

# TEST REPORT

Report No.: BCTC2404377748E

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Applicant: Guangzhou Yeain Health Technology Co., Ltd

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Product Name: Wireless Control Wearing Jump Egg

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Test Model: YY622

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Tested Date: 2024-04-30 to 2024-05-13

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Issued Date: 2024-05-13

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**Shenzhen BCTC Testing Co., Ltd.**

## FCC ID: 2BGF2-YY622

Product Name: Wireless Control Wearing Jump Egg

Trademark: YEAIN

Model/Type Reference: YY622  
YY603, YY612, YY613YY633, YY638, YY640, YY641, YY642, YY643, YY646,  
YY647, YY812, YY813, YY814, YY815, YY943, YY956

Prepared For: Guangzhou Yeain Health Technology Co., Ltd

Address: 713, Huaying International, No. 323 Tongkang Road, Baiyun District, Guangzhou, China

Manufacturer: Guangzhou Yeain Health Technology Co., Ltd

Address: 713, Huaying International, No. 323 Tongkang Road, Baiyun District, Guangzhou, China

Prepared By: Shenzhen BCTC Testing Co., Ltd.

Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China.

Sample Received Date: 2024-04-30

Sample Tested Date: 2024-04-30 to 2024-05-13

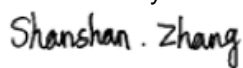
Issue Date: 2024-05-13

Report Number: BCTC2404377748E

Test Standards: FCC Part 15B  
ANSI C63.4:2014

Test Results: PASS

Tested by:



Shanshan. Zhang / Project Handler

Approved by:



Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

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(Note: N/A Means Not Applicable)

**1. Version**

Report No.	Issue Date	Description	Approved
BCTC2404377748E	2024-05-13	Original	Valid

## 2. Test Summary

The Product has been tested according to the following specifications:

Standard	Test Item	Test result
FCC Part 15B	Conducted Emission	Pass
FCC Part 15B	Radiated Emission	Pass



### 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)
Conducted Emission (150kHz-30MHz)	3.10
Radiated Emission(30MHz~200MHz)	4.60
Radiated Emission(200MHz~1000MHz)	5.20
Radiated spurious emission(1GHz-18GHz)	4.50

CO., LTD.

## 4. Product Information And Test Setup

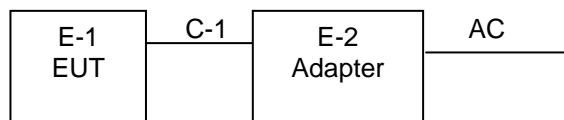
### 4.1 Product Information

Model/Type Reference:	YY622 YY603, YY612, YY613YY633, YY638, YY640, YY641, YY642, YY643, YY646, YY647, YY812, YY813, YY814, YY815, YY943, YY956
Model Differences:	All the models are the same circuit and RF module, except model names and appearance of the color.
Operation Frequency:	2402 MHz (The EUT is only a receiver)
Type of Modulation:	GFSK
Number Of Channel	1CH
Antenna installation:	Internal antenna
Antenna Gain:	0 dBi
Ratings:	DC 5V from adapter or DC 3.7V from battery
Remark:	The antenna gain of the product comes from the antenna report provided by the customer, and the test data is affected by the customer information.

### 4.2 Test Setup Configuration

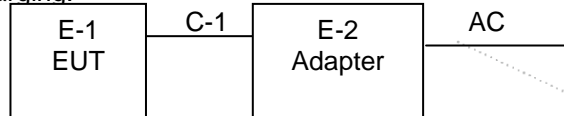
See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

Conducted Emission:

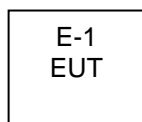


Radiated Spurious Emission:

Charging:



2.4G connect+Music mode:



### 4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
1.	ADAPTER	Hoco.	N18	---	---

#### 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.

### 4.4 Channel List

Channel List	
Channel	Frequency (MHz)
01	2402

### 4.5 Test Mode

Test item	Test Mode	Test Voltage
Conducted emissions from the AC mains power ports (150KHz-30MHz) <input checked="" type="checkbox"/> Class B	Charging	AC 120V/60Hz
Radiated emissions(30MHz-1GHz) <input checked="" type="checkbox"/> Class B	Charging	AC 120V/60Hz
	2.4G connect+Music mode	DC 3.7V
Radiated emissions(30MHz-1GHz) <input checked="" type="checkbox"/> Class B	Charging	AC 120V/60Hz
	2.4G connect+Music mode	DC 3.7V

