

FCC/ISED - TEST REPORT

Report Number : **68.950.24.0618.01** Date of Issue: **2025-01-16**

Model/HVIN : **FS2345**

Product Type : AURIA module

Applicant : Frontier Smart Technologies Ltd

Address : Harston, Harston Mill, Cambridge, CB22 7GG, UNITED KINGDOM

Manufacturer : Frontier Smart Technologies Ltd

Address : Harston, Harston Mill, Cambridge, CB22 7GG, UNITED KINGDOM

Test Result : ☒ **Positive** ☐ **Negative**

Total pages including Appendices : **122**

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2 Details about the Test Laboratory

Details about the Test Laboratory

Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Building 12&13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou,
Nanshan District, Shenzhen City, 518052, P. R. China

Telephone: 86 755 8828 6998

Fax: 86 755 828 5299

FCC Registration No.: 514049

FCC Designation No.: CN5009

IC Registration No.: 10320A

ISED CAB identifier: CN0077

3 Description of the Equipment Under Test

Product:	AURIA module
Model no.:	FS2345
FCC ID:	YYX-FS2345
IC:	11458A-FS2345
PMN:	AURIA
HVIN:	FS2345
Rating:	5VDC
RF Transmission Frequency:	2412MHz-2462MHz for 802.11b/g/n20 /ax20
No. of Operated Channel:	11
Modulation:	802.11b: BPSK, QPSK, CCK, 802.11g/802.11n20: BPSK, QPSK, 16-QAM, 64-QAM 802.11ax20: BPSK, QPSK, 16-QAM, 64-QAM/256-QAM/1024-QAM
Antenna Type:	Ant 1: Internal PIFA Antenna Ant 2: External PIFA Antenna
Antenna Gain:	Ant 1: 1.86dBi Ant 2: 2.21dBi FS2345 does not support MIMO, only one of Ant 1 or Ant 2 can transmit through a switch selection
S/N	Conducted Method Module: 241500278RYA02 Conducted Method Platform: FS2345032403053 Radiated Method Module: 241500246RYA02 Radiated Method Platform: FS2345032403028 Normal Module: 240100004RYA02 Normal Platform: FS2345032403037
Description of the EUT:	The Equipment Under Test (EUT) is a AURIA module supports Bluetooth Low Energy / Bluetooth BR+EDR/ Wi-Fi functions
Remark:	This report is only for 2.4GHz Wi-Fi.

4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2023 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators
RSS-Gen Issue 5 April 2018 Amendment 1 March 2019 + Amendment 2 February 2021	General Requirements for Compliance of Radio Apparatus
RSS-247 Issue 3 August 2023	Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSS) and License-Exempt Local Area Network (LE- LAN) Devices

All the test methods were according to KDB 558074 D01 15.247 Meas Guidance v05r02 Measurement Guidance and ANSI C63.10-2020.

5 Summary of Test Results

Technical Requirements			
FCC Part 15 Subpart C/ RSS-247 Issue 3/RSS-Gen Issue 5			
Test Condition		Test Site	Test Result
§15.207 & RSS-GEN 8.8	Conducted emission AC power port	Site 1	Pass
§15.247 (b) (3) & RSS-247 5.4(d)	Conducted peak output power	Site 1	Pass
RSS-247 5.4(d)	Equivalent Isotropic Radiated Power	Site 1	Pass
§15.247(a)(2) & RSS-247 5.2(a) & RSS-GEN 6.7	6dB bandwidth and 99% Occupied Bandwidth	Site 1	Pass
§15.247(e) & RSS-247 5.2(b)	Power spectral density	Site 1	Pass
§15.247(d) & RSS-247 5.5	Spurious RF conducted emissions	Site 1	Pass
§15.247(d) & RSS-247 5.5	Band edge	Site 1	Pass
§15.247(d) & §15.209 & §15.205 & RSS-247 5.5 & RSS-Gen 6.13	Spurious radiated emissions for transmitter	Site 1	Pass
§15.203 & RSS-Gen 6.8	Antenna requirement	See note 2	Pass

Note 1: N/A=Not Applicable.

Note 2: The EUT uses an Internal Integrated PIFA Antenna, which gain is 1.86dBi and an External Integrated PIFA Antenna, which gain is 2.21dBi. In accordance to §15.203 & RSS-Gen 6.8, it is considered sufficiently to comply with the provisions of this section.

6 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: YYX-FS2345, complies with Section 15.207, 15.209, 15.205, 15.247 of the FCC Part 15, Subpart C.

This submittal(s) (test report) is intended for IC:11458A-FS2345, complies with RSS-247, RSS-GEN.

The Model: FS2345 supports Bluetooth Low Energy/Bluetooth BR+EDR/Wi-Fi functions, power by 5VDC.

The TX and RX range is 2402MHz-2480MHz for Bluetooth, 2412MHz – 2462MHz for 2.4GHz Wi-Fi, 5180MHz – 5320MHz, 5500MHz – 5700MHz, 5745MHz – 5825MHz for 5GHz Wi-Fi. (This device shall not be capable of transmitting in the band 5600-5650MHz for Canada. This restriction is for the protection of Terminal Doppler Weather Radar (TDWR) operating in this band.)

This report is for the 2.4GHz Wi-Fi part.

SUMMARY:

All tests according to the regulations cited on page 6 were

■ - Performed

□ - Not Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

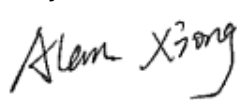
Sample Received Date: 2024-07-02

Testing Start Date: 2024-07-02

Testing End Date: 2024-08-05

- TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch

Reviewed by:



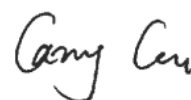
Alan Xiong
Project Manager

Prepared by:



Henry Chen
Project Engineer

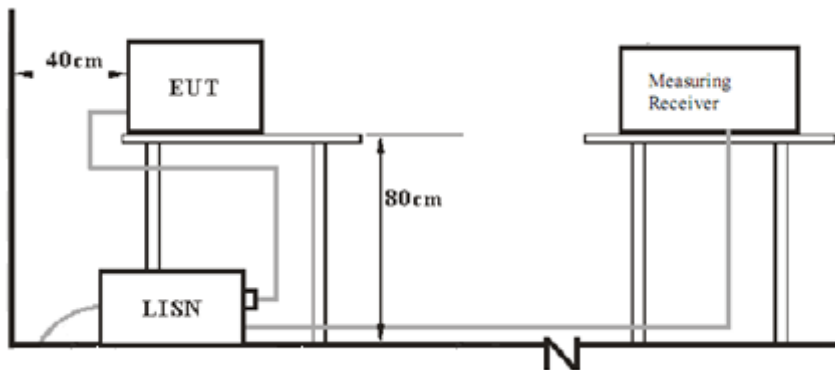
Tested by:



Carry Cai
Test Engineer

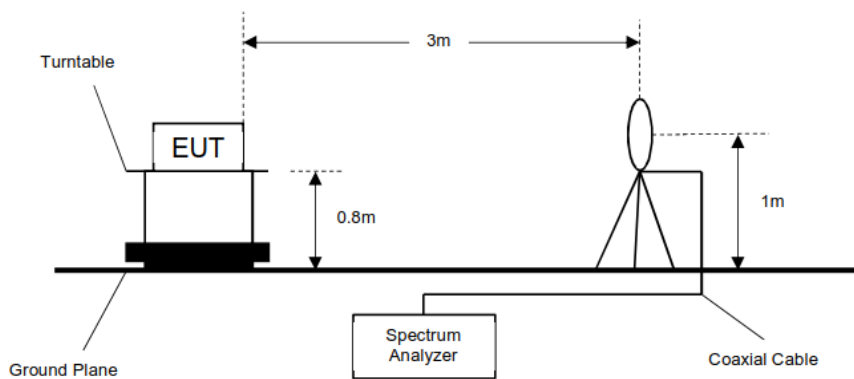
7 Test Setups

7.1 AC Power Line Conducted Emission test setups

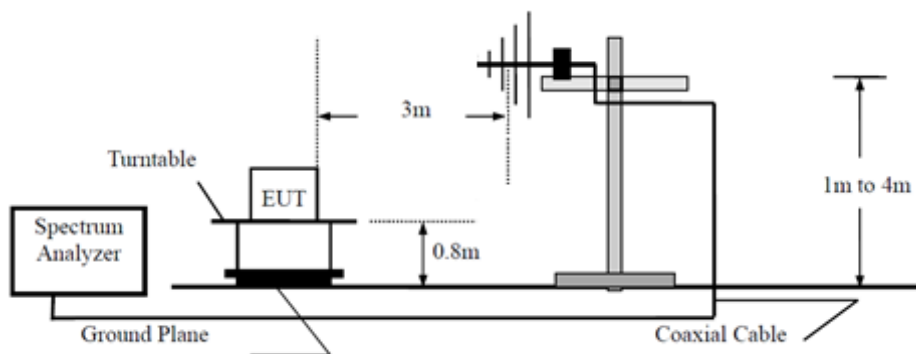


7.2 Radiated test setups

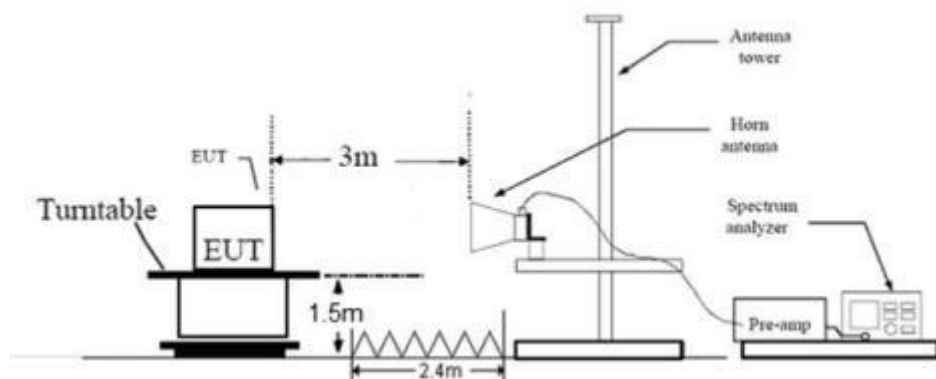
9kHz - 30MHz



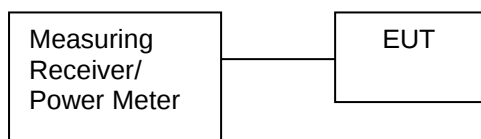
30MHz - 1GHz



Above 1GHz



7.3 Conducted RF test setups



8 Systems Test Configuration

Auxiliary Equipment Used during Test:

Description	Manufacturer	Model NO.	S/N
Laptop	Thinkpad	X230	0A72162

Test Channel information:

Test Mode	Channel (MHz)		
802.11b	CH 1: 2412MHz	CH 6: 2437MHz	CH 11: 2462MHz
802.11g	CH 1: 2412MHz	CH 6: 2437MHz	CH 11: 2462MHz
802.11n20	CH 1: 2412MHz	CH 6: 2437MHz	CH 11: 2462MHz
802.11n40	CH 3: 2422MHz	CH 6: 2437MHz	CH 9: 2452MHz
802.11ax20	CH 1: 2412MHz	CH 6: 2437MHz	CH 11: 2462MHz
802.11ax40	CH 3: 2422MHz	CH 6: 2437MHz	CH 9: 2452MHz

Test software information:

channel	CCK(1M~11M)	OFDM(6M~54M)	HE_B20 (MCS0~MCS11)	HE- RU26	HE- RU52	HE- RU106
1	13.5	15	15	7	10	13
2	13.5	15	15	7	10	13
3	13.5	15	15	7	10	13
4	13.5	15	15	7	10	13
5	13.5	15	15	7	10	13
6	13.5	15	15	7	10	13
7	13.5	15	15	7	10	13
8	13.5	15	15	7	10	13
9	13.5	15	15	7	10	13
10	13.5	15	15	7	10	13
11	13.5	15	15	7	10	13

9 Technical Requirement

9.1 Conducted Emission

Test Method

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. Both sides of AC line were checked for maximum conducted interference.
6. The frequency range from 150 kHz to 30 MHz was searched.
7. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

