

TEST REPORT

Application No.: SZCR2604001709AT
Applicant: Aura Home, Inc.
Address of Applicant: 148 Lafayette Street Floor 5, New York, 10013 United States
Manufacturer: Aura Home, Inc.
Address of Manufacturer: 148 Lafayette Street, Floor 5 New York, NY 10013 USA
Equipment Under Test (EUT):
EUT Name: Digital Photo Frame/Monitor
Model No.: AF310, AF31X-YYYY, AFM31X-YYYY (X is an Arabic numeral, representing different sales channels and regions, YYYY are Latin alphabets, representing different colors of product housing enclosure, M represents "Miracast"), RC310-YYYY (R and C are Latin alphabets, representing country/region code of different targeted markets and customers respectively, YYYY are Latin alphabets, representing different colors of product housing enclosure) ♣
 ♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Trade Mark: AURA
FCC ID: 2AZGI-AF310
Standard(s) : 47 CFR Part 15, Subpart C 15.247
Date of Receipt: 2026-04-23
Date of Test: 2026-05-02 to 2026-05-14
Date of Issue: 2026-05-17

Test Result:	Pass*
---------------------	--------------

* In the configuration tested, the EUT complied with the standards specified above.

Kenx. Xu

Kenx Xu
EMC Laboratory Manager



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch EMC Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
 Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com
 中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2026-05-17		Original

Authorized for issue by:				
		Edison Li		
		Edison Li/Project Engineer		
		Eric Fu		
		Eric Fu/Reviewer		



2 Test Summary

Radio Spectrum Technical Requirement				
Item	Standard	Method	Requirement	Result
Antenna Requirement	47 CFR Part 15, Subpart C 15.247	N/A	47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)	Pass

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2020) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
Radiated Emissions which fall in the restricted bands		ANSI C63.10 (2020) Section 6.10.5 & 11.12	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions Below 1GHz		ANSI C63.10 (2020) Section 6.4,6.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions Above 1GHz		ANSI C63.10 (2020) Section 6.6 & 11.12	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Maximum Conducted Output Power		ANSI C63.10 (2020) Section 11.9.2	47 CFR Part 15, Subpart C 15.247(b)(3)	Pass
Minimum 6dB Bandwidth		ANSI C63.10 (2020) Section 11.8.1	47 CFR Part 15, Subpart C 15.247a(2)	Pass
Power Spectral Density		ANSI C63.10 (2020) Section 11.10.3	47 CFR Part 15, Subpart C 15.247(e)	Pass
Conducted Band Edges Measurement		ANSI C63.10 (2020) Section 6.10.4	47 CFR Part 15, Subpart C 15.247(d)	Pass
Conducted Spurious Emissions		ANSI C63.10 (2020) Section 11.11	47 CFR Part 15, Subpart C 15.247(d)	Pass

Declaration of EUT Family Grouping:

Model No.: AF310, AF31X-YYYY, AFM31X-YYYY (X is an Arabic numeral, representing different sales channels and regions, YYYY are Latin alphabets, representing different colors of product housing enclosure, M represents "Miracast"), RC310-YYYY(R and C are Latin alphabets, representing country/region code of different targeted markets and customers respectively, YYYY are Latin alphabets, representing different colors of product housing enclosure)

Only the model AF310 was tested. According to the declaration from the applicant, the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on SKU naming and colors of enclosure for marketing purpose.



3 Contents

	Page
1 Cover Page	1
2 Test Summary.....	3
3 Contents	4
4 General Information.....	6
4.1 Details of E.U.T.	6
4.2 Description of Support Units	6
4.3 Measurement Uncertainty	6
4.4 Test Location	7
4.5 Test Facility	7
4.6 Deviation from Standards	7
4.7 Abnormalities from Standard Conditions	7
5 Equipment List	8
6 Radio Spectrum Technical Requirement.....	10
6.1 Antenna Requirement	10
6.1.1 Test Requirement:	10
6.1.2 Conclusion	10
7 Radio Spectrum Matter Test Results	11
7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)	11
7.1.1 E.U.T. Operation	11
7.1.2 Test Mode Description	11
7.1.3 Test Setup Diagram	12
7.1.4 Measurement Procedure and Data	12
7.2 Radiated Emissions which fall in the restricted bands	15
7.2.1 E.U.T. Operation	15
7.2.2 Test Mode Description	15
7.2.3 Test Setup Diagram	16
7.2.4 Measurement Procedure and Data	17
7.3 Radiated Spurious Emissions Below 1GHz	24
7.3.1 E.U.T. Operation	24
7.3.2 Test Mode Description	24
7.3.3 Test Setup Diagram	25
7.3.4 Measurement Procedure and Data	26
7.4 Radiated Spurious Emissions Above 1GHz	33
7.4.1 E.U.T. Operation	33
7.4.2 Test Mode Description	33
7.4.3 Test Setup Diagram	34
7.4.4 Measurement Procedure and Data	35
7.5 Maximum Conducted Output Power	43
7.5.1 E.U.T. Operation	43



SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/2

Report No.: SZCR260400170904

Page: 5 of 88

7.5.2	Test Mode Description	43
7.5.3	Test Setup Diagram	44
7.5.4	Measurement Procedure and Data	44
7.6	Minimum 6dB Bandwidth	45
7.6.1	E.U.T. Operation	45
7.6.2	Test Mode Description	45
7.6.3	Test Setup Diagram	45
7.6.4	Measurement Procedure and Data	45
7.7	Power Spectral Density	46
7.7.1	E.U.T. Operation	46
7.7.2	Test Mode Description	46
7.7.3	Test Setup Diagram	46
7.7.4	Measurement Procedure and Data	46
7.8	Conducted Band Edges Measurement	47
7.8.1	E.U.T. Operation	47
7.8.2	Test Mode Description	47
7.8.3	Test Setup Diagram	47
7.8.4	Measurement Procedure and Data	48
7.9	Conducted Spurious Emissions	49
7.9.1	E.U.T. Operation	49
7.9.2	Test Mode Description	49
7.9.3	Test Setup Diagram	49
7.9.4	Measurement Procedure and Data	50
8	Test Setup Photo	51
9	EUT Constructional Details (EUT Photos)	51
10	Appendix	52



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch Calibration Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

4 General Information

4.1 Details of E.U.T.

Power supply:	AC/DC Adapter Model: AURA15-001 Input: AC 100-240V, 50/60Hz, 0.5A Max Output: DC 5V, 3A 15W
Cable(s):	AC cable:160cm unshielded
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz
Modulation Type:	802.11b: DSSS (DBPSK, DQPSK, CCK); 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM)
Number of Channels:	802.11b/g/n(HT20):11
Channel Spacing:	5MHz
Antenna Type:	IPEX Antenna
Antenna Gain:	4.1dBi

Remark:The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
RF Cable	SGS	N/A(cable loss:0.8dB)	N/A

4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions at AC Power Line (150kHz-30MHz)	± 3.2dB
Radiated Emissions which fall in the restricted bands	± 6.0dB (Below 1GHz);± 4.6dB (Above 1GHz)
Radiated Spurious Emissions Below 1GHz	± 6.0dB for 3m; ± 5.0dB for 10m
Radiated Spurious Emissions Above 1GHz	± 4.6dB (1-18GHz);± 4.8dB (18-40GHz)
Maximum Conducted Output Power	± 0.4dB
Minimum 6dB Bandwidth	± 0.3%
Power Spectral Density	± 0.4dB
Conducted Band Edges Measurement	± 2.7dB
Conducted Spurious Emissions	± 2.7dB

Remark:

The U_{lab} (lab Uncertainty) is less than $U_{CISPR/ETSI}$ (CISPR/ETSI Uncertainty), so the test results – compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit; – non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.



4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

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

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1336

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

5 Equipment List

Conducted Emissions at AC Power Line (150kHz-30MHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Shielding Room	ZhongYu Electron	GB-88	SEM001-06	2025-05-07	2028-05-06
EMI Test Receiver	Rohde&Schwarz	ESR	SZ-WRG-M-047	2025-12-15	2026-12-14
Measurement Software	AUDIX	e3 V8.2014-6-27a	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM024-01	2025-07-05	2026-07-04
LISN	Rohde&Schwarz	ENV216	SEM007-01	2025-07-25	2026-07-24
LISN	ETS-LINDGREN	3816/2	SEM007-02	2026-02-24	2027-02-23

Radiated Emissions which fall in the restricted bands					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
3m Fully-Anechoic Chamber	AUDIX	N/A	SEM001-02	2025-05-07	2028-05-06
Signal Analyzer	Rohde & Schwarz	FSV40	SEM008-04	2026-02-02	2027-02-01
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2025-07-22	2026-07-21
Microwave system amplifier	Agilent	83017A	SEM005-25	2025-09-10	2026-09-09
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2025-07-05	2026-07-04

Radiated Spurious Emissions Below 1GHz					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Loop Antenna	ETS-Lindgren	6502	SEM003-08	2025-11-17	2027-11-16
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2023-06-19	2026-06-18
MXE EMI Receiver	Agilent Technologies	N9038A	SEM004-15	2025-07-25	2026-07-24
BiConiLog Antenna	ETS-LINDGREN	3142C	SEM003-01	2025-08-29	2027-08-28
Pre-Amplifier	Agilent Technologies	8447D	SEM005-01	2026-02-02	2027-02-01
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2025-07-05	2026-07-04



SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/2

Report No.: SZCR260400170904

Page: 9 of 88

Radiated Spurious Emissions Above 1GHz					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
3m Fully-Anechoic Chamber	AUDIX	N/A	SEM001-02	2025-05-07	2028-05-06
Signal Analyzer	Rohde & Schwarz	FSV40	SEM008-04	2026-02-02	2027-02-01
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2025-07-22	2026-07-21
Microwave system amplifier	Agilent	83017A	SEM005-25	2025-09-10	2026-09-09
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2025-07-05	2026-07-04
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	SEM003-15	2025-07-22	2027-07-21
Pre-Amplifier	TST PASS	LNA180400G40	SEM005-39	2025-05-22	2026-05-21

RF Conducted Test					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Power Sensor	TST PASS	TSPS2023R	SEM009-26	2026-02-04	2027-02-03
Power Sensor	KEYSIGHT	U2021XA	SEM009-16	2026-02-04	2027-02-03
DC Power Supply	Chroma	62012P-80-60	SEM011-11	2025-07-24	2026-07-23
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-19	2026-02-03	2027-02-02
Measurement Software	TST PASS	TST PASS V2.0	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2025-07-05	2026-07-04
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2026-02-02	2027-02-01

General used equipment					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	deli	8838	SEM002-32	2025-07-23	2026-07-22
Humidity/ Temperature Indicator	deli	8838	SEM002-33	2025-07-23	2026-07-22
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2026-02-14	2027-02-13



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)

6.1.2 Conclusion

Standard Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

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

EUT Antenna:

The antenna connector is a IPEX type that comply with Part15.203, the best case gain of the antenna1 is 4.1dBi.

Antenna location: Refer to internal photo.



7 Radio Spectrum Matter Test Results

7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207

Test Method: ANSI C63.10 (2020) Section 6.2

Test Engineer: Mason Wu

Limit:

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

*Decreases with the logarithm of the frequency.

Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

7.1.1 E.U.T. Operation

Operating Environment:

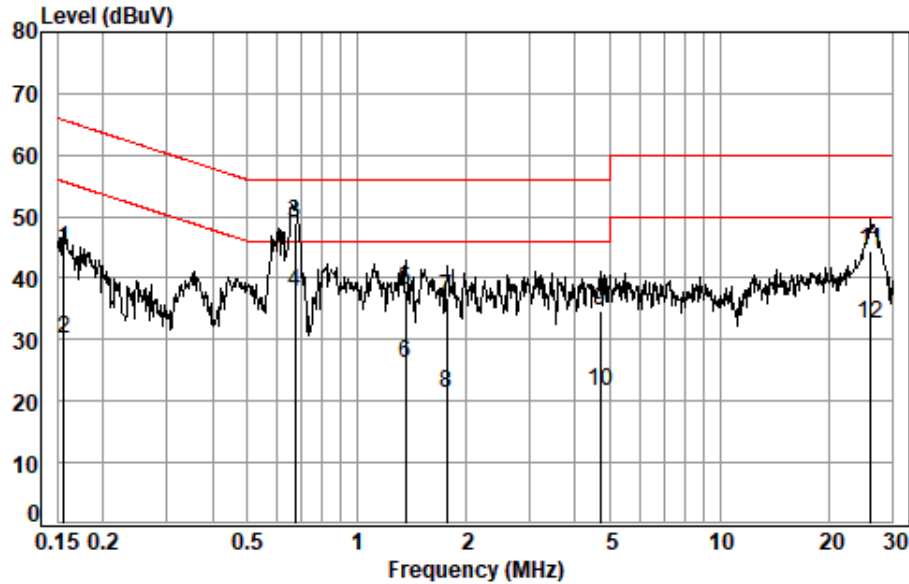
Temperature: 23 °C Humidity: 45 % RH Atmospheric Pressure: 1015 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.



Test Mode: 04; Line: Live line

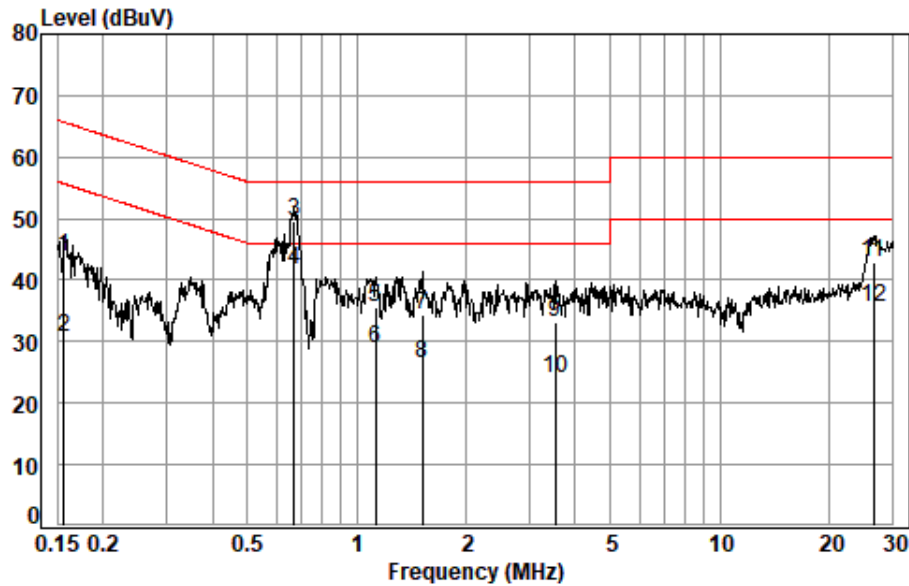


Site : Shielding Room
Condition: Line
Job No. : 01709AT
Test mode: 04

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.1565	0.06	9.63	35.09	44.78	65.65	-20.87	QP
2	0.1565	0.06	9.63	20.43	30.12	55.65	-25.53	Average
3 *	0.6754	0.10	9.65	39.21	48.96	56.00	-7.04	QP
4 *	0.6754	0.10	9.65	28.11	37.86	46.00	-8.14	Average
5	1.3593	0.12	9.69	28.07	37.88	56.00	-18.12	QP
6	1.3593	0.12	9.69	16.42	26.23	46.00	-19.77	Average
7	1.7716	0.12	9.71	26.83	36.66	56.00	-19.34	QP
8	1.7716	0.12	9.71	11.41	21.24	46.00	-24.76	Average
9	4.6964	0.14	9.96	24.65	34.75	56.00	-21.25	QP
10	4.6964	0.14	9.96	11.39	21.49	46.00	-24.51	Average
11	26.1393	0.25	13.49	30.66	44.40	60.00	-15.60	QP
12	26.1393	0.25	13.49	18.88	32.62	50.00	-17.38	Average



Test Mode: 04; Line: Neutral Line



Site : Shielding Room
Condition: Neutral
Job No. : 01709AT
Test mode: 04

	Cable	LISN	Read	Limit	Over	
Freq	Loss	Factor	Level	Level	Line	Remark
MHz	dB	dB	dBuV	dBuV	dBuV	dB
1	0.1557	0.06	9.64	33.98	43.68	65.69 -22.01 QP
2	0.1557	0.06	9.64	20.90	30.60	55.69 -25.09 Average
3 *	0.6719	0.10	9.64	39.74	49.48	56.00 -6.52 QP
4 *	0.6719	0.10	9.64	31.85	41.59	46.00 -4.41 Average
5	1.1292	0.11	9.67	25.73	35.51	56.00 -20.49 QP
6	1.1292	0.11	9.67	19.10	28.88	46.00 -17.12 Average
7	1.5193	0.12	9.70	24.54	34.36	56.00 -21.64 QP
8	1.5193	0.12	9.70	16.63	26.45	46.00 -19.55 Average
9	3.5278	0.13	9.84	23.32	33.29	56.00 -22.71 QP
10	3.5278	0.13	9.84	14.06	24.03	46.00 -21.97 Average
11	26.5581	0.26	13.52	29.01	42.79	60.00 -17.21 QP
12	26.5581	0.26	13.52	21.88	35.66	50.00 -14.34 Average



7.2 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209
 Test Method: ANSI C63.10 (2020) Section 6.10.5 & 11.12
 Measurement Distance: 3m
 Test Engineer: Logic Wang
 Limit:

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

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

7.2.1 E.U.T. Operation

Operating Environment:

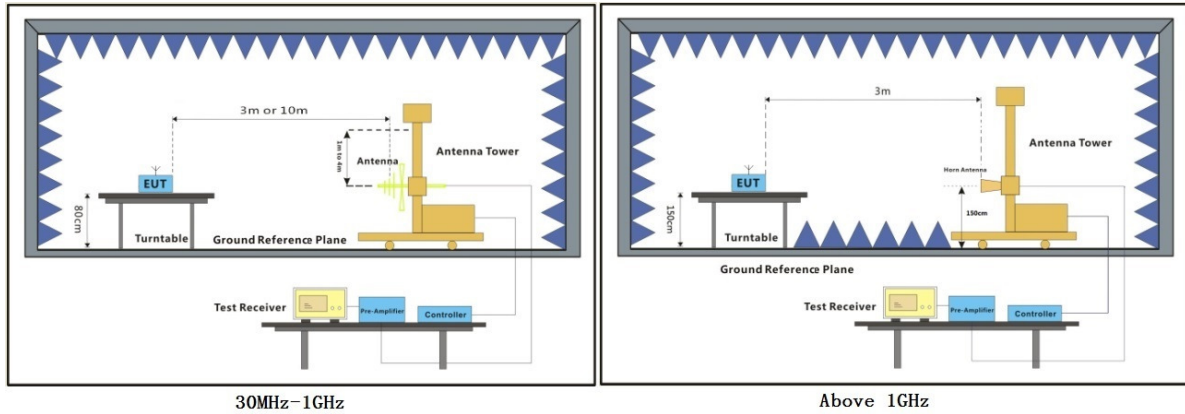
Temperature: 23.5 °C Humidity: 56.3 % RH Atmospheric Pressure: 1015 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.



7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

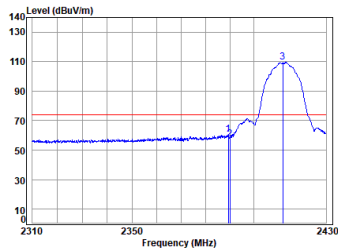
Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

Remark 3: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Peak detection (PK) and Average detection (AV) at frequency above 1GHz.

Remark 4: For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.

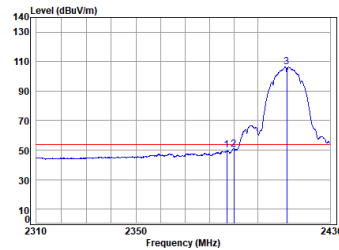


11b_TX_CH_01_Horizontal-Peak



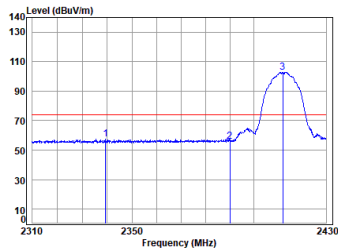
Site : chamber									
Condition: 3m HORIZONTAL									
Job No : 01709AT01711AT									
Mode : 2412 Band edge									
Cable : 2.4G WIFI 11B									
Freq	Loss	Ant	Preamp	Read	Limit	Over			
MHz	Factor	Factor	Level	Level	Line	Limit	Remark	Aux	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB			dB
1 2389.363	26.15	28.58	32.78	38.48	60.43	74.00	-13.57 Peak	0.00	
2 2390.000	26.15	28.58	32.78	35.78	57.73	74.00	-16.27 Peak	0.00	
3 p 2412.000	26.19	28.67	32.77	87.32	109.41	74.00	35.41 Peak	0.00	

11b_TX_CH_01_Horizontal-Avg



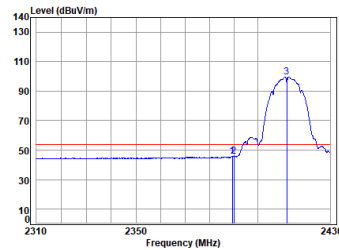
Site : chamber									
Condition: 3m HORIZONTAL									
Job No : 01709AT01711AT									
Mode : 2412 Band edge									
Cable : 2.4G WIFI 11B									
Freq	Loss	Ant	Preamp	Read	Limit	Over			
MHz	Factor	Factor	Level	Level	Line	Limit	Remark	Aux	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB			dB
1 2387.186	26.15	28.57	32.78	28.31	50.25	54.00	-3.75 Average	0.00	
2 2390.000	26.15	28.58	32.78	28.76	50.71	54.00	-3.29 Average	0.00	
3 q 2412.000	26.19	28.67	32.77	84.26	106.35	54.00	52.35 Average	0.00	

11b_TX_CH_01_Vertical-Peak



Site : chamber									
Condition: 3m VERTICAL									
Job No : 01709AT01711AT									
Mode : 2412 Band edge									
Cable : 2.4G WIFI 11B									
Freq	Loss	Ant	Preamp	Read	Limit	Over			
MHz	Factor	Factor	Level	Level	Line	Limit	Remark	Aux	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB			dB
1 2339.314	26.07	28.44	32.81	35.76	57.46	74.00	-16.54 Peak	0.00	
2 2390.000	26.15	28.58	32.78	34.04	55.99	74.00	-18.01 Peak	0.00	
3 p 2412.000	26.19	28.67	32.77	88.68	102.77	74.00	28.77 Peak	0.00	

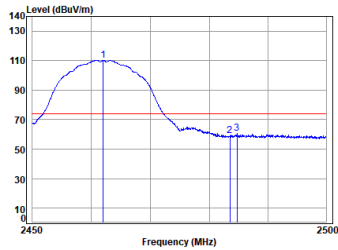
11b_TX_CH_01_Vertical-Avg



Site : chamber									
Condition: 3m VERTICAL									
Job No : 01709AT01711AT									
Mode : 2412 Band edge									
Cable : 2.4G WIFI 11B									
Freq	Loss	Ant	Preamp	Read	Limit	Over			
MHz	Factor	Factor	Level	Level	Line	Limit	Remark	Aux	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB			dB
1 2389.363	26.15	28.58	32.78	23.78	45.73	54.00	-8.27 Average	0.00	
2 2390.000	26.15	28.58	32.78	23.99	45.94	54.00	-8.06 Average	0.00	
3 q 2412.000	26.19	28.67	32.77	77.69	99.78	54.00	45.78 Average	0.00	



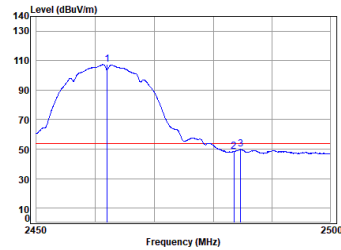
11b_TX_CH_11_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2462 Band edge
: 2.4G WIFI 11B

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 p 2462.000	26.28	28.92	32.74	87.75	110.21	74.00	36.21	Peak	0.00
2 2483.500	26.31	28.97	32.73	36.31	58.86	74.00	-15.14	Peak	0.00
3 2484.743	26.31	28.97	32.73	38.11	60.66	74.00	-13.34	Peak	0.00

