

MIC public notice 88

TEST REPORT

Client Name : Shenzhen Xiaohu Xingtong Technology Co., Ltd.

Address : Room 1209, Yichuang International Center, Building 2B, No. 8, Golf Avenue, Guangpei Community, Guanlan Street, Longhua District, Shenzhen, China

Product Name : XTEINK X4 Classic

Test Model No. : XTEINK X4 Classic

Report No. : CCTI260518183W4

Issued Date : Jul. 10, 2026

Prepared By : Shenzhen CCTI Technology Co., Ltd.

Address : A1-1, Building B1&B2, No.45 Gangtou Road, Bogang District, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Contact Info : Service Tel : 0086-400-188-9662

CCTI E-mail : ccti@ccti-lab.com

CCTI Web : www.ccti-lab.com



Scan code for report

TEST REPORT VERIFICATION

Applicant : Shenzhen Xiaohu Xingtong Technology Co., Ltd.
Address : Room 1209, Yichuang International Center, Building 2B, No. 8, Golf Avenue,
Guangpei Community, Guanlan Street, Longhua District, Shenzhen, China
Manufacturer : Shenzhen Xiaohu Xingtong Technology Co., Ltd.
Address : Room 1209, Yichuang International Center, Building 2B, No. 8, Golf Avenue,
Guangpei Community, Guanlan Street, Longhua District, Shenzhen, China
Product Name : XTEINK X4 Classic
Test Model No. : XTEINK X4 Classic
Series No. : N/A
Trade Mark : N/A
Power Supply : Input: DC 5V From Adapter, DC 3.8V From Battery
Test Date : Jun. 25, 2026 to Jul. 10, 2026

Test Standard(s) :

MIC public notice 88:2004, annex 43 and annex 1, Article 2, Paragraph 1, Item 19

Test Result : PASS

The device described above is tested by CCTI to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the MIC public notice 88:2004, annex 43 and annex 1 limits both conducted and radiated emissions. The results shown in this test report refer only to the sample(s) tested unless other wise stated and the sample(s) are retained for 30 days only.

The document is issued by CCTI, may be altered or revised by CCTI, personal only, and shall be noted in the revision of the document. this document cannot be reproduced except in full with our prior written permission.

Producer By : 
(Betty Liang / Engineer)

Date : Jul. 10, 2026

Authorized Signer : 
(Corey Mao / Manager)

Date : Jul. 10, 2026

TABLE OF CONTENTS

1. TEST SUMMARY	6
1.1. Test Facility	7
1.2. Test Uncertainty	7
2. GENERAL INFORMATION	8
2.1. General Description of EUT	8
2.2. Test Mode	9
2.3. Test Conditions	10
2.4. Test Voltage	10
2.5. Description of Test Setup	10
2.6. Description Test Peripheral and EUT Peripheral	10
2.7. Description of Test Equipment	11
3. Antenna Power	11
3.1. Applied Procedures / Limit	12
3.2. Test Setup	12
3.3. Test Procedure	12
3.4. Test Result	13
4. Frequency Tolerance	23
4.1. Applied Procedures / Limit	23
4.2. Test Setup	23
4.3. Test Procedure	23
4.4. Test Result	23
5. Occupied Frequency Bandwidth	24
5.1. Applied Procedures / Limit	26
5.2. Test Setup	26
5.3. Test Procedure	26
5.4. Test Result	27
6. Transmitter Spurious Emissions (Conducted)	32
6.1. Applied Procedures / Limit	32
6.2. Test Setup	32
6.3. Test Procedure	32
6.4. Test Result	33
7. Number of Carriers	42
7.1. Applied Procedures / Limit	42
7.2. Test Setup	42
7.3. Test Procedure	42
7.4. Test Result	42
8. Interference Prevention Function	43
8.1. Applied Procedures / Limit	43
8.2. Measuring ID Code Software	43
8.3. Test Setup	43
8.4. Test Procedure	43
8.5. Test Result	43

9. Carrier Sensing Function	44
9.1. Applied Procedures / Limit	44
9.2. Test Setup	44
9.3. Test Procedure	44
9.4. Test Result	45
10. Secondary Radiated Emissions	45
10.1. Applied Procedures / Limit	46
10.2. Test Setup	46
10.3. Test Procedure	46
10.4. Test Result	47
11. Equivalent Isotropic Radiated Power	48
11.1. Applied Procedures / Limit	56
11.2. Test Procedure	56
11.4. Test Result	56
12. 3dB Beam Bandwidth	57
12.1. Test Setup	57
12.2. Test Procedure	57
12.3. Test Result	58
APPENDIX I -- EUT TEST PHOTOGRAPHS	59
APPENDIX II -- EUT PHOTOGRAPHS	60
APPENDIX III -- STATEMENT	61

Revision History

Revision	Description	Issued Data	Remark
V0	Initial Test Report Release	Jul. 10, 2026	Corey Mao

1. TEST SUMMARY

Test procedures according to the technical standards:

Clause	Test Item	Result
Transmitter Parameters		
3.2 (2)	Antenna Power	P
3.2 (3)	Tolerances for Antenna Power	P
3.2 (4)	Frequency Tolerance	P
3.2 (7)	Occupied Frequency Bandwidth	P
3.2 (8)	Spread Bandwidth	N/A(3)
3.2 (10)	Number of Carriers	P
3.2 (11)	Dwell Time	N/A(4)
3.2 (6)	Spurious Emissions	P
/	Equivalent Isotropic Radiated Power	P
/	3dB Beam Bandwidth	N/A(5)
/	Interference prevention function	P
/	Carrier Sensing function	P
Receiver Parameters		
3.2 (1)	Secondary Radiated Emissions	P

NOTE:

- (1) P is an abbreviation for Pass, F is an abbreviation for Fail, N/A is an abbreviation for Not Applicable.
- (2) Decision rules for the conclusion of this test report: decision by actual test data without considering measurement uncertainty.
- (3) This test item is only for FHSS products.
- (4) This test item is only for FHSS products.
- (5) The EIRP less than 12.14dBm/MHz for 802.11b/g/n20, 9.13dBm/MHz for 802.11n40.

1.1. Test Facility

Shenzhen CCTI Technology Co., Ltd.

A1-1, Building B1&B2, No.45 Gangtuo Road, Bogang District, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

1.2. Test Uncertainty

Item	MU	Remark
Bandwidth	± 0.20 ppm	/
Antenna Power	± 0.33 dB	/
Frequency Tolerance	± 5.02 ppm	/
Conducted spurious emission	± 0.13 dB	/
Spurious emissions, radiated(>1 G)	± 2.83 dB	/
Spurious emissions, radiated(<1 G)	± 3.01 dB	/
(95% Confidence Levels, $k=2$)		

2. GENERAL INFORMATION

2.1. General Description of EUT

EUT	: XTEINK X4 Classic
Trademark	: N/A
Model Number	: XTEINK X4 Classic
Serial Model	: N/A
Model Difference	: N/A
Power Supply	: Input: DC 5V From Adapter, DC 3.8V From Battery
Radio Technology	: 2.4G WiFi
Operation frequency	: 2412MHz -2472MHz for IEEE 802.11b, g, n/HT20 2422MHz -2462MHz for IEEE 802.11n/HT40
Channel No.	: 802.11b/802.11g /802.11n(HT20): 13CH 802.11n(HT40): 9CH
Modulation	: IEEE 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM(64QAM, 16QAM, QPSK, BPSK)
Stated power	: 0.290mW/MHz
Antenna Gain (Peak)	: Maximum Gain is 5.19dBi
Antenna Type	: Internal Antenna
Hardware Version	: V1.0
Software Version	: V1.0
Intend use environment	: Residential, commercial and light industrial environment

Remark:

- (1) XTEINK X4 Classic was selected as the test model and the datas have been recorded in this report.
- (2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.2. Test Mode

For IEEE 802.11b,g,n/HT20, All Channels:

CH1	2412MHz	CH8	2447MHz
CH2	2417MHz	CH9	2452MHz
CH3	2422MHz	CH10	2457MHz
CH4	2427MHz	CH11	2462MHz
CH5	2432MHz	CH12	2467MHz
CH6	2437MHz	CH13	2472MHz
CH7	2442MHz	/	/

For IEEE 802.11n/HT40, All Channels:

CH1	2422MHz	CH6	2447MHz
CH2	2427MHz	CH7	2452MHz
CH3	2432MHz	CH8	2457MHz
CH4	2437MHz	CH9	2462MHz
CH5	2442MHz	/	/

The test software was used to control EUT work in Continuous TX mode, and select test channel, wireless mode:

Tested mode, channel, and data rate information			
Mode	Data rate (Mbps) (see Note)	Channel	Frequency (MHz)
IEEE 802.11b	1	Low :CH1	2412
	1	Middle: CH7	2442
	1	High: CH13	2472
IEEE 802.11g	6	Low :CH1	2412
	6	Middle: CH7	2442
	6	High: CH13	2472
IEEE 802.11n HT20	6.5	Low :CH1	2412
	6.5	Middle: CH7	2442
	6.5	High: CH13	2472
IEEE 802.11n HT40	13.5	Low :CH1	2422
	13.5	Middle: CH5	2442
	13.5	High: CH9	2462
Note: 1. According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test. 2. Antenna Connector Impedance: 50Ω, Cable Loss: 0 dB			

2.3. Test Conditions

Temperature range	5-35°C
Humidity range	45-85%
Pressure range	86-106kPa

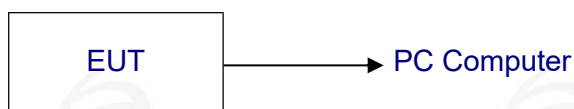
2.4. Test Voltage

Voltage mode	Input Voltage	Radio Unit Voltage
DC	DC 3.42V	DC 3.3V
	DC 3.8V	DC 3.3V
	DC 4.18V	DC 3.3V

Note:

- (1) The radio unit Voltage with the IC.
- (2) The radio unit less than 1%, so the test only rated voltage (Normal voltage DC 3.8V).

2.5. Description of Test Setup



2.6. Description Test Peripheral and EUT Peripheral

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

Item	Equipment	Trade Mark	Model/Type No.	Series No.	Note
1	PC Computer	HP	14s	/	/

Item	Shielded Type	Ferrite Core	Length	Note

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) "YES" is means "shielded" "with core"; "NO" is means "unshielded" "without core".

2.7. Description of Test Equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last Cal.	Next Cal.
1	966 Chamber	Yiheng	9*6*6	ZJE-001	2025.07.12	2028.07.11
2	Spectrum Analyzer	Agilent	N9020A	ZJE-024	2025.07.12	2026.07.11
3	EMI Test Receiver	R&S	ESCI7	ZJE-003	2025.07.12	2026.07.11
4	Broadband antenna	Schwarzbeck	VULB 9163	ZJE-004	2025.07.12	2026.07.11
5	Horn antenna	Schwarzbeck	BBHA 9120D	ZJE-005	2025.07.12	2026.07.11
6	Loop antenna	Schwarzbeck	FMZB 1519 B	ZJE-015	2025.07.12	2026.07.11
7	Attenuator6dB	YFC	6dB	ZJE-017	2025.07.12	2026.07.11
8	Synthesizer	R&S	CMW500	ZJE-036	2025.07.12	2026.07.11
9	Vector Signal Generator	Agilent	N5182A	ZJE-037	2025.07.12	2026.07.11
10	Analog signal generator	Agilent	N5181A	ZJE-038	2025.07.12	2026.07.11
11	Power Supply	Agilent	E3632A	ZJE-039	2025.07.12	2026.07.11
12	Attenuator6dB	Weinschel Associates	WA1-6-34	ZJE-040	2025.07.12	2026.07.11
13	Power meter	KEYSIGHT	E4419B	ZJE-028	2025.07.12	2026.07.11
14	RF Automatic Test System	TST	TSTRF562	ZJE-042	/	/
15	RSE Test Software	Frad	EZ-RE	ZJE-008	/	/

(a) Calibration conducted by the National institute of information and Communications Technology (NiCT) in Japan (hereinafter referred to as "NiCT") or a designated Calibration agency under Article 102-18paragraph (1) in JRL.

(b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act(Act No.51 of 1992).

(c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NiCT or a designated calibration agency under Article102-18 paragraph (1).

(d) Calibration, etc, conducted by using measuring instruments and other equipment listed in the right column of appended table No.3,which shall have been given any type of calibration, etc. listed above from (a)to (c).

We used the (c) method for equipment calibration.

3. Antenna Power

3.1. Applied Procedures / Limit

Type	Limit
OFDM OBW<26MHz, DS	10mW/MHz
OFDM OBW 26-38MHz	5mW/MHz
Tolerance	20%

3.2. Test Setup



3.3. Test Procedure

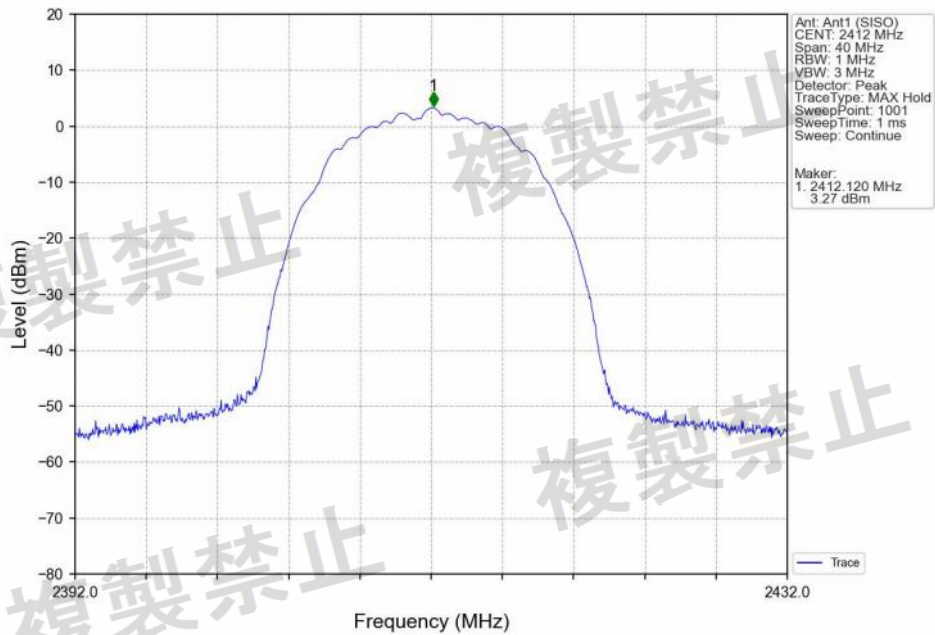
- (1) Configure EUT and assistant system according clause 2.3 and 3.3;
- (2) Set EUT work in test mode as described in clause 2.4;
- (3) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, set the Spectrum Analyzer as below:
 Centre Frequency: The centre frequency of the channel under test.
 Resolution BW: 1 MHz.
 Video BW: 1 MHz.
 Span: Wide enough to cover the complete power envelope of the signal of the EUT.
 Detector: Peak.
 Trace Mode: Max Hold.
- (4) Test Frequency: frequency of peak power
 RBW=VBW=1MHz, Span=0Hz, Sweep time=Auto, Detector mode=RMS
 Antenna power= average burst power

3.4. Test Result

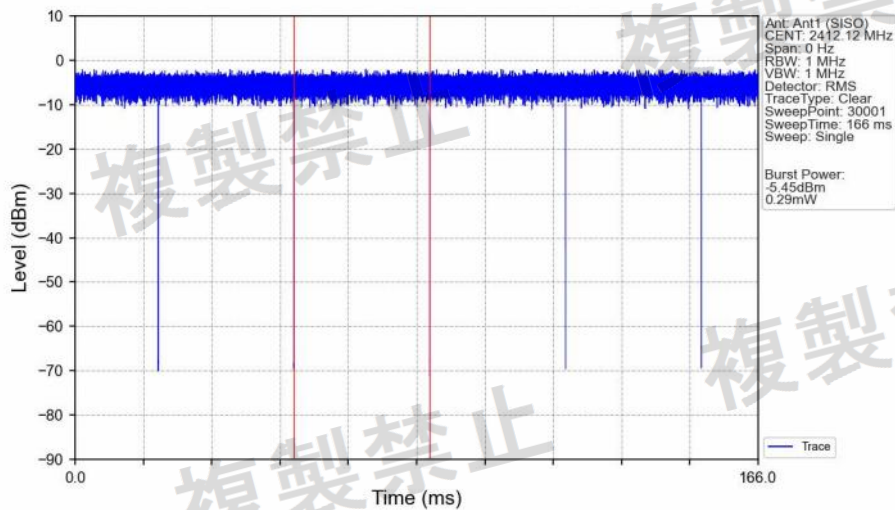
Mode	Condition	CH	Antenna Power		Result (mW /MHz)	Limit (mW /MHz)
			(dBm/MHz)			
			Ant	Power		
IEEE 802.11b	Normal	CH1	1	-5.45	0.285	10
		CH13	1	-6.35	0.232	10
IEEE 802.11g	Normal	CH1	1	-8.23	0.150	10
		CH13	1	-8.70	0.135	10
IEEE 802.11n HT20	Normal	CH1	1	-9.27	0.118	10
		CH13	1	-10.45	0.090	10
IEEE 802.11n HT40	Normal	CH1	1	-13.10	0.049	5
		CH9	1	-13.70	0.043	5

Mode	CH	ANT	Stated power	Result	Tolerance	Limit
			(mW/MHz)	(mW/MHz)	%	%
IEEE 802.11b	CH1	1	0.290	0.285	-1.72	20%
	CH13	1	0.290	0.232	-20.00	20%
IEEE 802.11g	CH1	1	0.290	0.150	-48.28	20%
	CH13	1	0.290	0.135	-53.45	20%
IEEE 802.11n HT20	CH1	1	0.290	0.118	-59.31	20%
	CH13	1	0.290	0.090	-68.97	20%
EEE 802.11n HT40	CH1	1	0.290	0.049	-83.10	20%
	CH9	1	0.290	0.043	-85.17	20%
Conclusion: Pass						

