RF Test Report

For

Applicant name:	**Zhenjiang Peixianziji E-commerce Co., Ltd.**
Address:	Room 301-5, 3rd Floor, Yicheng Innovation Park, No. 69 Guyang Middle Avenue, Xincheng, Dantu District, Zhenjiang, Jiangsu, China
EUT name:	Aphrodite
Brand name:	N/A
Model number:	YS078
Series model number:	N/A
FCC ID:	2BSZW-YS078

Issued By

Company name:	**BTF Testing Lab (Shenzhen) Co., Ltd.**
Address:	Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Report number:	BTF251020R00302
Test standards:	47 CFR Part 15.247
Test conclusion:	Pass
Date of sample receipt:	2025-10-20
Test date:	2025-10-20 to 2025-10-27
Date of issue:	2025-11-21

Prepared by: Chris Liu

Chris.Liu / Project engineer

Approved by:

Ryan.CJ / EMC Manager

Note: All the test results in this report only related to the testing samples. Which can be duplicated completely for the legal use with approval of applicant; it shall not be reproduced except in full without the written approval of BTF Testing Lab (Shenzhen) Co., Ltd., All the objections should be raised within thirty days from the date of issue. To validate the report, you can contact us.

BTF Testing Lab (Shenzhen) Co., Ltd.

Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China

Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

Revision History		
Version	Issue Date	Revisions Content
R_V0	2025-11-21	Original

Note:
Once the revision has been made, then previous versions reports are invalid.

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

Table of Contents

1 Introduction 4
1.1 Laboratory Location 4
1.2 Laboratory Facility 4
1.3 Announcement 4
2 Product Information 5
2.1 Application Information 5
2.2 Manufacturer Information 5
2.3 Factory Information 5
2.4 General Description of Equipment under Test (EUT) 5
2.5 Technical Information 5
3 Summary of Test Results 6
3.1 Test Standards 6
3.2 Uncertainty of Test 6
3.3 Summary of Test Result 6
3.4 Additions to, deviations, or exclusions from the method 7
4 Test Configuration 8
4.1 Test Equipment List 8
4.2 Test Auxiliary Equipment 9
4.3 Test Modes 9
4.4 Test Channel of EUT 9
4.5 Test software 10
5 Evaluation Results (Evaluation) 11
5.1 Antenna requirement 11
6 Radio Spectrum Matter Test Results (RF) 11
6.1 Conducted Emission at AC power line 11
6.1.1 Test Data 13
6.2 6dB Bandwidth 15
6.2.1 Test Data 16
6.3 Maximum Conducted Output Power 17
6.3.1 Test Data 17
6.4 Power Spectral Density 18
6.4.1 Test Data 18
6.5 Emissions in non-restricted frequency bands 19
6.5.1 Test Data 19
6.6 Band edge emissions (Radiated) 20
6.6.1 Test Data 21
6.7 Emissions in frequency bands (below 1GHz) 22
6.7.1 Test Data 23
6.8 Emissions in frequency bands (above 1GHz) 25
6.8.1 Test Data 26
7 Test Setup Photos 28
8 EUT Constructional Details (EUT Photos) 28

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

1 Introduction

1.1 Laboratory Location

Test location:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Phone number:	+86-0755-23146130
Fax number:	+86-0755-23146130

1.2 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Designation No.: CN1409**
  BTF Testing Lab (Shenzhen) Co., Ltd. has been accredited as a testing laboratory by FCC (Federal Communications Commission). The test firm Registration No. is 695374.
- **CNAS - Registration No.: CNAS L17568**
  BTF Testing Lab (Shenzhen) Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L17568.
- **A2LA - Registration No.: 6660.01**
  BTF Testing Lab (Shenzhen) Co., Ltd. is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories.

1.3 Announcement

(1) The test report reference to the report template version v0.
(2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
(3) The test report is invalid if there is any evidence and/or falsification.
(4) This document may not be altered or revised in any way unless done so by BTF and all revisions are duly noted in the revisions section.
(5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
(6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.
(7) All entrusted information in this report is provided by the client and has been confirmed through consultation with the client; The testing items for this report have been discussed and confirmed with the client, and our company is only responsible for the content reflected in the report.

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

2 Product Information

2.1 Application Information

Company name:	Zhenjiang Peixianziji E-commerce Co., Ltd.
Address:	Room 301-5, 3rd Floor, Yicheng Innovation Park, No. 69 Guyang Middle Avenue, Xincheng, Dantu District, Zhenjiang, Jiangsu, China

2.2 Manufacturer Information

Company name:	Dongguan Yishuo Electronic Technology Co., Ltd.
Address:	Building 9, Shichong Industrial Zone, Hengli Town, Dongguan City.

2.3 Factory Information

Company name:	Dongguan Yishuo Electronic Technology Co., Ltd.
Address:	Building 9, Shichong Industrial Zone, Hengli Town, Dongguan City.

2.4 General Description of Equipment under Test (EUT)

EUT name:	Aphrodite
Under test model name:	YS078
Series model name:	N/A
Description of model name differentiation:	N/A
Hardware version:	N/A
Software version:	N/A
Rating:	INPUT<Battery>: 3.7V 800mAh 2.96Wh

2.5 Technical Information

Operation Frequency:	2402MHz to 2480MHz
Channel numbers:	40
Channel separation:	2MHz
Modulation technology:	GFSK
Max. E.I.R.P Power:	-0.13dBm
Antenna type:	Internal Antenna
Antenna gain:	0dBi (declare by Applicant)

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

3 Summary of Test Results

3.1 Test Standards

The tests were performed according to following standards:
47 CFR Part 15.247: Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

3.2 Uncertainty of Test

Measurement	Value
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±1.5 dB
Power Spectral Density, conducted	±3.0 dB
Unwanted Emissions, conducted	±3.0 dB
Supply voltages	±3 %
Time	±5 %
Conducted Emission for LISN (9kHz ~ 150kHz)	±2.97 dB
Conducted Emission for LISN (150kHz ~ 30MHz)	±2.45 dB
Radiated Emission (30MHz ~ 1000MHz)	±4.80 dB
Radiated Emission (1GHz ~ 18GHz)	±4.82 dB
The following measurement uncertainty levels have been estimated for tests performed on the EUT 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.	

