TEST REPORT

Application No.:	KSCR2501000089AT
FCC ID:	2BHGF-0235C9NB
IC:	32743-0235C9NB
Applicant:	KeyLife International Technology Limited
Address of Applicant:	Workshop 7, 6th Floor Core 45, No. 43 Tsun Yip Street, Kowloon, HONG KONG
Manufacturer:	KeyLife International Technology Limited
Address of Manufacturer:	Workshop 7, 6th Floor Core 45, No. 43 Tsun Yip Street, Kowloon, HONG KONG
Equipment Under Test (EUT):	
EUT Name:	HomeBase
Model No.:	H310,H310-B,H310-xxxxxxxx-yyyyyyyy-zzz (where x,y,z may be blank, one letter or more combination letters from '0-9, A-Z and a-z'; '-' is option) ♣
♣	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
For IC Model No.:	H310,H310-B
Standard(s) :	47 CFR Part 15, Subpart E 15.407 RSS-247 Issue 3, August 2023 RSS-Gen Issue 5 Amendment 2 (February 2021)
Date of Receipt:	2025-01-17
Date of Test:	2025-01-20 to 2025-03-11
Date of Issue:	2025-03-12
Test Result:	**Pass***

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

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Revision Record			
Version	**Description**	***Date***	***Remark***
00	Original	2025-03-12	/

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

2 Test Summary

Radio Spectrum Technical Requirement				
Item	**FCC Requirement**	**IC Requirement**	**Method**	**Result**
Antenna Requirement	47 CFR Part 15, Subpart C 15.203	RSS-Gen Clause 6.8	N/A	Pass
Transmission in the Absence of Data	47 CFR Part 15, Subpart E 15.407 (c)	RSS-247 Section 6.4(a)	N/A	Pass

N/A: Not applicable

Radio Spectrum Matter Part				
Item	**FCC Requirement**	**IC Requirement**	**Method**	**Result**
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.207 & Subpart E 15.407 b(6)	RSS-Gen Section 8.8	ANSI C63.10 (2013) Section 6.2	Pass
99% Bandwidth	N/A	RSS-Gen Section 6.7	ANSI C63.10 Section 6.9.3	Pass
26dB Emission bandwidth	47 CFR Part 15, Subpart E 15.407 (a)	RSS-247 Section 6.2.1(1)	KDB 789033 D02 II C 1	Pass
Minimum 6 dB bandwidth (5.725-5.85 GHz band)	47 CFR Part 15, Subpart E 15.407 (e)	RSS-247 Section 6.2.4	KDB 789033 D02 II C 2	Pass
Maximum Conducted output power	47 CFR Part 15, Subpart E 15.407 (a)	RSS-247 Section 6.2.1&6.2.2&6.2.3&6.2.4	KDB 789033 D02 II E	Pass
Peak Power spectrum density	47 CFR Part 15, Subpart E 15.407 (a)	RSS-247 Section 6.2.1&6.2.2&6.2.3& 6.2.4	KDB 789033 D02 II F	Pass
Radiated Emissions	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	RSS-247 Section 3.3 & RSS-Gen Section 8.9	KDB 789033 D02 II G	Pass
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)	RSS-247 Section 3.3 & RSS-Gen Section 8.9	KDB 789033 D02 II G	Pass
Frequency Stability	47 CFR Part 15, Subpart E 15.407 (g)	RSS-Gen Section 8.11	ANSI C63.10 (2013) Section 6.8& RSS-Gen Section 6.11	Pass

Model No.: H310,H310-B,H310-xxxxxxxx-yyyyyyyy-zzz (where x,y,z may be blank, one letter or more combination letters from ’0-9, A-Z and a-z’; ’-’ is option

Only the model H310 was tested.

There are series models mentioned in this report, and they are identical in electrical and electronic characters. Only the model H310 was tested since their differences were the model number and color.

3 Contents

4 General Information

4.1 Details of E.U.T.

Power supply:	AC/DC Adapter: Model: DCT36W120300US-A3 Input: 100~240V~,50-60Hz,1A max Output: 12V/3A
S/N:	210235C9NB3249000011
Firmware Version:	GSHAV5R1B01D001SP22
Operation Frequency/Number of channels (20MHz):	U-NII-1: 5180-5240MHz (4 Channels); U-NII-3: 5745-5825MHz (5 Channels)
Operation Frequency/Number of channels/(40MHz):	U-NII-1: 5190-5230MHz (2 Channels); U-NII-3: 5755-5795MHz (2 Channels)
Modulation Type:	OFDM (64QAM, 16QAM, QPSK, BPSK); 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM); 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM); 802.11ax: OFDMA (BPSK, BPSK_DCM, QPSK, QPSK_DCM, 16QAM, 16QAM_DCM, 64QAM, 256QAM, 1024-QAM)
Channel Spacing:	802.11a/n/ac/ax 20: 20MHz; 802.11n/ac/ax 40: 40MHz
Antenna Type:	Internal antenna
Antenna Gain:	3.5dBi (Provided by the manufacturer)

4.2 Power level setting using in test

Channel	802.11a	802.11ac(VHT20)	802.11ax(HE20)
	Ant 1	Ant 1	Ant 1
36	17	17	17
40	17	17	17
48	17	17	17
149	15	15	15
157	15	15	15
165	16	15	15

Channel	802.11n(HT40)	802.11ax40
	Ant 1	Ant 1
38	17	17
46	17	17
54	17	17
151	15	15
159	15	15

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

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 antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna is Internal Antenna and no consideration of replacement. The best case gain of the Antenna is 3.5dBi.

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 (2013) Section 6.2

Limit:

Frequency of emission(MHz)	Conducted limit(dB μV)	
	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.		

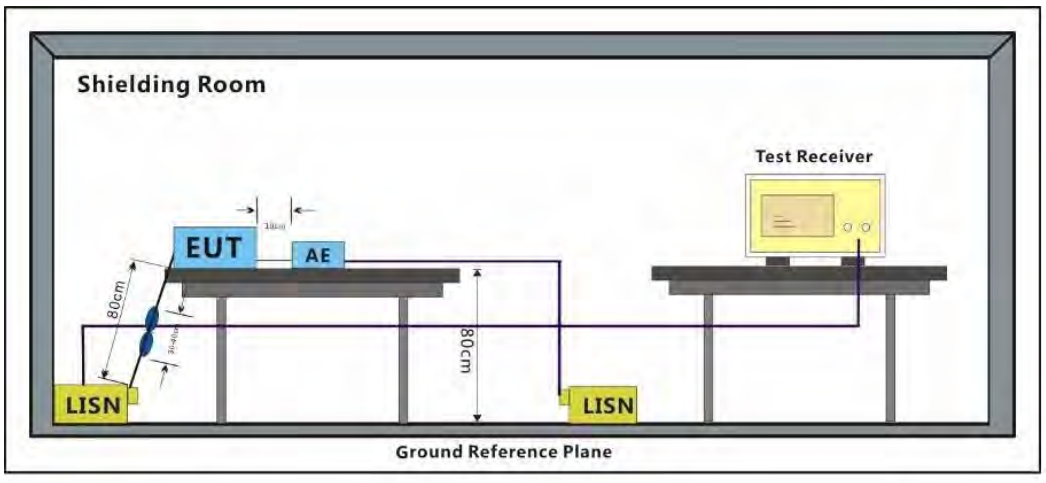
7.1.1 E.U.T. Operation

Operating Environment:
Temperature: 25.3 °C Humidity: 50.5 % 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/ax 20/40, 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,

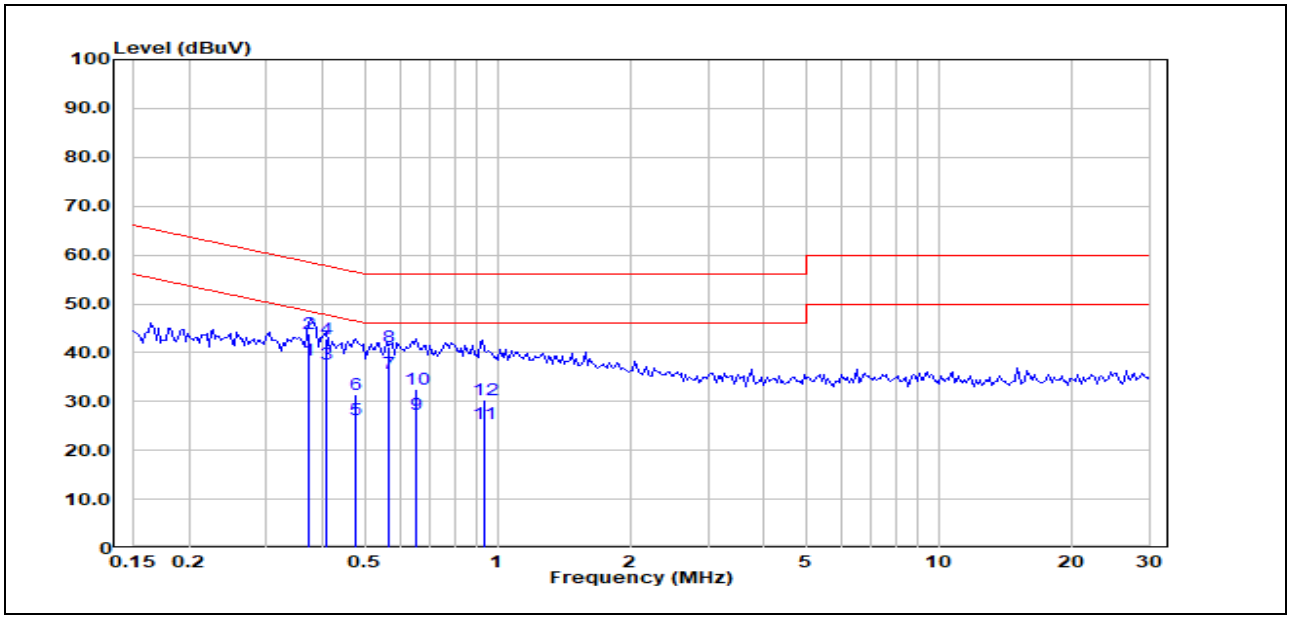
4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test 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

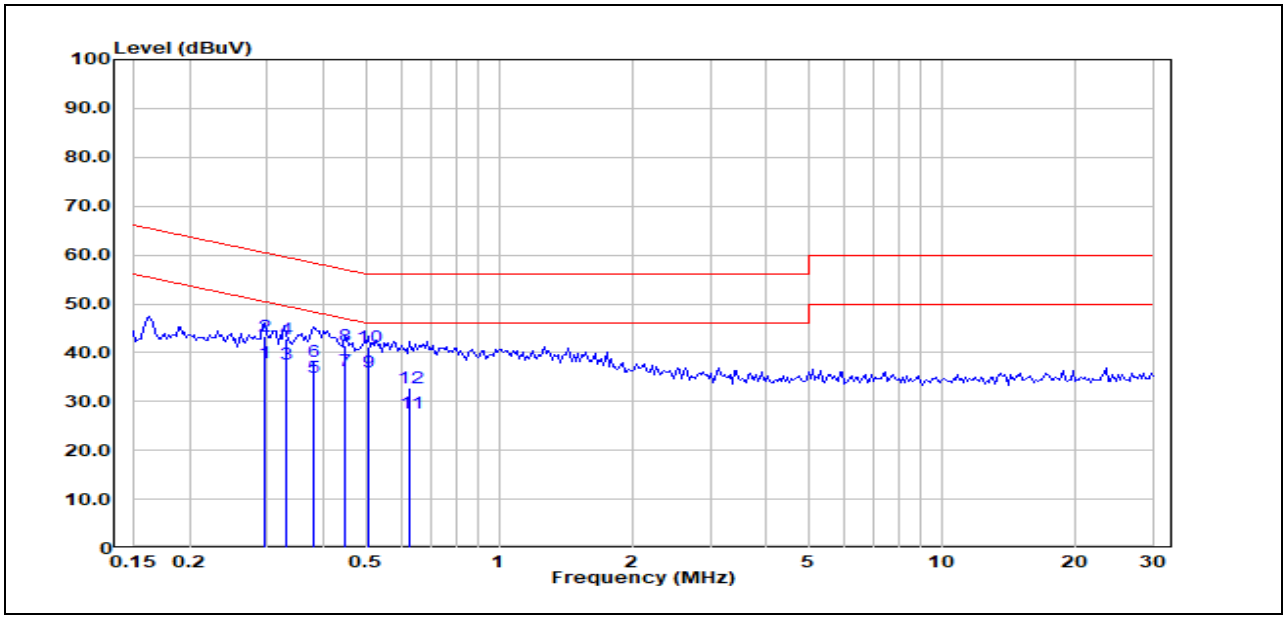
Test Data :



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.3747	18.29	20.07	38.36	48.40	-10.04	Average
2	0.3747	23.80	20.07	43.87	58.40	-14.53	QP
3	0.4104	17.64	20.06	37.70	47.64	-9.94	Average
4	0.4104	22.89	20.06	42.95	57.64	-14.69	QP
5	0.4764	6.27	20.04	26.31	46.40	-20.09	Average
6	0.4764	11.37	20.04	31.41	56.40	-24.99	QP
7	0.5662	15.83	19.93	35.76	46.00	-10.24	Average
8	0.5662	21.15	19.93	41.08	56.00	-14.92	QP
9	0.6547	7.49	19.81	27.30	46.00	-18.70	Average
10	0.6547	12.58	19.81	32.39	56.00	-23.61	QP
11	0.9353	5.55	19.83	25.38	46.00	-20.62	Average
12	0.9353	10.63	19.83	30.46	56.00	-25.54	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	0.2949	17.97	20.08	38.05	50.38	-12.33	Average
2	0.2949	23.20	20.08	43.28	60.38	-17.10	QP
3	0.3314	17.61	20.09	37.70	49.42	-11.72	Average
4	0.3314	22.86	20.09	42.95	59.42	-16.47	QP
5	0.3803	14.87	20.11	34.98	48.27	-13.29	Average
6	0.3803	18.15	20.11	38.26	58.27	-20.01	QP
7	0.4467	16.34	20.02	36.36	46.94	-10.58	Average
8	0.4467	21.50	20.02	41.52	56.94	-15.42	QP
9	0.5087	15.99	19.92	35.91	46.00	-10.09	Average
10	0.5087	21.24	19.92	41.16	56.00	-14.84	QP
11	0.6310	7.76	19.86	27.62	46.00	-18.38	Average
12	0.6310	13.03	19.86	32.89	56.00	-23.11	QP

7.2 Maximum Conducted output power

Test Requirement 47 CFR Part 15, Subpart E 15.407 (a)
Test Method: ANSI C63.10 (2013) 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: 25.3 °C Humidity: 50.5 % 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/ax 20/40, Only the data of worst case is recorded in the report.
Final test	02	TX mode (U-NII-3) _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/ax 20/40, Only the data of worst case is recorded in the report.

7.2.3 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 (2013) Section 6.4,6.5

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

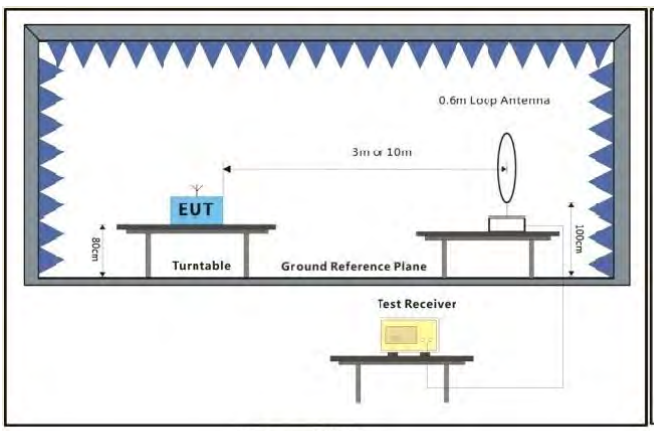
7.3.1 E.U.T. Operation

Operating Environment:
Temperature: 21.8 °C Humidity: 51.2 % RH Atmospheric Pressure: 1010 mbar

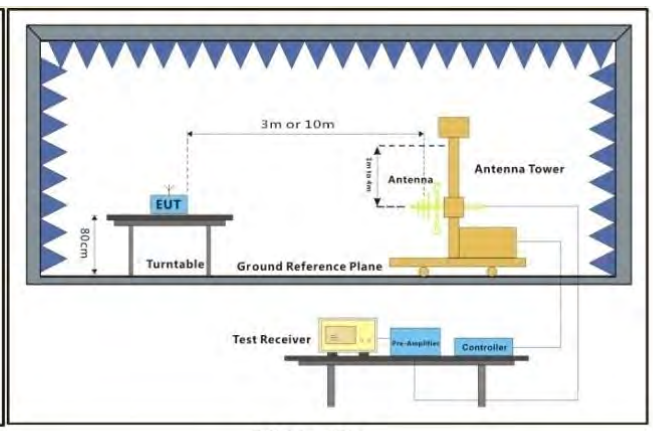
7.3.2 Test Mode Description

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/ax 20/40, 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

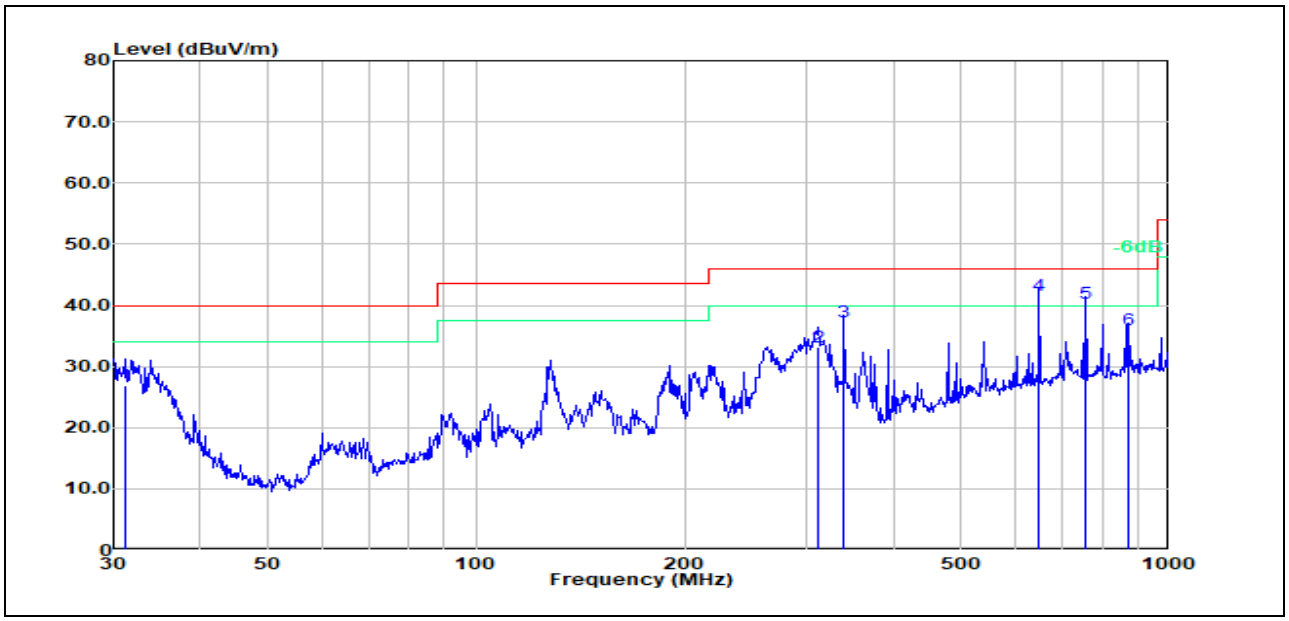
2. For emission below 1GHz, through the pre-scan found the worst case is the lowest channel of 802.11a. Only the worst case is recorded in the report.

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

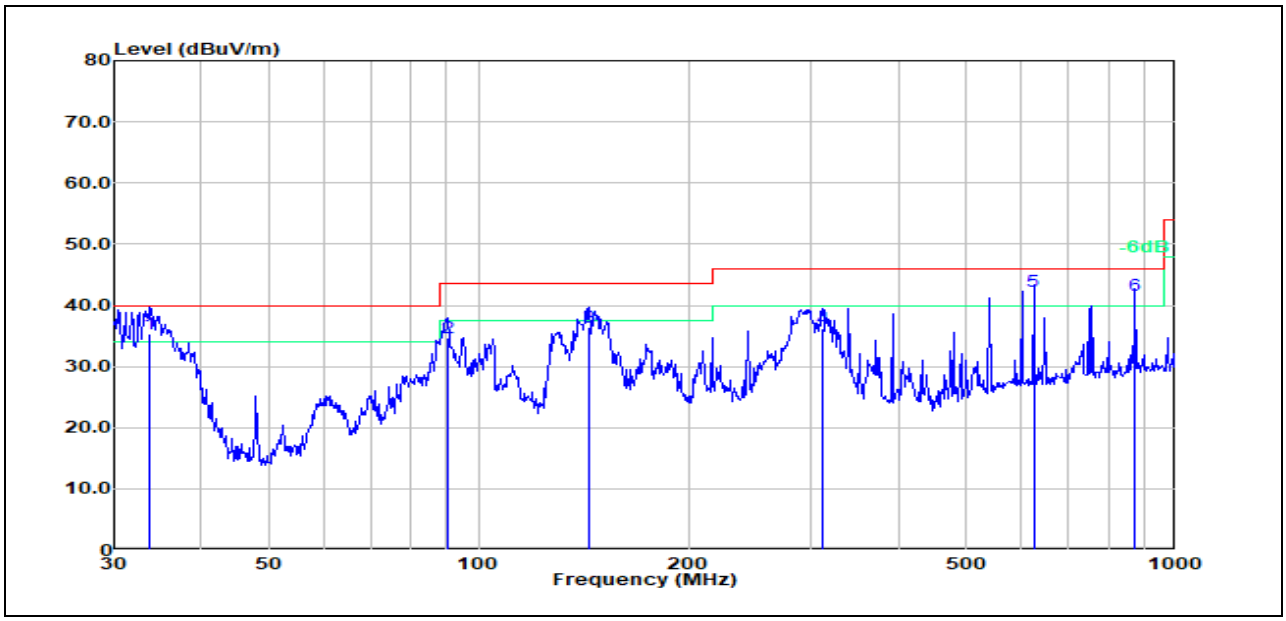
Test Data :



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	31.1800	8.45	18.45	26.90	40.00	-13.10	100	243	QP
2	312.1790	17.26	15.92	33.18	46.00	-12.82	200	265	QP
3	339.5890	21.02	16.30	37.32	46.00	-8.68	200	51	QP
4	649.6600	17.98	23.57	41.55	46.00	-4.45	100	243	QP
5	758.0410	16.54	23.78	40.32	46.00	-5.68	200	352	QP
6	875.2470	10.78	25.26	36.04	46.00	-9.96	100	330	QP

Test Mode: 01; Polarity: Vertical

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	33.7986	18.42	16.89	35.31	40.00	-4.69	100	360	QP
2	90.2205	22.59	12.03	34.62	43.50	-8.88	100	99	QP
3	143.8295	22.87	13.55	36.42	43.50	-7.08	100	343	QP
4	311.0866	20.13	16.00	36.13	46.00	-9.87	100	78	QP
5	625.0781	19.26	22.91	42.17	46.00	-3.83	100	201	QP
6	875.2469	16.37	25.26	41.63	46.00	-4.37	100	343	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 (2013) Section 6.6

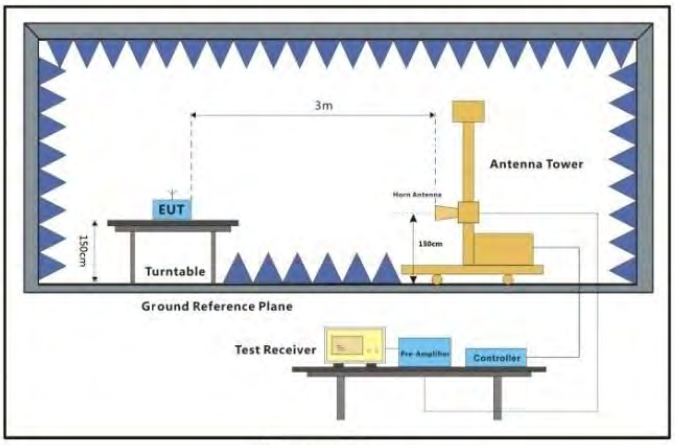
7.4.1 E.U.T. Operation

Operating Environment:
Temperature: 21.9 °C Humidity: 52.0 % 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/ax 20/40, Only the data of worst case is recorded in the report.
Final test	02	TX mode (U-NII-3) _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/ax 20/40, 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.

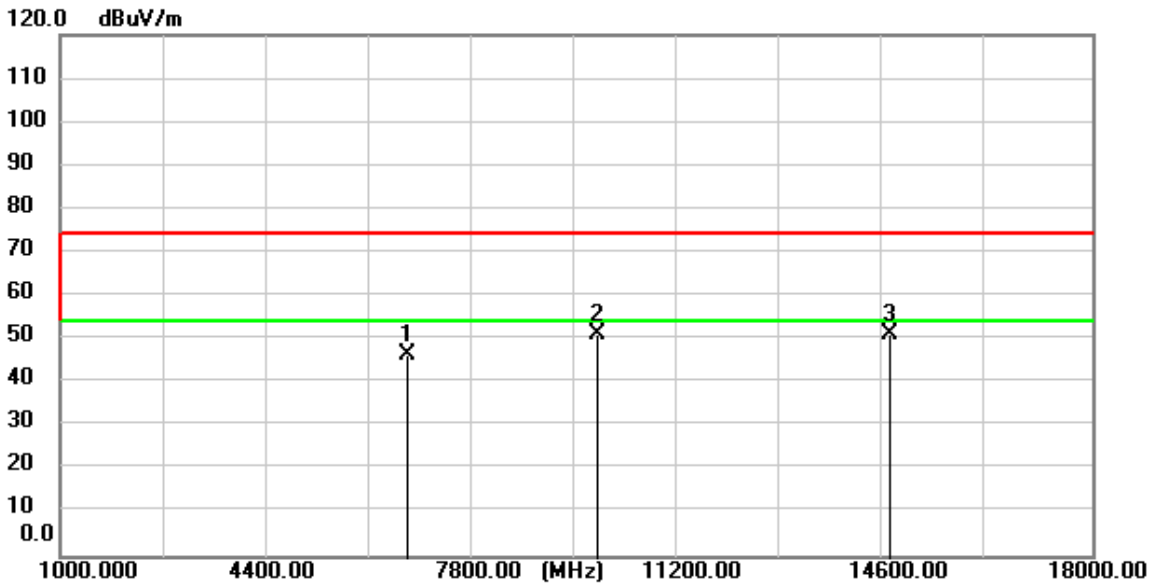
4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

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.

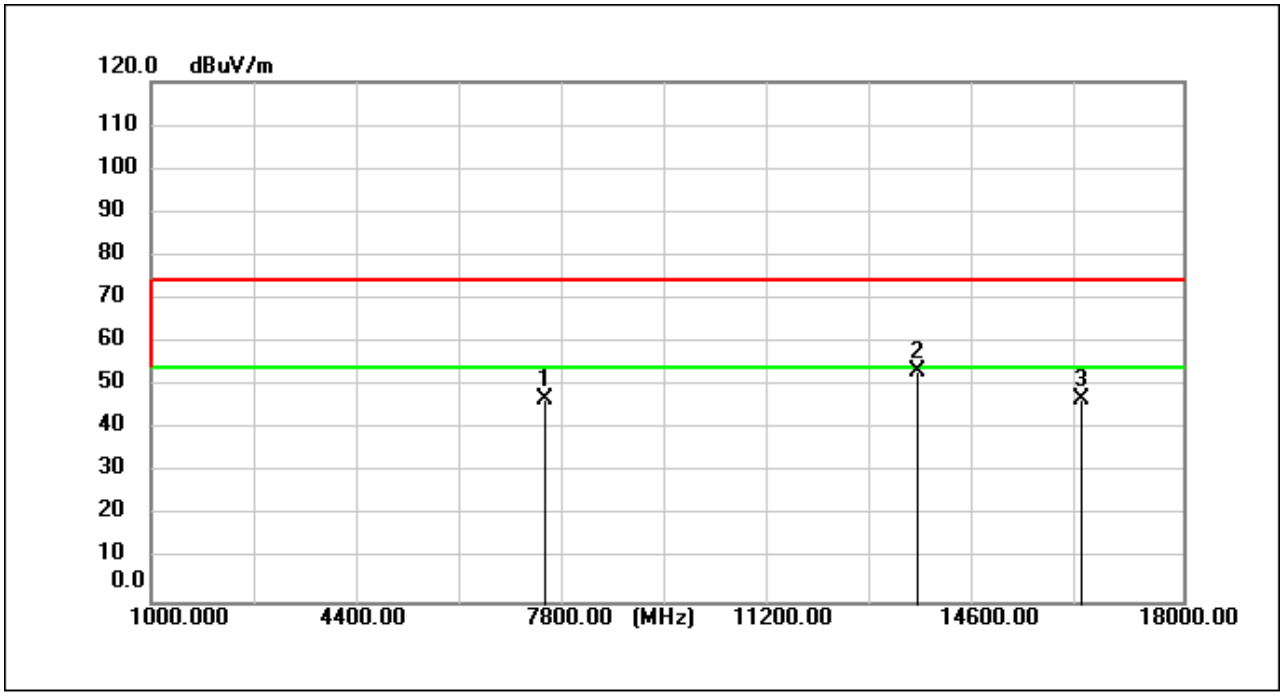
7. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geqslant$1/T (Duty cycle$<$98%) or 10Hz (Duty cycle$\geqslant$98%) for Average detection (AV) at frequency above 1GHz.

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



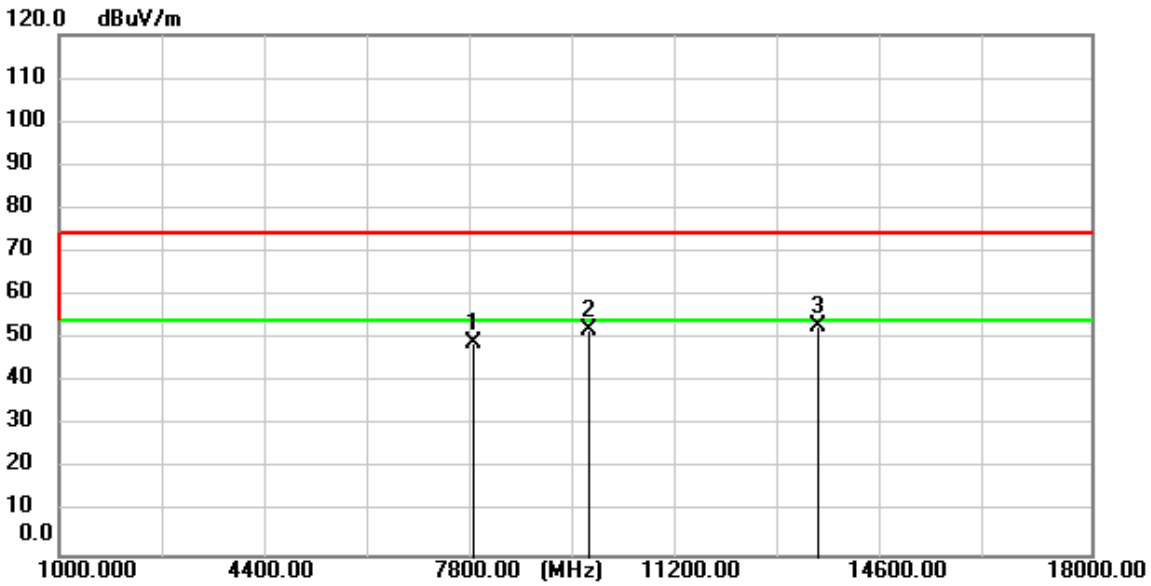
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6717.100	53.91	-7.22	46.69	74.00	-27.31	peak
2	9836.600	52.68	-1.58	51.10	74.00	-22.90	peak
3	14685.000	53.19	-1.99	51.20	74.00	-22.80	peak

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



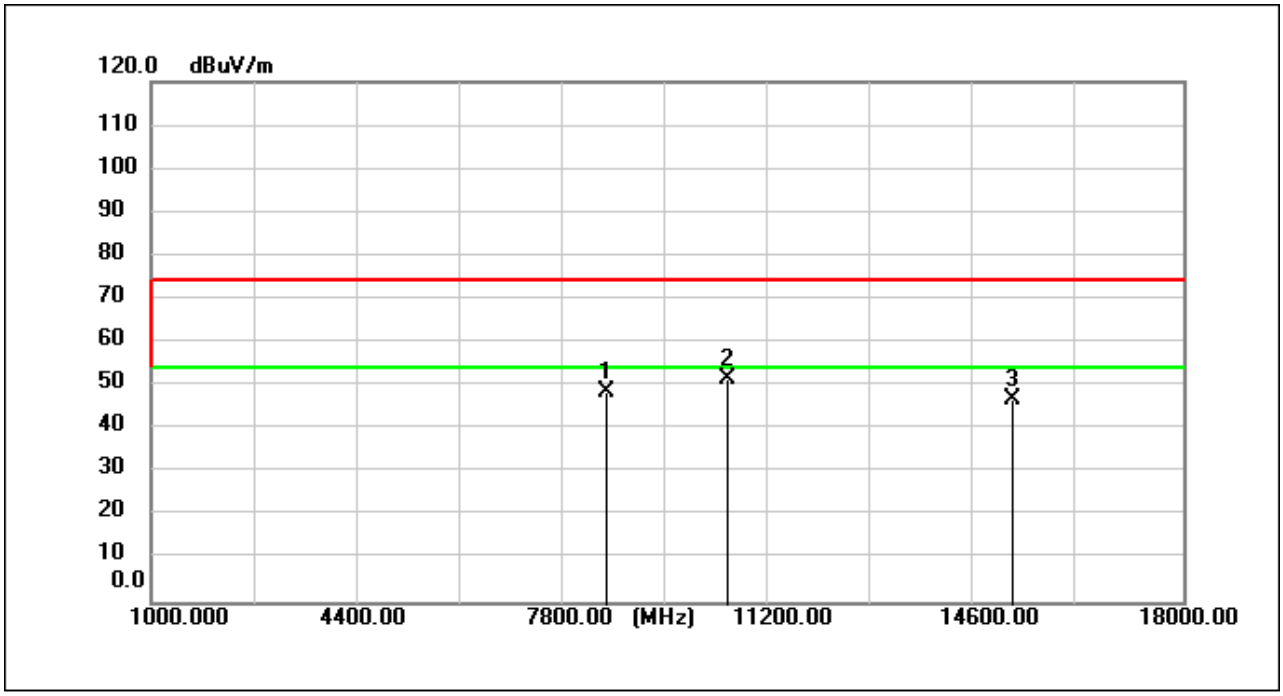
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7468.500	53.04	-6.28	46.76	74.00	-27.24	peak
2	13599.550	53.01	0.38	53.39	74.00	-20.61	peak
3	16323.800	51.39	-4.36	47.03	74.00	-26.97	peak

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



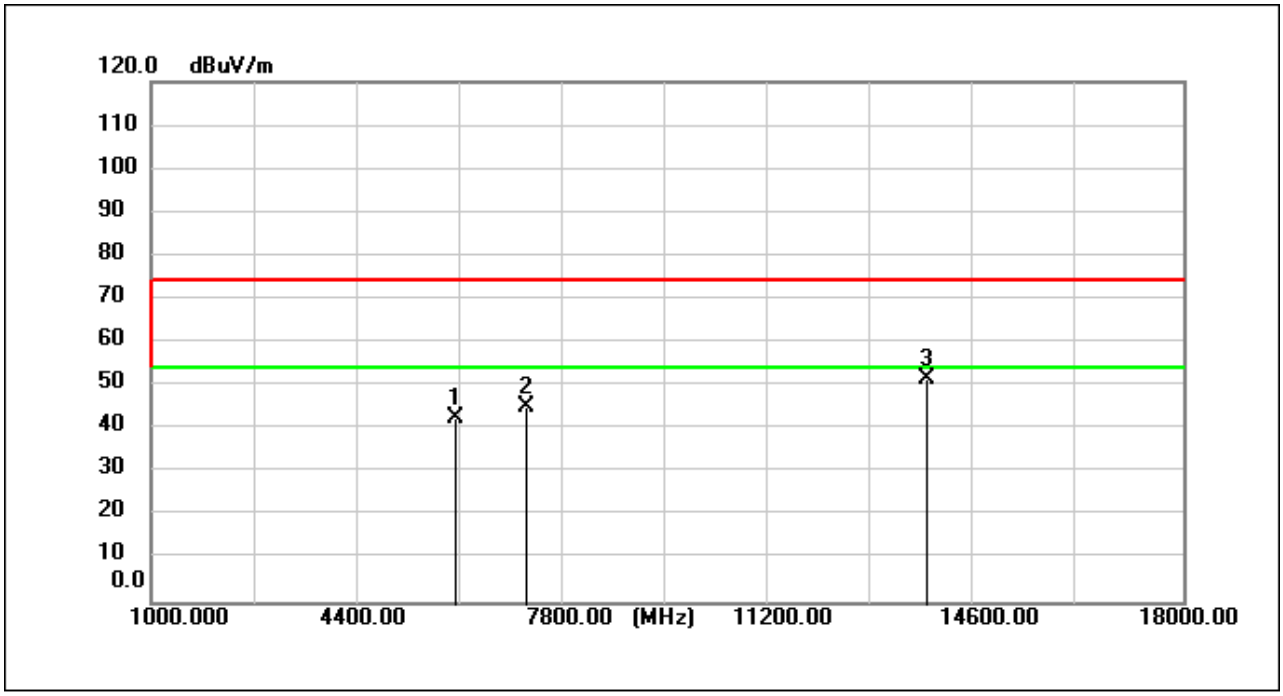
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7819.550	54.53	-5.57	48.96	74.00	-25.04	peak
2	9734.600	53.84	-1.82	52.02	74.00	-21.98	peak
3	13507.750	52.79	0.32	53.11	74.00	-20.89	peak

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



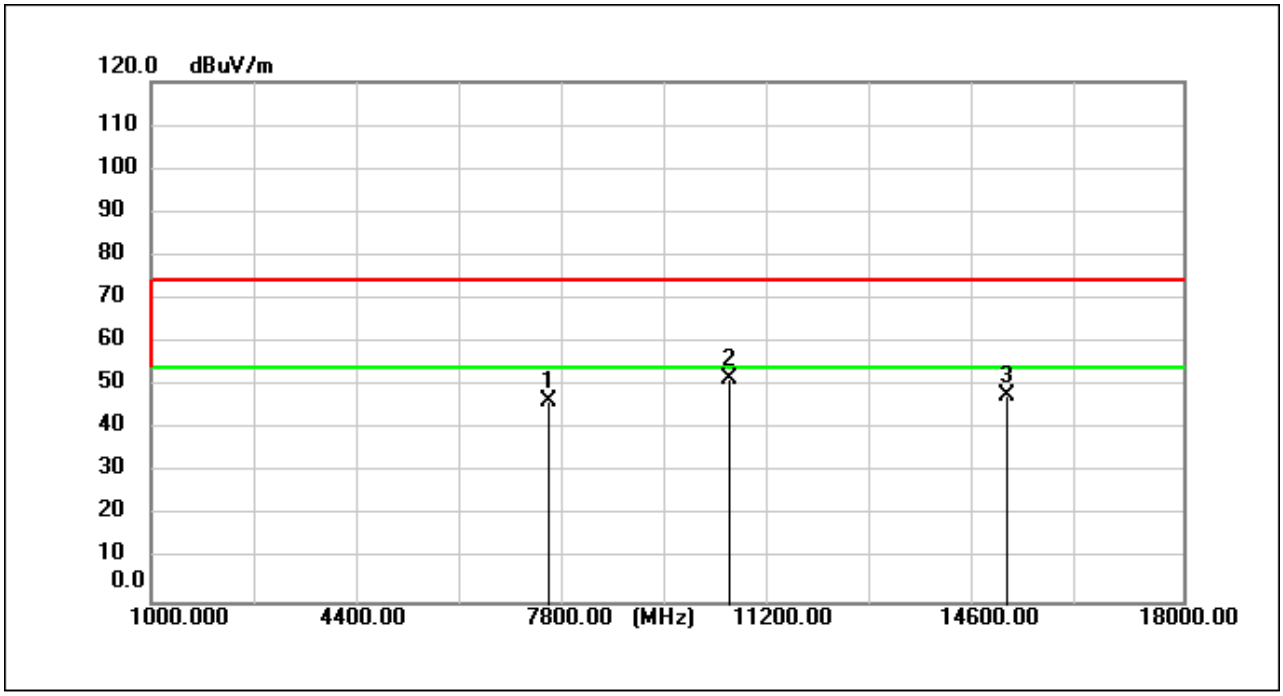
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8502.950	53.16	-4.35	48.81	74.00	-25.19	peak
2	10474.950	53.04	-1.57	51.47	74.00	-22.53	peak
3	15164.400	50.40	-3.60	46.80	74.00	-27.20	peak

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



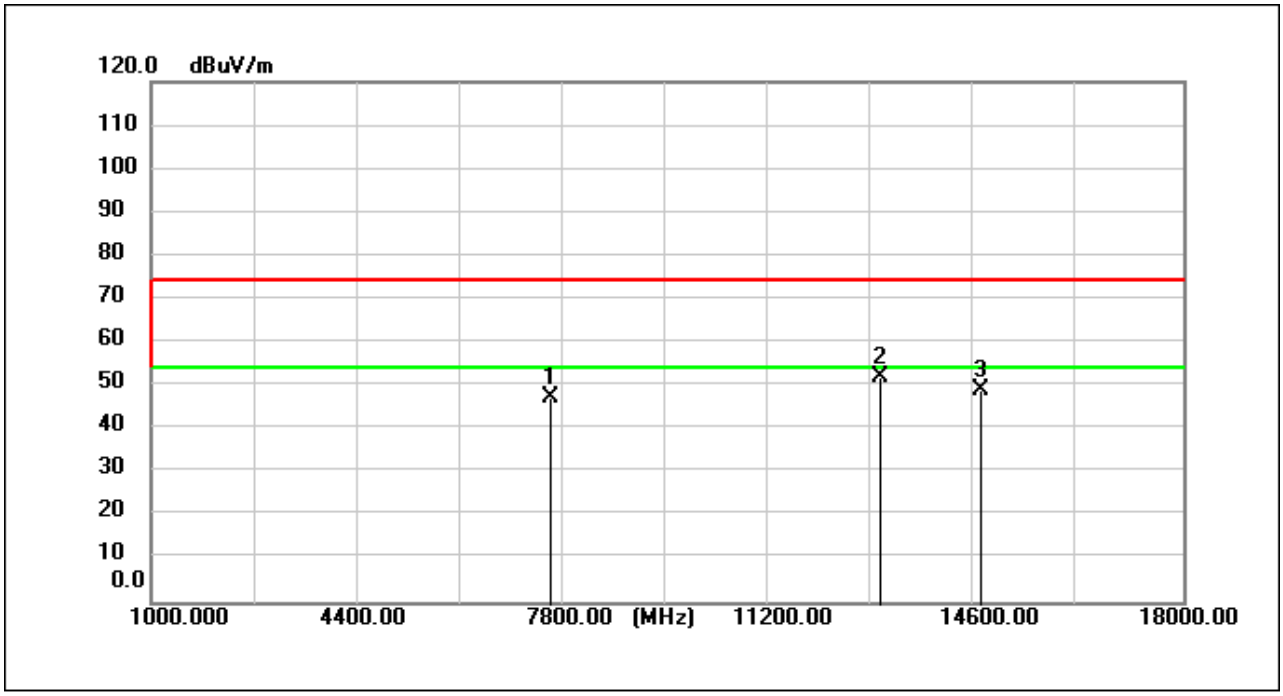
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6023.500	52.99	-10.38	42.61	74.00	-31.39	peak
2	7173.550	51.84	-6.66	45.18	74.00	-28.82	peak
3	13767.850	51.16	0.50	51.66	74.00	-22.34	peak

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



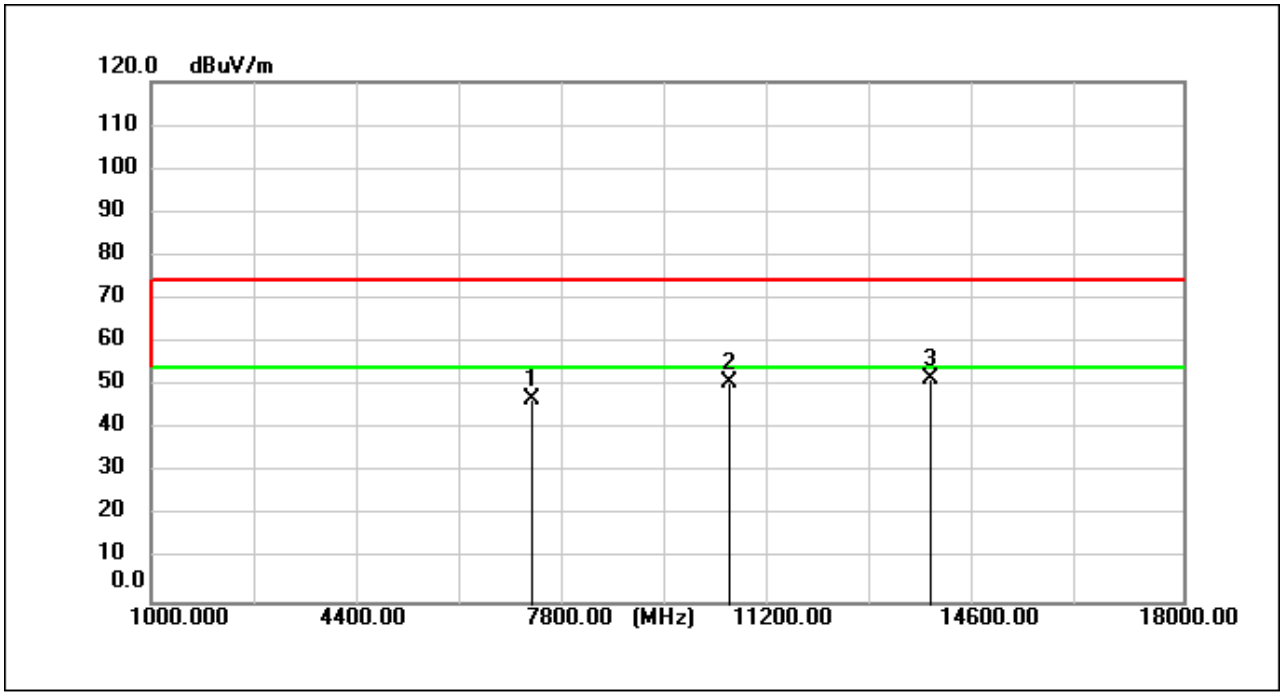
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7530.550	52.67	-6.14	46.53	74.00	-27.47	peak
2	10515.750	53.01	-1.56	51.45	74.00	-22.55	peak
3	15109.150	51.11	-3.41	47.70	74.00	-26.30	peak

Test Mode: 01; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



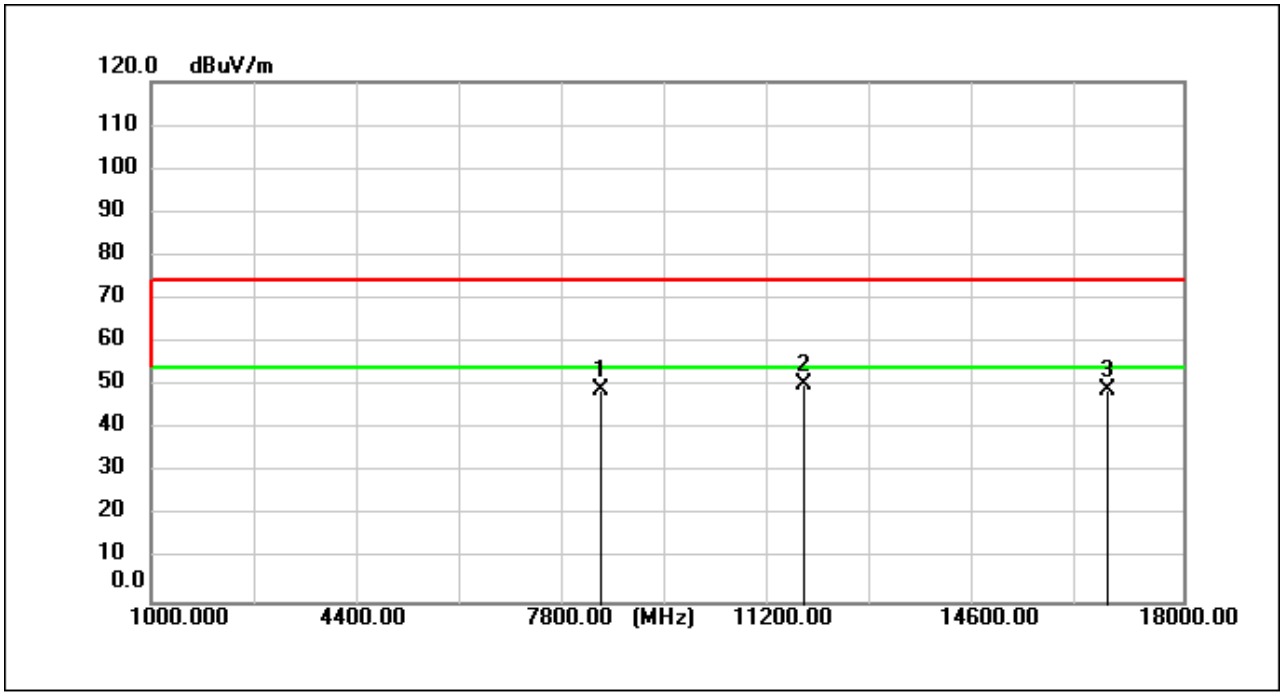
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7575.600	53.23	-6.05	47.18	74.00	-26.82	peak
2	13011.350	52.06	-0.12	51.94	74.00	-22.06	peak
3	14662.050	50.88	-1.91	48.97	74.00	-25.03	peak

Test Mode: 01; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



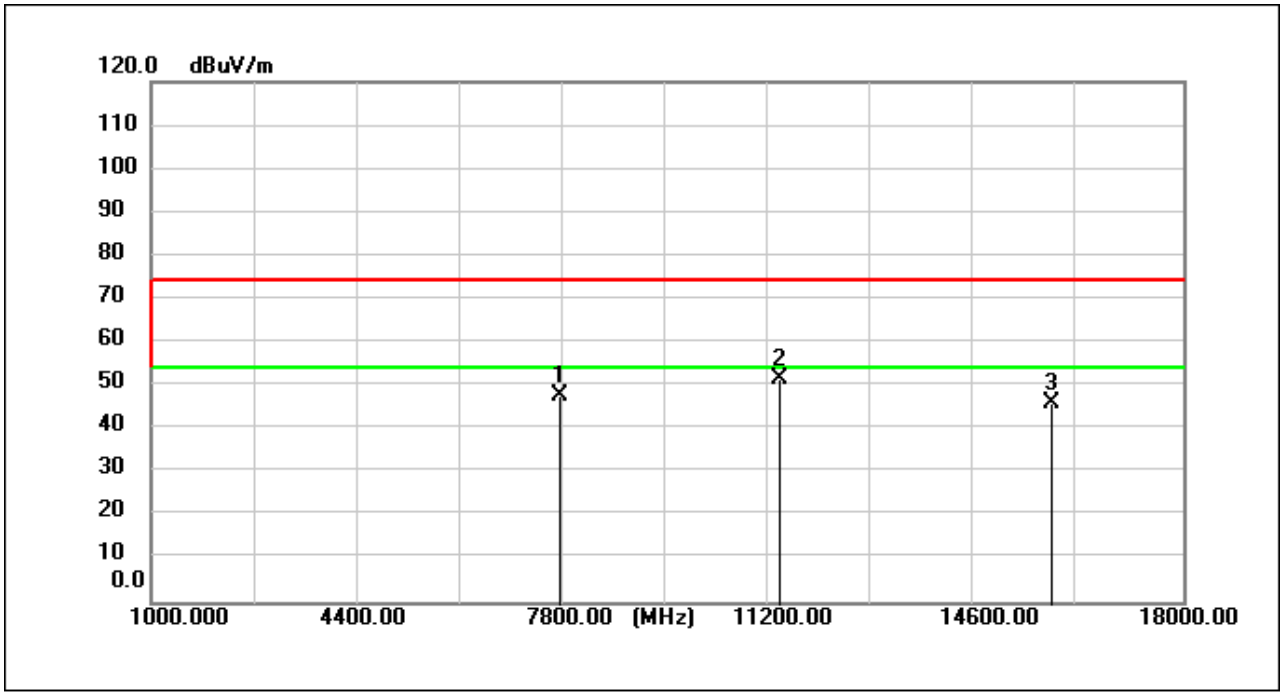
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7259.400	53.36	-6.57	46.79	74.00	-27.21	peak
2	10514.050	52.33	-1.56	50.77	74.00	-23.23	peak
3	13822.250	51.05	0.55	51.60	74.00	-22.40	peak

Test Mode: 01; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:middle



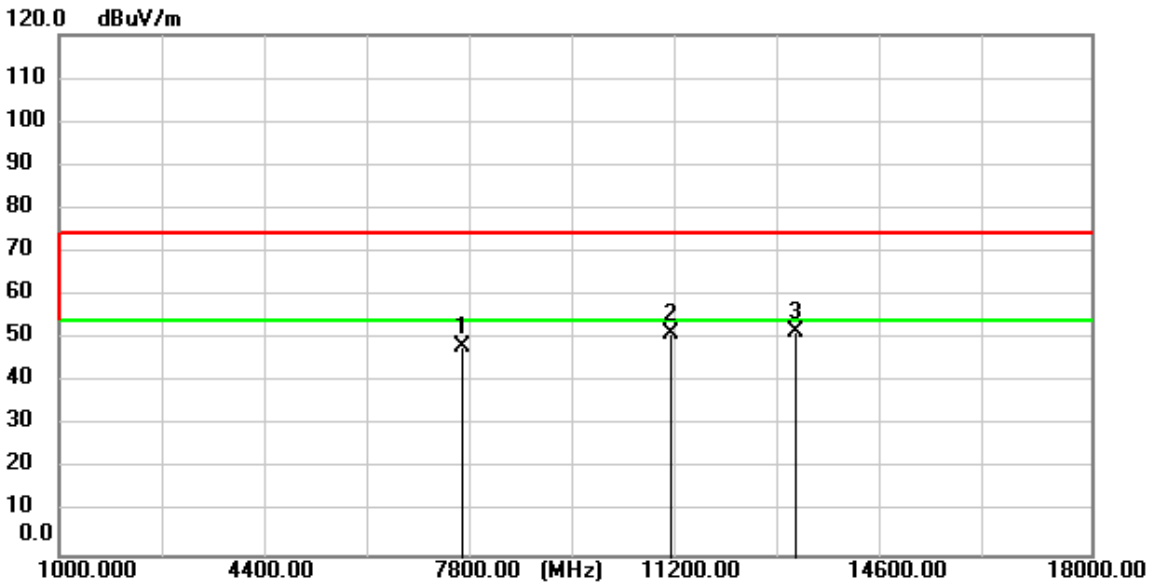
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8403.500	53.66	-4.51	49.15	74.00	-24.85	peak
2	11735.500	52.26	-1.71	50.55	74.00	-23.45	peak
3	16754.750	50.92	-1.69	49.23	74.00	-24.77	peak