802.11b 2412MHz_Ant1 (SISO)_NTNV

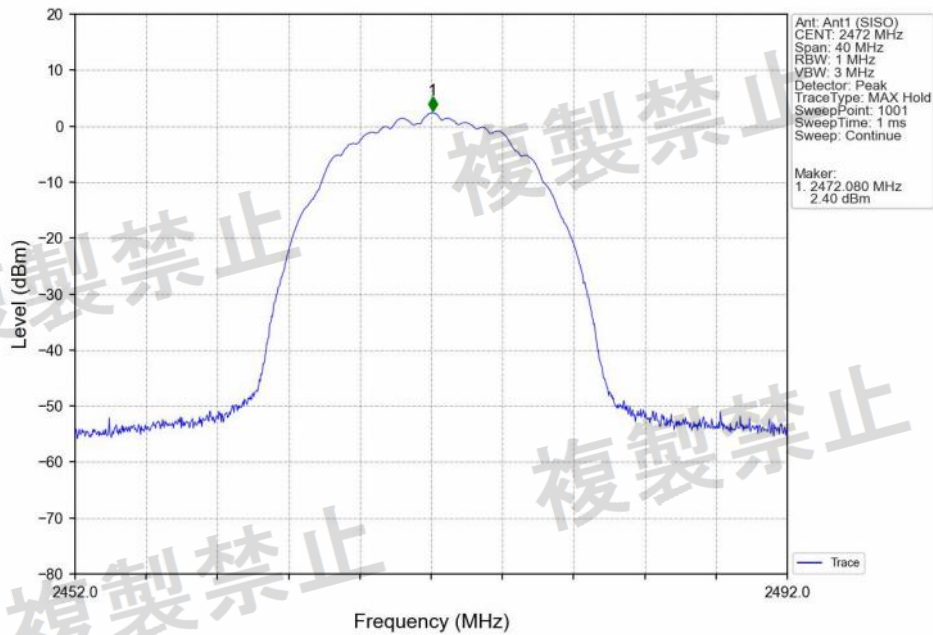


802.11b 2412MHz_Ant1 (SISO)_NTNV

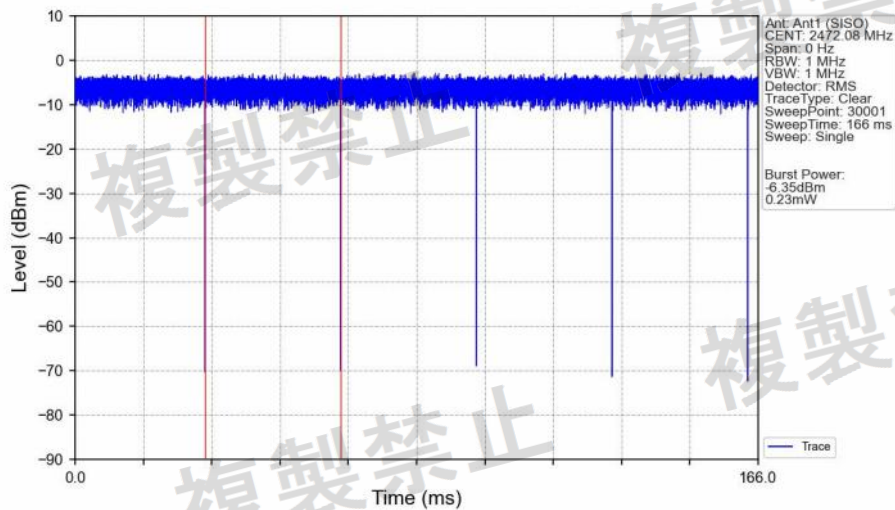


Burst No.	1	2	3	4
Length (ms)	32.951	32.951	32.951	32.951
Power(dBm)	-5.46	-5.45	-5.46	-5.45
Power(mW)	0.284	0.285	0.284	0.285
Remark	/	Max	/	/

802.11b 2472MHz_Ant1 (SISO)_NTNV

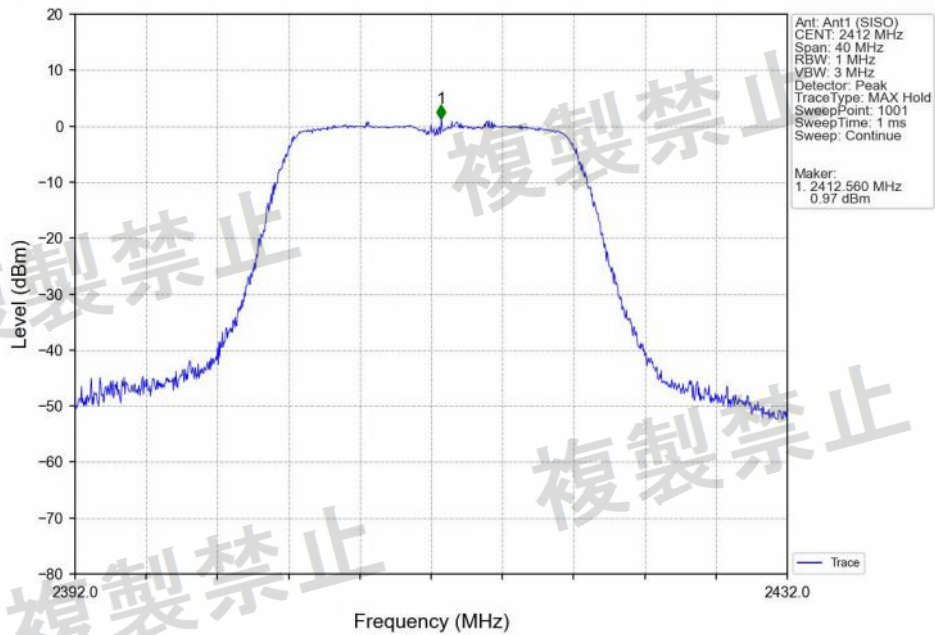


802.11b 2472MHz_Ant1 (SISO)_NTNV

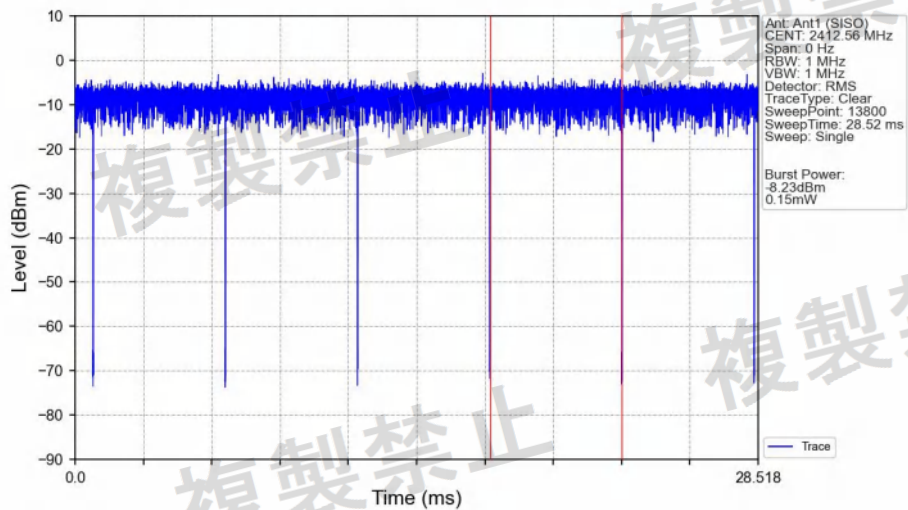


Burst No.	1	2	3	4
Length (ms)	32.957	32.951	32.957	32.957
Power(dBm)	-6.35	-6.36	-6.35	-6.36
Power(mW)	0.232	0.231	0.232	0.231
Remark	Max	/	/	/

802.11g_2412MHz_Ant1 (SISO)_NTNV

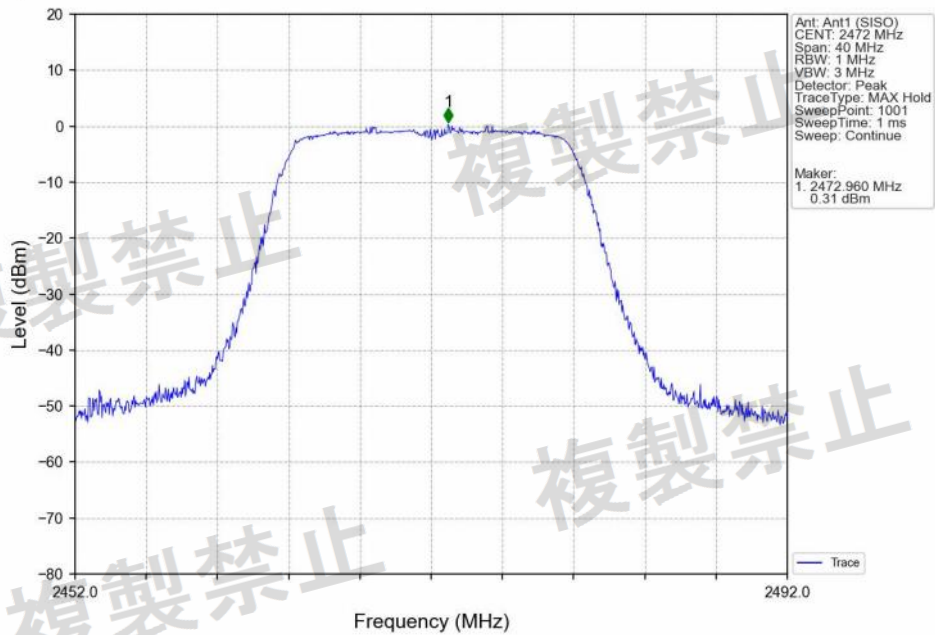


802.11g_2412MHz_Ant1 (SISO)_NTNV

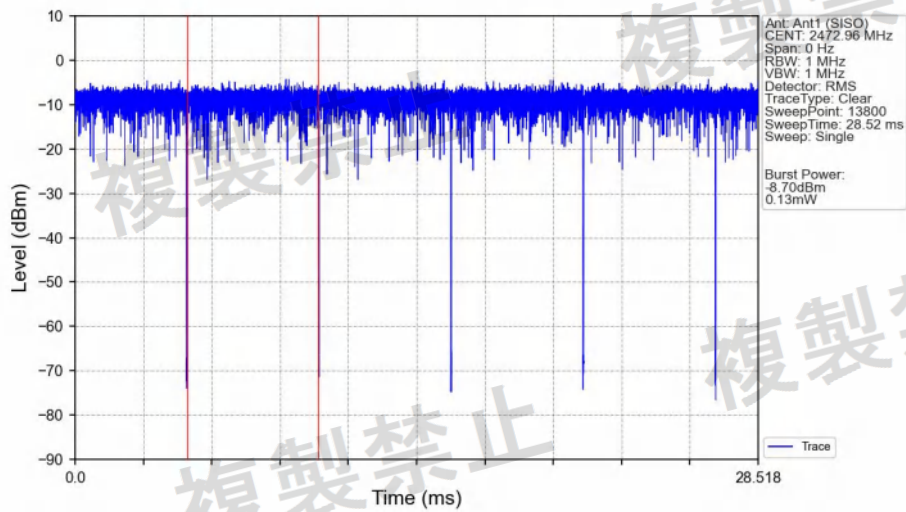


Burst No.	1	2	3	4	5
Length (ms)	5.485	5.485	5.485	5.485	5.485
Power(dBm)	-8.24	-8.24	-8.23	-8.23	-8.24
Power(mW)	0.150	0.150	0.150	0.150	0.150
Remark	/	/	/	Max	/

802.11g_2472MHz_Ant1 (SISO)_NTNV

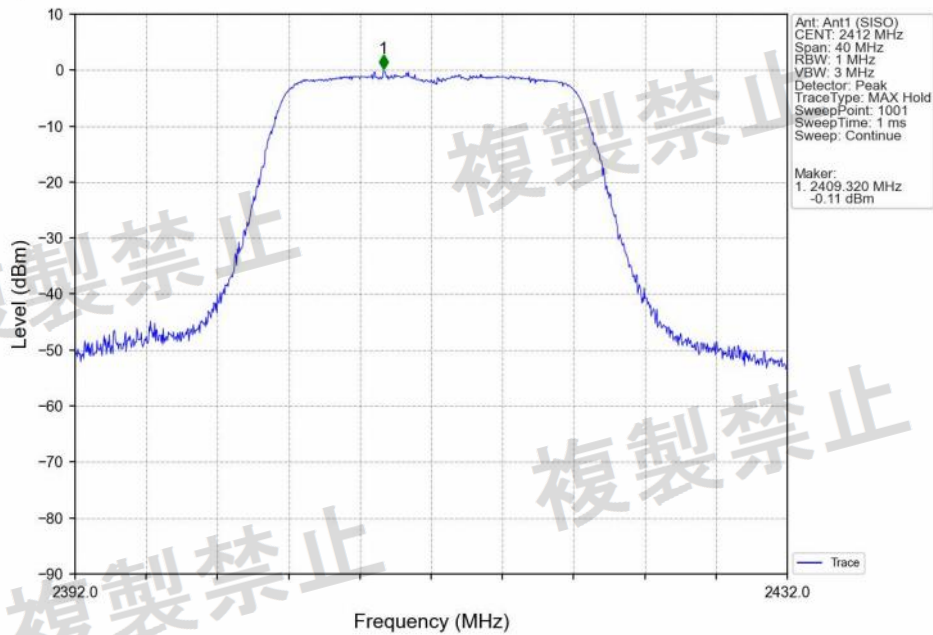


802.11g_2472MHz_Ant1 (SISO)_NTNV

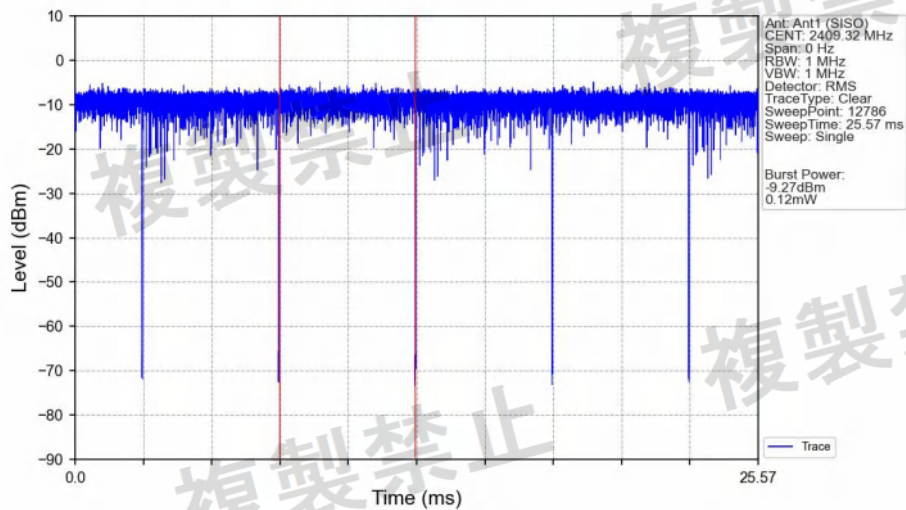


Burst No.	1	2	3	4
Length (ms)	5.485	5.485	5.485	5.487
Power(dBm)	-8.70	-8.71	-8.71	-8.71
Power(mW)	0.135	0.135	0.135	0.135
Remark	Max	/	/	/

802.11n(HT20) 2412MHz_Ant1 (SISO)_NTNV

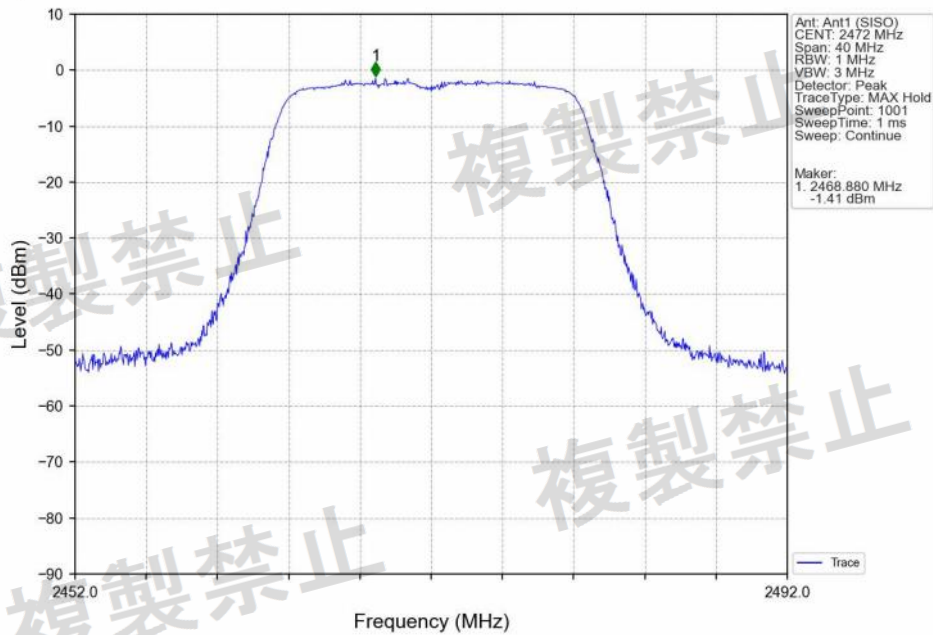


802.11n(HT20) 2412MHz_Ant1 (SISO)_NTNV

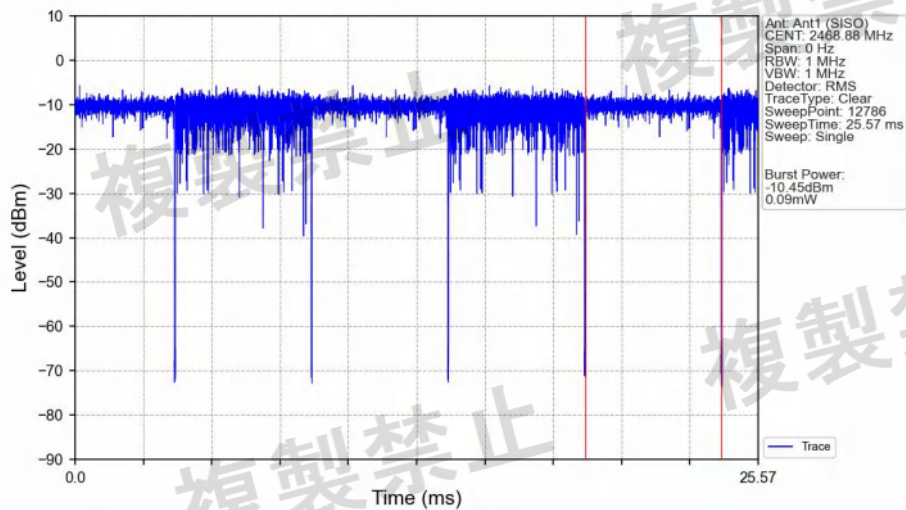


Burst No.	1	2	3	4
Length (ms)	5.082	5.080	5.082	5.080
Power(dBm)	-9.27	-9.27	-9.27	-9.27
Power(mW)	0.118	0.118	0.118	0.118
Remark	/	Max	/	/