## 5. Test Facility And Test Instrument Used

### 5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

### 5.2 Test Instrument Used

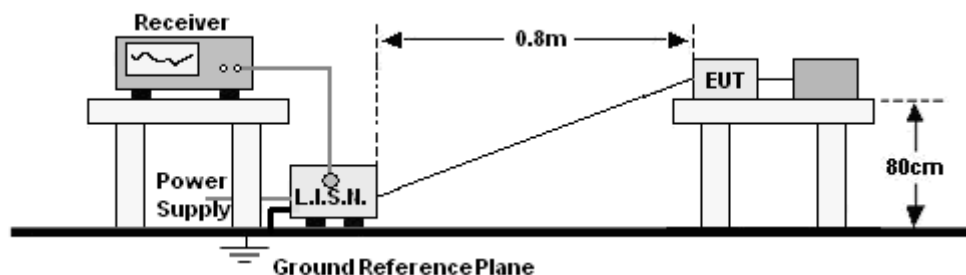
Conducted Emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR3	102075	May 15, 2023	May 14, 2024
LISN	R&S	ENV216	101375	May 15, 2023	May 14, 2024
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Pulse limiter	Schwarzbeck	VTSD 9561-F	01323	Sept. 22, 2023	Sept. 21, 2024

Radiated Emissions Test (966 Chamber#01)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	May 15, 2023	May 14, 2026
Receiver	R&S	ESRP	101154	May 15, 2023	May 14, 2024
Receiver	R&S	ESR3	102075	May 15, 2023	May 14, 2024
Amplifier	SKET	LAPA_01G1 8G-45dB	SK2021040901	May 15, 2023	May 14, 2024
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 15, 2023	May 14, 2024
TRILOG Broadband Antenna	schwarzbeck	VULB9163	942	May 29, 2023	May 28, 2024
Horn Antenna	schwarzbeck	BBHA9120D	1541	May 31, 2023	May 30, 2024
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

## 6. Conducted Emission At The Mains Terminals Test

### 6.1 Block Diagram Of Test Setup

For mains ports:



### 6.2 Limit

Limits for Class B devices

Frequency range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56*	56 to 46*
0,50 to 5	56	46
5 to 30	60	50

Notes:

1. \*Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

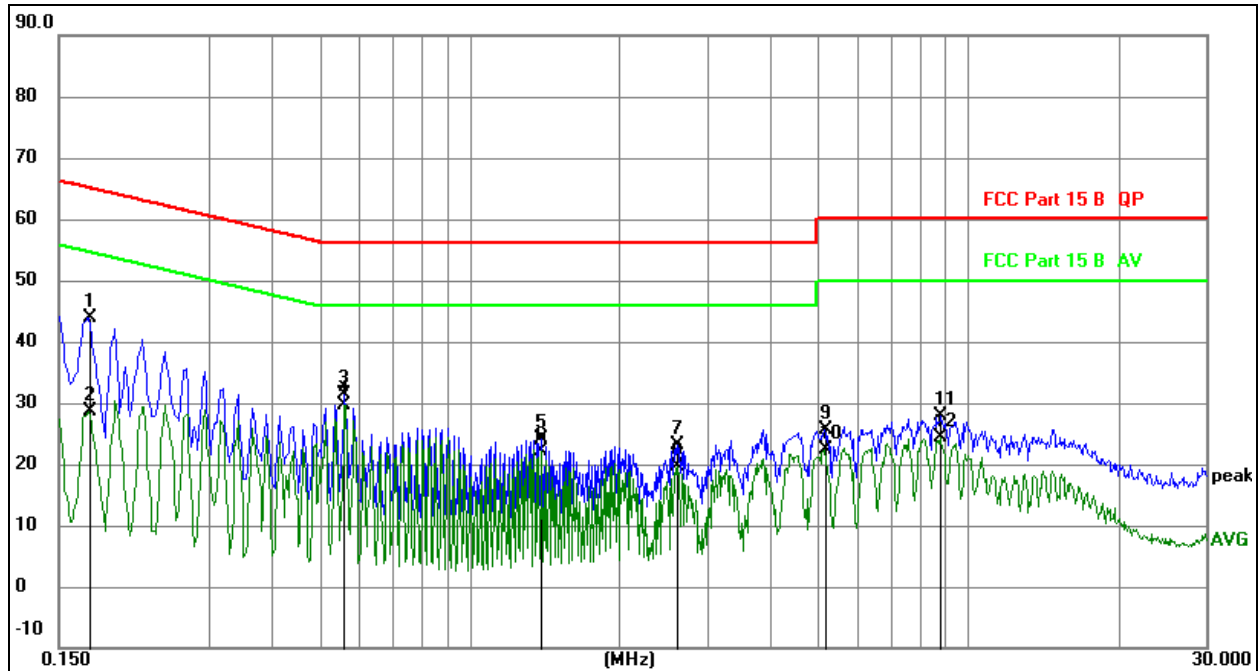
### 6.3 Test procedure

For mains ports:

- a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

## 6.4 Test Result

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Phase:	Line
Test Voltage :	AC 120V/60Hz	Test Mode:	Charging

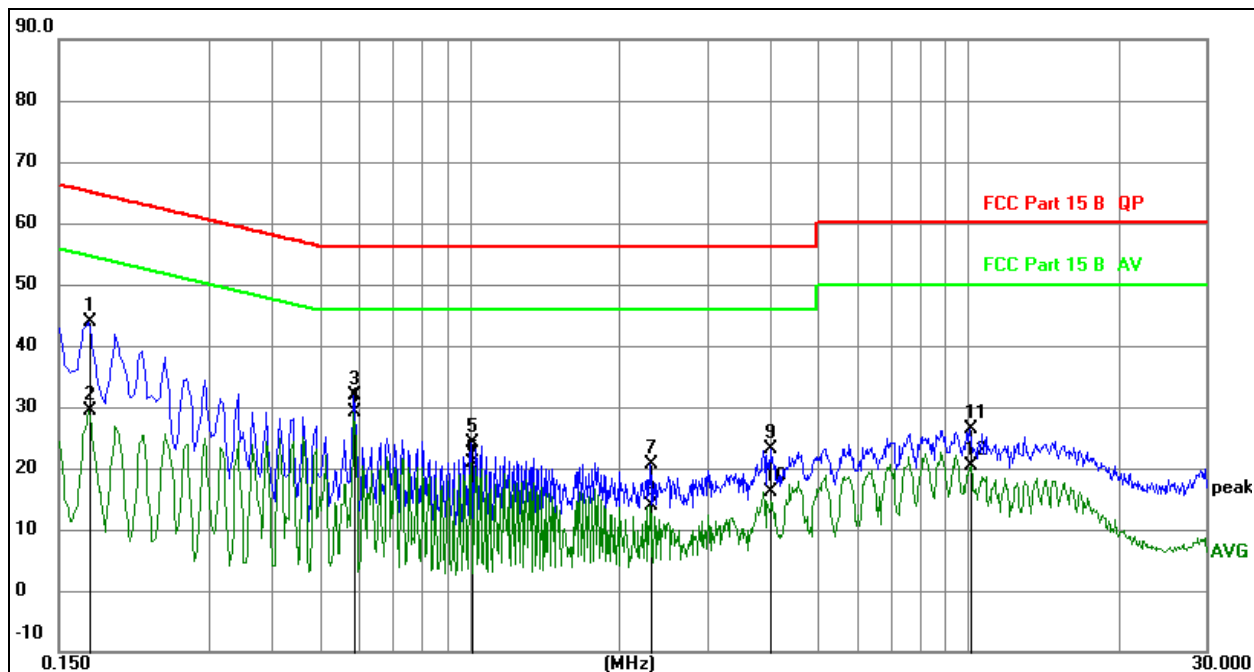


### Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.1722	24.21	19.77	43.98	64.85	-20.87	QP
2		0.1722	8.78	19.77	28.55	54.85	-26.30	AVG
3		0.5611	11.51	19.84	31.35	56.00	-24.65	QP
4	*	0.5611	9.87	19.84	29.71	46.00	-16.29	AVG
5		1.3958	4.14	19.95	24.09	56.00	-31.91	QP
6		1.3958	2.08	19.95	22.03	46.00	-23.97	AVG
7		2.6082	2.90	20.17	23.07	56.00	-32.93	QP
8		2.6082	-0.65	20.17	19.52	46.00	-26.48	AVG
9		5.1390	5.29	20.39	25.68	60.00	-34.32	QP
10		5.1390	1.91	20.39	22.30	50.00	-27.70	AVG
11		8.8223	7.99	19.91	27.90	60.00	-32.10	QP
12		8.8223	4.38	19.91	24.29	50.00	-25.71	AVG

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Phase:	Neutral
Test Voltage :	AC 120V/60Hz	Test Mode:	Charging



Remark:

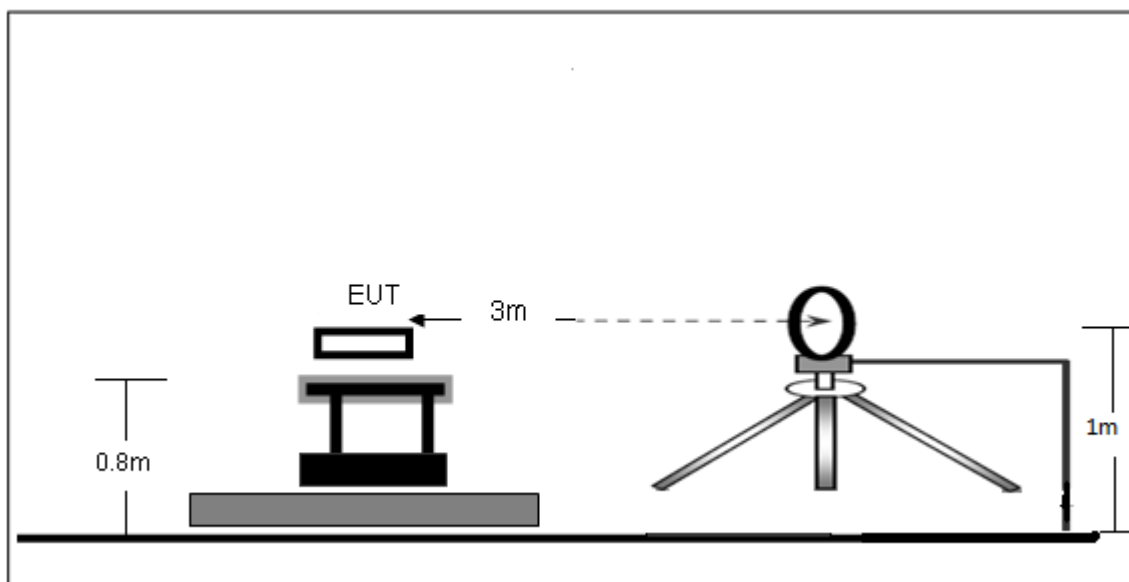
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq. MHz	Reading Level dB	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1725	24.11	19.78	43.89	64.84	-20.95	QP
2		0.1725	9.58	19.78	29.36	54.84	-25.48	AVG
3		0.5865	11.96	19.84	31.80	56.00	-24.20	QP
4	*	0.5865	9.33	19.84	29.17	46.00	-16.83	AVG
5		1.0050	4.18	19.95	24.13	56.00	-31.87	QP
6		1.0050	1.01	19.95	20.96	46.00	-25.04	AVG
7		2.3010	0.49	20.06	20.55	56.00	-35.45	QP
8		2.3010	-6.12	20.06	13.94	46.00	-32.06	AVG
9		4.0155	2.51	20.66	23.17	56.00	-32.83	QP
10		4.0155	-4.60	20.66	16.06	46.00	-29.94	AVG
11		10.0905	6.39	19.88	26.27	60.00	-33.73	QP
12		10.0905	0.42	19.88	20.30	50.00	-29.70	AVG