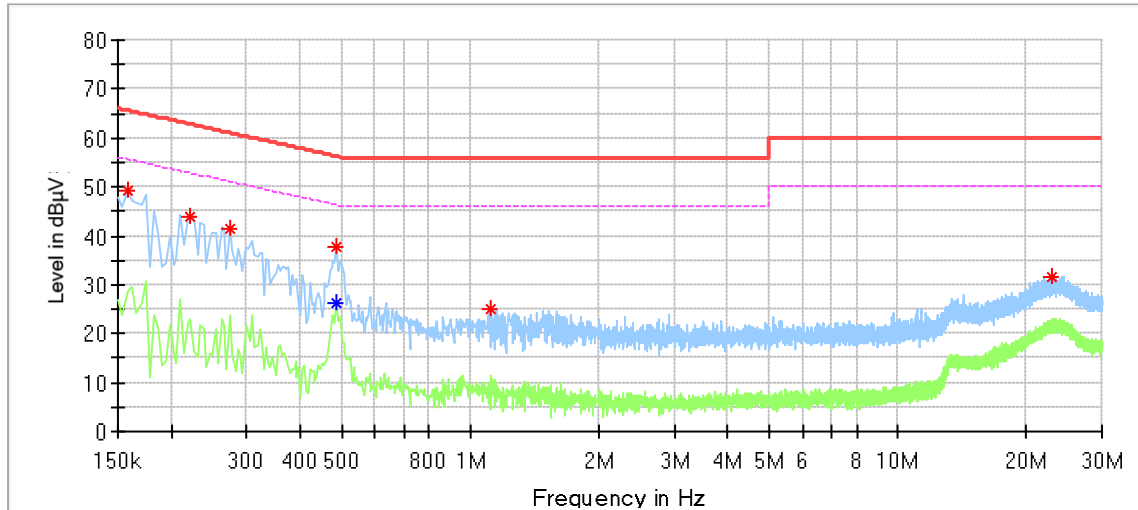
Limit

Frequency MHz	QP Limit dB μ V	AV Limit dB μ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

Conducted Emission

Product Type : AURIA module
 M/N : FS2345
 Operating Condition : Transmitting
 Test Specification : Line
 Comment : 5VDC Power by Laptop (AC 120V/60Hz)



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.158000	49.27	---	65.57	16.30	L1	9.53
0.222000	43.95	---	62.74	18.80	L1	9.55
0.274000	41.58	---	61.00	19.42	L1	9.56
0.486000	37.85	---	56.24	18.38	L1	9.59
0.486000	---	26.10	46.24	20.14	L1	9.59
1.122000	24.88	---	56.00	31.12	L1	9.60
22.830000	31.56	---	60.00	28.44	L1	10.05

Remark:

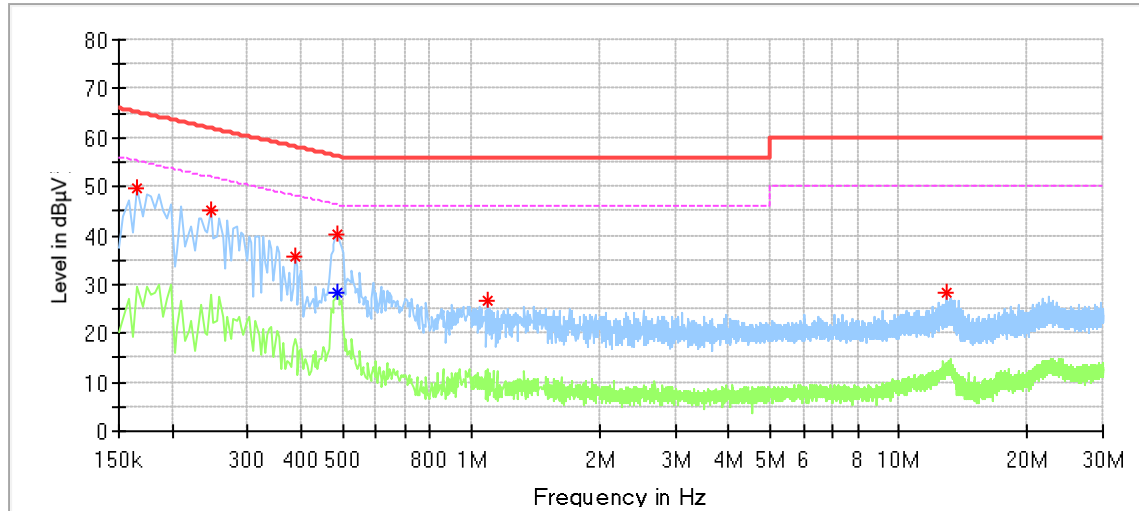
Level=Reading Level + Correction Factor

Correction Factor=Cable Loss + LISN Factor

(The Reading Level is recorded by software which is not shown in the sheet)

Conducted Emission

Product Type : AURIA module
 M/N : FS2345
 Operating Condition : Transmitting
 Test Specification : Neutral
 Comment : 5VDC Power by Laptop (AC 120V/60Hz)



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.166000	49.53	---	65.16	15.62	N	9.57
0.246000	45.13	---	61.89	16.76	N	9.59
0.386000	35.61	---	58.15	22.54	N	9.61
0.486000	40.12	---	56.24	16.12	N	9.62
0.486000	---	28.50	46.24	17.73	N	9.62
1.090000	26.47	---	56.00	29.53	N	9.63
12.986000	28.38	---	60.00	31.62	N	9.99

Remark:

Level=Reading Level + Correction Factor

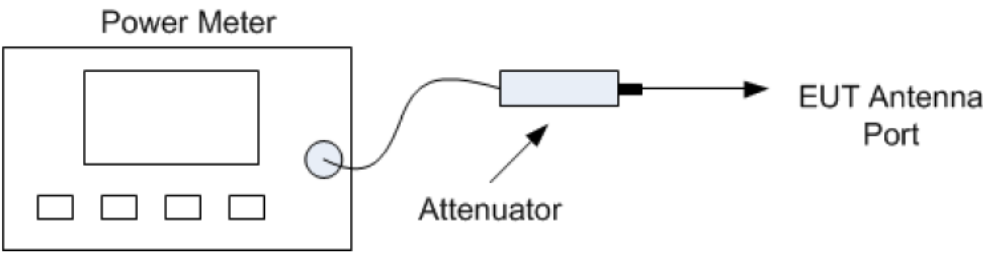
Correction Factor=Cable Loss + LISN Factor

(The Reading Level is recorded by software which is not shown in the sheet)

9.2 Conducted Output Power

Test Method

- 1) The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.
- 2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
- 3) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
- 4) Measure the peak power of the transmitter. This measurement is a peak over both the ON and OFF periods of the transmitter.



Power meter conducted test setup

Limits

According to §15.247 (b) (3) & RSS-247 5.4(d), conducted output power limit as below:

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤1	≤30

According to & RSS-247 5.4(d), EIRP limit as below:

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤4	≤36

Test result as below table

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Peak Conducted Output Power (dBm)		Verdict
					ANT1	Limit	
802.11b	SISO	2412	/	/	13.12	<=30	Pass
		2437	/	/	12.89	<=30	Pass
		2462	/	/	12.61	<=30	Pass
802.11g	SISO	2412	/	/	19.64	<=30	Pass
		2437	/	/	19.66	<=30	Pass
		2462	/	/	18.89	<=30	Pass
802.11n (HT20)	SISO	2412	/	/	20.22	<=30	Pass
		2437	/	/	20.26	<=30	Pass
		2462	/	/	19.52	<=30	Pass
802.11ax (HEW20)	SISO	2412	RU26	0	14.24	<=30	Pass
			RU52	37	20.36	<=30	Pass
			RU106	53	19.89	<=30	Pass
			RU242	61	22.52	<=30	Pass
		2437	RU26	4	15.32	<=30	Pass
			RU52	38	17.69	<=30	Pass
			RU106	53	20.35	<=30	Pass
			RU242	61	22.76	<=30	Pass
		2462	RU26	8	13.98	<=30	Pass
			RU52	40	16.13	<=30	Pass
			RU106	54	19.26	<=30	Pass
			RU242	61	21.96	<=30	Pass

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Peak Conducted Output Power (dBm)		Verdict
					ANT2	Limit	
802.11b	SISO	2412	/	/	13.21	<=30	Pass
		2437	/	/	12.99	<=30	Pass
		2462	/	/	12.73	<=30	Pass
802.11g	SISO	2412	/	/	19.63	<=30	Pass
		2437	/	/	19.76	<=30	Pass
		2462	/	/	18.98	<=30	Pass
802.11n (HT20)	SISO	2412	/	/	20.31	<=30	Pass
		2437	/	/	20.40	<=30	Pass
		2462	/	/	19.75	<=30	Pass
802.11ax (HEW20)	SISO	2412	RU26	0	14.49	<=30	Pass
			RU52	37	16.89	<=30	Pass
			RU106	53	20.44	<=30	Pass
			RU242	61	22.95	<=30	Pass
		2437	RU26	4	15.66	<=30	Pass
			RU52	38	17.98	<=30	Pass
			RU106	54	20.50	<=30	Pass
			RU242	61	23.01	<=30	Pass
		2462	RU26	8	14.20	<=30	Pass
			RU52	40	16.41	<=30	Pass
			RU106	54	19.50	<=30	Pass
			RU242	61	22.24	<=30	Pass

Mode	TX Type	Frequency (MHz)	RU	RU Pos	EIRP (dBm)		Verdict
					ANT1	Limit	
802.11b	SISO	2412	/	/	14.98	<=36	Pass
		2437	/	/	14.75	<=36	Pass
		2462	/	/	14.47	<=36	Pass
802.11g	SISO	2412	/	/	21.5	<=36	Pass
		2437	/	/	21.52	<=36	Pass
		2462	/	/	20.75	<=36	Pass
802.11n (HT20)	SISO	2412	/	/	22.08	<=36	Pass
		2437	/	/	22.12	<=36	Pass
		2462	/	/	21.38	<=36	Pass
802.11ax (HEW20)	SISO	2412	RU26	0	16.1	<=36	Pass
			RU52	37	22.22	<=36	Pass
			RU106	53	21.75	<=36	Pass
			RU242	61	24.38	<=36	Pass
		2437	RU26	4	17.18	<=36	Pass
			RU52	38	19.55	<=36	Pass
			RU106	53	22.21	<=36	Pass
			RU242	61	24.62	<=36	Pass
		2462	RU26	8	15.84	<=36	Pass
			RU52	40	17.99	<=36	Pass
			RU106	54	21.12	<=36	Pass
			RU242	61	23.82	<=36	Pass

Note: ANT1 gain is 1.86 dBi

Mode	TX Type	Frequency (MHz)	RU	RU Pos	EIRP (dBm)		Verdict
					ANT2	Limit	
802.11b	SISO	2412	/	/	15.42	<=36	Pass
		2437	/	/	15.2	<=36	Pass
		2462	/	/	14.94	<=36	Pass
802.11g	SISO	2412	/	/	21.84	<=36	Pass
		2437	/	/	21.97	<=36	Pass
		2462	/	/	21.19	<=36	Pass
802.11n (HT20)	SISO	2412	/	/	22.52	<=36	Pass
		2437	/	/	22.61	<=36	Pass
		2462	/	/	21.96	<=36	Pass
802.11ax (HEW20)	SISO	2412	RU26	0	16.7	<=36	Pass
			RU52	37	19.1	<=36	Pass
			RU106	53	22.65	<=36	Pass
			RU242	61	25.16	<=36	Pass
		2437	RU26	4	17.87	<=36	Pass
			RU52	38	20.19	<=36	Pass
			RU106	54	22.71	<=36	Pass
			RU242	61	25.22	<=36	Pass
		2462	RU26	8	16.41	<=36	Pass
			RU52	40	18.62	<=36	Pass
			RU106	54	21.71	<=36	Pass
			RU242	61	24.45	<=36	Pass

Note: ANT2 gain is 2.21 dBi

9.3 6dB Bandwidth

Test Method for 6 dB Bandwidth

1. The RF output of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
RBW=100KHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Use the automatic bandwidth measurement capability of an instrument, use the X dB bandwidth mode with X set to 6 dB.
5. Allow the trace to stabilize, record the 6 dB Bandwidth value.

Limit

Limit [kHz]

≥ 500

Test Method for 99 % Bandwidth

1. Set center frequency to the nominal EUT channel center frequency
2. Set span = 1.5 times to 5.0 times the OBW. Set RBW = 1 % to 5 % of the OBW
Set VBW $\geq$ 3 RBW Trace mode = max hold. Sweep = auto couple.
Allow the trace to stabilize.
3. Use the 99 % power bandwidth function of the instrument.
4. Record the results in the test report.

