

TEST REPORT

Report No.: 8429EU121704W4

Applicant: Guangdong Qiming Intelligent Industrial Co., Ltd.

Address: No. 501, Building 5, No. 3, Nikeng 3rd Road, Xinlan Community, Guanlan Street, Longhua District, Shenzhen City, China

Product Name: WD_RTL8821CE_V20

Model No.: WD_RTL8821CE_V20

Trademark: N/A

FCC ID: 2BVLX-RTL8821CE

Test Standard(s): 47 CFR Part 15E

Test Result: Pass

Date of Receipt: Mar. 17, 2026

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ISSUED BY:

SHENZHEN EU TESTING LABORATORY LIMITED



Prepared by:



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2 General Information

2.1 Applicant Information

Applicant	Guangdong Qiming Intelligent Industrial Co., Ltd.
Address	No. 501, Building 5, No. 3, Nikeng 3rd Road, Xinlan Community, Guanlan Street, Longhua District, Shenzhen City, China

2.2 Manufacturer Information

Manufacturer	Guangdong Qiming Intelligent Industrial Co., Ltd.
Address	No. 501, Building 5, No. 3, Nikeng 3rd Road, Xinlan Community, Guanlan Street, Longhua District, Shenzhen City, China

2.3 Factory Information

Factory	Guangdong Qiming Intelligent Industrial Co., Ltd.
Address	No. 501, Building 5, No. 3, Nikeng 3rd Road, Xinlan Community, Guanlan Street, Longhua District, Shenzhen City, China

2.4 General Description of E.U.T.

Product Name	WD_RTL8821CE_V20
Model No. Under Test	WD_RTL8821CE_V20
List Model No.	N/A
Description of Model differentiation	N/A
Rating(s)	Supply Power: 3.3VDC
Product Type	☒ Mobile ☐ Portable ☐ Fix Location
Test Sample No.	8429EU121704W-1/2(Normal), 8429EU121704W-2/2(Engineering)
Hardware Version	N/A
Software Version	N/A
Remark	For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.5 Technical Information of E.U.T.

Network and Wireless Connectivity	Bluetooth (BDR+EDR+BLE) WiFi 2.4G: 802.11b, 802.11g, 802.11n(HT20/40) WiFi 5G: 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80) U-NII-1/3
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The requirement for the following technical information of the EUT was tested in this report:

Technology	WiFi 5G
Modulation Type	a, n(HT20/40), ac(VHT20/40/80)
Operating Frequency	U-NII-1: 5150 MHz to 5250 MHz U-NII-3: 5725 MHz to 5850 MHz
Modulation Type	802.11a: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Number of Channels	802.11a/n(HT20)/ac(VHT20): U-NII Band 1: 4; U-NII Band 3: 5; 802.11n(HT40)/ac(VHT40): U-NII Band 1: 2; U-NII Band 3: 2; 802.11ac(VHT80): U-NII Band 1: 1 U-NII Band 3: 1
Antenna System (eg., MIMO, Smart Antenna)	N/A
Categorization as Correlated or Completely Uncorrelated	N/A
Antenna Type	Columnar Antenna
Antenna Gain(Peak)	3.71 dBi
Remark	The above information are declared by the applicant, EU-LAB is not responsible for the information accuracy provided by the applicant.

All channels were listed on the following table:

Bandwidth:	20MHz	Bandwidth:	40MHz	Bandwidth:	80MHz
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230	/	/
44	5220	/	/	/	/
48	5240	/	/	/	/
Bandwidth:	20MHz	Bandwidth:	40MHz	Bandwidth:	80MHz
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755	155	5775
153	5765	159	5795	/	/
157	5785	/	/	/	/
161	5805	/	/	/	/
165	5825	/	/	/	/

3 Test Summary

3.1 Test Standard

The tests were performed according to following standards:

47 CFR Part 15E: Unlicensed National Information Infrastructure Devices

Remark:

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product maybe which result in lowering the emission/immunity should be checked to ensure compliance has been maintained.

3.2 Test Verdict

Test Items	Standard	Method	Requirement	Results
Antenna requirement	47 CFR Part 15E	---	Part 15.203	Pass
Duty Cycle	47 CFR Part 15E	ANSI C63.10-2020+Cor.1-2023 section 12.2 (b)	---	Pass
Emission bandwidth and occupied bandwidth	47 CFR Part 15E	ANSI C63.10-2020+Cor.1-2023, section 6.9 & 12.5 KDB 789033 D02, Clause C.2	U-NII 1, U-NII 2A, U-NII 2C: No limits, 47 CFR Part 15.407(e)	Pass
Maximum conducted output power	47 CFR Part 15E	ANSI C63.10-2020+Cor.1-2023, section 12.4	47 CFR Part 15.407(a)(1)(i) 47 CFR Part 15.407(a)(1)(ii) 47 CFR Part 15.407(a)(1)(iii) 47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(3)(i)	Pass
Power spectral density	47 CFR Part 15E	ANSI C63.10-2020+Cor.1-2023, section 12.6	47 CFR Part 15.407(a)(1)(i) 47 CFR Part 15.407(a)(1)(ii) 47 CFR Part 15.407(a)(1)(iii) 47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(3)(i)	Pass
Frequency stability	47 CFR Part 15E	ANSI C63.10-2020+Cor.1-2023, section 6.8	47 CFR Part 15.407(g)	Pass
Band edge emissions (Conducted)	47 CFR Part 15E	ANSI C63.10-2020+Cor.1-2023, section 12.7.4, 12.7.6, 12.7.7	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)	Pass
Band edge emissions (Radiated)	47 CFR Part 15E	ANSI C63.10-2020+Cor.1-2023, section 12.7.4,	47 CFR Part 15.407(b)(1) 47 CFR Part	Pass

		12.7.6, 12.7.7	15.407(b)(4) 47 CFR Part 15.407(b)(10)	
Undesirable emission limits (below 1GHz)	47 CFR Part 15E	ANSI C63.10-2020+Cor.1-2023, section 12.7.4, 12.7.5	47 CFR Part 15.407(b)(9)	Pass
Undesirable emission limits (above 1GHz)	47 CFR Part 15E	ANSI C63.10-2020+Cor.1-2023, section 12.7.4, 12.7.6, 12.7.7	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)	Pass
Note: (1) "N/A" denotes test is not applicable in this Test Report.				

3.3 Test Laboratory

Test Laboratory	Shenzhen EU Testing Laboratory Limited
Address	101, Building B1, Fuqiao Fourth Area, Qiaotou Community, Fuhai Subdistrict, Baoan District, Shenzhen, Guangdong, China
Designation Number	CN1368
Test Firm Registration Number	952583

4 Test Configuration

4.1 Test Environment

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	30% to 60%	
Atmospheric Pressure	86 kPa to 106 kPa	
Temperature	NT (Normal Temperature)	+15°C to +35°C
Working Voltage of the EUT	NV (Normal Voltage)	3.3VDC

4.2 Test Equipment

Band edge emissions (Conducted) Duty Cycle Emission bandwidth and occupied bandwidth Maximum conducted output power Power spectral density Frequency stability					
Equipment	Manufacturer	Model No	Serial No	Cal Date	Cal Due Date
MXA Signal Analyzer	Agilent	N9020A	EE-011	2026-01-07	2027-01-06
MXG RF Vector Signal Generator	Agilent	N5182A	EE-012	2026-01-07	2027-01-06
MIMO Power Measurement Module	TSTPASS	TSPS 2023R	EE-016	2026-01-07	2027-01-06
Wideband Radio Communication Tester	ROHDE & SCHWARZ	CMW500	EE-402	2026-02-13	2027-02-12
MXG RF Analog Signal Generator	Agilent	N5181A	EE-406	2026-02-13	2027-02-12
Power Meter	Anritsu	ML2495A	EE-416	2026-02-13	2027-02-12
Constant Temperature Humidity Chamber	Guangxin	GXP-401	ES-002	2025-07-29	2026-07-28
RF Test Software	TSTPASS	TS32893 V2.0	EE-017	/	/

Band edge emissions (Radiated)					
Undesirable emission limits (above 1GHz)					
Equipment	Manufacturer	Model No	Serial No	Cal Date	Cal Due Date
EMI Test Receiver	ROHDE & SCHWARZ	ESPI	EE-006	2026-01-07	2027-01-06
Double Ridged Horn Antenna	A-INFOMW	LB-10180-NF	EE-008	2026-01-11	2029-01-10
Pre-amplifier	Agilent	8449B	EE-010	2026-01-07	2027-01-06
MXG RF Vector Signal Generator	Agilent	N5182A	EE-012	2026-01-07	2027-01-06
DRG Horn Antenna	SCHWARZBECK	BBHA 9170	EE-410	2026-02-13	2027-02-12
Pre-amplifier	SKET	LNPA-1840-50	EE-411	2026-02-13	2027-02-12
Test Software	Farad	EZ-EMC	EE-015	/	/

Undesirable emission limits (below 1GHz)					
Equipment	Manufacturer	Model No	Serial No	Cal Date	Cal Due Date
EMI Test Receiver	ROHDE & SCHWARZ	ESPI	EE-006	2026-01-07	2027-01-06
Bilog Broadband Antenna	SCHWARZBECK	VULB 9163	EE-007	2026-01-13	2029-01-12
Pre-amplifier	Agilent	8447D	EE-009	2026-01-07	2027-01-06
MXA Signal Analyzer	Agilent	N9020A	EE-011	2026-01-07	2027-01-06
Loop Antenna	TESEQ	HLA6121	EE-403	2026-02-13	2027-02-12
Test Software	Farad	EZ-EMC	EE-015	/	/

4.3 Description of Support Unit

No.	Title	Manufacturer	Model No.	Serial No.
1	NoteBook	Shenzhen Shenzhou Computer Co., Ltd.	CNB5S03	--

4.4 Test Mode

No.	Test Modes	Description
TM1	802.11a Mode	Keep the EUT in 802.11a transmitting mode at lowest, middle and highest channel.
TM2	802.11n(HT20) Mode	Keep the EUT in 802.11n(HT20) transmitting mode at lowest, middle and highest channel.
TM3	802.11n(HT40) Mode	Keep the EUT in 802.11n(HT40) transmitting mode at lowest, middle and highest channel.
TM4	802.11ac(VHT20) Mode	Keep the EUT in 802.11ac(VHT20) transmitting mode at lowest, middle and highest channel.
TM5	802.11ac(VHT40) Mode	Keep the EUT in 802.11ac(VHT40) transmitting mode at lowest, middle and highest channel.
TM6	802.11ac(VHT80) Mode	Keep the EUT in 802.11ac(VHT80) transmitting mode at lowest, middle and highest channel.

4.5 Description of Calculation

4.5.1 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS \text{ (dBuV/m)} = RA \text{ (dBuV)} + AF \text{ (dB/m)} + CL \text{ (dB)} - AG \text{ (dB)}$$

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

4.5.2 Disturbance Calculation

The AC mains conducted disturbance is calculated by adding the 10dB Pulse Limiter and Cable Factor and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$CD \text{ (dBuV)} = RA \text{ (dBuV)} + PL \text{ (dB)} + CL \text{ (dB)}$$

Where CD = Conducted Disturbance	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	PL = 10 dB Pulse Limiter Factor

4.6 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test Item	Measurement Uncertainty
Conducted Emission	2.64 dB
Time of Occupancy (Dwell Time)	1.8 %
Occupied Channel Bandwidth	70 kHz
RF output power, conducted	1.04 dB
Power Spectral Density, conducted	0.91 dB
Unwanted Emissions, conducted	2.72 dB
Radiated Emission (1GHz- 18GHz)	Ur = 3.50 dB (Horizontal) Ur = 3.50 dB (Vertical)
Radiated Emission (9kHz- 30MHz)	Ur = 2.50 dB
Radiated Emission (30MHz- 1GHz)	Ur = 2.70 dB (Horizontal) Ur = 2.70 dB (Vertical)
Radiated Emission (18GHz- 40GHz)	Ur = 5.15 dB (Horizontal) Ur = 5.24 dB (Vertical)

4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Condition

None

5 Evaluation Results (Evaluation)

5.1 Antenna requirement

5.1.1 Test Specification

Test Requirement:	Refer to 47 CFR Part 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.
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5.1.2 Test Data

PASS.

The Antenna Anti-Replacement as following method:

Protected Method	Description
The antenna is embedded in the product.	An embedded-in antenna-design is used.

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

6 Radio Spectrum Matter Test Results (RF)

6.1 Duty Cycle

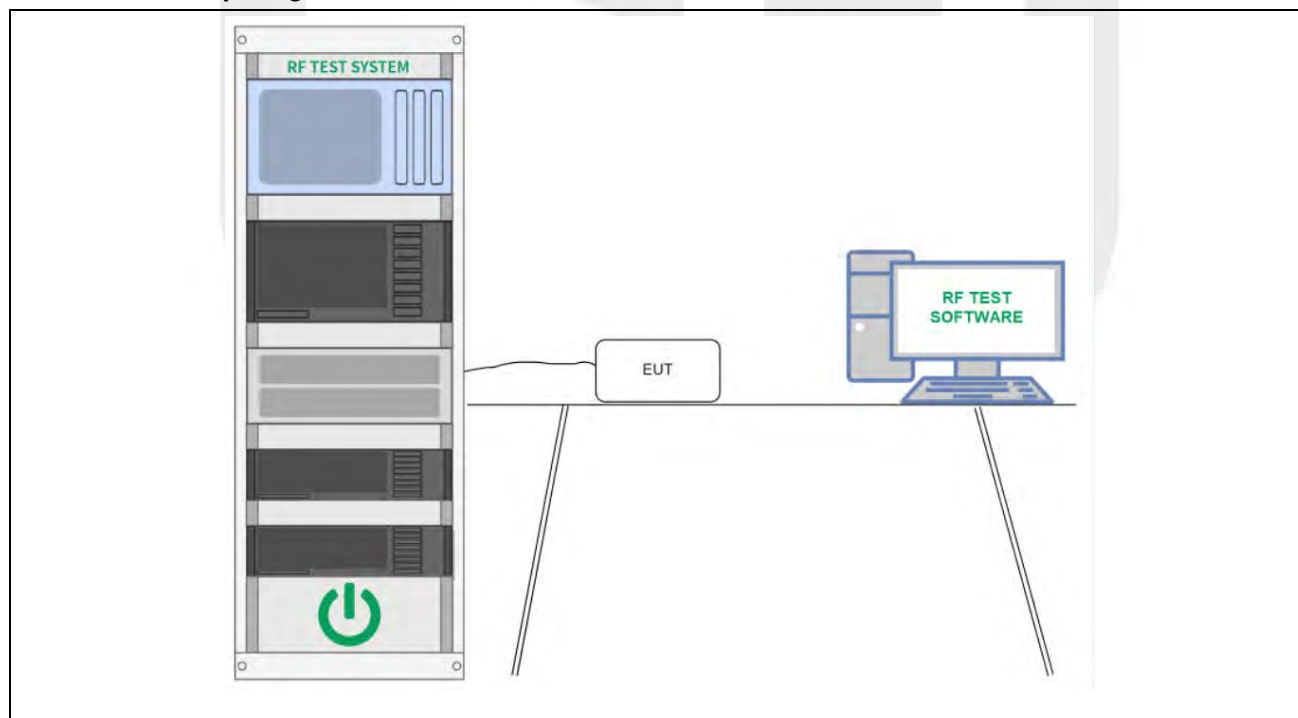
6.1.1 Test Specification

Test Requirement:	All measurements are to be performed with the EUT transmitting at 100% duty cycle at its maximum power control level; however, if 100% duty cycle cannot be achieved, measurements of duty cycle, x , and maximum-power transmission duration, T , are required for each tested mode of operation.
Test Limit:	No limits, only for report use.
Test Method:	ANSI C63.10-2020+Cor.1-2023 section 12.2 (b)
Procedure:	i) Set the center frequency of the instrument to the center frequency of the transmission. ii) Set RBW $\geq$ EBW if possible; otherwise, set RBW to the largest available value. iii) Set VBW $\geq$ RBW. iv) Set detector = peak. v) The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$, where T is defined in item a1) of 12.2, and the number of sweep points across duration T exceeds 100.

6.1.2 E.U.T. Operation

Pre test mode:	TM1, TM2, TM3, TM4, TM5, TM6
Final test mode:	TM1, TM2, TM3, TM4, TM5, TM6

6.1.3 Test Setup Diagram



6.1.4 Test Data

PASS.

Please refer to Annex D for details.

6.2 Emission bandwidth and occupied bandwidth

6.2.1 Test Specification

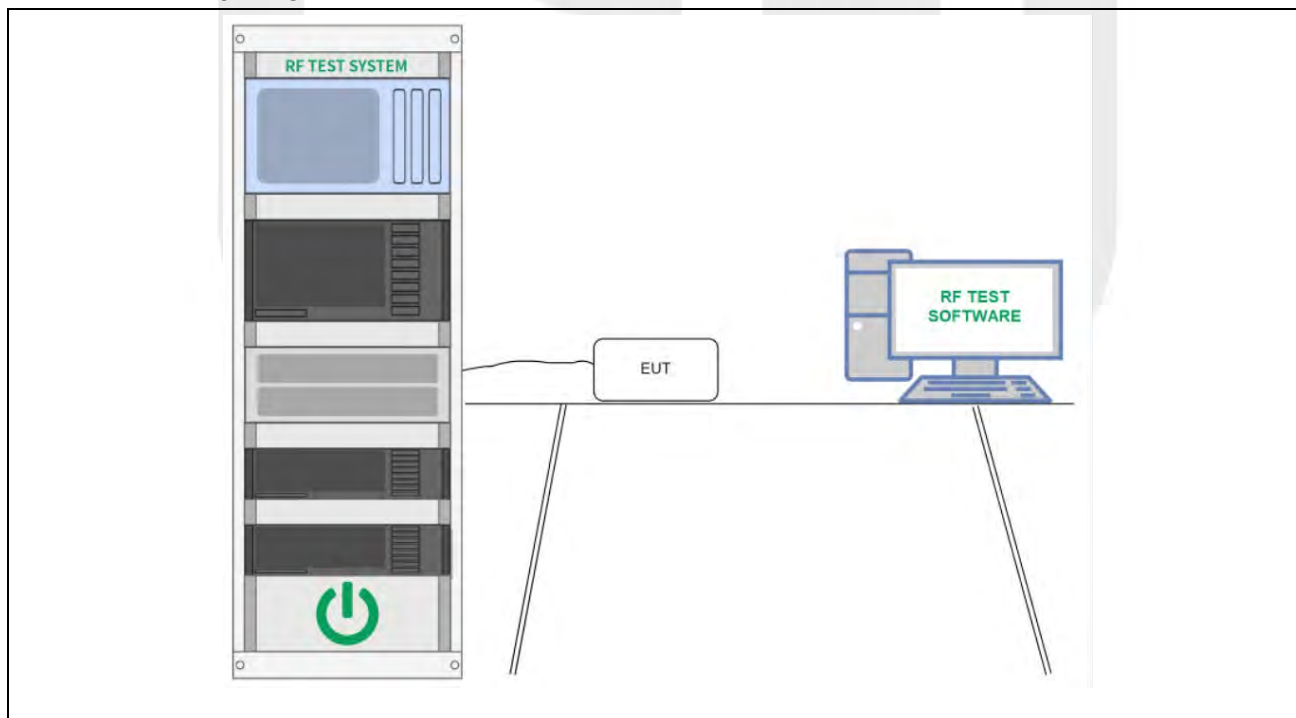
Test Requirement:	U-NII 1, U-NII 2A, U-NII 2C: No limits, only for report use. U-NII 3, U-NII 4: 47 CFR Part 15.407(e)
Test Limit:	U-NII 1, U-NII 2A, U-NII 2C: No limits, only for report use. U-NII 3, U-NII 4: Within the 5.725-5.850 GHz and 5.850-5.895 GHz bands, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.
Test Method:	ANSI C63.10-2020+Cor.1-2023, section 6.9 & 12.5 KDB 789033 D02, Clause C.2
Procedure:	Emission bandwidth: - Set RBW = approximately 1% of the emission bandwidth. - Set the VBW > RBW. - Detector = peak. - Trace mode = max hold. - Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the instrument. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%. Occupied bandwidth: - The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW. - The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement. - Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level. Specific guidance is given in 4.1.5.2. - Step a) through step c) might require iteration to adjust within the specified range. - Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used. - Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth. - If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until

	99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies. h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s). 6 dB emission bandwidth: a) Set RBW = 100 kHz. b) Set the video bandwidth (VBW) $\geq 3 \times$ RBW. c) Detector = Peak. d) Trace mode = max hold. e) Sweep = auto couple. f) Allow the trace to stabilize. g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
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6.2.2 E.U.T. Operation

Pre test mode:	TM1, TM2, TM3, TM4, TM5, TM6
Final test mode:	TM1, TM2, TM3, TM4, TM5, TM6

6.2.3 Test Setup Diagram



6.2.4 Test Data

PASS.

Please refer to Annex D for details.

6.3 Maximum conducted output power

6.3.1 Test Specification

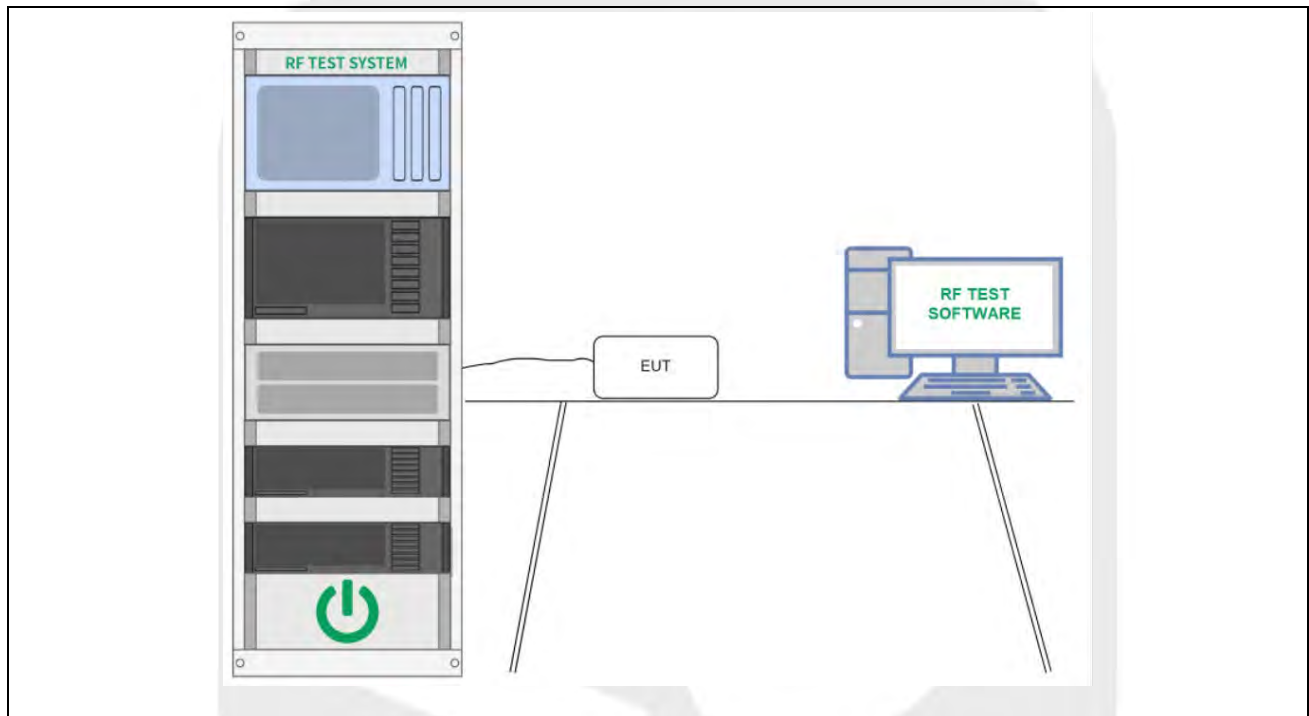
Test Requirement:	47 CFR Part 15.407(a)(1)(i) 47 CFR Part 15.407(a)(1)(ii) 47 CFR Part 15.407(a)(1)(iii) 47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(3)(i)
Test Limit:	For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm). For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations. For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally

	installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
Test Method:	ANSI C63.10-2020+Cor.1-2023, section 12.4
Procedure:	Refer to ANSI C63.10-2020+Cor.1-2023 section 12.4

6.3.2 E.U.T. Operation

Pre test mode:	TM1, TM2, TM3, TM4, TM5, TM6
Final test mode:	TM1, TM2, TM3, TM4, TM5, TM6

6.3.3 Test Setup Diagram



6.3.4 Test Data

PASS.

Please refer to Annex D for details.

6.4 Power spectral density

6.4.1 Test Specification

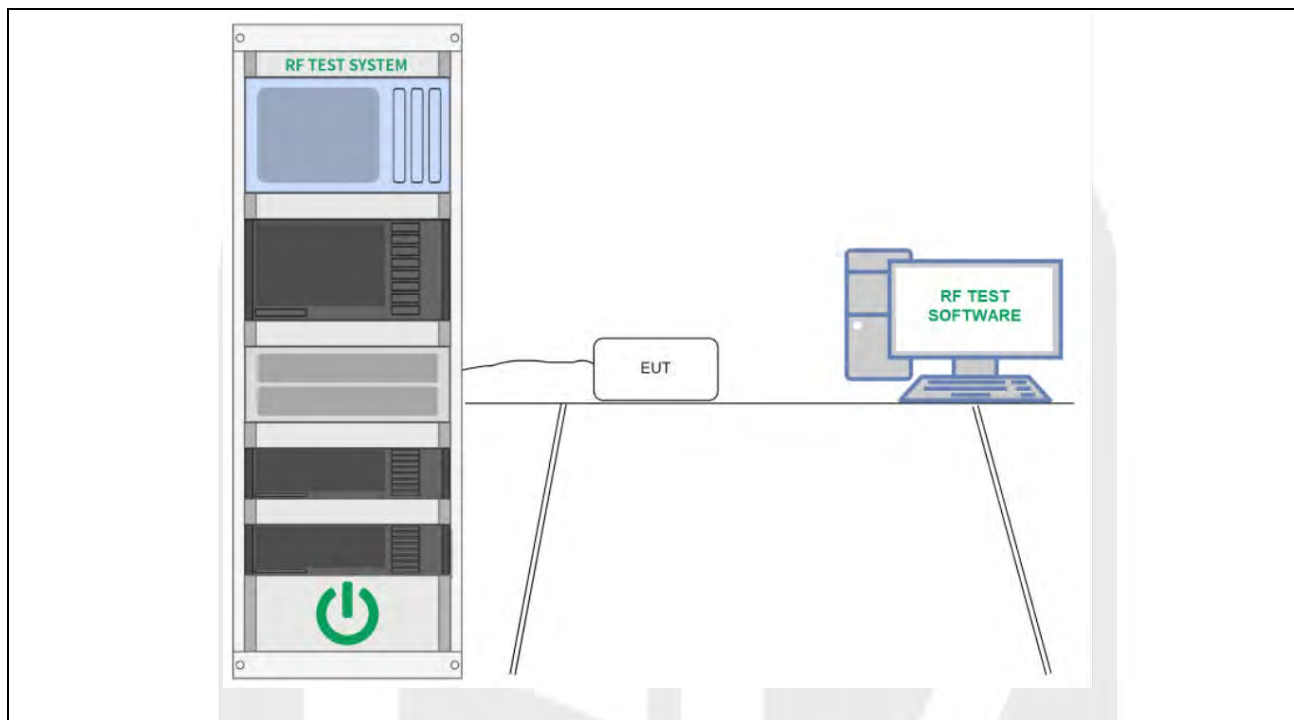
Test Requirement:	47 CFR Part 15.407(a)(1)(i) 47 CFR Part 15.407(a)(1)(ii) 47 CFR Part 15.407(a)(1)(iii) 47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(3)(i)
Test Limit:	For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations. For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. For the band 5.725-5.850 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
Test Method:	ANSI C63.10-2020+Cor.1-2023, section 12.6

Procedure:	Refer to ANSI C63.10-2020+Cor.1-2023, section 12.6
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6.4.2 E.U.T. Operation

Pre test mode:	TM1, TM2, TM3, TM4, TM5, TM6
Final test mode:	TM1, TM2, TM3, TM4, TM5, TM6

6.4.3 Test Setup Diagram



6.4.4 Test Data

PASS.

Please refer to Annex D for details.

6.5 Frequency stability

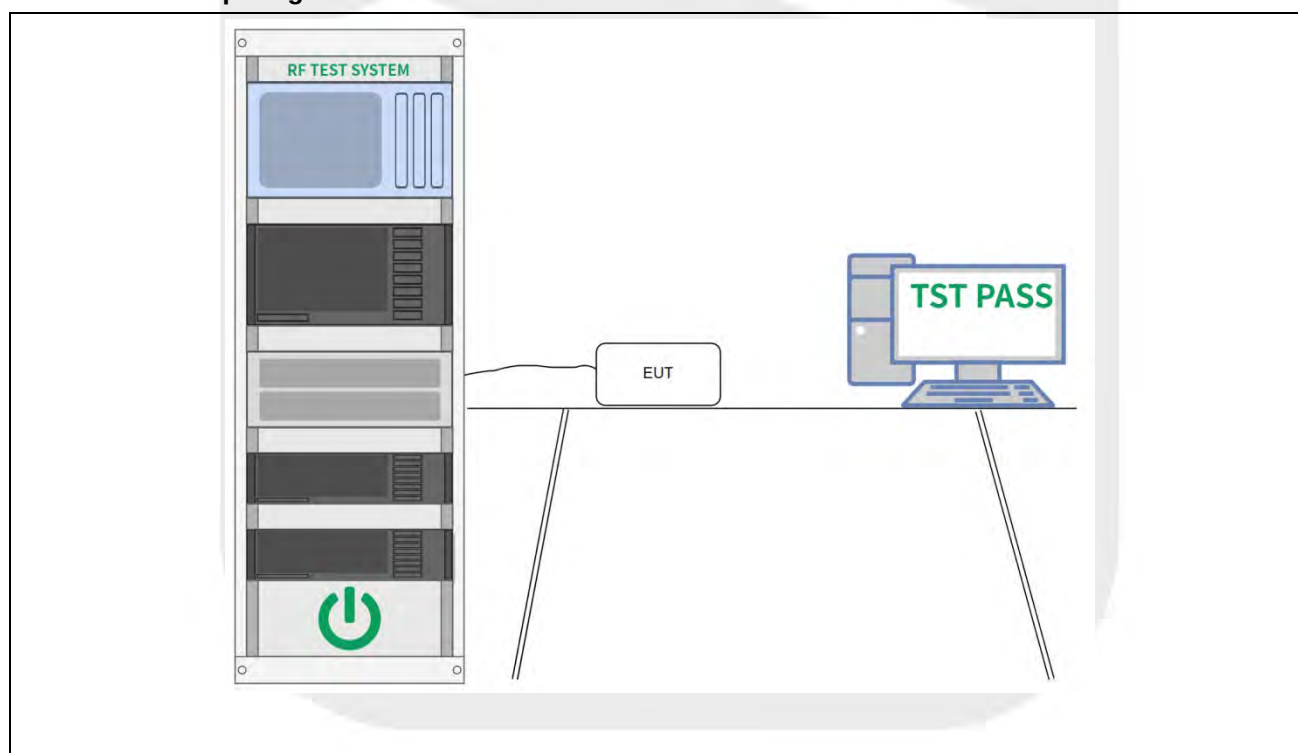
6.5.1 Test Specification

Test Requirement:	47 CFR Part 15.407(g)
Test Limit:	Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.
Test Method:	ANSI C63.10-2020+Cor.1-2023, section 6.8
Procedure:	Refer to ANSI C63.10-2020+Cor.1-2023 section 6.8

6.5.2 E.U.T. Operation

Pre test mode:	TM1, TM2, TM3, TM4, TM5, TM6
Final test mode:	TM1, TM2, TM3, TM4, TM5, TM6

6.5.3 Test Setup Diagram



6.5.4 Test Data

PASS.

Please refer to Annex D for details.

6.6 Band edge emissions (Conducted)

6.6.1 Test Specification

Test Requirement:	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)			
Test Limit:	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.			
	For transmitters operating solely in the 5.725-5.850 GHz band: 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.			
	MHz	MHz	MHz	GHz
	0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
	¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
	2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
	4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
	4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
	4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
	6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
	6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
	6.31175-6.31225	123-138	2200-2300	14.47-14.5
	8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
	8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
	8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
	8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
	12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
	12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
	12.57675-12.57725	322-335.4	3600-4400	(²)
	13.36-13.41			
¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.				
² Above 38.6				
The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in § 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in § 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in § 15.209 shall be demonstrated				

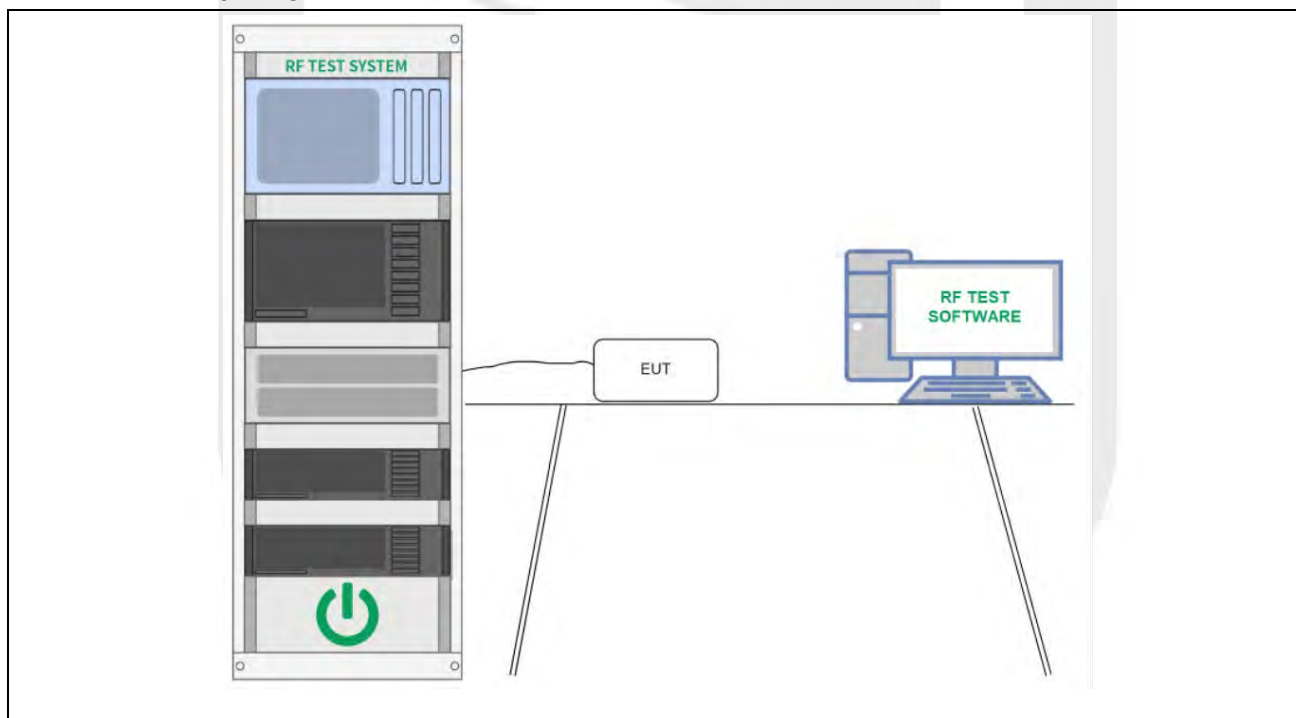
	based on the average value of the measured emissions. The provisions in § 15.35 apply to these measurements. Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table: <table><tr><th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr><tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr><tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr><tr><td>1.705-30.0</td><td>30</td><td>30</td></tr><tr><td>30-88</td><td>100 **</td><td>3</td></tr><tr><td>88-216</td><td>150 **</td><td>3</td></tr><tr><td>216-960</td><td>200 **</td><td>3</td></tr><tr><td>Above 960</td><td>500</td><td>3</td></tr></table> ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.	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
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																							
Test Method:	ANSI C63.10-2020+Cor.1-2023, section 12.7.4, 12.7.6, 12.7.7																								
Procedure:	Above 1GHz: 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.
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6.6.2 E.U.T. Operation

Pre test mode:	TM1, TM2, TM3, TM4, TM5, TM6
Final test mode:	TM1, TM2, TM3, TM4, TM5, TM6

6.6.3 Test Setup Diagram



6.6.4 Test Data

PASS.

Please refer to Annex D for details.

6.7 Band edge emissions (Radiated)

6.7.1 Test Specification

Test Requirement:	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)				
Test Limit:	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.				
	For transmitters operating solely in the 5.725-5.850 GHz band: 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.				
	MHz	MHz	MHz	GHz	
	0.090-0.110	16.42-16.423	399.9-410	4.5-5.15	
	¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46	
	2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75	
	4.125-4.128	25.5-25.67	1300-1427	8.025-8.5	
	4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2	
	4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5	
	6.215-6.218	74.8-75.2	1660-1710	10.6-12.7	
	6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4	
	6.31175-6.31225	123-138	2200-2300	14.47-14.5	
	8.291-8.294	149.9-150.05	2310-2390	15.35-16.2	
	8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4	
	8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12	
	8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0	
	12.29-12.293	167.72-173.2	3332-3339	31.2-31.8	
	12.51975-12.52025	240-285	3345.8-3358	36.43-36.5	
	12.57675-12.57725	322-335.4	3600-4400	(²)	
	13.36-13.41				
	¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.				
	² Above 38.6				
	The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in § 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in § 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in § 15.209 shall be demonstrated				

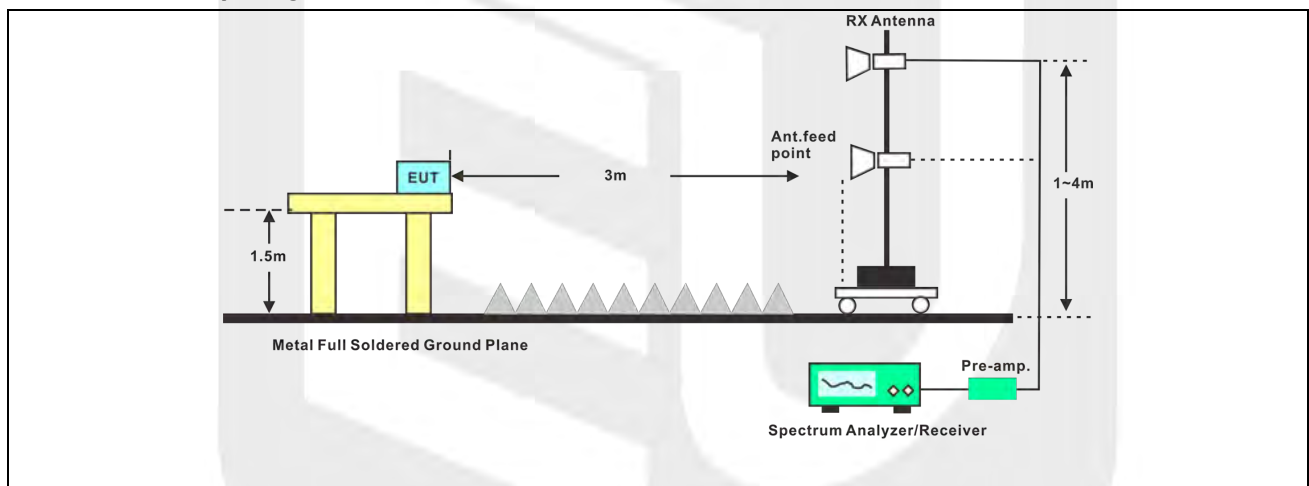
	based on the average value of the measured emissions. The provisions in § 15.35 apply to these measurements. Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table: <table><tr><th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr><tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr><tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr><tr><td>1.705-30.0</td><td>30</td><td>30</td></tr><tr><td>30-88</td><td>100 **</td><td>3</td></tr><tr><td>88-216</td><td>150 **</td><td>3</td></tr><tr><td>216-960</td><td>200 **</td><td>3</td></tr><tr><td>Above 960</td><td>500</td><td>3</td></tr></table> ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.	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
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																							
Test Method:	ANSI C63.10-2020+Cor.1-2023, section 12.7.4, 12.7.6, 12.7.7																								
Procedure:	Above 1GHz: 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.
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6.7.2 E.U.T. Operation

Pre test mode:	TM1, TM2, TM3, TM4, TM5, TM6
Final test mode:	TM1, TM2, TM3, TM4, TM5, TM6

6.7.3 Test Setup Diagram



6.7.4 Test Data

PASS.

Please refer to the following pages.

Band Edge Emissions Test Data:
U-NII-1:

Test Mode: 802.11a					CH Low: 5180 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5150.00	47.52	5.79	53.31	68.23	-14.93	PK	PASS
H	5350.00	45.74	6.45	52.19	68.23	-16.05	PK	PASS
V	5150.00	48.38	5.79	54.17	68.23	-14.06	PK	PASS
V	5350.00	45.36	6.45	51.81	68.23	-16.43	PK	PASS
H	5150.00	36.20	5.79	41.99	54.00	-12.01	AV	PASS
H	5350.00	31.78	6.45	38.23	54.00	-15.77	AV	PASS
V	5150.00	36.93	5.79	42.72	54.00	-11.28	AV	PASS
V	5350.00	33.77	6.45	40.22	54.00	-13.78	AV	PASS

Test Mode: 802.11a					CH High: 5240 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5150.00	48.88	5.79	54.67	68.23	-13.56	PK	PASS
H	5350.00	46.86	6.45	53.31	68.23	-14.93	PK	PASS
V	5150.00	48.64	5.79	54.43	68.23	-13.80	PK	PASS
V	5350.00	45.64	6.45	52.09	68.23	-16.15	PK	PASS
H	5150.00	35.95	5.79	41.74	54.00	-12.26	AV	PASS
H	5350.00	32.33	6.45	38.78	54.00	-15.22	AV	PASS
V	5150.00	36.25	5.79	42.04	54.00	-11.97	AV	PASS
V	5350.00	33.27	6.45	39.72	54.00	-14.28	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-1:

Test Mode: 802.11n(HT20)					CH Low: 5180 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5150.00	48.59	5.79	54.38	68.23	-13.86	PK	PASS
H	5350.00	44.25	6.45	50.70	68.23	-17.54	PK	PASS
V	5150.00	49.82	5.79	55.61	68.23	-12.62	PK	PASS
V	5350.00	46.52	6.45	52.97	68.23	-15.27	PK	PASS
H	5150.00	36.22	5.79	42.01	54.00	-11.99	AV	PASS
H	5350.00	31.03	6.45	37.48	54.00	-16.53	AV	PASS
V	5150.00	35.70	5.79	41.49	54.00	-12.52	AV	PASS
V	5350.00	32.10	6.45	38.55	54.00	-15.46	AV	PASS

Test Mode: 802.11n(HT20)					CH High: 5240 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5150.00	49.60	5.79	55.39	68.23	-12.85	PK	PASS
H	5350.00	45.36	6.45	51.81	68.23	-16.42	PK	PASS
V	5150.00	48.95	5.79	54.74	68.23	-13.50	PK	PASS
V	5350.00	46.92	6.45	53.37	68.23	-14.86	PK	PASS
H	5150.00	34.08	5.79	39.87	54.00	-14.13	AV	PASS
H	5350.00	31.37	6.45	37.82	54.00	-16.18	AV	PASS
V	5150.00	34.99	5.79	40.78	54.00	-13.23	AV	PASS
V	5350.00	32.57	6.45	39.02	54.00	-14.98	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-1:

Test Mode: 802.11n(HT40)					CH Low: 5190 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5150.00	49.56	5.79	55.35	68.23	-12.89	PK	PASS
H	5350.00	46.73	6.45	53.18	68.23	-15.06	PK	PASS
V	5150.00	49.42	5.79	55.21	68.23	-13.02	PK	PASS
V	5350.00	46.66	6.45	53.11	68.23	-15.12	PK	PASS
H	5150.00	34.05	5.79	39.84	54.00	-14.17	AV	PASS
H	5350.00	31.22	6.45	37.67	54.00	-16.33	AV	PASS
V	5150.00	35.68	5.79	41.47	54.00	-12.54	AV	PASS
V	5350.00	31.91	6.45	38.36	54.00	-15.64	AV	PASS

Test Mode: 802.11n(HT40)					CH High: 5230 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5150.00	49.95	5.79	55.74	68.23	-12.50	PK	PASS
H	5350.00	44.19	6.45	50.64	68.23	-17.59	PK	PASS
V	5150.00	47.84	5.79	53.63	68.23	-14.60	PK	PASS
V	5350.00	46.49	6.45	52.94	68.23	-15.29	PK	PASS
H	5150.00	34.96	5.79	40.75	54.00	-13.26	AV	PASS
H	5350.00	32.98	6.45	39.43	54.00	-14.57	AV	PASS
V	5150.00	34.54	5.79	40.33	54.00	-13.68	AV	PASS
V	5350.00	31.27	6.45	37.72	54.00	-16.28	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-1:

Test Mode: 802.11ac(VHT20)					CH Low: 5180 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5150.00	48.82	5.79	54.61	68.23	-13.62	PK	PASS
H	5350.00	46.75	6.45	53.20	68.23	-15.03	PK	PASS
V	5150.00	49.72	5.79	55.51	68.23	-12.72	PK	PASS
V	5350.00	44.98	6.45	51.43	68.23	-16.80	PK	PASS
H	5150.00	34.76	5.79	40.55	54.00	-13.45	AV	PASS
H	5350.00	32.56	6.45	39.01	54.00	-15.00	AV	PASS
V	5150.00	36.50	5.79	42.29	54.00	-11.71	AV	PASS
V	5350.00	31.36	6.45	37.81	54.00	-16.19	AV	PASS

Test Mode: 802.11ac(VHT20)					CH High: 5240 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5150.00	49.25	5.79	55.04	68.23	-13.20	PK	PASS
H	5350.00	45.99	6.45	52.44	68.23	-15.79	PK	PASS
V	5150.00	48.40	5.79	54.19	68.23	-14.05	PK	PASS
V	5350.00	44.53	6.45	50.98	68.23	-17.26	PK	PASS
H	5150.00	34.84	5.79	40.63	54.00	-13.37	AV	PASS
H	5350.00	33.56	6.45	40.01	54.00	-13.99	AV	PASS
V	5150.00	36.18	5.79	41.97	54.00	-12.03	AV	PASS
V	5350.00	32.63	6.45	39.08	54.00	-14.93	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-1:

Test Mode: 802.11 ac(VHT40)					CH Low: 5190 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5150.00	49.52	5.79	55.31	68.23	-12.93	PK	PASS
H	5350.00	44.39	6.45	50.84	68.23	-17.40	PK	PASS
V	5150.00	47.50	5.79	53.29	68.23	-14.94	PK	PASS
V	5350.00	45.97	6.45	52.42	68.23	-15.82	PK	PASS
H	5150.00	35.38	5.79	41.17	54.00	-12.83	AV	PASS
H	5350.00	32.69	6.45	39.14	54.00	-14.86	AV	PASS
V	5150.00	35.44	5.79	41.23	54.00	-12.78	AV	PASS
V	5350.00	32.20	6.45	38.65	54.00	-15.36	AV	PASS

Test Mode: 802.11 ac(VHT40)					CH High: 5230 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5150.00	49.05	5.79	54.84	68.23	-13.40	PK	PASS
H	5350.00	45.18	6.45	51.63	68.23	-16.60	PK	PASS
V	5150.00	48.43	5.79	54.22	68.23	-14.01	PK	PASS
V	5350.00	45.32	6.45	51.77	68.23	-16.47	PK	PASS
H	5150.00	36.63	5.79	42.42	54.00	-11.58	AV	PASS
H	5350.00	31.86	6.45	38.31	54.00	-15.70	AV	PASS
V	5150.00	36.79	5.79	42.58	54.00	-11.43	AV	PASS
V	5350.00	32.17	6.45	38.62	54.00	-15.38	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-1:

Test Mode: 802.11ac(VHT80)					CH: 5210 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5150.00	47.53	5.79	53.32	68.23	-14.91	PK	PASS
H	5350.00	44.56	6.45	51.01	68.23	-17.22	PK	PASS
V	5150.00	48.27	5.79	54.06	68.23	-14.18	PK	PASS
V	5350.00	46.62	6.45	53.07	68.23	-15.17	PK	PASS
H	5150.00	35.12	5.79	40.91	54.00	-13.10	AV	PASS
H	5350.00	33.25	6.45	39.70	54.00	-14.30	AV	PASS
V	5150.00	34.91	5.79	40.70	54.00	-13.31	AV	PASS
V	5350.00	33.51	6.45	39.96	54.00	-14.05	AV	PASS

Test Mode: 802.11 ac(VHT80)					CH: 5210 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5150.00	49.12	5.79	54.91	68.23	-13.32	PK	PASS
H	5350.00	46.50	6.45	52.95	68.23	-15.29	PK	PASS
V	5150.00	47.42	5.79	53.21	68.23	-15.03	PK	PASS
V	5350.00	46.24	6.45	52.69	68.23	-15.55	PK	PASS
H	5150.00	35.72	5.79	41.51	54.00	-12.49	AV	PASS
H	5350.00	31.37	6.45	37.82	54.00	-16.18	AV	PASS
V	5150.00	36.30	5.79	42.09	54.00	-11.91	AV	PASS
V	5350.00	31.61	6.45	38.06	54.00	-15.95	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-3:

Test Mode: 802.11a					CH Low: 5745 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5650.00	45.98	7.55	53.53	68.23	-14.71	PK	PASS
H	5700.00	48.19	7.56	55.75	105.23	-49.49	PK	PASS
H	5720.00	47.04	7.59	54.63	110.83	-56.21	PK	PASS
H	5725.00	50.89	7.68	58.57	122.23	-63.67	PK	PASS
V	5650.00	44.26	7.55	51.81	68.23	-16.42	PK	PASS
V	5700.00	45.91	7.56	53.47	105.23	-51.77	PK	PASS
V	5720.00	47.20	7.59	54.79	110.83	-56.04	PK	PASS
V	5725.00	49.28	7.68	56.96	122.23	-65.28	PK	PASS
H	5650.00	28.83	7.55	36.38	54.00	-17.62	AV	PASS
H	5700.00	30.81	7.56	38.37	54.00	-15.63	AV	PASS
H	5720.00	33.33	7.59	40.92	54.00	-13.08	AV	PASS
H	5725.00	37.59	7.68	45.27	54.00	-8.74	AV	PASS
V	5650.00	29.28	7.55	36.83	54.00	-17.18	AV	PASS
V	5700.00	31.52	7.56	39.08	54.00	-14.93	AV	PASS
V	5720.00	33.72	7.59	41.31	54.00	-12.70	AV	PASS
V	5725.00	36.79	7.68	44.47	54.00	-9.53	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-3:

Test Mode: 802.11a					CH High: 5825 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5850.00	51.15	7.55	58.70	122.23	-63.53	PK	PASS
H	5855.00	48.95	7.56	56.51	110.83	-54.32	PK	PASS
H	5875.00	47.02	7.59	54.61	105.23	-50.62	PK	PASS
H	5925.00	45.82	7.68	53.50	68.23	-14.73	PK	PASS
V	5850.00	50.81	7.55	58.36	122.23	-63.88	PK	PASS
V	5855.00	47.11	7.56	54.67	110.83	-56.17	PK	PASS
V	5875.00	45.30	7.59	52.89	105.23	-52.34	PK	PASS
V	5925.00	44.69	7.68	52.37	68.23	-15.86	PK	PASS
H	5850.00	34.47	7.55	42.02	54.00	-11.98	AV	PASS
H	5855.00	32.01	7.56	39.57	54.00	-14.44	AV	PASS
H	5875.00	31.36	7.59	38.95	54.00	-15.05	AV	PASS
H	5925.00	29.67	7.68	37.35	54.00	-16.66	AV	PASS
V	5850.00	36.07	7.55	43.62	54.00	-10.39	AV	PASS
V	5855.00	34.59	7.56	42.15	54.00	-11.86	AV	PASS
V	5875.00	33.85	7.59	41.44	54.00	-12.57	AV	PASS
V	5925.00	28.50	7.68	36.18	54.00	-17.83	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-3:

Test Mode: 802.11n(HT20)					CH Low: 5745 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5650.00	46.44	7.55	53.99	68.23	-14.25	PK	PASS
H	5700.00	46.81	7.56	54.37	105.23	-50.86	PK	PASS
H	5720.00	47.36	7.59	54.95	110.83	-55.88	PK	PASS
H	5725.00	51.74	7.68	59.42	122.23	-62.81	PK	PASS
V	5650.00	46.70	7.55	54.25	68.23	-13.99	PK	PASS
V	5700.00	48.31	7.56	55.87	105.23	-49.36	PK	PASS
V	5720.00	49.52	7.59	57.11	110.83	-53.72	PK	PASS
V	5725.00	50.44	7.68	58.12	122.23	-64.11	PK	PASS
H	5650.00	28.68	7.55	36.23	54.00	-17.77	AV	PASS
H	5700.00	31.15	7.56	38.71	54.00	-15.29	AV	PASS
H	5720.00	33.29	7.59	40.88	54.00	-13.13	AV	PASS
H	5725.00	34.73	7.68	42.41	54.00	-11.60	AV	PASS
V	5650.00	30.64	7.55	38.19	54.00	-15.81	AV	PASS
V	5700.00	30.16	7.56	37.72	54.00	-16.29	AV	PASS
V	5720.00	34.28	7.59	41.87	54.00	-12.13	AV	PASS
V	5725.00	34.17	7.68	41.85	54.00	-12.15	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-3:

Test Mode: 802.11n(HT20)					CH High: 5825 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5850.00	50.81	7.55	58.36	122.23	-63.87	PK	PASS
H	5855.00	47.61	7.56	55.17	110.83	-55.66	PK	PASS
H	5875.00	45.08	7.59	52.67	105.23	-52.56	PK	PASS
H	5925.00	46.10	7.68	53.78	68.23	-14.46	PK	PASS
V	5850.00	49.37	7.55	56.92	122.23	-65.32	PK	PASS
V	5855.00	48.05	7.56	55.61	110.83	-55.22	PK	PASS
V	5875.00	47.22	7.59	54.81	105.23	-50.42	PK	PASS
V	5925.00	44.31	7.68	51.99	68.23	-16.25	PK	PASS
H	5850.00	35.14	7.55	42.69	54.00	-11.31	AV	PASS
H	5855.00	35.72	7.56	43.28	54.00	-10.73	AV	PASS
H	5875.00	33.34	7.59	40.93	54.00	-13.07	AV	PASS
H	5925.00	28.03	7.68	35.71	54.00	-18.29	AV	PASS
V	5850.00	36.97	7.55	44.52	54.00	-9.48	AV	PASS
V	5855.00	32.55	7.56	40.11	54.00	-13.90	AV	PASS
V	5875.00	30.25	7.59	37.84	54.00	-16.17	AV	PASS
V	5925.00	28.95	7.68	36.63	54.00	-17.38	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-3:

Test Mode: 802.11n(HT40)					CH Low: 5755 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5650.00	43.64	7.55	51.19	68.23	-17.05	PK	PASS
H	5700.00	46.48	7.56	54.04	105.23	-51.20	PK	PASS
H	5720.00	50.02	7.59	57.61	110.83	-53.22	PK	PASS
H	5725.00	50.14	7.68	57.82	122.23	-64.41	PK	PASS
V	5650.00	43.90	7.55	51.45	68.23	-16.78	PK	PASS
V	5700.00	45.63	7.56	53.19	105.23	-52.04	PK	PASS
V	5720.00	50.80	7.59	58.39	110.83	-52.45	PK	PASS
V	5725.00	51.05	7.68	58.73	122.23	-63.50	PK	PASS
H	5650.00	31.08	7.55	38.63	54.00	-15.37	AV	PASS
H	5700.00	32.09	7.56	39.65	54.00	-14.36	AV	PASS
H	5720.00	32.51	7.59	40.10	54.00	-13.91	AV	PASS
H	5725.00	37.61	7.68	45.29	54.00	-8.72	AV	PASS
V	5650.00	29.44	7.55	36.99	54.00	-17.01	AV	PASS
V	5700.00	30.00	7.56	37.56	54.00	-16.44	AV	PASS
V	5720.00	32.86	7.59	40.45	54.00	-13.55	AV	PASS
V	5725.00	36.47	7.68	44.15	54.00	-9.85	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-3:

Test Mode: 802.11n(HT40)					CH High: 5795 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5850.00	52.44	7.55	59.99	122.23	-62.25	PK	PASS
H	5855.00	47.60	7.56	55.16	110.83	-55.67	PK	PASS
H	5875.00	45.92	7.59	53.51	105.23	-51.72	PK	PASS
H	5925.00	45.13	7.68	52.81	68.23	-15.42	PK	PASS
V	5850.00	52.06	7.55	59.61	122.23	-62.63	PK	PASS
V	5855.00	47.57	7.56	55.13	110.83	-55.71	PK	PASS
V	5875.00	48.63	7.59	56.22	105.23	-49.01	PK	PASS
V	5925.00	44.44	7.68	52.12	68.23	-16.11	PK	PASS
H	5850.00	37.57	7.55	45.12	54.00	-8.89	AV	PASS
H	5855.00	35.73	7.56	43.29	54.00	-10.72	AV	PASS
H	5875.00	32.75	7.59	40.34	54.00	-13.67	AV	PASS
H	5925.00	30.53	7.68	38.21	54.00	-15.80	AV	PASS
V	5850.00	37.79	7.55	45.34	54.00	-8.67	AV	PASS
V	5855.00	35.21	7.56	42.77	54.00	-11.24	AV	PASS
V	5875.00	30.57	7.59	38.16	54.00	-15.84	AV	PASS
V	5925.00	31.05	7.68	38.73	54.00	-15.28	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-3:

Test Mode: 802.11ac(VHT20)					CH Low: 5745 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5650.00	46.71	7.55	54.26	68.23	-13.97	PK	PASS
H	5700.00	47.14	7.56	54.70	105.23	-50.54	PK	PASS
H	5720.00	47.69	7.59	55.28	110.83	-55.55	PK	PASS
H	5725.00	52.08	7.68	59.76	122.23	-62.48	PK	PASS
V	5650.00	45.80	7.55	53.35	68.23	-14.89	PK	PASS
V	5700.00	46.15	7.56	53.71	105.23	-51.53	PK	PASS
V	5720.00	47.37	7.59	54.96	110.83	-55.88	PK	PASS
V	5725.00	49.65	7.68	57.33	122.23	-64.91	PK	PASS
H	5650.00	30.18	7.55	37.73	54.00	-16.27	AV	PASS
H	5700.00	32.75	7.56	40.31	54.00	-13.70	AV	PASS
H	5720.00	33.89	7.59	41.48	54.00	-12.52	AV	PASS
H	5725.00	35.36	7.68	43.04	54.00	-10.96	AV	PASS
V	5650.00	28.88	7.55	36.43	54.00	-17.58	AV	PASS
V	5700.00	33.01	7.56	40.57	54.00	-13.43	AV	PASS
V	5720.00	34.83	7.59	42.42	54.00	-11.58	AV	PASS
V	5725.00	34.57	7.68	42.25	54.00	-11.75	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-3:

Test Mode: 802.11ac(VHT20)					CH High: 5825 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5850.00	52.94	7.55	60.49	122.23	-61.75	PK	PASS
H	5855.00	48.82	7.56	56.38	110.83	-54.45	PK	PASS
H	5875.00	47.22	7.59	54.81	105.23	-50.42	PK	PASS
H	5925.00	45.72	7.68	53.40	68.23	-14.83	PK	PASS
V	5850.00	52.61	7.55	60.16	122.23	-62.08	PK	PASS
V	5855.00	47.35	7.56	54.91	110.83	-55.93	PK	PASS
V	5875.00	46.44	7.59	54.03	105.23	-51.21	PK	PASS
V	5925.00	43.80	7.68	51.48	68.23	-16.75	PK	PASS
H	5850.00	37.56	7.55	45.11	54.00	-8.89	AV	PASS
H	5855.00	32.27	7.56	39.83	54.00	-14.18	AV	PASS
H	5875.00	31.03	7.59	38.62	54.00	-15.39	AV	PASS
H	5925.00	31.66	7.68	39.34	54.00	-14.67	AV	PASS
V	5850.00	37.37	7.55	44.92	54.00	-9.09	AV	PASS
V	5855.00	32.60	7.56	40.16	54.00	-13.85	AV	PASS
V	5875.00	31.97	7.59	39.56	54.00	-14.45	AV	PASS
V	5925.00	30.00	7.68	37.68	54.00	-16.33	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-3:

Test Mode: 802.11ac(VHT40)					CH Low: 5755 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5650.00	46.14	7.55	53.69	68.23	-14.54	PK	PASS
H	5700.00	48.67	7.56	56.23	105.23	-49.01	PK	PASS
H	5720.00	50.86	7.59	58.45	110.83	-52.39	PK	PASS
H	5725.00	51.73	7.68	59.41	122.23	-62.82	PK	PASS
V	5650.00	44.83	7.55	52.38	68.23	-15.85	PK	PASS
V	5700.00	48.45	7.56	56.01	105.23	-49.22	PK	PASS
V	5720.00	49.61	7.59	57.20	110.83	-53.64	PK	PASS
V	5725.00	52.55	7.68	60.23	122.23	-62.00	PK	PASS
H	5650.00	30.36	7.55	37.91	54.00	-16.10	AV	PASS
H	5700.00	33.48	7.56	41.04	54.00	-12.97	AV	PASS
H	5720.00	35.96	7.59	43.55	54.00	-10.46	AV	PASS
H	5725.00	36.73	7.68	44.41	54.00	-9.60	AV	PASS
V	5650.00	30.83	7.55	38.38	54.00	-15.62	AV	PASS
V	5700.00	30.23	7.56	37.79	54.00	-16.21	AV	PASS
V	5720.00	32.75	7.59	40.34	54.00	-13.66	AV	PASS
V	5725.00	37.83	7.68	45.51	54.00	-8.49	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-3:

Test Mode: 802.11ac(VHT40)					CH High: 5795 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5850.00	52.54	7.55	60.09	122.23	-62.15	PK	PASS
H	5855.00	48.86	7.56	56.42	110.83	-54.41	PK	PASS
H	5875.00	48.55	7.59	56.14	105.23	-49.09	PK	PASS
H	5925.00	43.57	7.68	51.25	68.23	-16.98	PK	PASS
V	5850.00	50.39	7.55	57.94	122.23	-64.29	PK	PASS
V	5855.00	50.03	7.56	57.59	110.83	-53.25	PK	PASS
V	5875.00	48.25	7.59	55.84	105.23	-49.39	PK	PASS
V	5925.00	45.57	7.68	53.25	68.23	-14.99	PK	PASS
H	5850.00	37.09	7.55	44.64	54.00	-9.37	AV	PASS
H	5855.00	33.45	7.56	41.01	54.00	-12.99	AV	PASS
H	5875.00	32.80	7.59	40.39	54.00	-13.61	AV	PASS
H	5925.00	31.84	7.68	39.52	54.00	-14.48	AV	PASS
V	5850.00	37.13	7.55	44.68	54.00	-9.33	AV	PASS
V	5855.00	32.55	7.56	40.11	54.00	-13.89	AV	PASS
V	5875.00	32.21	7.59	39.80	54.00	-14.21	AV	PASS
V	5925.00	30.92	7.68	38.60	54.00	-15.40	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-3:

Test Mode: 802.11ac(VHT80)					CH: 5775 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5650.00	44.51	7.55	52.06	68.23	-16.18	PK	PASS
H	5700.00	47.64	7.56	55.20	105.23	-50.04	PK	PASS
H	5720.00	50.91	7.59	58.50	110.83	-52.34	PK	PASS
H	5725.00	52.38	7.68	60.06	122.23	-62.18	PK	PASS
V	5650.00	45.31	7.55	52.86	68.23	-15.38	PK	PASS
V	5700.00	45.18	7.56	52.74	105.23	-52.49	PK	PASS
V	5720.00	49.44	7.59	57.03	110.83	-53.80	PK	PASS
V	5725.00	51.92	7.68	59.60	122.23	-62.63	PK	PASS
H	5650.00	31.43	7.55	38.98	54.00	-15.03	AV	PASS
H	5700.00	30.91	7.56	38.47	54.00	-15.54	AV	PASS
H	5720.00	32.18	7.59	39.77	54.00	-14.23	AV	PASS
H	5725.00	36.34	7.68	44.02	54.00	-9.99	AV	PASS
V	5650.00	28.50	7.55	36.05	54.00	-17.96	AV	PASS
V	5700.00	30.46	7.56	38.02	54.00	-15.98	AV	PASS
V	5720.00	35.58	7.59	43.17	54.00	-10.83	AV	PASS
V	5725.00	35.65	7.68	43.33	54.00	-10.68	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

Band Edge Emissions Test Data:
U-NII-3:

Test Mode: 802.11ac(VHT80)					CH: 5775 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
H	5850.00	49.89	7.55	57.44	122.23	-64.79	PK	PASS
H	5855.00	49.85	7.56	57.41	110.83	-53.42	PK	PASS
H	5875.00	46.99	7.59	54.58	105.23	-50.65	PK	PASS
H	5925.00	46.19	7.68	53.87	68.23	-14.36	PK	PASS
V	5850.00	50.26	7.55	57.81	122.23	-64.43	PK	PASS
V	5855.00	50.89	7.56	58.45	110.83	-52.39	PK	PASS
V	5875.00	47.46	7.59	55.05	105.23	-50.19	PK	PASS
V	5925.00	45.35	7.68	53.03	68.23	-15.20	PK	PASS
H	5850.00	36.93	7.55	44.48	54.00	-9.53	AV	PASS
H	5855.00	35.59	7.56	43.15	54.00	-10.85	AV	PASS
H	5875.00	31.71	7.59	39.30	54.00	-14.70	AV	PASS
H	5925.00	28.19	7.68	35.87	54.00	-18.14	AV	PASS
V	5850.00	37.22	7.55	44.77	54.00	-9.24	AV	PASS
V	5855.00	35.91	7.56	43.47	54.00	-10.53	AV	PASS
V	5875.00	33.04	7.59	40.63	54.00	-13.38	AV	PASS
V	5925.00	28.18	7.68	35.86	54.00	-18.15	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.

6.8 Undesirable emission limits (below 1GHz)

6.8.1 Test Specification

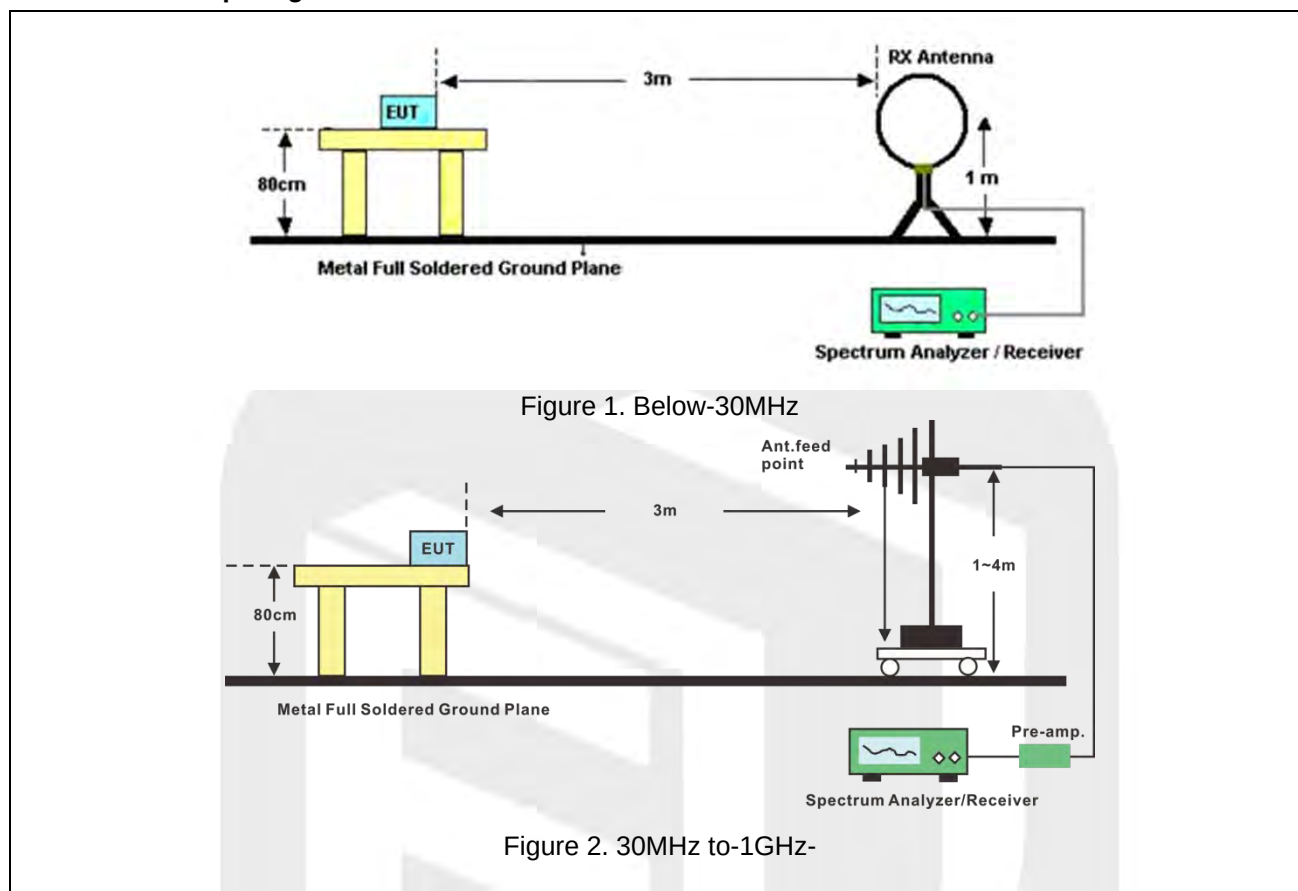
Test Requirement:	47 CFR Part 15.407(b)(9)		
Test Limit:	Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.		
	Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:		
	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
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.			
Test Method:	ANSI C63.10-2020+Cor.1-2023, section 12.7.4, 12.7.5		
Procedure:	Below 1GHz: 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- Preamplifier Factor 2. 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. 3. 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. Above 1GHz: 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- Preamplifier 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.
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6.8.2 E.U.T. Operation

Pre test mode:	TM1, TM2, TM3, TM4, TM5, TM6
Final test mode:	TM1, TM2, TM3, TM4, TM5, TM6

6.8.3 Test Setup Diagram



6.8.4 Test Data

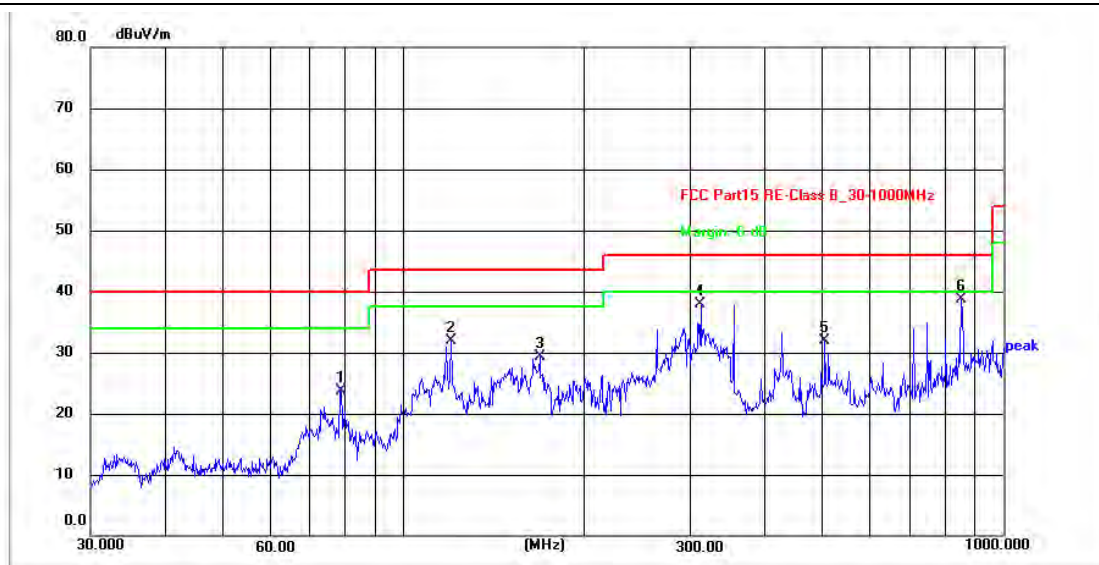
PASS.

The test results of 9kHz-30MHz was attenuated more than 20dB below the permissible limits, so the results don't record in the report.

During the test, for 30MHz to 1000MHz, pre-scan all modulations, and found the U-NII-1 / 802.11a modulation Low channel which is the worst case, only the worst case is recorded in the report.

Undesirable emission limits (below 1GHz) Test Data

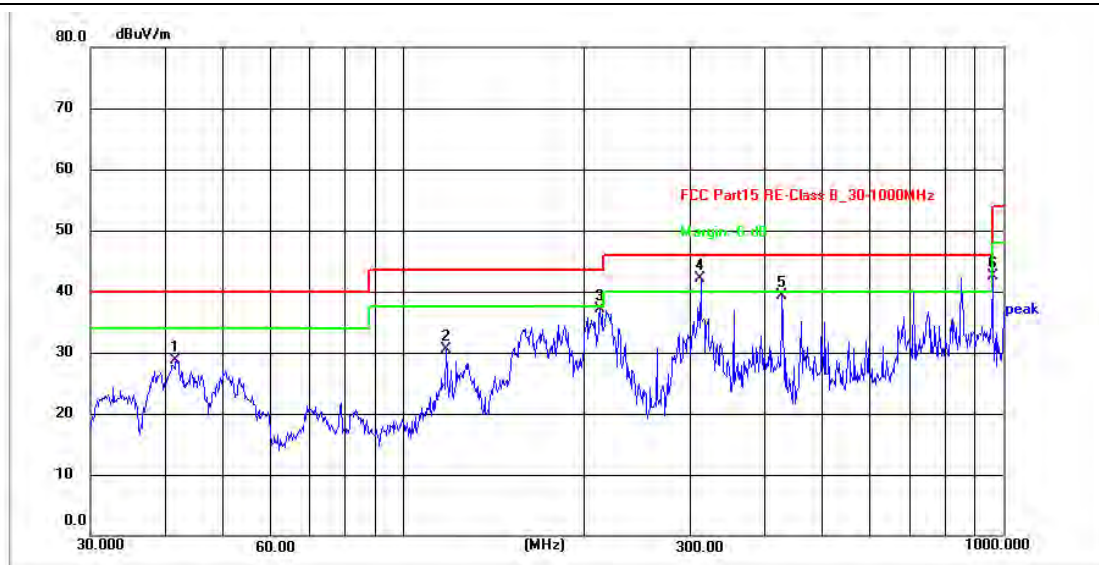
TM1 (SISO-ant1) / Polarization: Horizontal / Band: 5150-5250 MHz / BW: 20 / CH: L



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	78.6885	46.38	-22.64	23.74	40.00	-16.26	QP	P	
2	119.8555	51.84	-19.85	31.99	43.50	-11.51	QP	P	
3	168.4137	49.81	-20.48	29.33	43.50	-14.17	QP	P	
4	312.1792	53.22	-15.26	37.96	46.00	-8.04	QP	P	
5	504.7062	42.33	-10.52	31.81	46.00	-14.19	QP	P	
6 *	851.0353	43.85	-5.19	38.66	46.00	-7.34	QP	P	

Undesirable emission limits (below 1GHz) Test Data

TM1 (SISO-ant1) / Polarization: Vertical / Band: 5150-5250 MHz / BW: 20 / CH: L



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	41.7129	46.76	-18.08	28.68	40.00	-11.32	QP	P	
2	117.7724	50.27	-19.71	30.56	43.50	-12.94	QP	P	
3	212.2692	55.08	-17.96	37.12	43.50	-6.38	QP	P	
4	312.1792	57.25	-15.23	42.02	46.00	-3.98	QP	P	
5	426.5210	51.48	-12.21	39.27	46.00	-6.73	QP	P	
6 *	958.7943	46.91	-4.36	42.55	46.00	-3.45	QP	P	

6.9 Undesirable emission limits (above 1GHz)

6.9.1 Test Specification

Test Requirement:	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)			
Test Limit:	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.			
	For transmitters operating solely in the 5.725-5.850 GHz band: 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.			
	MHz	MHz	MHz	GHz
	0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
	¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
	2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
	4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
	4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
	4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
	6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
	6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
	6.31175-6.31225	123-138	2200-2300	14.47-14.5
	8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
	8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
	8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
	8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
	12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
	12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
	12.57675-12.57725	322-335.4	3600-4400	(²)
	13.36-13.41			
	¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.			
² Above 38.6				
The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in § 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in § 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in § 15.209 shall be demonstrated				

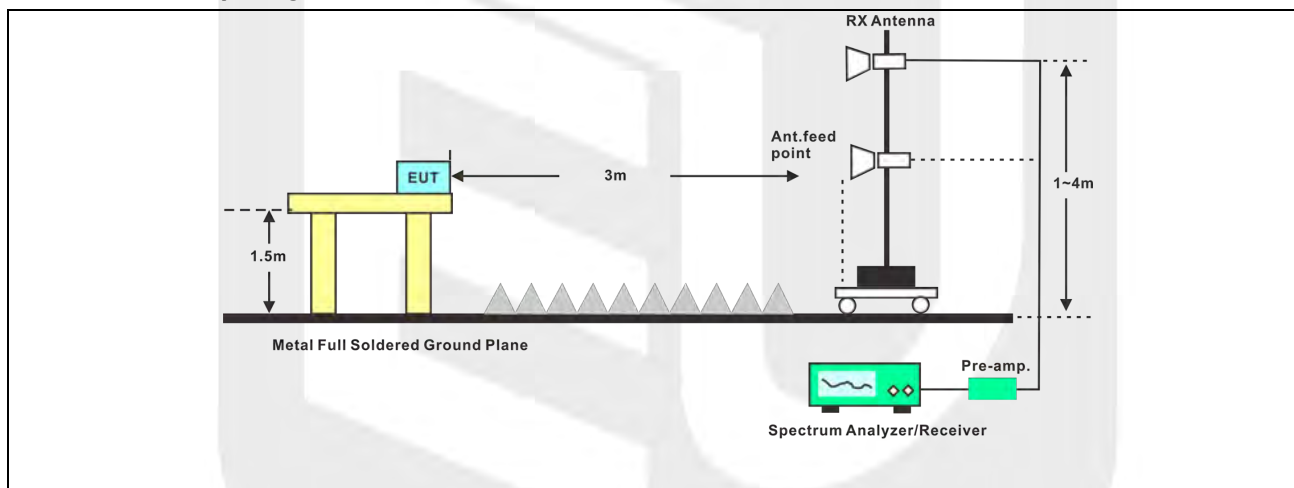
	based on the average value of the measured emissions. The provisions in § 15.35 apply to these measurements. Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table: <table><tr><th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr><tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr><tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr><tr><td>1.705-30.0</td><td>30</td><td>30</td></tr><tr><td>30-88</td><td>100 **</td><td>3</td></tr><tr><td>88-216</td><td>150 **</td><td>3</td></tr><tr><td>216-960</td><td>200 **</td><td>3</td></tr><tr><td>Above 960</td><td>500</td><td>3</td></tr></table> ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.	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
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																							
Test Method:	ANSI C63.10-2020+Cor.1-2023, section 12.7.4, 12.7.6, 12.7.7																								
Procedure:	Above 1GHz: 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.
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6.9.2 E.U.T. Operation

Pre test mode:	TM1, TM2, TM3, TM4, TM5, TM6
Final test mode:	TM3

6.9.3 Test Setup Diagram



6.9.4 Test Data

PASS.

For test of 1GHz-40GHz, during the test, pre-scan all modes, and found the U-NII-1 802.11n(HT20) is worse case, the report only record this mode.

The test data in the table do not include measurements above 18 GHz, since no significant disturbances were recorded beyond this frequency range. Therefore, only harmonics up to 18 GHz are presented in this report.

Radiated Spurious Emission (1GHz-40GHz)

Test Mode: 802.11n(HT20)					CH Low: 5180 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	3204.66	47.34	0.02	47.36	68.23	-20.87	PK	PASS
V	7514.32	41.13	9.84	50.98	68.23	-17.25	PK	PASS
V	9515.58	37.08	13.20	50.27	68.23	-17.96	PK	PASS
V	10360.50	42.98	13.79	56.77	68.23	-11.46	PK	PASS
V	14013.31	37.84	17.35	55.18	68.23	-13.05	PK	PASS
V	15540.25	*	*	*	68.23	*	PK	PASS
H	3200.25	46.16	-0.87	45.29	68.23	-22.94	PK	PASS
H	7502.00	41.52	9.83	51.36	68.23	-16.87	PK	PASS
H	9501.00	35.82	13.14	48.97	68.23	-19.26	PK	PASS
H	10360.25	43.91	13.79	57.70	68.23	-10.53	PK	PASS
H	14011.73	36.13	17.34	53.47	68.23	-14.76	PK	PASS
H	15540.00	*	*	*	68.23	*	PK	PASS
V	3204.66	34.88	0.02	34.89	54.00	-19.11	AV	PASS
V	7514.32	28.23	9.84	38.07	54.00	-15.93	AV	PASS
V	9515.58	24.84	13.20	38.03	54.00	-15.97	AV	PASS
V	10360.50	30.96	13.79	44.75	54.00	-9.25	AV	PASS
V	14013.31	22.36	17.35	39.70	54.00	-14.30	AV	PASS
V	15540.25	*	*	*	54.00	*	AV	PASS
H	3200.25	32.85	-0.87	31.98	54.00	-22.02	AV	PASS
H	7502.00	29.12	9.83	38.95	54.00	-15.05	AV	PASS
H	9501.00	22.86	13.14	36.01	54.00	-17.99	AV	PASS
H	10360.25	30.53	13.79	44.32	54.00	-9.68	AV	PASS
H	14011.73	22.72	17.34	40.07	54.00	-13.93	AV	PASS
H	15540.00	*	*	*	54.00	*	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. "*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

Radiated Spurious Emission (1GHz-40GHz)

Test Mode: 802.11n(HT20)					CH Middle: 5200 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	3405.98	45.89	-0.12	45.77	68.23	-22.46	PK	PASS
V	8010.25	40.64	10.35	50.99	68.23	-17.24	PK	PASS
V	9707.61	37.97	13.20	51.18	68.23	-17.05	PK	PASS
V	10401.50	42.91	13.91	56.82	68.23	-11.41	PK	PASS
V	14318.50	36.61	17.46	54.07	68.23	-14.16	PK	PASS
V	15600.50	*	*	*	68.23	*	PK	PASS
H	3409.46	46.13	-0.10	46.03	68.23	-22.20	PK	PASS
H	8017.44	40.93	10.37	51.30	68.23	-16.93	PK	PASS
H	9717.14	37.38	13.21	50.59	68.23	-17.64	PK	PASS
H	10401.75	42.14	13.91	56.05	68.23	-12.18	PK	PASS
H	14301.36	35.80	17.43	53.23	68.23	-15.00	PK	PASS
H	15601.50	*	*	*	68.23	*	PK	PASS
V	3405.98	33.17	-0.12	33.06	54.00	-20.94	AV	PASS
V	8010.25	30.86	10.35	41.20	54.00	-12.80	AV	PASS
V	9707.61	24.60	13.20	37.80	54.00	-16.20	AV	PASS
V	10401.50	30.11	13.91	44.02	54.00	-9.98	AV	PASS
V	14318.50	24.27	17.46	41.73	54.00	-12.27	AV	PASS
V	15600.50	*	*	*	54.00	*	AV	PASS
H	3409.46	34.36	-0.10	34.25	54.00	-19.75	AV	PASS
H	8017.44	28.01	10.37	38.38	54.00	-15.62	AV	PASS
H	9717.14	24.03	13.21	37.24	54.00	-16.76	AV	PASS
H	10401.75	33.00	13.91	46.91	54.00	-7.09	AV	PASS
H	14301.36	24.60	17.43	42.04	54.00	-11.96	AV	PASS
H	15601.50	*	*	*	54.00	*	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. "*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

Radiated Spurious Emission (1GHz-40GHz)

Test Mode: 802.11n(HT20)					CH High: 5240 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	3719.04	45.16	1.11	46.27	68.23	-21.96	PK	PASS
V	8212.22	40.16	10.88	51.04	68.23	-17.19	PK	PASS
V	9808.19	37.48	13.23	50.71	68.23	-17.52	PK	PASS
V	10480.25	42.80	13.96	56.76	68.23	-11.47	PK	PASS
V	14710.95	35.41	17.58	53.00	68.23	-15.23	PK	PASS
V	15721.75	*	*	*	68.23	*	PK	PASS
H	3705.82	47.72	1.10	48.82	68.23	-19.41	PK	PASS
H	8216.38	40.47	10.89	51.36	68.23	-16.87	PK	PASS
H	9802.93	37.76	13.23	50.99	68.23	-17.24	PK	PASS
H	10482.00	43.50	13.96	57.46	68.23	-10.77	PK	PASS
H	14711.75	35.65	17.59	53.24	68.23	-14.99	PK	PASS
H	15720.50	*	*	*	68.23	*	PK	PASS
V	3719.04	32.62	1.11	33.72	54.00	-20.28	AV	PASS
V	8212.22	29.32	10.88	40.20	54.00	-13.80	AV	PASS
V	9808.19	24.60	13.23	37.84	54.00	-16.16	AV	PASS
V	10480.25	31.41	13.96	45.37	54.00	-8.63	AV	PASS
V	14710.95	22.97	17.58	40.55	54.00	-13.45	AV	PASS
V	15721.75	*	*	*	54.00	*	AV	PASS
H	3705.82	32.59	1.10	33.68	54.00	-20.32	AV	PASS
H	8216.38	30.55	10.89	41.45	54.00	-12.55	AV	PASS
H	9802.93	23.56	13.23	36.79	54.00	-17.21	AV	PASS
H	10482.00	32.65	13.96	46.61	54.00	-7.39	AV	PASS
H	14711.75	24.40	17.59	41.98	54.00	-12.02	AV	PASS
H	15720.50	*	*	*	54.00	*	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. "*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

Radiated Spurious Emission (1GHz-40GHz)

Test Mode: 802.11n(HT20)					CH Low: 5745 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	3216.92	46.70	-0.81	45.89	68.23	-22.34	PK	PASS
V	7501.97	42.87	9.83	52.70	68.23	-15.53	PK	PASS
V	9507.21	37.17	13.17	50.33	68.23	-17.90	PK	PASS
V	11490.00	43.80	15.22	59.02	68.23	-9.21	PK	PASS
V	14009.21	36.65	17.34	54.00	68.23	-14.23	PK	PASS
V	17236.75	*	*	*	68.23	*	PK	PASS
H	3200.00	47.33	-0.87	46.46	68.23	-21.77	PK	PASS
H	7501.00	41.49	9.83	51.32	68.23	-16.91	PK	PASS
H	9502.00	37.10	13.15	50.25	68.23	-17.98	PK	PASS
H	11492.50	42.75	15.22	57.97	68.23	-10.26	PK	PASS
H	14007.64	35.91	17.34	53.25	68.23	-14.98	PK	PASS
H	17236.25	*	*	*	68.23	*	PK	PASS
V	3216.92	34.08	-0.81	33.27	54.00	-20.73	AV	PASS
V	7501.97	30.86	9.83	40.69	54.00	-13.31	AV	PASS
V	9507.21	22.75	13.17	35.92	54.00	-18.08	AV	PASS
V	11490.00	32.12	15.22	47.34	54.00	-6.66	AV	PASS
V	14009.21	22.07	17.34	39.42	54.00	-14.58	AV	PASS
V	17236.75	*	*	*	54.00	*	AV	PASS
H	3200.00	32.62	-0.87	31.75	54.00	-22.26	AV	PASS
H	7501.00	30.97	9.83	40.80	54.00	-13.20	AV	PASS
H	9502.00	22.09	13.15	35.24	54.00	-18.76	AV	PASS
H	11492.50	30.25	15.22	45.47	54.00	-8.53	AV	PASS
H	14007.64	23.92	17.34	41.26	54.00	-12.74	AV	PASS
H	17236.25	*	*	*	54.00	*	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. "*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

Radiated Spurious Emission (1GHz-40GHz)

Test Mode: 802.11n(HT20)					CH Middle: 5785 MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	3412.66	46.03	-0.09	45.94	68.23	-22.29	PK	PASS
V	8017.32	42.92	10.37	53.28	68.23	-14.95	PK	PASS
V	9711.14	37.08	13.20	50.28	68.23	-17.95	PK	PASS
V	11572.00	44.98	15.31	60.29	68.23	-7.94	PK	PASS
V	14317.65	36.09	17.46	53.55	68.23	-14.68	PK	PASS
V	17357.50	*	*	*	68.23	*	PK	PASS
H	3415.29	46.34	-0.08	46.27	68.23	-21.96	PK	PASS
H	8014.29	41.53	10.36	51.89	68.23	-16.34	PK	PASS
H	9704.21	37.15	13.20	50.35	68.23	-17.88	PK	PASS
H	11572.50	44.79	15.31	60.10	68.23	-8.13	PK	PASS
H	14306.06	35.15	17.44	52.59	68.23	-15.64	PK	PASS
H	17356.00	*	*	*	68.23	*	PK	PASS
V	3412.66	32.53	-0.09	32.45	54.00	-21.55	AV	PASS
V	8017.32	29.98	10.37	40.35	54.00	-13.65	AV	PASS
V	9711.14	23.99	13.20	37.19	54.00	-16.81	AV	PASS
V	11572.00	31.95	15.31	47.26	54.00	-6.74	AV	PASS
V	14317.65	23.24	17.46	40.69	54.00	-13.31	AV	PASS
V	17357.50	*	*	*	54.00	*	AV	PASS
H	3415.29	34.77	-0.08	34.69	54.00	-19.31	AV	PASS
H	8014.29	28.43	10.36	38.79	54.00	-15.21	AV	PASS
H	9704.21	23.88	13.20	37.08	54.00	-16.92	AV	PASS
H	11572.50	32.29	15.31	47.60	54.00	-6.40	AV	PASS
H	14306.06	23.03	17.44	40.47	54.00	-13.53	AV	PASS
H	17356.00	*	*	*	54.00	*	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. "*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

Radiated Spurious Emission (1GHz-40GHz)

Test Mode: 802.11n(HT20)					CH High: 5825MHz			
Pol.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
V	3714.83	47.35	1.10	48.46	68.23	-19.77	PK	PASS
V	8200.94	42.68	10.85	53.54	68.23	-14.69	PK	PASS
V	9804.51	35.45	13.23	48.68	68.23	-19.55	PK	PASS
V	11652.25	42.55	15.39	57.94	68.23	-10.29	PK	PASS
V	14704.89	36.31	17.57	53.88	68.23	-14.35	PK	PASS
V	17475.25	*	*	*	68.23	*	PK	PASS
H	3715.34	45.46	1.10	46.57	68.23	-21.66	PK	PASS
H	8209.90	42.94	10.88	53.82	68.23	-14.41	PK	PASS
H	9811.55	36.66	13.23	49.90	68.23	-18.33	PK	PASS
H	11651.25	44.44	15.39	59.83	68.23	-8.40	PK	PASS
H	14709.38	36.77	17.58	54.35	68.23	-13.88	PK	PASS
H	17477.00	*	*	*	68.23	*	PK	PASS
V	3714.83	34.53	1.10	35.64	54.00	-18.36	AV	PASS
V	8200.94	28.23	10.85	39.09	54.00	-14.91	AV	PASS
V	9804.51	22.69	13.23	35.92	54.00	-18.08	AV	PASS
V	11652.25	30.23	15.39	45.62	54.00	-8.38	AV	PASS
V	14704.89	24.94	17.57	42.51	54.00	-11.49	AV	PASS
V	17475.25	*	*	*	54.00	*	AV	PASS
H	3715.34	34.02	1.10	35.12	54.00	-18.88	AV	PASS
H	8209.90	28.24	10.88	39.11	54.00	-14.89	AV	PASS
H	9811.55	24.76	13.23	37.99	54.00	-16.01	AV	PASS
H	11651.25	30.02	15.39	45.41	54.00	-8.59	AV	PASS
H	14709.38	22.31	17.58	39.88	54.00	-14.12	AV	PASS
H	17477.00	*	*	*	54.00	*	AV	PASS

Remark:

1. Emission Level = Reading + Factor, Margin= Emission Level – Limit.
2. "*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

ANNEX A TEST SETUP PHOTOS

Please refer to the document "8429EU121704W1-ANNEX A.PDF"

ANNEX B EXTERNAL PHOTOS

Please refer to the document "8429EU121704W1-ANNEX B.PDF"

ANNEX C INTERNAL PHOTOS

Please refer to the document "8429EU121704W1-ANNEX C.PDF"



ANNEX D TEST DATA

1. Duty Cycle

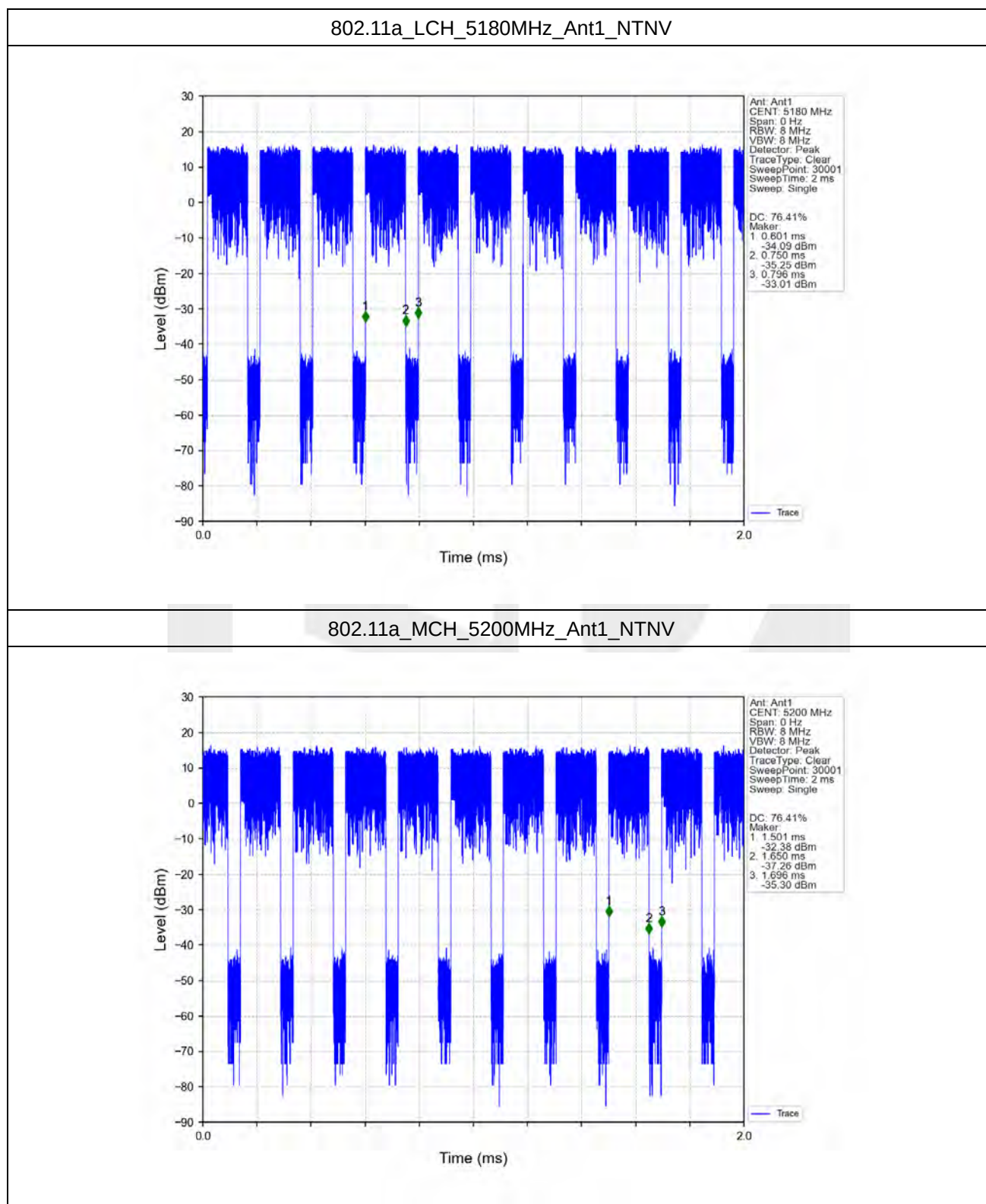
1.1 Test Result

1.1.1 Ant1

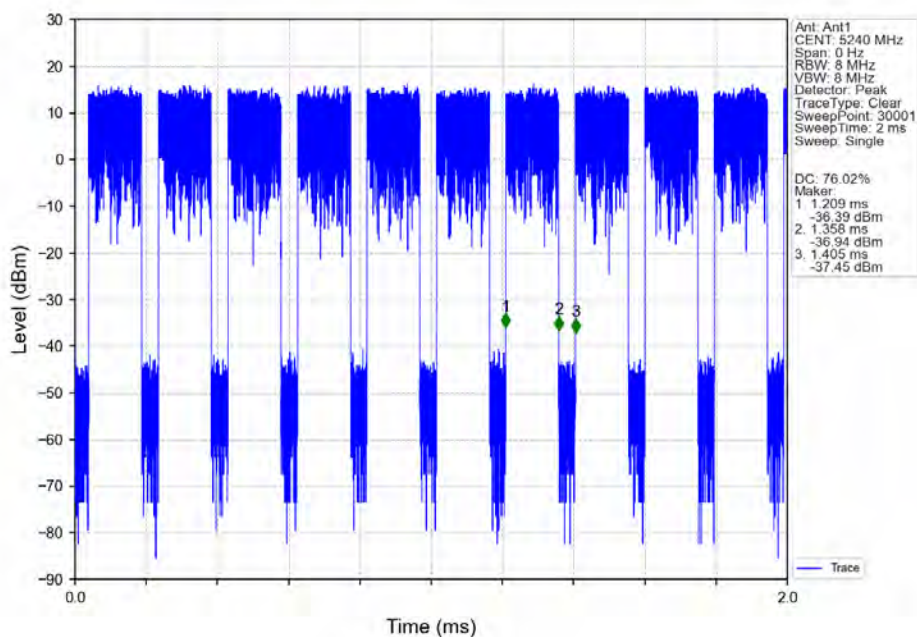
Ant1							
Mode	TX Type	Frequency (MHz)	T _{on} (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	0.149	0.195	76.41	1.17	0.39
		5200	0.149	0.195	76.41	1.17	0.51
		5240	0.149	0.196	76.02	1.19	0.71
		5745	0.149	0.196	76.02	1.19	0.52
		5785	0.149	0.196	76.02	1.19	0.47
		5825	0.149	0.195	76.41	1.17	0.21
802.11n (HT20)	SISO	5180	0.177	0.224	79.02	1.02	0.42
		5200	0.177	0.223	79.37	1.00	0.18
		5240	0.177	0.225	78.67	1.04	0.93
		5745	0.176	0.224	78.57	1.05	0.58
		5785	0.176	0.224	78.57	1.05	0.45
		5825	0.177	0.224	79.02	1.02	0.51
802.11n (HT40)	SISO	5190	0.181	0.229	79.04	1.02	0.71
		5230	0.181	0.229	79.04	1.02	0.62
		5755	0.181	0.229	79.04	1.02	0.89
		5795	0.181	0.228	79.39	1.00	0.54
802.11ac (VHT20)	SISO	5180	0.165	0.211	78.20	1.07	0.09
		5200	0.165	0.213	77.46	1.11	0.74
		5240	0.165	0.212	77.83	1.09	0.47
		5745	0.164	0.212	77.36	1.11	0.54
		5785	0.165	0.213	77.46	1.11	0.60
		5825	0.165	0.213	77.46	1.11	0.55
802.11ac (VHT40)	SISO	5190	0.157	0.205	76.59	1.16	0.79
		5230	0.157	0.204	76.96	1.14	0.45
		5755	0.157	0.205	76.59	1.16	0.89
		5795	0.157	0.204	76.96	1.14	0.51
802.11ac (VHT80)	SISO	5210	0.164	0.211	77.73	1.09	0.20
		5775	0.165	0.212	77.83	1.09	0.50

