	1 Year
2	L.I.S.N.	R&S	ENV216	HKE-059	2025/02/19	1 Year
3	EMI Test Receiver	R&S	ESR	HKE-005	2025/02/19	1 Year
4	Spectrum analyzer	Agilent	N9020A	HKE-025	2025/02/19	1 Year
5	Spectrum analyzer	Agilent	N9020A	HKE-117	2025/02/19	1 Year
6	Spectrum analyzer	R&S	FSV3044	HKE-126	2025/02/19	1 Year
7	Preamplifier	EMCI	EMC05184 5S	HKE-006	2025/02/19	1 Year
8	Preamplifier	Schwarzbeck	BBV 9743	HKE-016	2025/02/19	1 Year
9	Preamplifier	A.H. Systems	SAS-574	HKE-182	2025/02/19	1 Year
10	6dB Attenuator	Pasternack	6db	HKE-184	2025/02/19	1 Year
11	EMI Test Receiver	Rohde & Schwarz	ESR-7	HKE-010	2025/02/19	1 Year
12	Broadband Antenna	Schwarzbeck	VULB9168	HKE-167	2024/02/21	2 Year
13	Loop Antenna	COM-POWER	AL-130R	HKE-014	2024/02/21	2 Year
14	Horn Antenna	Schwarzbeck	9120D	HKE-013	2024/02/21	2 Year
15	EMI Test Software	Tonscend	JS32-CE 2.5.0.6	HKE-081	/	/
16	EMI Test Software	Tonscend	JS32-RE 5.0.0	HKE-082	/	/
17	RF Automatic control unit	Tonscend	JS0806-2	HKE-060	2025/02/19	1 Year
18	High pass filter unit	Tonscend	JS0806-F	HKE-055	2025/02/19	1 Year
19	Wireless Communication Test Set	R&S	CMU200	HKE-026	2025/02/19	1 Year
20	Wireless Communication Test Set	R&S	CMW500	HKE-027	2025/02/19	1 Year
21	High-low temperature chamber	Guangke	HT-80L	HKE-118	2025/06/09	1 Year
22	Temperature and humidity meter	Boyang	HTC-1	HKE-075	2025/06/09	1 Year
23	RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	/	/
24	10dB Attenuator	Schwarzbeck	VTSD9561F	HKE-153	2025/02/19	1 Year
25	RSE Test Software	Tonscend	JS36-RSE 5.0.0	HKE-184	/	/

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### 3.4 Test Result

Not applicable.

Note: EUT power supply by Battery Powered, so this test item not applicable.

## 4. Radiated Emission Test

### 4.1 Radiation Limit

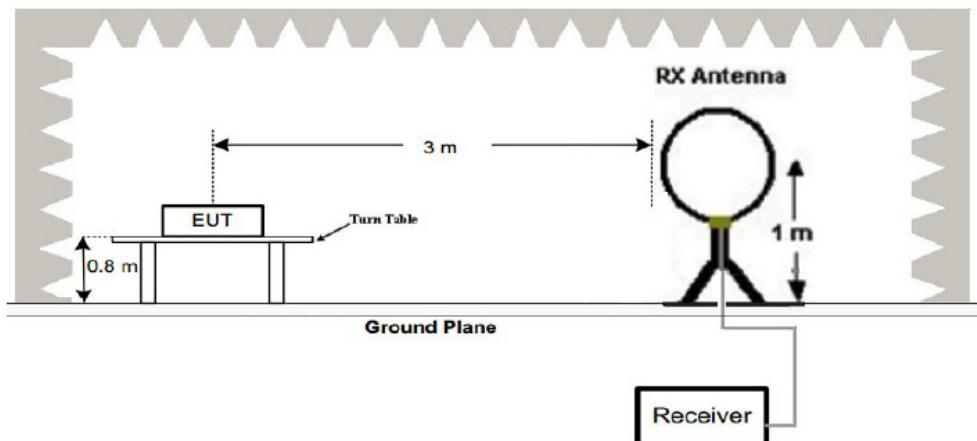
For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Distance (Meters)	Radiated (dB $\mu$ V/m)	Radiated ( $\mu$ V/m)
0.009-0.490	300	20log 2400/F (kHz)	2400/F (kHz)
0.490-1.705	30	20log 24000/F (kHz)	24000/F (kHz)
1.705-30	30	20log 30	30
30-88	3	40	100
88-216	3	43.5	150
216-960	3	46	200
Above 960	3	54	500

