中认信通
CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)

ACCREDITED
TESTING LABORATORY
CERTIFICATE # 6356.01

TEST REPORT

Applicant: **8devices**

Address: FCC:Antakalnio 17 - 6 Vilnius Lithuania
IC: Antakalnio g. 17-6 Vilnius Vilnius County LT-10312 Lithuania

FCC ID: **Z9WMAN**
IC: **11468A-MAN**
HVIN: **Mango**
Product Name: **Mango**
Model Number: **Mango**
Standard(s): **47 CFR Part 15, Subpart E(15.407)**
RSS-247 Issue 2, February 2017
RSS-Gen, Issue 5, February 2021 Amendment 2
ANSI C63.10-2013
KDB 789033 D02 General U-NII Test Procedures New Rules v02r01

The above equipment has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: **CR22010029-00B**

Date Of Issue: **2023-01-03**

Reviewed By: **Sun Zhong**

Sun Zhong

Title: Manager

Test Laboratory: **China Certification ICT Co., Ltd (Dongguan)**
No. 113, Pingkang Road, Dalang Town, Dongguan,
Guangdong, China
Tel: +86-769-82016888

Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0123.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "▲". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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CONTENTS

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

1.1.1 General:

EUT Name:	Mango
EUT Model:	Mango
Operation Frequency:	5180-5240 MHz (802.11a/n ht20/ac vht20/ax hew20) 5190-5230 MHz(802.11n ht40/ac vht40/ax hew40) 5210 MHz(802.11ac vht80/ax hew80) 5745-5825 MHz (802.11a/n ht20/ac vht20/ax hew20) 5755-5795 MHz(802.11n ht40/ac vht40/ax hew40) 5775 MHz(802.11ac vht80/ax hew80)
Maximum Average Output Power (Conducted):	18.38 dBm (5150-5250 MHz) 18.20 dBm (5725-5850 MHz)
Modulation Type:	802.11a/n/ac:OFDM-BPSK, QPSK, 16QAM, 64QAM,256QAM 802.11ax: OFDMA- BPSK, QPSK, 16QAM, 64QAM,256QAM, 1024QAM
Rated Input Voltage:	DC 3.3V
Serial Number:	CR22010029-RF-S1(Chip Antenna) CR22010029-RF-S2(Whip Antenna)
EUT Received Date:	2022.1.19
EUT Received Status:	Good

1.1.2 Operation Frequency Detail:

For 802.11a/n ht20/ac vht20/ax hew20:

5150-5250MHz Band		5725-5850MHz Band	
Channel	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
36	5180	149	5745
40	5200	153	5765
44	5220	157	5785
48	5240	161	5805
/	/	165	5825
Per section 15.31(m)/RSS-Gen, the below frequencies were performed the test as below:			
36	5180	149	5745
40	5200	157	5785
48	5240	165	5825

For 802.11n ht40/ac vht40/ax hew40:

5150-5250MHz Band		5725-5850MHz Band	
Channel	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
38	5190	151	5755
46	5230	159	5795
Per section 15.31(m)/RSS-Gen, the below frequencies were performed the test as below:			
38	5190	151	5755
46	5230	159	5795

For 802.11ac vht80/ax hew80:

5150-5250MHz Band		5725-5850MHz Band	
Channel	**Frequency (MHz)**	**Channel**	**Frequency (MHz)**
42	5210	155	5775
Per section 15.31(m)/RSS-Gen, the below frequencies were performed the test as below:			
42	5210	155	5775

1.1.3 Antenna Information Detail▲:

For Chip Antenna:

Antenna Chain	Manufacturer	Antenna Type	input impedance (Ohm)	Antenna Gain /Frequency Range	§15.203& RSS-Gen Requirement
0	Pulse Worldwide Headquarters	Chip	50	2.09 dBi/2.4~2.5GHz 4.32dBi/5.15~5.85 GHz	**Compliance**
1	Pulse Worldwide Headquarters	Chip	50	2.09 dBi/2.4~2.5GHz 4.32dBi/5.15~5.85 GHz	**Compliance**
The Method of §15.203 Compliance: ☒Antenna must be permanently attached to the unit. ☐Antenna must use a unique type of connector to attach to the EUT. ☐Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.					

For Whip Antenna:

Antenna Chain	Manufacturer	Antenna Type	input impedance (Ohm)	Antenna Gain /Frequency Range	§15.203& RSS-Gen Requirement
0	RF Solutions Ltd	Whip	50	4.0 dBi/2.4~2.5GHz 4.5dBi/5.15~5.25 GHz 5.0dBi/5.725~5.85 GHz	**Compliance**
1	RF Solutions Ltd	Whip	50	4.0 dBi/2.4~2.5GHz 4.5dBi/5.15~5.25 GHz 5.0dBi/5.725~5.85 GHz	**Compliance**
The Method of §15.203 Compliance: ☐Antenna must be permanently attached to the unit. ☒Antenna must use a unique type of connector to attach to the EUT. ☐Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.					