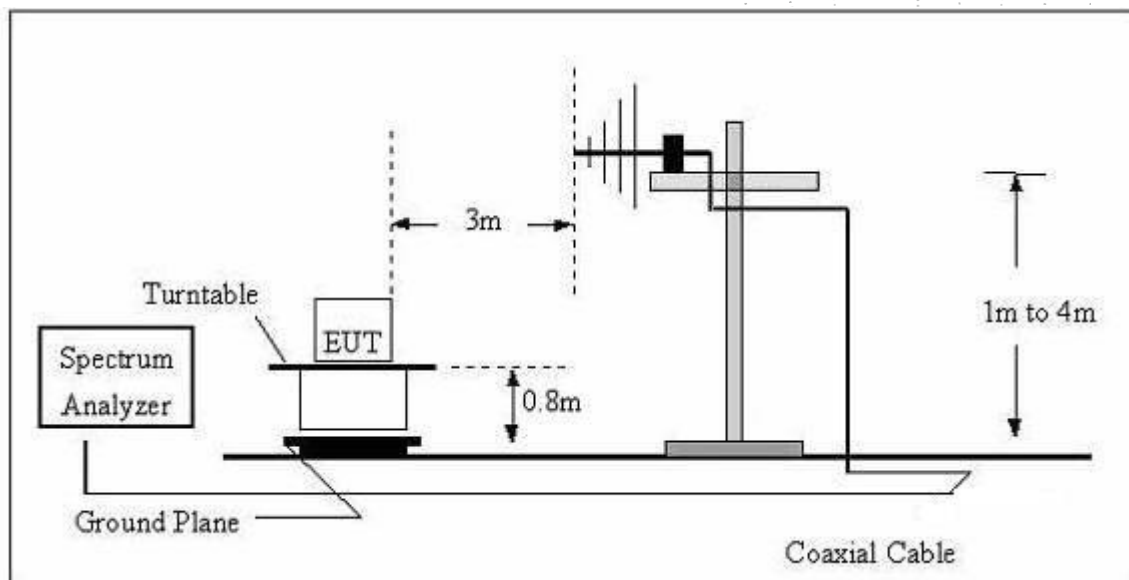
## 7. Radiation Emission Test

### 7.1 Block Diagram Of Test Setup

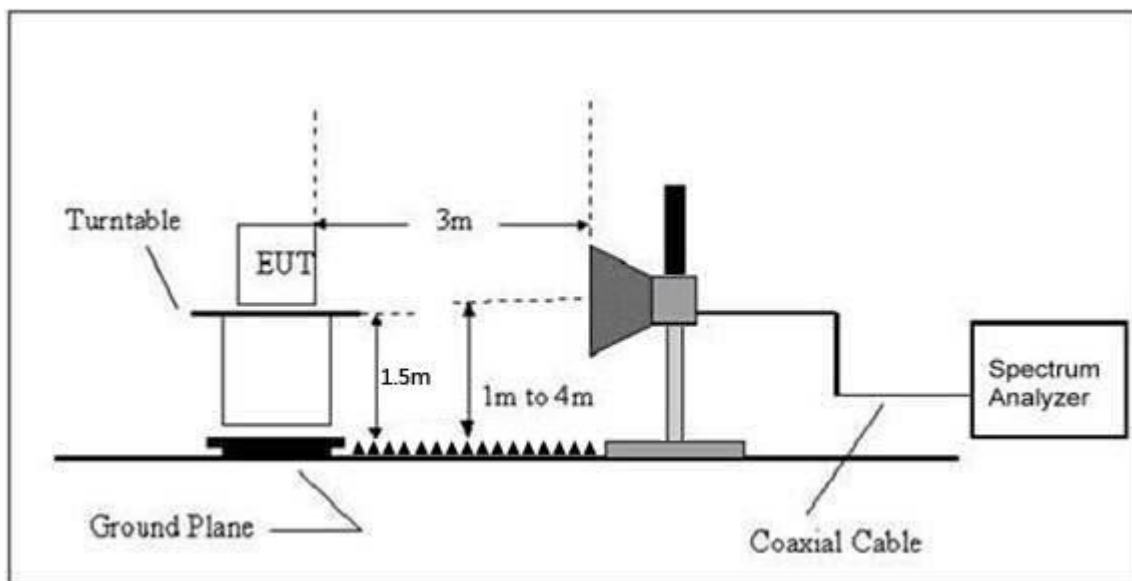
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



## 7.2 Limit

Limits for Class B devices

Frequency (MHz)	limits at 3m dB(μV/m)		
	QP Detector	PK Detector	AV Detector
30-88	40.0	--	--
88-216	43.5	--	--
216-960	46.0	--	--
960 to 1000	54.0	--	--
Above 1000	--	74.0	54.0

**Note:** The lower limit shall apply at the transition frequencies.

## 7.3 Test Procedure

Receiver Parameter	Setting
Attenuation	Auto
9kHz~150kHz	RBW 200Hz for QP
150kHz~30MHz	RBW 9kHz for QP
30MHz~1000MHz	RBW 120kHz for QP

Spectrum Parameter	Setting
1-25GHz	RBW 1 MHz /VBW 1 MHz for Peak, RBW 1 MHz / VBW 10Hz for Average