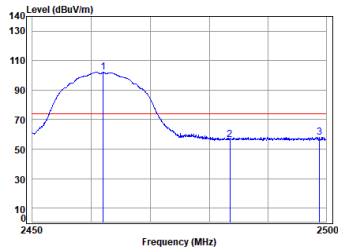
11b_TX_CH_11_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2462 Band edge
: 2.4G WIFI 11B

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 q 2462.000	26.28	28.92	32.74	84.91	107.37	54.00	53.37	Average	0.00
2 2483.500	26.31	28.97	32.73	25.77	48.32	54.00	-5.68	Average	0.00
3 2484.643	26.31	28.97	32.73	27.28	49.83	54.00	-4.17	Average	0.00

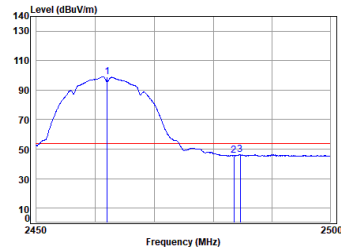
11b_TX_CH_11_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2462 Band edge
: 2.4G WIFI 11B

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 p 2462.000	26.28	28.92	32.74	79.62	102.08	74.00	28.08	Peak	0.00
2 2483.500	26.31	28.97	32.73	34.11	56.66	74.00	-17.34	Peak	0.00
3 2498.889	26.34	29.00	32.73	35.68	58.29	74.00	-15.71	Peak	0.00

11b_TX_CH_11_Vertical-Avg

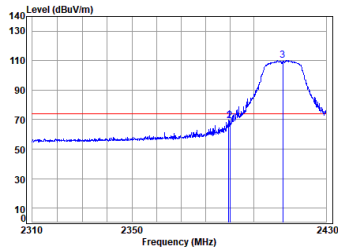


Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2462 Band edge
: 2.4G WIFI 11B

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 q 2462.000	26.28	28.92	32.74	76.66	99.12	54.00	45.12	Average	0.00
2 2483.500	26.31	28.97	32.73	23.13	45.68	54.00	-8.32	Average	0.00
3 2484.593	26.31	28.97	32.73	23.97	46.52	54.00	-7.48	Average	0.00



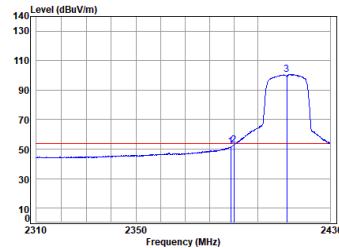
11g_TX_CH_01_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2412 Band edge
: 2.4G WIFI 11G

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1 2389.484	26.15	28.58	32.78	47.81	69.76	74.00	-4.24 Peak	0.00
2 2398.000	26.15	28.58	32.78	47.36	69.31	74.00	-4.69 Peak	0.00
3 p 2412.000	26.19	28.67	32.77	88.31	110.40	74.00	36.40 Peak	0.00

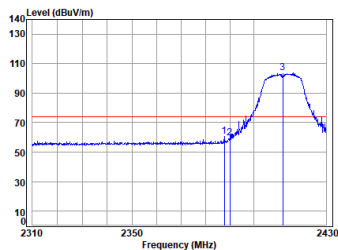
11g_TX_CH_01_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2412 Band edge
: 2.4G WIFI 11G

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1 2388.758	26.15	28.58	32.78	29.65	51.60	54.00	-2.40 Average	0.00
2 2398.000	26.15	28.58	32.78	30.57	52.52	54.00	-1.48 Average	0.00
3 q 2412.000	26.19	28.67	32.77	78.49	100.58	54.00	46.58 Average	0.00

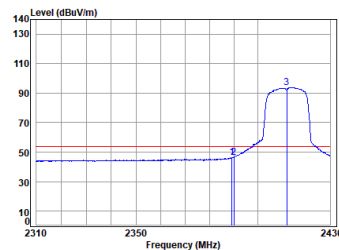
11g_TX_CH_01_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2412 Band edge
: 2.4G WIFI 11G

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1 2387.791	26.15	28.58	32.78	38.67	60.62	74.00	-13.38 Peak	0.00
2 2398.000	26.15	28.58	32.78	37.51	59.46	74.00	-14.54 Peak	0.00
3 p 2412.000	26.19	28.67	32.77	81.85	103.94	74.00	29.94 Peak	0.00

11g_TX_CH_01_Vertical-Avg

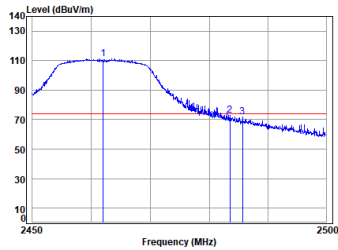


Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2412 Band edge
: 2.4G WIFI 11G

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1 2389.242	26.15	28.58	32.78	24.49	46.44	54.00	-7.56 Average	0.00
2 2398.000	26.15	28.58	32.78	24.43	46.38	54.00	-7.62 Average	0.00
3 q 2412.000	26.19	28.67	32.77	71.81	93.90	54.00	39.90 Average	0.00



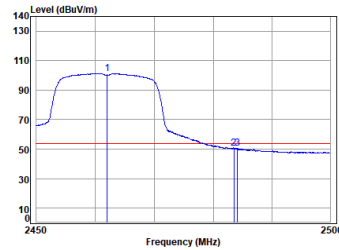
11g_TX_CH_11_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2462 Band edge
: 2.4G WIFI 11G

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1 p 2462.000	26.28	28.92	32.74	89.04	111.50	74.00	37.50	Peak
2 2483.500	26.31	28.97	32.73	58.28	72.83	74.00	-1.17	Peak
3 2485.697	26.32	28.97	32.73	49.25	71.81	74.00	-2.19	Peak

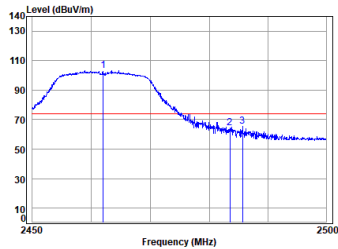
11g_TX_CH_11_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2462 Band edge
: 2.4G WIFI 11G

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1 q 2462.000	26.28	28.92	32.74	78.94	101.40	54.00	47.40	Average
2 2483.500	26.31	28.97	32.73	28.29	50.84	54.00	-3.16	Average
3 2484.141	26.31	28.97	32.73	28.12	50.67	54.00	-3.33	Average

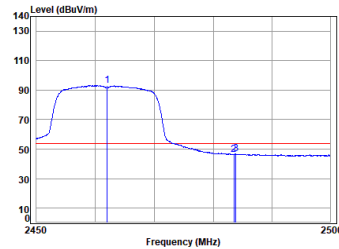
11g_TX_CH_11_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2462 Band edge
: 2.4G WIFI 11G

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1 p 2462.000	26.28	28.92	32.74	81.03	103.49	74.00	29.49	Peak
2 2483.500	26.31	28.97	32.73	41.76	64.31	74.00	-9.69	Peak
3 2485.647	26.32	28.97	32.73	42.75	65.31	74.00	-8.69	Peak

11g_TX_CH_11_Vertical-Avg

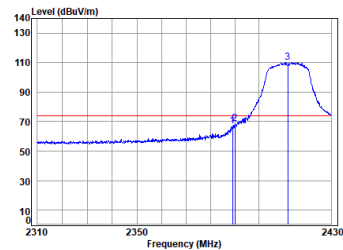


Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2462 Band edge
: 2.4G WIFI 11G

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1 q 2462.000	26.28	28.92	32.74	70.68	93.14	54.00	39.14	Average
2 2483.500	26.31	28.97	32.73	23.77	46.32	54.00	-7.68	Average
3 2483.890	26.31	28.97	32.73	24.08	46.63	54.00	-7.37	Average



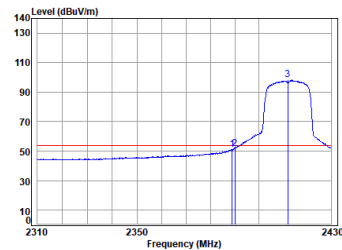
11n_HT(20M)_TX_CH_01_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2412 Band edge
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Remark	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	dB		Factor
1 2389.000	26.15	28.58	32.78	44.86	66.81	74.00	-7.19	Peak	0.00
2 2390.000	26.15	28.58	32.78	46.80	68.75	74.00	-5.25	Peak	0.00
3 p 2412.000	26.19	28.67	32.77	88.15	110.24	74.00	36.24	Peak	0.00

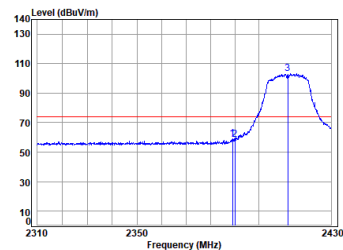
11n_HT(20M)_TX_CH_01_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2412 Band edge
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Remark	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	dB		Factor
1 2388.879	26.15	28.58	32.78	29.30	51.25	54.00	-2.75	Average	0.00
2 2390.000	26.15	28.58	32.78	29.91	51.86	54.00	-2.14	Average	0.00
3 q 2412.000	26.19	28.67	32.77	76.18	98.27	54.00	44.27	Average	0.00

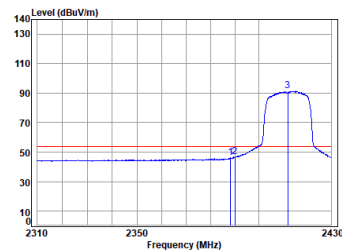
11n_HT(20M)_TX_CH_01_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2412 Band edge
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Remark	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	dB		Factor
1 2389.121	26.15	28.58	32.78	36.94	58.89	74.00	-15.11	Peak	0.00
2 2390.000	26.15	28.58	32.78	36.60	58.55	74.00	-15.45	Peak	0.00
3 p 2412.000	26.19	28.67	32.77	81.28	103.37	74.00	29.37	Peak	0.00

11n_HT(20M)_TX_CH_01_Vertical-Avg

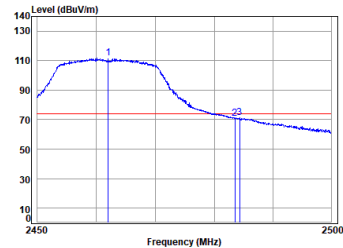


Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2412 Band edge
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Remark	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	dB		Factor
1 2388.274	26.15	28.58	32.78	24.14	46.09	54.00	-7.91	Average	0.00
2 2390.000	26.15	28.58	32.78	24.83	46.78	54.00	-7.22	Average	0.00
3 q 2412.000	26.19	28.67	32.77	69.20	91.29	54.00	37.29	Average	0.00



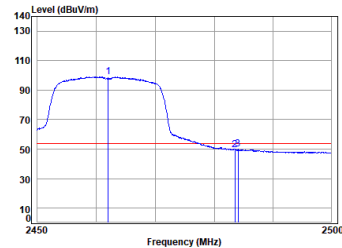
11n_HT(20M)_TX_CH_11_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2462 Band edge
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1 p 2462.000	26.28	28.92	32.74	89.23	111.69	74.00	37.69 Peak	0.00
2 2483.500	26.31	28.97	32.73	48.27	70.82	74.00	-3.18 Peak	0.00
3 2484.342	26.31	28.97	32.73	48.63	71.18	74.00	-2.82 Peak	0.00

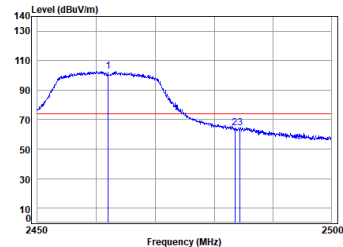
11n_HT(20M)_TX_CH_11_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2462 Band edge
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1 q 2462.000	26.28	28.92	32.74	76.64	99.10	54.00	45.10 Average	0.00
2 2483.500	26.31	28.97	32.73	26.97	49.52	54.00	-4.48 Average	0.00
3 2484.091	26.31	28.97	32.73	27.23	49.78	54.00	-4.22 Average	0.00

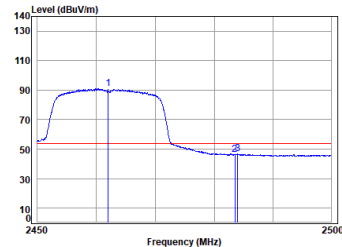
11n_HT(20M)_TX_CH_11_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2462 Band edge
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1 p 2462.000	26.28	28.92	32.74	80.14	102.60	74.00	28.60 Peak	0.00
2 2483.500	26.31	28.97	32.73	42.00	64.63	74.00	-9.37 Peak	0.00
3 2484.392	26.31	28.97	32.73	42.09	64.64	74.00	-9.36 Peak	0.00

11n_HT(20M)_TX_CH_11_Vertical-Avg



Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2462 Band edge
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1 q 2462.000	26.28	28.92	32.74	68.53	90.99	54.00	36.99 Average	0.00
2 2483.500	26.31	28.97	32.73	23.52	46.87	54.00	-7.93 Average	0.00
3 2483.990	26.31	28.97	32.73	24.15	46.70	54.00	-7.30 Average	0.00



7.3 Radiated Spurious Emissions Below 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209
 Test Method: ANSI C63.10 (2020) Section 6.4,6.5
 Measurement Distance: 3m
 Test Engineer: Mason Wu
 Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
960-1000	500	3

Note

1: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

2. At frequencies below 1GHz, measurements may be performed at a distance different to specified in the regulations.

Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor+ Aux Factor (if applicable)

The aux factor needs to be added when measurements are performed at a distance other than the limit distance provided.

EX. Below 30MHz, Aux Factor = 40 dB/decade of distance, the aux factor is $40\log(3/300) = -80\text{dB}$ (for 3m test distance).

EX. Above 30MHz, Aux Factor = 20 dB/decade of distance, the aux factor is $20\log(10/3) = 10.46\text{dB}$ (for 10m test distance).

7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 23.3 °C

Humidity: 45.6 % RH

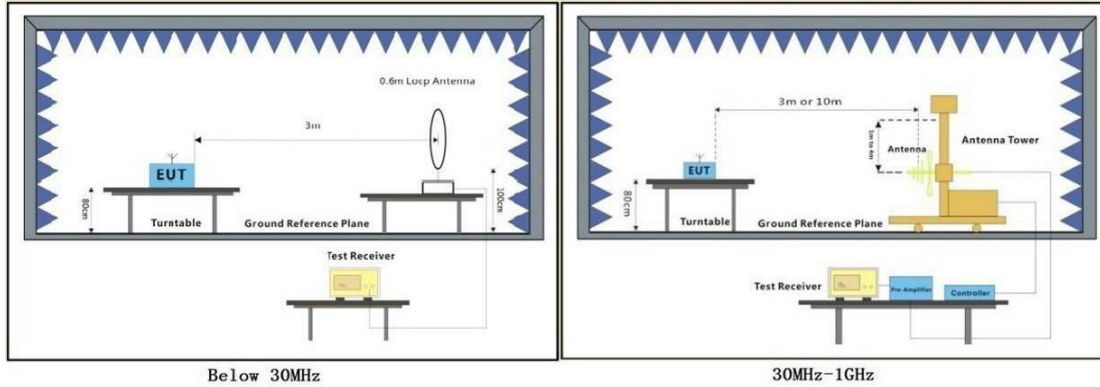
Atmospheric Pressure: 1015 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.



7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8m above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3m or 10m away from the interference-receiving antenna, which was mounted on the variable-height antenna tower.
- The antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m (for the test frequency of below 30MHz, the antenna was tuned to heights 1m) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.
- Test the EUT in the lowest channel, the middle channel, the Highest channel.
- The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- Repeat above procedures until all frequencies measured was complete.

Remark:

- At frequencies below 1GHz, measurements may be performed at a distance different to specified in the regulations.

Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor+ Aux Factor (if applicable)

The aux factor needs to be added when measurements are performed at a distance other than the limit distance provided.

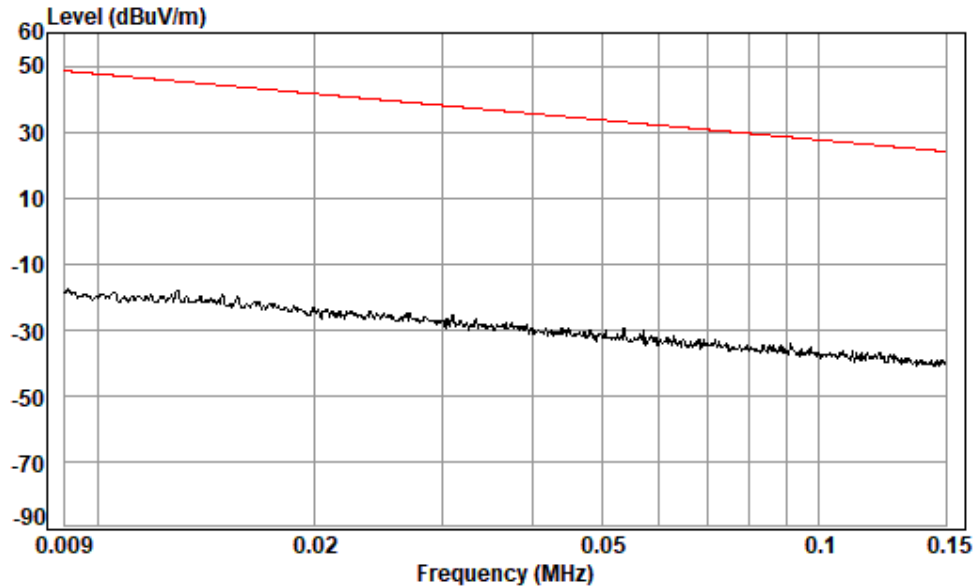
EX. Below 30MHz, Aux Factor = 40 dB/decade of distance, the aux factor is $40\log(3/300) = -80\text{dB}$ (for 3m test distance).

EX. Above 30MHz, Aux Factor = 20 dB/decade of distance, the aux factor is $20\log(10/3) = 10.46\text{dB}$ (for 10m test distance).

- Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

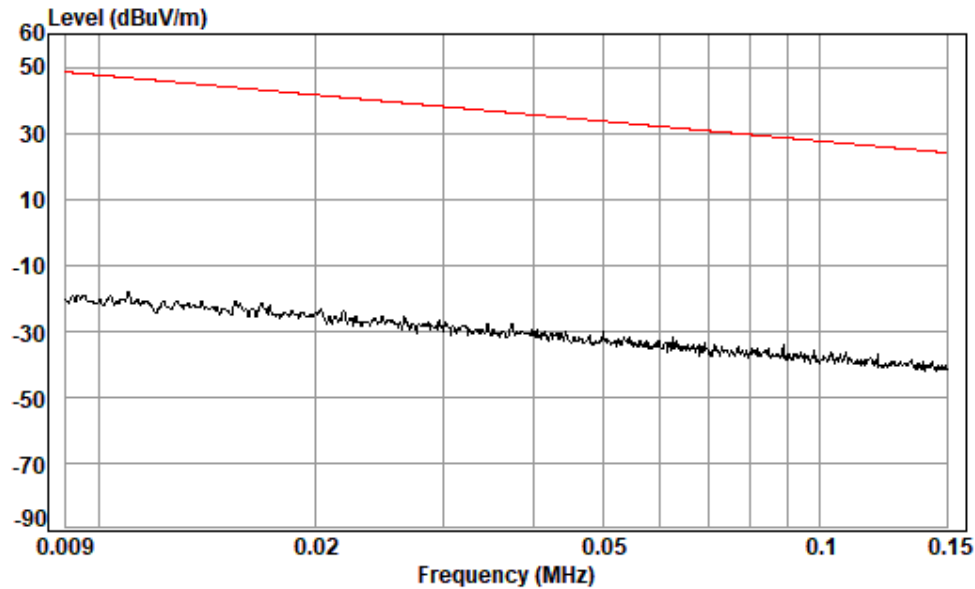
- The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the worst-case test curve is displayed.





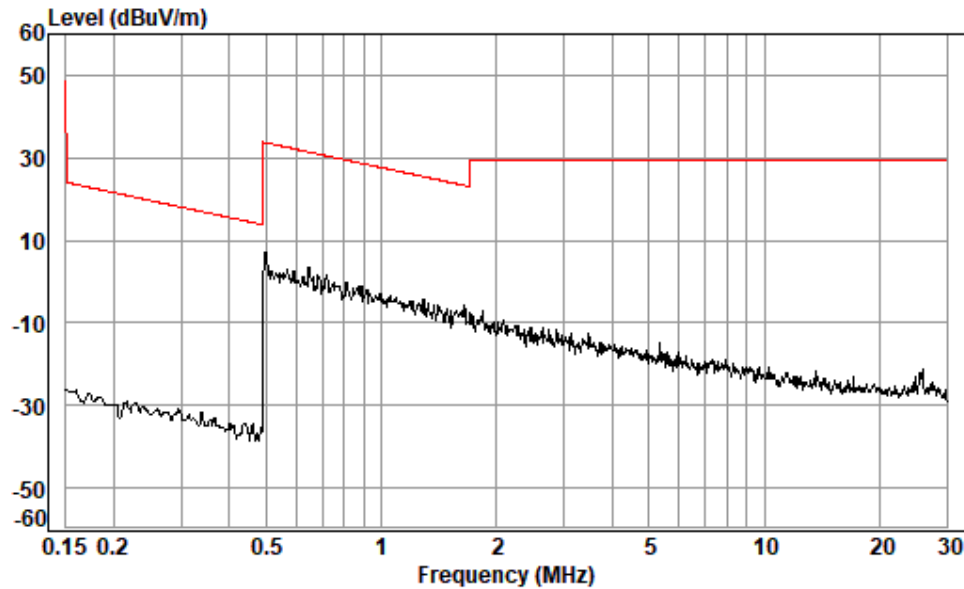
Condition: 3m
 Job No. : 01709AT
 Test Mode: 04
 : coaxial





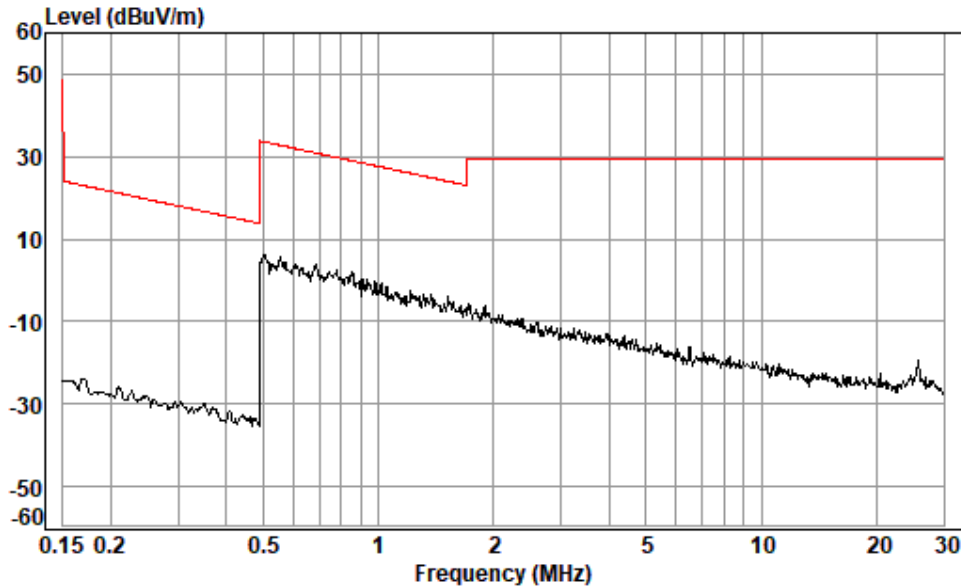
Condition: 3m
 Job No. : 01709AT
 Test Mode: 04
 : coplanar