Limit

Limit [kHz]

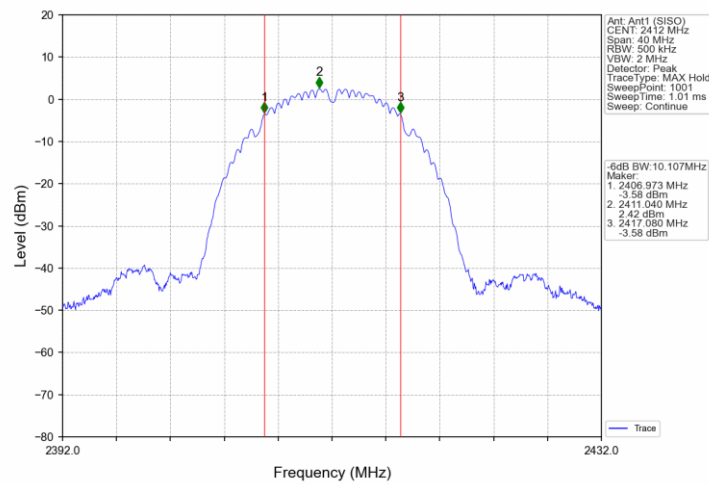
6 dB Bandwidth

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	6dB Bandwidth (MHz)		Verdict
						Result	Limit	
802.11b	SISO	2412	/	/	1	10.107	≥ 0.5	Pass
		2437	/	/	1	9.843	≥ 0.5	Pass
		2462	/	/	1	9.829	≥ 0.5	Pass
802.11g	SISO	2412	/	/	1	16.437	≥ 0.5	Pass
		2437	/	/	1	16.427	≥ 0.5	Pass
		2462	/	/	1	16.440	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	/	/	1	17.452	≥ 0.5	Pass
		2437	/	/	1	17.429	≥ 0.5	Pass
		2462	/	/	1	17.407	≥ 0.5	Pass
802.11ax (HEW20)	SISO	2412	RU242	61	1	18.941	≥ 0.5	Pass
		2437	RU242	61	1	18.883	≥ 0.5	Pass
		2462	RU242	61	1	18.911	≥ 0.5	Pass

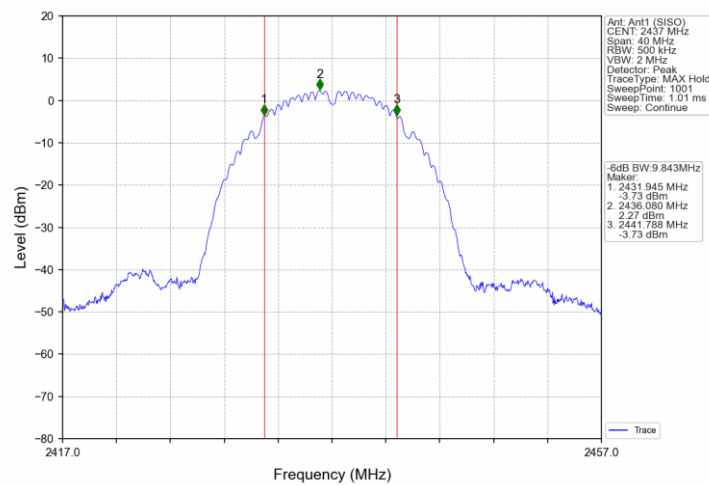
Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	6dB Bandwidth (MHz)		Verdict
						Result	Limit	
802.11b	SISO	2412	/	/	2	10.109	≥ 0.5	Pass
		2437	/	/	2	9.854	≥ 0.5	Pass
		2462	/	/	2	9.833	≥ 0.5	Pass
802.11g	SISO	2412	/	/	2	16.439	≥ 0.5	Pass
		2437	/	/	2	16.430	≥ 0.5	Pass
		2462	/	/	2	16.431	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	/	/	2	17.446	≥ 0.5	Pass
		2437	/	/	2	17.429	≥ 0.5	Pass
		2462	/	/	2	17.401	≥ 0.5	Pass
802.11ax (HEW20)	SISO	2412	RU242	61	2	18.905	≥ 0.5	Pass
		2437	RU242	61	2	18.930	≥ 0.5	Pass
		2462	RU242	61	2	18.903	≥ 0.5	Pass

6 dB Bandwidth

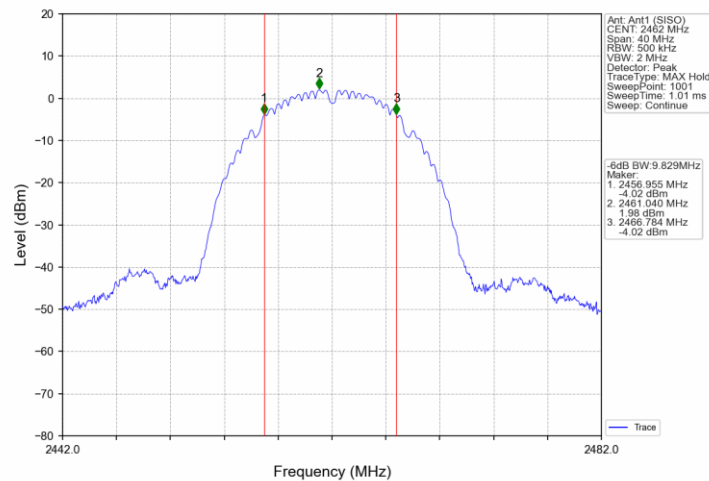
802.11b LCH 2412MHz Ant1 (SISO) NTN



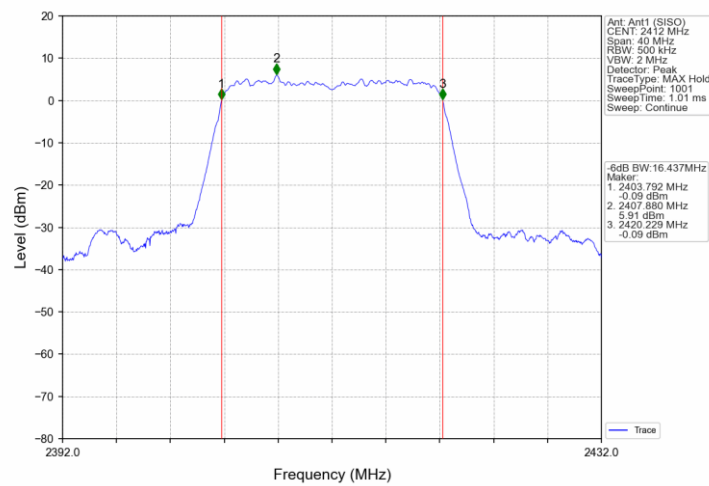
802.11b MCH 2437MHz Ant1 (SISO) NTN



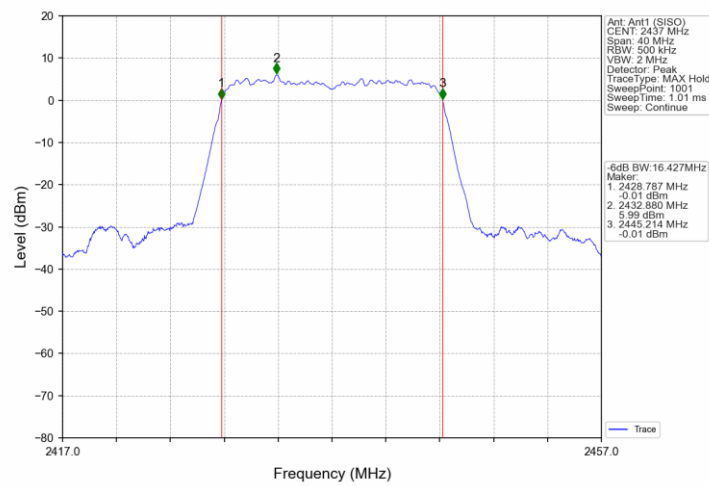
802.11b HCH 2462MHz Ant1 (SISO) NTN



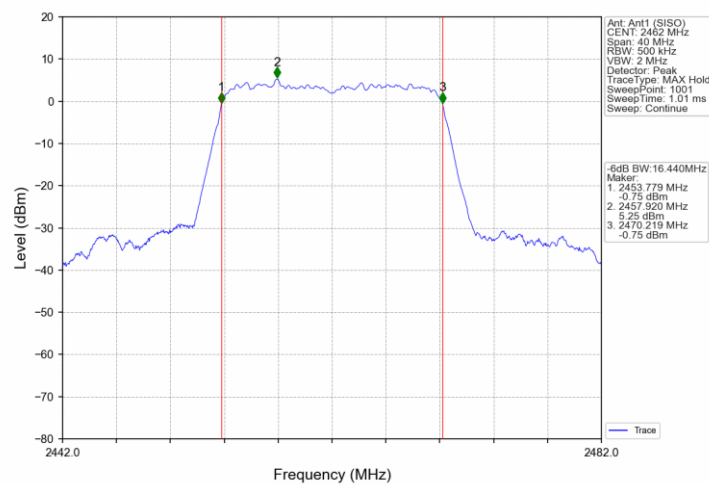
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



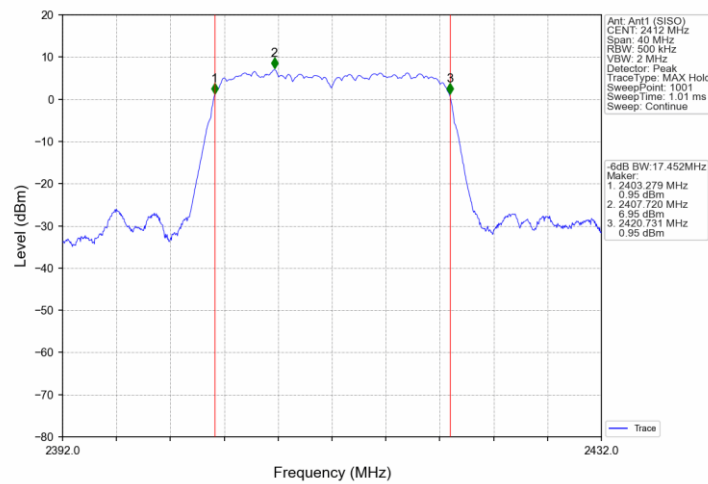
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



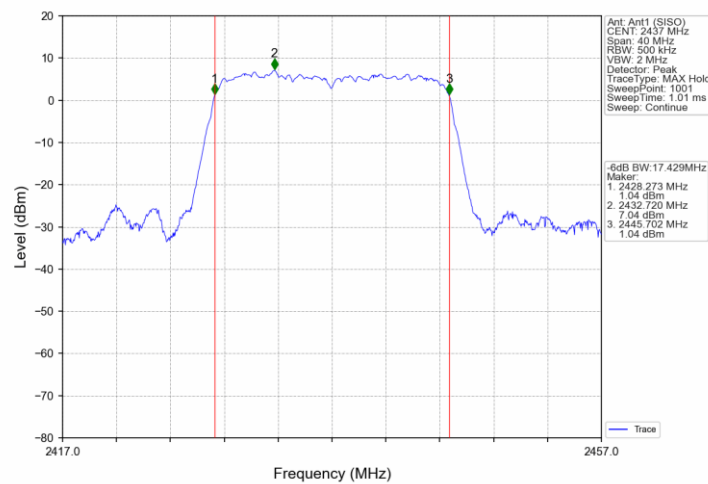
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



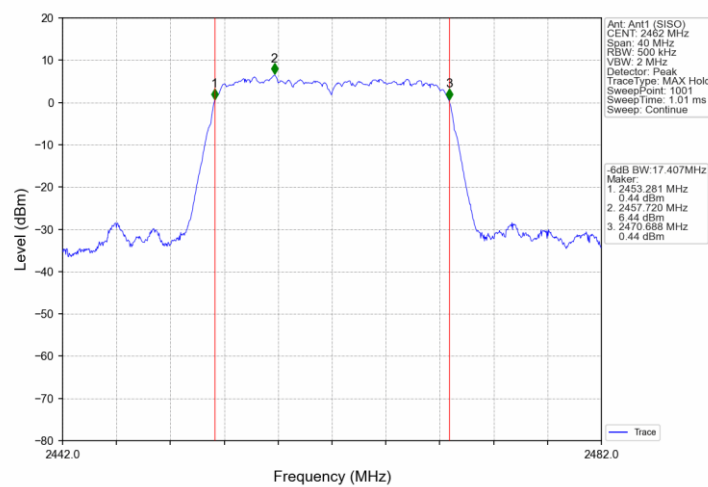
802.11n(HT20)_LCH_2412MHz_Ant2 (SISO)_NTNV



