TEST REPORT

Application No.:	KSCR2502000211AT
FCC ID:	2AXNA-OBSL56
Applicant:	AGM Global Vision LLC
Address of Applicant:	173 West Main Street, #962, Springerville, AZ 85938, USA
Manufacturer:	AGM Global Vision LLC
Address of Manufacturer:	173 West Main Street, #962, Springerville, AZ 85938, USA
Equipment Under Test (EUT):	
EUT Name:	Thermal Imaging Binocular
Model No.:	AGM ObservIR LRF 50-640, AGM ObservIR LRF 60-1280 ♣
♣	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Trade Mark:	AGM
Standard(s) :	47 CFR Part 15, Subpart E 15.407
Date of Receipt:	2025-02-13
Date of Test:	2025-03-03 to 2025-03-06
Date of Issue:	2025-03-07
Test Result:	**Pass***

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

Revision Record			
Version	**Description**	***Date***	***Remark***
00	Original	2025-03-07	/

Authorized for issue by:				
Tested By				
		Eric_Liu/Project Engineer		
Approved By				
		Terry Hou /Reviewer		

2 Test Summary

Radio Spectrum Technical Requirement				
Item	**Standard**	**Method**	**Requirement**	**Result**
Antenna Requirement	47 CFR Part 15, Subpart E 15.407	N/A	47 CFR Part 15, Subpart C 15.203	Pass
Transmission in the Absence of Data		N/A	47 CFR Part 15, Subpart E 15.407 (c)	Pass

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart E 15.407	ANSI C63.10 (2020) Section 6.2	47 CFR Part 15, Subpart C 15.207 & Subpart E 15.407 b(9)	Pass
Maximum Conducted output power		ANSI C63.10 (2020) Section 12.3	47 CFR Part 15, Subpart E 15.407 (a)	Pass
Radiated Emissions (Below 1GHz)		ANSI C63.10 (2020) Section 6.4,6.5	47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)	Pass
Radiated Emissions (Above 1GHz)		ANSI C63.10 (2020) Section 6.6	47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)	Pass
Radiated Emissions which fall in the restricted bands		ANSI C63.10 (2020) Section 6.10.5	47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)	Pass
Duty Cycle		ANSI C63.10 (2020) Section 12.2	ANSI C63.10 (2020) Section 12.2	Pass
99% Bandwidth		ANSI C63.10 (2020) Section 12.4.2	ANSI C63.10 (2020) Section 12.4.2	Pass
26dB Emission bandwidth		ANSI C63.10 (2020) Section 12.4.1	47 CFR Part 15, Subpart E 15.407 (a)	Pass
Peak Power spectrum density		ANSI C63.10 (2020) Section 12.5	47 CFR Part 15, Subpart E 15.407 (a)	Pass
Frequency Stability		ANSI C63.10 (2020) Section 6.8	47 CFR Part 15, Subpart E 15.407 (g)	Pass

Model No.: AGM ObservIR LRF 50-640, AGM ObservIR LRF 60-1280

Only the model AGM ObservIR LRF 50-640 was tested.

The only difference between different models is the detector. There are two suppliers for the storage chip of the main test model, which does not affect the RF performance. We only evaluated the AGM ObservIR LRF 50-640 models.

3 Contents

4 General Information

4.1 Details of E.U.T.

Power supply:	DC 5V/9V by adapter Model: S065YM2000325 Input: 100-240V~ 50/60Hz Output: 5.0V 3.0A; 9.0V 3.0A; 12.0V 3.0A; 15.0V 3.0A; 20.0V 3.25A
Operation Frequency/Number of channels (20MHz):	U-NII-1: 5180-5240MHz (4 Channels)
Operation Frequency/Number of channels/(40MHz):	U-NII-1: 5190-5230MHz (2 Channels)
Operation Frequency/Number of channels (80MHz):	U-NII-1: 5210MHz (1 Channel)
Modulation Type:	802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK); 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM); 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Channel Spacing:	802.11a/n/ac 20: 20MHz; 802.11n/ac 40: 40MHz; 802.11ac 80: 80MHz
DFS Function:	Without DFS function
TPC Function:	Without TPC function
Antenna Type:	PCB SMT Antenna
Antenna Gain:	2.59dBi (Provided by the manufacturer)

4.2 Power level setting using in test:

Channel	802.11a	802.11n(HT20)/ac(VHT20)
	Ant 1	Ant 1
36	7	7
40	7	7
48	6	7
Channel	802.11n(HT40)/ac(VHT40)	
	Ant 1	
38	7	
46	7	
Channel	802.11ac(VHT80)	
	Ant 1	
42	7	

4.3 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Notebook	LENOVO	K27	EB24537645

4.4 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4×10^{-8}
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz)
		5.9dB (Above 1GHz)
9	Radiated Spurious Emission Test	4.2dB (Below 30MHz)
		4.5dB (30MHz-1GHz)
		5.1dB (1GHz-18GHz)
		5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%
Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.		

4.5 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).

2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).

3. Sample source: sent by customer.

4.6 Test Facility

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

• A2LA

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

• FCC

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

• ISED

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 2324E

• VCCI

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions

None

5 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
Conducted Emission at Mains Terminals						
1	EMI Test Receive	R&S	ESCI	KS301101	03/19/2024	03/18/2025
2	LISN	R&S	ENV216	KS301197	01/15/2025	01/14/2026
3	LISN	Schwarzbeck	NNLK 8129	KS301091	01/15/2025	01/14/2026
4	Pulse Limiter	R&S	ESH3-Z2	KUS1902E001	12/05/2024	12/04/2025
5	CE test Cable	Thermax	/	CZ301102	01/14/2025	01/13/2026
6	Test Software	ESE	E3_V 6.111221a	/	N.C.R	N.C.R
RF Conducted Test						
1	Spectrum Analyzer	Keysight	N9020A	KUS1911E004-2	08/01/2024	07/31/2025
2	Spectrum Analyzer	Keysight	N9020A	KUS2001M001-2	08/01/2024	07/31/2025
3	Spectrum Analyzer	Keysight	N9030B	KSEM021-1	01/15/2025	01/14/2026
4	Signal Generator	R&S	SMBV100B	KSEM032	03/19/2024	03/18/2025
5	Signal Generator	R&S	SMW200A	KSEM020-1	08/02/2024	08/01/2025
6	Signal Generator	Agilent	N5182A	KUS2001M001-1	08/01/2024	07/31/2025
7	Radio Communication Test Station	Anritsu	MT8000A	KSEM001-1	08/01/2024	07/31/2025
8	Radio Communication Analyzer	Anritsu	MT8821C	KSEM002-1	03/19/2024	03/18/2025
9	Universal Radio Communication Tester	R&S	CMW500	KUS1911E004-1	08/13/2024	08/12/2025
10	Switcher	TST	FY562	KUS2001M001-4	01/15/2025	01/14/2026
11	AC Power Source	EXTECH	6605	KS301178	N.C.R	N.C.R
12	DC Power Supply	Aglient	E3632A	KS301180	N.C.R	N.C.R
13	Conducted Test Cable	Thermax	RF01-RF04	CZ301111-CZ301120	01/14/2025	01/13/2026
14	Temp. / Humidity Chamber	TERCHY	MHK-120AK	KS301190	08/26/2024	08/25/2025
15	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-5	03/19/2024	03/18/2025
16	Software	BST	TST-PASS	/	NCR	NCR
RF Radiated Test						
1	Spectrum Analyzer	R&S	FSV40	KUS1806E003	08/06/2024	08/05/2025
2	Universal Radio Communication Tester	R&S	CMW500	KSEM009-1	03/19/2024	03/18/2025
3	Signal Generator	Agilent	E8257C	KS301066	08/06/2024	08/05/2025
4	Loop Antenna	COM-POWER	AL-130R	KUS1806E001	03/18/2023	03/17/2025
5	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E005	06/29/2023	06/28/2025
6	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E006	03/19/2024	03/18/2025
7	Horn-antenna(1-18GHz)	Schwarzbeck	BBHA9120D	KS301079	03/23/2024	03/22/2025
8	Horn-antenna(1-18GHz)	ETS-LINDGREN	3117	KS301186	04/07/2023	04/06/2025
9	Horn Antenna(18-40GHz)	Schwarzbeck	BBHA9170	CZ301058	01/07/2024	01/06/2026
10	Amplifier(30MHz~18GHz)	PANSHAN TECHNOLOGY	LNA:1~18G	KSEM010-1	01/15/2025	01/14/2026
11	Amplifier(18~40GHz)	PANSHAN TECHNOLOGY	LNA180400G40	KSEM038	08/12/2024	08/11/2025
12	RE Test Cable	REBES MICROWAVE	/	CZ301097	08/23/2024	08/22/2025
13	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-4	03/19/2024	03/18/2025

14	Software	Faratronic	EZ_EMC-v 3A1	/	NCR	NCR
15	Software	ESE	E3_V 6.111221a	/	NCR	NCR

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 is PCB SMT Antenna and no consideration of replacement. The best case gain of the antenna is 2.59dBi.

Antenna location: Refer to internal photo.

6.2 Transmission in the Absence of Data

6.2.1 Test Requirement:

47 CFR Part 15, Subpart E 15.407 (c)

6.2.2 Conclusion

Conclusion

Standard Requirement:

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals.

Applicants shall include in their application for equipment authorization a description of how this requirement is met.

EUT Details:

WIFI chip support automatically discontinue transmission in case of either absence of information to transmit or operational failure, if the chip detect absence of information to transmit or operational failure, it will be automatically shut off.

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 & Subpart E 15.407 b(9)
Test Method: ANSI C63.10 (2020) Section 6.2

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.		

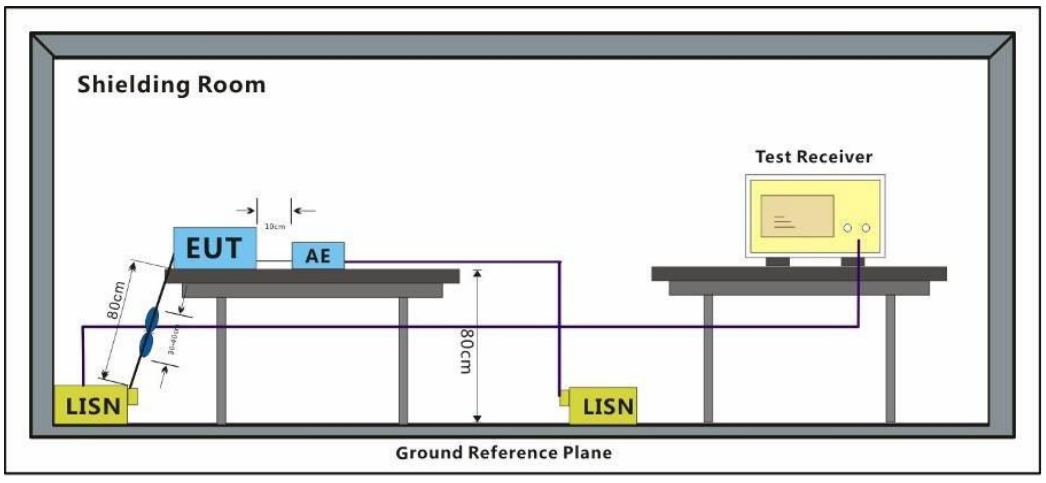
7.1.1 E.U.T. Operation

Operating Environment:
Temperature: 25.6 °C Humidity: 46.3 % RH Atmospheric Pressure: 1010 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode (U-NII-1)_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.

7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

1) The mains terminal disturbance voltage test was conducted in a shielded room.

2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.

3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,

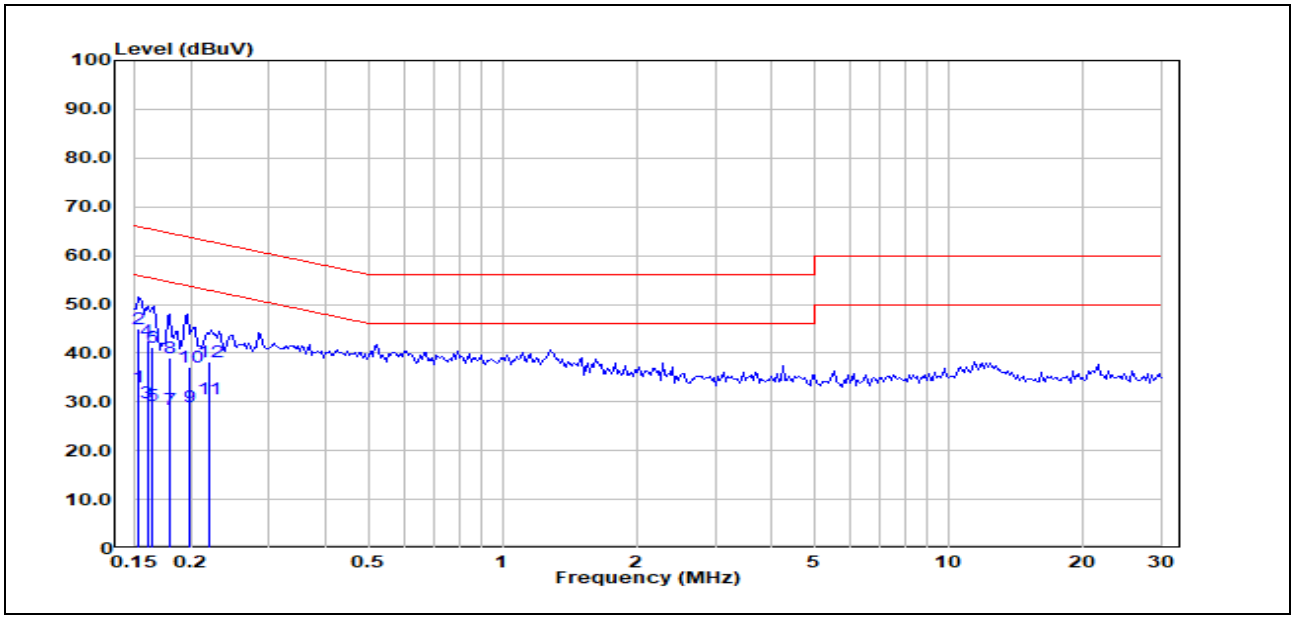
4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.

5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark: Level=Read Level+ Cable Loss+ LISN Factor

Test Mode: 01; Line: Live line

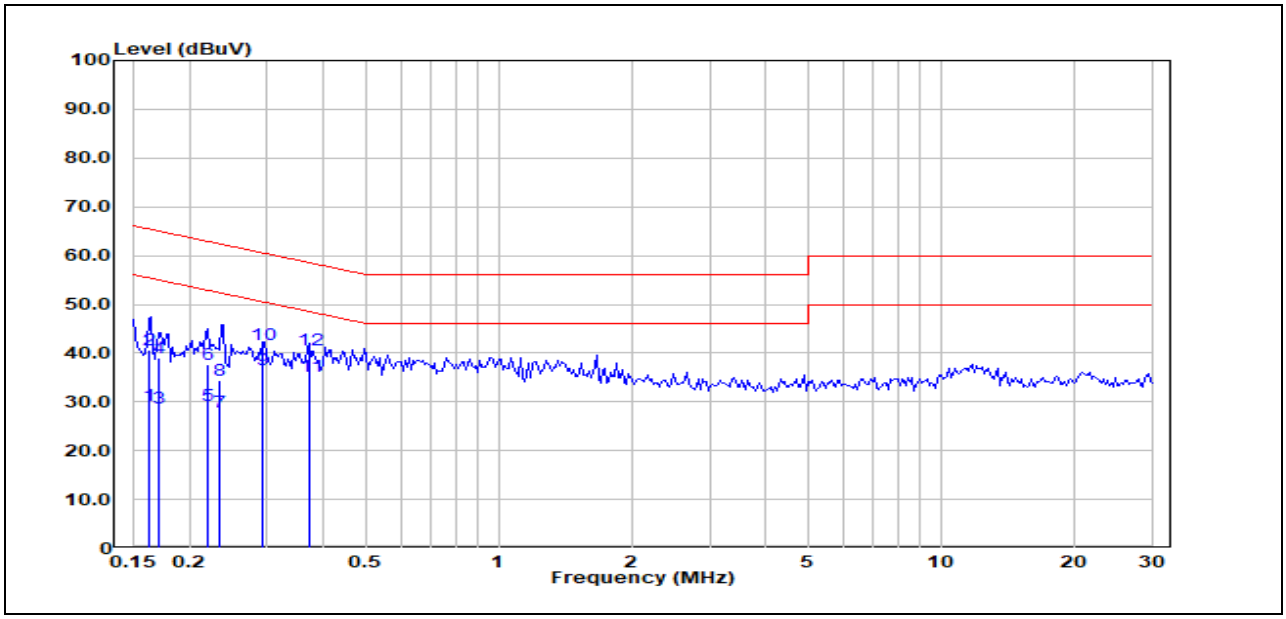
Test Data :



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1530	12.87	20.24	33.11	55.83	-22.72	Average
2	0.1530	24.78	20.24	45.02	65.83	-20.81	QP
3	0.1596	9.66	20.21	29.87	55.48	-25.61	Average
4	0.1596	22.33	20.21	42.54	65.48	-22.94	QP
5	0.1635	9.09	20.19	29.28	55.29	-26.01	Average
6	0.1635	21.04	20.19	41.23	65.29	-24.06	QP
7	0.1790	8.43	20.13	28.56	54.53	-25.97	Average
8	0.1790	18.95	20.13	39.08	64.53	-25.45	QP
9	0.1988	9.06	20.06	29.12	53.66	-24.54	Average
10	0.1988	17.06	20.06	37.12	63.66	-26.54	QP
11	0.2203	10.43	20.06	30.49	52.81	-22.32	Average
12	0.2203	18.16	20.06	38.22	62.81	-24.59	QP

Test Mode: 01; Line: Neutral Line

Test Data :



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1621	8.97	20.17	29.14	55.36	-26.22	Average
2	0.1621	20.54	20.17	40.71	65.36	-24.65	QP
3	0.1707	8.57	20.15	28.72	54.92	-26.20	Average
4	0.1707	18.92	20.15	39.07	64.92	-25.85	QP
5	0.2197	9.19	20.11	29.30	52.83	-23.53	Average
6	0.2197	17.46	20.11	37.57	62.83	-25.26	QP
7	0.2348	7.80	20.10	27.90	52.28	-24.38	Average
8	0.2348	14.43	20.10	34.53	62.28	-27.75	QP
9	0.2931	16.42	20.08	36.50	50.44	-13.94	Average
10	0.2931	21.66	20.08	41.74	60.44	-18.70	QP
11	0.3755	15.22	20.11	35.33	48.38	-13.05	Average
12	0.3755	20.43	20.11	40.54	58.38	-17.84	QP

7.2 Maximum Conducted output power

Test Requirement 47 CFR Part 15, Subpart E 15.407 (a)
Test Method: ANSI C63.10 (2020) Section 12.3

Limit:

Frequency band(MHz)	Limit
5150-5250	≤1W(30dBm) for master device
	≤250mW(24dBm) for client device
5250-5350	≤250mW(24dBm) or 11dBm+10logB*
5470-5725	≤250mW(24dBm) or 11dBm+10logB*
5725-5850	≤1W(30dBm)
Remark:	* Where B is the 26dB emission bandwidth in MHz. The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

7.2.1 E.U.T. Operation

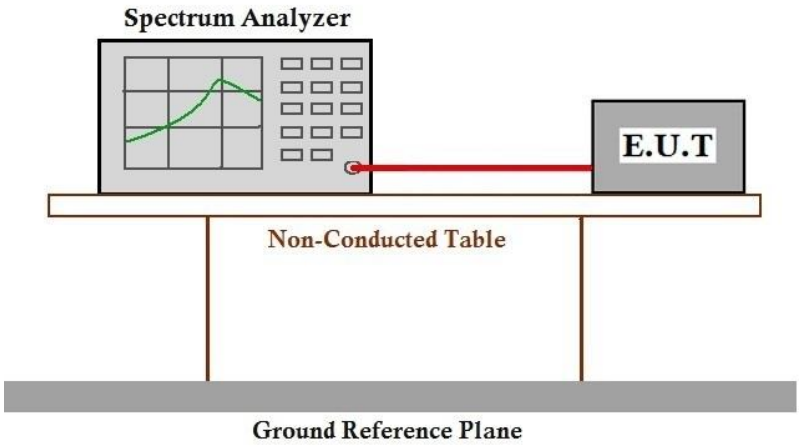
Operating Environment:

Temperature: 25.6 °C Humidity: 46.3 % RH Atmospheric Pressure: 1010 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode (U-NII-1)_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.