3.3 Summary of Test Result

Item	Standard	Requirement	Result
Antenna requirement	47 CFR Part 15.247	47 CFR 15.203	Pass
Conducted Emission at AC power line	47 CFR Part 15.247	47 CFR 15.207(a)	Pass
6dB Bandwidth	47 CFR Part 15.247	47 CFR 15.247(a)(2)	Pass
Maximum Conducted Output Power	47 CFR Part 15.247	47 CFR 15.247(b)(3)	Pass
Power Spectral Density	47 CFR Part 15.247	47 CFR 15.247(e)	Pass
Emissions in non-restricted frequency bands	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Band edge emissions (Radiated)	47 CFR Part 15.247	47 CFR 15.247(d), 15.209, 15.205	Pass
Emissions in frequency bands (below 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d), 15.209, 15.205	Pass
Emissions in frequency bands (above 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d), 15.209, 15.205	Pass
Remark: *1. Pass: Meet the requirements.* *2. N/A: not applicable.*			

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

3.4 Additions to, deviations, or exclusions from the method

None

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

4 Test Configuration

4.1 Test Equipment List

Conducted Emission at AC power line					
Test Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Test Software	Frad	EZ_EMC	Version: EMC-CON 3A1.1+	/	/
EMI Receiver	Rohde & Schwarz	ESCI3	101422	2025-10-17	2026-10-16
V-LISN	Schwarzbeck	NSLK 8127	01073	2025-08-23	2026-08-22
Coaxial Switcher	Schwarzbeck	CX210	CX210	/	/
Pulse Limiter	Schwarzbeck	VTSD 9561-F	00953	/	/
LISN-Cable	REBES Talent	LISN9K30M	21101580	2025-08-23	2026-08-22

6dB Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in non-restricted frequency bands					
Test Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Test Software	TST Pass	/	Version: 2.0	/	/
Cell Site Test Set	HP	8921A	US35010158	2025-10-17	2026-10-16
Spectrum Analyzer	Keysight	N9020A	MY50410020	2025-10-17	2026-10-16
ESG Vector Signal Generator	Agilent	E4438C	MY45094854	2025-10-17	2026-10-16
MXG Vector Signal Generator	Agilent	N5182A	MY46240163	2025-10-17	2026-10-16
Wideband Radio Communication Tester	Rohde&Schwarz	CMW500	161997	2025-10-17	2026-10-16
Programmable Constant Temperature And Humidity Test Chamber	ZZCKONG	ZZ-K02A	20210928007	2025-10-17	2026-10-16
DC Power Supply	Tongmen	etm-6050c	20211026123	2025-10-17	2026-10-16
RF Control Unit	Techy	TR1029-1	/	2025-10-17	2026-10-16
RF Sensor Unit	Techy	TR1029-2	/	2025-10-17	2026-10-16
RF shielding box	Yinuoxin Electronics	50*50*50 cm	/	2025-05-26	2026-05-25

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

Band edge emissions (Radiated) Emissions in frequency bands (below 1GHz) Emissions in frequency bands (above 1GHz)					
Test Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Test Software	Frad	EZ_EMC	Version: FA-03A2 RE+	/	/
EMI Receiver	Rohde & Schwarz	ESCI7	101032	2025-10-17	2026-10-16
Signal Analyzer	Rohde & Schwarz	FSQ40	100010	2025-10-17	2026-10-16
Log periodic antenna	Schwarzbeck	VULB 9168	01328	2025-10-18	2026-10-17
Preamplifier (30MHz ~ 1GHz)	Schwarzbeck	BBV9744	00246	2025-05-26	2026-05-25
BELOW-Cable	REBES Talent	9K1G	21101576	2025-08-23	2026-08-22
Horn Antenna	Schwarzbeck	BBHA9120D	2597	2025-10-18	2026-10-17
Preamplifier (1GHz ~ 18GHz)	Schwarzbeck	BBV9718D	00008	2025-10-18	2026-10-17
Preamplifier	TSTPASS	LNA10180G45	TS2215007	2025-05-26	2026-05-25
ABOVE-Cable	REBES Talent	1~18G	21101558	2025-08-23	2026-08-22
Horn Antenna	SCHWARZBECK	BBHA9170	1157	2025-10-18	2026-10-17
Low Noise Pre-amplifier	Sket	LNPA_1840G-50	SK2022032902	2025-10-17	2026-10-16
ABOVE-Cable2	REBES Talent	18~40G	21101686	2025-08-23	2026-08-22
ABOVE-Cable1	REBES Talent	18~40G	21101687	2025-08-23	2026-08-22

4.2 Test Auxiliary Equipment

The EUT has been tested as an independent unit.

4.3 Test Modes

No.	Test Modes
TM1	TX mode

4.4 Test Channel of EUT

Operation Band: 2400-2483.5 MHz

Bandwidth (MHz)	Lowest Channel (LCH) (MHz)	Middle Channel (MCH) (MHz)	Highest Channel (HCH) (MHz)
1	2402	2440	2480
2	2402	2440	2480

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

4.5 Test software

Test software:	Version:	Power Class:
FCC_assist_1.0.2.2.exe	1.0.2.2	10

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

5 Evaluation Results (Evaluation)

5.1 Antenna requirement

§15.203 requirement:

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

§15.247(b) (4) requirement:

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

E.U.T Antenna:	The Bluetooth antenna is an internal antenna which permanently attached, and the best case gain of the antenna is 0 dBi. See product internal photos for details.