Test Mode: 01; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:middle



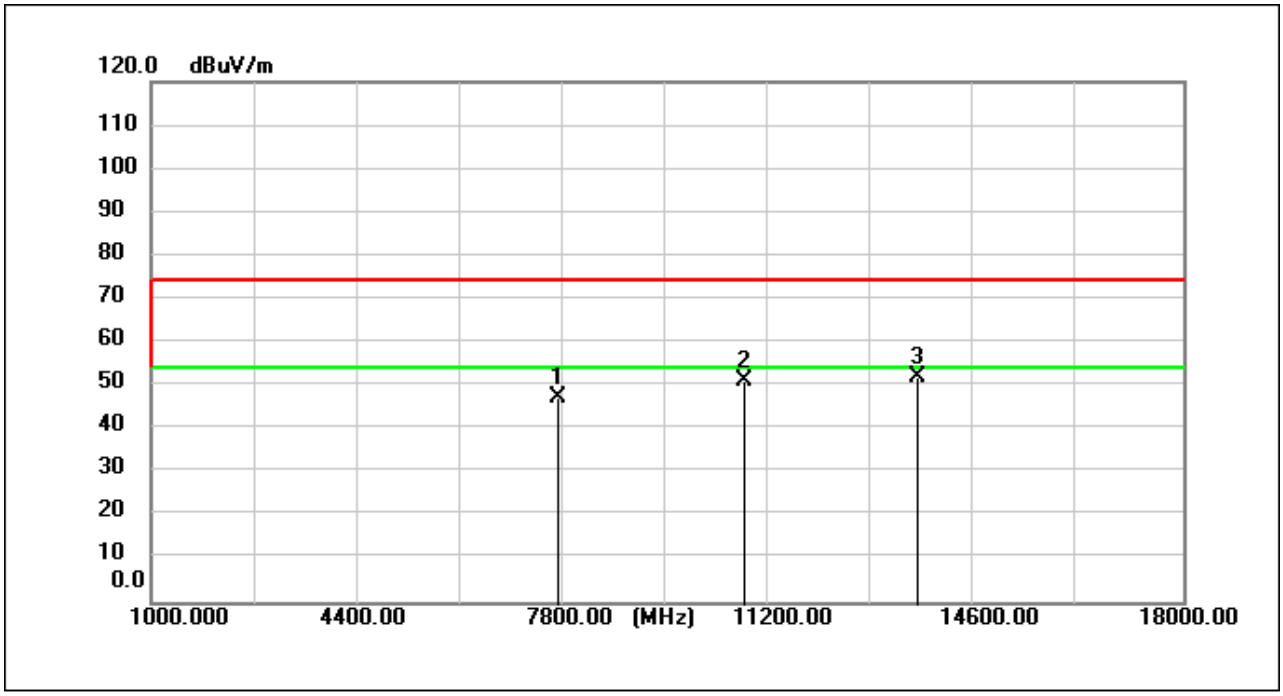
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7731.150	53.42	-5.74	47.68	74.00	-26.32	peak
2	11355.550	53.12	-1.66	51.46	74.00	-22.54	peak
3	15835.900	51.74	-5.86	45.88	74.00	-28.12	peak

Test Mode: 01; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High



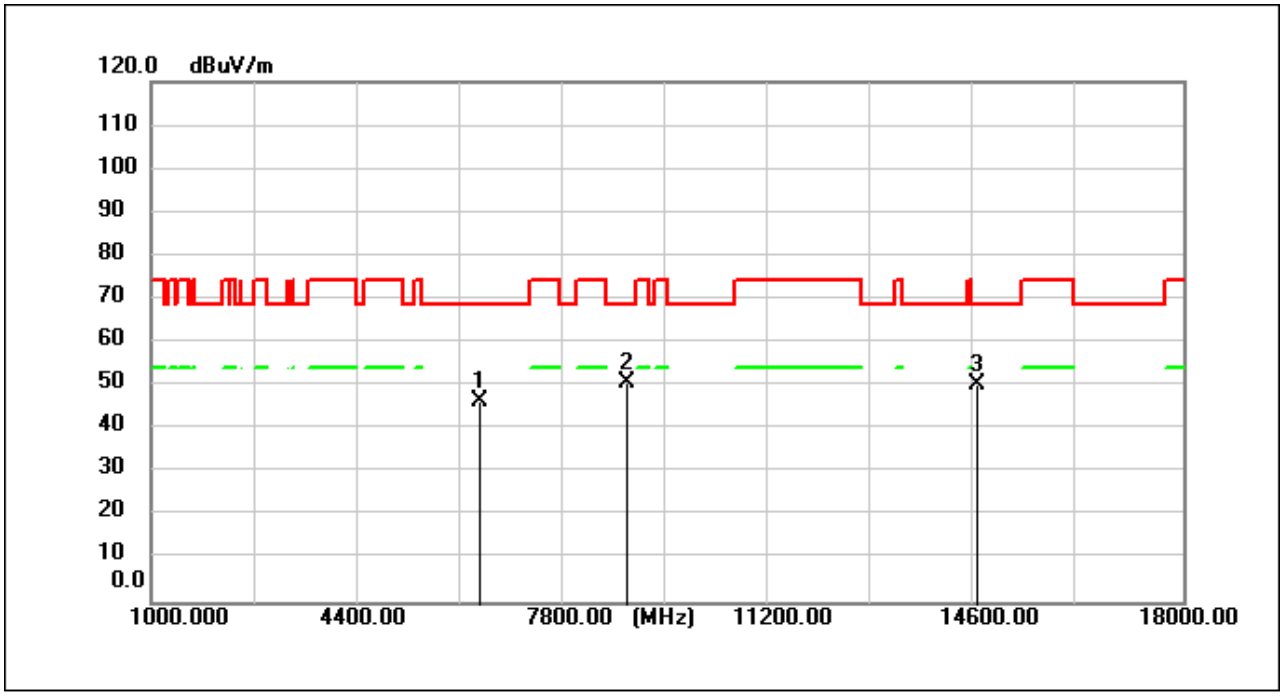
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7626.600	54.15	-5.96	48.19	74.00	-25.81	peak
2	11080.150	52.71	-1.63	51.08	74.00	-22.92	peak
3	13118.450	51.39	0.04	51.43	74.00	-22.57	peak

Test Mode: 01; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High



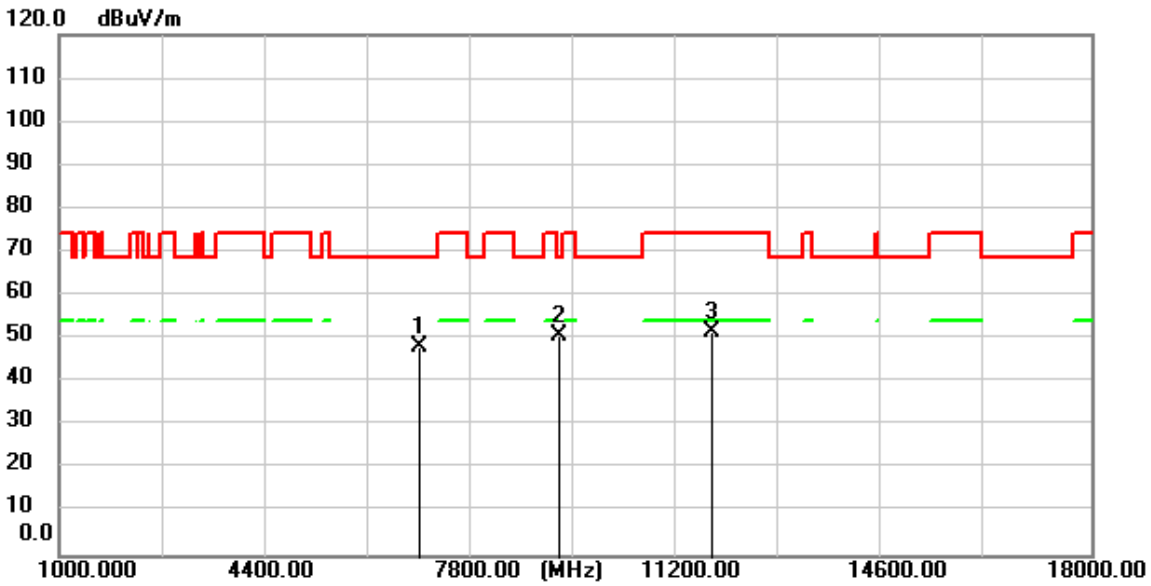
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7715.000	53.05	-5.77	47.28	74.00	-26.72	peak
2	10771.600	52.80	-1.58	51.22	74.00	-22.78	peak
3	13613.150	51.77	0.39	52.16	74.00	-21.84	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low



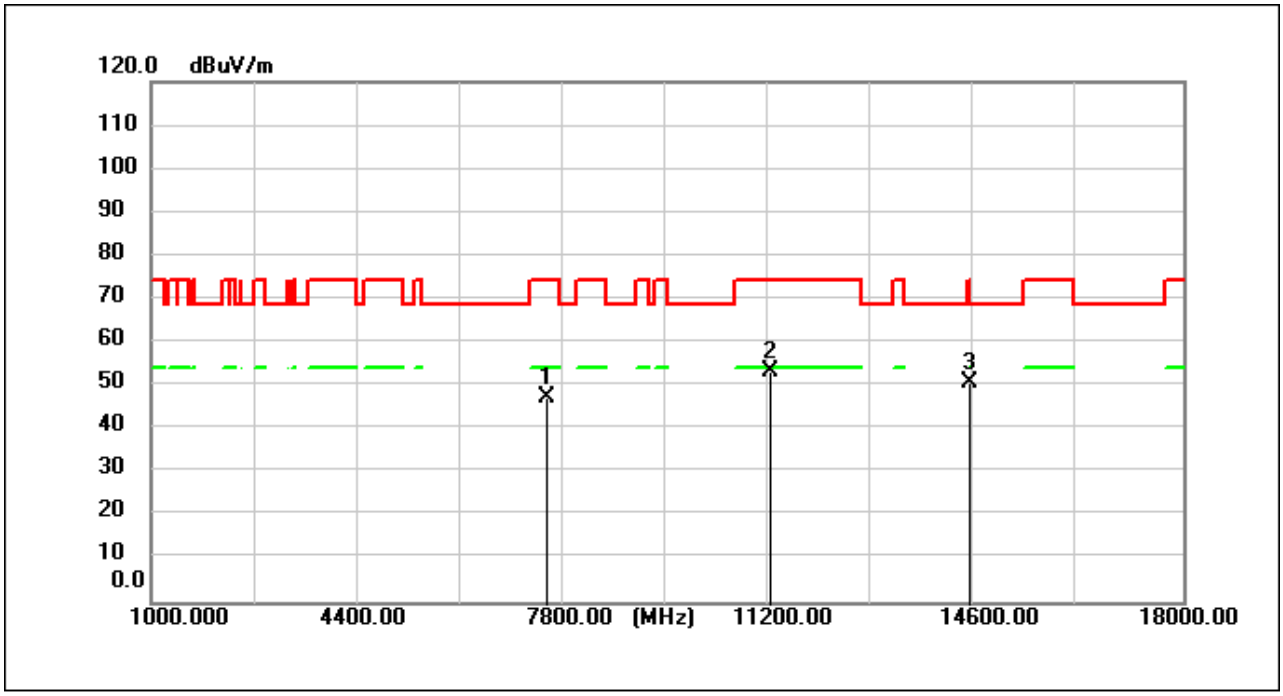
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6411.950	55.28	-8.63	46.65	68.30	-21.65	peak
2	8831.900	54.74	-3.80	50.94	68.30	-17.36	peak
3	14605.950	51.94	-1.72	50.22	68.30	-18.08	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low



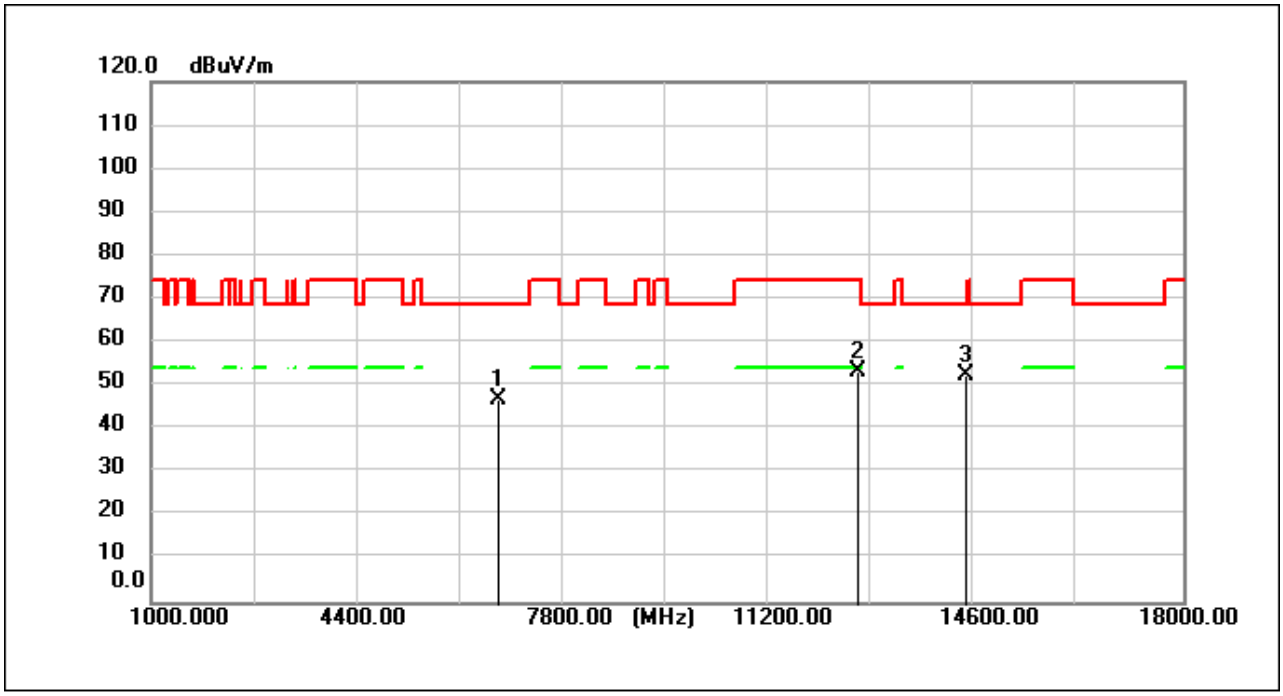
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6945.750	54.94	-6.93	48.01	68.30	-20.29	peak
2	9216.100	53.71	-3.01	50.70	68.30	-17.60	peak
3	11732.100	53.56	-1.71	51.85	74.00	-22.15	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:middle



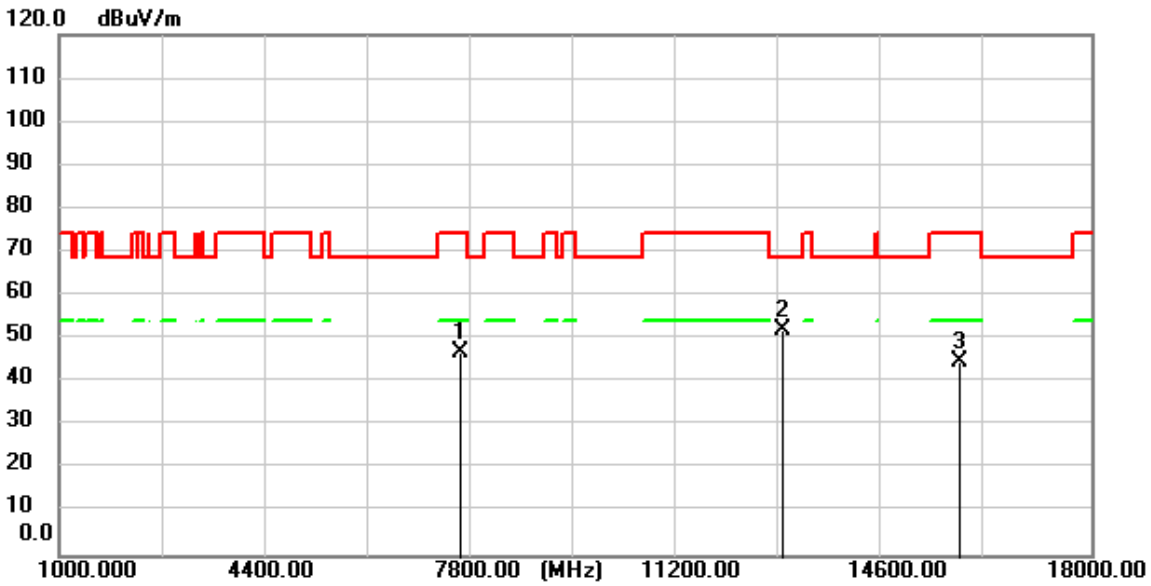
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7521.200	53.69	-6.17	47.52	74.00	-26.48	peak
2	11200.000	54.99	-1.64	53.35	74.00	-20.65	peak
3	14475.900	52.21	-1.29	50.92	74.00	-23.08	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:middle



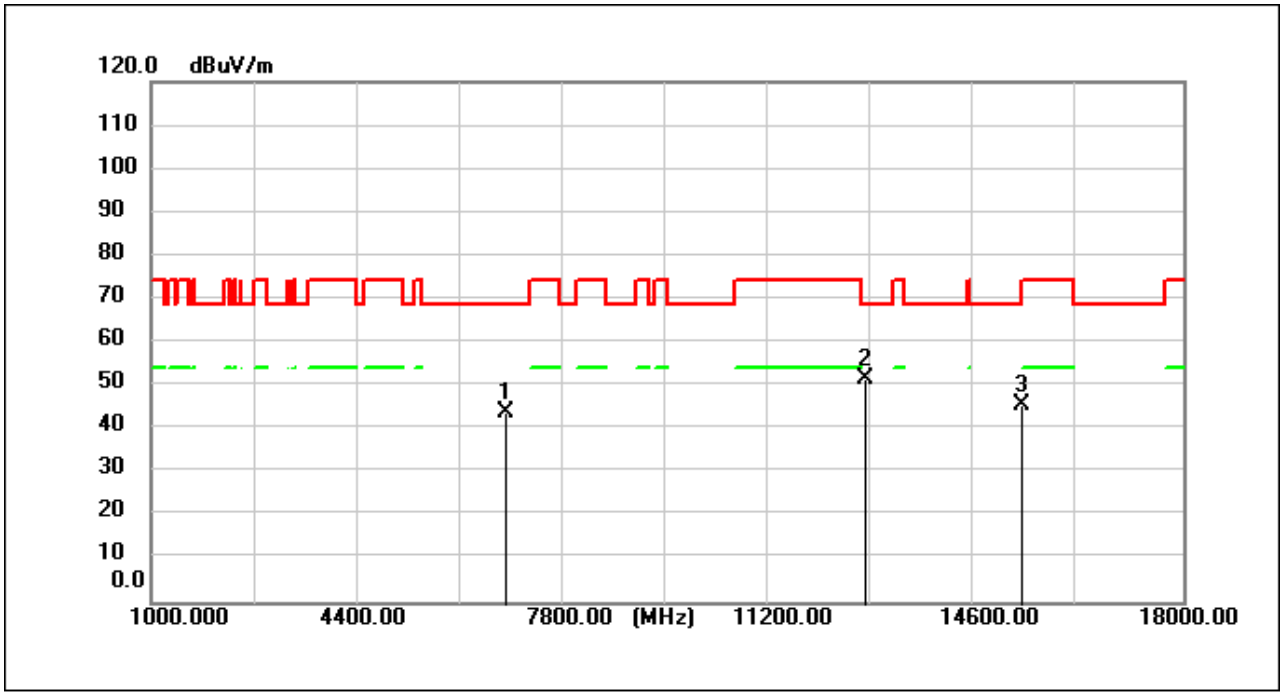
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6704.350	54.39	-7.28	47.11	68.30	-21.19	peak
2	12630.550	54.09	-0.71	53.38	74.00	-20.62	peak
3	14400.250	53.37	-1.02	52.35	68.30	-15.95	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:High



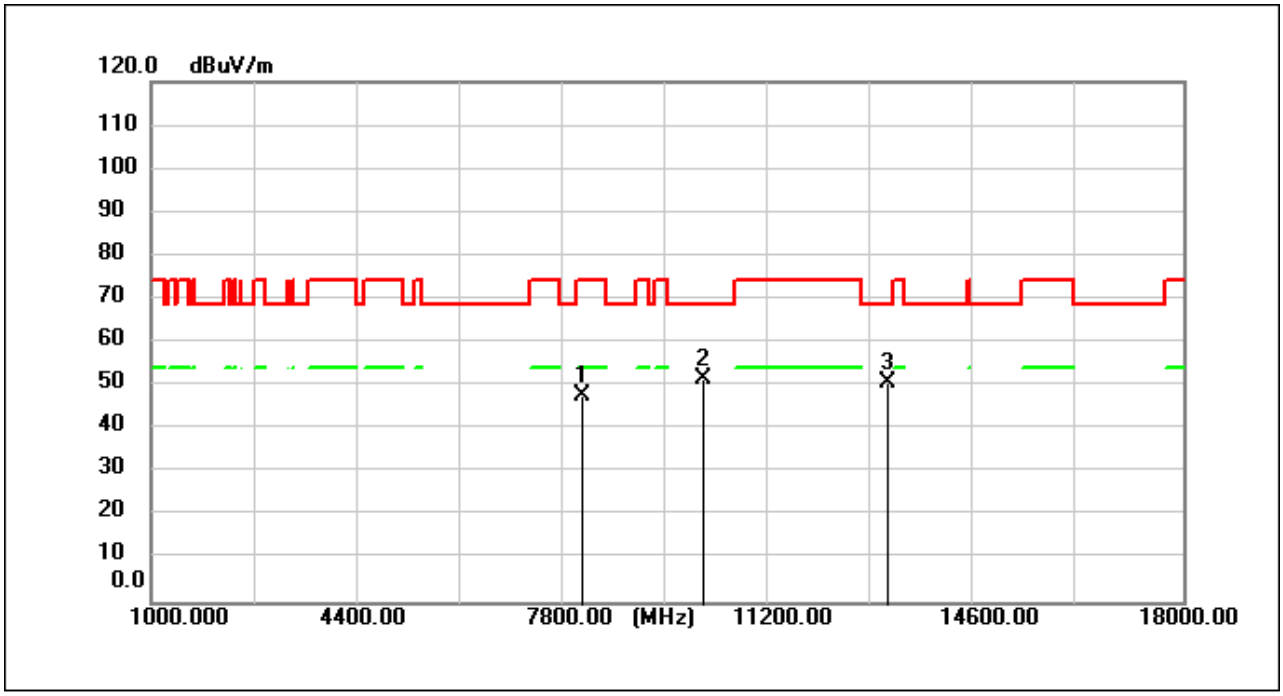
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7604.500	52.95	-6.00	46.95	74.00	-27.05	peak
2	12908.500	52.43	-0.28	52.15	68.30	-16.15	peak
3	15823.150	50.72	-5.81	44.91	74.00	-29.09	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:High



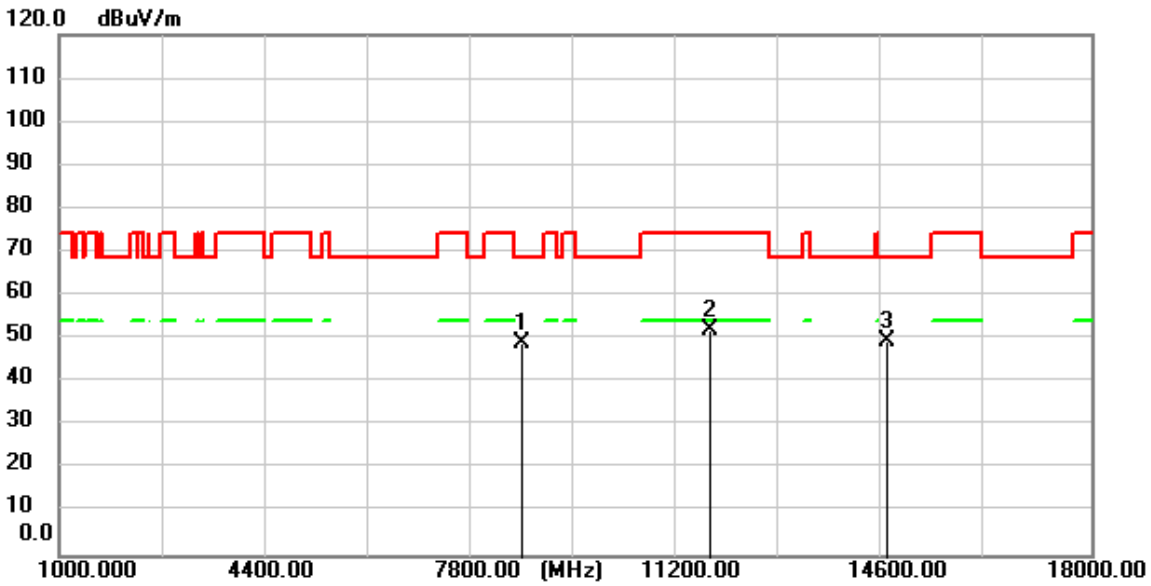
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6840.350	51.09	-7.05	44.04	68.30	-24.26	peak
2	12747.850	52.20	-0.53	51.67	68.30	-16.63	peak
3	15336.950	49.79	-4.17	45.62	68.30	-22.68	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



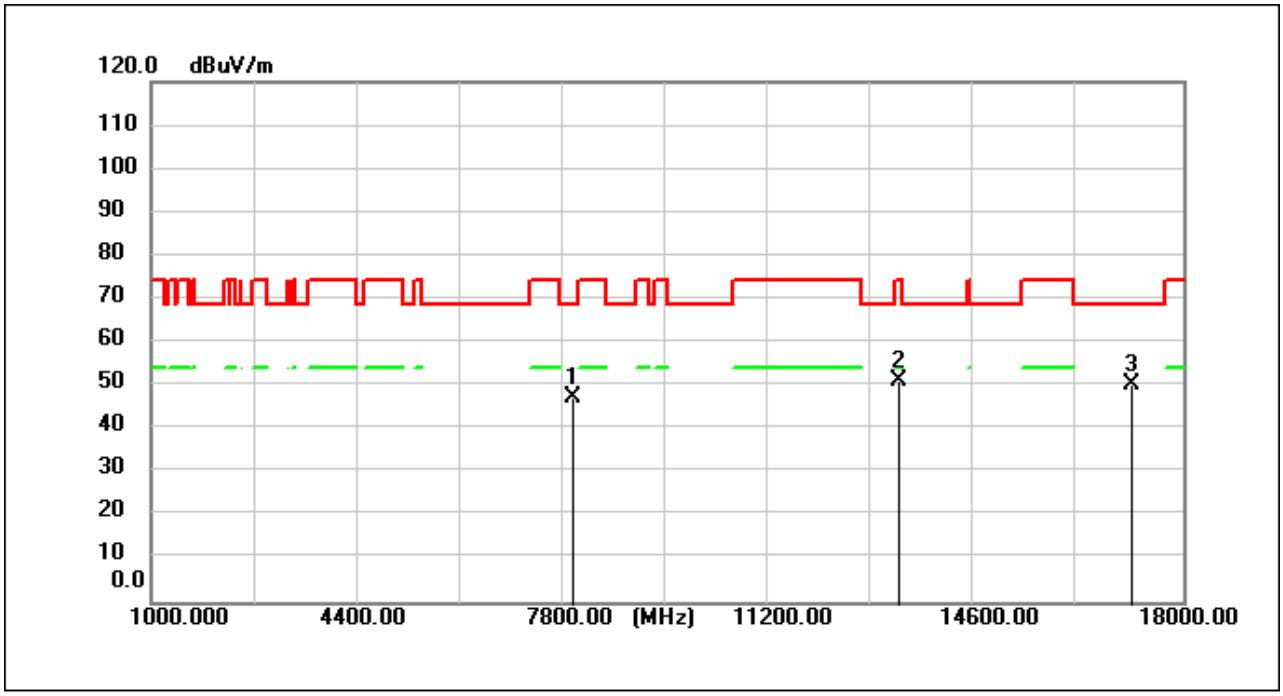
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8088.150	52.68	-5.04	47.64	74.00	-26.36	peak
2	10097.550	53.23	-1.54	51.69	68.30	-16.61	peak
3	13121.000	50.84	0.04	50.88	68.30	-17.42	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



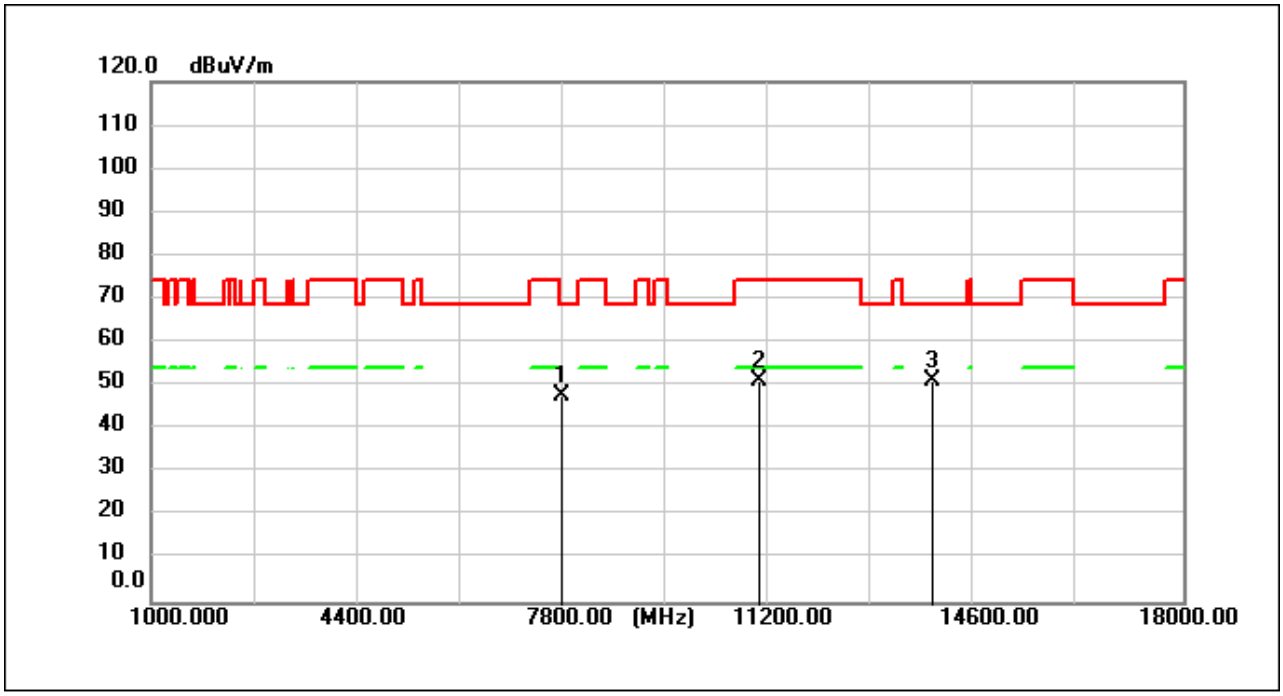
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8632.150	53.20	-4.13	49.07	68.30	-19.23	peak
2	11693.850	53.71	-1.72	51.99	74.00	-22.01	peak
3	14625.500	51.39	-1.79	49.60	68.30	-18.70	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:middle



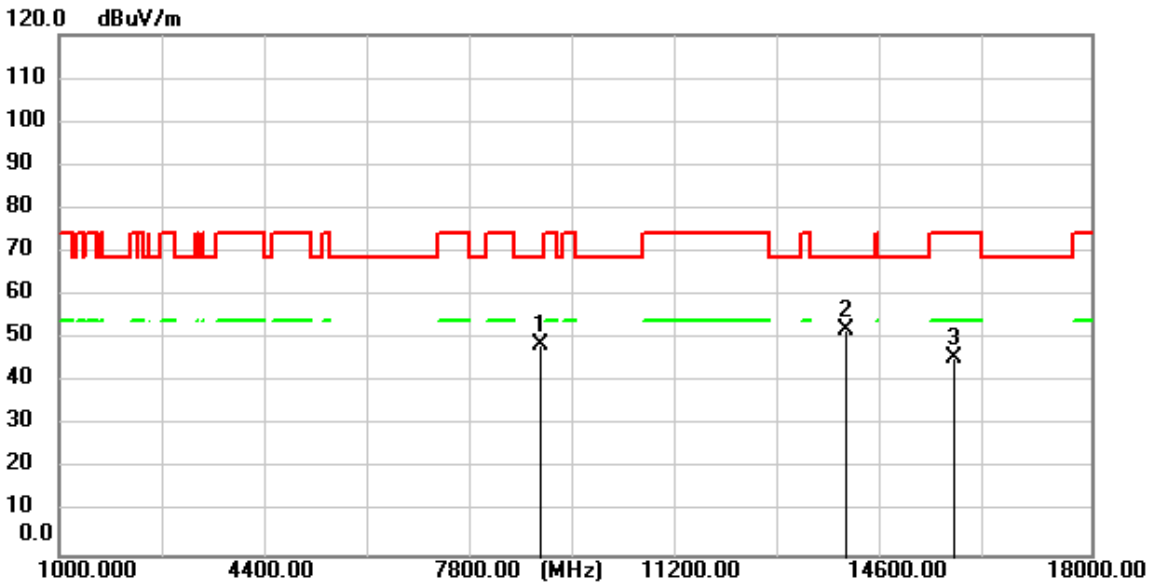
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7934.300	52.86	-5.33	47.53	68.30	-20.77	peak
2	13313.950	51.25	0.17	51.42	74.00	-22.58	peak
3	17145.750	49.55	0.75	50.30	68.30	-18.00	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:middle



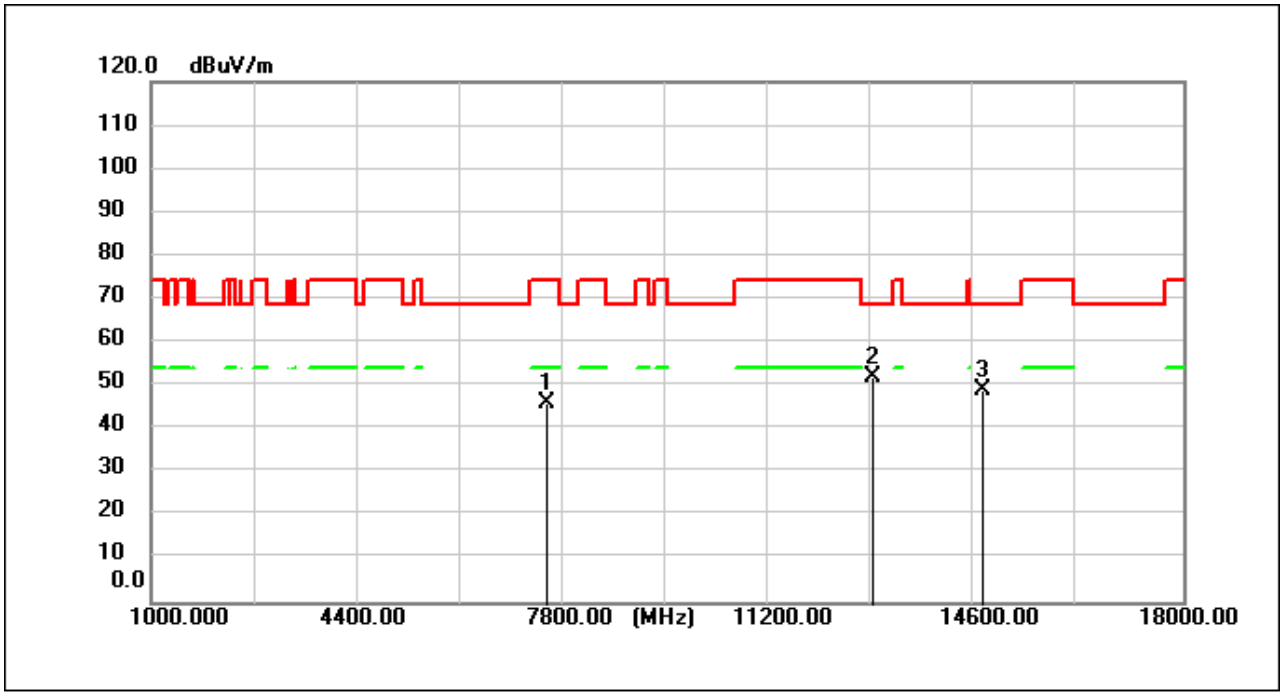
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7755.800	53.41	-5.69	47.72	68.30	-20.58	peak
2	11016.400	52.71	-1.62	51.09	74.00	-22.91	peak
3	13857.950	50.85	0.57	51.42	68.30	-16.88	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8927.100	52.32	-3.65	48.67	68.30	-19.63	peak
2	13959.100	51.23	0.64	51.87	68.30	-16.43	peak
3	15722.850	51.10	-5.48	45.62	74.00	-28.38	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7524.600	52.11	-6.16	45.95	74.00	-28.05	peak
2	12891.500	52.18	-0.31	51.87	68.30	-16.43	peak
3	14691.800	51.25	-2.01	49.24	68.30	-19.06	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 (2013) Section 6.10.5

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

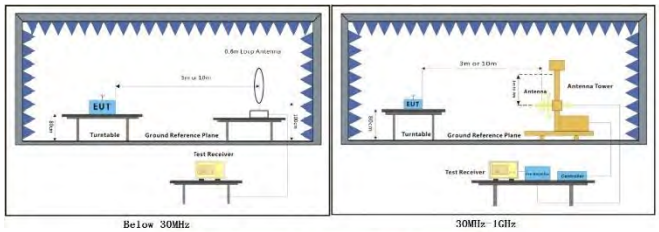
Operating Environment:
Temperature: 22.2 °C Humidity: 52.6 % RH Atmospheric Pressure: 1010 mbar

7.5.2 Test Mode Description

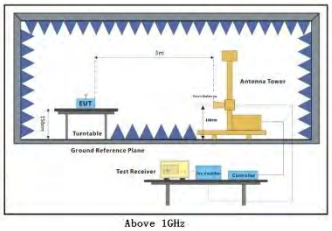
Pre-scan / Final test	Mode Code	Description

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/ax 20/40, Only the data of worst case is recorded in the report.
Final test	02	TX mode (U-NII-3) _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/ax 20/40, Only the data of worst case is recorded in the report.

7.5.3 Test Setup Diagram



Below 30MHz　　30MHz-1GHz



Above 1GHz

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.

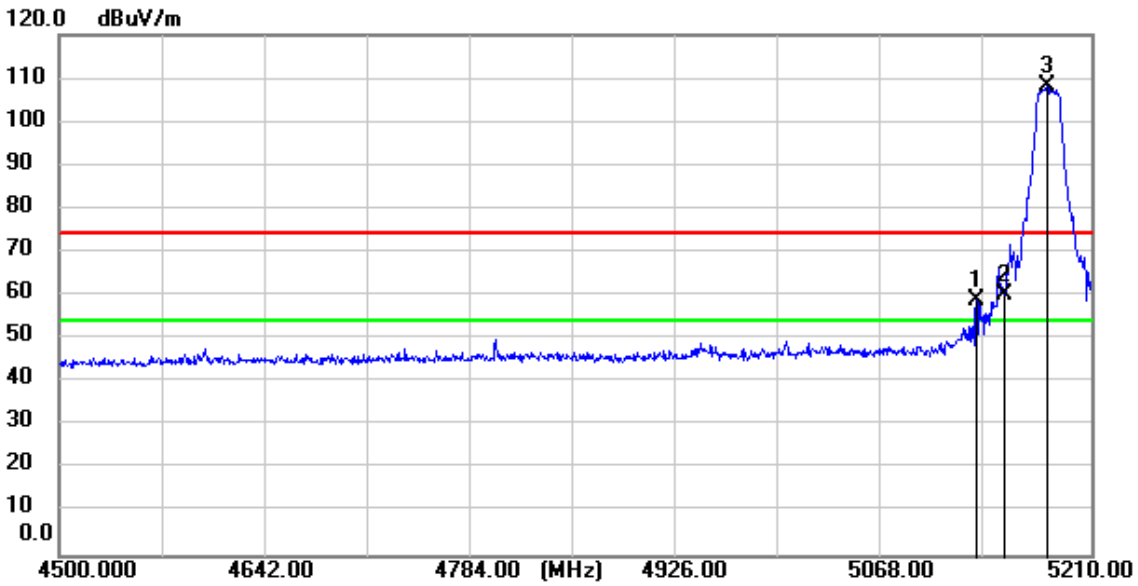
j. Repeat above procedures until all frequencies measured was complete.

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.

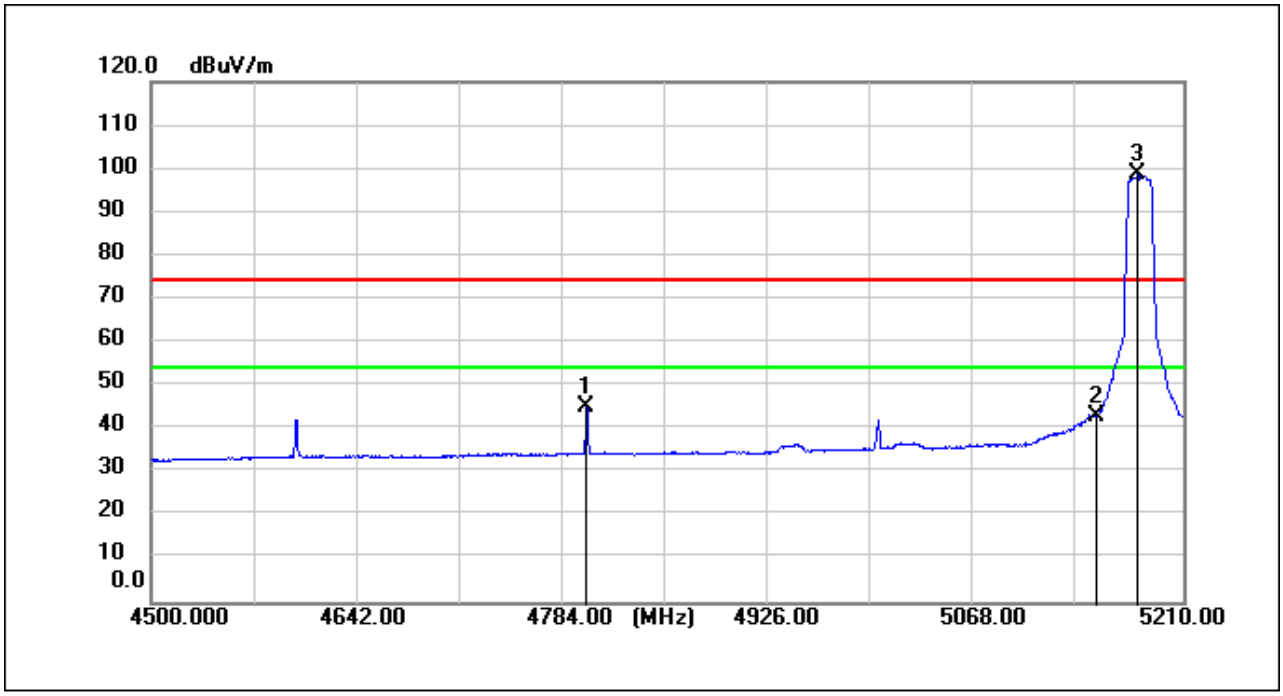
Remark 3. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geqslant$1/T (Duty cycle$<$98%) or 10Hz (Duty cycle$\geqslant$98%) for Average detection (AV) at frequency above 1GHz.

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



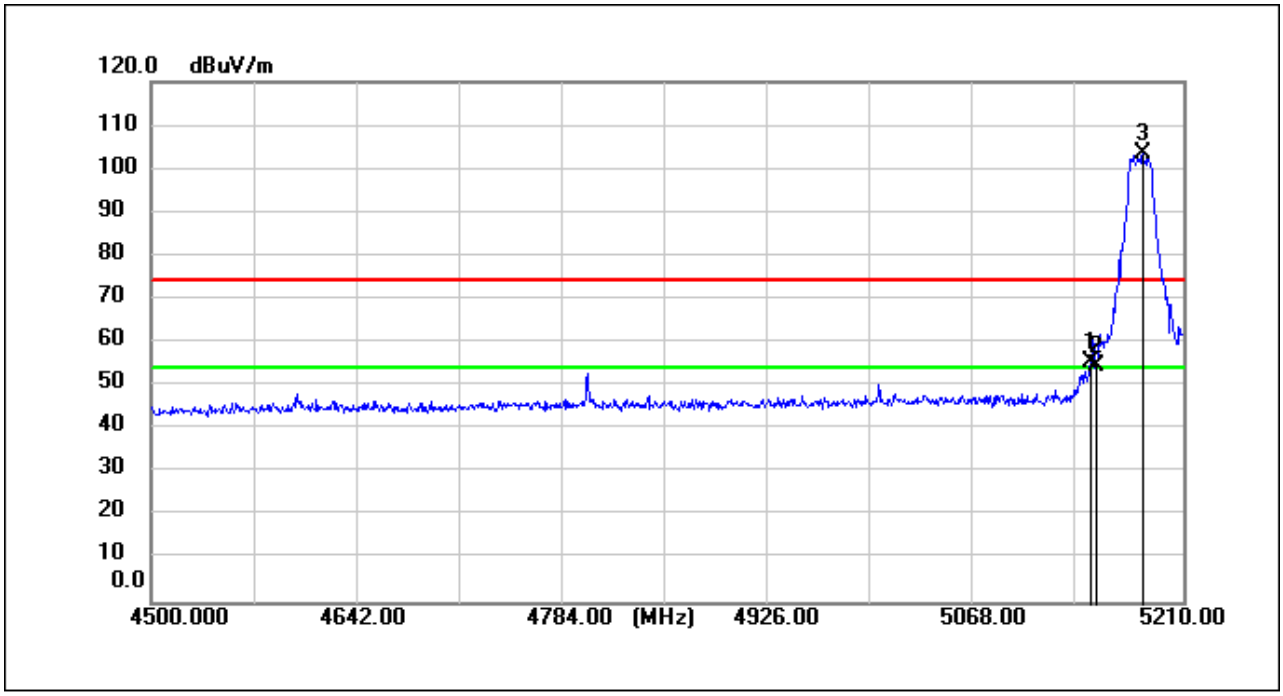
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5131.190	51.98	7.12	59.10	74.00	-14.90	peak
2	5150.000	53.04	7.12	60.16	74.00	-13.84	peak
3	5179.470	100.96	7.11	108.07	74.00	34.07	peak

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



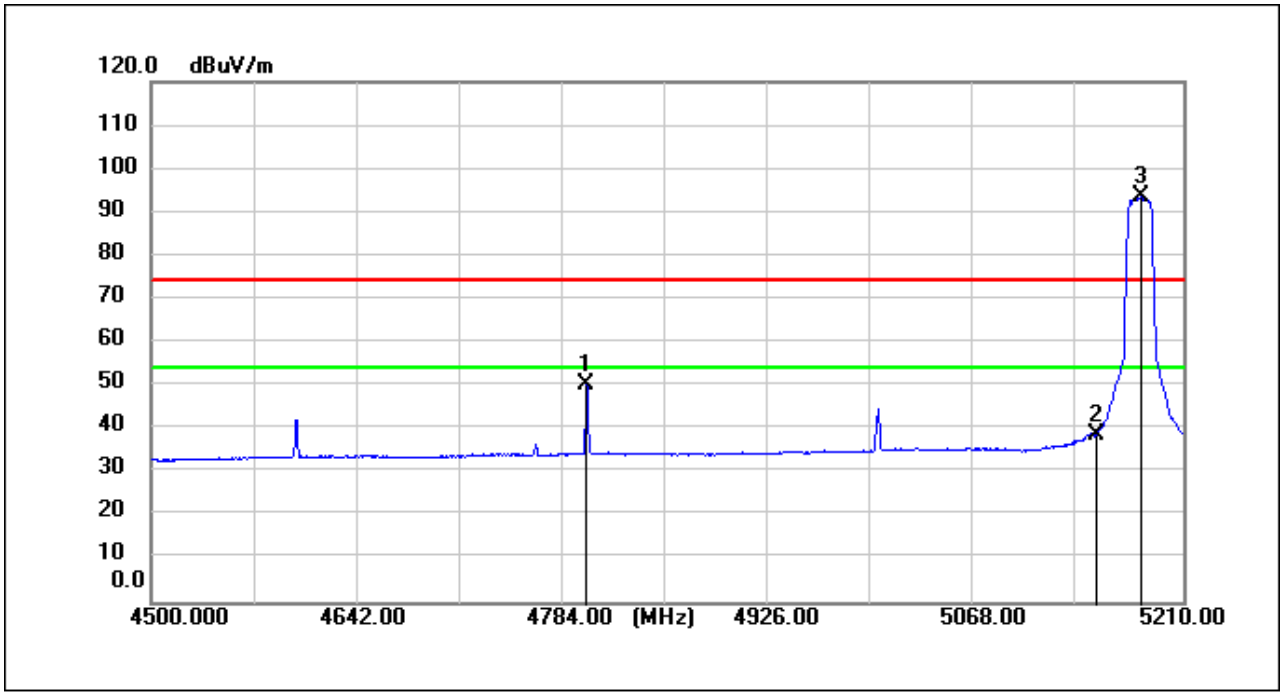
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4799.620	38.50	6.58	45.08	54.00	-8.92	AVG
2	5150.000	36.10	7.12	43.22	54.00	-10.78	AVG
3	5178.760	91.70	7.11	98.81	54.00	44.81	AVG

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



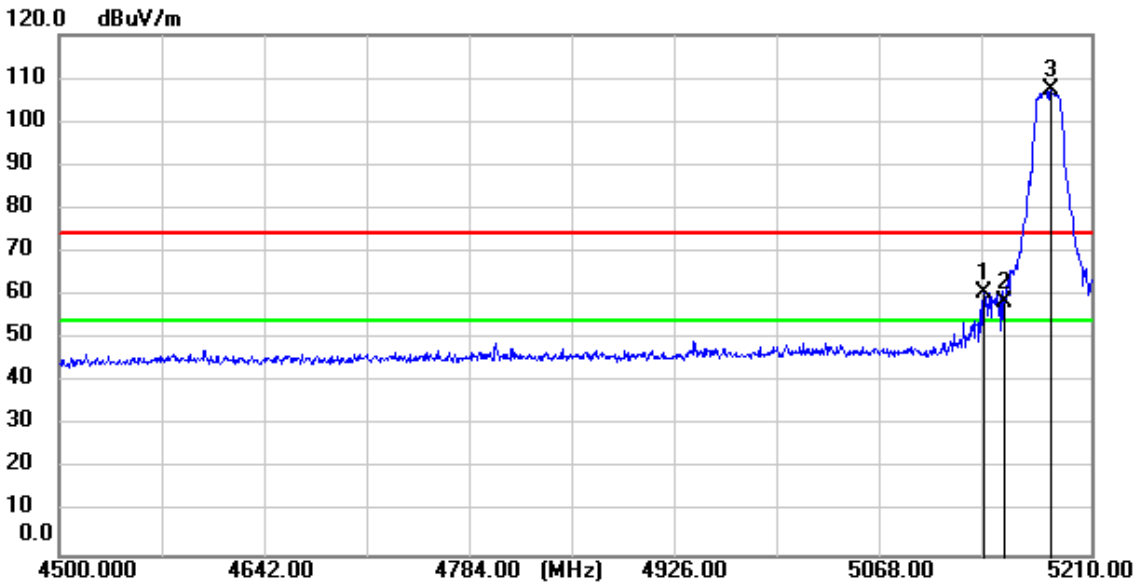
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5146.100	48.46	7.12	55.58	74.00	-18.42	peak
2	5150.000	47.72	7.12	54.84	74.00	-19.16	peak
3	5182.310	96.34	7.10	103.44	74.00	29.44	peak

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



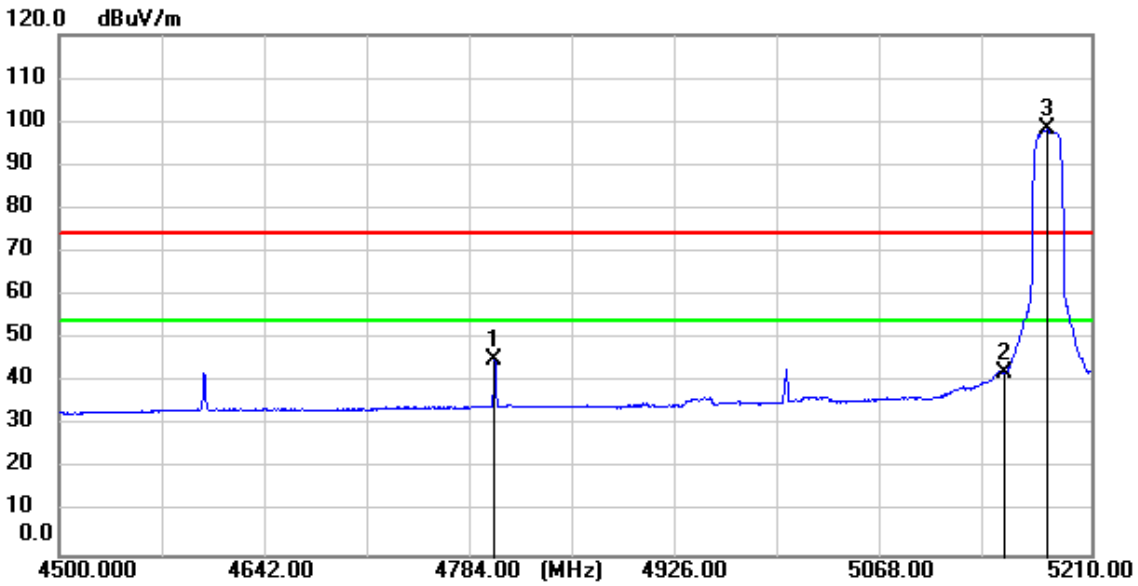
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4799.620	43.94	6.58	50.52	54.00	-3.48	AVG
2	5150.000	31.79	7.12	38.91	54.00	-15.09	AVG
3	5181.600	86.57	7.10	93.67	54.00	39.67	AVG

