RF Test Report

For

Applicant Name:	**Xwireless LLC**
Address:	11565 Old Georgetown Road, Rockville, MD, USA
EUT Name:	Tablet PC
Brand Name:	N/A
Model Number:	T10M Pro

Issued By

Company Name:	**BTF Testing Lab (Shenzhen) Co., Ltd.**
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Report Number:	BTF230506R00203
Test Standards:	47 CFR Part 15.247
Test Conclusion:	Pass
FCC ID:	2ADLJ-T10MPRO
Test Date:	2023-05-06 to 2023-05-19
Date of Issue:	2023-05-22

Prepared By: Elma.Yang

elma.yang / Project Engineer

Date: 2023-05-22

Approved By: Ryan.CJ

Ryan.CJ / EMC Manager

Date: 2023-05-22

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.

Revision History		
Version	Issue Date	Revisions Content
R_V0	2023-05-22	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.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

Table of Contents

1 INTRODUCTION 5
1.1 Identification of Testing Laboratory 5
1.2 Identification of the Responsible Testing Location 5
1.3 Announcement 5
2 PRODUCT INFORMATION 6
2.1 Application Information 6
2.2 Manufacturer Information 6
2.3 Factory Information 6
2.4 General Description of Equipment under Test (EUT) 6
2.5 Technical Information 6
3 SUMMARY OF TEST RESULTS 7
3.1 Test Standards 7
3.2 Uncertainty of Test 7
3.3 Summary of Test Result 7
4 TEST CONFIGURATION 8
4.1 Test Equipment List 8
4.2 Test Auxiliary Equipment 12
4.3 Test Modes 12
5 EVALUATION RESULTS (EVALUATION) 13
5.1 Antenna requirement 13
6 RADIO SPECTRUM MATTER TEST RESULTS (RF) 13
6.1 Conducted Emission at AC power line 13
6.1.1 E.U.T. Operation: 13
6.1.2 Test Setup Diagram: 13
6.1.3 Test Data: 14
6.2 Occupied Bandwidth 16
6.2.1 E.U.T. Operation: 16
6.2.2 Test Setup Diagram: 16
6.2.3 Test Data: 16
6.3 Maximum Conducted Output Power 17
6.3.1 E.U.T. Operation: 17
6.3.2 Test Setup Diagram: 18
6.3.3 Test Data: 18
6.4 Power Spectral Density 19
6.4.1 E.U.T. Operation: 19
6.4.2 Test Setup Diagram: 19
6.4.3 Test Data: 19
6.5 Emissions in non-restricted frequency bands 20
6.5.1 E.U.T. Operation: 20
6.5.2 Test Setup Diagram: 21
6.5.3 Test Data: 21
6.6 Band edge emissions (Radiated) 22
6.6.1 E.U.T. Operation: 22
6.6.2 Test Data: 23
6.7 Emissions in restricted frequency bands (below 1GHz) 27
6.7.1 E.U.T. Operation: 27
6.7.2 Test Data: 28

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

6.8 Emissions in restricted frequency bands (above 1GHz) 30
6.8.1 E.U.T. Operation: 30
6.8.2 Test Data: 31
7 TEST SETUP PHOTOS 37
8 EUT CONSTRUCTIONAL DETAILS (EUT PHOTOS) 39
APPENDIX 40

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

1 Introduction

1.1 Identification of Testing Laboratory

Company Name:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130

1.2 Identification of the Responsible Testing Location

Company Name:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130
FCC Registration Number:	518915
Designation Number:	CN1330

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.

2 Product Information

2.1 Application Information

Company Name:	Xwireless LLC
Address:	11565 Old Georgetown Road, Rockville, MD, USA

2.2 Manufacturer Information

Company Name:	Xwireless LLC
Address:	11565 Old Georgetown Road, Rockville, MD, USA

2.3 Factory Information

Company Name:	ZTECH COMMNICATION(SZ) CO LTD
Address:	FL 7 BLOCK D BAO'AN ZHIGU INNOVATION PARK YIN'TIAN ROAD NO.4 XI'XIANG STR' BAO'AN DISTRICT SZ CHINA

2.4 General Description of Equipment under Test (EUT)

EUT Name:	Tablet PC
Test Model Number:	T10M Pro

2.5 Technical Information

Power Supply:	DC 3.8V from Battery
Power Adaptor:	Input: 100-240V,50/60Hz 0.3A Output: 5.0V 2.0A 10.0W
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz; 802.11n(HT40): 2422MHz to 2452MHz
Number of Channels:	802.11b/g/n(HT20): 11 Channels; 802.11n(HT40): 7 Channels
Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK); 802.11g: OFDM(BPSK, QPSK, 16QAM, 64QAM); 802.11n(HT20 and HT40): OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type:	PIFA ANT
Antenna Gain#:	1.16 dBi
Note: #: The antenna gain provided by the applicant, and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant.	

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

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

Item	Measurement Uncertainty
Conducted Emission (150 kHz-30 MHz)	±2.64dB
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	Part 15.203	Pass
Conducted Emission at AC power line	47 CFR Part 15.247	47 CFR 15.207(a)	Pass
Occupied 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)	Pass
Emissions in restricted frequency bands (below 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Emissions in restricted frequency bands (above 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d)	Pass

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

4 Test Configuration

4.1 Test Equipment List

Conducted Emission at AC power line					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Pulse Limiter	SCHWARZBECK	VTSD 9561-F	00953	2022-11-24	2023-11-23
Coaxial Switcher	SCHWARZBECK	CX210	CX210	2022-11-24	2023-11-23
V-LISN	SCHWARZBECK	NSLK 8127	01073	2022-11-24	2023-11-23
LISN	AFJ	LS16/110VAC	16010020076	2023-02-23	2024-02-22
EMI Receiver	ROHDE&SCHWARZ	ESCI3	101422	2022-11-24	2023-11-23

Occupied Bandwidth					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
RFTest software	/	V1.00	/	/	/
RF Control Unit	Techy	TR1029-1	/	2022-11-24	2023-11-23
RF Sensor Unit	Techy	TR1029-2	/	2022-11-24	2023-11-23
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2022-11-24	2023-11-23
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2022-11-24	2023-11-23
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2022-11-24	2023-11-23
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2022-11-24	2023-11-23

Maximum Conducted Output Power					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
RFTest software	/	V1.00	/	/	/
RF Control Unit	Techy	TR1029-1	/	2022-11-24	2023-11-23
RF Sensor Unit	Techy	TR1029-2	/	2022-11-24	2023-11-23
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2022-11-24	2023-11-23
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2022-11-24	2023-11-23
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2022-11-24	2023-11-23
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2022-11-24	2023-11-23

Power Spectral Density					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
RFTest software	/	V1.00	/	/	/

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

RF Control Unit	Techy	TR1029-1	/	2022-11-24	2023-11-23
RF Sensor Unit	Techy	TR1029-2	/	2022-11-24	2023-11-23
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2022-11-24	2023-11-23
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2022-11-24	2023-11-23
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2022-11-24	2023-11-23
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2022-11-24	2023-11-23

Emissions in non-restricted frequency bands					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
RFTest software	/	V1.00	/	/	/
RF Control Unit	Techy	TR1029-1	/	2022-11-24	2023-11-23
RF Sensor Unit	Techy	TR1029-2	/	2022-11-24	2023-11-23
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2022-11-24	2023-11-23
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2022-11-24	2023-11-23
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2022-11-24	2023-11-23
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2022-11-24	2023-11-23

Band edge emissions (Radiated)					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	2023-03-24	2024-03-23
Preamplifier	SCHWARZBECK	BBV9744	00246	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-10m	21101566	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-1m	21101568	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2021-11-28	2023-11-27
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI7	101032	2022-11-24	2023-11-23
SIGNAL ANALYZER	ROHDE&SCHWARZ	FSQ40	100010	2022-11-24	2023-11-23

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Broadband Preamplilifier	SCHWARZBECK	BBV9718D	00008	2023-03-24	2024-03-23
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2022-05-22	2024-05-21
EZ_EMC	Frad	FA-03A2 RE+	/	/	/
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2021-11-28	2023-11-27

Emissions in restricted frequency bands (below 1GHz)					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	2023-03-24	2024-03-23
Preamplifier	SCHWARZBECK	BBV9744	00246	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-10m	21101566	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-1m	21101568	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2021-11-28	2023-11-27
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI7	101032	2022-11-24	2023-11-23
SIGNAL ANALYZER	ROHDE&SCHWARZ	FSQ40	100010	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Broadband Preamplilifier	SCHWARZBECK	BBV9718D	00008	2023-03-24	2024-03-23
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2022-05-22	2024-05-21
EZ_EMC	Frad	FA-03A2 RE+	/	/	/
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2021-11-28	2023-11-27

Emissions in restricted frequency bands (above 1GHz)					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	2023-03-24	2024-03-23
Preamplifier	SCHWARZBECK	BBV9744	00246	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-10m	21101566	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF1-SMASMAM-1m	21101568	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	2022-11-24	2023-11-23
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	2022-11-24	2023-11-23

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2021-11-28	2023-11-27
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI7	101032	2022-11-24	2023-11-23
SIGNAL ANALYZER	ROHDE&SCHWARZ	FSQ40	100010	2022-11-24	2023-11-23
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Broadband Preamplilifier	SCHWARZBECK	BBV9718D	00008	2023-03-24	2024-03-23
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2022-05-22	2024-05-21
EZ_EMC	Frad	FA-03A2 RE+	/	/	/
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2021-11-28	2023-11-27

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

4.2 Test Auxiliary Equipment

The EUT was tested as an independent device.

4.3 Test Modes

No.	Test Modes	Description
TM1	802.11b mode	Keep the EUT in continuously transmitting mode with 802.11b modulation.
TM2	802.11g mode	Keep the EUT in continuously transmitting mode with 802.11g modulation.
TM3	802.11n(HT20) mode	Keep the EUT in continuously transmitting mode with 802.11 n(HT20) modulation.
TM4	802.11n(HT40) mode	Keep the EUT in continuously transmitting mode with 802.11 n(HT40) modulation.

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

5 Evaluation Results (Evaluation)

5.1 Antenna requirement

Test 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 shall be considered sufficient to comply with the provisions of this section.

6 Radio Spectrum Matter Test Results (RF)

6.1 Conducted Emission at AC power line

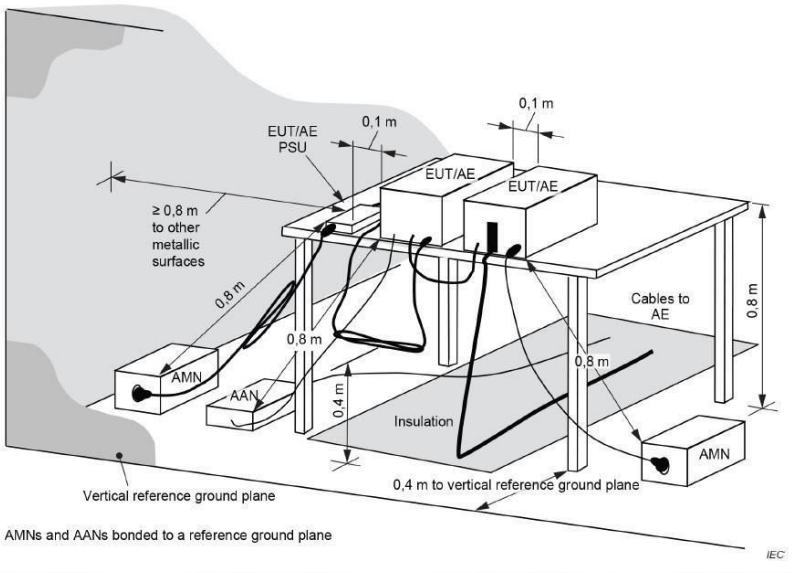
Test Requirement:	Except as shown in paragraphs (b)and (c)of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 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:	Refer to ANSI C63.10-2013 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices
Test Limit:	*Decreases with the logarithm of the frequency.

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

6.1.1 E.U.T. Operation:

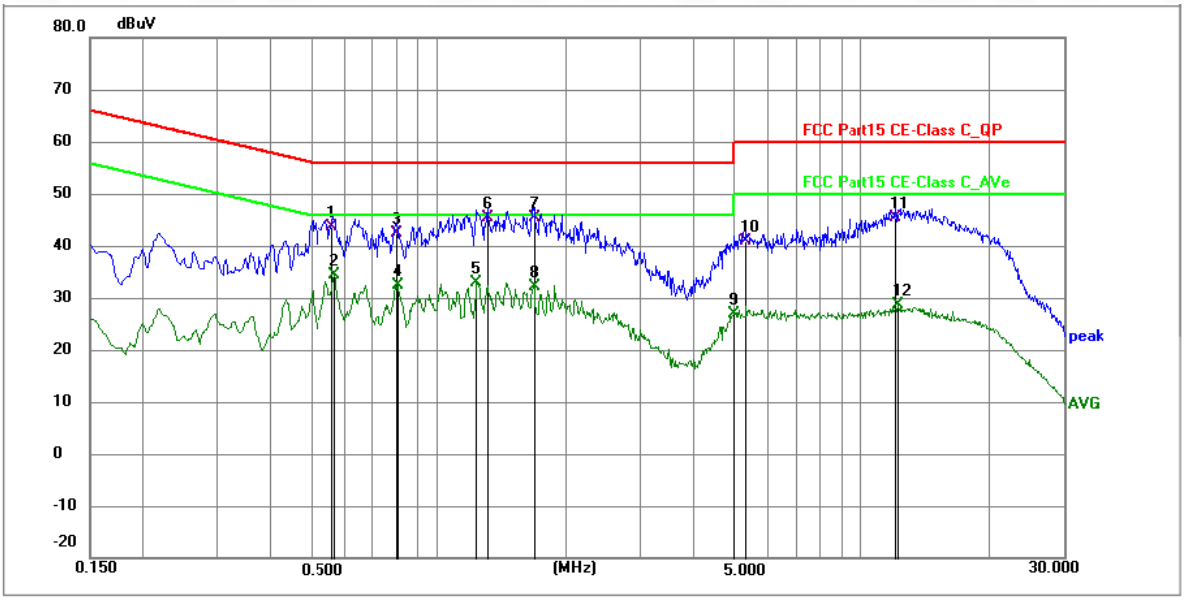
Operating Environment:	
Temperature:	24.4 °C
Humidity:	51.5 %
Atmospheric Pressure:	1010 mbar

6.1.2 Test Setup Diagram:



6.1.3 Test Data:

TM1 / Line: Line / Band: 2.4G / BW: 20 / CH: M

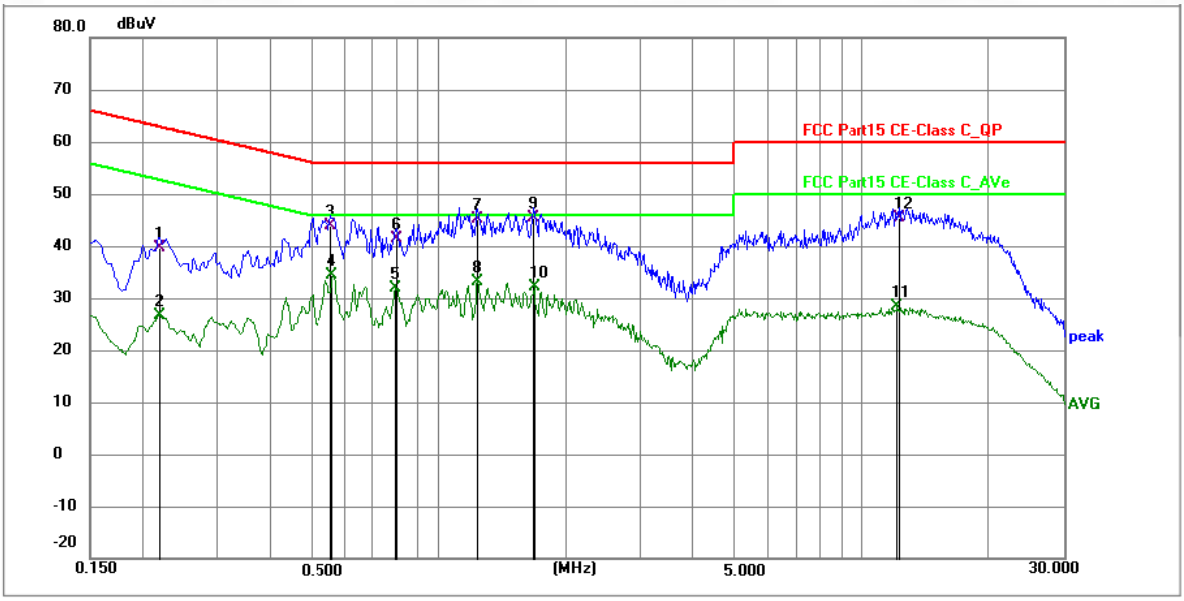


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.5639	32.89	10.65	43.54	56.00	-12.46	QP	P	
2	0.5685	23.75	10.65	34.40	46.00	-11.60	AVG	P	
3	0.7980	31.58	10.75	42.33	56.00	-13.67	QP	P	
4	0.8024	21.59	10.75	32.34	46.00	-13.66	AVG	P	
5	1.2344	22.18	10.76	32.94	46.00	-13.06	AVG	P	
6 *	1.3064	34.66	10.75	45.41	56.00	-10.59	QP	P	
7	1.6845	34.59	10.72	45.31	56.00	-10.69	QP	P	
8	1.6845	21.46	10.72	32.18	46.00	-13.82	AVG	P	
9	4.9920	16.38	10.61	26.99	46.00	-19.01	AVG	P	
10	5.3205	30.23	10.70	40.93	60.00	-19.07	QP	P	
11	11.9984	34.41	10.94	45.35	60.00	-14.65	QP	P	
12	12.1965	17.72	10.93	28.65	50.00	-21.35	AVG	P	