6 Radio Spectrum Matter Test Results (RF)

6.1 Conducted Emission at AC power line

Test Requirement:	Refer to 47 CFR 15.207(a), Except as shown in paragraphs (b)and (c)of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN).
Test Method:	ANSI C63.10-2020 section 6.2
Test Limit:	

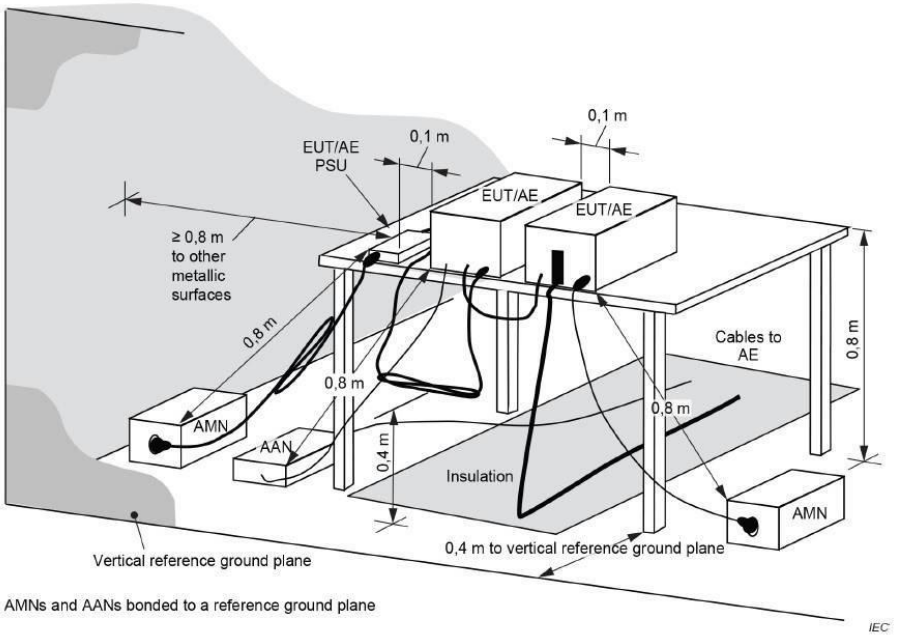
Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

Procedure:	Refer to ANSI C63.10-2020 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

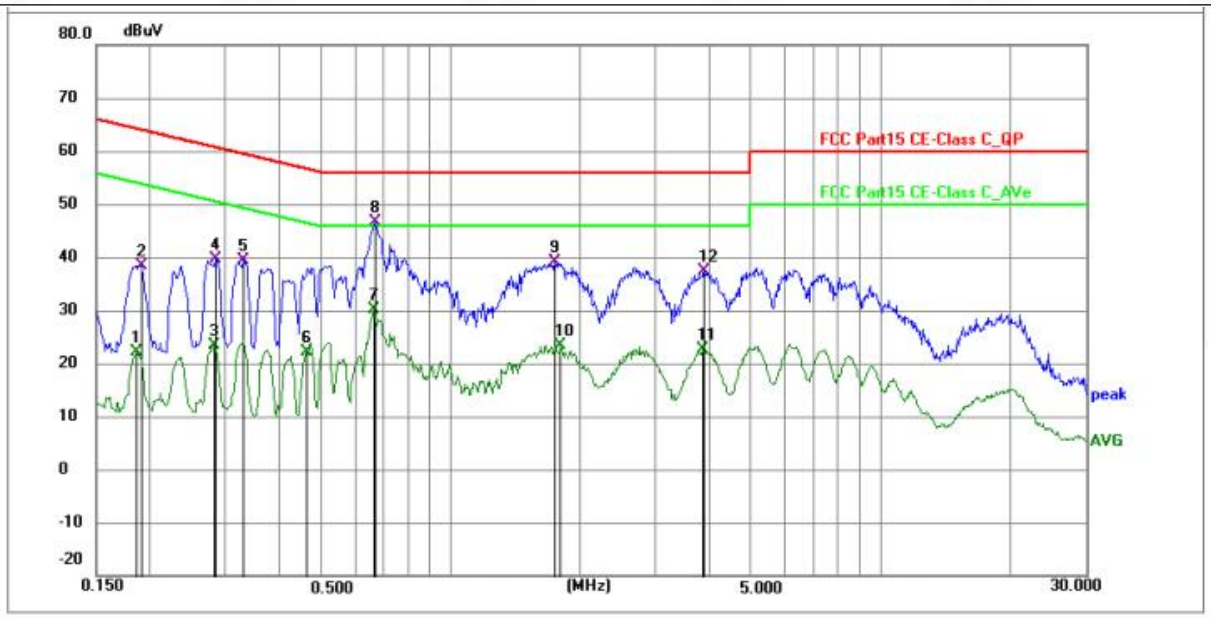
Test Setup:	
Operating Environment:	
Temperature:	26 °C
Humidity:	54 %
Atmospheric Pressure:	1010 mbar
Test voltage:	AC 120V 60Hz

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

6.1.1 Test Data

Remark: The report only reflects the test data of worst mode.

TM1 / Line: Line / Band: 2400-2483.5 MHz / BW: 1 / CH: M



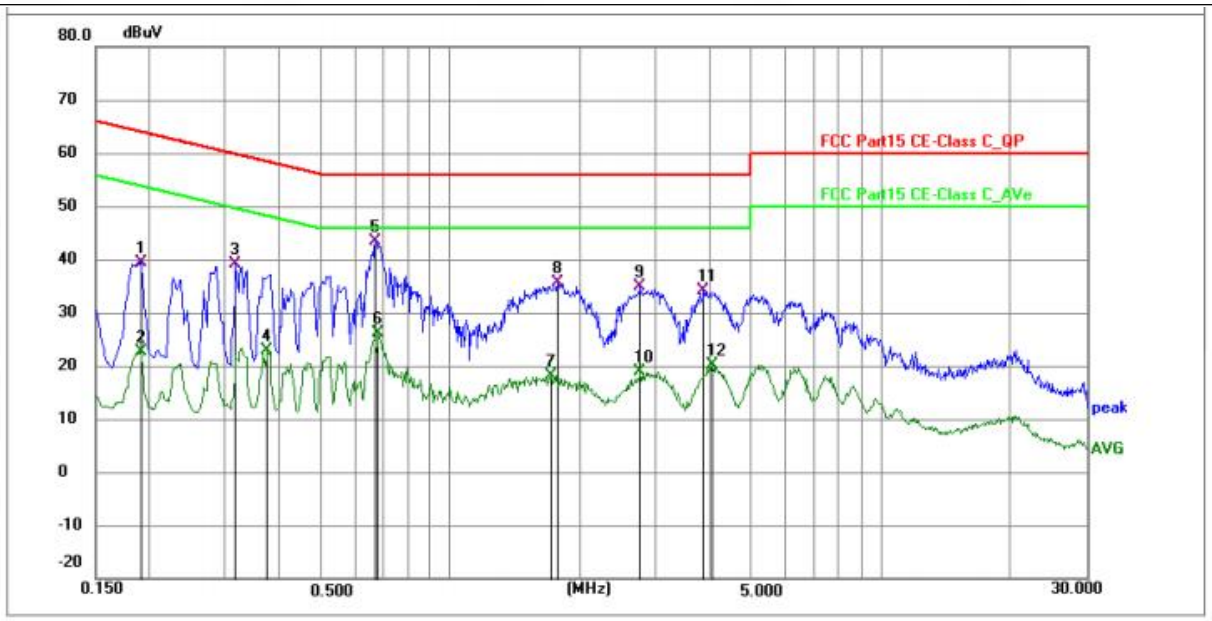
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1860	11.53	10.67	22.20	54.21	-32.01	AVG	P	
2	0.1905	27.65	10.68	38.33	64.01	-25.68	QP	P	
3	0.2805	12.74	10.70	23.44	50.80	-27.36	AVG	P	
4	0.2847	28.99	10.70	39.69	60.68	-20.99	QP	P	
5	0.3300	28.80	10.70	39.50	59.45	-19.95	QP	P	
6	0.4605	11.40	10.71	22.11	46.68	-24.57	AVG	P	
7	0.6630	19.42	10.65	30.07	46.00	-15.93	AVG	P	
8 *	0.6673	35.98	10.65	46.63	56.00	-9.37	QP	P	
9	1.7520	28.46	10.76	39.22	56.00	-16.78	QP	P	
10	1.8015	12.70	10.75	23.45	46.00	-22.55	AVG	P	
11	3.8400	11.73	10.82	22.55	46.00	-23.45	AVG	P	
12	3.8850	26.51	10.82	37.33	56.00	-18.67	QP	P	