7.2.3 Test Setup Diagram



7.2.4 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

7.3 Radiated Emissions (Below 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)
Test Method: ANSI C63.10 (2020) Section 6.4,6.5
Measurement Distance: 3M

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

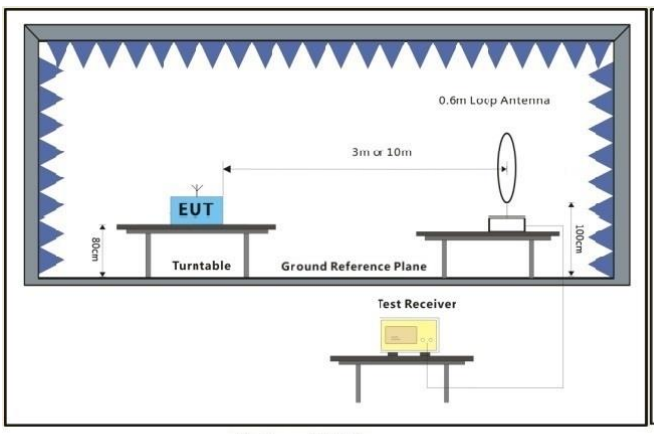
7.3.1 E.U.T. Operation

Operating Environment:
Temperature: 21.6 °C Humidity: 49.3 % RH Atmospheric Pressure: 1010 mbar

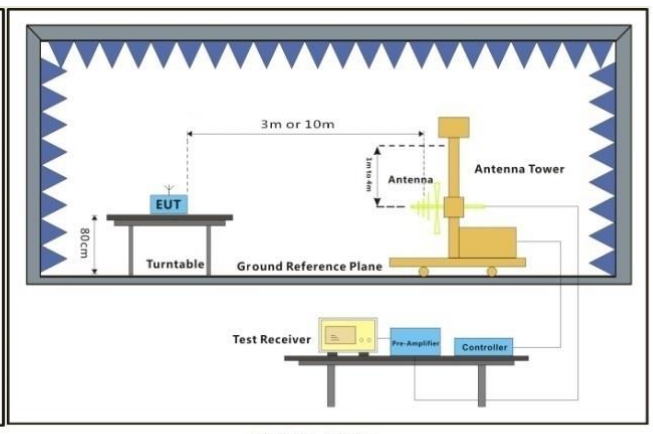
7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode (U-NII-1)_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.

7.3.3 Test Setup Diagram



Below 30MHz



30MHz-1GHz

7.3.4 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 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. 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.

c. 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.

d. 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.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. 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.

g. Test the EUT in the lowest channel, the middle channel, the Highest channel.

h. 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.

i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

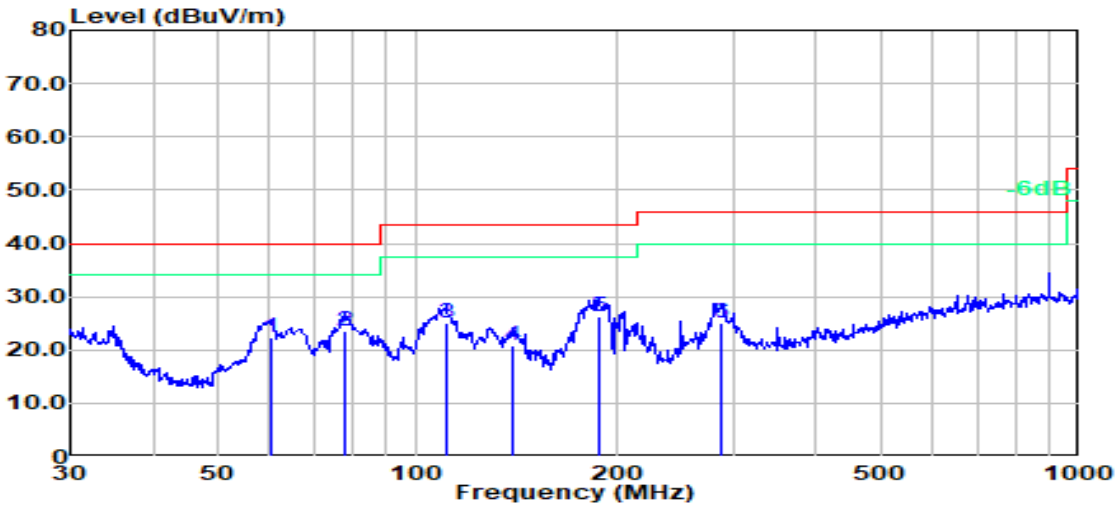
2. For emission below 1GHz, through the pre-scan found the worst case is the lowest channel of 802.11a. Only the worst case is recorded in the report.

3. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

4. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

Test Mode: 01; Polarity: Horizontal

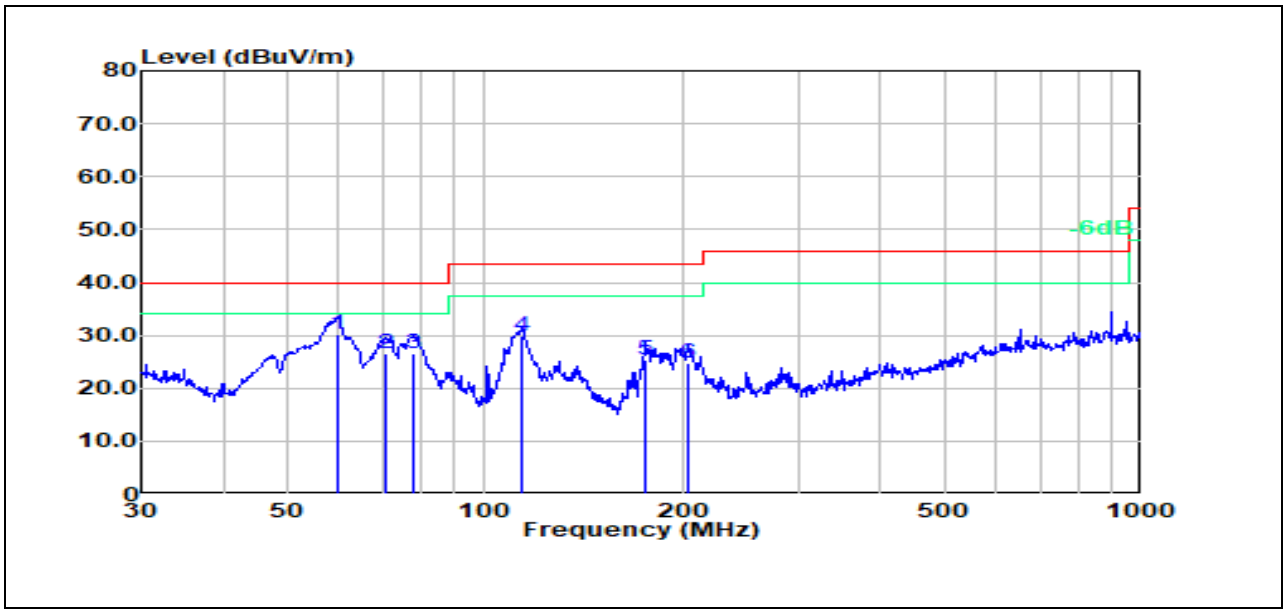
Test Data :



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	60.28	16.23	6.16	22.39	40.00	-17.61	100	360	QP
2	77.59	14.02	9.63	23.65	40.00	-16.35	200	92	QP
3	110.96	11.28	13.91	25.19	43.50	-18.31	100	126	QP
4	139.85	6.45	14.52	20.97	43.50	-22.53	200	349	QP
5	188.41	14.19	12.13	26.32	43.50	-17.18	200	322	QP
6	287.99	9.47	15.69	25.16	46.00	-20.84	100	315	QP

Test Mode: 01; Polarity: Vertical

Test Data :



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	59.65	24.16	6.03	30.19	40.00	-9.81	100	16	QP
2	70.83	18.49	8.00	26.49	40.00	-13.51	100	206	QP
3	77.59	17.02	9.63	26.65	40.00	-13.35	100	186	QP
4	114.11	16.11	13.67	29.78	43.50	-13.72	100	10	QP
5	176.27	13.29	12.19	25.48	43.50	-18.02	100	219	QP
6	204.24	13.27	11.60	24.87	43.50	-18.63	100	359	QP

7.4 Radiated Emissions (Above 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)
Test Method: ANSI C63.10 (2020) Section 6.6
Measurement Distance: 3M

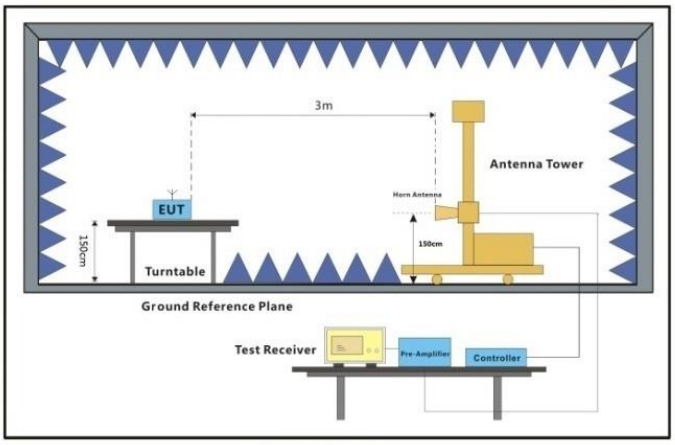
7.4.1 E.U.T. Operation

Operating Environment:
Temperature: 22.5 °C Humidity: 50.8 % RH Atmospheric Pressure: 1010 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode (U-NII-1)_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, 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 1.5 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.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. 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.

d. 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.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. 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 or average method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the middle channel, the Highest channel.

h. 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.

i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

3. 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.

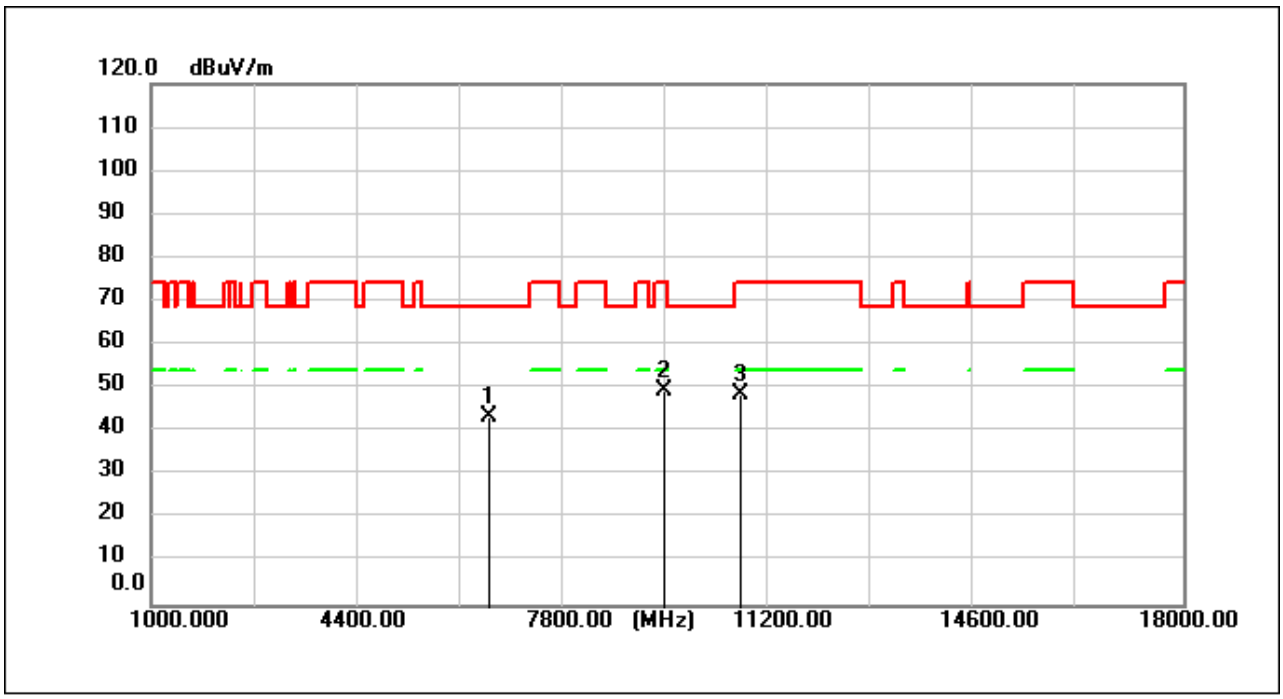
4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

5. For devices with multiple operating modes, measurements on the middle channel is used to determine the worst-case mode(s). Only the worst case mode with the highest output power and the mode with the highest output power spectral density for each modulation family (e.g., OFDM and direct sequence spread spectrum) is recorded in the test report.

6.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.

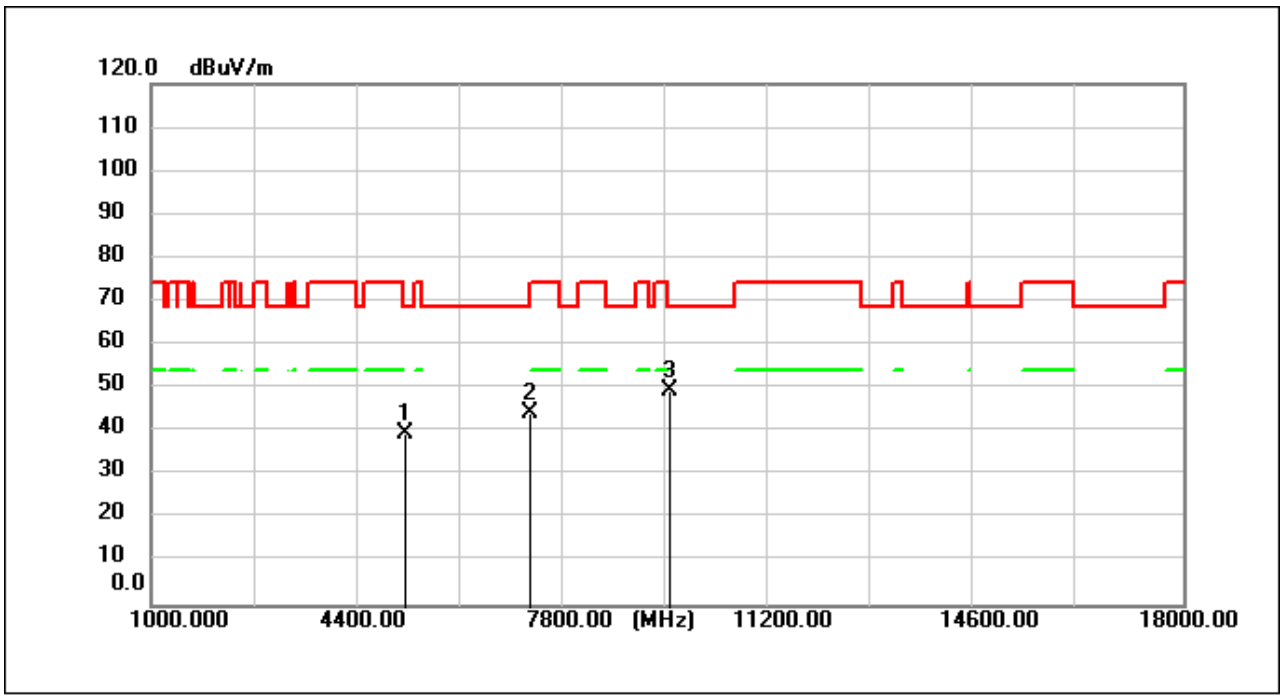
7. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geqslant$1/T (Duty cycle$<$98%) or 10Hz (Duty cycle$\geqslant$98%) for Average detection (AV) at frequency above 1GHz.

Test Mode: 01; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



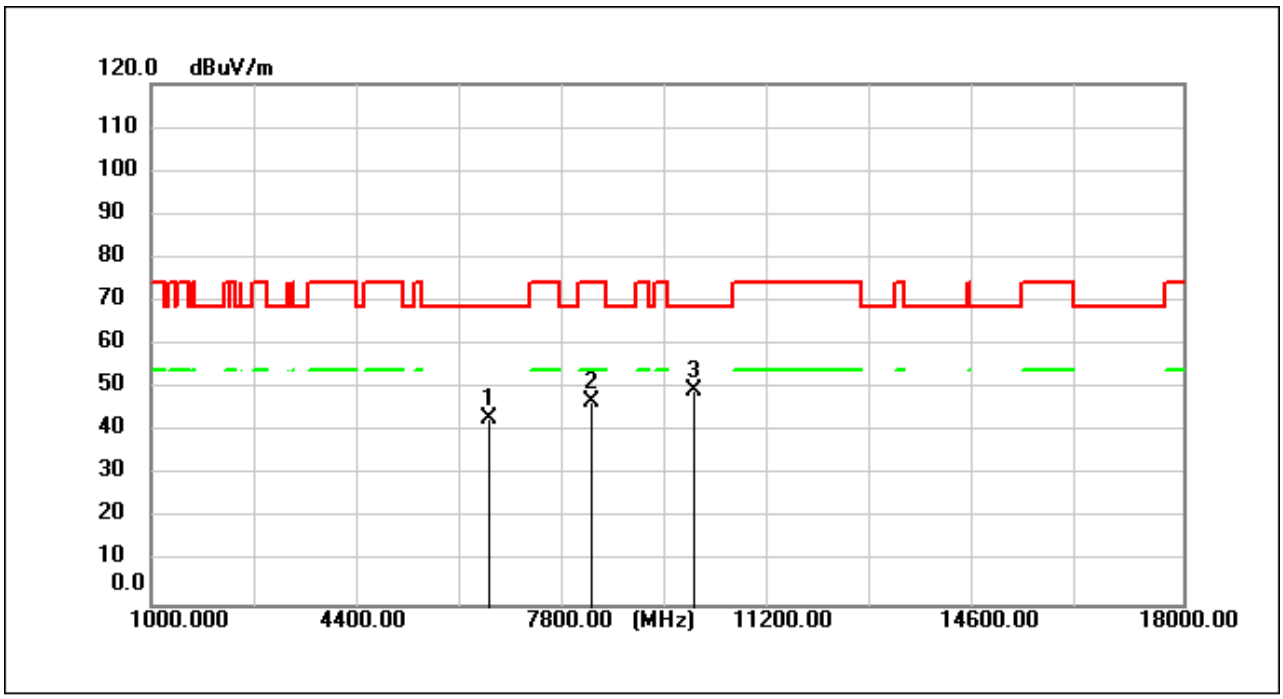
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6571.750	54.53	-11.16	43.37	68.30	-24.93	peak
2	9460.050	56.23	-6.62	49.61	74.00	-24.39	peak
3	10701.050	54.97	-6.16	48.81	74.00	-25.19	peak