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

TM1 / Line: Neutral / Band: 2.4G / BW: 20 / CH: M



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.2174	29.12	10.63	39.75	62.92	-23.17	QP	P	
2	0.2174	15.97	10.63	26.60	52.92	-26.32	AVG	P	
3	0.5550	33.22	10.65	43.87	56.00	-12.13	QP	P	
4	0.5639	23.63	10.65	34.28	46.00	-11.72	AVG	P	
5	0.7933	21.25	10.75	32.00	46.00	-14.00	AVG	P	
6	0.7980	30.53	10.75	41.28	56.00	-14.72	QP	P	
7	1.2390	34.33	10.76	45.09	56.00	-10.91	QP	P	
8	1.2390	22.47	10.76	33.23	46.00	-12.77	AVG	P	
9 *	1.6754	34.64	10.72	45.36	56.00	-10.64	QP	P	
10	1.6845	21.33	10.72	32.05	46.00	-13.95	AVG	P	
11	12.1290	17.38	10.89	28.27	50.00	-21.73	AVG	P	
12	12.2774	34.49	10.89	45.38	60.00	-14.62	QP	P	

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

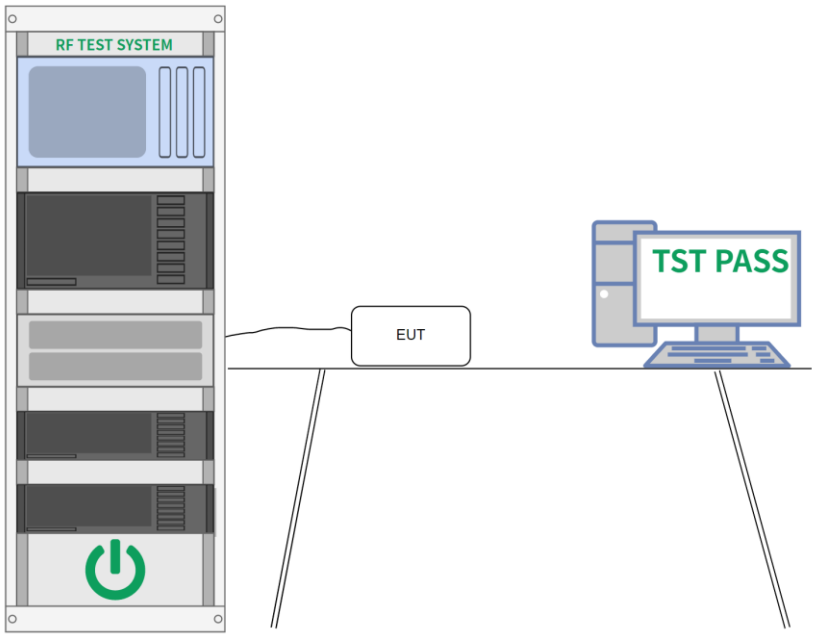
6.2 Occupied Bandwidth

Test Requirement:	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.
Test Method:	DTS bandwidth
Test Limit:	Section (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:	a) Set RBW = 100 kHz. b) Set the VBW >= [3 × RBW]. c) Detector = peak. d) Trace mode = max hold. e) Sweep = auto couple. f) Allow the trace to stabilize. g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.2.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23.4 °C
Humidity:	54.5 %
Atmospheric Pressure:	1010 mbar

6.2.2 Test Setup Diagram:



6.2.3 Test Data:

Please Refer to Appendix for Details.

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

6.3 Maximum Conducted Output Power

Test Requirement:	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.
Test Method:	Maximum peak conducted output power
Test Limit:	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 C63.10-2013, section 11.9.1 Maximum peak conducted output power

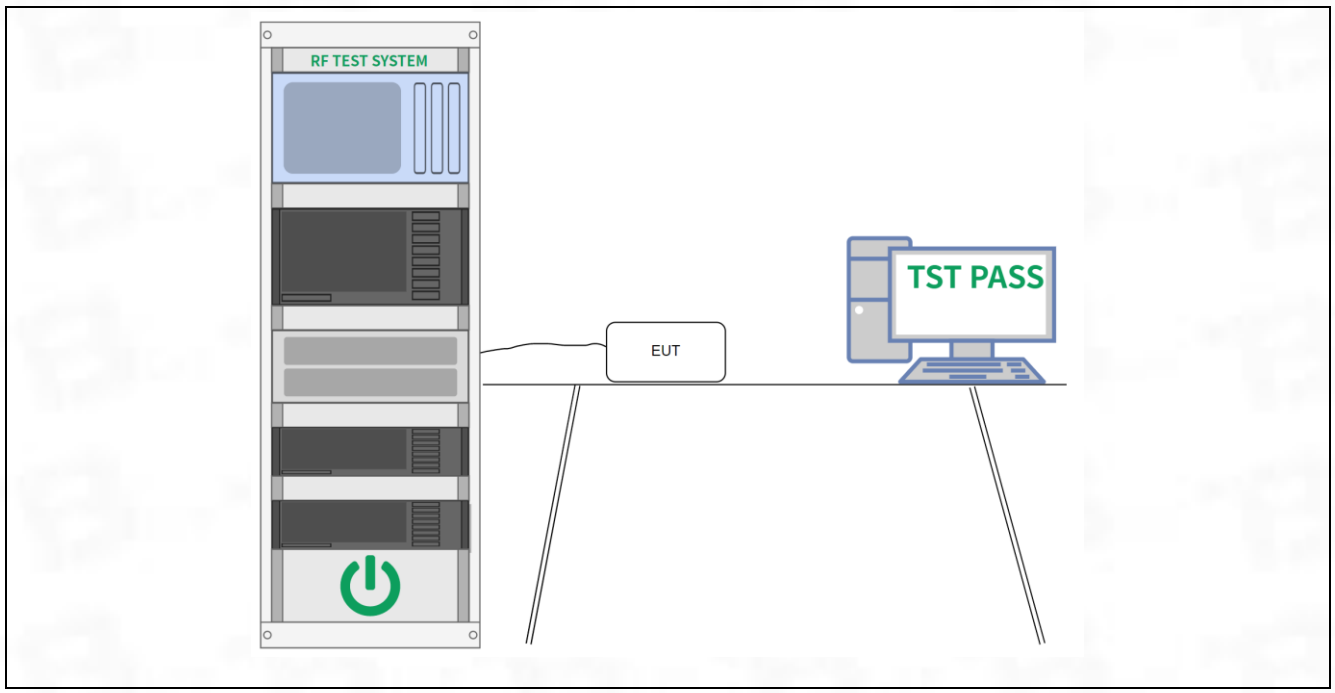
6.3.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23.4 °C
Humidity:	54.5 %
Atmospheric Pressure:	1010 mbar

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

6.3.2 Test Setup Diagram:



6.3.3 Test Data:

Please Refer to Appendix for Details.

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

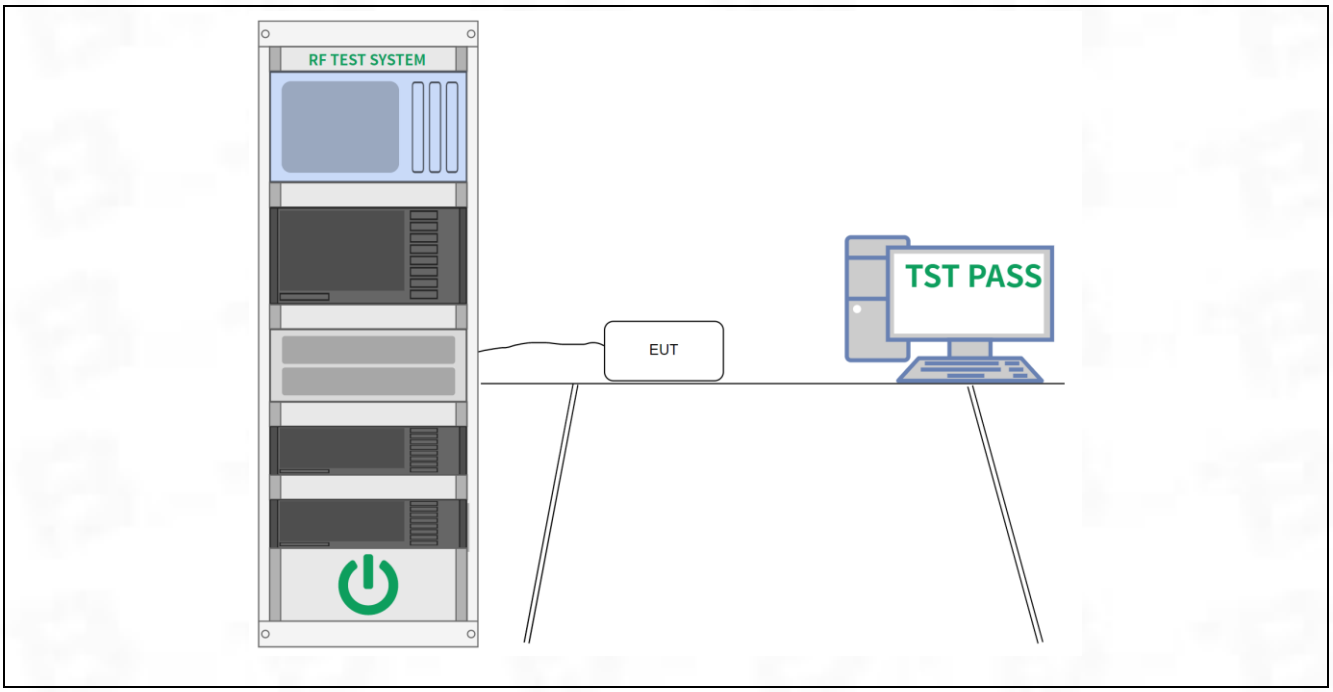
6.4 Power Spectral Density

Test Requirement:	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.
Test Method:	Maximum power spectral density level in the fundamental emission
Test Limit:	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.

6.4.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23.4 °C
Humidity:	54.5 %
Atmospheric Pressure:	1010 mbar

6.4.2 Test Setup Diagram:



6.4.3 Test Data:

Please Refer to Appendix for Details.

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

6.5 Emissions in non-restricted frequency bands

Test Requirement:	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.
Test Method:	Emissions in nonrestricted frequency bands
Test Limit:	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 C63.10-2013 Section 11.11.1, Section 11.11.2, Section 11.11.3

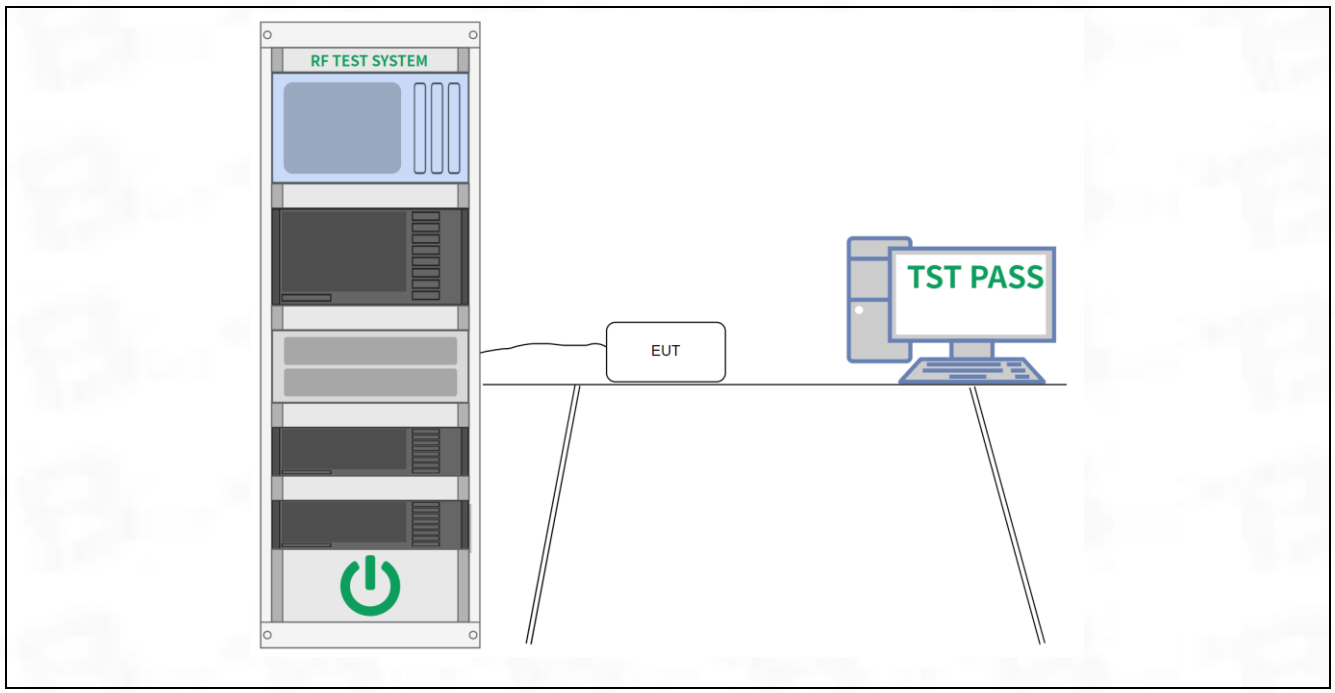
6.5.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23.4 °C
Humidity:	54.5 %
Atmospheric Pressure:	1010 mbar

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

6.5.2 Test Setup Diagram:



6.5.3 Test Data:

Please Refer to Appendix for Details.

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

6.6 Band edge emissions (Radiated)

<table>
<tr><td>Test Requirement:</td><td>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)).`</td></tr>
<tr><td>Test Method:</td><td>Radiated emissions tests</td></tr>
<tr><td>Test Limit:</td><td>
<table>
<tr><td>Frequency (MHz)</td><td>Field strength (microvolts/meter)</td><td>Measurement distance (meters)</td></tr>
<tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr>
<tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr>
<tr><td>1.705-30.0</td><td>30</td><td>30</td></tr>
<tr><td>30-88</td><td>100 **</td><td>3</td></tr>
<tr><td>88-216</td><td>150 **</td><td>3</td></tr>
<tr><td>216-960</td><td>200 **</td><td>3</td></tr>
<tr><td>Above 960</td><td>500</td><td>3</td></tr>
</table>
** 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.
</td></tr>
<tr><td>Procedure:</td><td>ANSI C63.10-2013 section 6.6.4</td></tr>
</table>

6.6.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23.6 °C
Humidity:	53.1 %
Atmospheric Pressure:	1010 mbar

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

6.6.2 Test Data:

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	68.43	-30.59	37.84	74.00	-36.16	peak	P
2	2390.000	71.28	-30.49	40.79	74.00	-33.21	peak	P
3 *	2400.000	81.36	-30.48	50.88	74.00	-23.12	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	67.93	-30.59	37.34	74.00	-36.66	peak	P
2	2390.000	69.28	-30.49	38.79	74.00	-35.21	peak	P
3 *	2400.000	77.86	-30.48	47.38	74.00	-26.62	peak	P

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	81.31	-30.39	50.92	74.00	-23.08	peak	P
2	2500.000	71.75	-30.37	41.38	74.00	-32.62	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	77.81	-30.39	47.42	74.00	-26.58	peak	P
2	2500.000	71.25	-30.37	40.88	74.00	-33.12	peak	P

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	69.42	-30.59	38.83	74.00	-35.17	peak	P
2	2390.000	72.46	-30.49	41.97	74.00	-32.03	peak	P
3 *	2400.000	80.43	-30.48	49.95	74.00	-24.05	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	71.42	-30.59	40.83	74.00	-33.17	peak	P
2	2390.000	72.96	-30.49	42.47	74.00	-31.53	peak	P
3 *	2400.000	83.43	-30.48	52.95	74.00	-21.05	peak	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	77.92	-30.39	47.53	74.00	-26.47	peak	P
2	2500.000	68.11	-30.37	37.74	74.00	-36.26	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	80.92	-30.39	50.53	74.00	-23.47	peak	P
2	2500.000	70.11	-30.37	39.74	74.00	-34.26	peak	P

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

TM3 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	66.88	-30.59	36.29	74.00	-37.71	peak	P
2	2390.000	68.27	-30.49	37.78	74.00	-36.22	peak	P
3 *	2400.000	83.74	-30.48	53.26	74.00	-20.74	peak	P

TM3 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	68.88	-30.59	38.29	74.00	-35.71	peak	P
2	2390.000	73.77	-30.49	43.28	74.00	-30.72	peak	P
3 *	2400.000	83.24	-30.48	52.76	74.00	-21.24	peak	P

TM3 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	81.39	-30.39	51.00	74.00	-23.00	peak	P
2	2500.000	70.65	-30.37	40.28	74.00	-33.72	peak	P