Note:Margin=Level-Limit=Reading+factor-Limit

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

TM1 / Line: Neutral / Band: 2400-2483.5 MHz / BW: 1 / CH: M



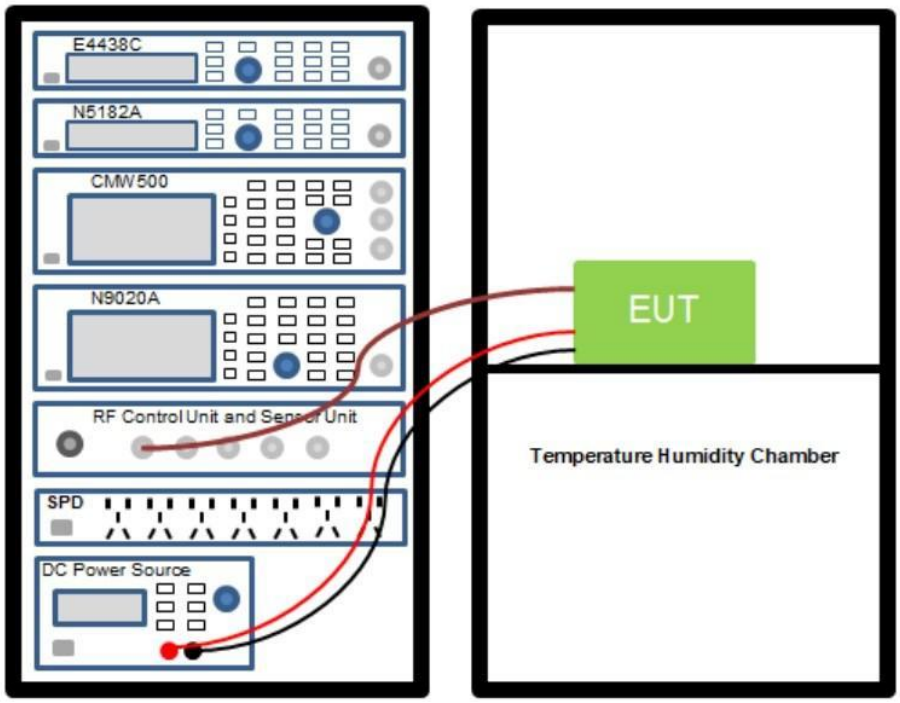
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1905	28.77	10.60	39.37	64.01	-24.64	QP	P	
2	0.1905	11.91	10.60	22.51	54.01	-31.50	AVG	P	
3	0.3165	28.44	10.68	39.12	59.80	-20.68	QP	P	
4	0.3750	12.10	10.72	22.82	48.39	-25.57	AVG	P	
5 *	0.6673	32.37	10.91	43.28	56.00	-12.72	QP	P	
6	0.6809	15.15	10.92	26.07	46.00	-19.93	AVG	P	
7	1.7160	7.07	10.99	18.06	46.00	-27.94	AVG	P	
8	1.7743	24.55	10.99	35.54	56.00	-20.46	QP	P	
9	2.7644	23.81	10.97	34.78	56.00	-21.22	QP	P	
10	2.7644	7.93	10.97	18.90	46.00	-27.10	AVG	P	
11	3.8715	23.27	10.94	34.21	56.00	-21.79	QP	P	
12	4.0560	9.16	10.95	20.11	46.00	-25.89	AVG	P	

Note:Margin=Level-Limit=Reading+factor-Limit

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

6.2 6dB Bandwidth

Test Requirement:	47 CFR 15.247(a)(2)
Test Method:	ANSI C63.10-2020, section 11.8
Test Limit:	Refer to 47 CFR 15.247(a)(2), Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.
Procedure:	11.8.1 Option 1 The steps for the first option are as follows: a) Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz. b) Set the VBW ≥ [3 × RBW]. c) Detector = peak. d) Trace mode = max-hold. e) Sweep = No faster than coupled (auto) time. f) Allow the trace to stabilize. g) Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "−6 dB down amplitude". If a marker is below this "−6 dB down amplitude" value, then it shall be as close as possible to this value. 11.8.2 Option 2 The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described in 11.8.1 (i.e., RBW = 100 kHz, VBW ≥ 3 × RBW, and peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥ 6 dB.
Test Setup:	

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

Operating Environment:	
Temperature:	23.9 °C
Humidity:	53.7 %
Atmospheric Pressure:	1010 mbar
Test voltage:	DC 3.7V From Battery