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



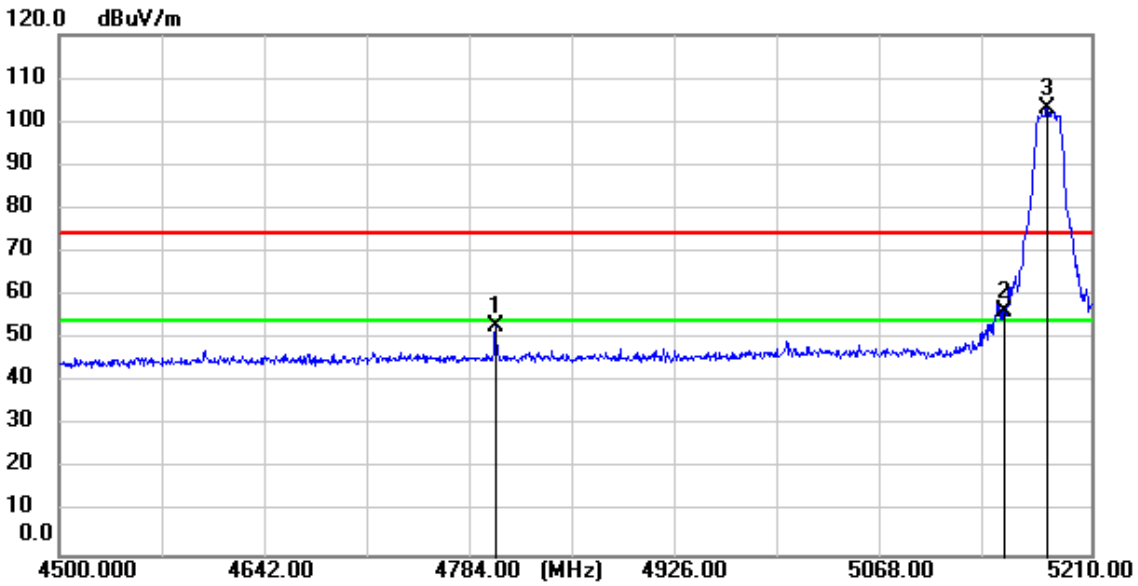
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5136.870	53.58	7.12	60.70	74.00	-13.30	peak
2	5150.000	51.40	7.12	58.52	74.00	-15.48	peak
3	5183.020	100.23	7.11	107.34	74.00	33.34	peak

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



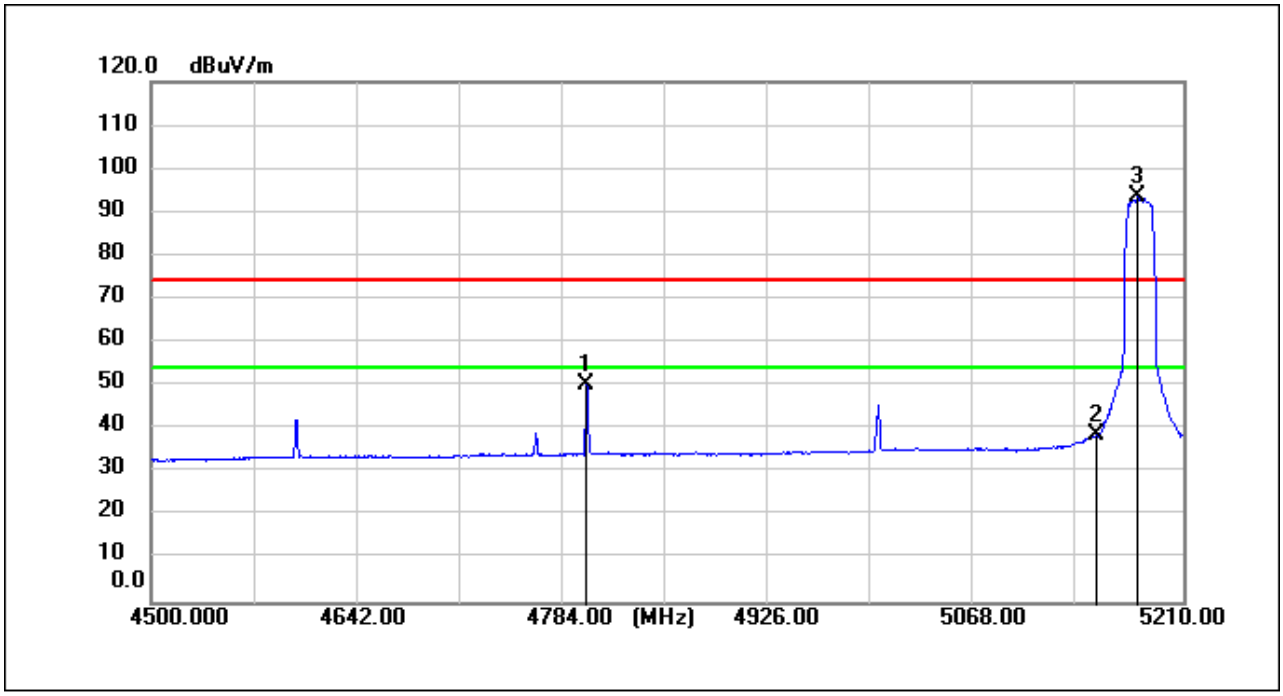
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4799.620	38.76	6.58	45.34	54.00	-8.66	AVG
2	5150.000	34.94	7.12	42.06	54.00	-11.94	AVG
3	5179.470	91.06	7.11	98.17	54.00	44.17	AVG

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



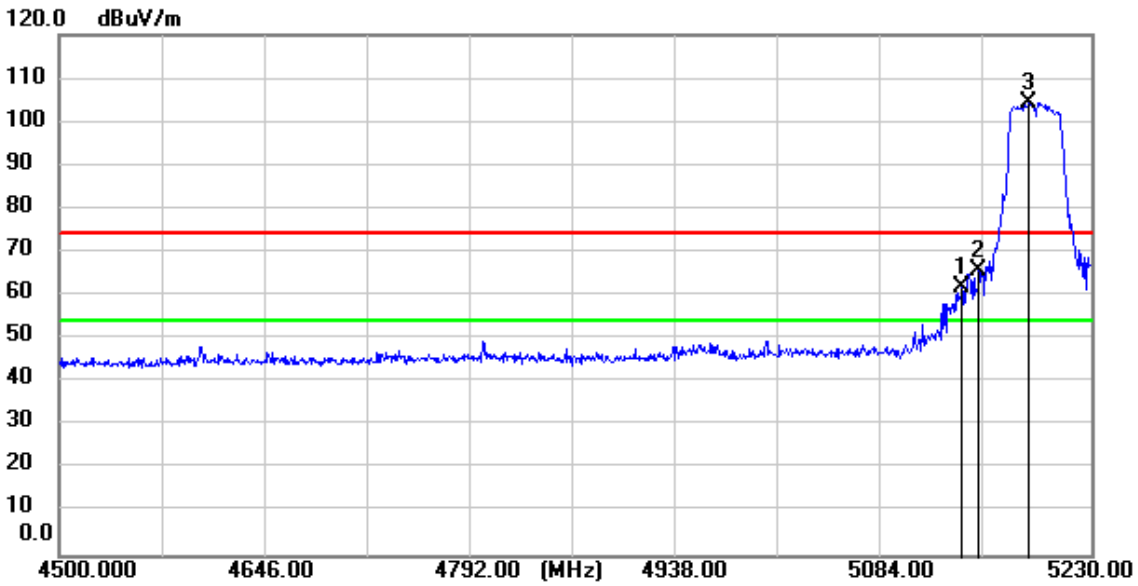
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.330	46.30	6.58	52.88	74.00	-21.12	peak
2	5150.000	49.10	7.12	56.22	74.00	-17.78	peak
3	5179.470	96.01	7.11	103.12	74.00	29.12	peak

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



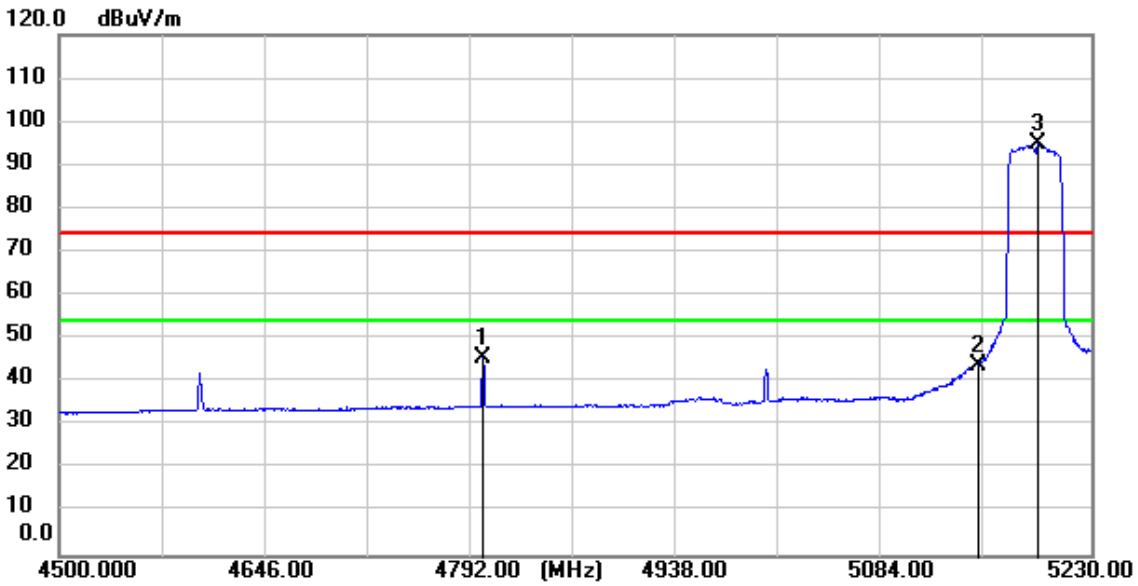
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4799.620	43.89	6.58	50.47	54.00	-3.53	AVG
2	5150.000	31.56	7.12	38.68	54.00	-15.32	AVG
3	5178.760	86.37	7.11	93.48	54.00	39.48	AVG

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



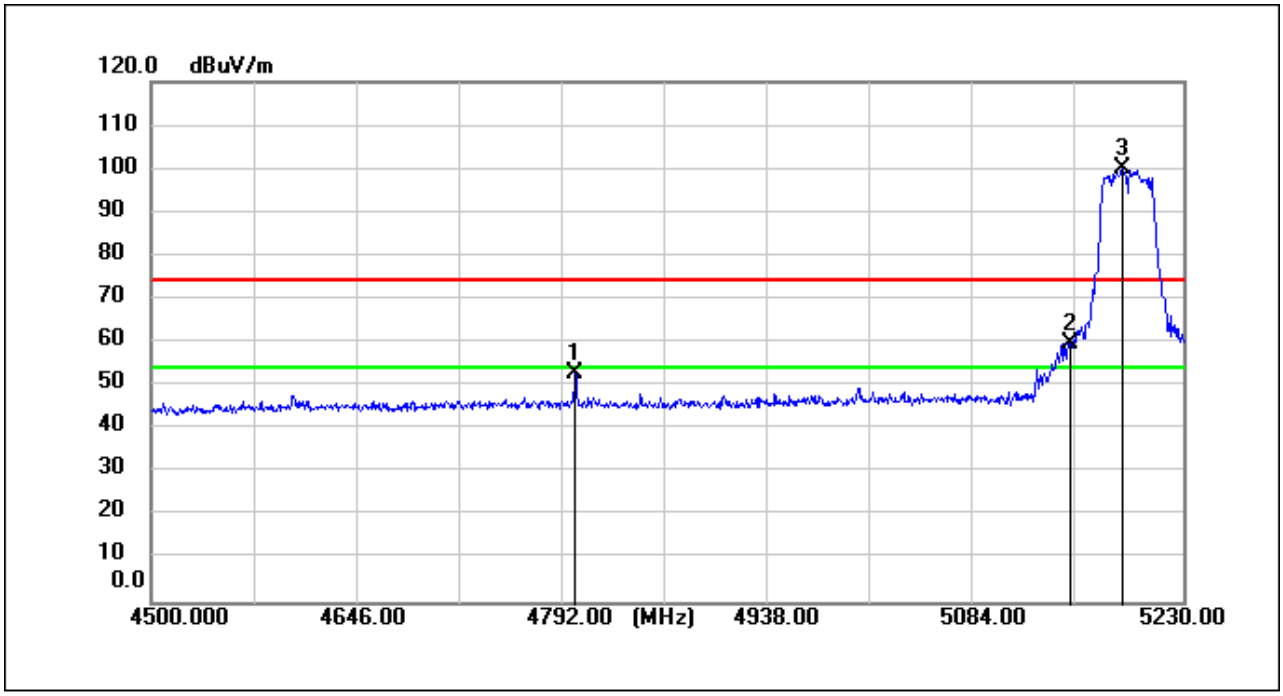
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5138.750	54.93	7.12	62.05	74.00	-11.95	peak
2	5150.000	58.84	7.12	65.96	74.00	-8.04	peak
3	5186.200	97.19	7.11	104.30	74.00	30.30	peak

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



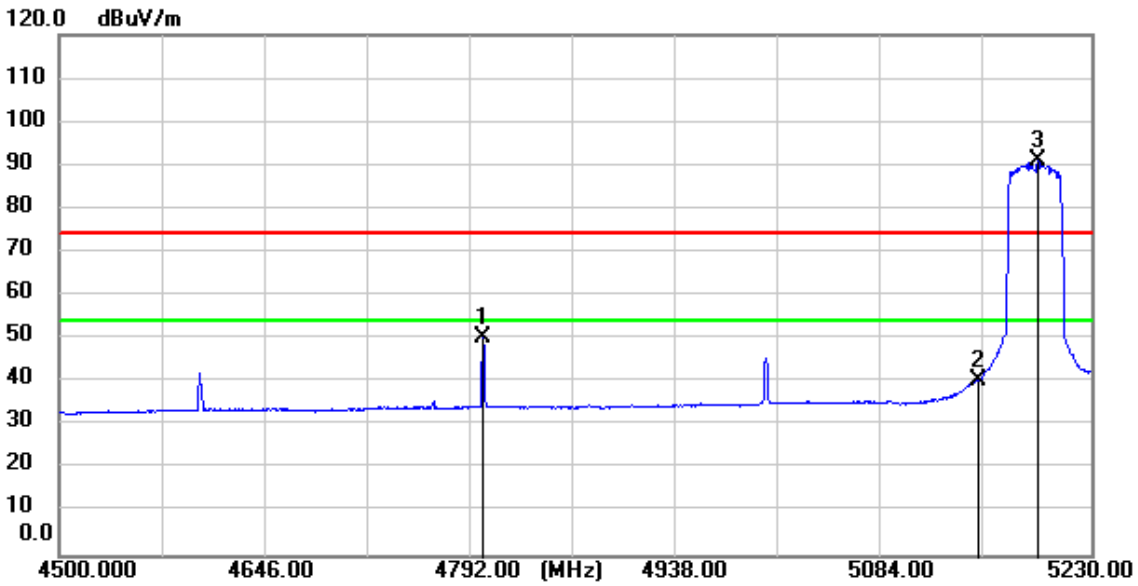
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.030	39.22	6.58	45.80	54.00	-8.20	AVG
2	5150.000	36.93	7.12	44.05	54.00	-9.95	AVG
3	5192.770	87.64	7.10	94.74	54.00	40.74	AVG

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



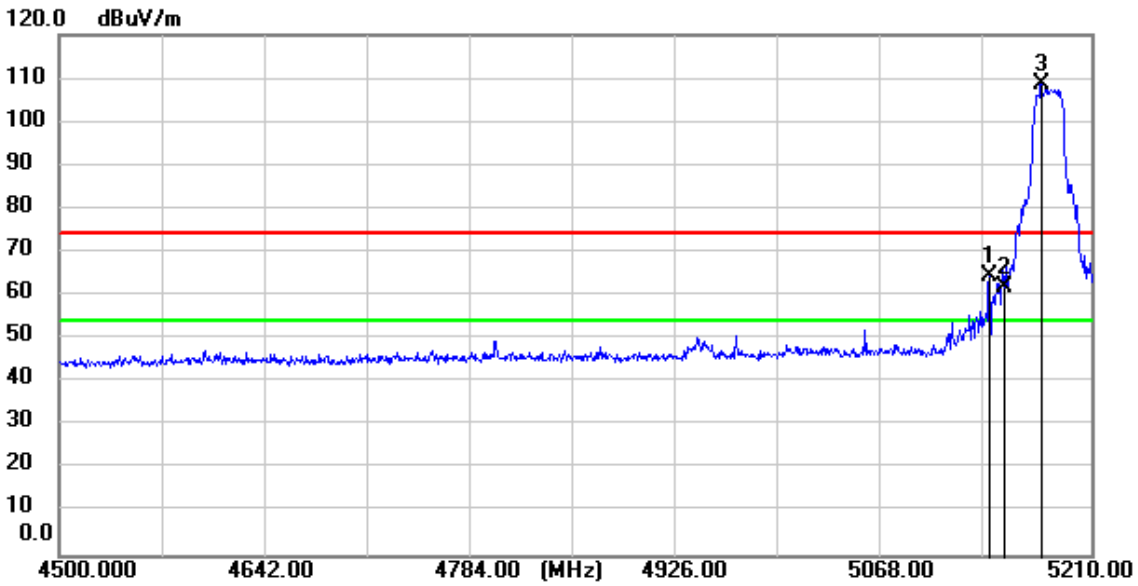
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.030	46.28	6.58	52.86	74.00	-21.14	peak
2	5150.000	52.57	7.12	59.69	74.00	-14.31	peak
3	5186.930	92.83	7.11	99.94	74.00	25.94	peak

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



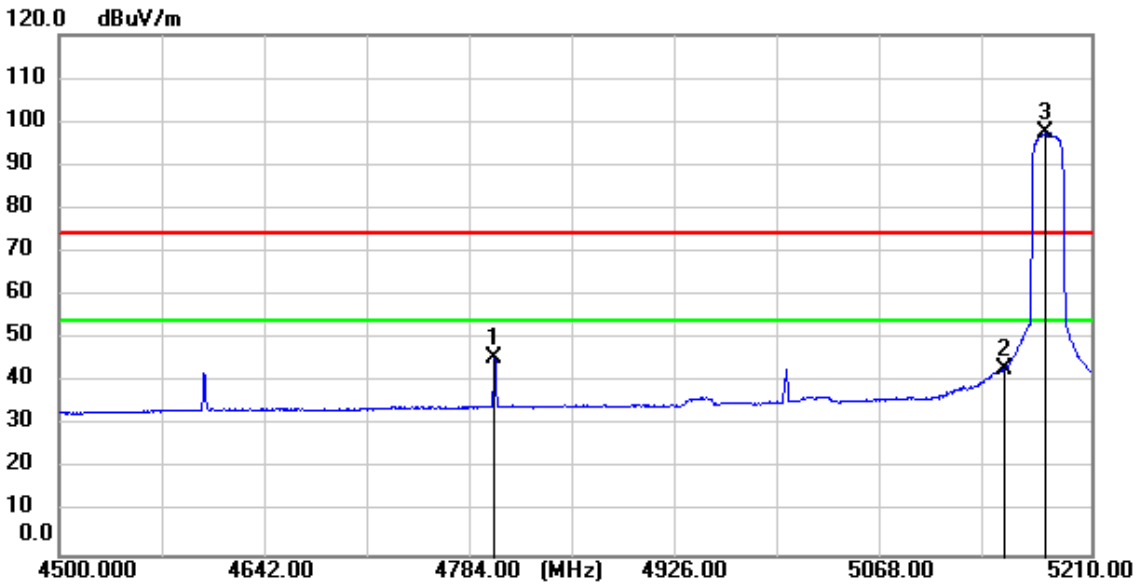
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.030	43.95	6.58	50.53	54.00	-3.47	AVG
2	5150.000	33.49	7.12	40.61	54.00	-13.39	AVG
3	5192.040	83.82	7.10	90.92	54.00	36.92	AVG

Test Mode: 01; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



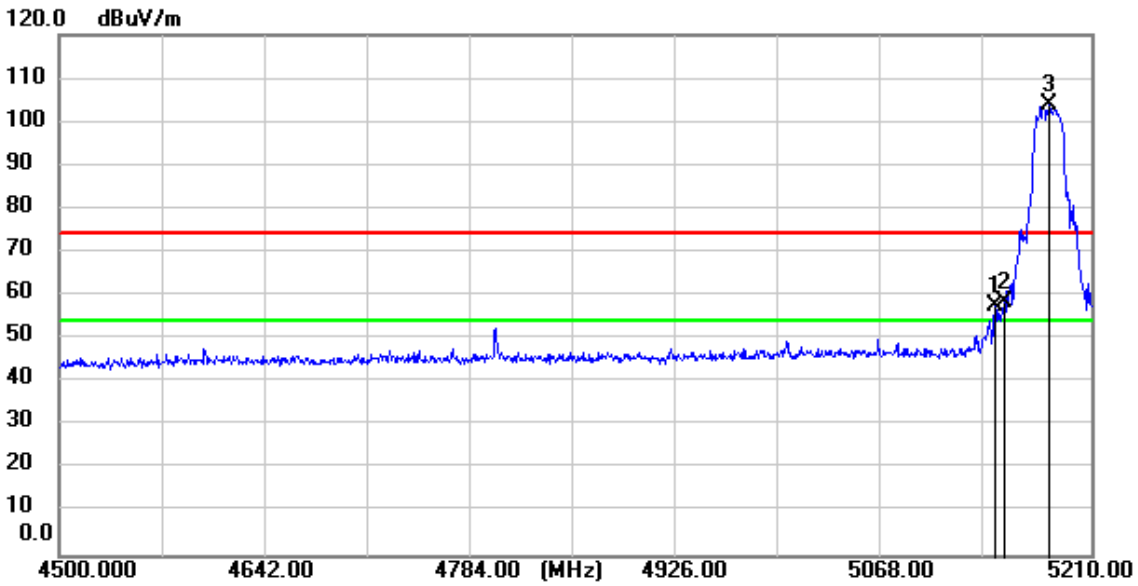
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5139.710	57.30	7.12	64.42	74.00	-9.58	peak
2	5150.000	54.81	7.12	61.93	74.00	-12.07	peak
3	5175.920	101.51	7.11	108.62	74.00	34.62	peak

Test Mode: 01; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



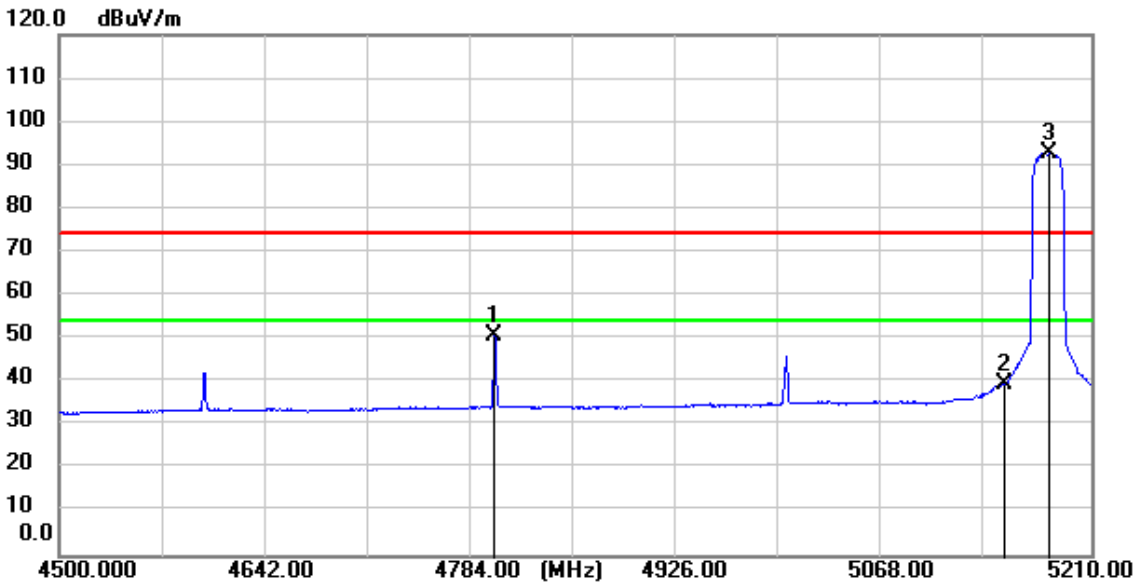
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4799.620	39.25	6.58	45.83	54.00	-8.17	AVG
2	5150.000	36.01	7.12	43.13	54.00	-10.87	AVG
3	5178.760	90.48	7.11	97.59	54.00	43.59	AVG

Test Mode: 01; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



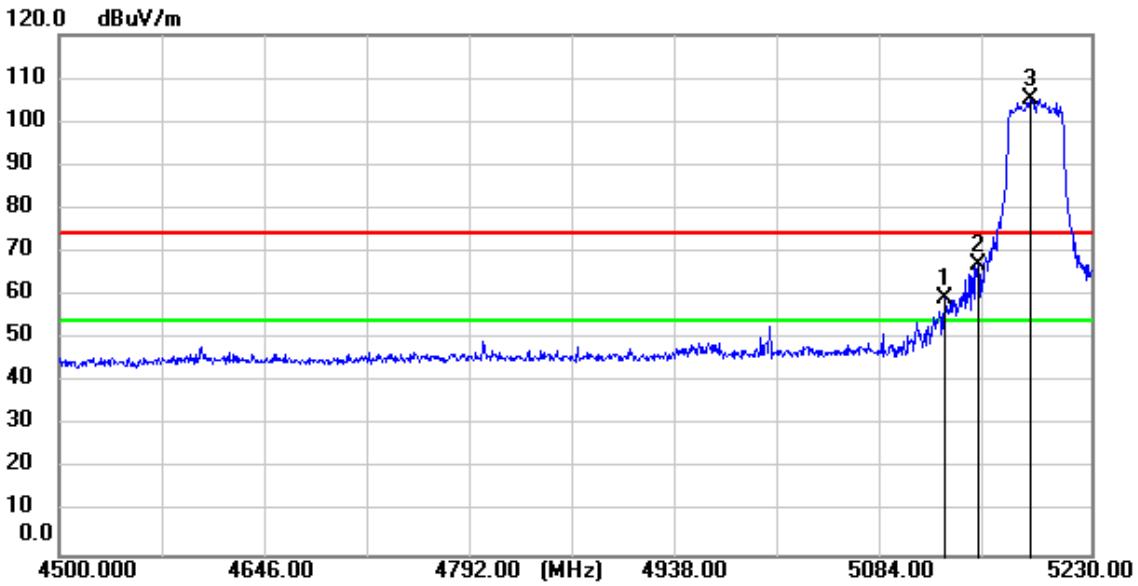
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5143.970	50.40	7.12	57.52	74.00	-16.48	peak
2	5150.000	51.22	7.12	58.34	74.00	-15.66	peak
3	5181.600	96.71	7.10	103.81	74.00	29.81	peak

Test Mode: 01; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



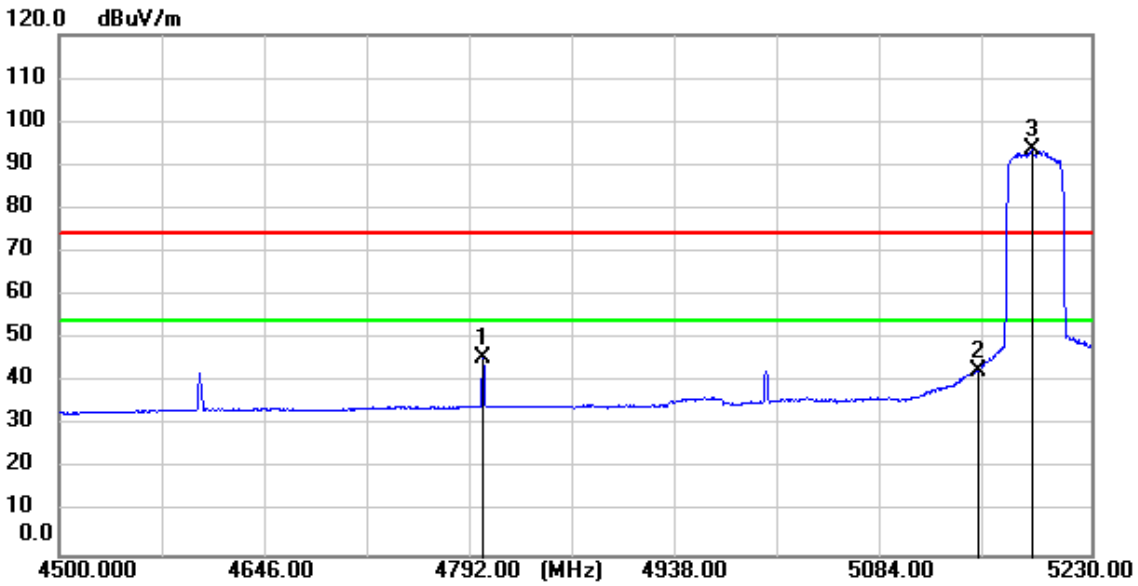
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4799.620	44.18	6.58	50.76	54.00	-3.24	AVG
2	5150.000	32.70	7.12	39.82	54.00	-14.18	AVG
3	5180.890	85.90	7.10	93.00	54.00	39.00	AVG

Test Mode: 01; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:Low



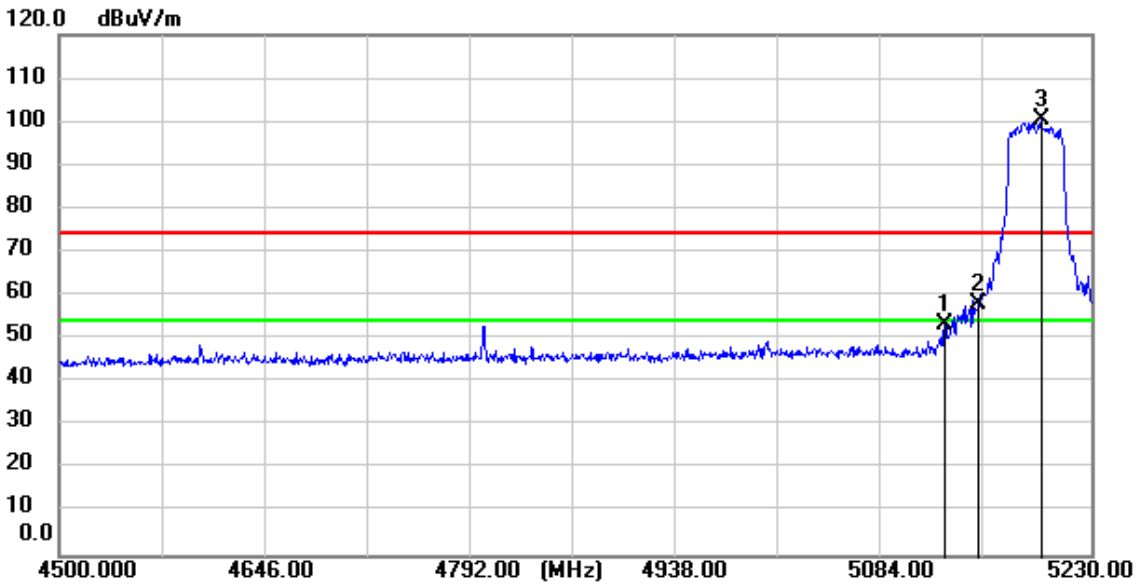
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5127.070	52.19	7.12	59.31	74.00	-14.69	peak
2	5150.000	60.14	7.12	67.26	74.00	-6.74	peak
3	5186.930	97.97	7.11	105.08	74.00	31.08	peak

Test Mode: 01; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:Low



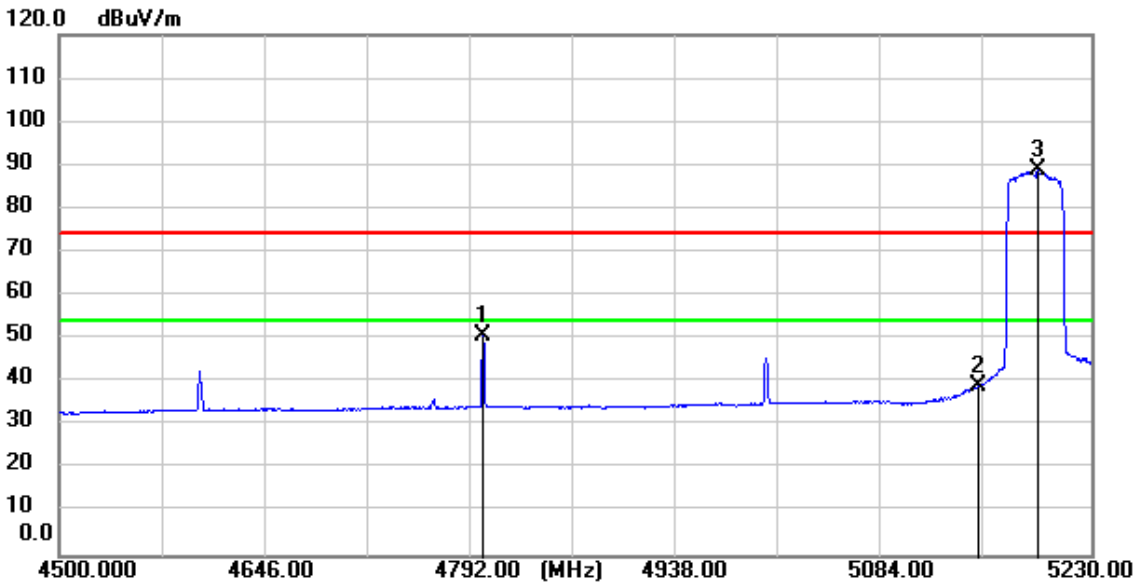
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.030	39.13	6.58	45.71	54.00	-8.29	AVG
2	5150.000	35.55	7.12	42.67	54.00	-11.33	AVG
3	5188.390	86.32	7.11	93.43	54.00	39.43	AVG

Test Mode: 01; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:Low



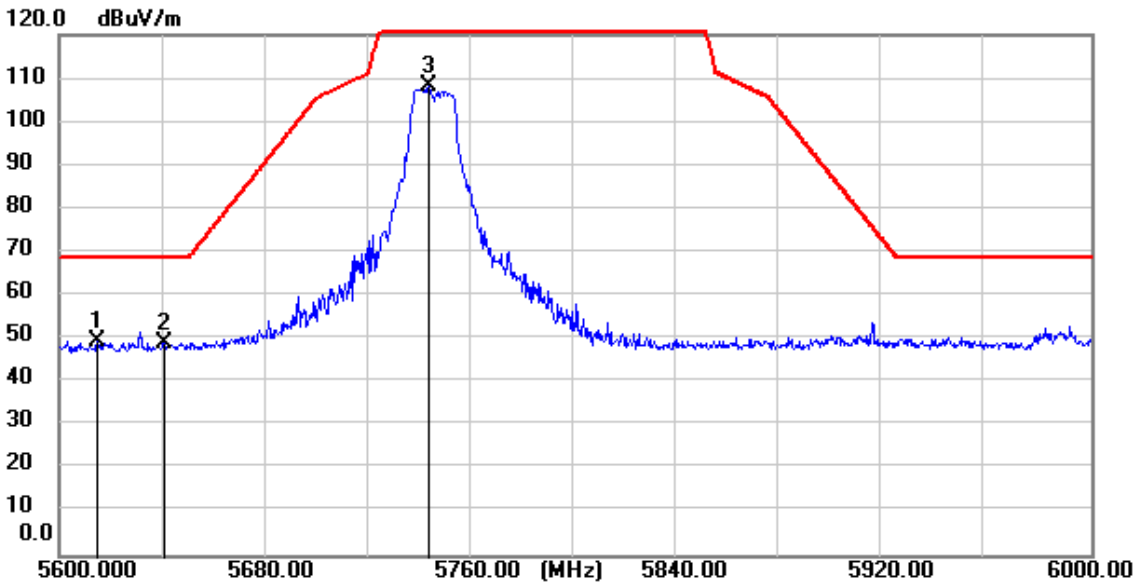
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5127.070	46.11	7.12	53.23	74.00	-20.77	peak
2	5150.000	51.15	7.12	58.27	74.00	-15.73	peak
3	5194.960	93.41	7.11	100.52	74.00	26.52	peak

Test Mode: 01; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:Low



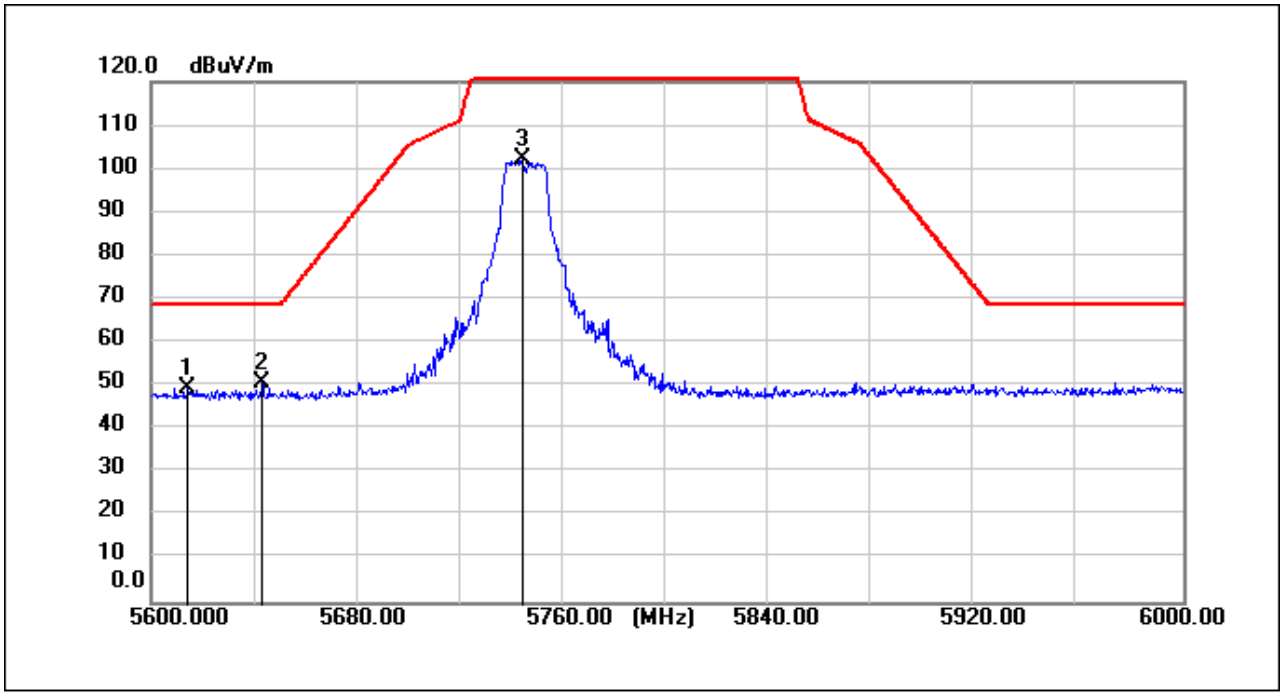
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.030	44.19	6.58	50.77	54.00	-3.23	AVG
2	5150.000	31.89	7.12	39.01	54.00	-14.99	AVG
3	5192.770	81.62	7.10	88.72	54.00	34.72	AVG

Test Mode: 02; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



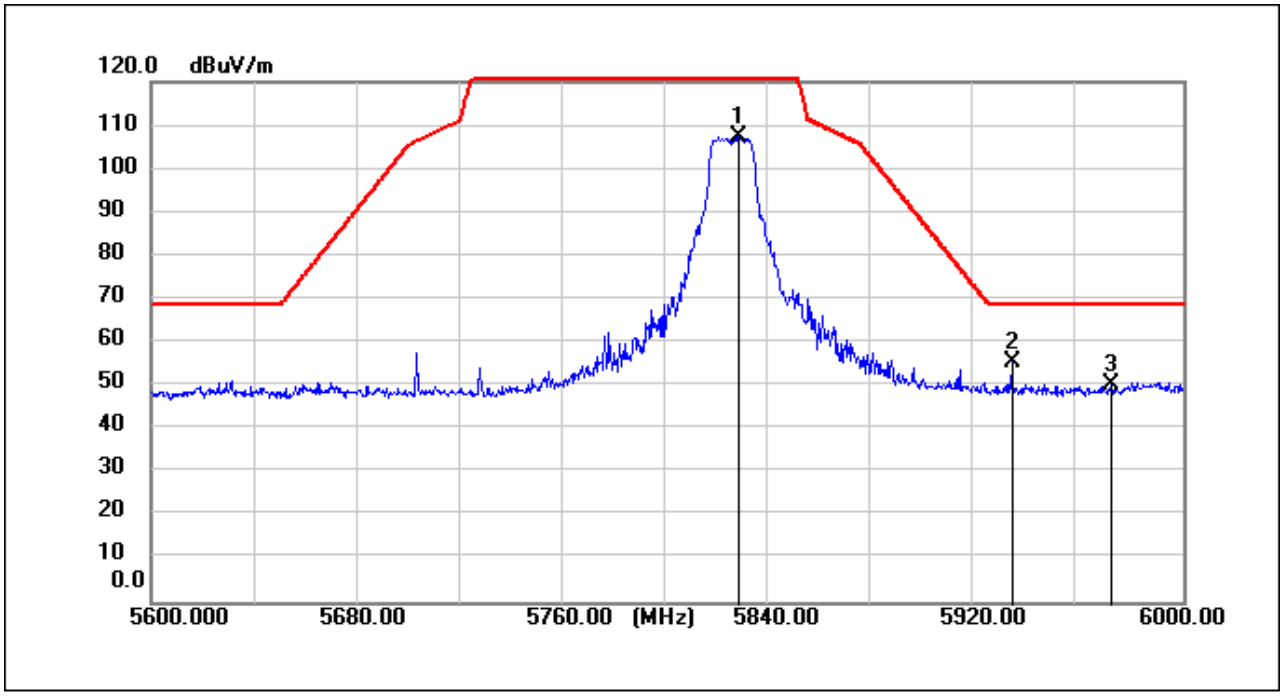
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5614.800	42.29	7.11	49.40	68.20	-18.80	peak
2	5640.800	41.94	7.18	49.12	68.20	-19.08	peak
3	5743.200	100.64	7.41	108.05	135.00	-26.95	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



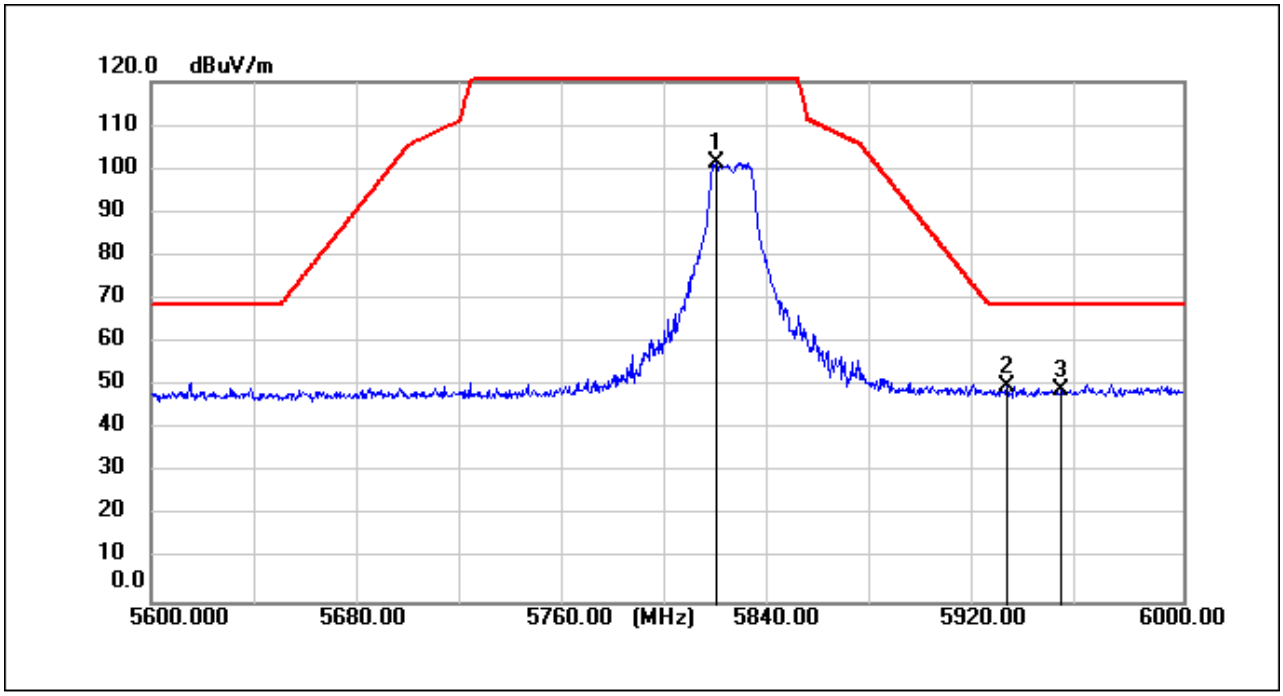
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5614.400	42.55	7.11	49.66	68.20	-18.54	peak
2	5643.200	43.58	7.18	50.76	68.20	-17.44	peak
3	5744.000	94.70	7.42	102.12	135.00	-32.88	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High



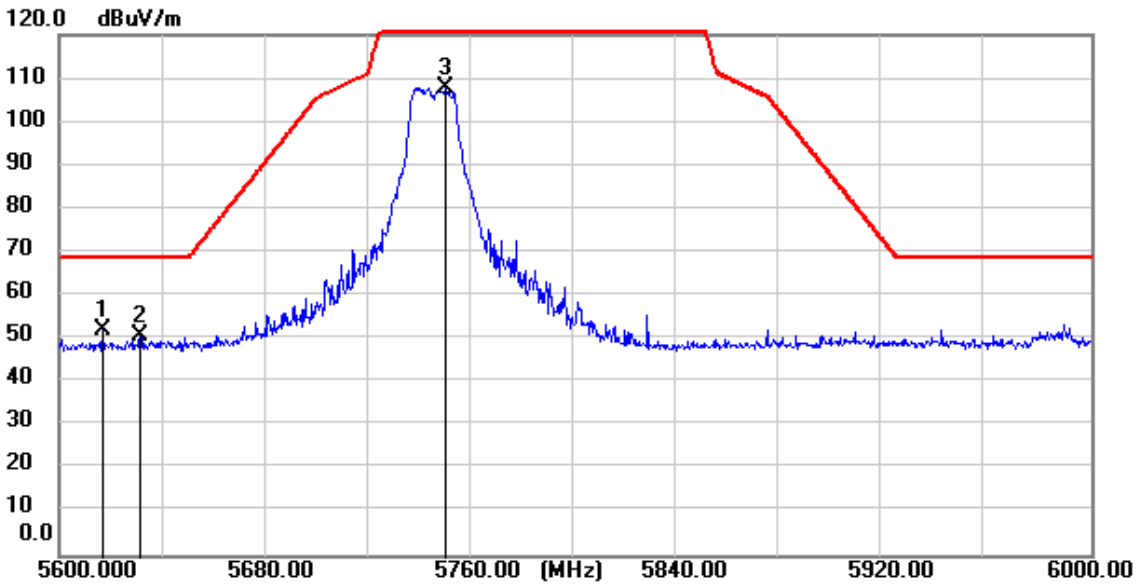
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5828.000	99.82	7.61	107.43	135.00	-27.57	peak
2	5933.600	47.63	7.87	55.50	68.20	-12.70	peak
3	5972.400	42.39	7.96	50.35	68.20	-17.85	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High



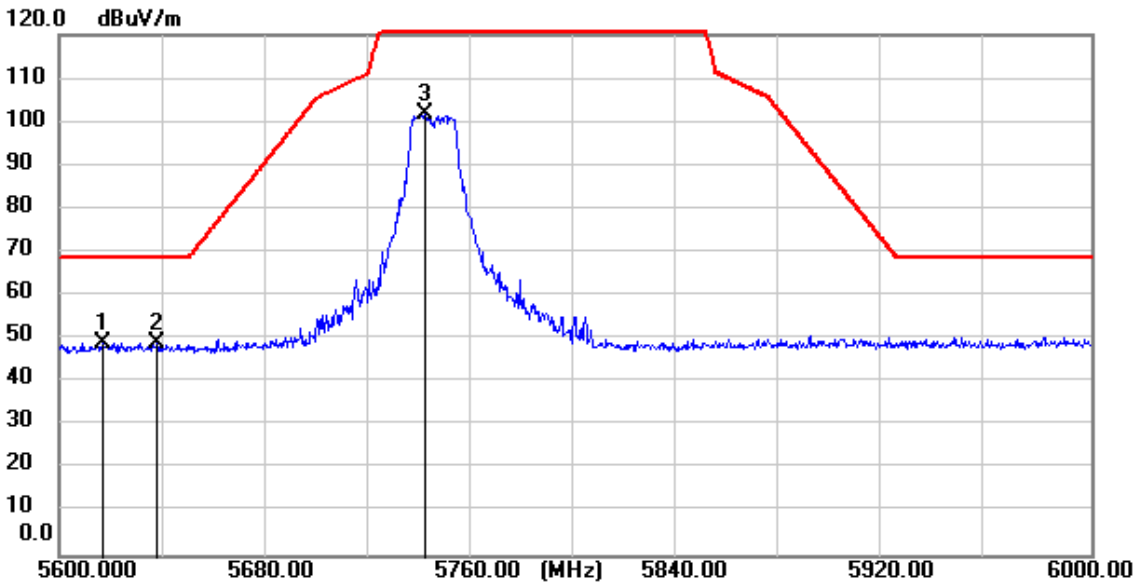
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5819.200	93.97	7.60	101.57	135.00	-33.43	peak
2	5931.600	41.95	7.86	49.81	68.20	-18.39	peak
3	5952.800	41.33	7.91	49.24	68.20	-18.96	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low



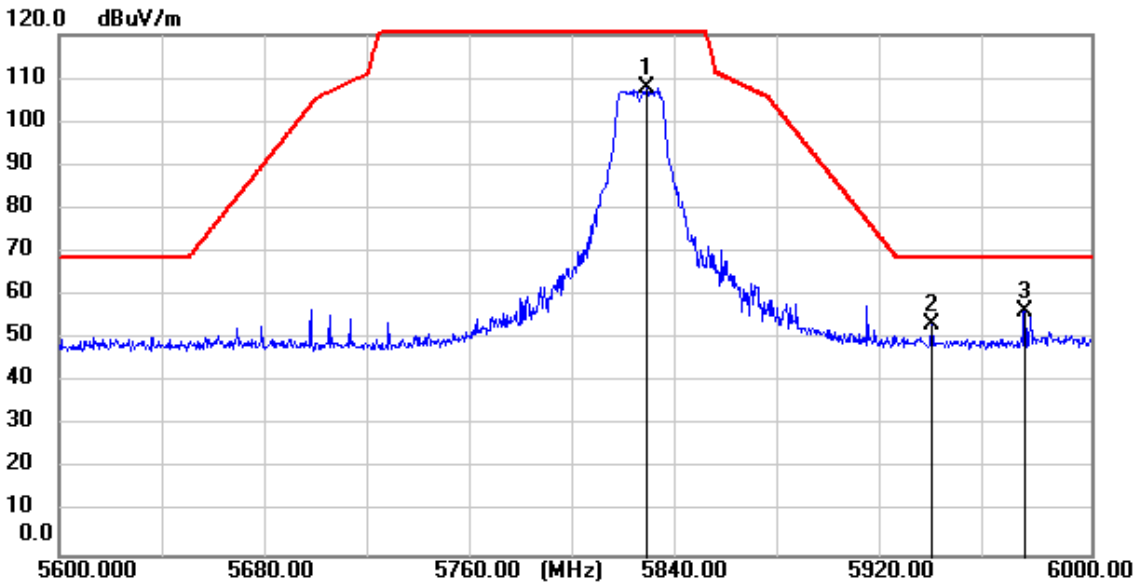
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5616.800	44.92	7.12	52.04	68.20	-16.16	peak
2	5631.600	43.74	7.16	50.90	68.20	-17.30	peak
3	5749.600	100.14	7.44	107.58	135.00	-27.42	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:Low



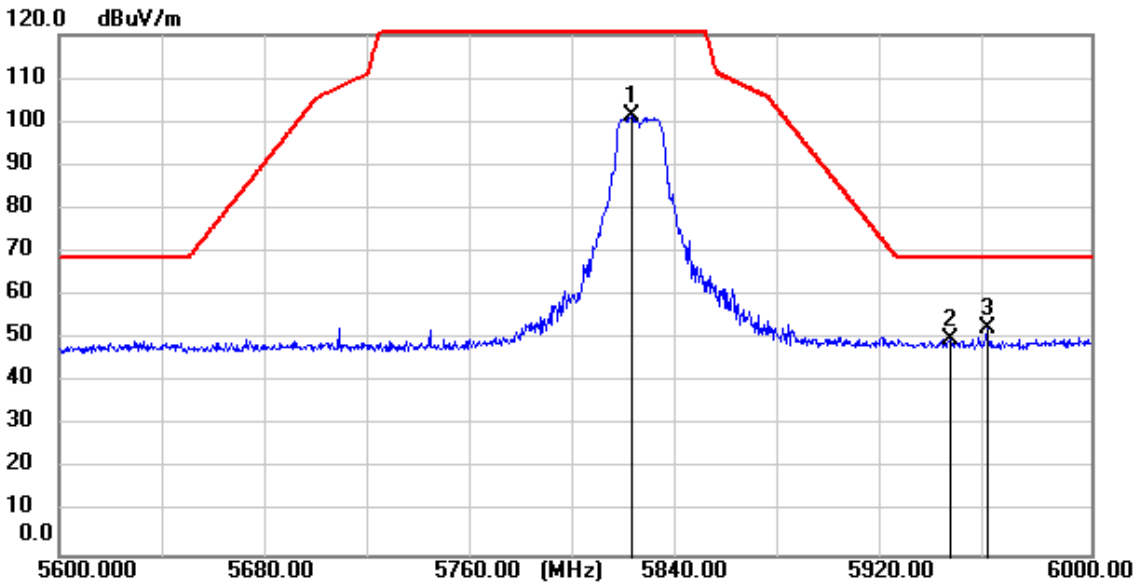
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5616.800	41.92	7.12	49.04	68.20	-19.16	peak
2	5638.000	41.89	7.17	49.06	68.20	-19.14	peak
3	5742.000	94.25	7.42	101.67	135.00	-33.33	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:20MHz; Channel:High