1.2 Test Graph

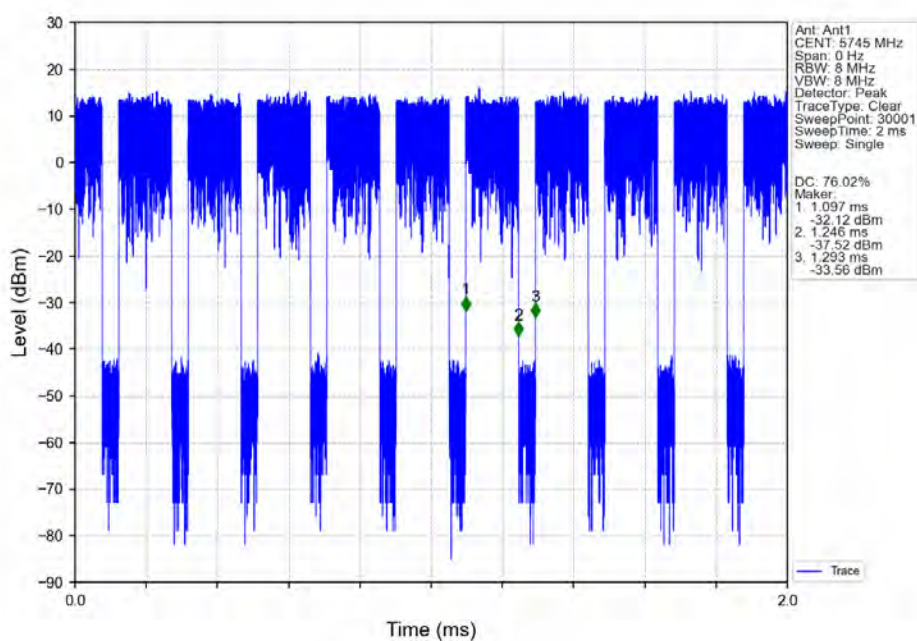
1.2.1 Ant1



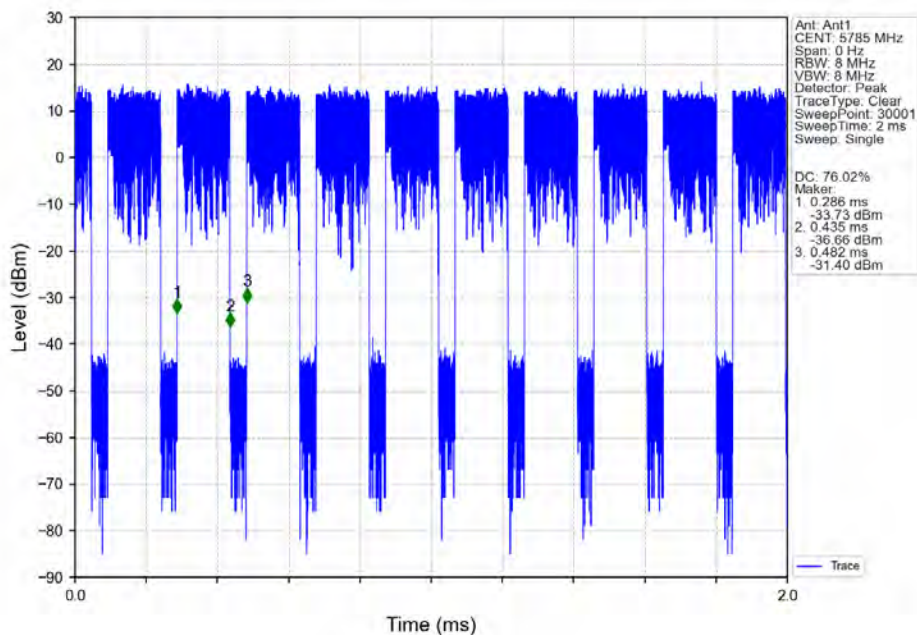
802.11a_HCH_5240MHz_Ant1_NTNV



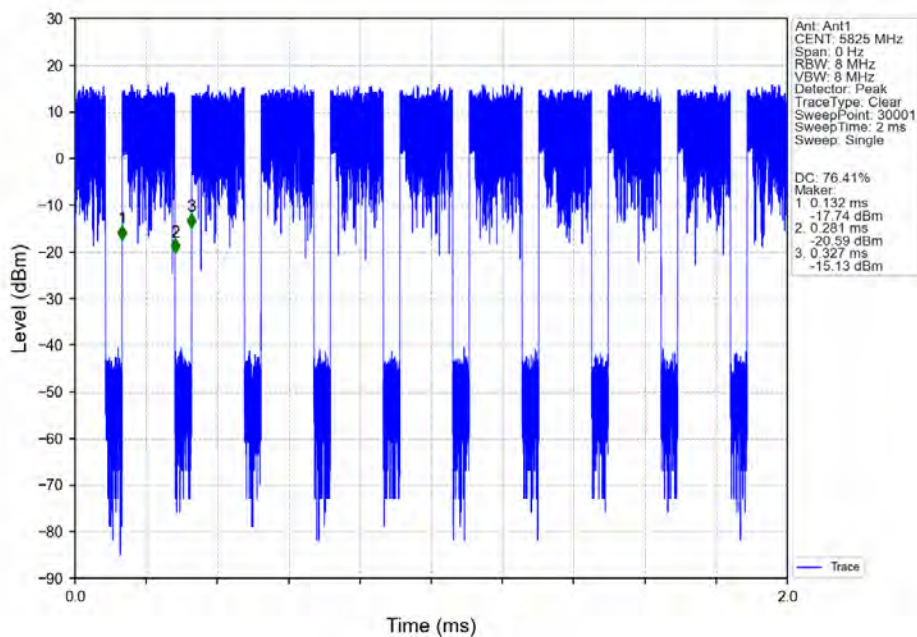
802.11a_LCH_5745MHz_Ant1_NTNV



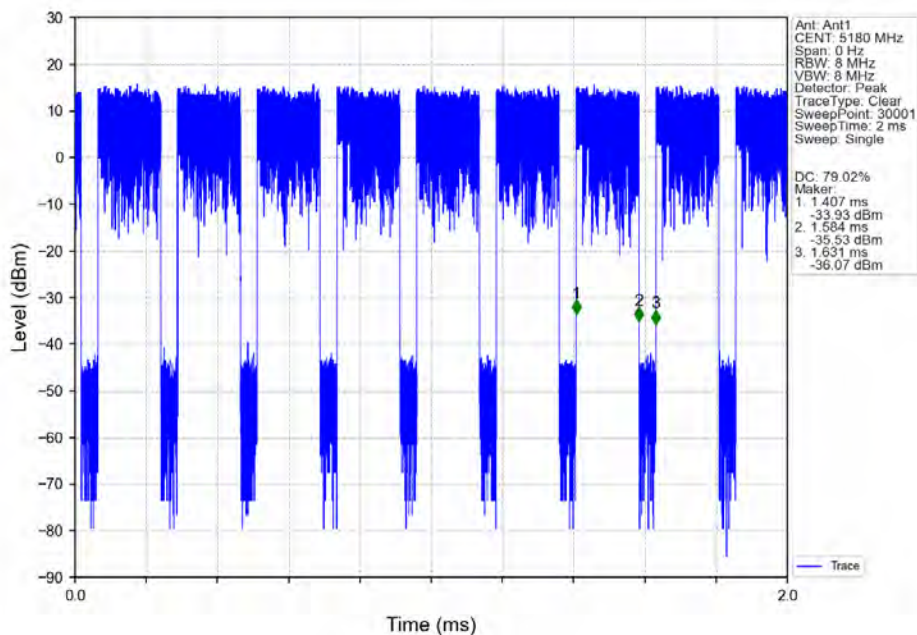
802.11a_MCH_5785MHz_Ant1_NTNV



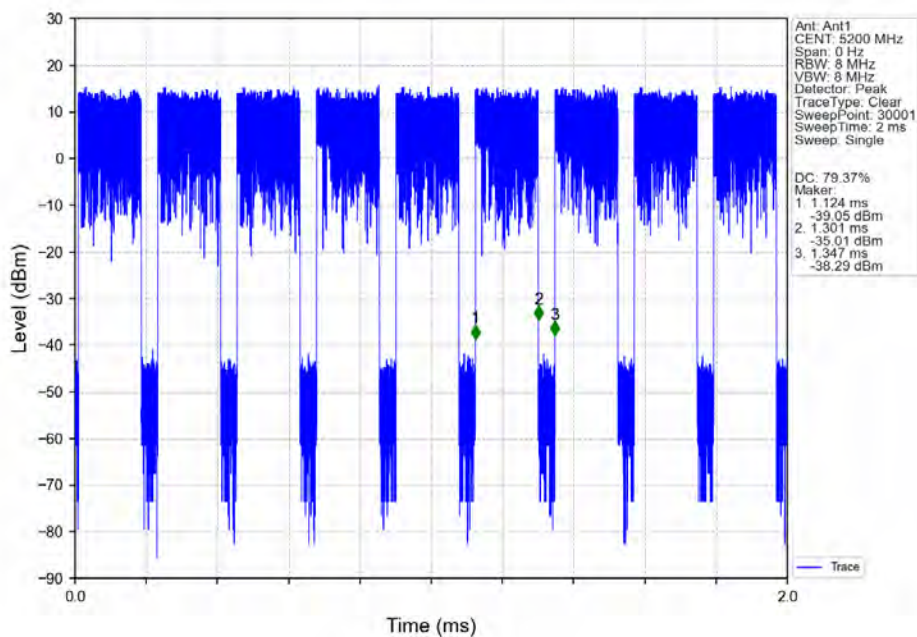
802.11a_HCH_5825MHz_Ant1_NTNV



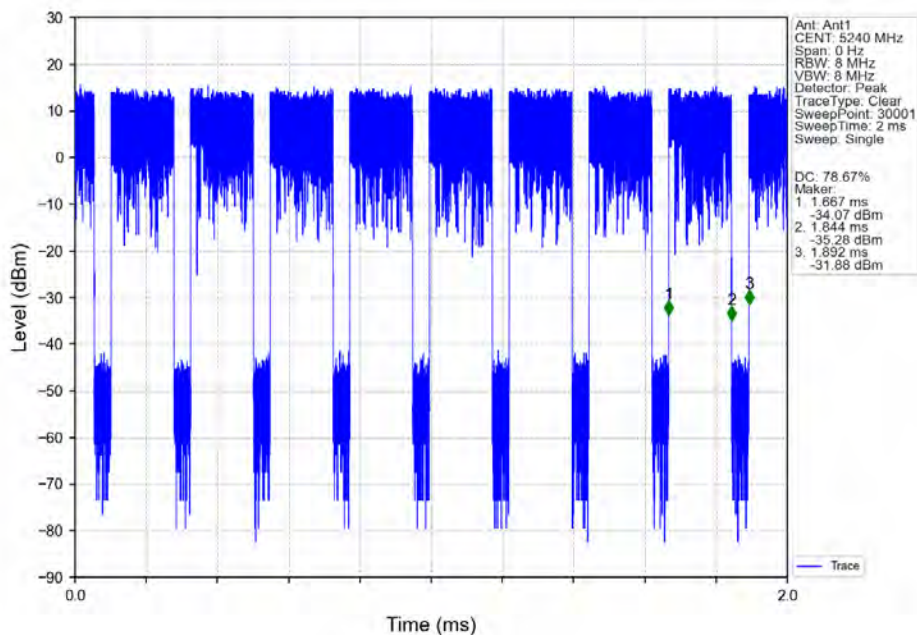
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



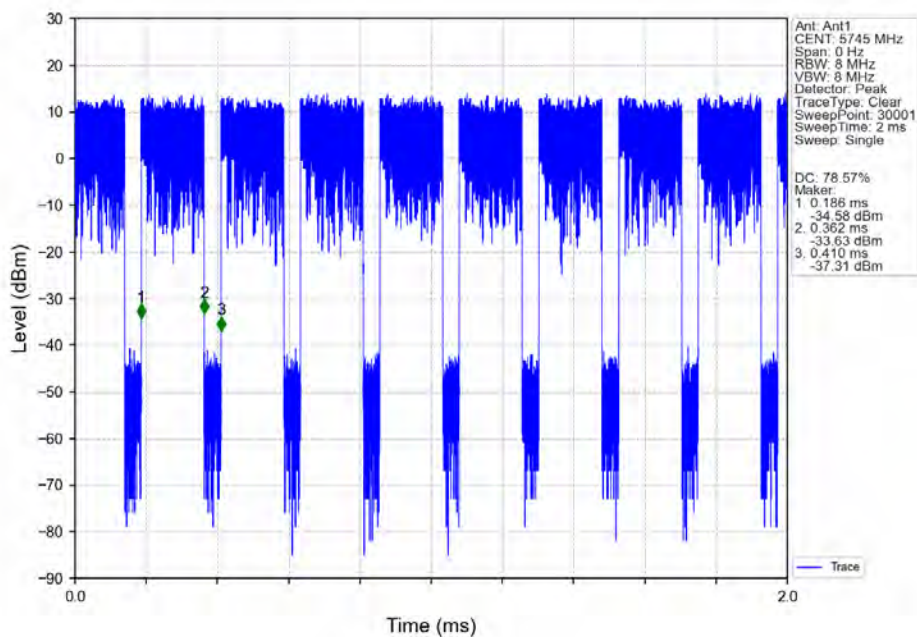
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



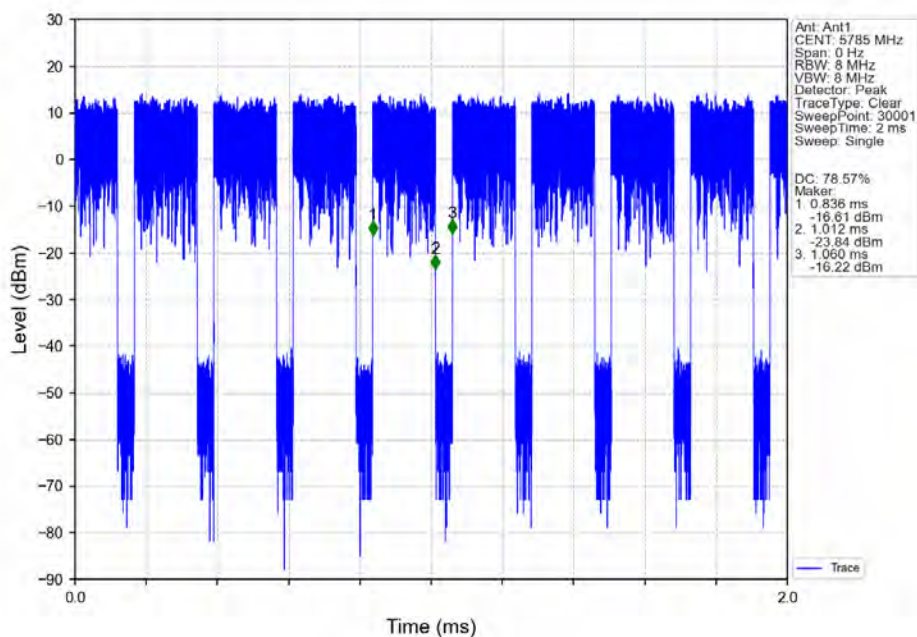
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



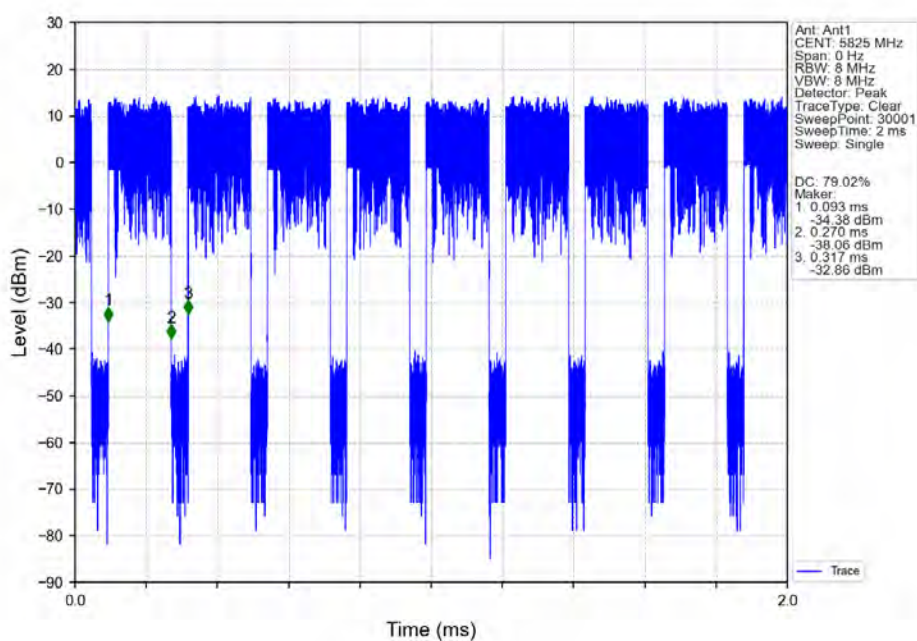
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



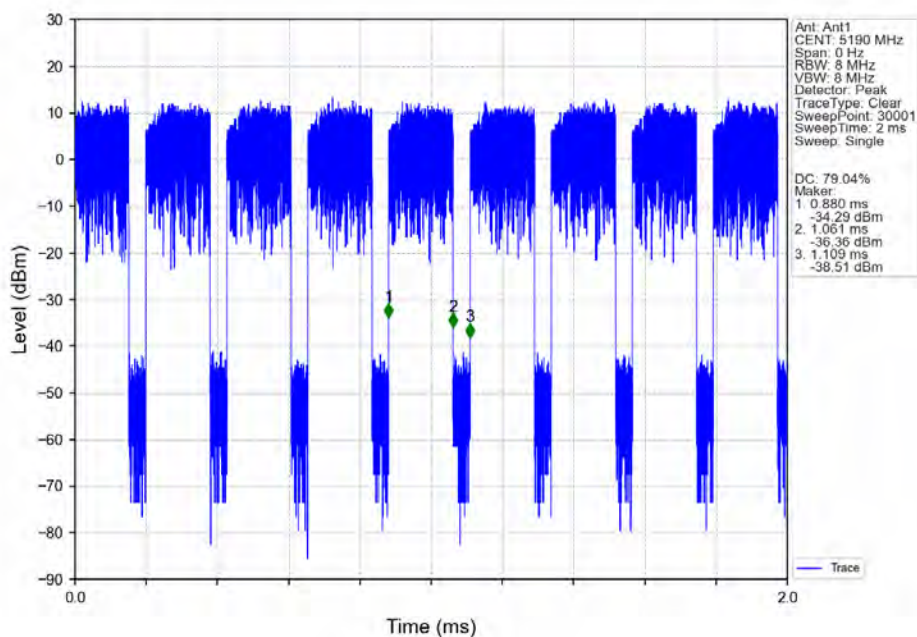
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



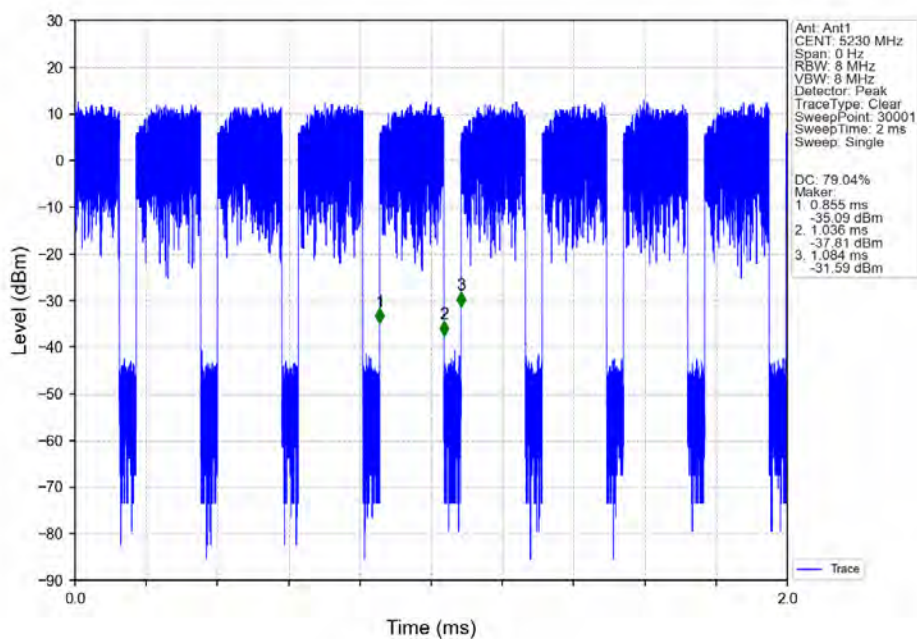
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



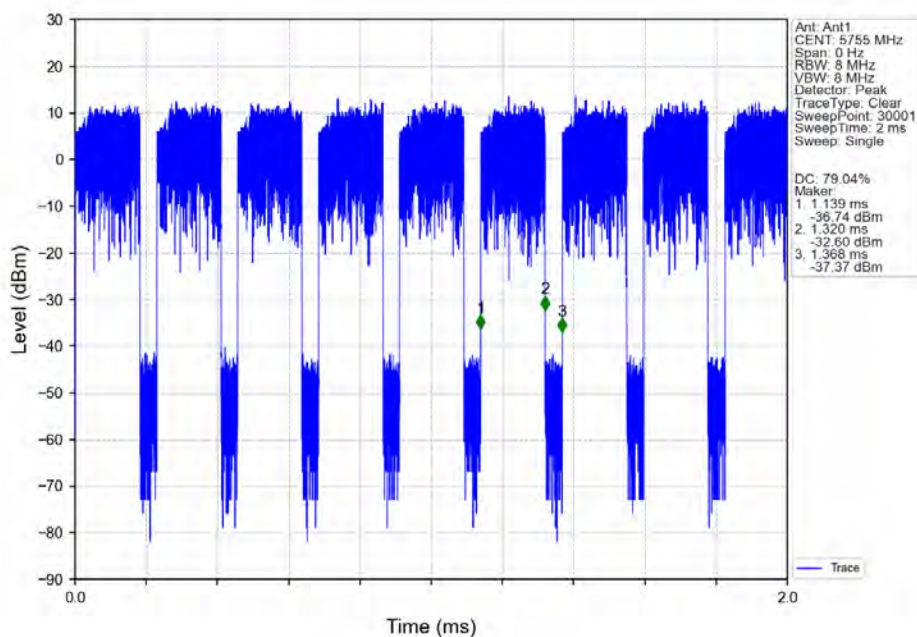
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



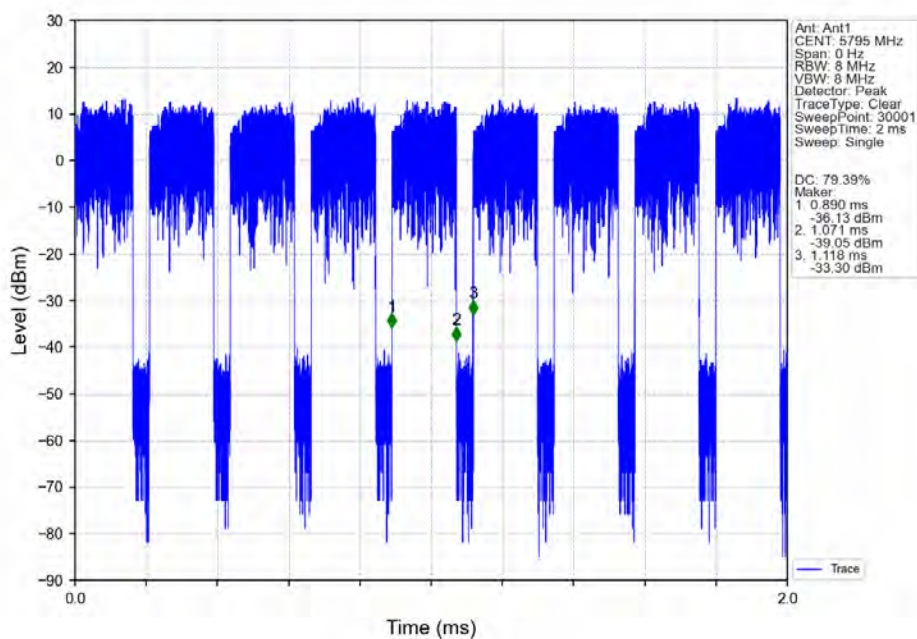
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



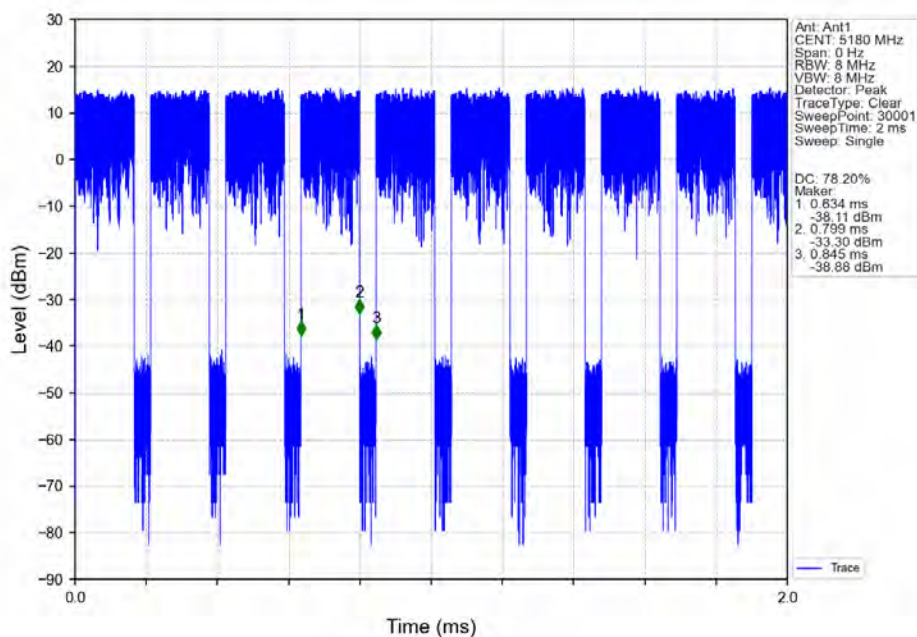
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



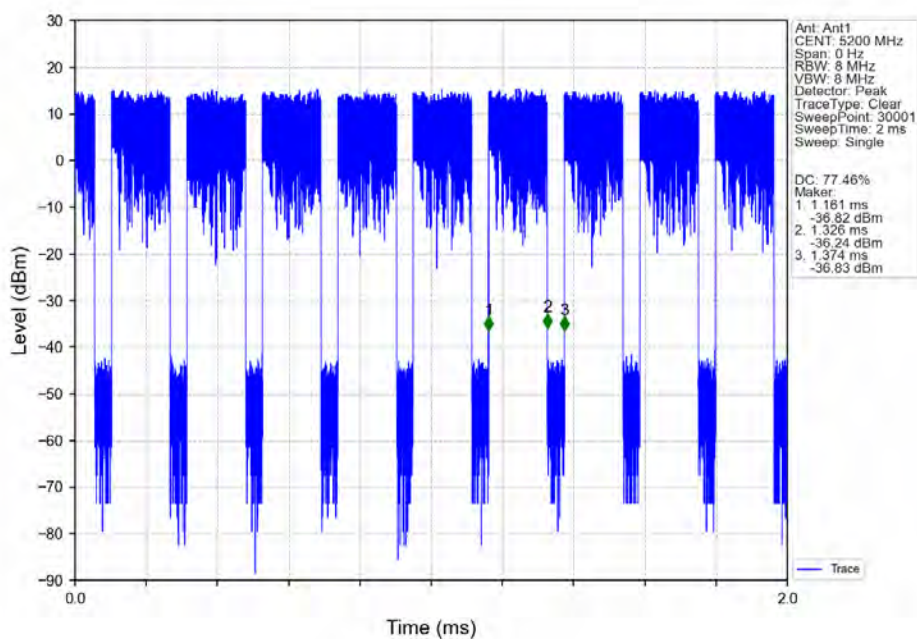
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



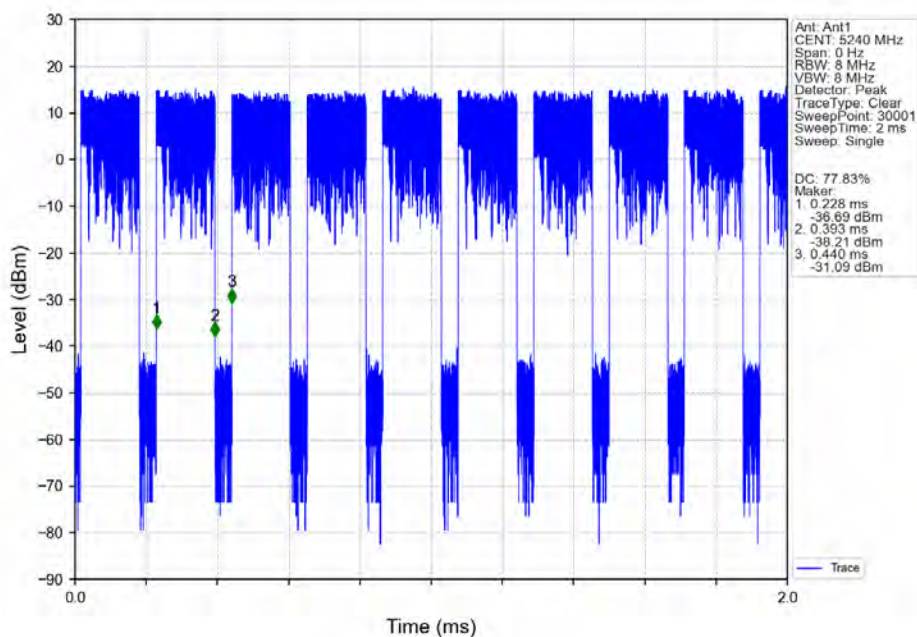
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



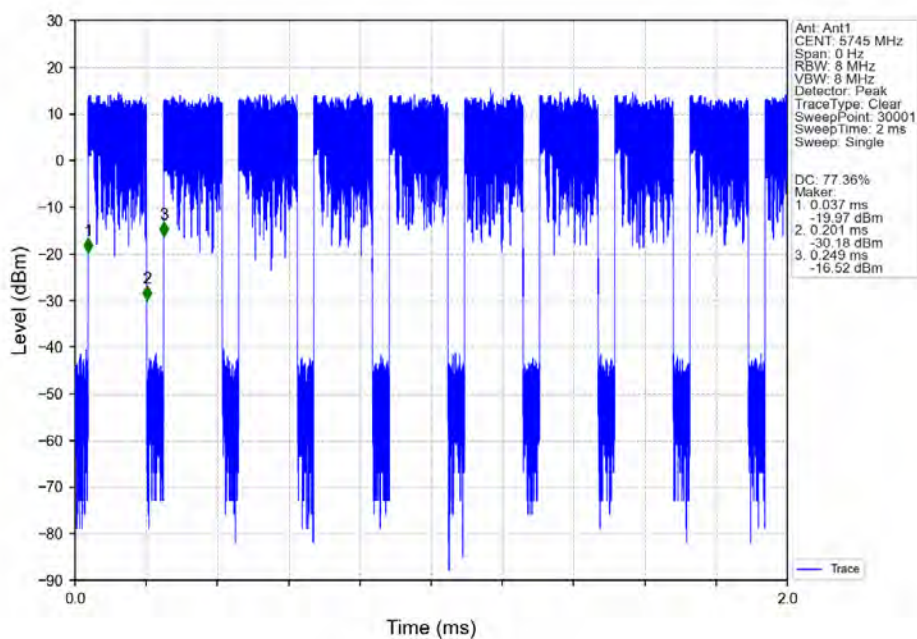
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



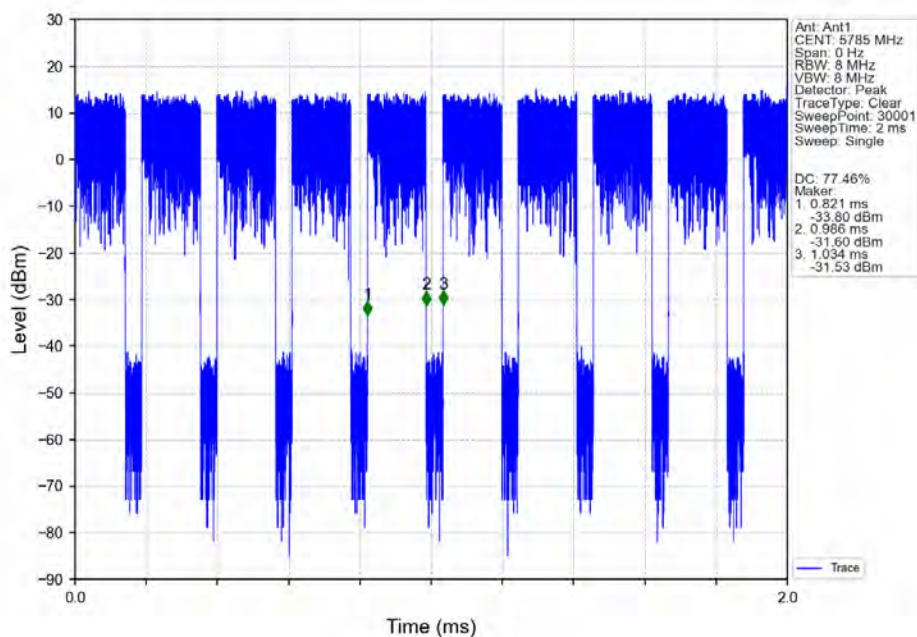
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



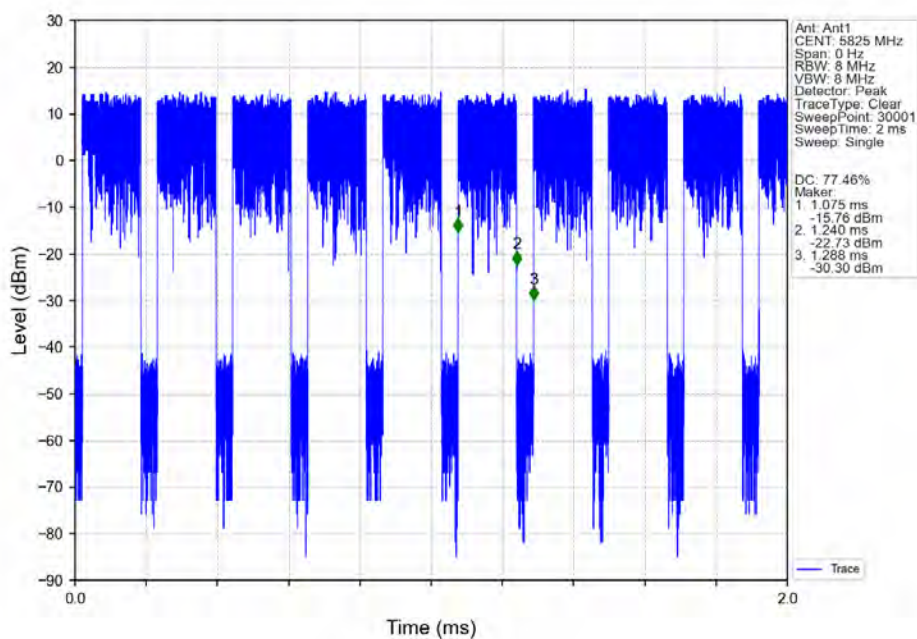
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



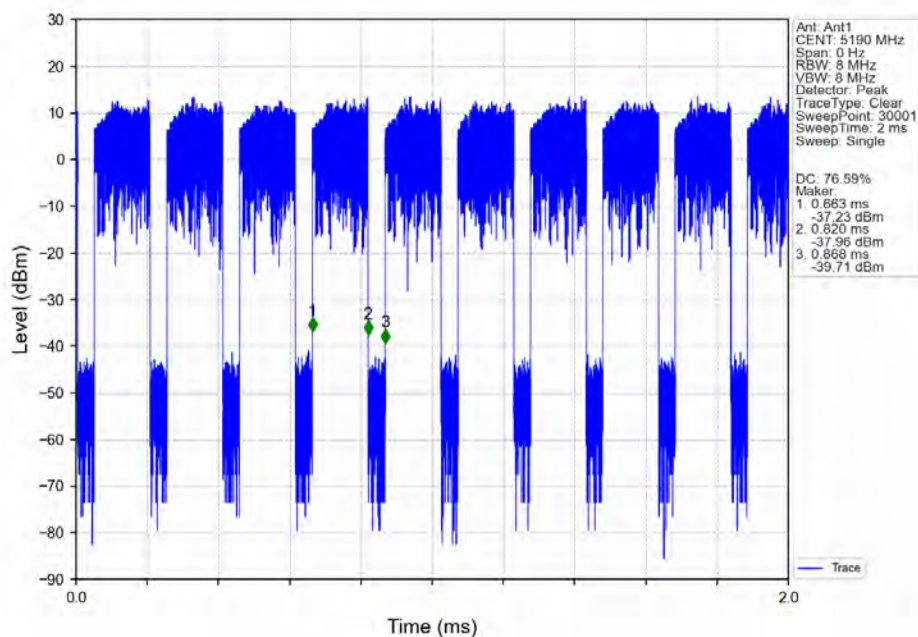
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



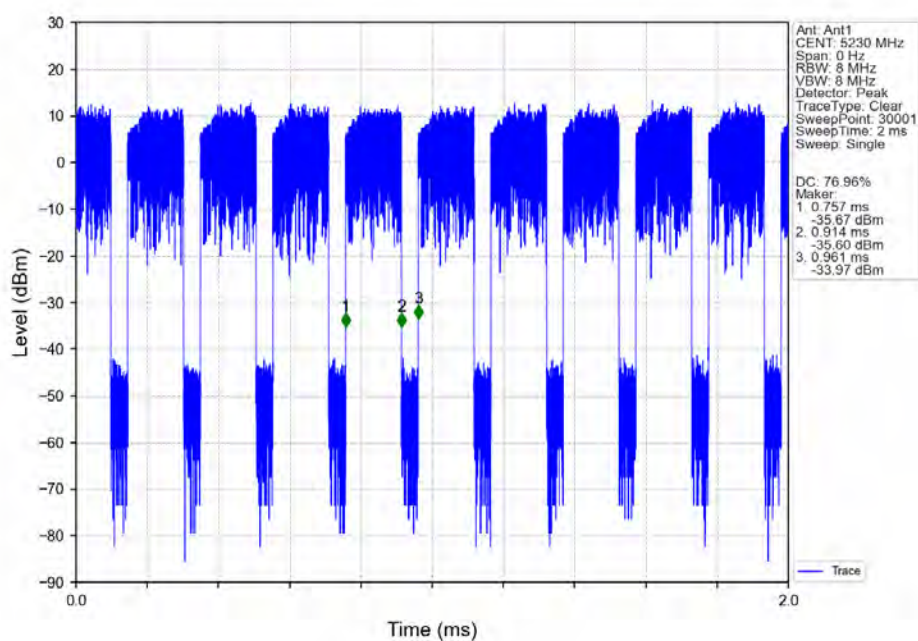
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



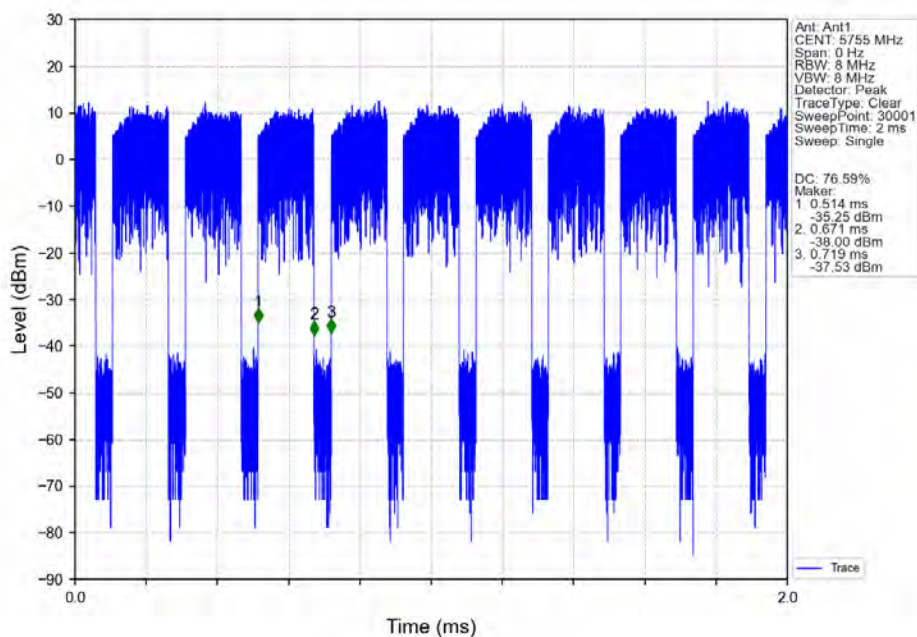
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



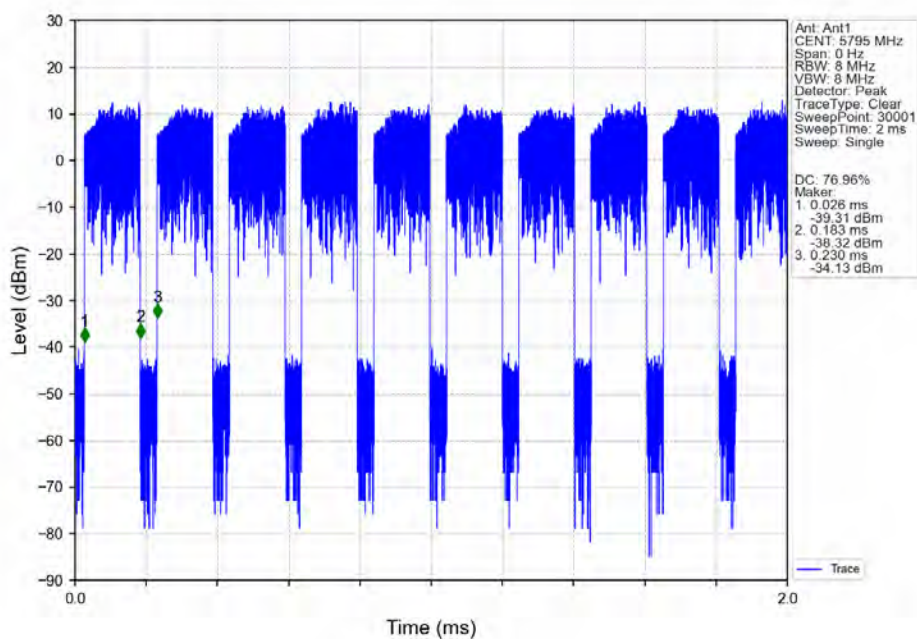
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



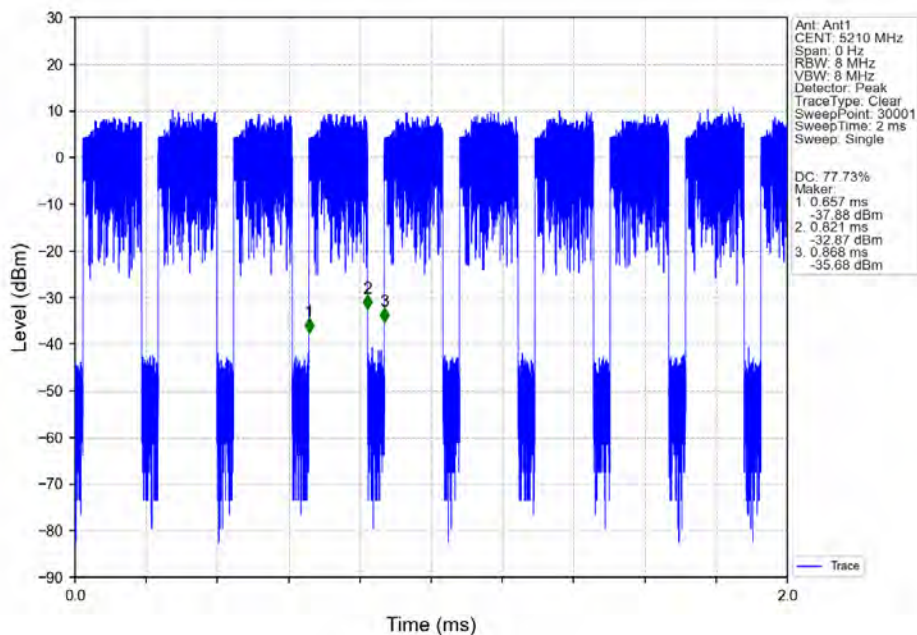
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



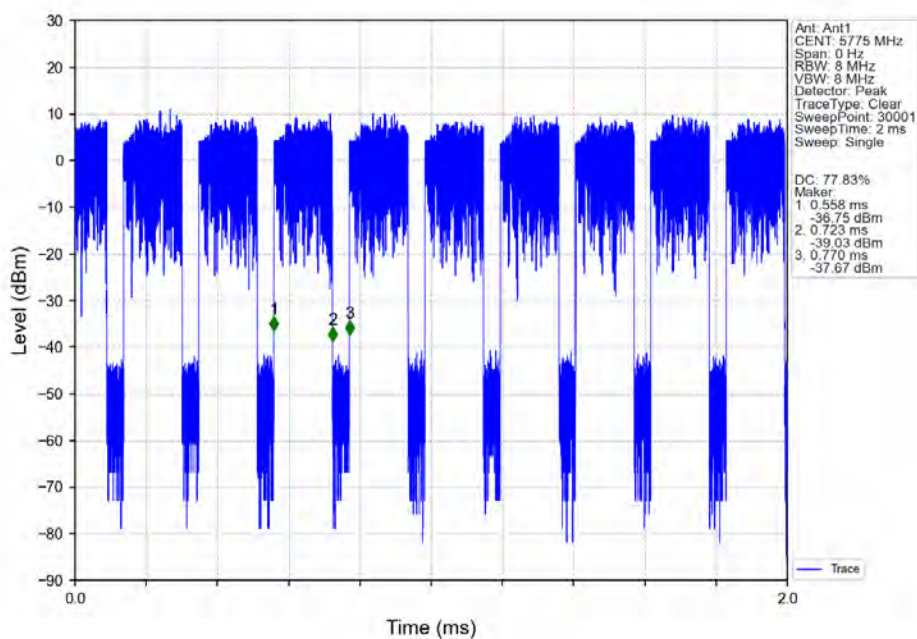
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5775MHz_Ant1_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	16.469	/	Pass
		5200	1	16.510	/	Pass
		5240	1	16.492	/	Pass
		5745	1	16.688	/	Pass
		5785	1	16.669	/	Pass
		5825	1	16.681	/	Pass
802.11n (HT20)	SISO	5180	1	17.597	/	Pass
		5200	1	17.638	/	Pass
		5240	1	17.639	/	Pass
		5745	1	17.782	/	Pass
		5785	1	17.810	/	Pass
		5825	1	17.816	/	Pass
802.11n (HT40)	SISO	5190	1	36.218	/	Pass
		5230	1	36.217	/	Pass
		5755	1	36.652	/	Pass
		5795	1	36.775	/	Pass
802.11ac (VHT20)	SISO	5180	1	17.609	/	Pass
		5200	1	17.648	/	Pass
		5240	1	17.665	/	Pass
		5745	1	17.841	/	Pass
		5785	1	17.879	/	Pass
		5825	1	17.789	/	Pass
802.11ac (VHT40)	SISO	5190	1	36.217	/	Pass
		5230	1	36.228	/	Pass
		5755	1	36.655	/	Pass
		5795	1	36.747	/	Pass
802.11ac (VHT80)	SISO	5210	1	74.983	/	Pass
		5775	1	75.174	/	Pass

2.1.2 26dB BW

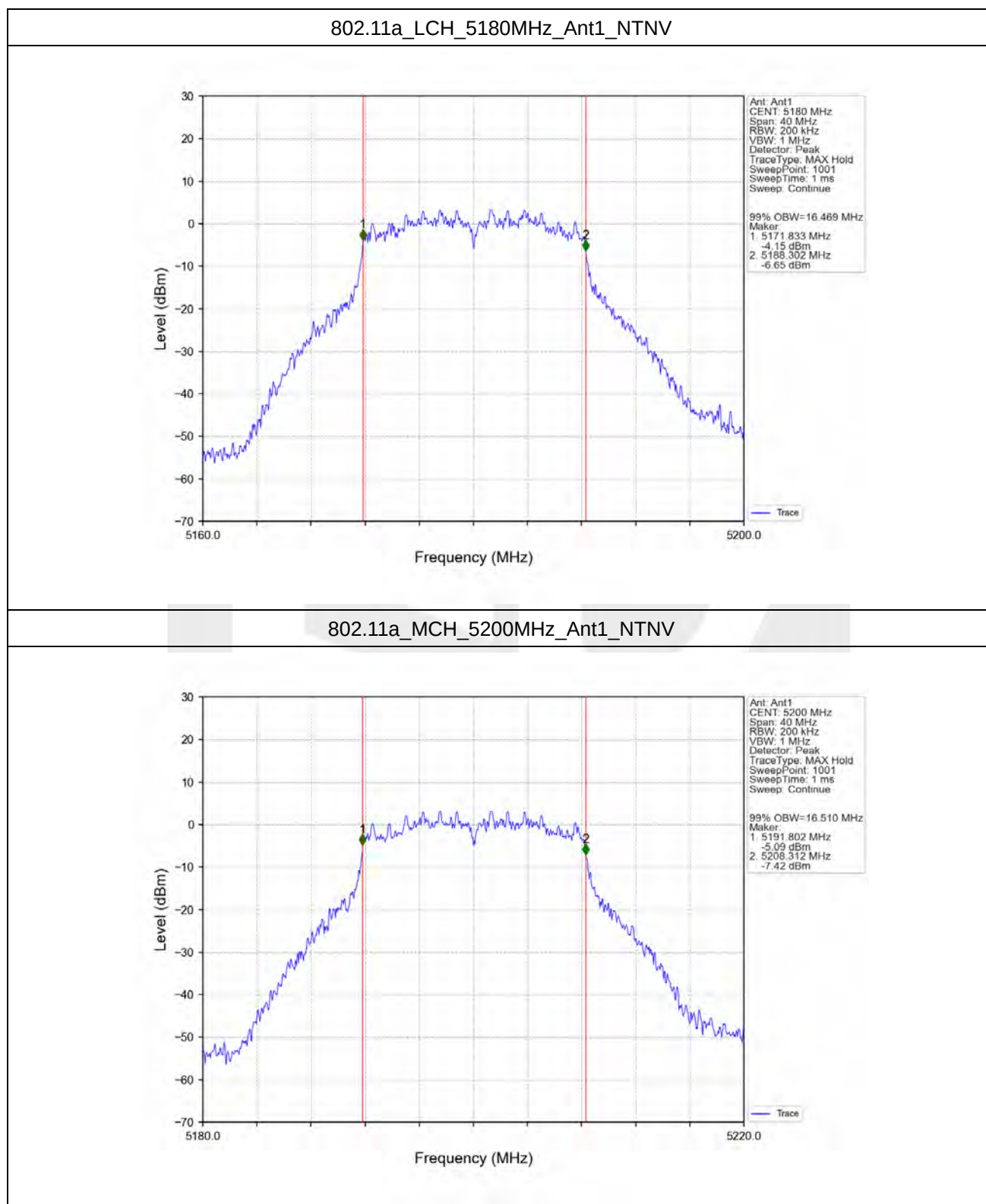
Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	22.595	/	Pass
		5200	1	22.833	/	Pass
		5240	1	23.545	/	Pass
802.11n (HT20)	SISO	5180	1	22.495	/	Pass
		5200	1	22.952	/	Pass
		5240	1	23.720	/	Pass
802.11n (HT40)	SISO	5190	1	43.225	/	Pass
		5230	1	43.259	/	Pass
802.11ac (VHT20)	SISO	5180	1	23.209	/	Pass
		5200	1	23.065	/	Pass
		5240	1	22.466	/	Pass
802.11ac (VHT40)	SISO	5190	1	43.085	/	Pass
		5230	1	43.484	/	Pass
802.11ac (VHT80)	SISO	5210	1	84.068	/	Pass

2.1.3 6dB BW

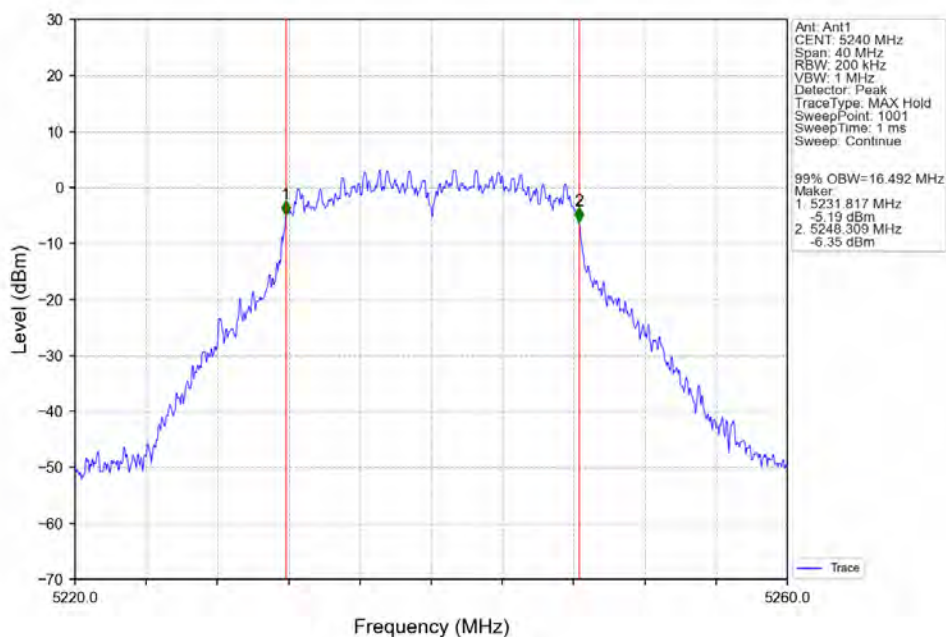
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5745	1	16.372	≥ 0.5	Pass
		5785	1	16.341	≥ 0.5	Pass
		5825	1	16.352	≥ 0.5	Pass
802.11n (HT20)	SISO	5745	1	17.584	≥ 0.5	Pass
		5785	1	17.267	≥ 0.5	Pass
		5825	1	17.585	≥ 0.5	Pass
802.11n (HT40)	SISO	5755	1	36.278	≥ 0.5	Pass
		5795	1	36.336	≥ 0.5	Pass
802.11ac (VHT20)	SISO	5745	1	17.596	≥ 0.5	Pass
		5785	1	17.262	≥ 0.5	Pass
		5825	1	17.550	≥ 0.5	Pass
802.11ac (VHT40)	SISO	5755	1	36.119	≥ 0.5	Pass
		5795	1	36.042	≥ 0.5	Pass
802.11ac (VHT80)	SISO	5775	1	75.098	≥ 0.5	Pass