802.11n(HT20) 2472MHz_Ant1 (SISO)_NTNV

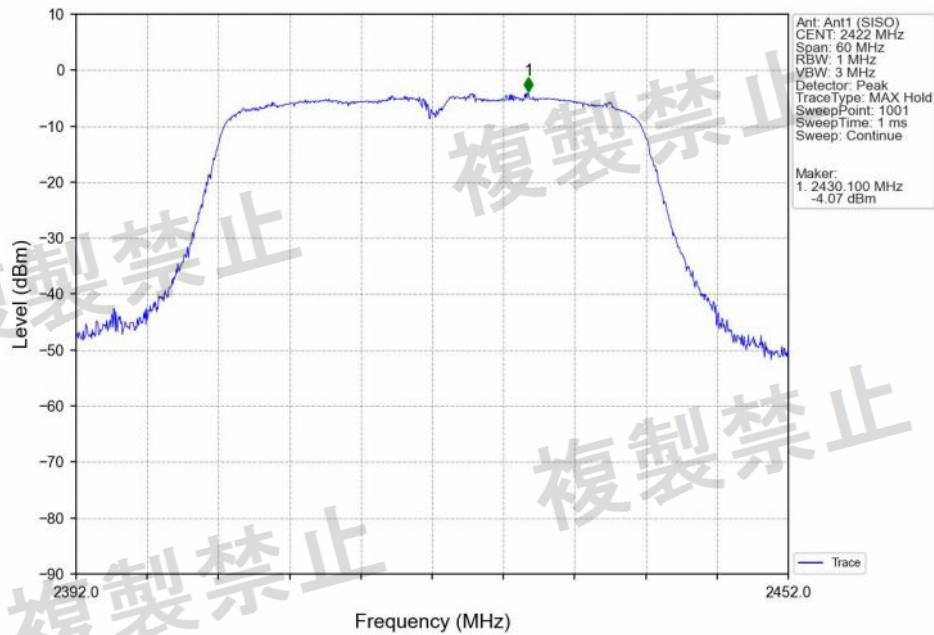


802.11n(HT20) 2472MHz_Ant1 (SISO)_NTNV

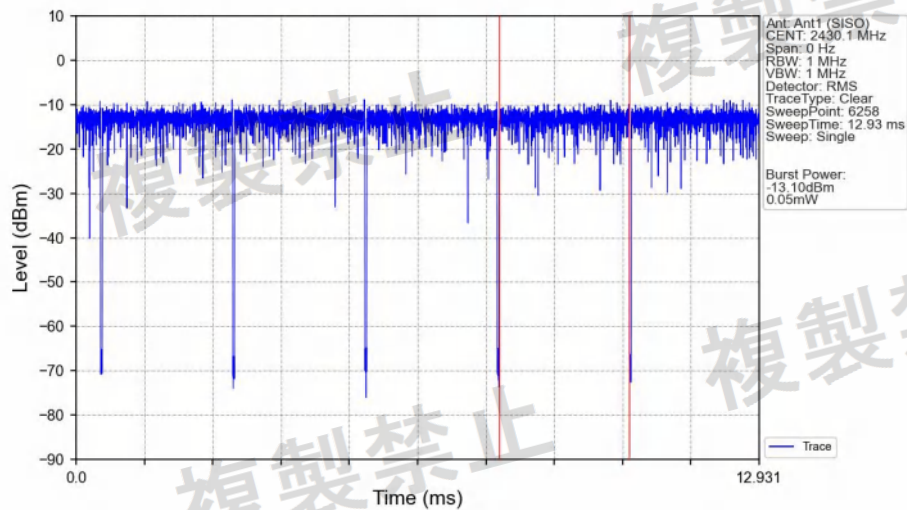


Burst No.	1	2	3	4
Length (ms)	5.080	5.082	5.080	5.082
Power(dBm)	-10.45	-10.45	-10.45	-10.45
Power(mW)	0.090	0.090	0.090	0.090
Remark	/	/	/	Max

802.11n(HT40) 2422MHz_Ant1 (SISO)_NTNV

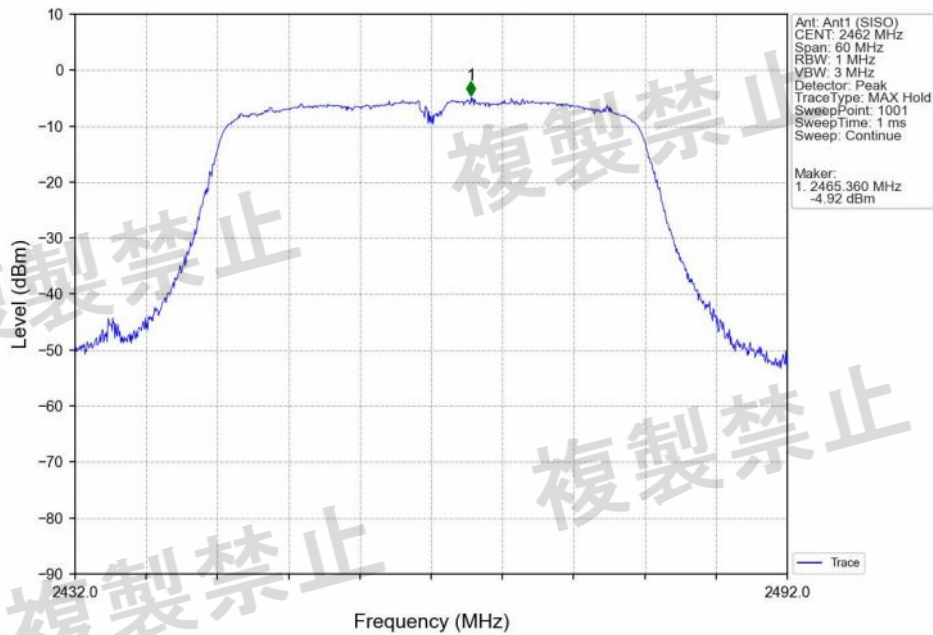


802.11n(HT40) 2422MHz_Ant1 (SISO)_NTNV

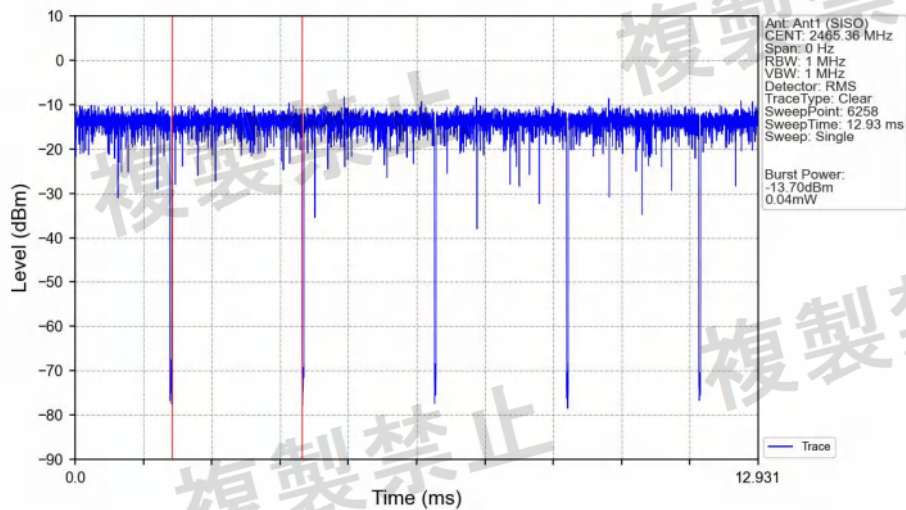


Burst No.	1	2	3	4
Length (ms)	2.470	2.470	2.470	2.468
Power(dBm)	-13.11	-13.11	-13.11	-13.10
Power(mW)	0.049	0.049	0.049	0.049
Remark	/	/	/	Max

802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV



Burst No.	1	2	3	4
Length (ms)	2.468	2.470	2.470	2.470
Power(dBm)	-13.70	-13.71	-13.70	-13.70
Power(mW)	0.043	0.043	0.043	0.043
Remark	Max	/	/	/

4. Frequency Tolerance

4.1. Applied Procedures / Limit

$\pm 50 \times 10^{-6}$ or less(50ppm)

4.2. Test Setup



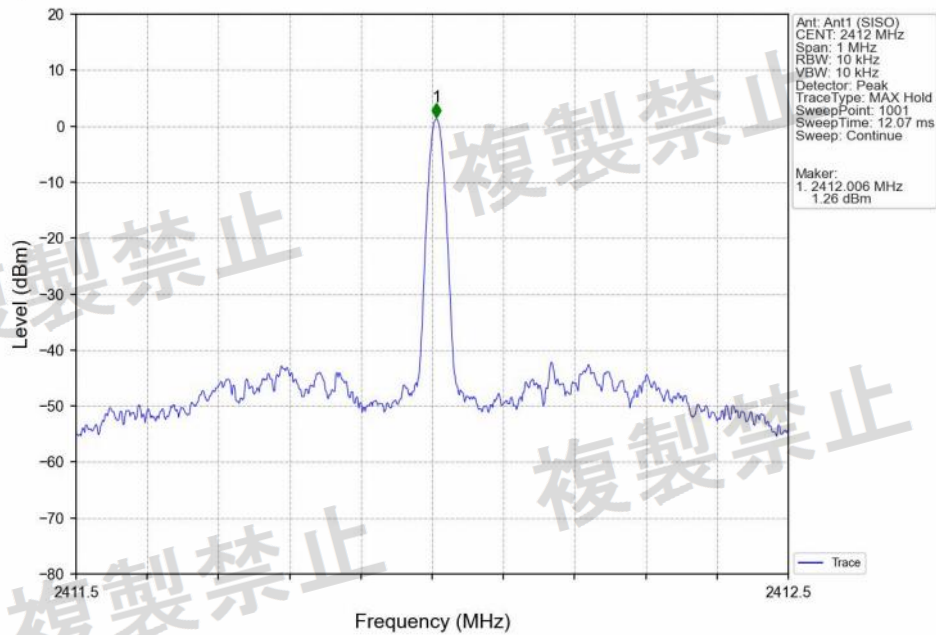
4.3. Test Procedure

- (1) Configure EUT and assistant system according clause 2.3 and 4.3;
- (2) Set EUT work in carrier Tx mode as described in clause 2.4;
- (3) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, set the Spectrum Analyzer as below:
 Centre Frequency: The centre frequency of the channel under test.
 Resolution BW: 10 KHz.
 Video BW: 30 KHz.
 Span: 1MHz.
 Detector: Peak.
 Trace Mode: Max Hold.
- (4) When the trace is complete, find the peak value of the power envelope and record the frequency.

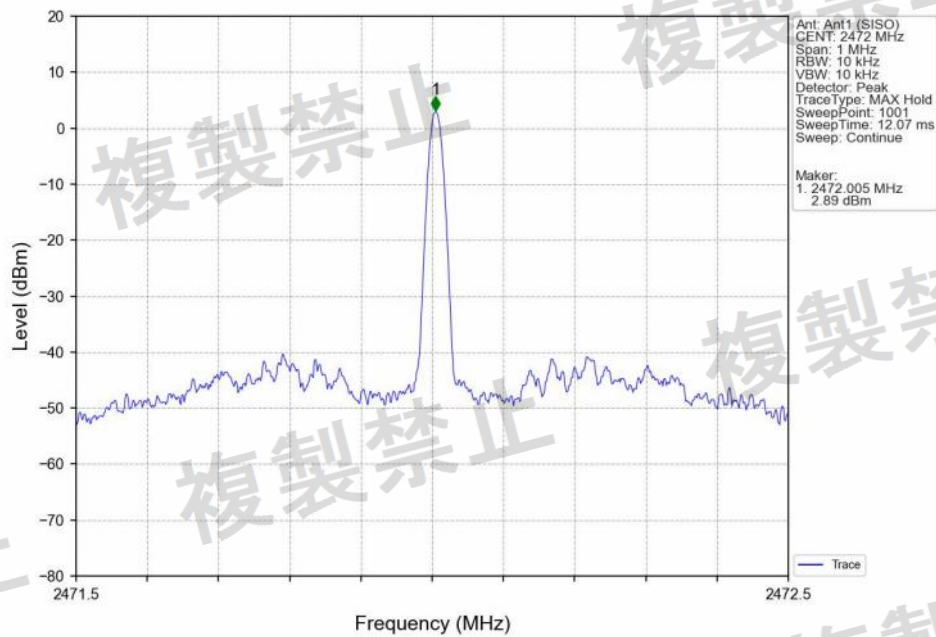
4.4. Test Result

Mode	CH	ANT	Measured	Result	Limit
			MHz	ppm	ppm
Carrier Tx Mode	CH1:2412MHz	1	2412.006	2.49	± 50
	CH13:2472MHz	1	2472.005	2.02	± 50
	CH1:2422MHz	1	2422.002	0.83	± 50
	CH9:2462MHz	1	2462.001	0.41	± 50
Conclusion: Pass					

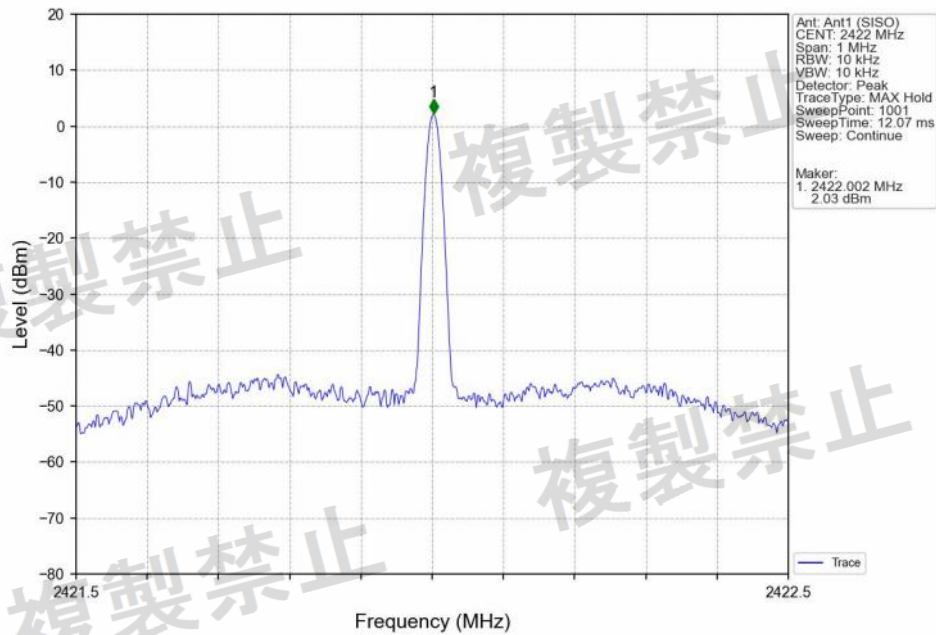
Frequency Error_NTNV_Carrier Wave_2412MHz_Ant1 (SISO)_NTNV



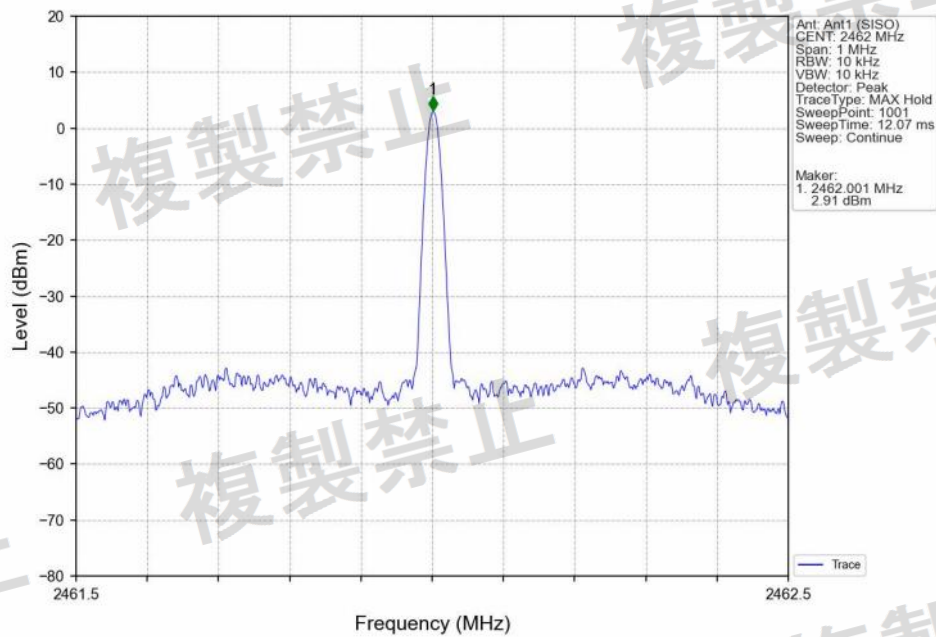
Frequency Error_NTNV_Carrier Wave_2472MHz_Ant1 (SISO)_NTNV



Frequency Error_NTNV_Carrier Wave_2422MHz_Ant1 (SISO)_NTNV



Frequency Error_NTNV_Carrier Wave_2462MHz_Ant1 (SISO)_NTNV



5. Occupied Frequency Bandwidth

5.1. Applied Procedures / Limit

Permissible value for occupied bandwidth using the FH system, a hybrid system combining DS and FH systems, or a hybrid system combining FH and OFDM systems shall be 83.5 MHz or less, while necessary bandwidth (minimum occupied bandwidth sufficient to ensure information transmission of required quality at a required transmission rate for the system used under specified conditions for a given emission type) using a system other than any of the above shall be 26 MHz or less.