1.1.4 Accessory Information:

No Accessory

1.2 Description of Test Configuration

1.2.1 EUT Operation Condition:

EUT Operation Mode:	The system was configured for testing in Engineering Mode, which was provided by the manufacturer.
Equipment Modifications:	No
EUT Exercise Software:	QRCT

The software " QRCT "was provided by manufacturer. The maximum power was configured as below, that was provided by the manufacturer▲:

5150-5250 MHz Band:

Test Modes	Test Channels	Test Frequency (MHz)	Data rate	Power Level Setting	
				Chain 0	Chain 1
802.11a	Lowest	5180	6Mbps	13	16
	Middle	5200	6Mbps	13	16
	Highest	5240	6Mbps	13	16
802.11n ht20	Lowest	5180	MCS8	12	15
	Middle	5200	MCS8	13	16
	Highest	5240	MCS8	13	16
802.11n ht40	Lowest	5190	MCS8	9	12
	Highest	5230	MCS8	10	13
802.11ac vht20	Lowest	5180	MCS8	13	15
	Middle	5200	MCS8	13	16
	Highest	5240	MCS8	13	16
802.11ac vht40	Lowest	5190	MCS8	13	16
	Highest	5230	MCS8	13	16
802.11ac vht80	Middle	5210	MCS8	9	12

For 802.11ax hew20/ ax hew40/ ax hew80:

Test Modes	setting	Test Channels	Test Frequency (MHz)	Data rate	Power Level Setting	
					Chain 0	Chain 1
802.11ax hew20	26Tone	Lowest	5180	MCS0	7	6.5
		Middle	5200	MCS0	8	7.5
		Highest	5240	MCS0	10	9.5
	52Tone	Lowest	5180	MCS0	15	14.5
		Middle	5200	MCS0	6	5.5
		Highest	5240	MCS0	7	6.5
	106Tone	Lowest	5180	MCS0	10	9.5
		Highest	5200	MCS0	14	13.5
		Middle	5240	MCS0	7	6.5
	242Tone	Lowest	5180	MCS0	8	7.5
		Middle	5200	MCS0	10	9.5
		Highest	5240	MCS0	14	13.5
802.11ax hew40	26Tone	Lowest	5190	MCS0	5	4.5
		Highest	5230	MCS0	6	5.5
	52Tone	Lowest	5190	MCS0	8	7.5
		Highest	5230	MCS0	11	10.5
	106Tone	Lowest	5190	MCS0	15	14.5
		Highest	5230	MCS0	4	3.5
	242Tone	Lowest	5190	MCS0	6	5.5
		Highest	5230	MCS0	8	7.5
	484Tone	Lowest	5190	MCS0	11	10.5
		Highest	5230	MCS0	15	14.5
802.11ax hew80	26Tone	Middle	5210	MCS0	0	0
	52Tone	Middle	5210	MCS0	3	2.5
	106Tone	Middle	5210	MCS0	5	4.5
	242Tone	Middle	5210	MCS0	7	6.5
	484Tone	Middle	5210	MCS0	10	9.5
	996Tone	Middle	5210	MCS0	15	14.5

5725-5850 MHz Band:					
Test Modes	**Test Channels**	**Test Frequency (MHz)**	**Data rate**	**Power Level Setting**	
				Chain 0	**Chain 1**
802.11a	Lowest	5745	6Mbps	12	16
	Middle	5785	6Mbps	12	16
	Highest	5825	6Mbps	11	16
802.11n ht20	Lowest	5745	MCS8	11	16
	Middle	5785	MCS8	11	16
	Highest	5825	MCS8	11	16
802.11n ht40	Lowest	5755	MCS8	12	16
	Highest	5795	MCS8	12	16
802.11ac vht20	Lowest	5745	MCS8	11	16
	Middle	5785	MCS8	11	16
	Highest	5825	MCS8	12	16
802.11ac vht40	Lowest	5755	MCS8	11	16
	Highest	5795	MCS8	11	16
802.11ac vht80	Middle	5775	MCS8	11	14

For 802.11ax hew20/ ax hew40/ ax hew80:

Test Modes	setting	Test Channels	Test Frequency (MHz)	Data rate	Power Level Setting	
					Chain 0	Chain 1
802.11ax hew20	26Tone	Lowest	5745	MCS0	7	6.5
		Middle	5785	MCS0	9	8.5
		Highest	5825	MCS0	11	10.5
	52Tone	Lowest	5745	MCS0	15	14.5
		Middle	5785	MCS0	7	6.5
		Highest	5825	MCS0	9	8.5
	106Tone	Lowest	5745	MCS0	11	10.5
		Highest	5785	MCS0	15	14.5
		Middle	5825	MCS0	6	5.5
	242Tone	Lowest	5745	MCS0	8	7.5
		Middle	5785	MCS0	10	9.5
		Highest	5825	MCS0	15	14
802.11ax hew40	26Tone	Lowest	5755	MCS0	5.5	6
		Highest	5795	MCS0	7	7.5
	52Tone	Lowest	5755	MCS0	10	9.5
		Highest	5795	MCS0	12	11.5
	106Tone	Lowest	5755	MCS0	16	15.5
		Highest	5795	MCS0	6	5.5
	242Tone	Lowest	5755	MCS0	8	7.5
		Highest	5795	MCS0	10	9.5
	484Tone	Lowest	5755	MCS0	12	11.5
		Highest	5795	MCS0	16	15.5
802.11ax hew80	26Tone	Middle	5775	MCS0	2	1.5
	52Tone	Middle	5775	MCS0	4	3.5
	106Tone	Middle	5775	MCS0	6	5.5
	242Tone	Middle	5775	MCS0	8	7.5
	484Tone	Middle	5775	MCS0	11	10.5
	996Tone	Middle	5775	MCS0	16	15.5

Note:
1. The above are the worst-case data rates, which are determined for each mode based upon investigations by measuring the average power and PSD across all data rates, bandwidths, and modulations.
2. The device supports SISO in all modes, and MIMO 2T2R in 802.11n/ac/ax modes, per pretest, 2T2R mode was the worst mode and reported for 802.11n/ac/ax modes.
3. For 802.11 ax testing, all different tone and RU index configurations was performed for output power, the maximum result is in Full RU Configuration, and prescan all the different tone and RU index with the other test item,the worst case at the Full RU, so the other test was only performed at Full RU configuration(802.11ax hew20:242/61, 802.11ax hew40: 484/65, 802.11ax hew80: 996/67).

1.2.2 Support Equipment List and Details

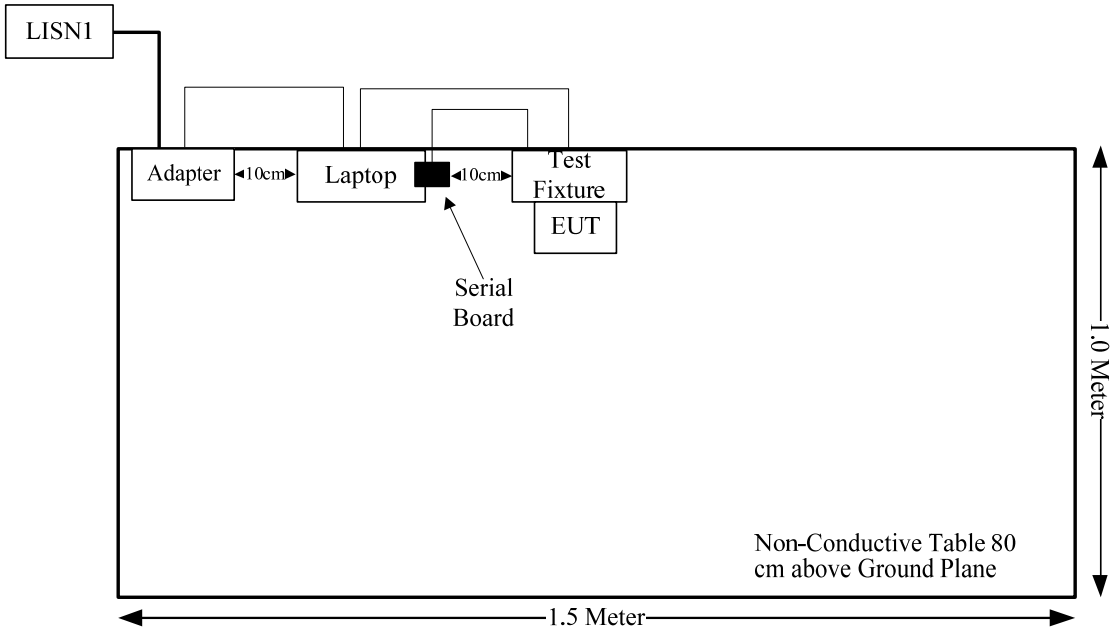
Manufacturer	Description	Model	Serial Number
Lenovo	Laptop	E480	PF-1QQYYP 19/06
8devices	Test Fixture	Unknown	CR22010029-RF-S4
Unknown	Serial Board	Unknown	CR22010029-RF-S3