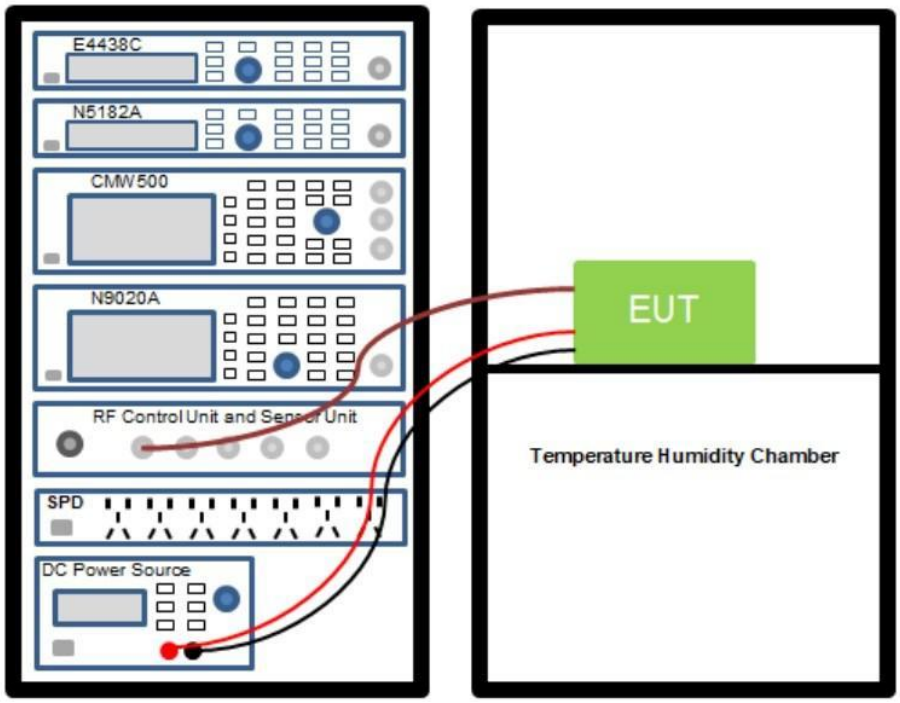
6.2.1 Test Data

Please Refer to Appendix-BLE for Details.

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

6.3 Maximum Conducted Output Power

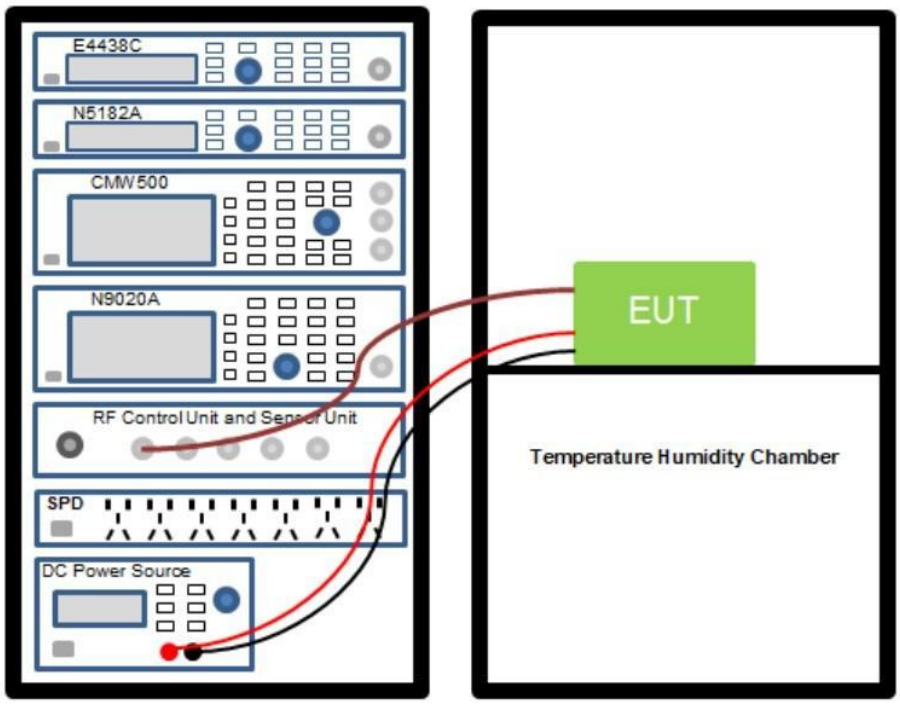
Test Requirement:	47 CFR 15.247(b)(3)
Test Method:	ANSI C63.10-2020 section 11.9.1
Test Limit:	Refer to 47 CFR 15.247(b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.
Procedure:	ANSI C63.10-2020, section 11.9.1 Maximum peak conducted output power
Test Setup:	
Operating Environment:	
Temperature:	23.9 °C
Humidity:	53.7 %
Atmospheric Pressure:	1010 mbar
Test voltage:	DC 3.7V From Battery

6.3.1 Test Data

Please Refer to Appendix-BLE for Details.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

6.4 Power Spectral Density

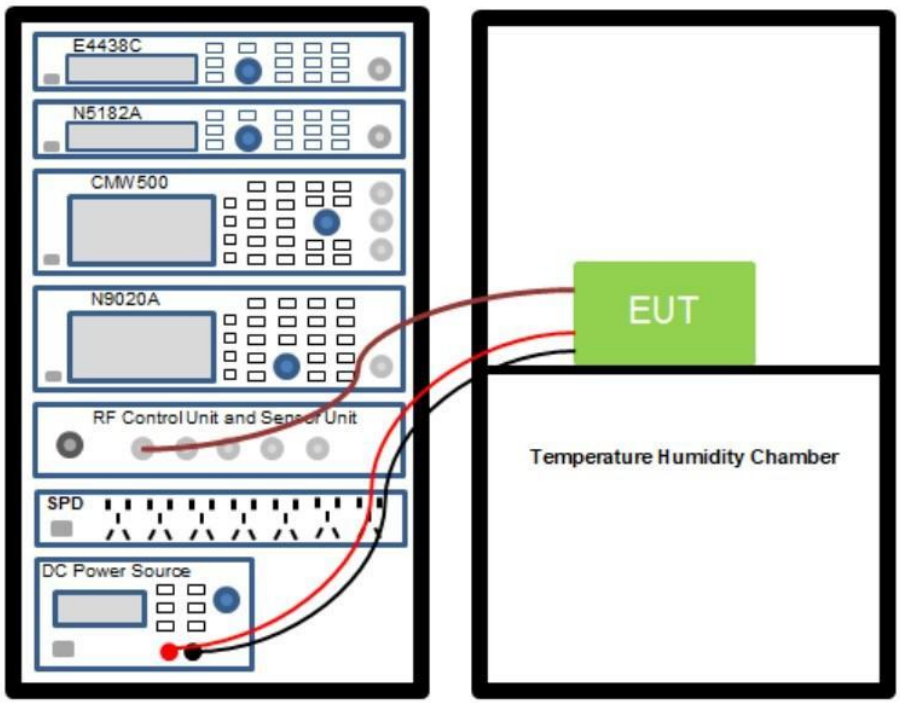
Test Requirement:	47 CFR 15.247(e)
Test Method:	ANSI C63.10-2020, section 11.10
Test Limit:	Refer to 47 CFR 15.247(e), For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.
Procedure:	ANSI C63.10-2020, section 11.10, Maximum power spectral density level in the fundamental emission
Test Setup:	
Operating Environment:	
Temperature:	23.9 °C
Humidity:	53.7 %
Atmospheric Pressure:	1010 mbar
Test voltage:	DC 3.7V From Battery