2.2 Test Graph

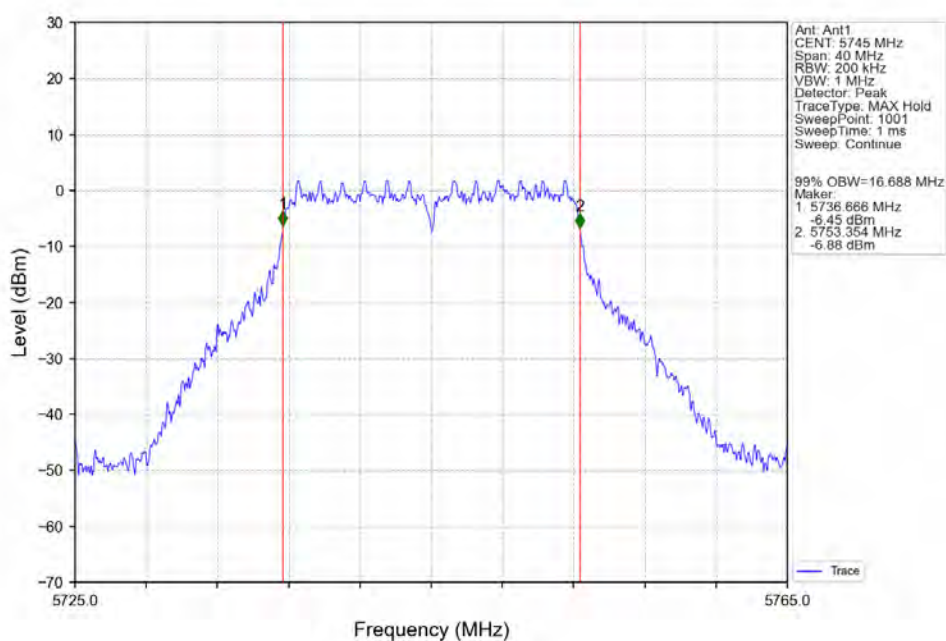
2.2.1 OBW



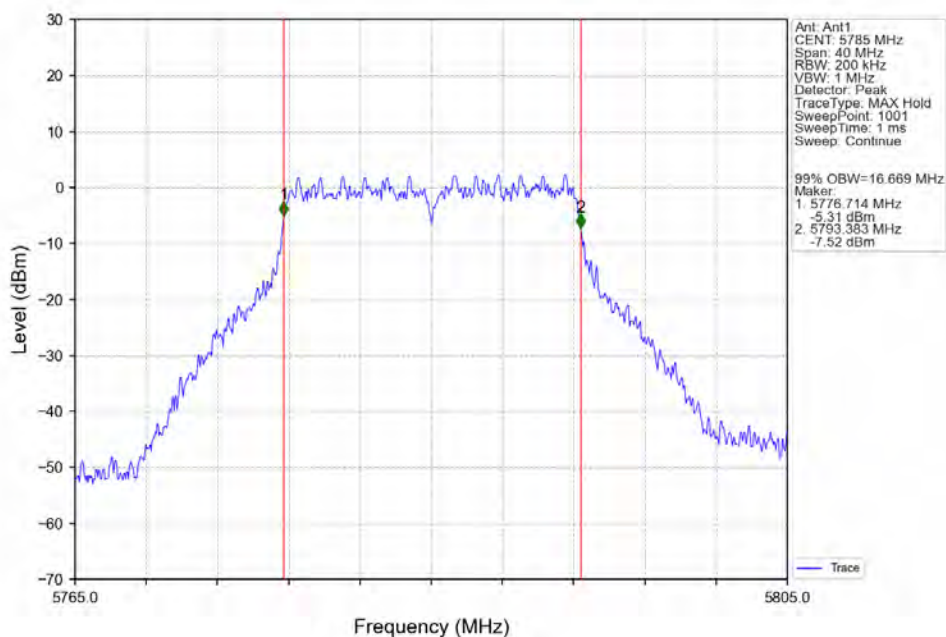
802.11a_HCH_5240MHz_Ant1_NTNV



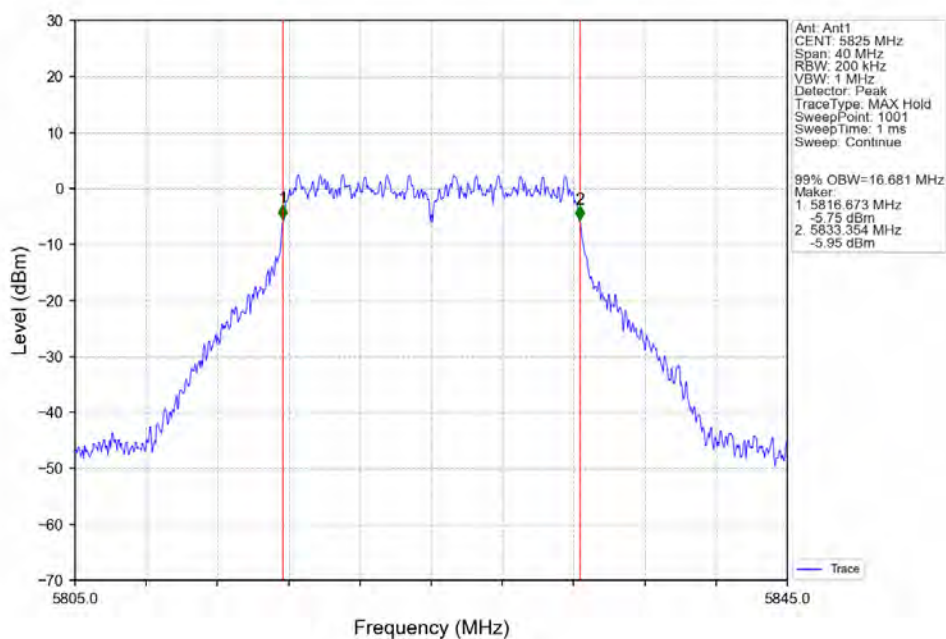
802.11a_LCH_5745MHz_Ant1_NTNV



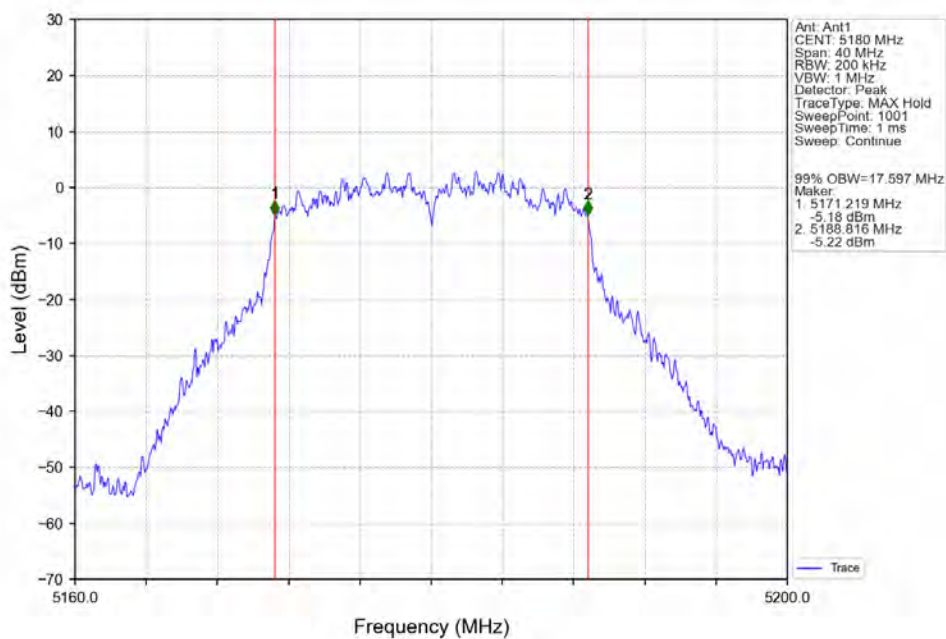
802.11a_MCH_5785MHz_Ant1_NTNV



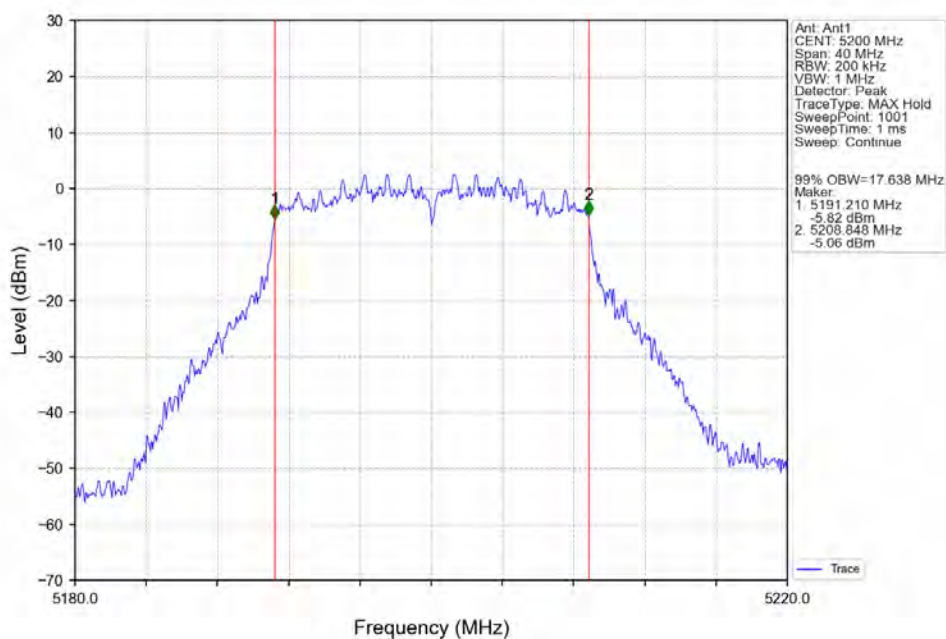
802.11a_HCH_5825MHz_Ant1_NTNV



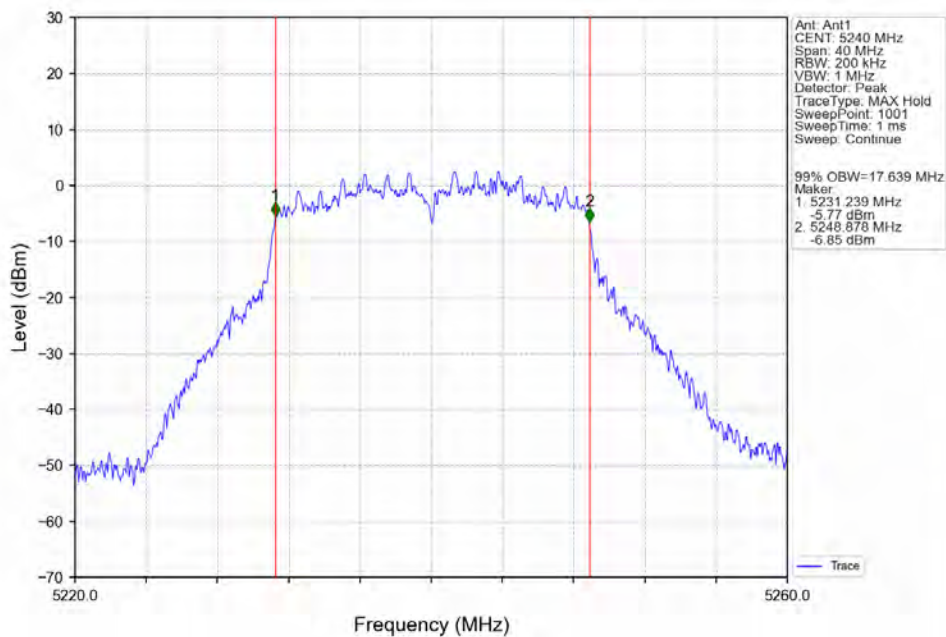
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



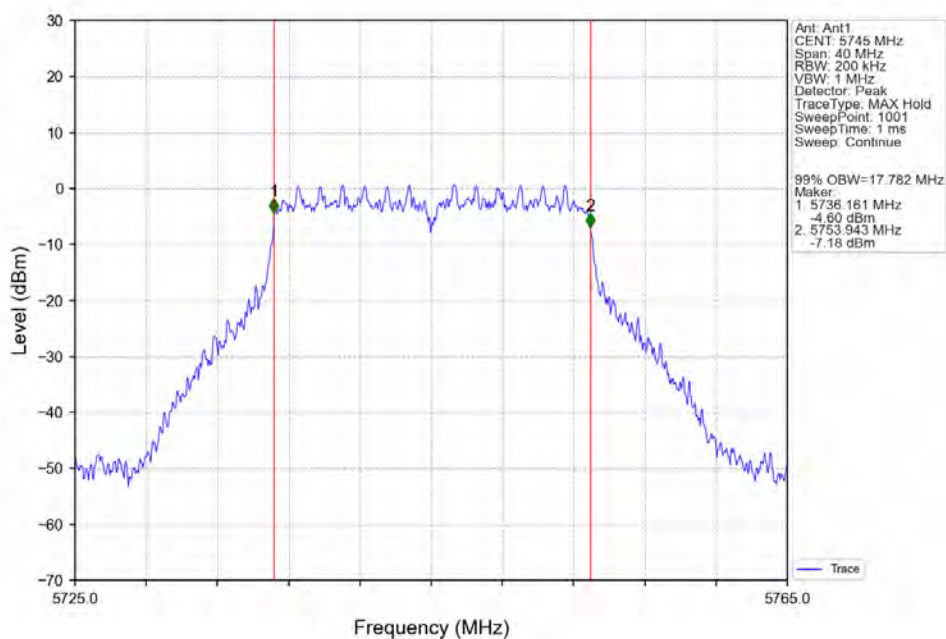
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



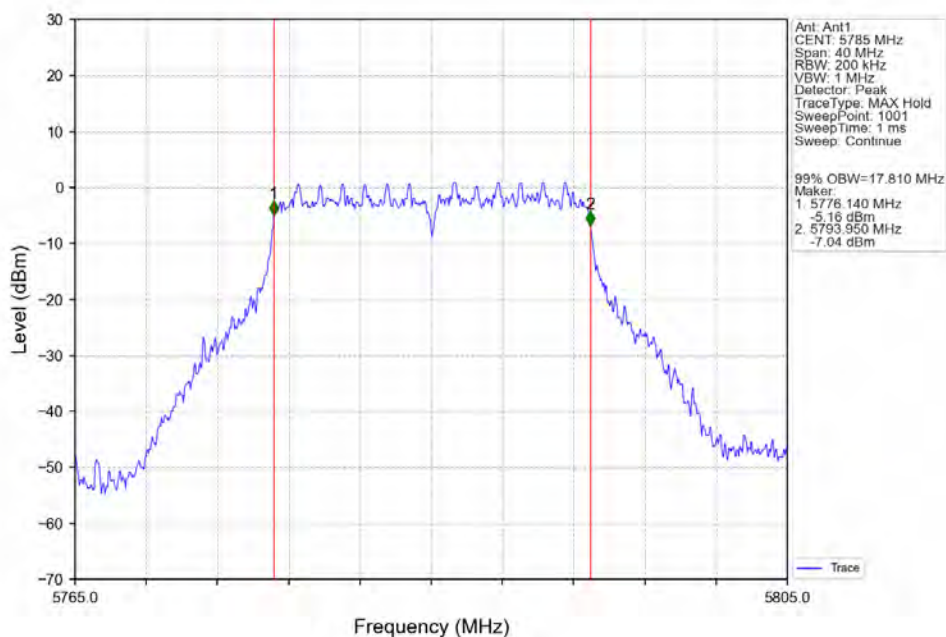
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



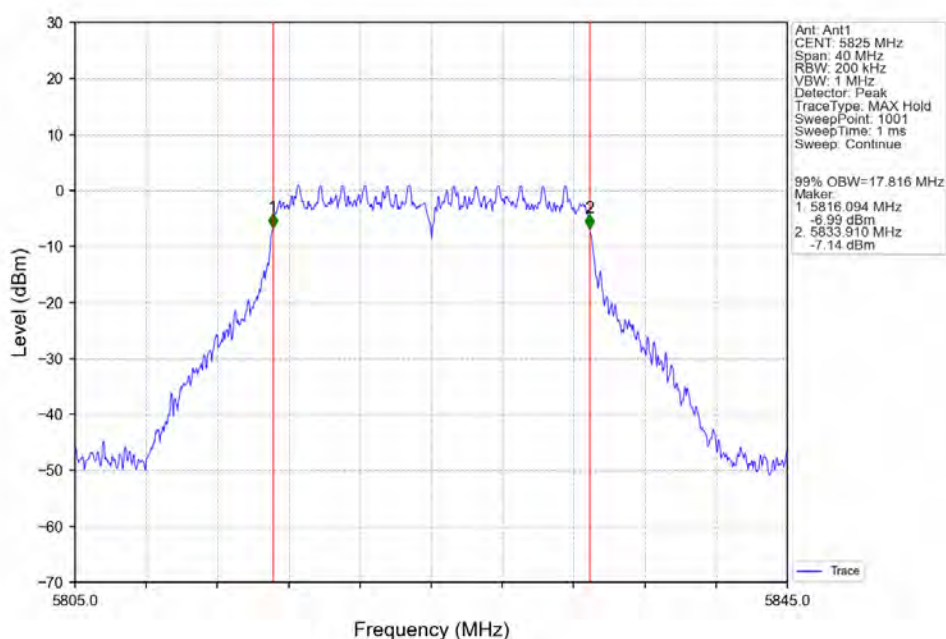
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



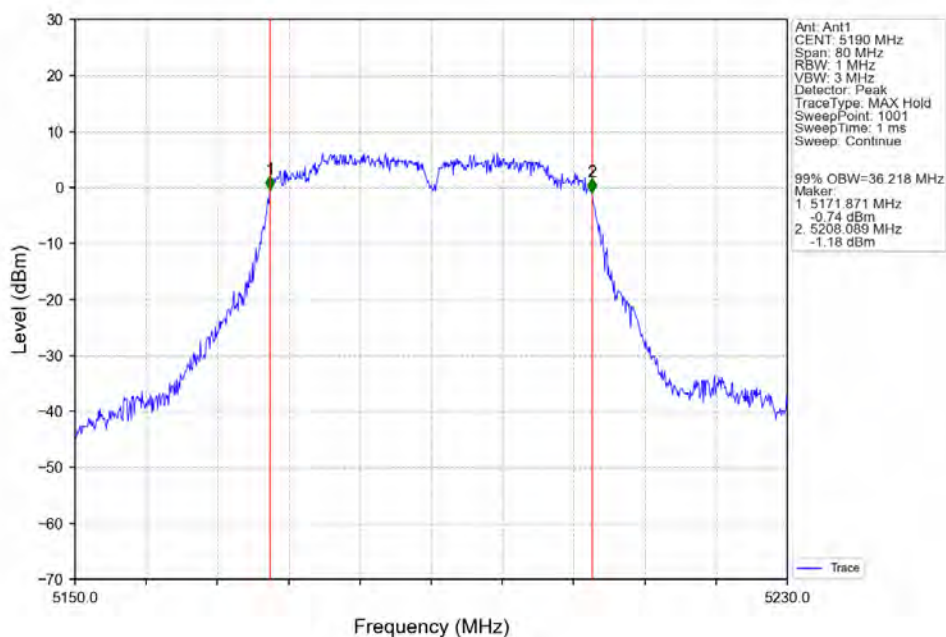
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



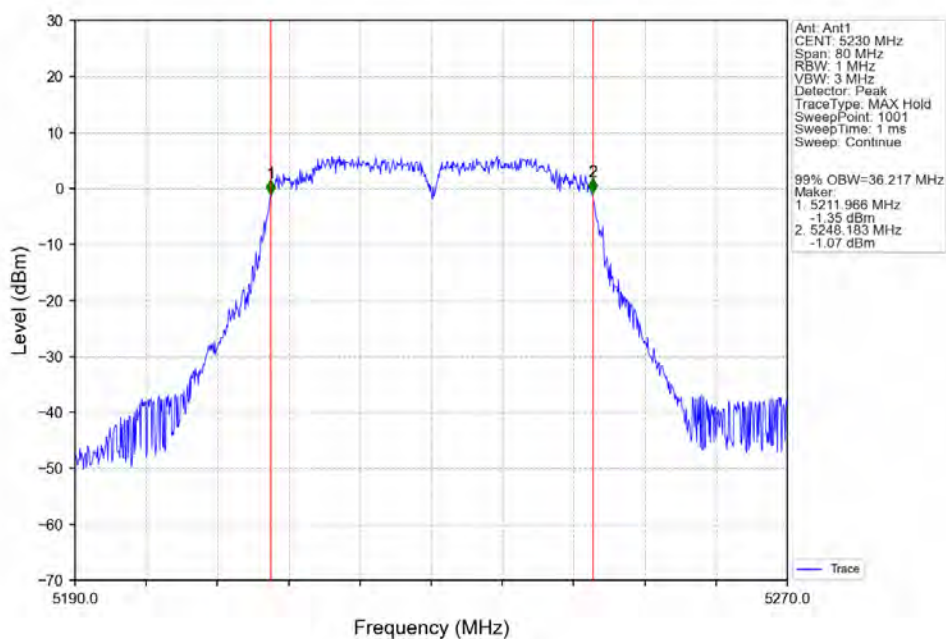
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



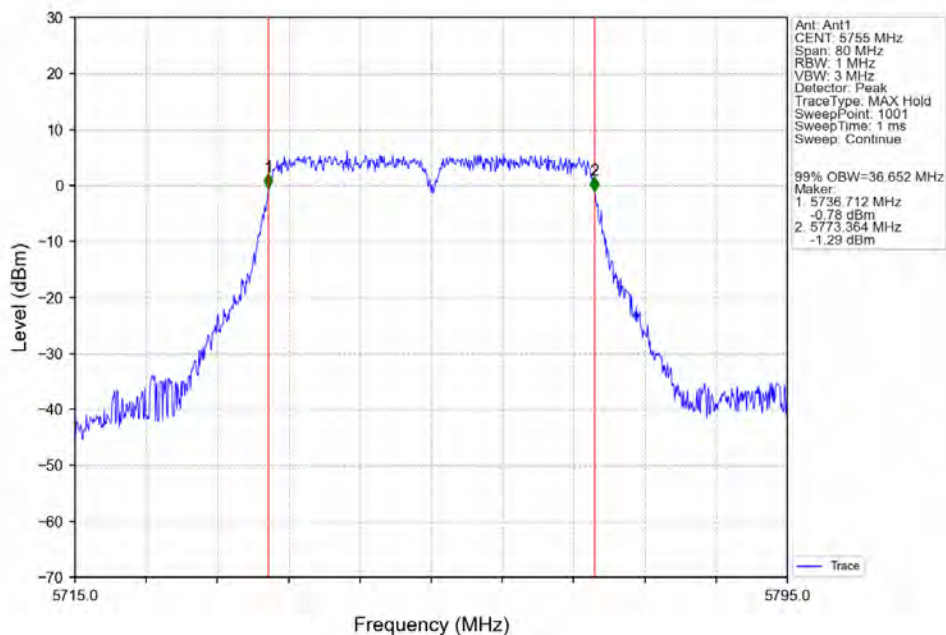
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



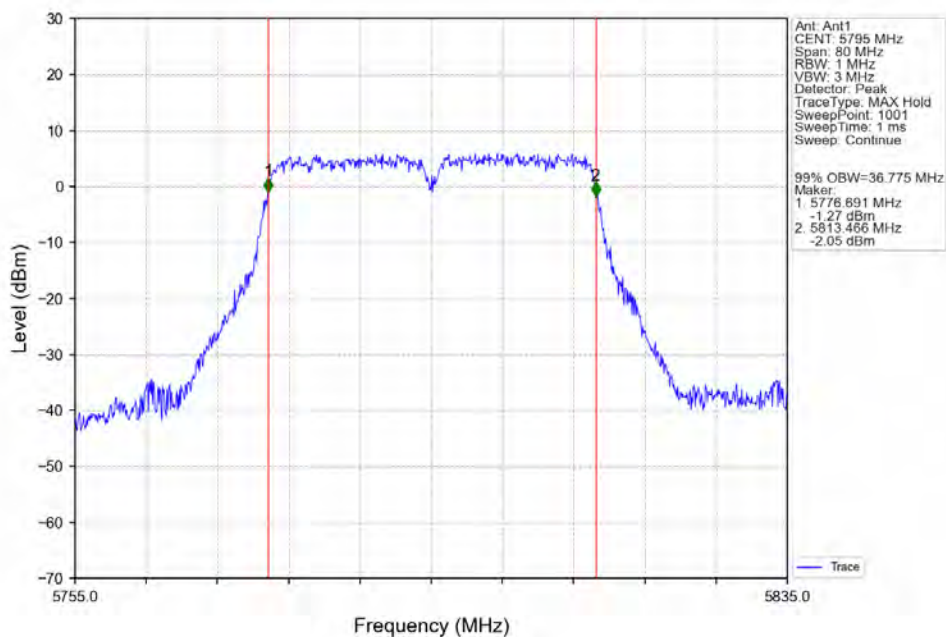
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



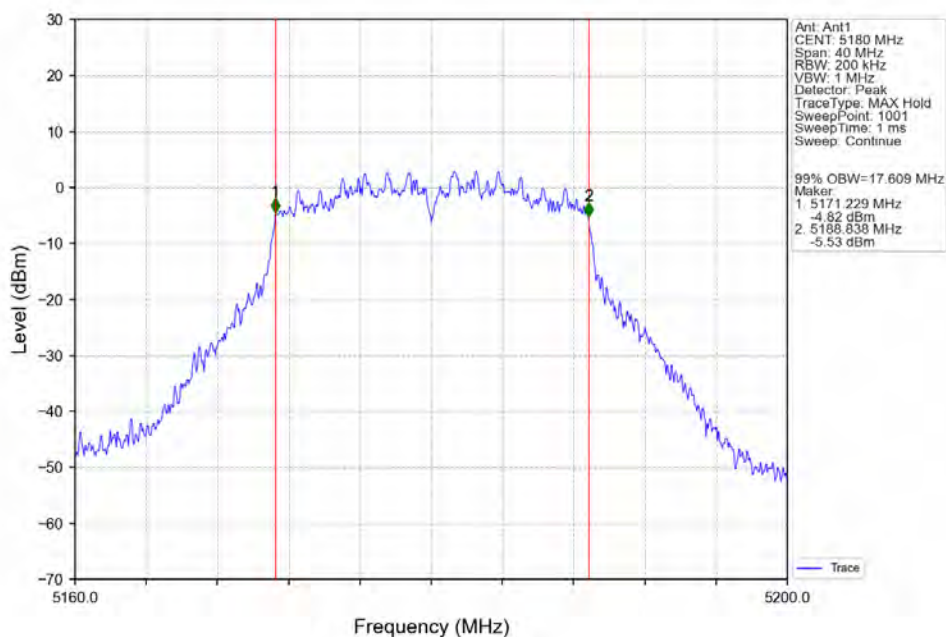
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



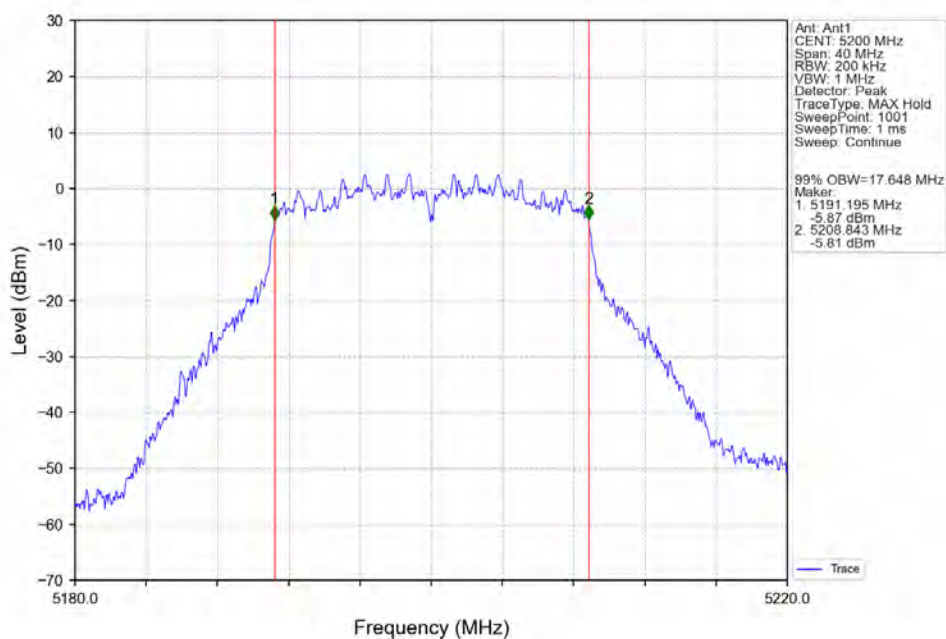
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



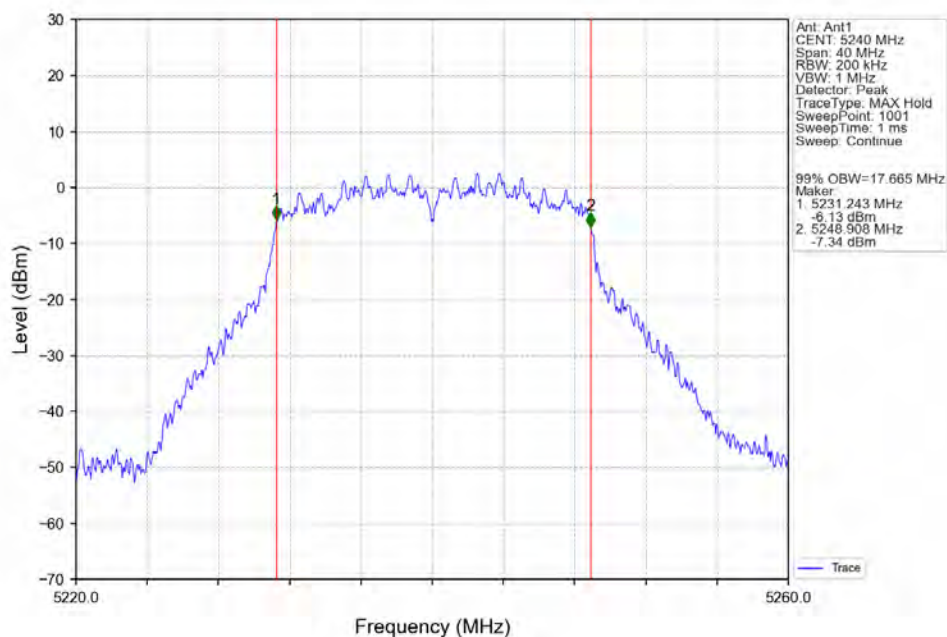
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



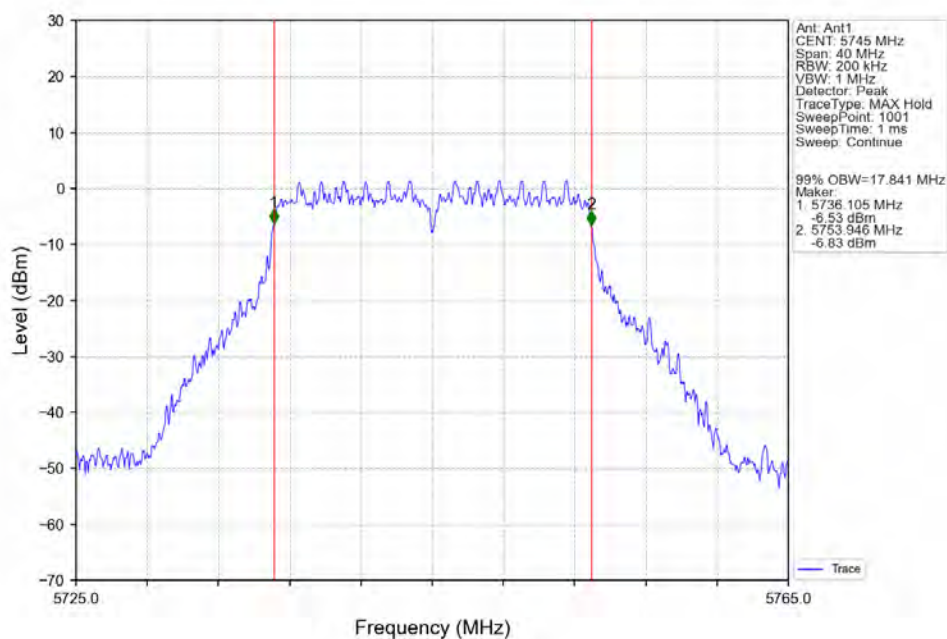
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



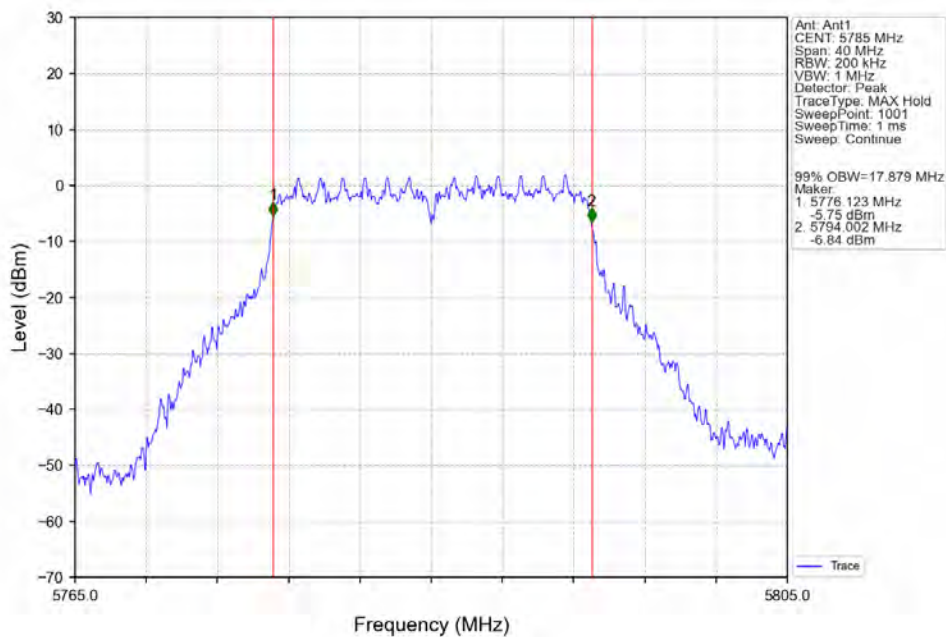
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



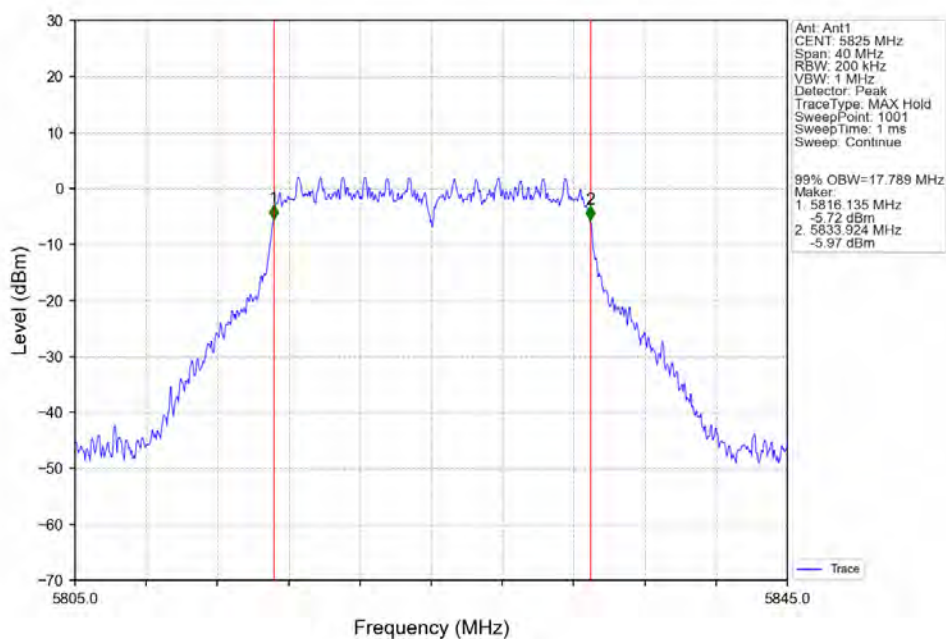
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



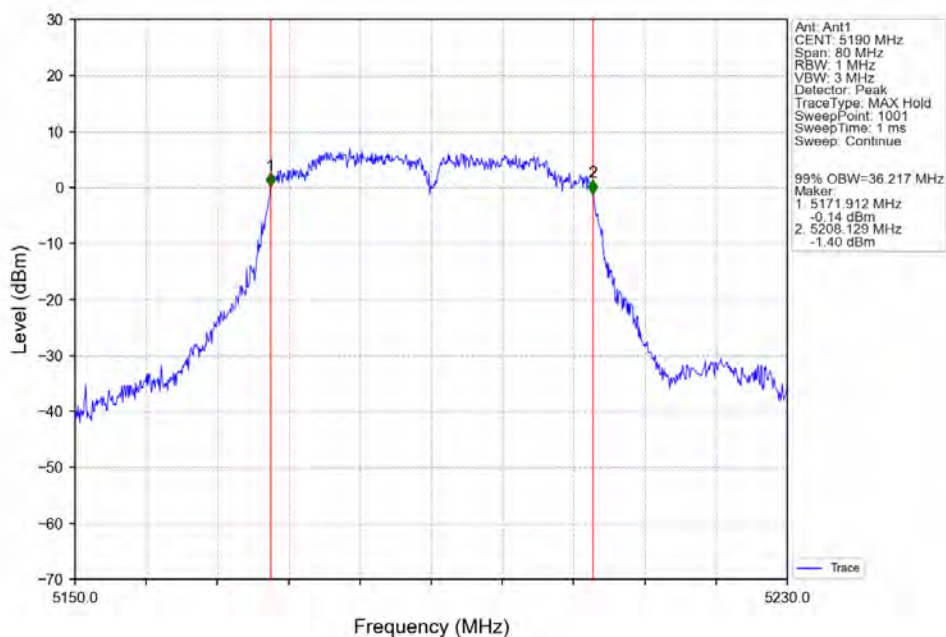
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



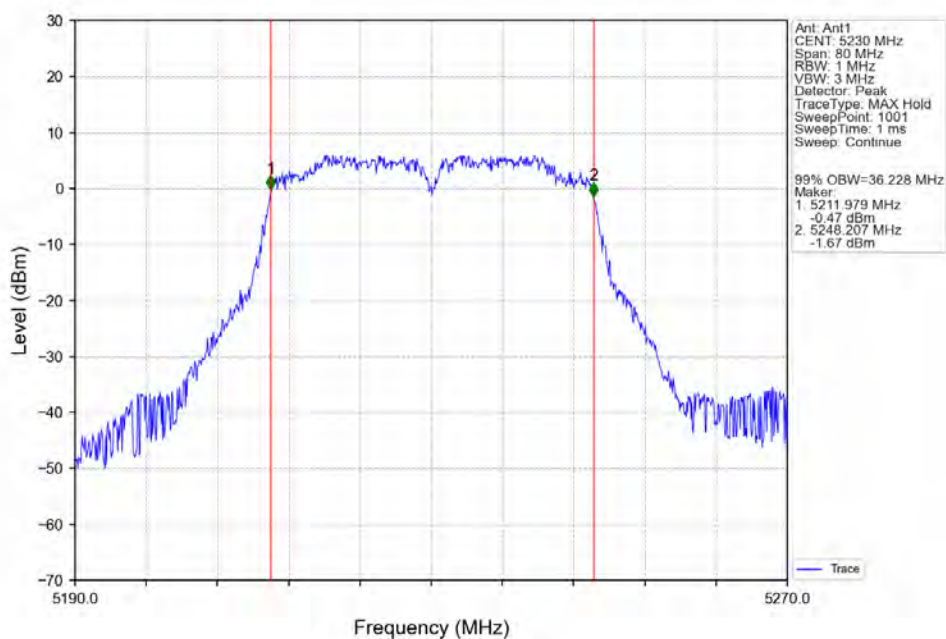
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



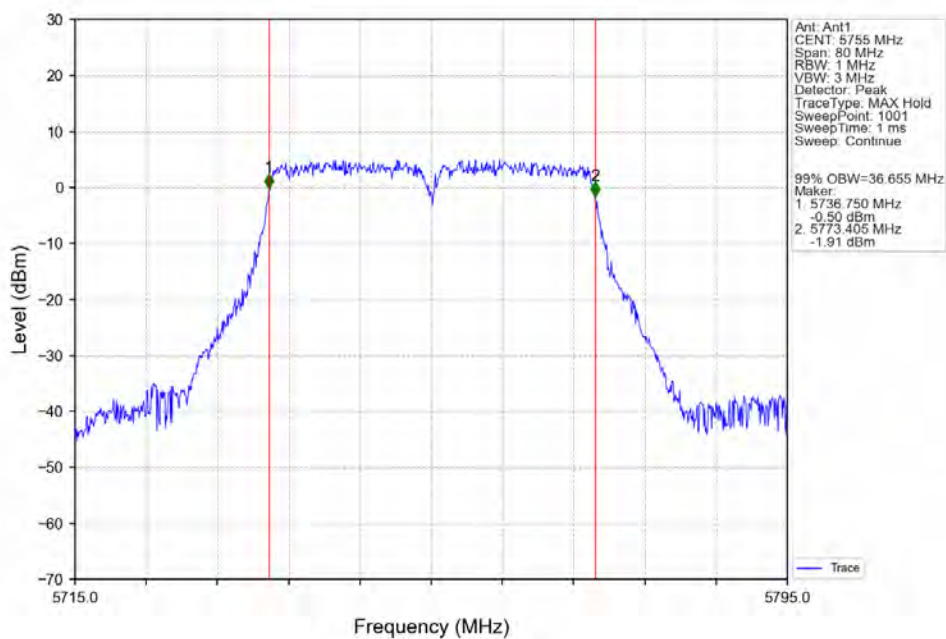
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



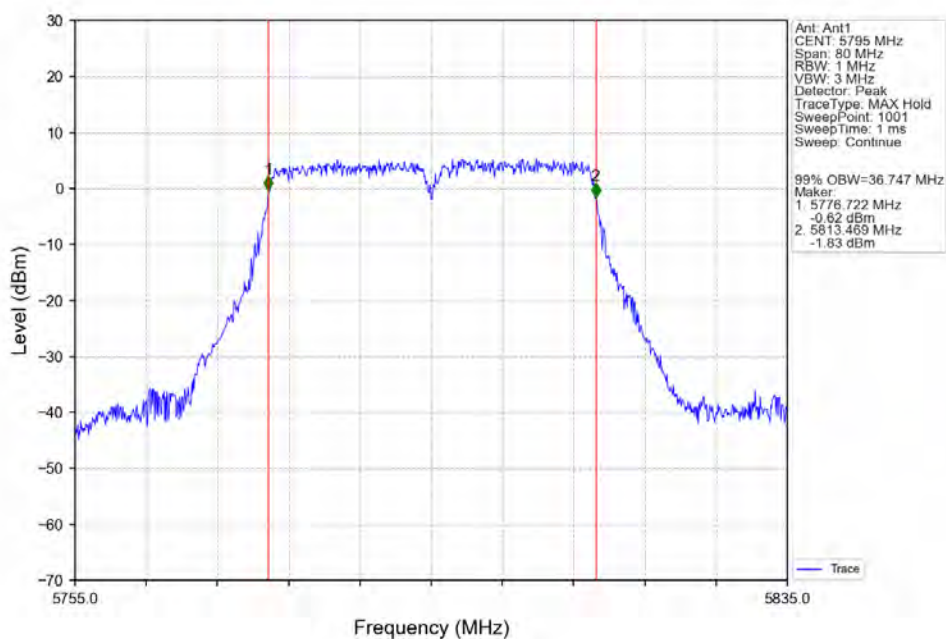
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



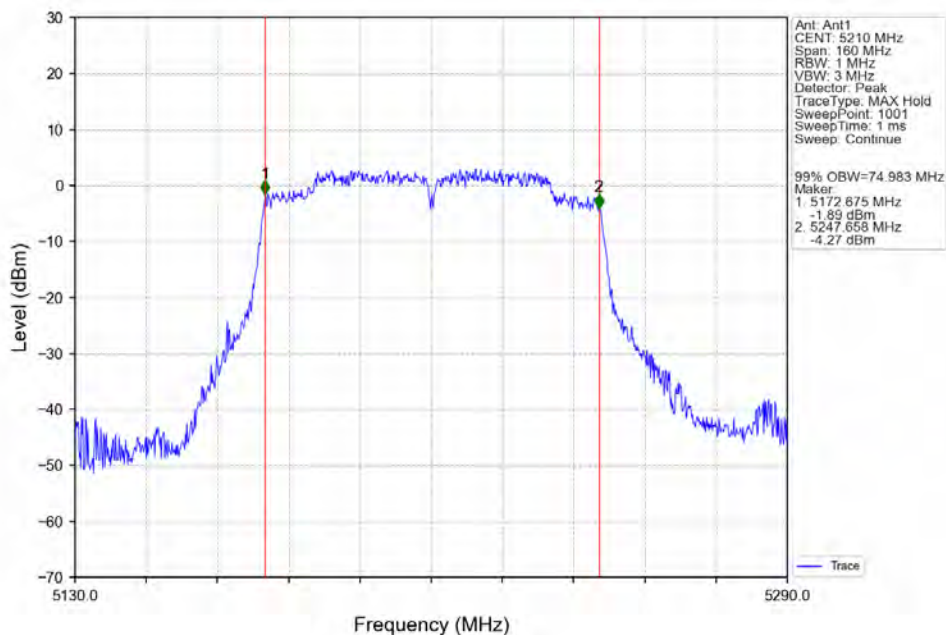
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



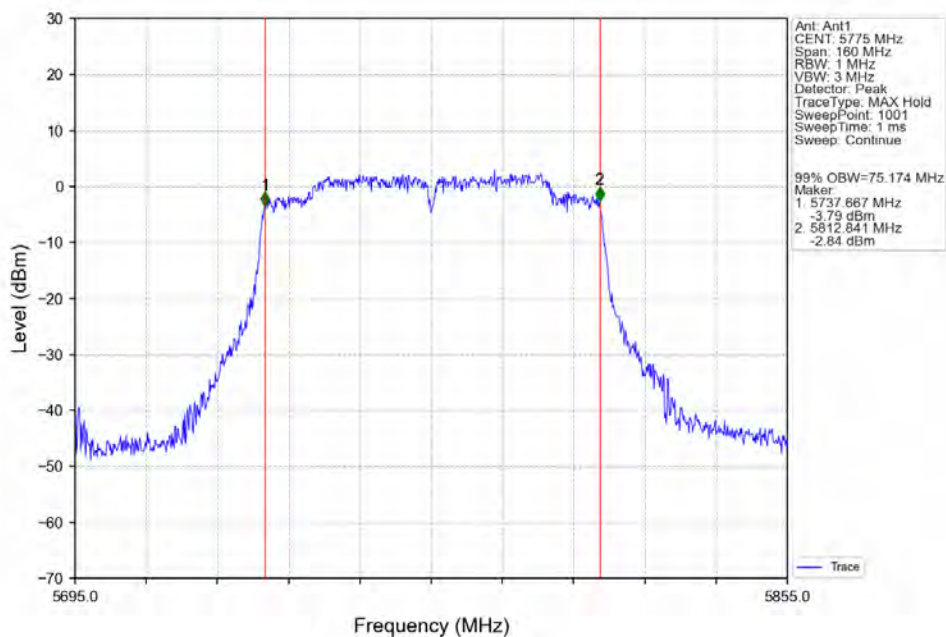
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



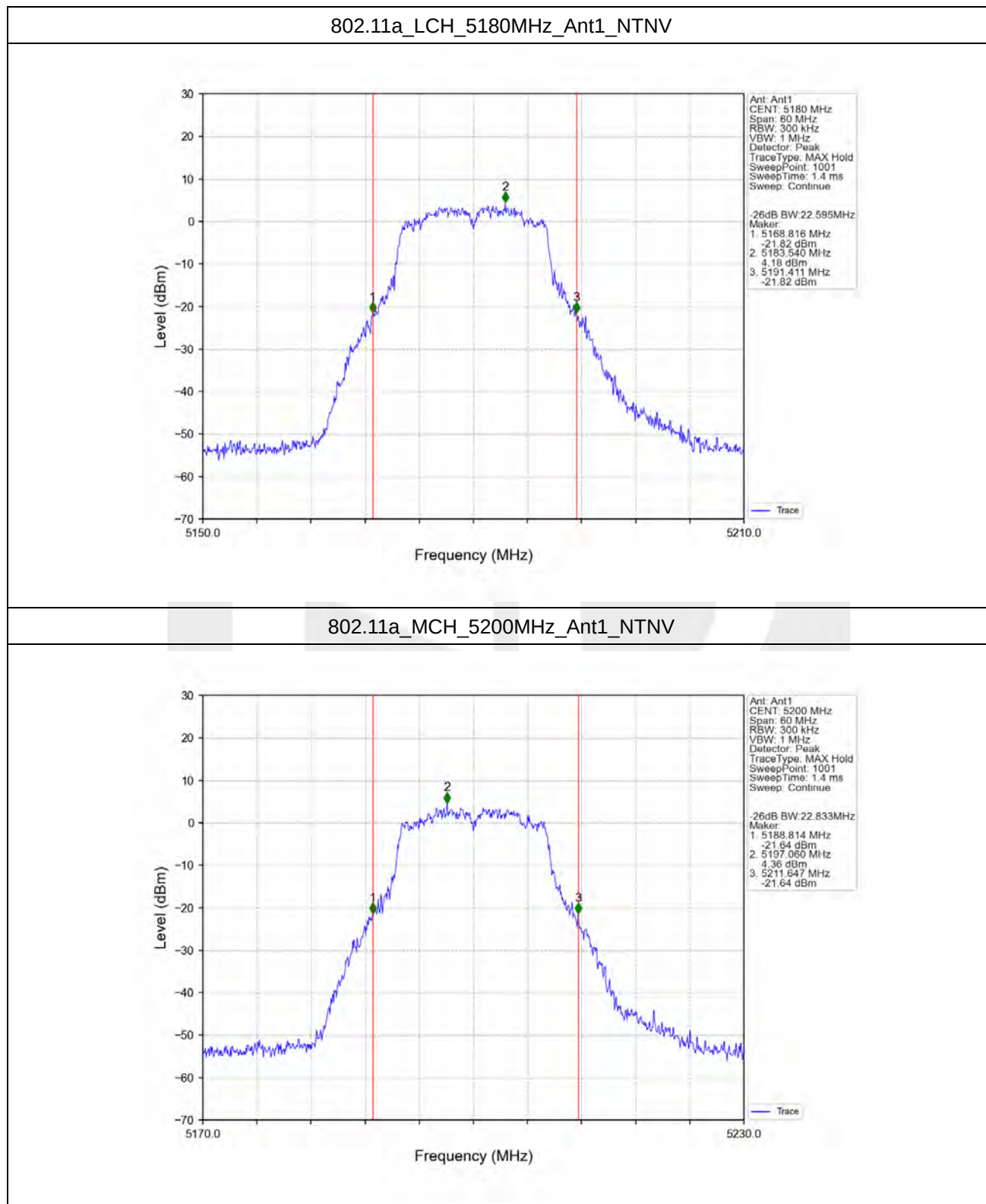
802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