1.2.3 Support Cable List and Details

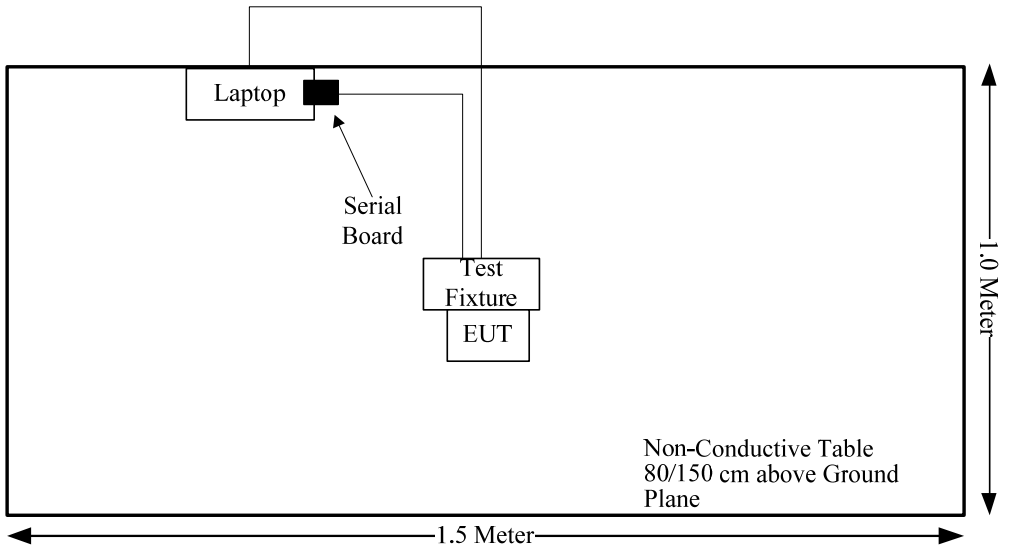
Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Signal Cable	No	No	0.4	Serial Board	Test Fixture
USB Cable	No	No	1.5	Laptop	Test Fixture

1.2.4 Block Diagram of Test Setup

AC line conducted emissions:



Spurious Emissions:



1.3 Measurement Uncertainty

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.61dB
Power Spectral Density, conducted	±0.61 dB
Unwanted Emissions, radiated	30M~200MHz: 4.15 dB,200M~1GHz: 5.61 dB,1G~6GHz: 5.14 dB, 6G~18GHz: 5.93 dB,18G~26.5G:5.47 dB,26.5G~40G:5.63 dB
Unwanted Emissions, conducted	±1.26 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	2.8 dB (150 kHz to 30 MHz)

2. SUMMARY OF TEST RESULTS

Standard(s) Section	Test Items	Result
§15.207(a) RSS-Gen Clause 8.8	AC line conducted emissions	Compliant
FCC§15.205& §15.209 &§15.407(b) RSS-247 Clause 6.2	Undesirable Emission& Restricted Bands	Compliant
RSS-247 Clause 6.2.1.2	26dB attenuated below the channel power	Compliant
FCC§15.407(a) (e) RSS-247 Clause 6.2 RSS-Gen Clause 6.7	Emission Bandwidth	Compliant
FCC§15.407(a) RSS-247 Clause 6.2	Conducted Transmitter Output Power	Compliant
FCC§15.407 (a) RSS-247 Clause 6.2	Power Spectral Density	Compliant
§15.203 RSS-GEN Clause 6.8	Antenna Requirement	Compliant
RSS-247 Clause 6.4	Additional requirements	Compliant
FCC§15.407 (f) & §1.1310 & §2.1091	Maximum Permissible Exposure (MPE)	Compliant
RSS-102 Clause 2.5.2	Exemption Limits For Routine Evaluation-RF Exposure Evaluation	Compliant

3. REQUIREMENTS AND TEST PROCEDURES

3.1 AC Line Conducted Emissions

3.1.1 Applicable Standard

FCC§15.207(a).

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

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

*Decreases with the logarithm of the frequency.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

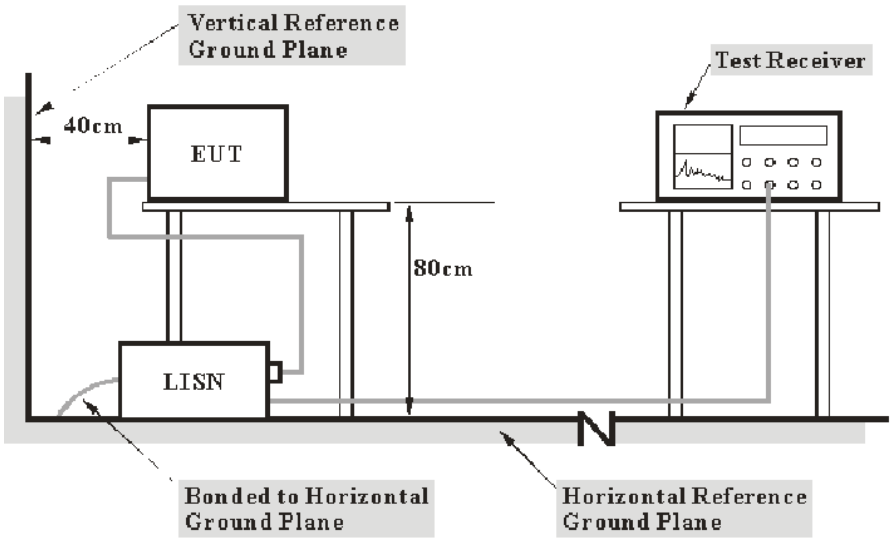
(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 μV within the frequency band 535-1705 kHz, as measured using a 50 μH/50 ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtainig their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