Condition: 3m
Job No. : 01709AT
Test Mode: 04
: coaxial

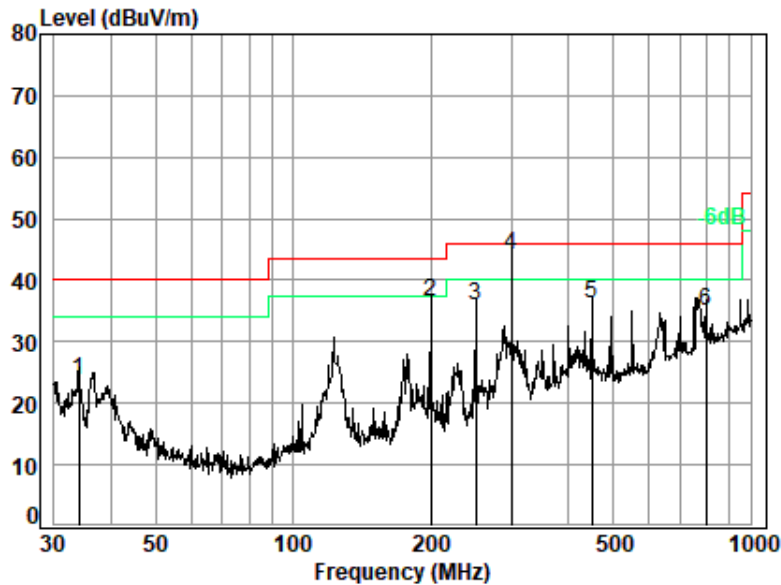




Condition: 3m
 Job No. : 01709AT
 Test Mode: 04
 : coplanar



Test Mode: 04; Polarity: Horizontal



Condition: 3m HORIZONTAL

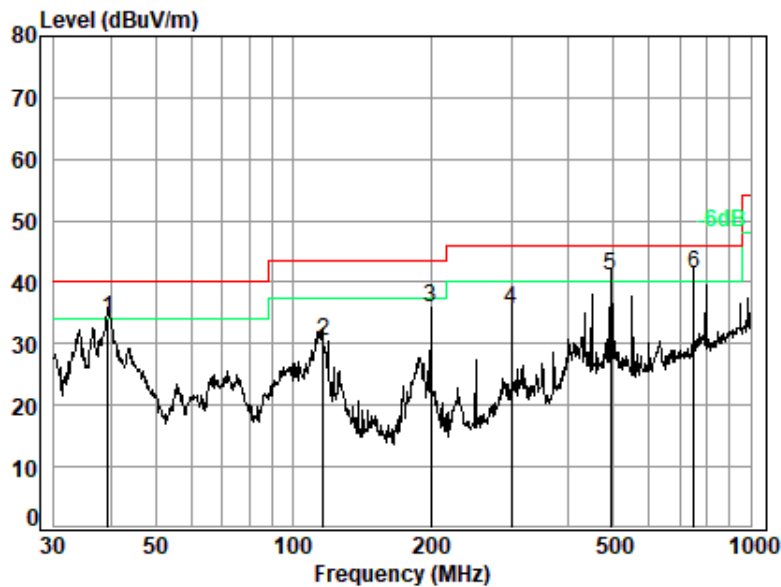
Job No. : 01709AT/01711AT

Test Mode: 04

	Ant	Cable	Preamp	Read		Limit	Over	
	Freq	Factor	Loss	Factor	Level	Level	Line	Limit
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB
1	34.037	19.22	0.78	27.65	31.41	23.76	40.00	-16.24 QP
2	199.986	14.27	1.70	27.80	48.35	36.52	43.50	-6.98 QP
3	250.301	17.25	1.93	27.63	44.27	35.82	46.00	-10.18 QP
4 q	300.367	17.78	2.11	27.50	51.84	44.23	46.00	-1.77 QP
5	449.556	21.01	2.66	27.85	40.37	36.19	46.00	-9.81 QP
6	798.980	27.24	3.69	27.60	31.51	34.84	46.00	-11.16 QP



Test Mode: 04; Polarity: Vertical



Condition: 3m VERTICAL

Job No. : 01709AT/01711AT

Test Mode: 04

	Ant	Cable	Preamp	Read		Limit	Over	
	Freq	Factor	Loss	Factor	Level	Level	Line	Limit
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB
1	39.299	16.51	0.82	27.64	44.30	33.99	40.00	-6.01 QP
2	116.132	11.77	1.32	27.64	45.02	30.47	43.50	-13.03 QP
3	199.986	14.27	1.70	27.80	47.86	36.03	43.50	-7.47 QP
4	300.367	17.78	2.11	27.50	43.15	35.54	46.00	-10.46 QP
5	494.199	22.42	2.79	27.93	43.86	41.14	46.00	-4.86 QP
6 q	750.108	26.44	3.55	27.71	39.06	41.34	46.00	-4.66 QP



7.4 Radiated Spurious Emissions Above 1GHz

Test Requirement: 47 CFR Part 15, Subpart C 15.205 & 15.209
 Test Method: ANSI C63.10 (2020) Section 6.6 & 11.12
 Measurement Distance: 3m
 Test Engineer: Logic Wang
 Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
Above 1000	500	3

Note:

At Above 18GHz, measurements may be performed at a distance shorter than that specified in the regulations

Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor+ Aux Factor (if applicable)

The aux factor needs to be added when measurements are performed at a distance other than the limit distance provided.

EX. Above 18GHz, Aux Factor = 20 dB/decade of distance, the aux factor is $20\log(1/3) = -9.54\text{dB}$ (for 1m test distance).

7.4.1 E.U.T. Operation

Operating Environment:

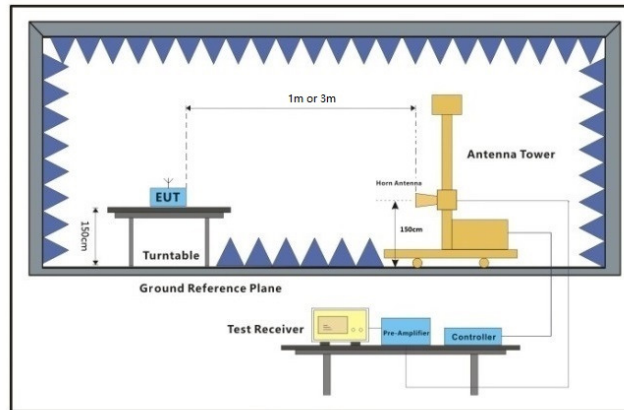
Temperature: 23.5 °C Humidity: 56.3 % RH Atmospheric Pressure: 1015 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.



7.4.3 Test Setup Diagram



Above 1GHz



7.4.4 Measurement Procedure and Data

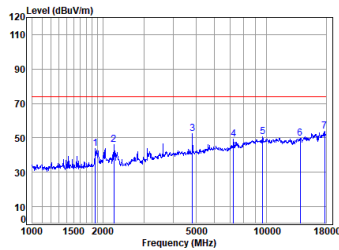
- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5m above the ground at a 3m fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3m away from the interference-receiving antenna from 1GHz to 18GHz, and 1m away from the interference-receiving antenna above 18GHz.
- b. The interference-receiving antenna was mounted on the variable-height antenna tower, with its boresight facing the EUT throughout the test.
- c. The antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- g. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- h. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Scan from 1GHz to 10th harmonic of the highest frequency or 40 GHz, whichever is lower.
2. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.
3. For the frequency above 18GHz, testing had been executed under all test modes, only the worst-case test curve is displayed in the report.
4. For devices with multiple operating modes, measurements on the middle channel is used to determine the worst-case mode(s).



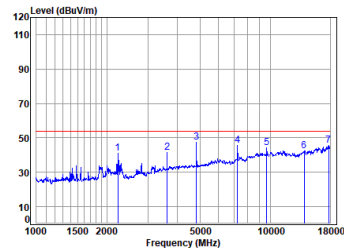
11b_TX_CH_01_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2412 TX RSE
Cable : 2.4G WIFI 11B

Freq	Loss	Cable	Ant	Pream	Read	Limit	Over	Aux
MHz	dB	dB/m	dB	dB	dBuV	dBuV/m	dB	dB
1	1861.588	5.01	27.02	54.87	66.81	43.97	74.00	-30.03 Peak
2	2226.950	5.20	28.27	54.93	67.43	45.97	74.00	-28.03 Peak
3	4824.000	7.43	33.90	54.22	65.33	52.44	74.00	-21.56 Peak
4	7236.000	8.49	35.97	53.18	57.99	49.27	74.00	-24.73 Peak
5	9648.000	10.72	37.80	53.34	55.53	50.71	74.00	-23.29 Peak
6	13957.530	10.97	39.42	52.91	52.18	49.58	74.00	-24.42 Peak
7	17741.740	11.35	43.81	52.53	51.28	53.91	74.00	-20.09 Peak

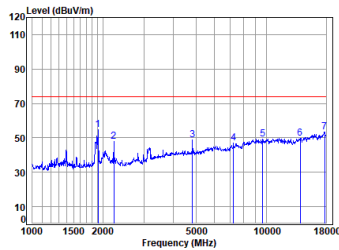
11b_TX_CH_01_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2412 TX RSE
Cable : 2.4G WIFI 11B

Freq	Loss	Cable	Ant	Pream	Read	Limit	Over	Aux
MHz	dB	dB/m	dB	dB	dBuV	dBuV/m	dB	dB
1	2226.950	5.20	28.27	54.93	62.55	41.09	54.00	-12.91 Average
2	3619.064	6.37	32.10	54.54	57.70	41.63	54.00	-12.37 Average
3	4824.000	7.43	33.90	54.22	60.34	47.45	54.00	-6.55 Average
4	7236.000	8.49	35.97	53.18	54.20	45.48	54.00	-8.52 Average
5	9648.000	10.72	37.80	53.34	49.09	44.27	54.00	-9.73 Average
6	13957.530	10.97	39.42	52.91	44.73	42.21	54.00	-11.79 Average
7	17741.740	11.35	43.81	52.53	43.00	45.63	54.00	-8.37 Average

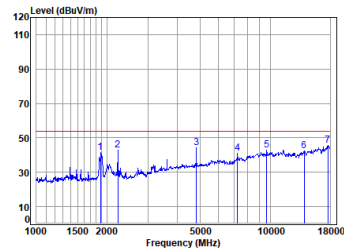
11b_TX_CH_01_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2412 TX RSE
Cable : 2.4G WIFI 11B

Freq	Loss	Cable	Ant	Pream	Read	Limit	Over	Aux
MHz	dB	dB/m	dB	dB	dBuV	dBuV/m	dB	dB
1	1918.650	5.01	27.49	54.88	77.30	54.92	74.00	-19.08 Peak
2	2226.950	5.20	28.27	54.93	69.14	47.68	74.00	-26.32 Peak
3	4824.000	7.43	33.90	54.22	61.76	48.87	74.00	-25.13 Peak
4	7236.000	8.49	35.97	53.18	55.85	47.13	74.00	-26.87 Peak
5	9648.000	10.72	37.80	53.34	53.94	49.12	74.00	-24.88 Peak
6	13957.530	10.97	39.42	52.91	52.24	49.72	74.00	-24.28 Peak
7	17741.740	11.35	43.81	52.53	50.86	53.49	74.00	-20.51 Peak

11b_TX_CH_01_Vertical-Avg

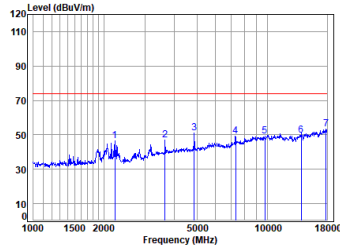


Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2412 TX RSE
Cable : 2.4G WIFI 11B

Freq	Loss	Cable	Ant	Pream	Read	Limit	Over	Aux
MHz	dB	dB/m	dB	dB	dBuV	dBuV/m	dB	dB
1	1883.236	5.01	27.23	54.87	63.93	41.30	54.00	-12.70 Average
2	2226.950	5.20	28.27	54.93	64.33	42.87	54.00	-11.13 Average
3	4824.000	7.43	33.90	54.22	57.25	44.36	54.00	-9.64 Average
4	7236.000	8.49	35.97	53.18	49.64	40.92	54.00	-13.08 Average
5	9648.000	10.72	37.80	53.34	47.06	43.04	54.00	-10.96 Average
6	13957.530	10.97	39.42	52.91	44.85	42.33	54.00	-11.67 Average
7	17739.470	11.28	43.56	52.58	43.29	45.55	54.00	-8.45 Average



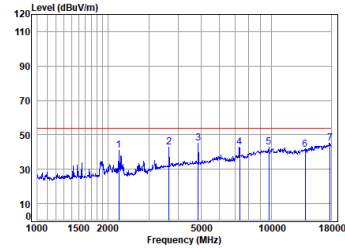
11b_TX_CH_06_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2437 TX RSE
: 2.4G WIFI 11B

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	Line	Limit	Factor
dB	dB/m	dB	dB	dBuV	dBuV/m	dB	dB	dB
1 2226.950	5.20	28.27	54.93	67.86	46.40	74.00	-27.60 Peak	0.00
2 3650.582	6.41	32.11	54.52	62.84	46.84	74.00	-27.16 Peak	0.00
3 4874.000	7.47	34.10	54.21	63.71	51.07	74.00	-22.93 Peak	0.00
4 7311.000	8.47	36.19	53.17	57.75	49.24	74.00	-24.76 Peak	0.00
5 9740.000	10.69	37.51	53.30	54.16	49.06	74.00	-24.94 Peak	0.00
6 13957.530	10.97	39.42	52.91	52.11	49.59	74.00	-24.41 Peak	0.00
7 17844.590	11.41	43.49	52.48	50.94	53.36	74.00	-20.64 Peak	0.00

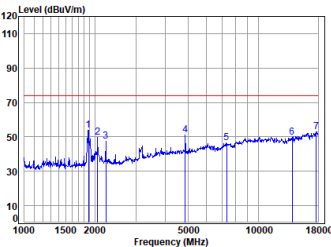
11b_TX_CH_06_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2437 TX RSE
: 2.4G WIFI 11B

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	Line	Limit	Factor
dB	dB/m	dB	dB	dBuV	dBuV/m	dB	dB	dB
1 2226.950	5.20	28.27	54.93	62.75	41.29	54.00	-12.71 Average	0.00
2 3650.582	6.41	32.11	54.52	59.05	43.05	54.00	-10.95 Average	0.00
3 4874.000	7.47	34.10	54.21	57.83	45.19	54.00	-8.81 Average	0.00
4 7311.000	8.47	36.19	53.17	51.38	42.87	54.00	-11.13 Average	0.00
5 9740.000	10.69	37.51	53.30	48.20	43.10	54.00	-10.90 Average	0.00
6 13957.530	10.97	39.42	52.91	44.21	41.69	54.00	-12.31 Average	0.00
7 17793.090	11.38	43.45	52.50	42.94	45.27	54.00	-8.73 Average	0.00

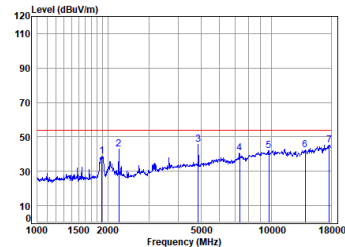
11b_TX_CH_06_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2437 TX RSE
: 2.4G WIFI 11B

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	Line	Limit	Factor
dB	dB/m	dB	dB	dBuV	dBuV/m	dB	dB	dB
1 1877.800	5.01	27.18	54.87	76.59	53.91	74.00	-20.09 Peak	0.00
2 2853.822	5.06	28.17	54.91	71.50	49.82	74.00	-24.18 Peak	0.00
3 2226.950	5.20	28.27	54.93	68.86	47.40	74.00	-26.60 Peak	0.00
4 4874.000	7.47	34.10	54.21	63.71	51.07	74.00	-22.93 Peak	0.00
5 7311.000	8.47	36.19	53.17	55.16	46.65	74.00	-27.35 Peak	0.00
6 13957.530	10.97	39.42	52.91	52.32	49.80	74.00	-24.20 Peak	0.00
7 17690.530	11.32	44.01	52.55	50.25	53.03	74.00	-20.97 Peak	0.00

11b_TX_CH_06_Vertical-Avg

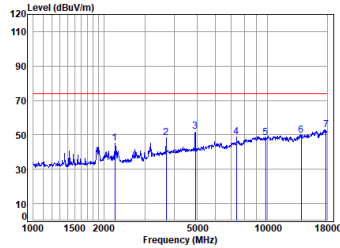


Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2437 TX RSE
: 2.4G WIFI 11B

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	Line	Limit	Factor
dB	dB/m	dB	dB	dBuV	dBuV/m	dB	dB	dB
1 1888.687	5.01	27.29	54.88	61.36	38.78	54.00	-15.22 Average	0.00
2 2226.950	5.20	28.27	54.93	64.39	42.93	54.00	-11.07 Average	0.00
3 4874.000	7.47	34.10	54.21	58.12	45.48	54.00	-8.52 Average	0.00
4 7311.000	8.47	36.19	53.17	49.22	40.71	54.00	-13.29 Average	0.00
5 9740.000	10.69	37.51	53.30	47.23	42.13	54.00	-11.87 Average	0.00
6 13957.530	10.97	39.42	52.91	44.74	42.22	54.00	-11.78 Average	0.00
7 17690.530	11.32	44.01	52.55	42.49	45.27	54.00	-8.73 Average	0.00



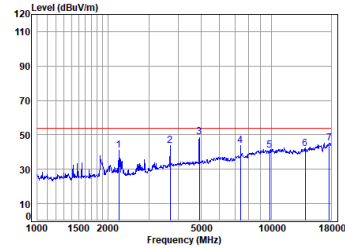
11b_TX_CH_11_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2462 TX RSE
: 2.4G WIFI 11B

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Line	Over Limit	Aux Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1	2226.950	5.20	28.27	54.93	66.55	45.09	74.00	-28.91 Peak	0.00
2	3693.033	6.48	32.53	54.49	63.95	48.47	74.00	-25.53 Peak	0.00
3	4924.000	7.50	34.06	54.21	64.62	51.97	74.00	-22.03 Peak	0.00
4	7386.000	8.44	36.16	53.16	57.25	48.69	74.00	-25.31 Peak	0.00
5	9848.000	10.66	37.51	53.26	53.29	48.20	74.00	-25.80 Peak	0.00
6	13957.530	10.97	39.42	52.91	52.25	49.73	74.00	-24.27 Peak	0.00
7	17793.090	11.38	43.45	52.50	50.66	52.99	74.00	-21.01 Peak	0.00

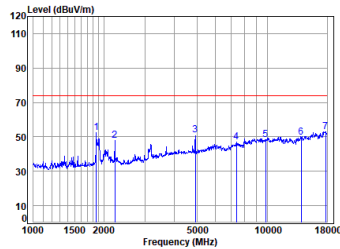
11b_TX_CH_11_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2462 TX RSE
: 2.4G WIFI 11B

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Line	Over Limit	Aux Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1	2226.950	5.20	28.27	54.93	62.33	40.87	54.00	-13.13 Average	0.00
2	3693.033	6.48	32.53	54.49	59.14	43.66	54.00	-10.34 Average	0.00
3	4924.000	7.50	34.06	54.21	61.28	48.63	54.00	-5.37 Average	0.00
4	7386.000	8.44	36.16	53.16	52.57	44.81	54.00	-9.99 Average	0.00
5	9848.000	10.66	37.51	53.26	45.93	40.84	54.00	-13.16 Average	0.00
6	13957.530	10.97	39.42	52.91	44.35	41.83	54.00	-12.17 Average	0.00
7	17690.530	11.32	44.01	52.55	42.59	45.37	54.00	-8.63 Average	0.00

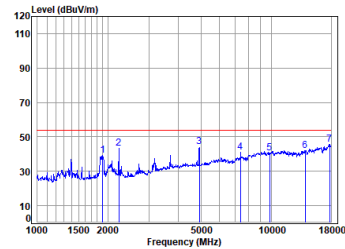
11b_TX_CH_11_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2462 TX RSE
: 2.4G WIFI 11B

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit	Over Limit	Aux Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1	1861.588	5.01	27.02	54.87	75.21	52.37	74.00	-21.63 Peak	0.00
2	2226.950	5.20	28.27	54.93	69.46	48.00	74.00	-26.00 Peak	0.00
3	4924.000	7.50	34.06	54.21	63.86	51.21	74.00	-22.79 Peak	0.00
4	7386.000	8.44	36.16	53.16	55.34	46.78	74.00	-27.22 Peak	0.00
5	9848.000	10.66	37.51	53.26	53.39	48.30	74.00	-25.70 Peak	0.00
6	13957.530	10.97	39.42	52.91	52.35	49.83	74.00	-24.17 Peak	0.00
7	17741.740	11.35	43.81	52.53	50.36	52.99	74.00	-21.01 Peak	0.00

11b_TX_CH_11_Vertical-Avg

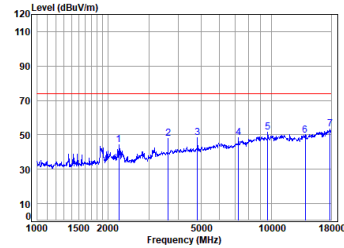


Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2462 TX RSE
: 2.4G WIFI 11B

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Limit	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	dB
1	1905.135	5.01	27.44	54.88	61.63	39.20	54.00	-14.80 Average 0.00
2	2226.950	5.20	28.27	54.93	64.58	43.12	54.00	-10.88 Average 0.00
3	4924.000	7.50	34.06	54.21	57.02	44.37	54.00	-9.63 Average 0.00
4	7386.000	8.44	36.16	53.16	49.65	41.09	54.00	-12.91 Average 0.00
5	9848.000	10.66	37.51	53.26	45.59	40.50	54.00	-13.50 Average 0.00
6	13957.530	10.97	39.42	52.91	44.35	41.83	54.00	-12.17 Average 0.00
7	17741.740	11.35	43.81	52.53	42.82	45.45	54.00	-8.55 Average 0.00



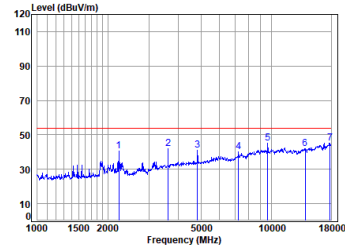
11n_HT(20M)_TX_CH_01_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2412 TX RSE
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB	dB	dB
1 2226.950	5.20	28.27	54.93	65.94	44.48	74.00	-29.52 Peak	0.00
2 3619.064	6.37	32.10	54.54	63.80	47.73	74.00	-26.27 Peak	0.00
3 4824.000	7.43	33.90	54.22	61.04	48.15	74.00	-25.85 Peak	0.00
4 7236.000	8.49	35.97	53.18	56.96	48.24	74.00	-25.76 Peak	0.00
5 9648.000	10.72	37.80	53.34	56.54	51.72	74.00	-22.28 Peak	0.00
6 13957.530	10.97	39.42	52.91	52.14	49.62	74.00	-24.38 Peak	0.00
7 p17793.090	11.38	43.45	52.50	50.95	53.28	74.00	-20.72 Peak	0.00

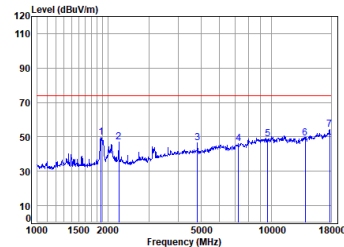
11n_HT(20M)_TX_CH_01_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2412 TX RSE
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB	dB	dB
1 2226.950	5.20	28.27	54.93	61.84	48.38	54.00	-13.62 Average	0.00
2 3619.064	6.37	32.10	54.54	58.11	42.04	54.00	-11.96 Average	0.00
3 4824.000	7.43	33.90	54.22	53.80	40.91	54.00	-13.09 Average	0.00
4 7236.000	8.49	35.97	53.18	48.81	40.89	54.00	-13.91 Average	0.00
5 9648.000	10.72	37.80	53.34	50.02	45.20	54.00	-8.80 Average	0.00
6 13957.530	10.97	39.42	52.91	44.44	41.92	54.00	-12.08 Average	0.00
7 17844.590	11.41	43.49	52.48	42.70	45.12	54.00	-8.88 Average	0.00