TM3 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	77.89	-30.39	47.50	74.00	-26.50	peak	P
2	2500.000	69.65	-30.37	39.28	74.00	-34.72	peak	P

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	69.14	-30.59	38.55	74.00	-35.45	peak	P
2	2390.000	72.12	-30.49	41.63	74.00	-32.37	peak	P
3 *	2400.000	79.13	-30.48	48.65	74.00	-25.35	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2310.000	68.02	-30.59	37.43	74.00	-36.57	peak	P
2	2390.000	74.60	-30.49	44.11	74.00	-29.89	peak	P
3 *	2400.000	75.72	-30.48	45.24	74.00	-28.76	peak	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	81.87	-30.39	51.48	74.00	-22.52	peak	P
2	2500.000	78.06	-30.37	47.69	74.00	-26.31	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	79.87	-30.39	49.48	74.00	-24.52	peak	P
2	2500.000	77.06	-30.37	46.69	74.00	-27.31	peak	P

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

6.7 Emissions in restricted frequency bands (below 1GHz)

<table>
<tr><td>Test Requirement:</td><td>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)).`</td></tr>
<tr><td>Test Method:</td><td>Radiated emissions tests</td></tr>
<tr><td>Test Limit:</td><td>
<table>
<tr><td>Frequency (MHz)</td><td>Field strength (microvolts/meter)</td><td>Measurement distance (meters)</td></tr>
<tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr>
<tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr>
<tr><td>1.705-30.0</td><td>30</td><td>30</td></tr>
<tr><td>30-88</td><td>100 **</td><td>3</td></tr>
<tr><td>88-216</td><td>150 **</td><td>3</td></tr>
<tr><td>216-960</td><td>200 **</td><td>3</td></tr>
<tr><td>Above 960</td><td>500</td><td>3</td></tr>
</table>
** 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.
</td></tr>
<tr><td>Procedure:</td><td>ANSI C63.10-2013 section 6.6.4</td></tr>
</table>

6.7.1 E.U.T. Operation:

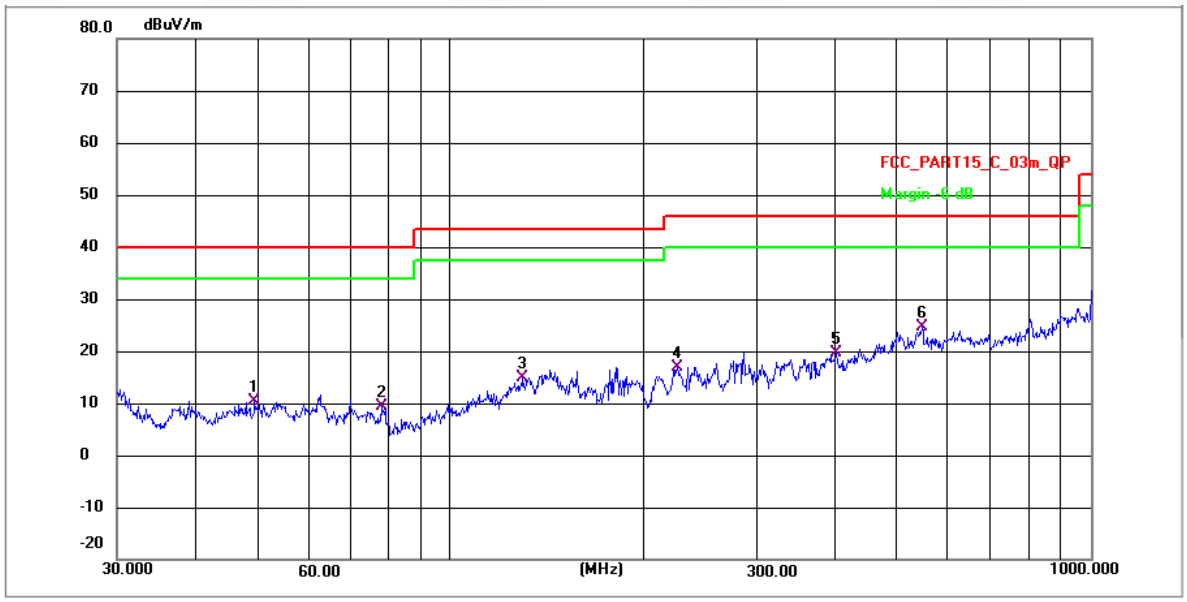
Operating Environment:	
Temperature:	25.6 °C
Humidity:	48.5 %
Atmospheric Pressure:	1010 mbar

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

6.7.2 Test Data:

Note: All the mode have been tested, and only the worst case mode are in the report
TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

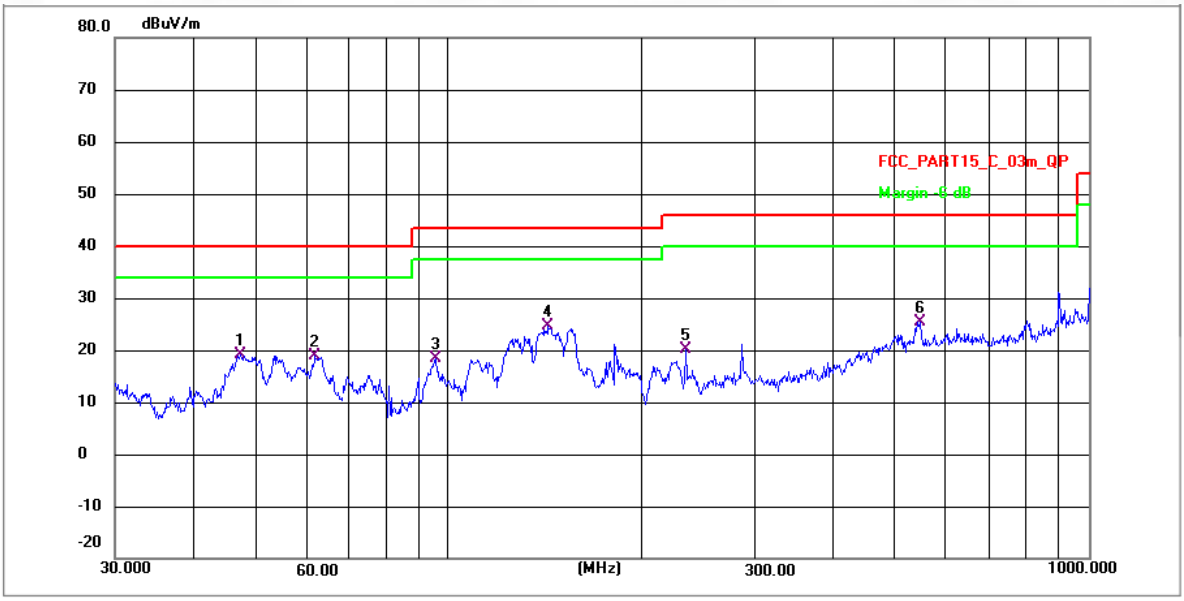


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	49.2730	28.71	-18.28	10.43	40.00	-29.57	QP	P
2	78.0020	27.38	-18.03	9.35	40.00	-30.65	QP	P
3	129.9226	42.93	-27.96	14.97	43.50	-28.53	QP	P
4	226.0994	43.00	-26.19	16.81	46.00	-29.19	QP	P
5	400.4319	44.18	-24.61	19.57	46.00	-26.43	QP	P
6 *	546.1393	46.34	-21.62	24.72	46.00	-21.28	QP	P

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	46.9948	39.42	-20.39	19.03	40.00	-20.97	QP	P
2	61.6698	39.03	-20.13	18.90	40.00	-21.10	QP	P
3	95.5945	47.30	-28.95	18.35	43.50	-25.15	QP	P
4 *	143.3261	52.44	-27.84	24.60	43.50	-18.90	QP	P
5	234.1684	46.22	-25.98	20.24	46.00	-25.76	QP	P
6	546.1393	47.06	-21.62	25.44	46.00	-20.56	QP	P

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

6.8 Emissions in restricted frequency bands (above 1GHz)

<table>
<tr><td>Test Requirement:</td><td>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)).`</td></tr>
<tr><td>Test Method:</td><td>Radiated emissions tests</td></tr>
<tr><td>Test Limit:</td><td>
<table>
<tr><td>Frequency (MHz)</td><td>Field strength (microvolts/meter)</td><td>Measurement distance (meters)</td></tr>
<tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr>
<tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr>
<tr><td>1.705-30.0</td><td>30</td><td>30</td></tr>
<tr><td>30-88</td><td>100 **</td><td>3</td></tr>
<tr><td>88-216</td><td>150 **</td><td>3</td></tr>
<tr><td>216-960</td><td>200 **</td><td>3</td></tr>
<tr><td>Above 960</td><td>500</td><td>3</td></tr>
</table>
** 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.
</td></tr>
<tr><td>Procedure:</td><td>ANSI C63.10-2013 section 6.6.4</td></tr>
</table>

6.8.1 E.U.T. Operation:

Operating Environment:	
Temperature:	25.6 °C
Humidity:	48.5 %
Atmospheric Pressure:	1010 mbar

6.8.2 Test Data:

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2872.764	72.08	-29.73	42.35	74.00	-31.65	peak	P
2	4334.363	67.53	-28.86	38.67	74.00	-35.33	peak	P
3	6704.183	69.73	-25.20	44.53	74.00	-29.47	peak	P
4	8217.072	71.26	-25.44	45.82	74.00	-28.18	peak	P
5	14350.239	72.03	-21.16	50.87	74.00	-23.13	peak	P
6 *	17593.646	69.51	-16.42	53.09	74.00	-20.91	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2812.785	62.97	-29.83	33.14	74.00	-40.86	peak	P
2	4041.547	63.88	-28.98	34.90	74.00	-39.10	peak	P
3	5479.335	63.47	-26.96	36.51	74.00	-37.49	peak	P
4	6684.834	67.82	-25.21	42.61	74.00	-31.39	peak	P
5	7962.228	69.03	-25.47	43.56	74.00	-30.44	peak	P
6 *	12422.844	71.53	-21.71	49.82	74.00	-24.18	peak	P

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3130.268	62.92	-29.39	33.53	74.00	-40.47	peak	P
2	3906.029	65.79	-29.01	36.78	74.00	-37.22	peak	P
3	5269.649	67.01	-27.15	39.86	74.00	-34.14	peak	P
4	6737.206	66.77	-25.17	41.60	74.00	-32.40	peak	P
5	9401.838	69.55	-23.42	46.13	74.00	-27.87	peak	P
6 *	13901.163	70.04	-21.06	48.98	74.00	-25.02	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2781.256	66.89	-29.89	37.00	74.00	-37.00	peak	P
2	3243.556	60.43	-29.29	31.14	74.00	-42.86	peak	P
3	4754.381	66.80	-28.06	38.74	74.00	-35.26	peak	P
4	6952.841	67.77	-24.97	42.80	74.00	-31.20	peak	P
5	9801.413	71.24	-23.85	47.39	74.00	-26.61	peak	P
6 *	14350.239	71.53	-21.16	50.37	74.00	-23.63	peak	P

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3140.237	61.40	-29.38	32.02	74.00	-41.98	peak	P
2	4374.638	65.52	-28.83	36.69	74.00	-37.31	peak	P
3	5444.604	67.49	-27.00	40.49	74.00	-33.51	peak	P
4	7580.450	71.57	-24.90	46.67	74.00	-27.33	peak	P
5	12629.207	72.70	-21.55	51.15	74.00	-22.85	peak	P
6 *	15007.760	73.14	-20.42	52.72	74.00	-21.28	peak	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3020.064	60.24	-29.50	30.74	74.00	-43.26	peak	P
2	3897.007	65.51	-29.01	36.50	74.00	-37.50	peak	P
3	4706.527	65.66	-28.20	37.46	74.00	-36.54	peak	P
4	5644.912	67.53	-26.48	41.05	74.00	-32.95	peak	P
5	7697.468	71.14	-25.08	46.06	74.00	-27.94	peak	P
6 *	15007.760	72.14	-20.42	51.72	74.00	-22.28	peak	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2938.266	62.79	-29.61	33.18	74.00	-40.82	peak	P
2	4510.742	67.23	-28.76	38.47	74.00	-35.53	peak	P
3	5925.783	65.81	-25.57	40.24	74.00	-33.76	peak	P
4	7684.131	69.87	-25.05	44.82	74.00	-29.18	peak	P
5	11368.003	70.77	-23.17	47.60	74.00	-26.40	peak	P
6 *	16798.538	69.40	-18.64	50.76	74.00	-23.24	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2973.293	62.81	-29.56	33.25	74.00	-40.75	peak	P
2	3349.307	65.40	-29.19	36.21	74.00	-37.79	peak	P
3	5825.586	66.76	-25.89	40.87	74.00	-33.13	peak	P
4	6719.703	69.52	-25.18	44.34	74.00	-29.66	peak	P
5	8217.072	72.26	-25.44	46.82	74.00	-27.18	peak	P
6 *	13489.514	71.18	-20.98	50.20	74.00	-23.80	peak	P

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3349.307	60.40	-29.19	31.21	74.00	-42.79	peak	P
2	4196.297	66.75	-28.92	37.83	74.00	-36.17	peak	P
3	5337.094	70.12	-27.08	43.04	74.00	-30.96	peak	P
4	6667.467	69.69	-25.23	44.46	74.00	-29.54	peak	P
5	12491.255	71.78	-21.63	50.15	74.00	-23.85	peak	P
6 *	14882.489	71.53	-20.59	50.94	74.00	-23.06	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3047.246	62.10	-29.47	32.63	74.00	-41.37	peak	P
2	4181.767	66.92	-28.93	37.99	74.00	-36.01	peak	P
3	5549.464	67.60	-26.79	40.81	74.00	-33.19	peak	P
4	6719.703	69.52	-25.18	44.34	74.00	-29.66	peak	P
5	12491.255	72.28	-21.63	50.65	74.00	-23.35	peak	P
6 *	17942.861	69.59	-16.80	52.79	74.00	-21.21	peak	P

TM2 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3054.300	62.97	-29.46	33.51	74.00	-40.49	peak	P
2	4936.425	62.79	-27.55	35.24	74.00	-38.76	peak	P
3	6667.467	67.19	-25.23	41.96	74.00	-32.04	peak	P
4	7697.468	70.14	-25.08	45.06	74.00	-28.94	peak	P
5	12662.103	70.30	-21.53	48.77	74.00	-25.23	peak	P
6 *	15564.397	70.67	-21.51	49.16	74.00	-24.84	peak	P

TM2 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2967.284	58.04	-29.56	28.48	74.00	-45.52	peak	P
2	3935.493	59.63	-29.01	30.62	74.00	-43.38	peak	P
3	5094.423	64.19	-27.29	36.90	74.00	-37.10	peak	P
4	7267.215	66.51	-24.85	41.66	74.00	-32.34	peak	P
5	9475.497	69.24	-23.25	45.99	74.00	-28.01	peak	P
6 *	14955.796	71.79	-20.47	51.32	74.00	-22.68	peak	P

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

TM3 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	2886.915	60.21	-29.70	30.51	74.00	-43.49	peak	P
2	3959.453	62.90	-29.01	33.89	74.00	-40.11	peak	P
3	5222.643	64.88	-27.19	37.69	74.00	-36.31	peak	P
4	6737.206	66.27	-25.17	41.10	74.00	-32.90	peak	P
5	8716.149	69.63	-24.88	44.75	74.00	-29.25	peak	P
6 *	12813.048	72.27	-21.44	50.83	74.00	-23.17	peak	P

TM3 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3020.064	61.24	-29.50	31.74	74.00	-42.26	peak	P
2	3959.453	63.90	-29.01	34.89	74.00	-39.11	peak	P
3	6190.139	63.86	-25.35	38.51	74.00	-35.49	peak	P
4	8433.630	69.30	-25.35	43.95	74.00	-30.05	peak	P
5	10100.515	70.45	-24.33	46.12	74.00	-27.88	peak	P
6 *	12534.655	71.91	-21.60	50.31	74.00	-23.69	peak	P

TM3 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3243.556	60.43	-29.29	31.14	74.00	-42.86	peak	P
2	3792.553	61.96	-29.03	32.93	74.00	-41.07	peak	P
3	5011.179	66.66	-27.36	39.30	74.00	-34.70	peak	P
4	6471.896	67.93	-25.38	42.55	74.00	-31.45	peak	P
5	8094.493	70.79	-25.49	45.30	74.00	-28.70	peak	P
6 *	14882.489	71.53	-20.59	50.94	74.00	-23.06	peak	P

TM3 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3038.451	56.25	-29.47	26.78	74.00	-47.22	peak	P
2	5192.539	60.86	-27.21	33.65	74.00	-40.35	peak	P
3	6657.838	65.21	-25.24	39.97	74.00	-34.03	peak	P
4	8228.955	68.04	-25.43	42.61	74.00	-31.39	peak	P
5	12534.655	68.41	-21.60	46.81	74.00	-27.19	peak	P
6 *	16447.807	68.95	-19.44	49.51	74.00	-24.49	peak	P