3.1.2 EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

The adapter or EUT was connected to the main LISN with a 120 V/60 Hz AC power source.

3.1.3 EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

3.1.4 Test Procedure

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase ("hot") line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

3.1.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor
Factor = attenuation caused by cable loss + voltage division factor of AMN

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

3.2 Radiation Spurious Emissions

3.2.1 Applicable Standard

FCC §15.407 (b);

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of – 27 dBm/MHz.
(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of – 27 dBm/MHz.
(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of – 27 dBm/MHz.
(4) For transmitters operating solely in the 5.725-5.850 GHz band:
(i) All emissions shall be limited to a level of – 27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
(ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in § 15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in § 15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.
(8) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
(9) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in § 15.207.
(10) The provisions of § 15.205 apply to intentional radiators operating under this section.
(11) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.
(c) The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

RSS-247 Clause 6.2

Frequency band 5150-5250 MHz

6.2.1.2 Unwanted emission limits

For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth (i.e. 99% bandwidth), above 5250 MHz. The 26 dB bandwidth may fall into the 5250-5350 MHz band; however, if the occupied bandwidth also falls within the 5250-5350 MHz band, the transmission is considered as intentional and the devices shall comply with all requirements in the band 5250-5350 MHz including implementing dynamic frequency selection (DFS) and TPC, on the portion of the emission that resides in the 5250-5350 MHz band.

Frequency band 5725-5850 MHz

6.2.4.2 Unwanted emission limits

Devices operating in the band 5725-5850 MHz with antenna gain greater than 10 dBi can have unwanted emissions that comply with either the limits in this section or in section 5.5 until six (6) months after the publication date of this standard for certification. Certified devices that do not comply with emission limits in this section shall not be manufactured, imported, distributed, leased, offered for sale or sold after April 1, 2018.

Devices operating in the band 5725-5850 MHz with antenna gain of 10 dBi or less can have unwanted emissions that comply with either the limits in this section or in section 5.5 until April 1, 2018 for certification. Certified devices that do not comply with emission limits in this section shall not be manufactured, imported, distributed, leased, offered for sale or sold after April 1, 2020.

Devices operating in the band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following:

a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;

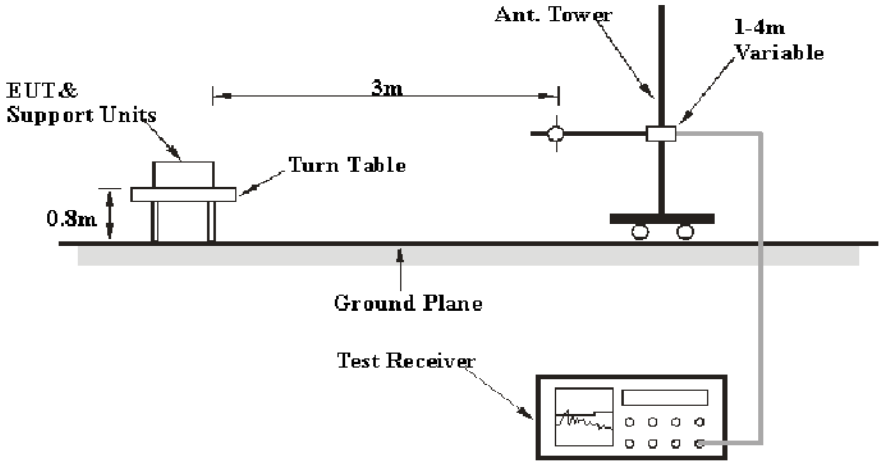
b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;