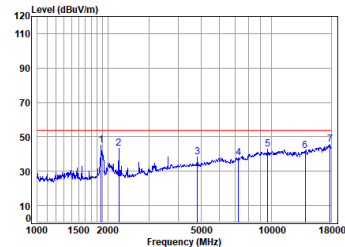
11n_HT(20M)_TX_CH_01_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2412 TX RSE
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB	dB	dB
1 1872.381	5.01	27.13	54.87	72.26	49.53	74.00	-24.47 Peak	0.00
2 2226.950	5.20	28.27	54.93	68.63	47.17	74.00	-26.83 Peak	0.00
3 4824.000	7.43	33.90	54.22	59.41	46.52	74.00	-27.48 Peak	0.00
4 7236.000	8.49	35.97	53.18	54.76	46.04	74.00	-27.96 Peak	0.00
5 9648.000	10.72	37.80	53.34	53.50	48.76	74.00	-25.24 Peak	0.00
6 13957.530	10.97	39.42	52.91	52.01	49.49	74.00	-24.51 Peak	0.00
7 p17741.740	11.35	43.81	52.53	51.53	54.16	74.00	-19.84 Peak	0.00

11n_HT(20M)_TX_CH_01_Vertical-Avg

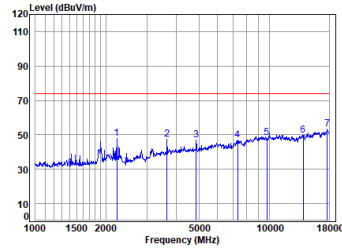


Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2412 TX RSE
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB	dB	dB
1 1872.381	5.01	27.13	54.87	67.73	45.00	54.00	-9.00 Average	0.00
2 2226.950	5.20	28.27	54.93	64.05	43.39	54.00	-10.61 Average	0.00
3 4824.000	7.43	33.90	54.22	51.27	38.38	54.00	-15.62 Average	0.00
4 7236.000	8.49	35.97	53.18	46.72	38.00	54.00	-16.00 Average	0.00
5 9648.000	10.72	37.80	53.34	47.57	42.75	54.00	-11.25 Average	0.00
6 13957.530	10.97	39.42	52.91	44.40	41.88	54.00	-12.12 Average	0.00
7 q17793.090	11.38	43.45	52.50	43.32	45.65	54.00	-8.35 Average	0.00



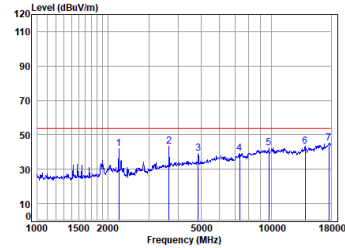
11n_HT(20M)_TX_CH_06_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT01711AT
Mode : 2437 TX RSE
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB	dB	dB
1	2226.950	5.20	28.27	54.93	69.23	47.77	74.00	-26.23 Peak
2	3650.582	6.41	32.11	54.52	63.34	47.34	74.00	-26.66 Peak
3	4874.000	7.47	34.10	54.21	59.78	47.14	74.00	-26.86 Peak
4	7311.000	8.47	36.19	53.17	55.68	47.17	74.00	-26.83 Peak
5	9740.000	10.69	37.51	53.30	53.68	46.58	74.00	-25.42 Peak
6	13957.530	10.97	39.42	52.91	52.10	49.58	74.00	-24.42 Peak
7	17690.530	11.32	44.01	52.55	50.60	53.38	74.00	-20.62 Peak

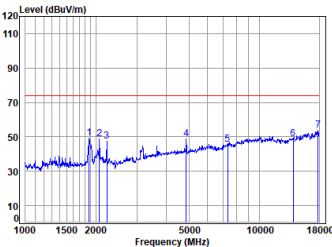
11n_HT(20M)_TX_CH_06_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT01711AT
Mode : 2437 TX RSE
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB	dB	dB
1	2226.950	5.20	28.27	54.93	63.48	42.02	54.00	-11.98 Average
2	3650.582	6.41	32.11	54.52	59.19	43.19	54.00	-10.81 Average
3	4874.000	7.47	34.10	54.21	51.97	39.33	54.00	-14.67 Average
4	7311.000	8.47	36.19	53.17	47.88	39.37	54.00	-14.63 Average
5	9740.000	10.69	37.51	53.30	47.73	42.63	54.00	-11.37 Average
6	13957.530	10.97	39.42	52.91	46.04	43.52	54.00	-10.48 Average
7	17690.530	11.32	44.01	52.55	42.98	45.24	54.00	-8.76 Average

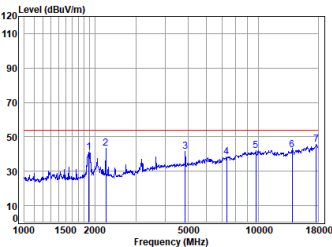
11n_HT(20M)_TX_CH_06_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT01711AT
Mode : 2437 TX RSE
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB	dB	dB
1	1872.381	5.01	27.13	54.87	72.05	49.32	74.00	-24.68 Peak
2	2871.700	5.07	28.03	54.91	70.42	48.61	74.00	-25.39 Peak
3	2226.950	5.20	28.27	54.93	68.72	47.26	74.00	-26.74 Peak
4	4874.000	7.47	34.10	54.21	61.57	48.93	74.00	-25.07 Peak
5	7311.000	8.47	36.19	53.17	54.30	45.79	74.00	-28.21 Peak
6	13957.530	10.97	39.42	52.91	51.55	49.03	74.00	-24.97 Peak
7	17690.530	11.32	44.01	52.55	51.46	53.88	74.00	-20.12 Peak

11n_HT(20M)_TX_CH_06_Vertical-Avg

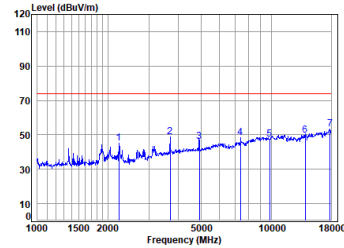


Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT01711AT
Mode : 2437 TX RSE
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB	dB	dB
1	1888.687	5.01	27.29	54.88	63.51	40.93	54.00	-13.07 Average
2	2226.950	5.20	28.27	54.93	64.87	43.41	54.00	-10.59 Average
3	4874.000	7.47	34.10	54.21	54.08	41.44	54.00	-12.56 Average
4	7311.000	8.47	36.19	53.17	46.85	38.34	54.00	-15.66 Average
5	9740.000	10.69	37.51	53.30	47.07	41.97	54.00	-12.03 Average
6	13957.530	10.97	39.42	52.91	44.77	42.25	54.00	-11.75 Average
7	17690.530	11.32	44.01	52.55	42.90	45.68	54.00	-8.32 Average



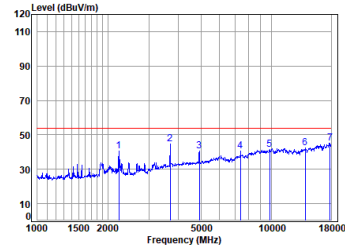
11n_HT(20M)_TX_CH_11_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2462 TX RSE
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
dB	dB/m	dB	dB	dB	dBuV	dBuV/m	dB	dB
1	2226.950	5.20	28.27	54.93	66.51	45.05	74.00	-28.95 Peak
2	3693.033	6.48	32.53	54.49	64.28	48.00	74.00	-25.20 Peak
3	4924.000	7.50	34.06	54.21	58.66	46.01	74.00	-27.99 Peak
4	7386.000	8.44	36.16	53.16	57.07	48.51	74.00	-25.49 Peak
5	9848.000	10.66	37.51	53.26	52.65	47.56	74.00	-26.44 Peak
6	13957.530	10.97	39.42	52.91	52.20	49.68	74.00	-24.32 Peak
7	17844.590	11.41	43.49	52.48	50.93	53.35	74.00	-20.65 Peak

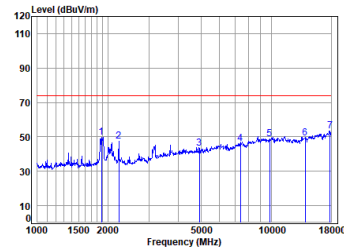
11n_HT(20M)_TX_CH_11_Horizontal-Avg



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT\01711AT
Mode : 2462 TX RSE
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
dB	dB/m	dB	dB	dB	dBuV	dBuV/m	dB	dB
1	2226.950	5.20	28.27	54.93	61.98	40.52	54.00	-13.48 Average
2	3693.033	6.48	32.53	54.49	60.12	44.64	54.00	-9.36 Average
3	4924.000	7.50	34.06	54.21	53.46	40.81	54.00	-13.19 Average
4	7386.000	8.44	36.16	53.16	49.06	40.50	54.00	-13.50 Average
5	9848.000	10.66	37.51	53.26	46.52	41.43	54.00	-12.57 Average
6	13957.530	10.97	39.42	52.91	45.05	42.53	54.00	-11.47 Average
7	17793.090	11.38	43.45	52.50	42.95	45.28	54.00	-8.72 Average

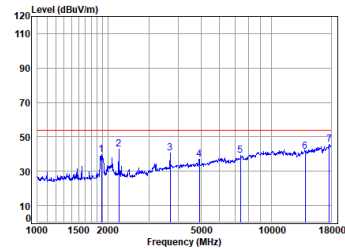
11n_HT(20M)_TX_CH_11_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2462 TX RSE
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
dB	dB/m	dB	dB	dB	dBuV	dBuV/m	dB	dB
1	1877.800	5.01	27.18	54.87	72.51	49.83	74.00	-24.17 Peak
2	2226.950	5.20	28.27	54.93	68.08	47.42	74.00	-26.58 Peak
3	4924.000	7.50	34.06	54.21	55.85	43.20	74.00	-30.80 Peak
4	7386.000	8.44	36.16	53.16	54.00	46.24	74.00	-27.76 Peak
5	9848.000	10.66	37.51	53.26	53.89	48.00	74.00	-25.20 Peak
6	13957.530	10.97	39.42	52.91	52.01	49.49	74.00	-24.51 Peak
7	17793.090	11.38	43.45	52.50	51.24	53.57	74.00	-20.43 Peak

11n_HT(20M)_TX_CH_11_Vertical-Avg

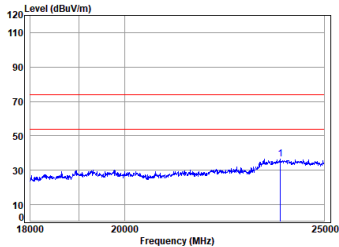


Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT\01711AT
Mode : 2462 TX RSE
: 2.4G WIFI 11N20

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	dBuV	dBuV/m	Limit	Factor
dB	dB/m	dB	dB	dB	dBuV	dBuV/m	dB	dB
1	1883.236	5.01	27.23	54.87	62.29	39.66	54.00	-14.34 Average
2	2226.950	5.20	28.27	54.93	64.48	43.82	54.00	-10.98 Average
3	3693.033	6.48	32.53	54.49	56.17	48.69	54.00	-13.31 Average
4	4924.000	7.50	34.06	54.21	49.46	36.81	54.00	-17.19 Average
5	7386.000	8.44	36.16	53.16	47.77	39.21	54.00	-14.79 Average
6	13957.530	10.97	39.42	52.91	44.26	41.74	54.00	-12.26 Average
7	17690.530	11.32	44.01	52.55	42.67	45.45	54.00	-8.55 Average



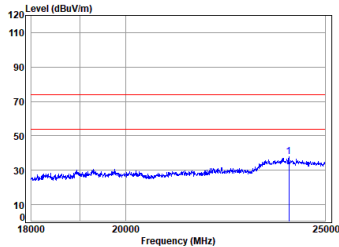
11b_TX_CH_06_Horizontal-Peak



Site : chamber
Condition: 3m HORIZONTAL
Job No : 01709AT01711AT
Mode : 2437 TX RSE
Cable : 2.4G WIFI 11B

Freq	Loss Factor	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 p23813.610	6.77	38.93	50.36	50.91	36.71	74.00	-37.29	Peak	-9.54

11b_TX_CH_06_Vertical-Peak



Site : chamber
Condition: 3m VERTICAL
Job No : 01709AT01711AT
Mode : 2437 TX RSE
Cable : 2.4G WIFI 11B

Freq	Loss Factor	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 p24009.990	6.78	39.00	50.42	52.01	37.83	74.00	-36.17	Peak	-9.54



7.5 Maximum Conducted Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.247(b)(3)
 Test Method: ANSI C63.10 (2020) Section 11.9.2
 Test Engineer: Mingli Hu
 Limit:

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for ≥ 50 hopping channels
	0.25 for $25 \leq$ hopping channels < 50
	1 for digital modulation
2400-2483.5	1 for ≥ 75 non-overlapping hopping channels
	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

7.5.1 E.U.T. Operation

Operating Environment:

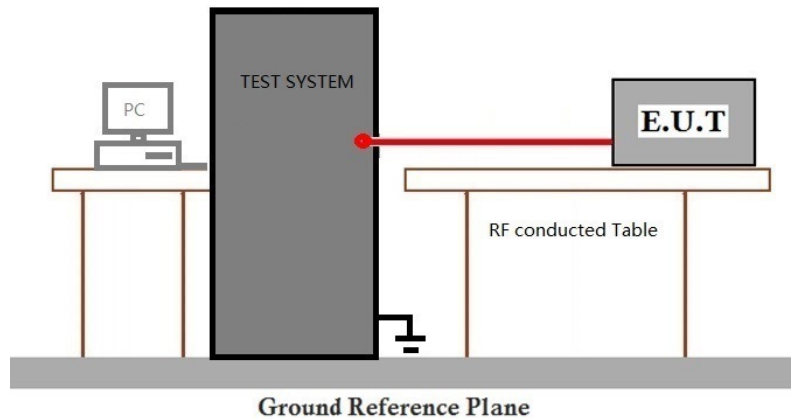
Temperature: 26.1 °C Humidity: 43.8 % RH Atmospheric Pressure: 1015 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.



7.5.3 Test Setup Diagram



7.5.4 Measurement Procedure and Data

Note: Since the verify power the same operating range bandwidth and smaller power can be covered by the higher power.

Please Refer to Appendix for Details



7.6 Minimum 6dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.247a(2)
 Test Method: ANSI C63.10 (2020) Section 11.8.1
 Test Engineer: Mingli Hu
 Limit: ≥ 500 kHz

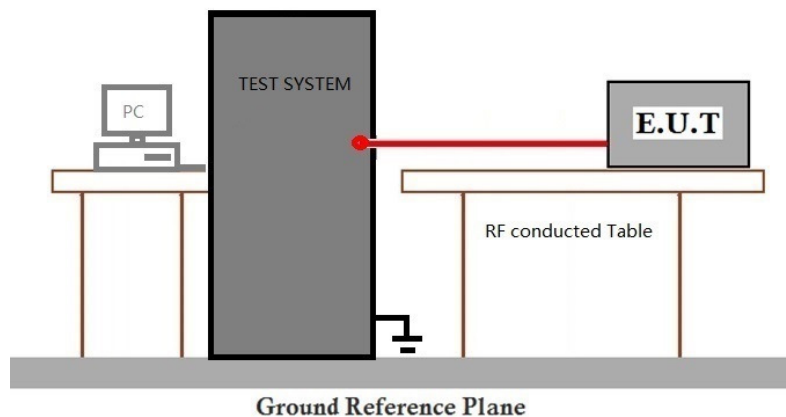
7.6.1 E.U.T. Operation

Operating Environment:
 Temperature: 26.1 °C Humidity: 43.8 % RH Atmospheric Pressure: 1015 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

7.6.3 Test Setup Diagram



7.6.4 Measurement Procedure and Data

Please Refer to Appendix for Details



7.7 Power Spectral Density

Test Requirement: 47 CFR Part 15, Subpart C 15.247(e)
 Test Method: ANSI C63.10 (2020) Section 11.10.3
 Test Engineer: Mingli Hu
 Limit: ≤8dBm in any 3 kHz band during any time interval of continuous transmission

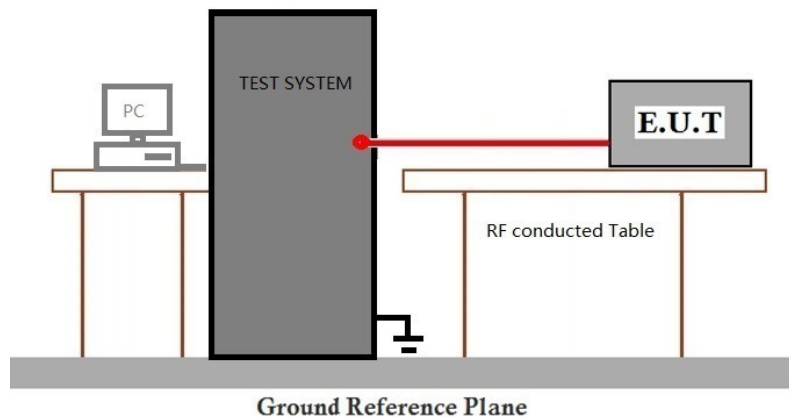
7.7.1 E.U.T. Operation

Operating Environment:
 Temperature: 26.1 °C Humidity: 43.8 % RH Atmospheric Pressure: 1015 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

7.7.3 Test Setup Diagram



7.7.4 Measurement Procedure and Data

Please Refer to Appendix for Details



7.8 Conducted Band Edges Measurement

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)
 Test Method: ANSI C63.10 (2020) Section 6.10.4
 Test Engineer: Mingli Hu
 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. 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)).

7.8.1 E.U.T. Operation

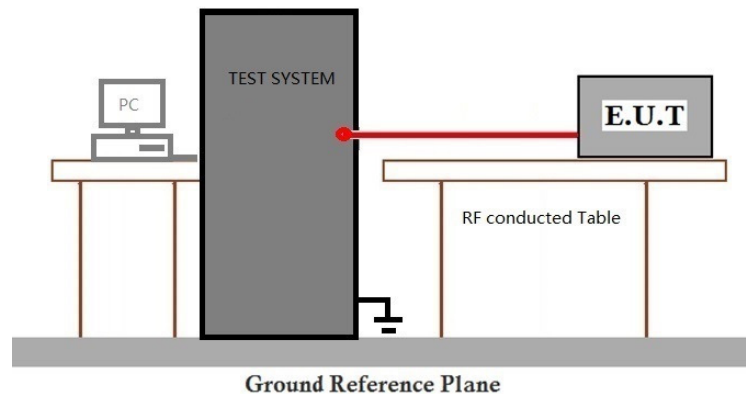
Operating Environment:

Temperature: 26.1 °C Humidity: 43.8 % RH Atmospheric Pressure: 1015 mbar

7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

7.8.3 Test Setup Diagram





SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/2

Report No.: SZCR260400170904

Page: 48 of 88

7.8.4 Measurement Procedure and Data

Please Refer to Appendix for Details



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch Calibration Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

7.9 Conducted Spurious Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)
 Test Method: ANSI C63.10 (2020) Section 11.11
 Test Engineer: Mingli Hu
 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. 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)).

7.9.1 E.U.T. Operation

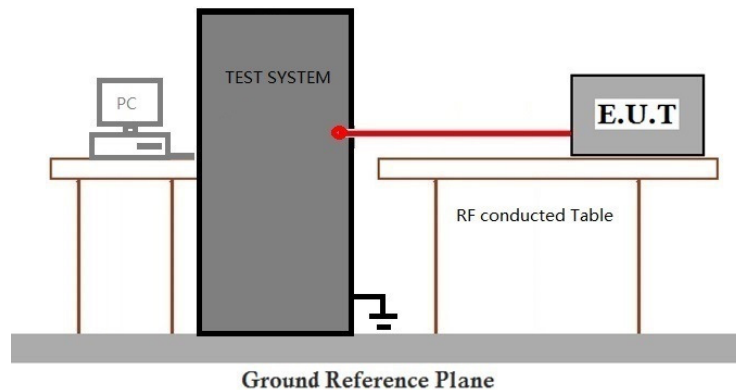
Operating Environment:

Temperature: 26.1 °C Humidity: 43.8 % RH Atmospheric Pressure: 1015 mbar

7.9.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

7.9.3 Test Setup Diagram





SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/2

Report No.: SZCR260400170904

Page: 50 of 88

7.9.4 Measurement Procedure and Data

Please Refer to Appendix for Details



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch Calibration Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

8 Test Setup Photo

Refer to Appendix – Test Setup Photos for SZCR2604001709AT

9 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for SZCR2604001709AT



10 Appendix

1. Duty Cycle

1.1 Test Result

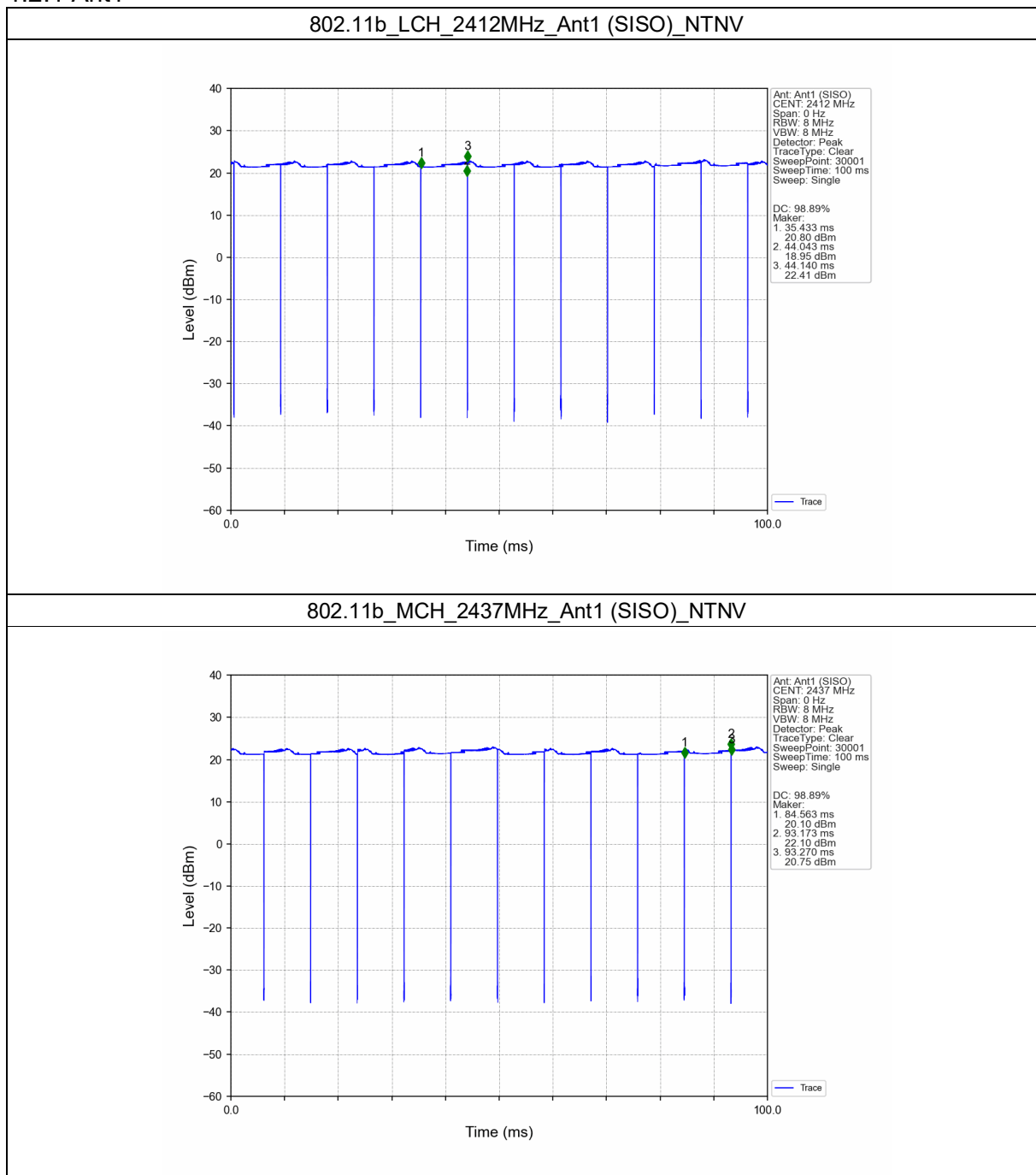
1.1.1 Ant1

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	8.610	8.707	98.89	0.05	0.04
		2437	8.610	8.707	98.89	0.05	0.04
		2462	8.610	8.707	98.89	0.05	0.04
802.11g	SISO	2412	1.428	1.530	93.33	0.30	0.03
		2437	1.429	1.530	93.40	0.30	0.00
		2462	1.428	1.530	93.33	0.30	0.03
802.11n (HT20)	SISO	2412	1.336	1.437	92.97	0.32	0.03
		2437	1.337	1.437	93.04	0.31	0.03
		2462	1.337	1.437	93.04	0.31	0.03