6.4.1 Test Data

Please Refer to Appendix-BLE for Details.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

6.5 Emissions in non-restricted frequency bands

Test Requirement:	47 CFR 15.247(d)
Test Method:	ANSI C63.10-2020 section 11.11
Test Limit:	Refer to 47 CFR 15.247(d), In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required.
Procedure:	ANSI C63.10-2020 Section 11.11.1, Section 11.11.2, Section 11.11.3
Test Setup:	
Operating Environment:	
Temperature:	23.9 °C
Humidity:	53.7 %
Atmospheric Pressure:	1010 mbar
Test voltage:	DC 3.7V From Battery

6.5.1 Test Data

Please Refer to Appendix-BLE for Details.

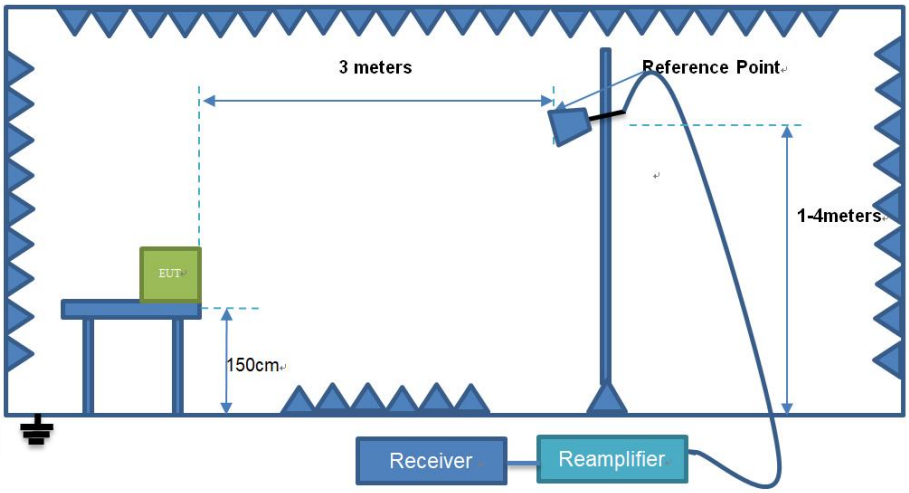
BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

6.6 Band edge emissions (Radiated)

Test Requirement:	Refer to 47 CFR 15.247(d), In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).`
Test Method:	ANSI C63.10-2020 section 6.10
Test Limit:	

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100 **	3
88-216	150 **	3
216-960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.
In the emission table above, the tighter limit applies at the band edges.
The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

Procedure:	ANSI C63.10-2020 section 6.10.5.2
Test Setup:	

Operating Environment:	
Temperature:	24.6 °C
Humidity:	55 %
Atmospheric Pressure:	1010 mbar
Test voltage:	DC 3.7V From Battery

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

6.6.1 Test Data

Remark: The report only reflects the test data of worst mode.

Test Channel: Lowest channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2310.00	51.40	3.85	55.26	74.00	-18.74	Peak	Pass
2310.00	41.11	3.85	44.96	54.00	-9.04	AVG	Pass
2390.00	52.41	3.91	56.33	74.00	-17.67	Peak	Pass
2390.00	42.36	3.91	46.27	54.00	-7.73	AVG	Pass
Test Channel: Lowest channel, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2310.00	51.04	3.85	54.89	74.00	-19.11	Peak	Pass
2310.00	40.78	3.85	44.64	54.00	-9.36	AVG	Pass
2390.00	51.69	3.91	55.60	74.00	-18.40	Peak	Pass
2390.00	41.54	3.91	45.46	54.00	-8.54	AVG	Pass
Test Channel: Highest channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2483.50	50.57	3.99	54.56	74.00	-19.44	Peak	Pass
2483.50	40.49	3.99	44.48	54.00	-9.52	AVG	Pass
2500.00	51.90	4.00	55.90	74.00	-18.10	Peak	Pass
2500.00	42.13	4.00	46.13	54.00	-7.87	AVG	Pass
Test Channel: Highest channel, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2483.50	50.65	3.99	54.64	74.00	-19.36	Peak	Pass
2483.50	39.92	3.99	43.91	54.00	-10.09	AVG	Pass
2500.00	52.44	4.00	56.44	74.00	-17.56	Peak	Pass
2500.00	41.80	4.00	45.80	54.00	-8.20	AVG	Pass