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

TM3 / Polarization: Horizontal / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3462.506	54.75	-29.09	25.66	74.00	-48.34	peak	P
2	4947.852	61.35	-27.51	33.84	74.00	-40.16	peak	P
3	6634.786	64.31	-25.26	39.05	74.00	-34.95	peak	P
4	7742.094	68.65	-25.15	43.50	74.00	-30.50	peak	P
5	11617.127	69.57	-22.86	46.71	74.00	-27.29	peak	P
6 *	14865.293	72.51	-20.61	51.90	74.00	-22.10	peak	P

TM3 / Polarization: Vertical / Band: 2.4G / BW: 20 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3367.751	59.03	-29.18	29.85	74.00	-44.15	peak	P
2	4299.426	64.44	-28.87	35.57	74.00	-38.43	peak	P
3	5337.094	69.12	-27.08	42.04	74.00	-31.96	peak	P
4	6952.841	67.27	-24.97	42.30	74.00	-31.70	peak	P
5	9716.791	69.38	-23.67	45.71	74.00	-28.29	peak	P
6 *	13693.792	70.35	-21.02	49.33	74.00	-24.67	peak	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3508.850	59.41	-29.06	30.35	74.00	-43.65	peak	P
2	4275.880	63.40	-28.89	34.51	74.00	-39.49	peak	P
3	5314.005	64.63	-27.11	37.52	74.00	-36.48	peak	P
4	6619.462	67.71	-25.27	42.44	74.00	-31.56	peak	P
5	8433.630	70.30	-25.35	44.95	74.00	-29.05	peak	P
6 *	10980.469	72.33	-23.48	48.85	74.00	-25.15	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3254.826	59.51	-29.28	30.23	74.00	-43.77	peak	P
2	4275.880	62.40	-28.89	33.51	74.00	-40.49	peak	P
3	5444.604	63.49	-27.00	36.49	74.00	-37.51	peak	P
4	6667.467	65.19	-25.23	39.96	74.00	-34.04	peak	P
5	7789.230	69.12	-25.21	43.91	74.00	-30.09	peak	P
6 *	17301.162	69.05	-17.10	51.95	74.00	-22.05	peak	P

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3508.850	59.41	-29.06	30.35	74.00	-43.65	peak	P
2	4713.333	61.68	-28.18	33.50	74.00	-40.50	peak	P
3	6136.695	63.47	-25.34	38.13	74.00	-35.87	peak	P
4	6704.183	66.73	-25.20	41.53	74.00	-32.47	peak	P
5	7684.131	68.37	-25.05	43.32	74.00	-30.68	peak	P
6 *	16334.105	71.05	-19.98	51.07	74.00	-22.93	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: M

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3199.791	61.35	-29.33	32.02	74.00	-41.98	peak	P
2	4284.540	66.92	-28.88	38.04	74.00	-35.96	peak	P
3	5859.360	66.46	-25.79	40.67	74.00	-33.33	peak	P
4	6784.104	69.27	-25.12	44.15	74.00	-29.85	peak	P
5	9596.773	70.23	-23.41	46.82	74.00	-27.18	peak	P
6 *	17151.790	69.55	-17.68	51.87	74.00	-22.13	peak	P

TM4 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3072.896	62.59	-29.45	33.14	74.00	-40.86	peak	P
2	3691.965	65.21	-29.04	36.17	74.00	-37.83	peak	P
3	5147.709	64.26	-27.25	37.01	74.00	-36.99	peak	P
4	7807.262	70.10	-25.24	44.86	74.00	-29.14	peak	P
5	10048.102	70.95	-24.31	46.64	74.00	-27.36	peak	P
6 *	15164.736	71.07	-20.76	50.31	74.00	-23.69	peak	P

TM4 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	3106.833	60.04	-29.41	30.63	74.00	-43.37	peak	P
2	4126.536	63.04	-28.95	34.09	74.00	-39.91	peak	P
3	4947.852	65.35	-27.51	37.84	74.00	-36.16	peak	P
4	7001.240	67.34	-24.93	42.41	74.00	-31.59	peak	P
5	8598.543	70.69	-25.12	45.57	74.00	-28.43	peak	P
6 *	12491.255	70.78	-21.63	49.15	74.00	-24.85	peak	P

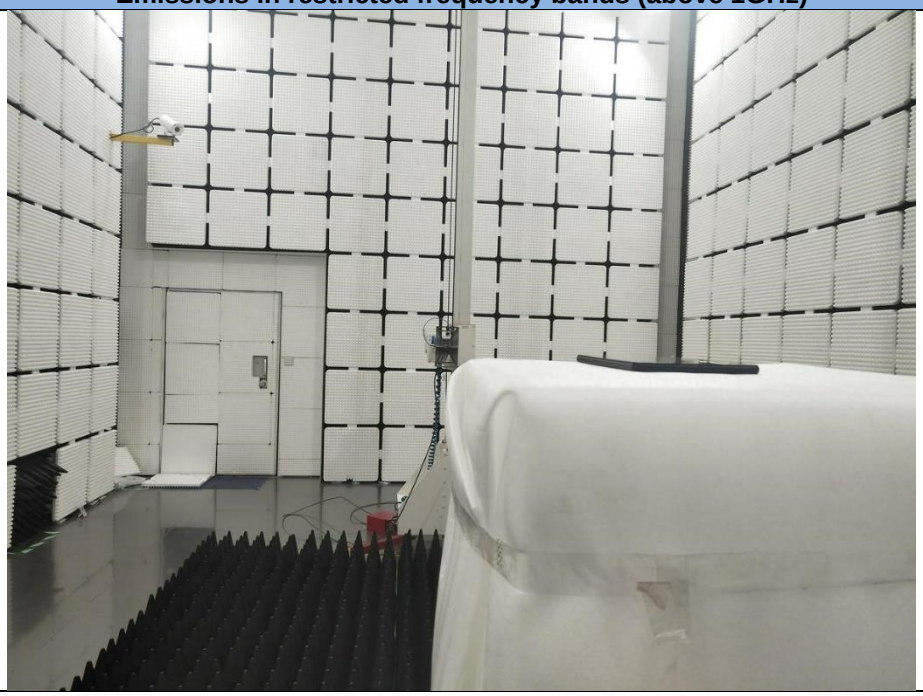
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

7 Test Setup Photos

Conducted Emission at AC power line

Occupied Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in non-restricted frequency bands

Band edge emissions (Radiated) Emissions in restricted frequency bands (above 1GHz)


Emissions in restricted frequency bands (below 1GHz)

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

8 EUT Constructional Details (EUT Photos)

Please refer to the report No.BTF230506R00201

Appendix

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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

1. Duty Cycle

1.1 Ant1

1.1.1 Test Result

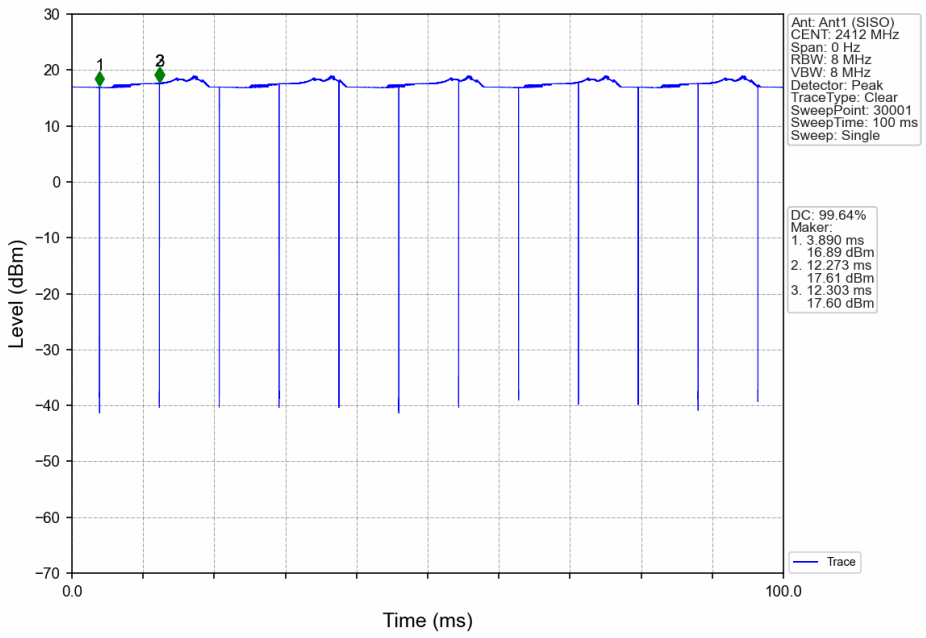
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	8.383	8.413	99.64	0.02	0.04
		2437	8.384	8.414	99.64	0.02	0.04
		2462	8.384	8.414	99.64	0.02	0.04
802.11g	SISO	2412	1.394	1.428	97.62	0.10	0.03
		2437	1.394	1.428	97.62	0.10	0.03
		2462	1.395	1.428	97.69	0.10	0.03
802.11n (HT20)	SISO	2412	1.302	1.336	97.46	0.11	0.03
		2437	1.302	1.336	97.46	0.11	0.03
		2462	1.302	1.336	97.46	0.11	0.03
802.11n (HT40)	SISO	2422	0.649	0.683	95.02	0.22	0.03
		2437	0.649	0.683	95.02	0.22	0.03
		2452	0.649	0.683	95.02	0.22	0.03

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

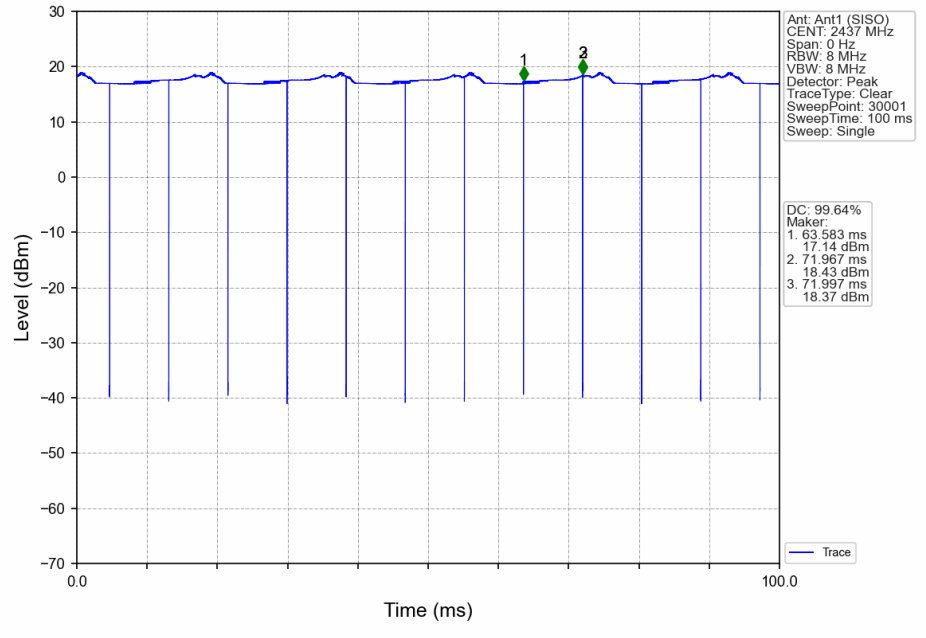
BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

1.1.2 Test Graph

802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



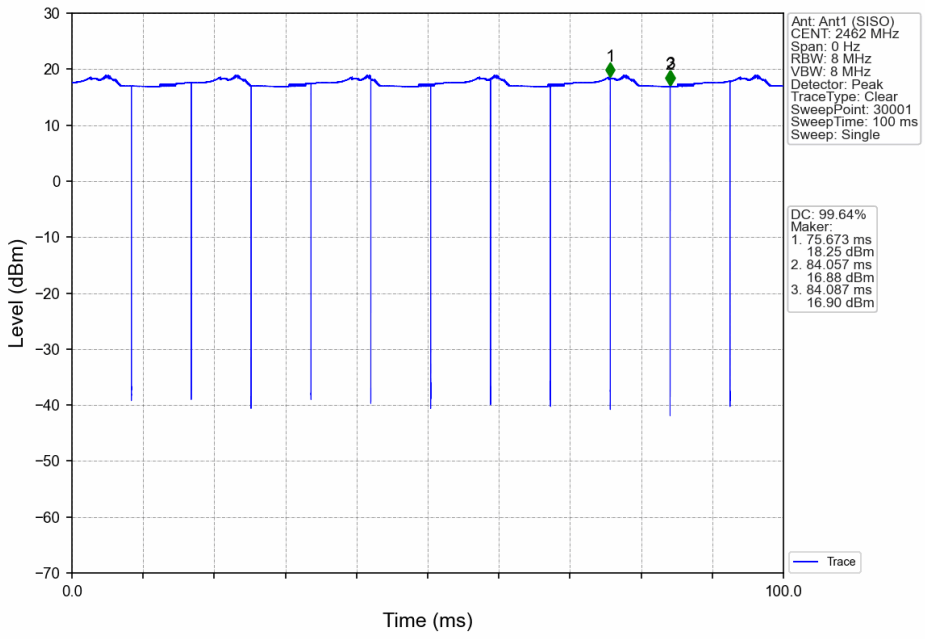
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



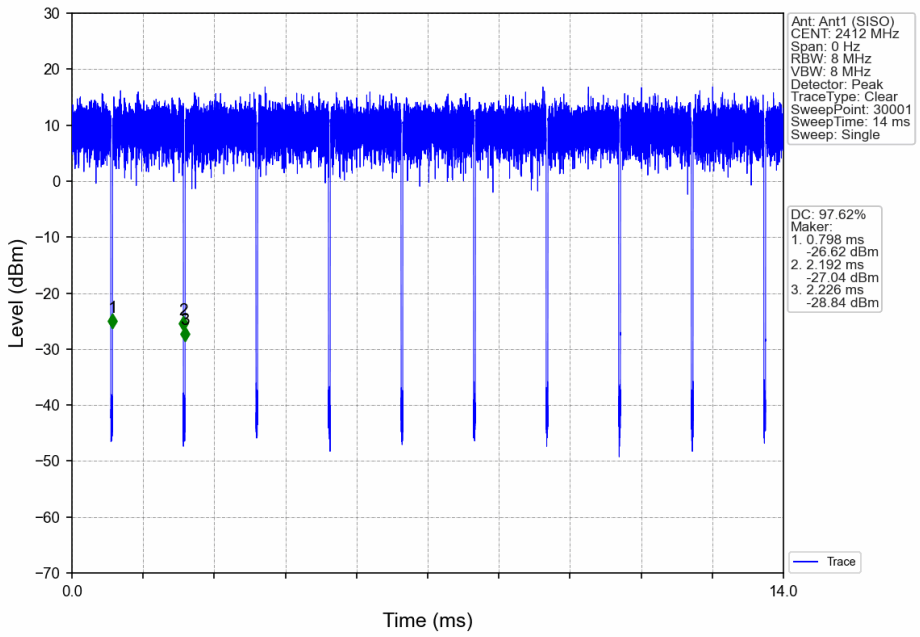
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



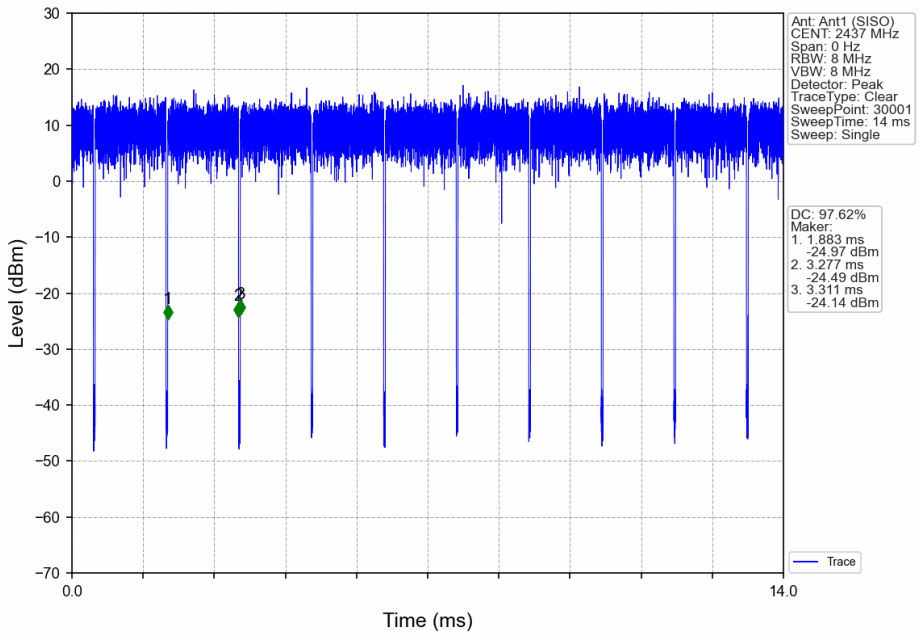
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