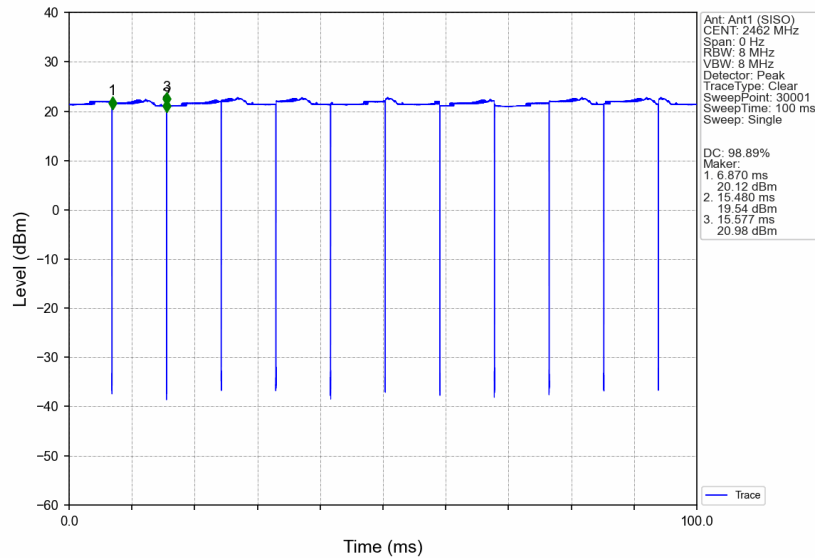


1.2 Test Graph

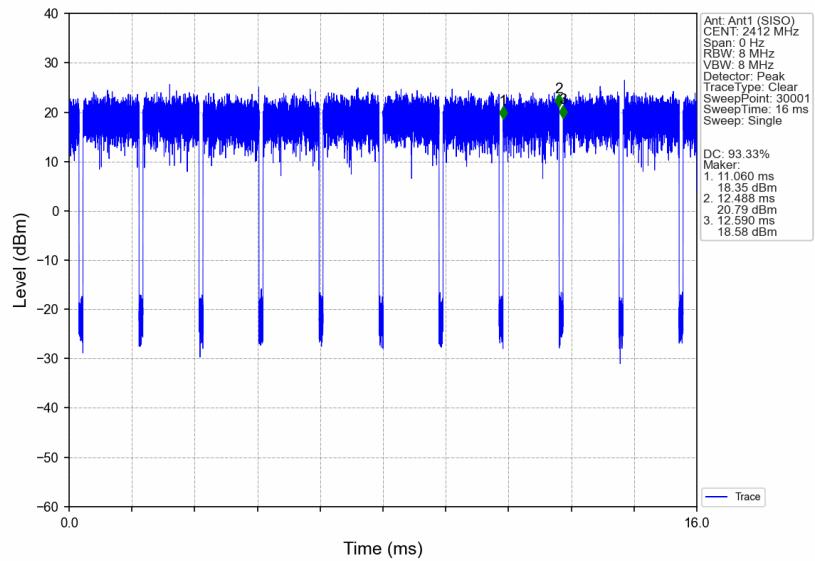
1.2.1 Ant1



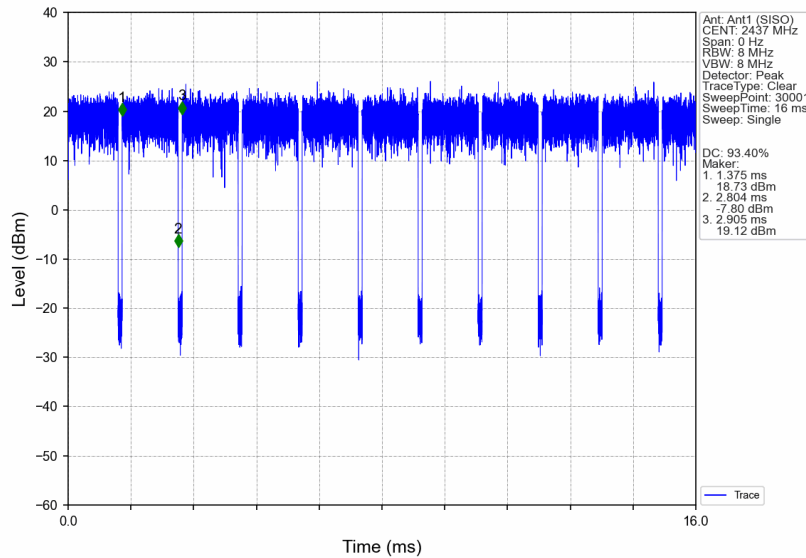
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



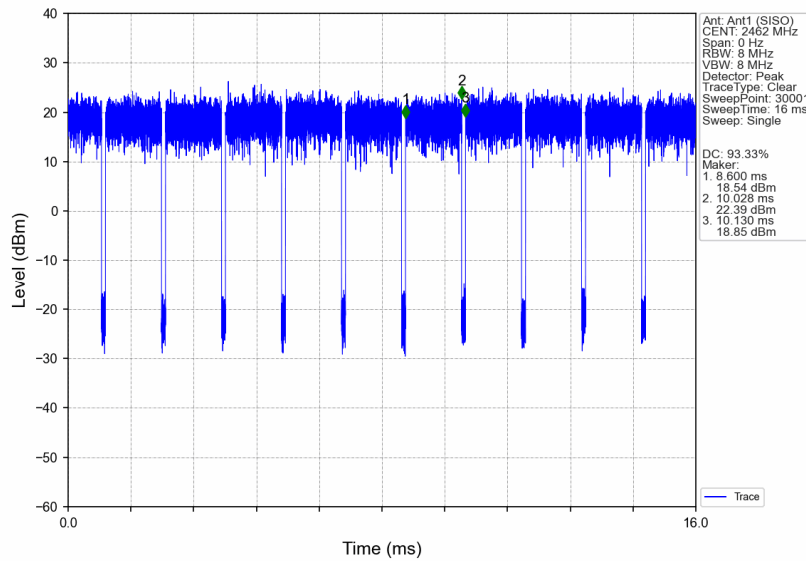
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



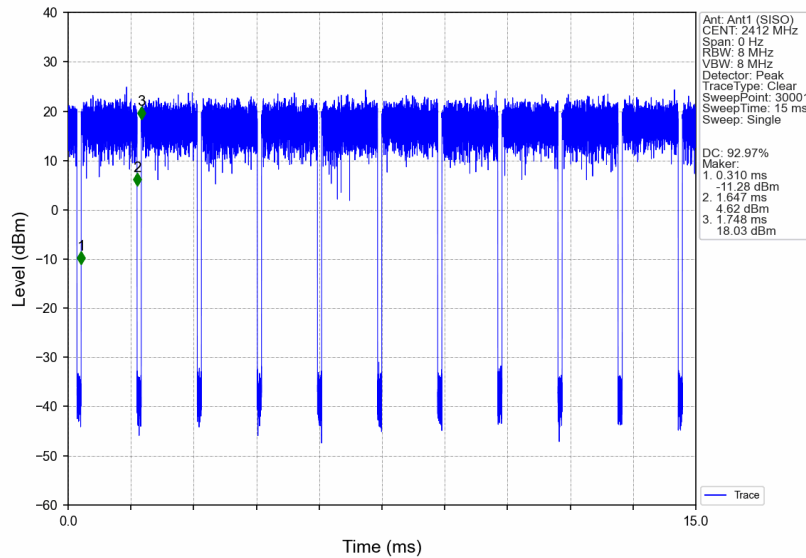
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



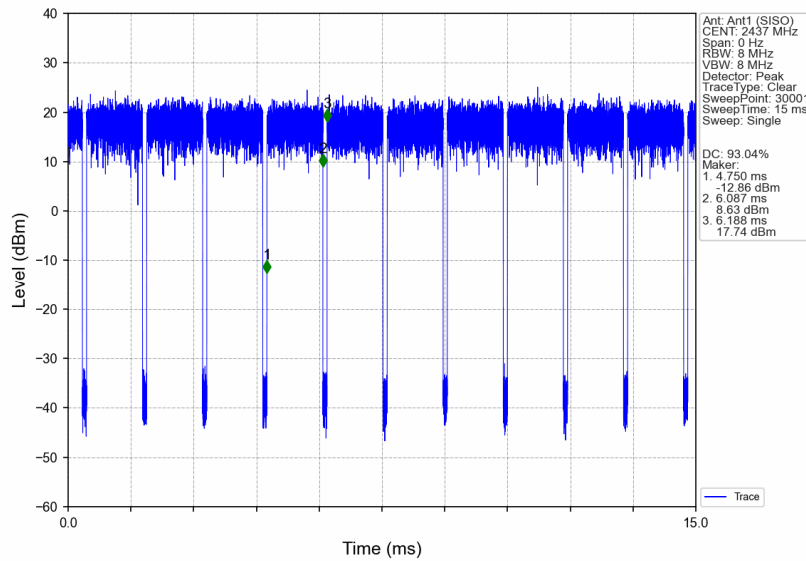
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



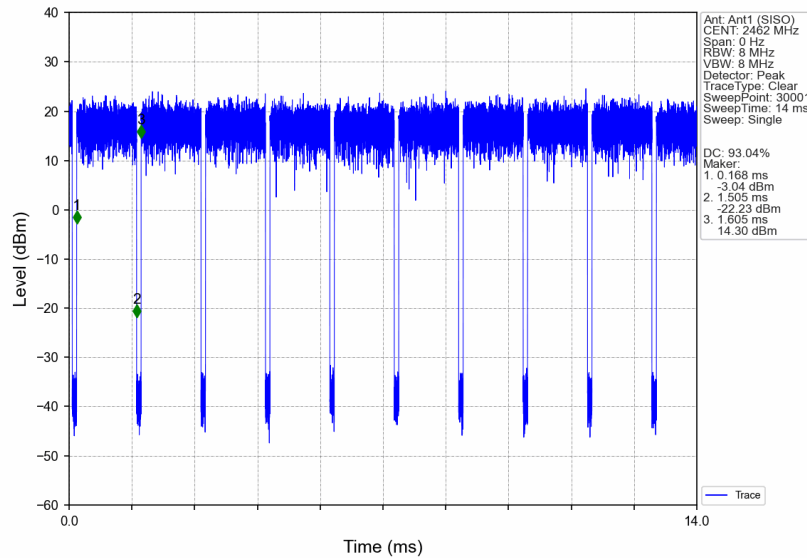
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW(report only)

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	14.042	/	Pass
		2437	1	14.022	/	Pass
		2462	1	14.021	/	Pass
802.11g	SISO	2412	1	16.348	/	Pass
		2437	1	16.340	/	Pass
		2462	1	16.329	/	Pass
802.11n (HT20)	SISO	2412	1	17.447	/	Pass
		2437	1	17.449	/	Pass
		2462	1	17.455	/	Pass

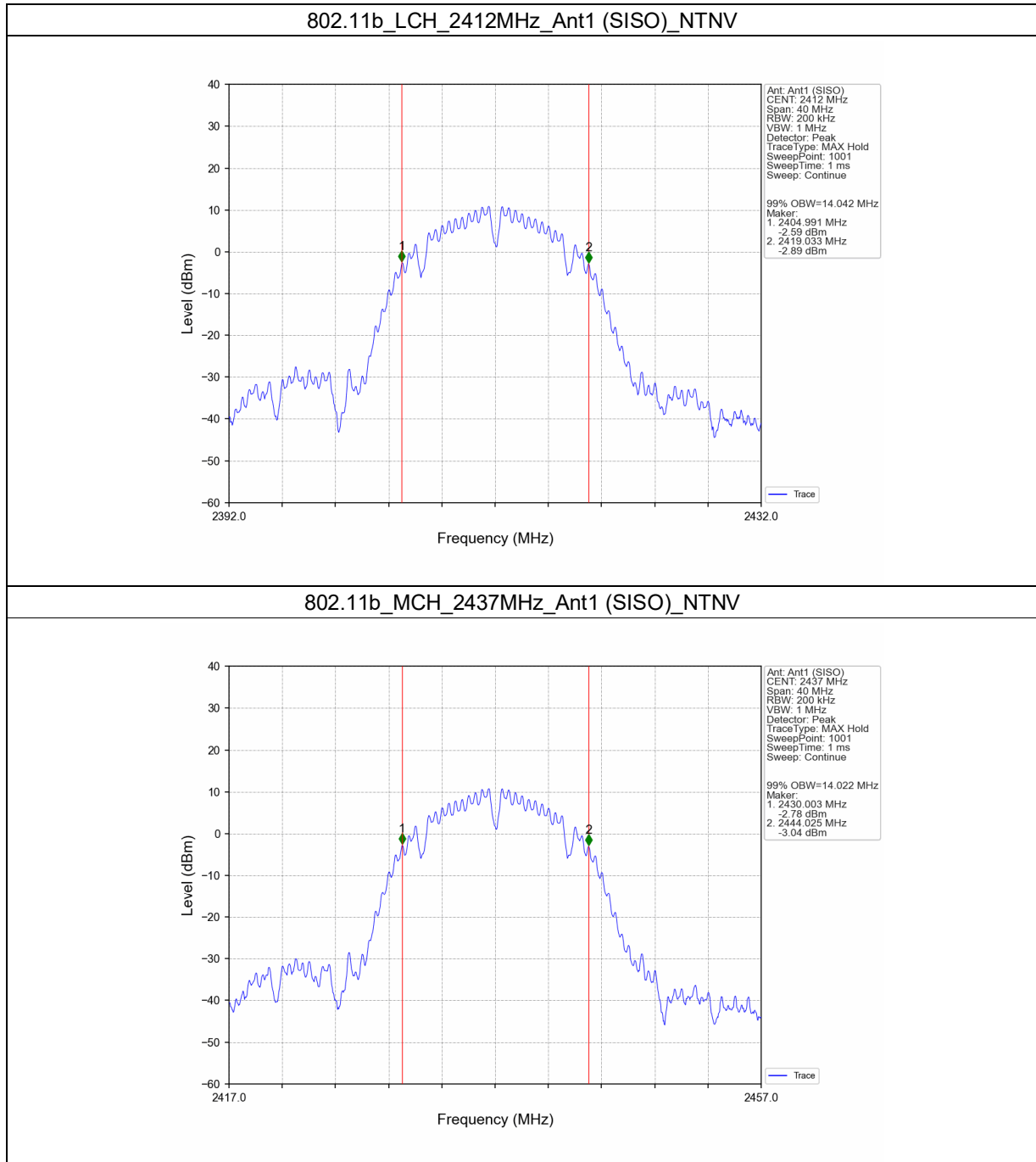
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	9.122	≥ 0.5	Pass
		2437	1	9.122	≥ 0.5	Pass
		2462	1	9.127	≥ 0.5	Pass
802.11g	SISO	2412	1	15.954	≥ 0.5	Pass
		2437	1	15.987	≥ 0.5	Pass
		2462	1	15.989	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	16.792	≥ 0.5	Pass
		2437	1	16.982	≥ 0.5	Pass
		2462	1	16.999	≥ 0.5	Pass

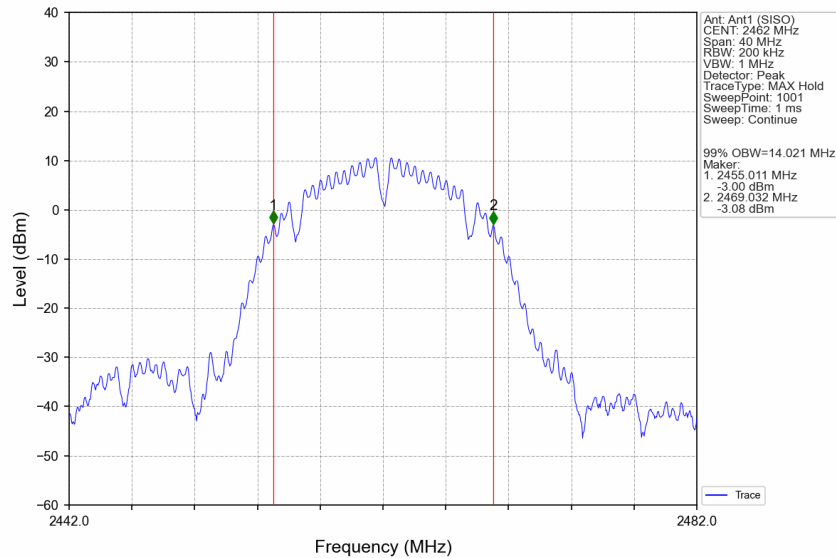


2.2 Test Graph

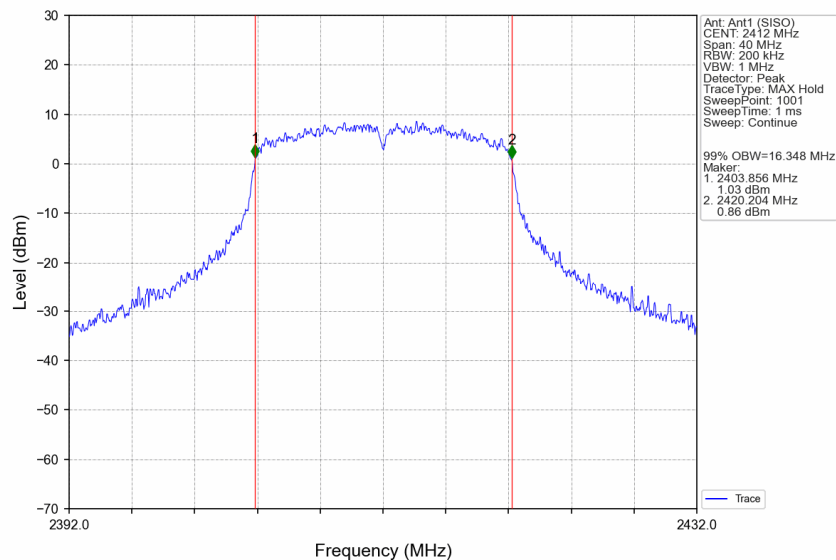
2.2.1 OBW



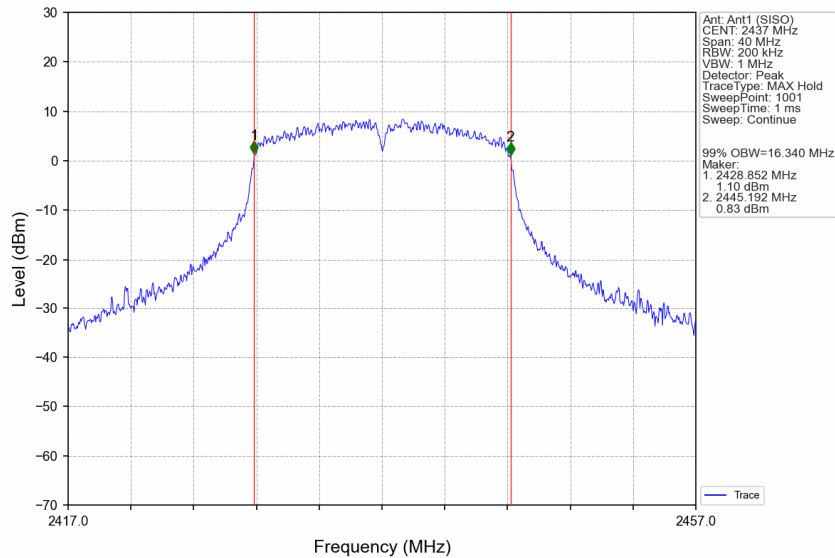
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



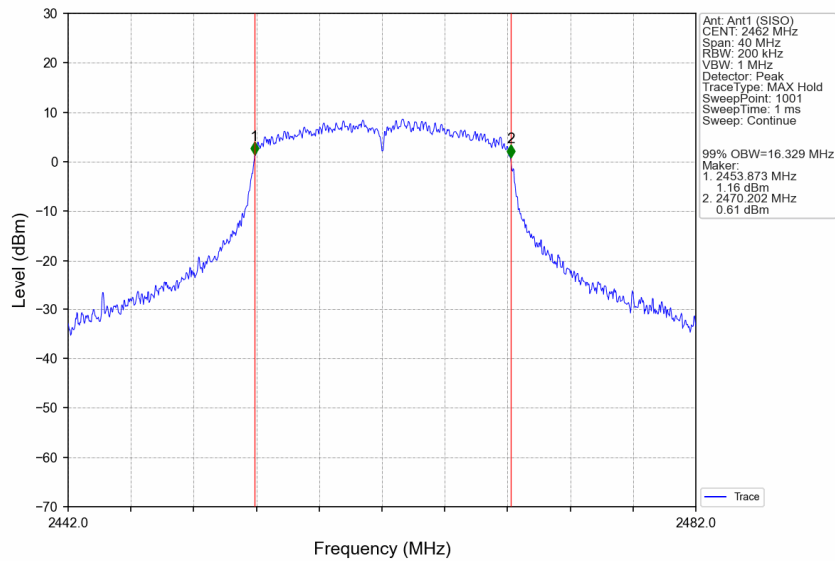
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



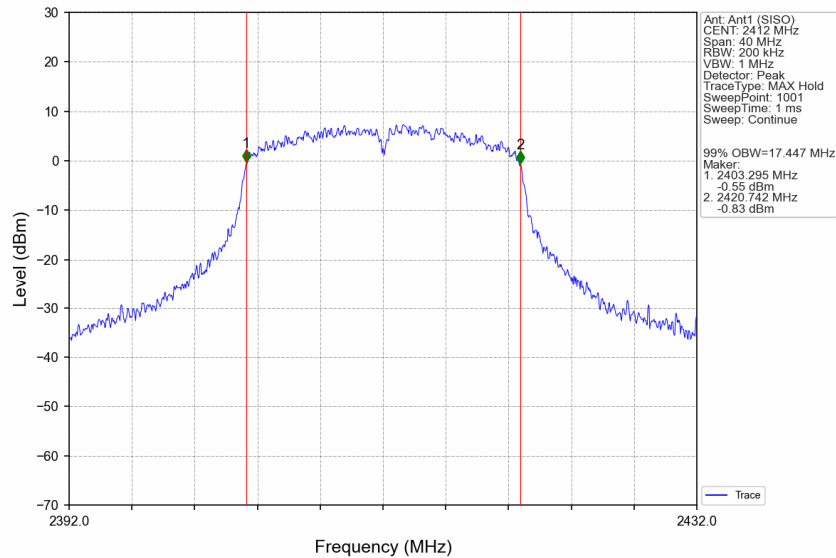
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



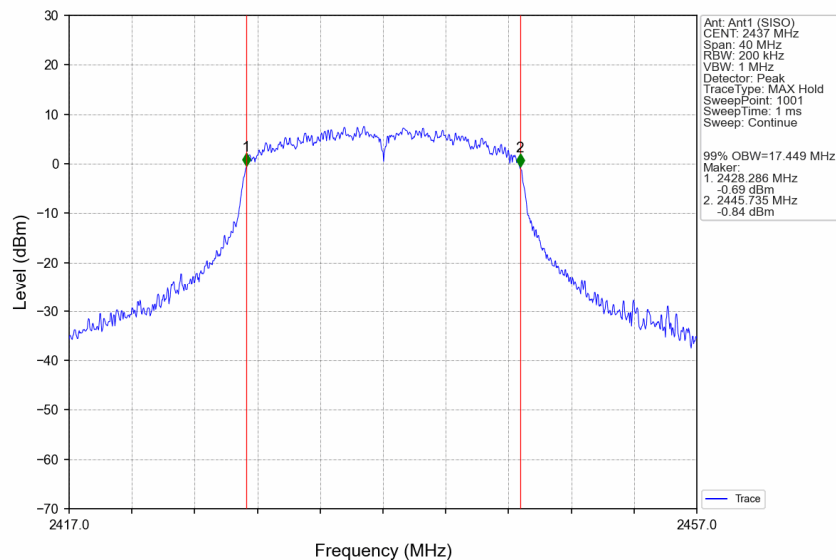
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



