

# FCC Test Report

**Test Report  
On Behalf of  
Guangdong Meiyisen Biotechnology Co., LTD  
For  
RC DRIFT RETURNS**

**Model No.: YL-102, YL-103, YL-102-1, YL-122-1, YL-103-1, YL-121-1,  
YL-123-1, YL-124-1**

**FCC ID: 2BNXY-YL-102**

**Prepared For: Guangdong Meiyisen Biotechnology Co., LTD**

**Room B086, 806, No. 662, Huangpu Avenue, Tianhe District, Guangzhou,  
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: Jul. 23, 2025 ~ Aug. 04, 2025**

**Date of Report: Aug. 04, 2025**

**Report Number: HK2507234036-E**

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## Test Result Certification

**Applicant's Name** ..... : Guangdong Meiyisen Biotechnology Co., LTD

Address ..... : Room B086, 806, No. 662, Huangpu Avenue, Tianhe District, Guangzhou, China

**Manufacturer's Name** ..... : Guangdong Meiyisen Biotechnology Co., LTD

Address ..... : Room B086, 806, No. 662, Huangpu Avenue, Tianhe District, Guangzhou, China

### Product Description

Trade Mark ..... : N/A

Product Name ..... : RC DRIFT RETURNS

Model and/or Type Reference... : YL-102, YL-103, YL-102-1, YL-122-1, YL-103-1, YL-121-1, YL-123-1, YL-124-1

### 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 ..... : Jul. 23, 2025 ~ Aug. 04, 2025

Date of Issue ..... : Aug. 04, 2025

Test Result ..... : Pass

Testing Engineer

len liao

(Len Liao)

Technical Manager

Sliver Wan

(Sliver Wan)

Authorized Signatory

Jason Zhou

(Jason Zhou)

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

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	Aug. 04, 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 DRIFT RETURNS
Model Name:	YL-102
Series Model(s):	YL-103, YL-102-1, YL-122-1, YL-103-1, YL-121-1, YL-123-1, YL-124-1
Model Difference:	All model's the function, software and electric circuit are the same, only the product accessories and model named different. Test sample model: YL-102.
FCC ID:	2BNXY-YL-102
Antenna Type:	Internal antenna
Antenna Gain:	0.59dBi
Operation Frequency:	2405-2475MHz
Number of Channels:	71CH
Modulation Type:	GFSK
Power Source:	DC3V from Battery
Power Rating:	DC3V from Battery
Note:	<p>1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.</p> <p>2. Antenna gain Refer to the antenna specifications.</p> <p>3. The cable loss data is obtained from the supplier.</p> <p>4. The test results in the report only apply to the tested sample.</p>

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## 2.2 Carrier Frequency of Channels

Channel	Frequency (MHz)						
1	2405	19	2423	37	2441	55	2459
2	2406	20	2424	38	2442	56	2460
3	2407	21	2425	39	2443	57	2461
4	2408	22	2426	40	2444	58	2462
5	2409	23	2427	41	2445	59	2463
6	2410	24	2428	42	2446	60	2464
7	2411	25	2429	43	2447	61	2465
8	2412	26	2430	44	2448	62	2466
9	2413	27	2431	45	2449	63	2467
10	2414	28	2432	46	2450	64	2468
11	2415	29	2433	47	2451	65	2469
12	2416	30	2434	48	2452	66	2470
13	2417	31	2435	49	2453	67	2471
14	2418	32	2436	50	2454	68	2472
15	2419	33	2437	51	2455	69	2473
16	2420	34	2438	52	2456	70	2474
17	2421	35	2439	53	2457	71	2475
18	2422	36	2440	54	2458		