Test Mode: 01; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



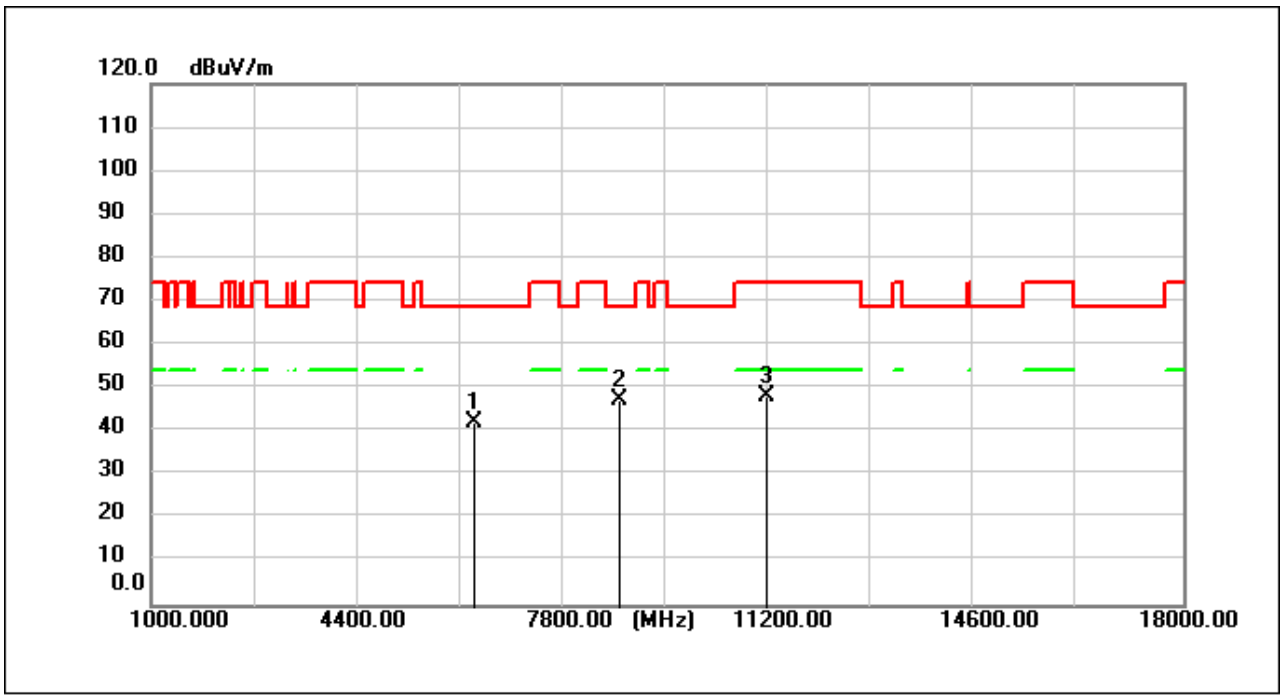
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5176.900	56.17	-16.34	39.83	68.30	-28.47	peak
2	7256.000	54.25	-10.02	44.23	74.00	-29.77	peak
3	9528.900	56.07	-6.45	49.62	68.30	-18.68	peak

Test Mode: 01; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle



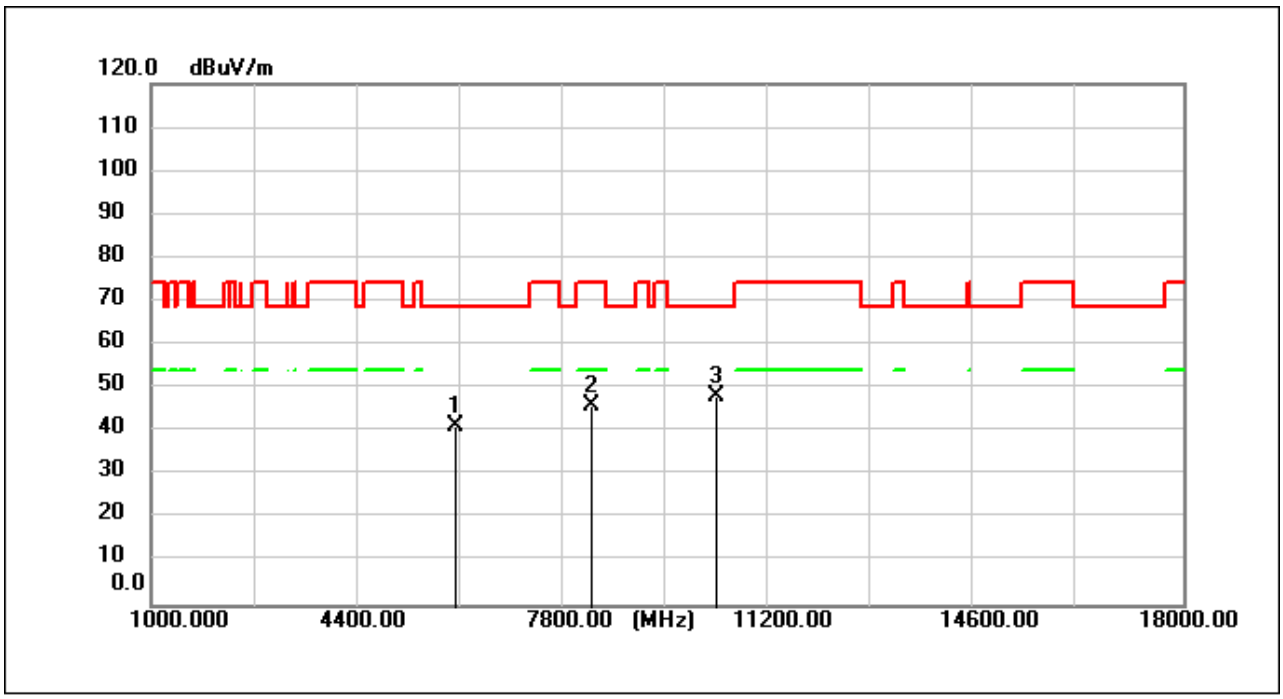
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6572.600	54.19	-11.16	43.03	68.30	-25.27	peak
2	8257.300	55.75	-8.90	46.85	74.00	-27.15	peak
3	9942.000	55.03	-5.60	49.43	68.30	-18.87	peak

Test Mode: 01; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle



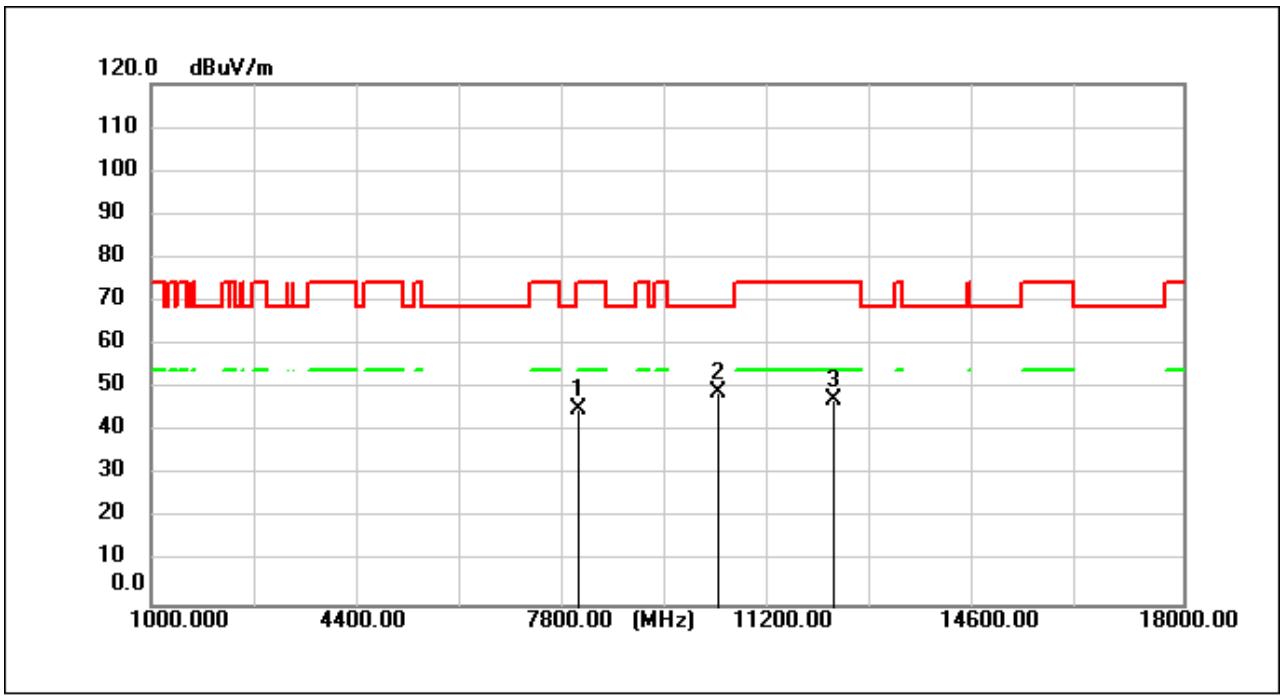
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6334.600	54.62	-12.28	42.34	68.30	-25.96	peak
2	8716.300	55.41	-8.23	47.18	68.30	-21.12	peak
3	11134.550	54.57	-6.43	48.14	74.00	-25.86	peak

Test Mode: 01; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6027.750	55.00	-13.67	41.33	68.30	-26.97	peak
2	8258.150	55.14	-8.90	46.24	74.00	-27.76	peak
3	10290.500	53.84	-5.82	48.02	68.30	-20.28	peak

Test Mode: 01; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8034.600	54.37	-9.25	45.12	74.00	-28.88	peak
2	10345.750	54.96	-5.87	49.09	68.30	-19.21	peak
3	12222.550	53.61	-6.30	47.31	74.00	-26.69	peak

7.5 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)
Test Method: ANSI C63.10 (2020) Section 6.10.5
Measurement Distance: 3M

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

*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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.

7.5.1 E.U.T. Operation

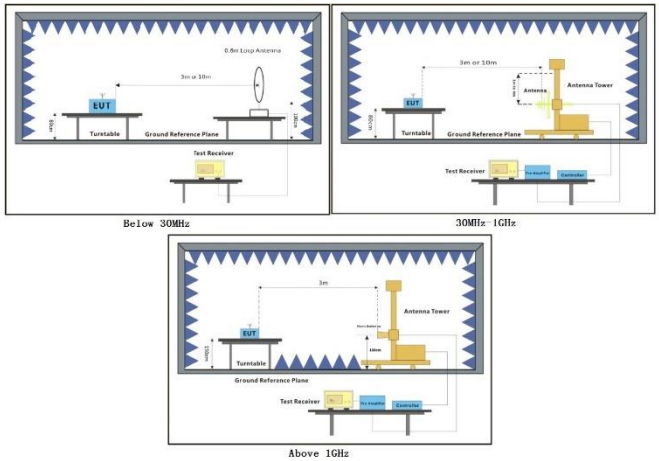
Operating Environment:
Temperature: 22.5 °C Humidity: 50.8 % RH Atmospheric Pressure: 1010 mbar

7.5.2 Test Mode Description

Pre-scan /	Mode	Description

Final test	Code	
Final test	01	TX mode (U-NII-1)_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.

7.5.3 Test Setup Diagram



7.5.4 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.

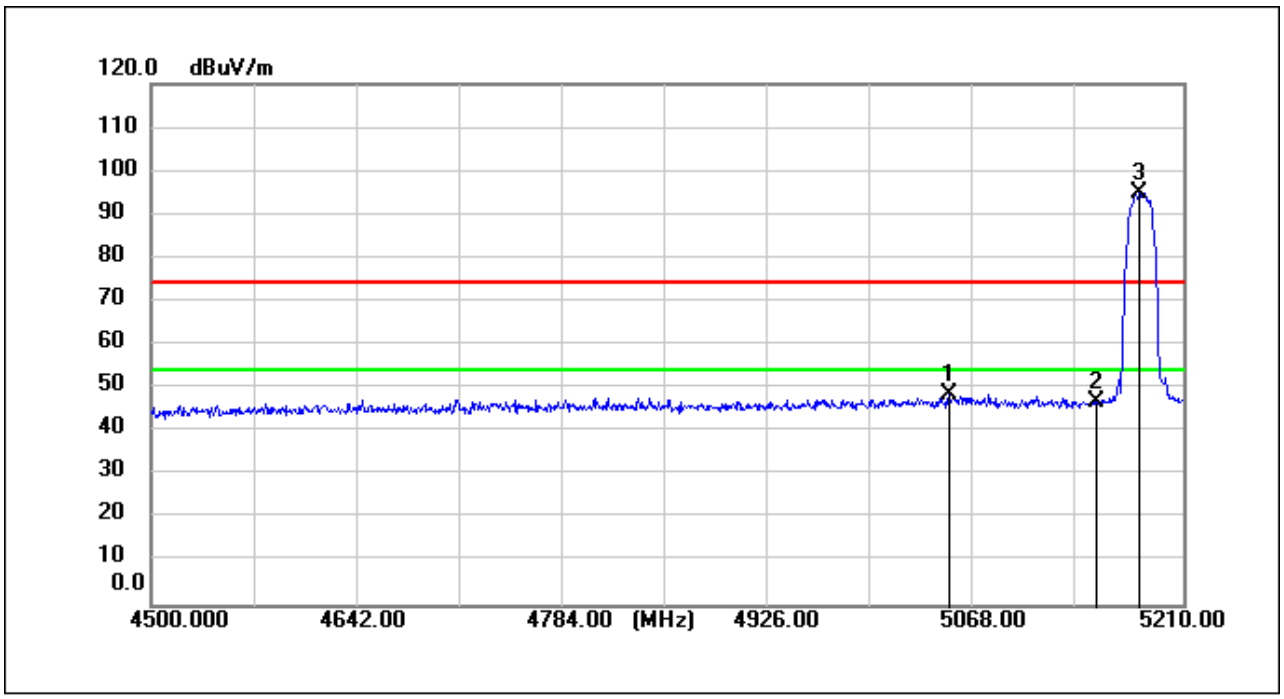
j. Repeat above procedures until all frequencies measured was complete.

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

Remark 2.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.

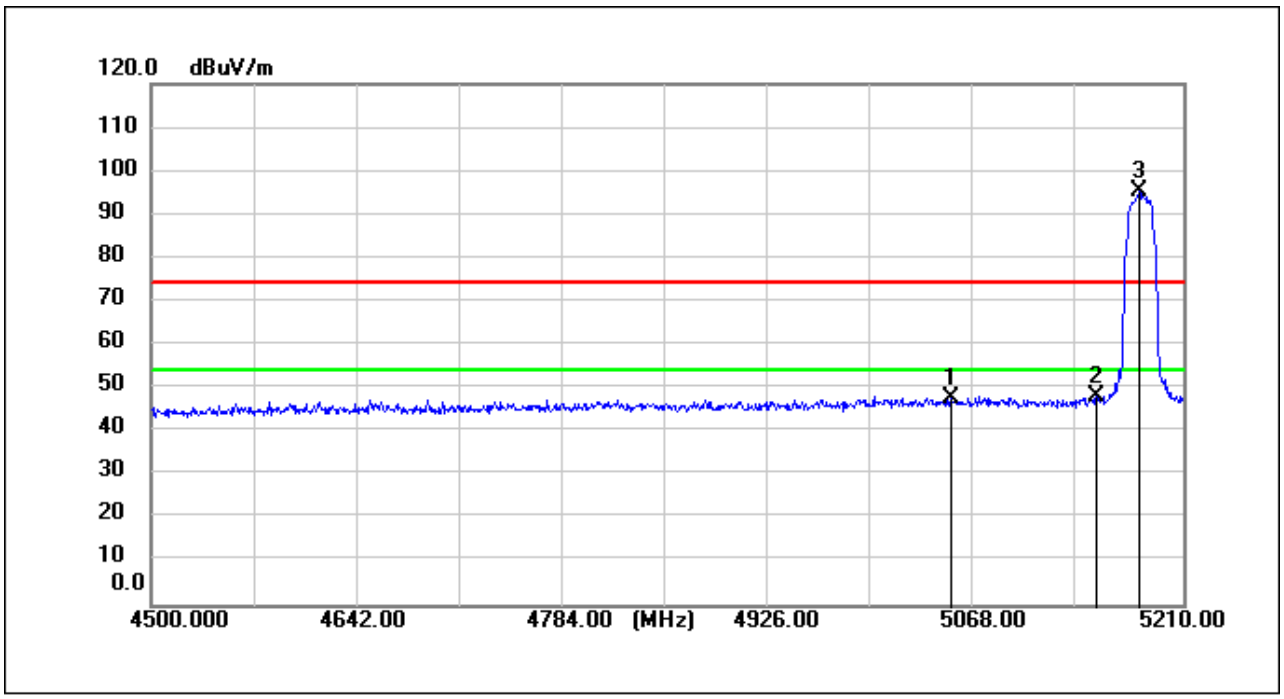
Remark 3. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geqslant$1/T (Duty cycle$<$98%) or 10Hz (Duty cycle$\geqslant$98%) for Average detection (AV) at frequency above 1GHz.

Test Mode: 01; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



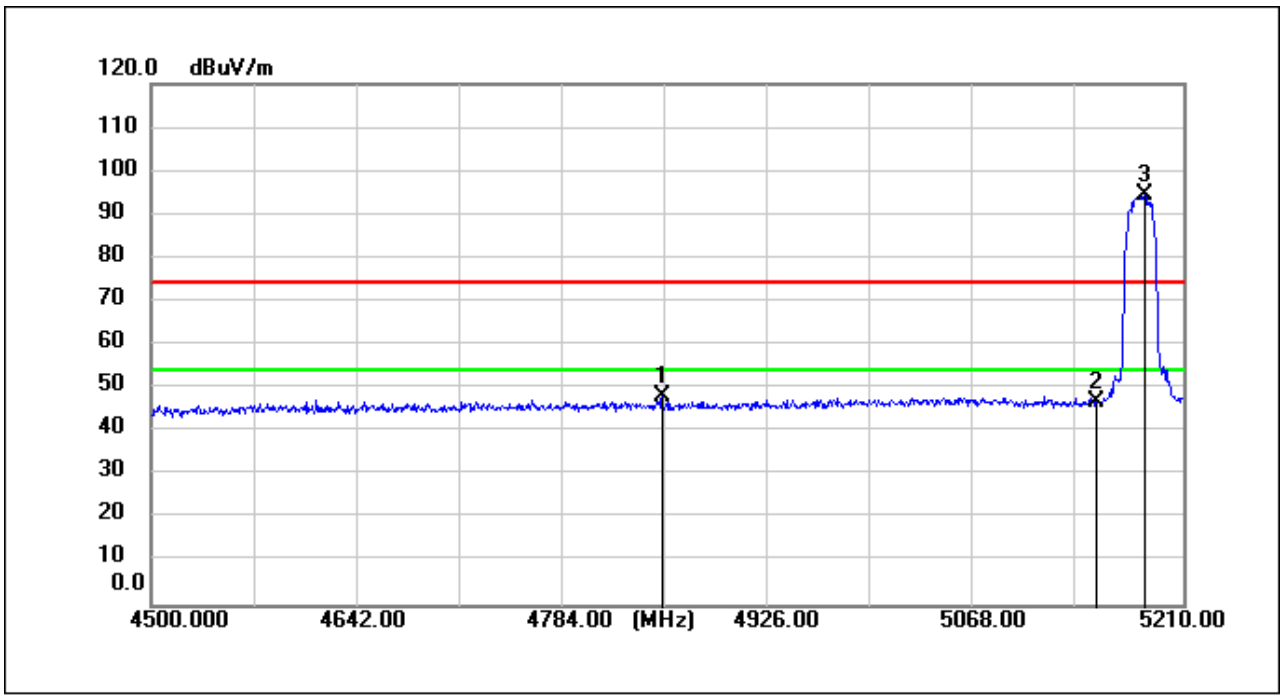
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5048.830	41.67	7.15	48.82	74.00	-25.18	peak
2	5150.000	39.90	7.12	47.02	74.00	-26.98	peak
3	5179.470	88.02	7.11	95.13	74.00	21.13	peak