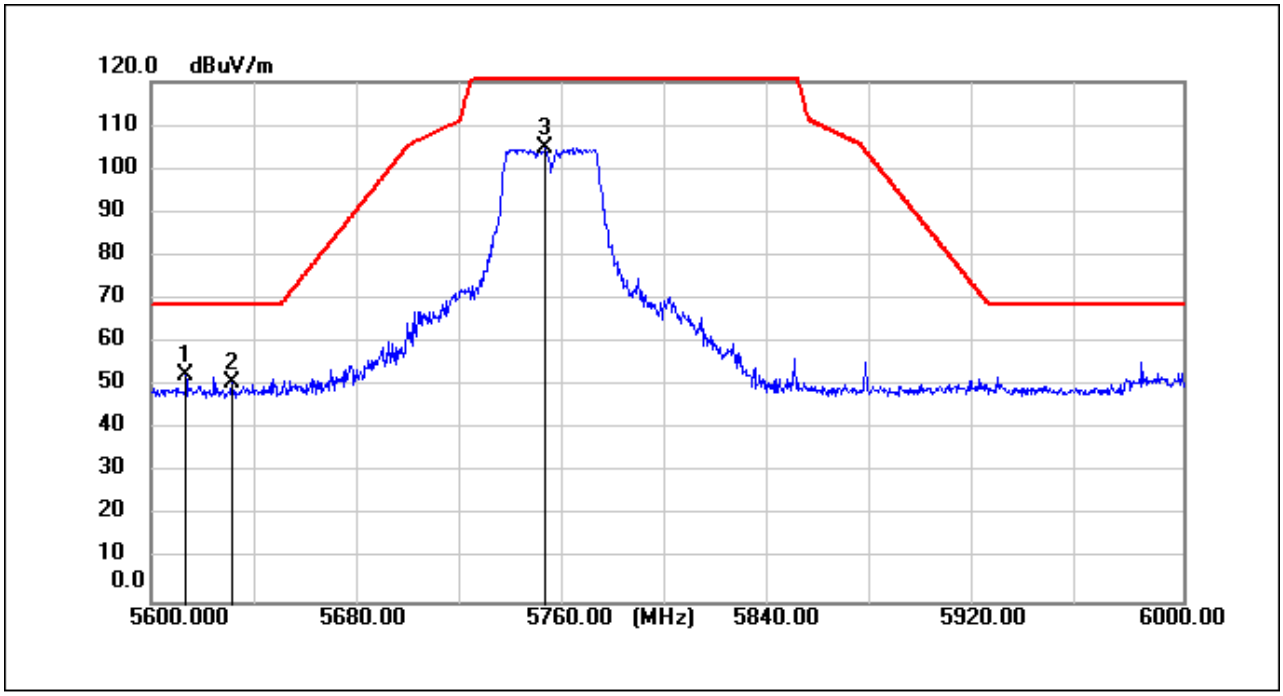
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5828.000	100.16	7.61	107.77	135.00	-27.23	peak
2	5938.400	45.35	7.88	53.23	68.20	-14.97	peak
3	5974.400	48.49	7.96	56.45	68.20	-11.75	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11ac; Bandwidth:20MHz; Channel:High



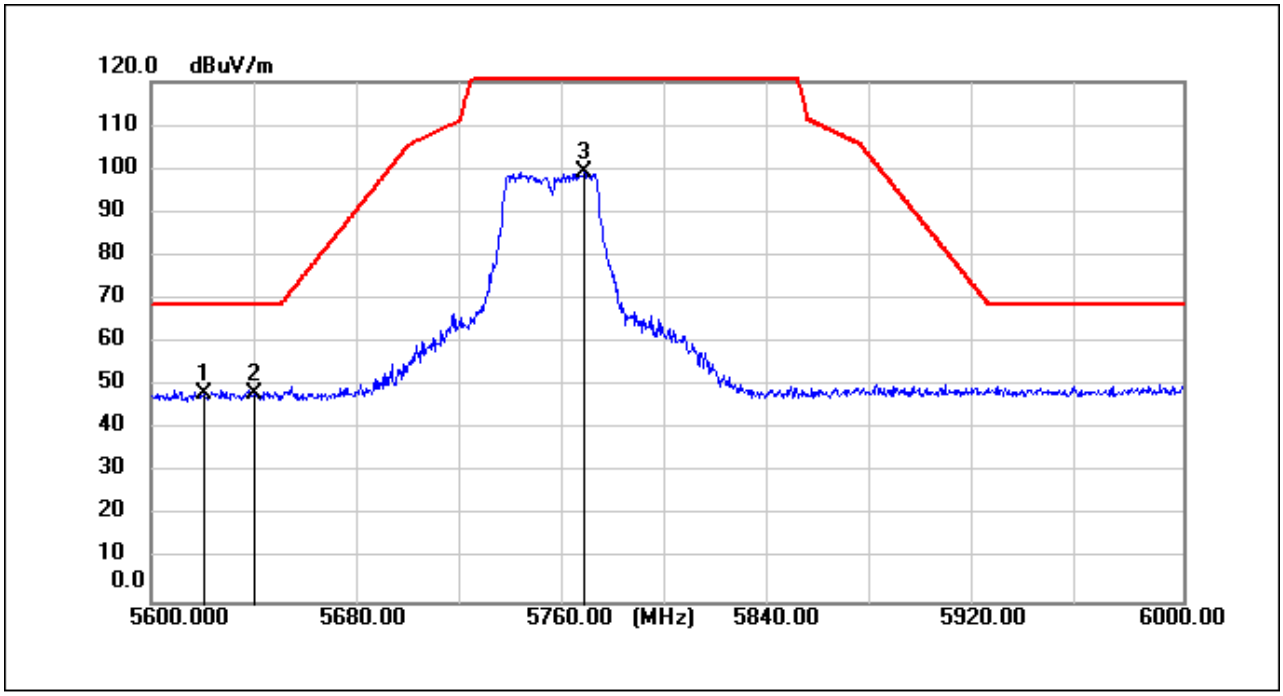
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5822.000	93.65	7.60	101.25	135.00	-33.75	peak
2	5945.600	42.15	7.89	50.04	68.20	-18.16	peak
3	5959.600	44.39	7.92	52.31	68.20	-15.89	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low



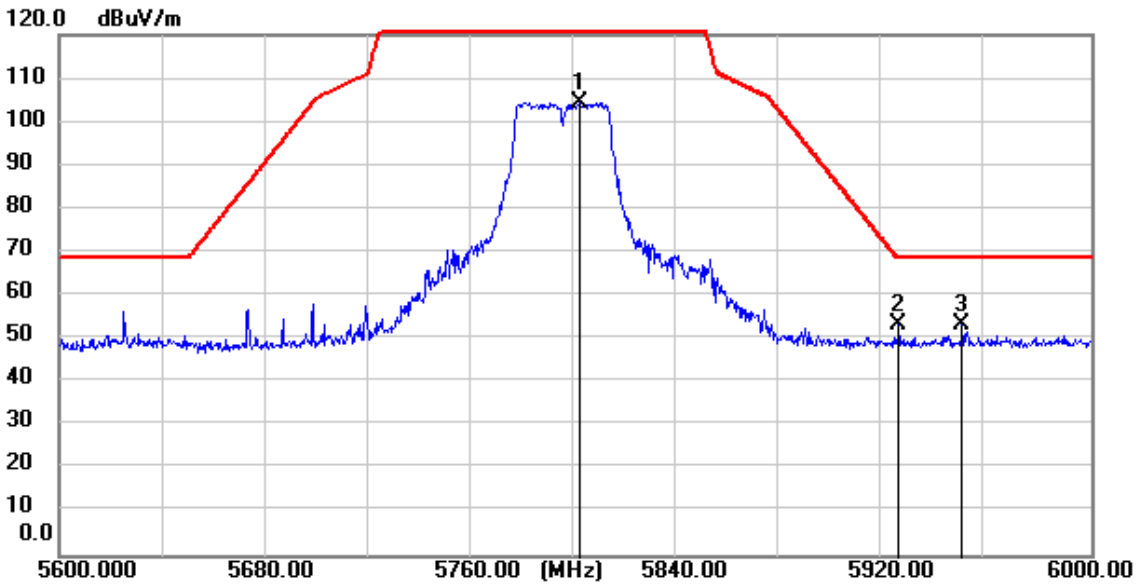
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5613.600	45.48	7.11	52.59	68.20	-15.61	peak
2	5631.200	43.52	7.15	50.67	68.20	-17.53	peak
3	5752.800	97.32	7.44	104.76	135.00	-30.24	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:Low



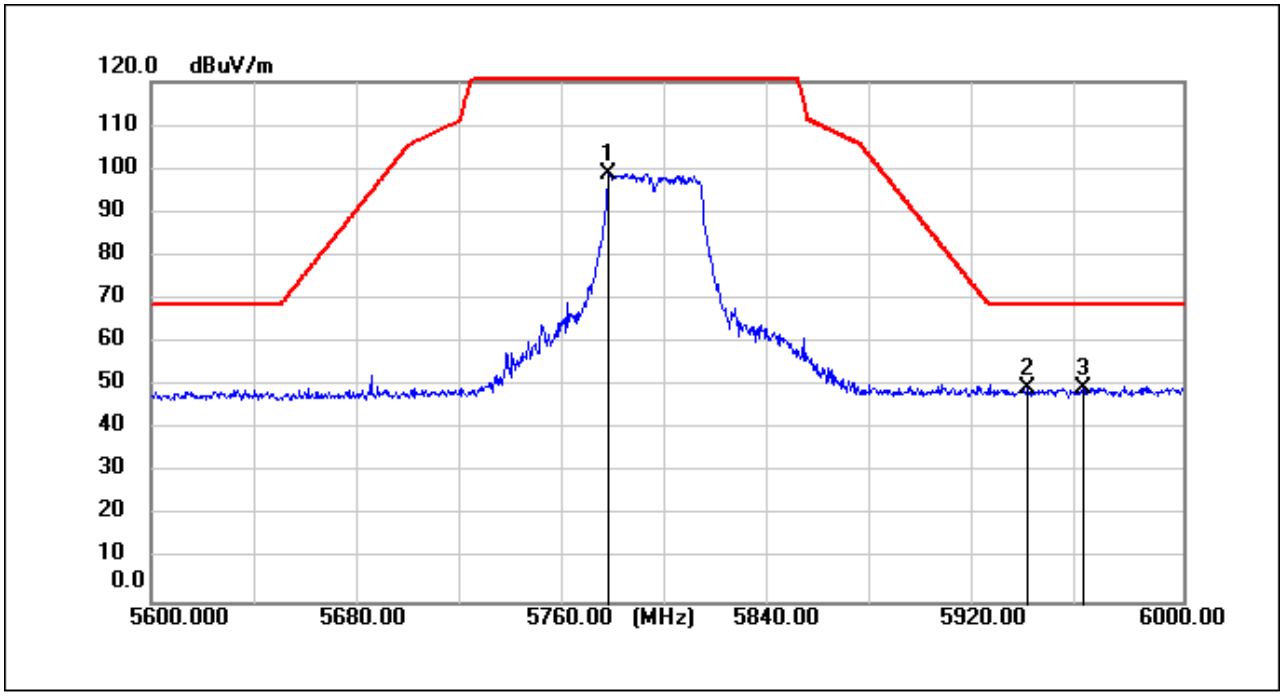
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5620.400	41.05	7.12	48.17	68.20	-20.03	peak
2	5640.400	40.89	7.18	48.07	68.20	-20.13	peak
3	5768.000	91.89	7.47	99.36	135.00	-35.64	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:40MHz; Channel:High



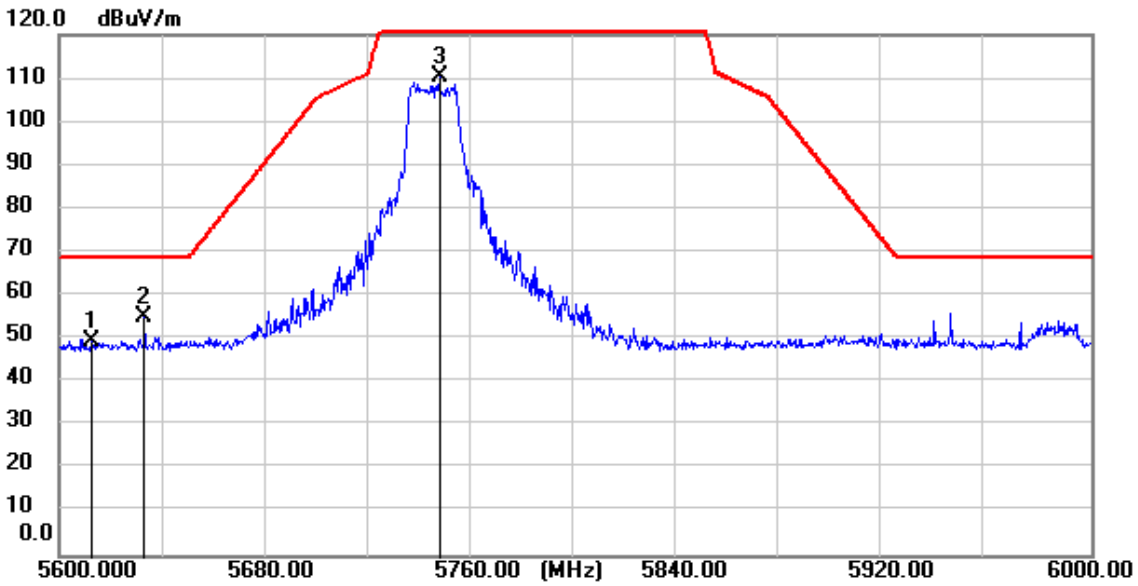
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5801.600	96.93	7.56	104.49	135.00	-30.51	peak
2	5925.600	45.56	7.85	53.41	68.20	-14.79	peak
3	5950.000	45.57	7.91	53.48	68.20	-14.72	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:High



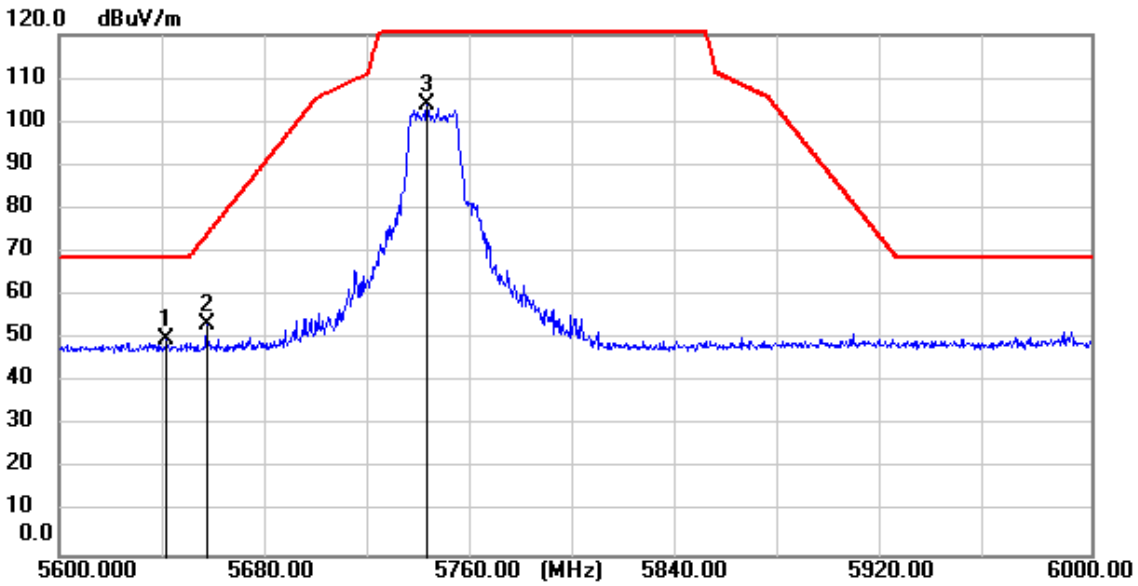
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5777.600	91.45	7.50	98.95	135.00	-36.05	peak
2	5939.600	41.52	7.88	49.40	68.20	-18.80	peak
3	5961.600	41.70	7.93	49.63	68.20	-18.57	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



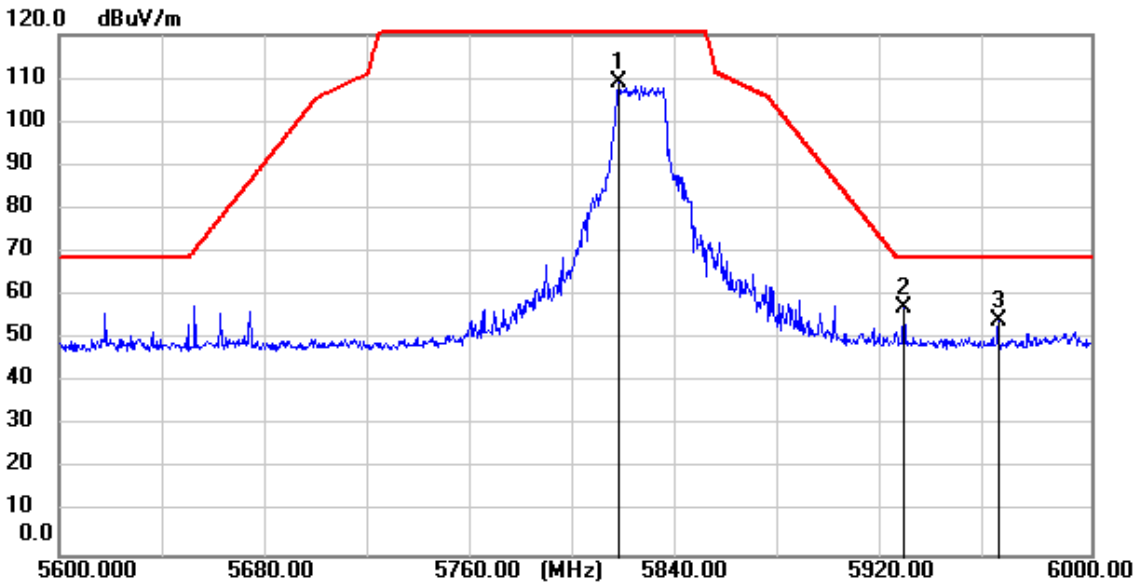
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5612.400	42.44	7.10	49.54	68.20	-18.66	peak
2	5633.200	47.81	7.16	54.97	68.20	-13.23	peak
3	5747.600	103.10	7.43	110.53	135.00	-24.47	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



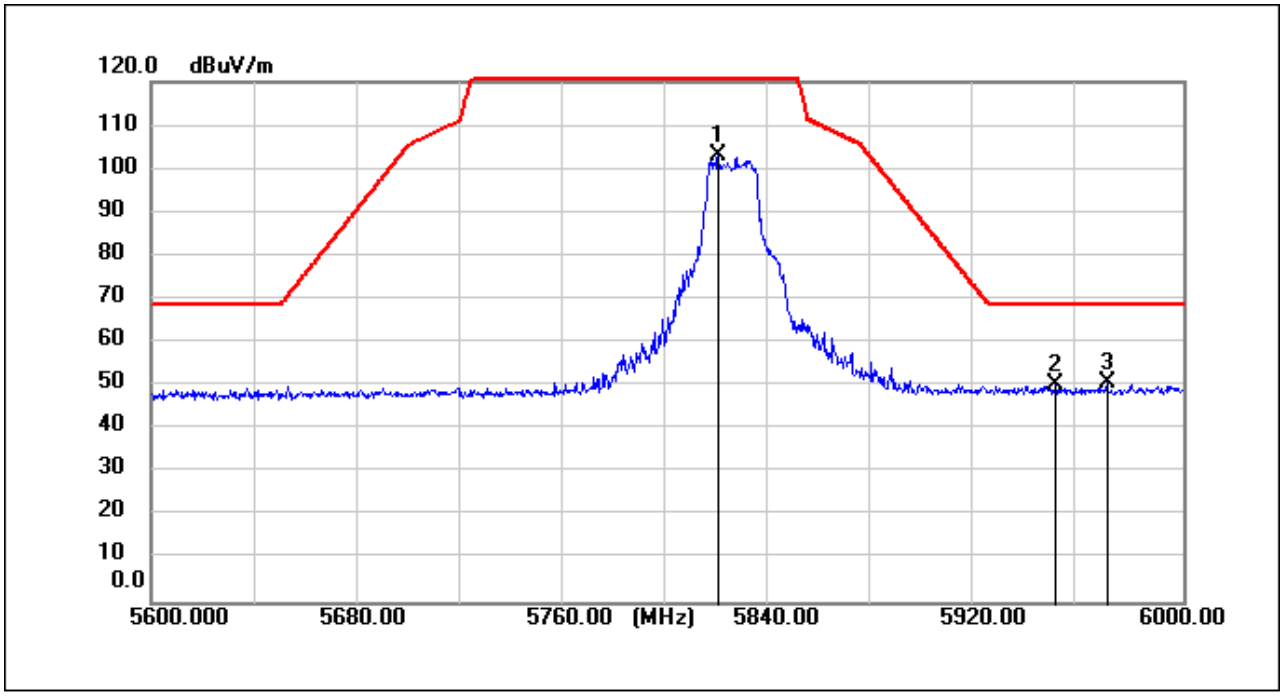
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5641.600	42.75	7.18	49.93	68.20	-18.27	peak
2	5657.200	46.16	7.22	53.38	73.53	-20.15	peak
3	5742.800	96.41	7.41	103.82	135.00	-31.18	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High



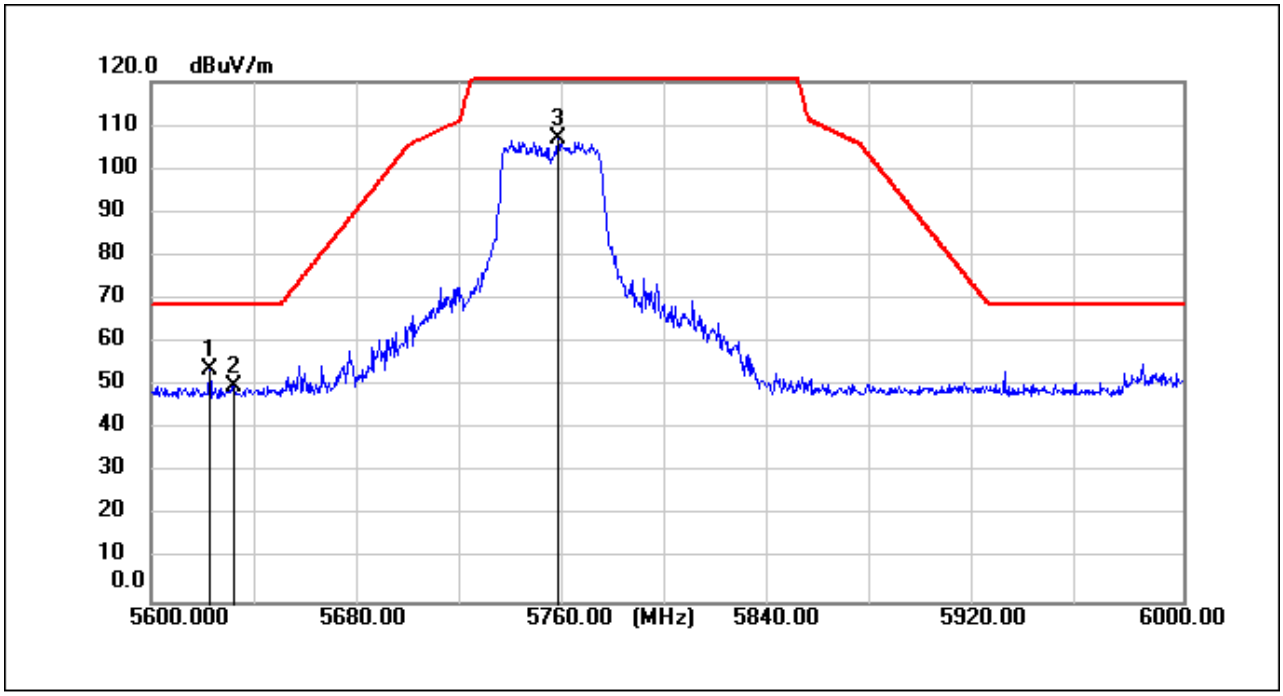
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5817.200	101.48	7.59	109.07	135.00	-25.93	peak
2	5927.600	49.42	7.85	57.27	68.20	-10.93	peak
3	5964.000	46.31	7.94	54.25	68.20	-13.95	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High



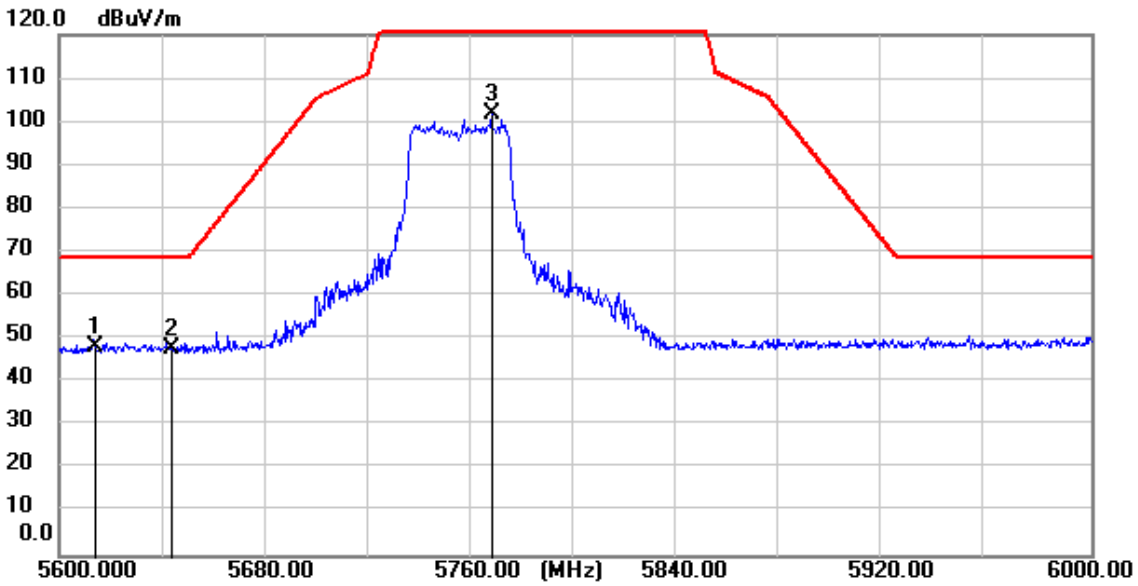
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5819.600	95.35	7.59	102.94	135.00	-32.06	peak
2	5950.800	42.61	7.90	50.51	68.20	-17.69	peak
3	5970.400	42.66	7.95	50.61	68.20	-17.59	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:Low



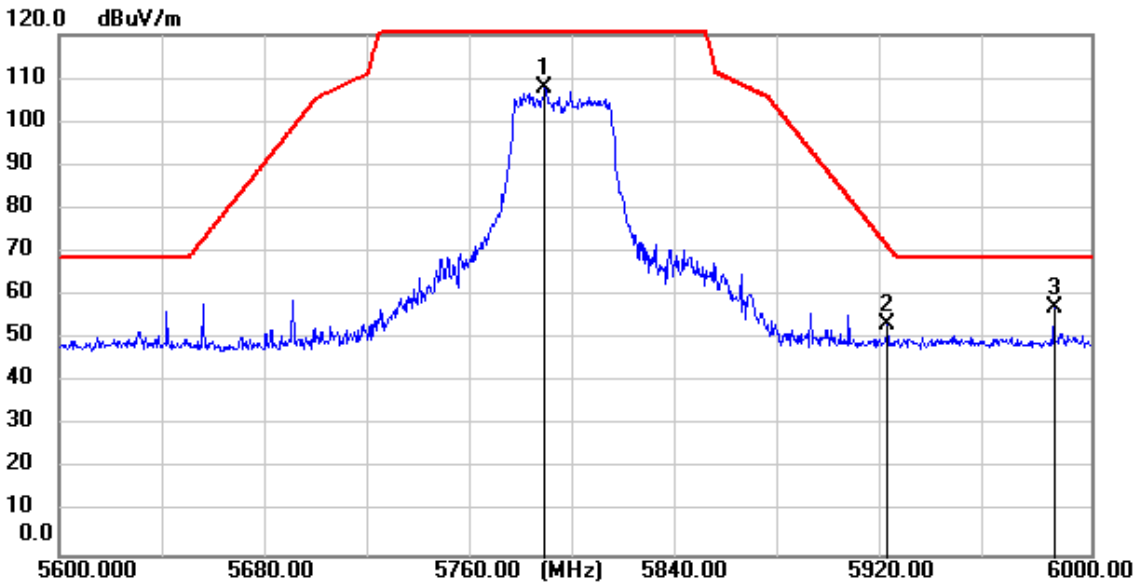
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5622.800	46.81	7.13	53.94	68.20	-14.26	peak
2	5632.000	42.97	7.16	50.13	68.20	-18.07	peak
3	5758.000	99.42	7.45	106.87	135.00	-28.13	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:Low



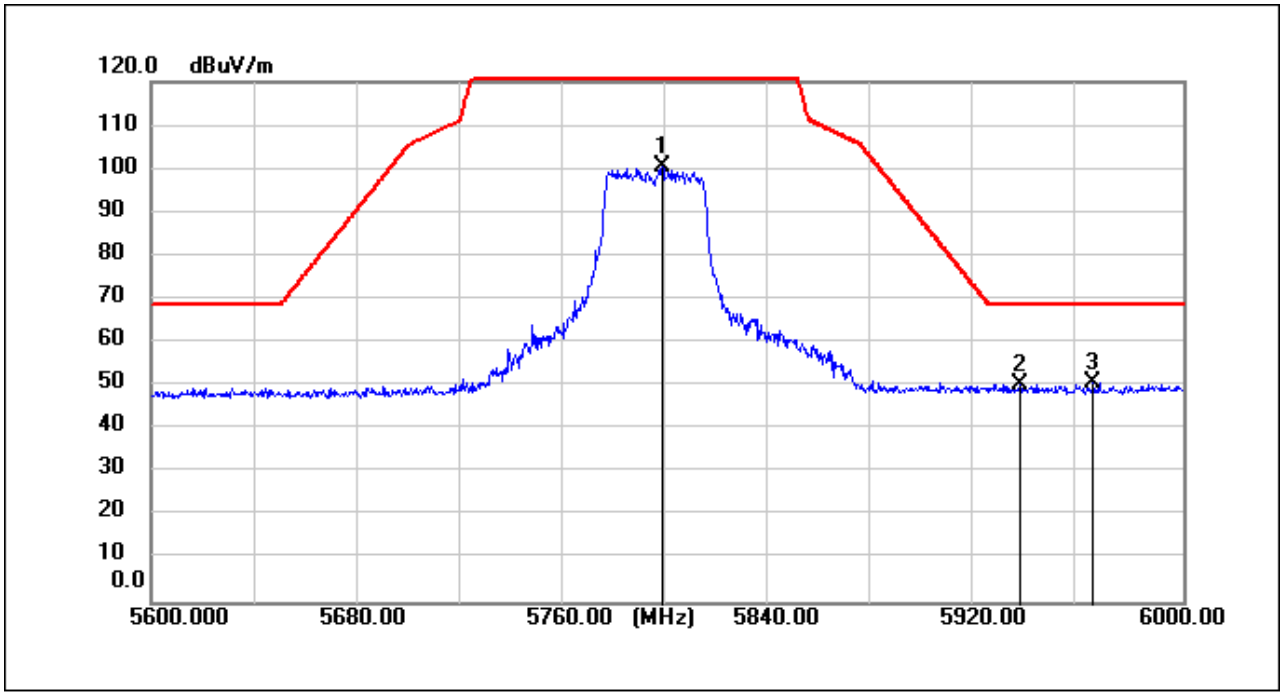
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5614.400	40.91	7.11	48.02	68.20	-20.18	peak
2	5644.000	40.70	7.18	47.88	68.20	-20.32	peak
3	5767.600	94.11	7.47	101.58	135.00	-33.42	peak

Test Mode: 02; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5788.400	100.22	7.53	107.75	135.00	-27.25	peak
2	5921.200	45.53	7.83	53.36	71.01	-17.65	peak
3	5985.600	49.08	7.99	57.07	68.20	-11.13	peak

Test Mode: 02; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5798.400	92.93	7.54	100.47	135.00	-34.53	peak
2	5936.800	42.64	7.87	50.51	68.20	-17.69	peak
3	5965.200	43.00	7.94	50.94	68.20	-17.26	peak

7.6 Duty Cycle

Test Requirement ANSI C63.10 (2013) Section 12.2
Test Method: ANSI C63.10 (2013) Section 12.2

7.6.1 E.U.T. Operation

Operating Environment:
Temperature: 25.3 °C Humidity: 50.5 % 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/ax 20/40, Only the data of worst case is recorded in the report.
Final test	02	TX mode (U-NII-3) _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/ax 20/40, Only the data of worst case is recorded in the report.

7.6.3 Measurement Procedure and Data

Please Refer to Appendix for Details

7.7 99% Bandwidth

Test Requirement ANSI C63.10 (2013) Section 12.4.2
Test Method: ANSI C63.10 (2013) Section 12.4.2

7.7.1 E.U.T. Operation

Operating Environment:
Temperature: 25.3 °C Humidity: 50.5 % 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/ax 20/40, Only the data of worst case is recorded in the report.
Final test	02	TX mode (U-NII-3) _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/ax 20/40, Only the data of worst case is recorded in the report.

7.7.3 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 (2013) Section 12.4.1

7.8.1 E.U.T. Operation

Operating Environment:
Temperature: 25.3 °C Humidity: 50.5 % 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/ax 20/40, Only the data of worst case is recorded in the report.
Final test	02	TX mode (U-NII-3) _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/ax 20/40, Only the data of worst case is recorded in the report.

7.8.3 Measurement Procedure and Data

Please Refer to Appendix for Details

7.9 Minimum 6 dB bandwidth (5.725-5.85 GHz band)

Test Requirement 47 CFR Part 15, Subpart E 15.407 (e)
Test Method: ANSI C63.10 (2013) Section 6.9.2

Limit:

Frequency band(MHz)	Limit
5725-5850	⩾500 kHz

7.9.1 E.U.T. Operation

Operating Environment:
Temperature: 25.3 °C Humidity: 50.5 % RH Atmospheric Pressure: 1010 mbar

7.9.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	02	TX mode (U-NII-3) _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/ax 20/40, Only the data of worst case is recorded in the report.

7.9.3 Measurement Procedure and Data

Please Refer to Appendix for Details

7.10 Peak Power spectrum density

Test Requirement 47 CFR Part 15, Subpart E 15.407 (a)
Test Method: ANSI C63.10 (2013) 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.

7.10.1 E.U.T. Operation

Operating Environment:
Temperature: 25.3 °C Humidity: 50.5 % 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/ax 20/40, Only the data of worst case is recorded in the report.
Final test	02	TX mode (U-NII-3) _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/ax 20/40, Only the data of worst case is recorded in the report.

7.10.3 Measurement Procedure and Data

Please Refer to Appendix for Details

7.11 Frequency Stability

Test Requirement 47 CFR Part 15, Subpart E 15.407 (g)
Test Method: ANSI C63.10 (2013) Section 6.8

7.11.1 E.U.T. Operation

Operating Environment:
Temperature: 25.3 °C Humidity: 50.5 % RH Atmospheric Pressure: 1010 mbar

7.11.2 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/ax 20/40, Only the data of worst case is recorded in the report.
Final test	02	TX mode (U-NII-3) _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/ax 20/40, Only the data of worst case is recorded in the report.

7.11.3 Measurement Procedure and Data

Please Refer to Appendix for Details

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2501000089AT

9 EUT Constructional Details (EUT Photos)

Refer to Appendix_Photographs of EUT Constructional Details for KSCR2501000089AT

10 Appendix

1. Duty Cycle

1.1 Test Result

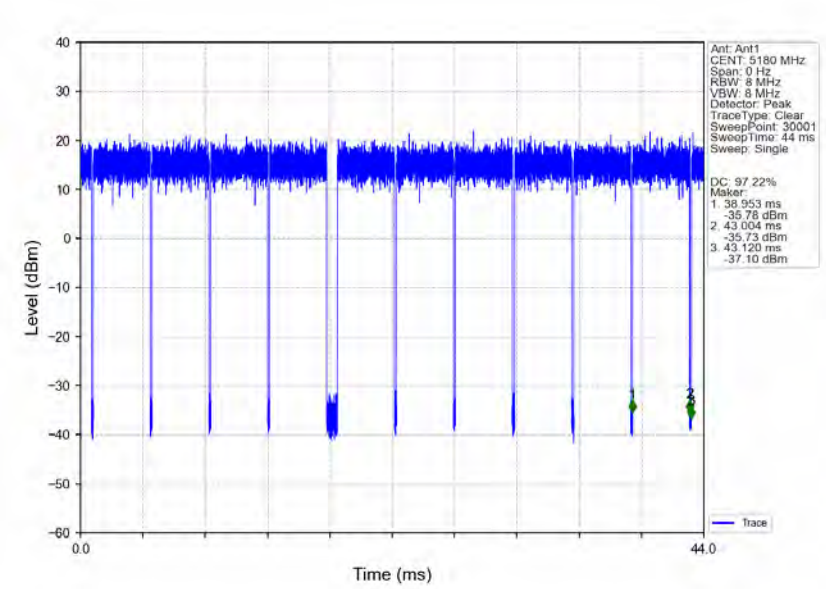
1.1.1 Ant1

Ant1									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	/	/	4.051	4.167	97.22	0.12	0.48
		5200	/	/	4.032	4.212	95.73	0.19	1.46
		5240	/	/	4.033	4.261	94.65	0.24	2.44
		5745	/	/	4.035	4.243	95.10	0.22	2.05
		5785	/	/	4.053	4.906	82.61	0.83	15.08
		5825	/	/	4.034	4.216	95.68	0.19	1.45
802.11ac (VHT20)	SISO	5180	/	/	1.286	1.410	91.21	0.40	0.58
		5200	/	/	1.285	1.437	89.42	0.49	2.33
		5240	/	/	1.284	1.522	84.36	0.74	7.03
		5745	/	/	1.284	1.513	84.86	0.71	6.54
		5785	/	/	1.285	1.455	88.32	0.54	3.39
		5825	/	/	1.285	1.615	79.57	0.99	11.87
802.11ac (VHT40)	SISO	5190	/	/	0.937	1.115	84.04	0.76	5.04
		5230	/	/	0.937	1.097	85.41	0.68	3.67
		5755	/	/	0.936	1.115	83.95	0.76	5.03
		5795	/	/	0.937	1.248	75.08	1.24	13.90
802.11ax (HE20)	SISO	5180	RU242	Left	0.996	1.175	84.77	0.72	4.81
		5200	RU242	Left	0.997	1.176	84.78	0.72	4.80
		5240	RU242	Left	0.996	1.225	81.31	0.90	7.87
		5745	RU242	Left	0.996	1.234	80.71	0.93	7.74
		5785	RU242	Left	2.859	3.146	90.88	0.42	5.11
		5825	RU242	Left	2.858	3.121	91.57	0.38	4.40
802.11ax (HE40)	SISO	5190	RU484	Left	1.459	1.592	91.65	0.38	1.06
		5230	RU484	Left	1.459	1.610	90.62	0.43	2.09
		5755	RU484	Left	1.458	1.773	82.23	0.85	8.72
		5795	RU484	Left	1.458	1.734	84.08	0.75	8.63

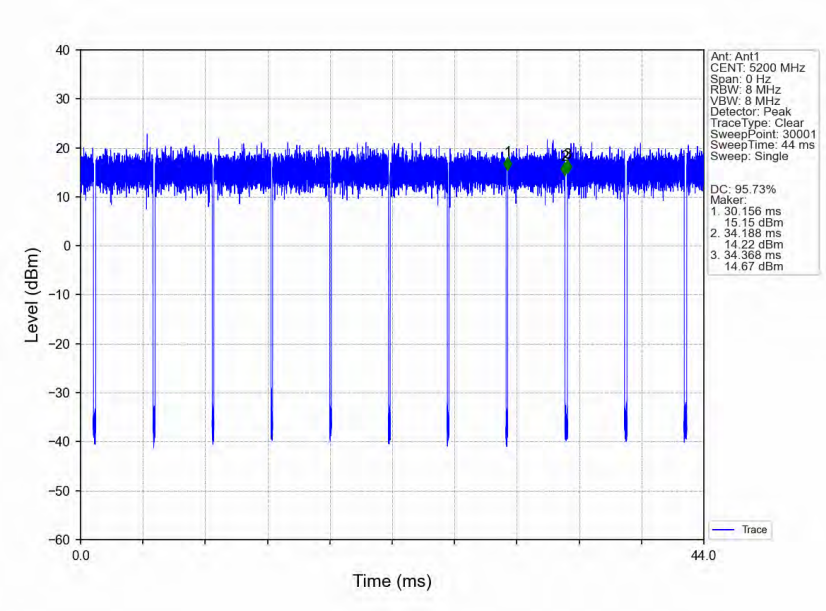
1.2 Test Graph

1.2.1 Ant1

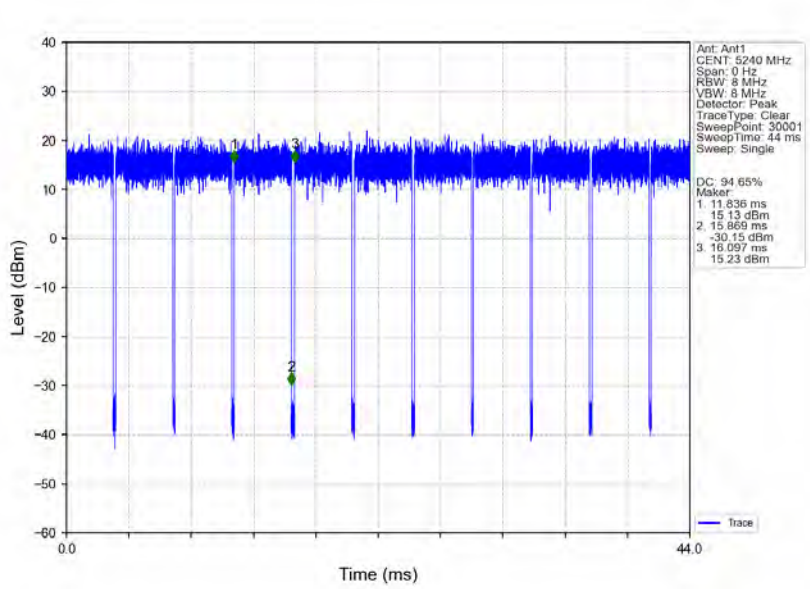
802.11a_LCH_5180MHz_Ant1_NTNV



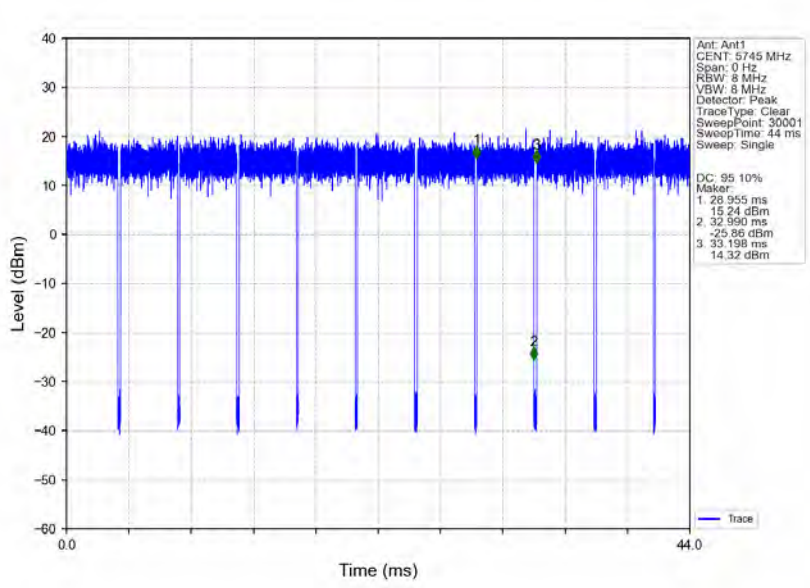
802.11a_MCH_5200MHz_Ant1_NTNV



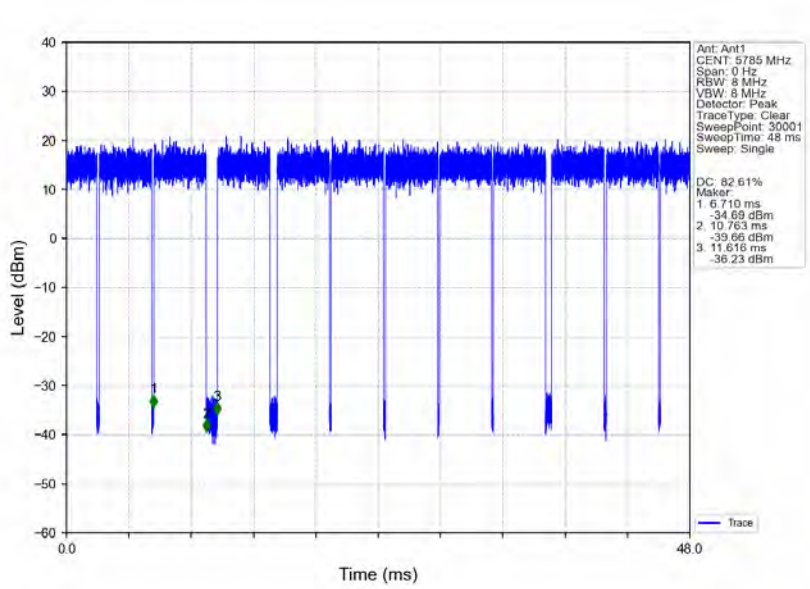
802.11a_HCH_5240MHz_Ant1_NTNV



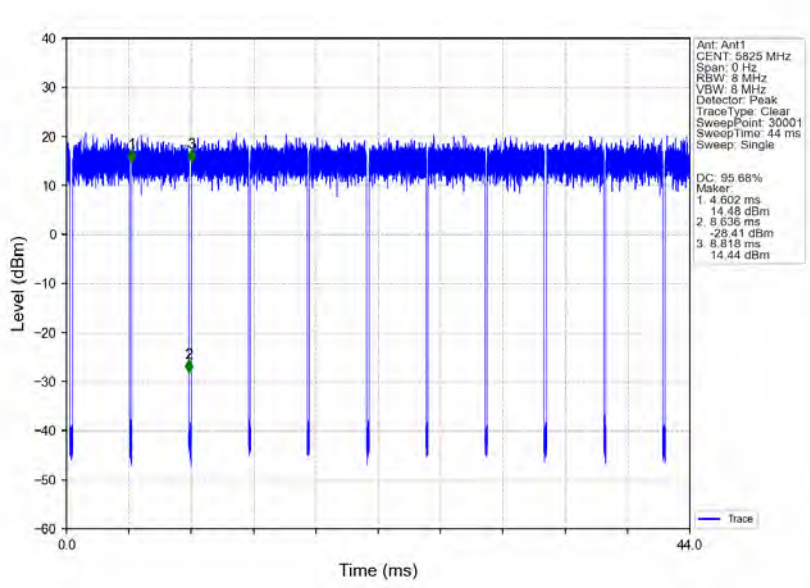
802.11a_LCH_5745MHz_Ant1_NTNV



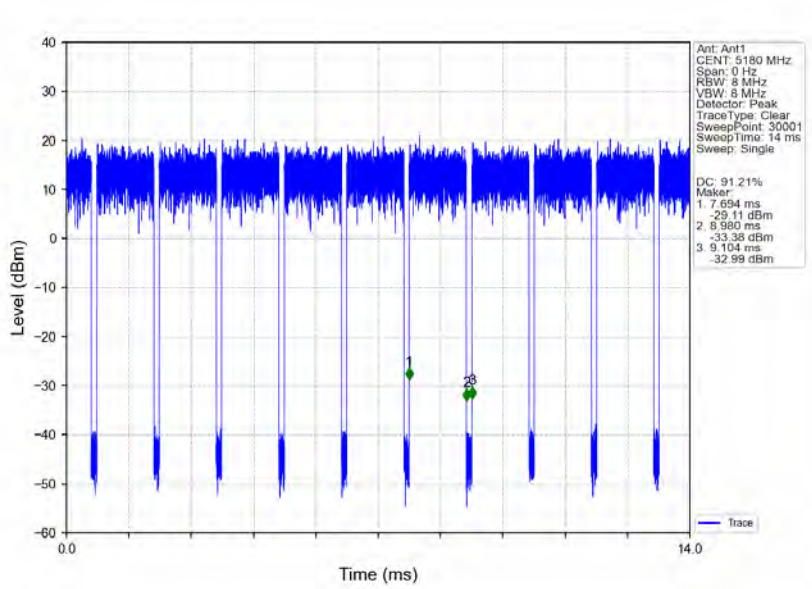
802.11a_MCH_5785MHz_Ant1_NTNV



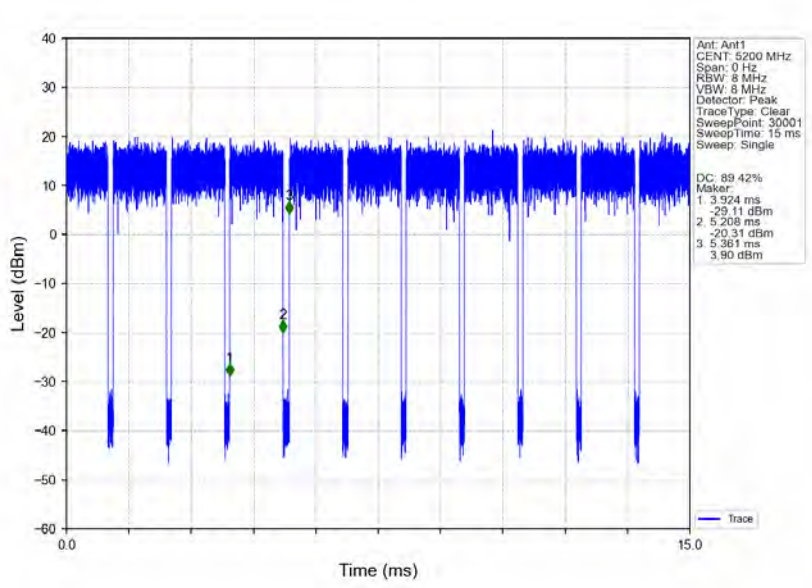
802.11a_HCH_5825MHz_Ant1_NTNV



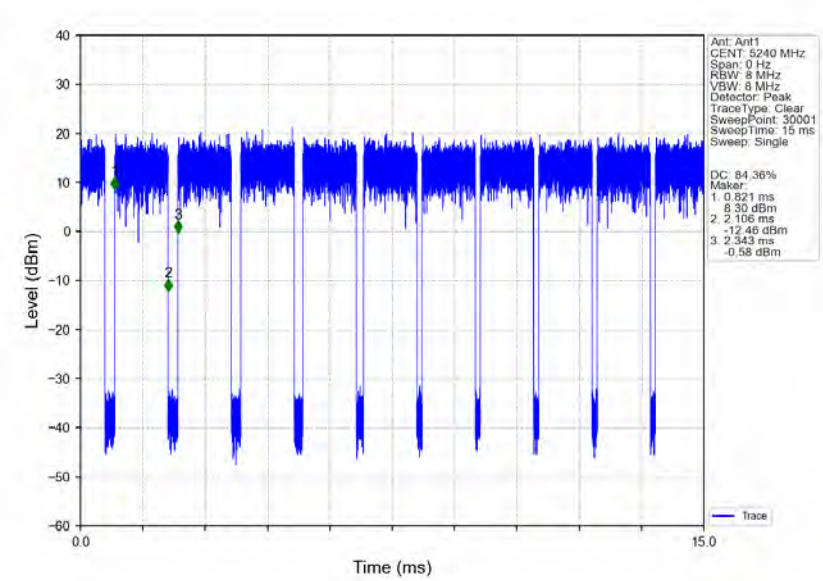
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



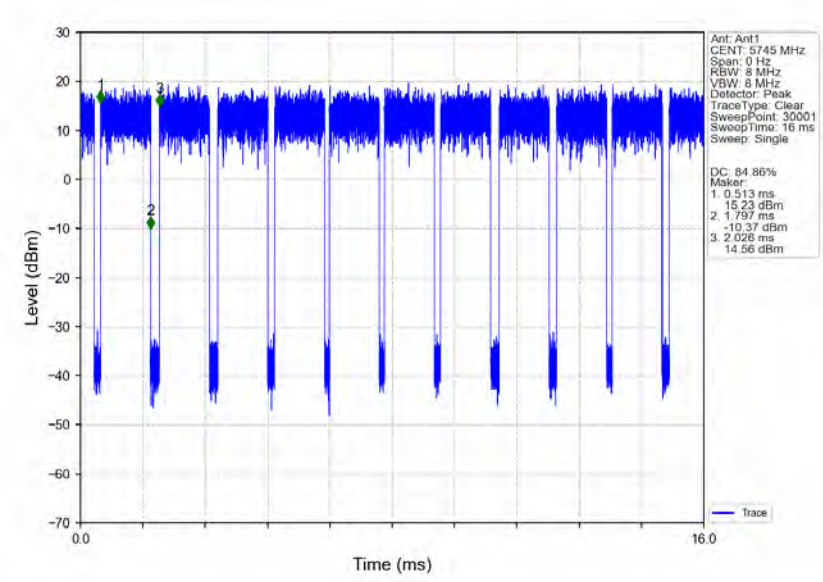
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



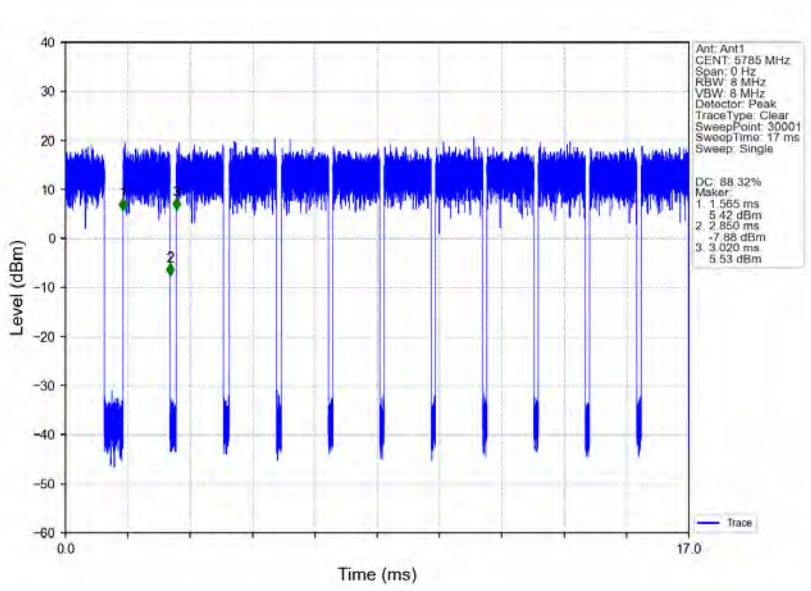
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



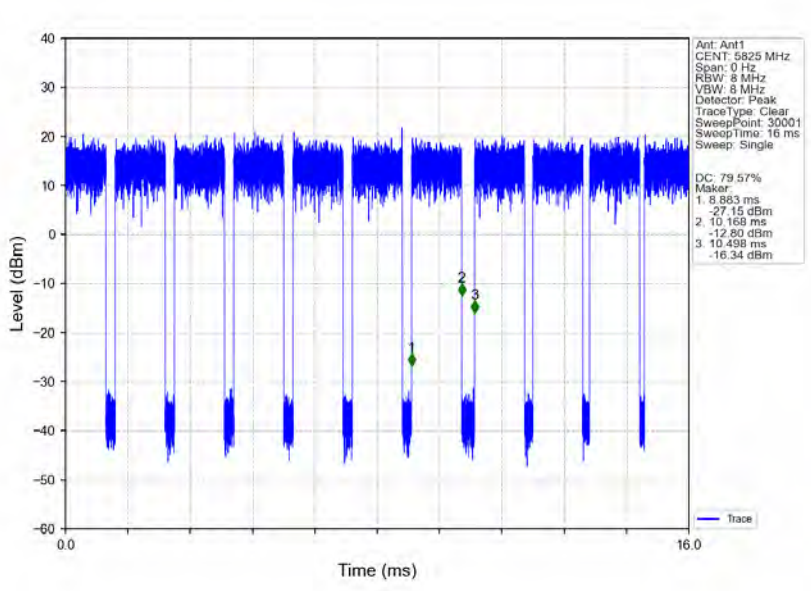
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