Note:Margin=Level-Limit=Reading+factor-Limit

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

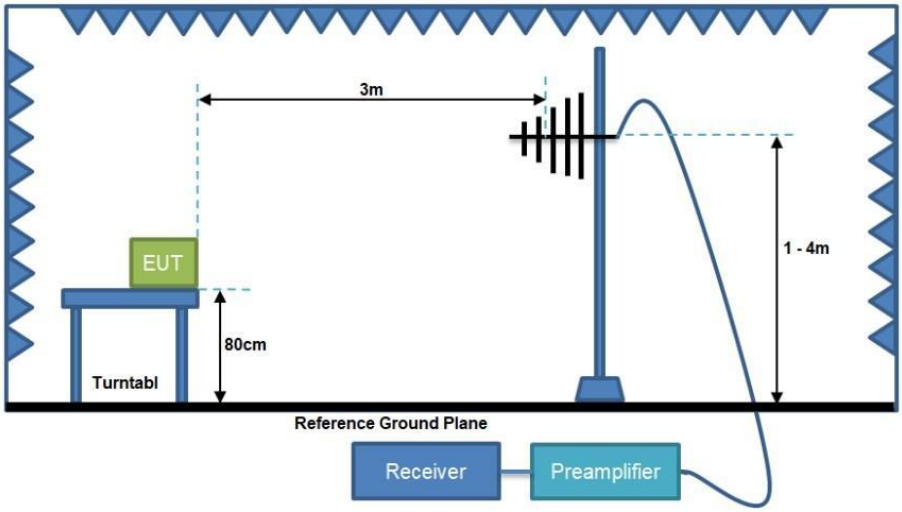
BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

6.7 Emissions in frequency bands (below 1GHz)

Test Requirement:	Refer to 47 CFR 15.247(d), In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).`
Test Method:	ANSI C63.10-2020 section 6.6.4
Test Limit:	

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100 **	3
88-216	150 **	3
216-960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.
In the emission table above, the tighter limit applies at the band edges.
The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

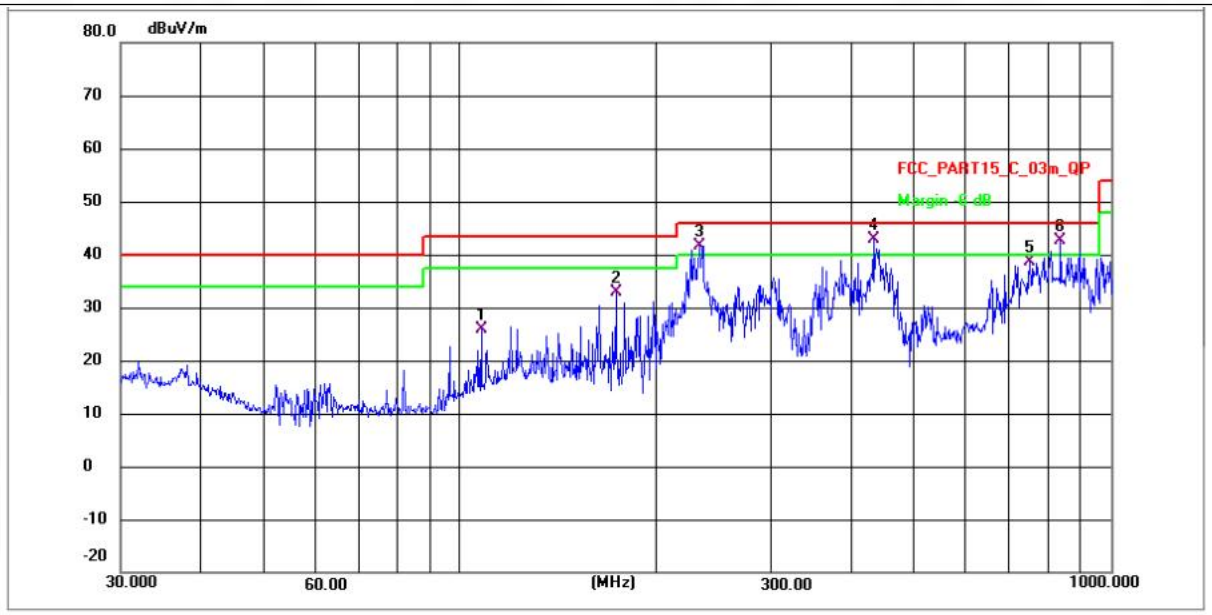
Procedure:	ANSI C63.10-2020 section 6.6.4
Test Setup:	

Operating Environment:	
Temperature:	24.6 °C
Humidity:	55 %
Atmospheric Pressure:	1010 mbar
Test voltage:	DC 3.7V From Battery

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

6.7.1 Test Data

TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: L



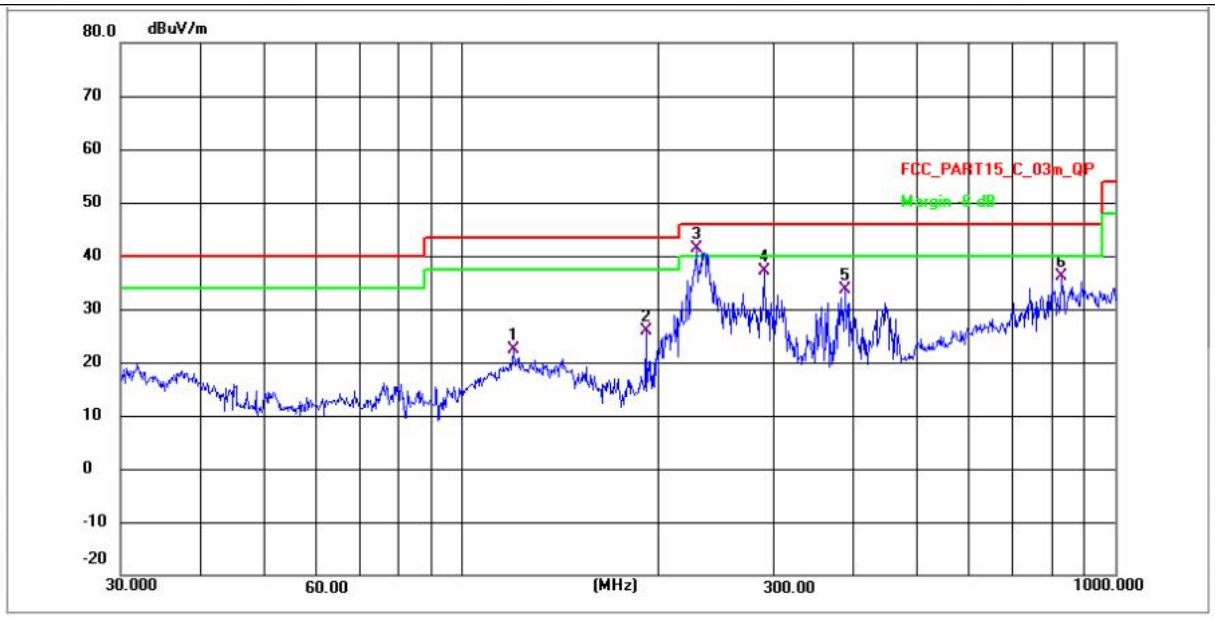
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	107.5100	48.23	-22.40	25.83	43.50	-17.67	QP	P
2	173.2050	54.74	-21.79	32.95	43.50	-10.55	QP	P
3 !	233.7581	62.79	-21.19	41.60	46.00	-4.40	QP	P
4 *	431.0314	62.35	-19.57	42.78	46.00	-3.22	QP	P
5	750.1082	56.34	-17.75	38.59	46.00	-7.41	QP	P
6 !	836.2441	59.80	-17.26	42.54	46.00	-3.46	QP	P