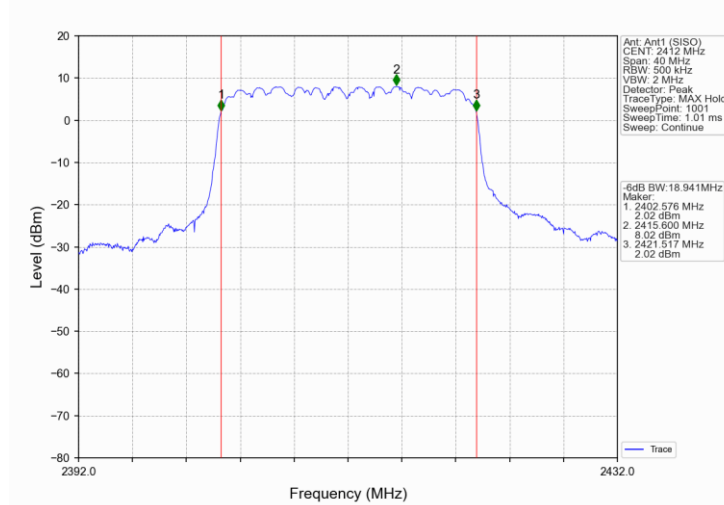
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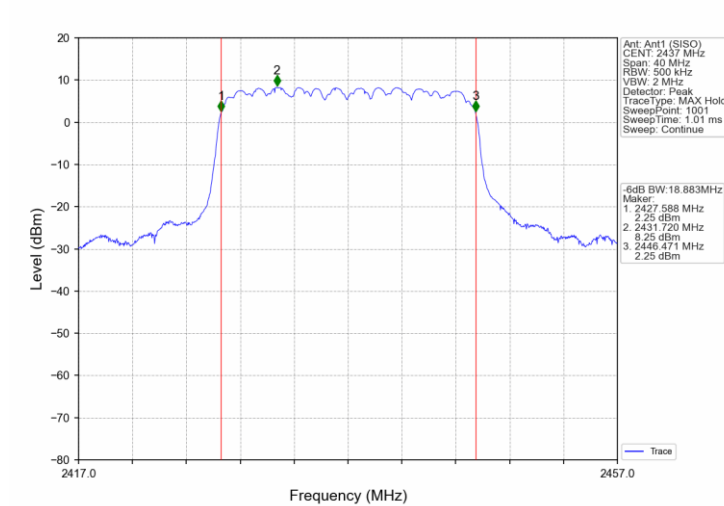
802.11n(HT20)_HCH_2462MHz_Ant2 (SISO)_NTNV



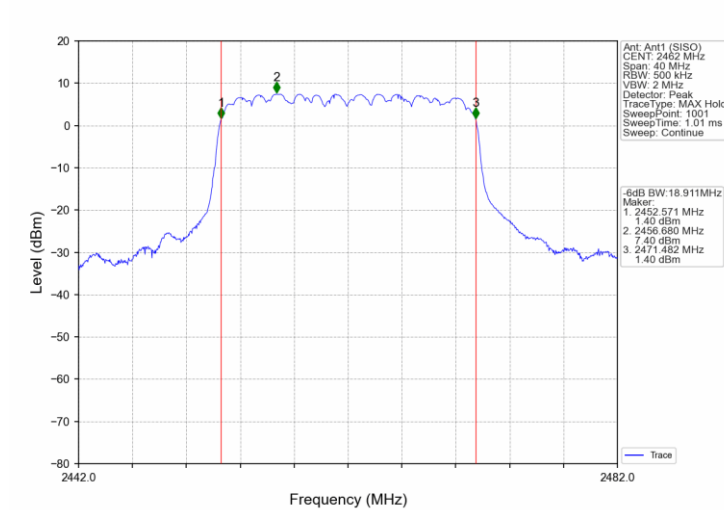
802.11ax(HEW20)_LCH_2412MHz_RU242_61_Ant2 (SISO)_NTNV



802.11ax(HEW20)_MCH_2437MHz_RU242_61_Ant2 (SISO)_NTNV



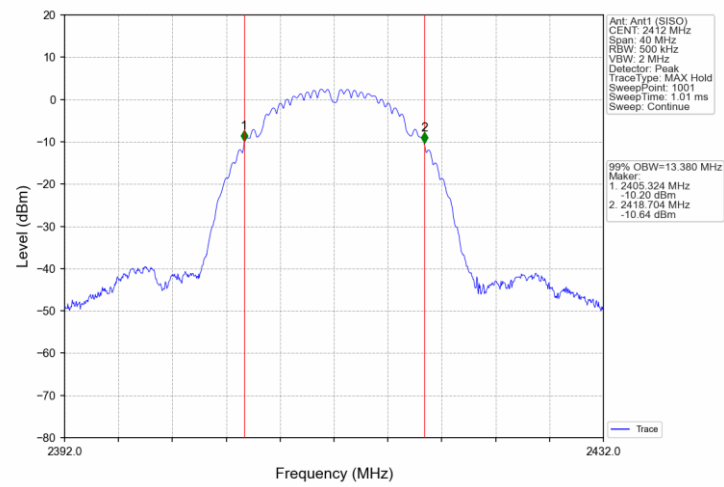
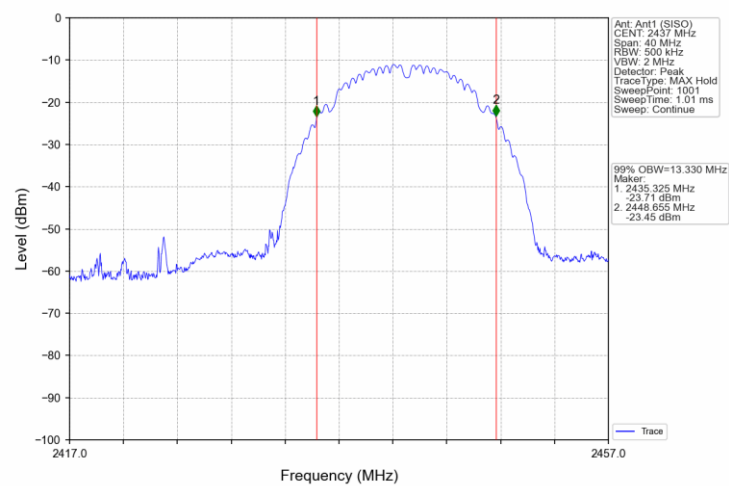
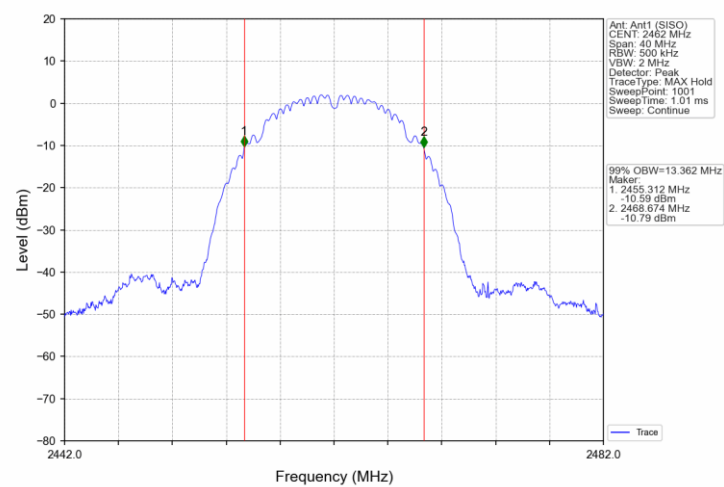
802.11ax(HEW20)_HCH_2462MHz_RU242_61_Ant2 (SISO)_NTNV



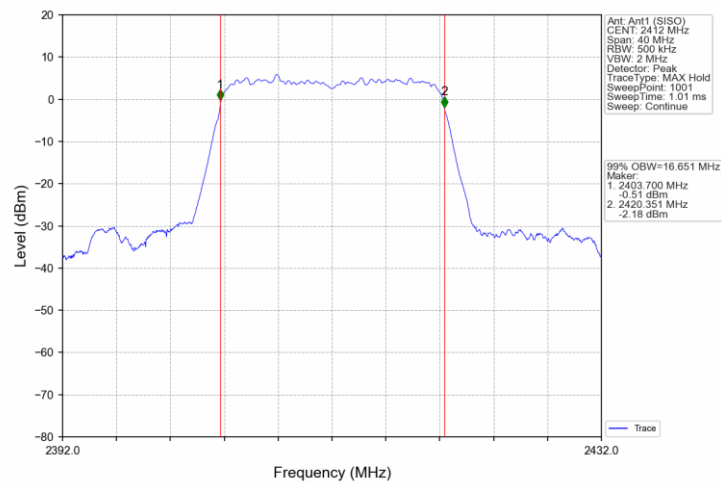
99% Bandwidth

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	99% Occupied Bandwidth (MHz)		Verdict
						Result	Limit	
802.11b	SISO	2412	/	/	1	13.380	/	Pass
		2437	/	/	1	13.330	/	Pass
		2462	/	/	1	13.362	/	Pass
802.11g	SISO	2412	/	/	1	16.651	/	Pass
		2437	/	/	1	16.650	/	Pass
		2462	/	/	1	16.630	/	Pass
802.11n (HT20)	SISO	2412	/	/	1	17.568	/	Pass
		2437	/	/	1	17.566	/	Pass
		2462	/	/	1	17.554	/	Pass
802.11ax (HEW20)	SISO	2412	RU242	61	1	18.831	/	Pass
		2437	RU242	61	1	18.813	/	Pass
		2462	RU242	61	1	18.811	/	Pass

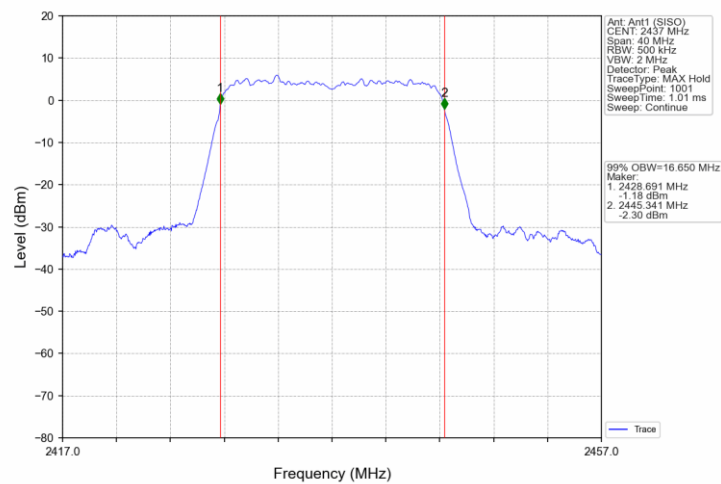
Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	99% Occupied Bandwidth (MHz)		Verdict
						Result	Limit	
802.11b	SISO	2412	/	/	2	13.369	/	Pass
		2437	/	/	2	13.370	/	Pass
		2462	/	/	2	13.357	/	Pass
802.11g	SISO	2412	/	/	2	16.646	/	Pass
		2437	/	/	2	16.640	/	Pass
		2462	/	/	2	16.633	/	Pass
802.11n (HT20)	SISO	2412	/	/	2	17.566	/	Pass
		2437	/	/	2	17.572	/	Pass
		2462	/	/	2	17.546	/	Pass
802.11ax (HEW20)	SISO	2412	RU242	61	2	18.810	/	Pass
		2437	RU242	61	2	18.818	/	Pass
		2462	RU242	61	2	18.800	/	Pass

99% Bandwidth**802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV****802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV****802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV**

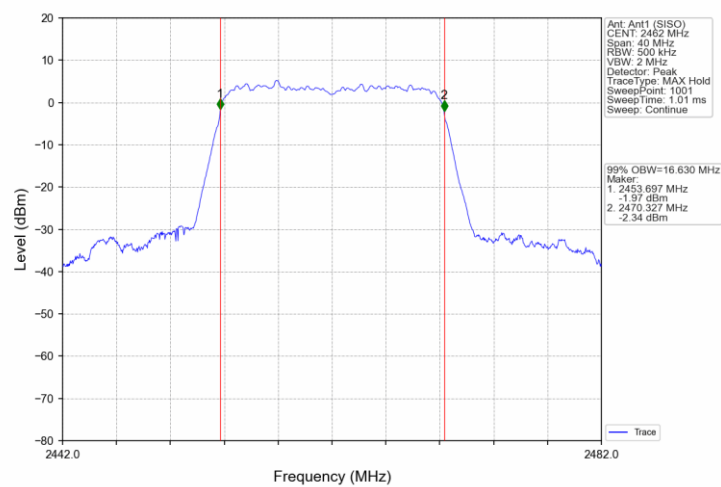
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