5.2. Test Setup



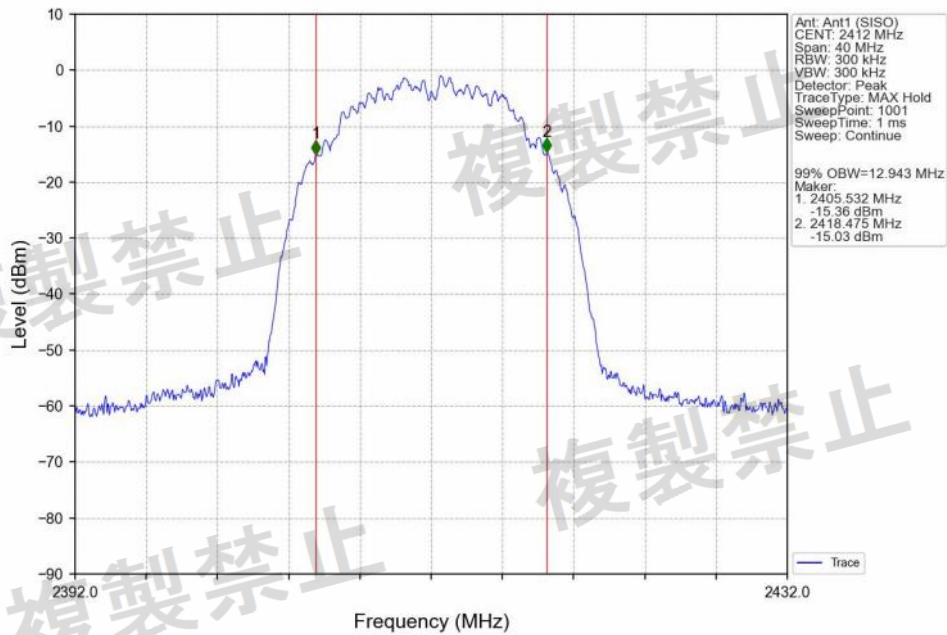
5.3. Test Procedure

- (1) Configure EUT and assistant system according clause 2.3 and 5.3;
- (2) Set EUT work in test mode as described in clause 2.4;
- (3) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, set the Spectrum Analyzer as below:
 - Centre Frequency: The centre frequency of the channel under test.
 - Resolution BW: 300 KHz
 - Video BW: 300 KHz
 - Span: Wide enough to cover the complete power envelope of the signal of the EUT.
 - Detector: Peak.
 - Trace Mode: Max Hold.
- (4) When the trace is complete, measure the occupied bandwidth (99% bandwidth) with spectrum analyzer's bandwidth measure function.

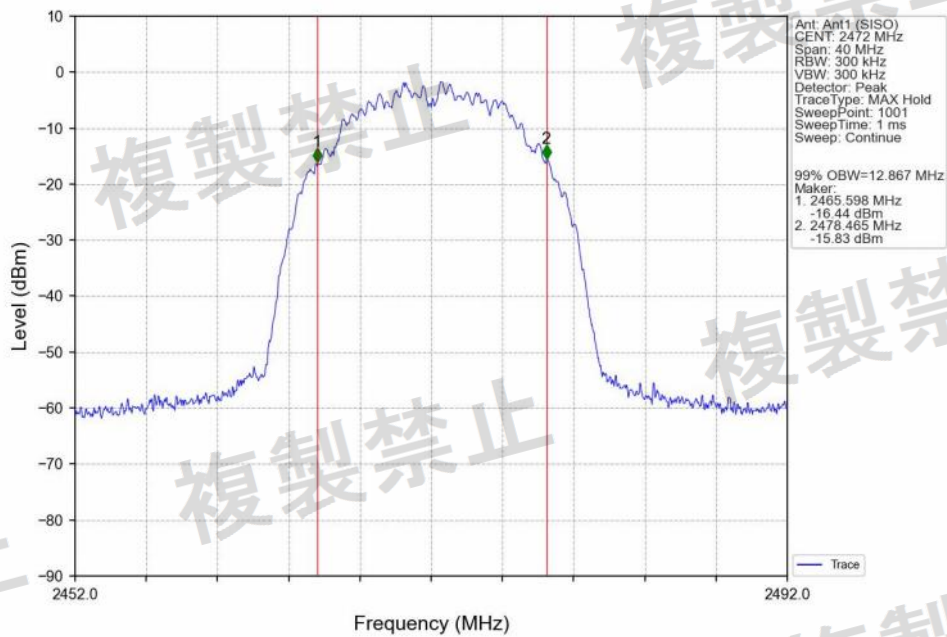
5.4. Test Result

Mode	Condition	CH	ANT	Result	Limit
				(MHz)	(MHz)
IEEE 802.11b	Normal	CH1	1	12.943	<=26
		CH13	1	12.867	<=26
IEEE 802.11g	Normal	CH1	1	16.367	<=40
		CH13	1	16.337	<=40
IEEE 802.11n HT20	Normal	CH1	1	17.145	<=40
		CH13	1	17.117	<=40
IEEE 802.11n HT40	Normal	CH1	1	35.516	<=40
		CH9	1	35.469	<=40
Conclusion: Pass					

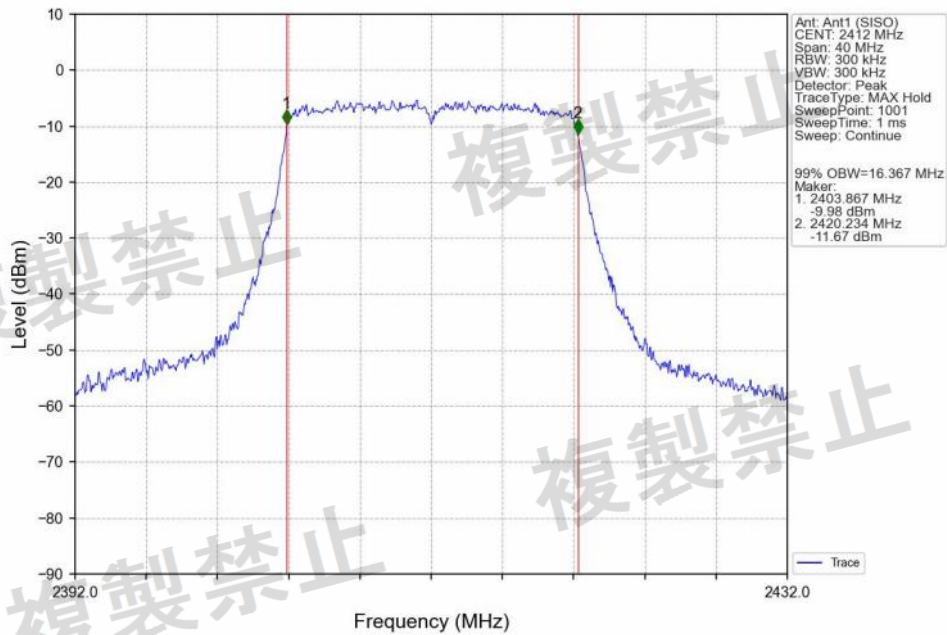
802.11b 2412MHz_Ant1 (SISO)_NTNV



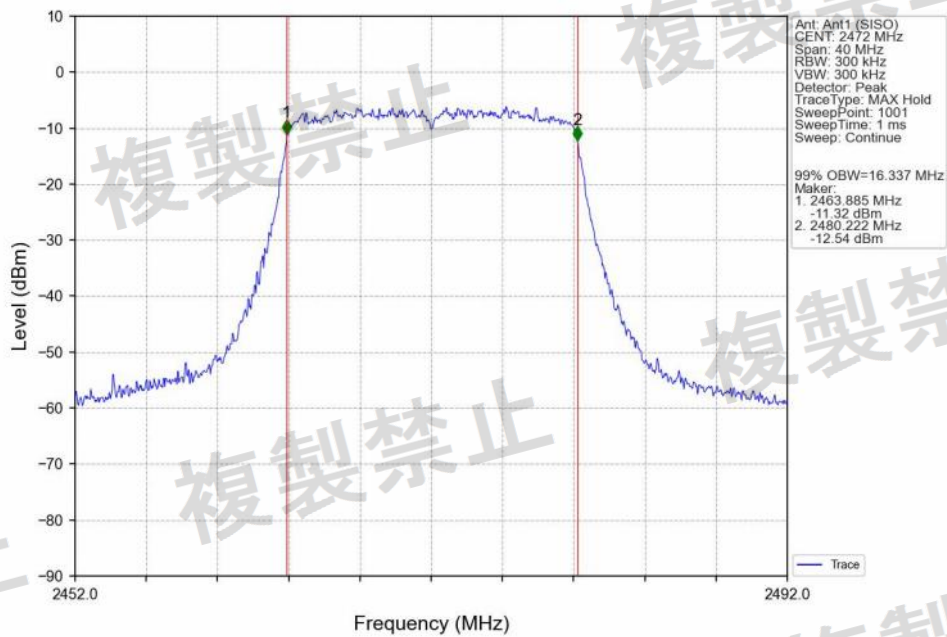
802.11b 2472MHz_Ant1 (SISO)_NTNV



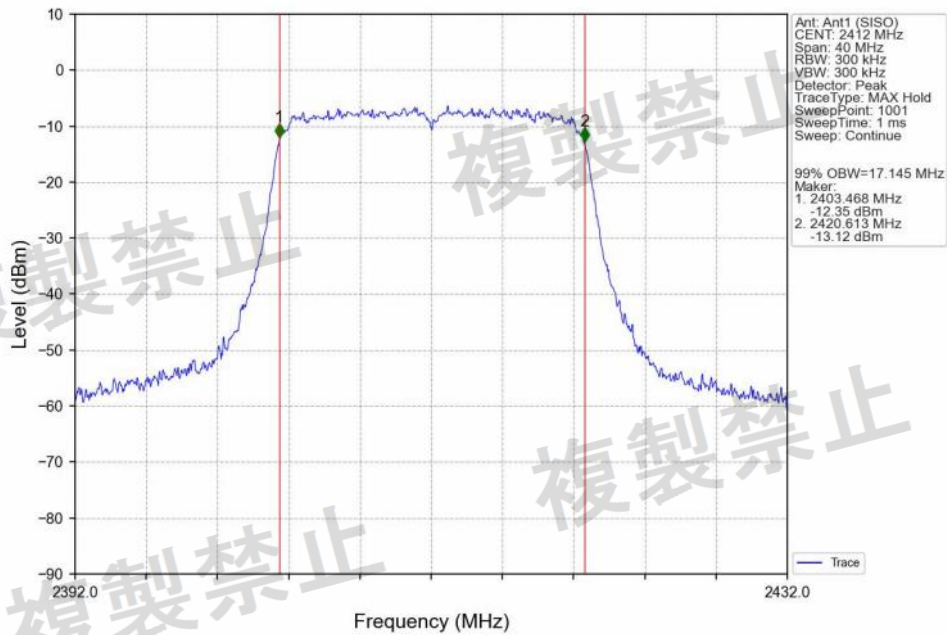
802.11g_2412MHz_Ant1 (SISO)_NTNV



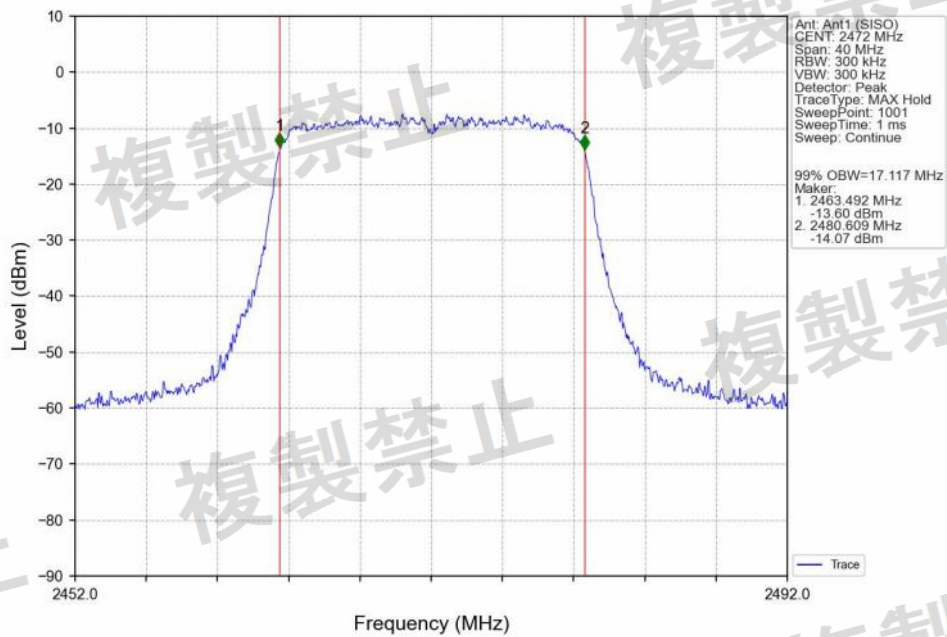
802.11g_2472MHz_Ant1 (SISO)_NTNV



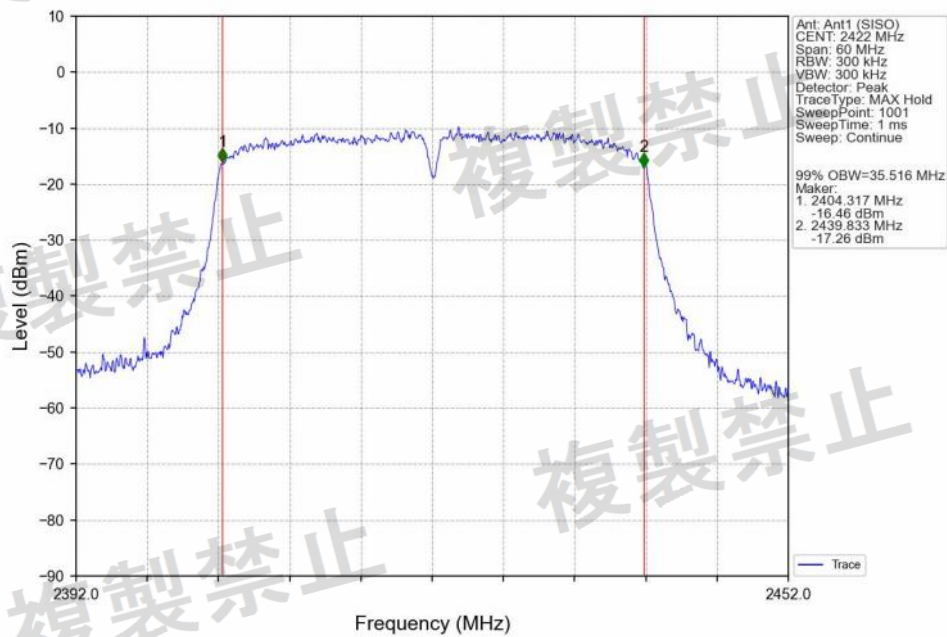
802.11n(HT20) 2412MHz_Ant1 (SISO)_NTNV



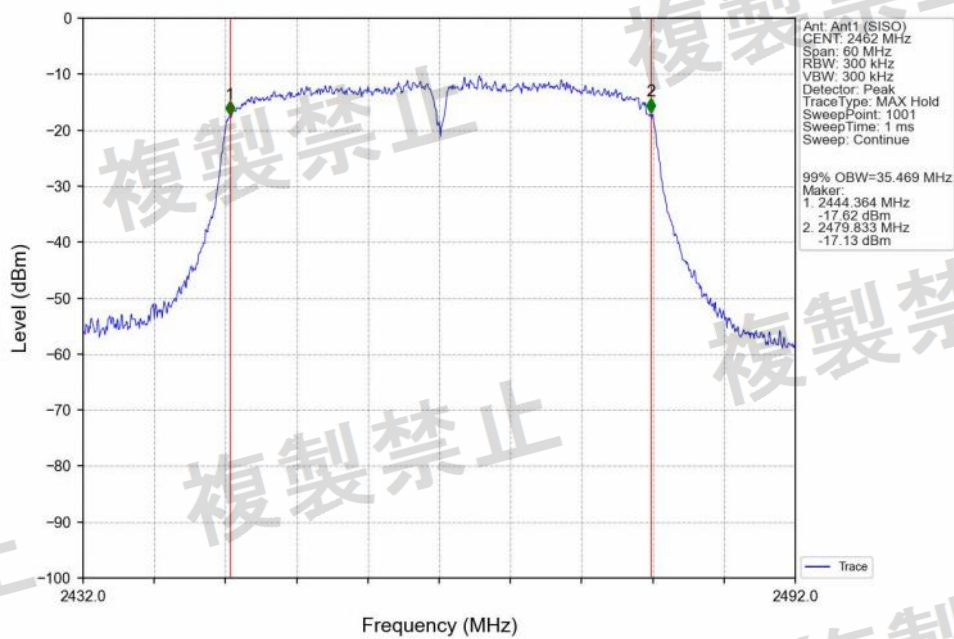
802.11n(HT20) 2472MHz_Ant1 (SISO)_NTNV



802.11n(HT40) 2422MHz_Ant1 (SISO) NTN



802.11n(HT40) 2462MHz_Ant1 (SISO) NTN



6. Transmitter Spurious Emissions (Conducted)

6.1. Applied Procedures / Limit

Permissible mean power of spurious emission of each frequency supplied to a feeder, that is, mean power of spurious emission in the 1 MHz bandwidth at frequency f other than frequency band used shall be as follows:

- a. $2,387\text{MHz} \leq f \leq 2,400\text{MHz}$ and $2,483.5\text{MHz} < f \leq 2,496.5\text{MHz}$ 25 $\mu\text{W}/\text{MHz}$ or less
- b. $2,387\text{MHz} > f$ and $2,496.5\text{MHz} < f$ 2.5 $\mu\text{W}/\text{MHz}$ or less

6.2. Test Setup



6.3. Test Procedure

- (1) Configure EUT and assistant system according clause 2.3 and 6.3;
- (2) Set EUT work in test mode as described in clause 2.4;
- (3) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, set the Spectrum Analyzer as below:

Below 1GHz:

Resolution BW: 1MHz.
Video BW: 1MHz.
Detector: Peak.
Trace Mode: Max Hold.