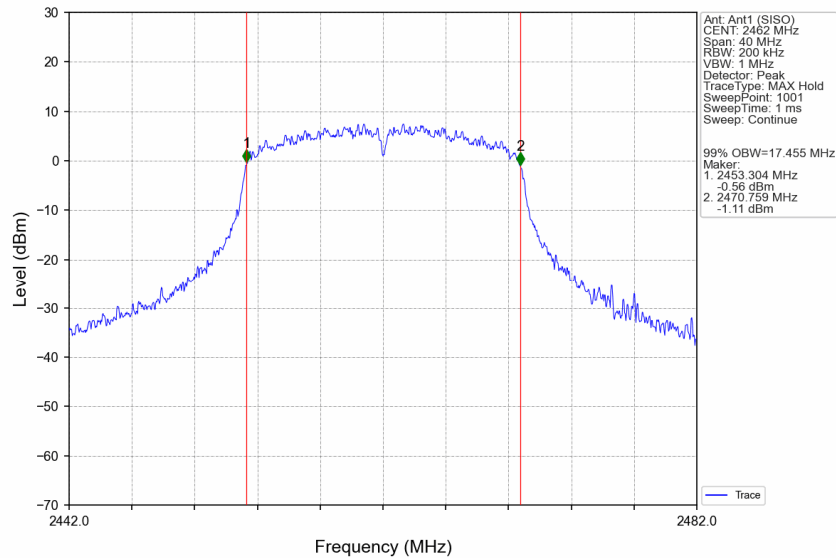
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



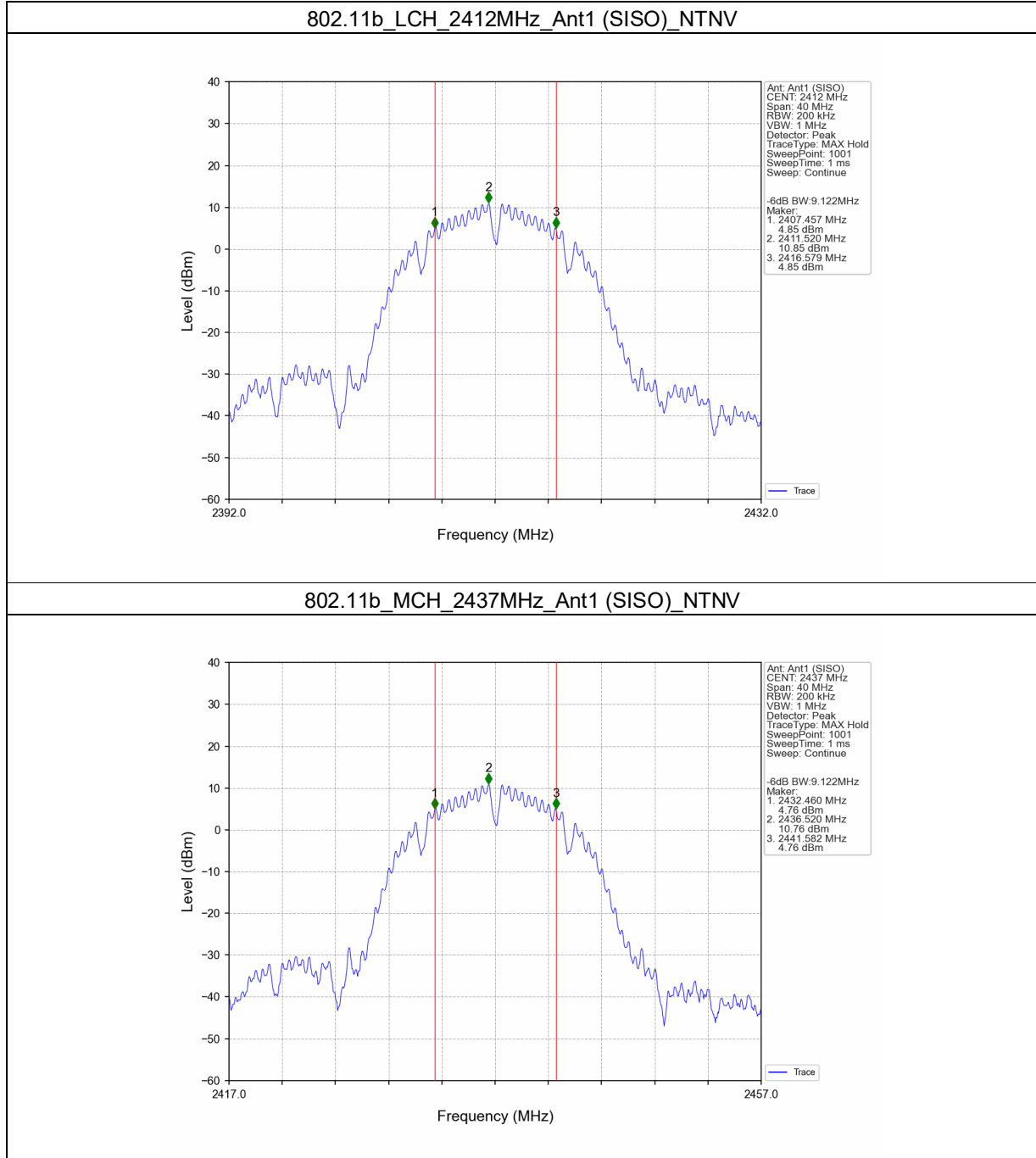
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



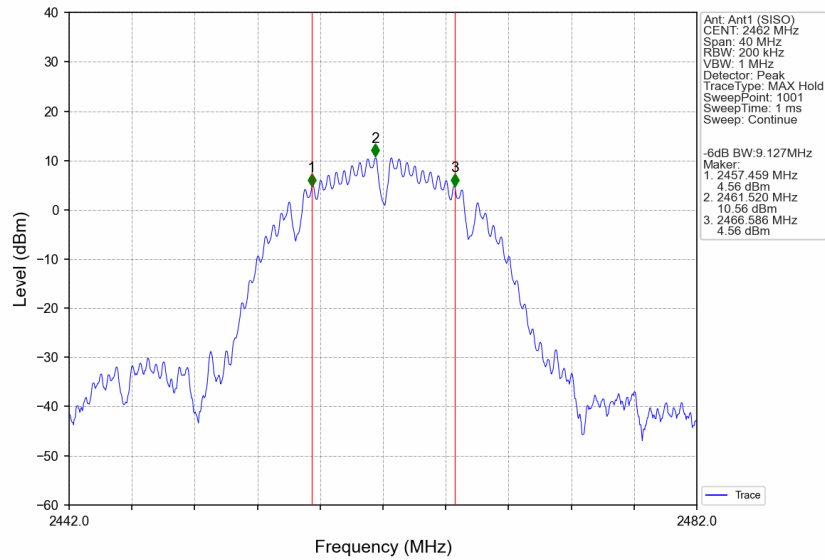
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



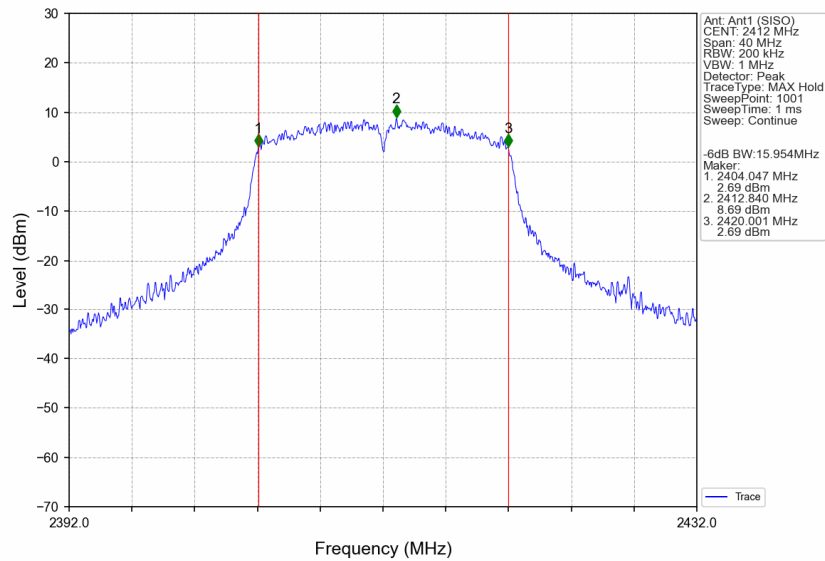
2.2.2 6dB BW



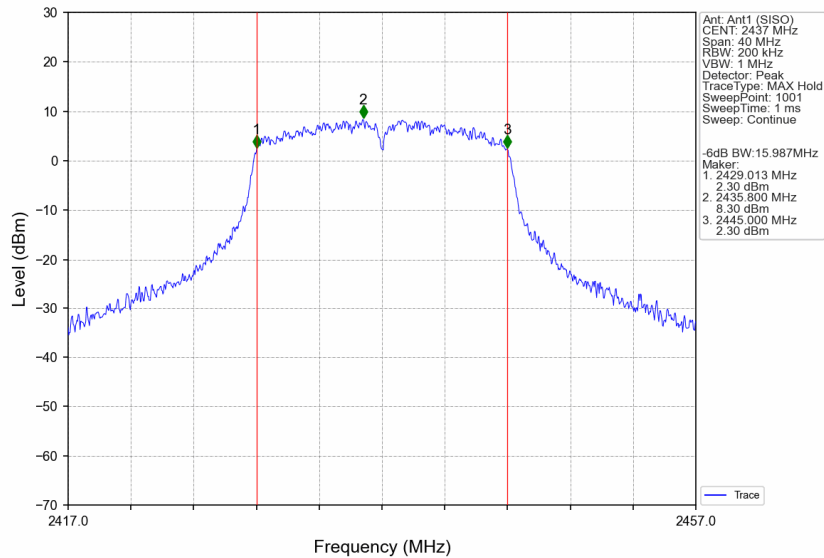
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



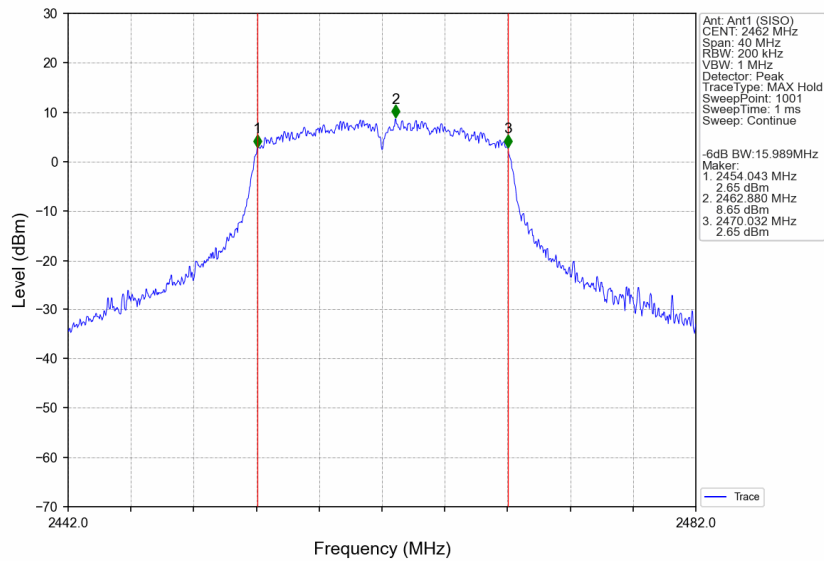
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



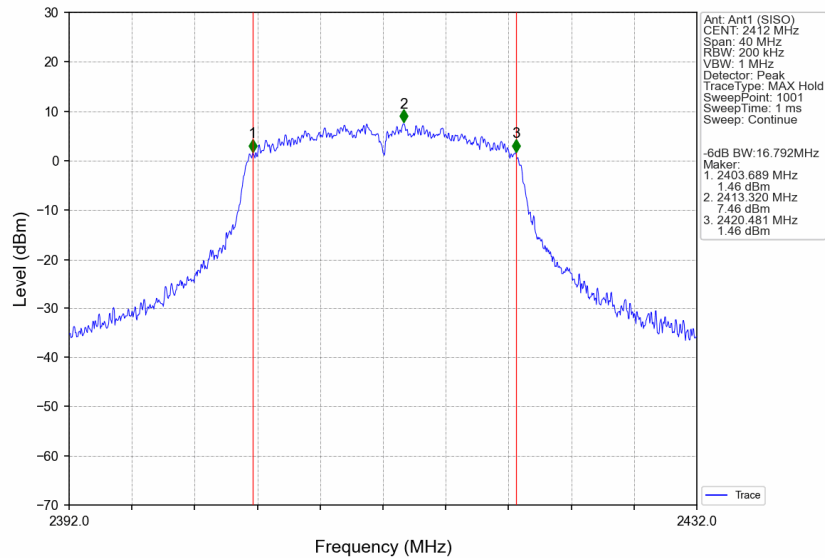
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



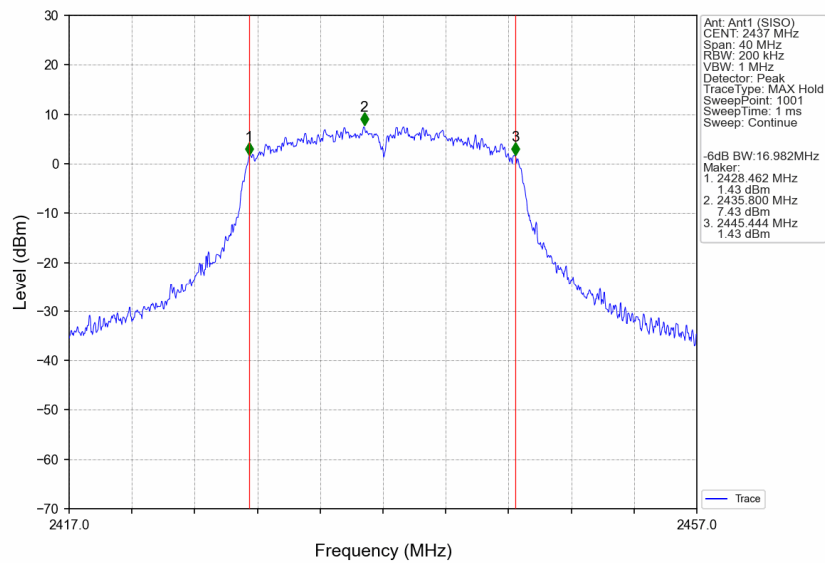
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



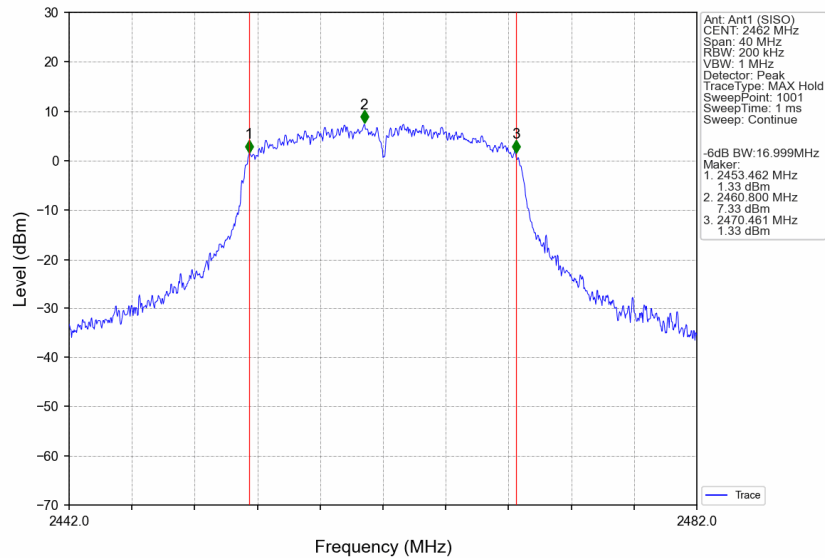
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	18.36	<=30	Pass
		2437	18.21	<=30	Pass
		2462	18.24	<=30	Pass
802.11g	SISO	2412	17.66	<=30	Pass
		2437	17.65	<=30	Pass
		2462	17.66	<=30	Pass
802.11n (HT20)	SISO	2412	16.61	<=30	Pass
		2437	16.63	<=30	Pass
		2462	16.53	<=30	Pass

4. Maximum Power Spectral Density

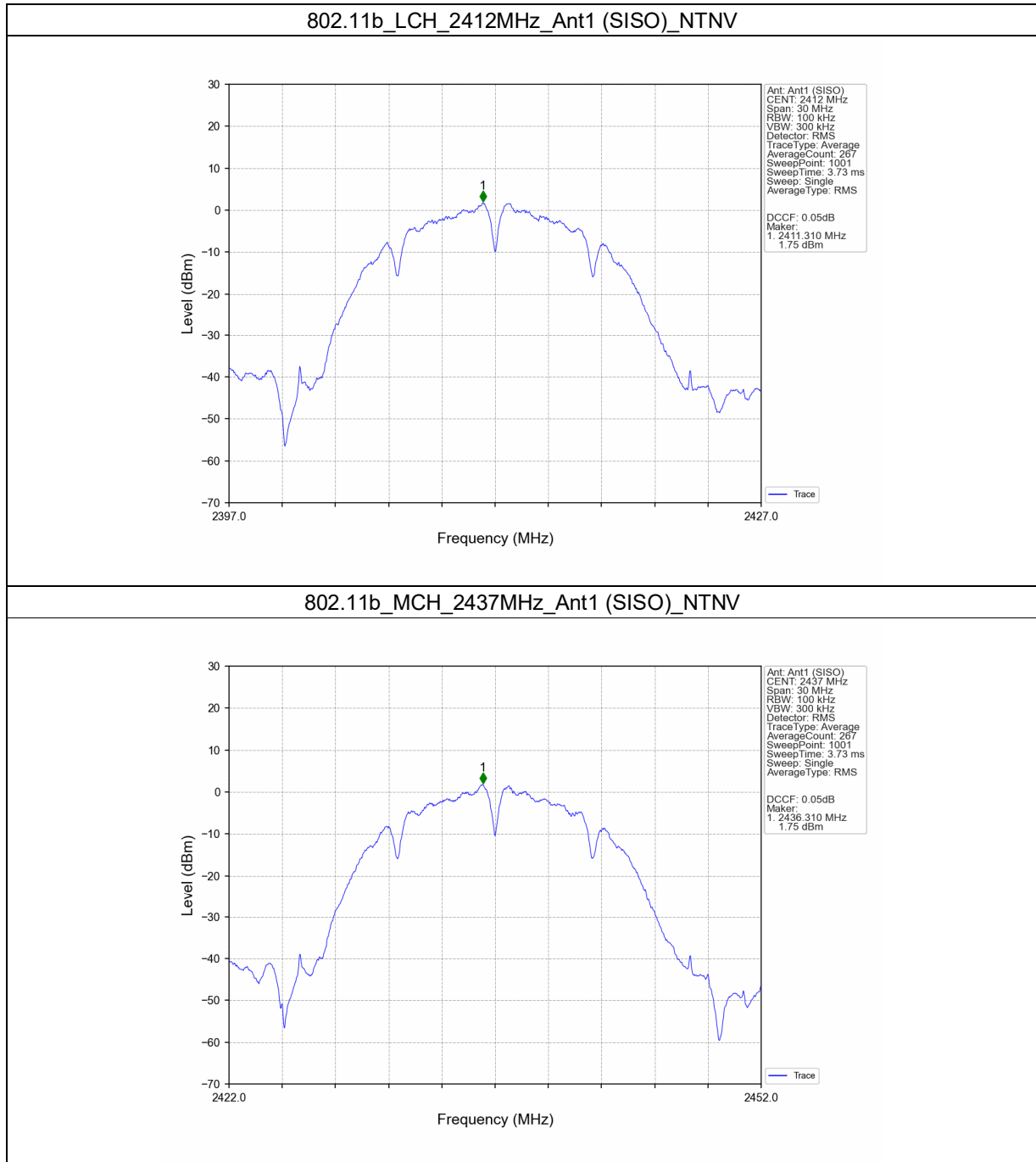
4.1 Test Result

4.1.1 PSD

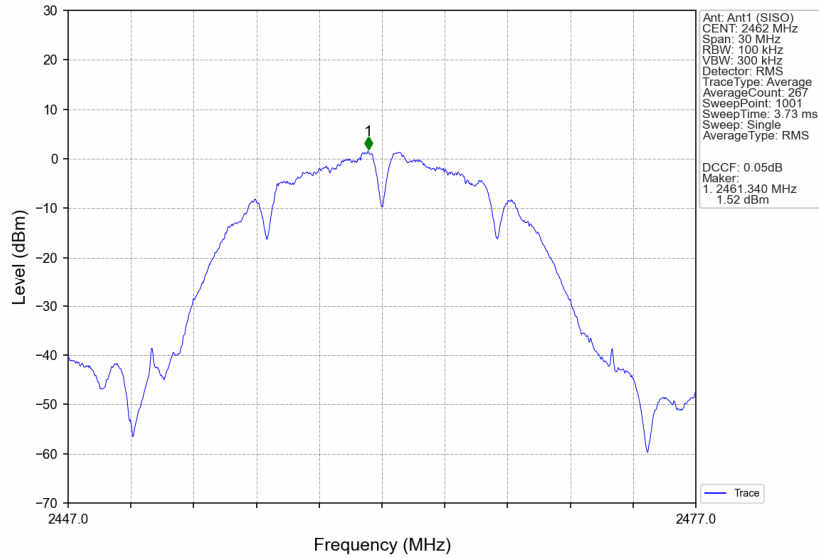
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	1.75	<=8	Pass
		2437	1.75	<=8	Pass
		2462	1.52	<=8	Pass
802.11g	SISO	2412	-1.62	<=8	Pass
		2437	-2.05	<=8	Pass
		2462	-1.69	<=8	Pass
802.11n (HT20)	SISO	2412	-2.80	<=8	Pass
		2437	-2.70	<=8	Pass
		2462	-2.81	<=8	Pass

4.2 Test Graph

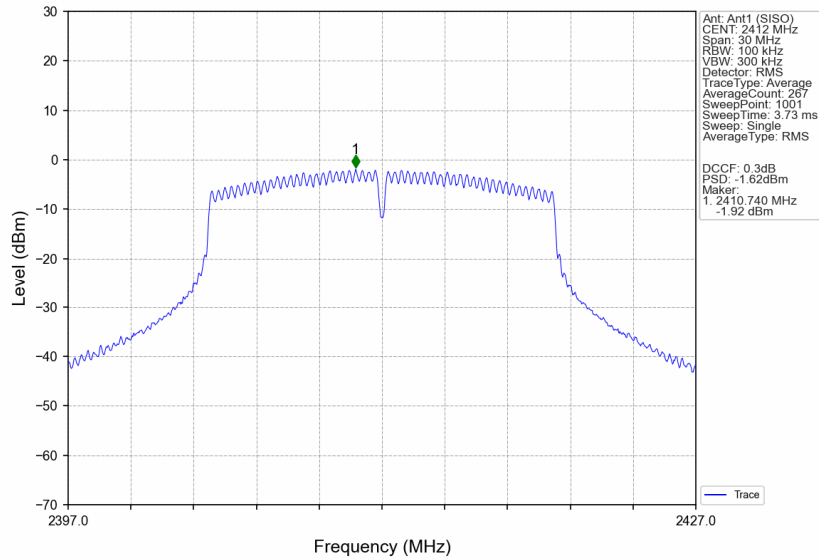
4.2.1 PSD



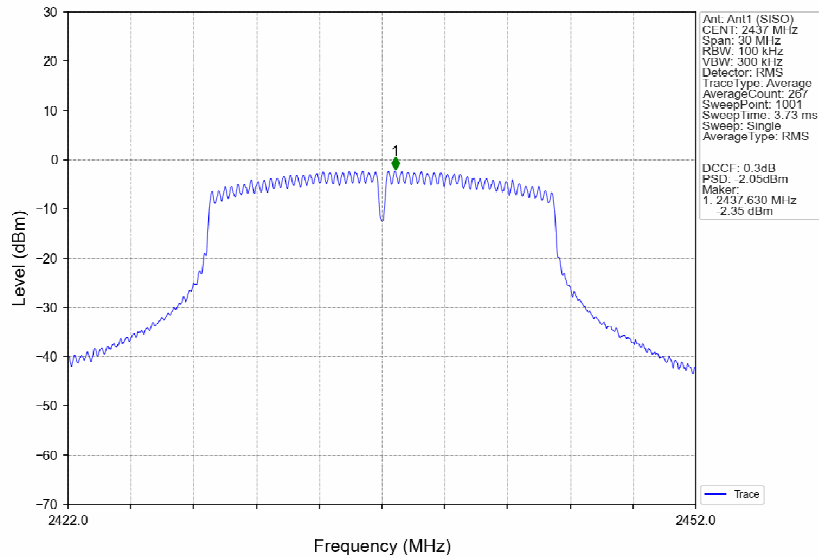
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