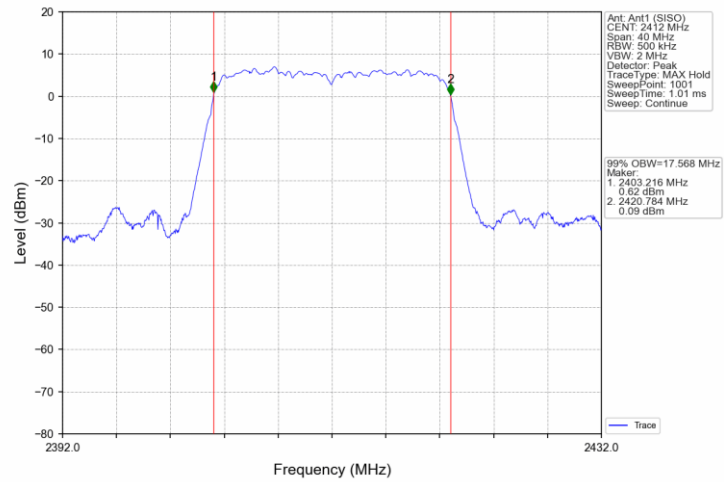
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



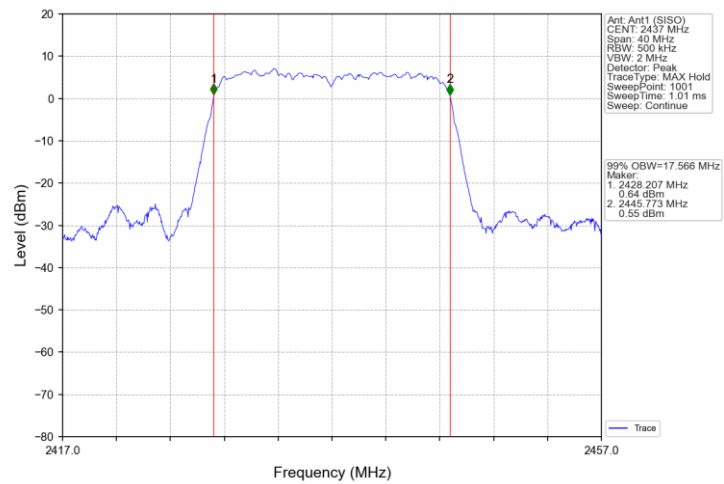
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



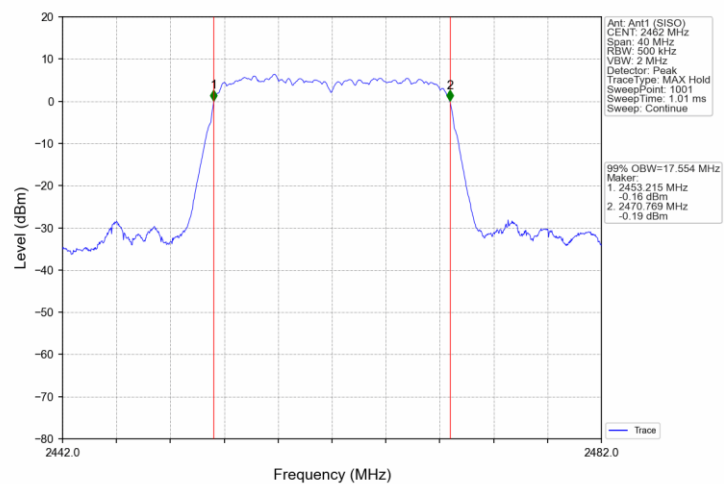
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



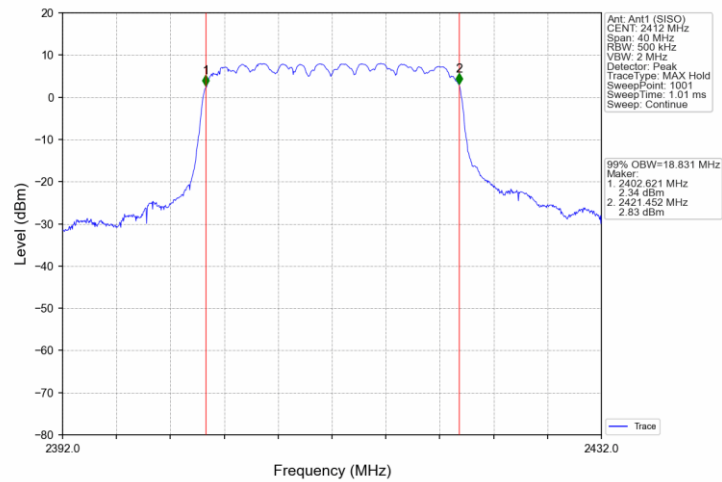
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTNV



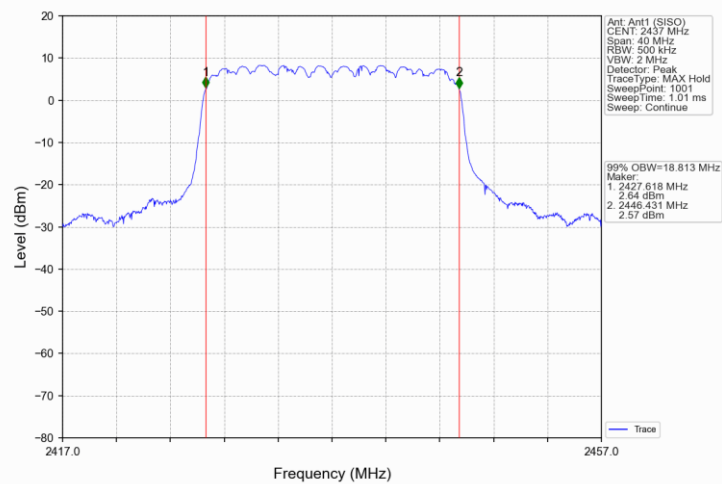
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTNV



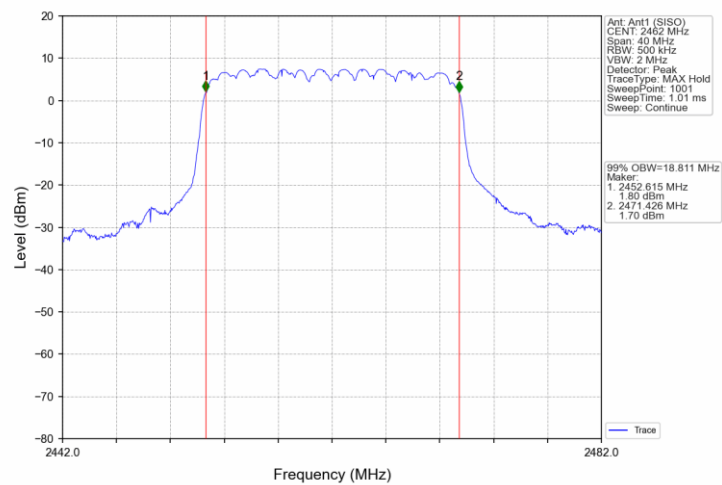
802.11ax(HEW20)_LCH_2412MHz_RU242_61_Ant1 (SISO)_NTNV



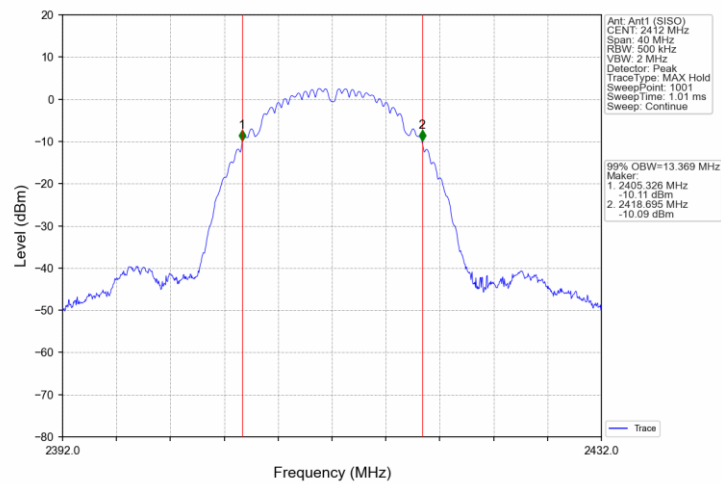
802.11ax(HEW20)_MCH_2437MHz_RU242_61_Ant1 (SISO)_NTNV



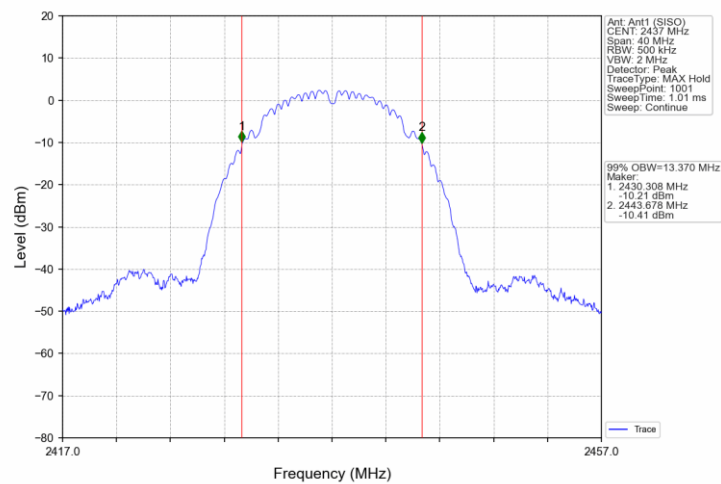
802.11ax(HEW20)_HCH_2462MHz_RU242_61_Ant1 (SISO)_NTNV