Above 1GHz:

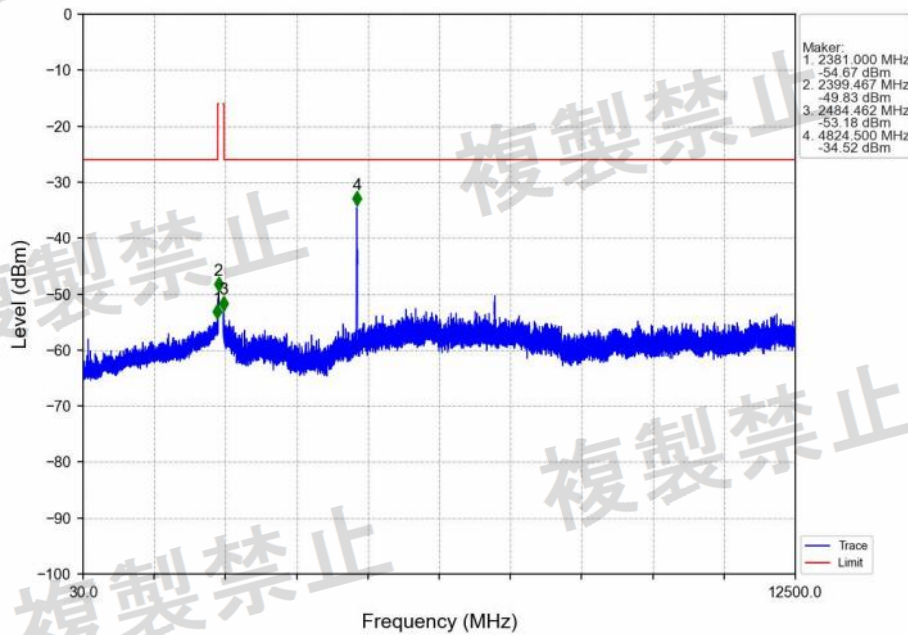
Resolution BW: 1MHz.
Video BW: 1MHz.
Detector: Peak.
Trace Mode: Max Hold.

- (4) All the emissions from 30MHz to 12.5GHz were measured and record.

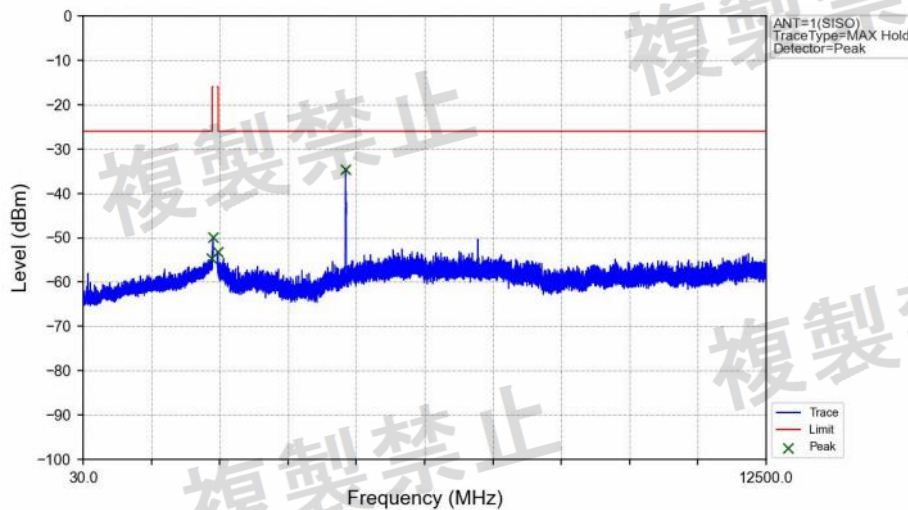
6.4. Test Result

Mode	Condition	CH	Frequency (MHz)	PK Power (dBm /MHz)	PK Power (uW /MHz)	AV Power (dBm /MHz)	AV Power (uW /MHz)	Limit (uW /MHz)	Result
IEEE 802.11b Tx Mode	Normal	CH1	30-2387	-54.67	0.003	/	/	2.5	PASS
			2387-2400	-49.83	0.010	/	/	25	
			2483.5-2496.5	-53.18	0.005	/	/	25	
			2496.5-12500	-34.52	0.353	/	/	2.5	
		CH13	30-2387	-55.25	0.003	/	/	2.5	PASS
			2387-2400	-54.11	0.004	/	/	25	
			2483.5-2496.5	-50.69	0.009	/	/	25	
			2496.5-12500	-37.40	0.182	/	/	2.5	
IEEE 802.11g Tx Mode	Normal	CH1	30-2387	-53.68	0.004	/	/	2.5	PASS
			2387-2400	-40.60	0.087	/	/	25	
			2483.5-2496.5	-53.38	0.005	/	/	25	
			2496.5-12500	-36.99	0.200	/	/	2.5	
		CH13	30-2387	-55.00	0.003	/	/	2.5	PASS
			2387-2400	-53.86	0.004	/	/	25	
			2483.5-2496.5	-38.86	0.130	/	/	25	
			2496.5-12500	-40.87	0.082	/	/	2.5	
IEEE 802.11n HT20 Tx Mode	Normal	CH1	30-2387	-54.16	0.004	/	/	2.5	PASS
			2387-2400	-41.28	0.074	/	/	25	
			2483.5-2496.5	-52.76	0.005	/	/	25	
			2496.5-12500	-39.10	0.123	/	/	2.5	
		CH13	30-2387	-53.79	0.004	/	/	2.5	PASS
			2387-2400	-52.89	0.005	/	/	25	
			2483.5-2496.5	-38.58	0.139	/	/	25	
			2496.5-12500	-42.06	0.062	/	/	2.5	
IEEE 802.11n HT40 Tx Mode	Normal	CH1	30-2387	-49.00	0.013	/	/	2.5	PASS
			2387-2400	-38.67	0.136	/	/	25	
			2483.5-2496.5	-54.66	0.003	/	/	25	
			2496.5-12500	-41.20	0.076	/	/	2.5	
		CH9	30-2387	-57.31	0.002	/	/	2.5	PASS
			2387-2400	-56.70	0.002	/	/	25	
			2483.5-2496.5	-36.38	0.230	/	/	25	
			2496.5-12500	-43.16	0.048	/	/	2.5	

802.11b 2412MHz_Ant1 (SISO)_NTNV

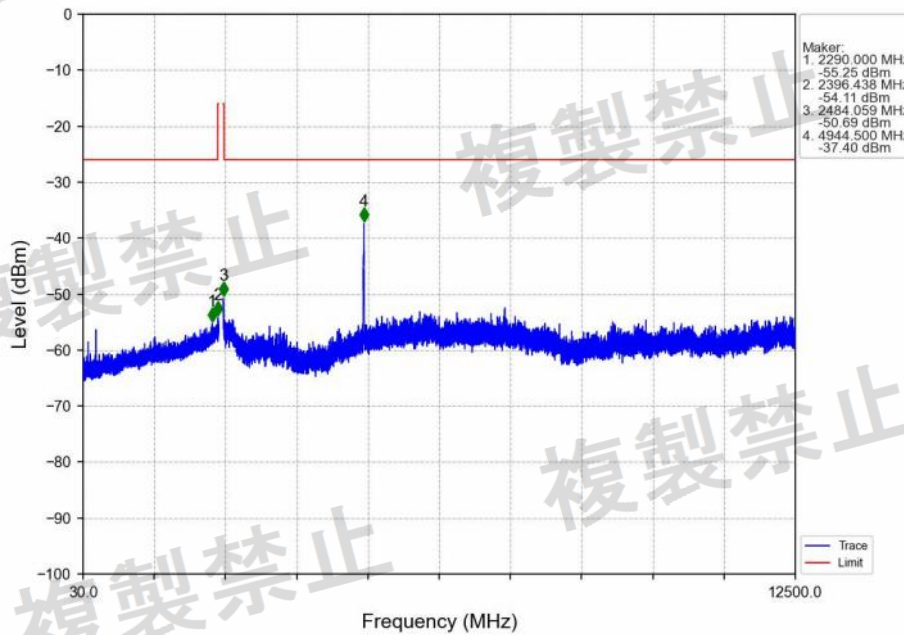


802.11b 2412MHz_Ant1 (SISO)_NTNV

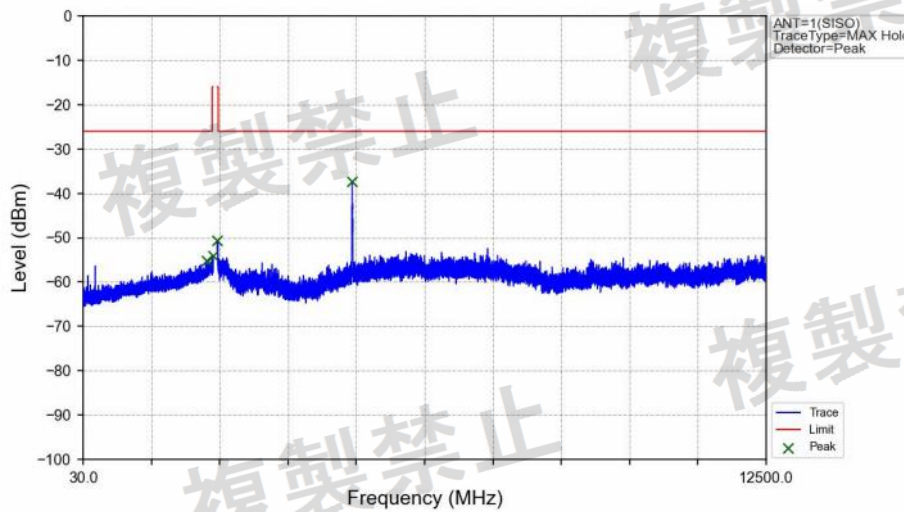


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2381.000	-54.67	/	-26	Pass
2387	2400	1	1	2399.467	-49.83	/	-16	Pass
2483.5	2496.5	1	1	2484.462	-53.18	/	-16	Pass
2496.5	12500	1	1	4824.500	-34.52	/	-26	Pass

802.11b 2472MHz_Ant1 (SISO)_NTNV

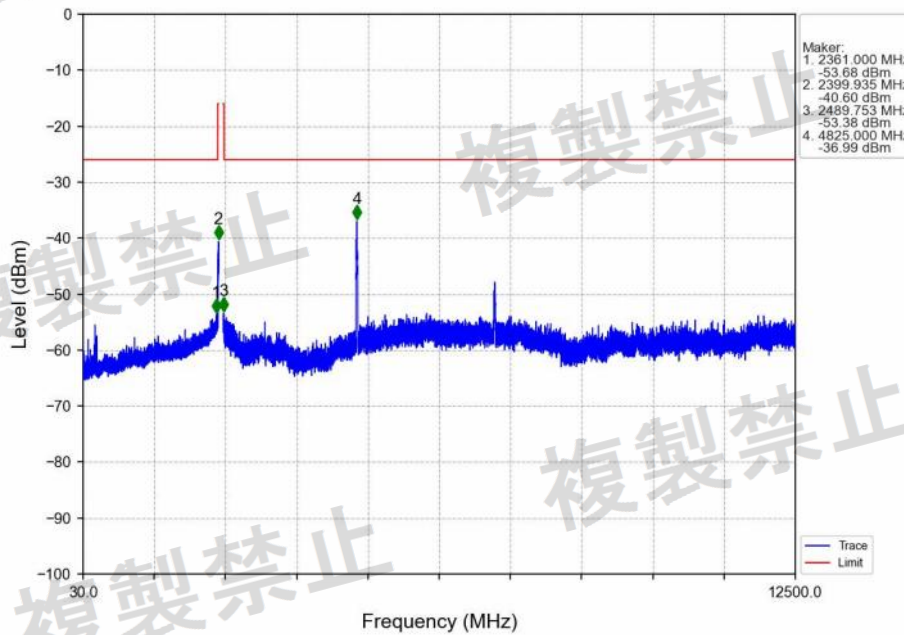


802.11b 2472MHz_Ant1 (SISO)_NTNV

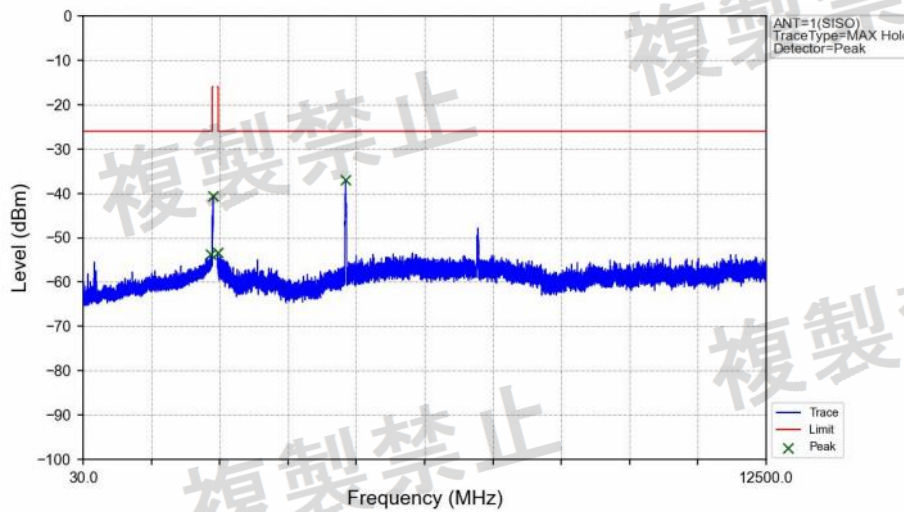


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2290.000	-55.25	/	-26	Pass
2387	2400	1	1	2396.438	-54.11	/	-16	Pass
2483.5	2496.5	1	1	2484.059	-50.69	/	-16	Pass
2496.5	12500	1	1	4944.500	-37.40	/	-26	Pass

802.11g_2412MHz_Ant1 (SISO)_NTNV

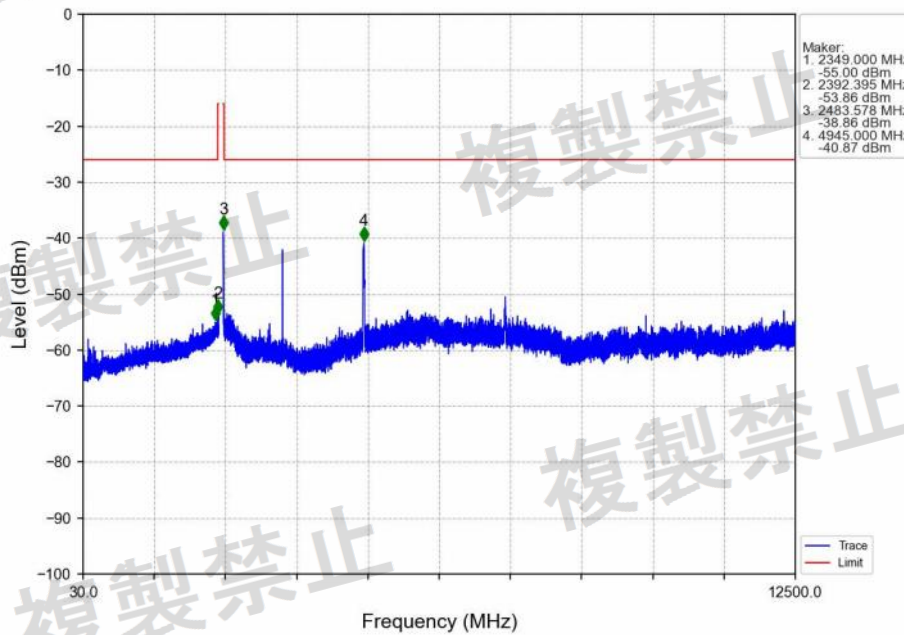


802.11g_2412MHz_Ant1 (SISO)_NTNV

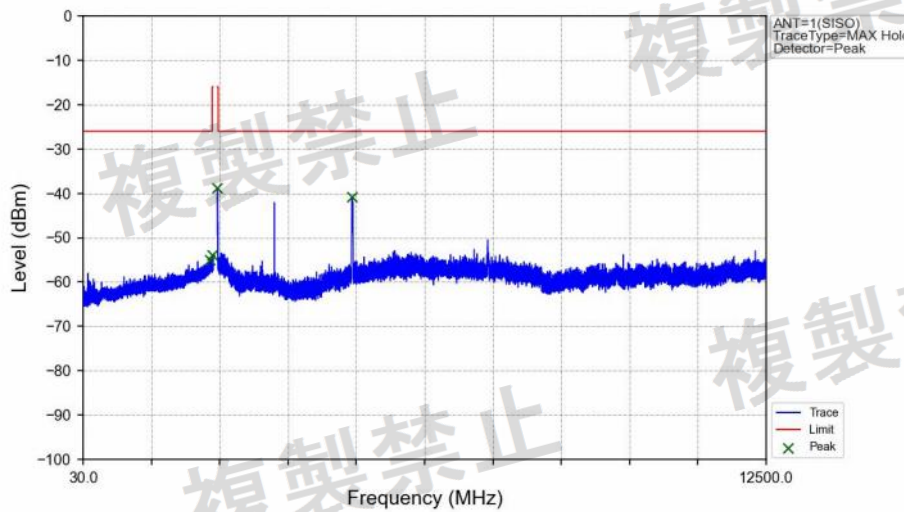


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2361.000	-53.68	/	-26	Pass
2387	2400	1	1	2399.935	-40.60	/	-16	Pass
2483.5	2496.5	1	1	2489.753	-53.38	/	-16	Pass
2496.5	12500	1	1	4825.000	-36.99	/	-26	Pass