Test Mode: 01; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



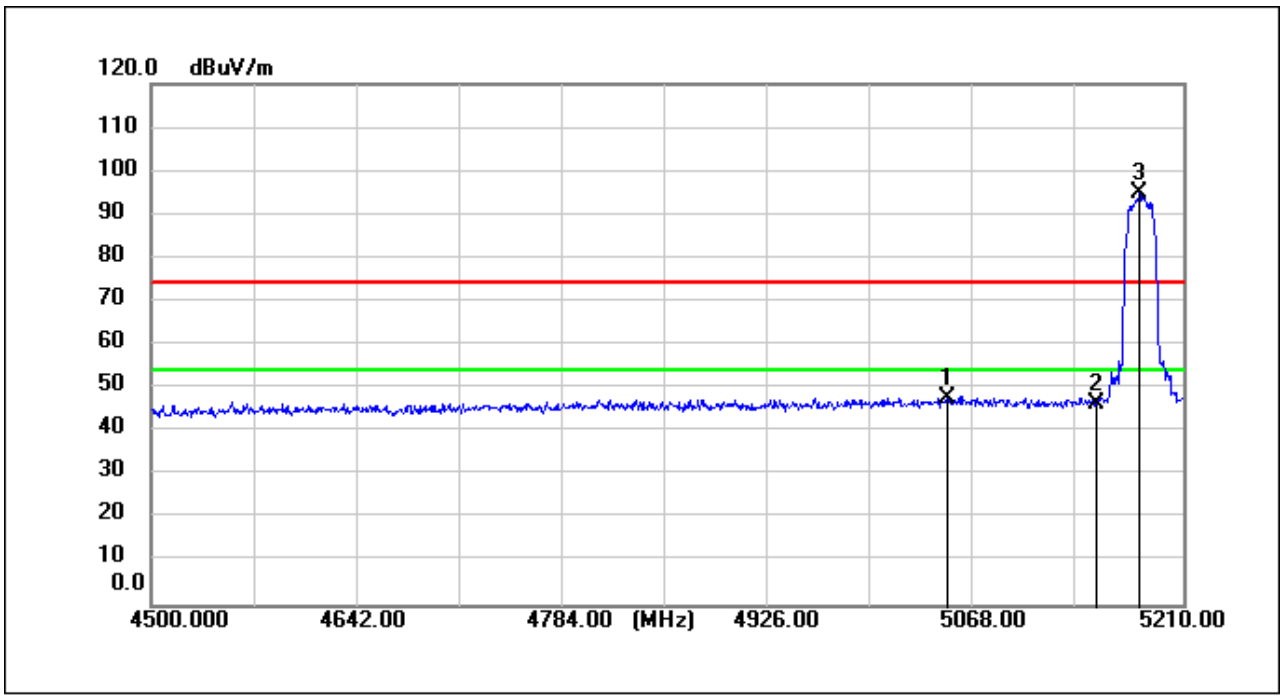
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5050.960	40.78	7.15	47.93	74.00	-26.07	peak
2	5150.000	41.14	7.12	48.26	74.00	-25.74	peak
3	5179.470	88.25	7.11	95.36	74.00	21.36	peak

Test Mode: 01; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low



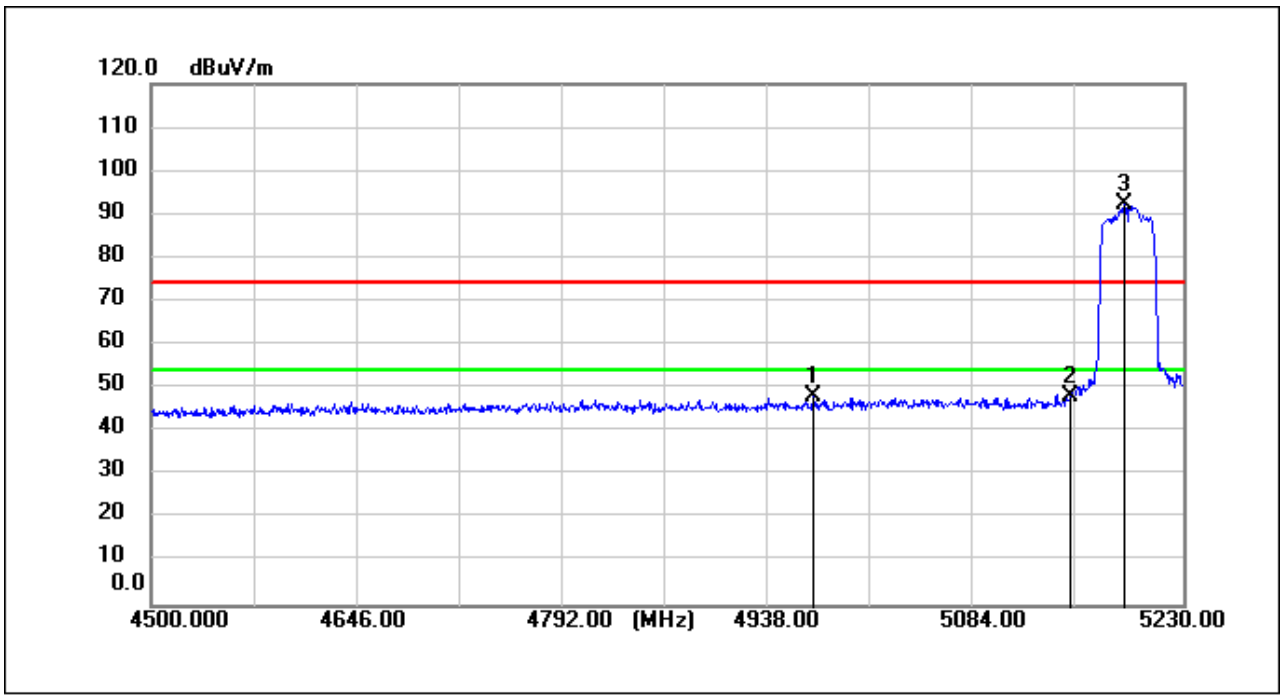
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4851.450	41.29	6.73	48.02	74.00	-25.98	peak
2	5150.000	39.79	7.12	46.91	74.00	-27.09	peak
3	5183.730	87.57	7.11	94.68	74.00	20.68	peak

Test Mode: 01; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low



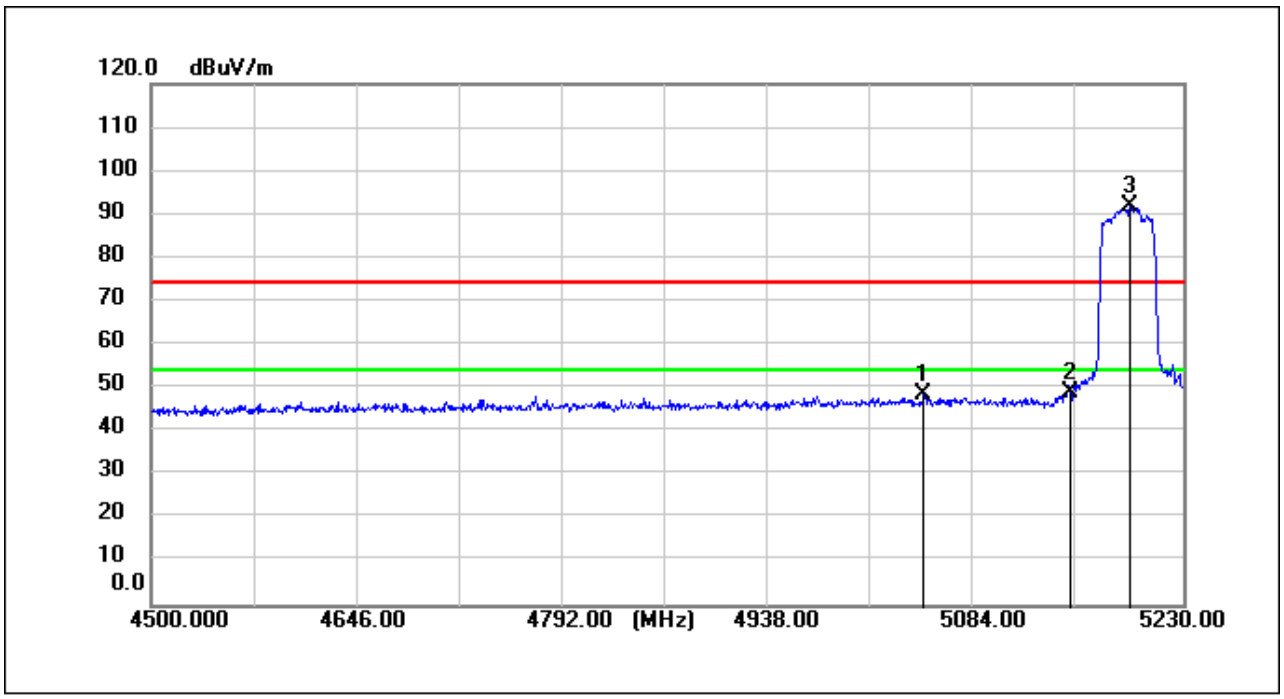
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5047.410	40.76	7.15	47.91	74.00	-26.09	peak
2	5150.000	39.26	7.12	46.38	74.00	-27.62	peak
3	5180.180	87.61	7.11	94.72	74.00	20.72	peak

Test Mode: 01; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low



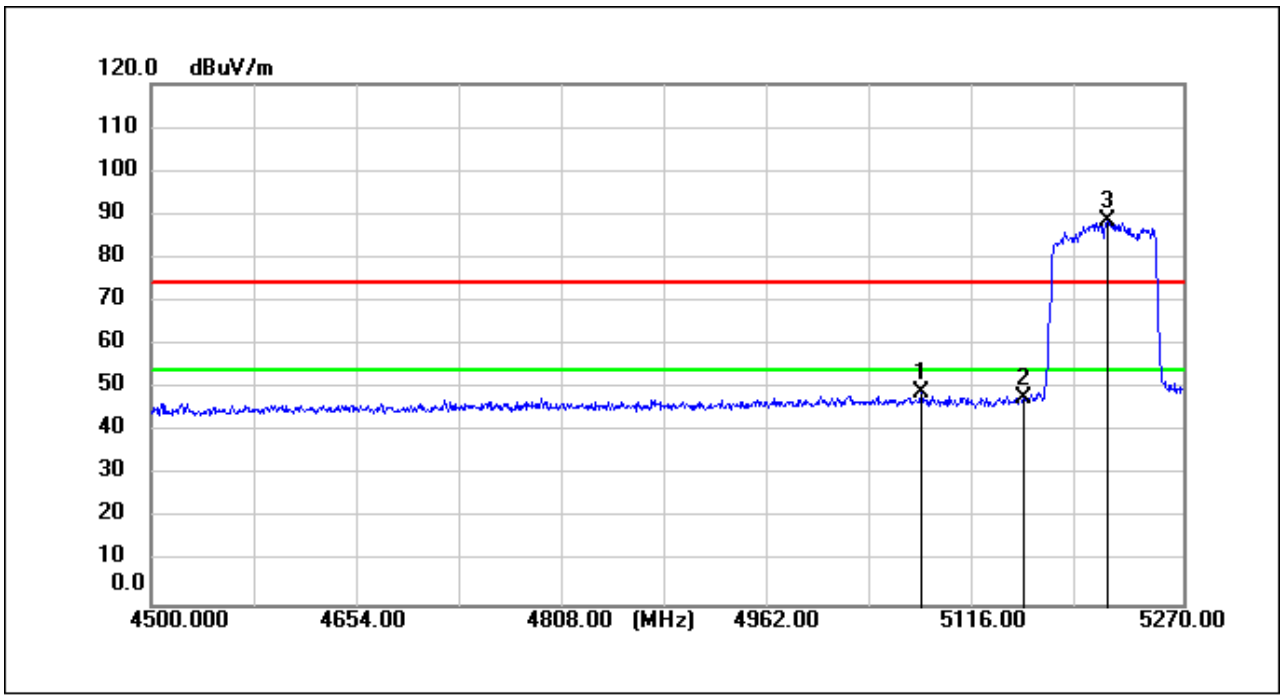
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4968.660	41.35	7.07	48.42	74.00	-25.58	peak
2	5150.000	41.19	7.12	48.31	74.00	-25.69	peak
3	5188.390	85.21	7.11	92.32	74.00	18.32	peak

Test Mode: 01; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low



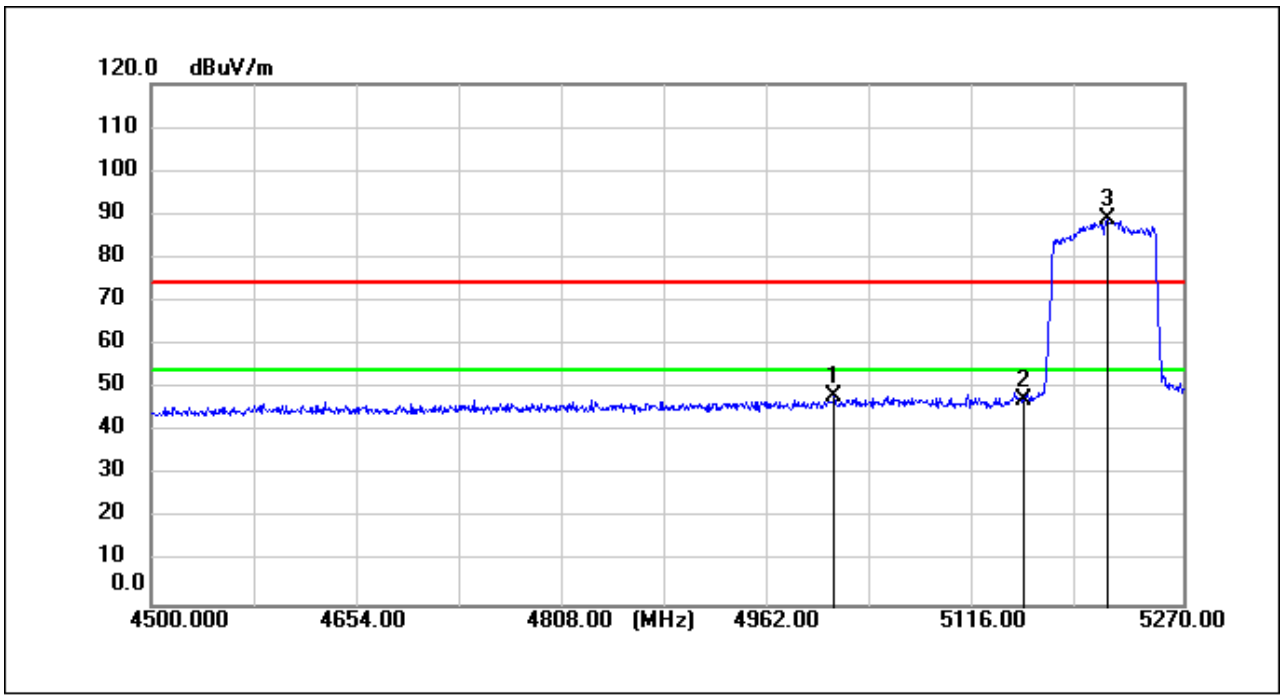
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5046.770	41.54	7.15	48.69	74.00	-25.31	peak
2	5150.000	41.81	7.12	48.93	74.00	-25.07	peak
3	5192.040	84.80	7.10	91.90	74.00	17.90	peak

Test Mode: 01; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5075.190	42.05	7.14	49.19	74.00	-24.81	peak
2	5150.000	40.50	7.12	47.62	74.00	-26.38	peak
3	5213.020	81.24	7.09	88.33	74.00	14.33	peak

Test Mode: 01; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5009.740	40.96	7.16	48.12	74.00	-25.88	peak
2	5150.000	40.40	7.12	47.52	74.00	-26.48	peak
3	5213.020	81.75	7.09	88.84	74.00	14.84	peak

7.6 Duty Cycle

Test Requirement ANSI C63.10 (2020) Section 12.2
Test Method: ANSI C63.10 (2020) Section 12.2

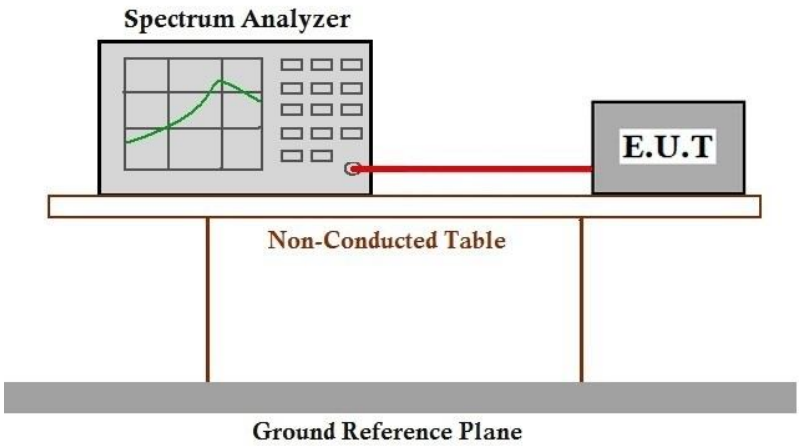
7.6.1 E.U.T. Operation

Operating Environment:
Temperature: 25.6 °C Humidity: 46.3 % RH Atmospheric Pressure: 1010 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode (U-NII-1)_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, 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 99% Bandwidth

Test Requirement ANSI C63.10 (2020) Section 12.4.2
Test Method: ANSI C63.10 (2020) Section 12.4.2

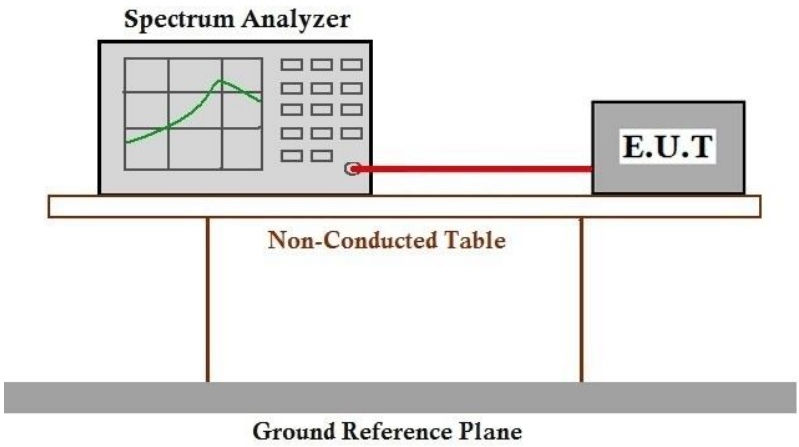
7.7.1 E.U.T. Operation

Operating Environment:
Temperature: 25.6 °C Humidity: 46.3 % RH Atmospheric Pressure: 1010 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode (U-NII-1)_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, 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 26dB Emission bandwidth

Test Requirement 47 CFR Part 15, Subpart E 15.407 (a)
Test Method: ANSI C63.10 (2020) Section 12.4.1

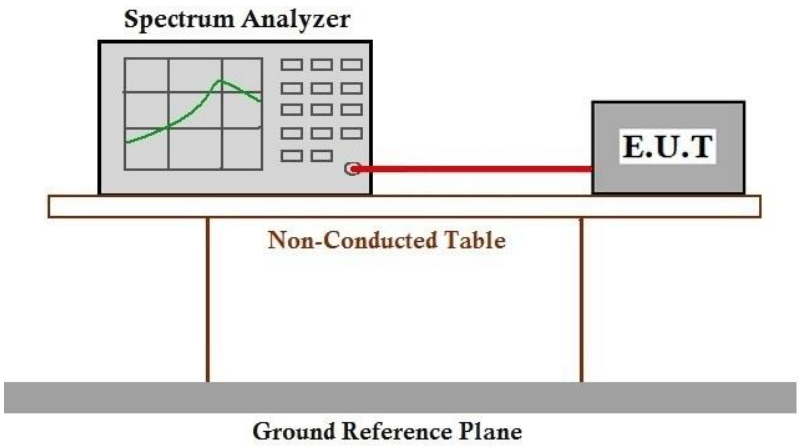
7.8.1 E.U.T. Operation

Operating Environment:
Temperature: 25.6 °C Humidity: 46.3 % RH Atmospheric Pressure: 1010 mbar

7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode (U-NII-1)_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.

7.8.3 Test Setup Diagram



7.8.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.9 Peak Power spectrum density

Test Requirement 47 CFR Part 15, Subpart E 15.407 (a)
Test Method: ANSI C63.10 (2020) Section 12.5

Limit:

Frequency band(MHz)	Limit
5150-5250	≤17dBm in 1MHz for master device
	≤11dBm in 1MHz for client device
5250-5350	≤11dBm in 1MHz for client device
5470-5725	≤11dBm in 1MHz for client device
5725-5850	≤30dBm in 500 kHz
Remark:	The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test.