## 2.3 Operation of EUT during Testing

## Operating Mode

The mode is used: **Transmitting mode**

Low Channel: 2405MHz

Middle Channel: 2440MHz

High Channel: 2475MHz





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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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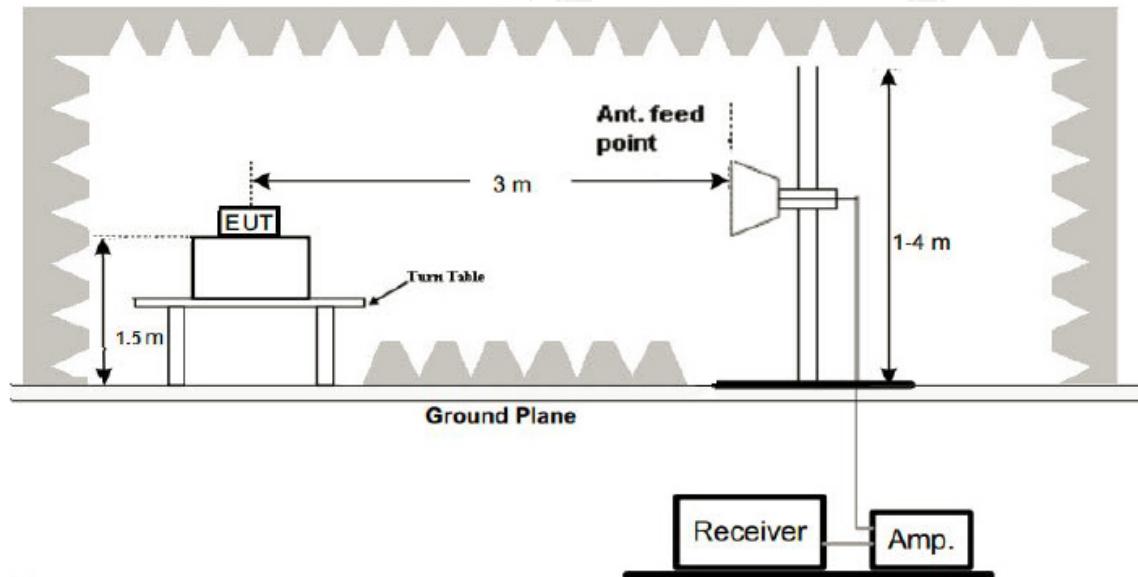
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### (3) Radiated Emission Test-Up Frequency Above 1GHz



### 4.3 Test Procedure

1. Below 1GHz measurement the EUT is placed on turntable which is 0.8m above ground plane. And above 1GHz measurement EUT was placed on low permittivity and low tangent turn table which is 1.5m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The test frequency range from 9KHz to 25GHz per FCC PART 15.33(a).

Note:

For battery operated equipment, the equipment tests shall be performed using a new battery.

### 4.4 Test Result

PASS

All the test modes completed for test. The worst case of Radiated Emission is CH 01; the test data of this mode was reported.

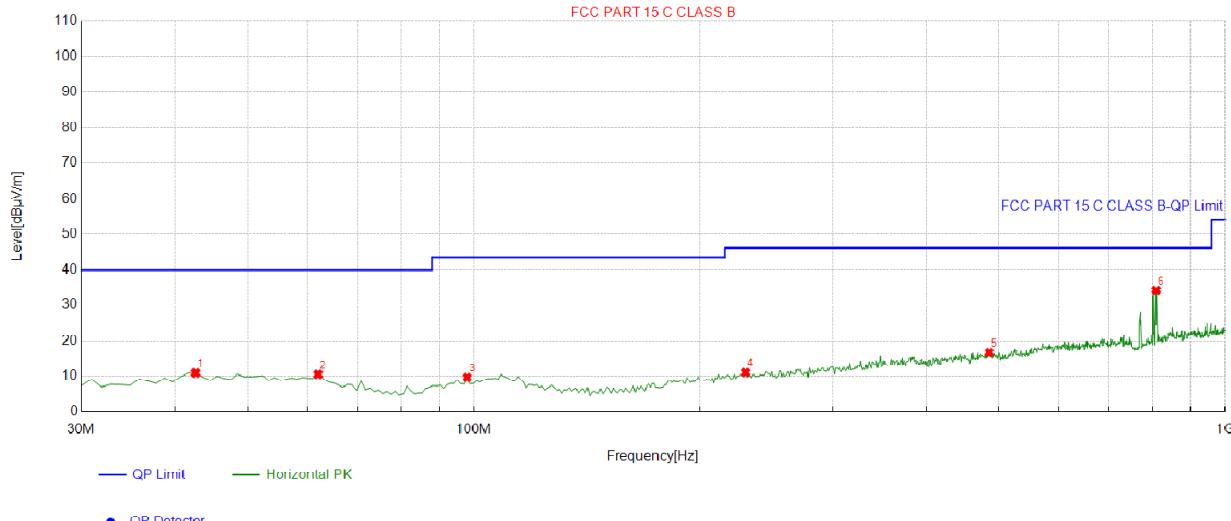
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## Below 1GHz Test Results:

### Antenna polarity: H



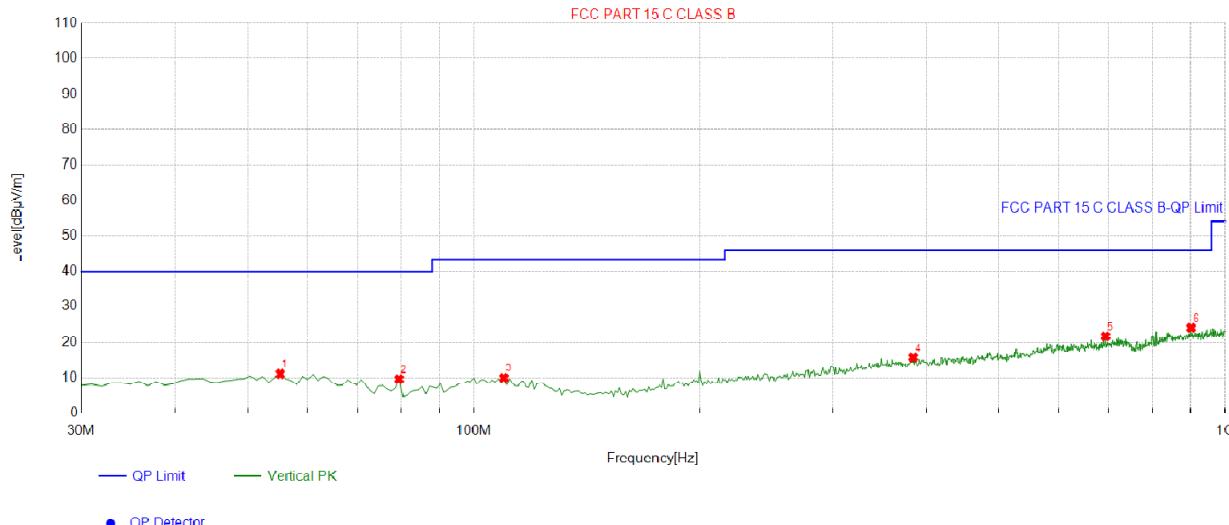
### Suspected List

NO.	Freq. [MHz]	Factor [dB]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	42.6226	-13.31	24.18	10.87	40.00	29.13	100	187	Horizontal
2	62.0420	-14.29	24.75	10.46	40.00	29.54	100	48	Horizontal
3	97.9680	-15.12	24.66	9.54	43.50	33.96	100	312	Horizontal
4	230.0200	-13.93	24.93	11.00	46.00	35.00	100	246	Horizontal
5	485.3854	-7.93	24.60	16.67	46.00	29.33	100	63	Horizontal
6	809.6897	-3.79	37.97	34.18	46.00	11.82	100	161	Horizontal

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



Antenna polarity: V



#### Suspected List

NO.	Freq. [MHz]	Factor [dB]	Reading [dB $\mu$ V/m]	Level [dB $\mu$ V/m]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	55.2452	-14.00	25.09	11.09	40.00	28.91	100	354	Vertical
2	79.5195	-18.01	27.69	9.68	40.00	30.32	100	230	Vertical
3	109.6196	-14.22	24.24	10.02	43.50	33.48	100	300	Vertical
4	384.4044	-9.06	24.70	15.64	46.00	30.36	100	105	Vertical
5	693.1732	-4.14	25.87	21.73	46.00	24.27	100	68	Vertical
6	900.9610	-1.06	25.18	24.12	46.00	21.88	100	6	Vertical

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

#### Harmonics and Spurious Emissions

##### Frequency Range (9 kHz-30MHz)

Frequency (MHz)	Level@3m (dB $\mu$ V/m)	Limit@3m (dB $\mu$ V/m)
--	--	--
--	--	--
--	--	--
--	--	--

**Note:** 1. Emission Level=Reading+ Cable loss+ Antenna factor-Amp factor.

2. The emission levels are 20 dB below the limit value, which are not reported. It is deemed to comply with the requirement.