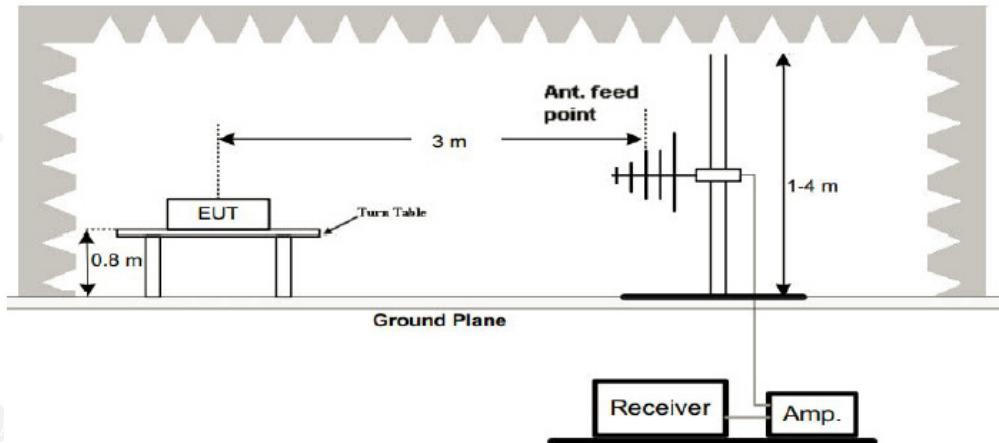
For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

### 4.2 Test Setup

#### (1) Radiated Emission Test-Up Frequency Below 30MHz



#### (2) Radiated Emission Test-Up Frequency 30MHz~1GHz







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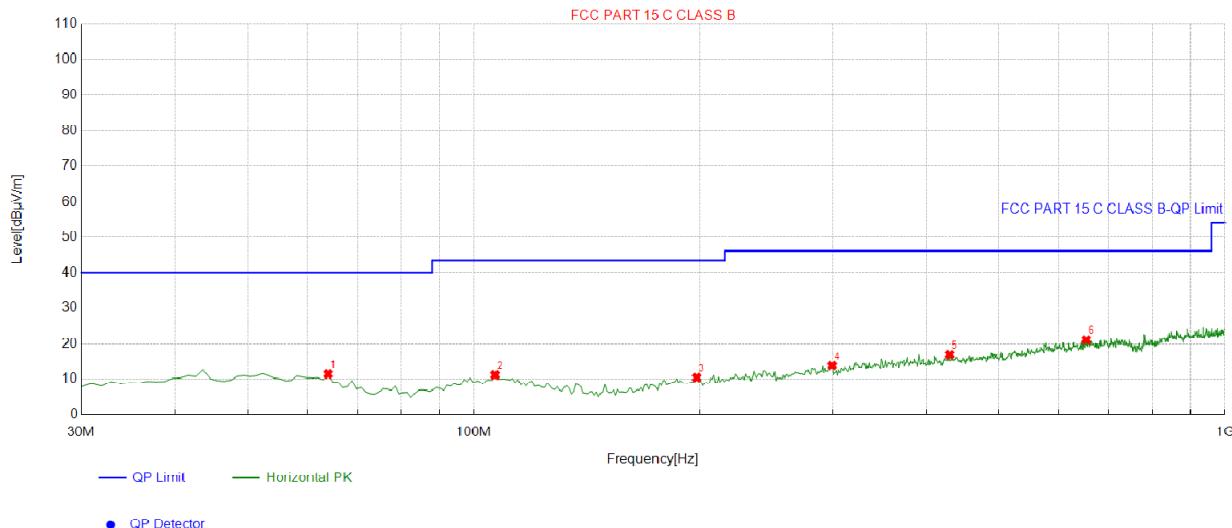
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Below 1GHz Test Results:

Antenna polarity: H



Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	63.9840	-14.38	25.76	11.38	40.00	28.62	100	16	Horizontal
2	106.7067	-14.49	25.60	11.11	43.50	32.39	100	53	Horizontal
3	197.9780	-14.86	25.25	10.39	43.50	33.11	100	300	Horizontal
4	299.9299	-11.71	25.50	13.79	46.00	32.21	100	344	Horizontal
5	430.0400	-8.72	25.64	16.92	46.00	29.08	100	350	Horizontal
6	653.3634	-4.92	26.08	21.16	46.00	24.84	100	24	Horizontal

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level;



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## Above 1 GHz Test Results

CH Low (2407MHz)

Horizontal:

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector Type
2407.00	103.15	-5.84	97.31	114	16.69	peak
2407.00	84.98	-5.84	79.14	94	14.86	AVG
4814.00	53.27	-3.64	49.63	74	24.37	peak
4814.00	42.36	-3.64	38.72	54	15.28	AVG
7221.00	52.11	-0.95	51.16	74	22.84	peak
7221.00	41.27	-0.95	40.32	54	13.68	AVG

Remark: Factor = Cable loss + Antenna factor + Attenuator - Preamplifier; Level = Reading + Factor;  
Margin = Limit - Level.

Vertical:

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector Type
2407.00	103.25	-5.84	97.41	114	16.59	peak
2407.00	87.36	-5.84	81.52	94	12.48	AVG
4814.00	51.29	-3.64	47.65	74	26.35	peak
4814.00	42.33	-3.64	38.69	54	15.31	AVG
7221.00	53.18	-0.95	52.23	74	21.77	peak
7221.00	42.08	-0.95	41.13	54	12.87	AVG

Remark: Factor = Cable loss + Antenna factor + Attenuator - Preamplifier; Level = Reading + Factor;  
Margin = Limit - Level.



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CH Middle (2444MHz)

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2444.00	104.32	-5.71	98.61	114	15.39	peak
2444.00	85.74	-5.71	80.03	94	13.97	AVG
4888.00	53.12	-3.51	49.61	74	24.39	peak
4888.00	42.09	-3.51	38.58	54	15.42	AVG
7332.00	51.33	-0.82	50.51	74	23.49	peak
7332.00	43.25	-0.82	42.43	54	11.57	AVG

Remark: Factor = Cable loss + Antenna factor + Attenuator - Preamplifier; Level = Reading + Factor;  
Margin = Limit - Level.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2444.00	103.36	-5.71	97.65	114	16.35	peak
2444.00	83.25	-5.71	77.54	94	16.46	AVG
4888.00	53.97	-3.51	50.46	74	23.54	peak
4888.00	42.35	-3.51	38.84	54	15.16	AVG
7332.00	52.26	-0.82	51.44	74	22.56	peak
7332.00	43.37	-0.82	42.55	54	11.45	AVG

Remark: Factor = Cable loss + Antenna factor + Attenuator - Preamplifier; Level = Reading + Factor;  
Margin = Limit - Level.



CH High (2476MHz)

## Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type HUMAN TESTING
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2476.00	103.97	-5.65	98.32	114	15.68	peak
2476.00	85.36	-5.65	79.71	94	14.29	AVG
4952.00	53.71	-3.43	50.28	74	23.72	peak
4952.00	43.26	-3.43	39.83	54	14.17	AVG
7428.00	53.26	-0.75	52.51	74	21.49	peak
7428.00	41.27	-0.75	40.52	54	13.48	AVG

Remark: Factor = Cable loss + Antenna factor + Attenuator - Preamplifier; Level = Reading + Factor; Margin = Limit - Level.

### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2476.00	104.21	-5.65	98.56	114	15.44	peak
2476.00	82.36	-5.65	76.71	94	17.29	AVG
4952.00	54.21	-3.43	50.78	74	23.22	peak
4952.00	45.19	-3.43	41.76	54	12.24	AVG
7428.00	54.12	-0.75	53.37	74	20.63	peak
7428.00	41.33	-0.75	40.58	54	13.42	AVG

Remark: Factor = Cable loss + Antenna factor + Attenuator - Preamplifier; Level = Reading + Factor;  
Margin = Limit - Level.

---

**Remark :**

(1) Measuring frequencies from 1 GHz to the 25 GHz.

(2) "F" denotes fundamental frequency; "H" denotes spurious frequency; "E" denotes band edge frequency.