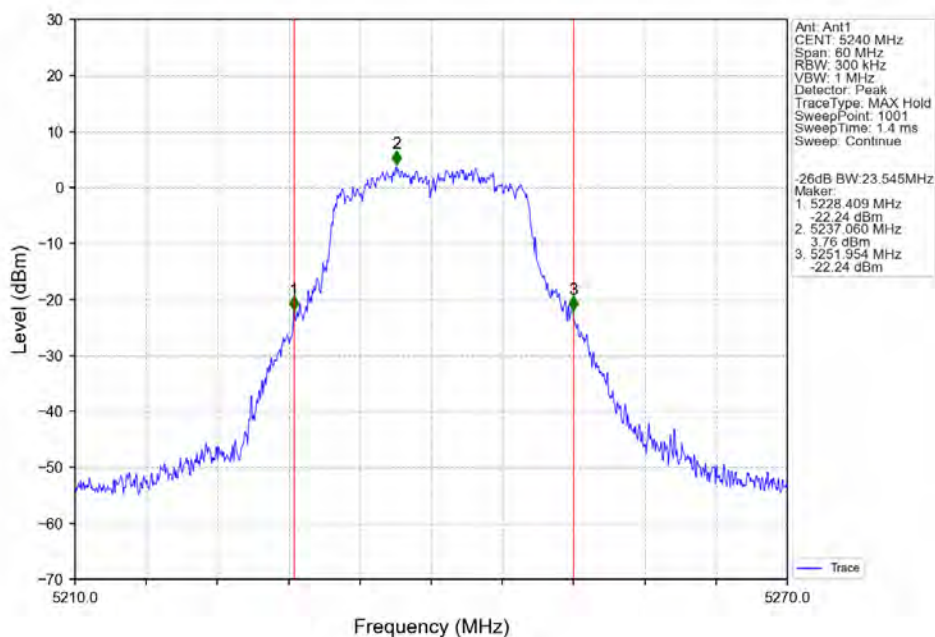
802.11ac(VHT80)_MCH_5775MHz_Ant1_NTNV



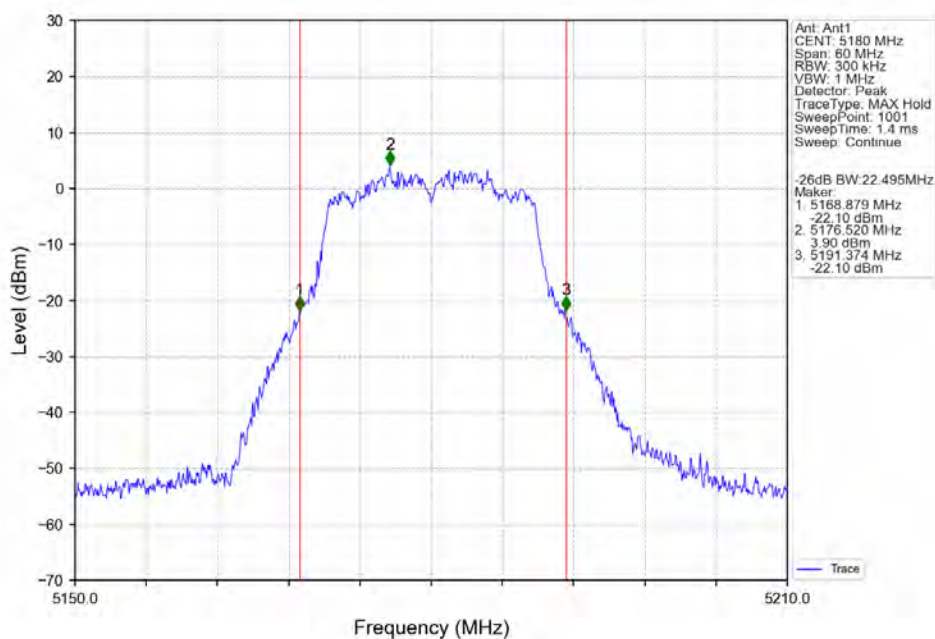
2.2.2 26dB BW



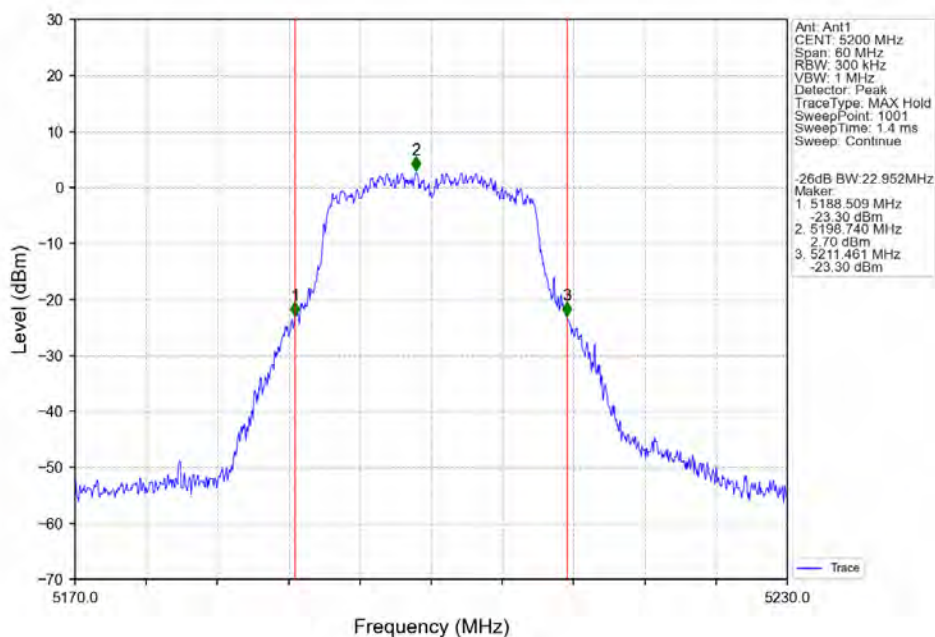
802.11a_HCH_5240MHz_Ant1_NTNV



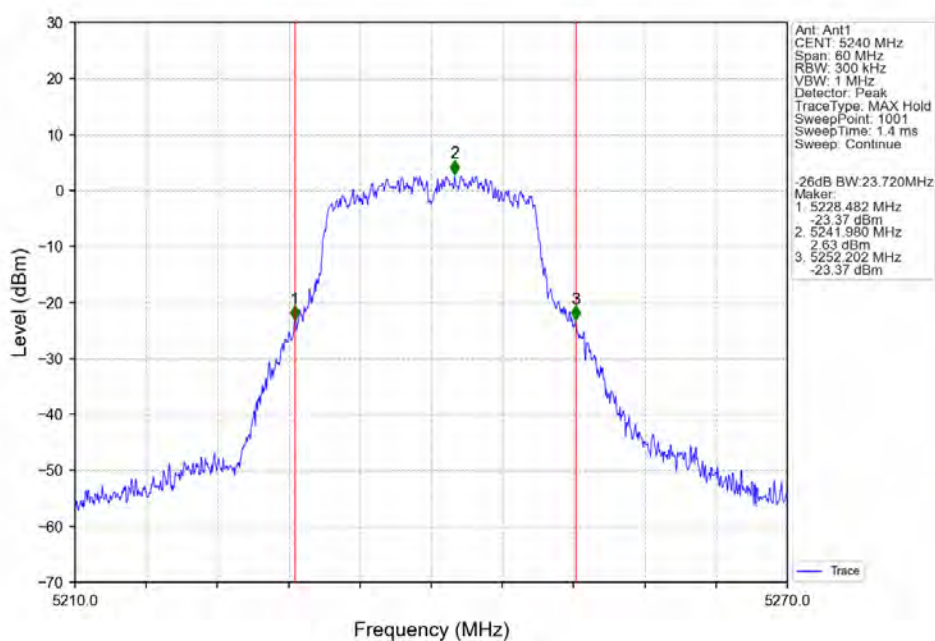
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



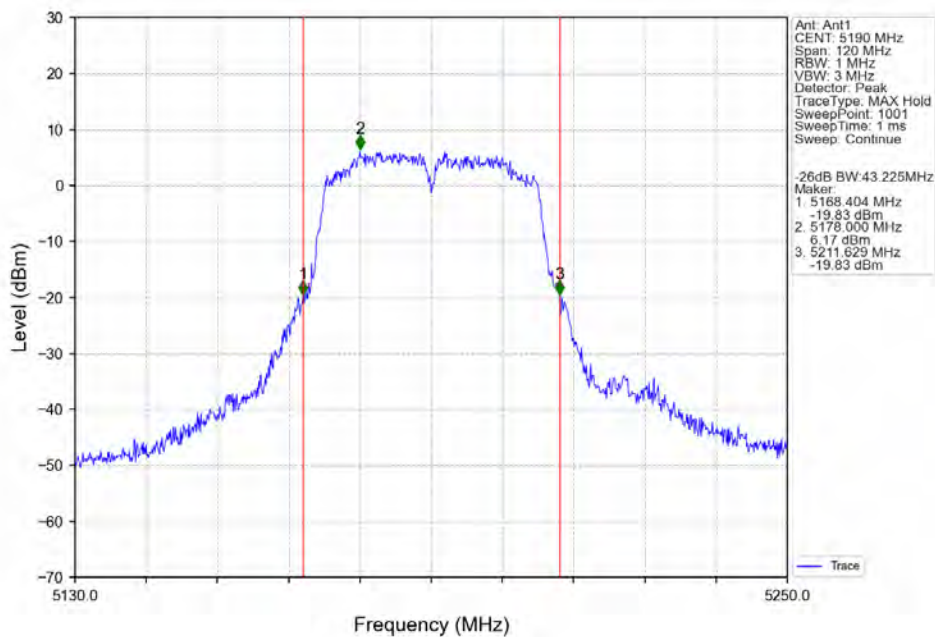
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



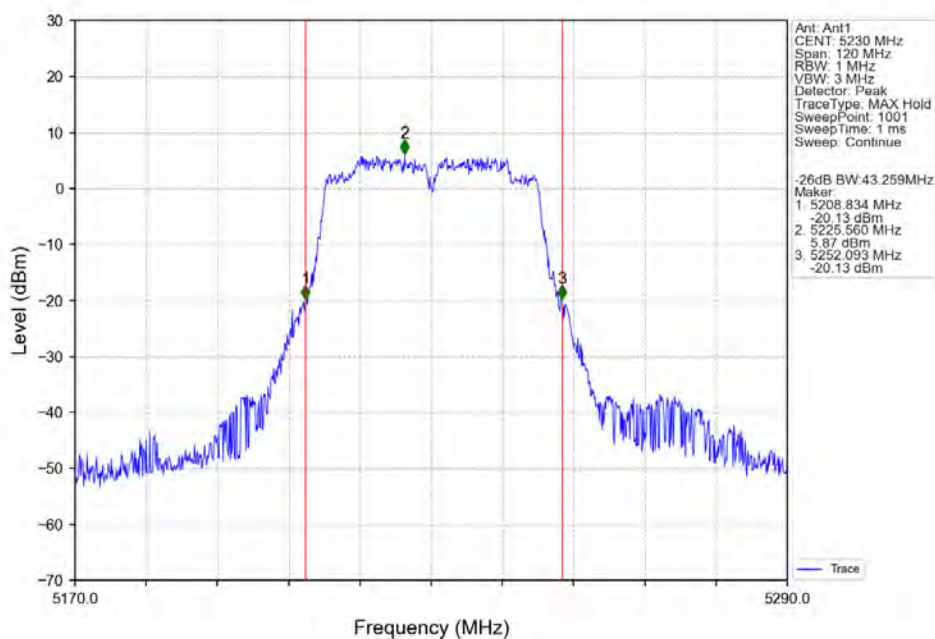
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



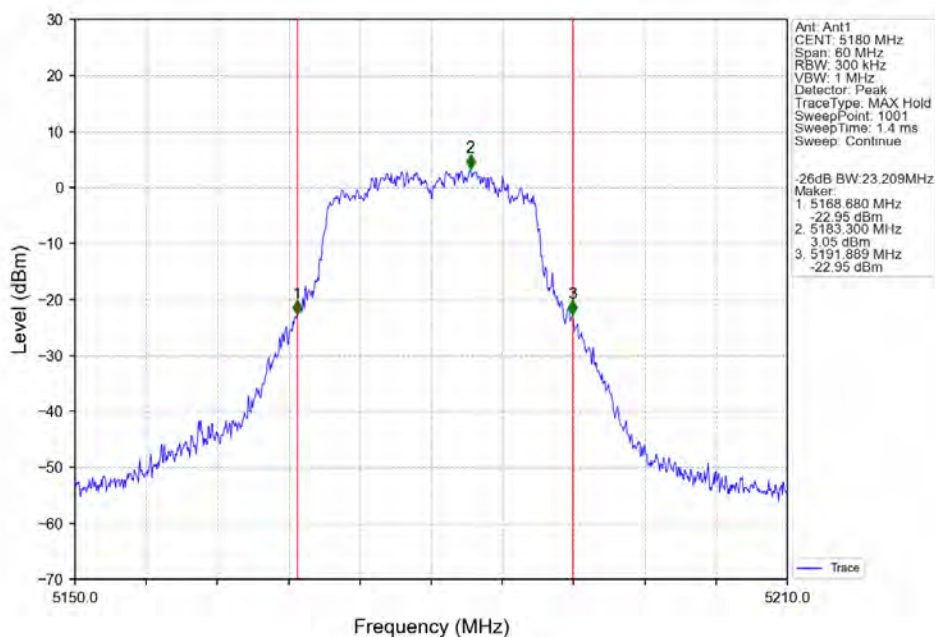
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



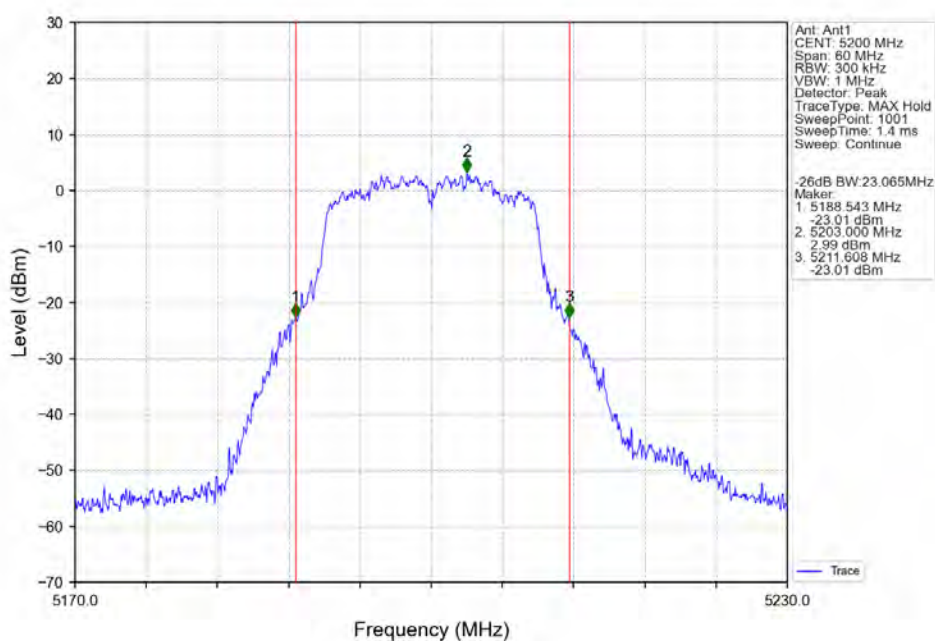
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



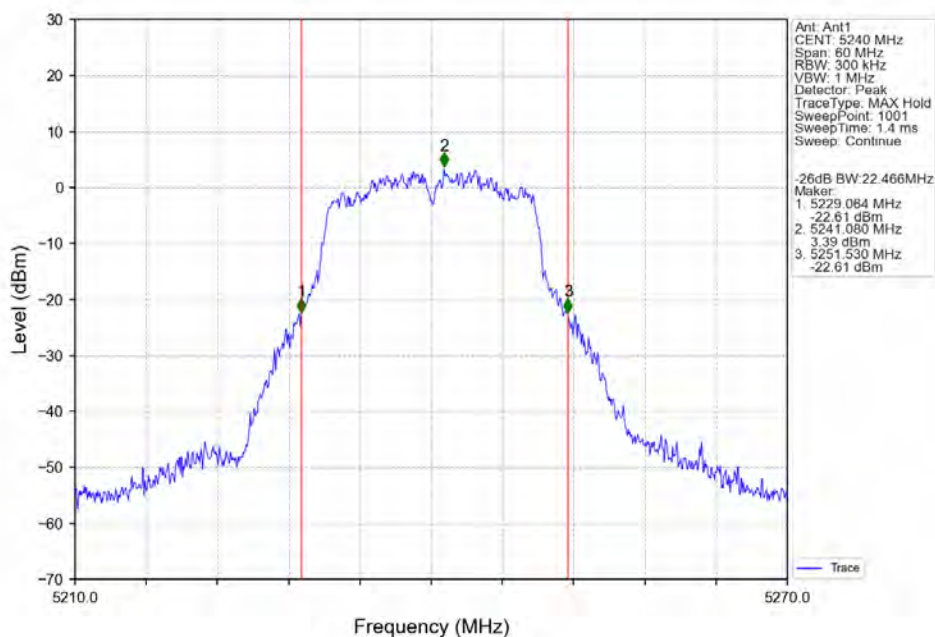
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



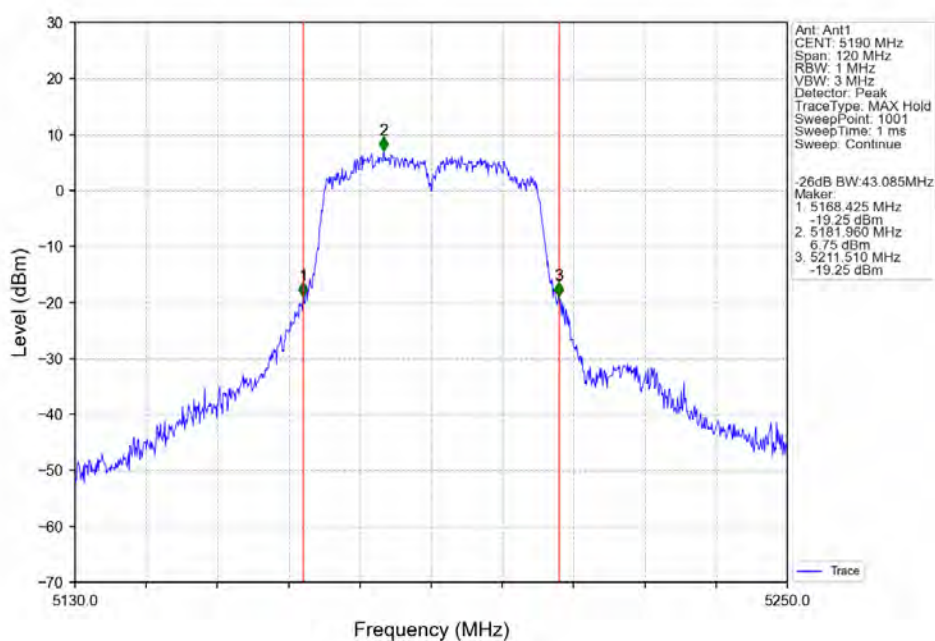
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



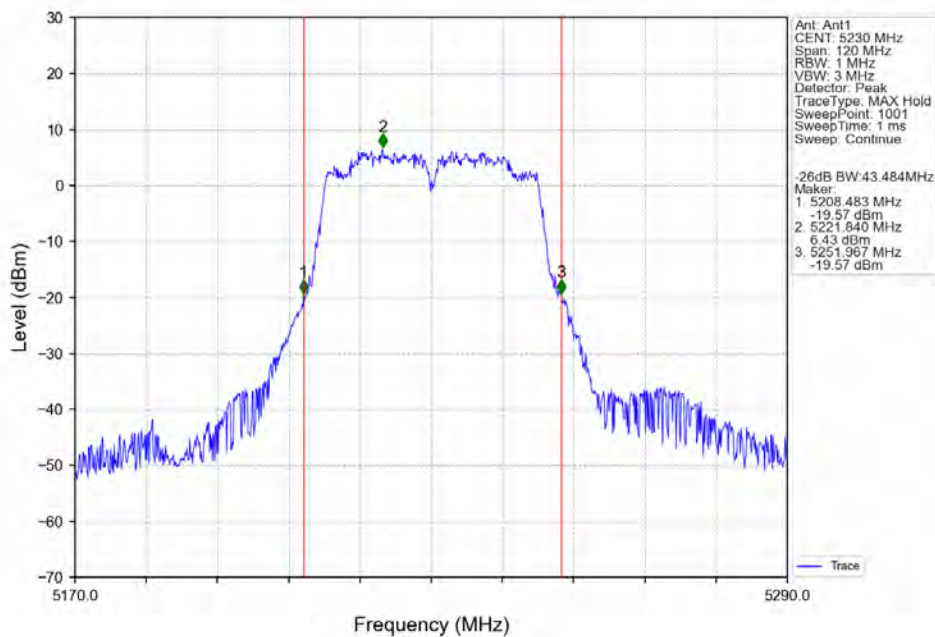
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



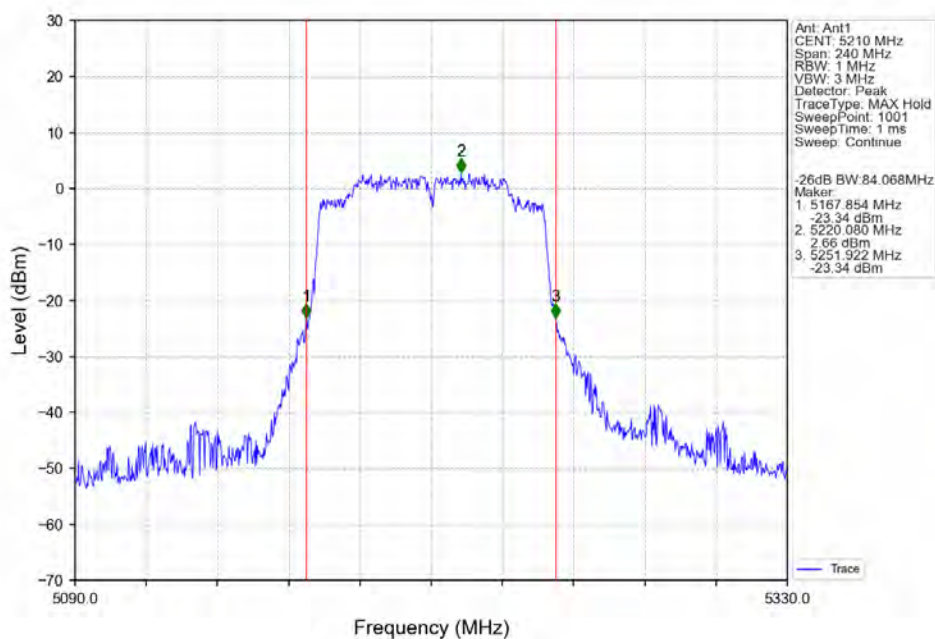
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



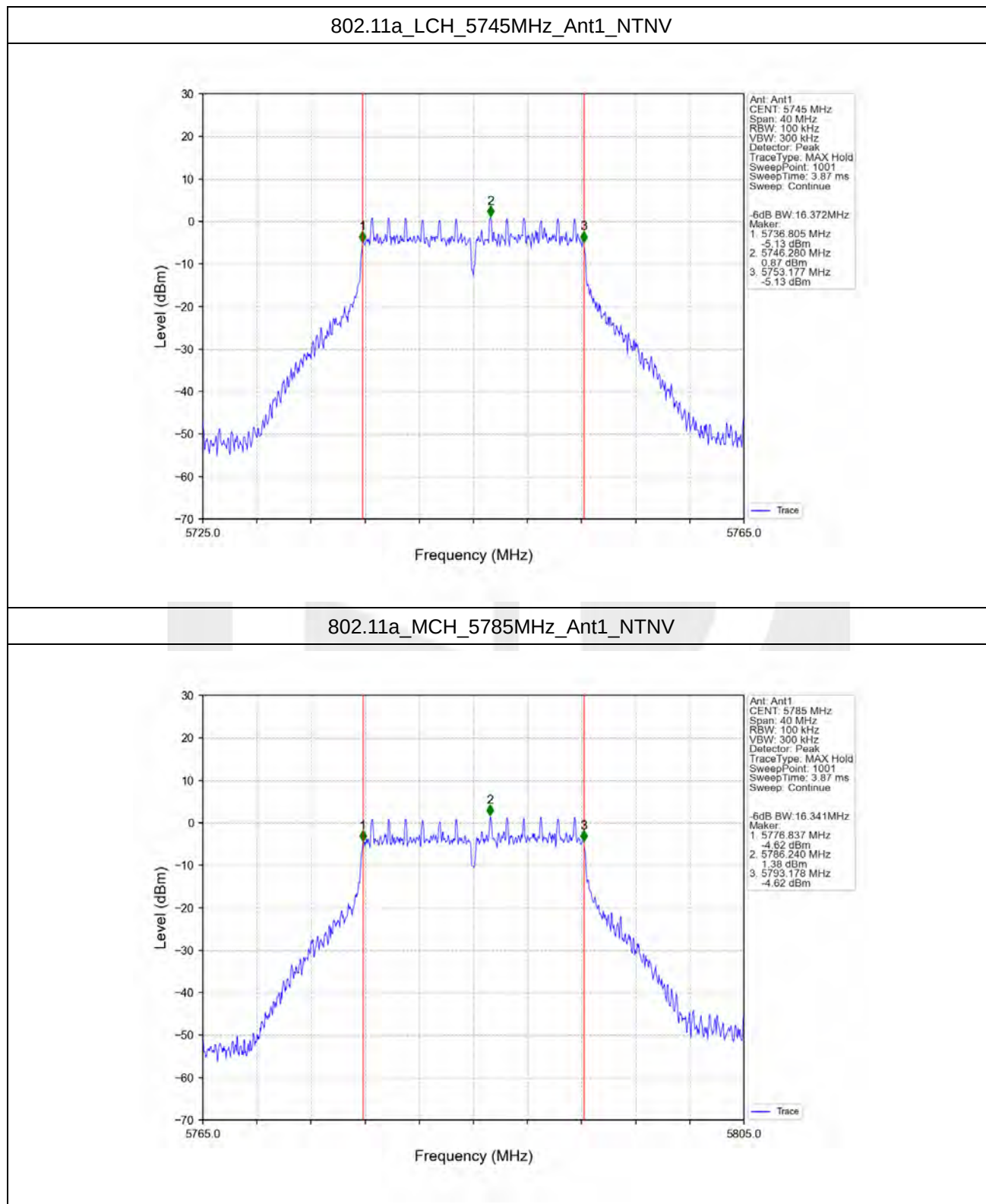
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



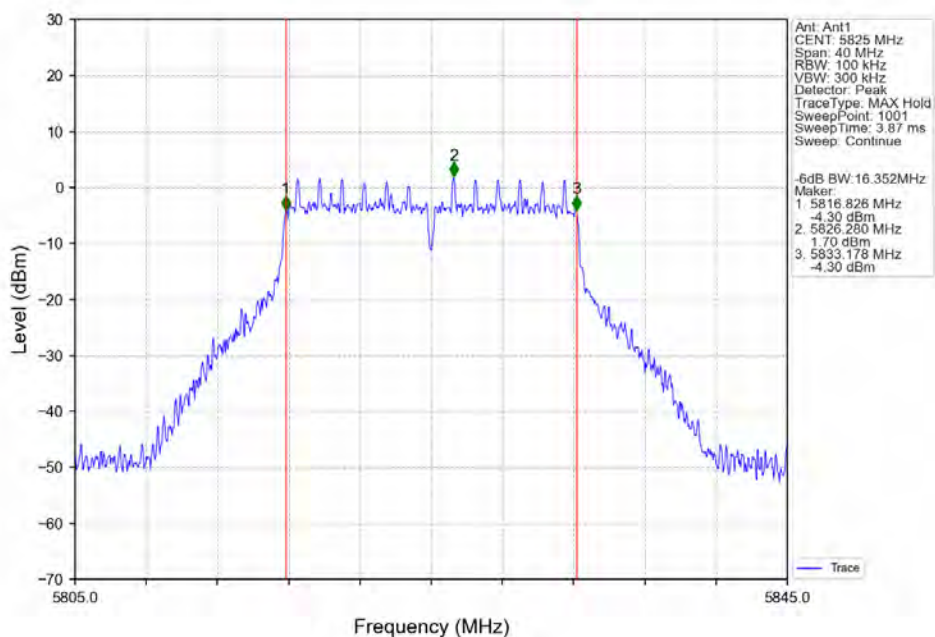
802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



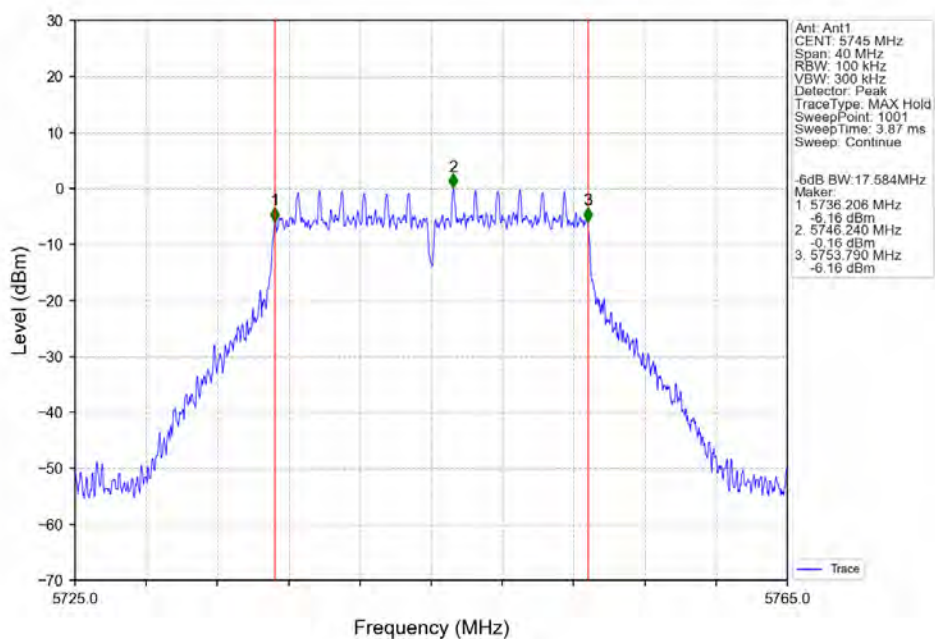
2.2.3 6dB BW



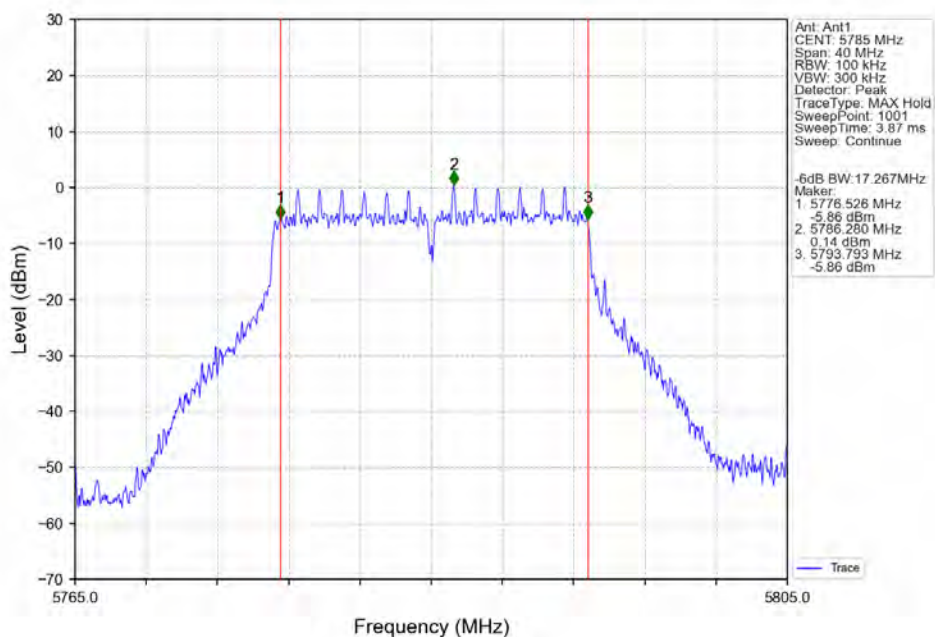
802.11a_HCH_5825MHz_Ant1_NTNV



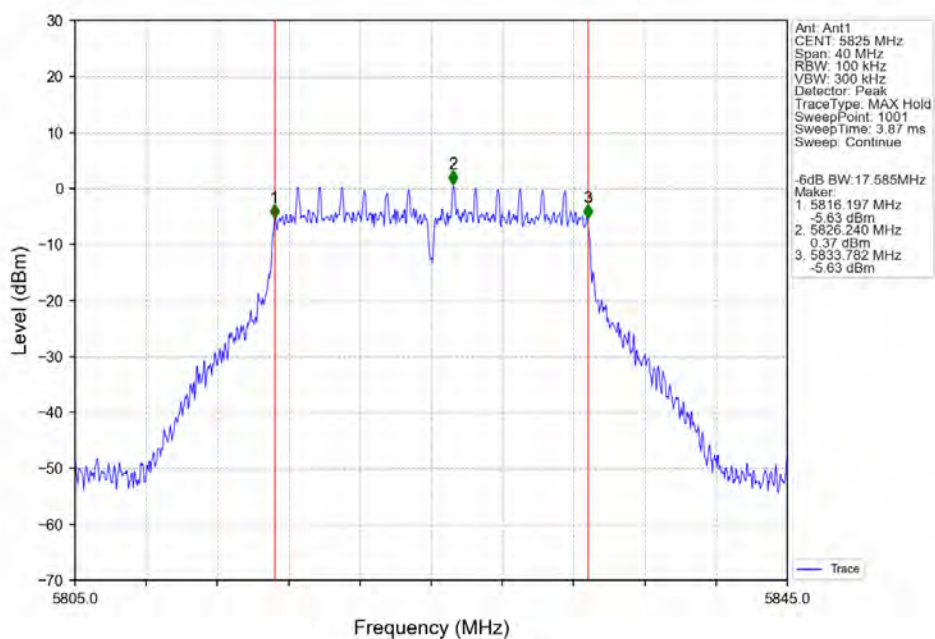
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



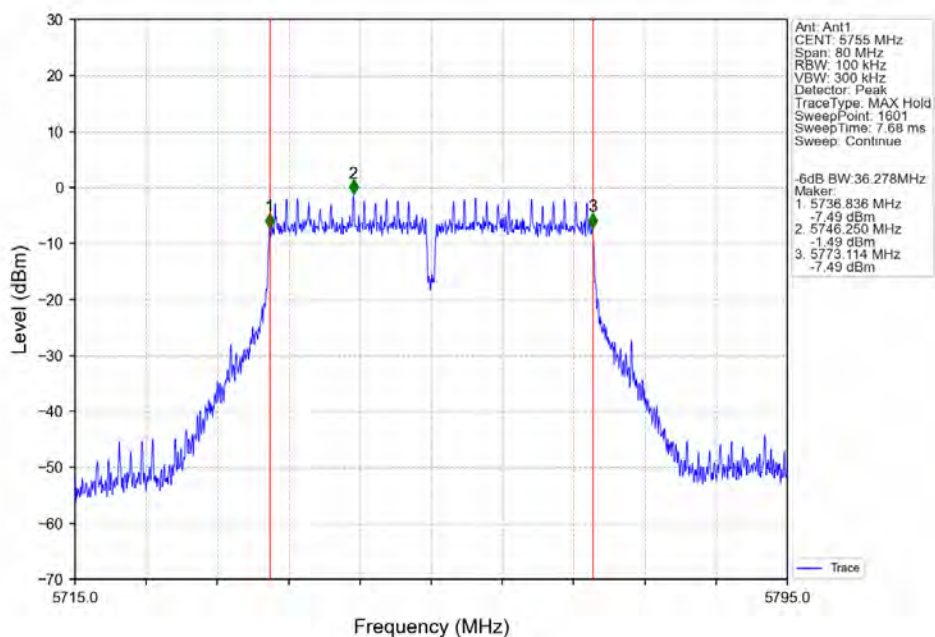
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



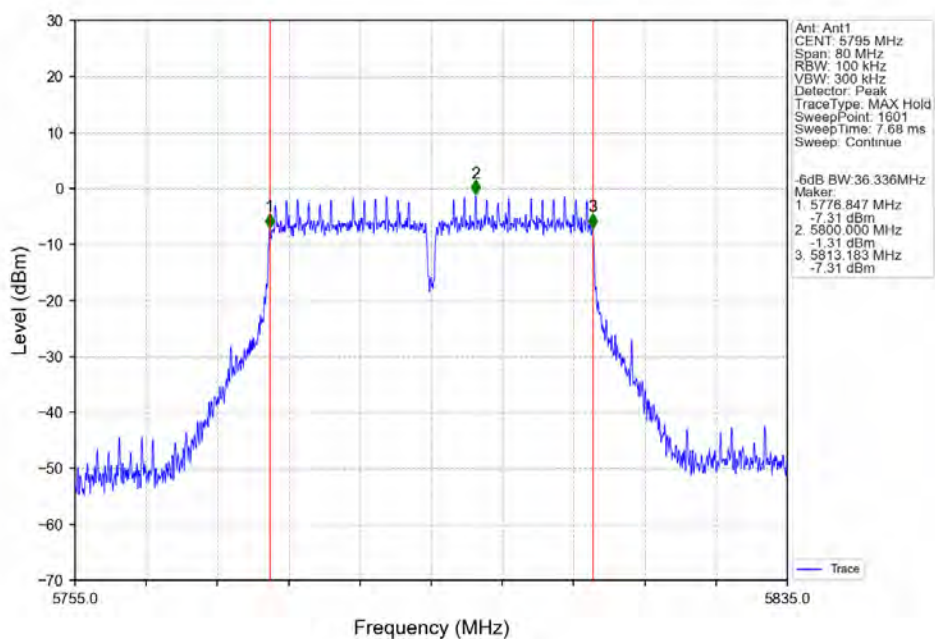
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



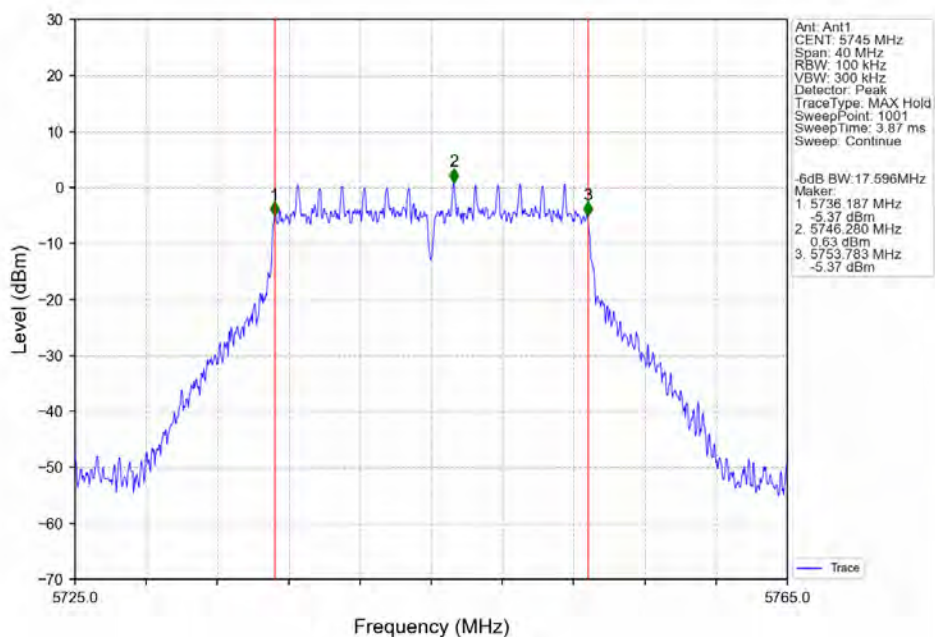
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



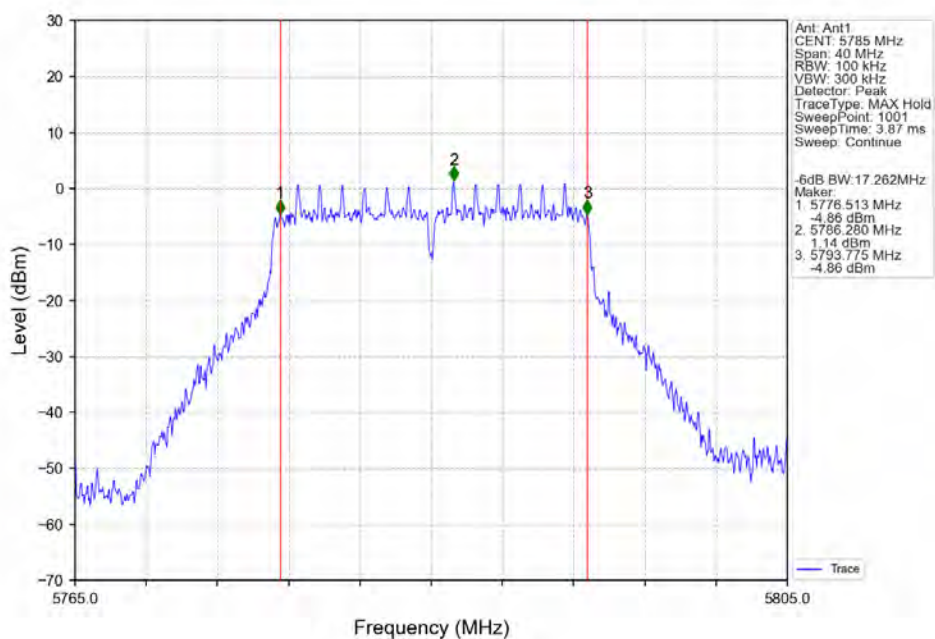
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



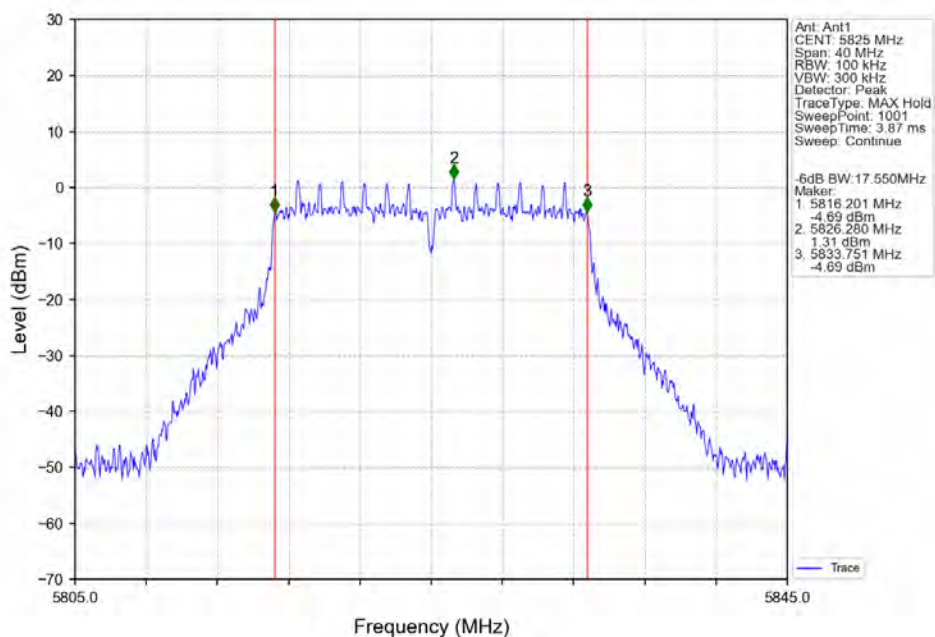
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



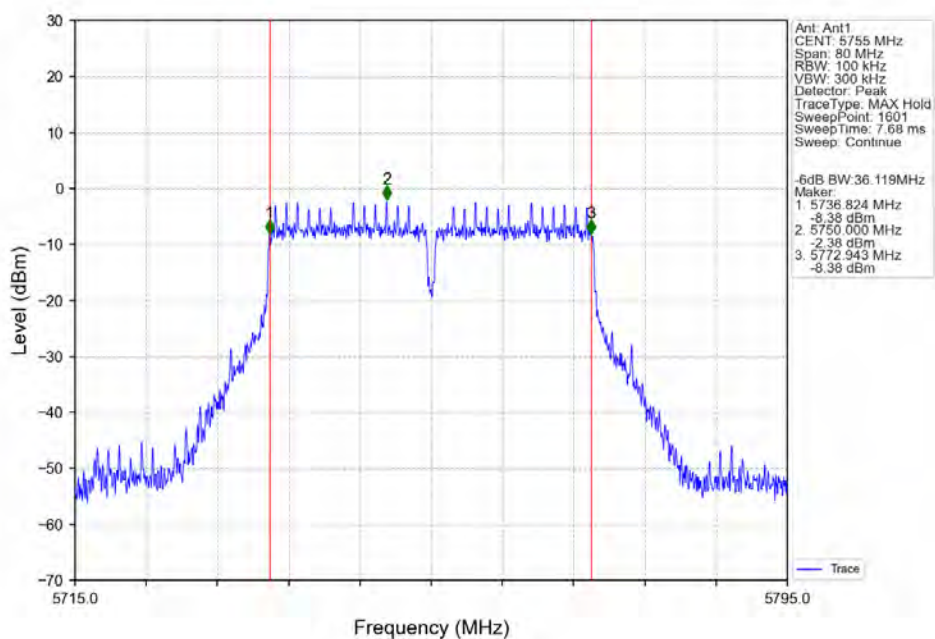
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



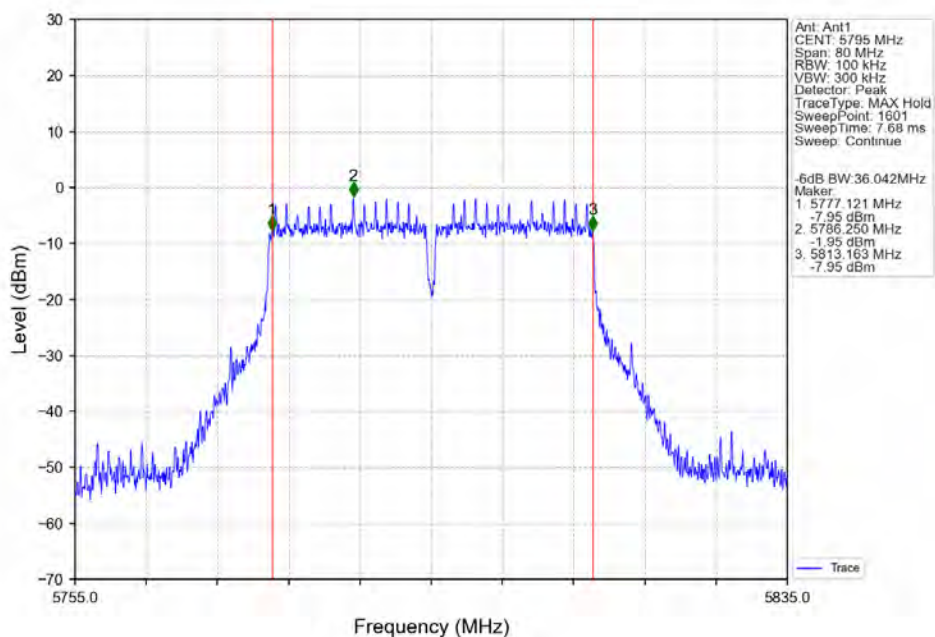
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



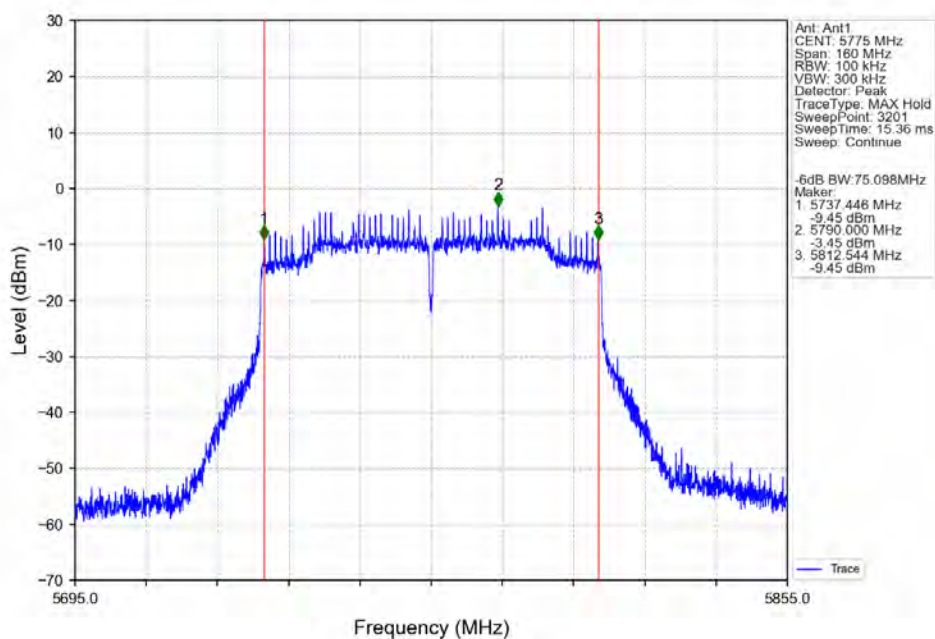
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5775MHz_Ant1_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	12.13	≤ 23.98	Pass
		5200	12.06	≤ 23.98	Pass
		5240	11.92	≤ 23.98	Pass
		5745	11.57	≤ 30	Pass
		5785	11.78	≤ 30	Pass
		5825	12.12	≤ 30	Pass
802.11n (HT20)	SISO	5180	11.48	≤ 23.98	Pass
		5200	11.32	≤ 23.98	Pass
		5240	11.24	≤ 23.98	Pass
		5745	10.31	≤ 30	Pass
		5785	10.57	≤ 30	Pass
		5825	10.77	≤ 30	Pass
802.11n (HT40)	SISO	5190	11.67	≤ 23.98	Pass
		5230	11.55	≤ 23.98	Pass
		5755	11.95	≤ 30	Pass
		5795	12.36	≤ 30	Pass
802.11ac (VHT20)	SISO	5180	11.57	≤ 23.98	Pass
		5200	11.49	≤ 23.98	Pass
		5240	11.28	≤ 23.98	Pass
		5745	11.19	≤ 30	Pass
		5785	11.44	≤ 30	Pass
		5825	11.75	≤ 30	Pass
802.11ac (VHT40)	SISO	5190	12.09	≤ 23.98	Pass
		5230	11.85	≤ 23.98	Pass
		5755	11.33	≤ 30	Pass
		5795	11.64	≤ 30	Pass
802.11ac (VHT80)	SISO	5210	11.53	≤ 23.98	Pass
		5775	11.14	≤ 30	Pass

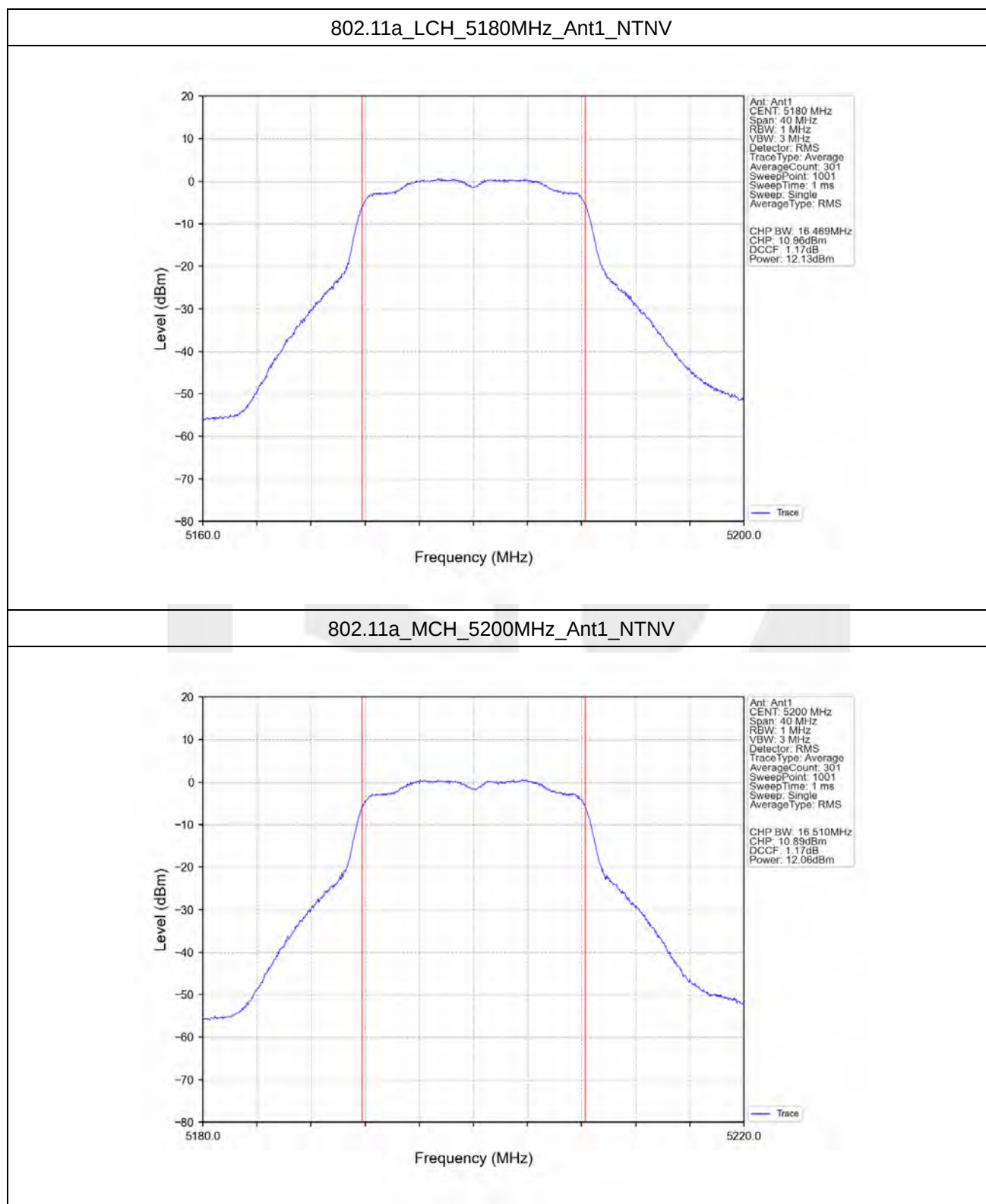
Note1: Antenna Gain:

- Band: 1 Ant1: 3.71dBi;
- Band: 3 Ant1: 3.71dBi;

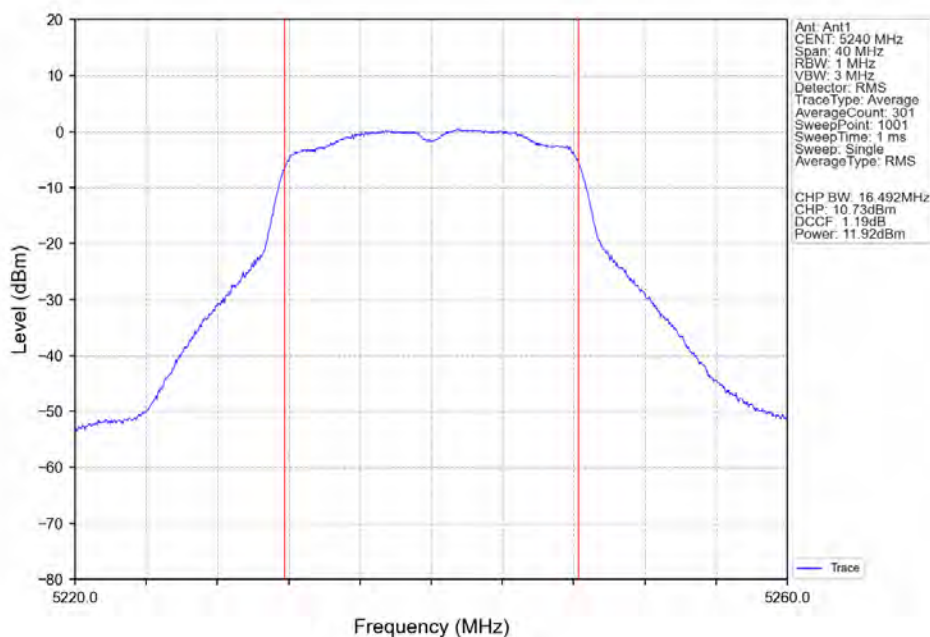


3.2 Test Graph

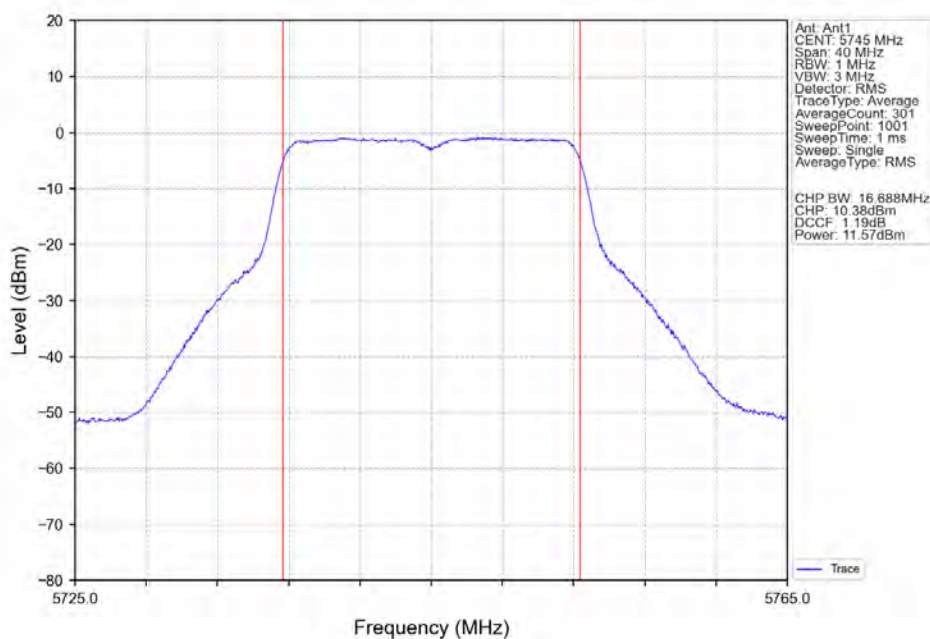
3.2.1 Power



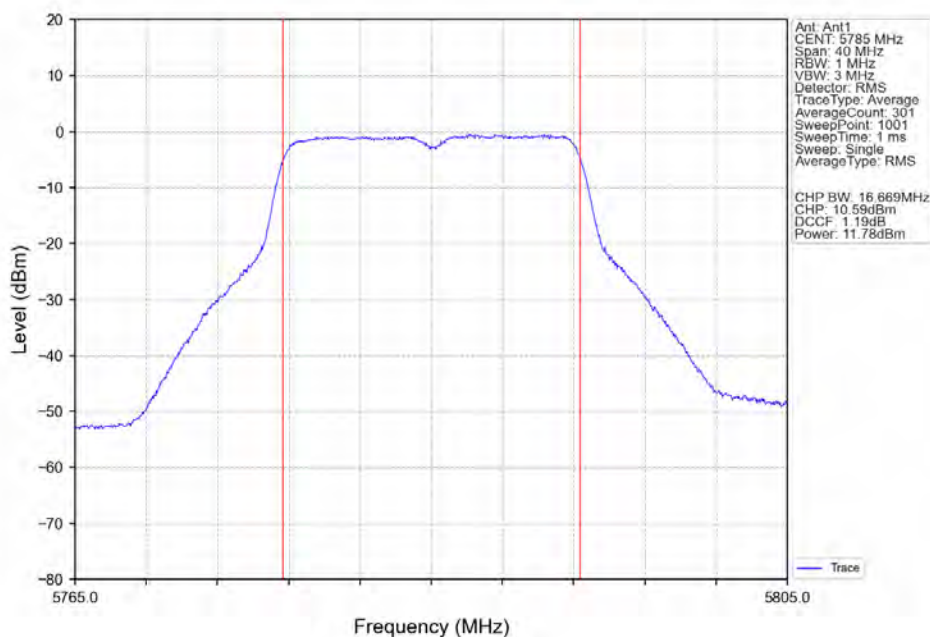
802.11a_HCH_5240MHz_Ant1_NTNV



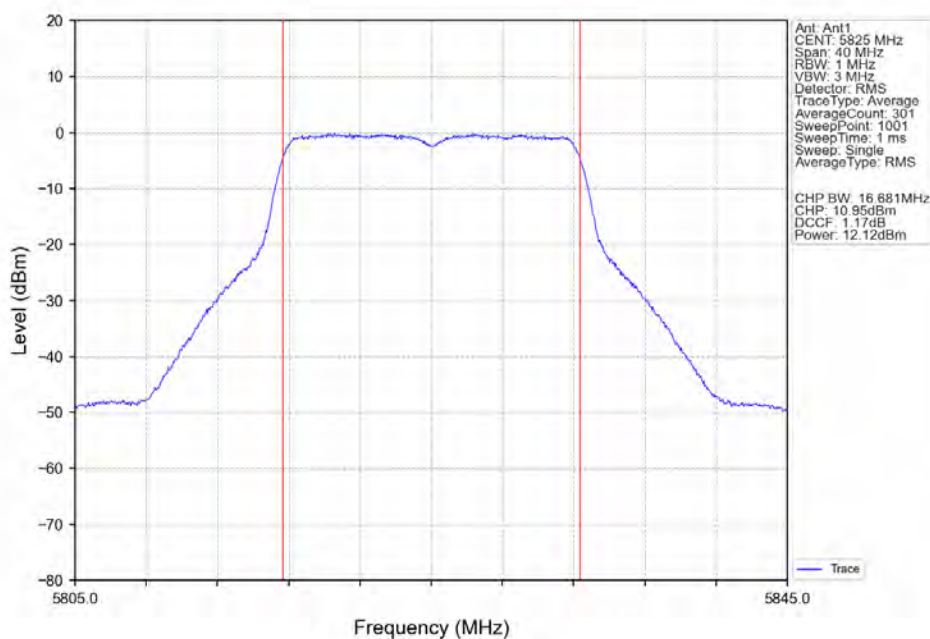
802.11a_LCH_5745MHz_Ant1_NTNV



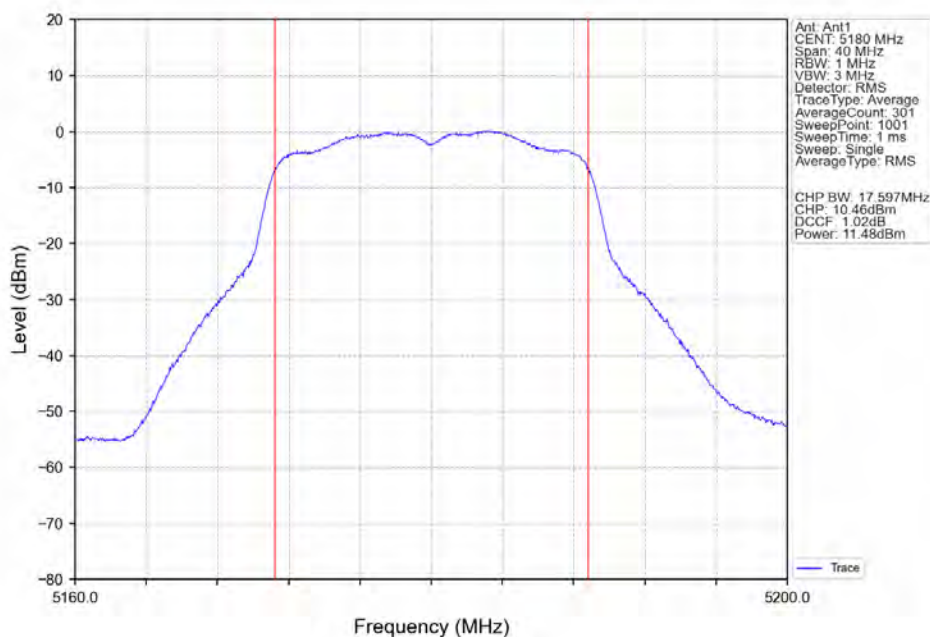
802.11a_MCH_5785MHz_Ant1_NTNV



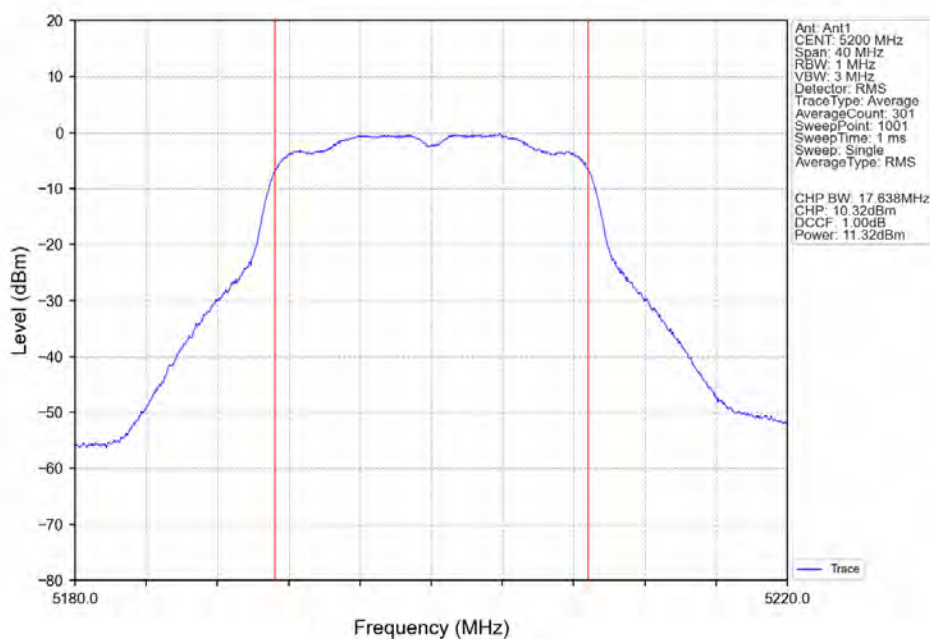
802.11a_HCH_5825MHz_Ant1_NTNV



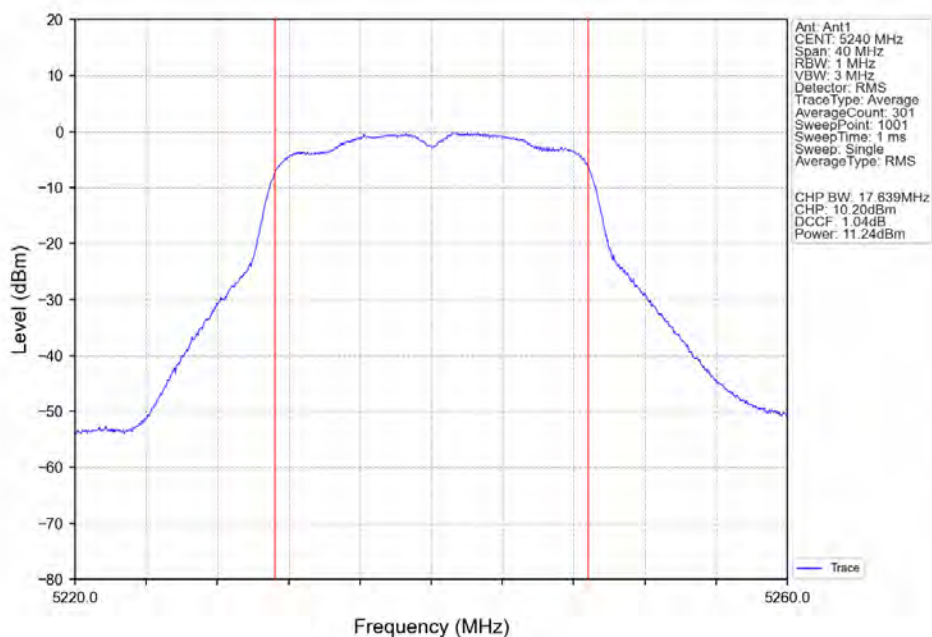
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



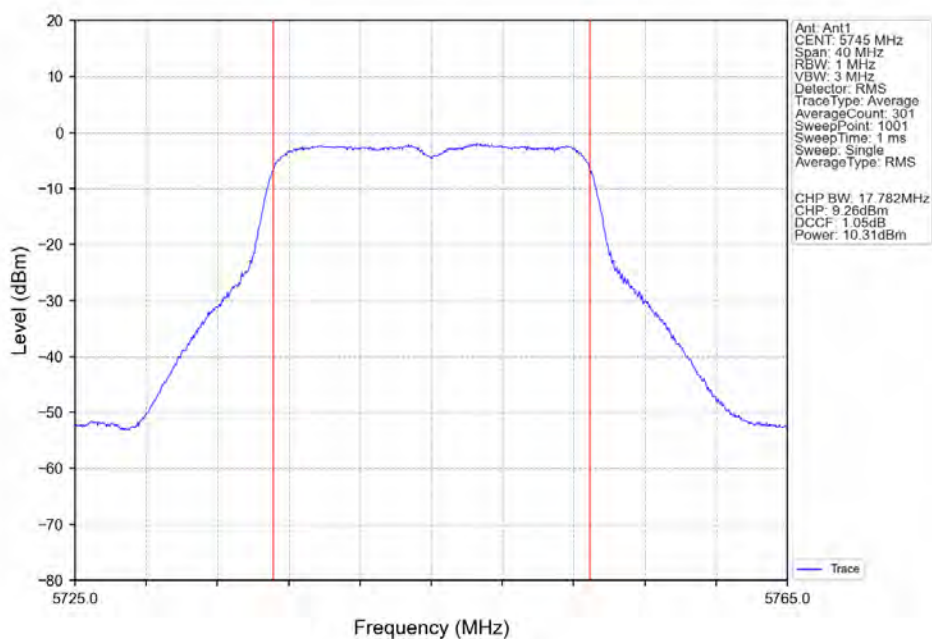
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



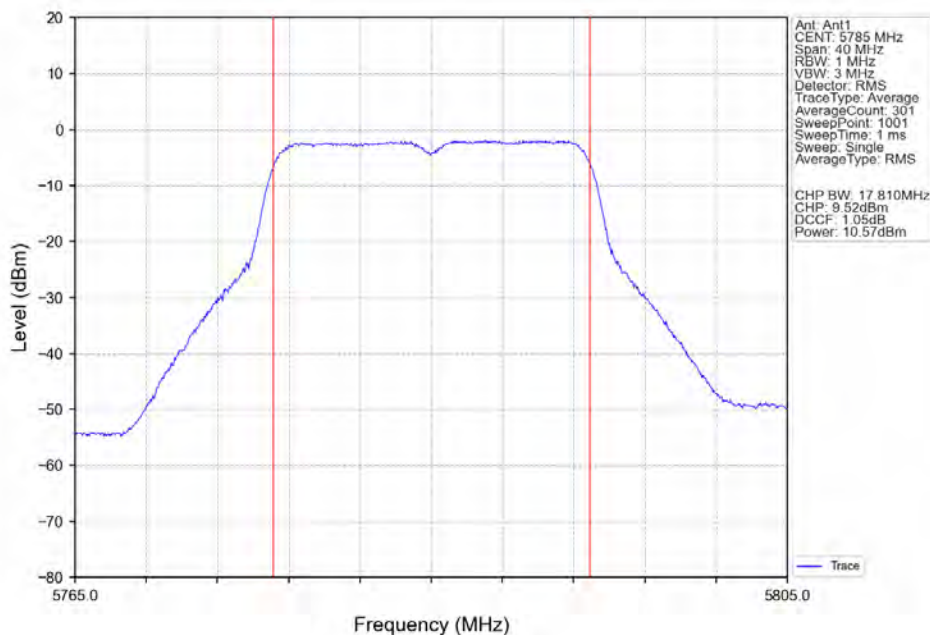
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



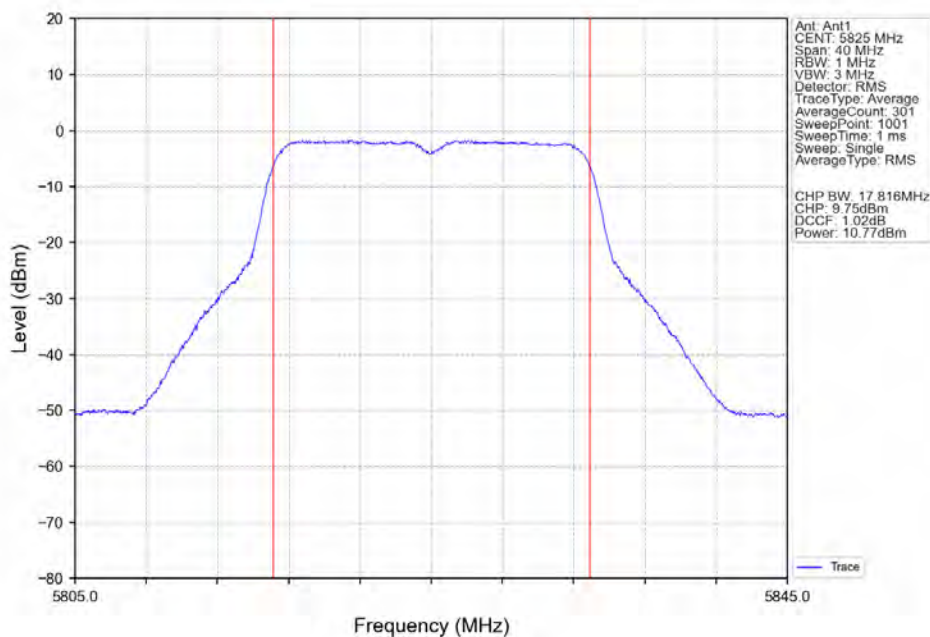
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



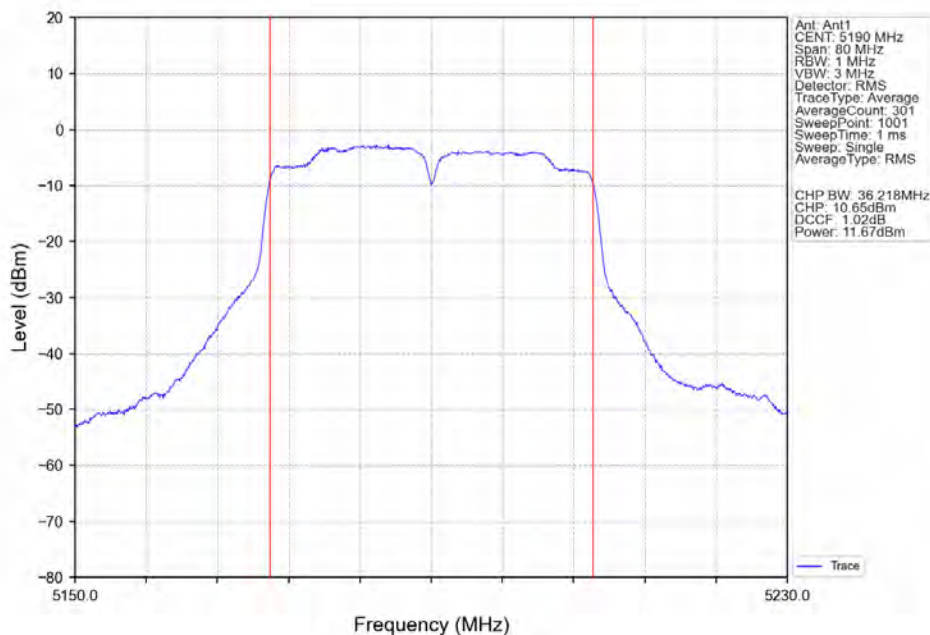
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



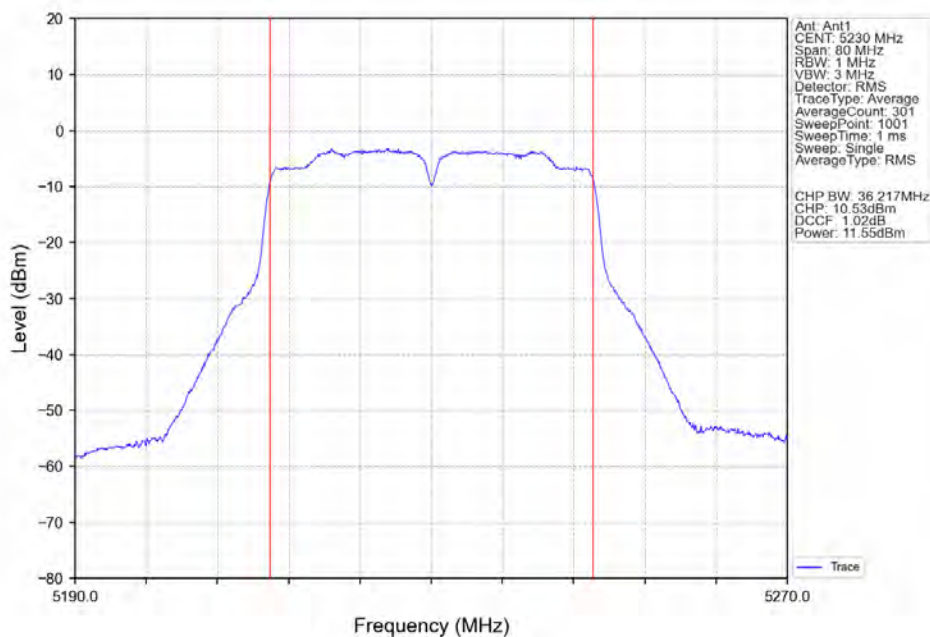
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



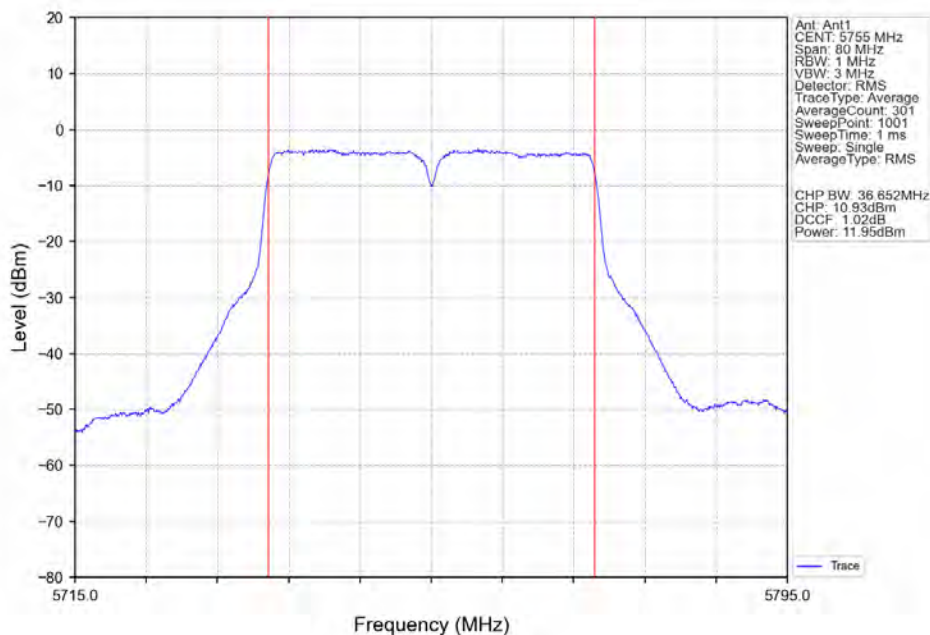
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



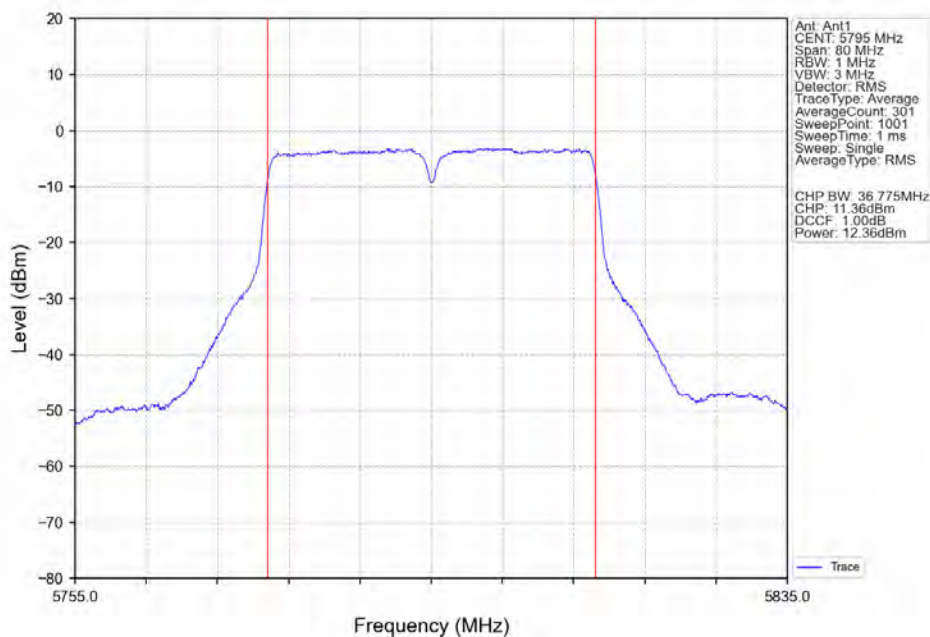
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



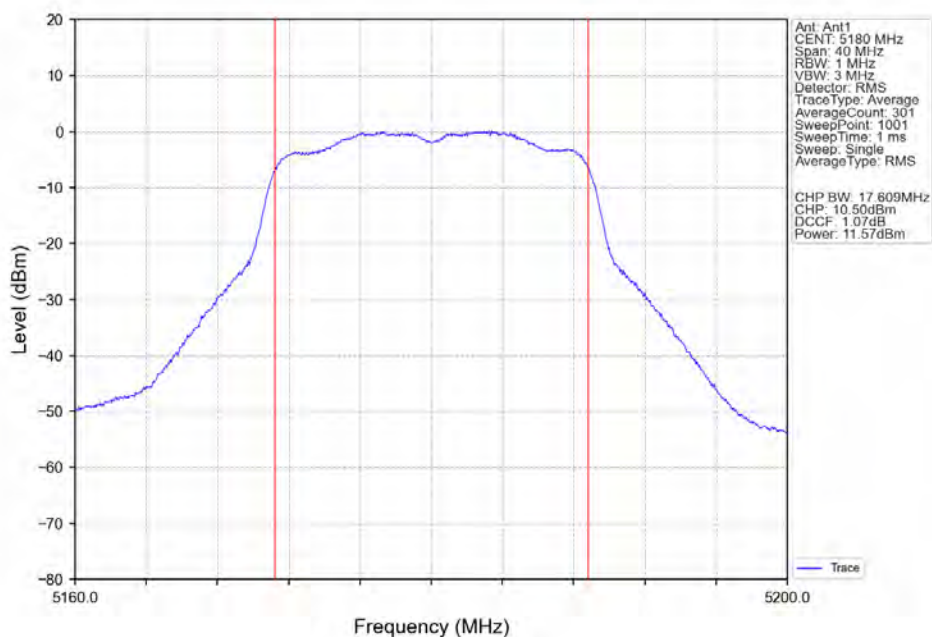
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



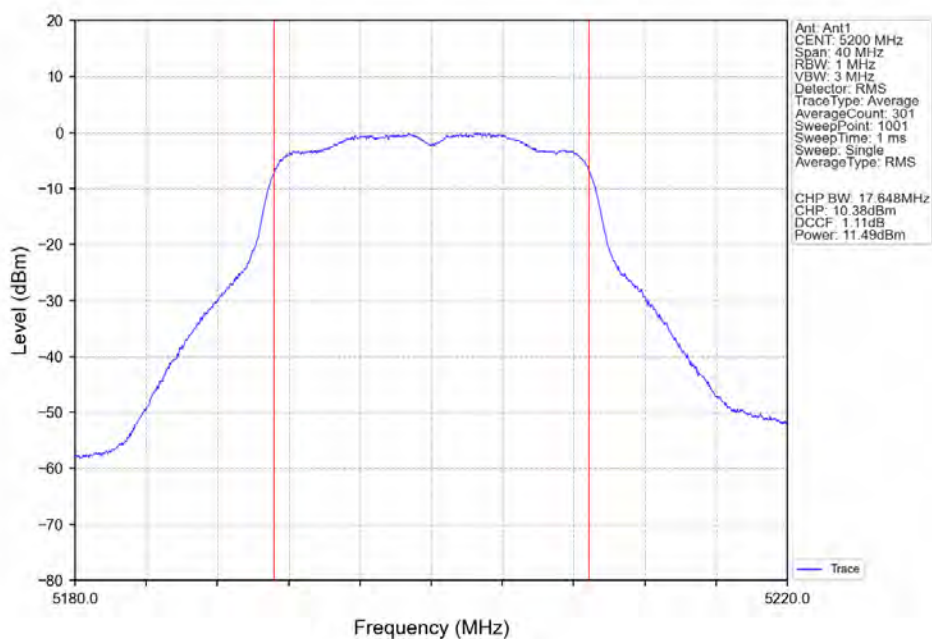
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



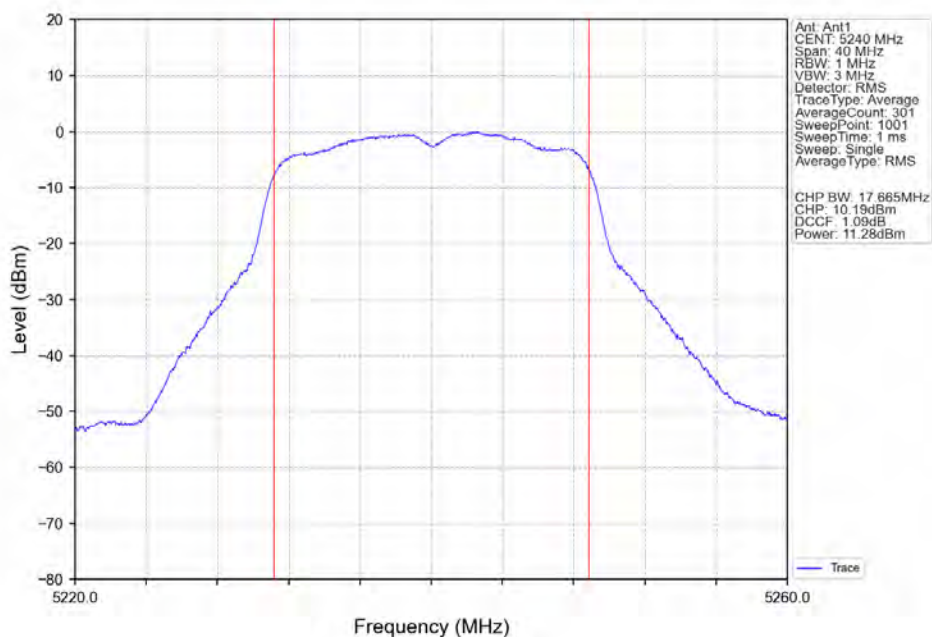
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



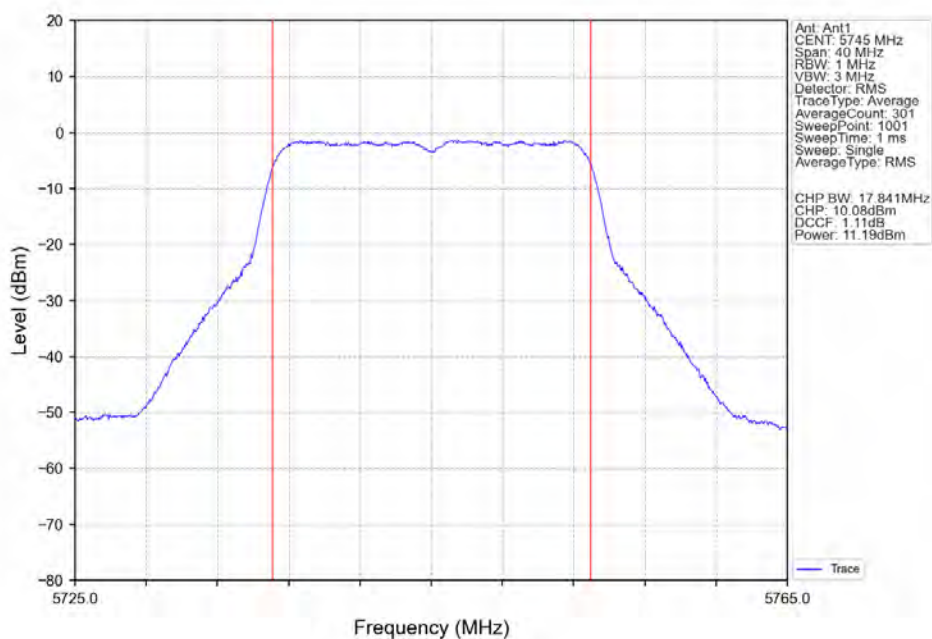
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



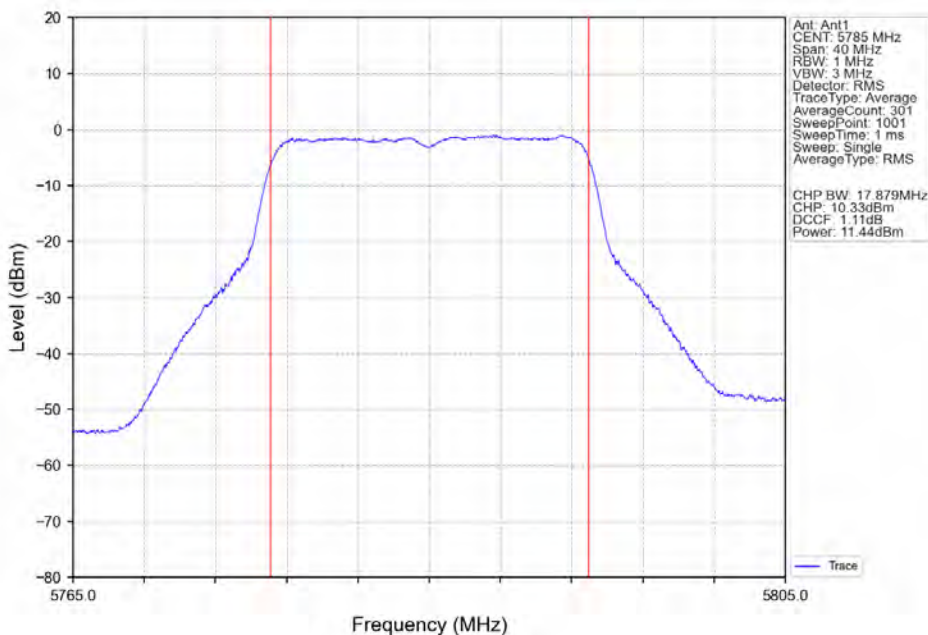
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



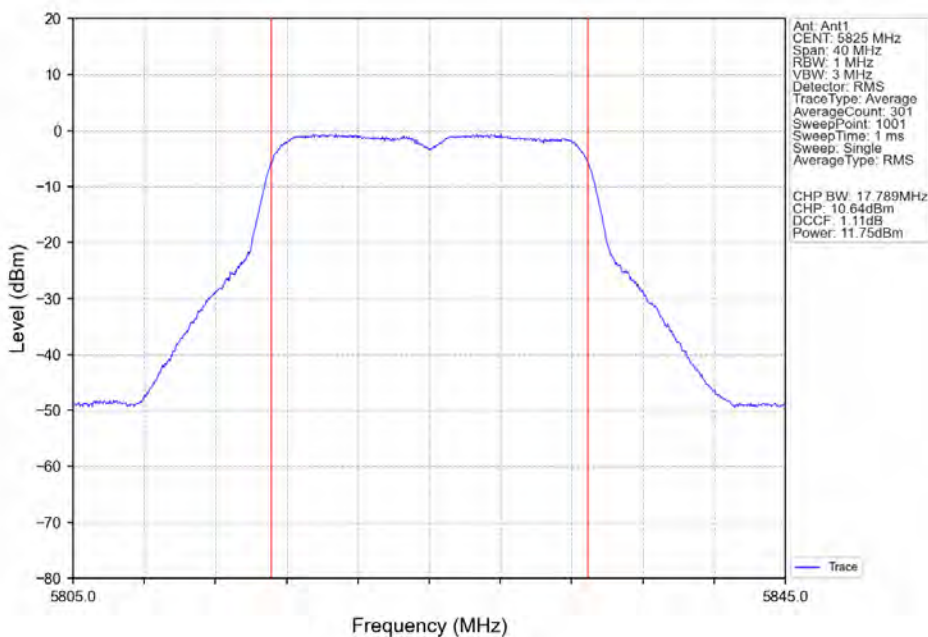
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



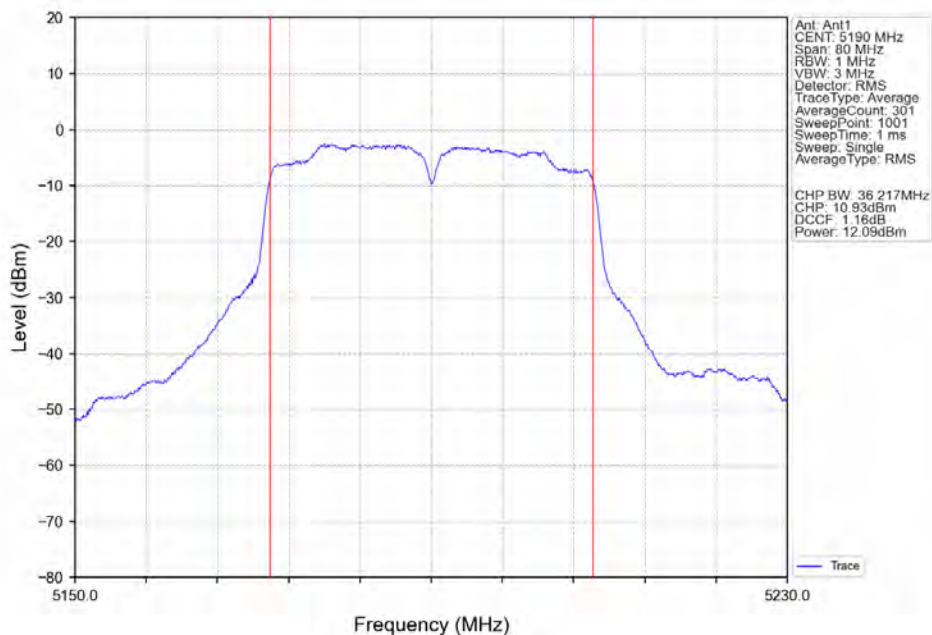
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



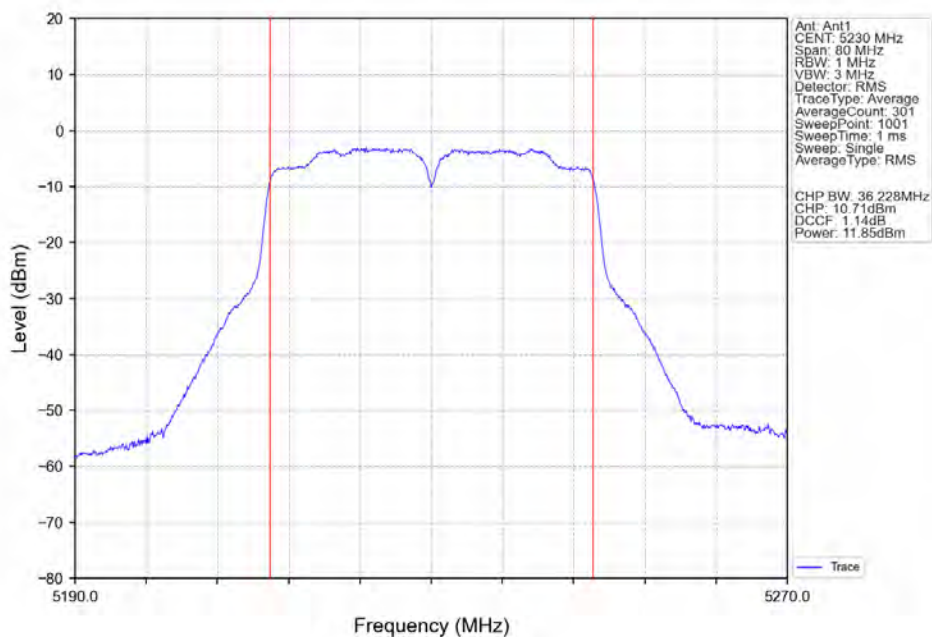
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



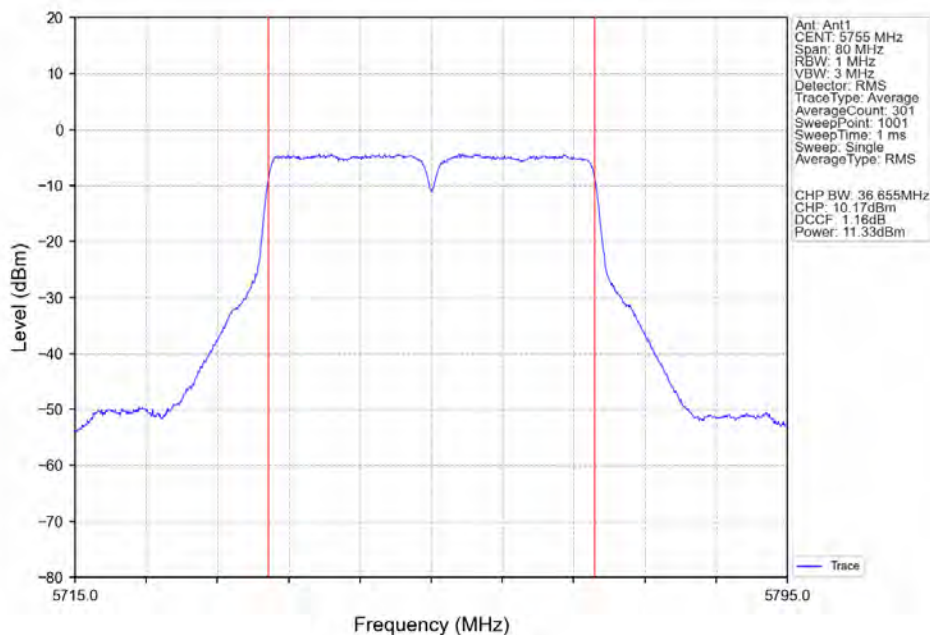
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



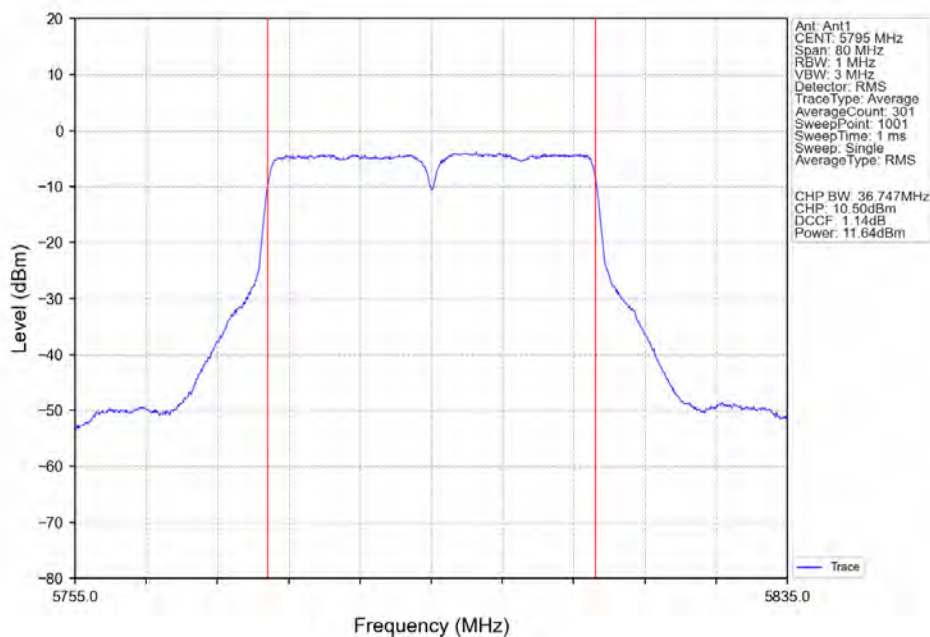
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



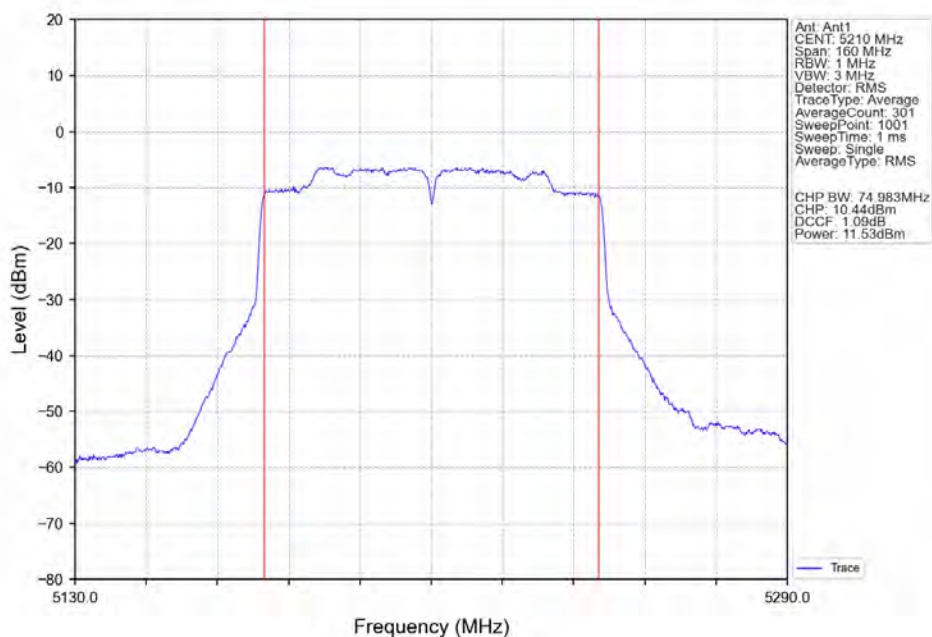
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



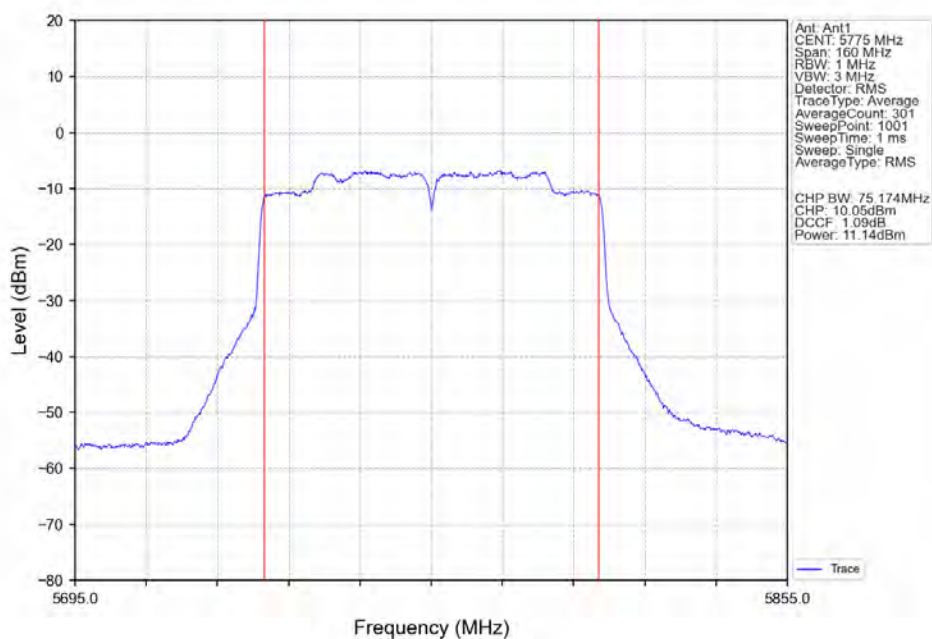
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5775MHz_Ant1_NTNV