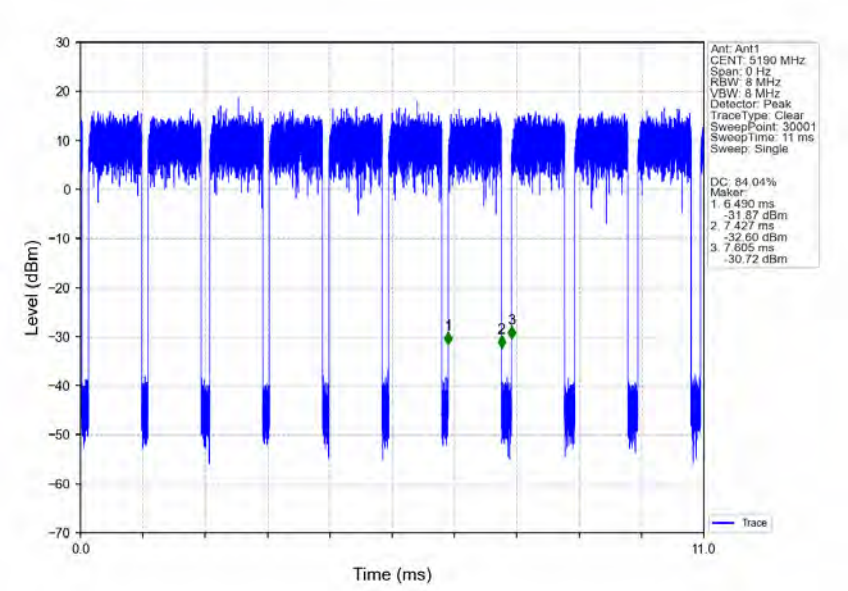
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



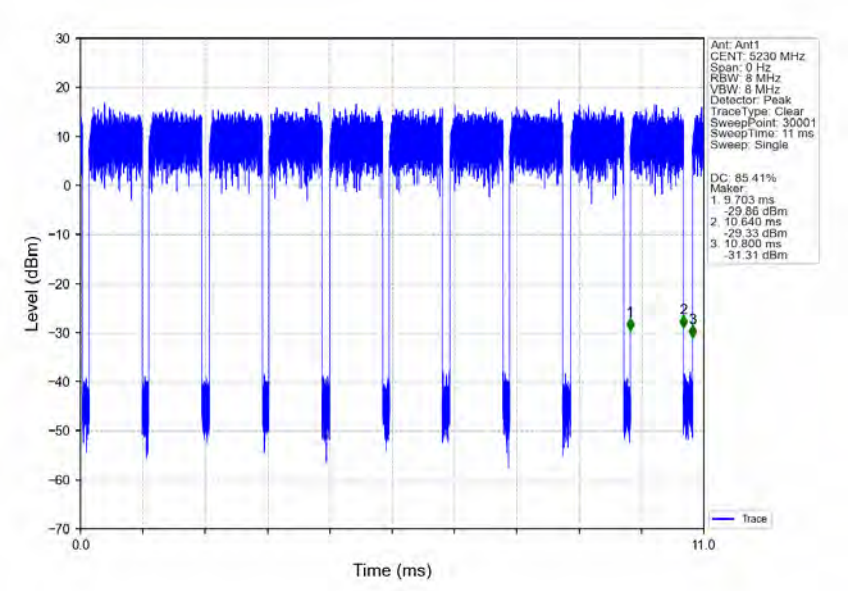
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



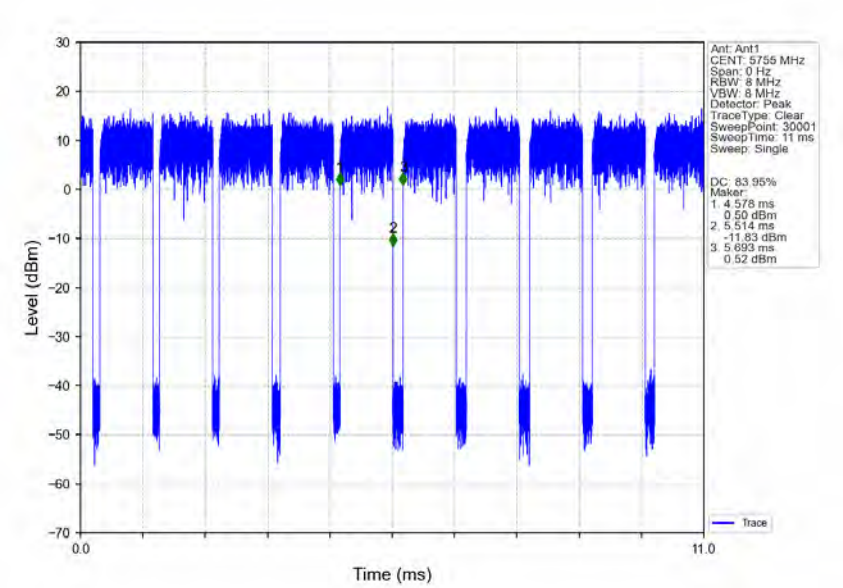
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



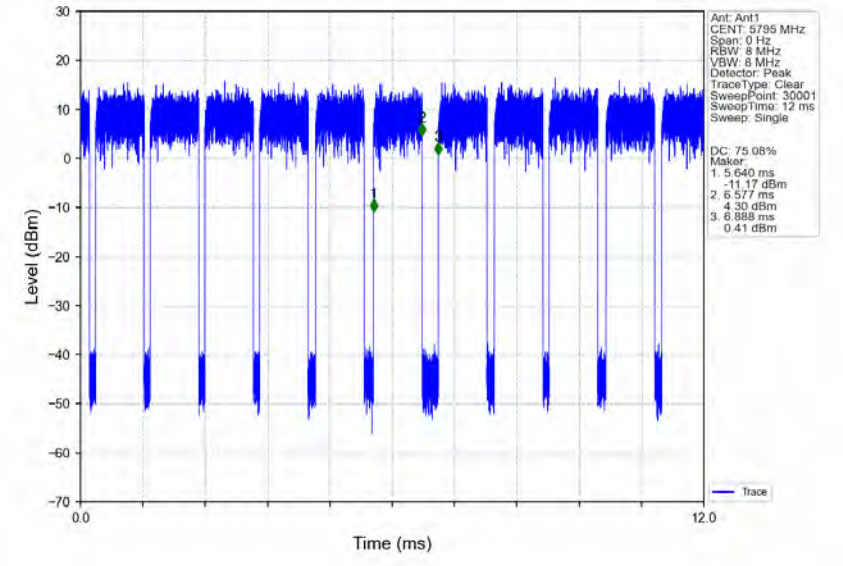
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



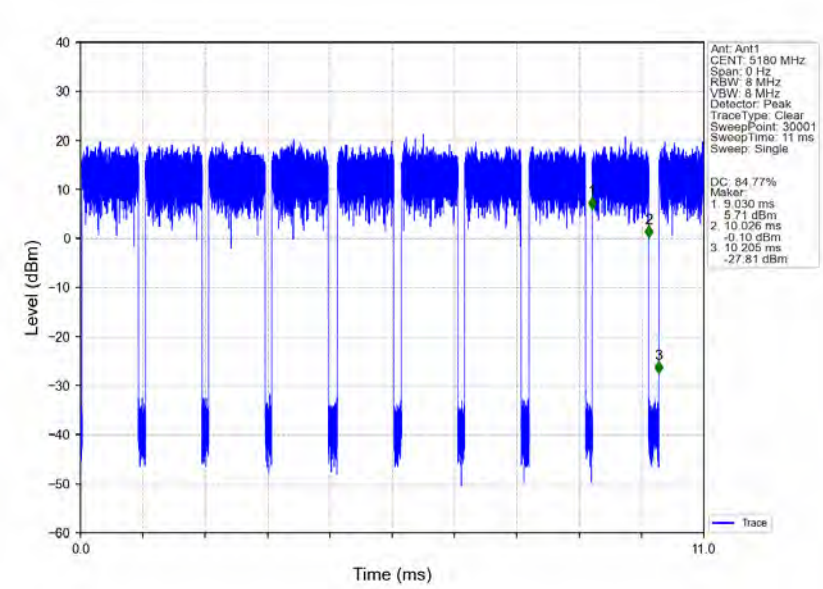
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



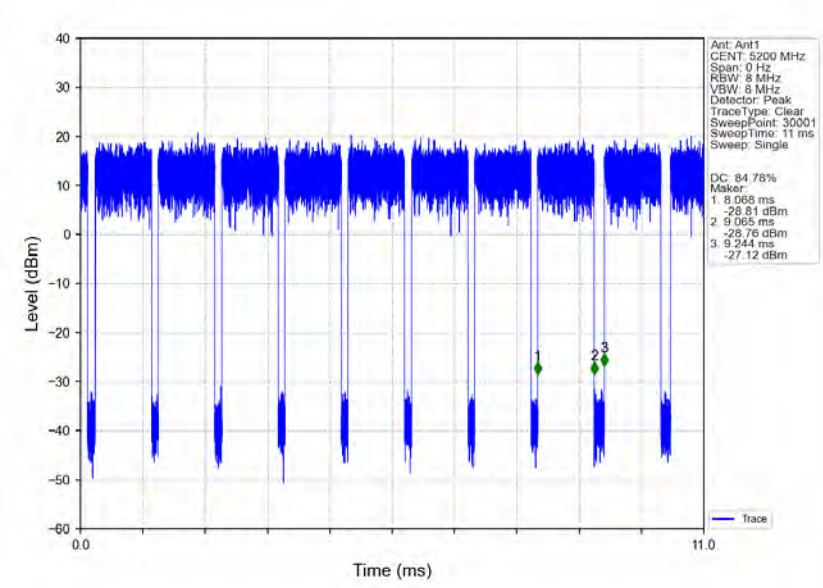
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



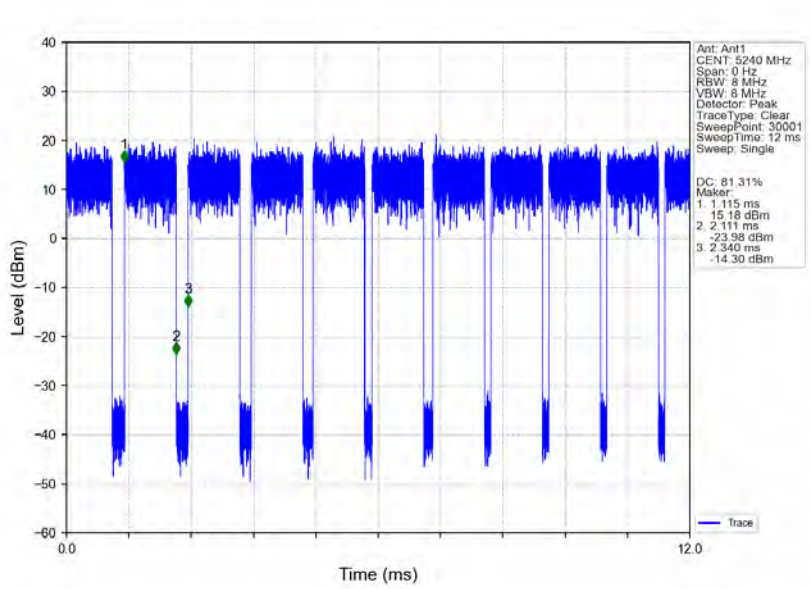
802.11ax(HE20)_LCH_5180MHz_RU242_Left_Ant1_NTNV



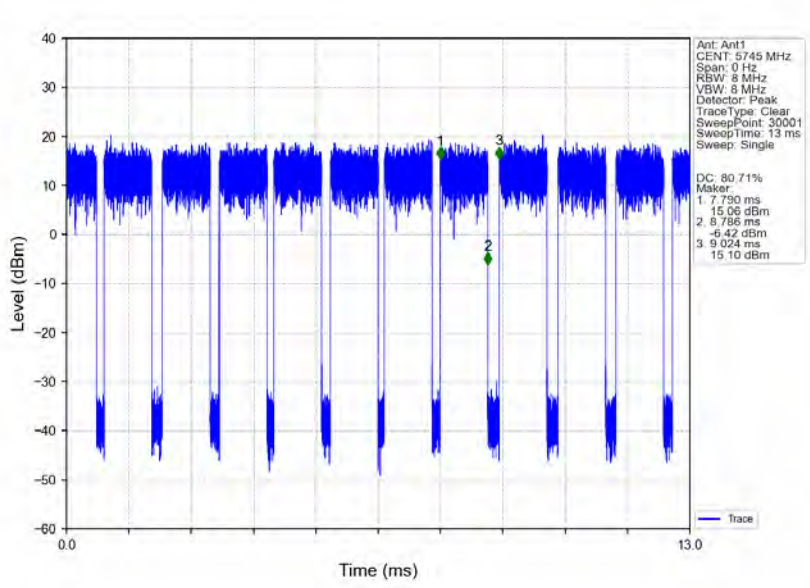
802.11ax(HE20)_MCH_5200MHz_RU242_Left_Ant1_NTNV



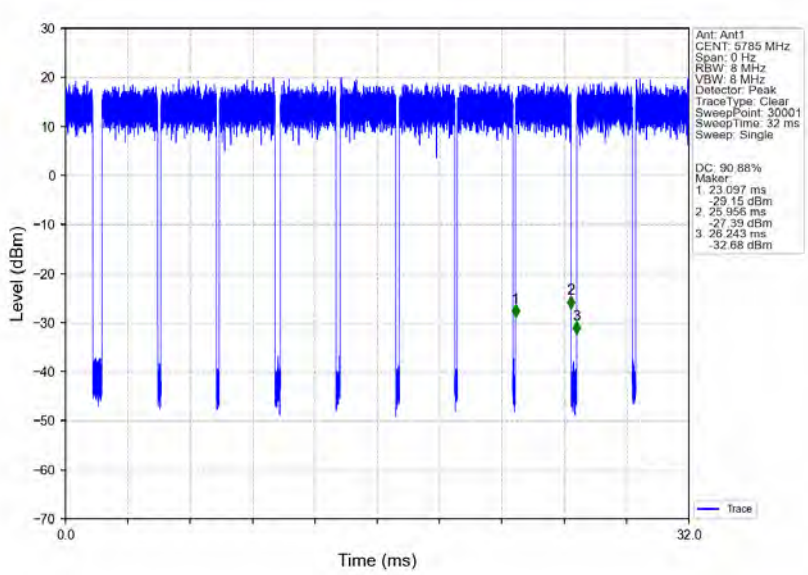
802.11ax(HE20)_HCH_5240MHz_RU242_Left_Ant1_NTNV



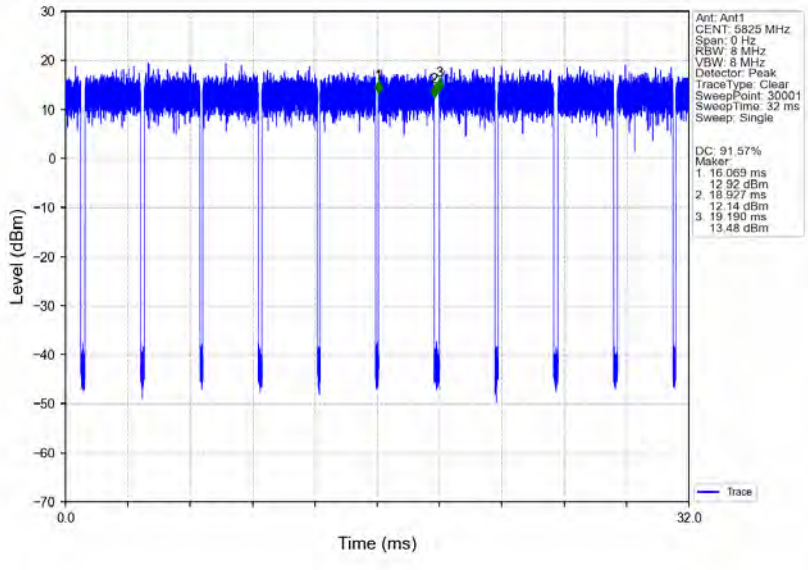
802.11ax(HE20)_LCH_5745MHz_RU242_Left_Ant1_NTNV



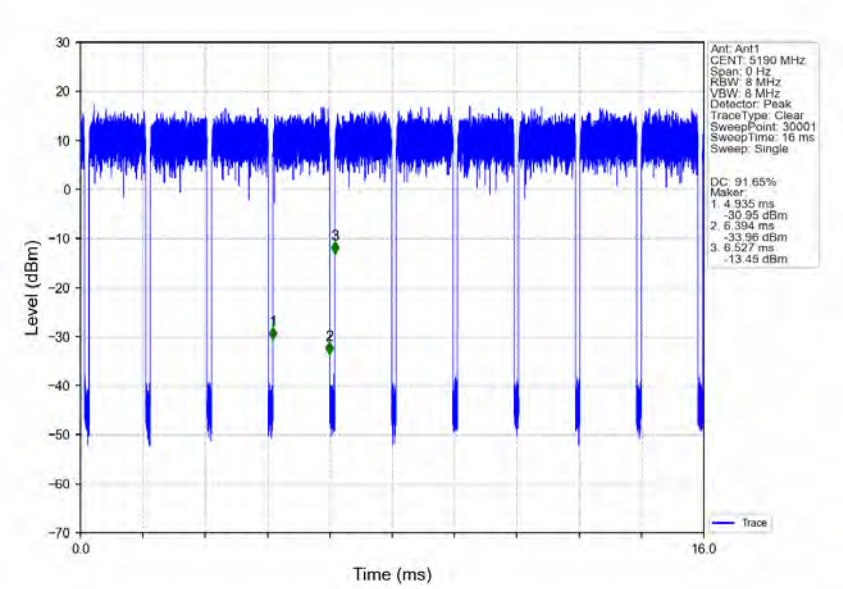
802.11ax(HE20)_MCH_5785MHz_RU242_Left_Ant1_NTNV



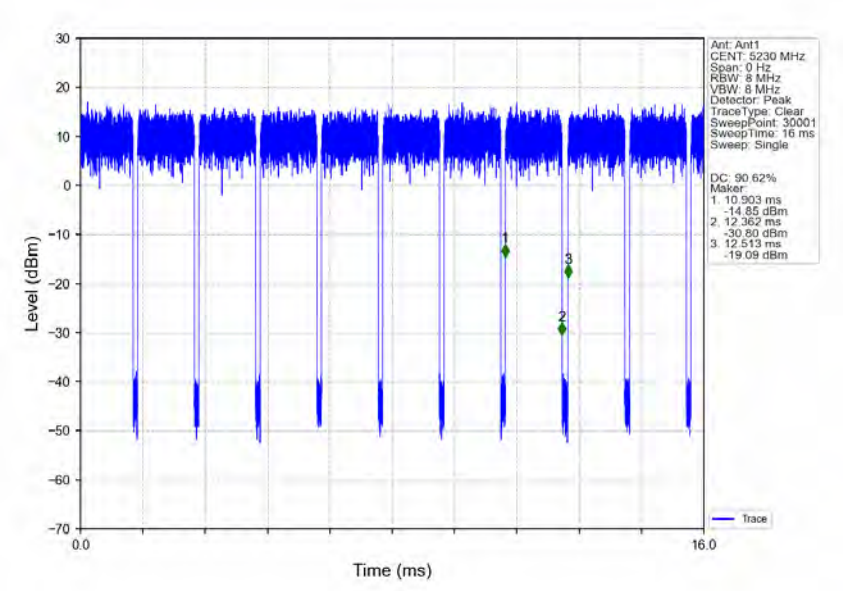
802.11ax(HE20)_HCH_5825MHz_RU242_Left_Ant1_NTNV



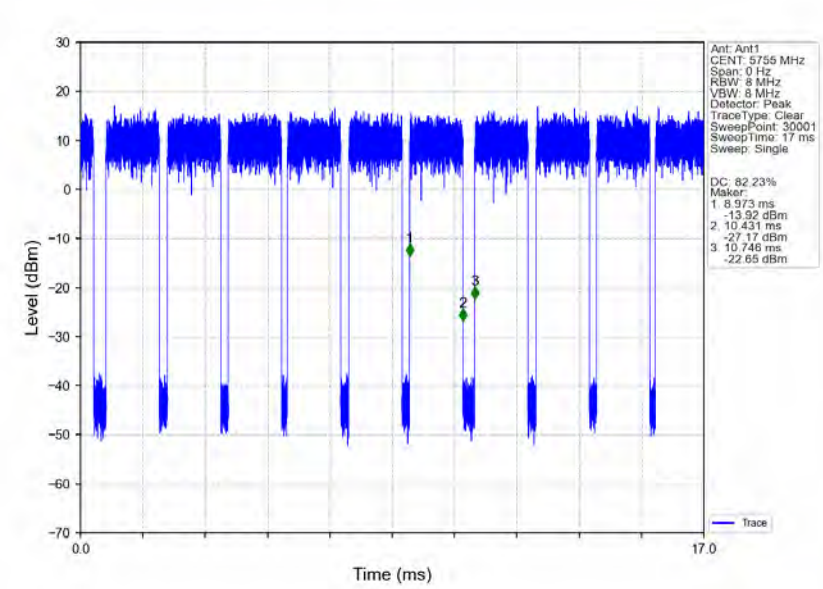
802.11ax(HE40)_LCH_5190MHz_RU484_Left_Ant1_NTNV



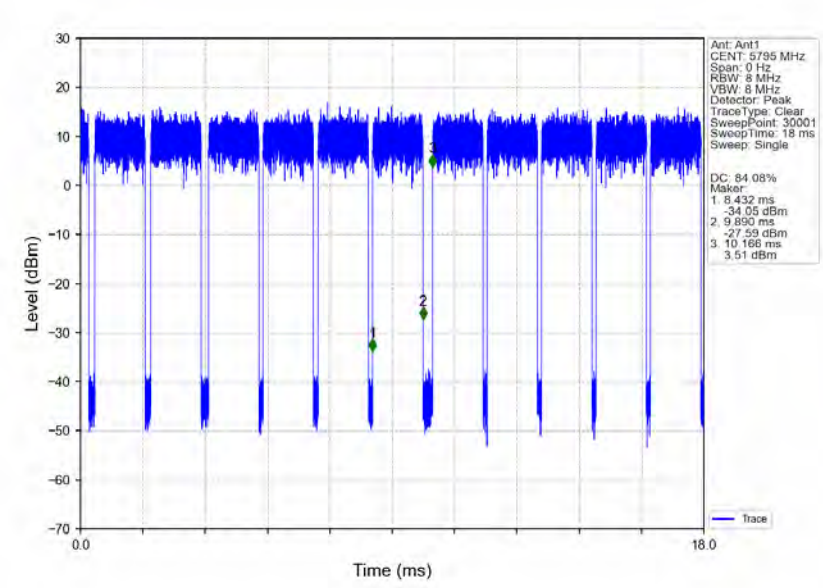
802.11ax(HE40)_HCH_5230MHz_RU484_Left_Ant1_NTNV



802.11ax(HE40)_LCH_5755MHz_RU484_Left_Ant1_NTNV



802.11ax(HE40)_HCH_5795MHz_RU484_Left_Ant1_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	99% Occupied Bandwidth (MHz)		Verdict
						Result	Limit	
802.11a	SISO	5180	/	/	1	18.805	/	Pass
		5200	/	/	1	18.891	/	Pass
		5240	/	/	1	18.855	/	Pass
		5745	/	/	1	19.119	/	Pass
		5785	/	/	1	19.003	/	Pass
		5825	/	/	1	19.050	/	Pass
802.11ac (VHT20)	SISO	5180	/	/	1	19.804	/	Pass
		5200	/	/	1	19.653	/	Pass
		5240	/	/	1	19.790	/	Pass
		5745	/	/	1	19.849	/	Pass
		5785	/	/	1	19.931	/	Pass
		5825	/	/	1	20.157	/	Pass
802.11ac (VHT40)	SISO	5190	/	/	1	37.659	/	Pass
		5230	/	/	1	37.981	/	Pass
		5755	/	/	1	38.289	/	Pass
		5795	/	/	1	38.252	/	Pass
802.11ax (HE20)	SISO	5180	RU242	Left	1	20.003	/	Pass
		5200	RU242	Left	1	20.108	/	Pass
		5240	RU242	Left	1	20.089	/	Pass
		5745	RU242	Left	1	20.365	/	Pass
		5785	RU242	Left	1	20.079	/	Pass
		5825	RU242	Left	1	20.056	/	Pass
802.11ax (HE40)	SISO	5190	RU484	Left	1	38.830	/	Pass
		5230	RU484	Left	1	38.862	/	Pass
		5755	RU484	Left	1	39.209	/	Pass
		5795	RU484	Left	1	39.260	/	Pass

2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	6dB Bandwidth (MHz)		Verdict
						Result	Limit	
802.11a	SISO	5745	/	/	1	16.438	>=0.5	Pass
		5785	/	/	1	16.444	>=0.5	Pass
		5825	/	/	1	16.452	>=0.5	Pass
802.11ac (VHT20)	SISO	5745	/	/	1	17.674	>=0.5	Pass
		5785	/	/	1	17.647	>=0.5	Pass
		5825	/	/	1	17.665	>=0.5	Pass
802.11ac (VHT40)	SISO	5755	/	/	1	36.423	>=0.5	Pass
		5795	/	/	1	36.407	>=0.5	Pass
802.11ax	SISO	5745	RU242	Left	1	19.030	>=0.5	Pass

(HE20)		5785	RU242	Left	1	19.058	>=0.5	Pass
		5825	RU242	Left	1	19.047	>=0.5	Pass
802.11ax (HE40)	SISO	5755	RU484	Left	1	38.227	>=0.5	Pass
		5795	RU484	Left	1	38.216	>=0.5	Pass

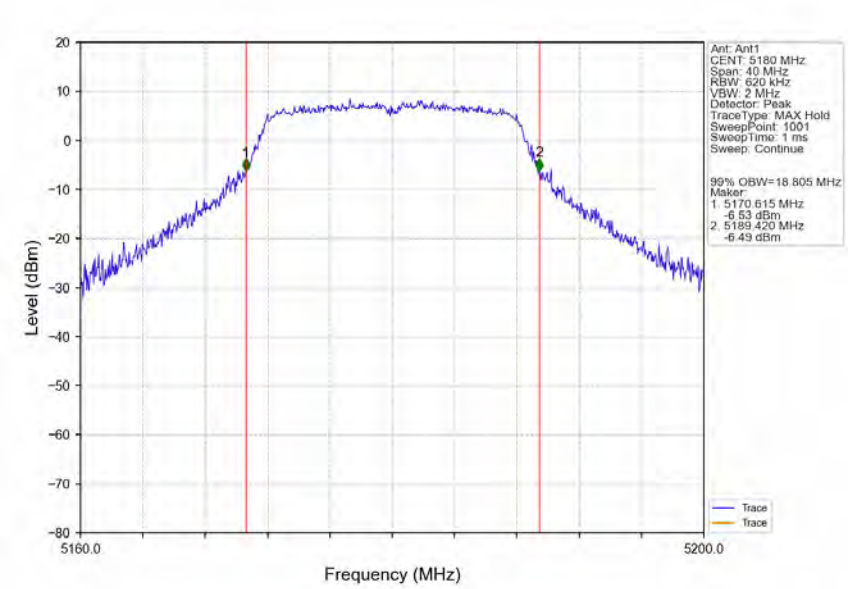
2.1.3 26dB BW

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	26dB Bandwidth (MHz)		Verdict
						Result	Limit	
802.11a	SISO	5180	/	/	1	24.883	/	Pass
		5200	/	/	1	25.084	/	Pass
		5240	/	/	1	24.398	/	Pass
802.11ac (VHT20)	SISO	5180	/	/	1	25.520	/	Pass
		5200	/	/	1	25.902	/	Pass
		5240	/	/	1	26.007	/	Pass
802.11ac (VHT40)	SISO	5190	/	/	1	45.871	/	Pass
		5230	/	/	1	45.978	/	Pass
802.11ax (HE20)	SISO	5180	RU242	Left	1	25.964	/	Pass
		5200	RU242	Left	1	25.011	/	Pass
		5240	RU242	Left	1	25.766	/	Pass
802.11ax (HE40)	SISO	5190	RU484	Left	1	44.670	/	Pass
		5230	RU484	Left	1	45.561	/	Pass

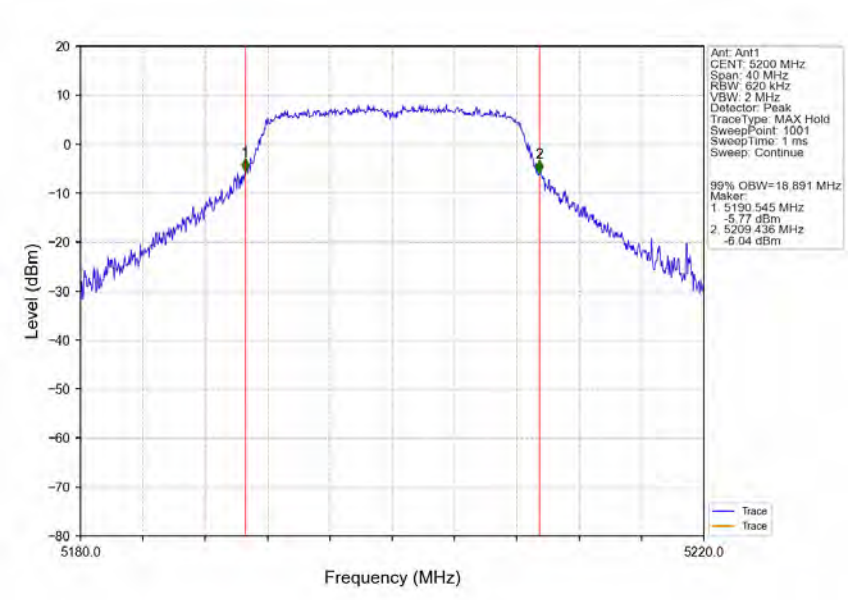
2.2 Test Graph

2.2.1 OBW

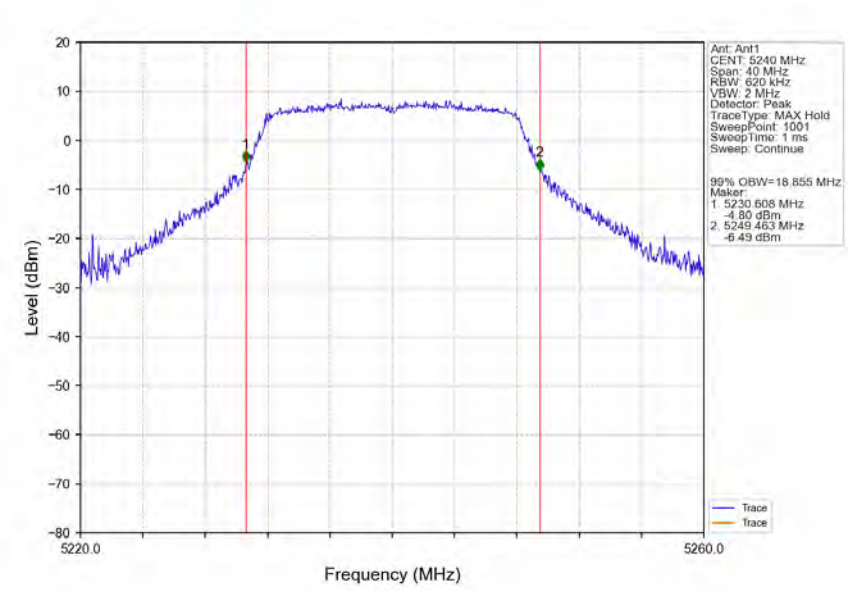
802.11a_LCH_5180MHz_Ant1_NTNV



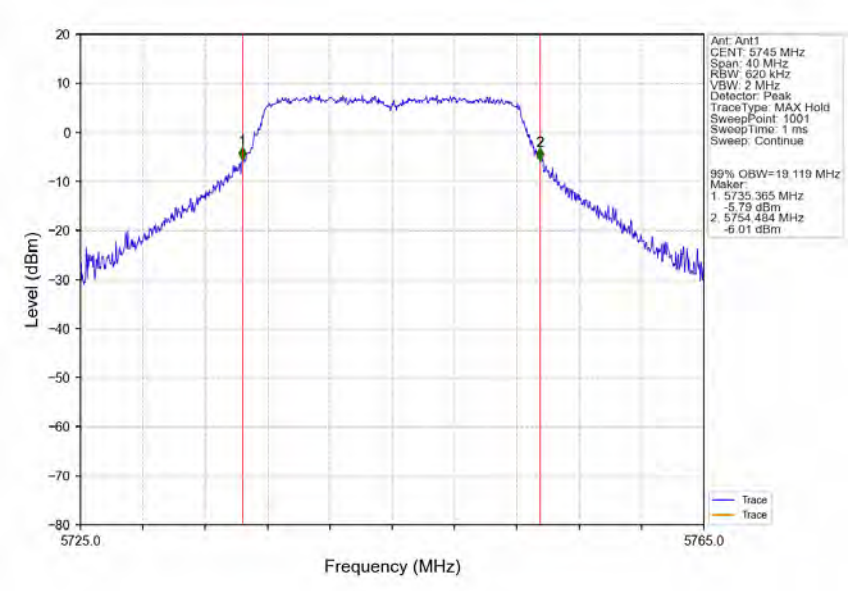
802.11a_MCH_5200MHz_Ant1_NTNV



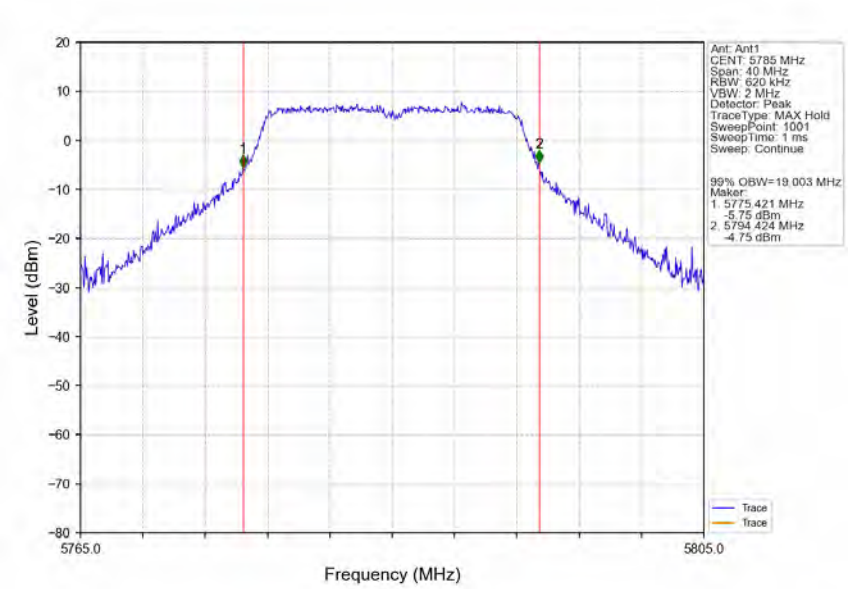
802.11a_HCH_5240MHz_Ant1_NTNV



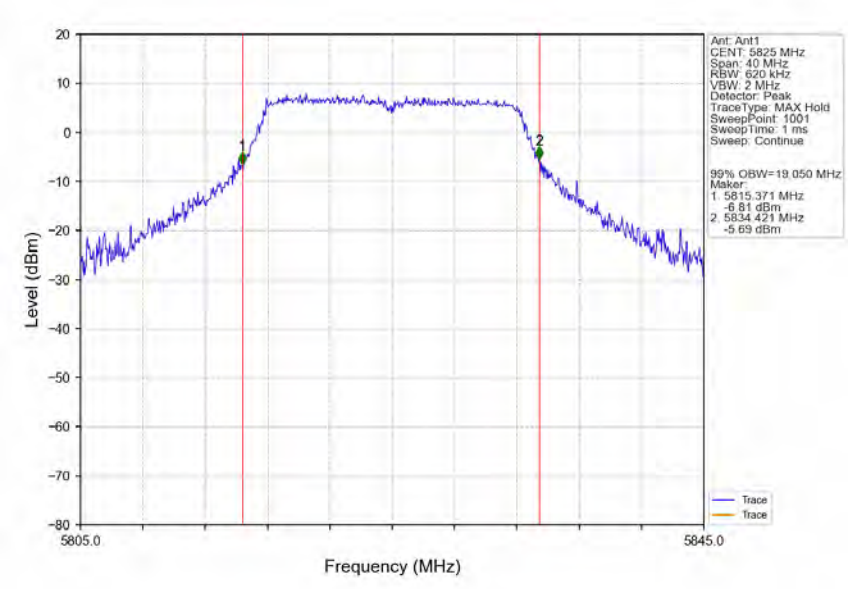
802.11a_LCH_5745MHz_Ant1_NTNV



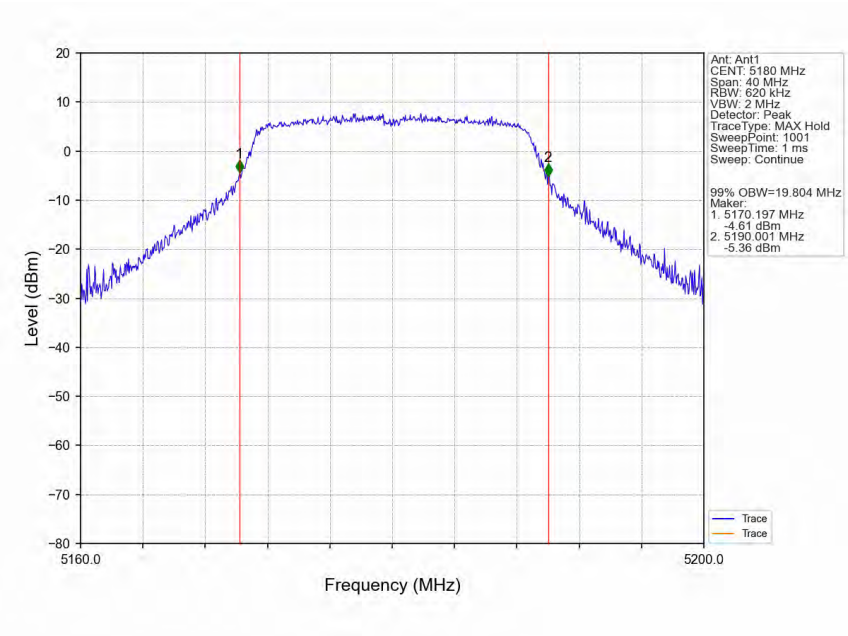
802.11a_MCH_5785MHz_Ant1_NTNV



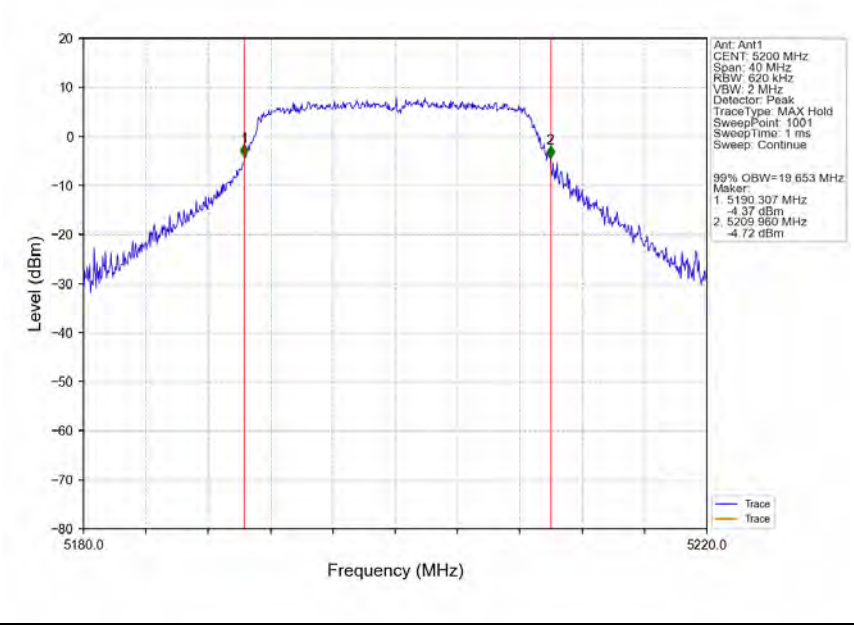
802.11a_HCH_5825MHz_Ant1_NTNV



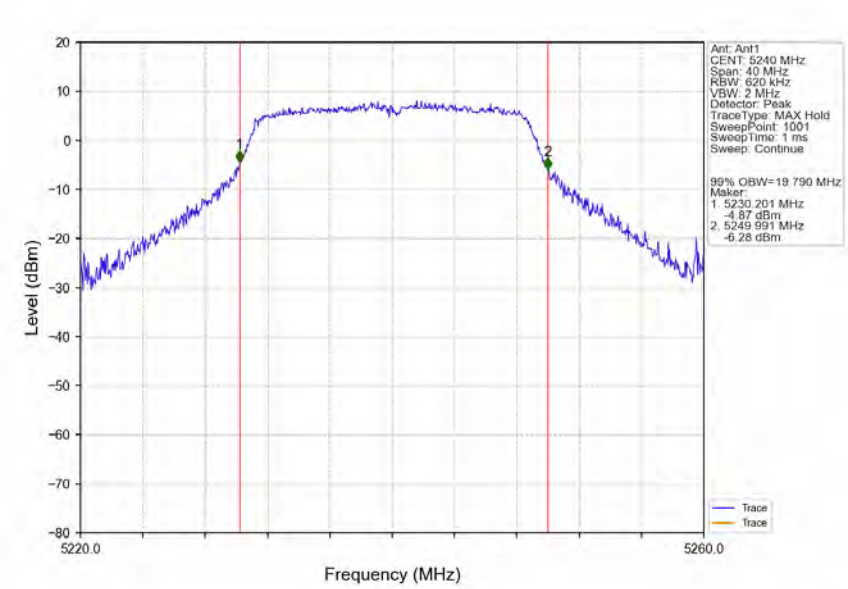
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



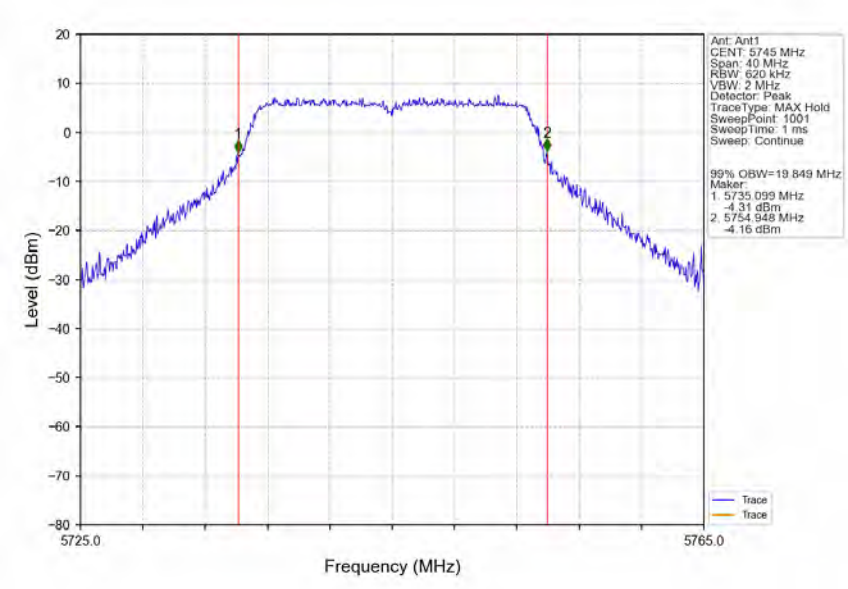
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



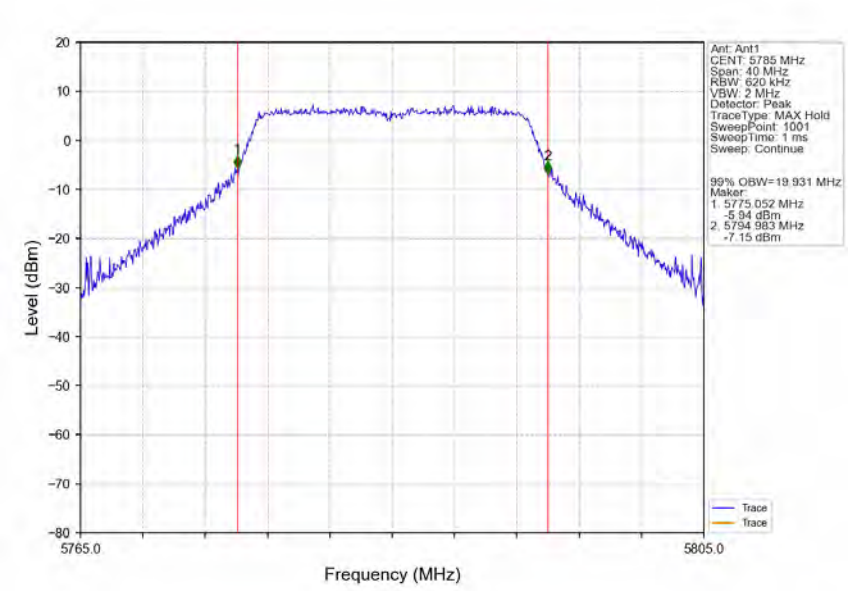
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



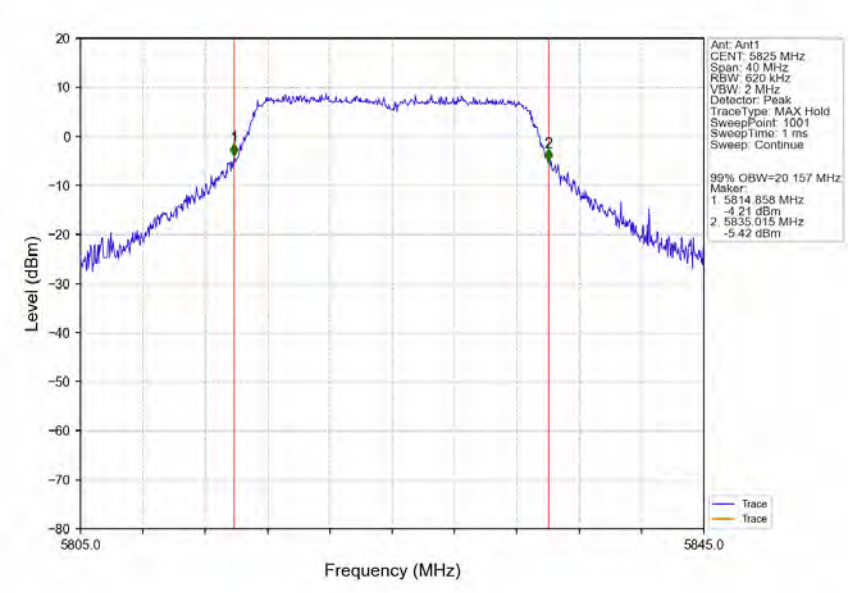
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



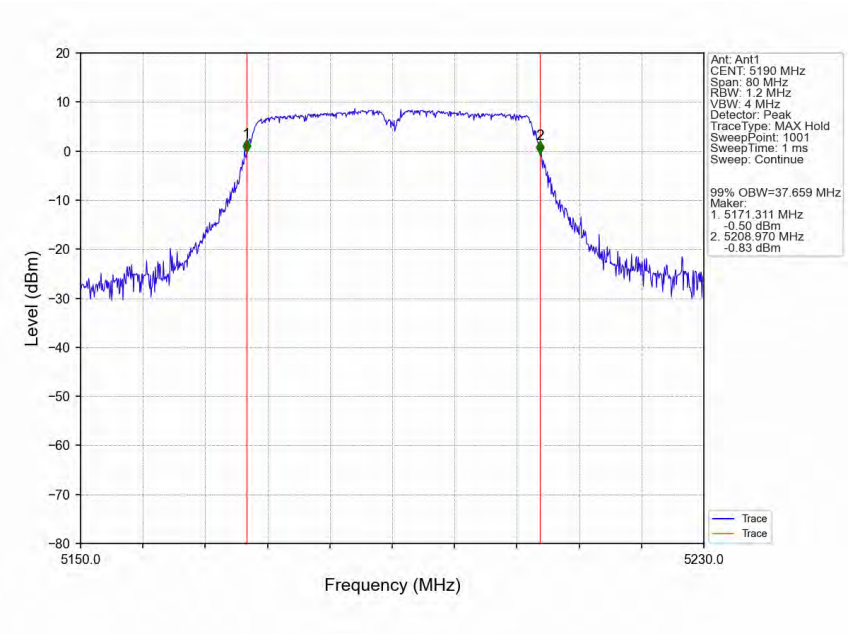
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



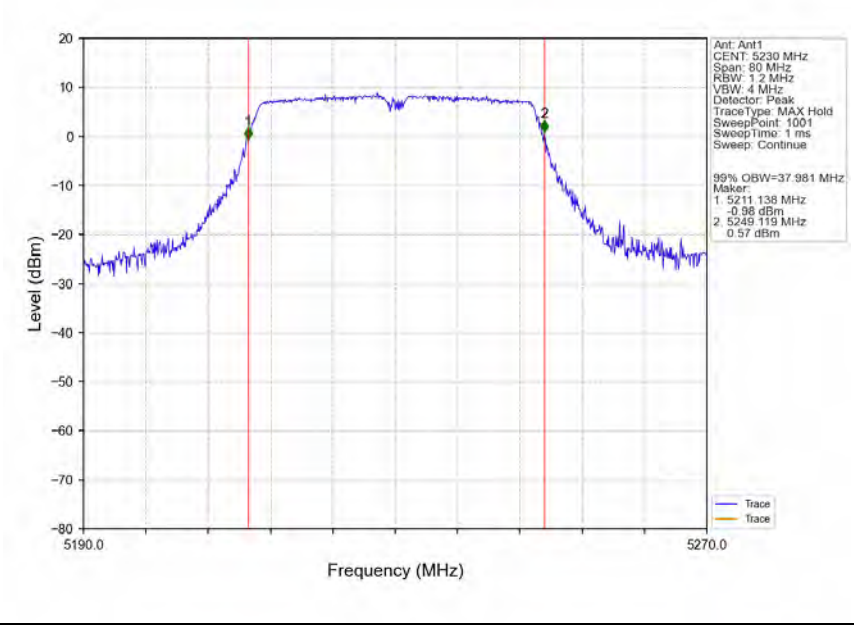
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



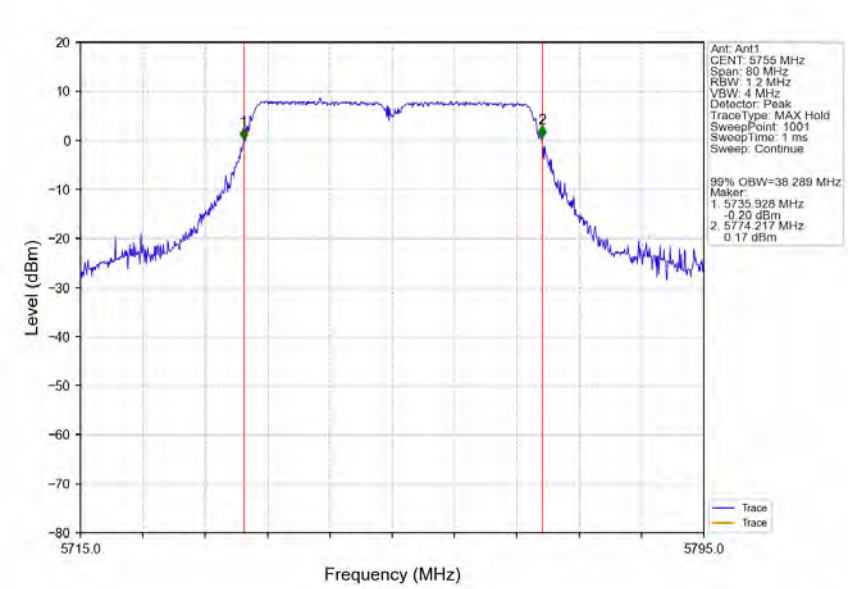
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



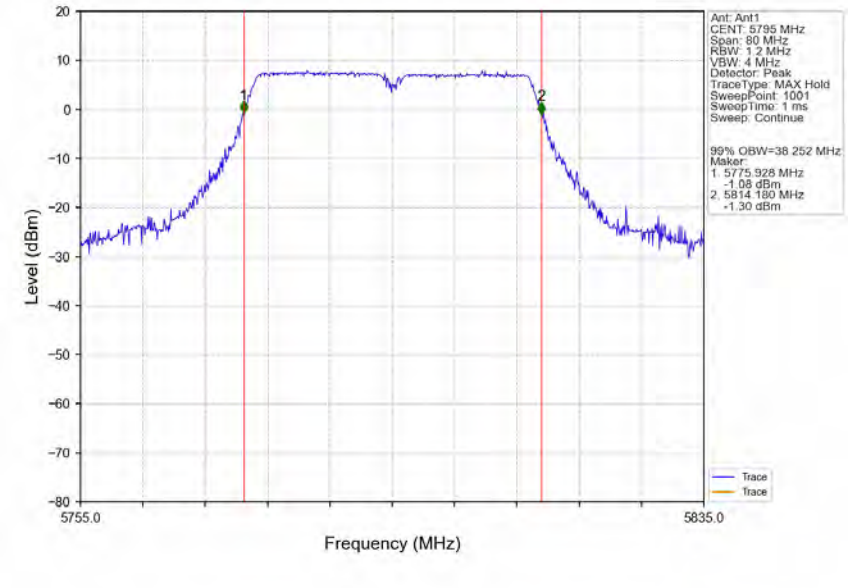
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



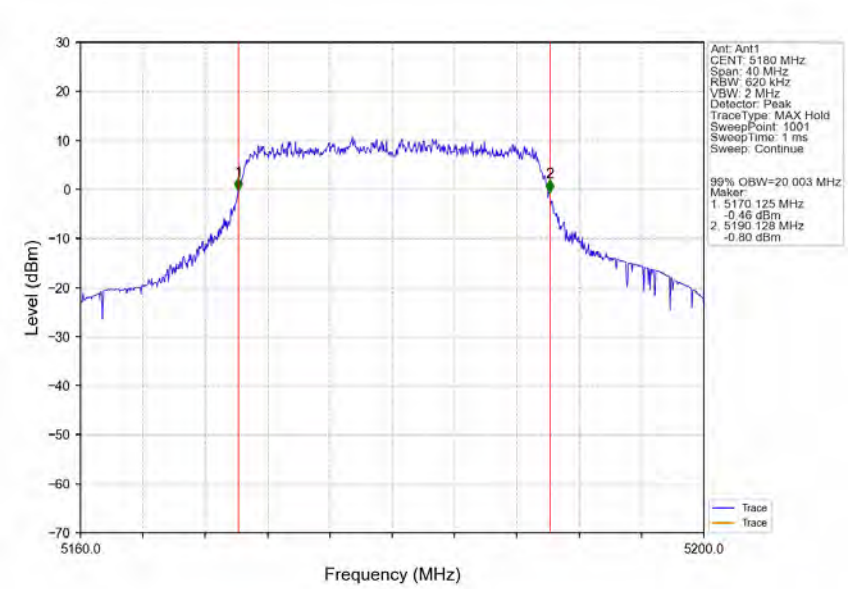
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