(3) \* denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.

(4) The emissions are attenuated more than 20dB below the permissible limits are not record in the report.

(5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.

(6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

(7) All modes of operation were investigated and the worst-case emissions are reported.

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## 5. Band Edge

## 5.1 Limits

FCC PART 15.249(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

## 5.2 Test Procedure

The band edge compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW to 1MHz and VBM to 3MHz to measure the peak field strength and set RBW to 1MHz and VBW to 10Hz to measure the average radiated field strength. The conducted RF band edge was measured by using a spectrum analyzer. Set span wide enough to capture the highest in-band emission and the emission at the band edge. Set RBW to 1MHz and VBW to 3MHz, to measure the conducted peak band edge.

### 5.3 Test Result

**PASS**

Radiated Band Edge Test:

Operation Mode: TX CH Low (2407MHz)

Horizontal (Worst case):

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2310	55.32	-5.81	49.51	74	24.49	peak
2310	/	-5.81	/	54	/	AVG
2390	54.98	-5.84	49.14	74	24.86	peak
2390	/	-5.84	/	54	/	AVG
2400	55.21	-5.84	49.37	74	24.63	peak
2400	/	-5.84	/	54	/	AVG

Remark: Factor = Cable loss + Antenna factor + Attenuator - Preamplifier; Level = Reading + Factor; Margin = Limit - Level.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2310	55.36	-5.81	49.55	74	24.45	peak
2310	/	-5.81	/	54	/	AVG
2390	54.89	-5.84	49.05	74	24.95	peak
2390	/	-5.84	/	54	/	AVG
2400	54.81	-5.84	48.97	74	25.03	peak
2400	/	-5.84	/	54	/	AVG

Remark: Factor = Cable loss + Antenna factor + Attenuator - Preamplifier; Level = Reading + Factor; Margin = Limit - Level.



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Operation Mode: TX CH High (2476MHz)

Horizontal (Worst case):

Frequency (MHz)	Reading Result (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector Type
2483.50	55.36	-5.65	49.71	74	24.29	peak
2483.50	/	-5.65	/	54	/	AVG
2500.00	54.08	-5.65	48.43	74	25.57	peak
2500.00	/	-5.65	/	54	/	AVG

Remark: Factor = Cable loss + Antenna factor + Attenuator - Preamplifier; Level = Reading + Factor; Margin = Limit - Level.

Vertical:

Frequency (MHz)	Reading Result (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector Type
2483.50	55.37	-5.65	49.72	74	24.28	peak
2483.50	/	-5.65	/	54	/	AVG
2500.00	54.21	-5.65	48.56	74	25.44	peak
2500.00	/	-5.65	/	54	/	AVG

Remark: Factor = Cable loss + Antenna factor + Attenuator - Preamplifier; Level = Reading + Factor; Margin = Limit - Level.

Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Remark:

1. If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.
2. In restricted bands of operation, the spurious emissions below the permissible value more than 20dB.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

## 6. Occupied Bandwidth Measurement

## 6.1 Test Setup

### Same as Radiated Emission Measurement

## 6.2 Test Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set EUT as normal operation.
3. Based on ANSI C63.10 section 6.9.2: RBW= 20KHz. VBW= 62KHz, Span= 3MHz.
4. The useful radiated emission from the EUT was detected by the spectrum analyzer with peak detector.

### **6.3 Measurement Equipment Used**

Same as Radiated Emission Measurement

## 6.4 Test Result

## PASS

Frequency HUAK TESTING	20dB Bandwidth HUAK TESTING (MHz)	Result
2407 MHz	1.164	<b>PASS</b>
2444 MHz	1.168	<b>PASS</b>
2476 MHz	1.172	<b>PASS</b>