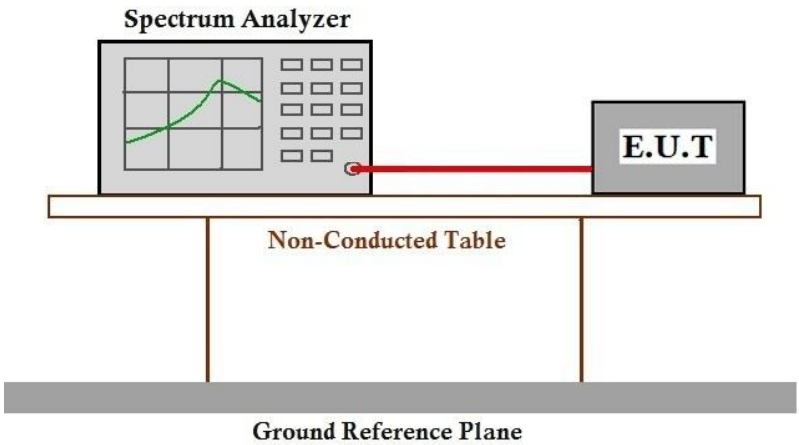
7.9.1 E.U.T. Operation

Operating Environment:
Temperature: 25.6 °C Humidity: 46.3 % RH Atmospheric Pressure: 1010 mbar

7.9.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode (U-NII-1)_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.

7.9.3 Test Setup Diagram



7.9.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.10 Frequency Stability

Test Requirement 47 CFR Part 15, Subpart E 15.407 (g)
Test Method: ANSI C63.10 (2020) Section 6.8

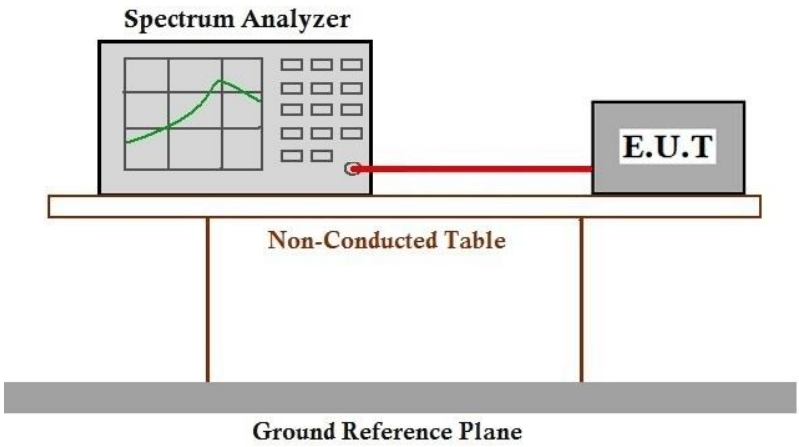
7.10.1 E.U.T. Operation

Operating Environment:
Temperature: 25.6 °C Humidity: 46.3 % RH Atmospheric Pressure: 1010 mbar

7.10.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode (U-NII-1)_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 @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.

7.10.3 Test Setup Diagram



7.10.4 Measurement Procedure and Data

Please Refer to Appendix for Details

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2502000211AT

9 EUT Constructional Details (EUT Photos)

Refer to Appendix_Photographs of EUT Constructional Details for KSCR2502000211AT

10 Appendix

1. Duty Cycle

1.1 Test Result

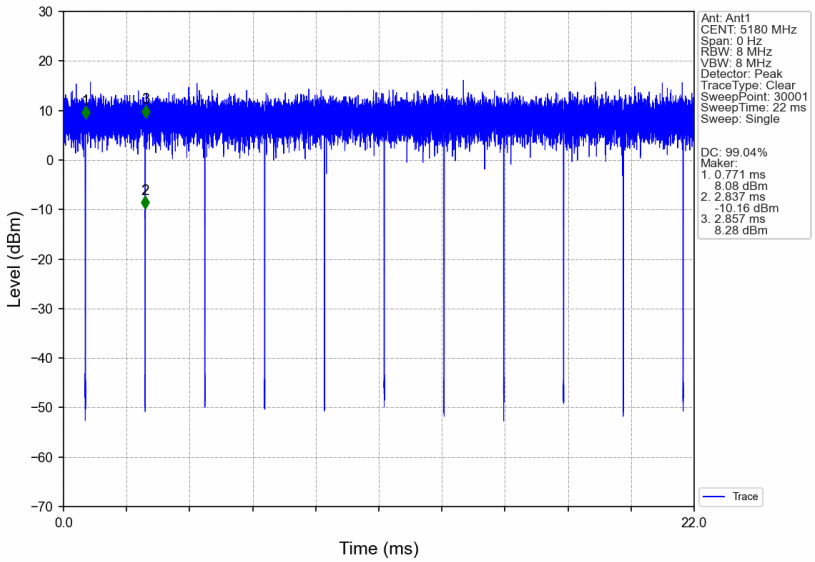
1.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	2.066	2.086	99.04	0.04	0.04
		5200	2.066	2.086	99.04	0.04	0.07
		5240	2.065	2.085	99.04	0.04	0.07
802.11ac (VHT20)	SISO	5180	1.934	2.034	95.08	0.22	0.04
		5200	1.933	2.033	95.08	0.22	0.04
		5240	1.933	2.034	95.03	0.22	0.00
802.11ac (VHT40)	SISO	5190	0.958	1.054	90.89	0.41	0.03
		5230	0.958	1.054	90.89	0.41	0.07
802.11ac (VHT80)	SISO	5210	0.466	0.562	82.92	0.81	0.10

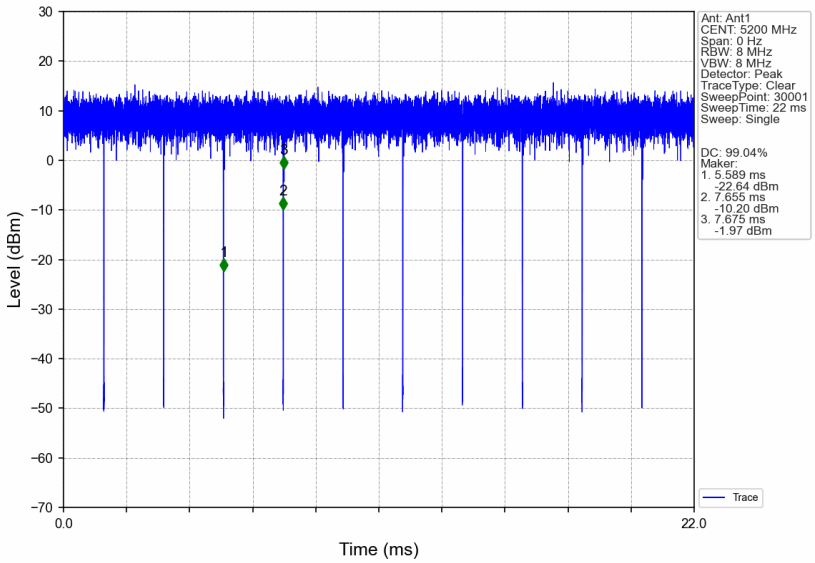
1.2 Test Graph

1.2.1 Ant1

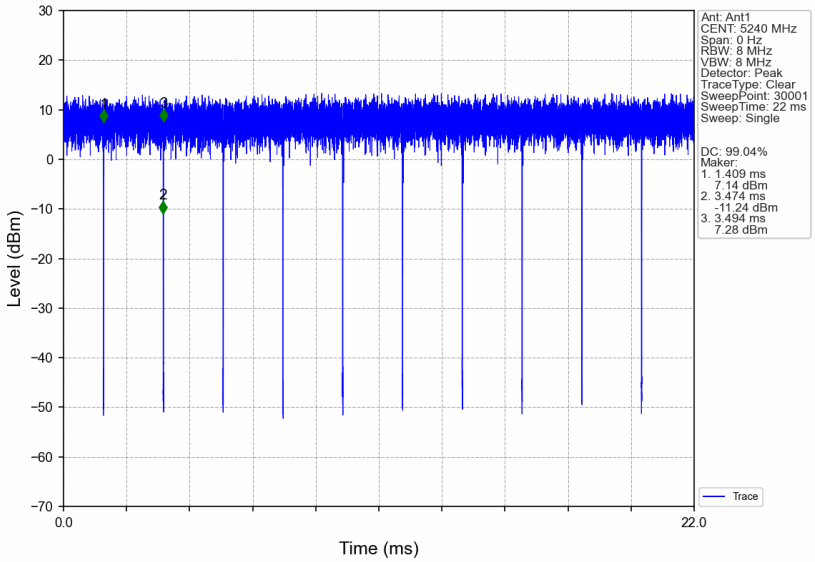
802.11a_LCH_5180MHz_Ant1_NTNV



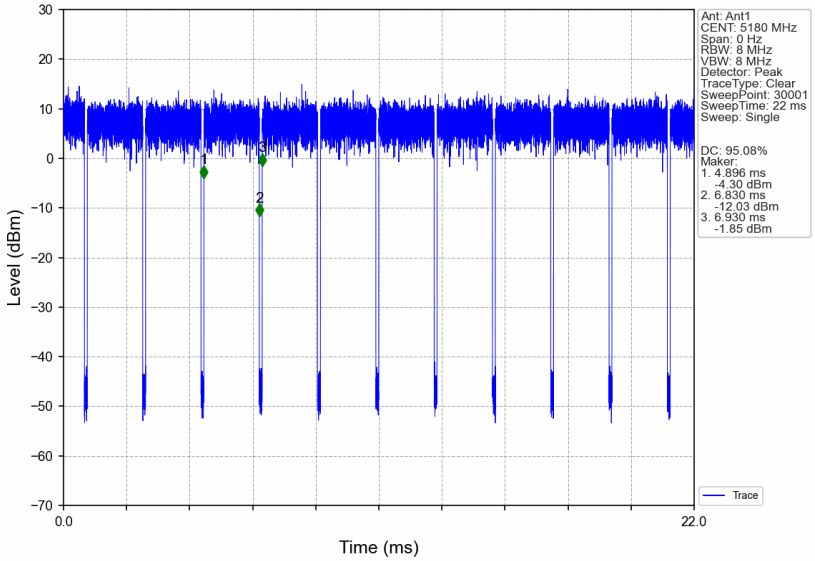
802.11a_MCH_5200MHz_Ant1_NTNV



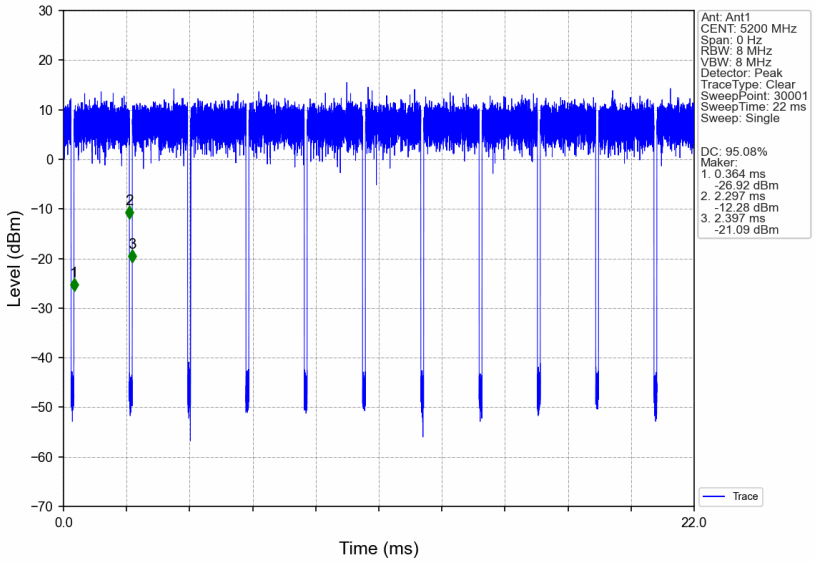
802.11a_HCH_5240MHz_Ant1_NTNV



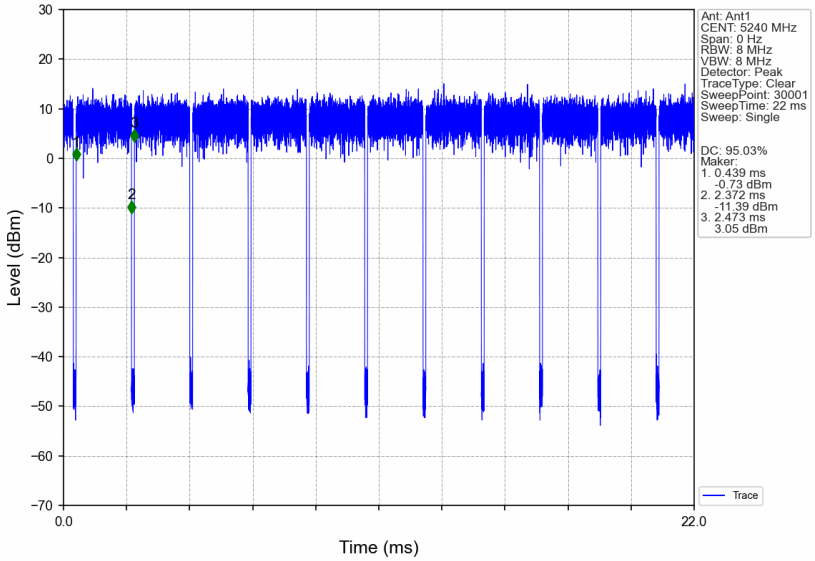
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



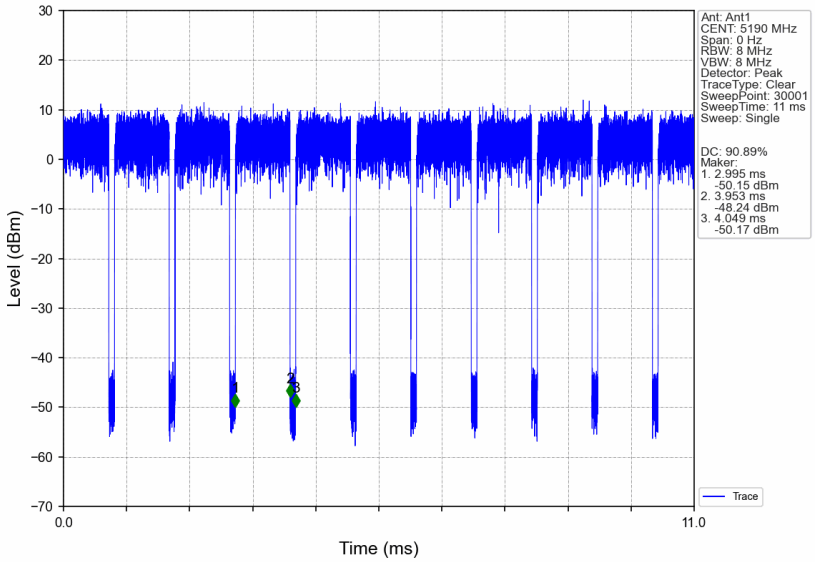
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



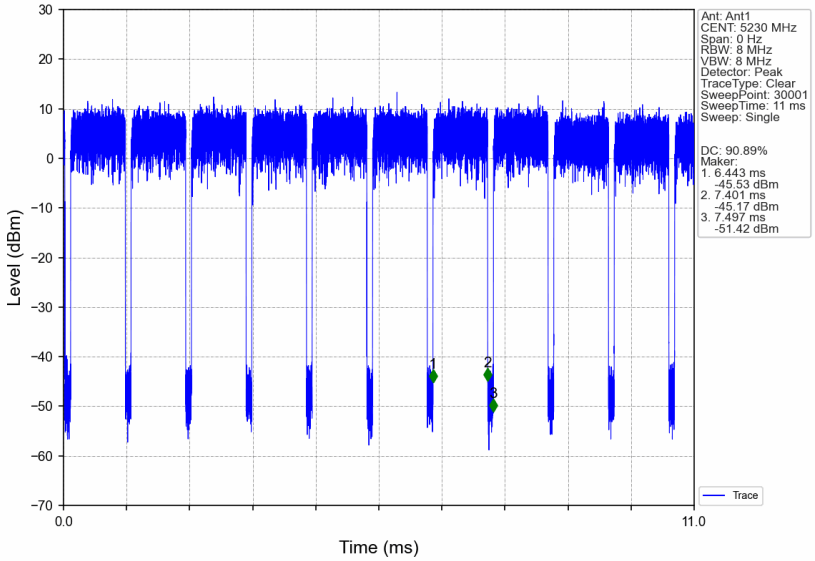
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



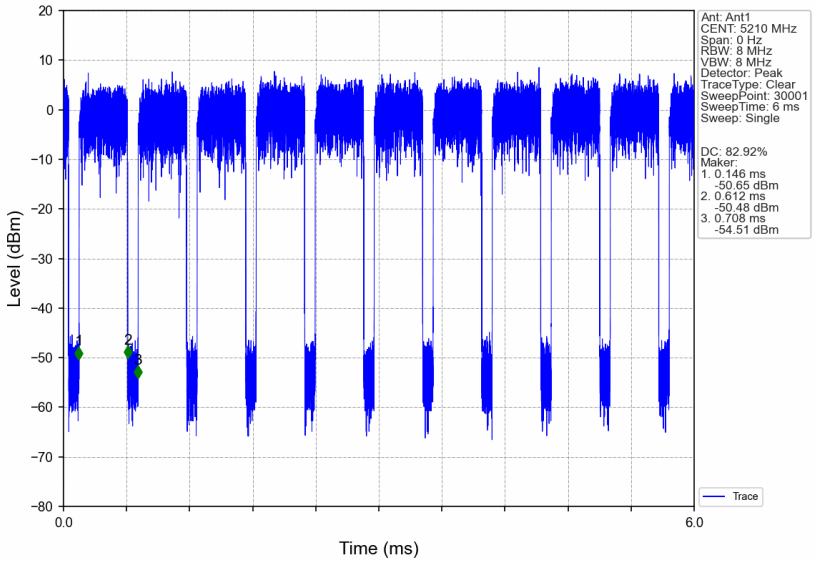
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	17.786	/	Pass
		5200	1	17.905	/	Pass
		5240	1	17.743	/	Pass
802.11ac (VHT20)	SISO	5180	1	18.686	/	Pass
		5200	1	18.689	/	Pass
		5240	1	18.682	/	Pass
802.11ac (VHT40)	SISO	5190	1	36.592	/	Pass
		5230	1	36.534	/	Pass
802.11ac (VHT80)	SISO	5210	1	76.001	/	Pass

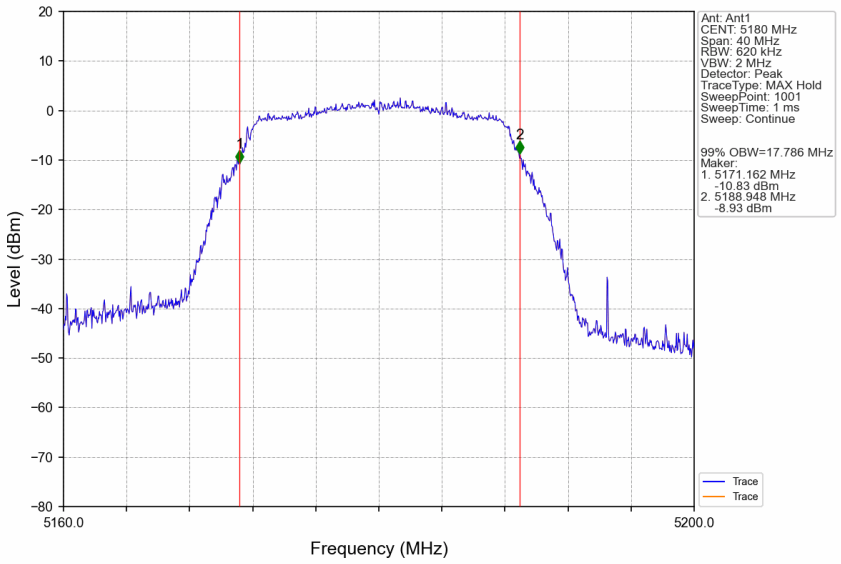
2.1.2 26dB BW

Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	21.156	/	Pass
		5200	1	20.933	/	Pass
		5240	1	20.884	/	Pass
802.11ac (VHT20)	SISO	5180	1	21.491	/	Pass
		5200	1	21.258	/	Pass
		5240	1	21.035	/	Pass
802.11ac (VHT40)	SISO	5190	1	39.661	/	Pass
		5230	1	39.780	/	Pass
802.11ac (VHT80)	SISO	5210	1	81.398	/	Pass