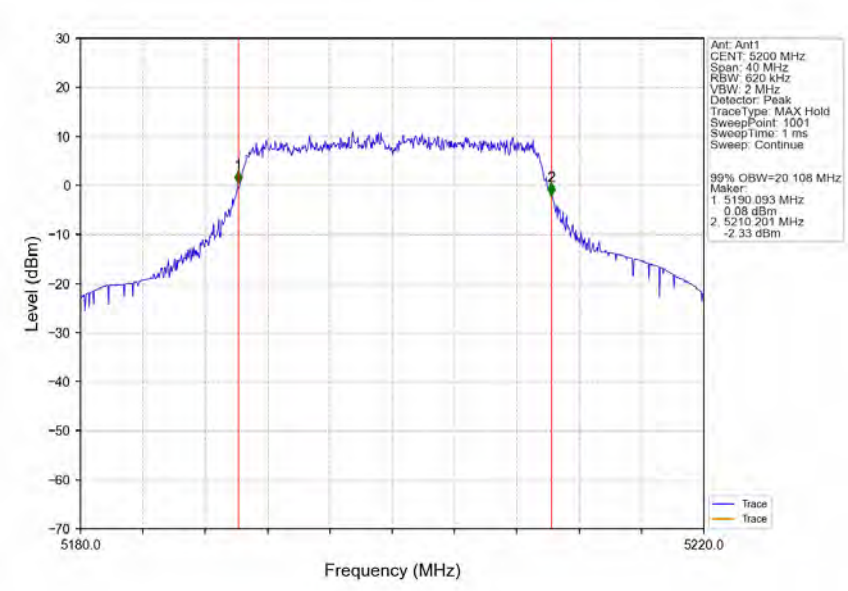
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



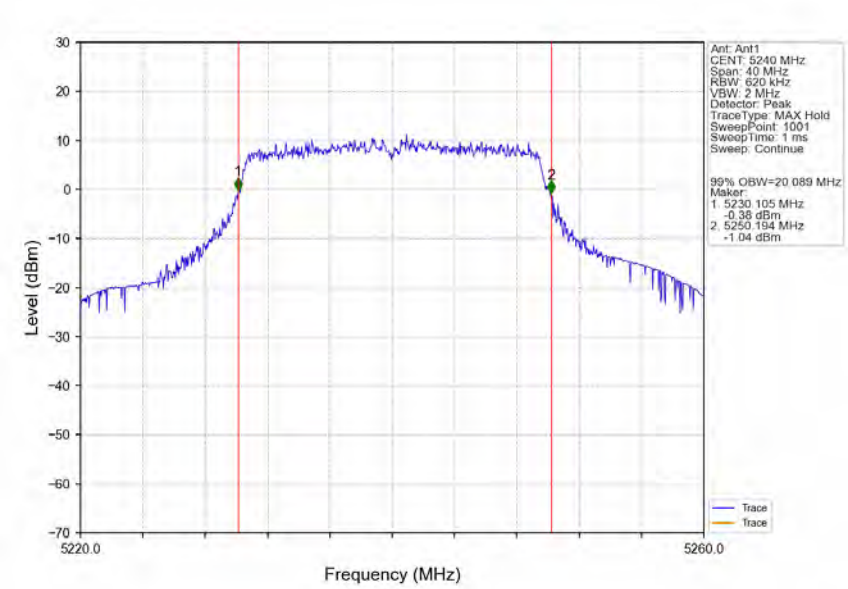
802.11ax(HE20)_LCH_5180MHz_RU242_Left_Ant1_NTNV



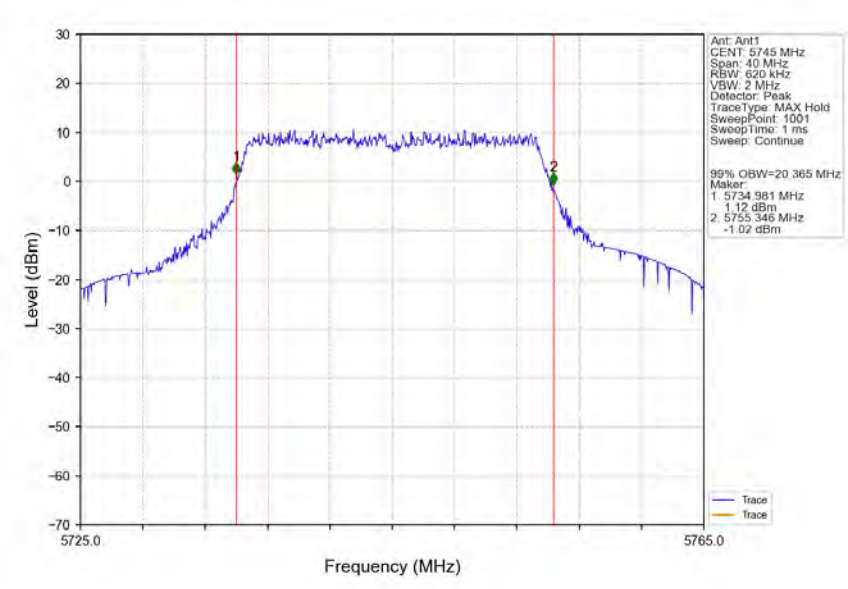
802.11ax(HE20)_MCH_5200MHz_RU242_Left_Ant1_NTNV



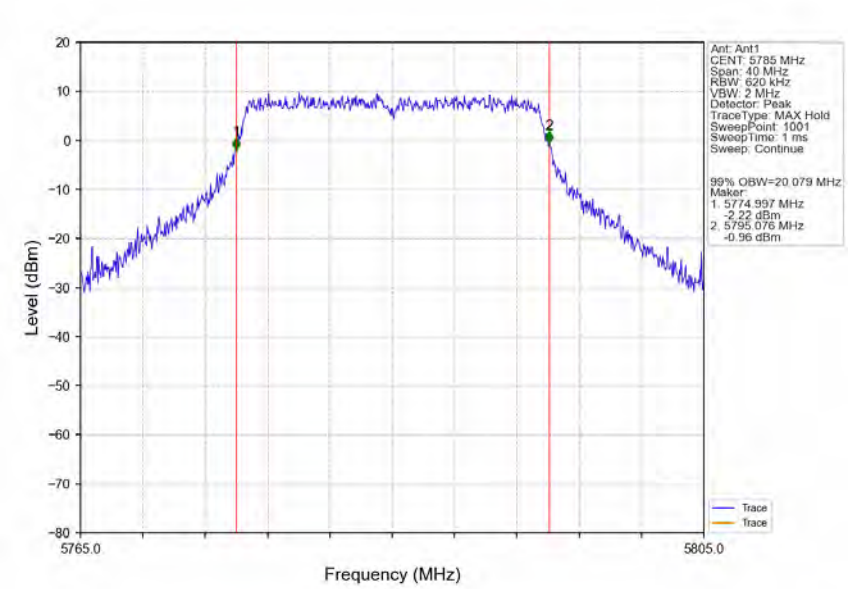
802.11ax(HE20)_HCH_5240MHz_RU242_Left_Ant1_NTNV



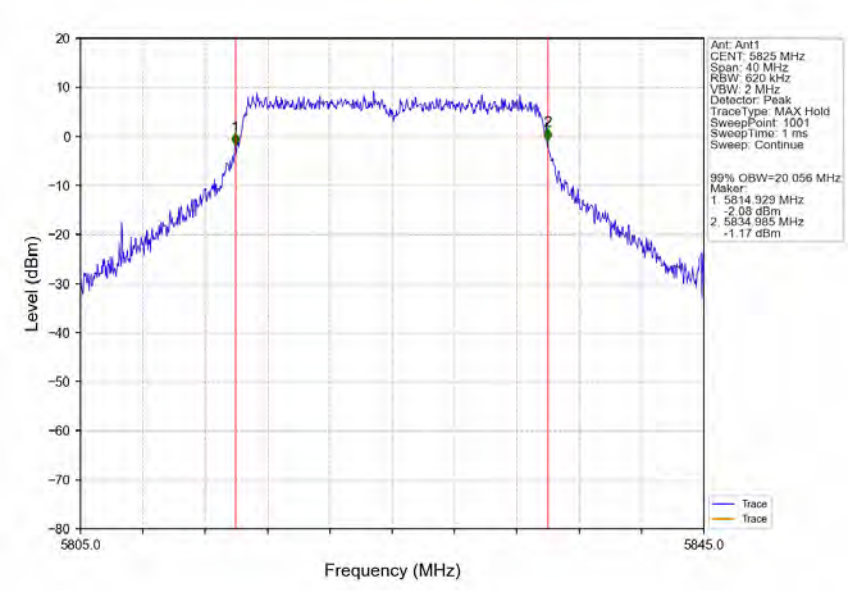
802.11ax(HE20)_LCH_5745MHz_RU242_Left_Ant1_NTNV



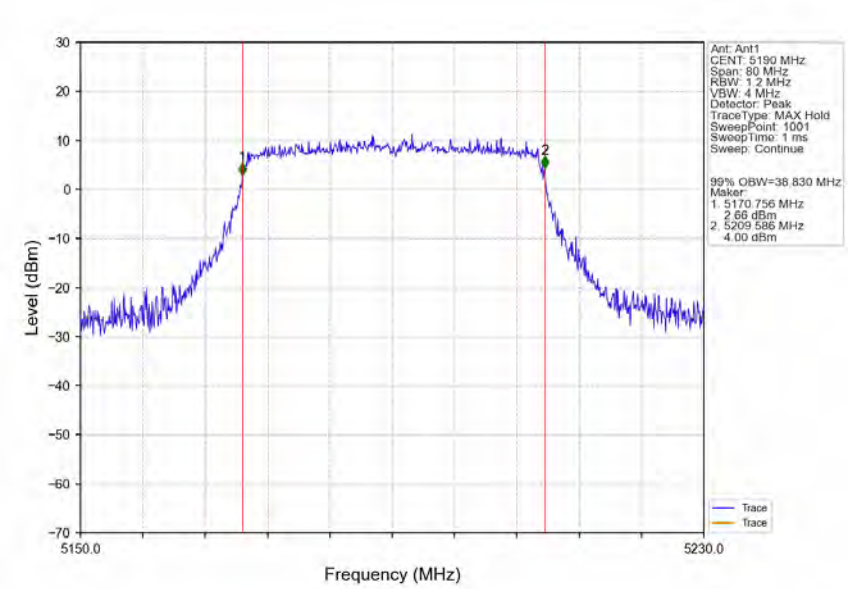
802.11ax(HE20)_MCH_5785MHz_RU242_Left_Ant1_NTNV



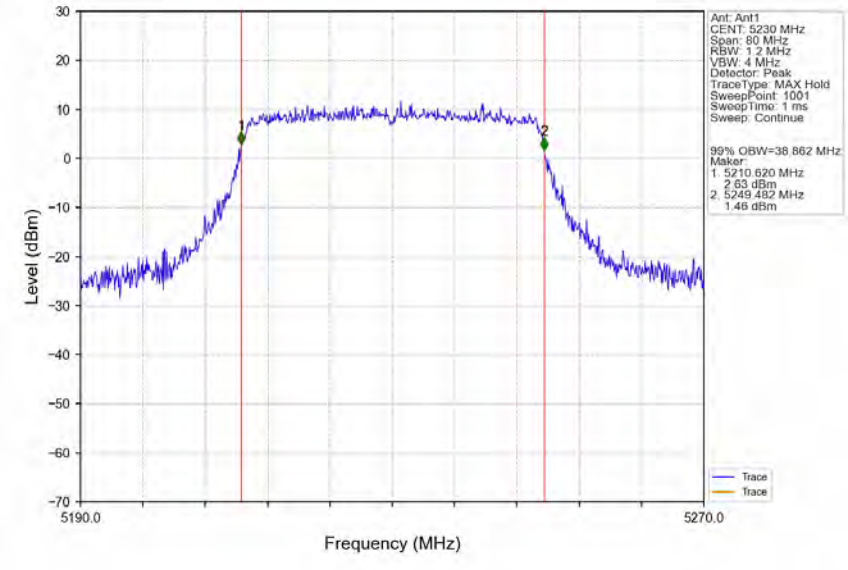
802.11ax(HE20)_HCH_5825MHz_RU242_Left_Ant1_NTNV



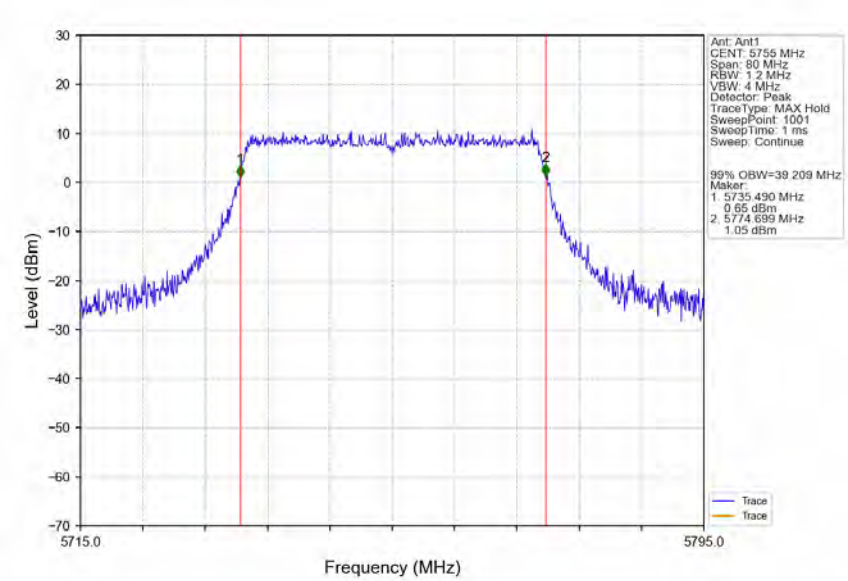
802.11ax(HE40)_LCH_5190MHz_RU484_Left_Ant1_NTNV



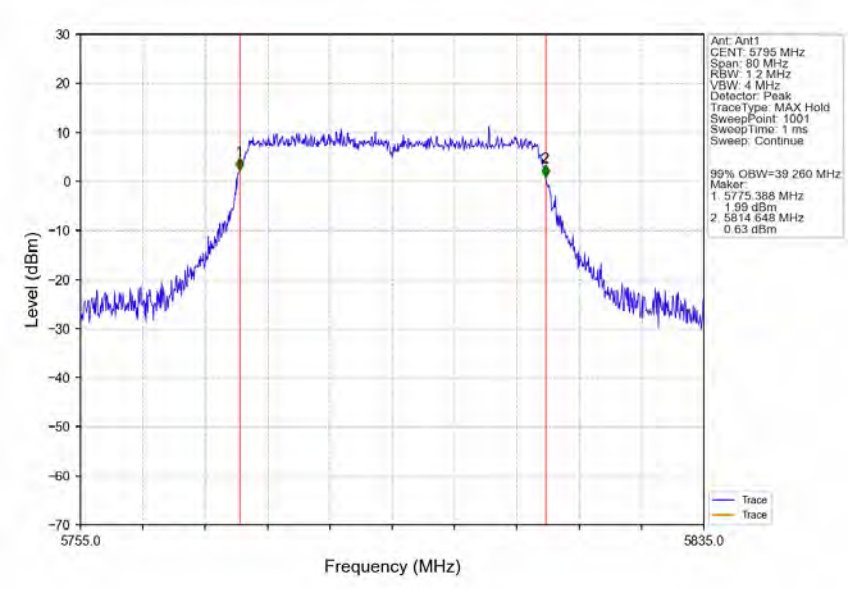
802.11ax(HE40)_HCH_5230MHz_RU484_Left_Ant1_NTNV



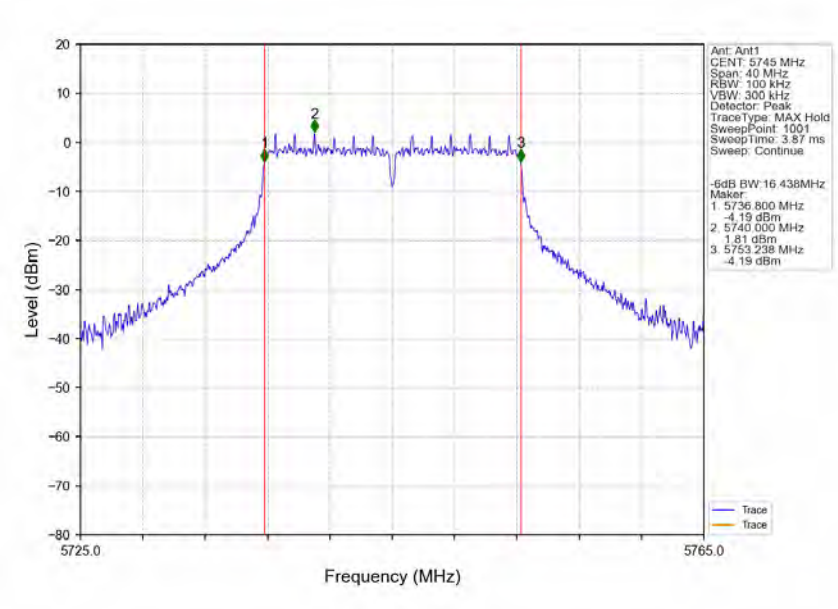
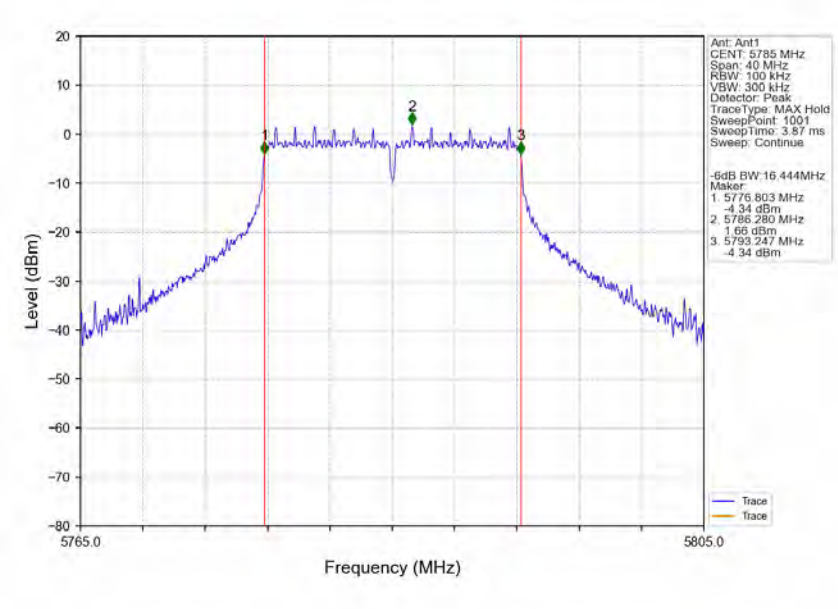
802.11ax(HE40)_LCH_5755MHz_RU484_Left_Ant1_NTNV



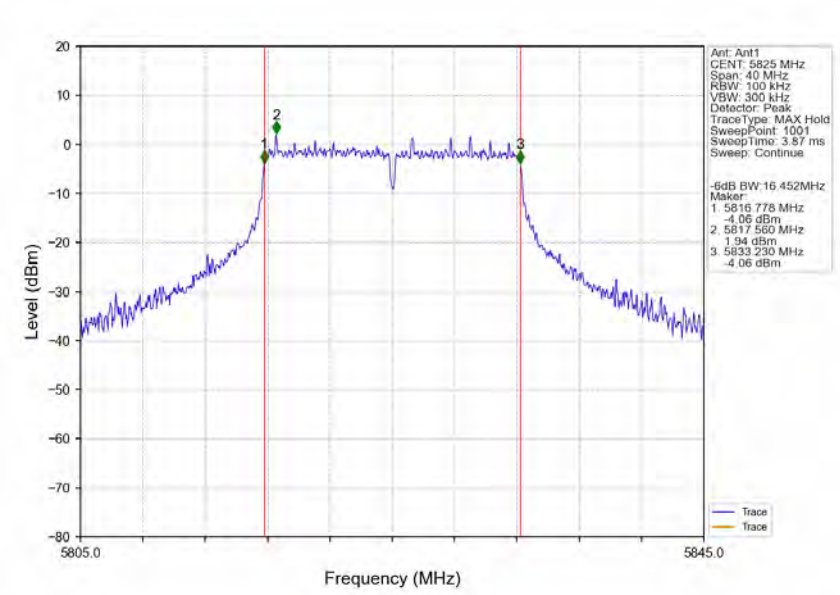
802.11ax(HE40)_HCH_5795MHz_RU484_Left_Ant1_NTNV



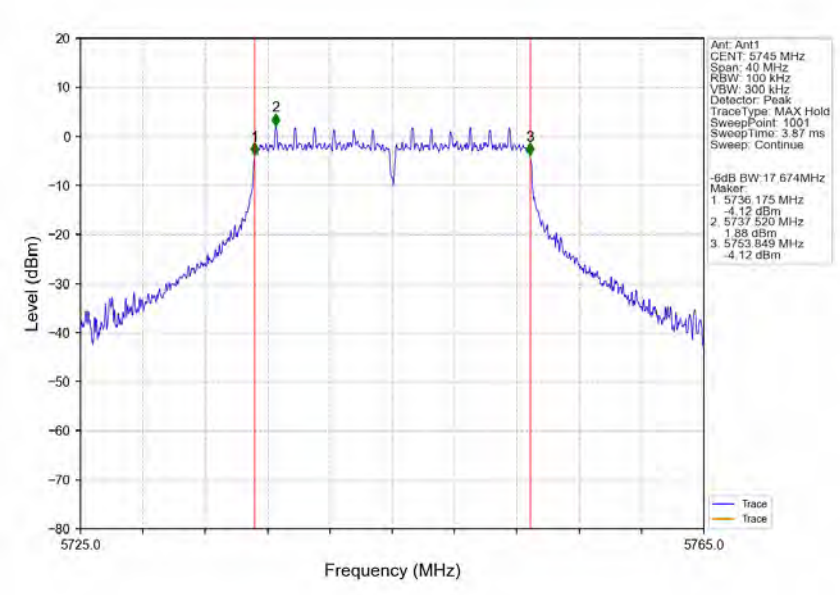
2.2.2 6dB BW

802.11a_LCH_5745MHz_Ant1_NTNV

802.11a_MCH_5785MHz_Ant1_NTNV


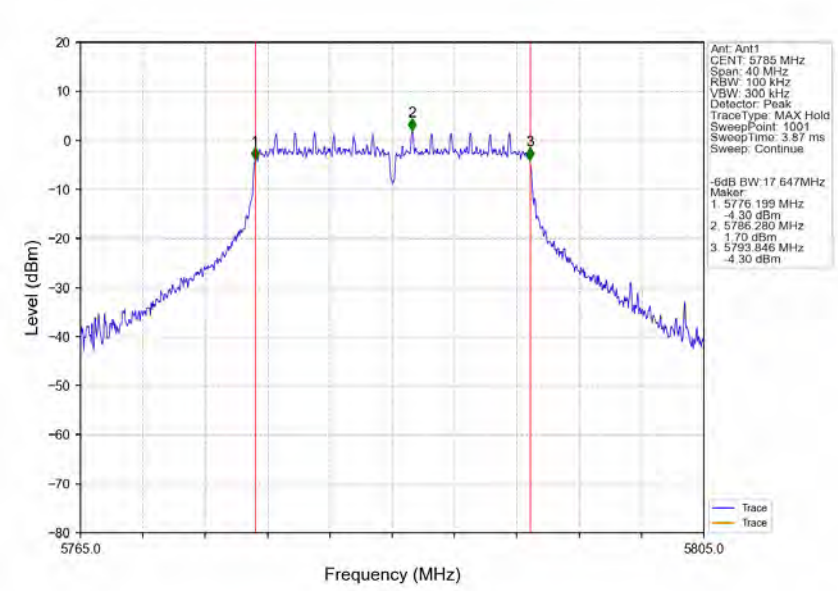
802.11a_HCH_5825MHz_Ant1_NTNV



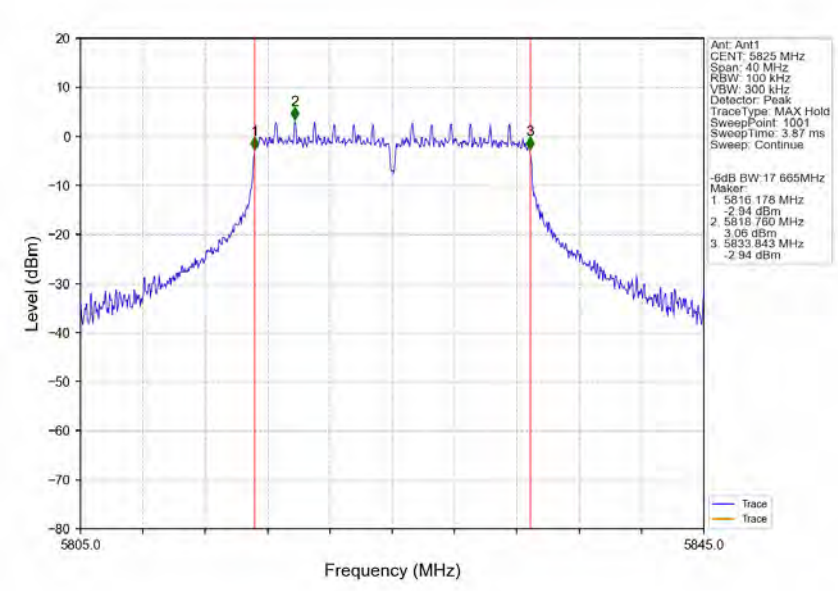
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



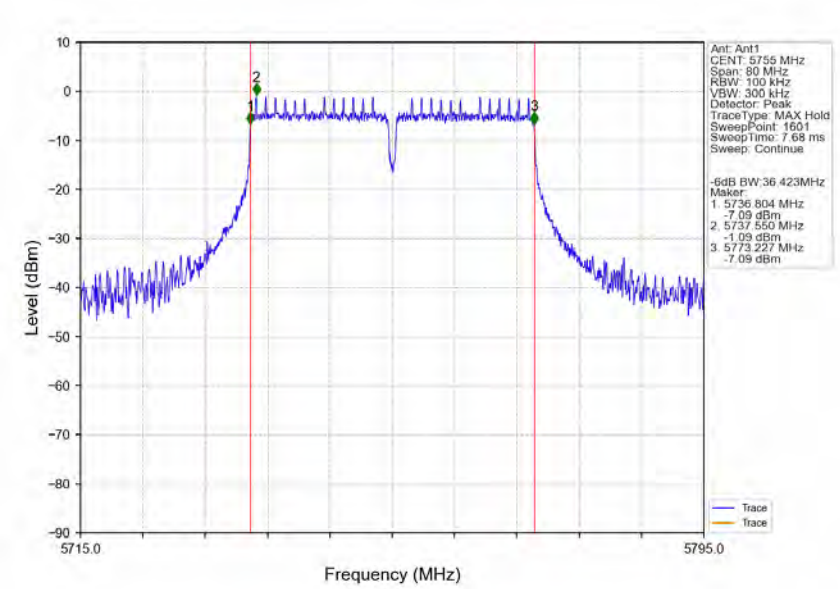
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



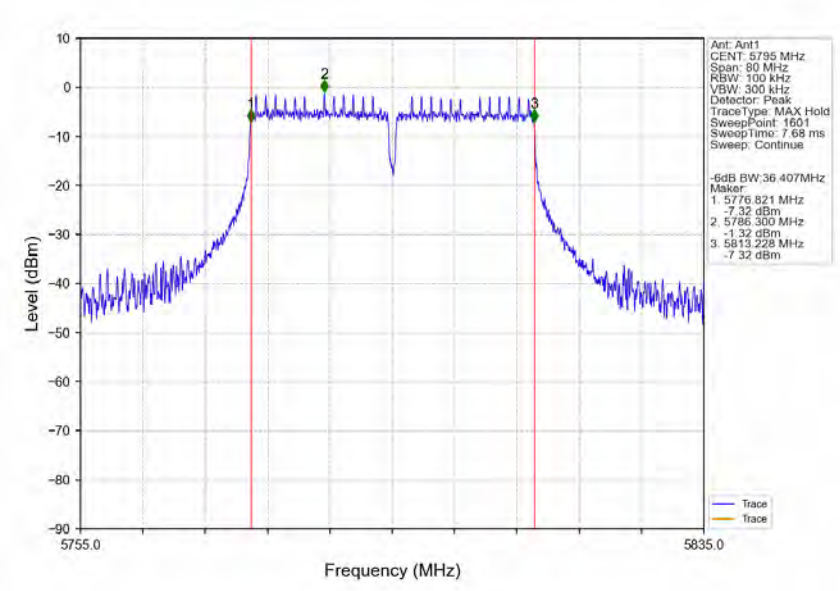
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



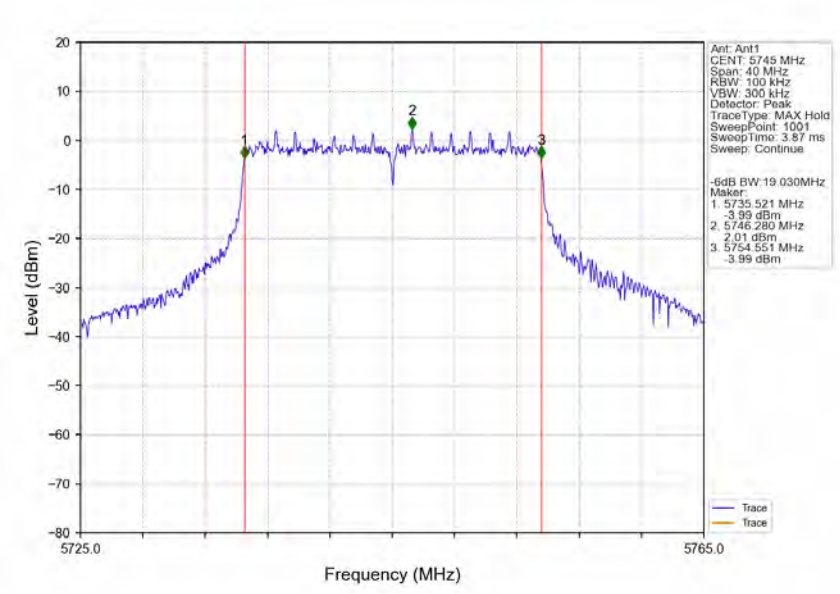
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



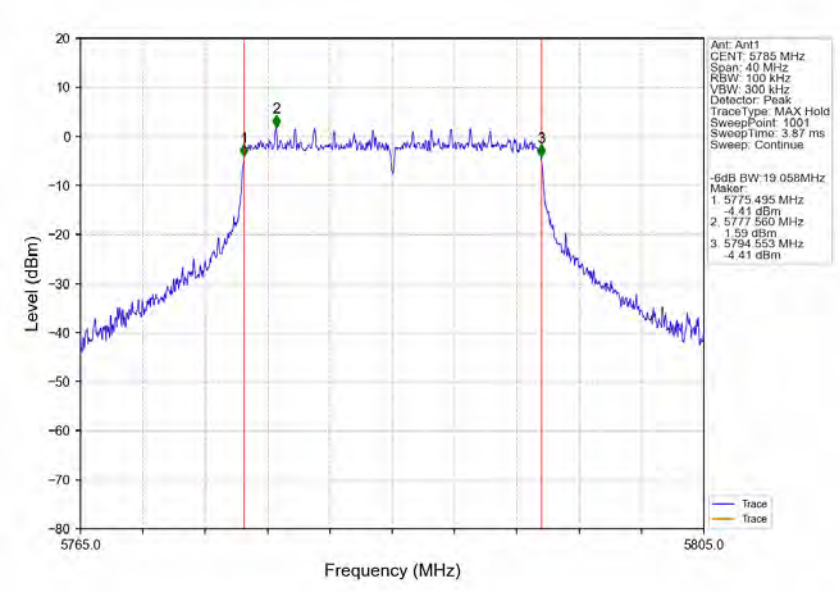
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



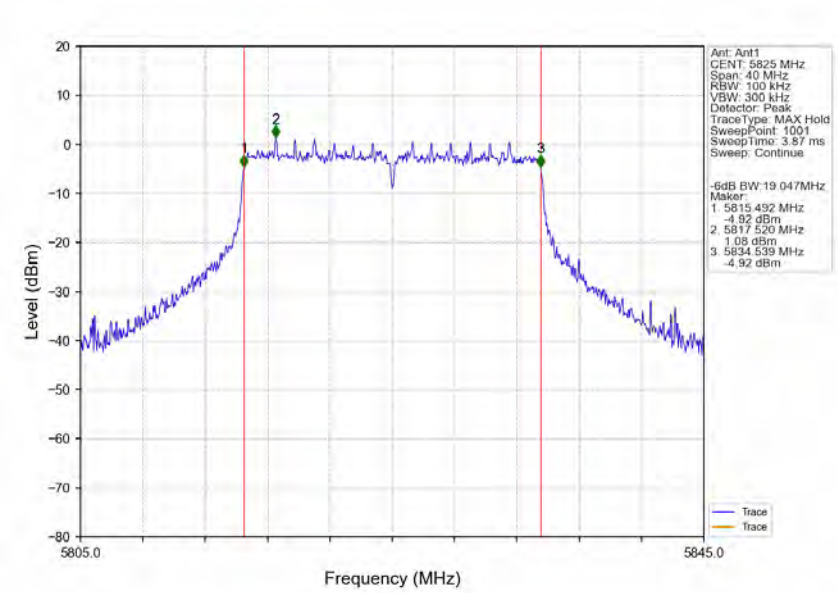
802.11ax(HE20)_LCH_5745MHz_RU242_Left_Ant1_NTNV



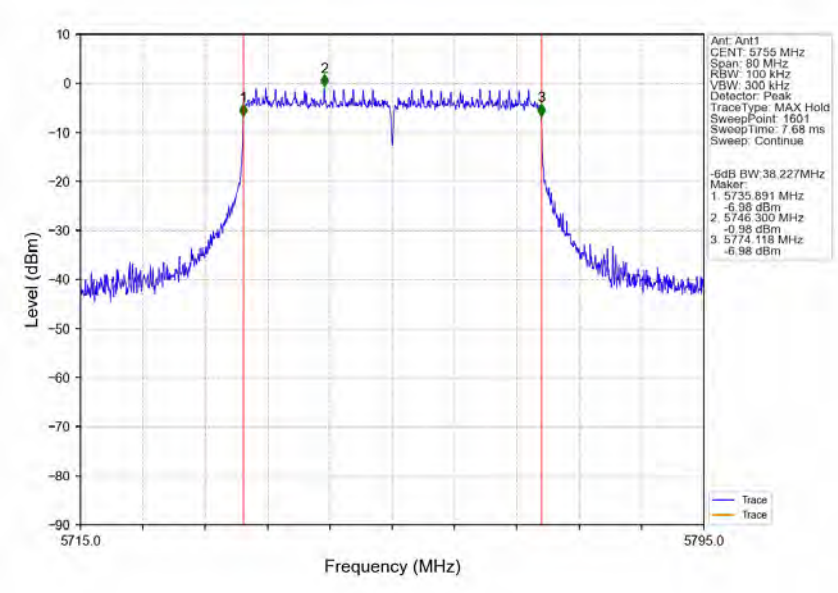
802.11ax(HE20)_MCH_5785MHz_RU242_Left_Ant1_NTNV



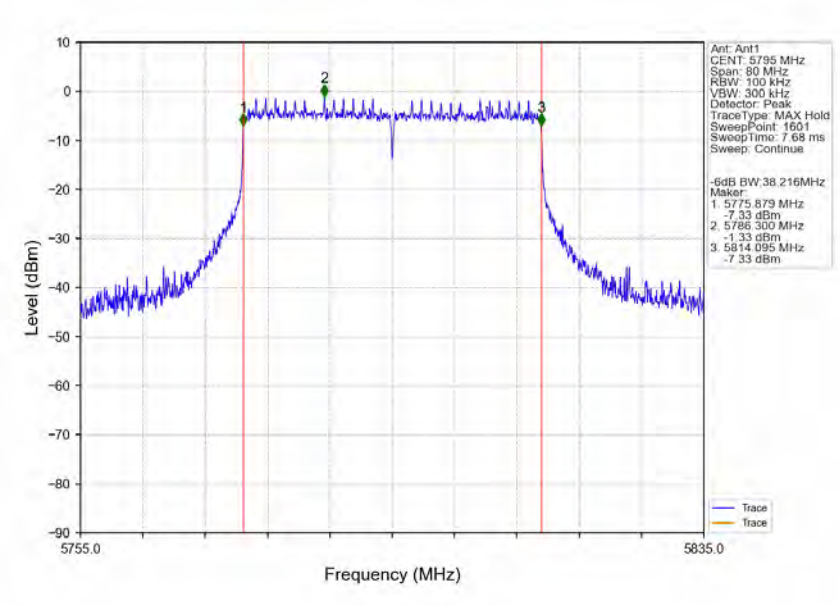
802.11ax(HE20)_HCH_5825MHz_RU242_Left_Ant1_NTNV



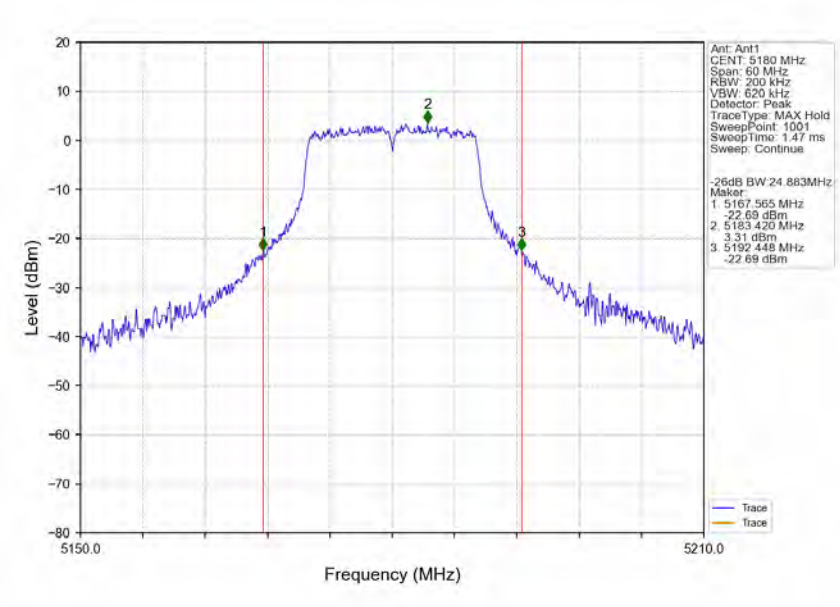
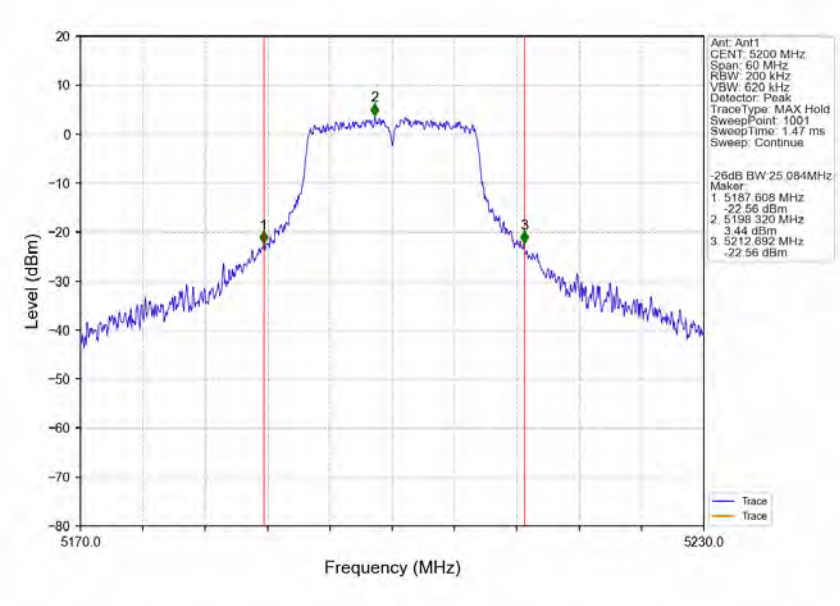
802.11ax(HE40)_LCH_5755MHz_RU484_Left_Ant1_NTNV



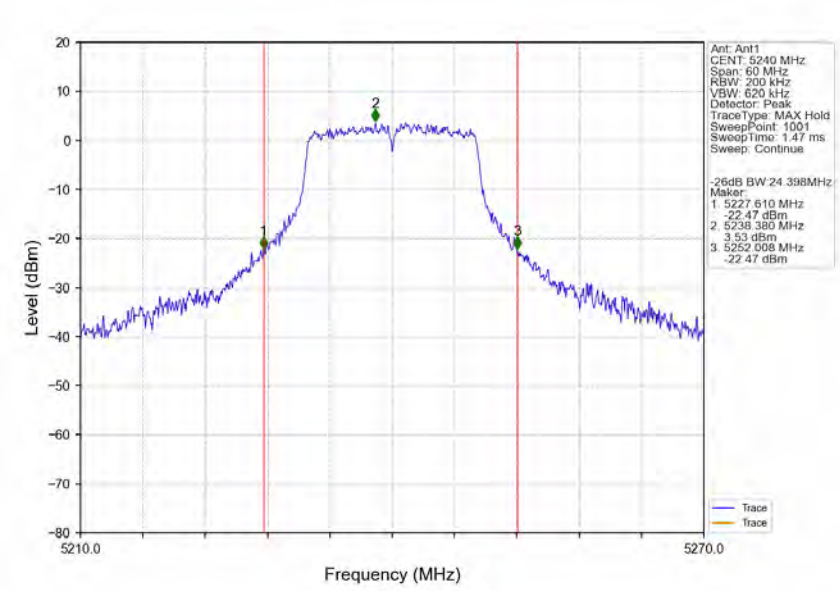
802.11ax(HE40)_HCH_5795MHz_RU484_Left_Ant1_NTNV



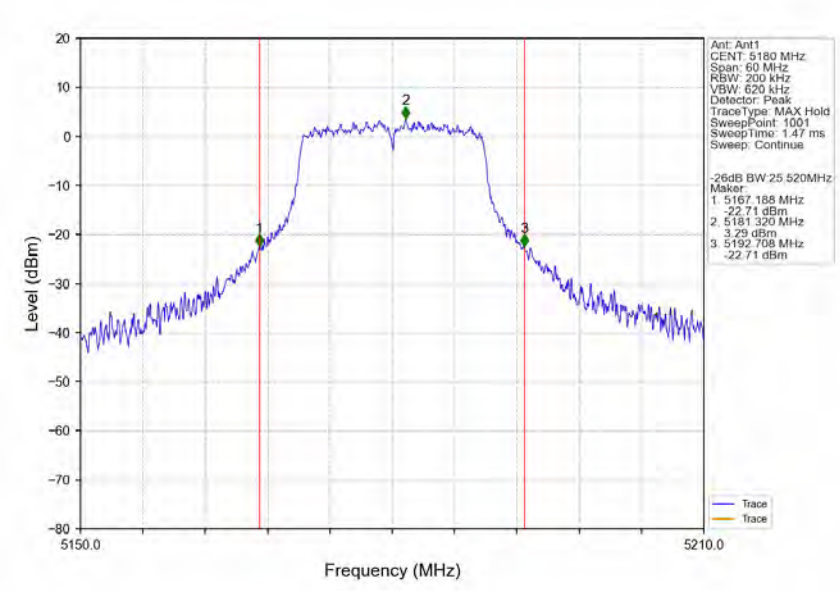
2.2.3 26dB BW

802.11a_LCH_5180MHz_Ant1_NTNV

802.11a_MCH_5200MHz_Ant1_NTNV


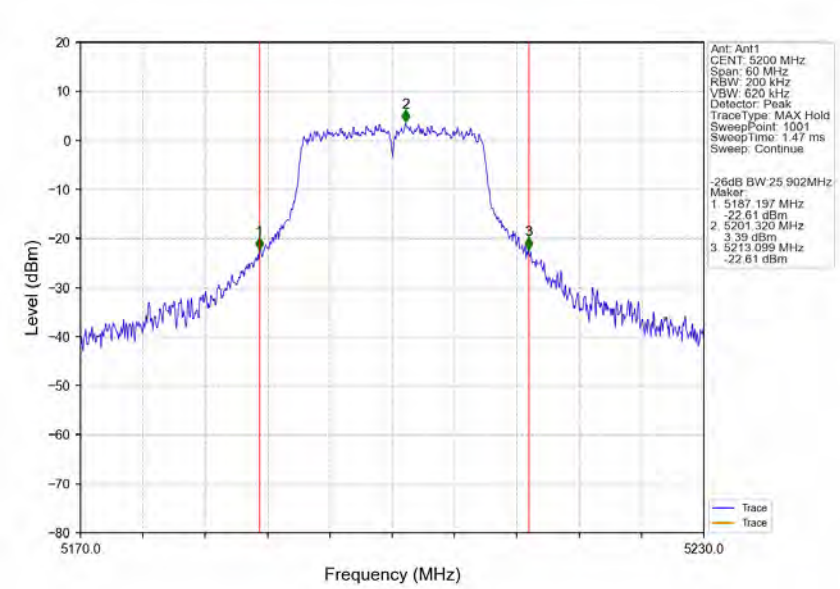
802.11a_HCH_5240MHz_Ant1_NTNV



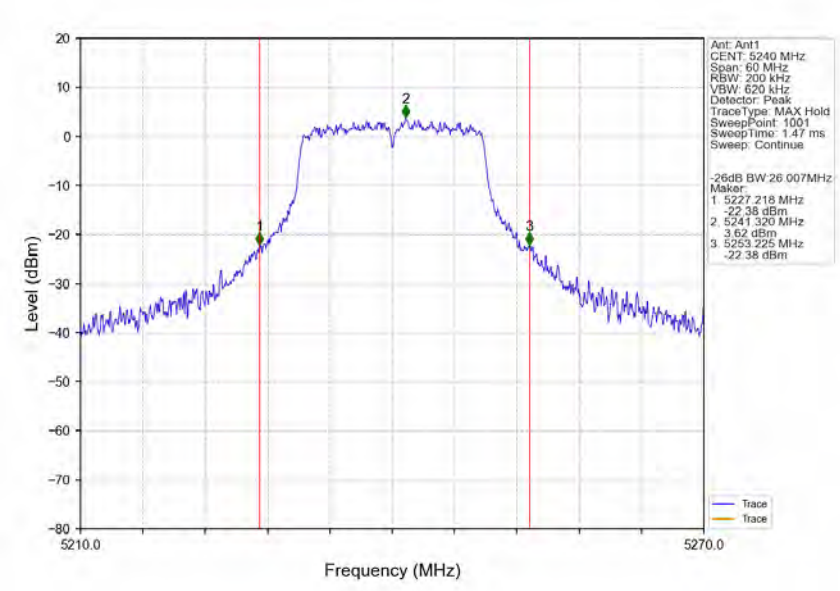
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



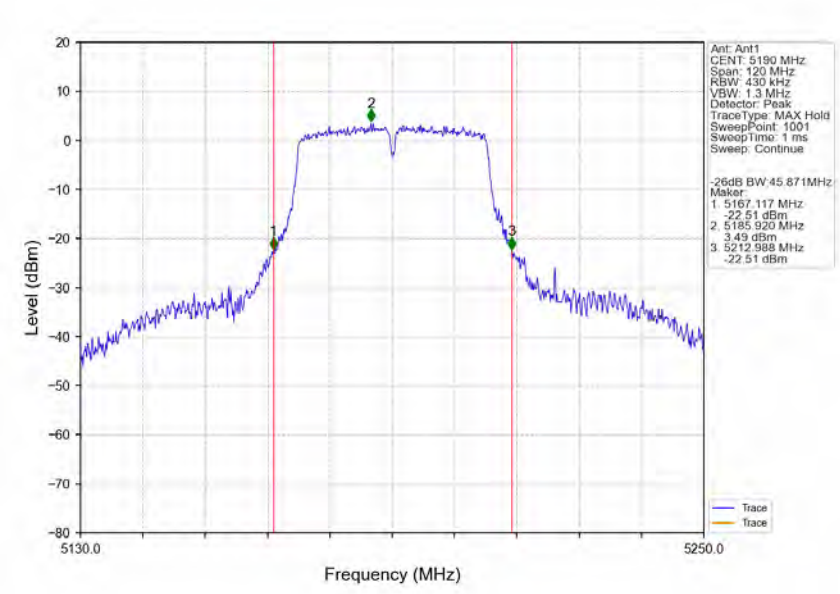
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



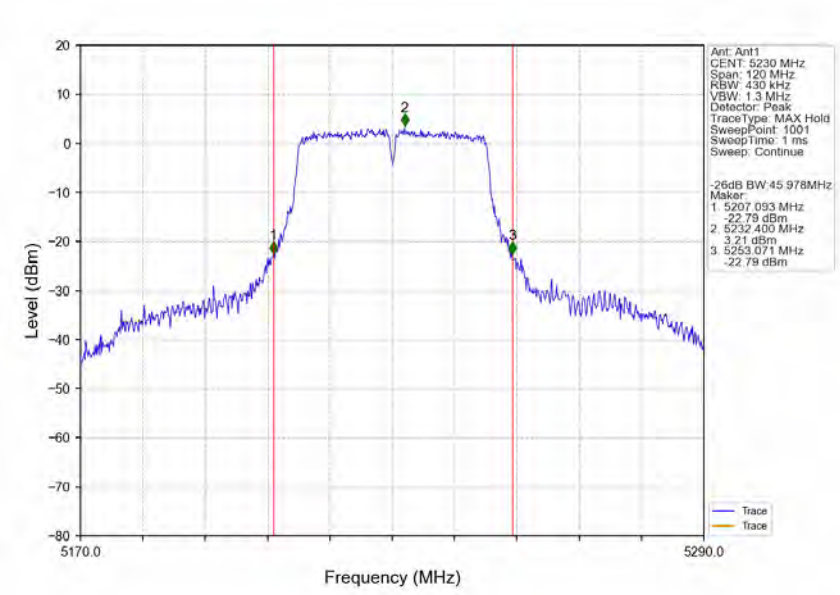
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



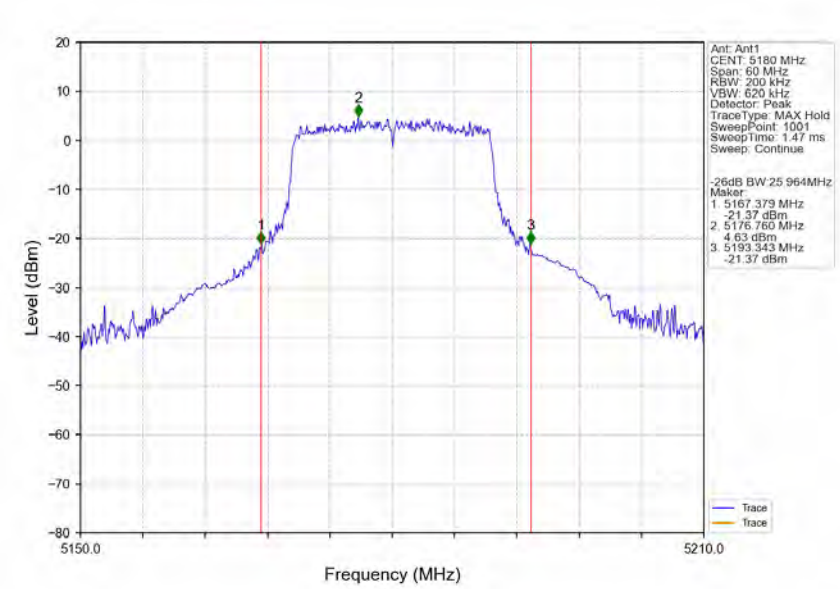
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



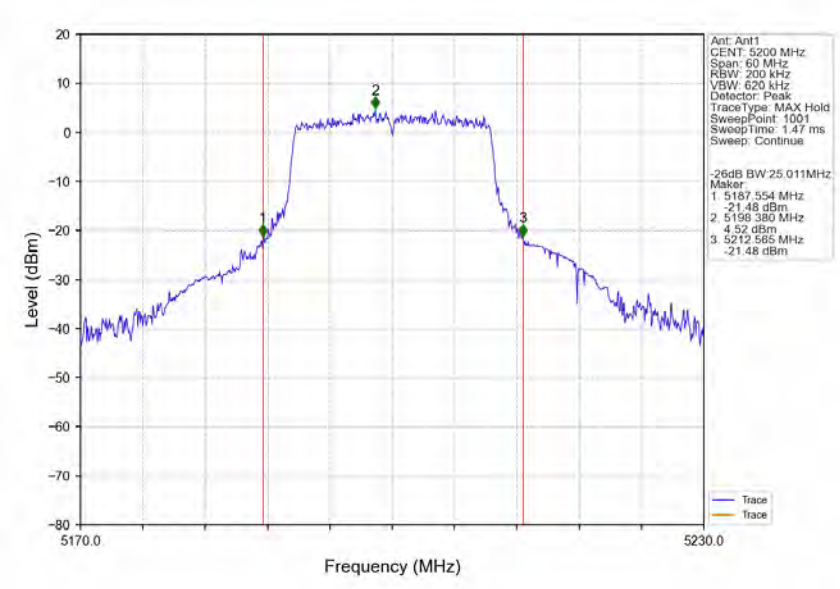
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



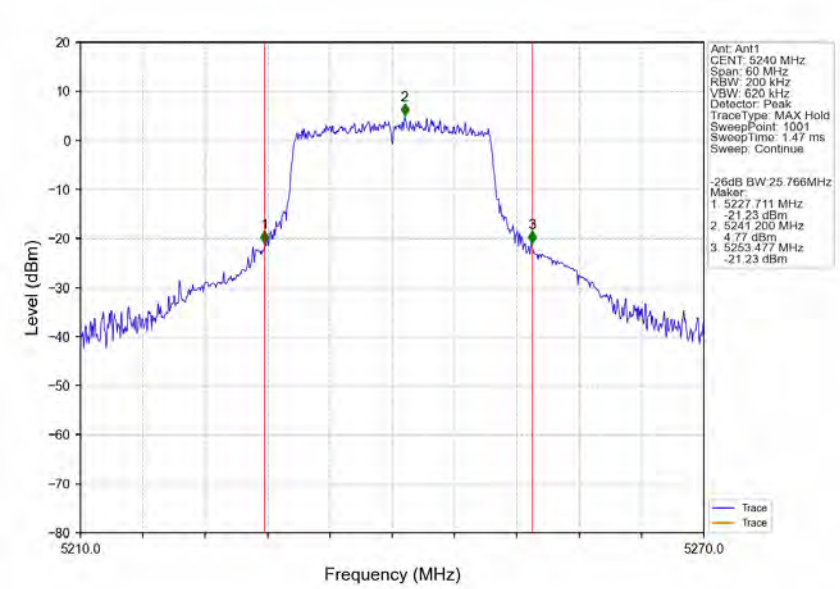
802.11ax(HE20)_LCH_5180MHz_RU242_Left_Ant1_NTNV