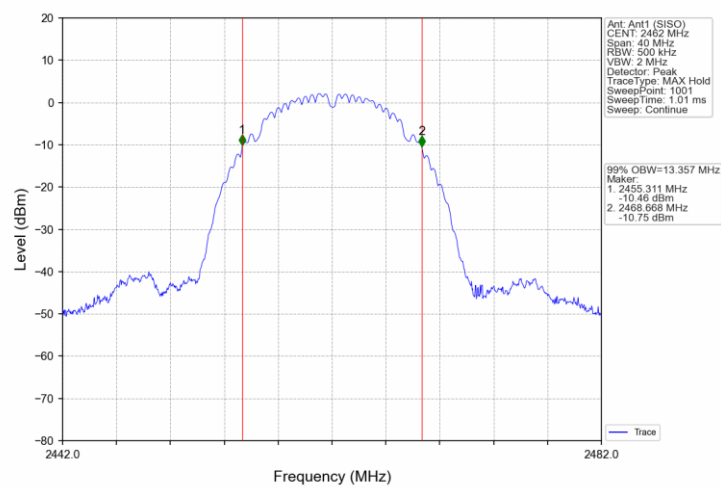
802.11b_LCH_2412MHz_Ant12(SISO)_NTNV



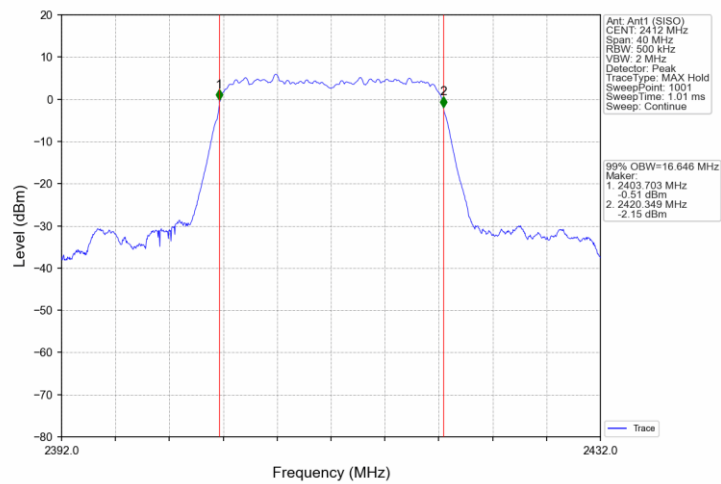
802.11b_MCH_2437MHz_Ant2 (SISO)_NTNV



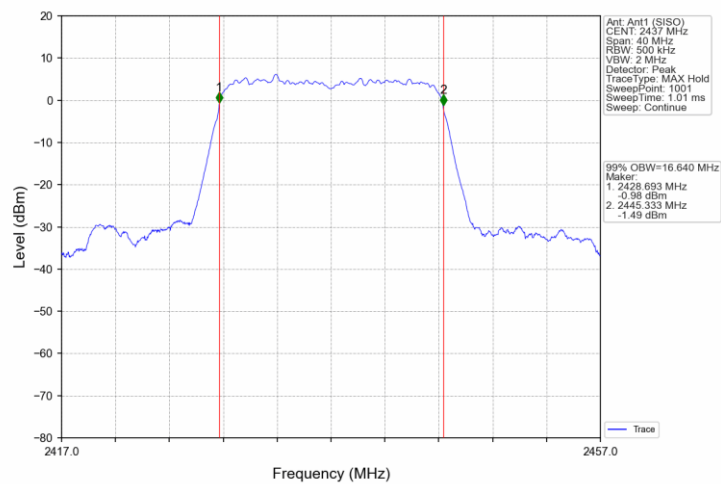
802.11b_HCH_2462MHz_Ant2 (SISO)_NTNV



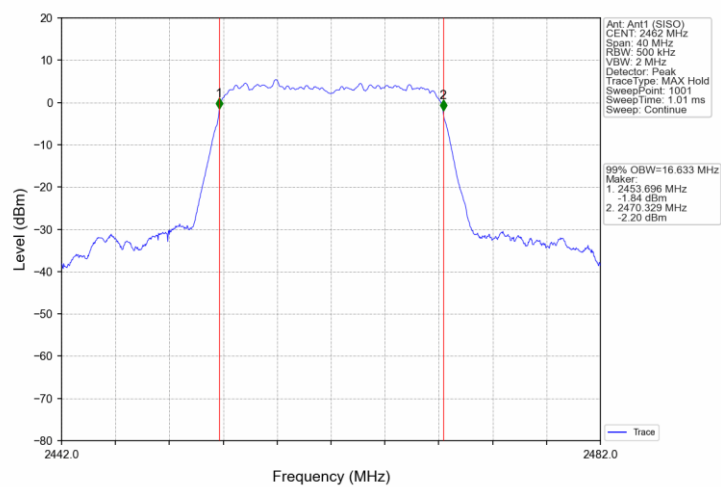
802.11g_LCH_2412MHz_Ant2(SISO)_NTNV



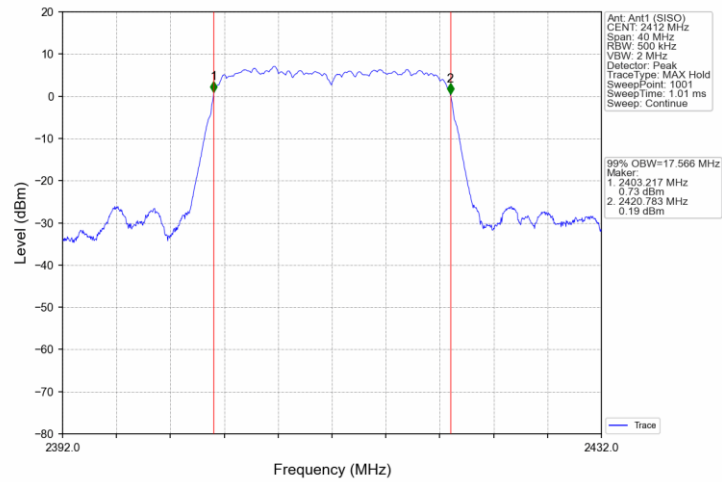
802.11g_MCH_2437MHz_Ant2 (SISO)_NTNV



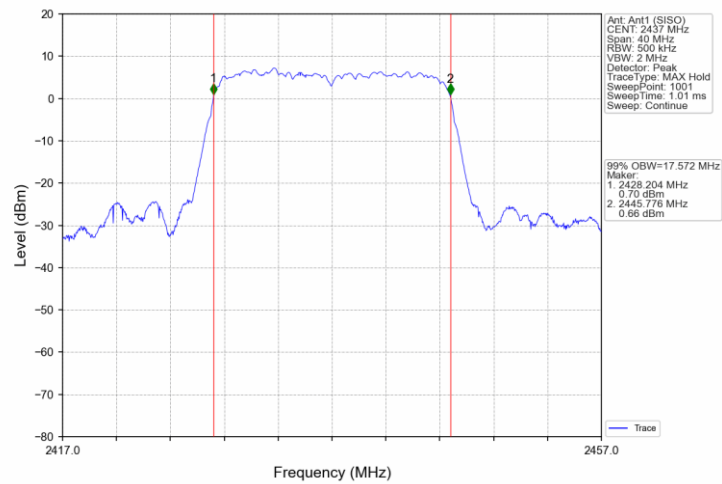
802.11g_HCH_2462MHz_Ant2 (SISO)_NTNV



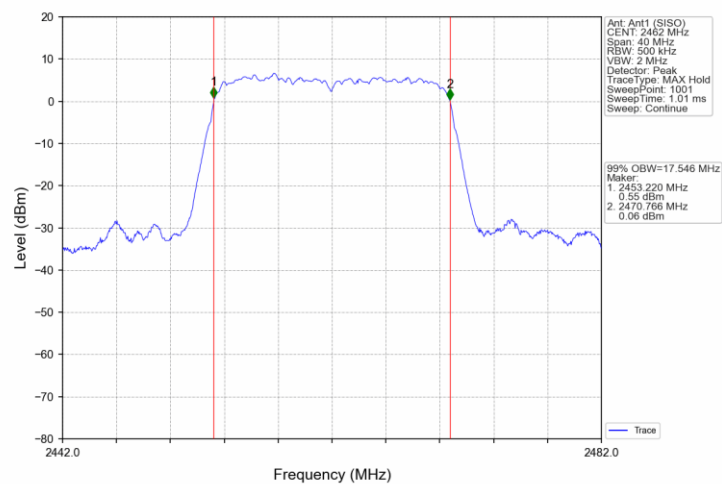
802.11n(HT20) LCH 2412MHz Ant2 (SISO) NTNV



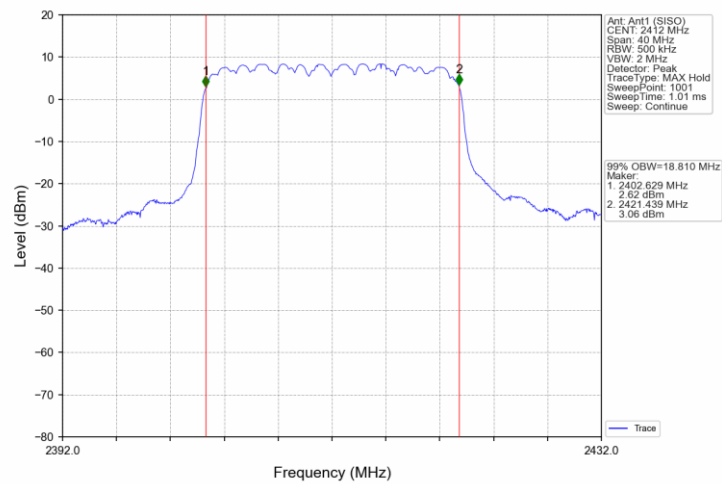
802.11n(HT20) MCH 2437MHz Ant2 (SISO) NTNV



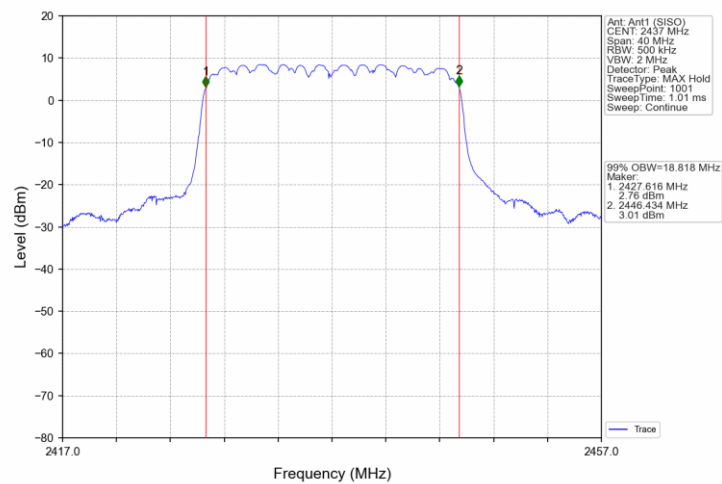
802.11n(HT20) HCH 2462MHz Ant2 (SISO) NTNV



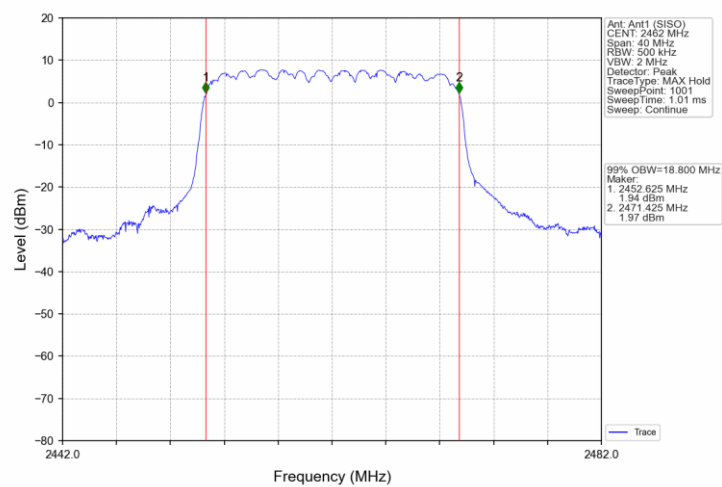
802.11ax(HEW20) LCH 2412MHz RU242 61 Ant12(SISO) NTNV



802.11ax(HEW20) MCH 2437MHz RU242 61 Ant2 (SISO) NTNV



802.11ax(HEW20) HCH 2462MHz RU242 61 Ant2 (SISO) NTNV



9.4 Power Spectral Density

Test Method

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance:

1. The RF output of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
4. Set analyzer center frequency to DTS channel center frequency. RBW=3kHz, VBW $\geq$ 3RBW, Span=1.5 times DTS bandwidth, Detector=Peak, Sweep=auto, Trace= max hold.
5. Allow trace to fully stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.
6. Repeat above procedures until other frequencies measured were completed.

Limit

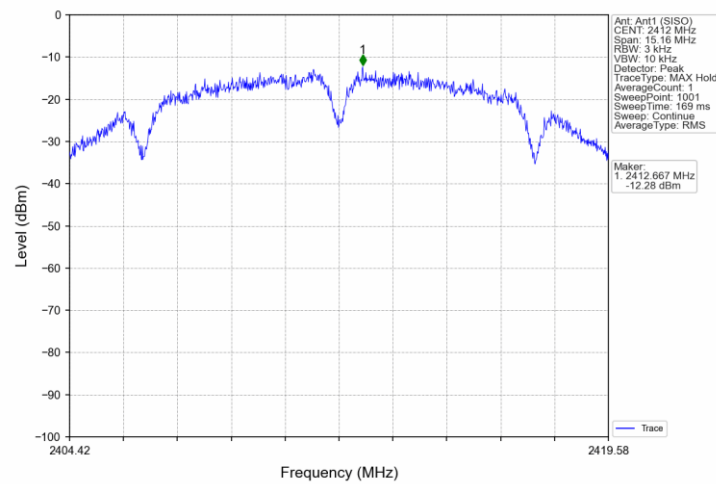
Limit [dBm/3KHz]