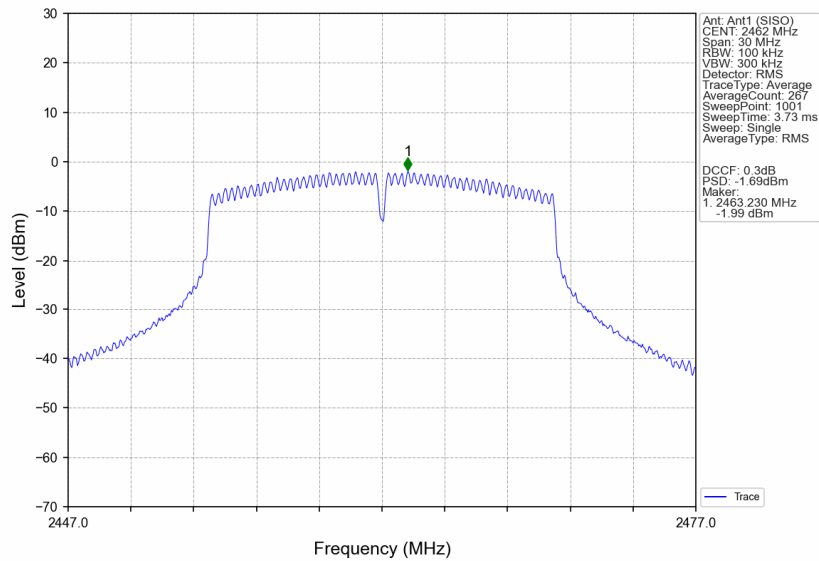
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



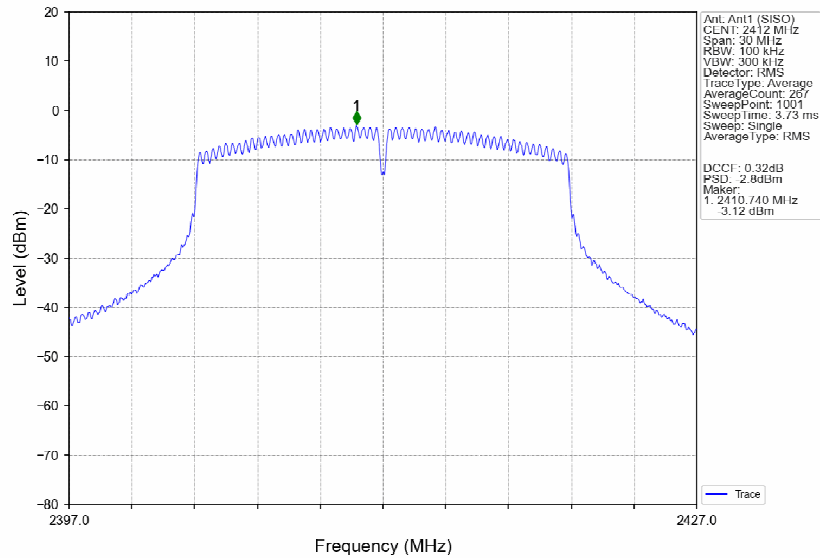
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



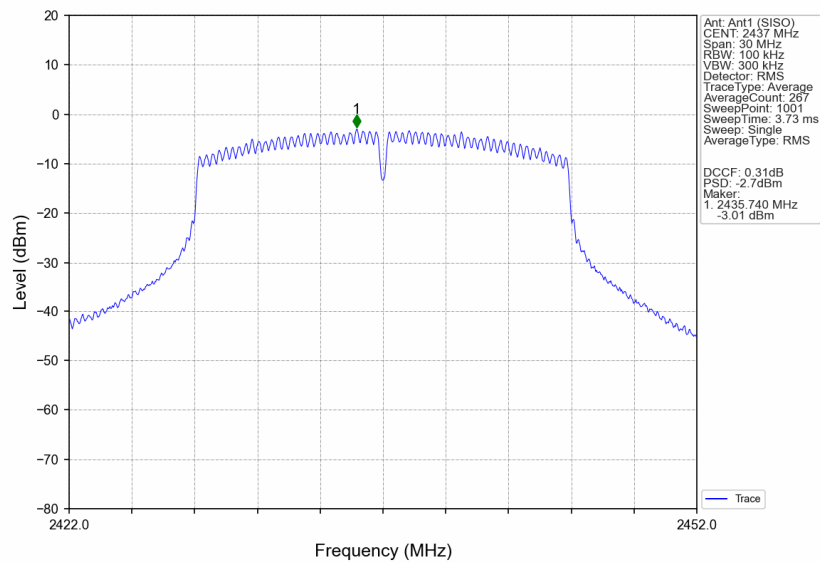
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



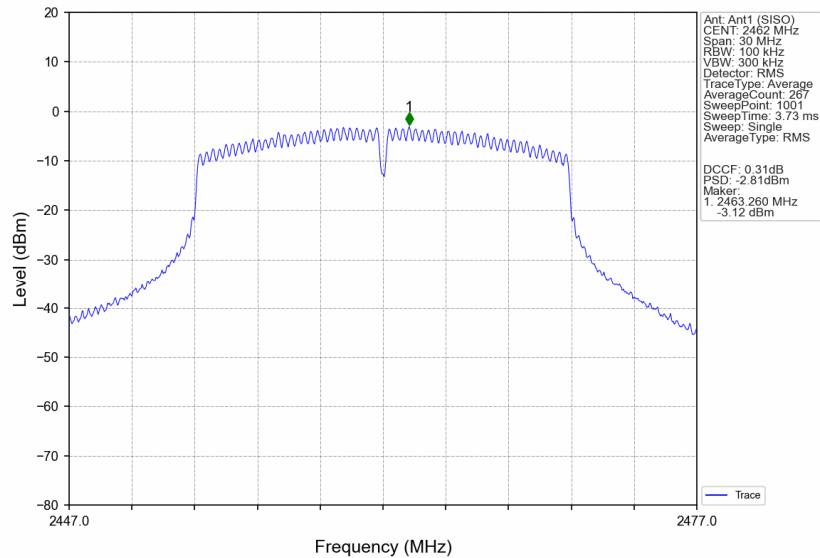
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

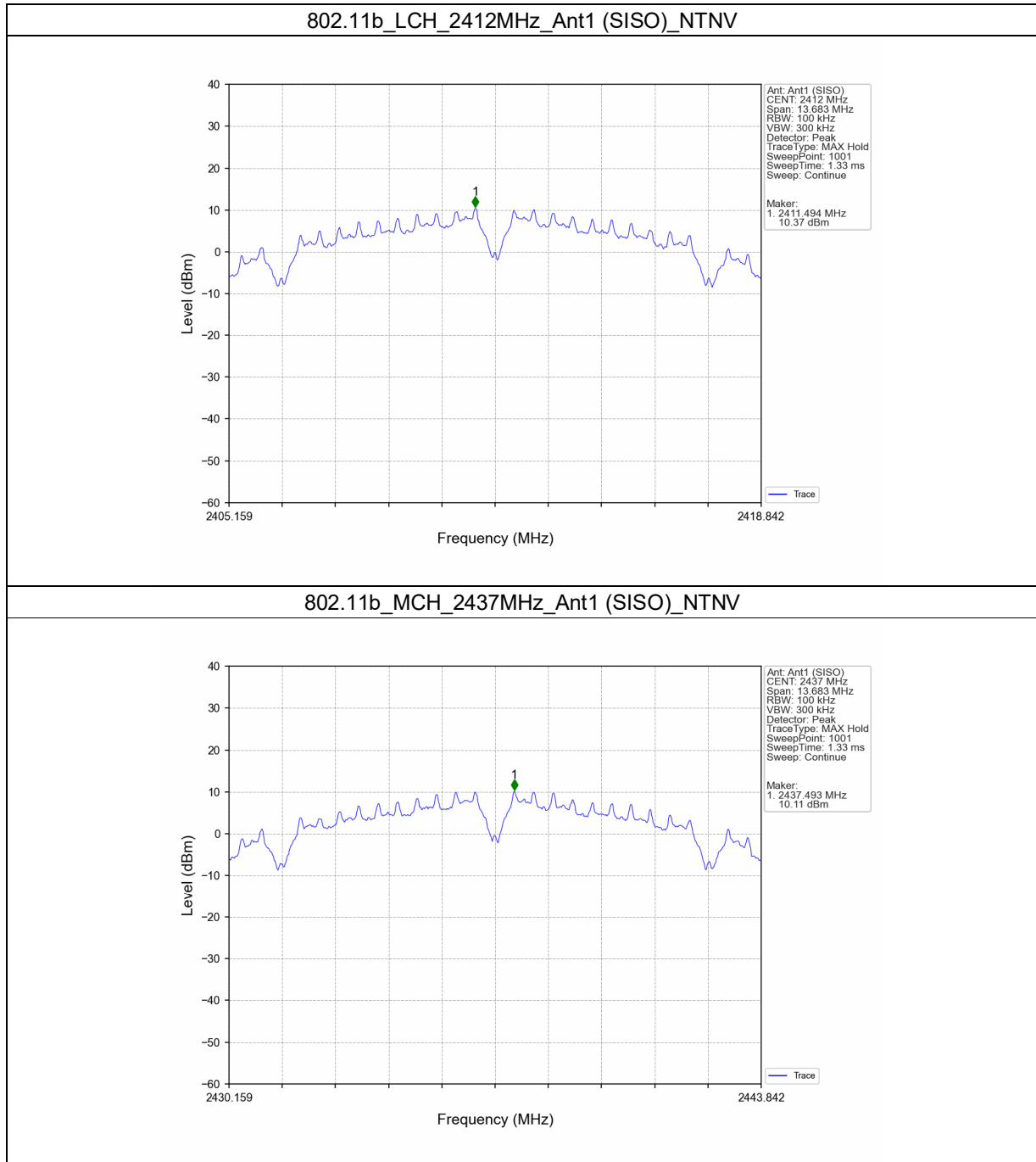
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	10.37
		2437	1	10.11
		2462	1	10.08
802.11g	SISO	2412	1	7.26
		2437	1	7.51
		2462	1	7.67
802.11n (HT20)	SISO	2412	1	6.74
		2437	1	6.81
		2462	1	6.57

5.1.2 CSE

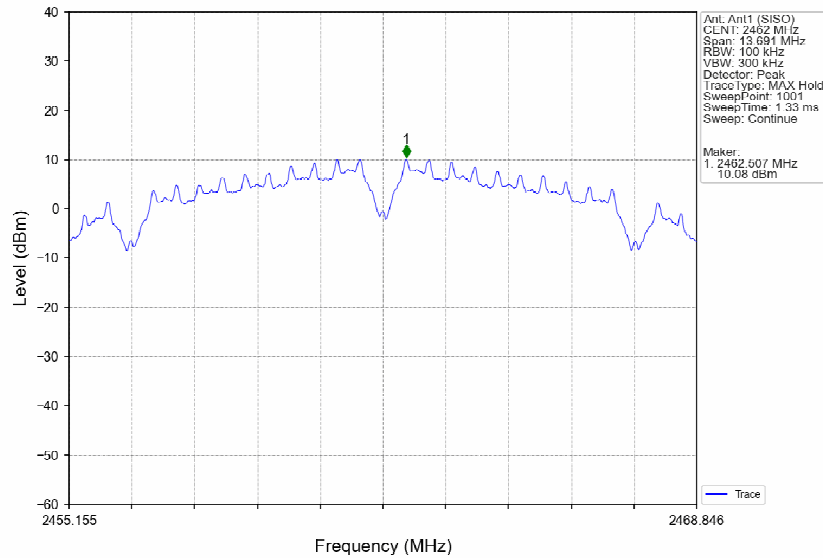
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	10.37	-19.63	Pass
		2437	1	10.37	-19.63	Pass
		2462	1	10.37	-19.63	Pass
802.11g	SISO	2412	1	7.67	-22.33	Pass
		2437	1	7.67	-22.33	Pass
		2462	1	7.67	-22.33	Pass
802.11n (HT20)	SISO	2412	1	6.81	-23.19	Pass
		2437	1	6.81	-23.19	Pass
		2462	1	6.81	-23.19	Pass

5.2 Test Graph

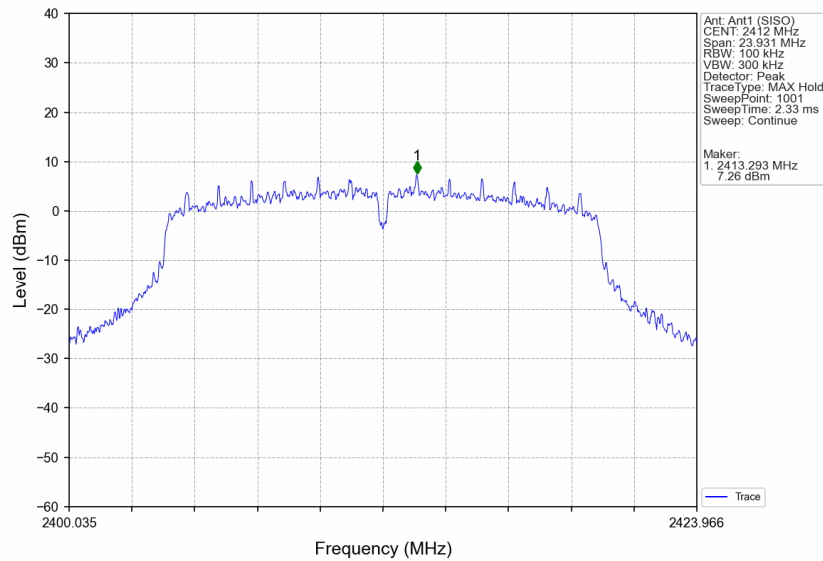
5.2.1 Ref



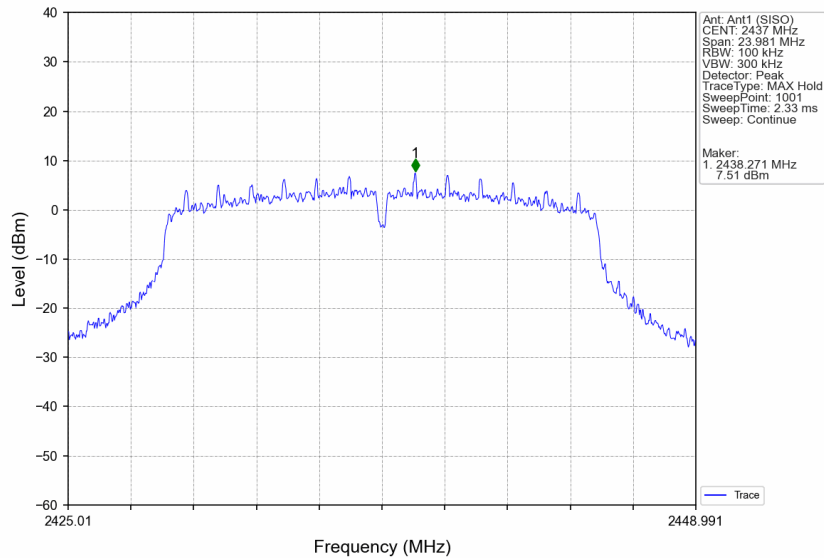
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



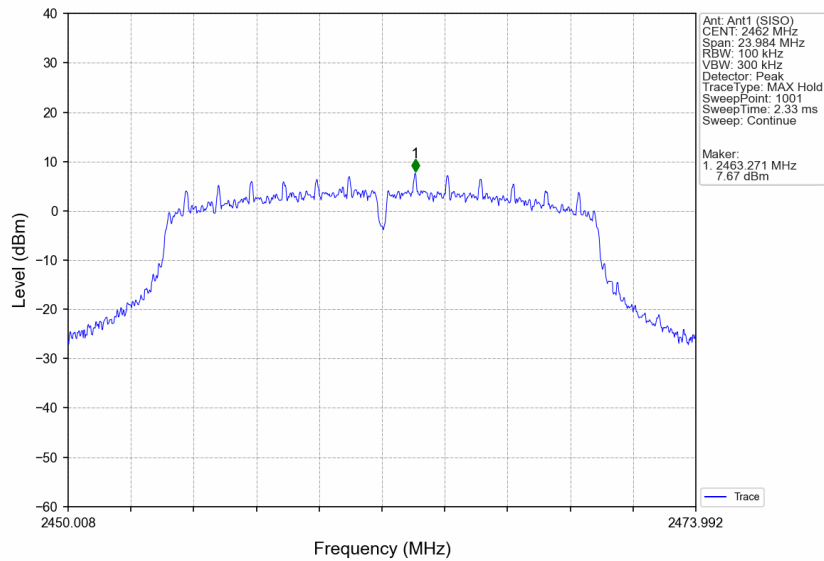
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



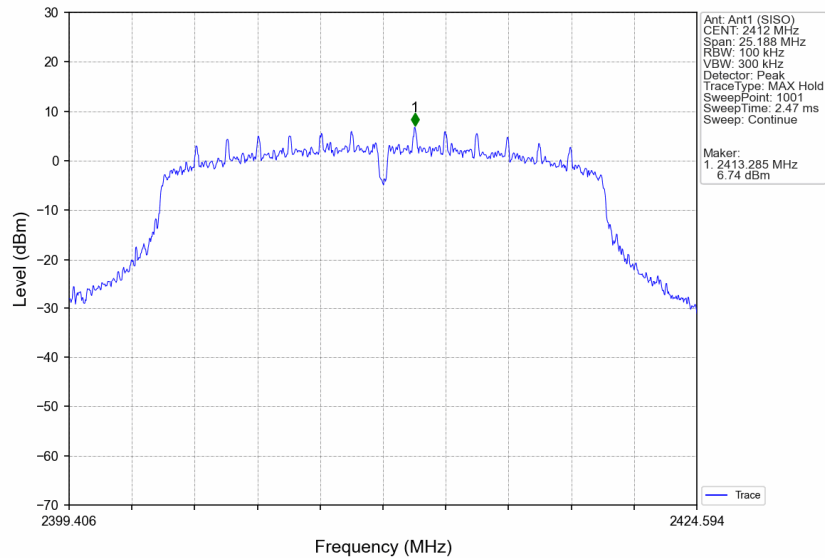
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



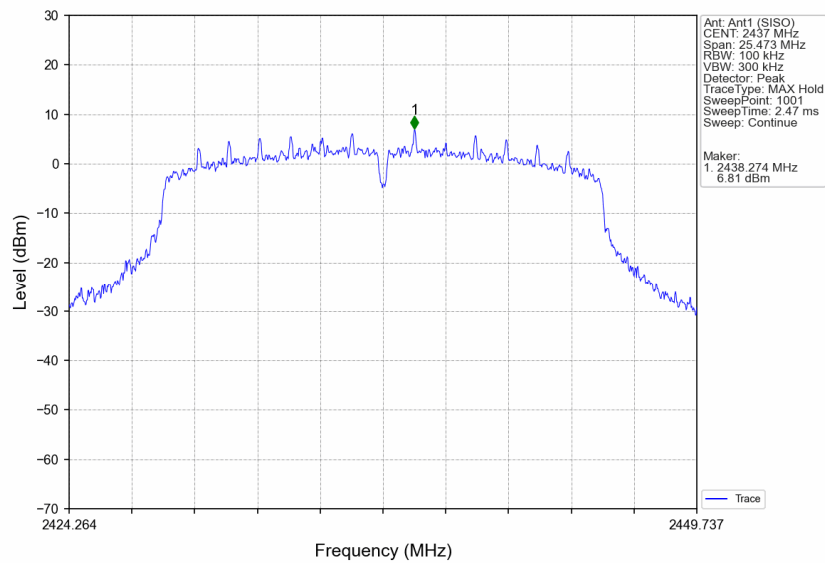
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