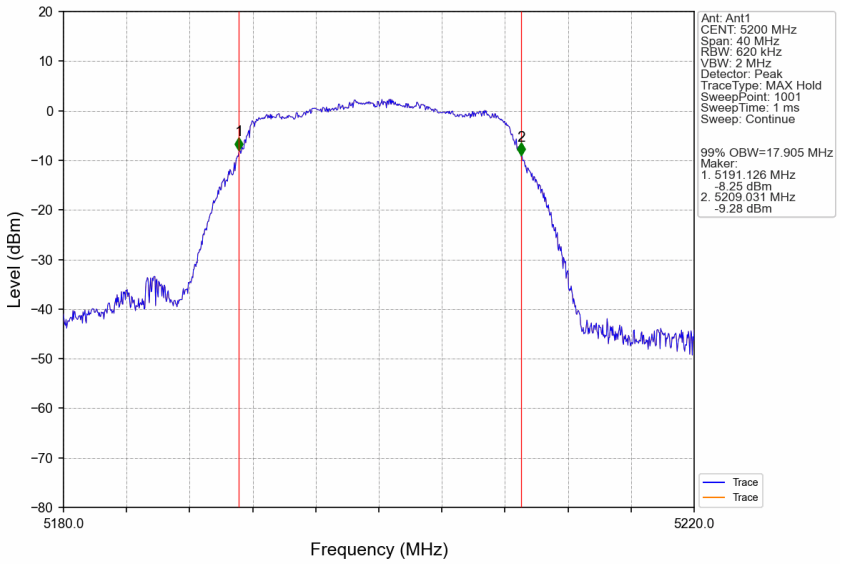
2.2 Test Graph

2.2.1 OBW

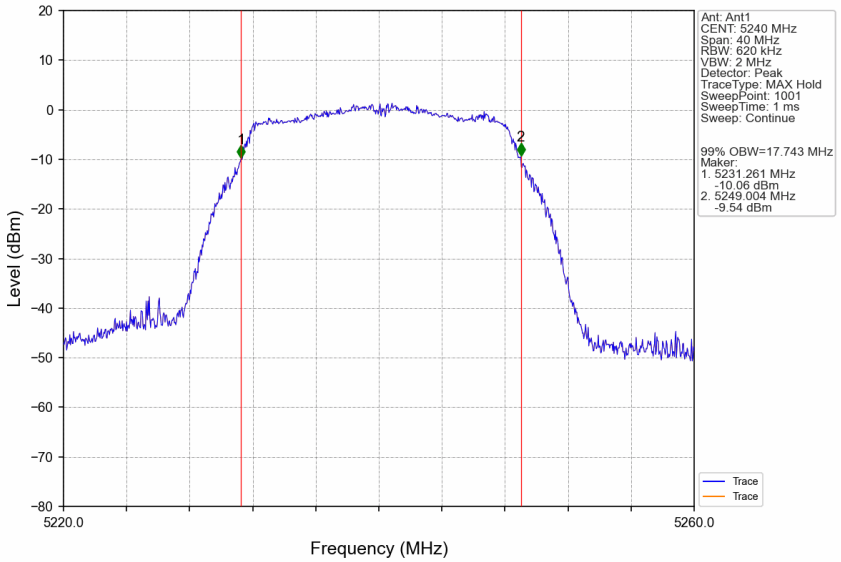
802.11a_LCH_5180MHz_Ant1_NTNV



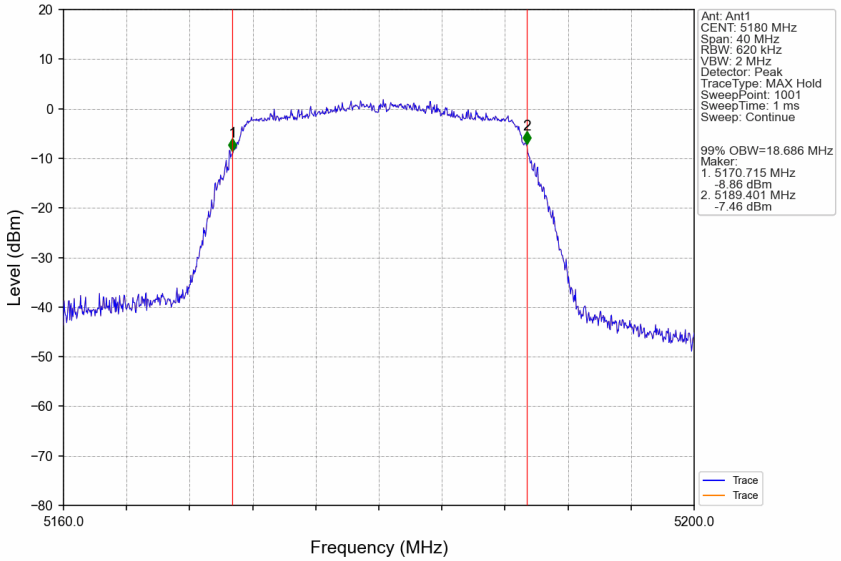
802.11a_MCH_5200MHz_Ant1_NTNV



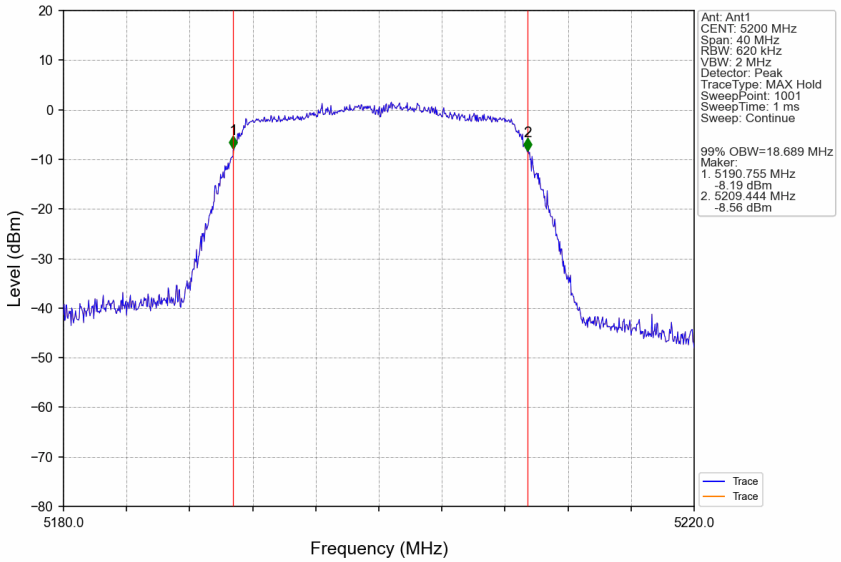
802.11a_HCH_5240MHz_Ant1_NTNV



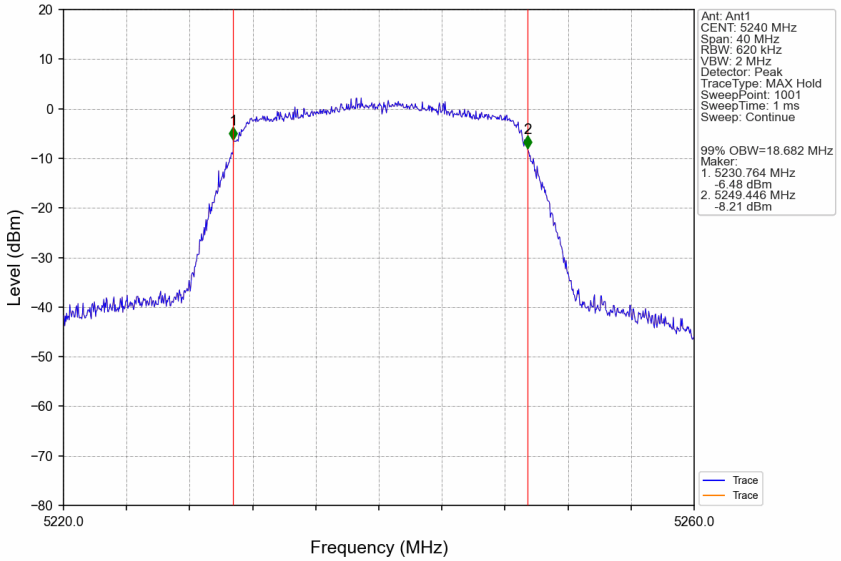
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



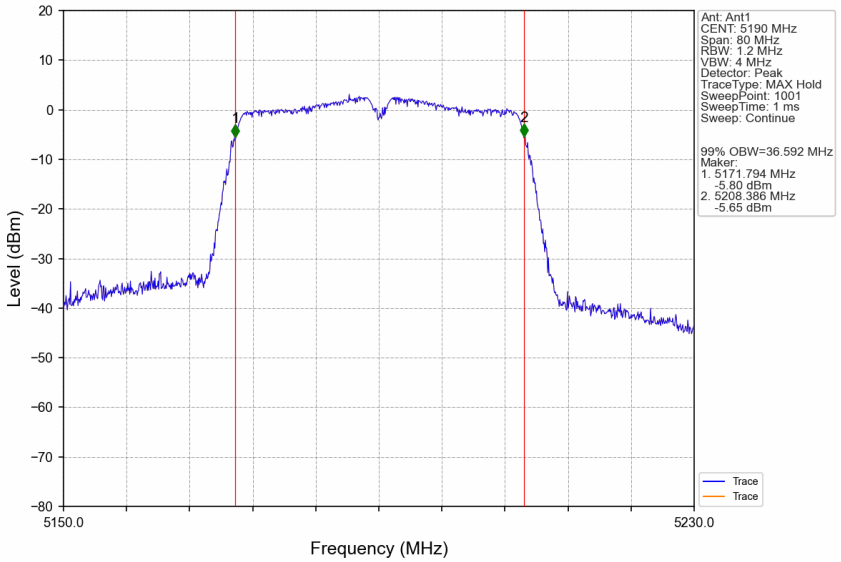
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



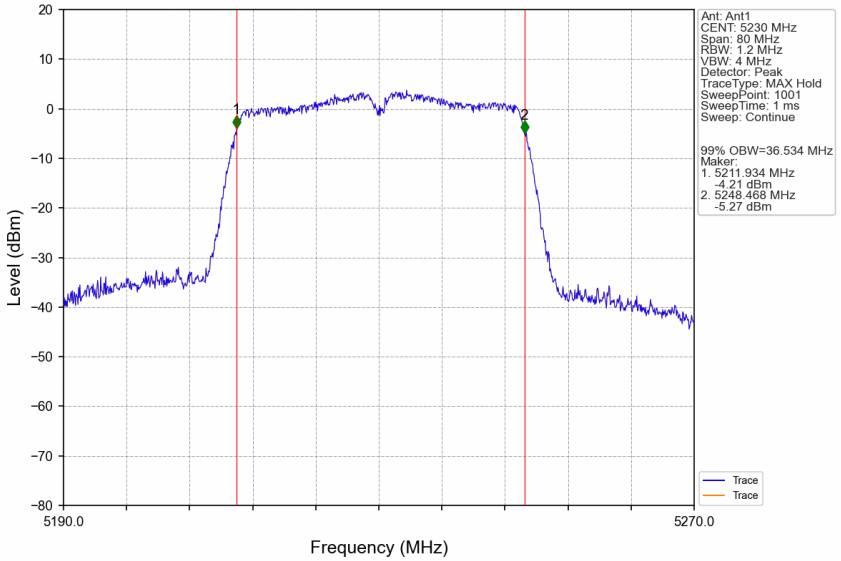
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



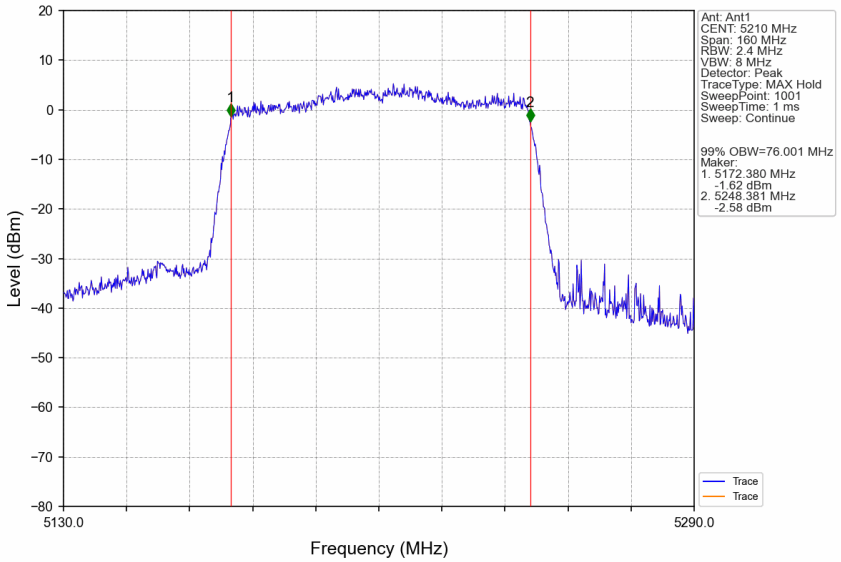
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV

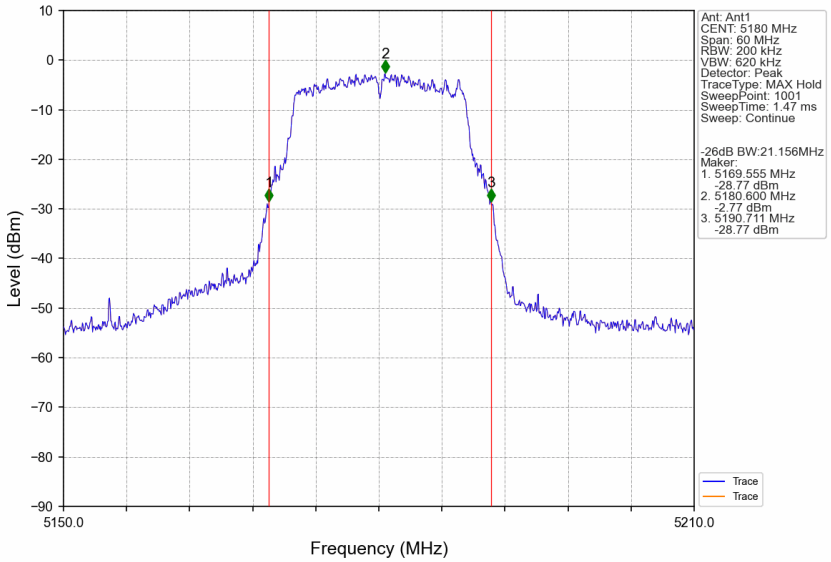


802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV

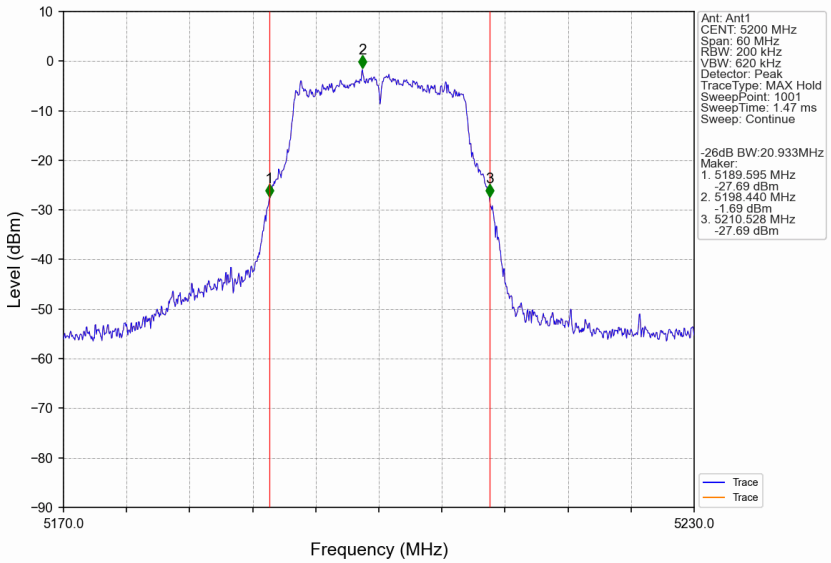


2.2.2 26dB BW

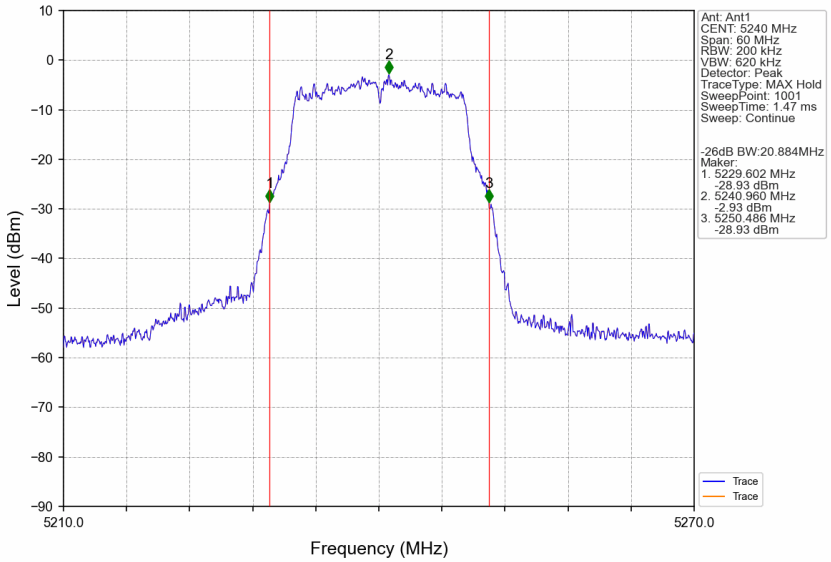
802.11a_LCH_5180MHz_Ant1_NTNV



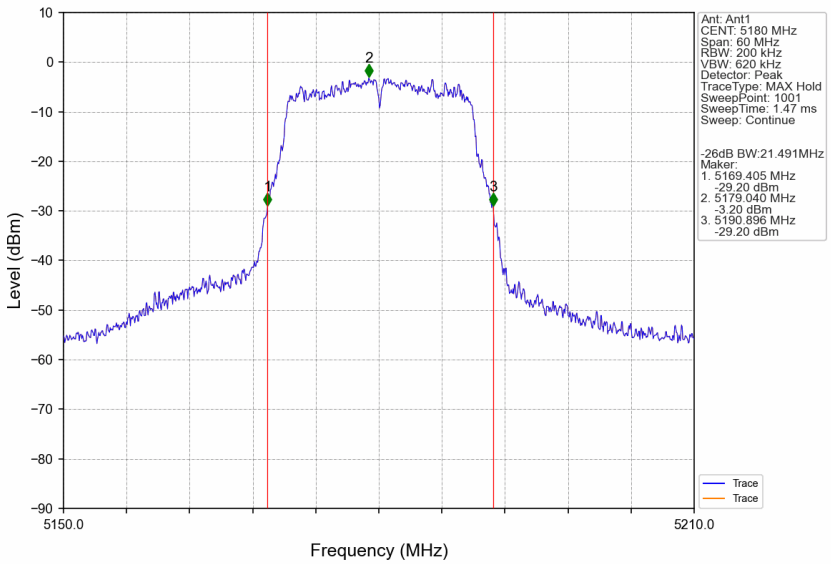
802.11a_MCH_5200MHz_Ant1_NTNV



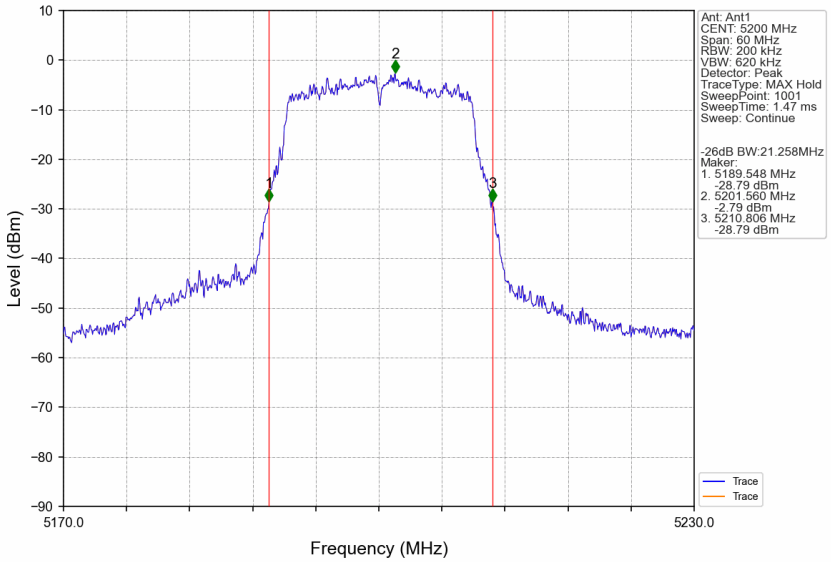
802.11a_HCH_5240MHz_Ant1_NTNV



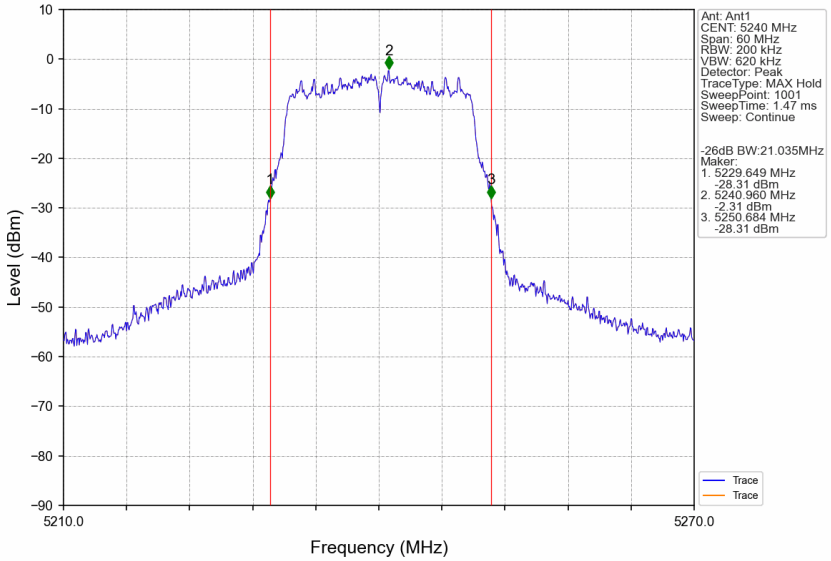
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