**30MHz ~ 1GHz:**

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

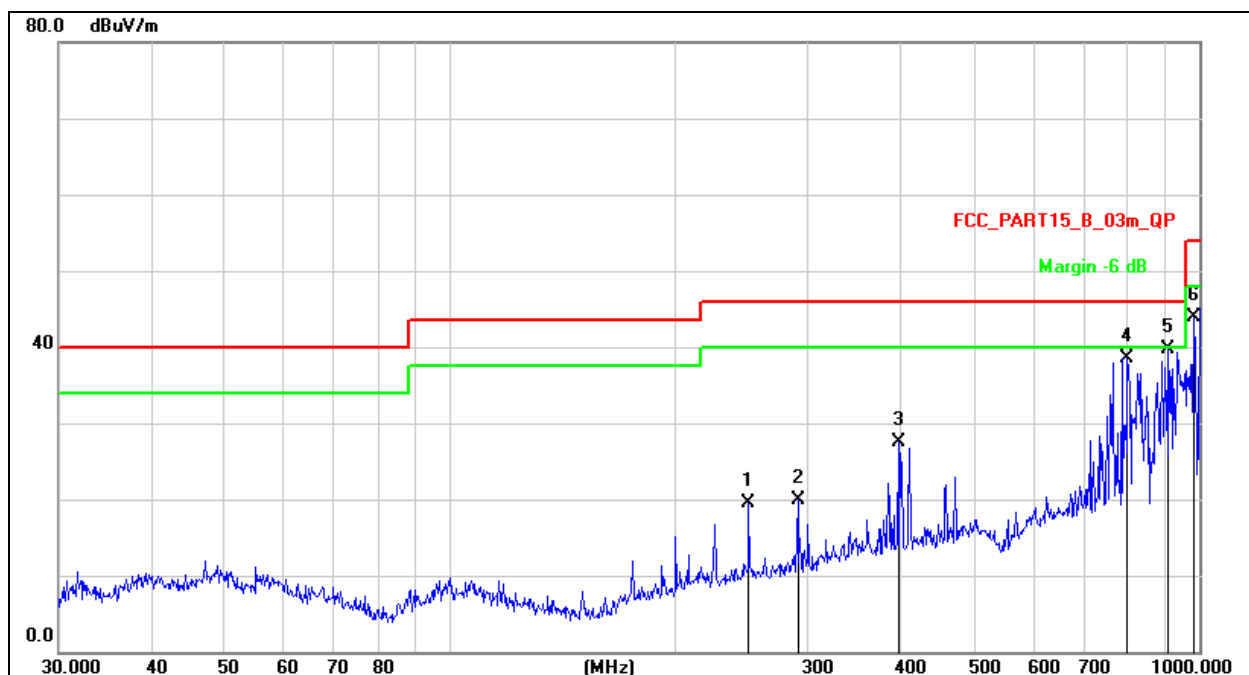
**Above 1GHz:**

- a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
  - b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
  - c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
  - d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
  - e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
  - f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
  - g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- Note:  
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

**7.4 Test Result****Note:**

1. All test modes were tested and passed; only the worst case mode were recorded in this report.
2. The amplitude of above 1GHz which are attenuated by more than 20dB below the permissible value has no need to be reported.

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Phase:	Horizontal
Test Voltage :	DC 3.7V	Test Mode:	The worst data (2.4G connect+Music mode)



Remark:

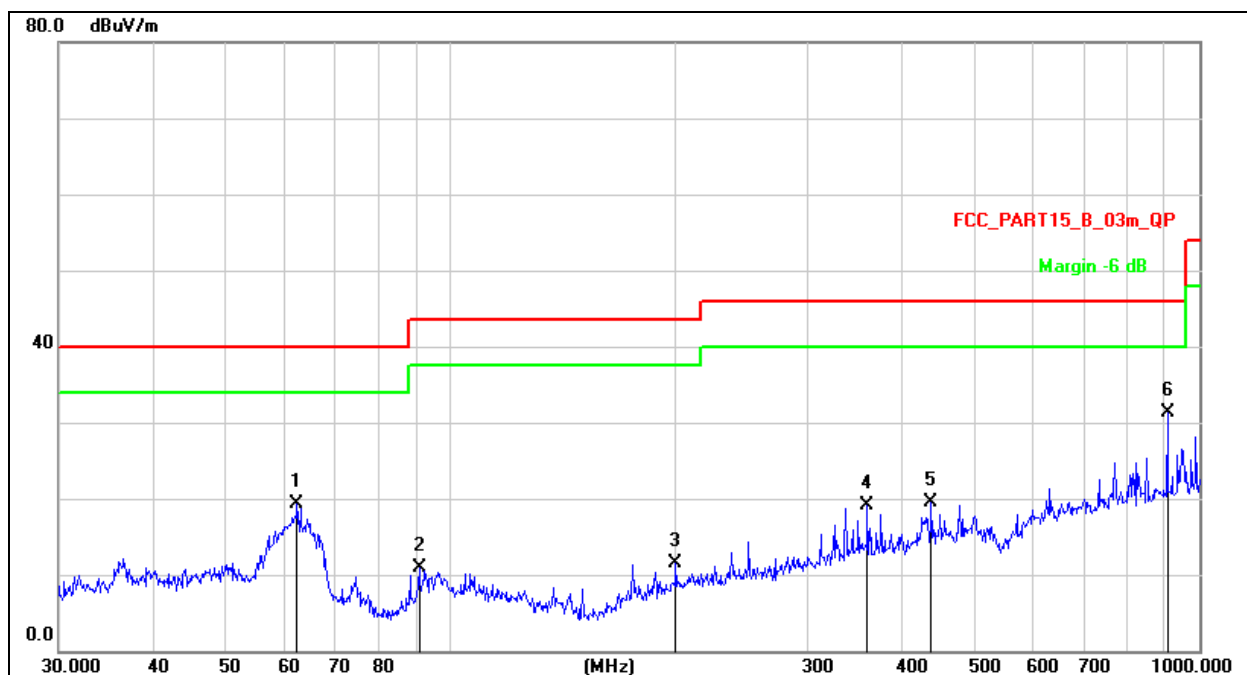
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

2. Measurement = Reading Level + Correct Factor

3. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		250.3012	33.76	-14.28	19.48	46.00	-26.52	QP
2		291.0360	33.33	-13.43	19.90	46.00	-26.10	QP
3		396.2415	38.46	-10.89	27.57	46.00	-18.43	QP
4		801.7863	42.97	-4.38	38.59	46.00	-7.41	QP
5	*	906.4824	42.84	-3.10	39.74	46.00	-6.26	QP
6		982.6200	46.43	-2.56	43.87	54.00	-10.13	QP