802.11g_2472MHz_Ant1 (SISO)_NTNV

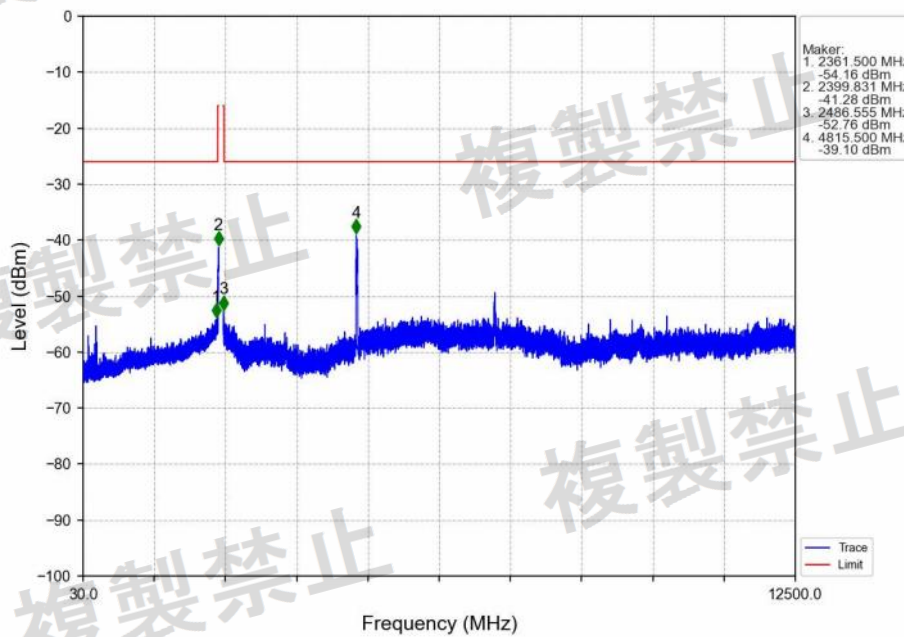


802.11g_2472MHz_Ant1 (SISO)_NTNV

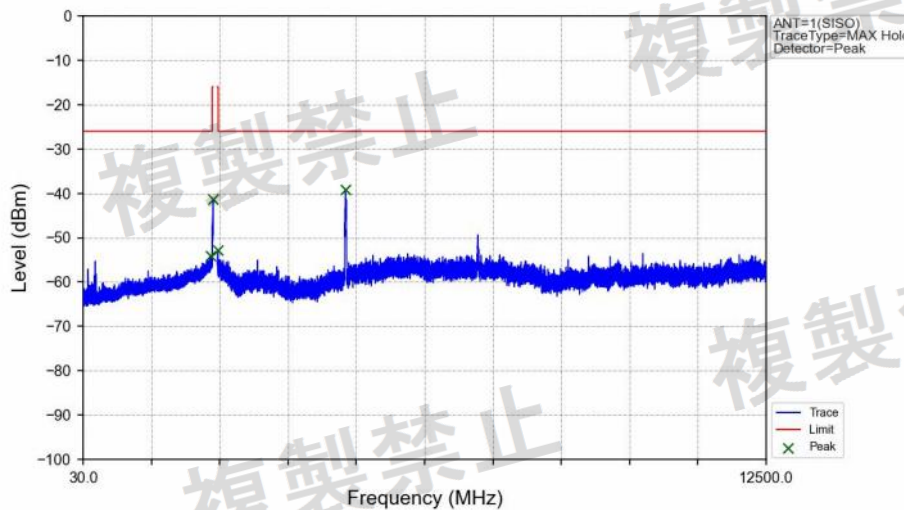


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2349.000	-55.00	/	-26	Pass
2387	2400	1	1	2392.395	-53.86	/	-16	Pass
2483.5	2496.5	1	1	2483.578	-38.86	/	-16	Pass
2496.5	12500	1	1	4945.000	-40.87	/	-26	Pass

802.11n(HT20) 2412MHz_Ant1 (SISO)_NTNV

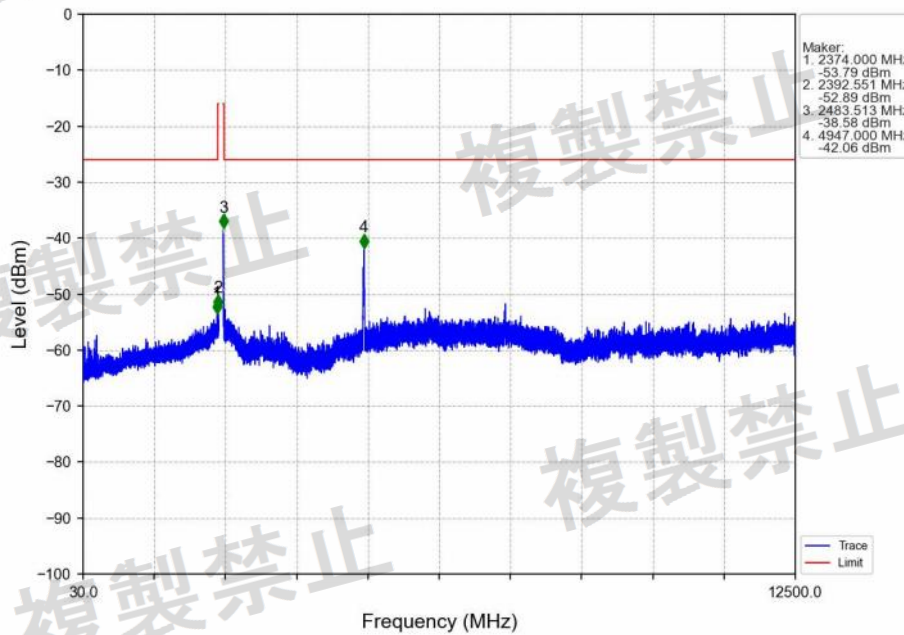


802.11n(HT20) 2412MHz_Ant1 (SISO)_NTNV

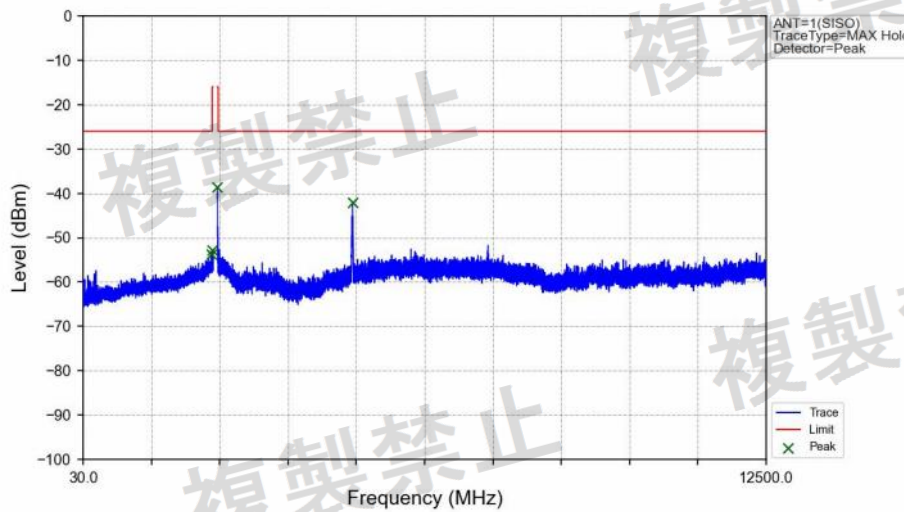


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2361.500	-54.16	/	-26	Pass
2387	2400	1	1	2399.831	-41.28	/	-16	Pass
2483.5	2496.5	1	1	2486.555	-52.76	/	-16	Pass
2496.5	12500	1	1	4815.500	-39.10	/	-26	Pass

802.11n(HT20) 2472MHz_Ant1 (SISO)_NTNV

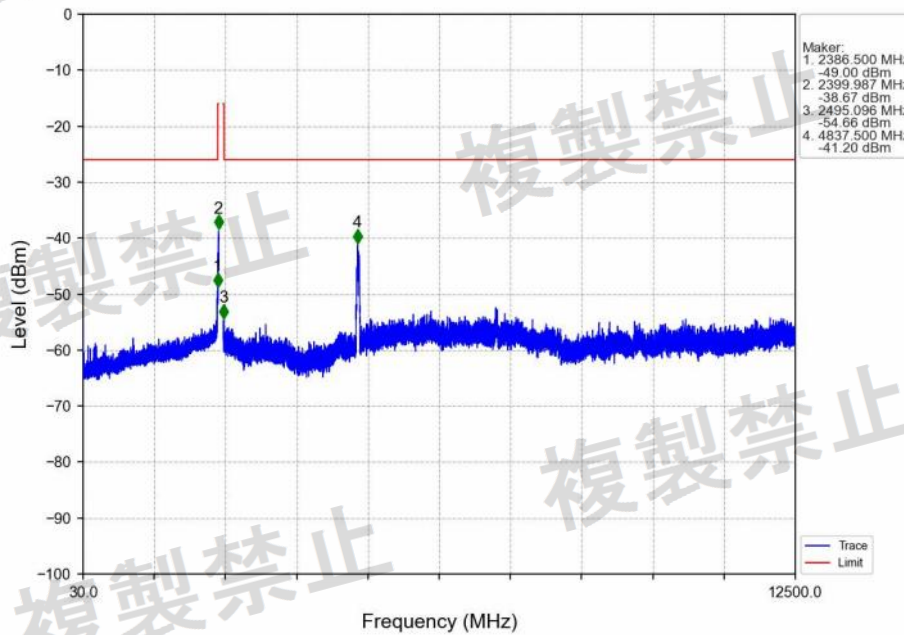


802.11n(HT20) 2472MHz_Ant1 (SISO)_NTNV

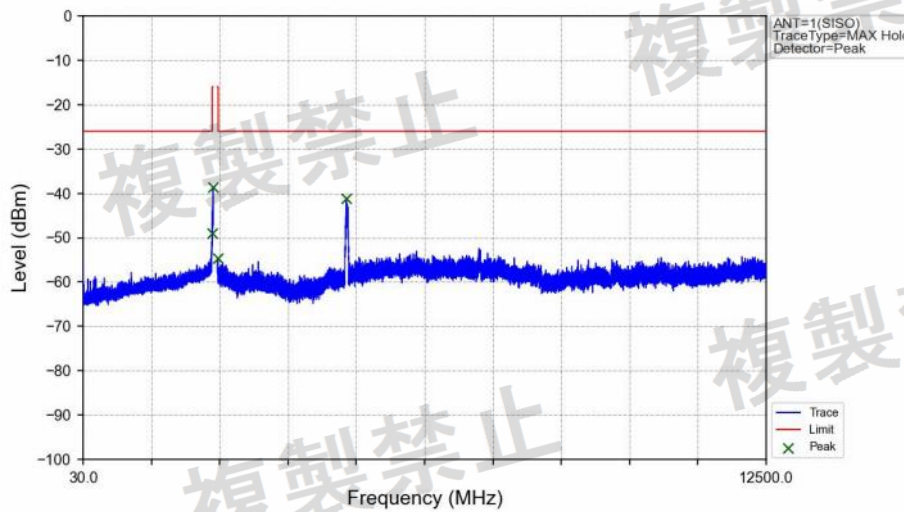


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2374.000	-53.79	/	-26	Pass
2387	2400	1	1	2392.551	-52.89	/	-16	Pass
2483.5	2496.5	1	1	2483.513	-38.58	/	-16	Pass
2496.5	12500	1	1	4947.000	-42.06	/	-26	Pass

802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV

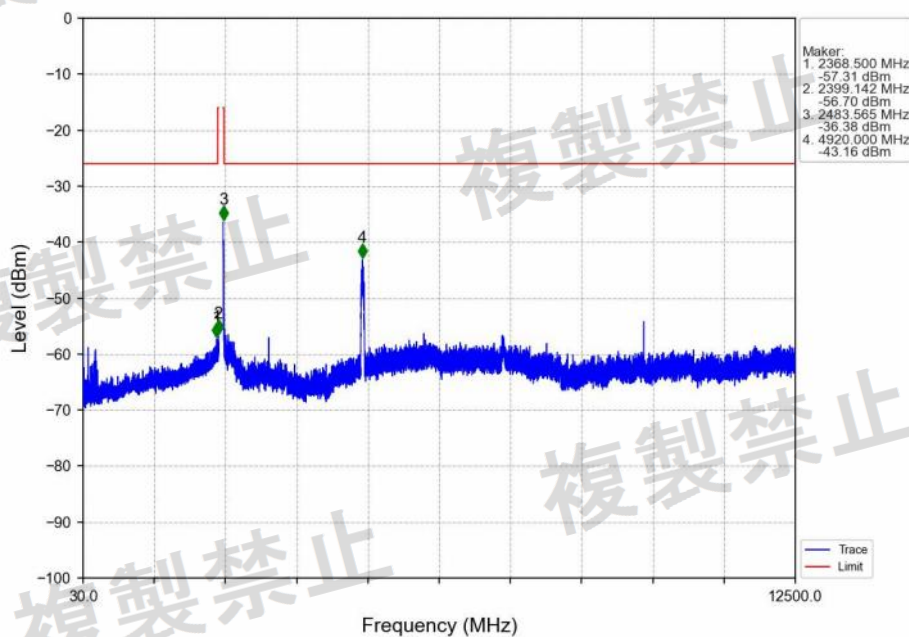


802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV

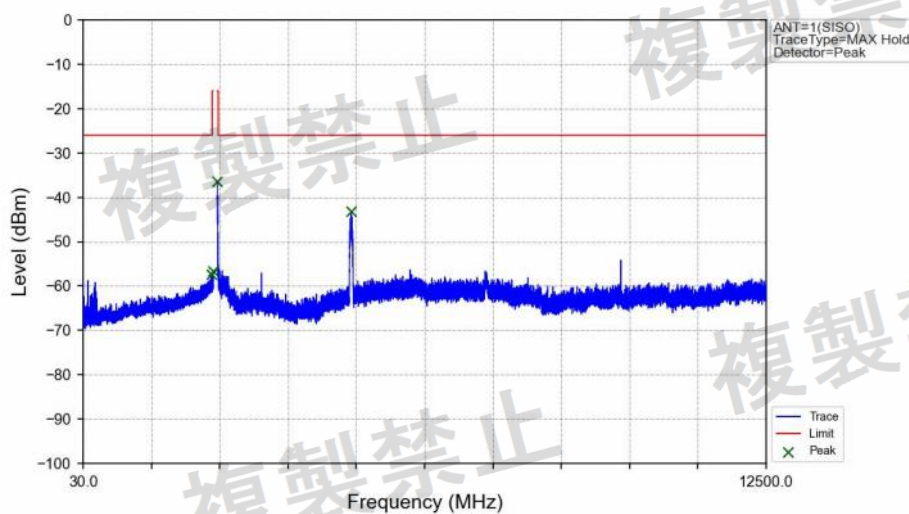


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2386.500	-49.00	/	-26	Pass
2387	2400	1	1	2399.987	-38.67	/	-16	Pass
2483.5	2496.5	1	1	2495.096	-54.66	/	-16	Pass
2496.5	12500	1	1	4837.500	-41.20	/	-26	Pass

802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2368.500	-57.31	/	-26	Pass
2387	2400	1	1	2399.142	-56.70	/	-16	Pass
2483.5	2496.5	1	1	2483.565	-36.38	/	-16	Pass
2496.5	12500	1	1	4920.000	-43.16	/	-26	Pass

7. Number of Carriers

7.1. Applied Procedures / Limit

The OFDM system shall have one or more carriers per 1 MHz bandwidth.

7.2. Test Setup



7.3. Test Procedure

- (1) Configure EUT and assistant system according clause 2.3 and 9.3.
- (2) Set EUT work in test mode as described in clause 2.4.

7.4. Test Result

EUT:	XTEINK X4 Classic	Tested by:	Leo Wang
Temperature:	24℃	Humidity:	56%RH
Test result:	PASS		

8. Interference Prevention Function

8.1. Applied Procedures / Limit

Item	Limits
Identification	≥48 bits

8.2. Measuring ID Code Software

Item	Limits
MAC IP List	MAC Scan

8.3. Test Setup



8.4. Test Procedure

- (1) In the case that the EUT has the function of automatically transmitting the identification code:
 - a. Transmit the predetermined identification codes form EUT.
 - b. Check the transmitted identification codes with the demodulator.
- (2) In the case of receiving the identification ocde:
 - a. Transmit the predetermined identification codes form the counterpart.
 - b. Check if communication is normal.
 - c. Transmit the signals other than predetermined ID codes form the counterpart.
 - d. check if the EUT stops the transmission, or if it displays that idnetification codes are different from the predetermined ones.

8.5. Test Result

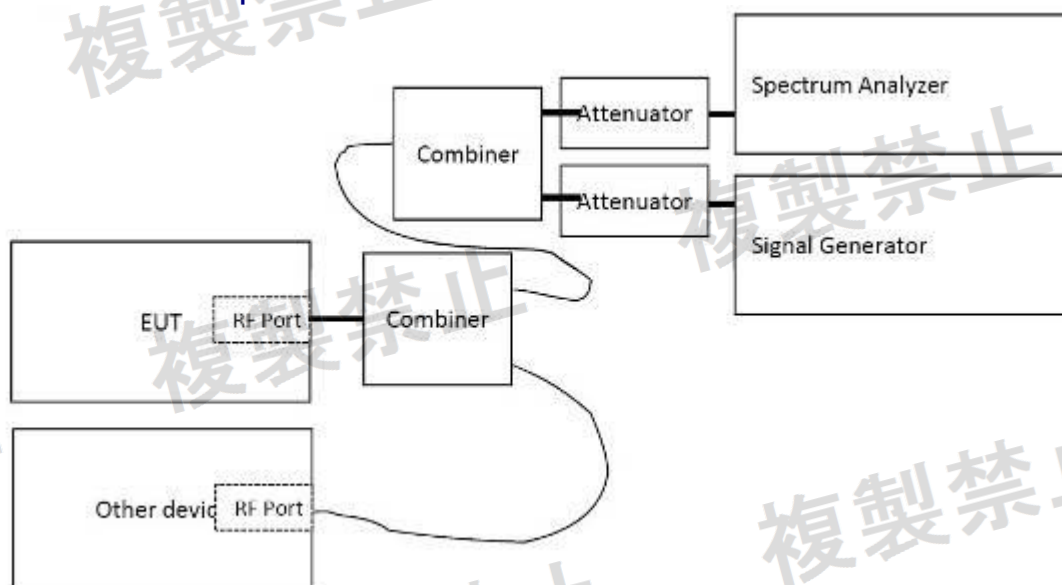
EUT:	XTEINK X4 Classic	Tested by:	Leo Wang
Temperature:	24℃	Humidity:	56%RH
Mac address:	52:42:48:45:5C:C9		
Test result:	PASS		

9. Carrier Sensing Function

9.1. Applied Procedures / Limit

EUT stop RF transmission signal after carrier inject to EUT.
(On $22.79 + G - 20 \cdot \log(f)$ [dBm] (G: dBi; f: MHz) or 100mV/m).

9.2. Test Setup



9.3. Test Procedure

11.3.1. SG adjusted the frequency as same as the EUT transmitted signal and emitted the absence of modulation from SG and power level is (on $22.79 + G - 20 \cdot \log(f)$ dBm) (G is the antenna gain, f is the test frequency).

11.3.2. turn off the RF signal of the SG.

11.3.3. EUT have transmitted the maximum modulation signal and fixed channelize.

11.3.4. Setting of SA: RBW/VBW=1MHz/1MHz, Span=50MHz, Sweep time=auto, Sweep mode=continuous, Detect mode=positive peak

11.3.5. SG RF signal on.

11.3.6. EUT shall be stop the transmitted any signal and SG RF signal off, the EUT will be continuous

9.4. Test Result

Frequency(MHz)	PCS(dBm)
2422	-39.70
2462	-39.85

Note:

1.this test item only applies to those modes with bandwidth greater than 20MHz;

$PCS=22.79+G-20*\log(F)$

G=antenna gain

F=transmission frequency

2. after a carrier signal $22.79+G-20*\log(f)[dBm]$ was injected into EUT, it stopped transmission.