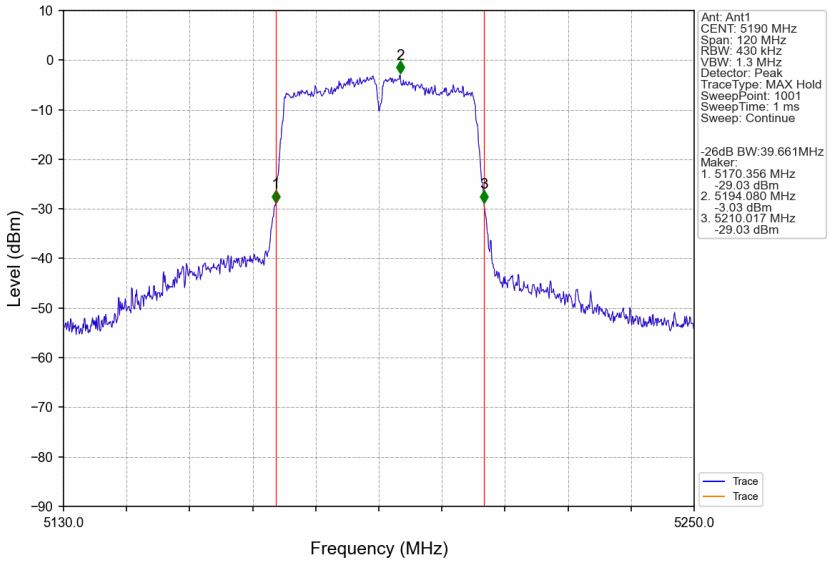
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



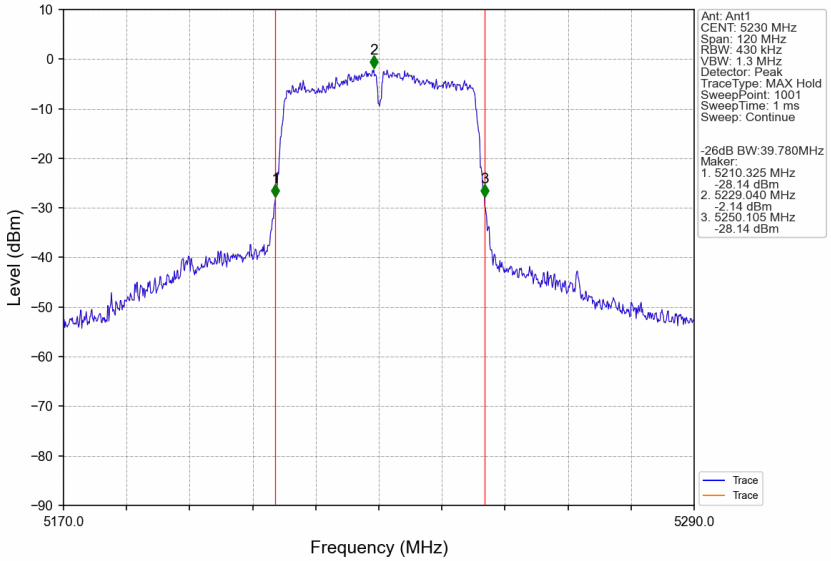
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



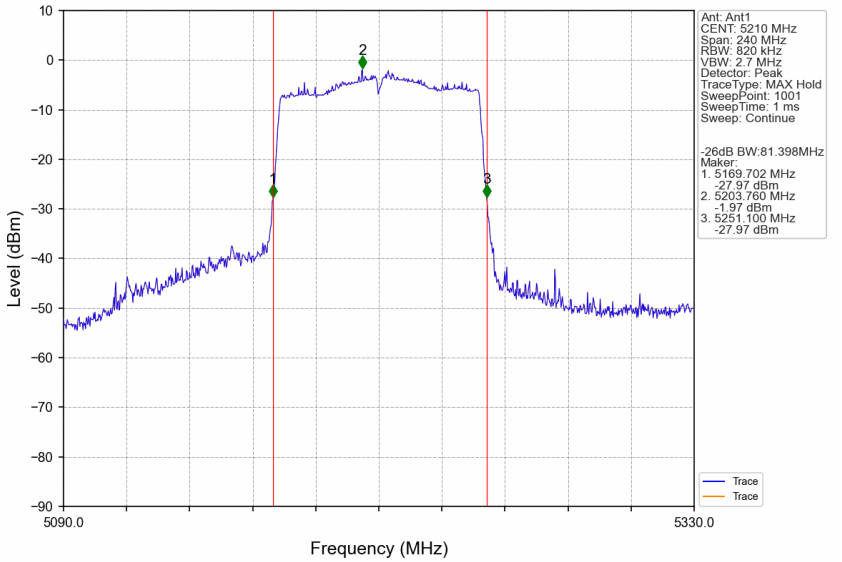
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

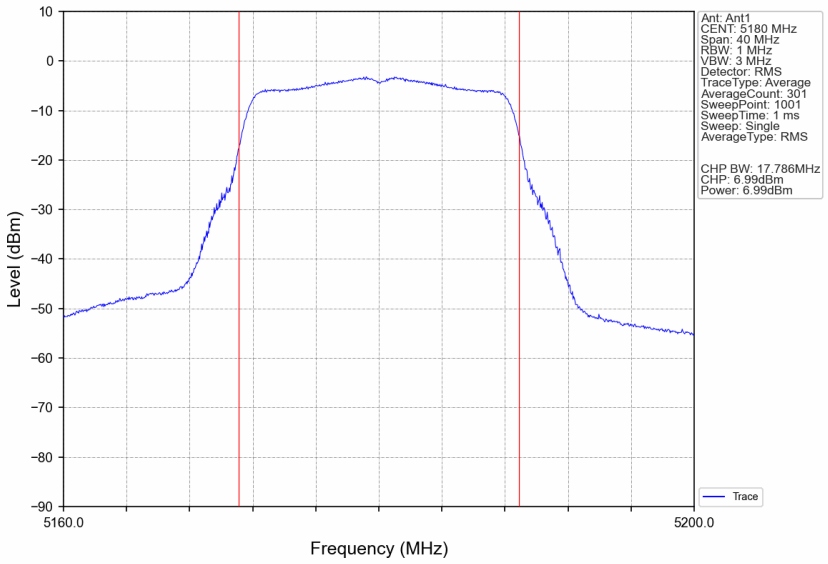
3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	6.99	<=23.98	Pass
		5200	6.83	<=23.98	Pass
		5240	6.17	<=23.98	Pass
802.11ac (VHT20)	SISO	5180	6.51	<=23.98	Pass
		5200	6.46	<=23.98	Pass
		5240	6.62	<=23.98	Pass
802.11ac (VHT40)	SISO	5190	6.60	<=23.98	Pass
		5230	6.75	<=23.98	Pass
802.11ac (VHT80)	SISO	5210	6.32	<=23.98	Pass
Note1: Antenna Gain: Ant1: 2.59dBi;					

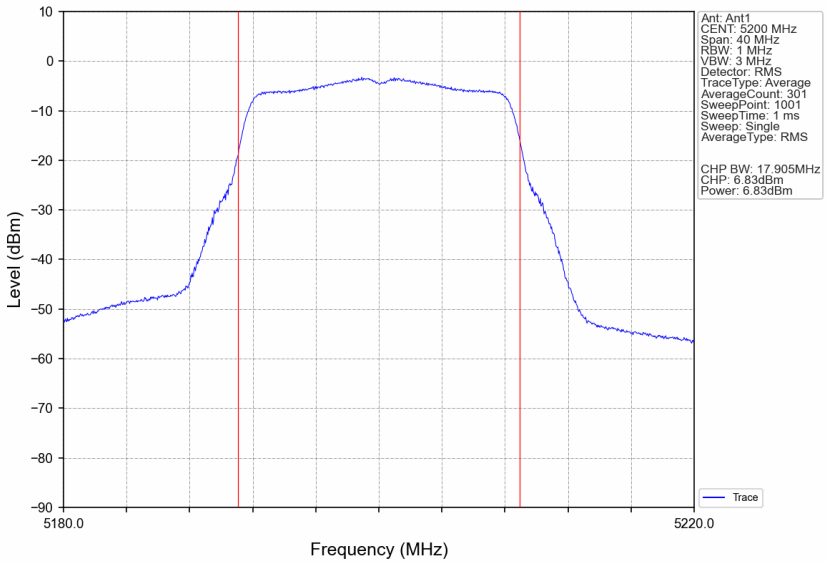
3.2 Test Graph

3.2.1 Power

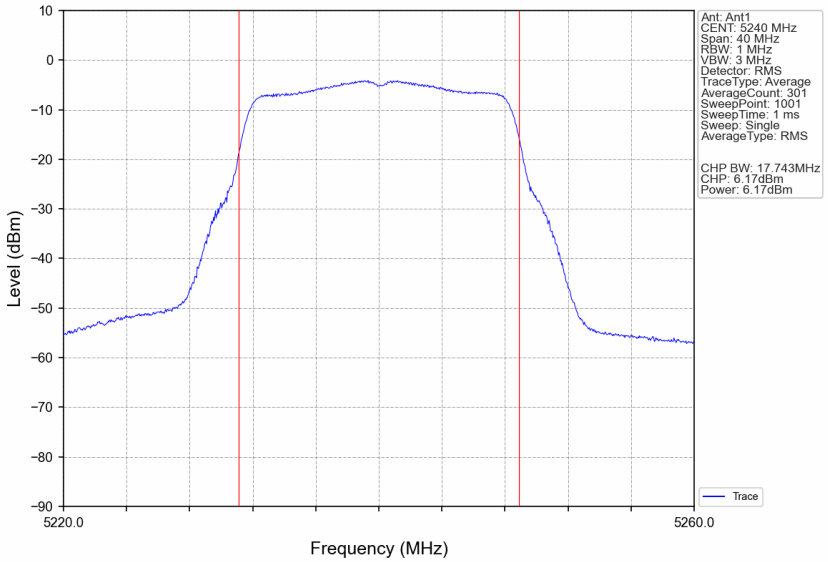
802.11a_LCH_5180MHz_Ant1_NTNV



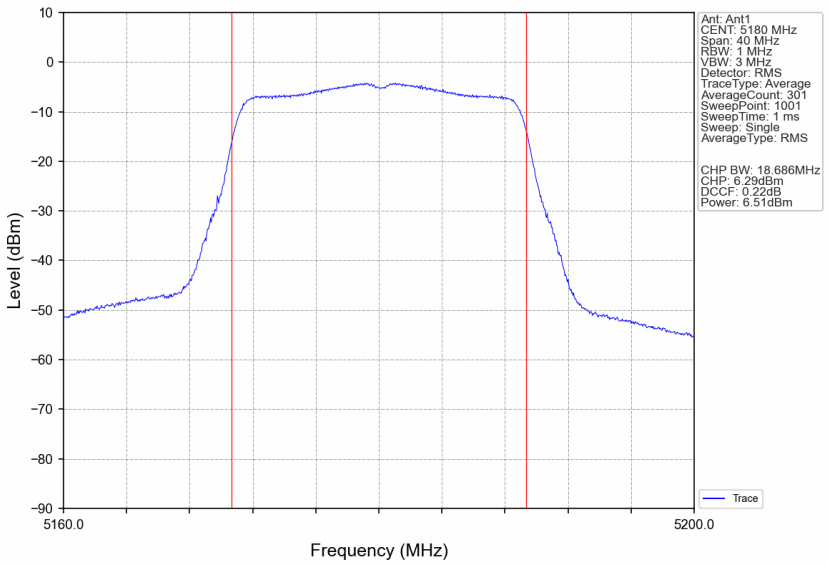
802.11a_MCH_5200MHz_Ant1_NTNV



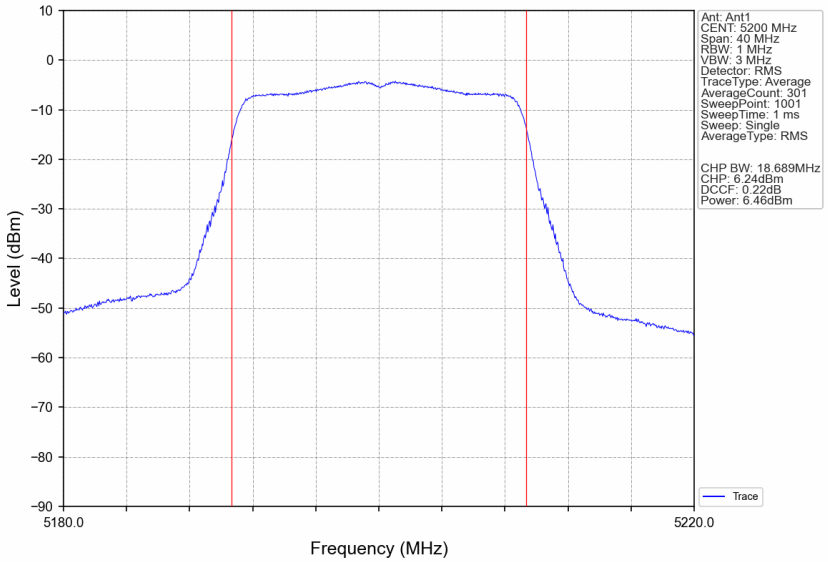
802.11a_HCH_5240MHz_Ant1_NTNV



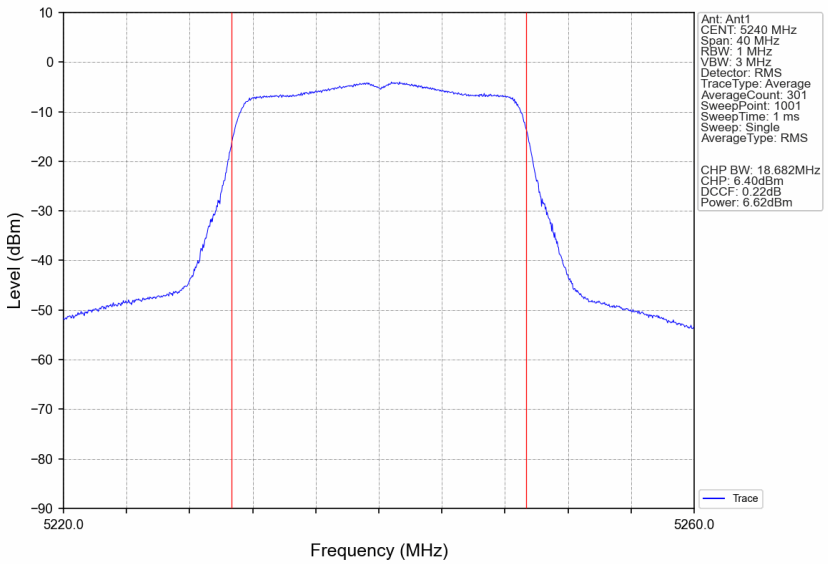
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



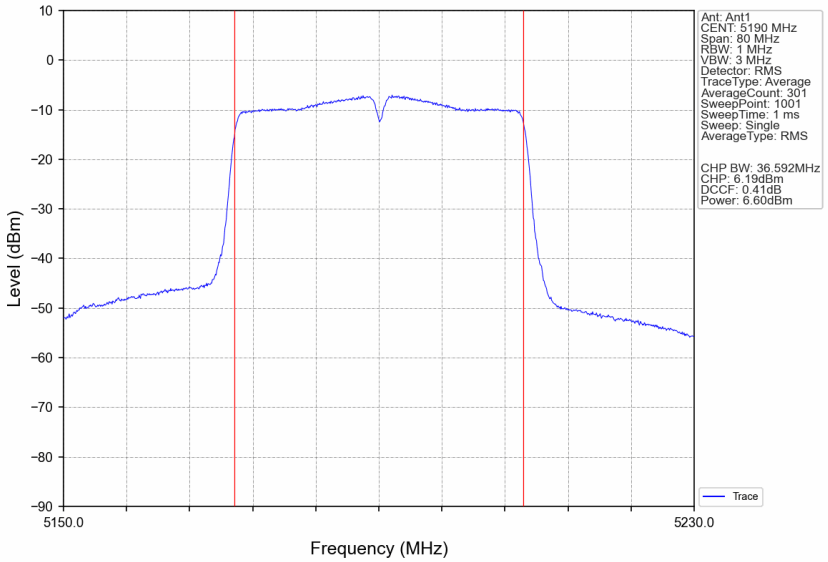
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



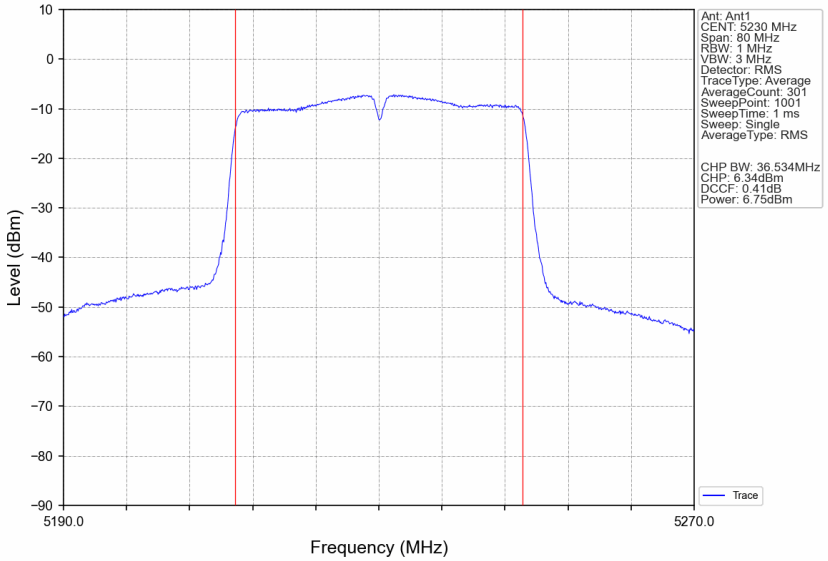
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