c) 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and

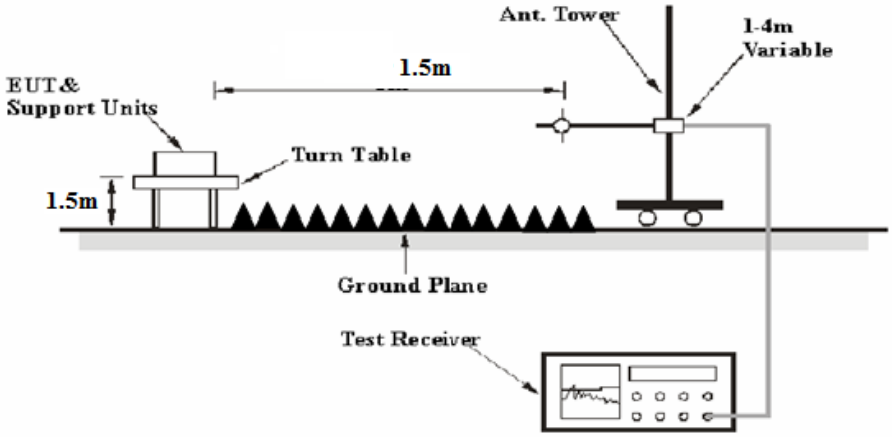
d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

3.2.2 EUT Setup

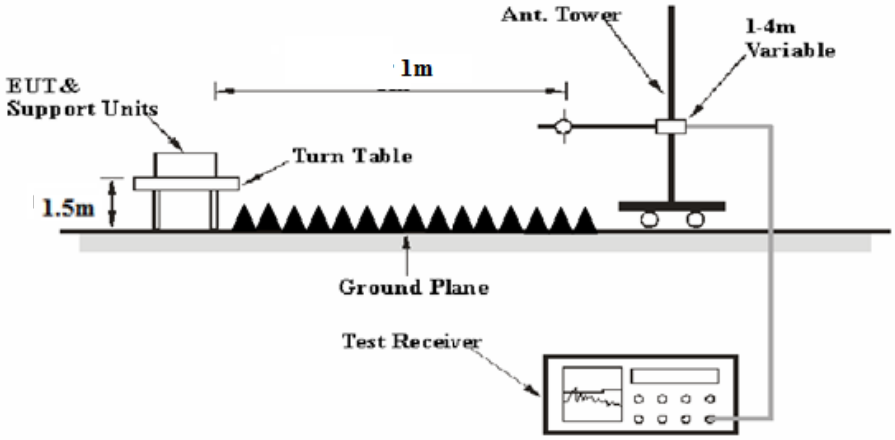
Below 1GHz:



1-26.5 GHz:



26.5-40 GHz:



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was FCC 15.209, FCC 15.407 RSS-247, RSS-Gen limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

3.2.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 40 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

30-1000MHz:

Measurement	RBW	Video B/W	IF B/W
QP	120 kHz	300 kHz	120kHz

1GHz- 40GHz:

Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
Ave.	>98%	1MHz	10 Hz
	<98%	1MHz	1/T

Note: T is minimum transmission duration

If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform an QP/Average measurement.

3.2.4 Test Procedure

During the radiated emission test, the adapter was connected to the first AC floor outlet.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1GHz, peak and Average detection modes for frequencies above 1GHz.

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, emission shall be computed as: E [dBμV/m] = EIRP[dBm] + 95.2, for d = 3 meters.

According to C63.10, the above 1G test result shall be extrapolated to the specified distance using an extrapolation Factor of 20dB/decade from 3m to 1.5m or 1m
Distance extrapolation Factor =20 log (specific distance [3m]/test distance [1.5m]) dB= 6.02 dB
or
Distance extrapolation Factor =20 log (specific distance [3m]/test distance [1m]) dB= 9.54 dB

All emissions under the average limit and under the noise floor have not recorded in the report.

3.2.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Factor = Antenna Factor + Cable Loss- Amplifier Gain

For 30MHz-1GHz:
Result = Reading + Factor

For 1GHz-40GHz
Result = Reading + Factor-Distance extrapolation Factor

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

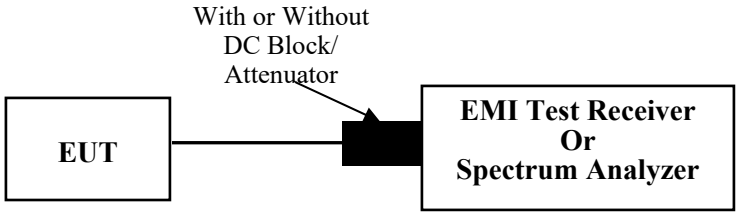
3.3 26dB attenuated below the channel power:

3.3.1 Applicable Standard

RSS-247 Clause 6.2.1.2

For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth (i.e. 99% bandwidth), above 5250 MHz. The 26 dB bandwidth may fall into the 5250-5350 MHz band; however, if the occupied bandwidth also falls within the 5250-5350 MHz band, the transmission is considered as intentional and the devices shall comply with all requirements in the band 5250-5350 MHz including implementing dynamic frequency selection (DFS) and TPC, on the portion of the emission that resides in the 5250-5350 MHz band.