3. Test Mode: 802.11n (HT40)

10. Secondary Radiated Emissions

10.1. Applied Procedures / Limit

The limit on secondary emissions radiated from the receiving equipment within which the function of other radio equipment will not be impaired shall be, in terms of the power of a dummy antenna circuit that has the same electrical constant as the receiving antenna, 4 nW or less at a frequency below 1 GHz and 20 nW or less at a frequency of 1 GHz or higher as measured using the circuit.

10.2. Test Setup



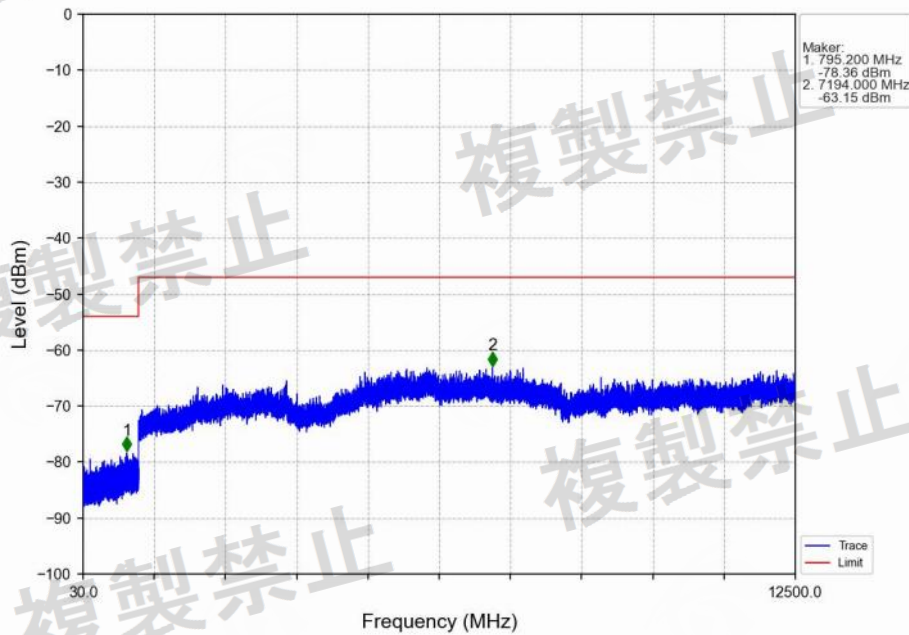
10.3. Test Procedure

- (1) Configure EUT and assistant system according clause 2.3 and 12.3;
- (2) Set EUT work in test mode as described in clause 2.4;
- (3) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, set the Spectrum Analyzer as below:
 - Resolution BW: 100 KHz for frequency below 1GHz and 1MHz for frequency above 1GHz
 - Video BW: 100 KHz for frequency below 1GHz and 1MHz for frequency above 1GHz
 - Detector: Peak.
 - Trace Mode: Max Hold.
- (4) All the emissions from 30MHz to 12.5GHz were measured and record.

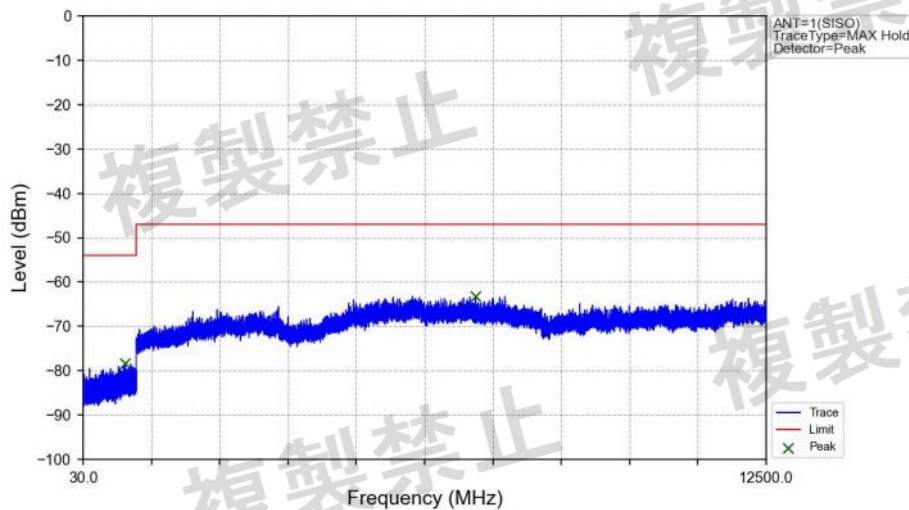
10.4. Test Result

Mode	Condition	CH	Frequency (MHz)	PK Power (dBm)	PK Power (nW)	Limit (nW)	Result
IEEE 802.11b Rx Mode	Normal	CH1	30-1000	-78.36	0.015	4	PASS
			1000-13000	-63.15	0.484	20	
		CH13	30-1000	-79.06	0.012	4	PASS
			1000-13000	-62.11	0.615	20	
IEEE 802.11g Rx Mode	Normal	CH1	30-1000	-78.85	0.013	4	PASS
			1000-13000	-62.53	0.558	20	
		CH13	30-1000	-78.93	0.013	4	PASS
			1000-13000	-62.70	0.537	20	
IEEE 802.11n HT20 Rx Mode	Normal	CH1	30-1000	-78.62	0.014	4	PASS
			1000-13000	-62.35	0.582	20	
		CH13	30-1000	-78.53	0.014	4	PASS
			1000-13000	-62.54	0.557	20	
IEEE 802.11n HT40 Rx Mode	Normal	CH1	30-1000	-78.54	0.014	4	PASS
			1000-13000	-62.98	0.504	20	
		CH9	30-1000	-78.39	0.014	4	PASS
			1000-13000	-63.18	0.481	20	

802.11b 2412MHz_Ant1 (SISO)_NTNV

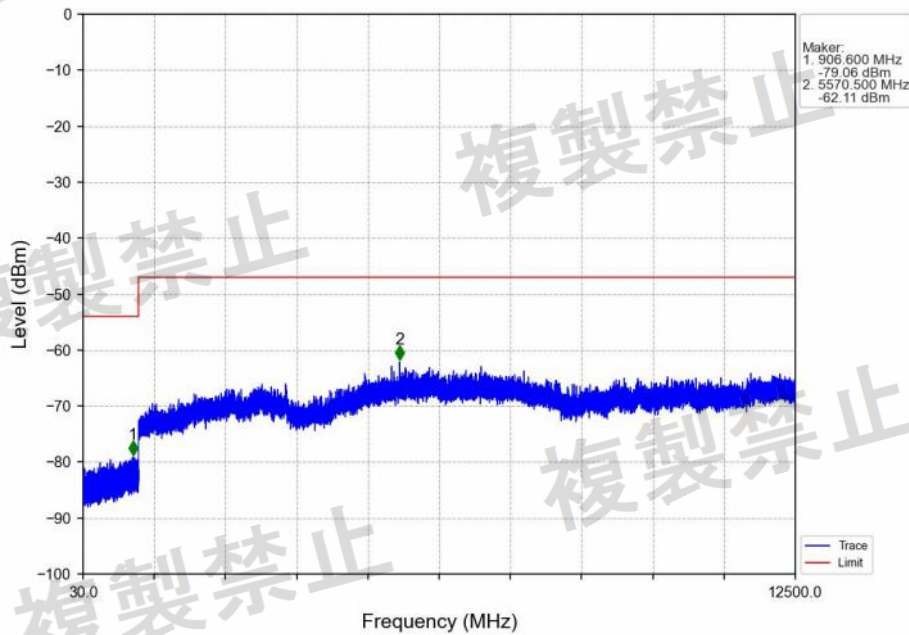


802.11b 2412MHz_Ant1 (SISO)_NTNV

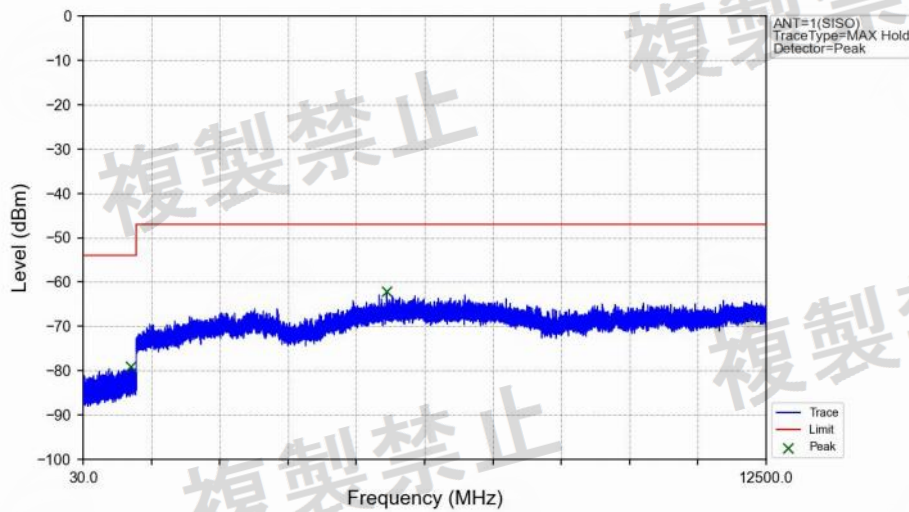


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	795.200	-78.36	/	-54	Pass
1000	12500	1	1	7194.000	-63.15	/	-47	Pass

802.11b 2472MHz_Ant1 (SISO)_NTNV

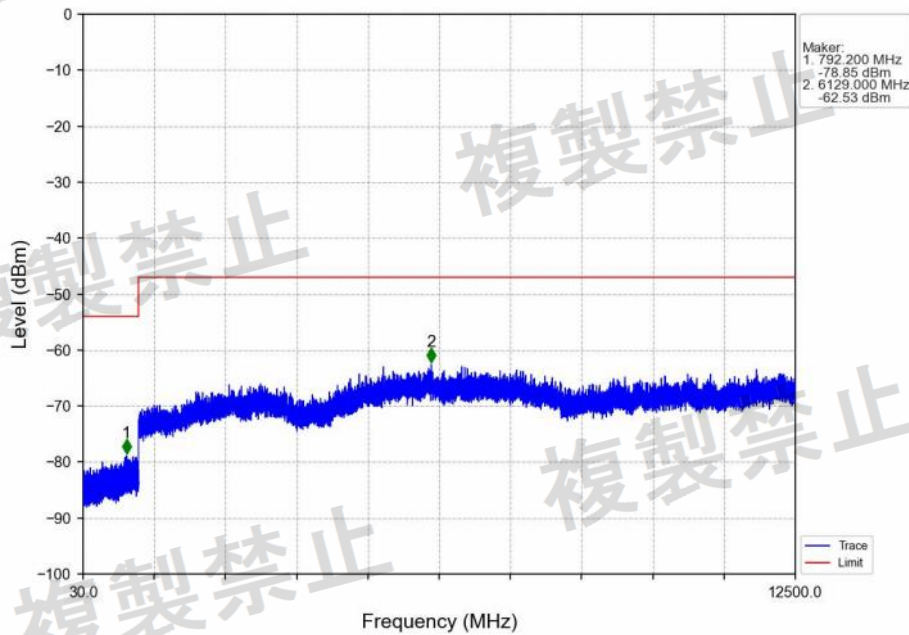


802.11b 2472MHz_Ant1 (SISO)_NTNV

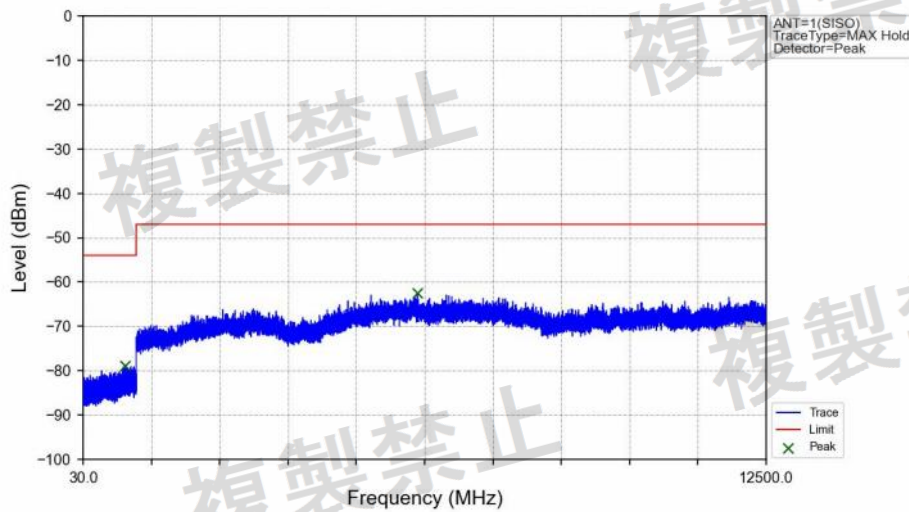


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	906.600	-79.06	/	-54	Pass
1000	12500	1	1	5570.500	-62.11	/	-47	Pass

802.11g_2412MHz_Ant1 (SISO)_NTNV

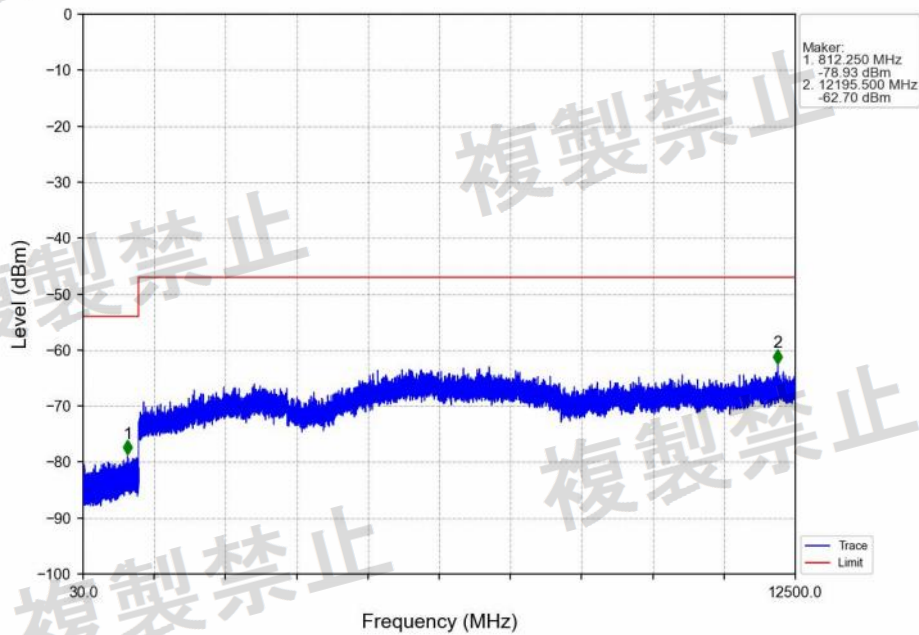


802.11g_2412MHz_Ant1 (SISO)_NTNV

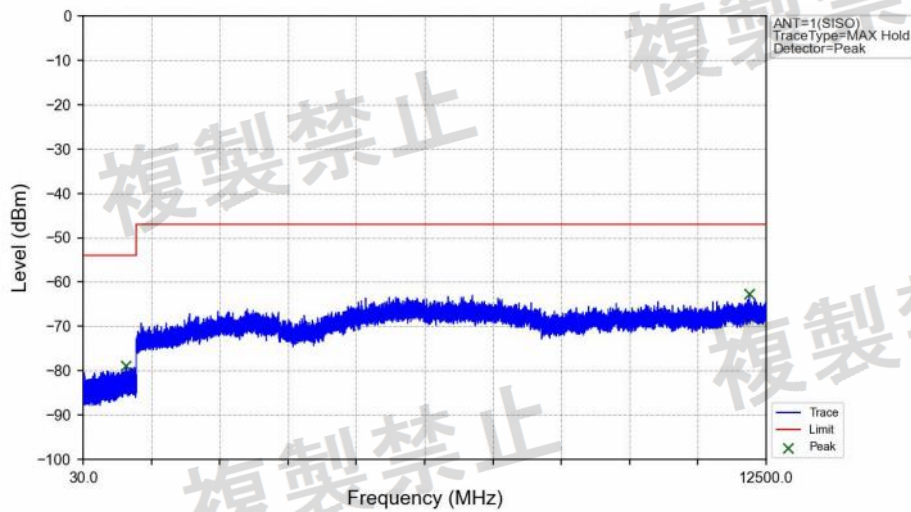


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	792.200	-78.85	/	-54	Pass
1000	12500	1	1	6129.000	-62.53	/	-47	Pass