≤ 8

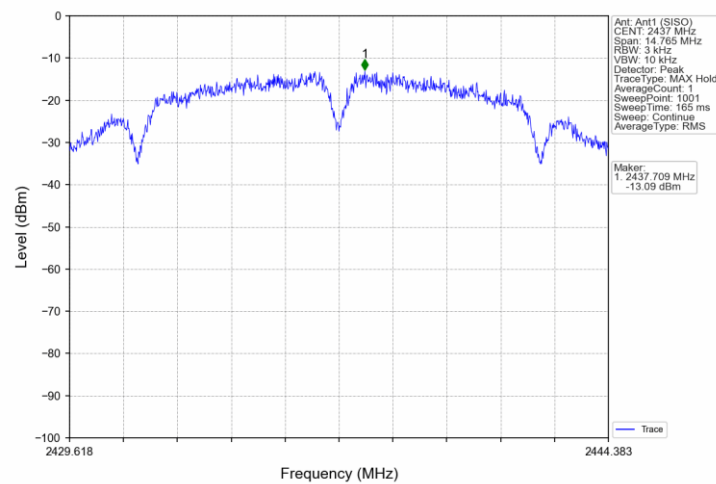
Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum PSD (dBm/3kHz)		Verdict
					ANT1	Limit	
802.11b	SISO	2412	/	/	-12.28	<=8	Pass
		2437	/	/	-13.09	<=8	Pass
		2462	/	/	-13.17	<=8	Pass
802.11g	SISO	2412	/	/	-14.60	<=8	Pass
		2437	/	/	-14.46	<=8	Pass
		2462	/	/	-15.58	<=8	Pass
802.11n (HT20)	SISO	2412	/	/	-14.96	<=8	Pass
		2437	/	/	-14.48	<=8	Pass
		2462	/	/	-15.87	<=8	Pass
802.11ax (HEW20)	SISO	2412	RU26	0	-14.55	<=8	Pass
			RU52	37	-9.39	<=8	Pass
			RU106	53	-14.16	<=8	Pass
			RU242	61	-15.06	<=8	Pass
		2437	RU26	4	-14.31	<=8	Pass
			RU52	38	-14.19	<=8	Pass
			RU106	53	-13.88	<=8	Pass
			RU242	61	-14.87	<=8	Pass
		2462	RU26	8	-15.87	<=8	Pass
			RU52	40	-15.65	<=8	Pass
			RU106	54	-14.07	<=8	Pass
			RU242	61	-15.44	<=8	Pass

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum PSD (dBm/3kHz)		Verdict
					ANT2	Limit	
802.11b	SISO	2412	/	/	-12.78	<=8	Pass
		2437	/	/	-12.45	<=8	Pass
		2462	/	/	-13.20	<=8	Pass
802.11g	SISO	2412	/	/	-15.61	<=8	Pass
		2437	/	/	-15.00	<=8	Pass
		2462	/	/	-15.01	<=8	Pass
802.11n (HT20)	SISO	2412	/	/	-14.58	<=8	Pass
		2437	/	/	-14.47	<=8	Pass
		2462	/	/	-15.25	<=8	Pass
802.11ax (HEW20)	SISO	2412	RU26	0	-14.81	<=8	Pass
			RU52	37	-13.03	<=8	Pass
			RU106	53	-13.61	<=8	Pass
			RU242	61	-14.82	<=8	Pass
		2437	RU26	4	-13.44	<=8	Pass
			RU52	38	-12.74	<=8	Pass
			RU106	54	-13.64	<=8	Pass
			RU242	61	-14.50	<=8	Pass
		2462	RU26	8	-15.80	<=8	Pass
			RU52	40	-14.16	<=8	Pass
			RU106	54	-14.39	<=8	Pass
			RU242	61	-15.44	<=8	Pass

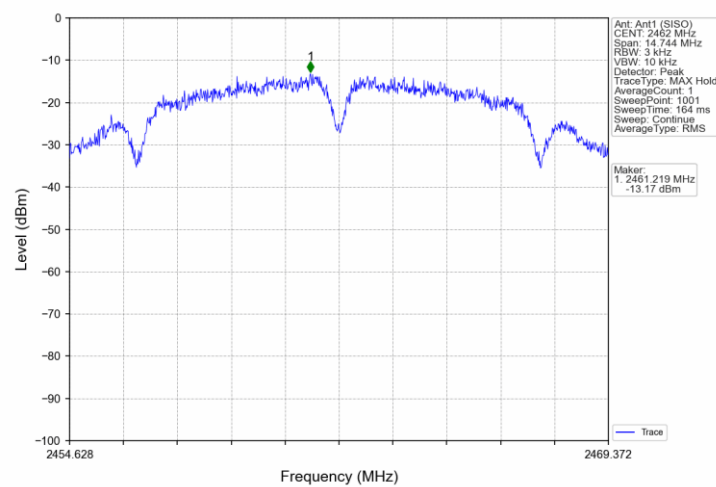
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



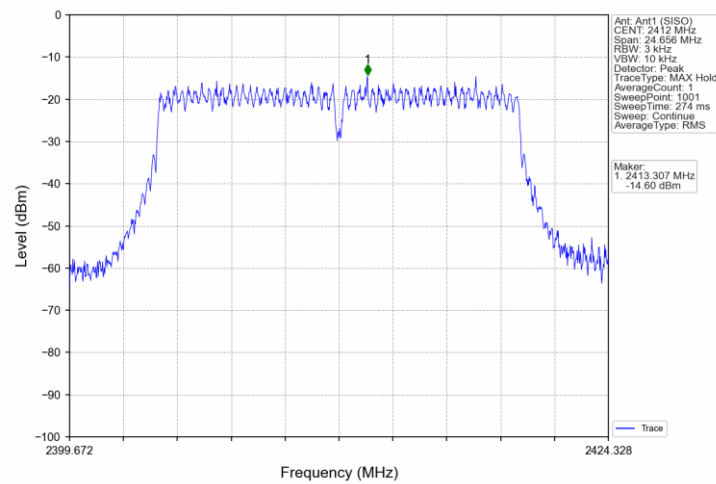
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



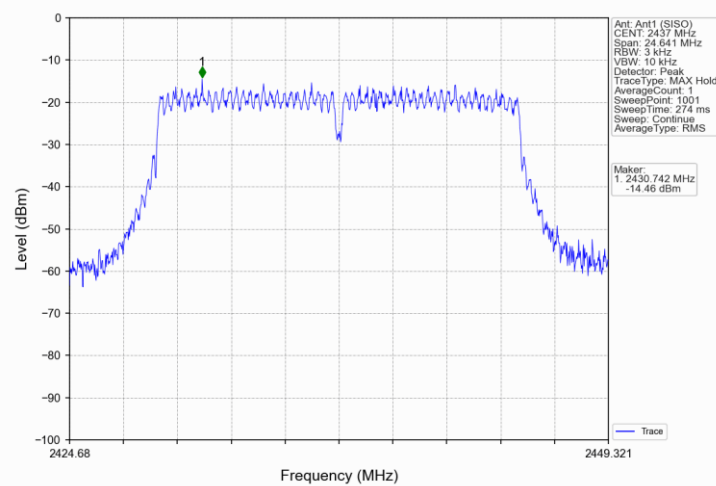
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



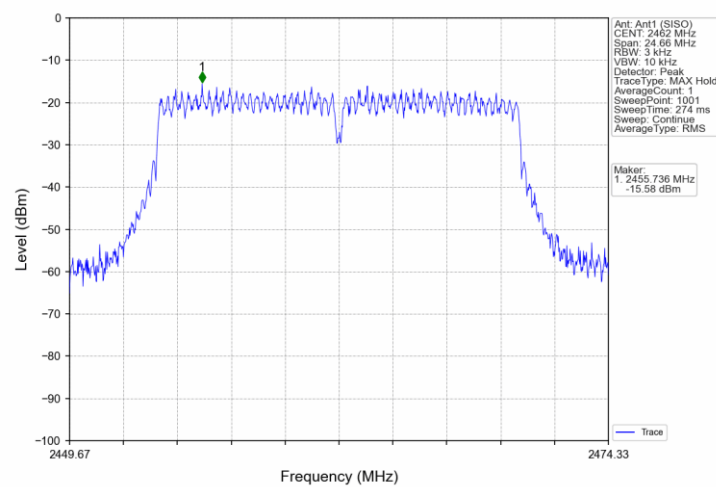
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



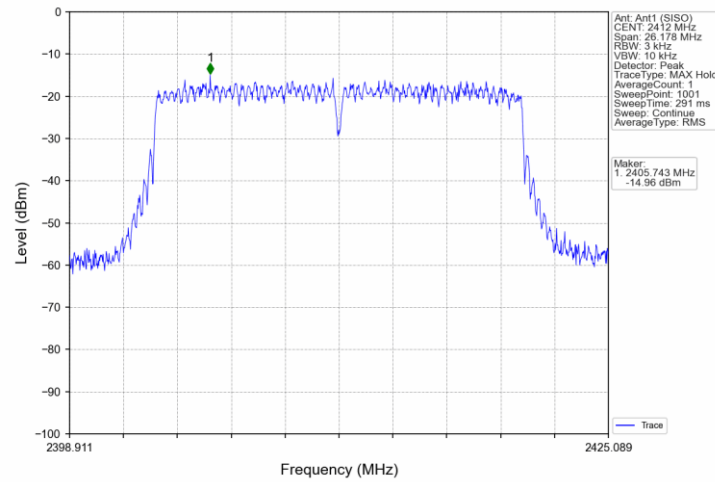
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



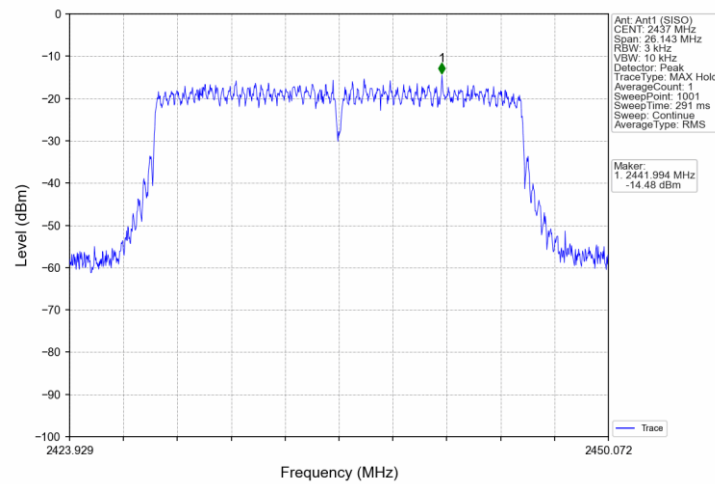
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



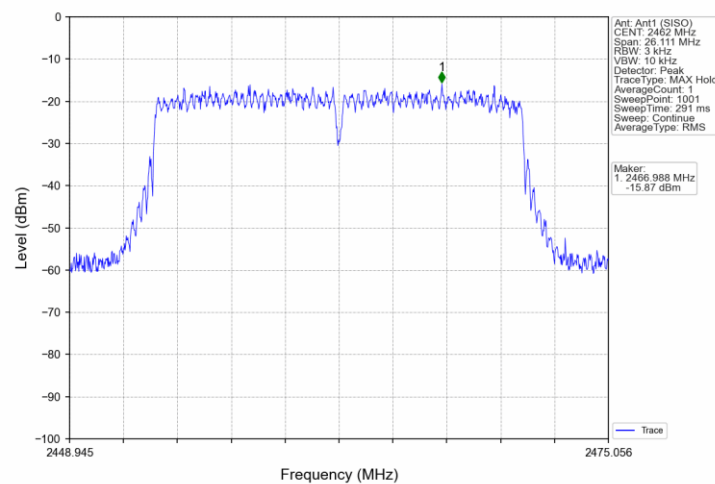
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTV



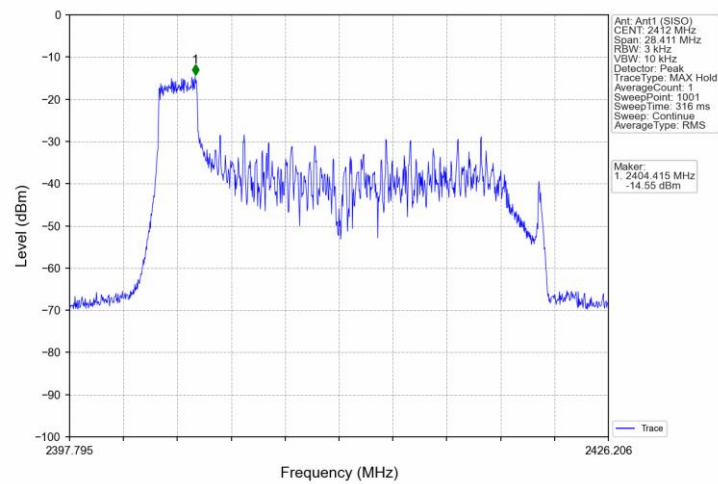
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTV



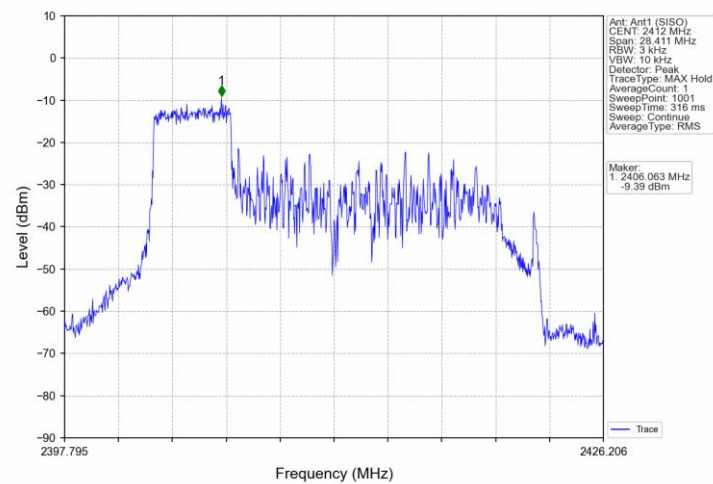
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTV



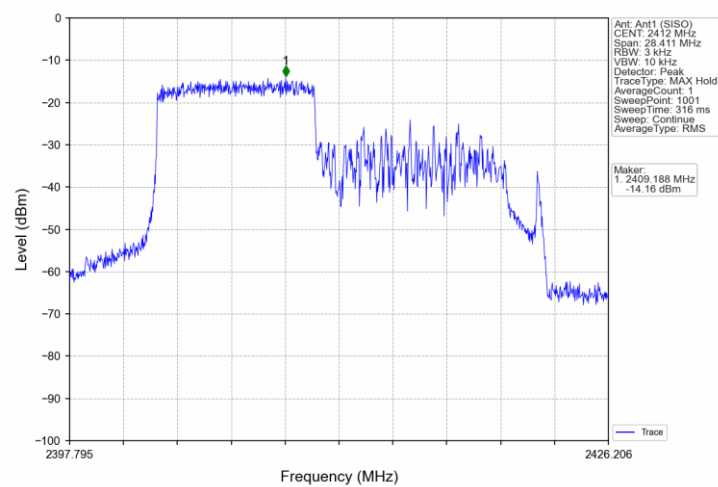
802.11ax(HEW20)_LCH_2412MHz_RU26_0_Ant1 (SISO)_NTNV



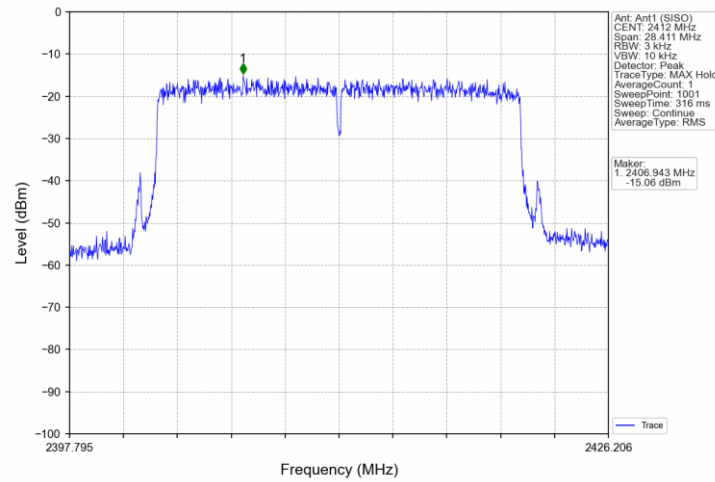
802.11ax(HEW20)_LCH_2412MHz_RU52_37_Ant1 (SISO)_NTNV



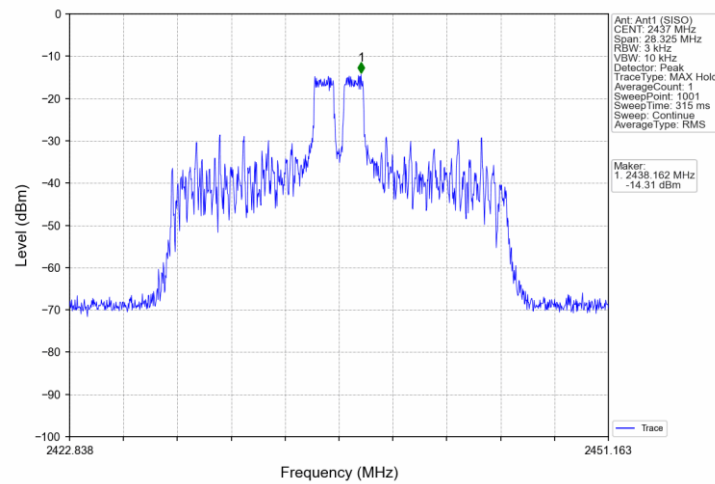
802.11ax(HEW20)_LCH_2412MHz_RU106_53_Ant1 (SISO)_NTNV



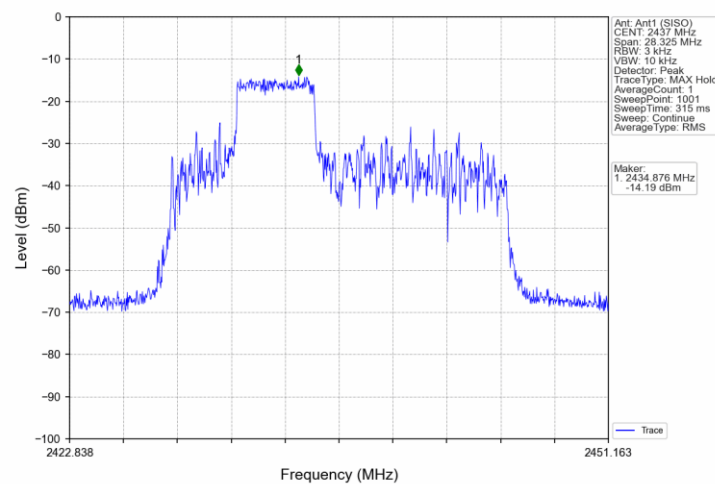
802.11ax(HEW20)_LCH_2412MHz_RU242_61_Ant1 (SISO)_NTNV



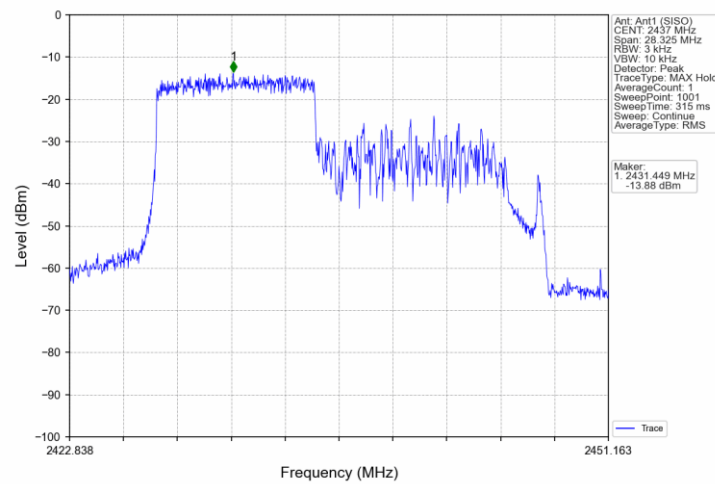
802.11ax(HEW20)_MCH_2437MHz_RU26_4_Ant1 (SISO)_NTNV



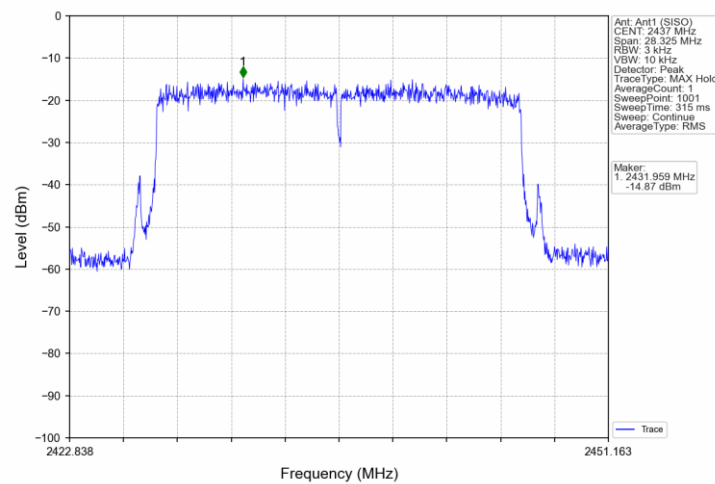
802.11ax(HEW20)_MCH_2437MHz_RU52_38_Ant1 (SISO)_NTNV



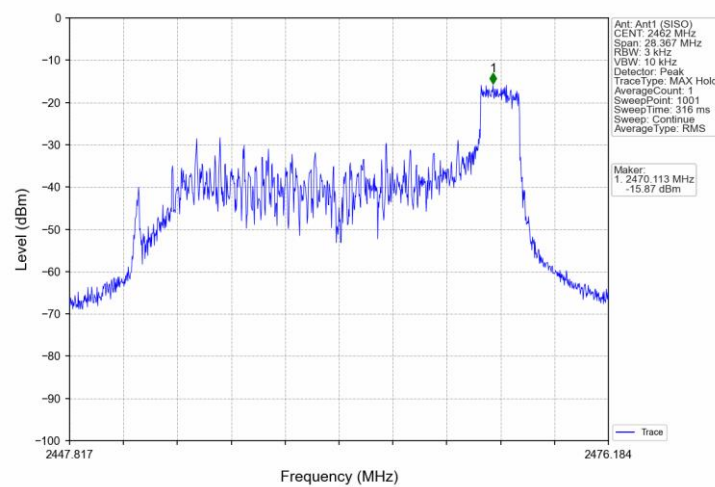
802.11ax(HEW20)_MCH_2437MHz_RU106_53_Ant1 (SISO)_NTNV



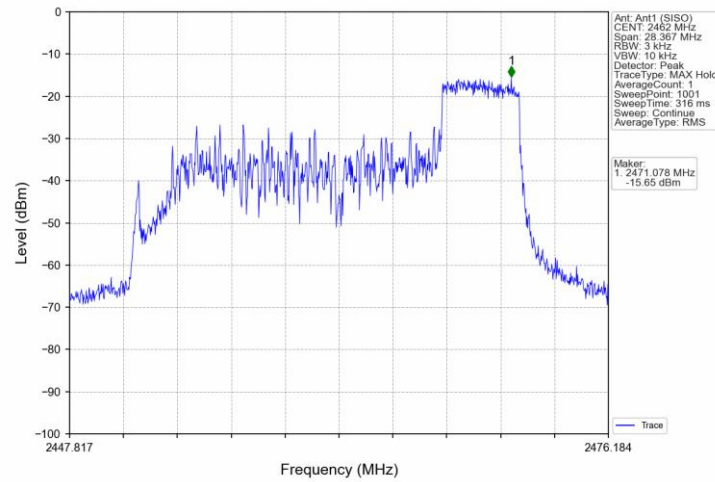
802.11ax(HEW20)_MCH_2437MHz_RU242_61_Ant1 (SISO)_NTNV



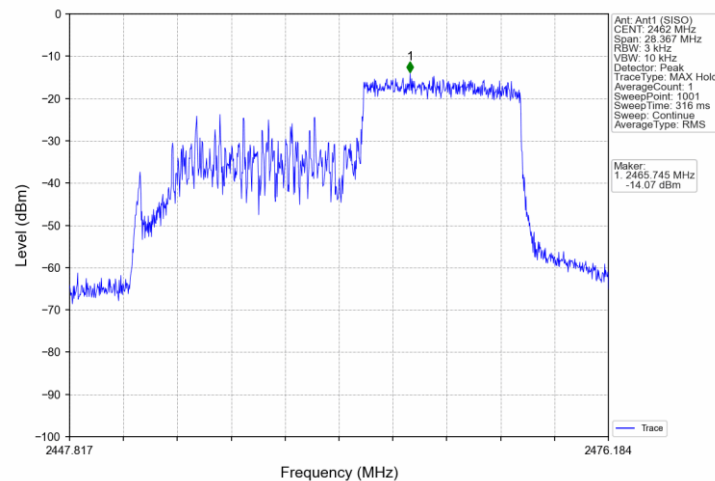
802.11ax(HEW20)_HCH_2462MHz_RU26_8_Ant1 (SISO)_NTNV



802.11ax(HEW20) HCH 2462MHz RU52 40 Ant1 (SISO) NTNv



802.11ax(HEW20) HCH 2462MHz RU106 54 Ant1 (SISO) NTNv



802.11ax(HEW20) HCH 2462MHz RU242 61 Ant1 (SISO) NTNv