3.3.2 EUT Setup



3.3.3Test Procedure

a) Set RBW = 1%~5% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = peak.
d) Trace mode = max hold
e) Measure the emission attenuated below the channel power

3.4 Emission Bandwidth:

3.4.1 Applicable Standard

FCC §15.407 (a),(h)

(h)(2) Radar Detection Function of Dynamic Frequency Selection (DFS). U-NII devices operating with any part of its 26 dB emission bandwidth in the 5.25-5.35 GHz and 5.47-5.725 GHz bands shall employ a DFS radar detection mechanism to detect the presence of radar systems and to avoid co-channel operation with radar systems.

FCC §15.407 (e)

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.

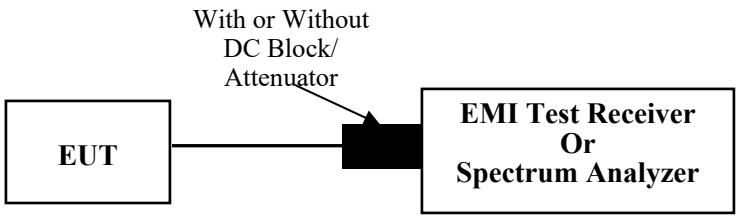
RSS-247 Clause 6.2.1.2

For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth (i.e. 99% bandwidth), above 5250 MHz. The 26 dB bandwidth may fall into the 5250-5350 MHz band; however, if the occupied bandwidth also falls within the 5250-5350 MHz band, the transmission is considered as intentional and the devices shall comply with all requirements in the band 5250-5350 MHz including implementing dynamic frequency selection (DFS) and TPC, on the portion of the emission that resides in the 5250-5350 MHz band.

RSS-247 Clause 6.2.4.1

For equipment operating in the band 5725-5850 MHz, the minimum 6 dB bandwidth shall be at least 500 kHz.

3.4.2 EUT Setup



3.4.3Test Procedure

26dB Emission Bandwidth:

According to ANSI C63.10-2013 Section 12.4.1

a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = peak.
d) Trace mode = max hold
e) 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%.

99% Occupied Bandwidth:

According to ANSI C63.10-2013 Section 12.4.2&6.9.3

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.
The following procedure shall be used for measuring 99% power bandwidth:
a) 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.
b) 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.
c) 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.
d) Step a) through step c) might require iteration to adjust within the specified range.
e) 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.
f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
g) 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:

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01

a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 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.
Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described in this section. For devices that use channel aggregation refer to III.A and III.C for determining emission bandwidth.

3.5 Maximum conducted output power:

3.5.1 Applicable Standard

FCC §15.407(a) (1)(iv)
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. In addition, 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, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

FCC §15.407(a) (3)(i)

For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, 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, both the maximum conducted output power and 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.

RSS-247 Clause 6.2.1.1

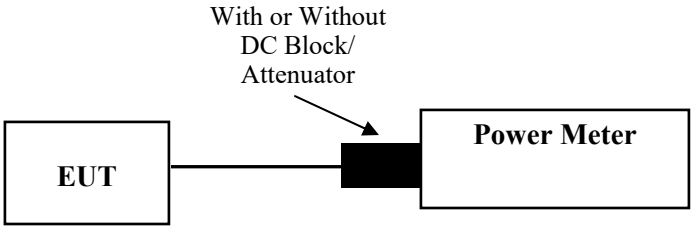
For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or 1.76 + 10 log10B, dBm, whichever is less stringent. Devices shall implement transmitter power control (TPC) in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.

For other devices, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

RSS-247 Clause 6.2.4.1

The maximum conducted output power shall not exceed 1 W. The output 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, both the maximum conducted output power and the output 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 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-multipoint3 systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

3.5.2 EUT Setup



3.5.3Test Procedure

According to ANSI C63.10-2013 Section 11.9.1.3

Method PM-G is measurement using a gated RF average power meter.
Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

3.6 Maximum power spectral density:

3.6.1 Applicable Standard

FCC §15.407(a) (1)(iv)
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. In addition, 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, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

FCC §15.407(a) (3)(i)

For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, 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, both the maximum conducted output power and 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.

RSS-247 Clause 6.2.1.1

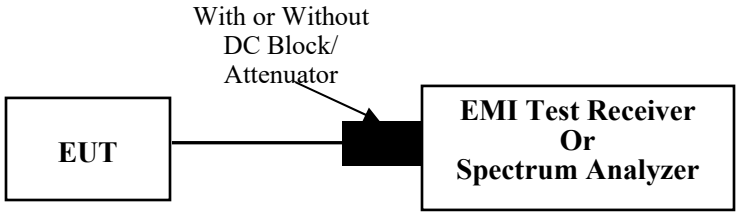
For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed 30 mW or 1.76 + 10 log10B, dBm, whichever is less stringent. Devices shall implement transmitter power control (TPC) in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.