4. Maximum Power Spectral Density

4.1 Test Result

4.1.1 PSD

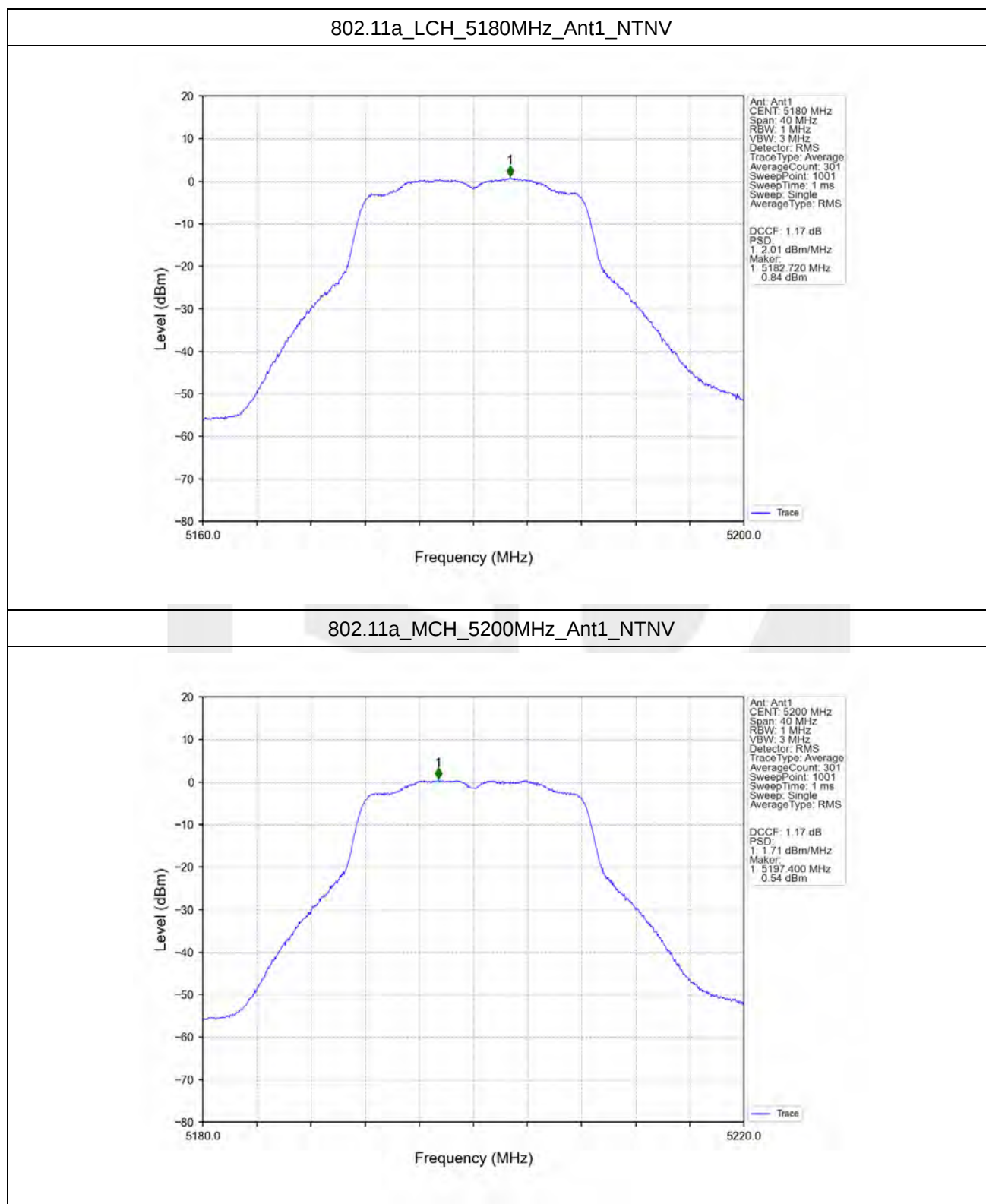
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	2.01	≤ 11	Pass
		5200	1.71	≤ 11	Pass
		5240	1.77	≤ 11	Pass
802.11n (HT20)	SISO	5180	1.11	≤ 11	Pass
		5200	0.79	≤ 11	Pass
		5240	0.62	≤ 11	Pass
802.11n (HT40)	SISO	5190	-1.91	≤ 11	Pass
		5230	-2.17	≤ 11	Pass
802.11ac (VHT20)	SISO	5180	1.22	≤ 11	Pass
		5200	1.00	≤ 11	Pass
		5240	0.77	≤ 11	Pass
802.11ac (VHT40)	SISO	5190	-1.25	≤ 11	Pass
		5230	-1.98	≤ 11	Pass
802.11ac (VHT80)	SISO	5210	-5.11	≤ 11	Pass
Note1: Antenna Gain: - Band: 3 Ant1: 3.71dBi;					

4.1.2 PSD-Band3

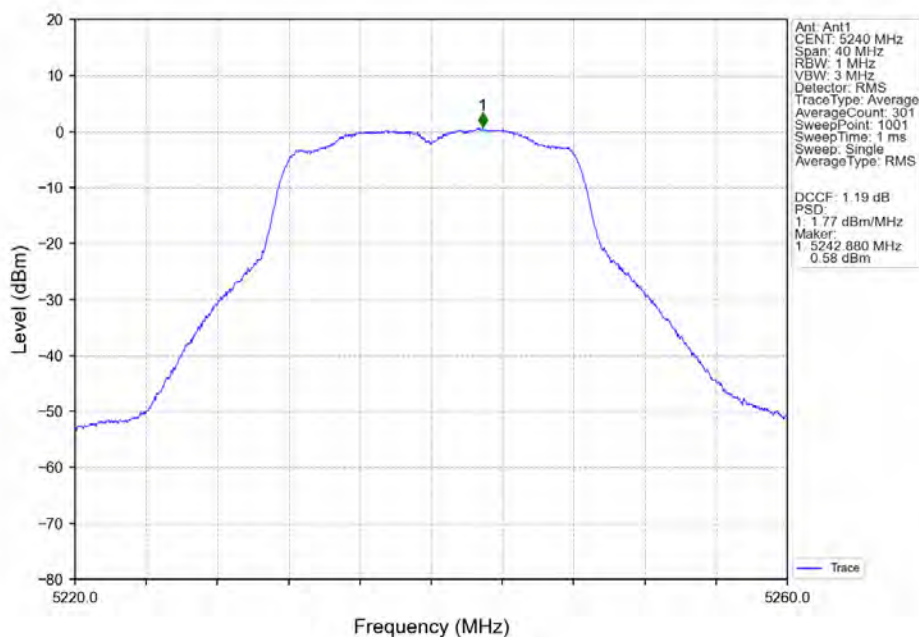
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/500kHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5745	-1.96	<=30	Pass
		5785	-1.67	<=30	Pass
		5825	-1.38	<=30	Pass
802.11n (HT20)	SISO	5745	-3.46	<=30	Pass
		5785	-2.77	<=30	Pass
		5825	-2.77	<=30	Pass
802.11n (HT40)	SISO	5755	-4.83	<=30	Pass
		5795	-4.51	<=30	Pass
802.11ac (VHT20)	SISO	5745	-2.30	<=30	Pass
		5785	-2.21	<=30	Pass
		5825	-1.96	<=30	Pass
802.11ac (VHT40)	SISO	5755	-5.31	<=30	Pass
		5795	-5.04	<=30	Pass
802.11ac (VHT80)	SISO	5775	-7.39	<=30	Pass
Note1: Antenna Gain: - Band: 3 Ant1: 3.71dBi;					

4.2 Test Graph

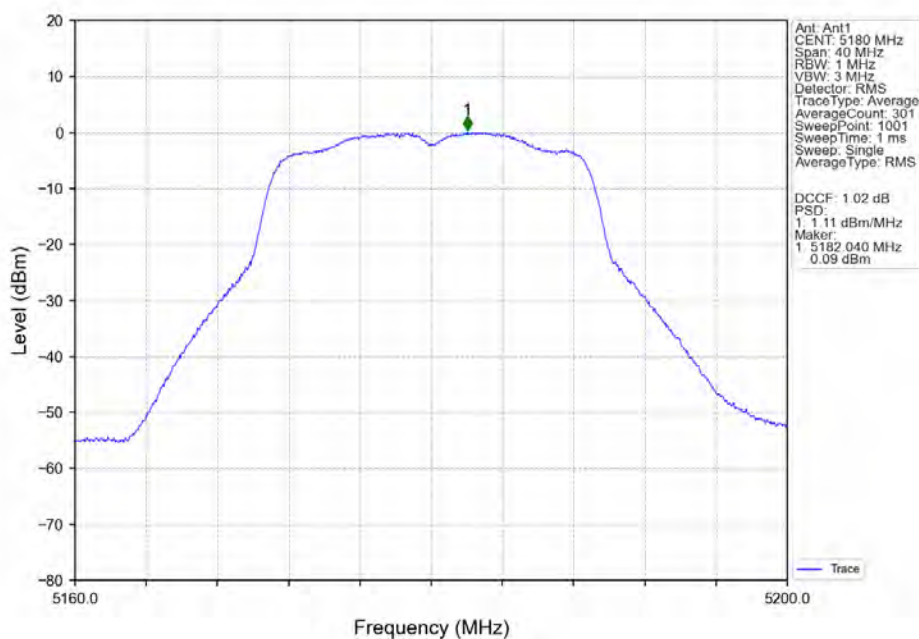
4.2.1 PSD



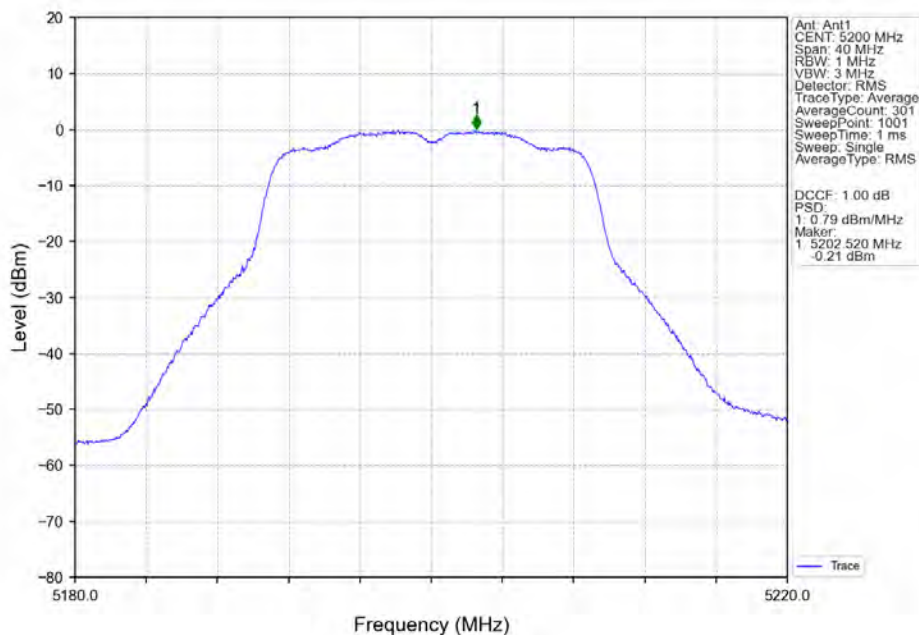
802.11a_HCH_5240MHz_Ant1_NTNV



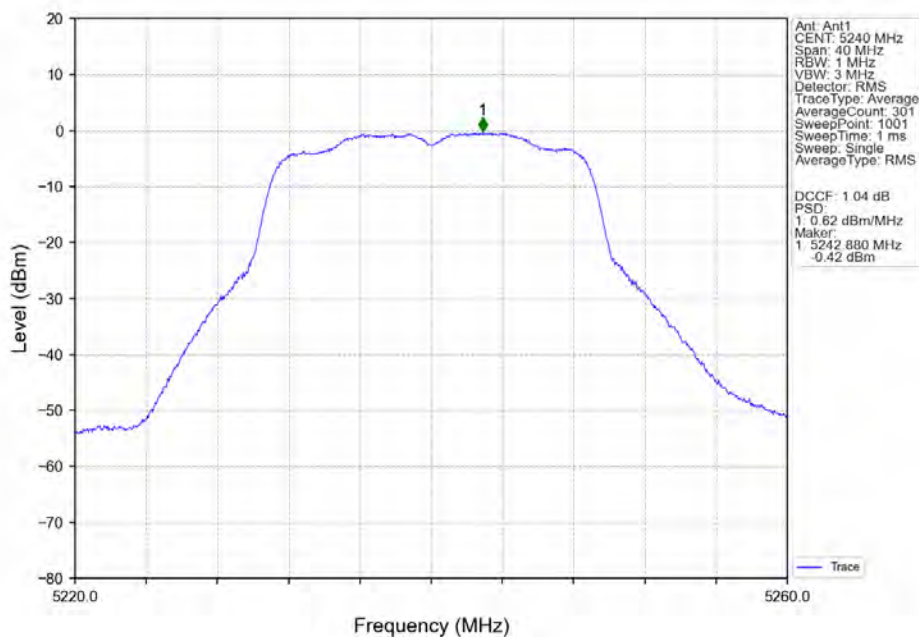
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



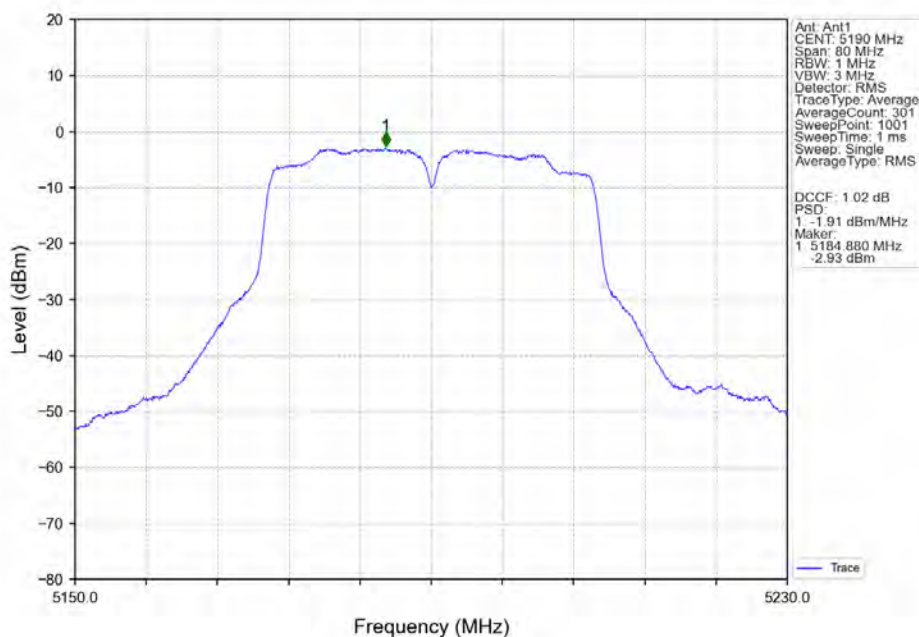
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



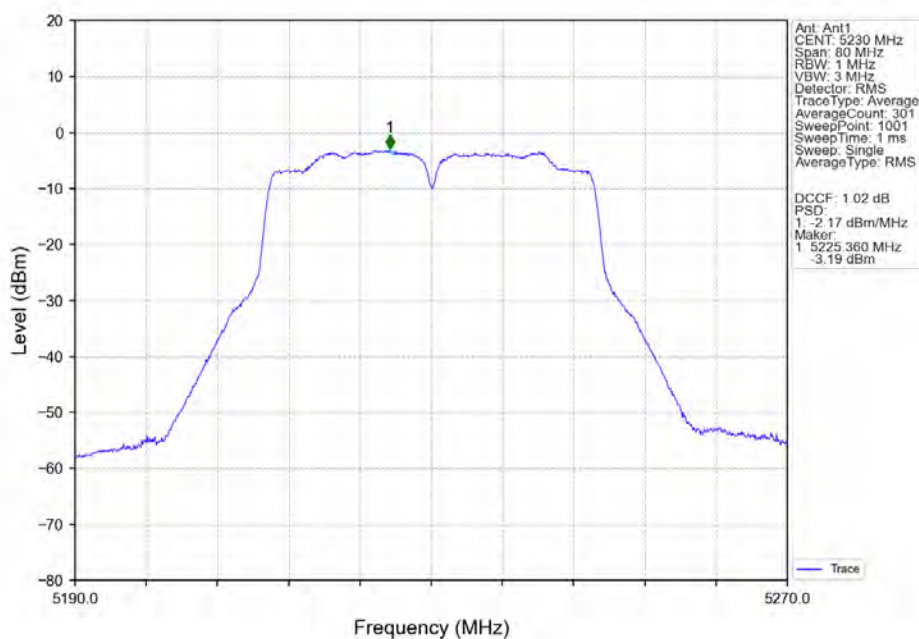
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



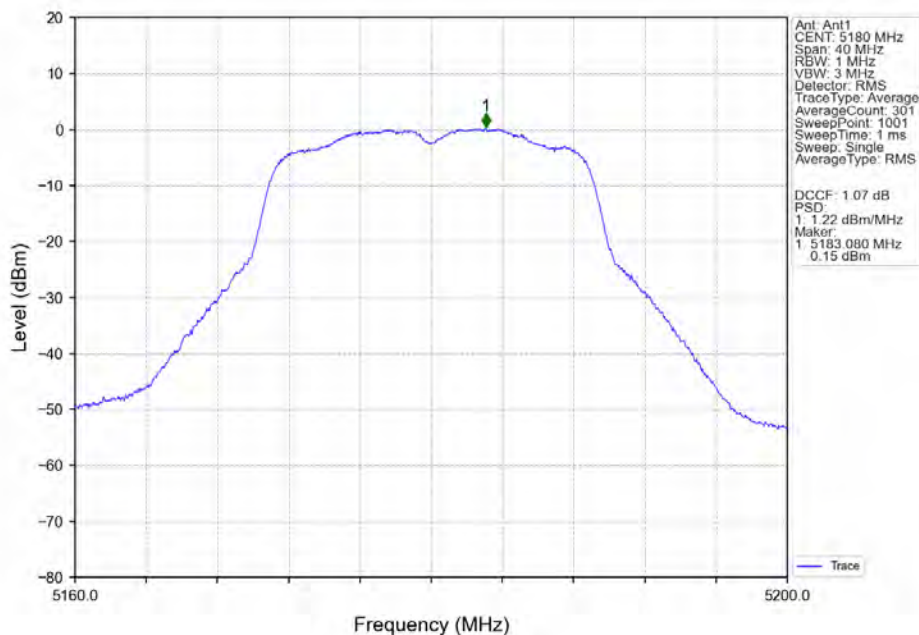
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



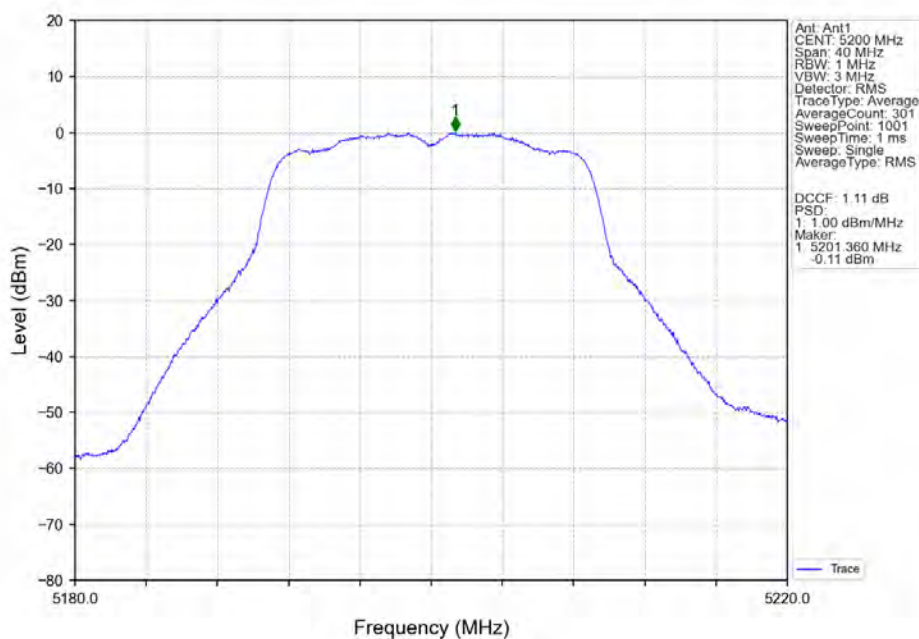
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



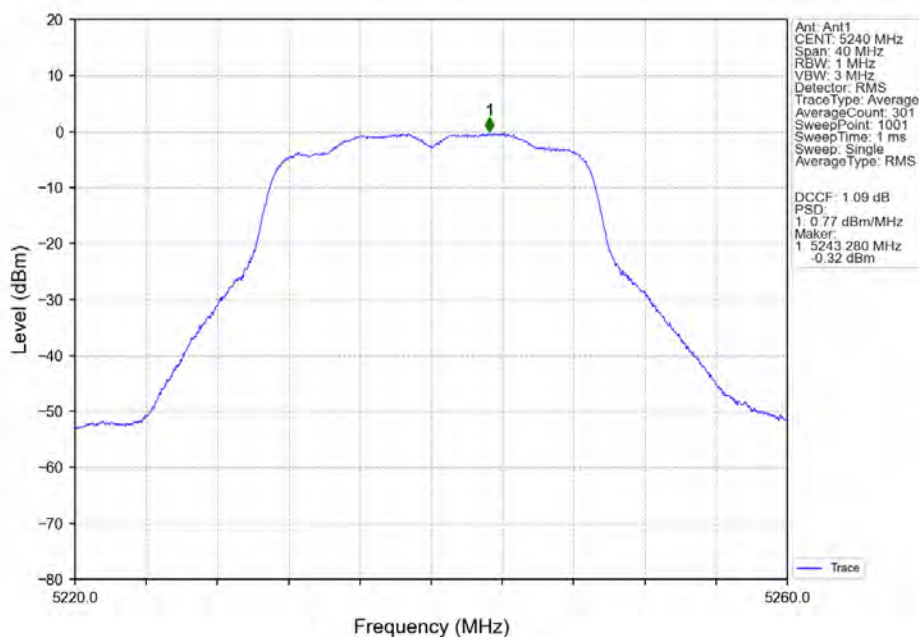
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



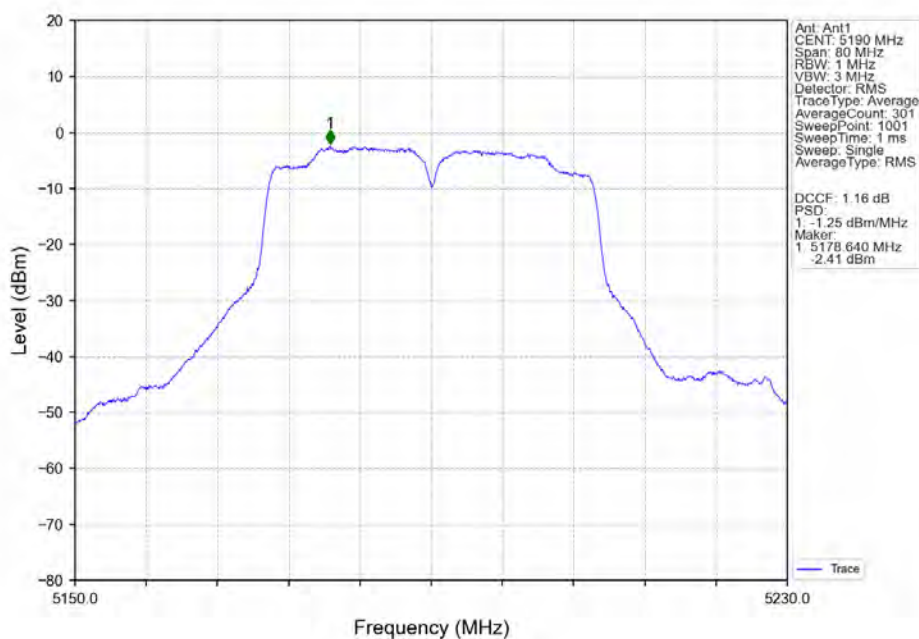
802.11ac(VHT20)_MCH_5200MHz_Ant1_NTNV



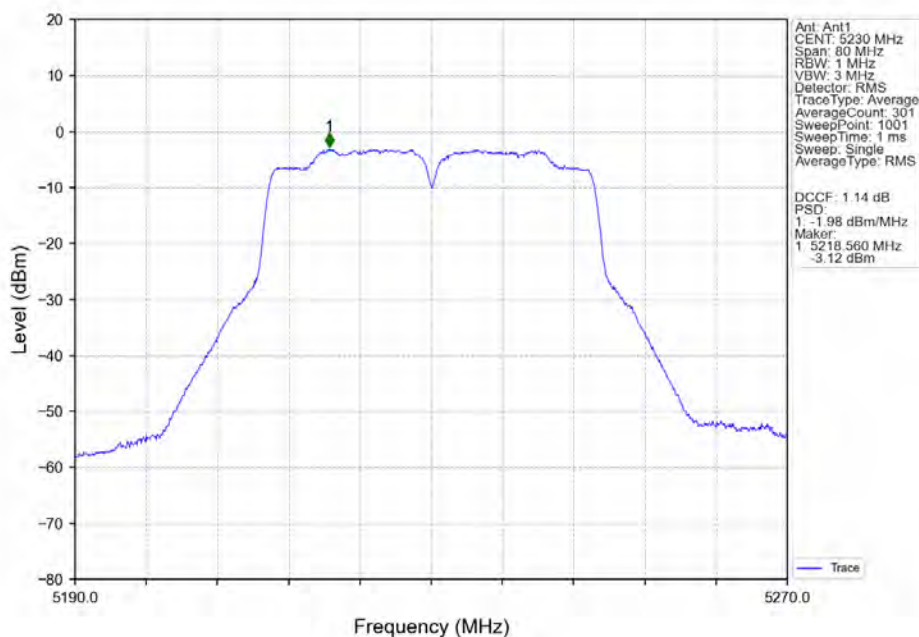
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



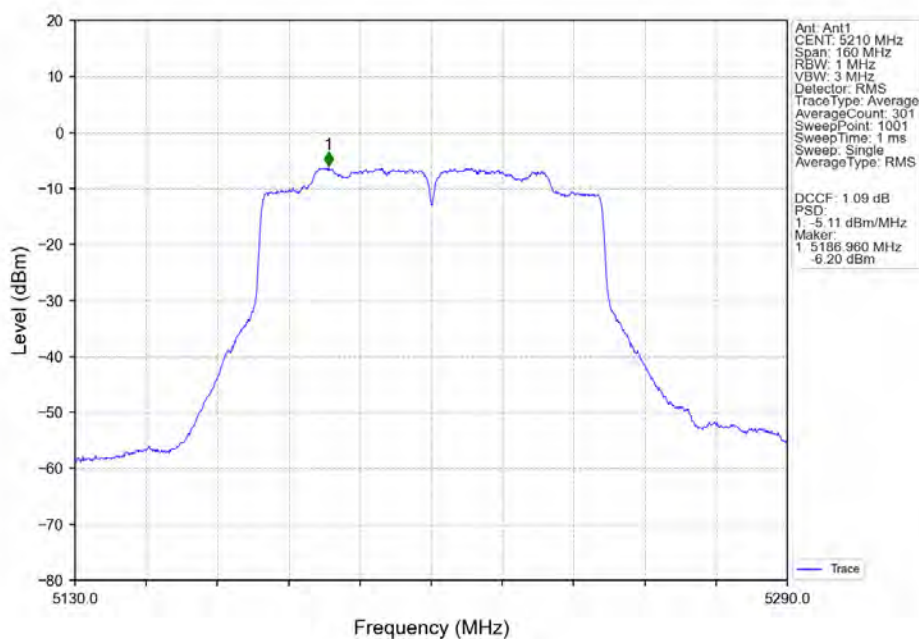
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



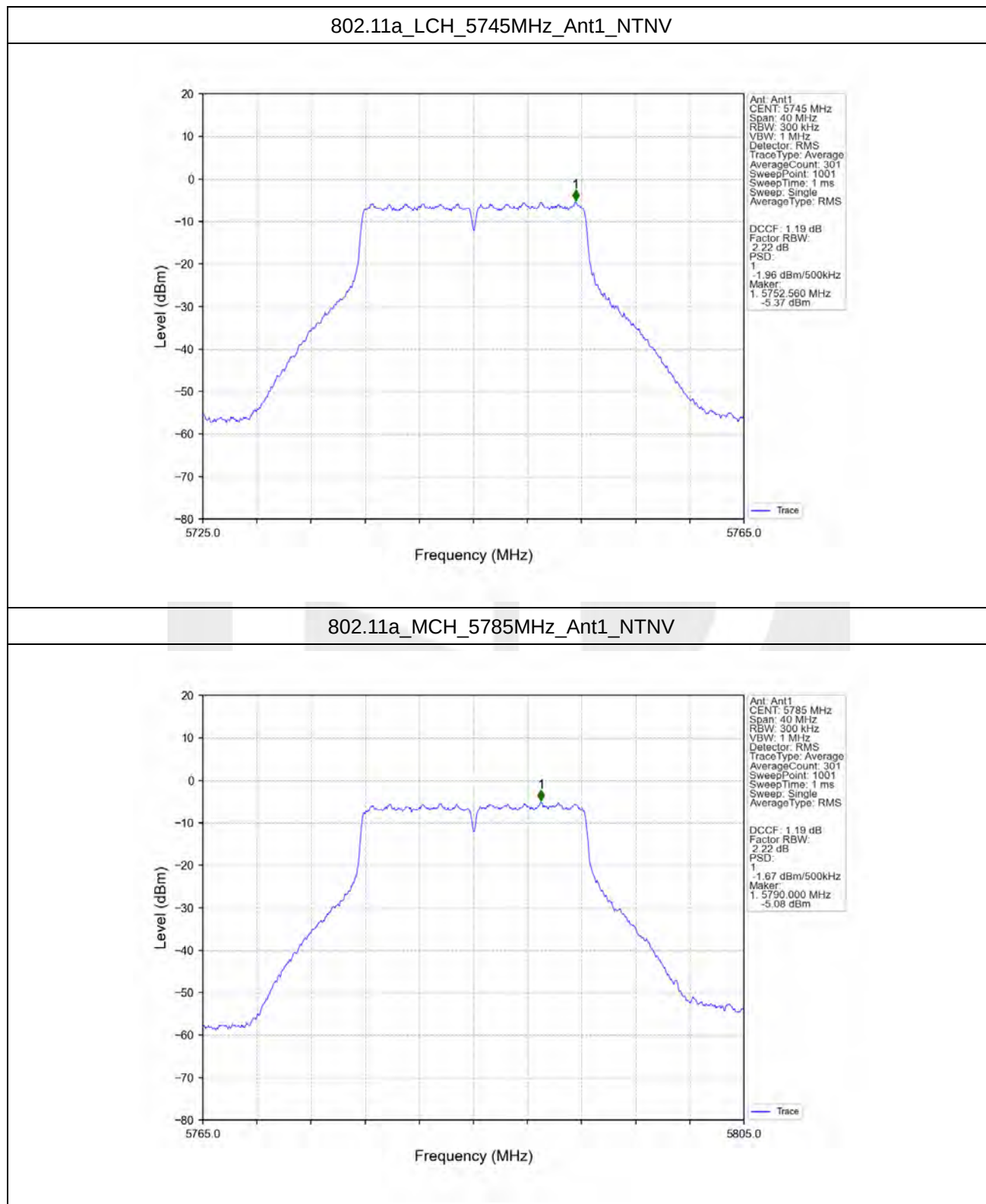
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



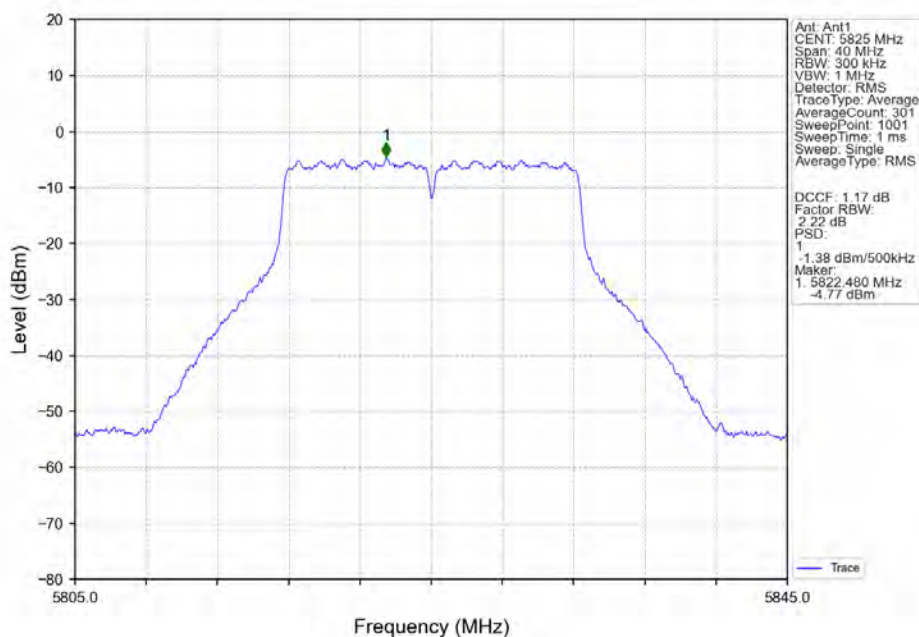
802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



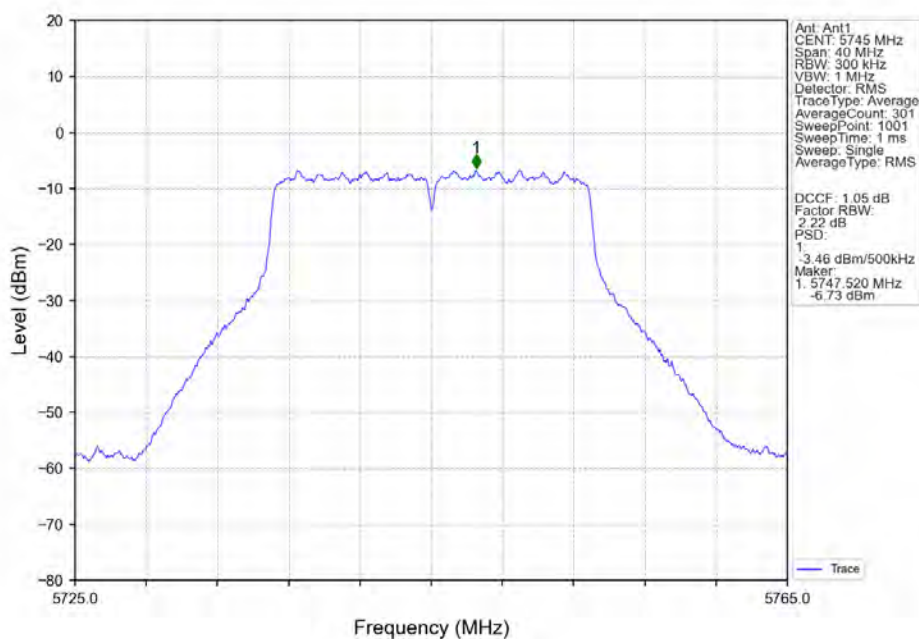
4.2.2 PSD-Band3



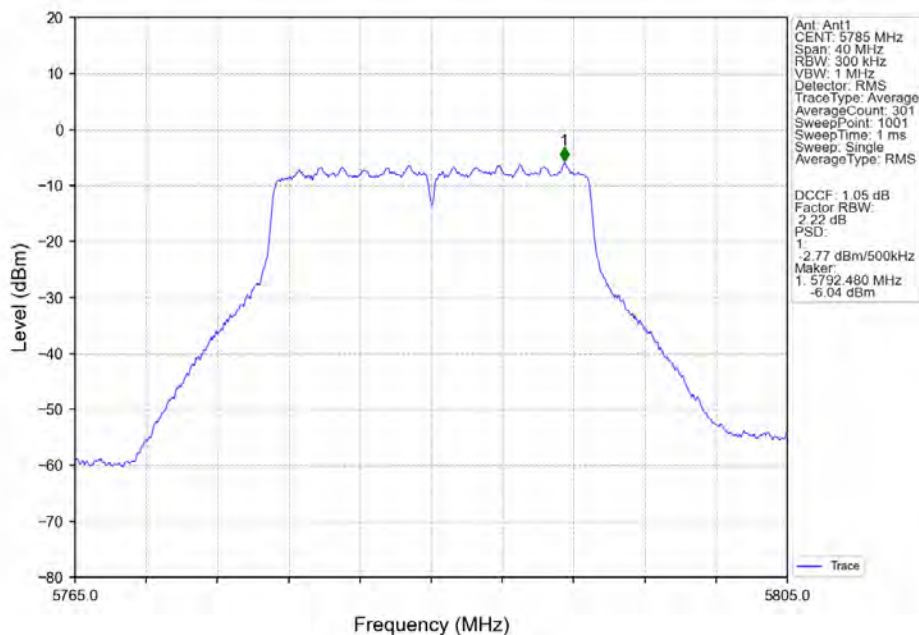
802.11a_HCH_5825MHz_Ant1_NTNV



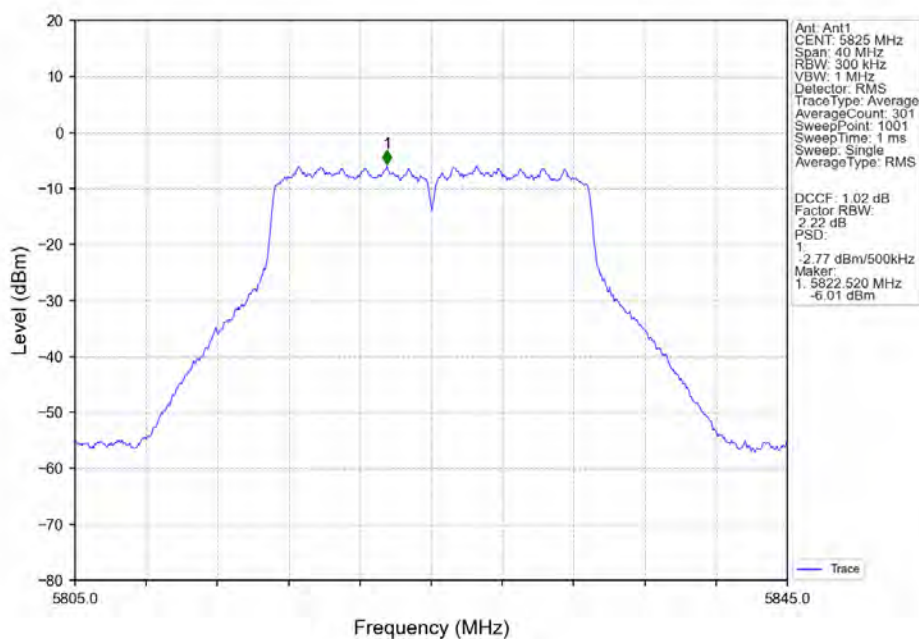
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



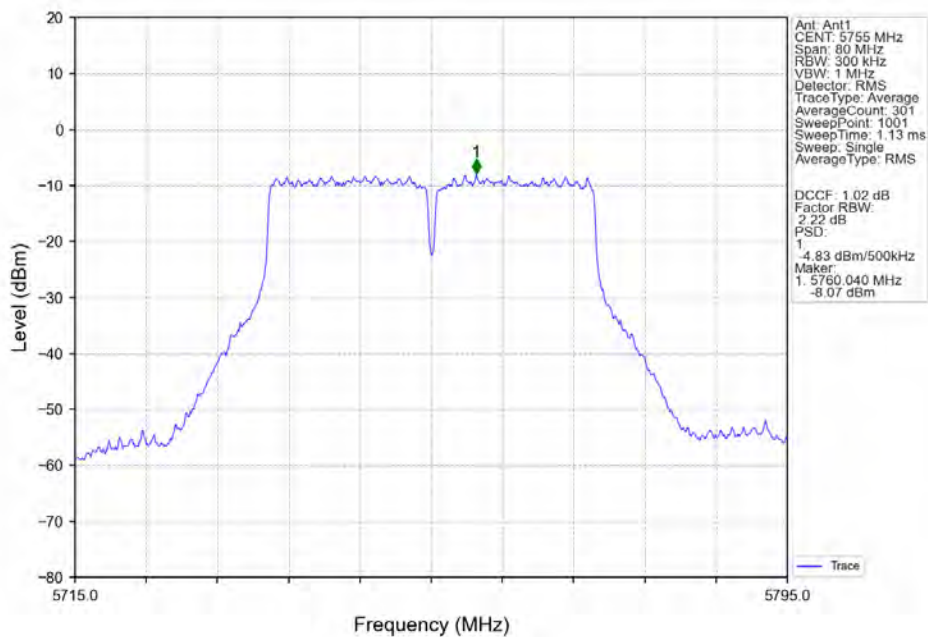
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



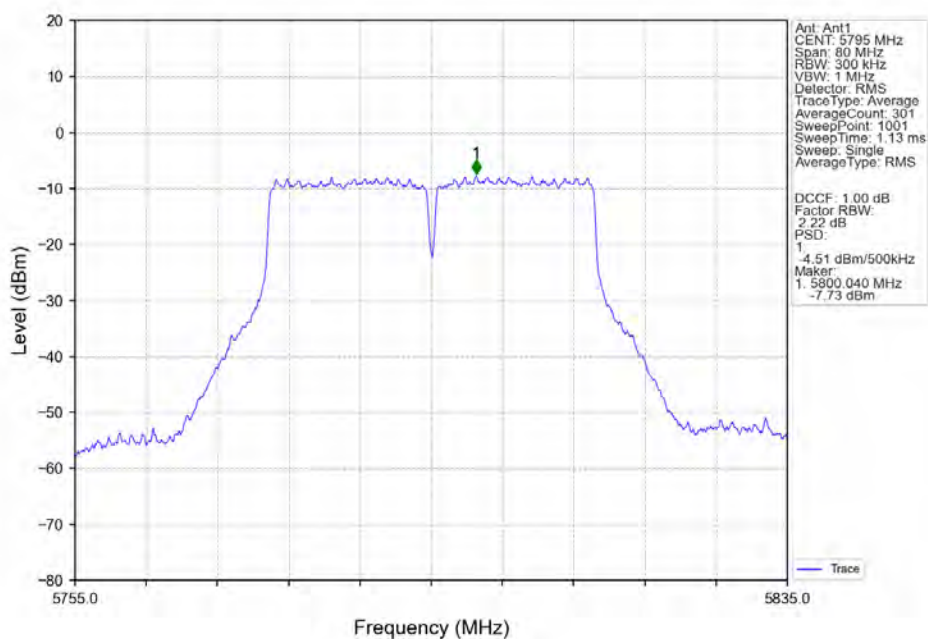
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



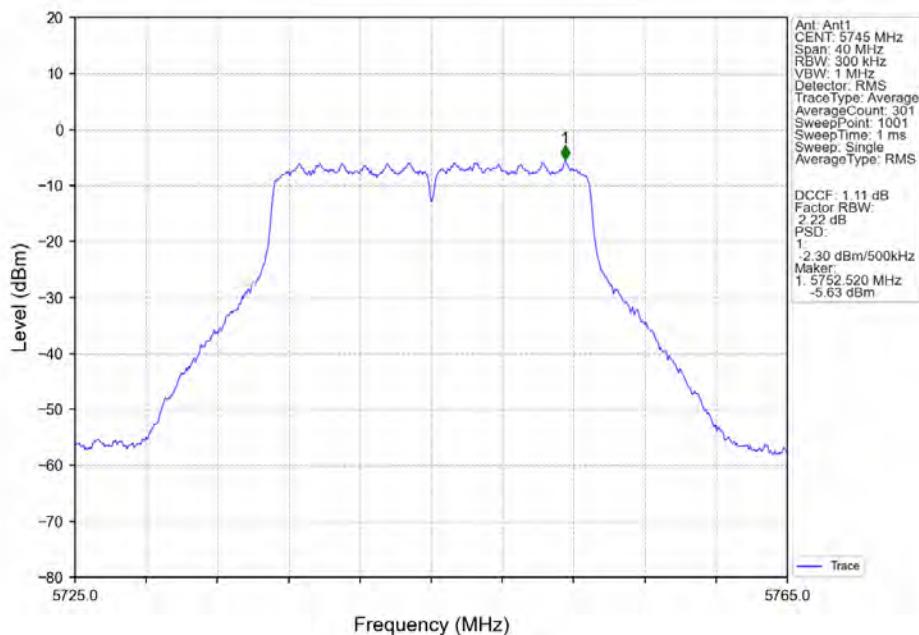
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



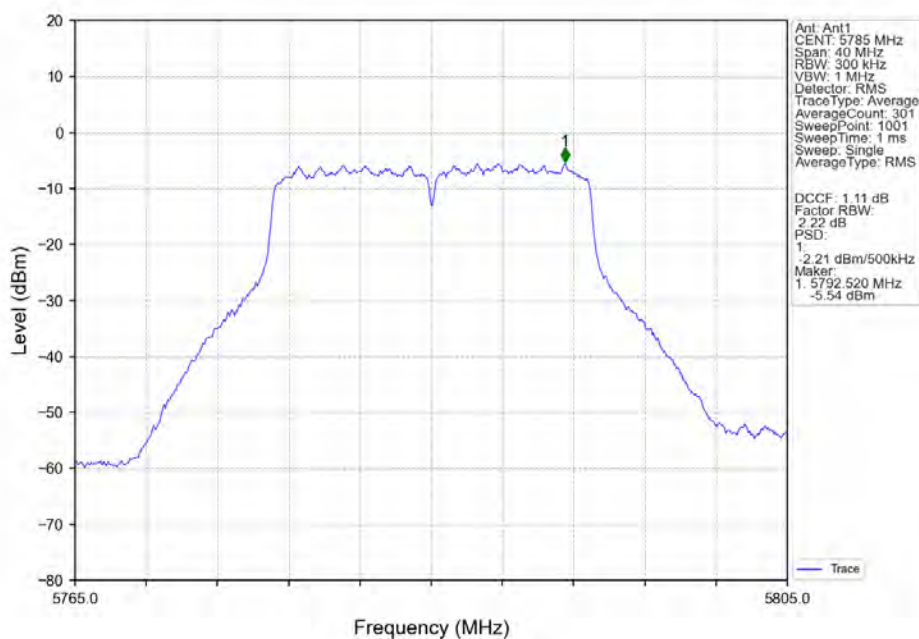
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



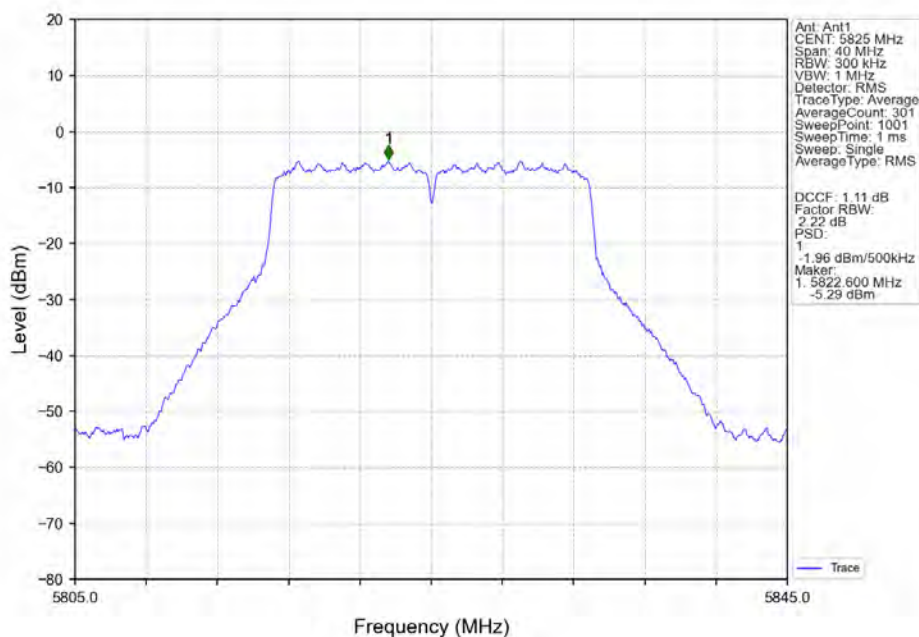
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



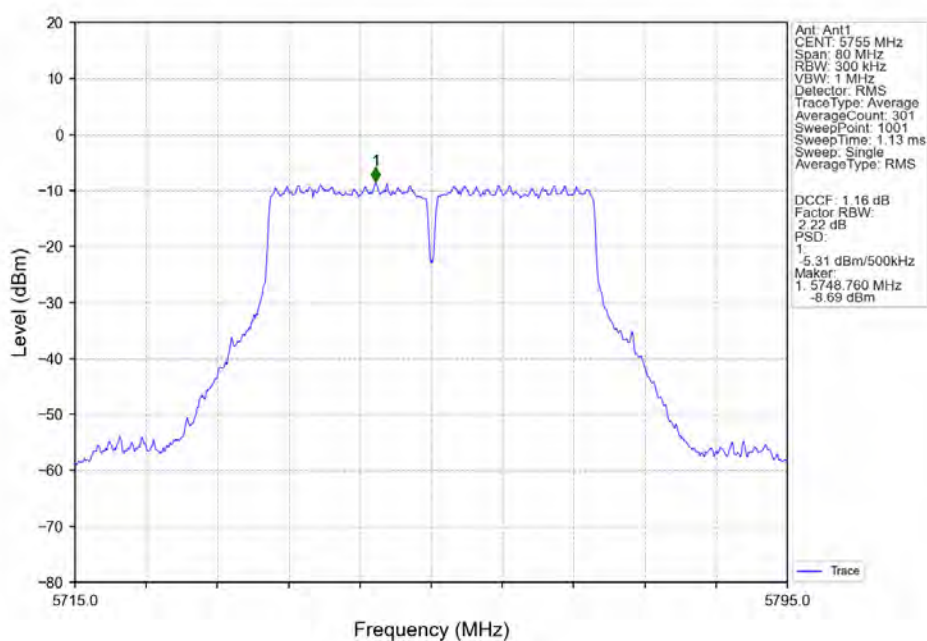
802.11ac(VHT20)_MCH_5785MHz_Ant1_NTNV



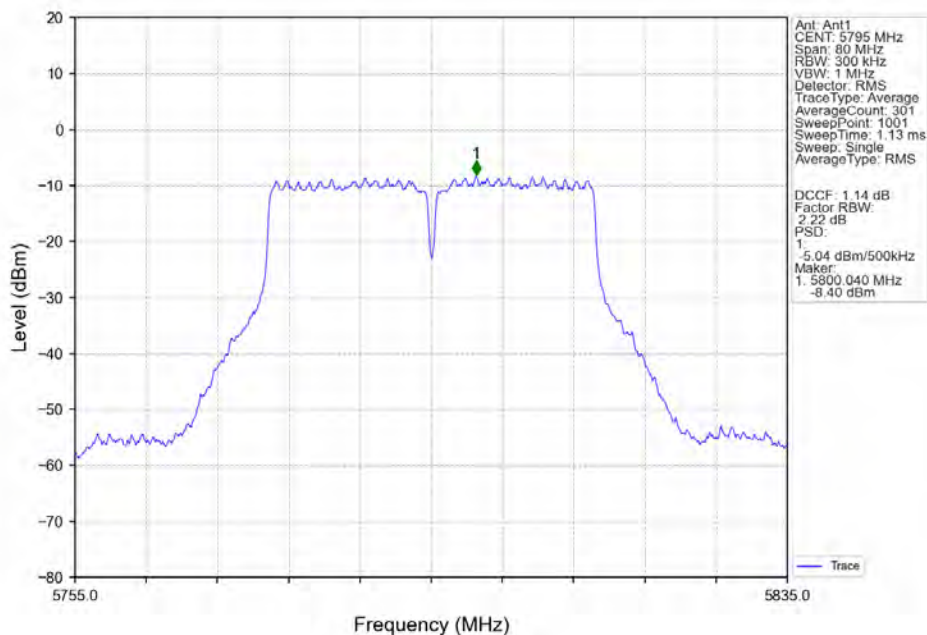
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



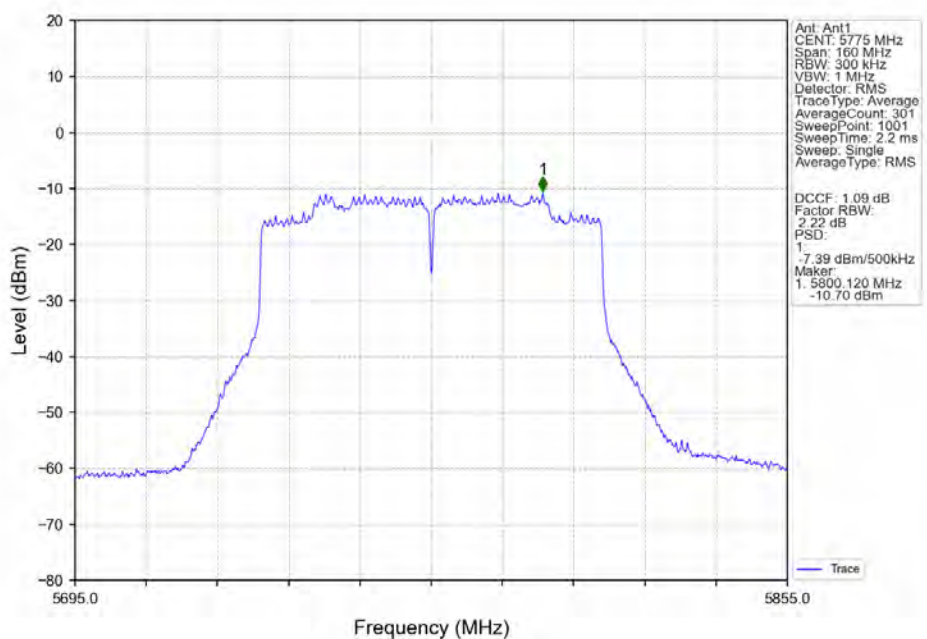
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5775MHz_Ant1_NTNV



5. Unwanted Emissions In Restricted Frequency Bands

5.1 Test Result

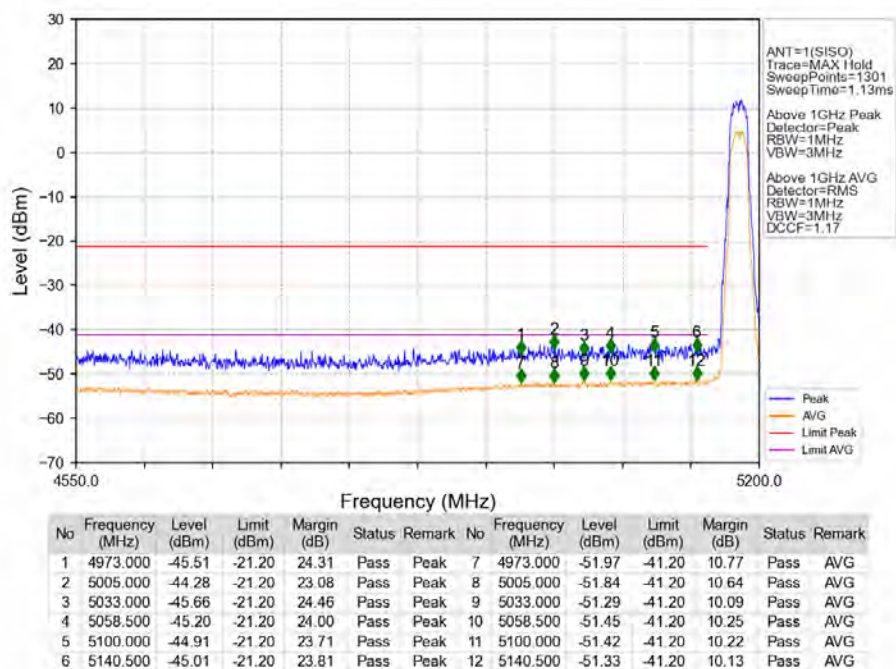
5.1.1 RSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Unwanted Emissions (dBm)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	Refer To Test Graph		Pass
		5240	1	Refer To Test Graph		Pass
		5745	1	Refer To Test Graph		Pass
		5825	1	Refer To Test Graph		Pass
802.11n (HT20)	SISO	5180	1	Refer To Test Graph		Pass
		5240	1	Refer To Test Graph		Pass
		5745	1	Refer To Test Graph		Pass
		5825	1	Refer To Test Graph		Pass
802.11n (HT40)	SISO	5190	1	Refer To Test Graph		Pass
		5230	1	Refer To Test Graph		Pass
		5755	1	Refer To Test Graph		Pass
		5795	1	Refer To Test Graph		Pass
802.11ac (VHT20)	SISO	5180	1	Refer To Test Graph		Pass
		5240	1	Refer To Test Graph		Pass
		5745	1	Refer To Test Graph		Pass
		5825	1	Refer To Test Graph		Pass
802.11ac (VHT40)	SISO	5190	1	Refer To Test Graph		Pass
		5230	1	Refer To Test Graph		Pass
		5755	1	Refer To Test Graph		Pass
		5795	1	Refer To Test Graph		Pass
802.11ac (VHT80)	SISO	5210	1	Refer To Test Graph		Pass
		5775	1	Refer To Test Graph		Pass
Note: 1) EIRP[dBm]=E[dBuV/m]- 95.2, for d= 3 m; 2) Level[dBm] results have calculated the antenna gain; 3) Antenna gain= U-NII-1: 5150 MHz to 5250 MHz: 3.71 dBi and U-NII-3: 5725 MHz to 5850 MHz: 3.71 dBi.						