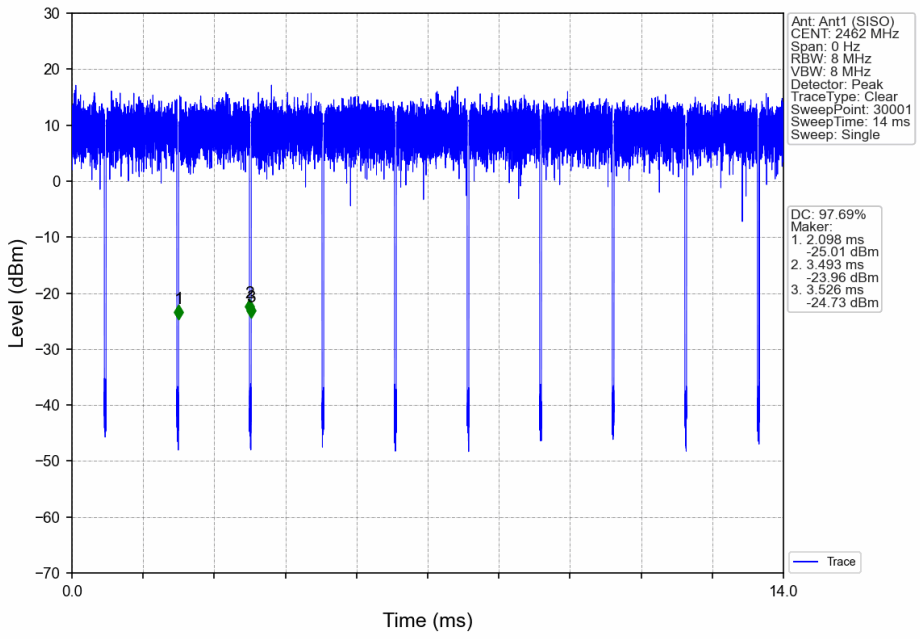
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



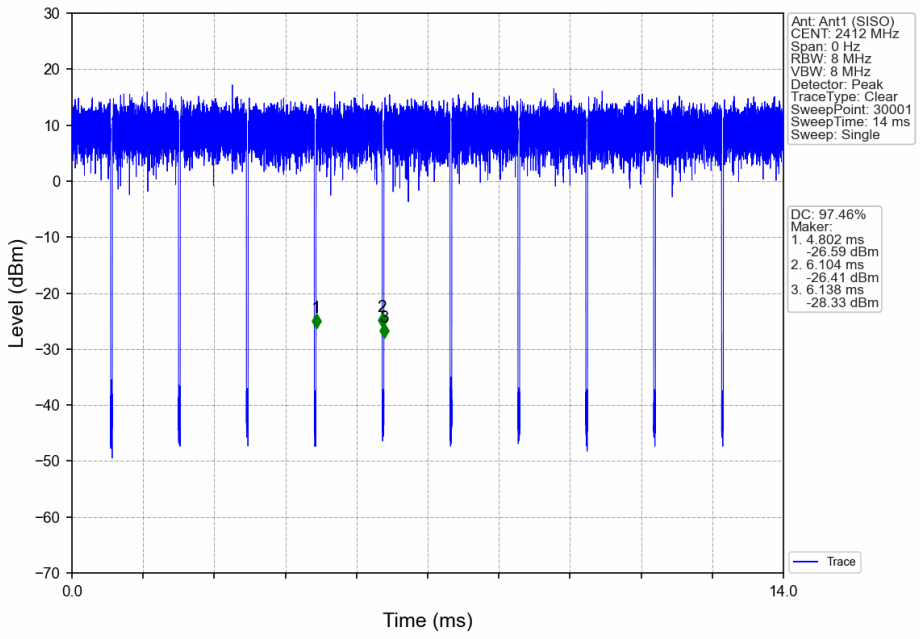
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



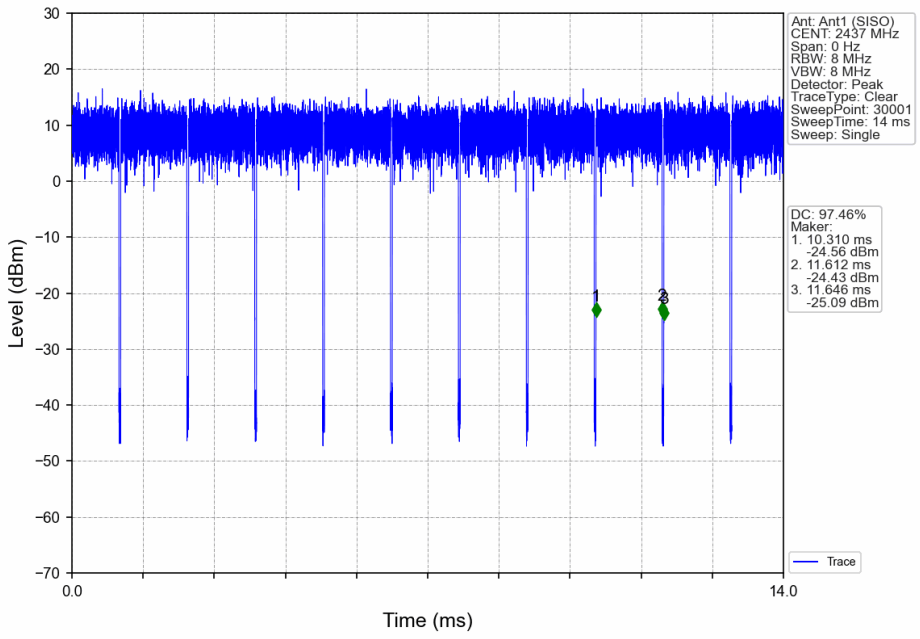
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



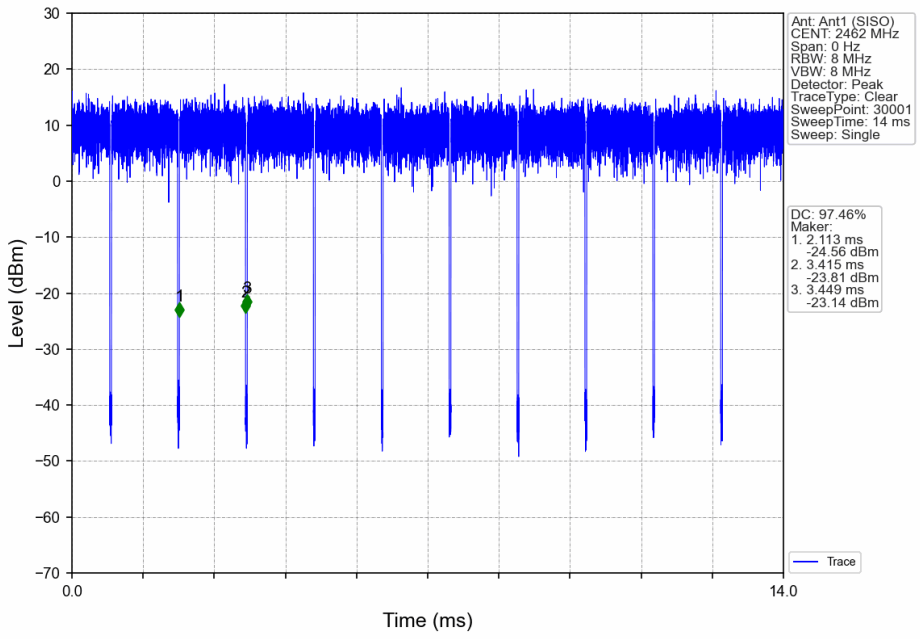
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



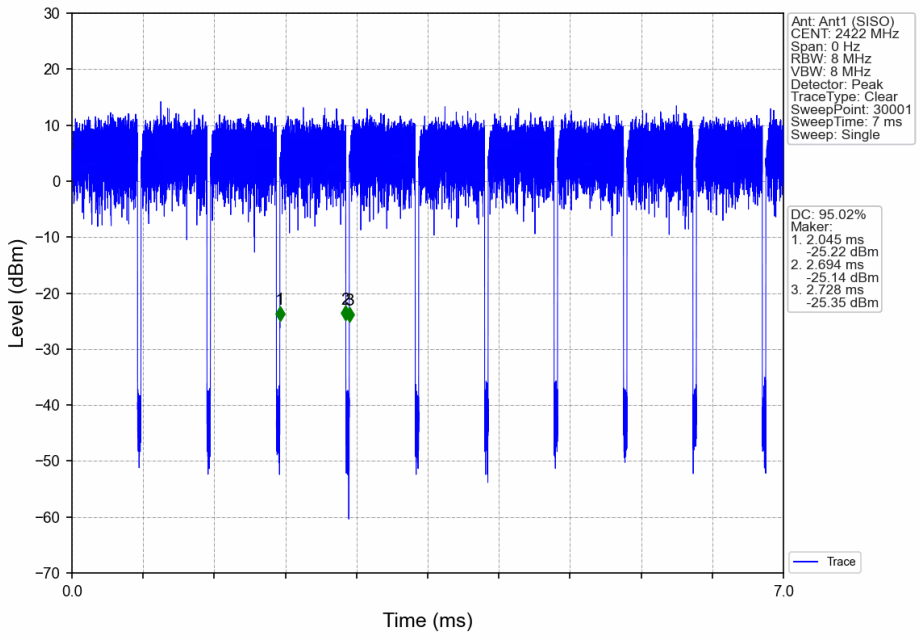
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



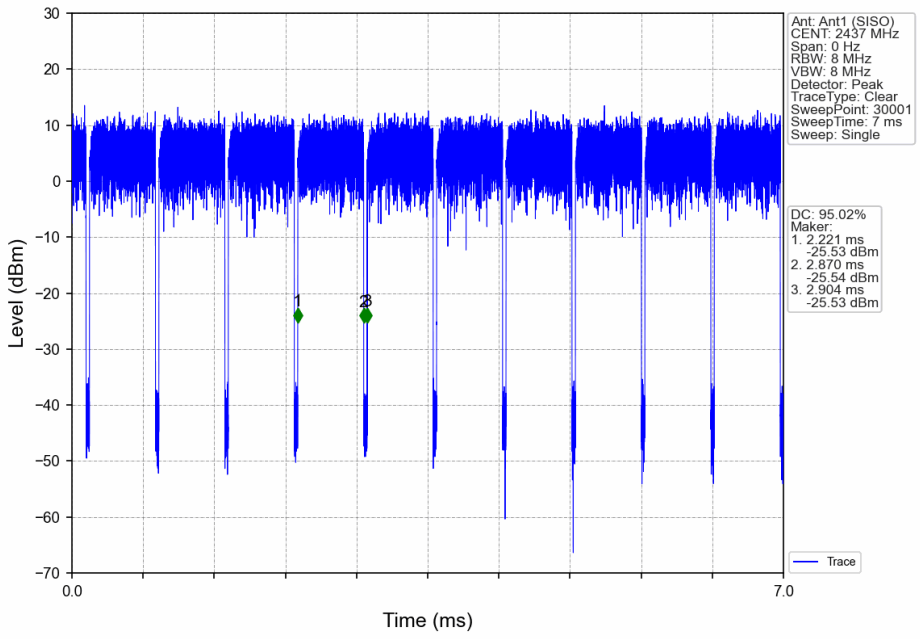
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



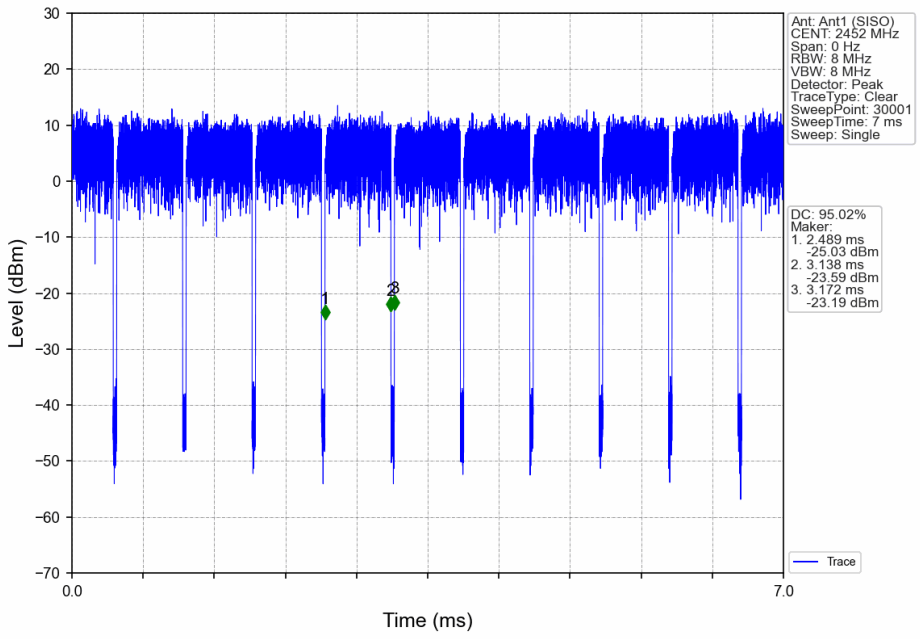
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

2. Bandwidth

2.1 OBW

2.1.1 Test Result

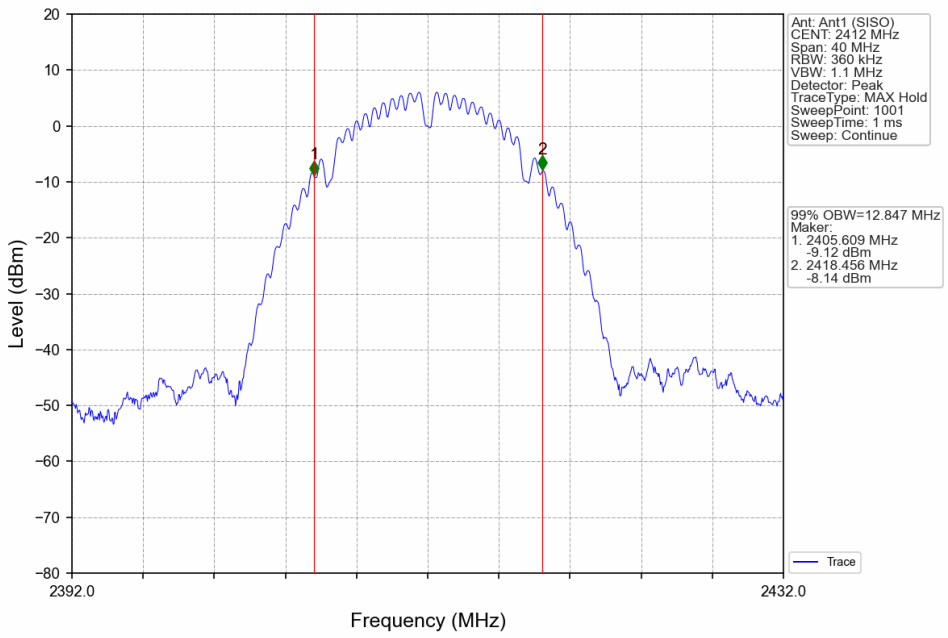
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz) Result	Verdict
802.11b	SISO	2412	1	12.847	Pass
		2437	1	12.810	Pass
		2462	1	12.791	Pass
802.11g	SISO	2412	1	17.453	Pass
		2437	1	17.472	Pass
		2462	1	17.454	Pass
802.11n (HT20)	SISO	2412	1	18.272	Pass
		2437	1	18.220	Pass
		2462	1	18.266	Pass
802.11n (HT40)	SISO	2422	1	36.528	Pass
		2437	1	36.524	Pass
		2452	1	36.542	Pass

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

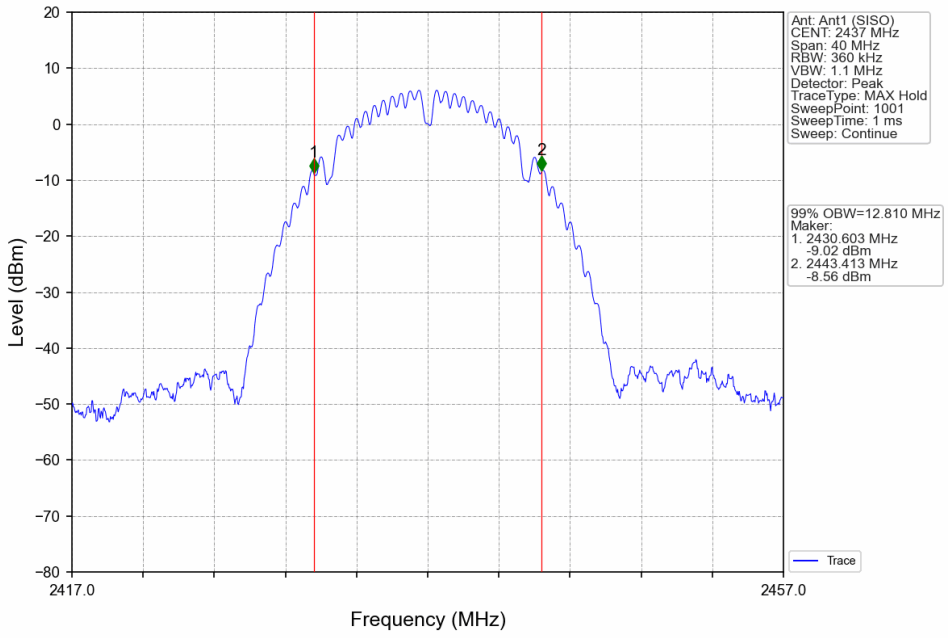
BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