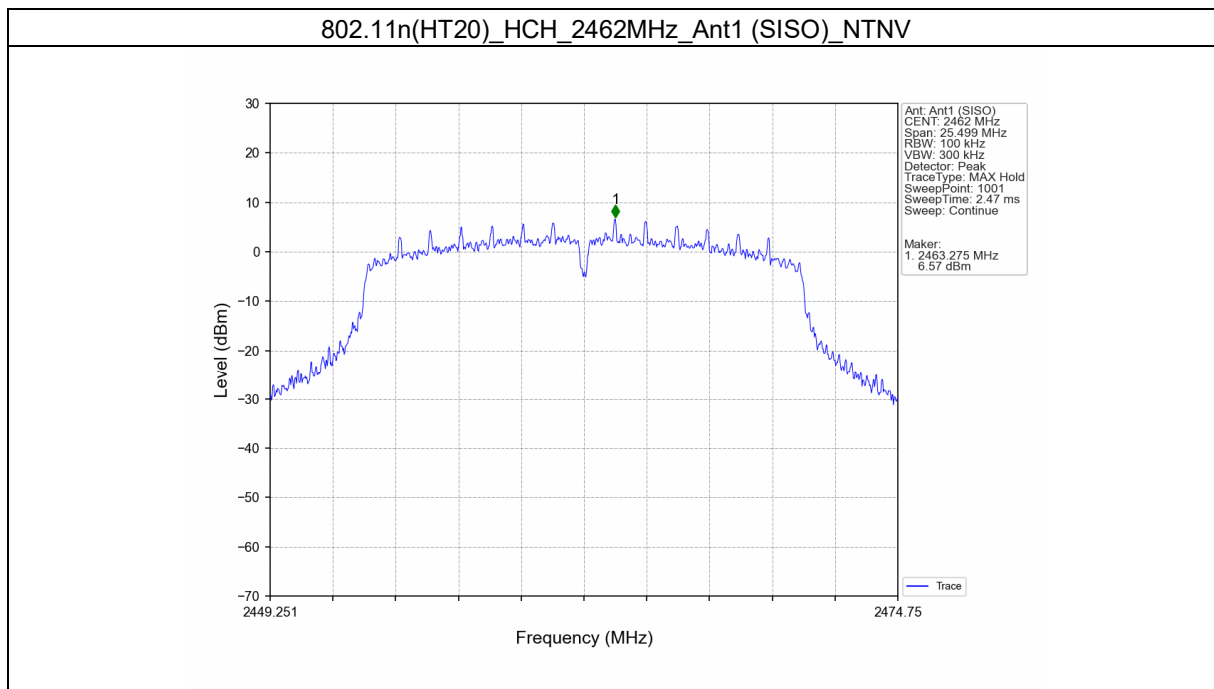


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

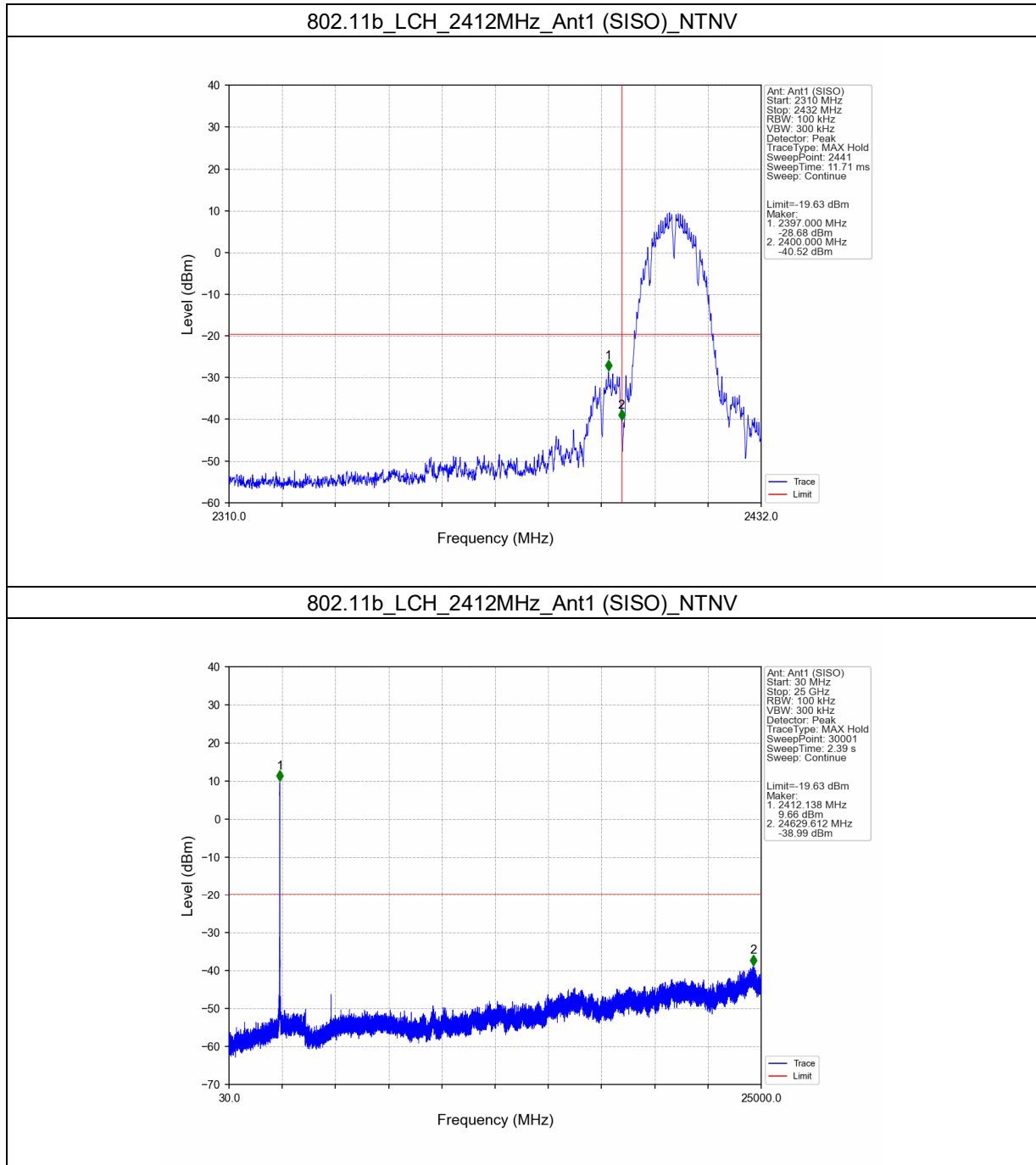


802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

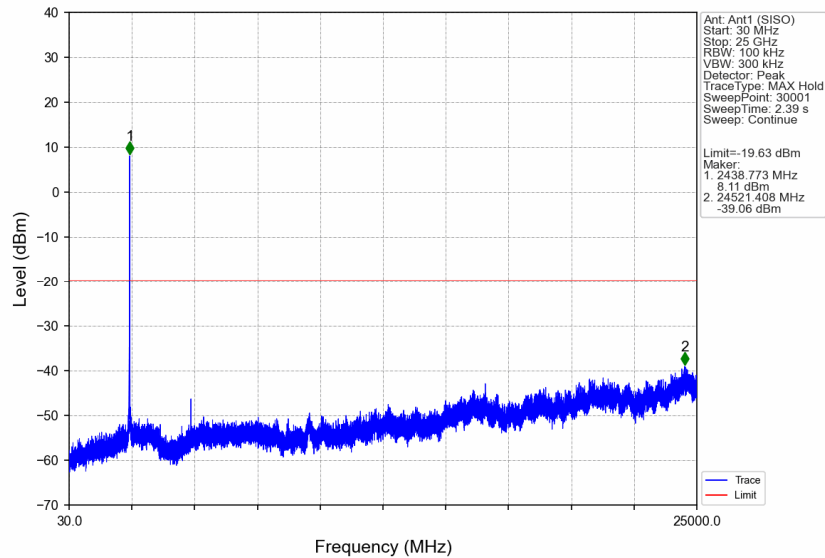




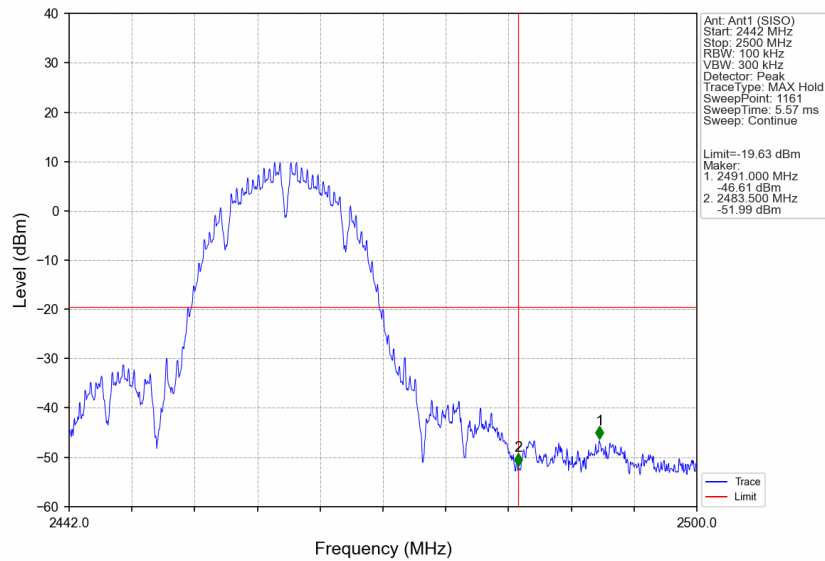
5.2.2 CSE



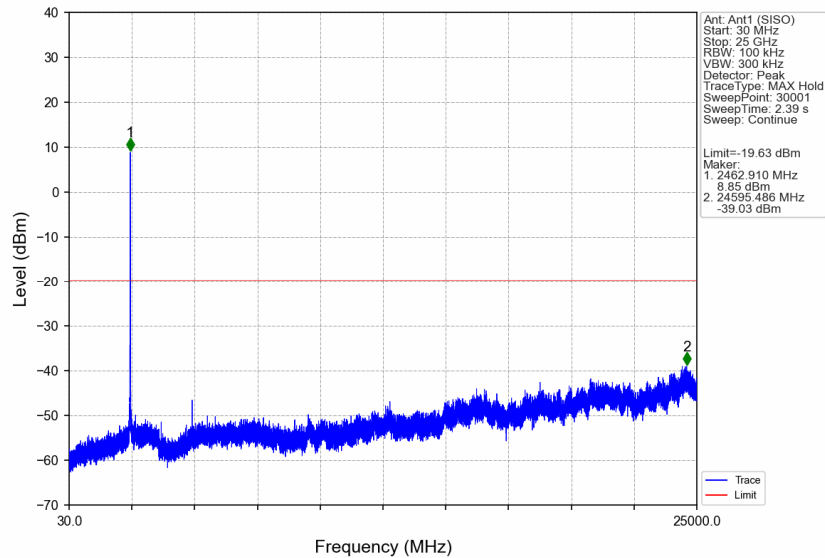
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



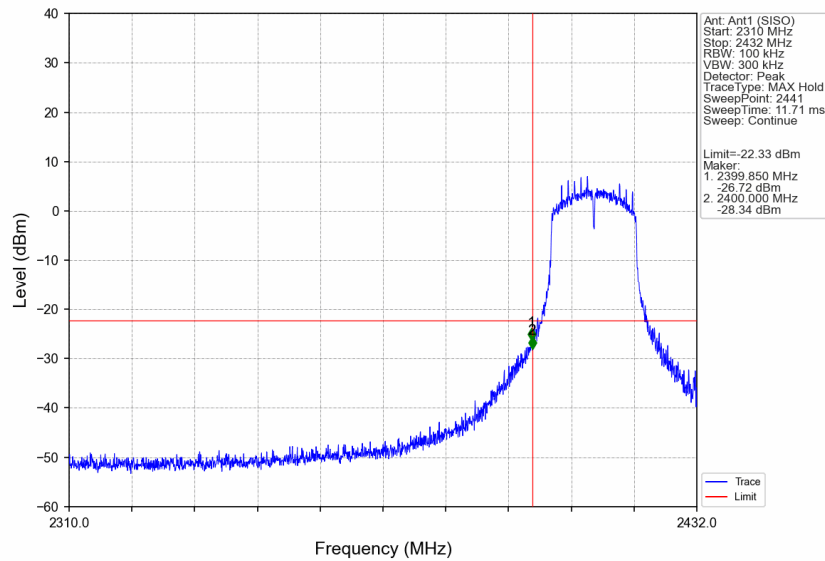
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



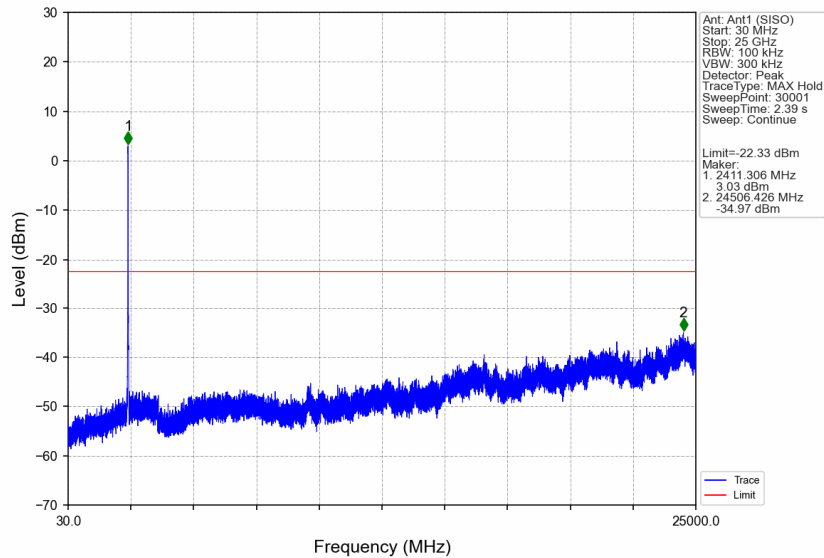
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



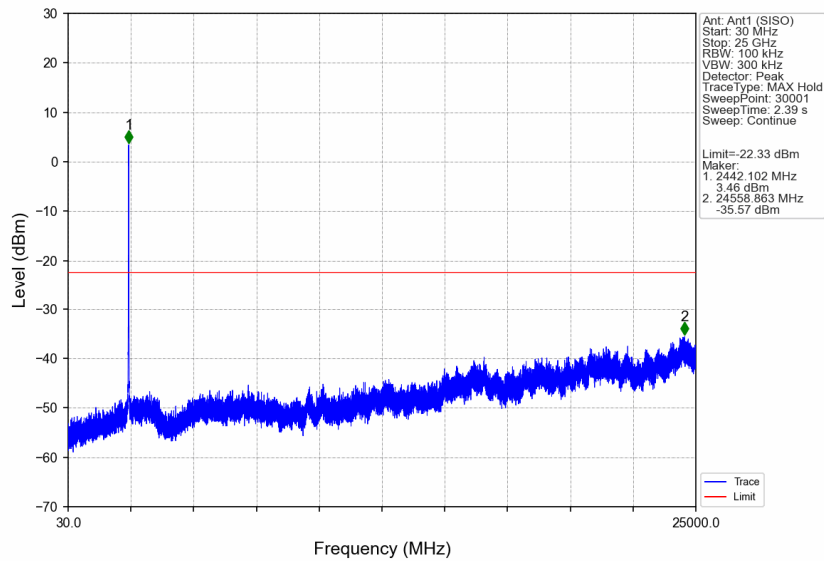
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



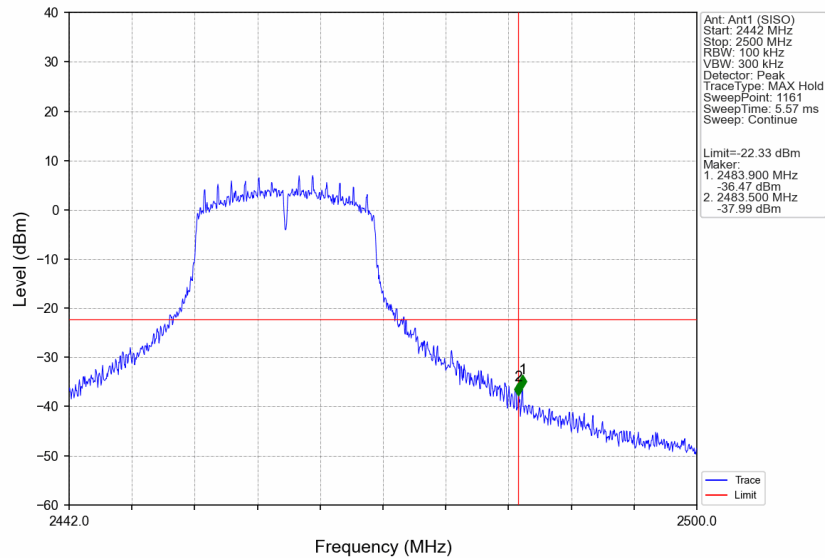
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



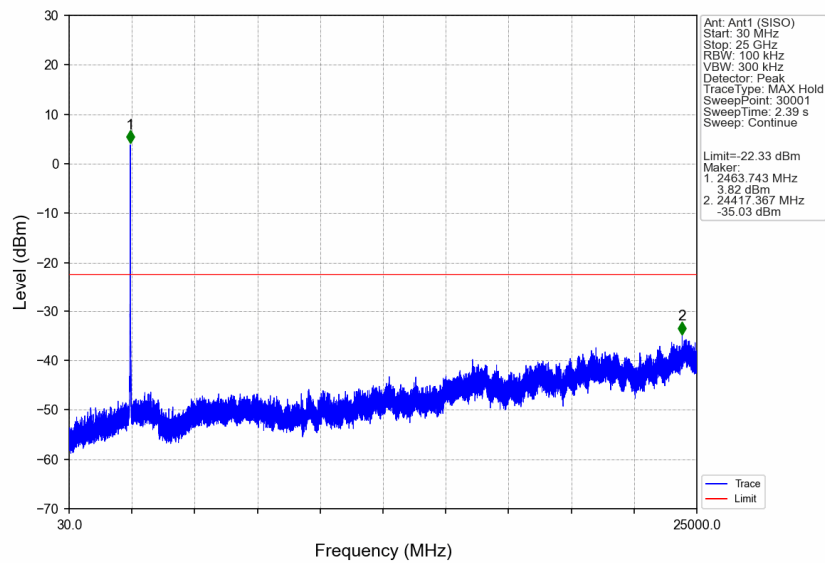
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



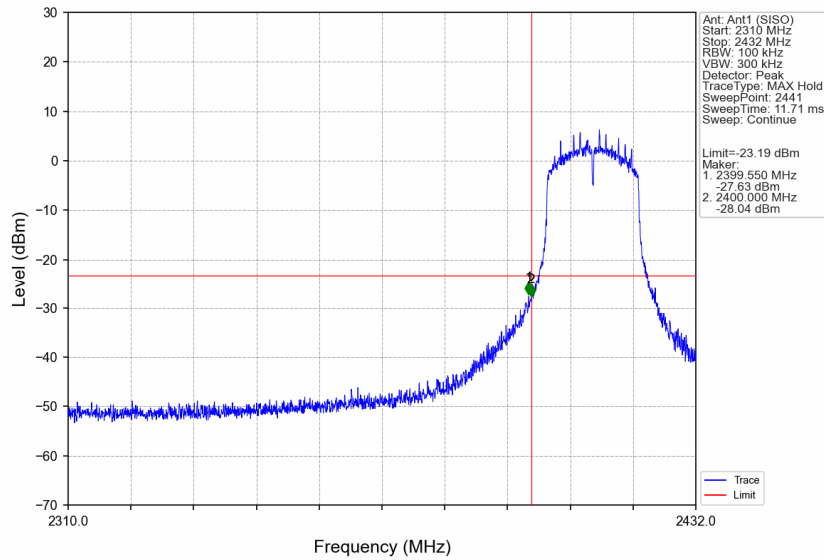
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



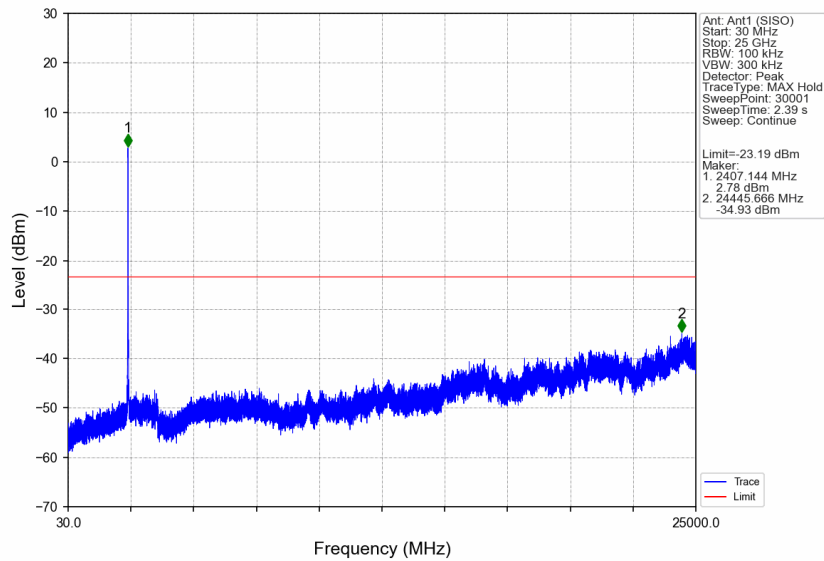
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



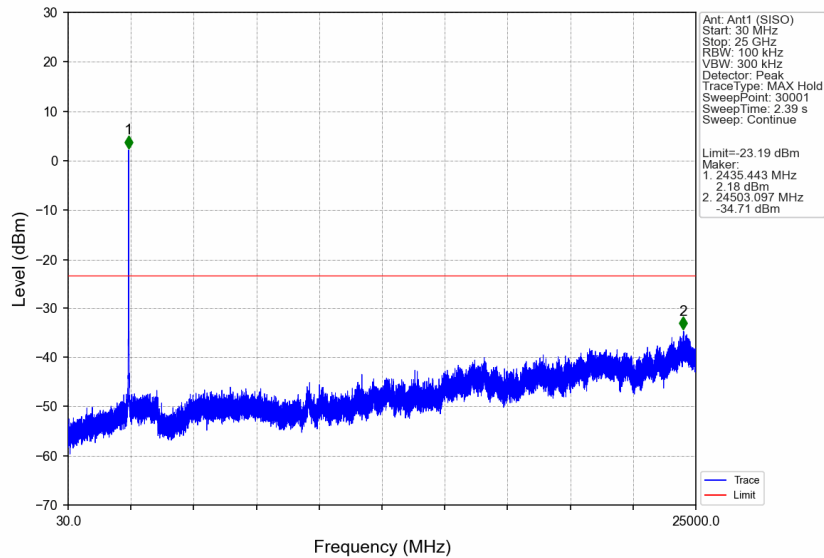
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



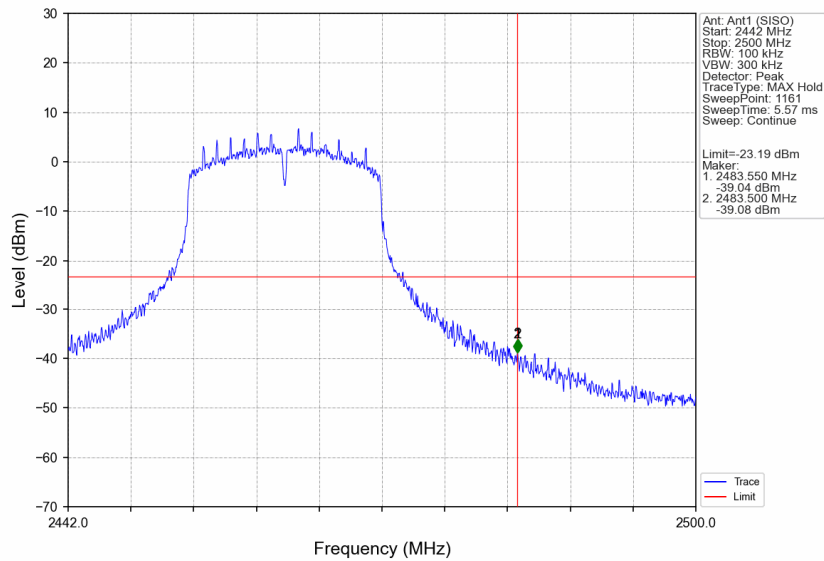
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

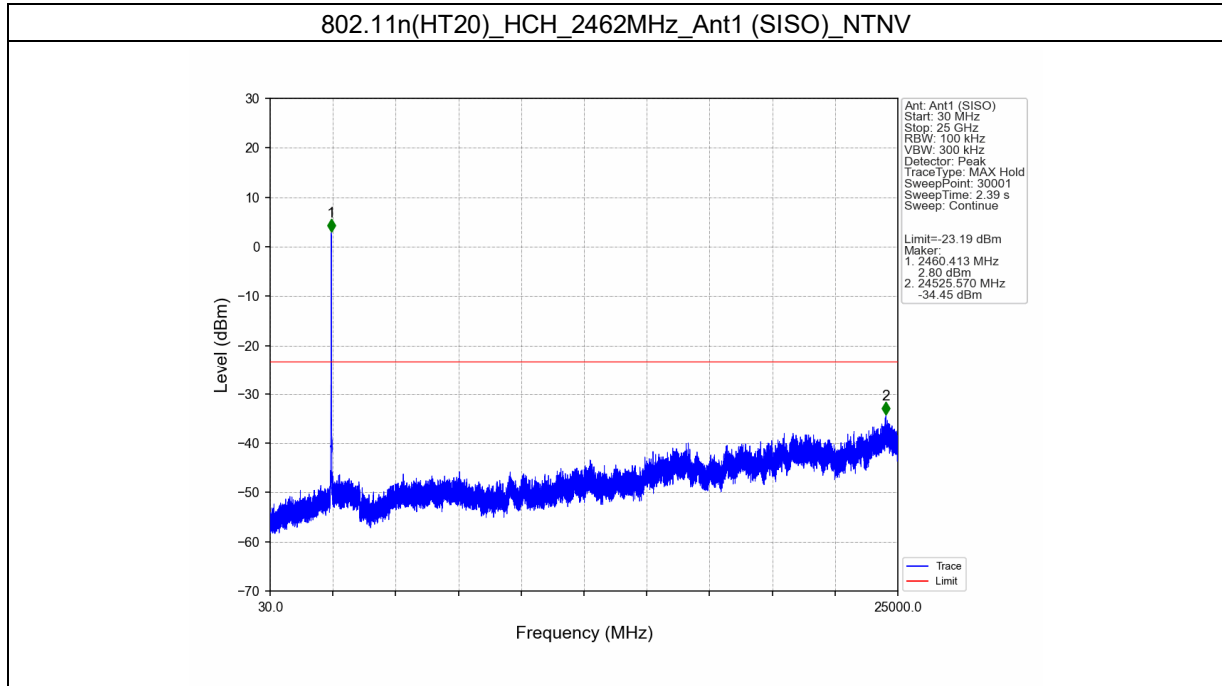


802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV





- End of the Report -