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## Above 1 GHz Test Results

CH Low (2405MHz)

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
2405	100.23	-5.84	94.39	114	19.61	peak
2405	86.33	-5.84	80.49	94	13.51	AVG
4810	52.31	-3.64	48.67	74	25.33	peak
4810	42.18	-3.64	38.54	54	15.46	AVG
7215	52.24	-0.95	51.29	74	22.71	peak
7215	39.80	-0.95	38.85	54	15.15	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
2405	103.49	-5.84	97.65	114	16.35	peak
2405	88.56	-5.84	82.72	94	11.28	AVG
4810	51.21	-3.64	47.57	74	26.43	peak
4810	41.78	-3.64	38.14	54	15.86	AVG
7215	53.16	-0.95	52.21	74	21.79	peak
7215	41.43	-0.95	40.48	54	13.52	AVG

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

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CH Middle (2440MHz)

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)	
2440	104.85	-5.71	99.14	114	14.86	peak
2440	77.42	-5.71	71.71	94	22.29	AVG
4880	53.90	-3.51	50.39	74	23.61	peak
4880	42.94	-3.51	39.43	54	14.57	AVG
7320	51.26	-0.82	50.44	74	23.56	peak
7320	43.51	-0.82	42.69	54	11.31	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)	
2440	102.5	-5.71	96.79	114	17.21	peak
2440	79.26	-5.71	73.55	94	20.45	AVG
4880	53.69	-3.51	50.18	74	23.82	peak
4880	43.87	-3.51	40.36	54	13.64	AVG
7320	54.19	-0.82	53.37	74	20.63	peak
7320	44.57	-0.82	43.75	54	10.25	AVG

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

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CH High (2475MHz)

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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
2475	102.8	-5.65	97.15	114	16.85	peak
2475	83.14	-5.65	77.49	94	16.51	AVG
4950	53.75	-3.43	50.32	74	23.68	peak
4950	42.82	-3.43	39.39	54	14.61	AVG
7425	54.43	-0.75	53.68	74	20.32	peak
7425	39.60	-0.75	38.85	54	15.15	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
2475	103.99	-5.65	98.34	114	15.66	peak
2475	81.72	-5.65	76.07	94	17.93	AVG
4950	54.29	-3.43	50.86	74	23.14	peak
4950	45.18	-3.43	41.75	54	12.25	AVG
7425	52.94	-0.75	52.19	74	21.81	peak
7425	40.82	-0.75	40.07	54	13.93	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 73.16dB $\mu$ V/m(PK Value) < 93.98(AV Limit), at harmonic 53.20 dB $\mu$ V/m(PK Value) < 54 dB $\mu$ V/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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Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



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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 (2405MHz)

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	53.89	-5.81	48.08	74	25.92	peak
2310	/	-5.81	/	54	/	AVG
2390	55.36	-5.84	49.52	74	24.48	peak
2390	/	-5.84	/	54	/	AVG
2400	54.17	-5.84	48.33	74	25.67	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	56.26	-5.81	50.45	74	23.55	peak
2310	/	-5.81	/	54	/	AVG
2390	53.89	-5.84	48.05	74	25.95	peak
2390	/	-5.84	/	54	/	AVG
2400	54.29	-5.84	48.45	74	25.55	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 (2475MHz)

### Horizontal (Worst case):

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2483.50	56.2	-5.65	50.55	74	23.45	peak
2483.50	/	-5.65	/	54	/	AVG
2500.00	53.8	-5.65	48.15	74	25.85	peak
2500.00	/	-5.65	/	54	/	AVG

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

Vertical:

Frequency	Reading Result	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2483.50	53.92	-5.65	48.27	74	25.73	peak
2483.50	/	-5.65	/	54	/	AVG
2500.00	53.63	-5.65	47.98	74	26.02	peak
2500.00	/	-5.65	/	54	/	AVG

### 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.

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## 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