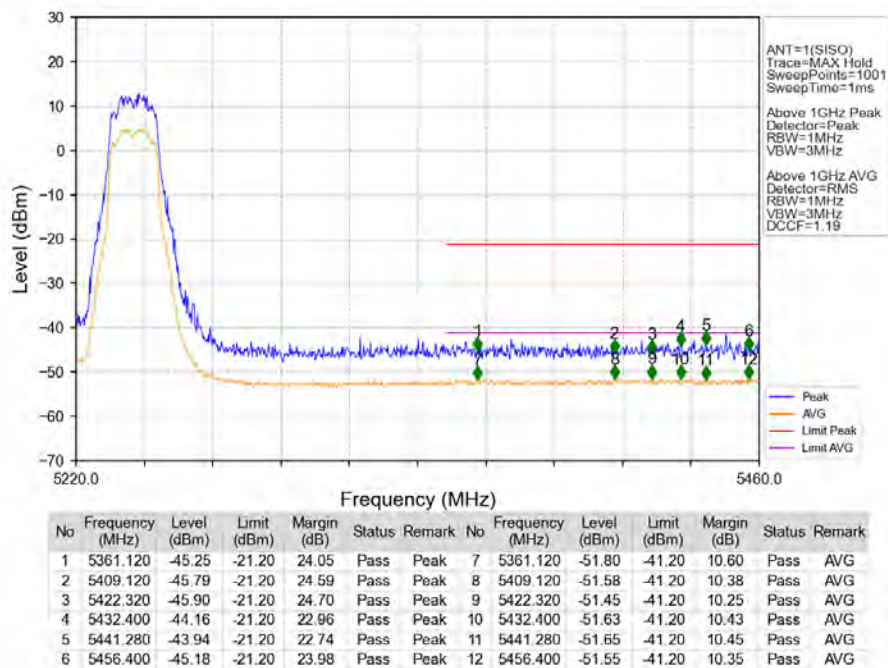
5.2 Test Graph

5.2.1 RSE

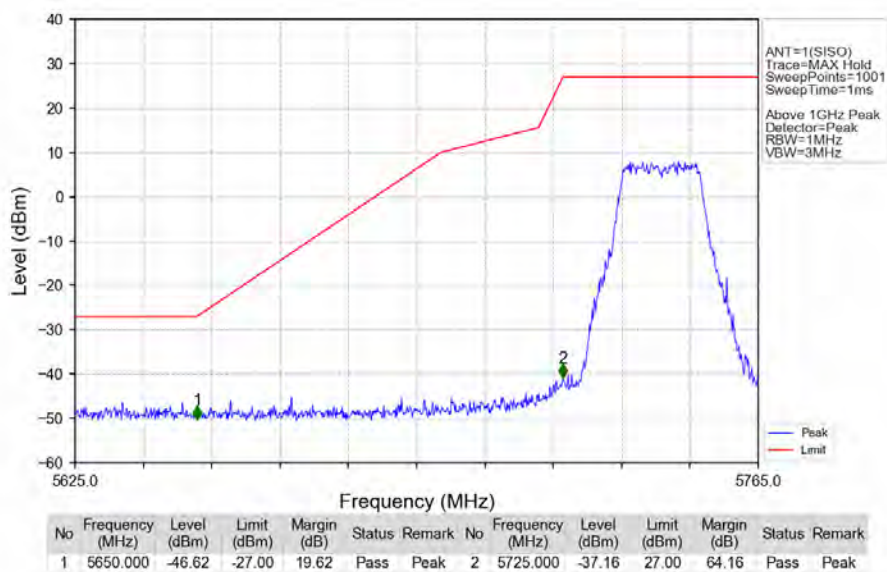
802.11a_LCH_5180MHz_Ant1_NTNV



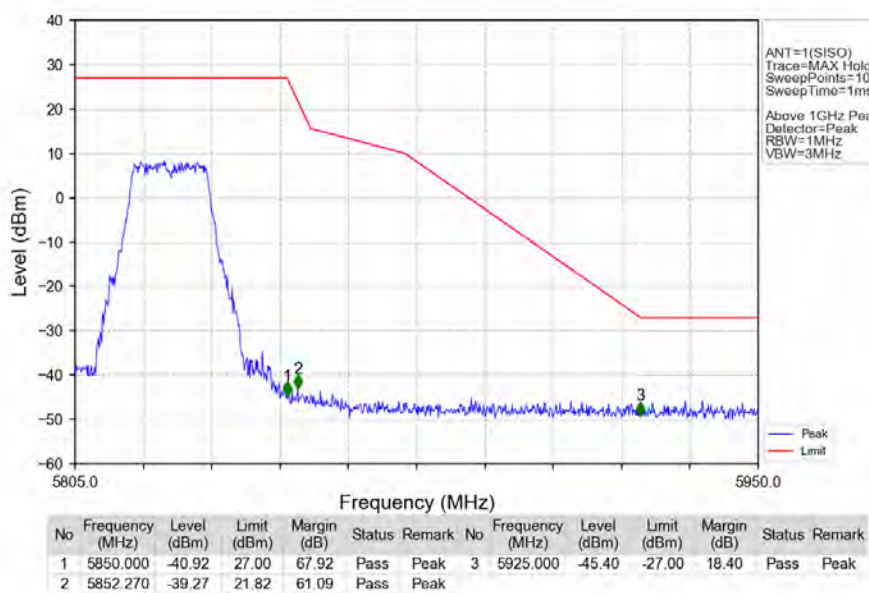
802.11a_HCH_5240MHz_Ant1_NTNV



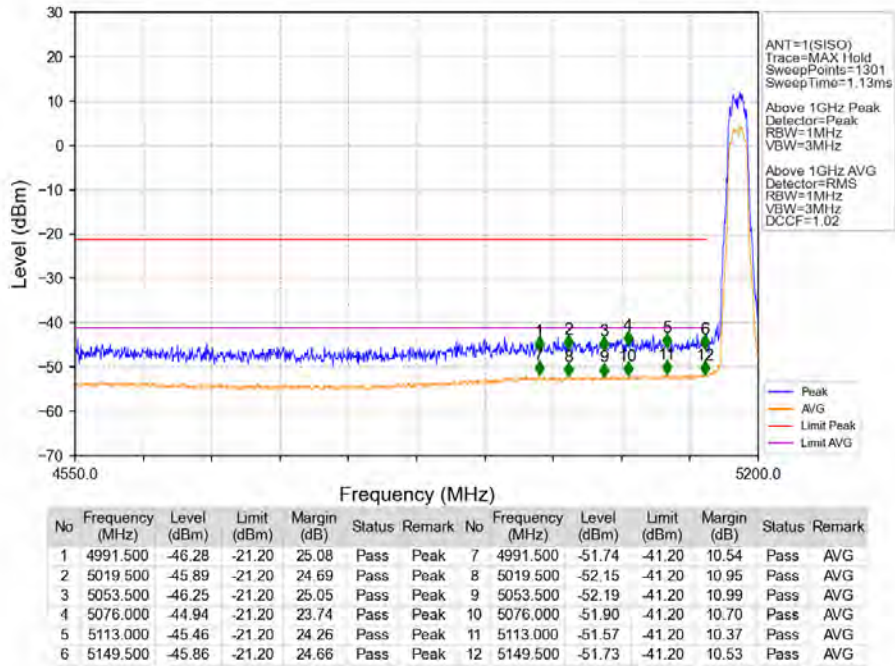
802.11a_LCH_5745MHz_Ant1_NTNV



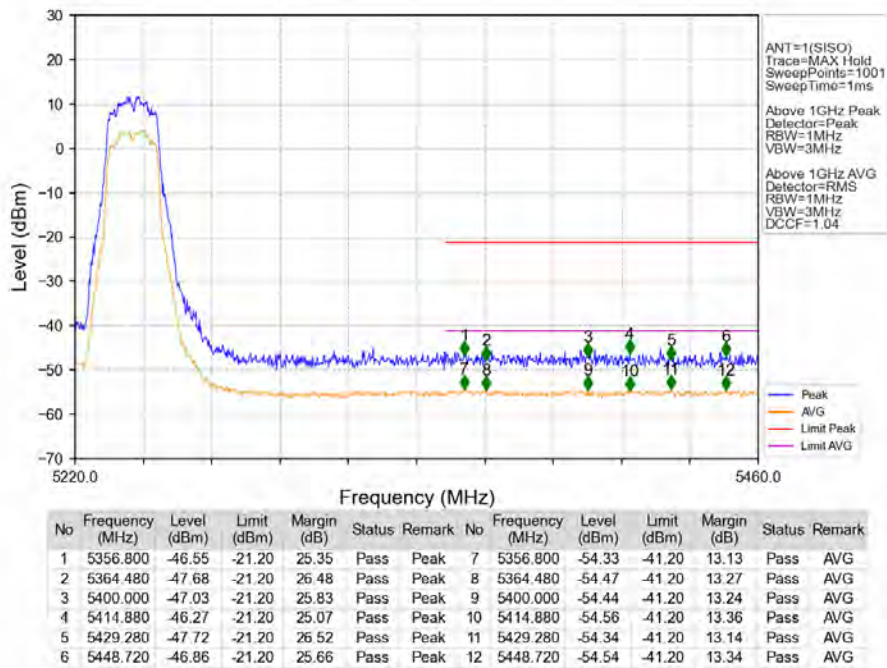
802.11a_HCH_5825MHz_Ant1_NTNV



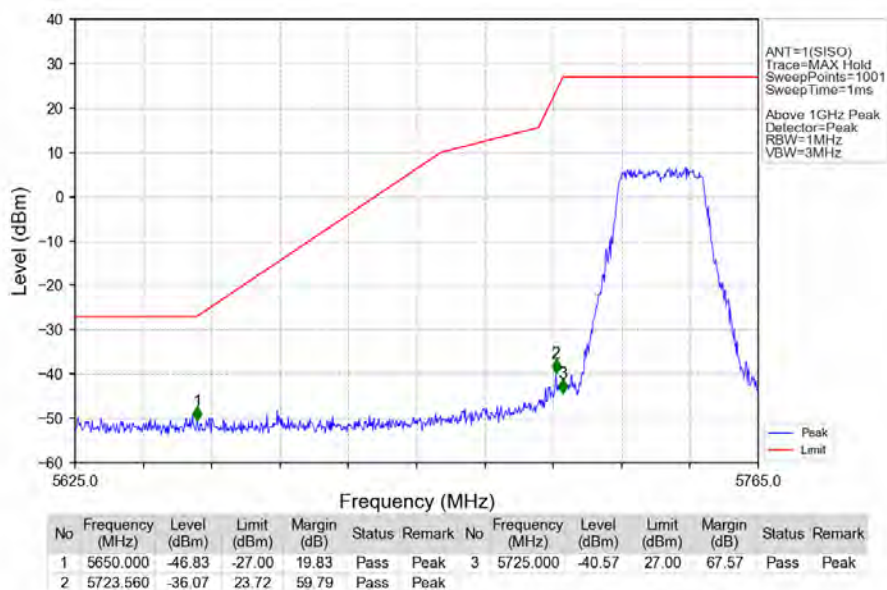
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



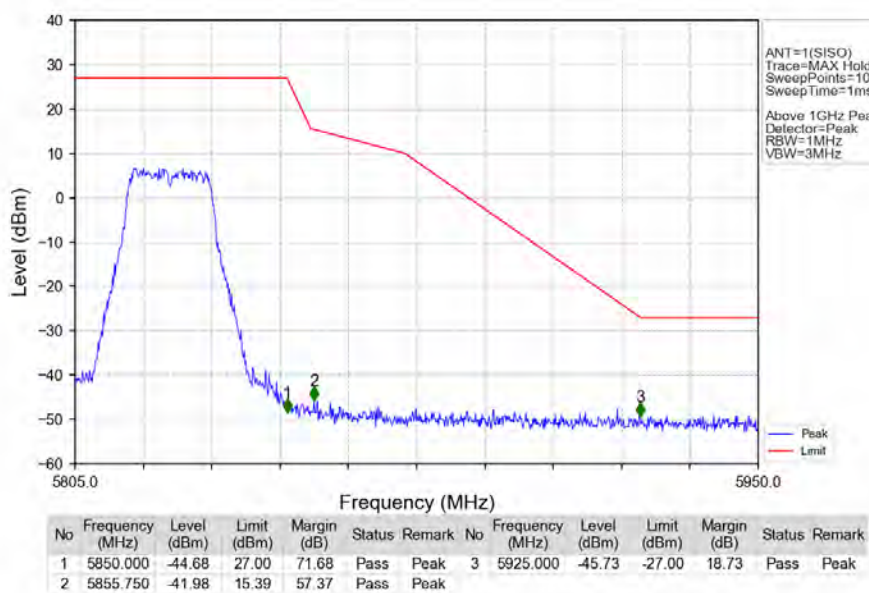
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



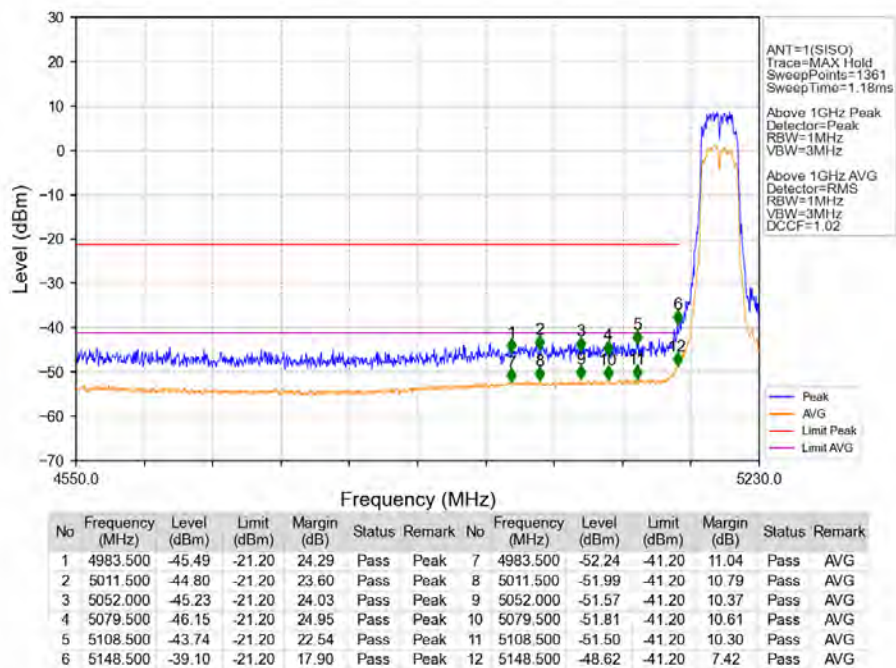
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



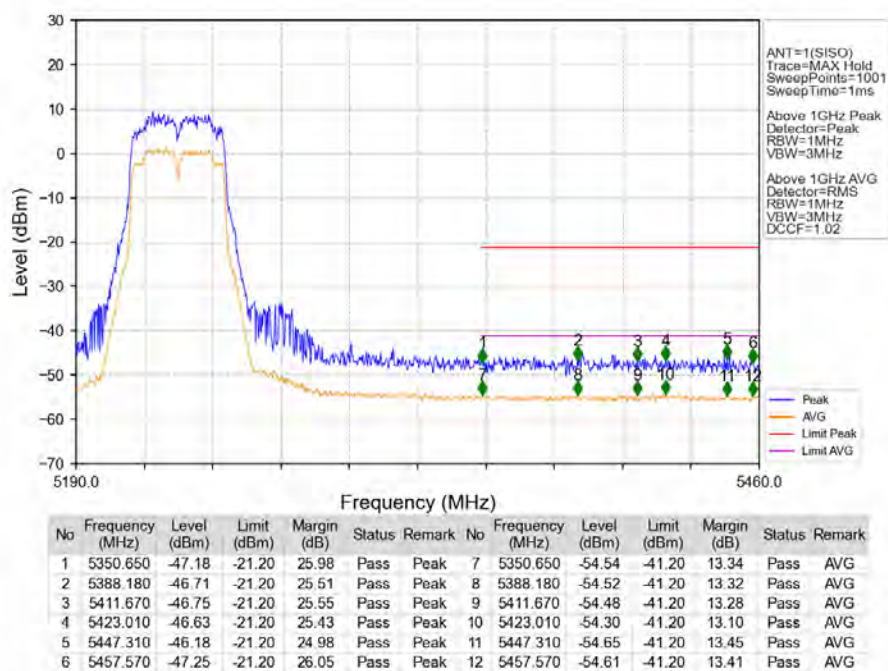
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



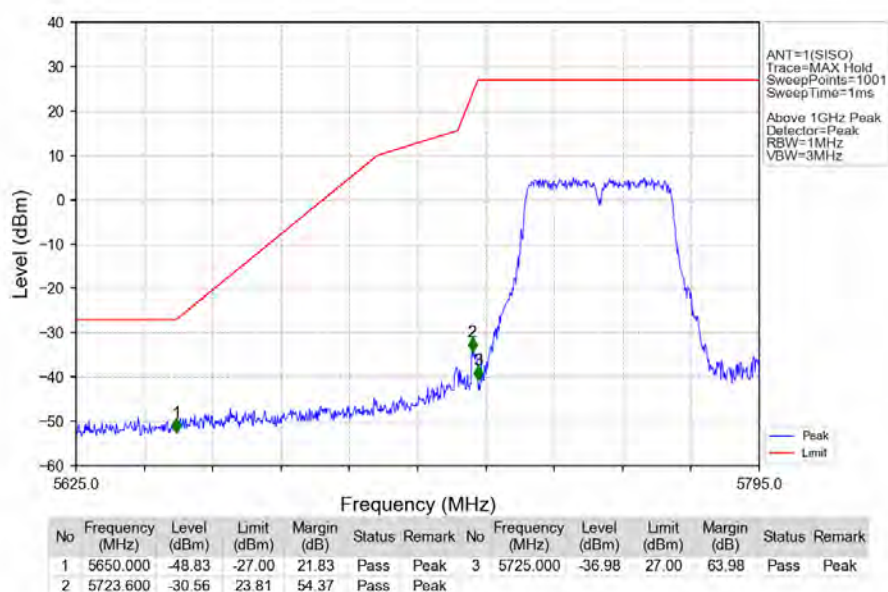
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



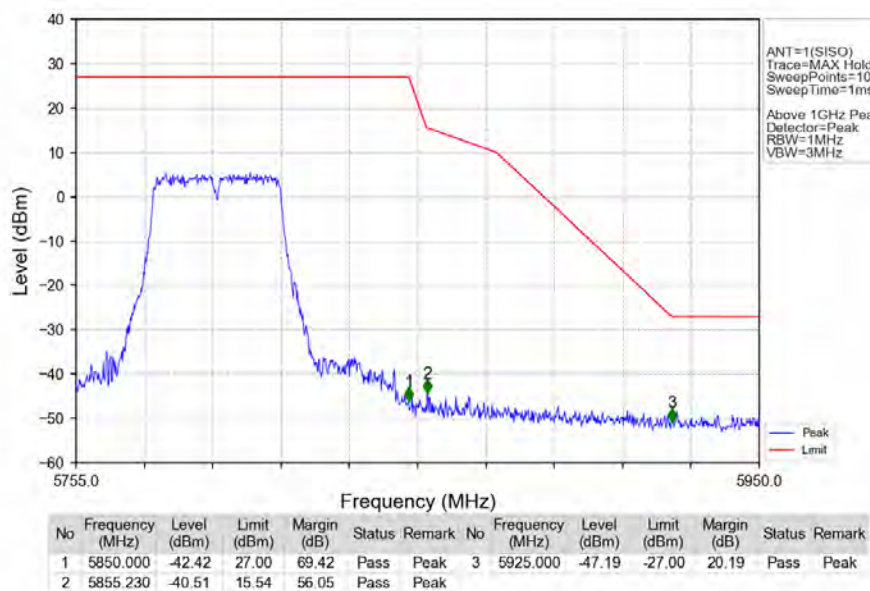
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



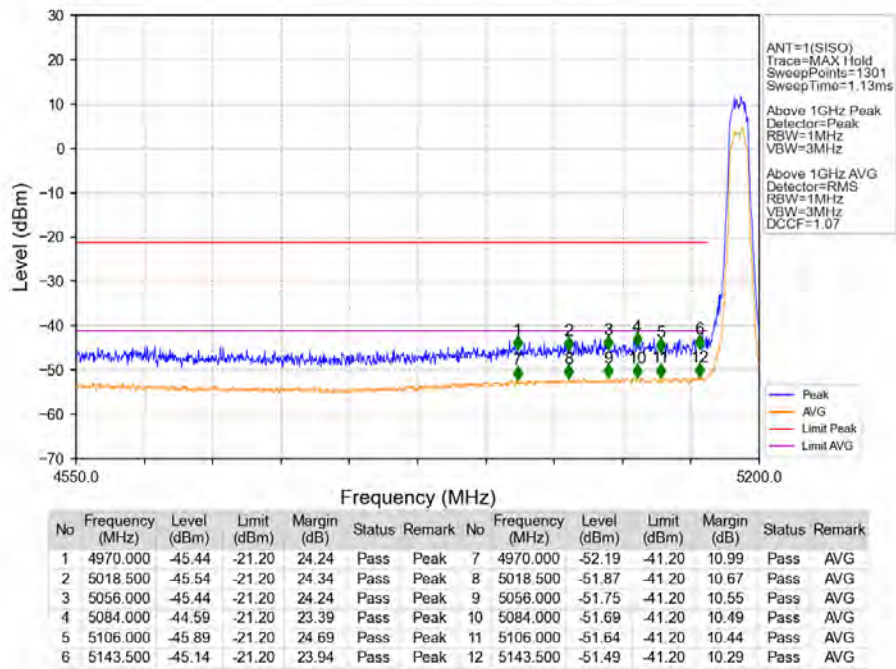
802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



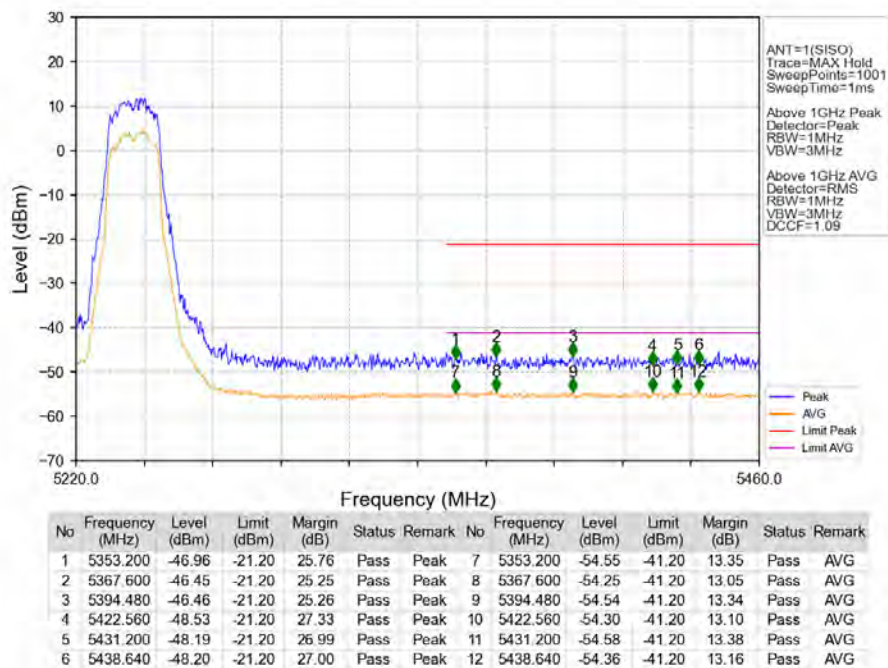
802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



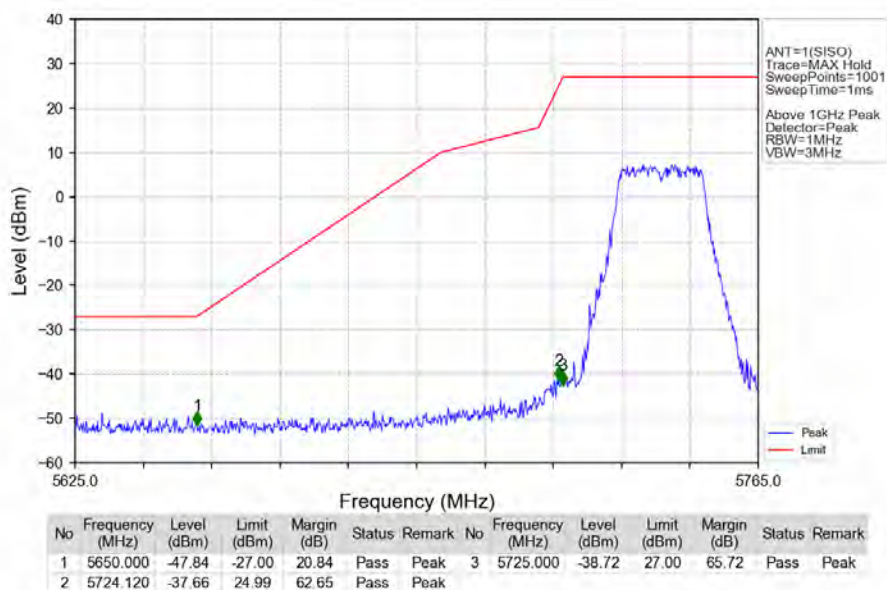
802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV



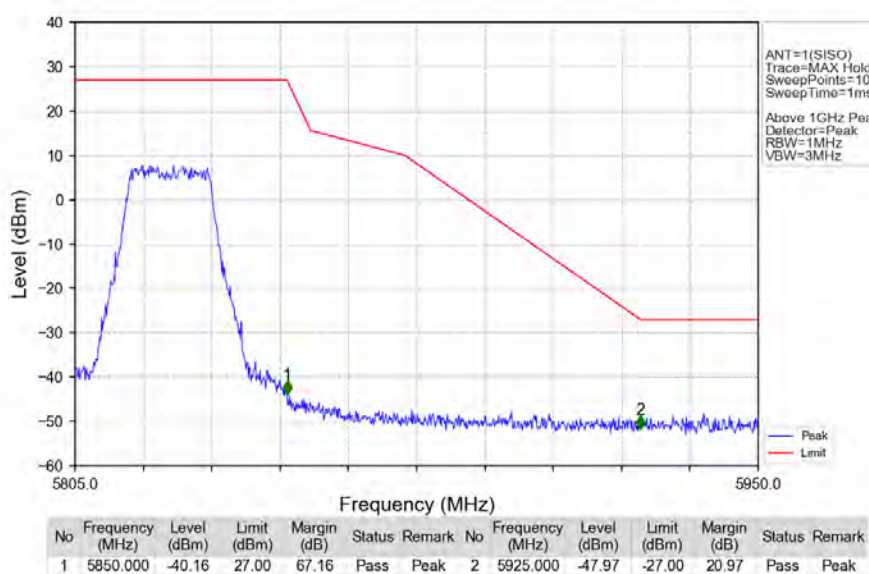
802.11ac(VHT20)_HCH_5240MHz_Ant1_NTNV



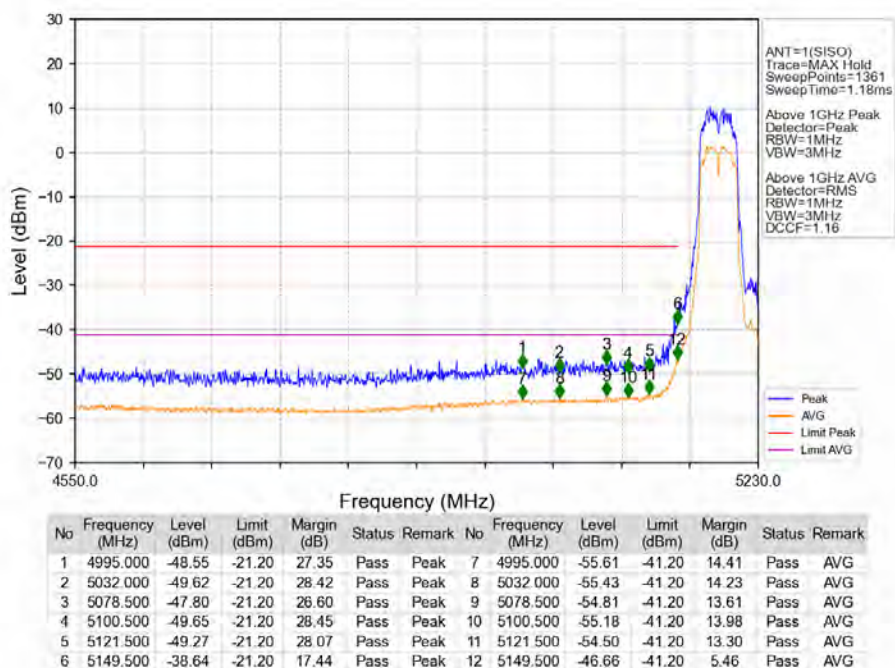
802.11ac(VHT20)_LCH_5745MHz_Ant1_NTNV



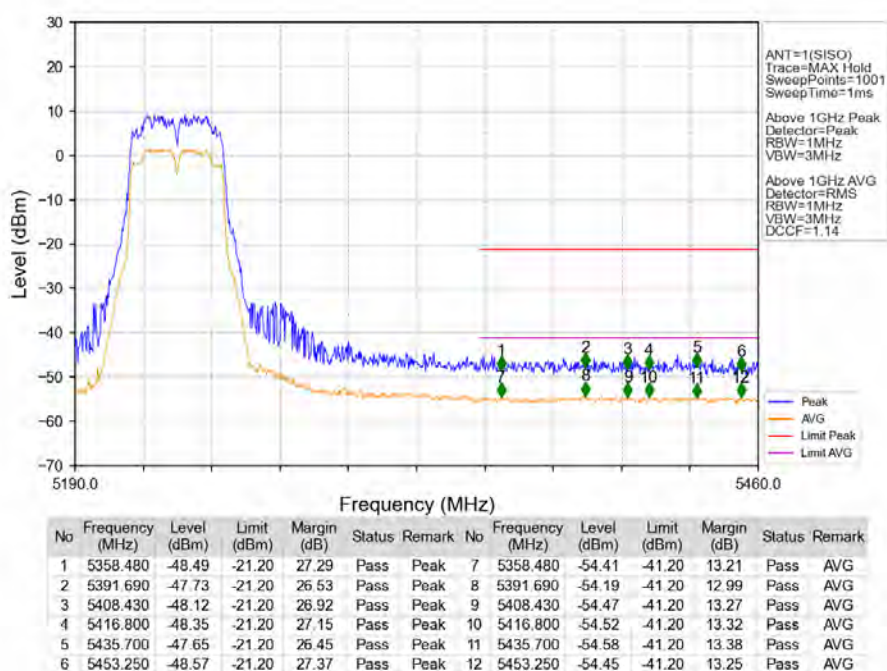
802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



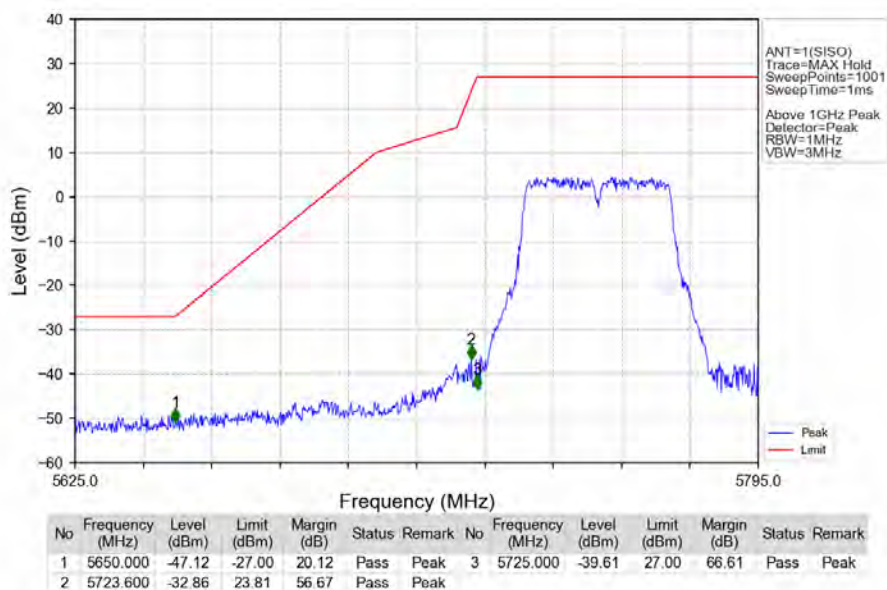
802.11ac(VHT40)_LCH_5190MHz_Ant1_NTNV



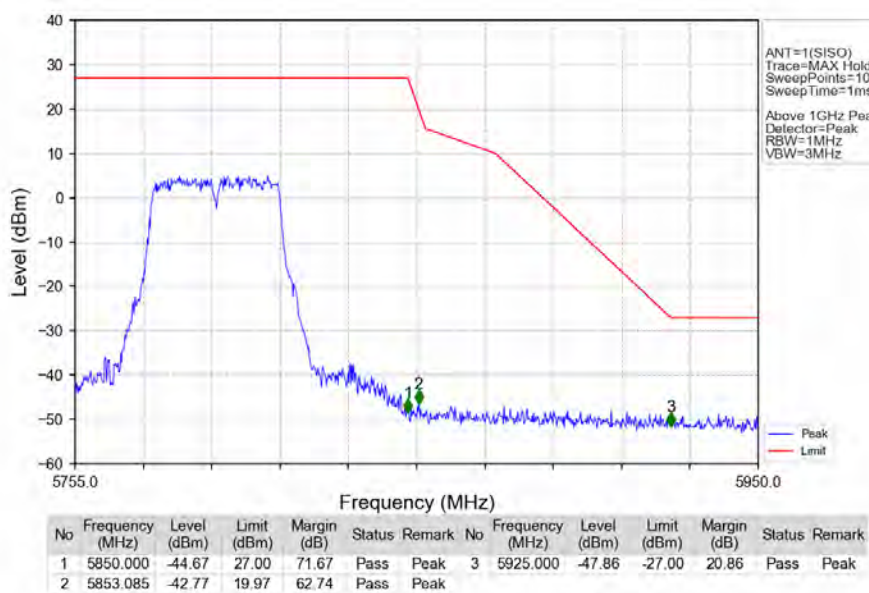
802.11ac(VHT40)_HCH_5230MHz_Ant1_NTNV



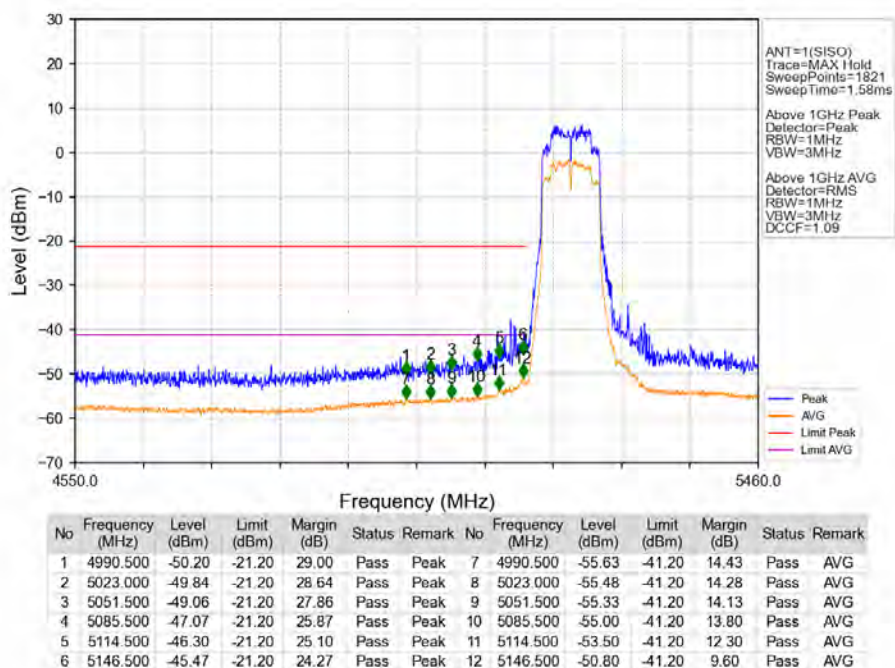
802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



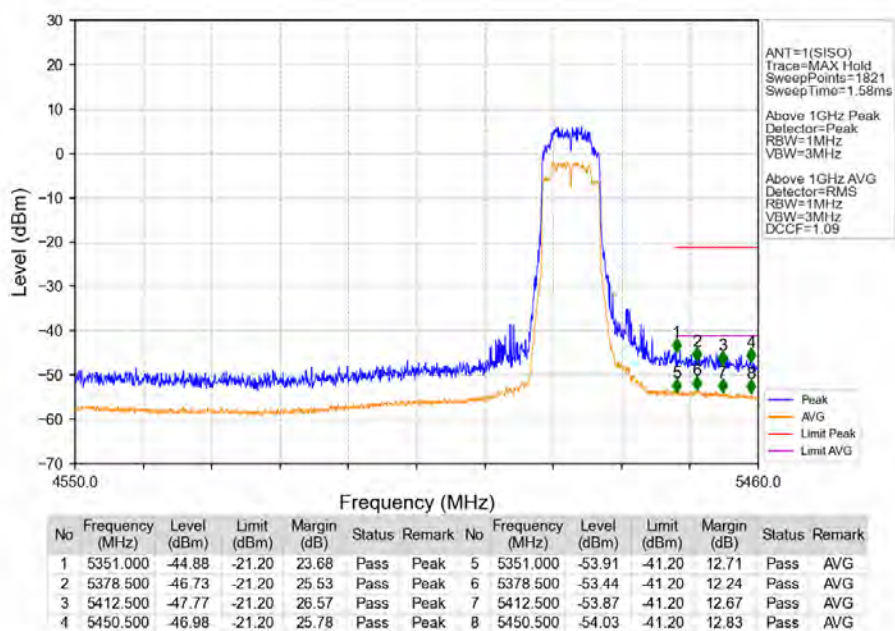
802.11ac(VHT40)_HCH_5795MHz_Ant1_NTNV



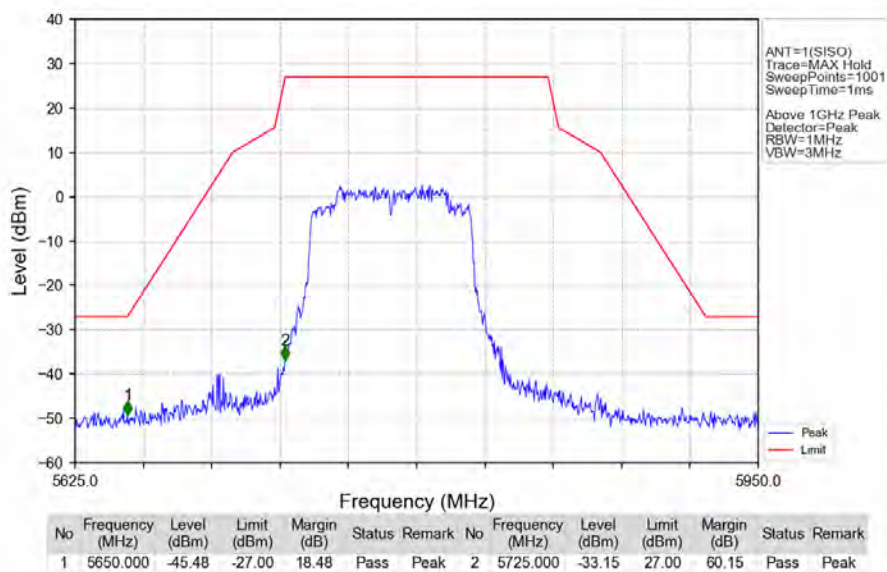
802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



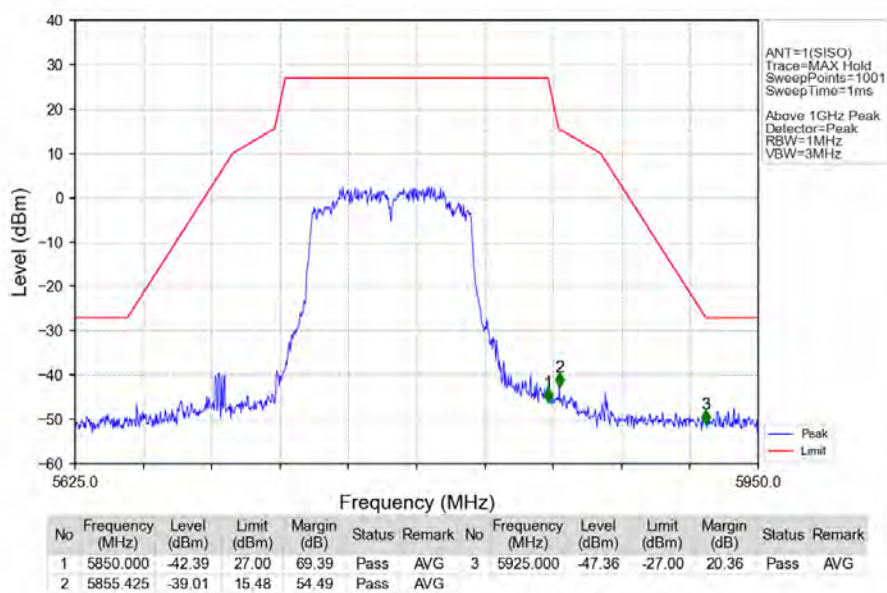
802.11ac(VHT80)_MCH_5210MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5775MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5775MHz_Ant1_NTNV



6. Frequency Stability

6.1 Test Result

6.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage	Measured Frequency (MHz)	Limit (MHz)	Verdict
Carrier Wave	SISO	5180	20	LV	5179.999	5150 to 5250	Pass
				NV	5180.001	5150 to 5250	Pass
				HV	5180.001	5150 to 5250	Pass
			-30	NV	5180.001	5150 to 5250	Pass
			-20	NV	5180.001	5150 to 5250	Pass
			-10	NV	5180.001	5150 to 5250	Pass
			0	NV	5180.001	5150 to 5250	Pass
			10	NV	5180.001	5150 to 5250	Pass
			30	NV	5180.001	5150 to 5250	Pass
			40	NV	5180.001	5150 to 5250	Pass
			50	NV	5180.001	5150 to 5250	Pass
		5200	20	LV	5200.001	5150 to 5250	Pass
				NV	5200.001	5150 to 5250	Pass
				HV	5200.001	5150 to 5250	Pass
			-30	NV	5200.001	5150 to 5250	Pass
			-20	NV	5200.001	5150 to 5250	Pass
			-10	NV	5200.001	5150 to 5250	Pass
			0	NV	5200.001	5150 to 5250	Pass
			10	NV	5200.001	5150 to 5250	Pass
			30	NV	5200.001	5150 to 5250	Pass
			40	NV	5200.001	5150 to 5250	Pass
			50	NV	5200.001	5150 to 5250	Pass
		5240	20	LV	5240.001	5150 to 5250	Pass
				NV	5240.002	5150 to 5250	Pass
				HV	5240.002	5150 to 5250	Pass
			-30	NV	5240.002	5150 to 5250	Pass
			-20	NV	5240.002	5150 to 5250	Pass
			-10	NV	5240.002	5150 to 5250	Pass

			0	NV	5240.002	5150 to 5250	Pass
			10	NV	5240.002	5150 to 5250	Pass
			30	NV	5240.002	5150 to 5250	Pass
			40	NV	5240.002	5150 to 5250	Pass
			50	NV	5240.002	5150 to 5250	Pass
		5745	20	LV	5745.000	5725 to 5850	Pass
				NV	5745.001	5725 to 5850	Pass
				HV	5745.002	5725 to 5850	Pass
			-30	NV	5745.002	5725 to 5850	Pass
			-20	NV	5745.002	5725 to 5850	Pass
			-10	NV	5745.002	5725 to 5850	Pass
			0	NV	5745.002	5725 to 5850	Pass
			10	NV	5745.002	5725 to 5850	Pass
			30	NV	5745.002	5725 to 5850	Pass
			40	NV	5745.002	5725 to 5850	Pass
			50	NV	5745.002	5725 to 5850	Pass
		5785	20	LV	5785.000	5725 to 5850	Pass
				NV	5785.001	5725 to 5850	Pass
				HV	5785.002	5725 to 5850	Pass
			-30	NV	5785.002	5725 to 5850	Pass
			-20	NV	5785.002	5725 to 5850	Pass
			-10	NV	5785.002	5725 to 5850	Pass
			0	NV	5785.002	5725 to 5850	Pass
			10	NV	5785.002	5725 to 5850	Pass
			30	NV	5785.003	5725 to 5850	Pass
			40	NV	5785.002	5725 to 5850	Pass
			50	NV	5785.003	5725 to 5850	Pass
		5825	20	LV	5825.001	5725 to 5850	Pass
				NV	5825.002	5725 to 5850	Pass
				HV	5825.003	5725 to 5850	Pass
			-30	NV	5825.003	5725 to 5850	Pass
			-20	NV	5825.003	5725 to 5850	Pass
			-10	NV	5825.003	5725 to 5850	Pass
			0	NV	5825.003	5725 to 5850	Pass
			10	NV	5825.003	5725 to 5850	Pass
			30	NV	5825.003	5725 to 5850	Pass
			40	NV	5825.003	5725 to 5850	Pass

			50	NV	5825.003	5725 to 5850	Pass
		5190	20	LV	5190.001	5150 to 5250	Pass
				NV	5190.001	5150 to 5250	Pass
				HV	5190.001	5150 to 5250	Pass
			-30	NV	5190.001	5150 to 5250	Pass
			-20	NV	5190.001	5150 to 5250	Pass
			-10	NV	5190.001	5150 to 5250	Pass
			0	NV	5190.001	5150 to 5250	Pass
			10	NV	5190.002	5150 to 5250	Pass
			30	NV	5190.001	5150 to 5250	Pass
			40	NV	5190.001	5150 to 5250	Pass
			50	NV	5190.001	5150 to 5250	Pass
		5230	20	LV	5230.001	5150 to 5250	Pass
				NV	5230.002	5150 to 5250	Pass
				HV	5230.002	5150 to 5250	Pass
			-30	NV	5230.002	5150 to 5250	Pass
			-20	NV	5230.002	5150 to 5250	Pass
			-10	NV	5230.002	5150 to 5250	Pass
			0	NV	5230.002	5150 to 5250	Pass
			10	NV	5230.002	5150 to 5250	Pass
			30	NV	5230.002	5150 to 5250	Pass
			40	NV	5230.003	5150 to 5250	Pass
			50	NV	5230.003	5150 to 5250	Pass
		5755	20	LV	5755.001	5725 to 5850	Pass
				NV	5755.001	5725 to 5850	Pass
				HV	5755.002	5725 to 5850	Pass
			-30	NV	5755.002	5725 to 5850	Pass
			-20	NV	5755.002	5725 to 5850	Pass
			-10	NV	5755.002	5725 to 5850	Pass
			0	NV	5755.002	5725 to 5850	Pass
			10	NV	5755.002	5725 to 5850	Pass
			30	NV	5755.002	5725 to 5850	Pass
			40	NV	5755.002	5725 to 5850	Pass
			50	NV	5755.002	5725 to 5850	Pass
		5795	20	LV	5795.000	5725 to 5850	Pass
				NV	5795.002	5725 to 5850	Pass
				HV	5795.002	5725 to 5850	Pass

			-30	NV	5795.002	5725 to 5850	Pass
			-20	NV	5795.003	5725 to 5850	Pass
			-10	NV	5795.003	5725 to 5850	Pass
			0	NV	5795.003	5725 to 5850	Pass
			10	NV	5795.003	5725 to 5850	Pass
			30	NV	5795.003	5725 to 5850	Pass
			40	NV	5795.003	5725 to 5850	Pass
			50	NV	5795.003	5725 to 5850	Pass
		5210	20	LV	5210.002	5150 to 5250	Pass
				NV	5210.002	5150 to 5250	Pass
				HV	5210.002	5150 to 5250	Pass
			-30	NV	5210.002	5150 to 5250	Pass
			-20	NV	5210.002	5150 to 5250	Pass
			-10	NV	5210.002	5150 to 5250	Pass
			0	NV	5210.002	5150 to 5250	Pass
			10	NV	5210.002	5150 to 5250	Pass
			30	NV	5210.002	5150 to 5250	Pass
			40	NV	5210.002	5150 to 5250	Pass
			50	NV	5210.002	5150 to 5250	Pass
		5775	20	LV	5775.000	5725 to 5850	Pass
				NV	5775.002	5725 to 5850	Pass
				HV	5775.002	5725 to 5850	Pass
			-30	NV	5775.002	5725 to 5850	Pass
			-20	NV	5775.002	5725 to 5850	Pass
			-10	NV	5775.003	5725 to 5850	Pass
			0	NV	5775.003	5725 to 5850	Pass
			10	NV	5775.003	5725 to 5850	Pass
			30	NV	5775.003	5725 to 5850	Pass
			40	NV	5775.003	5725 to 5850	Pass

STATEMENT

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