802.11g_2472MHz_Ant1 (SISO)_NTNV

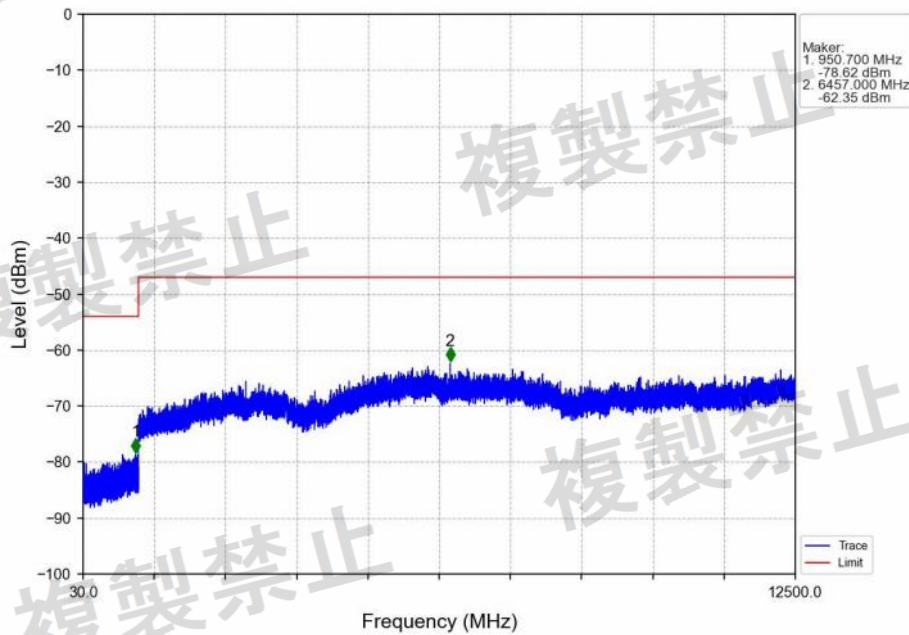


802.11g_2472MHz_Ant1 (SISO)_NTNV

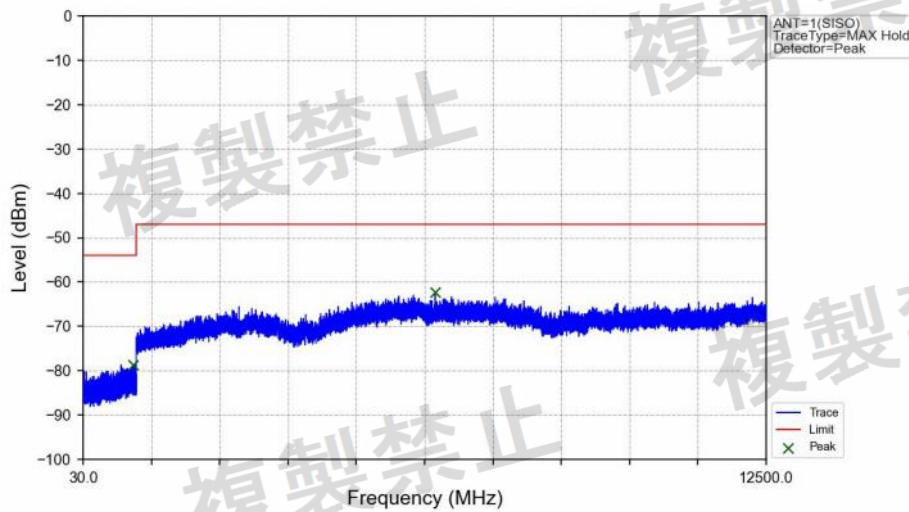


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	812.250	-78.93	/	-54	Pass
1000	12500	1	1	12195.500	-62.70	/	-47	Pass

802.11n(HT20) 2412MHz_Ant1 (SISO)_NTNV

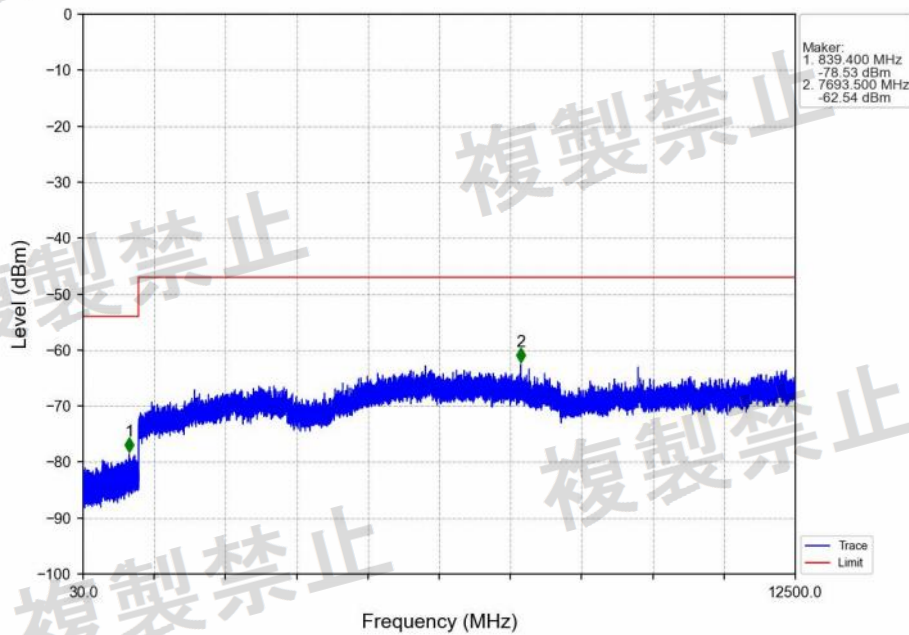


802.11n(HT20) 2412MHz_Ant1 (SISO)_NTNV

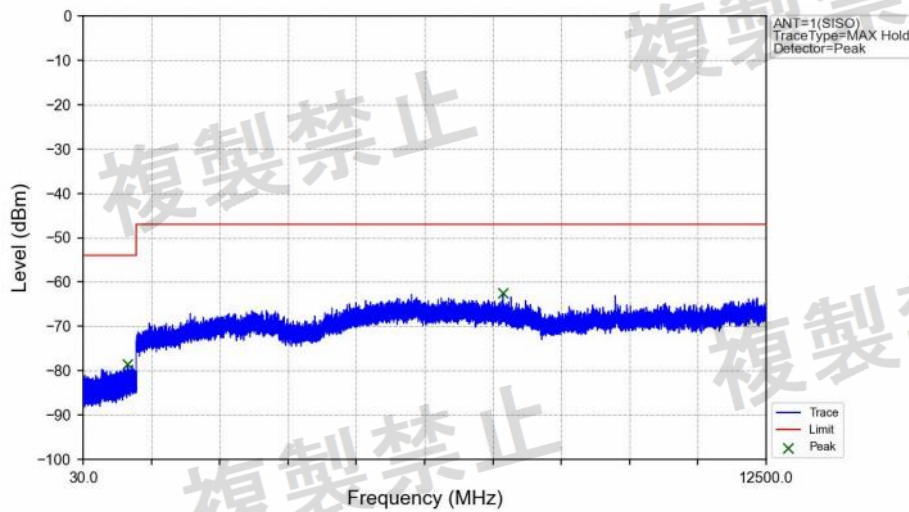


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	950.700	-78.62	/	-54	Pass
1000	12500	1	1	6457.000	-62.35	/	-47	Pass

802.11n(HT20)_2472MHz_Ant1 (SISO)_NTNV

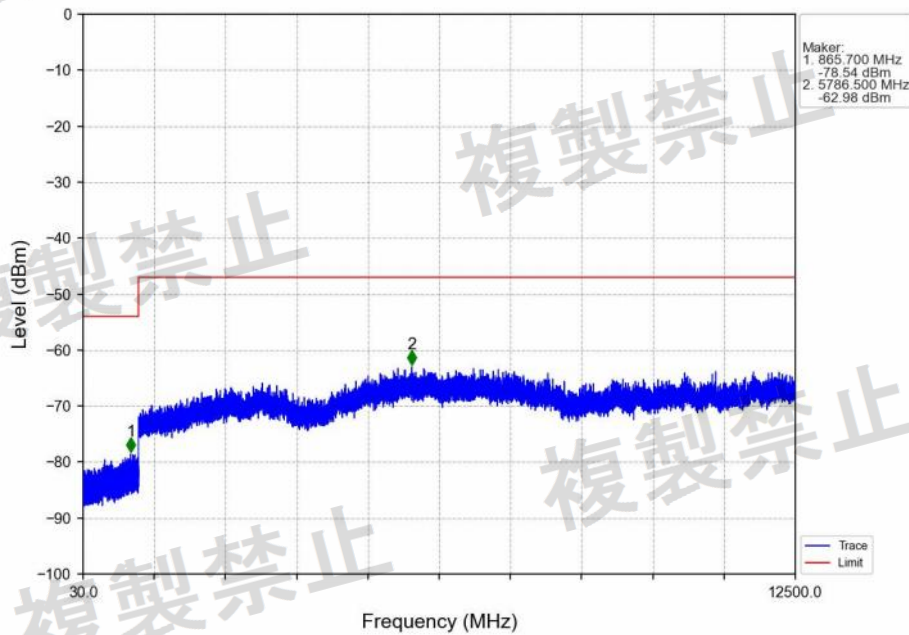


802.11n(HT20)_2472MHz_Ant1 (SISO)_NTNV

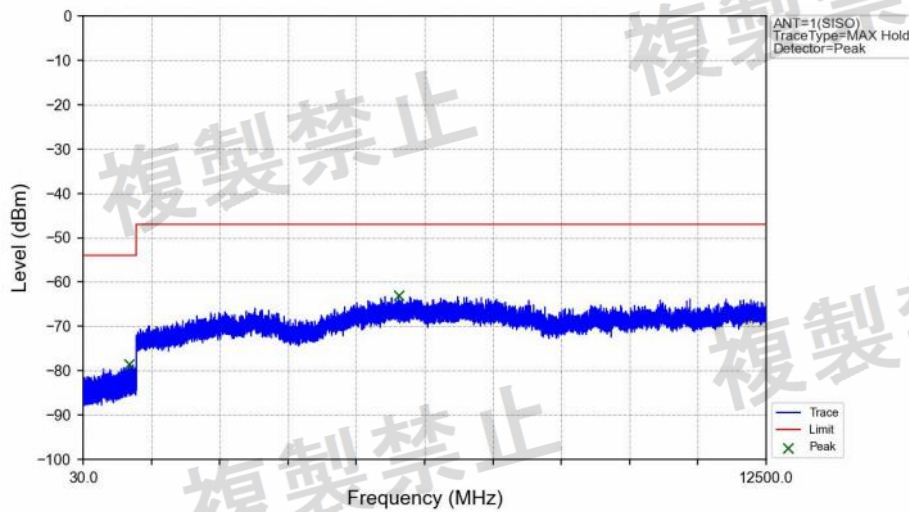


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	839.400	-78.53	/	-54	Pass
1000	12500	1	1	7693.500	-62.54	/	-47	Pass

802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV

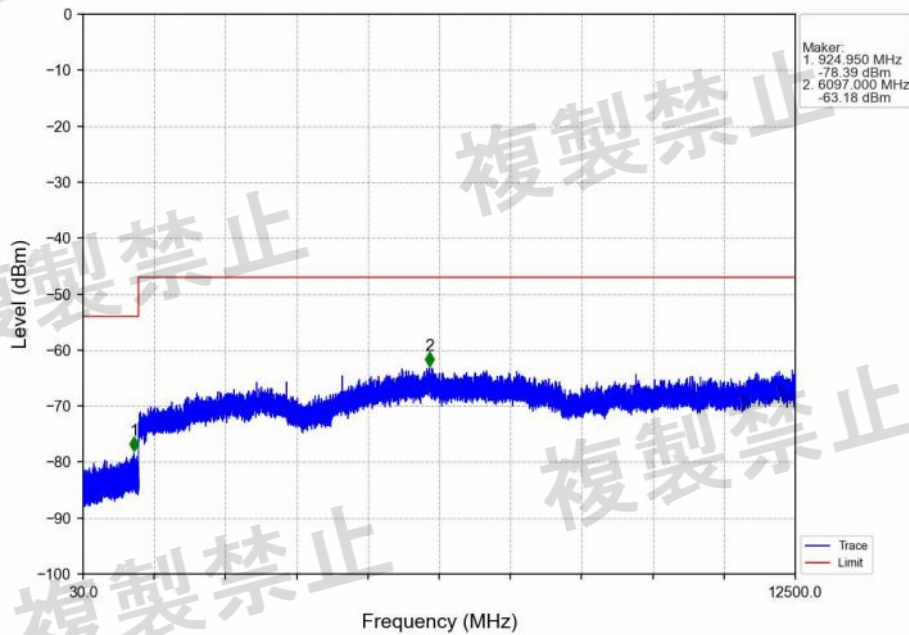


802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV

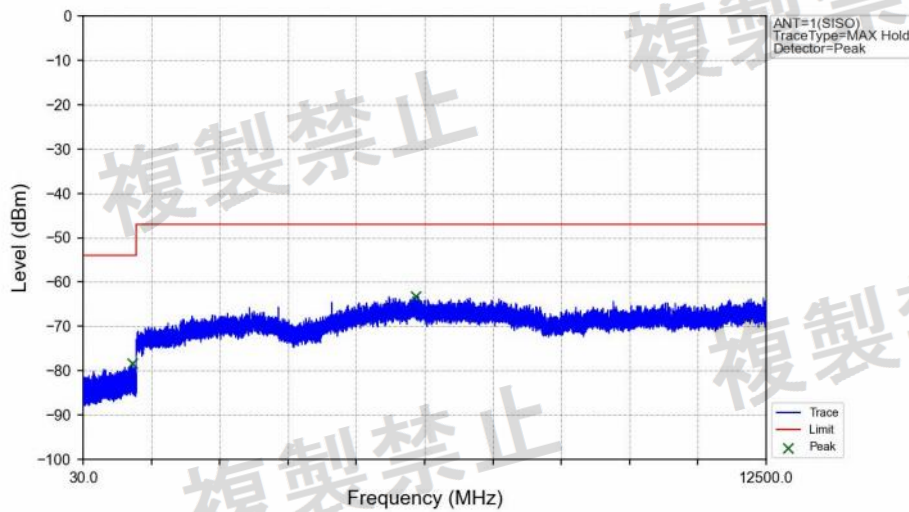


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	865.700	-78.54	/	-54	Pass
1000	12500	1	1	5786.500	-62.98	/	-47	Pass

802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	924.950	-78.39	/	-54	Pass
1000	12500	1	1	6097.000	-63.18	/	-47	Pass

11. Equivalent Isotropic Radiated Power

11.1. Applied Procedures / Limit

Modulation system	Frequency band used	Antenna power (max.)	EIRP	
			Omnidirectional case	Directional case
DS	2400~2483.5MHz	10mW/MHz	12.14dBm/MHz	22.14dBm/MHz
OFDM1	2400~2483.5MHz	10mW/MHz	12.14dBm/MHz	22.14dBm/MHz
OFDM2	2400~2483.5MHz	5mW/MHz	9.14dBm/MHz	19.14dBm/MHz

11.2. Test Procedure

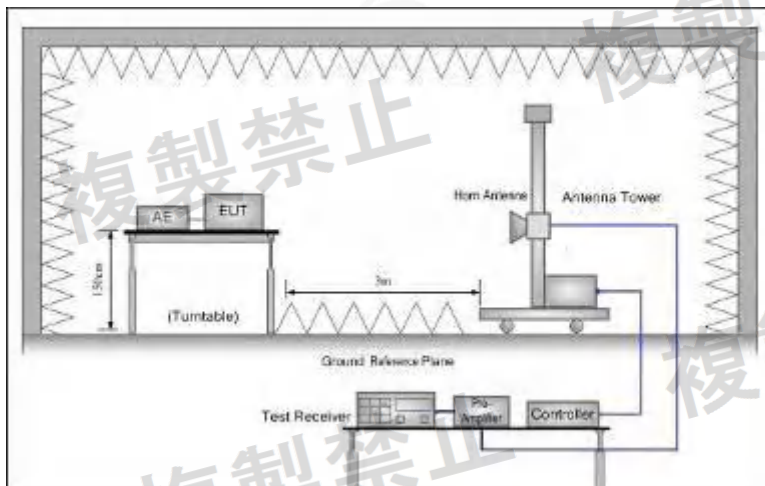
EIRP is obtained through (Conducted Power + Antenna Gain)/Occupied Frequency Bandwidth.

11.3. Test Result

Mode	Frequency (MHz)	Gain (dBi)	EIRP (dBm/MHz)		Verdict
			Result	Limit	
802.11b	2412	5.19	-0.02	<=12.14	Pass
	2472	5.19	-0.09	<=12.14	Pass
802.11g	2412	5.19	-0.19	<=12.14	Pass
	2472	5.19	-0.21	<=12.14	Pass
802.11n (HT20)	2412	5.19	-0.24	<=12.14	Pass
	2472	5.19	-0.31	<=12.14	Pass
802.11n (HT40)	2422	5.19	-0.22	<=9.13	Pass
	2462	5.19	-0.24	<=9.13	Pass

12. 3dB Beam Bandwidth

12.1. Test Setup



12.2. Test Procedure

Step 1

Set the test equipment at test frequency, and transmit.

Step 2

Stop the modulation, and make it “continuous transmission of unmodulated wave” in principle. If it is impossible, make it “intermittent burst transmission of unmodulated wave”

Step 3

Polarized wave side of measurement antenna is the same using mode as test equipment.

Step 4

Set the height and direction of test equipment and measurement antenna approximately facing each other.

Step 5

Set the spectrum analyzer according to “Spectrum set” and set as reference level and receive.

Step 6

Adjust at the maximum received power point, turning the test equipment horizontally and vertically.

Step 7

Change the height of the measurement antenna from the ground by $\pm 50\text{cm}$ with a central focus on the antenna of test equipment, and search the location that the power is maximum by adjusting the direction of measurement antenna. Set the indicator of spectrum analyzer at this point as “E”.

Step 8

By using EIRP (P_E) that is measured at 9, calculate allowed main beam angle (θ_0) between the horizontal plane and vertical plane of the test equipment as follows.

Allowed main beam angle (θ_0) = $360/A$

θ_0 : Allowed transmitter antenna beamwidth angle in degree of test equipment

P_E : EIRP of test equipment (dBm)

A: A is defined as EIRP divides by the summation of antenna gain 2.14dBi transmitter antenna and average power 10mW (In case of using OFDM, or DS, or FHSS, or DS and complex with FHSS, or OFDM and complex with FHSS, 10mW/MHz. However, in FHSS or DS and complex with FHSS, or OFDM and complex with FHSS, when using the frequency from 2,427MHz to 2,470.75MHz, 3mW/MHz) antenna power. In case the value is lower than 1, set A as 1.

Step 9

Turn the test equipment in horizontal direction, from main beam direction with the beam angle except main beam angle (θ_0) calculated by (step 8), over all surroundings as much as possible. Confirm that received power is decreased more than 3dB from the maximum point value of received power(E).

Step 10

Return the test equipment to position (step 6), incline the test equipment in vertical direction, from main beam direction with the beam angle except main beam angle (θ_0) calculated by (step 8), widely as much as possible (over 90 degrees. However, it is able to according to "6. other condition", too.) Confirm that received power is 3dB lower than the maximum point value of received power (E).

Step 9

Spectrum Analyzer as below:

Centre Frequency: The centre frequency of the channel under test.

Frequency Span: 0Hz

Resolution BW: 1MHz

Video BW: 1KHz

Y-Axis: 5dB/Div

Detector: Peak.

Sweep mode: Continuous sweep

Input level: the amplitude of transmission signal is set around max. line area of mixer.

12.3. Test Result

Not applicable(The EIRP less than 12.14dBm/MHz for 802.11b/g/n20, 9.13dBm/MHz for 802.11n40)

APPENDIX I -- EUT TEST PHOTOGRAPHS

Please see the attachment for details

APPENDIX II -- EUT PHOTOGRAPHS

Please see the attachment for details

APPENDIX III -- STATEMENT

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

***** END OF REPORT *****