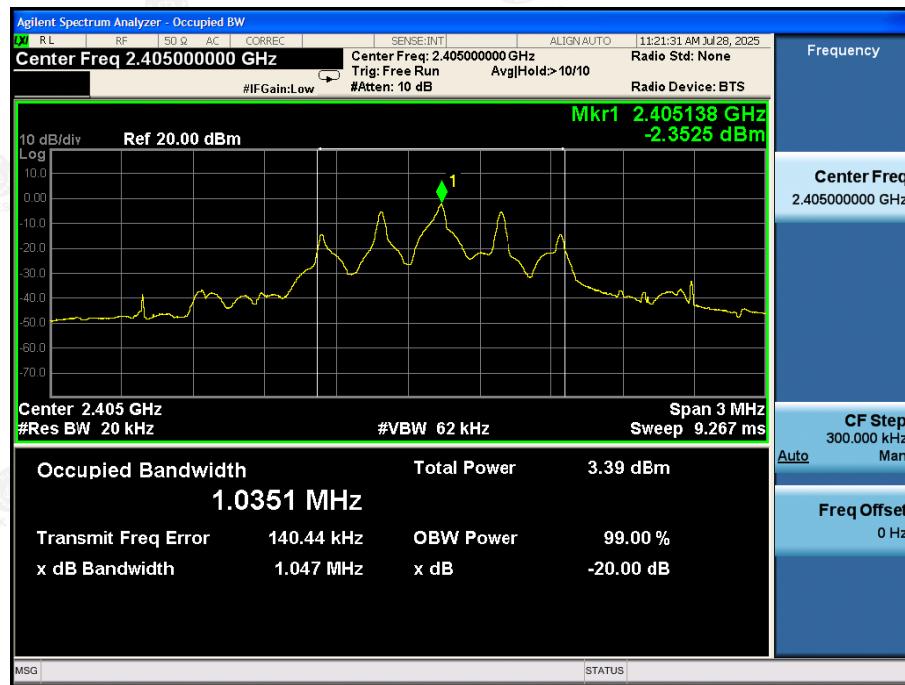
Same as Radiated Emission Measurement

## 6.4 Test Result

## PASS

Frequency HUAK TESTING	20dB Bandwidth HUAK TESTING (MHz)	Result
2405 MHz	1.047	<b>PASS</b>
2440 MHz	1.046	<b>PASS</b>
2475 MHz	1.048	<b>PASS</b>

CH: 2405MHz



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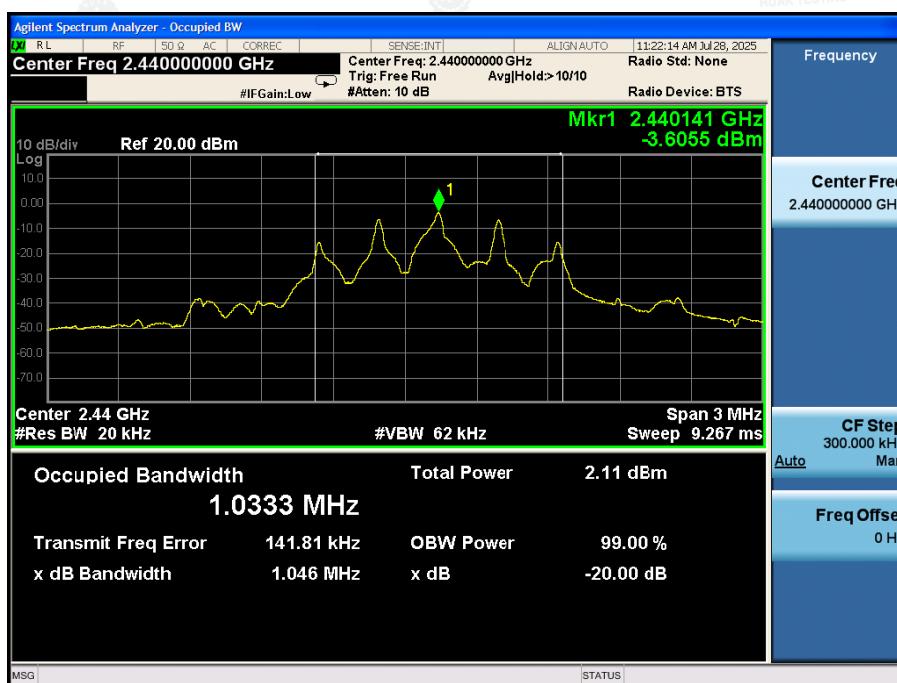
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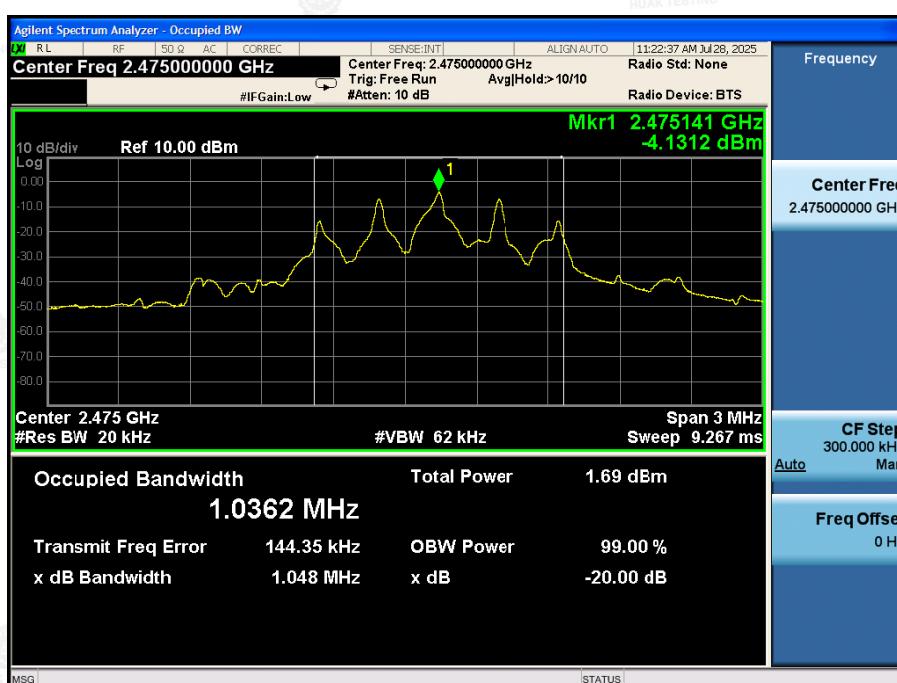
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CH: 2440MHz