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Phase:	Vertical
Test Voltage :	DC 3.7V	Test Mode:	The worst data (2.4G connect+Music mode)



Remark:

- Factor = Antenna Factor + Cable Loss – Pre-amplifier.
- Measurement = Reading Level + Correct Factor
- Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		62.4314	35.17	-15.92	19.25	40.00	-20.75	QP
2		90.8554	28.09	-17.27	10.82	43.50	-32.68	QP
3		199.9856	27.20	-15.72	11.48	43.50	-32.02	QP
4		360.4476	30.49	-11.35	19.14	46.00	-26.86	QP
5		438.6554	29.59	-10.08	19.51	46.00	-26.49	QP
6	*	906.4824	34.46	-3.10	31.36	46.00	-14.64	QP

## 8. EUT Photographs

EUT Photo



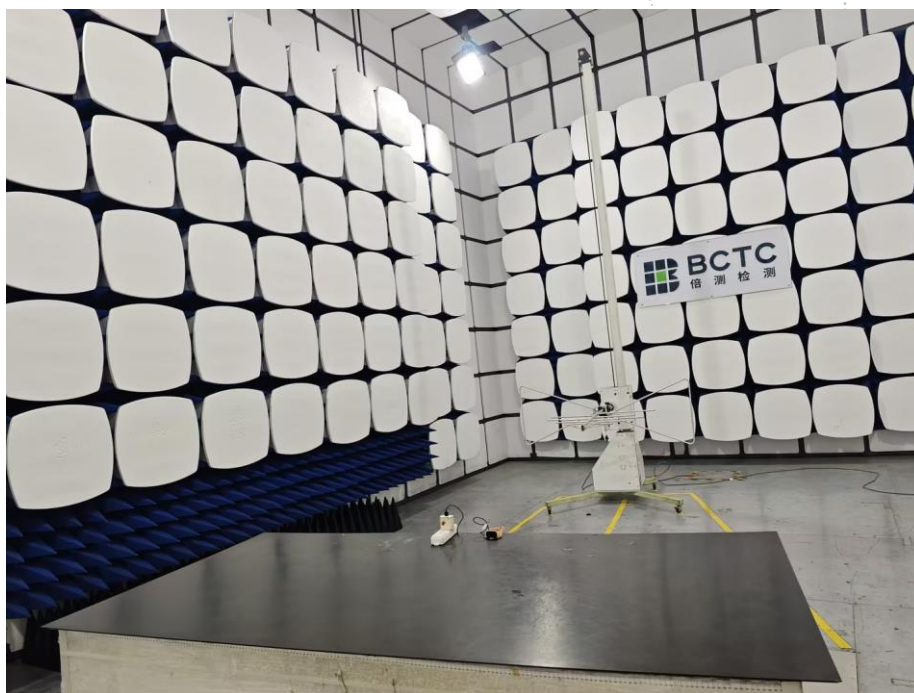
NOTE: Appendix-Photographs Of EUT Constructional Details