2.1.2 Test Graph

802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



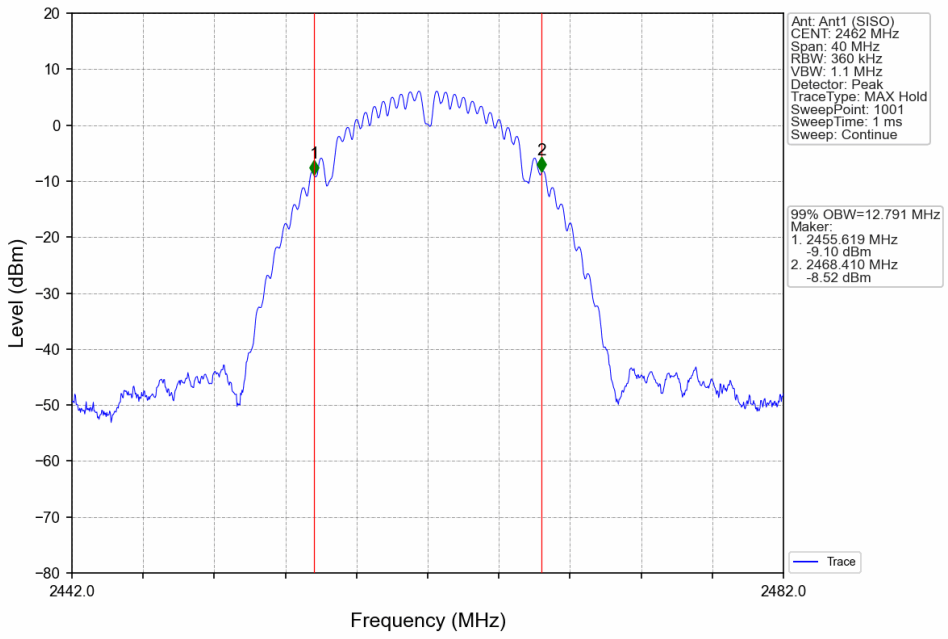
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



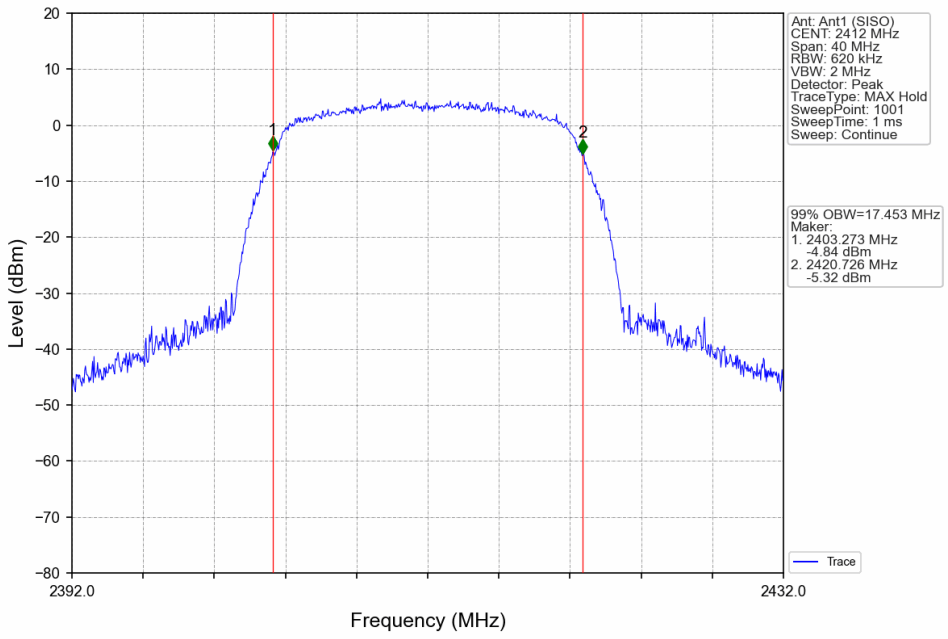
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



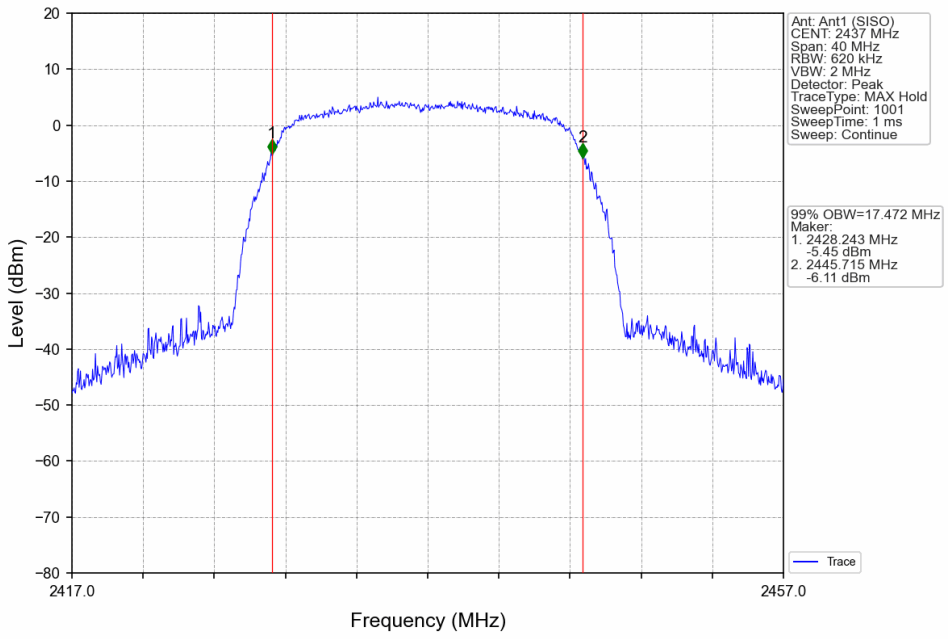
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



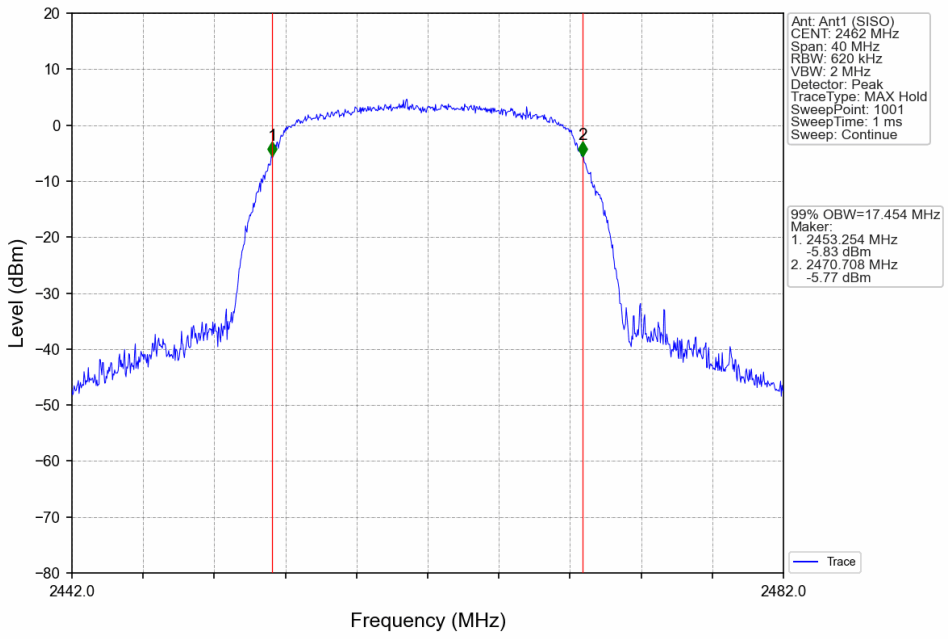
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



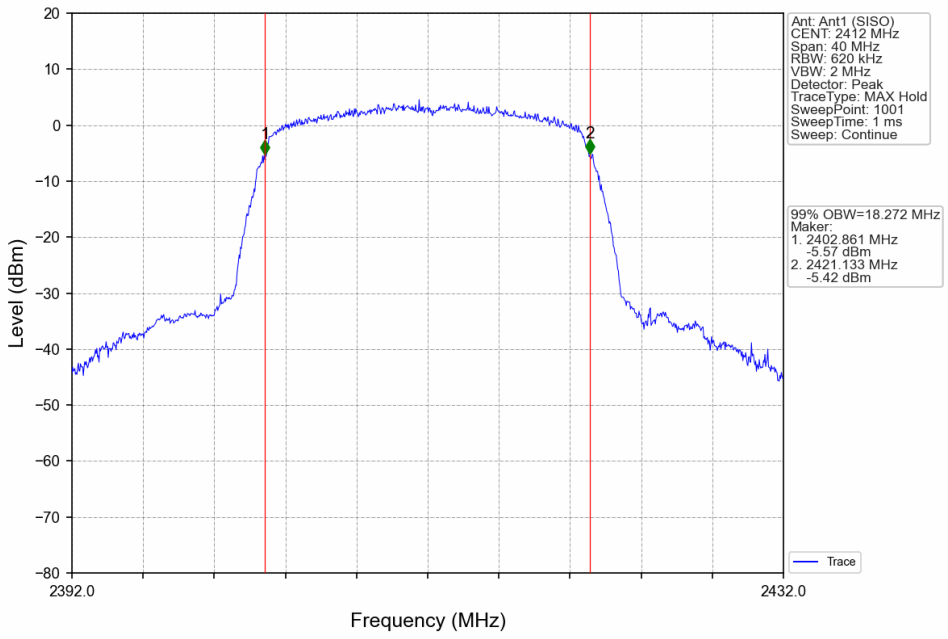
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



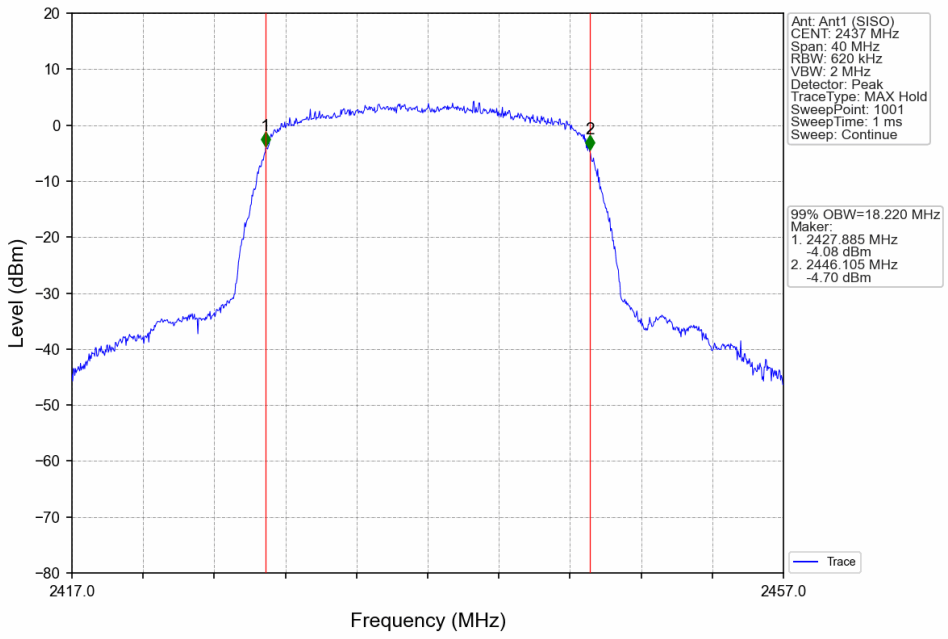
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



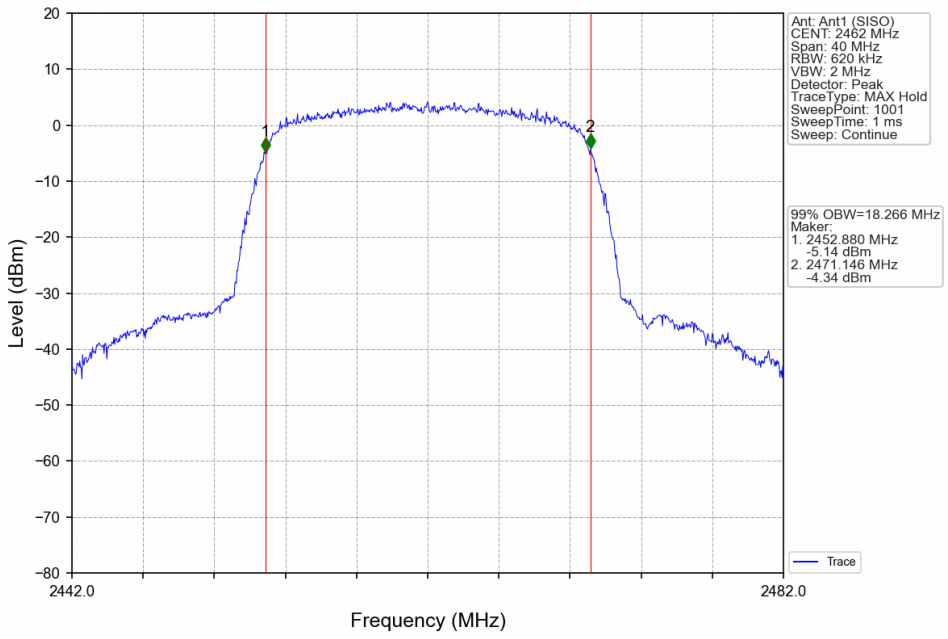
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



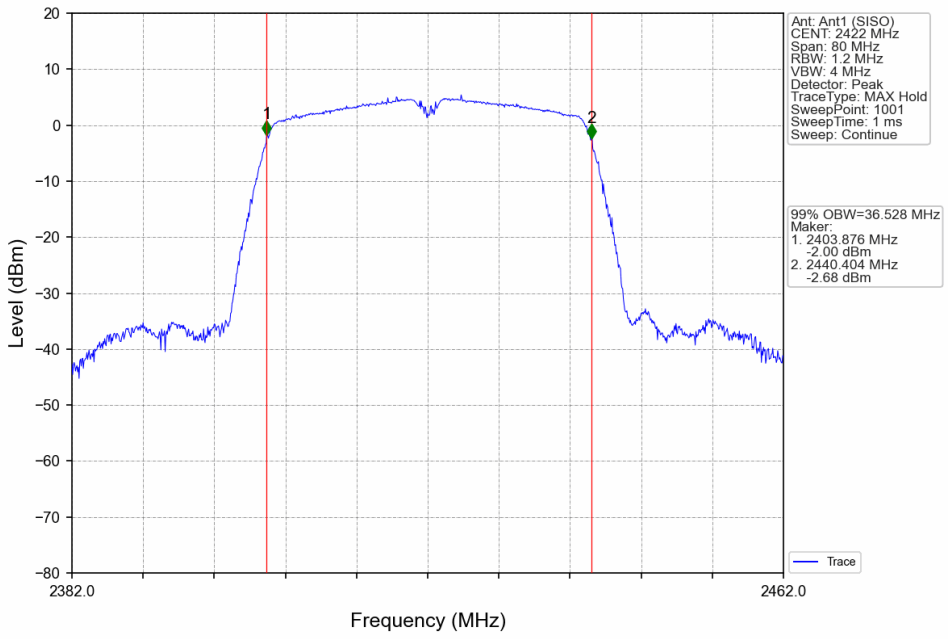
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



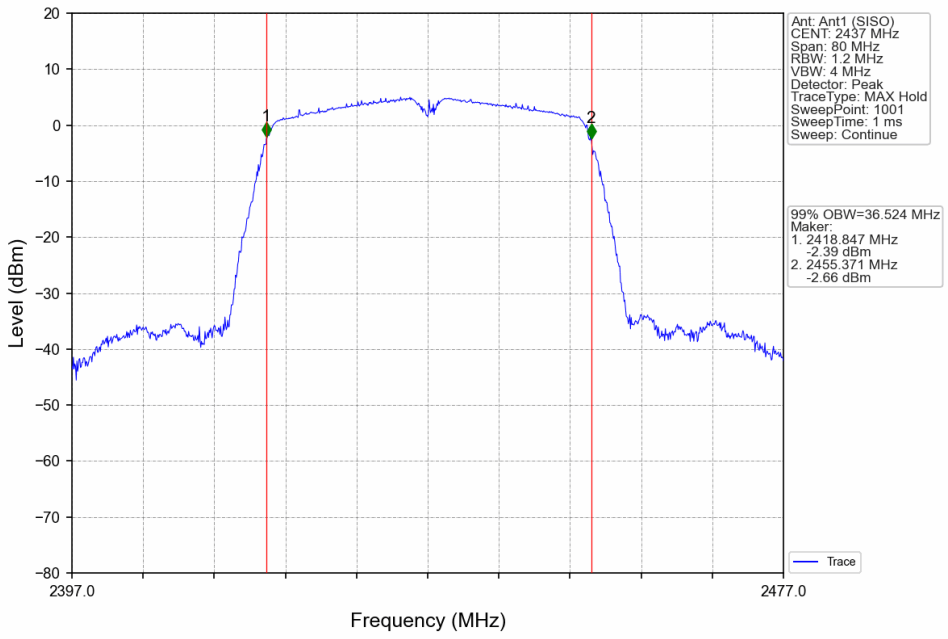
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