CH00: 2407MHz



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Page 24 of 28

Report No.: HK2508064326-E

CH18: 2444MHz



CH35: 2476MHz



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## 7. Antenna Requirements

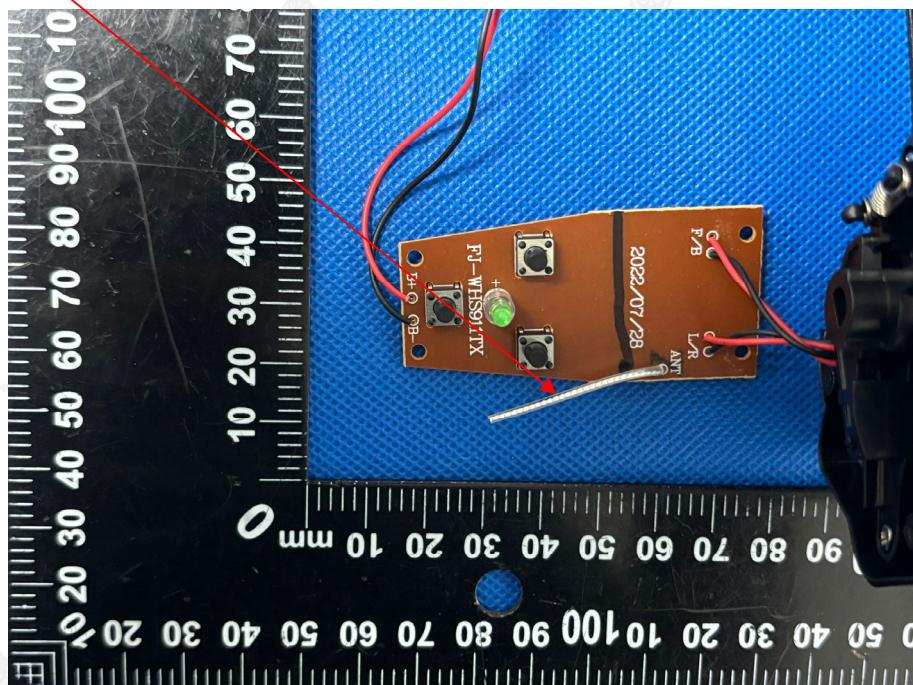
## Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Antenna Connected Construction

The antenna used in this product is an Internal antenna, need professional installation, not easy to remove. It conforms to the standard requirements. The directional gains of antenna used for transmitting is 0.17dBi.

## Antenna





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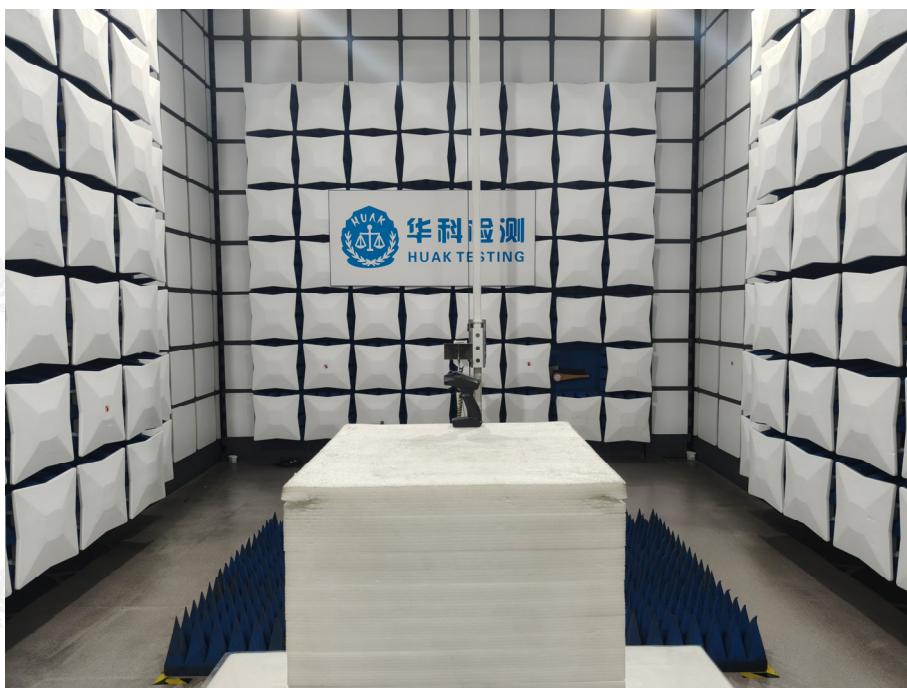
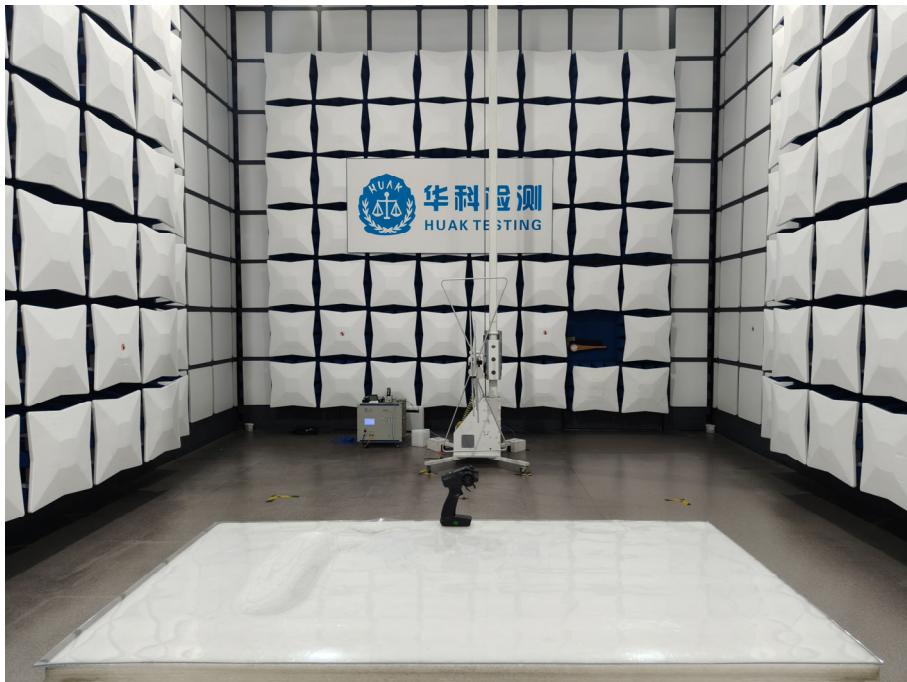
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## 8. Photographs of Test