CH: 2475MHz



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## 7. Antenna Requirement

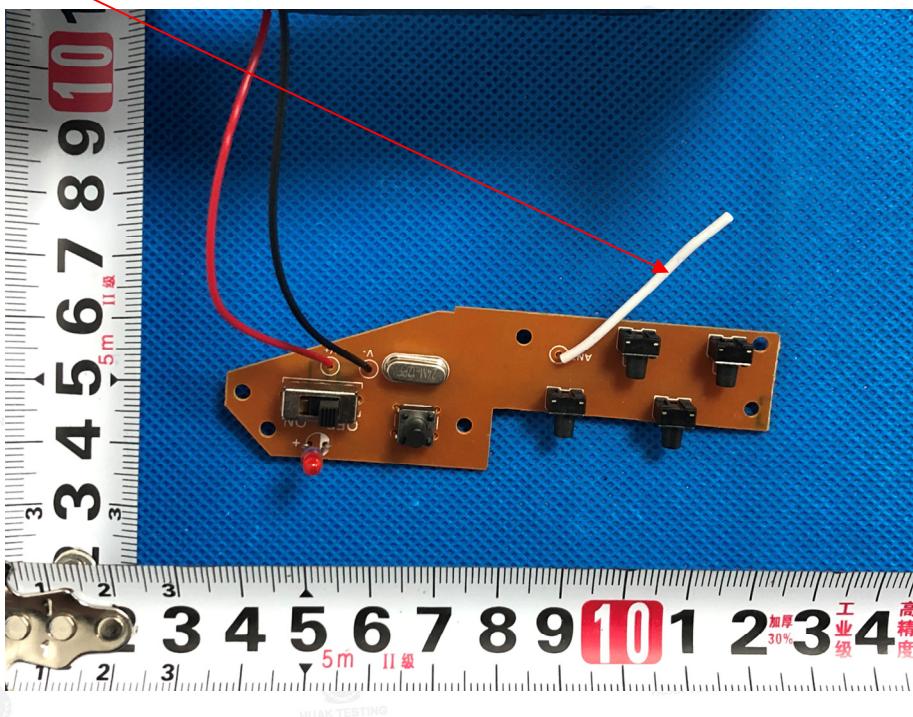
### Standard Applicable

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 0.59dBi.