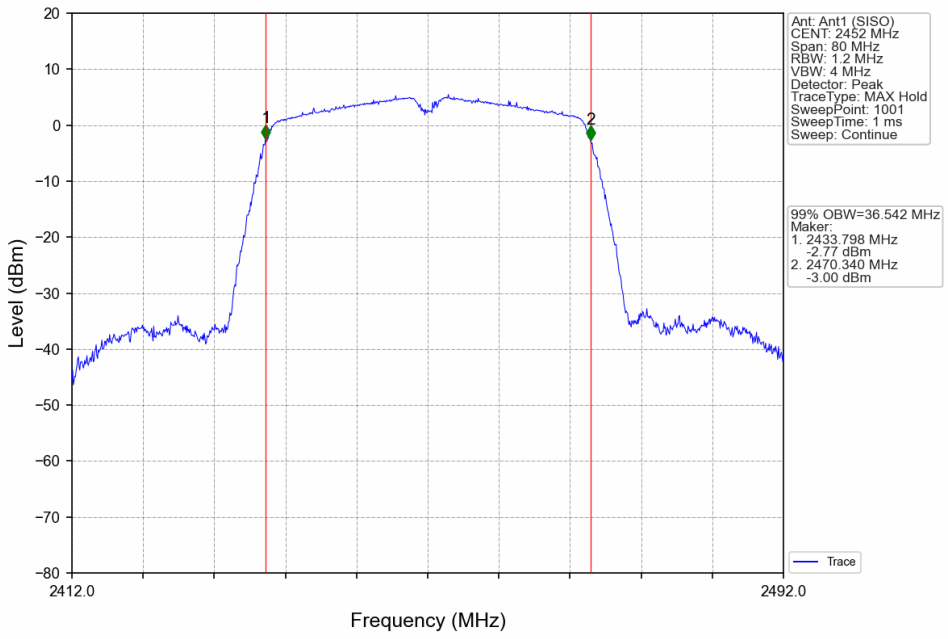
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

2.2 6dB BW

2.2.1 Test Result

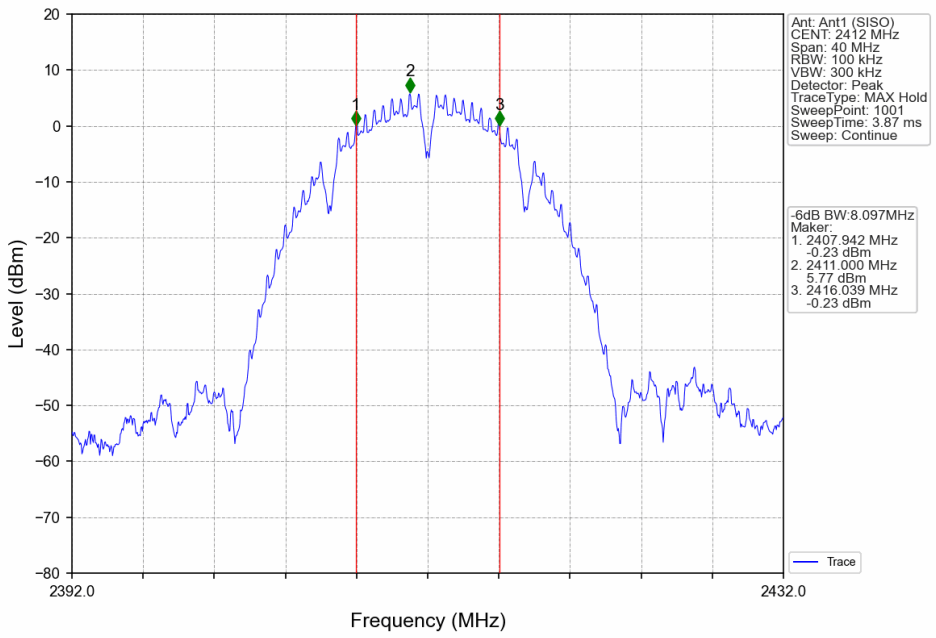
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	8.097	>=0.5	Pass
		2437	1	8.095	>=0.5	Pass
		2462	1	8.108	>=0.5	Pass
802.11g	SISO	2412	1	15.171	>=0.5	Pass
		2437	1	15.161	>=0.5	Pass
		2462	1	15.174	>=0.5	Pass
802.11n (HT20)	SISO	2412	1	15.171	>=0.5	Pass
		2437	1	15.175	>=0.5	Pass
		2462	1	15.171	>=0.5	Pass
802.11n (HT40)	SISO	2422	1	35.166	>=0.5	Pass
		2437	1	35.163	>=0.5	Pass
		2452	1	35.150	>=0.5	Pass

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

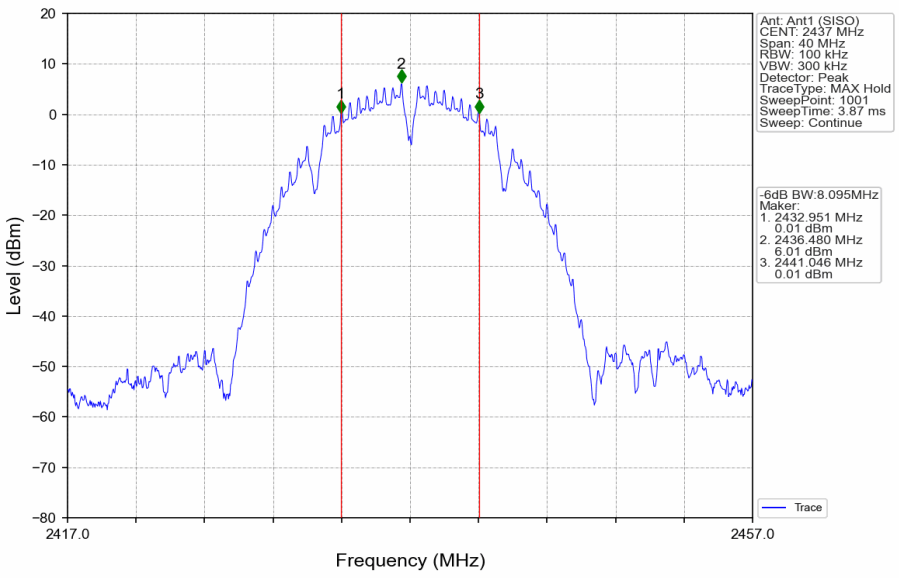
BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

2.2.2 Test Graph

802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



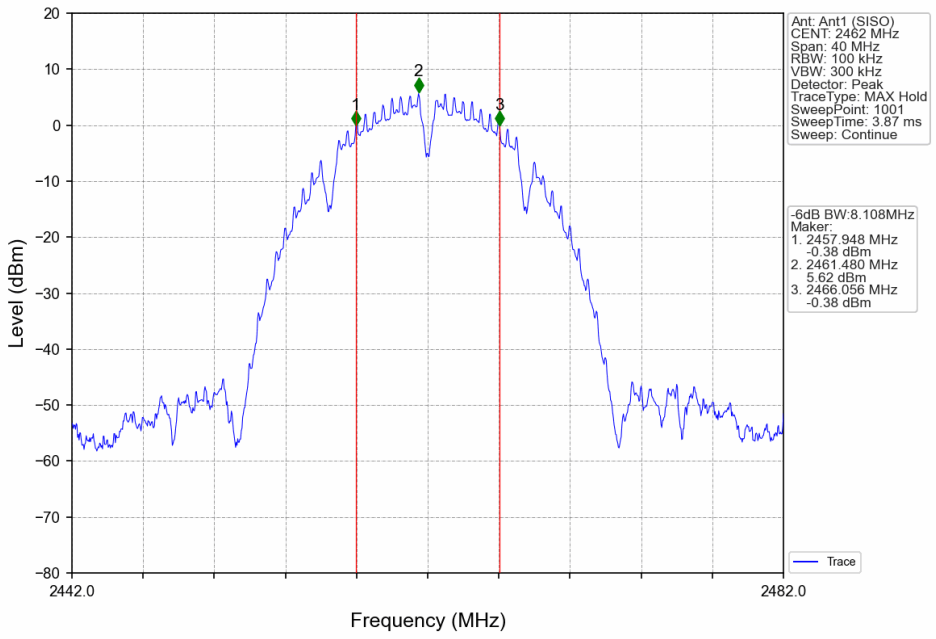
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



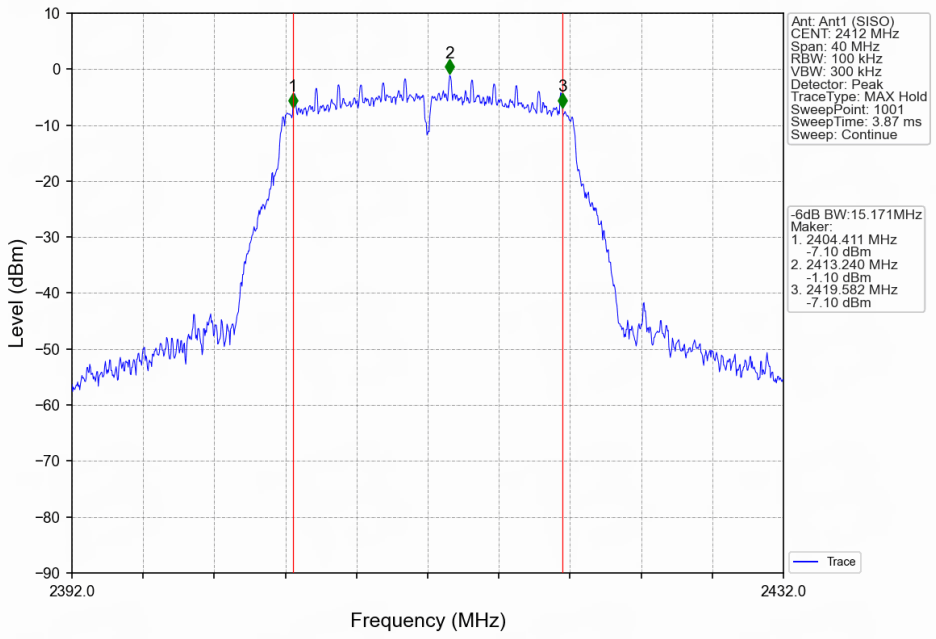
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



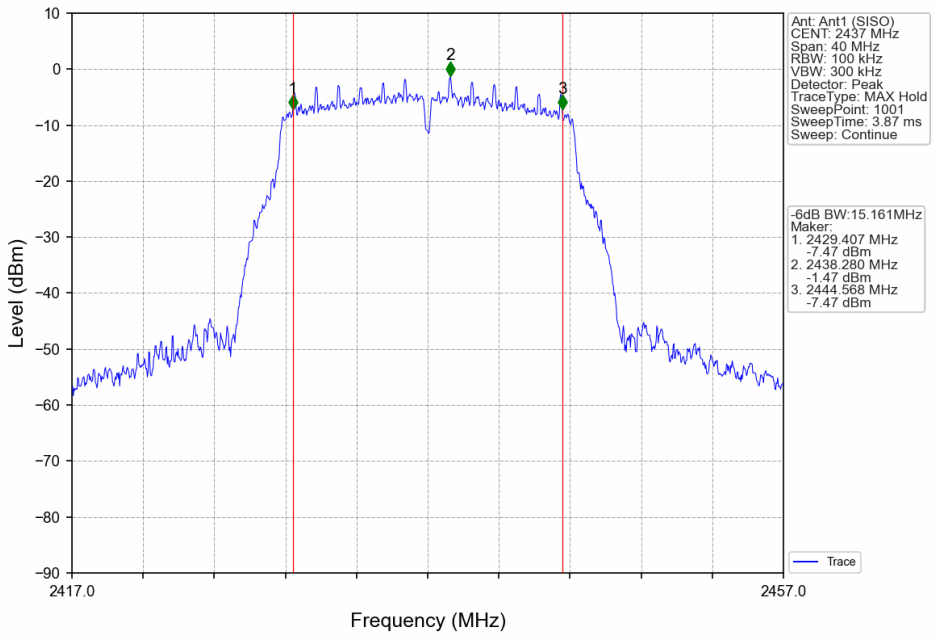
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



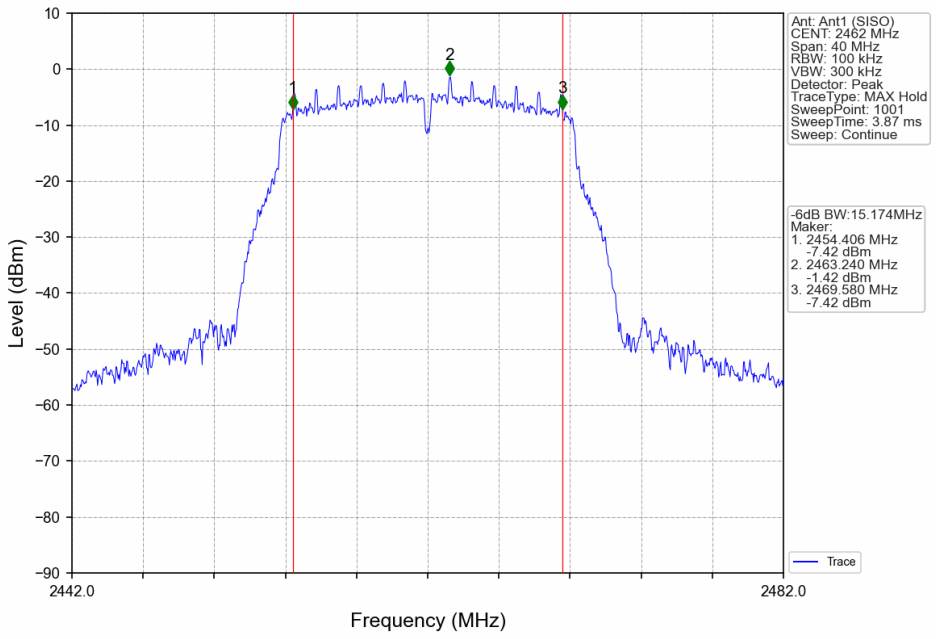
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



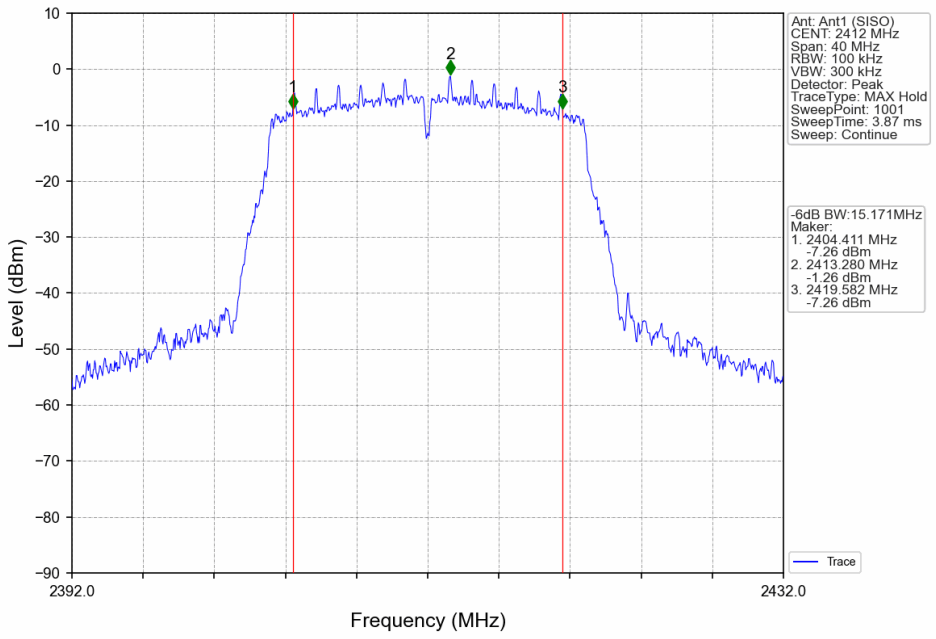
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



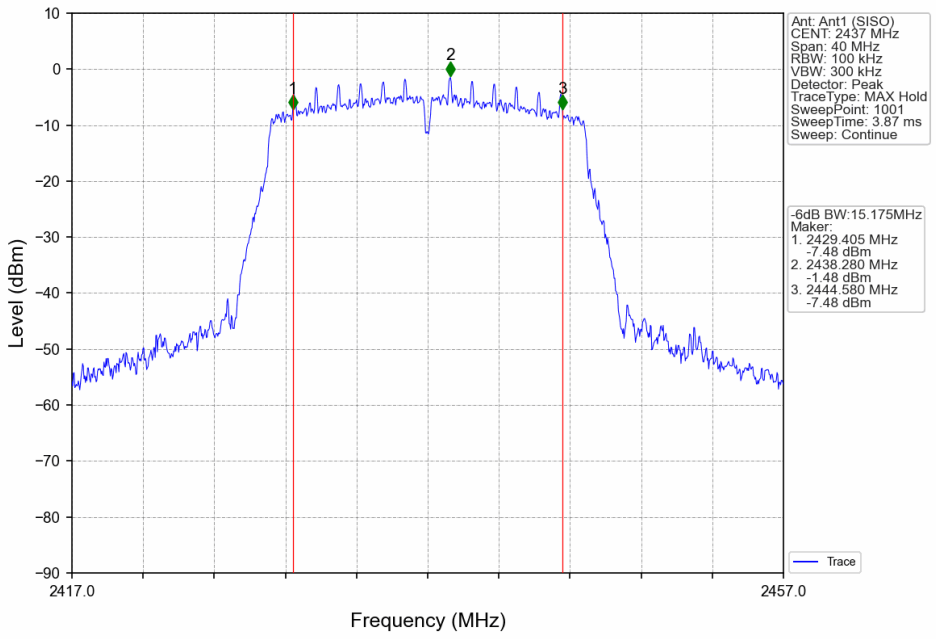
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