### Radiated Emission

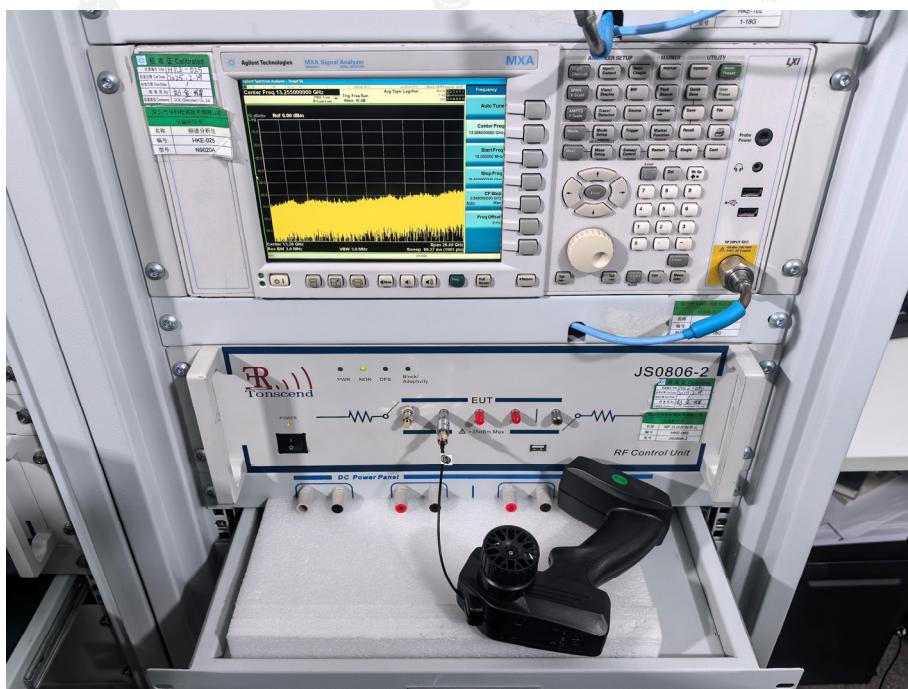


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## RF Conducted Emission



## 9. Photos of the EUT

Reference to the report: ANNEX A of external photos and ANNEX B of internal photos.

-----End of test report-----