Note:Margin=Level-Limit=Reading+factor-Limit

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

TM1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: L



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	120.0660	44.61	-22.29	22.32	43.50	-21.18	QP	P
2	191.0738	47.59	-21.63	25.96	43.50	-17.54	QP	P
3 *	229.2930	62.64	-21.23	41.41	46.00	-4.59	QP	P
4	290.5260	57.87	-20.70	37.17	46.00	-8.83	QP	P
5	387.9920	53.61	-19.92	33.69	46.00	-12.31	QP	P
6	828.9455	53.60	-17.38	36.22	46.00	-9.78	QP	P

Note:Margin=Level-Limit=Reading+factor-Limit

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

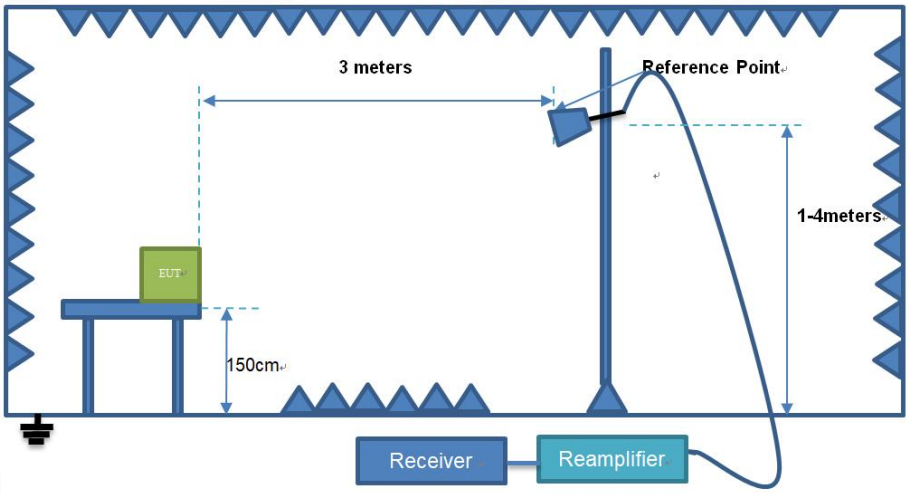
BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

6.8 Emissions in frequency bands (above 1GHz)

Test Requirement:	Refer to 47 CFR 15.247(d), in addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).`
Test Method:	ANSI C63.10-2020 section 6.6.4
Test Limit:	

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100 **	3
88-216	150 **	3
216-960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.
In the emission table above, the tighter limit applies at the band edges.
The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

Procedure:	ANSI C63.10-2020 section 6.6.4
Test Setup:	

Operating Environment:	
Temperature:	24.6 °C
Humidity:	55 %
Atmospheric Pressure:	1010 mbar
Test voltage:	DC 3.7V From Battery

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

6.8.1 Test Data

Remark: The report only reflects the test data of worst mode.

Test Channel: Lowest channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4804.00	78.72	-48.89	29.83	74.00	-44.17	Peak	Pass
4804.00	68.66	-48.89	19.78	54.00	-34.22	AVG	Pass
7206.00	86.79	-47.02	39.76	74.00	-34.24	Peak	Pass
7206.00	76.80	-47.02	29.78	54.00	-24.22	AVG	Pass
Test Channel: Lowest channel, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4804.00	77.91	-48.89	29.03	74.00	-44.97	Peak	Pass
4804.00	67.14	-48.89	18.26	54.00	-35.74	AVG	Pass
7206.00	85.74	-47.02	38.72	74.00	-35.28	Peak	Pass
7206.00	75.37	-47.02	28.35	54.00	-25.65	AVG	Pass
Test Channel: Middle channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4880.00	78.28	-48.84	29.44	74.00	-44.56	Peak	Pass
4880.00	67.33	-48.84	18.50	54.00	-35.50	AVG	Pass
7320.00	85.71	-46.89	38.82	74.00	-35.18	Peak	Pass
7320.00	74.73	-46.89	27.85	54.00	-26.15	AVG	Pass
Test Channel: Middle channel, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4880.00	78.39	-48.84	29.56	74.00	-44.44	Peak	Pass
4880.00	68.23	-48.84	19.39	54.00	-34.61	AVG	Pass
7320.00	86.60	-46.89	39.72	74.00	-34.28	Peak	Pass
7320.00	75.87	-46.89	28.99	54.00	-25.01	AVG	Pass
Test Channel: Highest channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4960.00	78.66	-48.79	29.88	74.00	-44.12	Peak	Pass
4960.00	67.98	-48.79	19.19	54.00	-34.81	AVG	Pass
7440.00	85.69	-46.74	38.94	74.00	-35.06	Peak	Pass
7440.00	75.02	-46.74	28.28	54.00	-25.72	AVG	Pass
Test Channel: Highest channel, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4960.00	79.82	-48.79	31.04	74.00	-42.96	Peak	Pass

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

4960.00	70.28	-48.79	21.49	54.00	-32.51	AVG	Pass
7440.00	85.71	-46.74	38.97	74.00	-35.03	Peak	Pass
7440.00	75.21	-46.74	28.47	54.00	-25.53	AVG	Pass

Note:Margin=Level-Limit=Reading+factor-Limit

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

7 Test Setup Photos

Please refer to the Appendix I Test Setup Photos

8 EUT Constructional Details (EUT Photos)

Please refer to the AppendixII External Photos &Appendix-BLE III External Photos

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

BTF Testing Lab (Shenzhen) Co., Ltd.

Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China

www.btf-lab.com

-- END OF REPORT --

Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
Plant 101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, Guangdong, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com