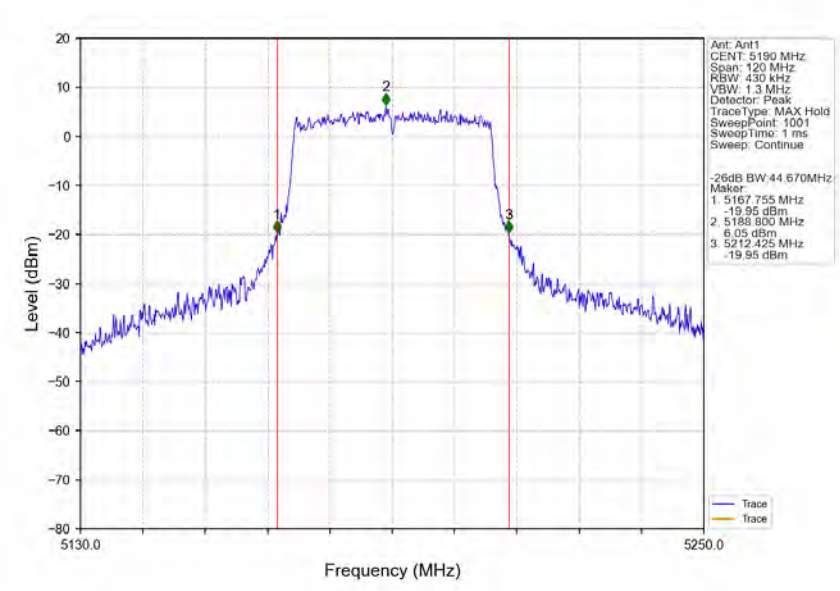
802.11ax(HE20)_MCH_5200MHz_RU242_Left_Ant1_NTNV



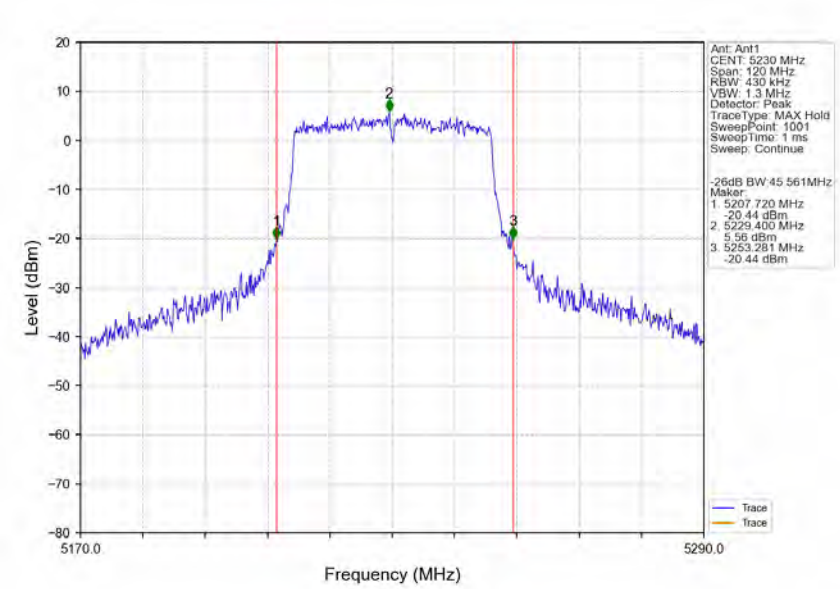
802.11ax(HE20)_HCH_5240MHz_RU242_Left_Ant1_NTNV



802.11ax(HE40)_LCH_5190MHz_RU484_Left_Ant1_NTNV



802.11ax(HE40)_HCH_5230MHz_RU484_Left_Ant1_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

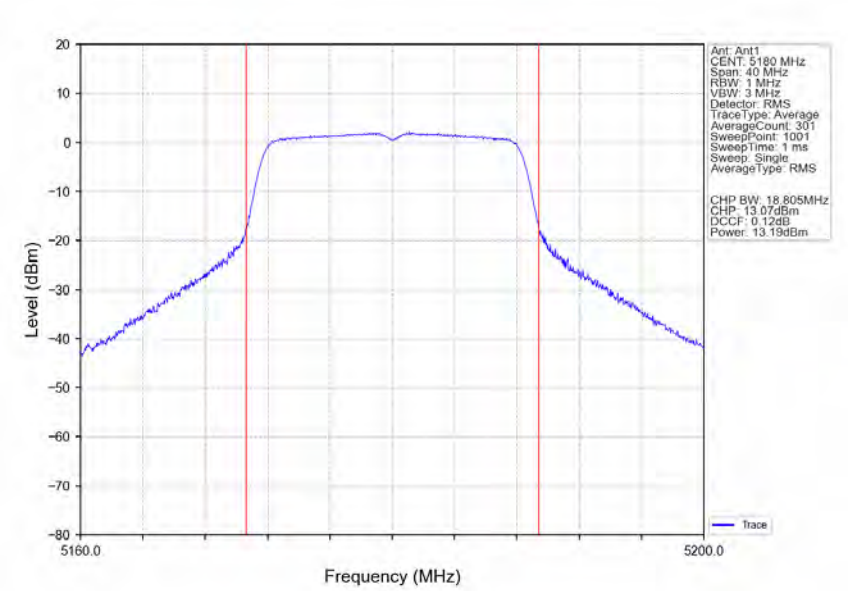
3.1.1 Power

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Average Conducted Output Power (dBm)		Verdict
					ANT1	Limit	
802.11a	SISO	5180	/	/	13.19	<=30	Pass
		5200	/	/	13.38	<=30	Pass
		5240	/	/	13.20	<=30	Pass
		5745	/	/	13.38	<=30	Pass
		5785	/	/	13.08	<=30	Pass
		5825	/	/	13.34	<=30	Pass
802.11ac (VHT20)	SISO	5180	/	/	13.22	<=30	Pass
		5200	/	/	13.33	<=30	Pass
		5240	/	/	13.22	<=30	Pass
		5745	/	/	13.40	<=30	Pass
		5785	/	/	13.15	<=30	Pass
		5825	/	/	14.34	<=30	Pass
802.11ac (VHT40)	SISO	5190	/	/	13.24	<=30	Pass
		5230	/	/	13.21	<=30	Pass
		5755	/	/	13.33	<=30	Pass
		5795	/	/	12.87	<=30	Pass
802.11ax (HE20)	SISO	5180	RU242	Left	13.23	<=30	Pass
		5200	RU242	Left	13.28	<=30	Pass
		5240	RU242	Left	13.16	<=30	Pass
		5745	RU242	Left	13.50	<=30	Pass
		5785	RU242	Left	13.11	<=30	Pass
		5825	RU242	Left	12.23	<=30	Pass
802.11ax (HE40)	SISO	5190	RU484	Left	13.18	<=30	Pass
		5230	RU484	Left	13.17	<=30	Pass
		5755	RU484	Left	13.34	<=30	Pass
		5795	RU484	Left	12.86	<=30	Pass
Note1: Antenna Gain: Ant1: 3.50dBi;							

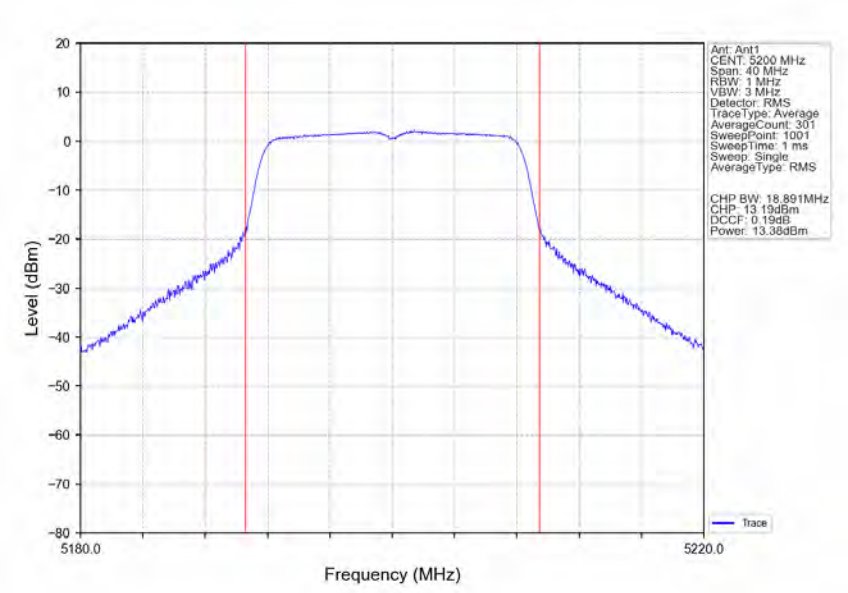
3.2 Test Graph

3.2.1 Power

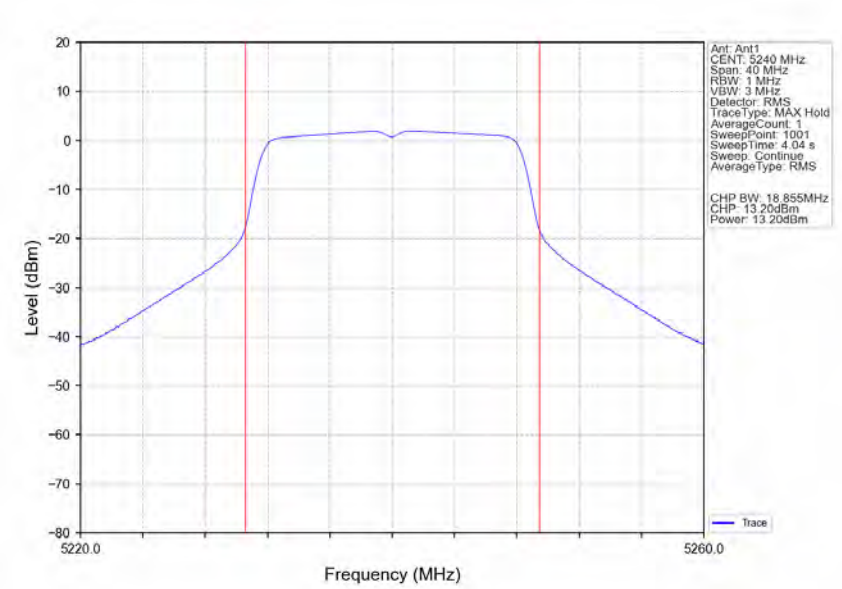
802.11a_LCH_5180MHz_Ant1_NTNV



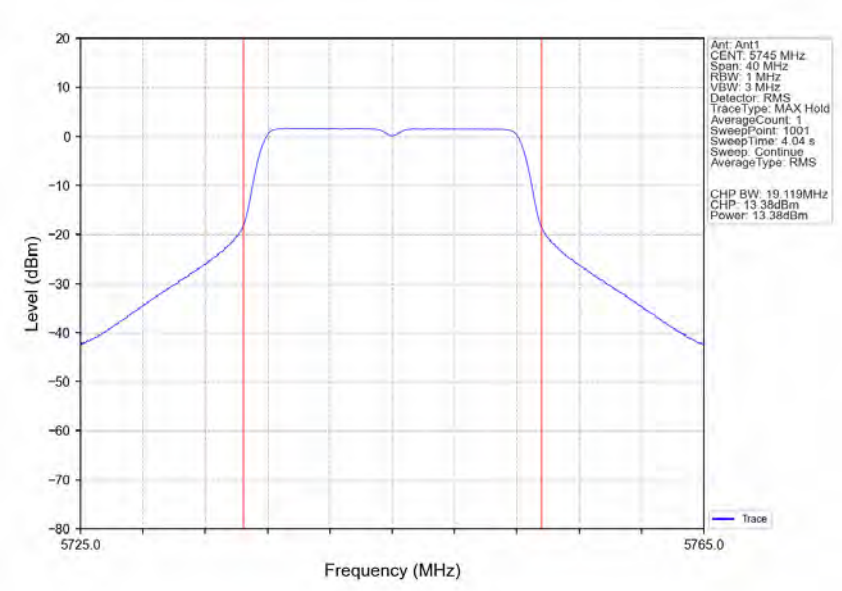
802.11a_MCH_5200MHz_Ant1_NTNV



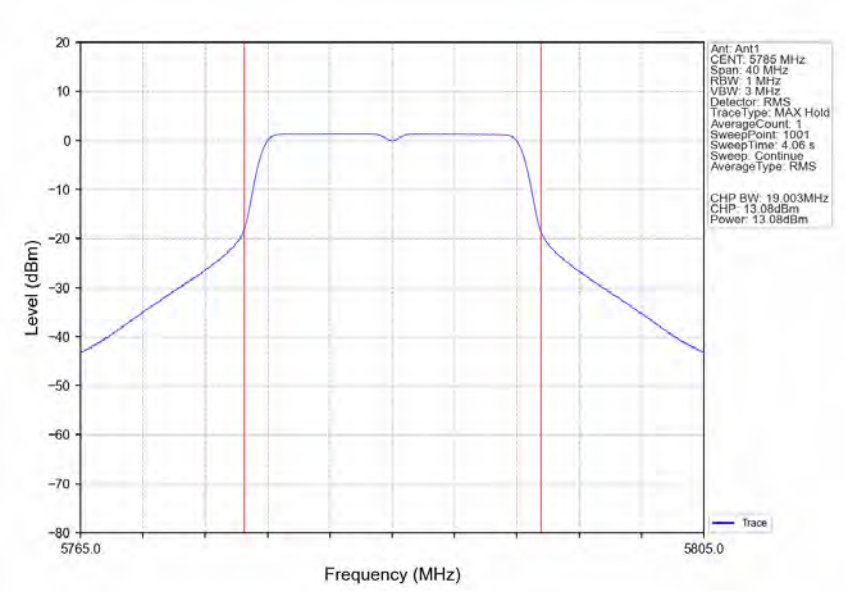
802.11a_HCH_5240MHz_Ant1_NTNV



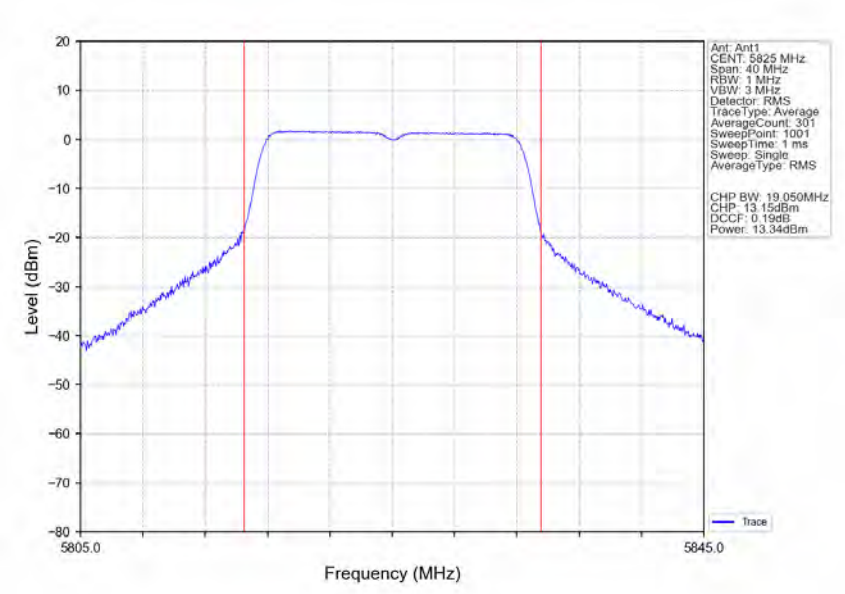
802.11a_LCH_5745MHz_Ant1_NTNV



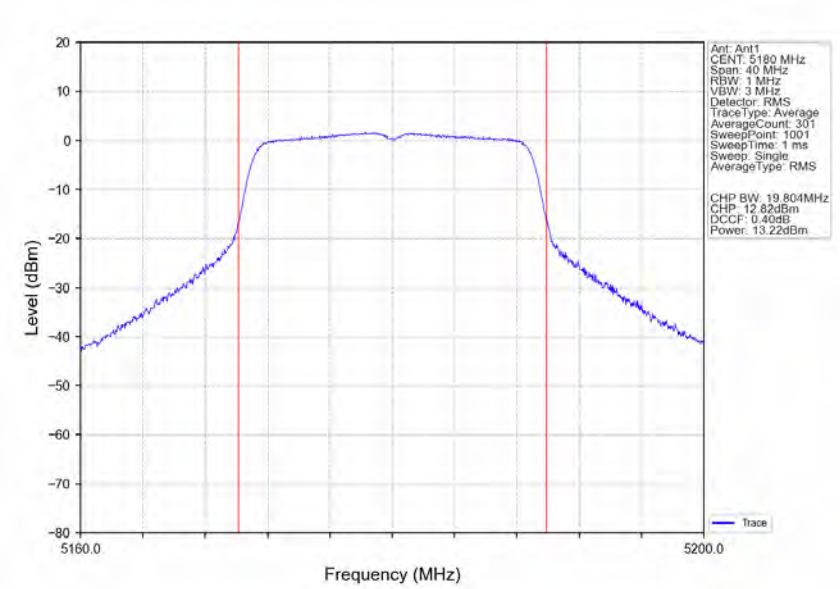
802.11a_MCH_5785MHz_Ant1_NTNV



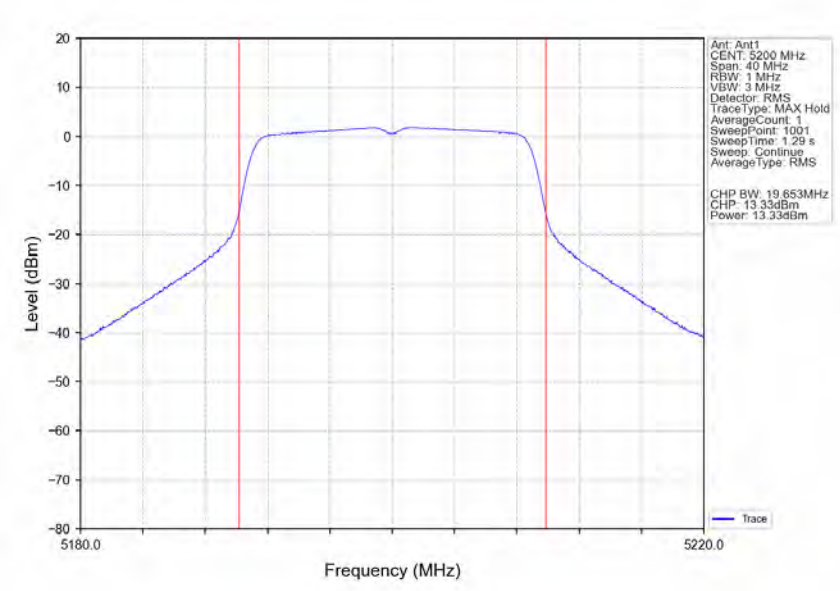
802.11a_HCH_5825MHz_Ant1_NTNV



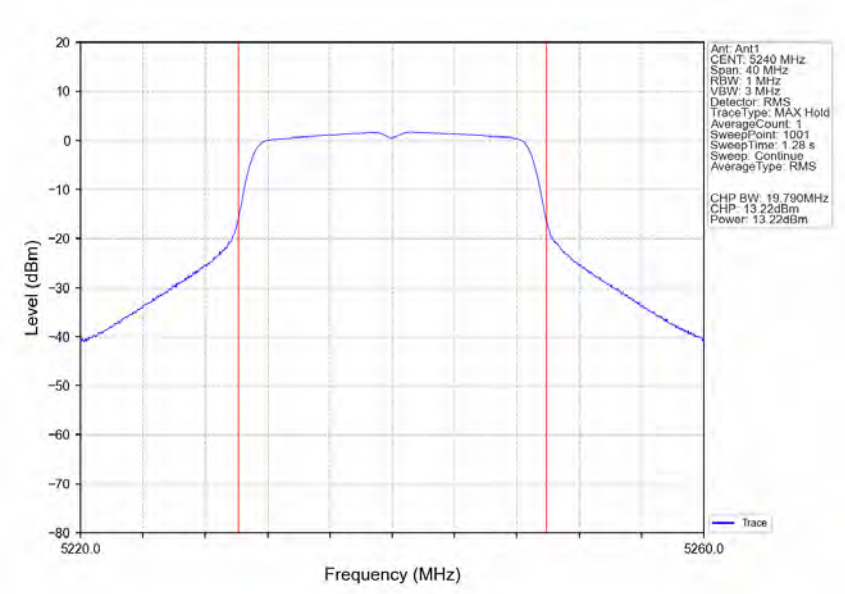
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



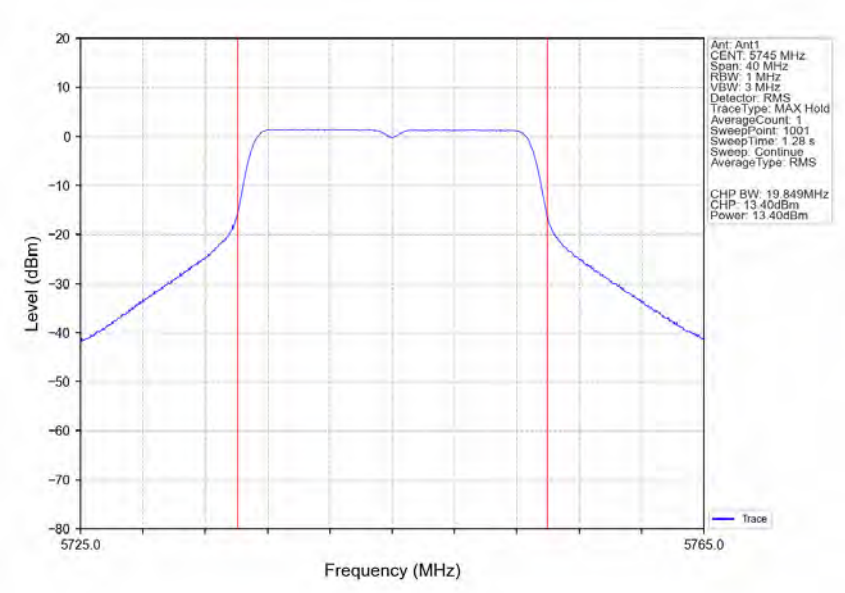
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



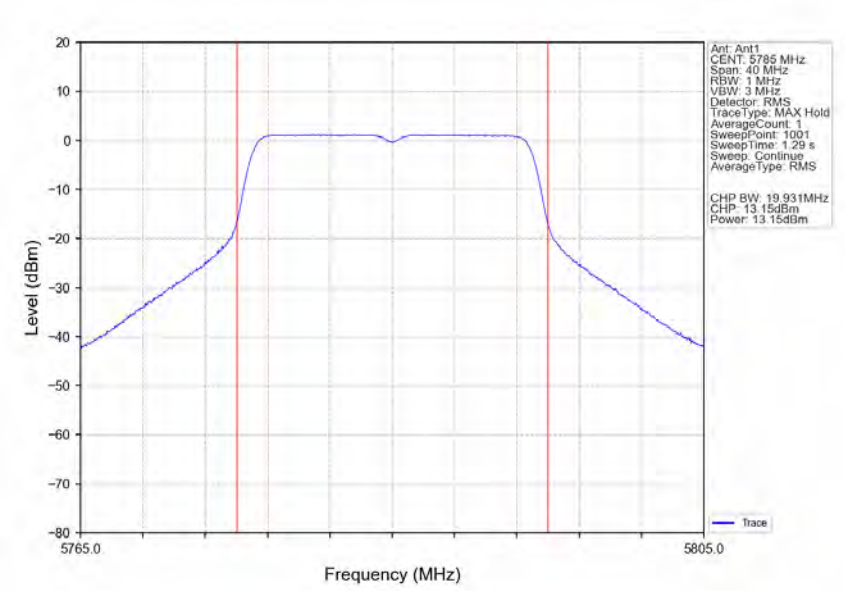
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



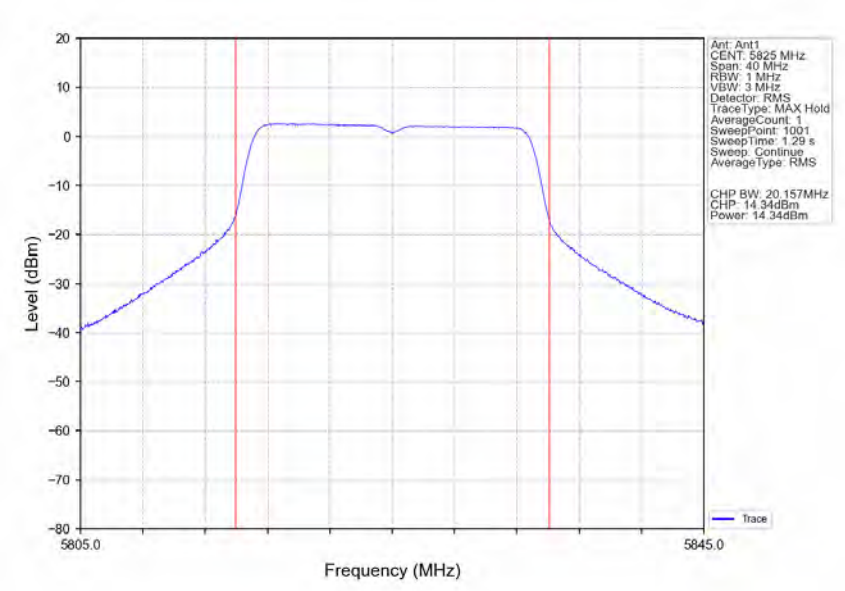
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



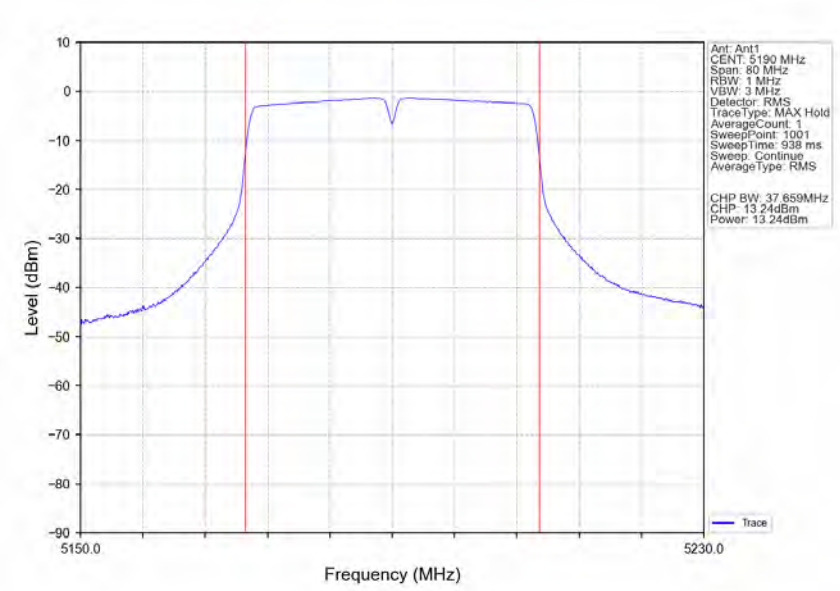
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



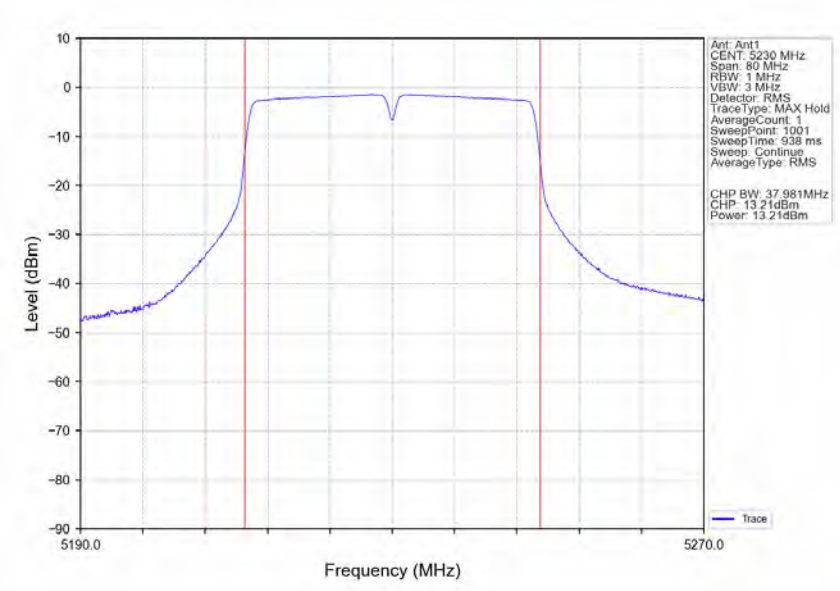
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



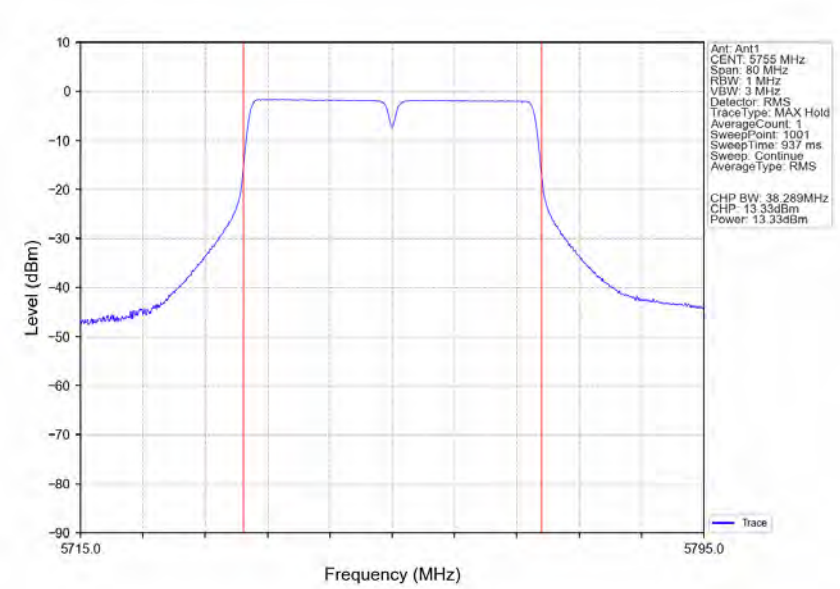
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



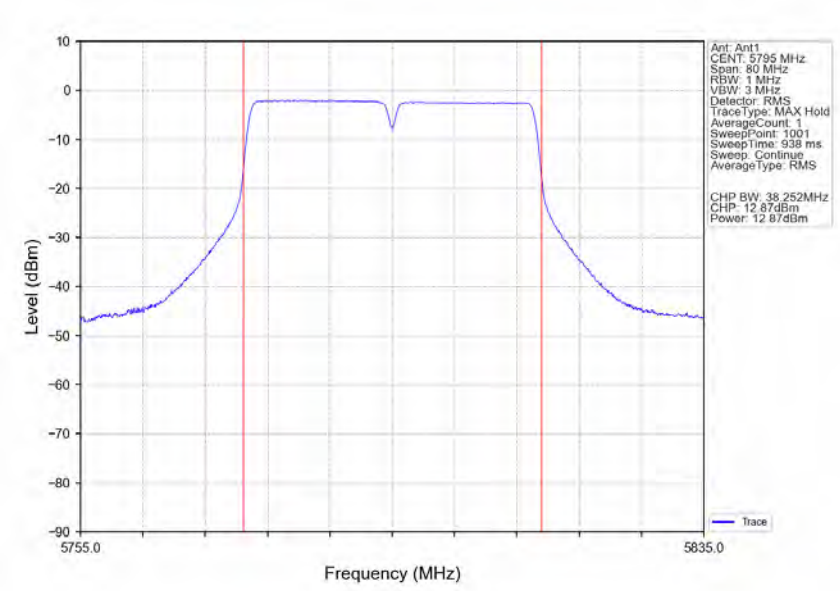
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



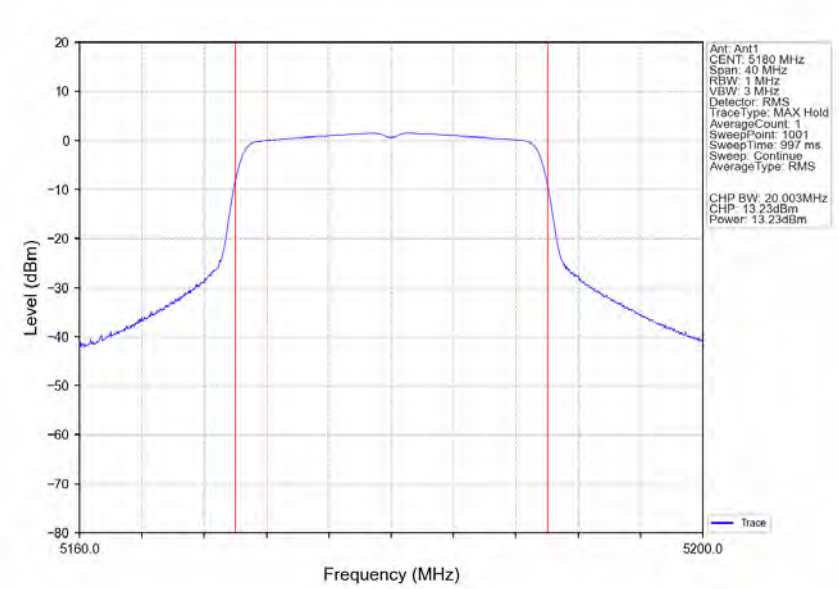
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



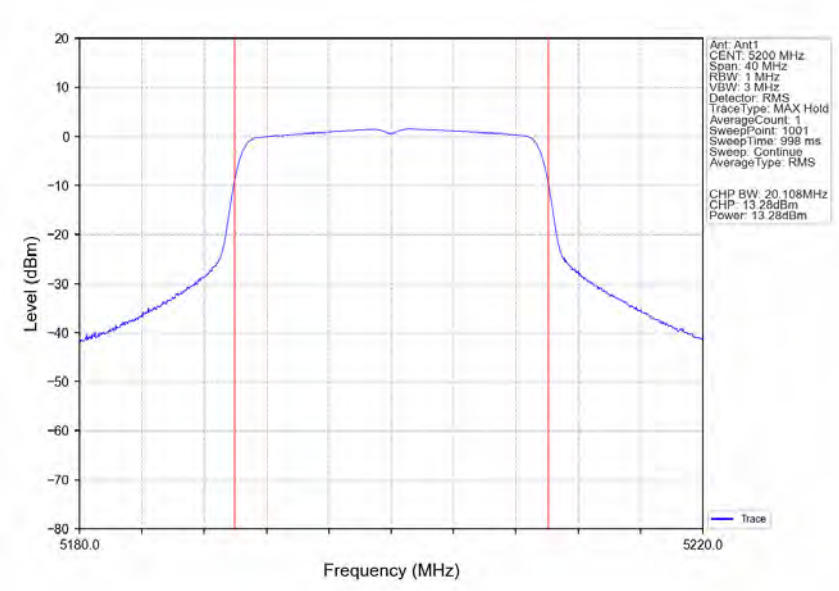
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



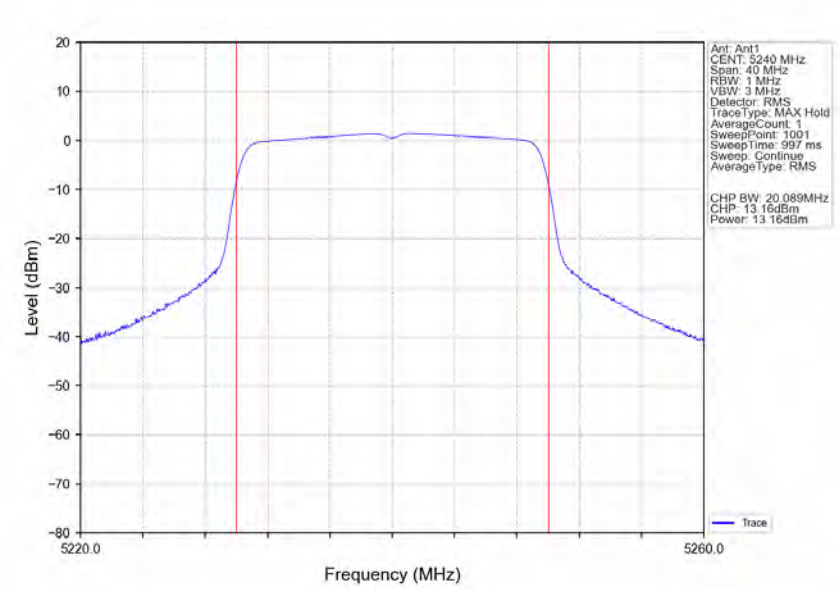
802.11ax(HE20)_LCH_5180MHz_RU242_Left_Ant1_NTNV



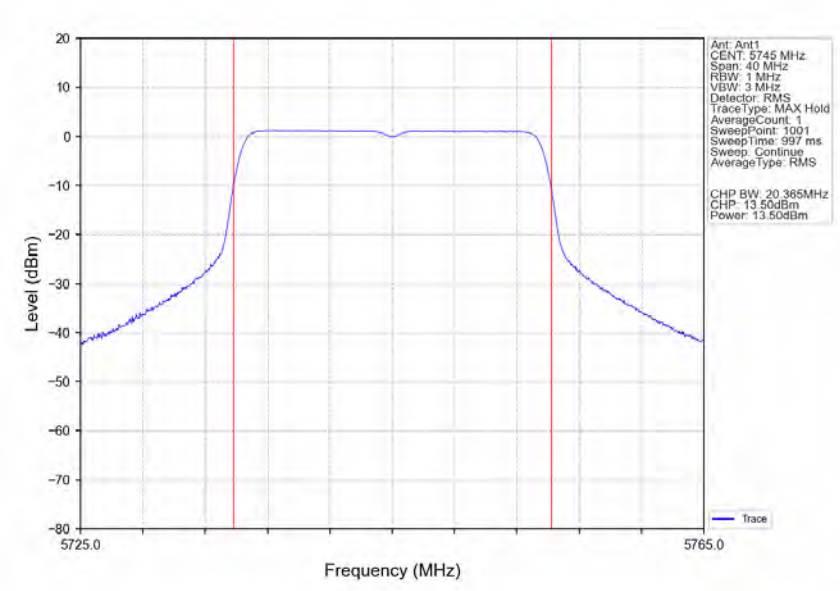
802.11ax(HE20)_MCH_5200MHz_RU242_Left_Ant1_NTNV



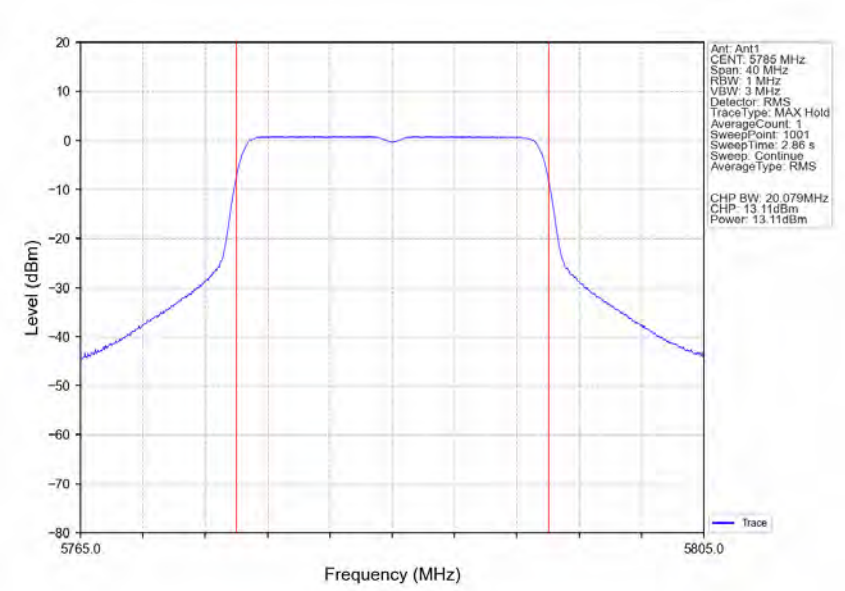
802.11ax(HE20)_HCH_5240MHz_RU242_Left_Ant1_NTNV



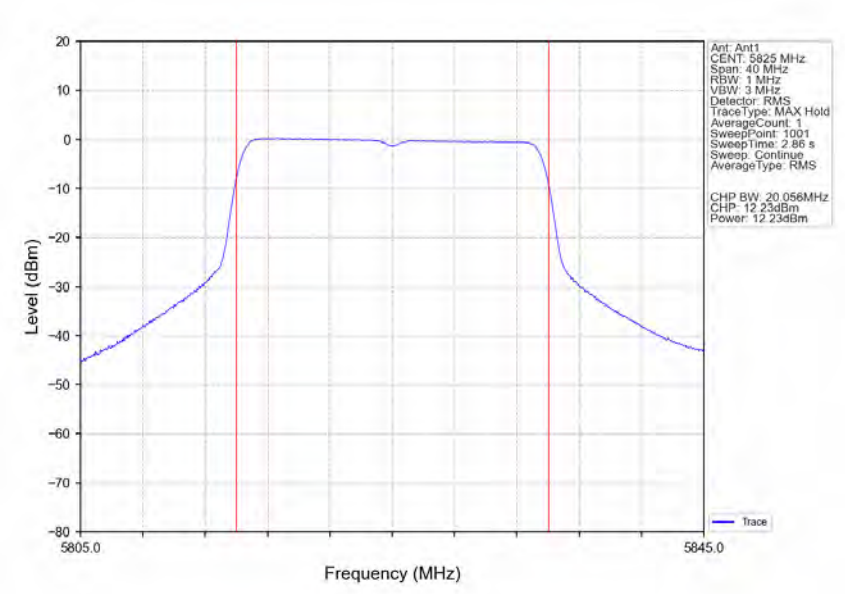
802.11ax(HE20)_LCH_5745MHz_RU242_Left_Ant1_NTNV



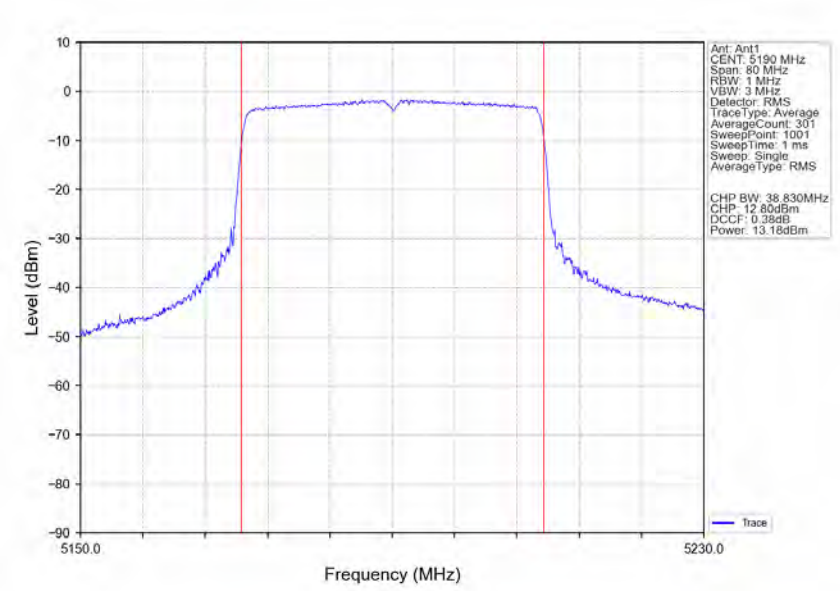
802.11ax(HE20)_MCH_5785MHz_RU242_Left_Ant1_NTNV



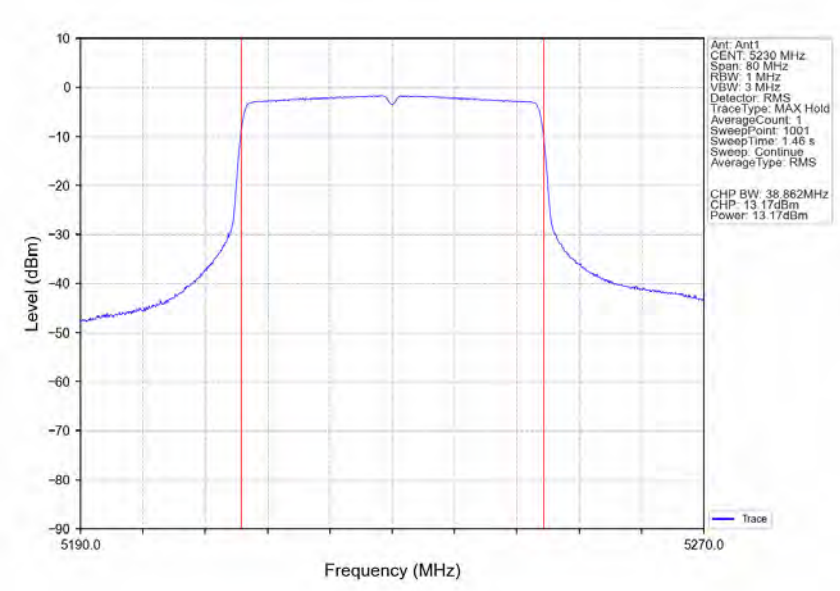
802.11ax(HE20)_HCH_5825MHz_RU242_Left_Ant1_NTNV



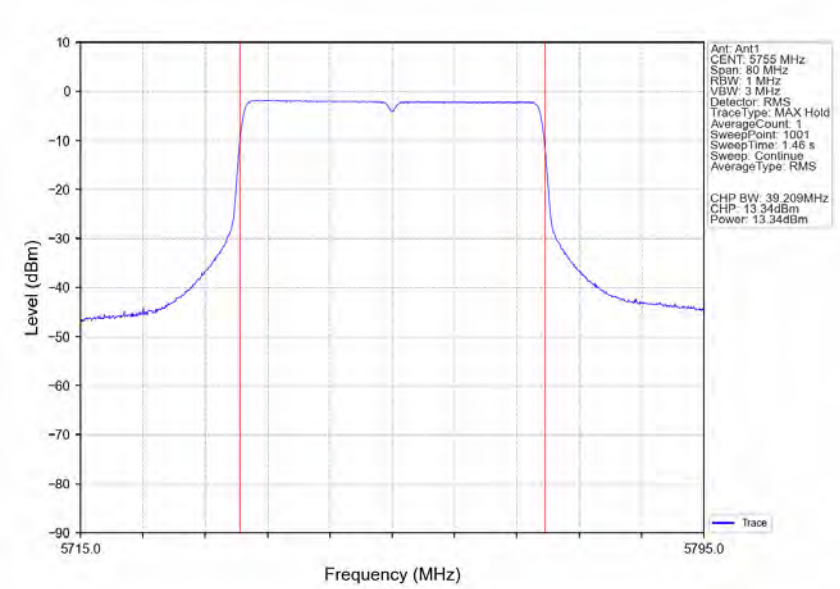
802.11ax(HE40)_LCH_5190MHz_RU484_Left_Ant1_NTNV



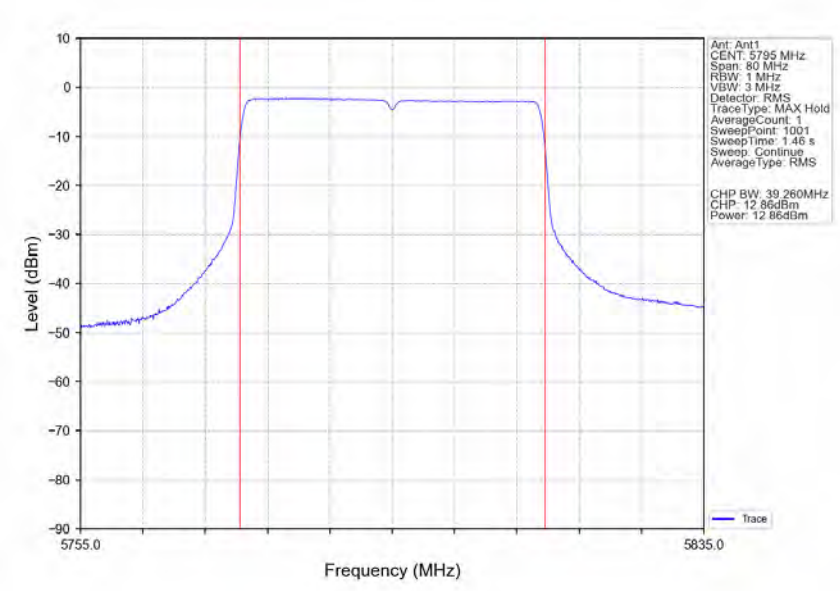
802.11ax(HE40)_HCH_5230MHz_RU484_Left_Ant1_NTNV



802.11ax(HE40)_LCH_5755MHz_RU484_Left_Ant1_NTNV



802.11ax(HE40)_HCH_5795MHz_RU484_Left_Ant1_NTNV



4. Maximum Power Spectral Density

4.1 Test Result

4.1.1 PSD

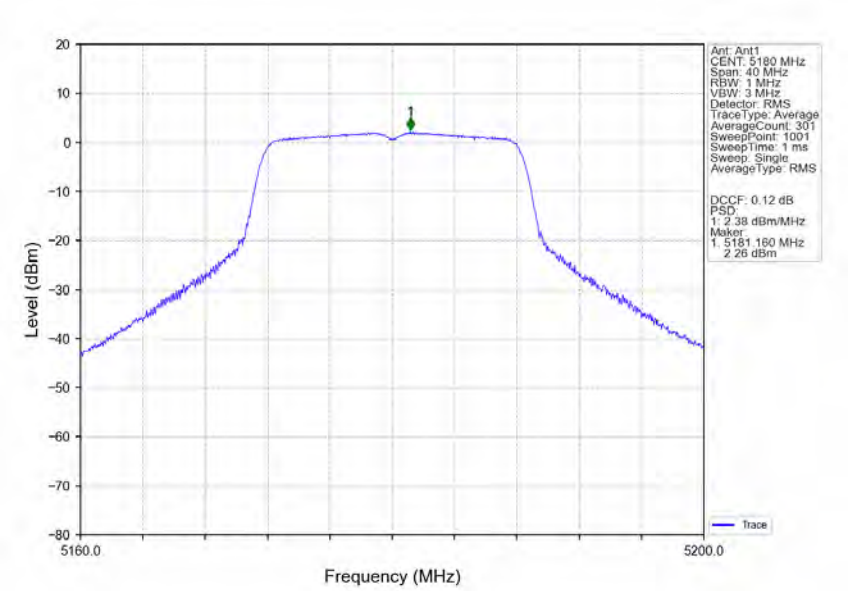
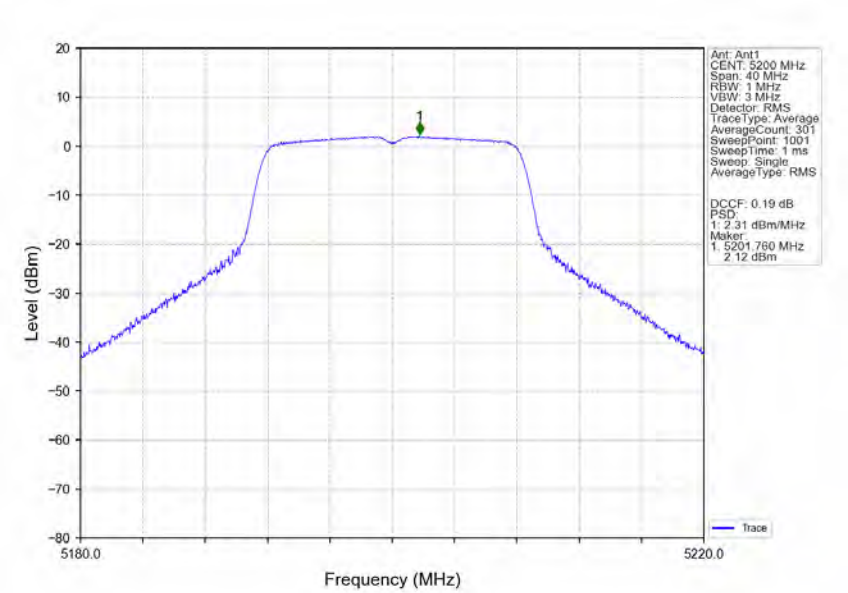
Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum PSD (dBm/MHz)		Verdict
					ANT1	Limit	
802.11a	SISO	5180	/	/	2.38	<=17	Pass
		5200	/	/	2.31	<=17	Pass
		5240	/	/	1.98	<=17	Pass
802.11ac (VHT20)	SISO	5180	/	/	1.91	<=17	Pass
		5200	/	/	1.92	<=17	Pass
		5240	/	/	1.84	<=17	Pass
802.11ac (VHT40)	SISO	5190	/	/	-1.28	<=17	Pass
		5230	/	/	-1.46	<=17	Pass
802.11ax (HE20)	SISO	5180	RU242	Left	1.56	<=17	Pass
		5200	RU242	Left	1.57	<=17	Pass
		5240	RU242	Left	1.50	<=17	Pass
802.11ax (HE40)	SISO	5190	RU484	Left	-1.28	<=17	Pass
		5230	RU484	Left	-1.63	<=17	Pass
Note1: Antenna Gain: Ant1: 3.50dBi;							

4.1.2 PSD-Band3

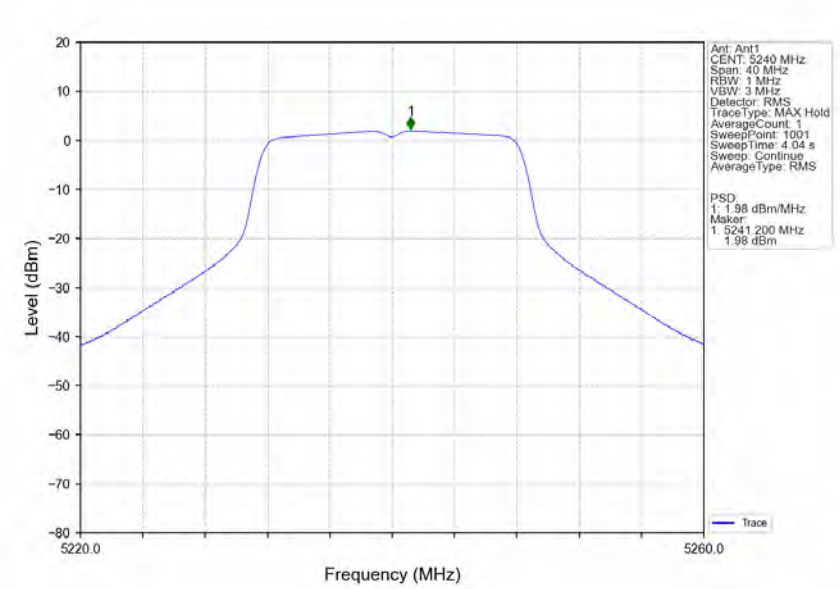
Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum PSD (dBm/500kHz)		Verdict
					ANT1	Limit	
802.11a	SISO	5745	/	/	-1.23	<=30	Pass
		5785	/	/	-1.55	<=30	Pass
		5825	/	/	-0.95	<=30	Pass
802.11ac (VHT20)	SISO	5745	/	/	-1.39	<=30	Pass
		5785	/	/	-1.64	<=30	Pass
		5825	/	/	-0.25	<=30	Pass
802.11ac (VHT40)	SISO	5755	/	/	-4.38	<=30	Pass
		5795	/	/	-4.69	<=30	Pass
802.11ax (HE20)	SISO	5745	RU242	Left	-1.66	<=30	Pass
		5785	RU242	Left	-2.18	<=30	Pass
		5825	RU242	Left	-2.74	<=30	Pass
802.11ax (HE40)	SISO	5755	RU484	Left	-4.77	<=30	Pass
		5795	RU484	Left	-5.65	<=30	Pass
Note1: Antenna Gain: Ant1: 3.50dBi;							