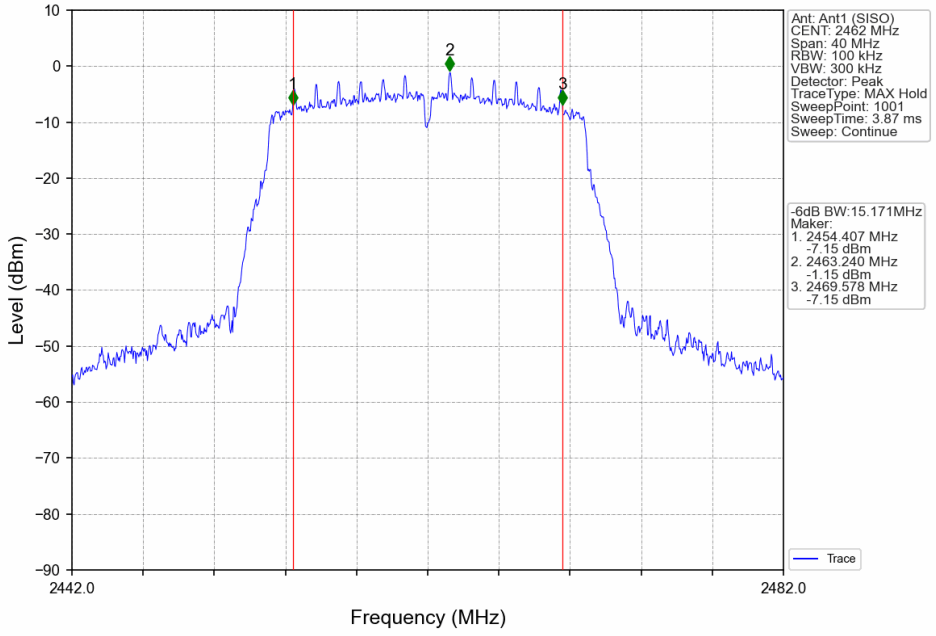
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



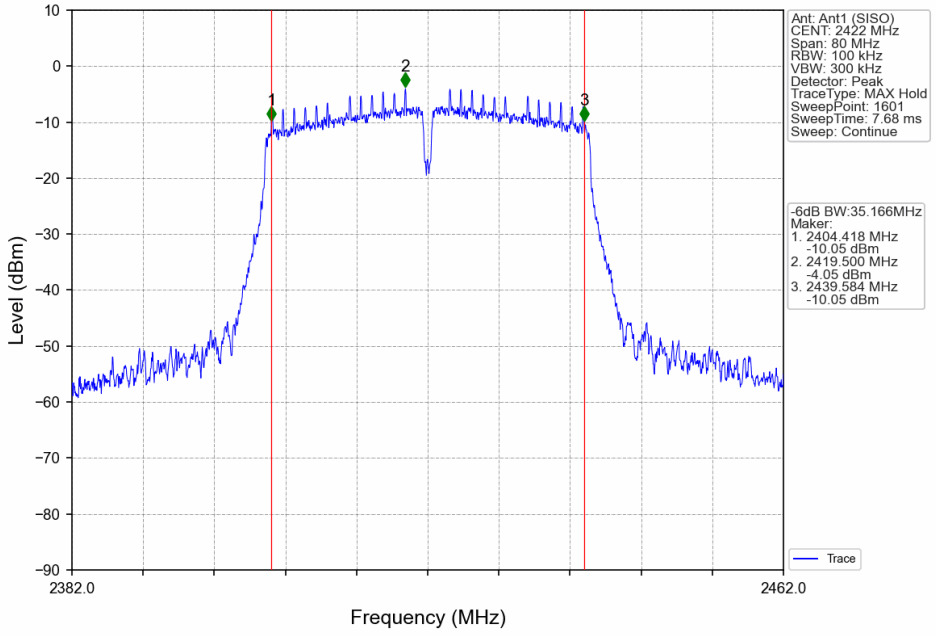
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



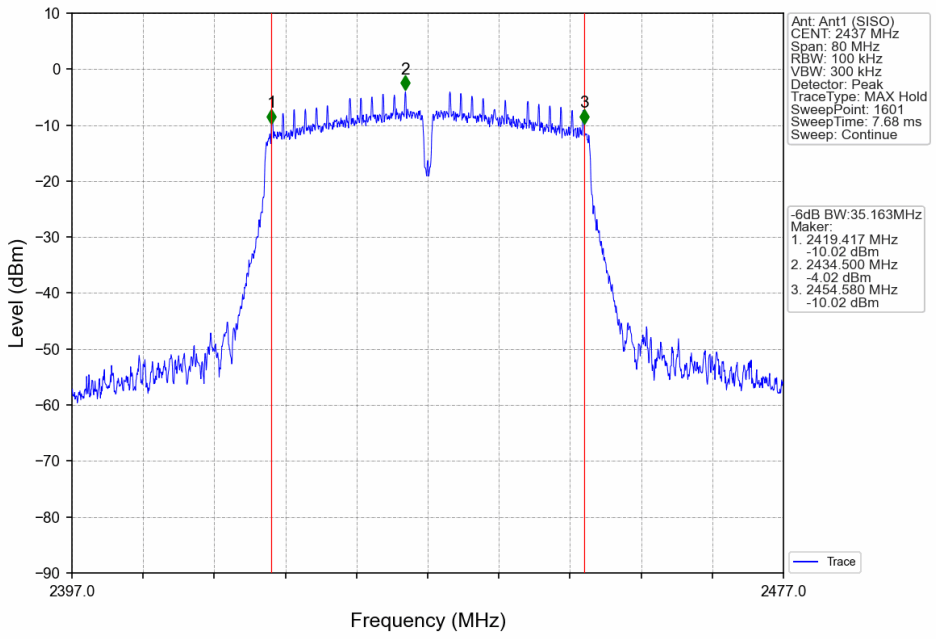
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



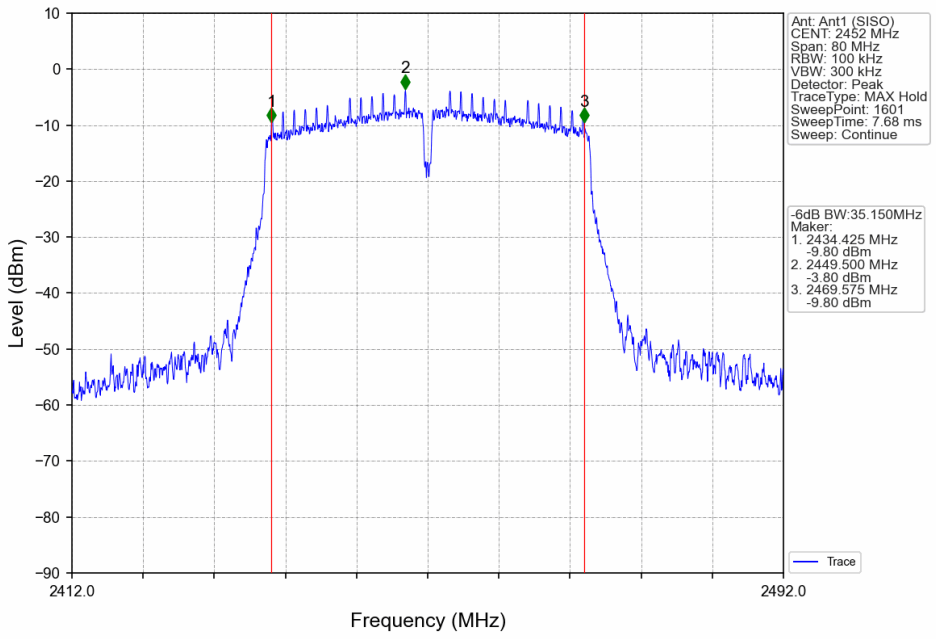
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

3. Maximum Conducted Output Power

3.1 Power

3.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	16.10	<=30	Pass
		2437	16.13	<=30	Pass
		2462	16.16	<=30	Pass
802.11g	SISO	2412	16.40	<=30	Pass
		2437	16.22	<=30	Pass
		2462	16.23	<=30	Pass
802.11n (HT20)	SISO	2412	16.17	<=30	Pass
		2437	16.20	<=30	Pass
		2462	16.27	<=30	Pass
802.11n (HT40)	SISO	2422	16.84	<=30	Pass
		2437	16.91	<=30	Pass
		2452	16.93	<=30	Pass
Note1: Antenna Gain: Ant1: 1.16dBi;					

4. Maximum Power Spectral Density

4.1 PSD

4.1.1 Test Result

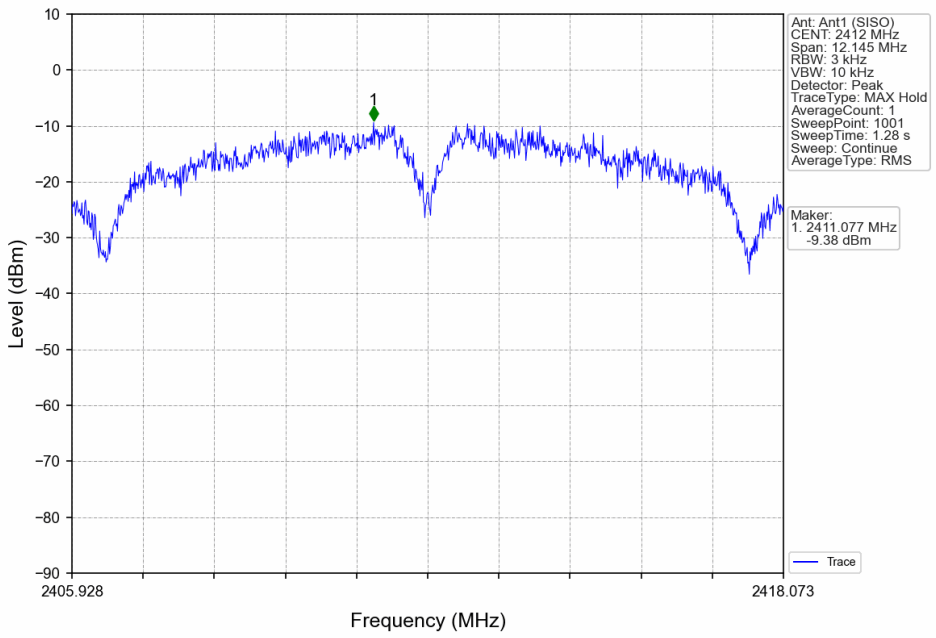
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-9.38	<=8	Pass
		2437	-7.03	<=8	Pass
		2462	-7.90	<=8	Pass
802.11g	SISO	2412	-15.71	<=8	Pass
		2437	-15.73	<=8	Pass
		2462	-16.15	<=8	Pass
802.11n (HT20)	SISO	2412	-14.89	<=8	Pass
		2437	-15.16	<=8	Pass
		2462	-16.77	<=8	Pass
802.11n (HT40)	SISO	2422	-18.11	<=8	Pass
		2437	-19.60	<=8	Pass
		2452	-18.79	<=8	Pass
Note1: Antenna Gain: Ant1: 1.16dBi;					

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

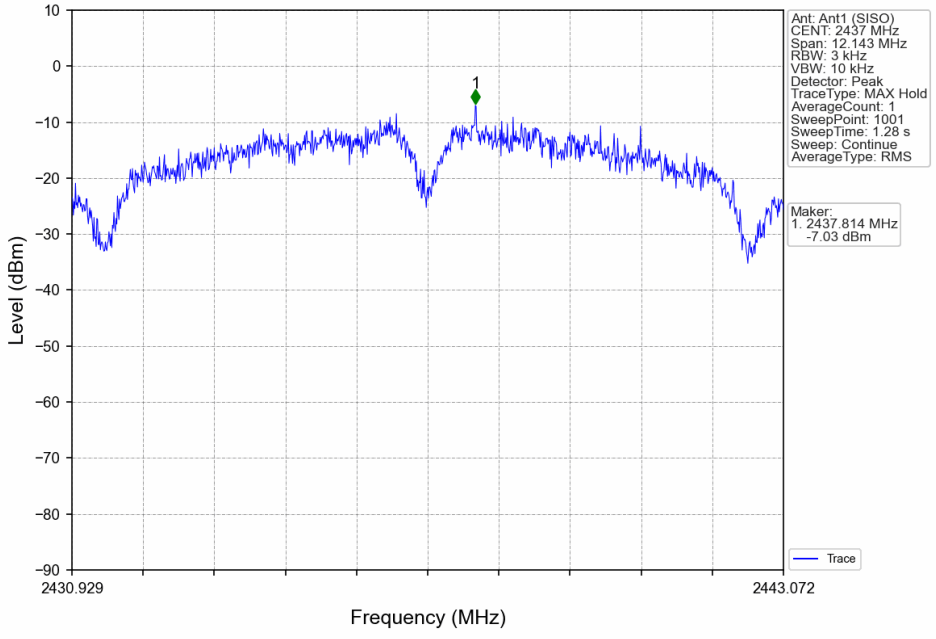
BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

4.1.2 Test Graph

802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



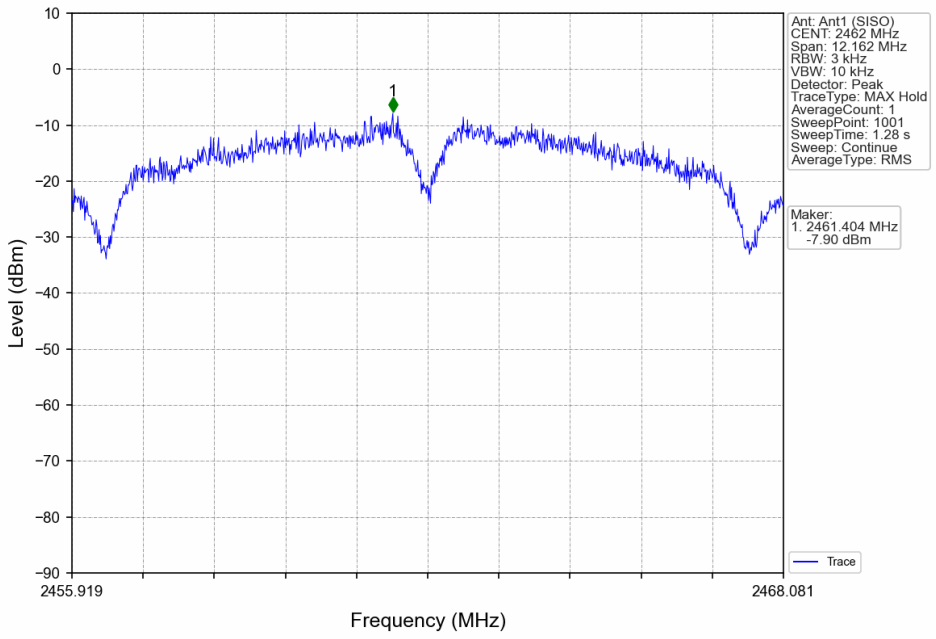
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



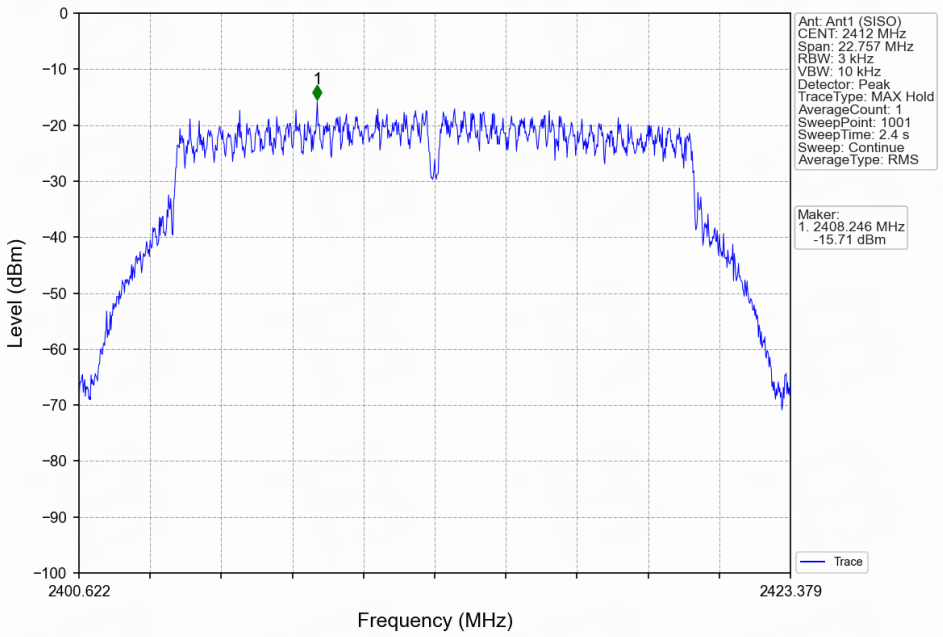
Total or partial reproduction of this document without permission of the Laboratory is not allowed.

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



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

BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China