#### Antenna



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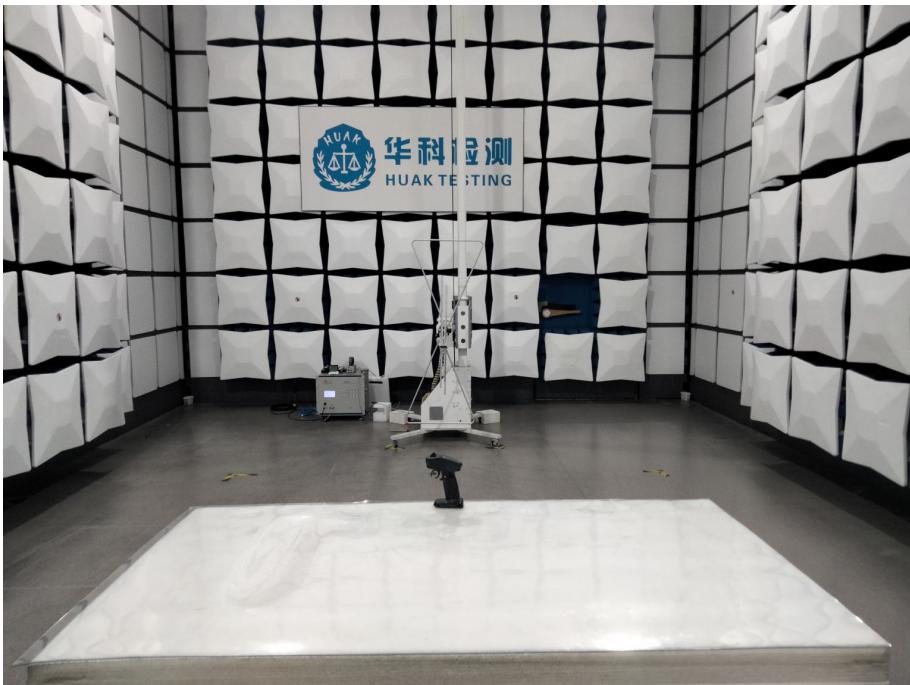


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## 8. Photographs of Test

### Radiated Emission





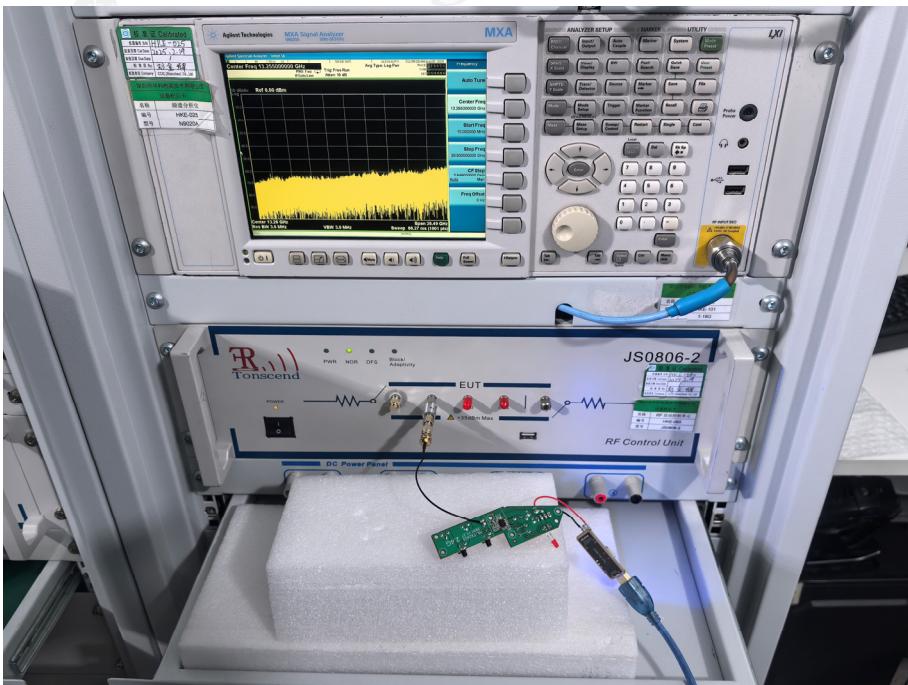
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### RF Conducted Emission



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## 9. Photos of the EUT

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

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



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