4.2 Test Graph

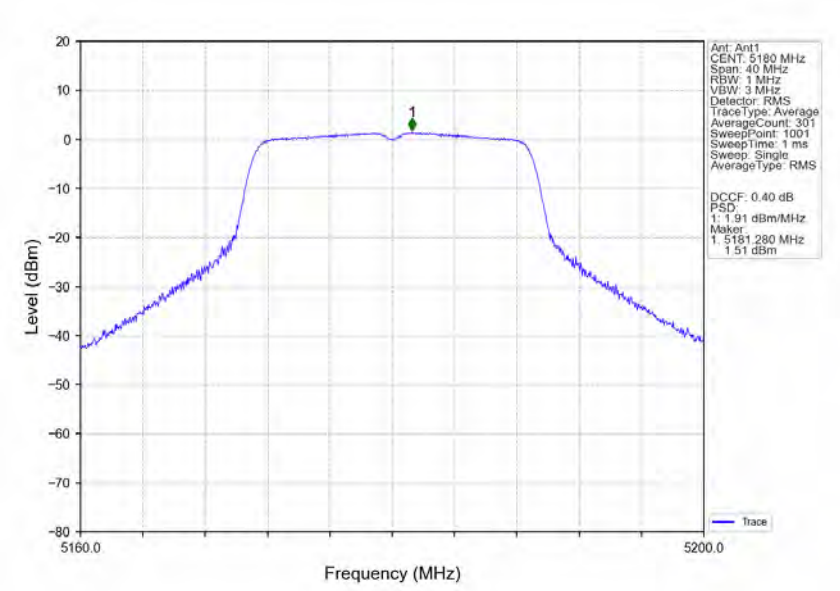
4.2.1 PSD

802.11a_LCH_5180MHz_Ant1_NTNV

802.11a_MCH_5200MHz_Ant1_NTNV


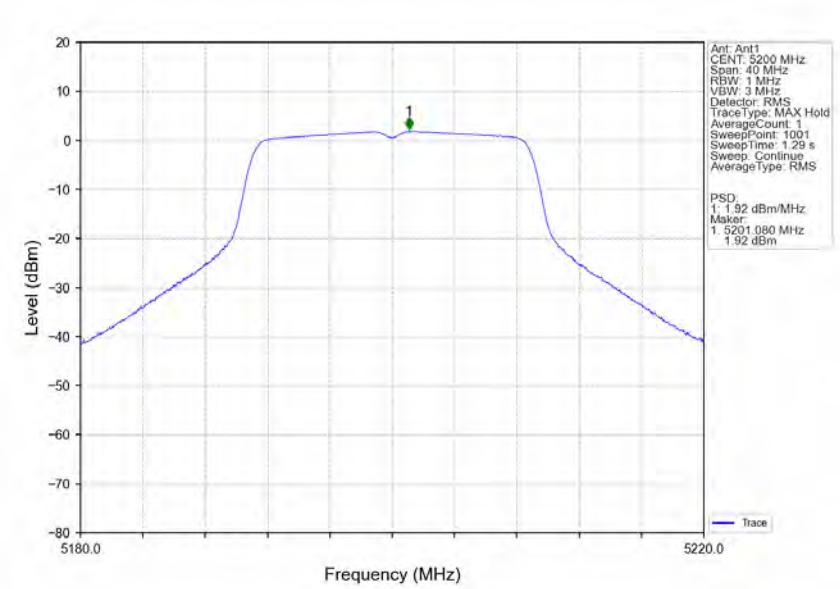
802.11a_HCH_5240MHz_Ant1_NTNV



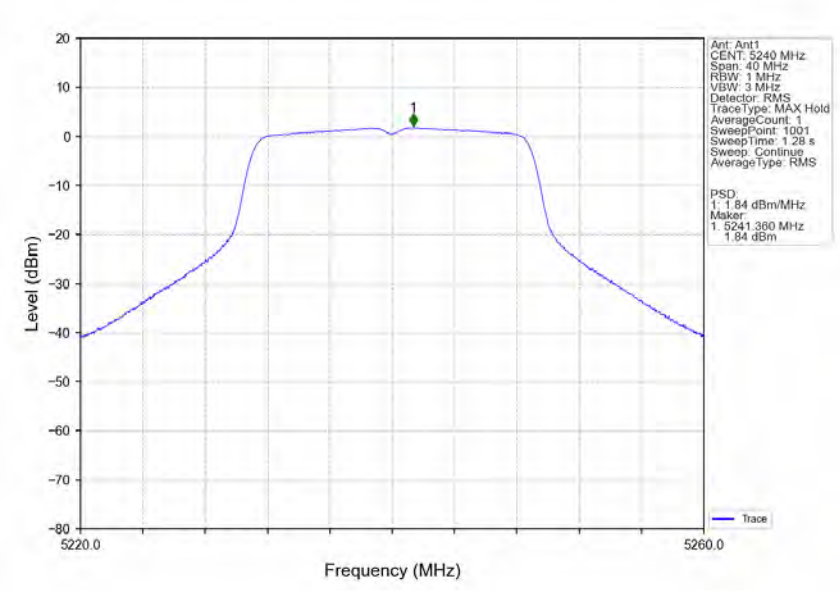
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



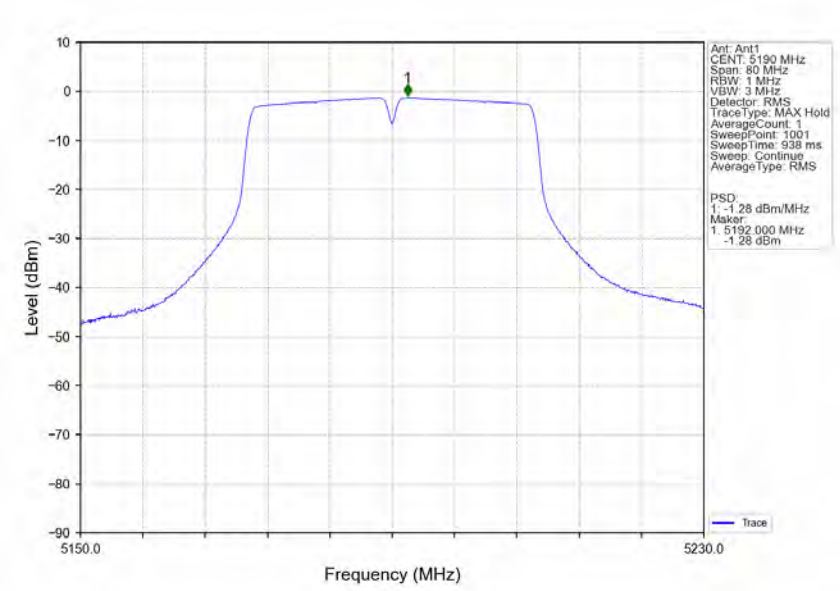
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



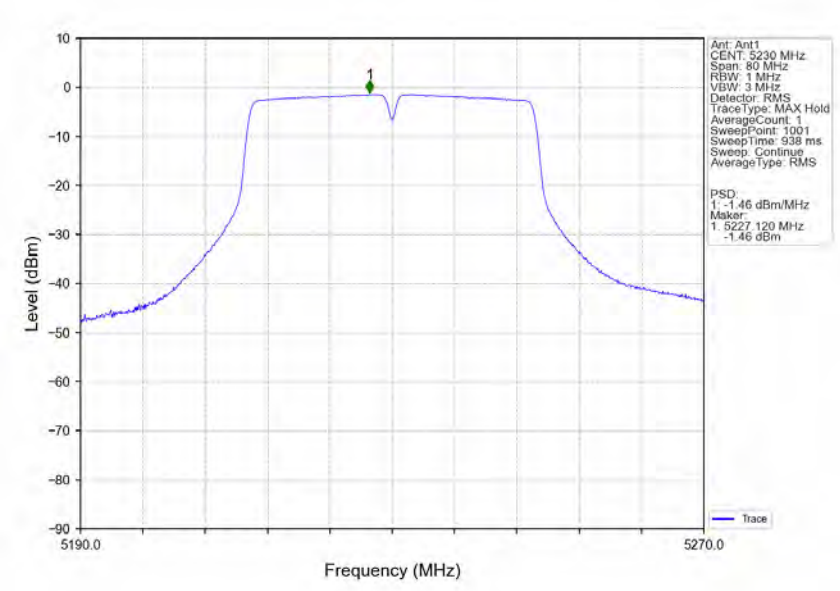
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



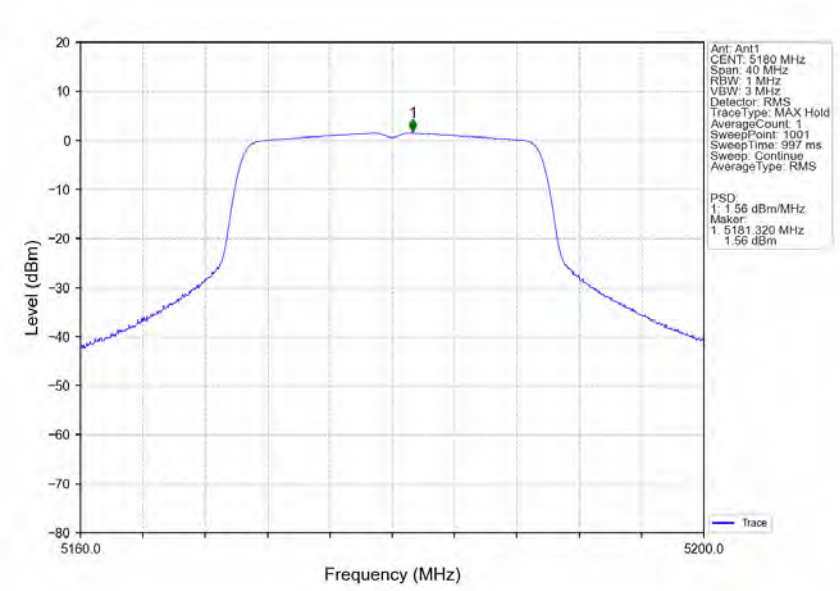
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



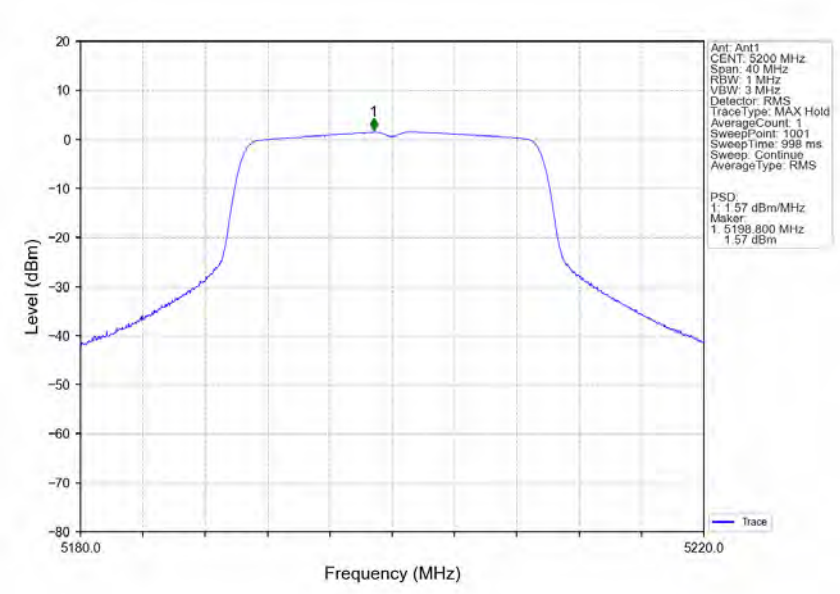
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



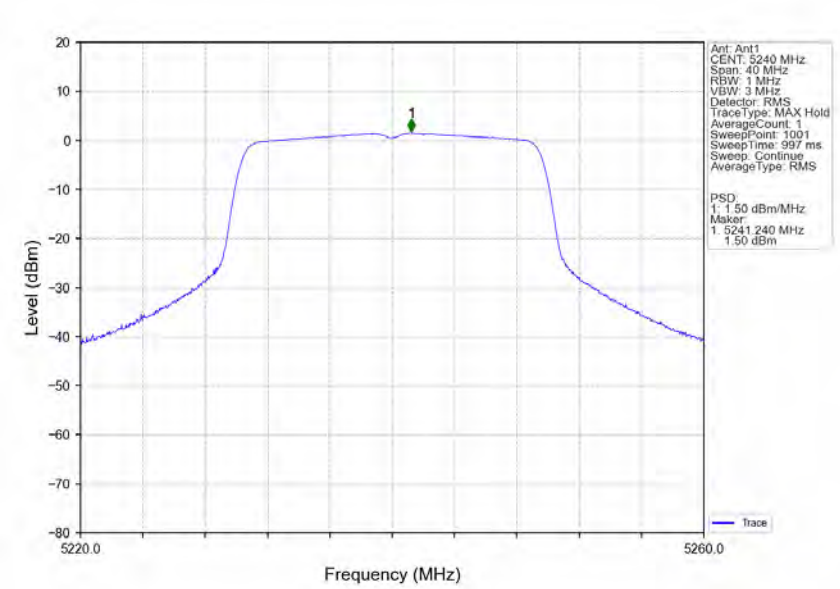
802.11ax(HE20)_LCH_5180MHz_RU242_Left_Ant1_NTNV



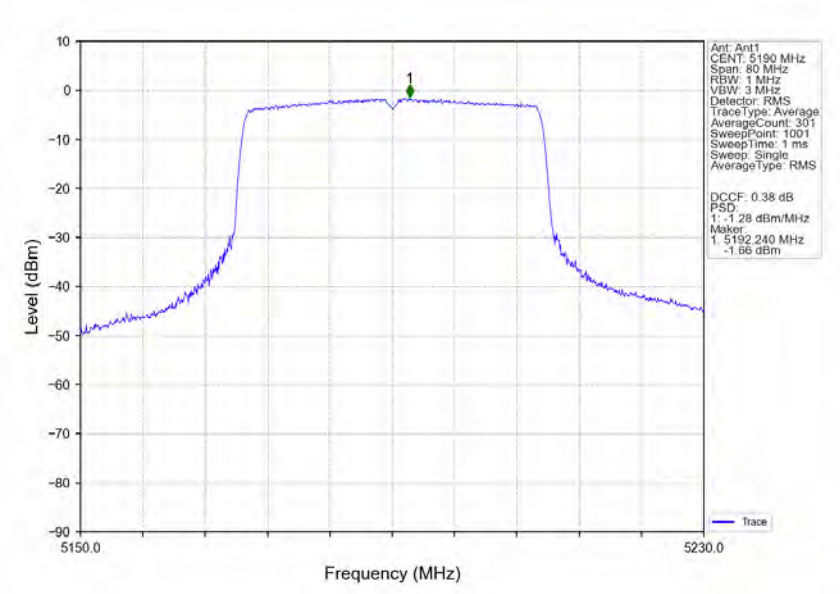
802.11ax(HE20)_MCH_5200MHz_RU242_Left_Ant1_NTNV



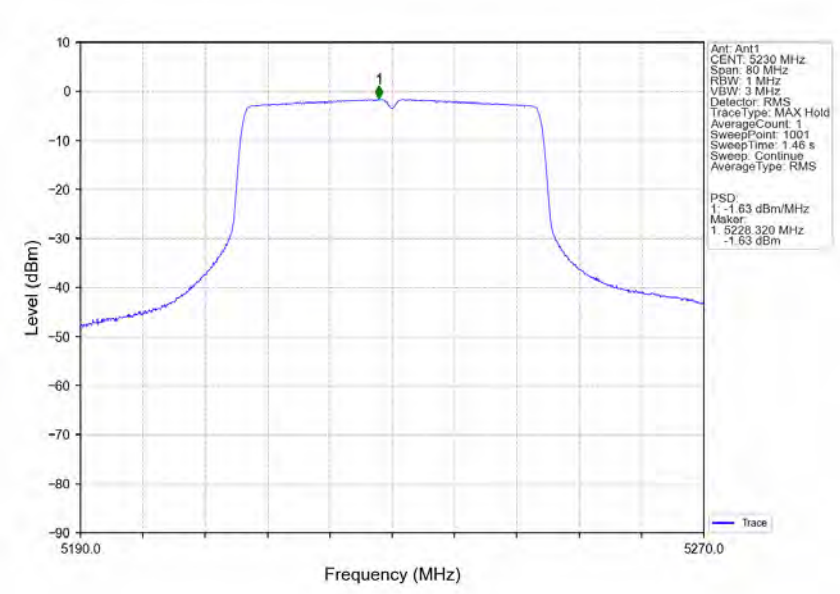
802.11ax(HE20)_HCH_5240MHz_RU242_Left_Ant1_NTNV



802.11ax(HE40)_LCH_5190MHz_RU484_Left_Ant1_NTNV

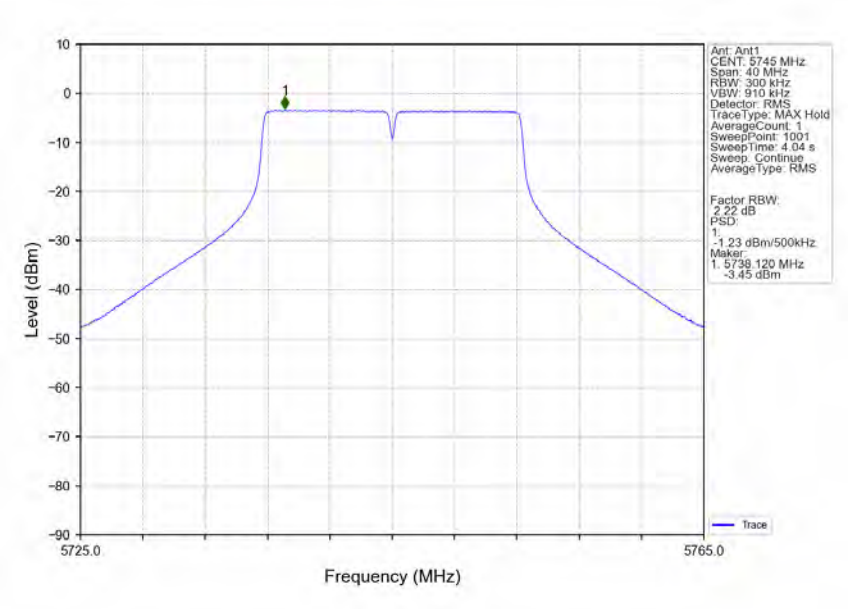


802.11ax(HE40)_HCH_5230MHz_RU484_Left_Ant1_NTNV

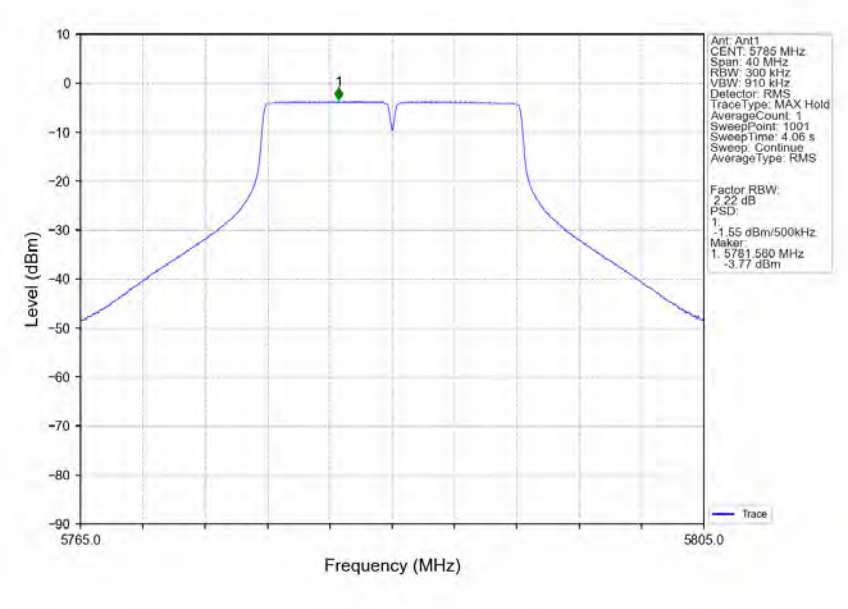


4.2.2 PSD-Band3

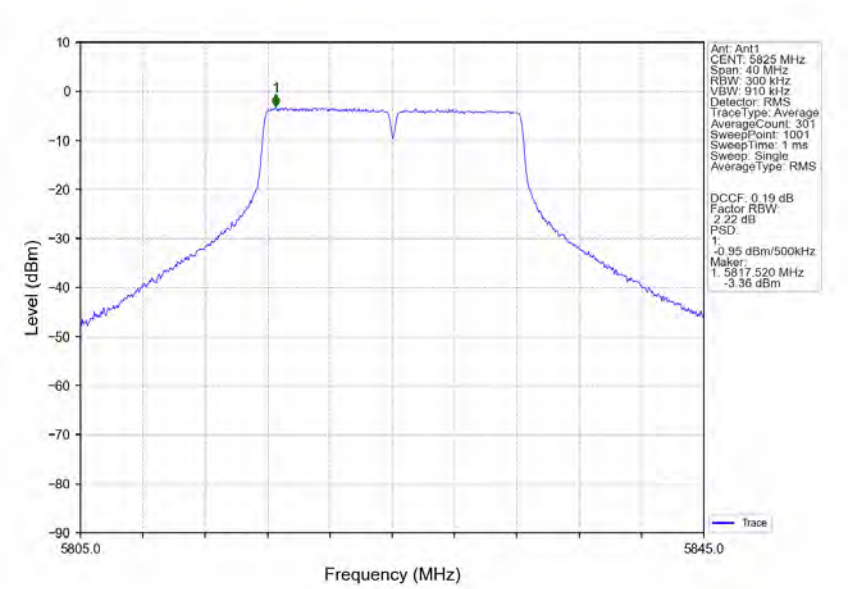
802.11a_LCH_5745MHz_Ant1_NTNV



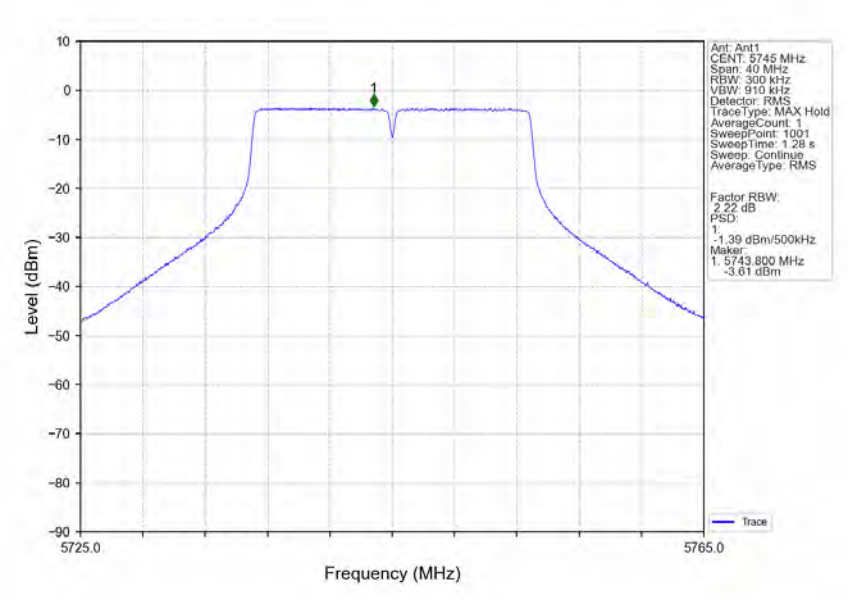
802.11a_MCH_5785MHz_Ant1_NTNV



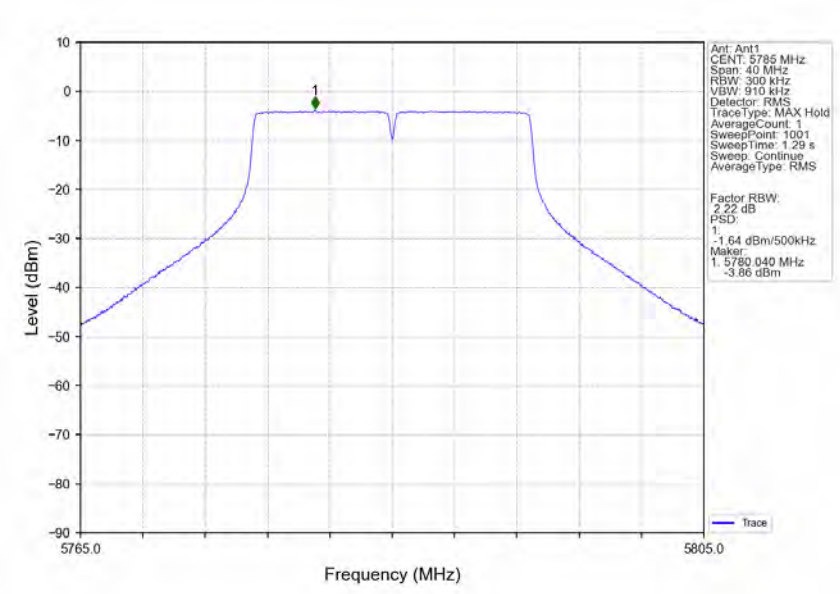
802.11a_HCH_5825MHz_Ant1_NTNV



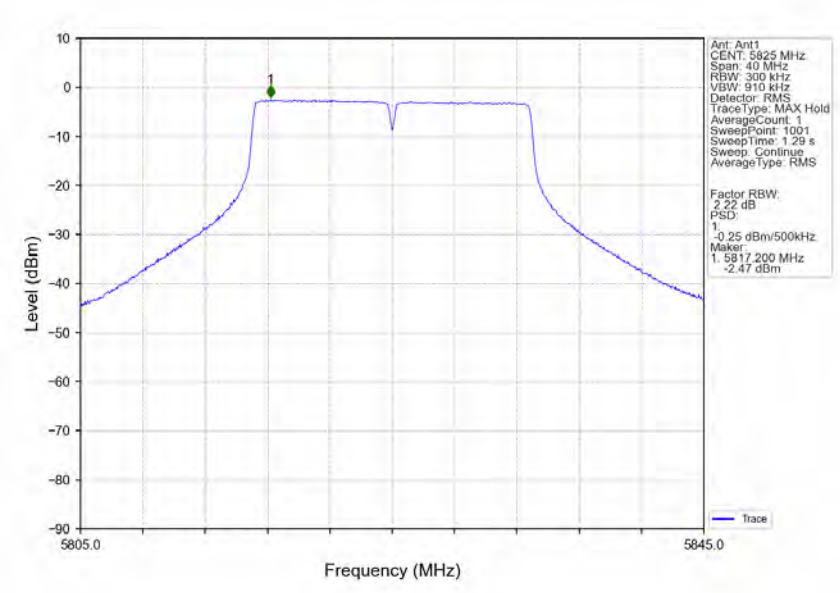
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



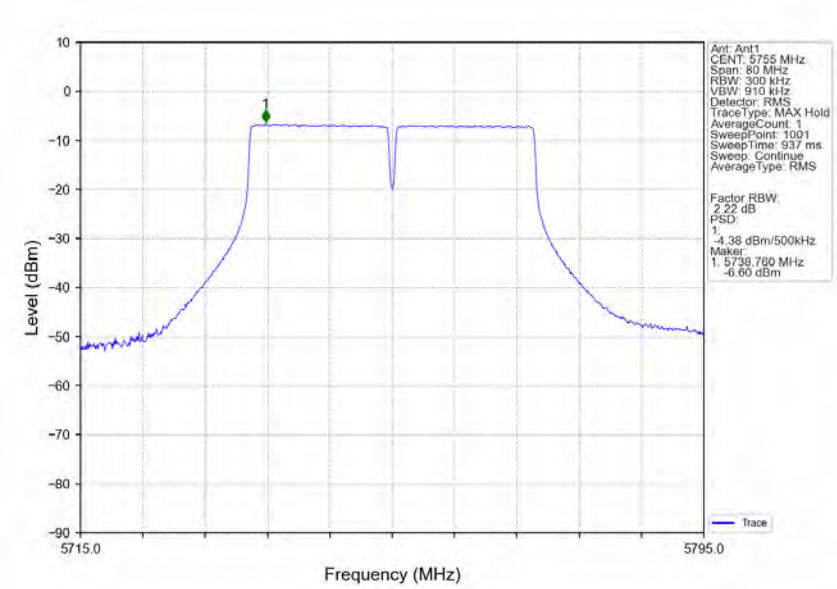
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



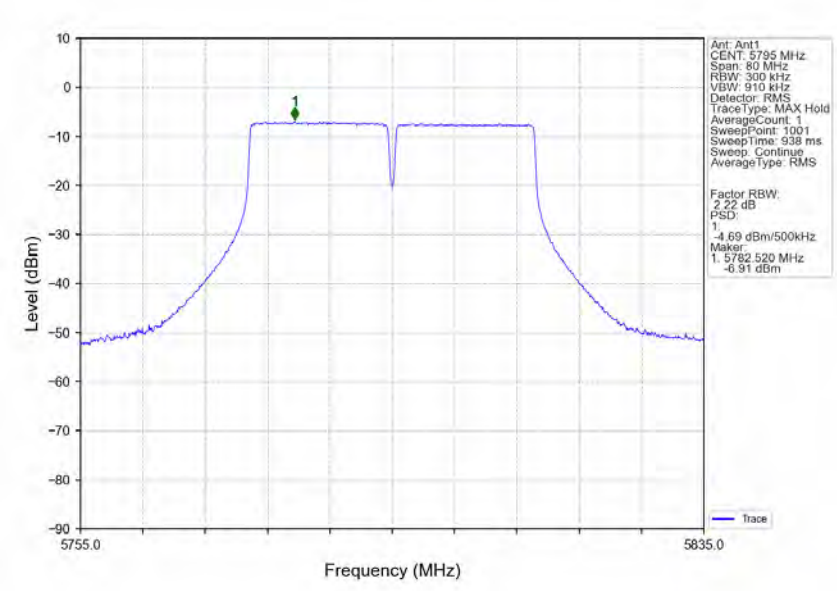
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



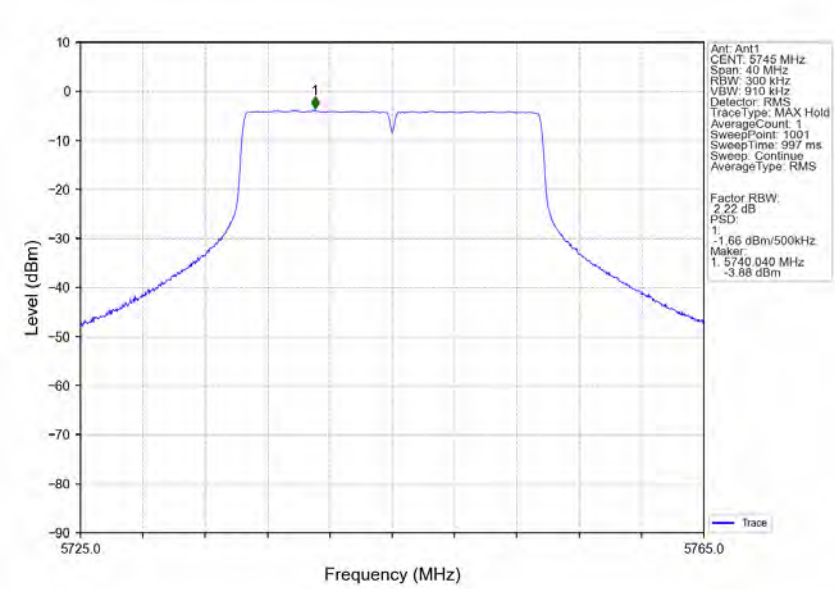
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



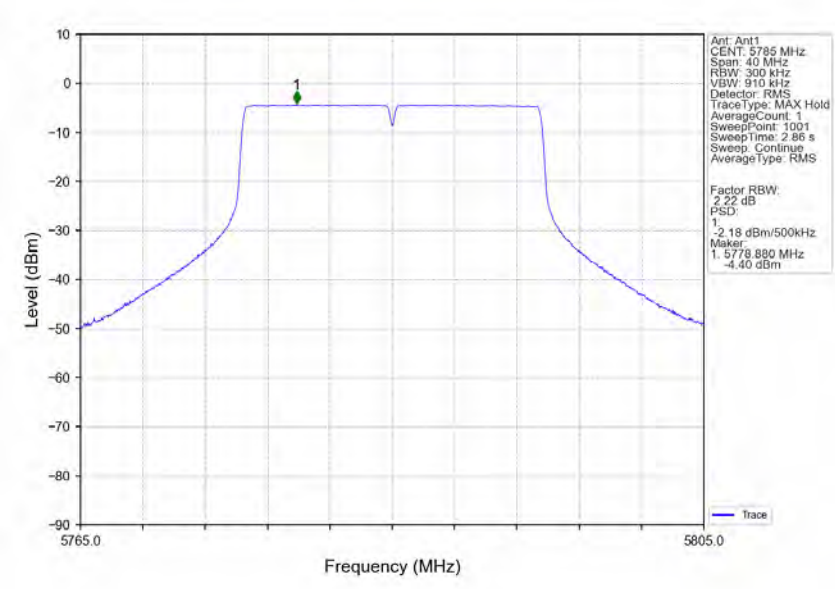
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



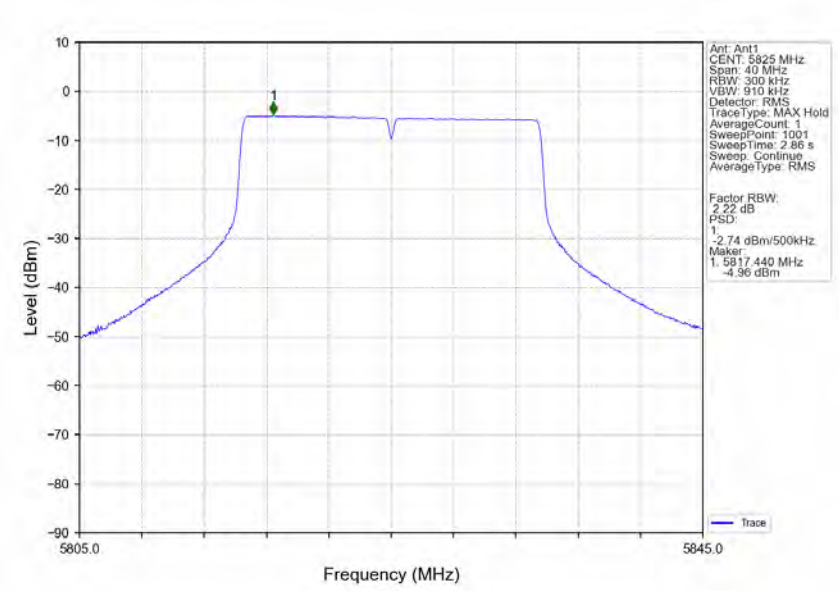
802.11ax(HE20)_LCH_5745MHz_RU242_Left_Ant1_NTNV



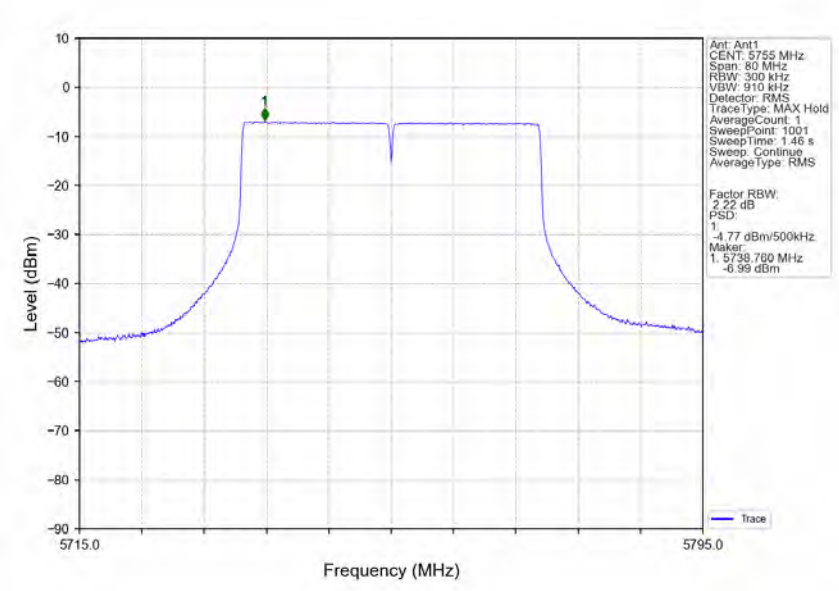
802.11ax(HE20)_MCH_5785MHz_RU242_Left_Ant1_NTNV



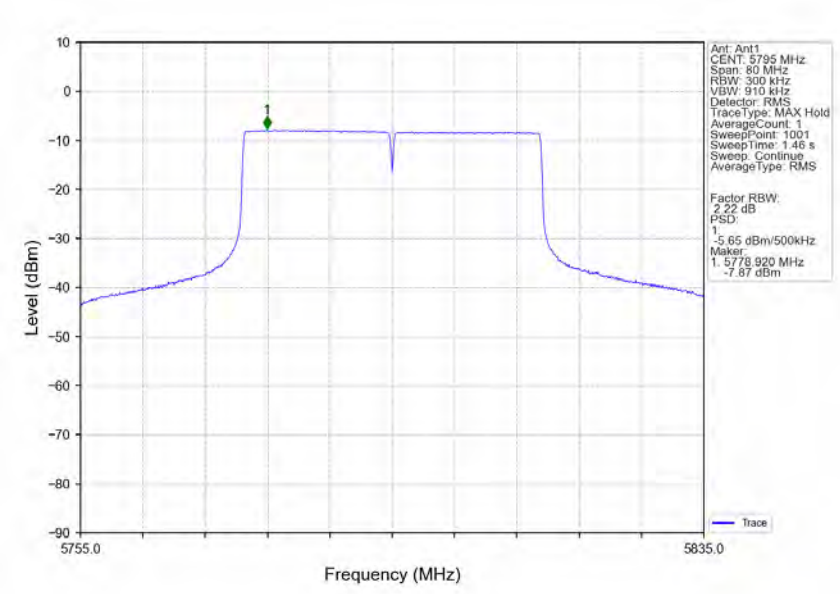
802.11ax(HE20)_HCH_5825MHz_RU242_Left_Ant1_NTNV



802.11ax(HE40)_LCH_5755MHz_RU484_Left_Ant1_NTNV



802.11ax(HE40)_HCH_5795MHz_RU484_Left_Ant1_NTNV



5. Frequency Stability

5.1 Test Result

5.1.1 Ant1

Ant1									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
802.11a	SISO	5180	/	/	20	102	5180.000	5150 to 5250	Pass
						120	5180.060	5150 to 5250	Pass
						138	5180.020	5150 to 5250	Pass
					-30	120	5180.020	5150 to 5250	Pass
					-20	120	5180.040	5150 to 5250	Pass
					-10	120	5180.000	5150 to 5250	Pass
					0	120	5180.060	5150 to 5250	Pass
					10	120	5180.020	5150 to 5250	Pass
					30	120	5180.000	5150 to 5250	Pass
					40	120	5180.000	5150 to 5250	Pass
					50	120	5180.020	5150 to 5250	Pass
		5200	/	/	20	102	5200.020	5150 to 5250	Pass
						120	5200.000	5150 to 5250	Pass
						138	5200.020	5150 to 5250	Pass
					-30	120	5199.980	5150 to 5250	Pass
					-20	120	5200.020	5150 to 5250	Pass
					-10	120	5200.040	5150 to 5250	Pass
					0	120	5200.000	5150 to 5250	Pass
					10	120	5200.000	5150 to 5250	Pass
					30	120	5200.020	5150 to 5250	Pass
					40	120	5200.020	5150 to 5250	Pass
					50	120	5200.020	5150 to 5250	Pass
		5240	/	/	20	102	5239.960	5150 to 5250	Pass
						120	5240.000	5150 to 5250	Pass
						138	5240.020	5150 to 5250	Pass
					-30	120	5240.000	5150 to 5250	Pass
					-20	120	5240.040	5150 to 5250	Pass
					-10	120	5240.060	5150 to 5250	Pass
					0	120	5240.060	5150 to 5250	Pass
					10	120	5240.060	5150 to 5250	Pass
					30	120	5240.000	5150 to 5250	Pass
					40	120	5240.060	5150 to 5250	Pass
					50	120	5240.040	5150 to 5250	Pass
		5745	/	/	20	102	5745.020	5725 to 5850	Pass
						120	5745.060	5725 to 5850	Pass
						138	5745.060	5725 to 5850	Pass
					-30	120	5745.040	5725 to 5850	Pass
					-20	120	5745.040	5725 to 5850	Pass
					-10	120	5745.020	5725 to 5850	Pass

					0	120	5745.020	5725 to 5850	Pass
					10	120	5745.020	5725 to 5850	Pass
					30	120	5745.040	5725 to 5850	Pass
					40	120	5745.060	5725 to 5850	Pass
					50	120	5745.040	5725 to 5850	Pass
		5785	/	/	20	102	5785.000	5725 to 5850	Pass
						120	5785.060	5725 to 5850	Pass
						138	5785.020	5725 to 5850	Pass
					-30	120	5785.040	5725 to 5850	Pass
					-20	120	5785.020	5725 to 5850	Pass
					-10	120	5785.060	5725 to 5850	Pass
					0	120	5785.040	5725 to 5850	Pass
					10	120	5785.020	5725 to 5850	Pass
					30	120	5785.040	5725 to 5850	Pass
					40	120	5785.040	5725 to 5850	Pass
					50	120	5785.020	5725 to 5850	Pass
		5825	/	/	20	102	5825.060	5725 to 5850	Pass
						120	5825.060	5725 to 5850	Pass
						138	5825.020	5725 to 5850	Pass
					-30	120	5825.000	5725 to 5850	Pass
					-20	120	5825.020	5725 to 5850	Pass
					-10	120	5824.940	5725 to 5850	Pass
					0	120	5824.960	5725 to 5850	Pass
					10	120	5825.000	5725 to 5850	Pass
					30	120	5825.020	5725 to 5850	Pass
					40	120	5825.100	5725 to 5850	Pass
					50	120	5825.020	5725 to 5850	Pass
802.11ac (VHT20)	SISO	5180	/	/	20	102	5180.020	5150 to 5250	Pass
						120	5180.020	5150 to 5250	Pass
						138	5180.020	5150 to 5250	Pass
					-30	120	5180.020	5150 to 5250	Pass
					-20	120	5180.040	5150 to 5250	Pass
					-10	120	5180.080	5150 to 5250	Pass
					0	120	5180.020	5150 to 5250	Pass
					10	120	5180.060	5150 to 5250	Pass
					30	120	5180.080	5150 to 5250	Pass
					40	120	5180.060	5150 to 5250	Pass
					50	120	5180.020	5150 to 5250	Pass
		5200	/	/	20	102	5200.040	5150 to 5250	Pass
						120	5200.060	5150 to 5250	Pass
						138	5200.080	5150 to 5250	Pass
					-30	120	5200.060	5150 to 5250	Pass
					-20	120	5200.120	5150 to 5250	Pass
					-10	120	5200.060	5150 to 5250	Pass
					0	120	5200.080	5150 to 5250	Pass
					10	120	5200.060	5150 to 5250	Pass
					30	120	5200.100	5150 to 5250	Pass
					40	120	5200.080	5150 to 5250	Pass
					50	120	5200.080	5150 to 5250	Pass
		5240	/	/	20	102	5240.100	5150 to 5250	Pass

						120	5240.060	5150 to 5250	Pass
						138	5240.060	5150 to 5250	Pass
					-30	120	5240.040	5150 to 5250	Pass
					-20	120	5240.080	5150 to 5250	Pass
					-10	120	5240.080	5150 to 5250	Pass
					0	120	5240.080	5150 to 5250	Pass
					10	120	5240.040	5150 to 5250	Pass
					30	120	5240.100	5150 to 5250	Pass
					40	120	5240.040	5150 to 5250	Pass
					50	120	5240.020	5150 to 5250	Pass
		5745	/	/	20	102	5745.100	5725 to 5850	Pass
						120	5745.080	5725 to 5850	Pass
						138	5745.020	5725 to 5850	Pass
					-30	120	5745.020	5725 to 5850	Pass
					-20	120	5745.060	5725 to 5850	Pass
					-10	120	5745.020	5725 to 5850	Pass
					0	120	5745.040	5725 to 5850	Pass
					10	120	5745.060	5725 to 5850	Pass
					30	120	5745.100	5725 to 5850	Pass
					40	120	5745.080	5725 to 5850	Pass
					50	120	5745.060	5725 to 5850	Pass
		5785	/	/	20	102	5785.040	5725 to 5850	Pass
						120	5785.020	5725 to 5850	Pass
						138	5785.020	5725 to 5850	Pass
					-30	120	5785.060	5725 to 5850	Pass
					-20	120	5785.020	5725 to 5850	Pass
					-10	120	5785.040	5725 to 5850	Pass
					0	120	5785.100	5725 to 5850	Pass
					10	120	5785.020	5725 to 5850	Pass
					30	120	5785.040	5725 to 5850	Pass
					40	120	5785.080	5725 to 5850	Pass
					50	120	5785.040	5725 to 5850	Pass
		5825	/	/	20	102	5825.040	5725 to 5850	Pass
						120	5825.040	5725 to 5850	Pass
						138	5825.020	5725 to 5850	Pass
					-30	120	5825.060	5725 to 5850	Pass
					-20	120	5825.040	5725 to 5850	Pass
					-10	120	5825.060	5725 to 5850	Pass
					0	120	5825.020	5725 to 5850	Pass
					10	120	5825.060	5725 to 5850	Pass
					30	120	5825.040	5725 to 5850	Pass
					40	120	5825.060	5725 to 5850	Pass
					50	120	5825.080	5725 to 5850	Pass
802.11ac (VHT40)	SISO	5190	/	/	20	102	5190.040	5150 to 5250	Pass
						120	5190.120	5150 to 5250	Pass
						138	5190.120	5150 to 5250	Pass
					-30	120	5190.120	5150 to 5250	Pass
					-20	120	5190.160	5150 to 5250	Pass
					-10	120	5190.080	5150 to 5250	Pass
					0	120	5190.080	5150 to 5250	Pass

					10	120	5190.080	5150 to 5250	Pass
					30	120	5190.080	5150 to 5250	Pass
					40	120	5190.080	5150 to 5250	Pass
					50	120	5190.080	5150 to 5250	Pass
		5230	/	/	20	102	5230.040	5150 to 5250	Pass
						120	5230.120	5150 to 5250	Pass
						138	5230.080	5150 to 5250	Pass
					-30	120	5230.080	5150 to 5250	Pass
					-20	120	5230.080	5150 to 5250	Pass
					-10	120	5230.120	5150 to 5250	Pass
					0	120	5230.080	5150 to 5250	Pass
					10	120	5230.120	5150 to 5250	Pass
					30	120	5230.080	5150 to 5250	Pass
					40	120	5230.080	5150 to 5250	Pass
					50	120	5230.160	5150 to 5250	Pass
		5755	/	/	20	102	5755.120	5725 to 5850	Pass
						120	5755.080	5725 to 5850	Pass
						138	5755.080	5725 to 5850	Pass
					-30	120	5755.120	5725 to 5850	Pass
					-20	120	5755.160	5725 to 5850	Pass
					-10	120	5755.120	5725 to 5850	Pass
					0	120	5755.080	5725 to 5850	Pass
					10	120	5755.080	5725 to 5850	Pass
					30	120	5755.120	5725 to 5850	Pass
					40	120	5755.120	5725 to 5850	Pass
					50	120	5755.040	5725 to 5850	Pass
		5795	/	/	20	102	5795.080	5725 to 5850	Pass
						120	5795.040	5725 to 5850	Pass
						138	5795.080	5725 to 5850	Pass
					-30	120	5795.080	5725 to 5850	Pass
					-20	120	5795.080	5725 to 5850	Pass
					-10	120	5795.120	5725 to 5850	Pass
					0	120	5795.080	5725 to 5850	Pass
					10	120	5795.080	5725 to 5850	Pass
					30	120	5795.080	5725 to 5850	Pass
					40	120	5795.080	5725 to 5850	Pass
					50	120	5795.080	5725 to 5850	Pass
802.11ax (HE20)	SISO	5180	RU242	Left	20	102	5180.000	5150 to 5250	Pass
						120	5180.060	5150 to 5250	Pass
						138	5180.000	5150 to 5250	Pass
					-30	120	5180.040	5150 to 5250	Pass
					-20	120	5180.000	5150 to 5250	Pass
					-10	120	5180.100	5150 to 5250	Pass
					0	120	5180.080	5150 to 5250	Pass
					10	120	5180.060	5150 to 5250	Pass
					30	120	5180.060	5150 to 5250	Pass
					40	120	5180.100	5150 to 5250	Pass
					50	120	5180.000	5150 to 5250	Pass
		5200	RU242	Left	20	102	5200.100	5150 to 5250	Pass
						120	5200.040	5150 to 5250	Pass

						138	5200.100	5150 to 5250	Pass
					-30	120	5200.020	5150 to 5250	Pass
					-20	120	5200.040	5150 to 5250	Pass
					-10	120	5200.080	5150 to 5250	Pass
					0	120	5199.940	5150 to 5250	Pass
					10	120	5200.080	5150 to 5250	Pass
					30	120	5200.100	5150 to 5250	Pass
					40	120	5200.040	5150 to 5250	Pass
					50	120	5200.100	5150 to 5250	Pass
		5240	RU242	Left	20	102	5240.080	5150 to 5250	Pass
						120	5240.120	5150 to 5250	Pass
						138	5240.060	5150 to 5250	Pass
					-30	120	5240.100	5150 to 5250	Pass
					-20	120	5240.060	5150 to 5250	Pass
					-10	120	5240.100	5150 to 5250	Pass
					0	120	5239.960	5150 to 5250	Pass
					10	120	5240.080	5150 to 5250	Pass
					30	120	5240.000	5150 to 5250	Pass
					40	120	5240.120	5150 to 5250	Pass
					50	120	5240.060	5150 to 5250	Pass
		5745	RU242	Left	20	102	5745.040	5725 to 5850	Pass
						120	5745.040	5725 to 5850	Pass
						138	5745.060	5725 to 5850	Pass
					-30	120	5745.080	5725 to 5850	Pass
					-20	120	5745.060	5725 to 5850	Pass
					-10	120	5745.040	5725 to 5850	Pass
					0	120	5745.020	5725 to 5850	Pass
					10	120	5745.040	5725 to 5850	Pass
					30	120	5745.060	5725 to 5850	Pass
					40	120	5745.120	5725 to 5850	Pass
					50	120	5744.960	5725 to 5850	Pass
		5785	RU242	Left	20	102	5785.060	5725 to 5850	Pass
						120	5785.100	5725 to 5850	Pass
						138	5785.100	5725 to 5850	Pass
					-30	120	5785.000	5725 to 5850	Pass
					-20	120	5785.060	5725 to 5850	Pass
					-10	120	5785.120	5725 to 5850	Pass
					0	120	5785.080	5725 to 5850	Pass
					10	120	5785.020	5725 to 5850	Pass
					30	120	5785.080	5725 to 5850	Pass
					40	120	5785.020	5725 to 5850	Pass
					50	120	5785.020	5725 to 5850	Pass
		5825	RU242	Left	20	102	5825.040	5725 to 5850	Pass
						120	5825.040	5725 to 5850	Pass
						138	5825.060	5725 to 5850	Pass
					-30	120	5825.100	5725 to 5850	Pass
					-20	120	5825.000	5725 to 5850	Pass
					-10	120	5825.060	5725 to 5850	Pass
					0	120	5825.040	5725 to 5850	Pass
					10	120	5825.040	5725 to 5850	Pass

					30	120	5825.020	5725 to 5850	Pass
					40	120	5825.060	5725 to 5850	Pass
					50	120	5825.080	5725 to 5850	Pass
802.11ax (HE40)	SISO	5190	RU484	Left	20	102	5190.160	5150 to 5250	Pass
						120	5190.160	5150 to 5250	Pass
						138	5190.000	5150 to 5250	Pass
					-30	120	5190.080	5150 to 5250	Pass
					-20	120	5190.120	5150 to 5250	Pass
					-10	120	5190.120	5150 to 5250	Pass
					0	120	5190.040	5150 to 5250	Pass
					10	120	5190.040	5150 to 5250	Pass
					30	120	5190.160	5150 to 5250	Pass
					40	120	5190.160	5150 to 5250	Pass
					50	120	5190.160	5150 to 5250	Pass
		5230	RU484	Left	20	102	5230.040	5150 to 5250	Pass
						120	5230.080	5150 to 5250	Pass
						138	5230.080	5150 to 5250	Pass
					-30	120	5230.040	5150 to 5250	Pass
					-20	120	5230.120	5150 to 5250	Pass
					-10	120	5230.080	5150 to 5250	Pass
					0	120	5230.080	5150 to 5250	Pass
					10	120	5230.000	5150 to 5250	Pass
					30	120	5230.080	5150 to 5250	Pass
					40	120	5230.040	5150 to 5250	Pass
					50	120	5230.040	5150 to 5250	Pass
		5755	RU484	Left	20	102	5755.040	5725 to 5850	Pass
						120	5755.080	5725 to 5850	Pass
						138	5755.080	5725 to 5850	Pass
					-30	120	5755.080	5725 to 5850	Pass
					-20	120	5755.120	5725 to 5850	Pass
					-10	120	5755.160	5725 to 5850	Pass
					0	120	5755.040	5725 to 5850	Pass
					10	120	5755.120	5725 to 5850	Pass
					30	120	5755.040	5725 to 5850	Pass
					40	120	5755.080	5725 to 5850	Pass
					50	120	5755.120	5725 to 5850	Pass
		5795	RU484	Left	20	102	5795.120	5725 to 5850	Pass
						120	5795.080	5725 to 5850	Pass
						138	5795.080	5725 to 5850	Pass
					-30	120	5795.040	5725 to 5850	Pass
					-20	120	5795.120	5725 to 5850	Pass
					-10	120	5795.080	5725 to 5850	Pass
					0	120	5795.040	5725 to 5850	Pass
					10	120	5795.120	5725 to 5850	Pass
					30	120	5795.120	5725 to 5850	Pass
					40	120	5795.120	5725 to 5850	Pass
					50	120	5795.200	5725 to 5850	Pass

- End of the Report -