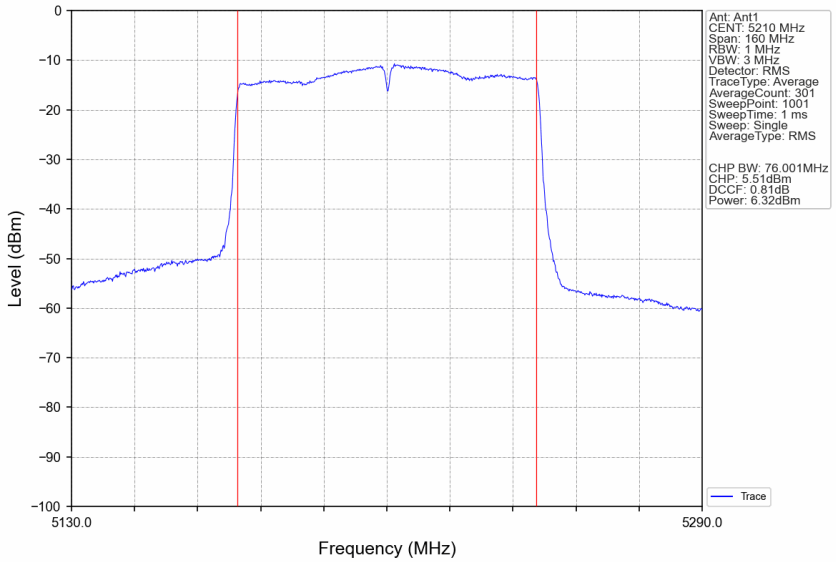
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



4. Maximum Power Spectral Density

4.1 Test Result

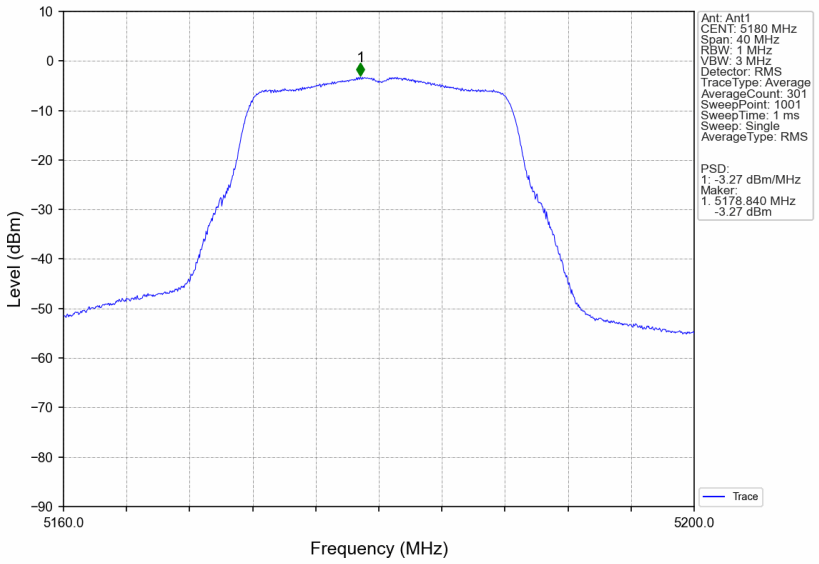
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	-3.27	<=11	Pass
		5200	-3.32	<=11	Pass
		5240	-4.05	<=11	Pass
802.11ac (VHT20)	SISO	5180	-3.87	<=11	Pass
		5200	-4.06	<=11	Pass
		5240	-3.95	<=11	Pass
802.11ac (VHT40)	SISO	5190	-6.66	<=11	Pass
		5230	-6.35	<=11	Pass
802.11ac (VHT80)	SISO	5210	-9.91	<=11	Pass
Note1: Antenna Gain: Ant1: 2.59dBi;					

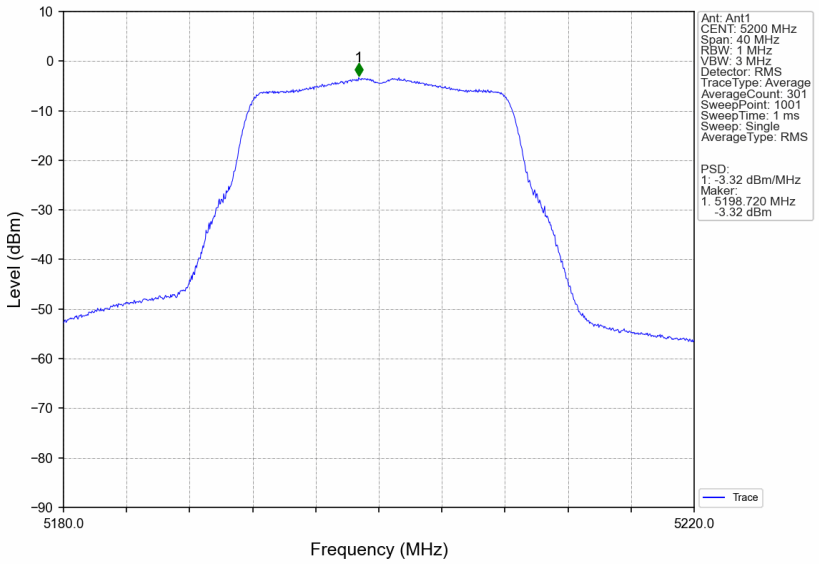
4.2 Test Graph

4.2.1 PSD

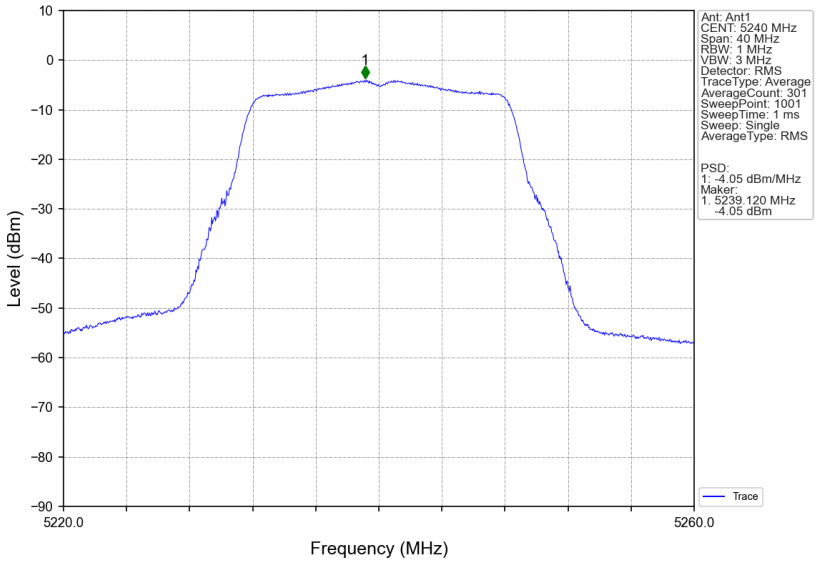
802.11a_LCH_5180MHz_Ant1_NTNV



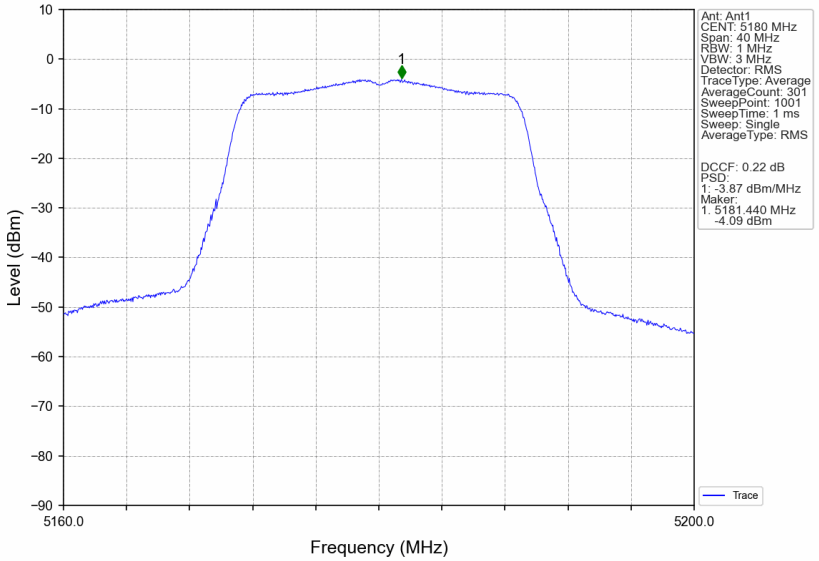
802.11a_MCH_5200MHz_Ant1_NTNV



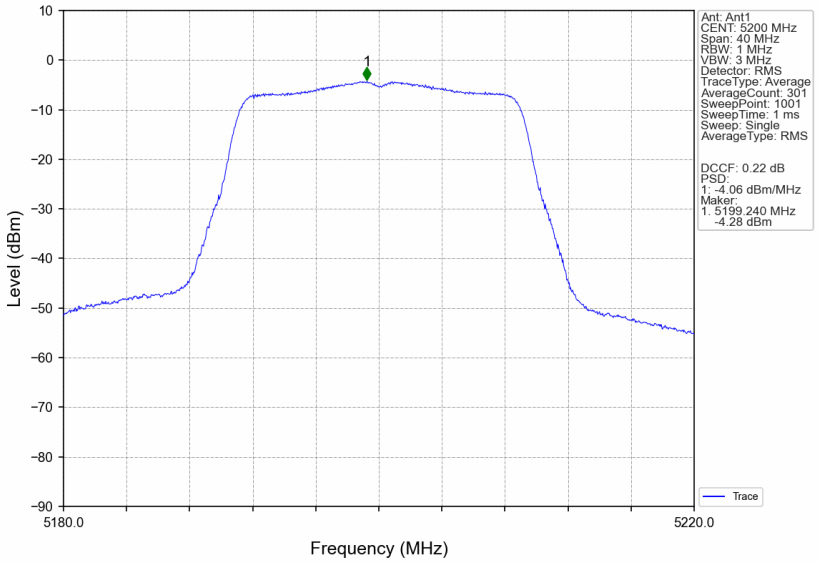
802.11a_HCH_5240MHz_Ant1_NTNV



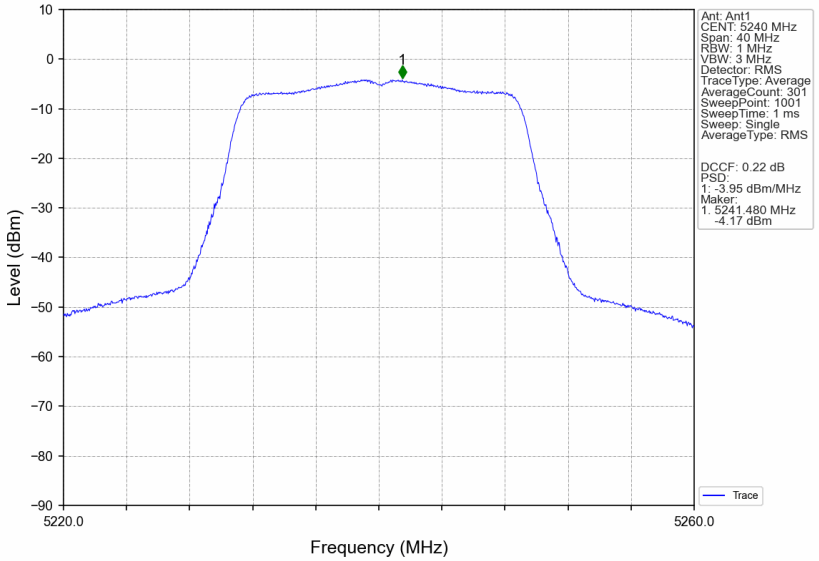
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



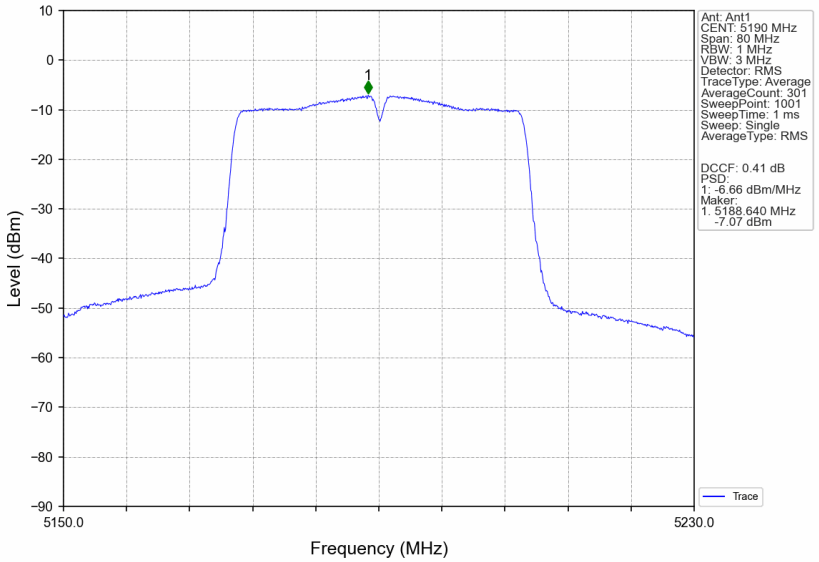
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



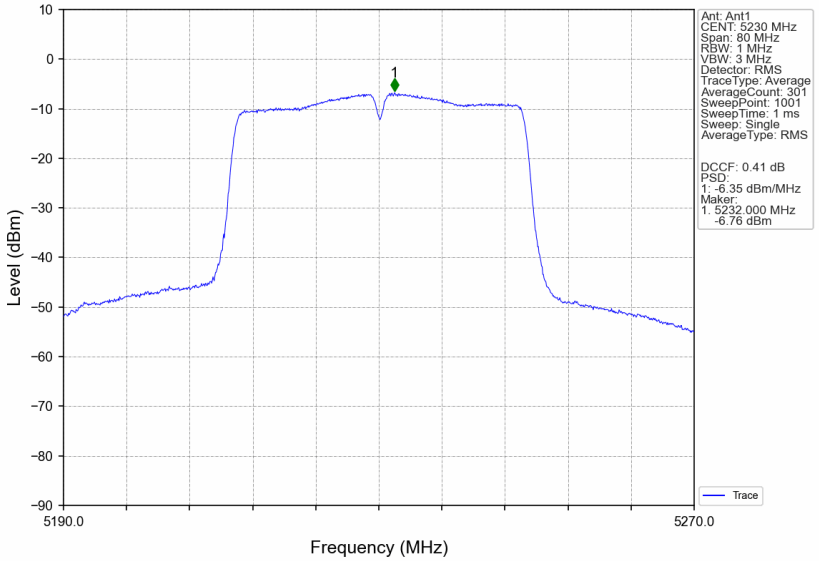
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



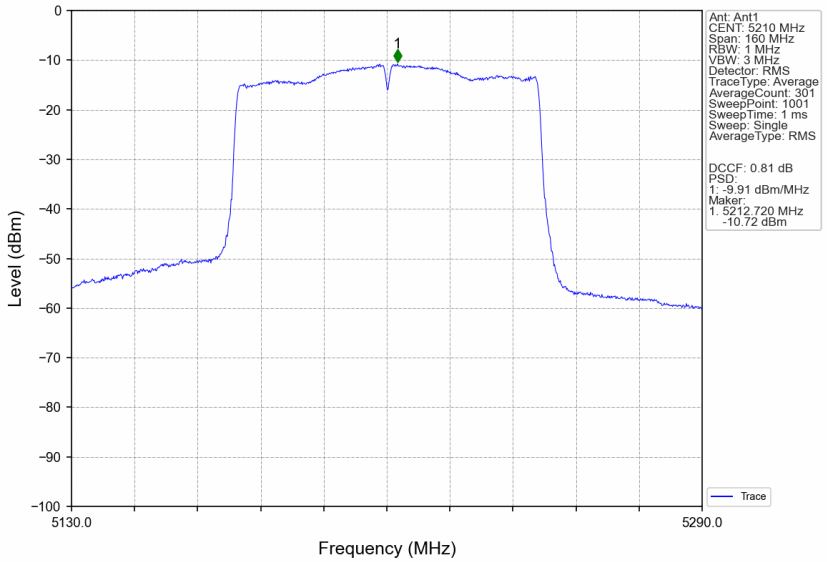
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



5. Frequency Stability

5.1 Test Result

5.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
Carrier Wave	SISO	5180	20	102	5180.060	5150 to 5250	Pass
				120	5180.060	5150 to 5250	Pass
				138	5180.060	5150 to 5250	Pass
			-30	120	5180.060	5150 to 5250	Pass
			-20	120	5180.059	5150 to 5250	Pass
			-10	120	5180.059	5150 to 5250	Pass
			0	120	5180.059	5150 to 5250	Pass
			10	120	5180.059	5150 to 5250	Pass
			30	120	5180.059	5150 to 5250	Pass
			40	120	5180.059	5150 to 5250	Pass
			50	120	5180.059	5150 to 5250	Pass
		5200	20	102	5200.059	5150 to 5250	Pass
				120	5200.059	5150 to 5250	Pass
				138	5200.059	5150 to 5250	Pass
			-30	120	5200.059	5150 to 5250	Pass
			-20	120	5200.059	5150 to 5250	Pass
			-10	120	5200.059	5150 to 5250	Pass
			0	120	5200.059	5150 to 5250	Pass
			10	120	5200.059	5150 to 5250	Pass
			30	120	5200.059	5150 to 5250	Pass
			40	120	5200.059	5150 to 5250	Pass
			50	120	5200.059	5150 to 5250	Pass
		5240	20	102	5240.060	5150 to 5250	Pass
				120	5240.059	5150 to 5250	Pass
				138	5240.060	5150 to 5250	Pass
			-30	120	5240.059	5150 to 5250	Pass
			-20	120	5240.060	5150 to 5250	Pass
			-10	120	5240.059	5150 to 5250	Pass
			0	120	5240.060	5150 to 5250	Pass
			10	120	5240.059	5150 to 5250	Pass
			30	120	5240.059	5150 to 5250	Pass
			40	120	5240.059	5150 to 5250	Pass
			50	120	5240.059	5150 to 5250	Pass
		5190	20	102	5190.059	5150 to 5250	Pass
				120	5190.059	5150 to 5250	Pass
				138	5190.059	5150 to 5250	Pass
			-30	120	5190.059	5150 to 5250	Pass
			-20	120	5190.059	5150 to 5250	Pass
			-10	120	5190.059	5150 to 5250	Pass

			0	120	5190.059	5150 to 5250	Pass
			10	120	5190.059	5150 to 5250	Pass
			30	120	5190.059	5150 to 5250	Pass
			40	120	5190.059	5150 to 5250	Pass
			50	120	5190.059	5150 to 5250	Pass
		5230	20	102	5230.059	5150 to 5250	Pass
				120	5230.059	5150 to 5250	Pass
				138	5230.059	5150 to 5250	Pass
			-30	120	5230.059	5150 to 5250	Pass
			-20	120	5230.059	5150 to 5250	Pass
			-10	120	5230.059	5150 to 5250	Pass
			0	120	5230.059	5150 to 5250	Pass
			10	120	5230.059	5150 to 5250	Pass
			30	120	5230.059	5150 to 5250	Pass
			40	120	5230.059	5150 to 5250	Pass
			50	120	5230.059	5150 to 5250	Pass
		5210	20	102	5210.059	5150 to 5250	Pass
				120	5210.059	5150 to 5250	Pass
				138	5210.059	5150 to 5250	Pass
			-30	120	5210.059	5150 to 5250	Pass
			-20	120	5210.059	5150 to 5250	Pass
			-10	120	5210.059	5150 to 5250	Pass
			0	120	5210.059	5150 to 5250	Pass
			10	120	5210.059	5150 to 5250	Pass
			30	120	5210.059	5150 to 5250	Pass
			40	120	5210.059	5150 to 5250	Pass
			50	120	5210.059	5150 to 5250	Pass

- End of the Report -