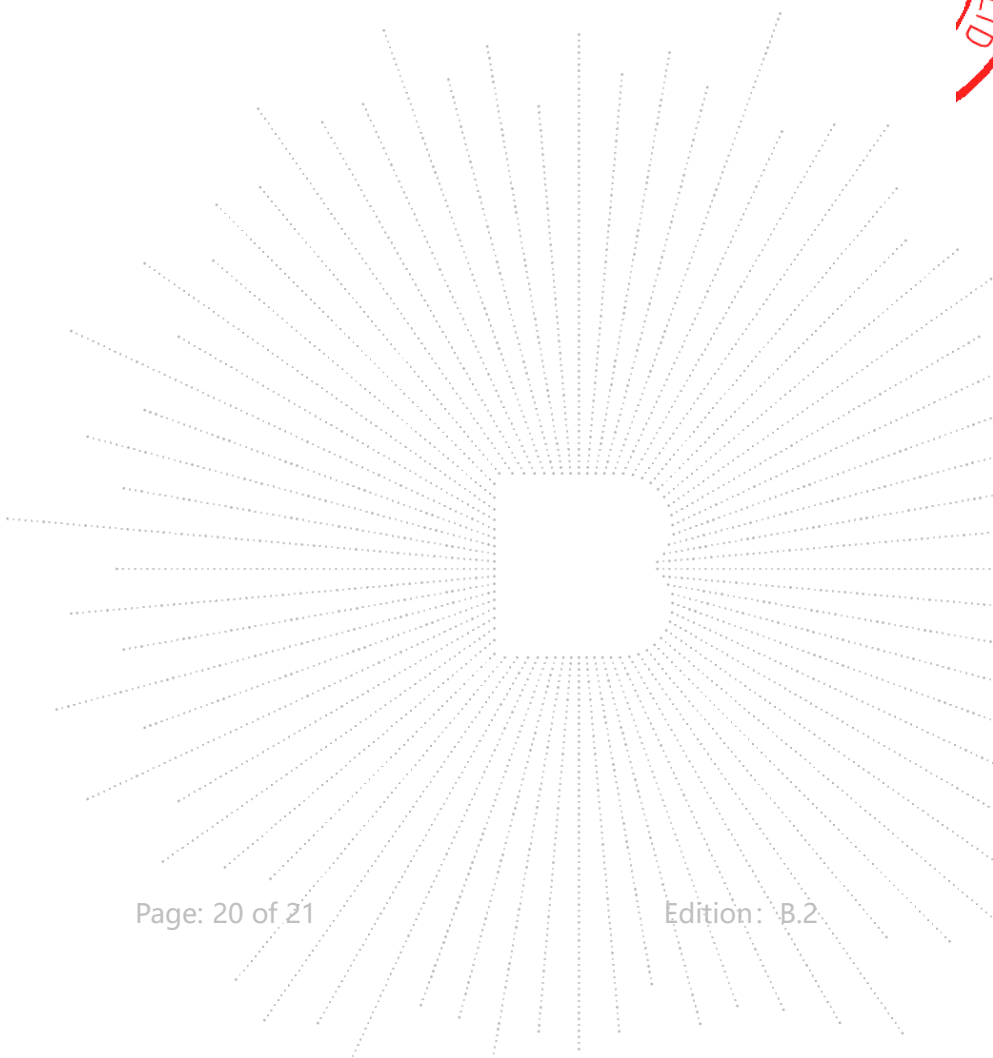
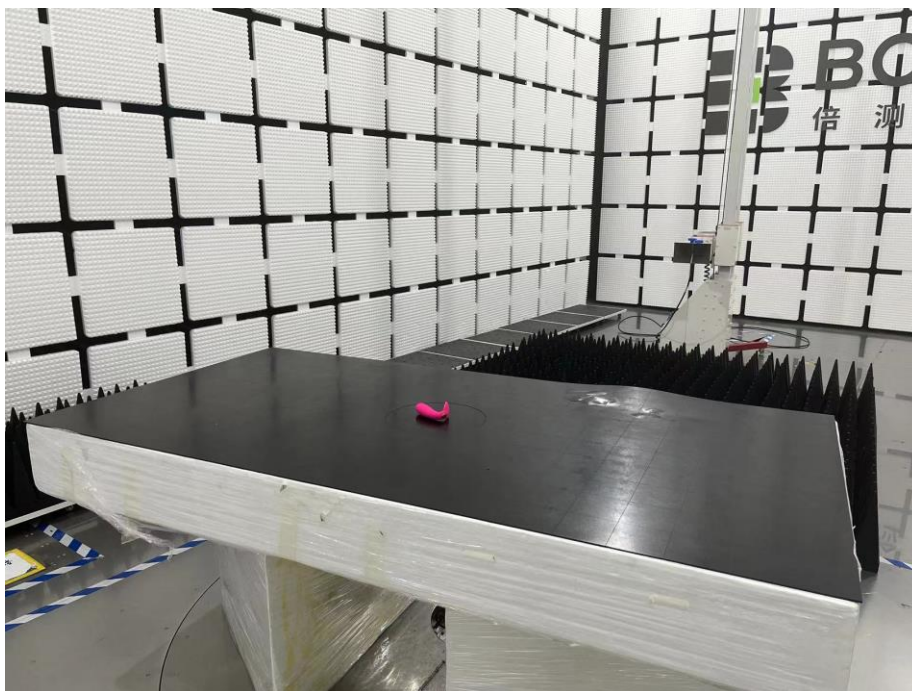
## 9. EUT Test Setup Photographs

### Conducted Emission



### Radiated Emission





**STATEMENT**

1. The equipment lists are traceable to the national reference standards.
2. The test report can not be partially copied unless prior written approval is issued from our lab.
3. The test report is invalid without the "special seal for inspection and testing".
4. The test report is invalid without the signature of the approver.
5. The test process and test result is only related to the Unit Under Test.
6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
7. The quality system of our laboratory is in accordance with ISO/IEC17025.
8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

## Address:

1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

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P.C.: 518103

FAX: 0755-33229357

Website: <http://www.chnbctc.com>Consultation E-mail: [bctc@bctc-lab.com.cn](mailto:bctc@bctc-lab.com.cn)Complaint/Advice E-mail: [advice@bctc-lab.com.cn](mailto:advice@bctc-lab.com.cn)

\*\*\*\*\* END \*\*\*\*\*

2017