For other devices, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

RSS-247 Clause 6.2.4.1

The maximum conducted output power shall not exceed 1 W. The output 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, both the maximum conducted output power and the output 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 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-multipoint3 systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

3.6.2 EUT Setup



3.6.3Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01

Method SA-3 (power averaging (rms) detection with max hold):
(i) Set span to encompass the entire EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.

(ii) Set sweep trigger to “free run.”

(iii) Set RBW = 1 MHz.

(iv) Set VBW ≥ 3 MHz

(v) Number of points in sweep ≥ 2 × span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)

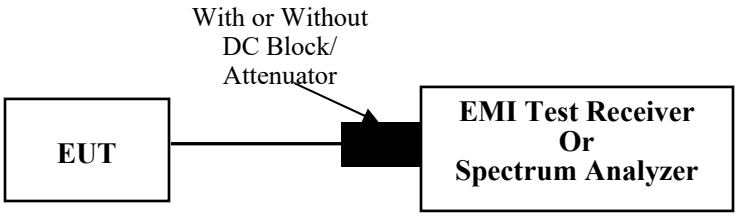
(vi) Sweep time ≤ (number of points in sweep) × *T*, where *T* is defined in II.B.1.a).
Note: If this results in a sweep time less than the auto sweep time of the analyzer, Method SA-3 Alternative shall not be used. (The purpose of this step is to ensure that averaging time in each bin is less than or equal to the minimum time of a transmission.)
(vii) Detector = power averaging (rms).

(viii) Trace mode = max hold.
(ix) Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

For devices operating in the band 5.725−5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used.

3.7 Duty Cycle:

3.7.1 EUT Setup



3.7.2Test Procedure

According to ANSI C63.10-2013 Section 12.2

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:
1) Set the center frequency of the instrument to the center frequency of the transmission.
2) Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value.
3) Set VBW ≥ RBW. Set detector = peak or average.
4) The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if T ≤ 16.7 μs.)

3.8 Antenna Requirement

3.8.1 Applicable Standard

FCC §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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

RSS-GEN Clause 6.8

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report (and in the notice to be included in the user manual, provided below).
When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer. The test report shall state the RF power, output power setting and spurious emission measurements with each antenna type that is used with the transmitter being tested.
For licence-exempt equipment with detachable antennas, the user manual shall also contain the following notice in a conspicuous location:
This radio transmitter [enter the device's ISED certification number] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types which can be used with the transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna type.

3.8.2 Judgment

Please refer to the Antenna Information detail in Section 1.

3.9 Additional requirement

3.9.1 Applicable Standard

According to RSS-247 Clause 6.4 Additional requirement

The following requirements shall apply:

a) The device shall automatically discontinue transmission in cases of absence of information to transmit, or operational failure. A description on how this is done shall accompany the application for equipment certification. Note that this is not intended to prohibit transmission of control or signalling information or the use of repetitive codes where required by the technology.

b) All LE-LAN devices must contain security features to protect against modification of software by unauthorized parties.

Manufacturers must implement security features in any digitally modulated devices capable of operating in any of the frequency ranges within the 5 GHz band, so that third parties are not able to reprogram the device to operate outside the parameters for which the device was certified. The software must prevent the user from operating the transmitter with operating frequencies, output power, modulation types or other radio frequency parameters outside those that were approved for the device. Manufacturers may use various means, including the use of a private network that allows only authenticated users to download software, electronic signatures in software or coding in hardware that is decoded by software to verify that new software can be legally loaded into a device to meet these requirements and must describe the methods in their application for equipment certification.

Manufacturers must take steps to ensure that DFS functionality cannot be disabled by the operator of the LE-LAN device.

c) The user manual for LE-LAN devices shall contain instructions related to the restrictions mentioned in the above sections, namely that:

i. the device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;[4]

ii. for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit;

iii. for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits as appropriate; and

iv. where applicable, antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 shall be clearly indicated.

3.9.2 Judgment

RSS-247 Clause 6.4 a):

The device shall automatically discontinue transmission in cases of absence of information to transmit, or operational failure. Please refer to the declaration

RSS-247 Clause 6.4 b):

The devices must contain security features to protect against modification of software by unauthorized parties. Please refer to the declaration

RSS-247 Clause 6.4 c):

i) The device is for indoor use only in the range of 5150-5250 MHz.

ii) the device is not operation in 5250-5350MHz, and 5470-5725 MHz.

iii) the maximum antenna gain is 5dBi, the EIRP compliant with the requirement in 5725-5850MHz. see the Conducted Output power test result.

iV) not Applicable.

4. Test DATA AND RESULTS

4.1 AC Line Conducted Emissions

Serial Number:	CR22010029-RF-S1	Test Date:	2022-04-18
Test Site:	CE	Test Mode:	Transmitting (802.11a Chain 0 5825MHz was the worst)
Tester:	Nick Tang	Test Result:	Pass

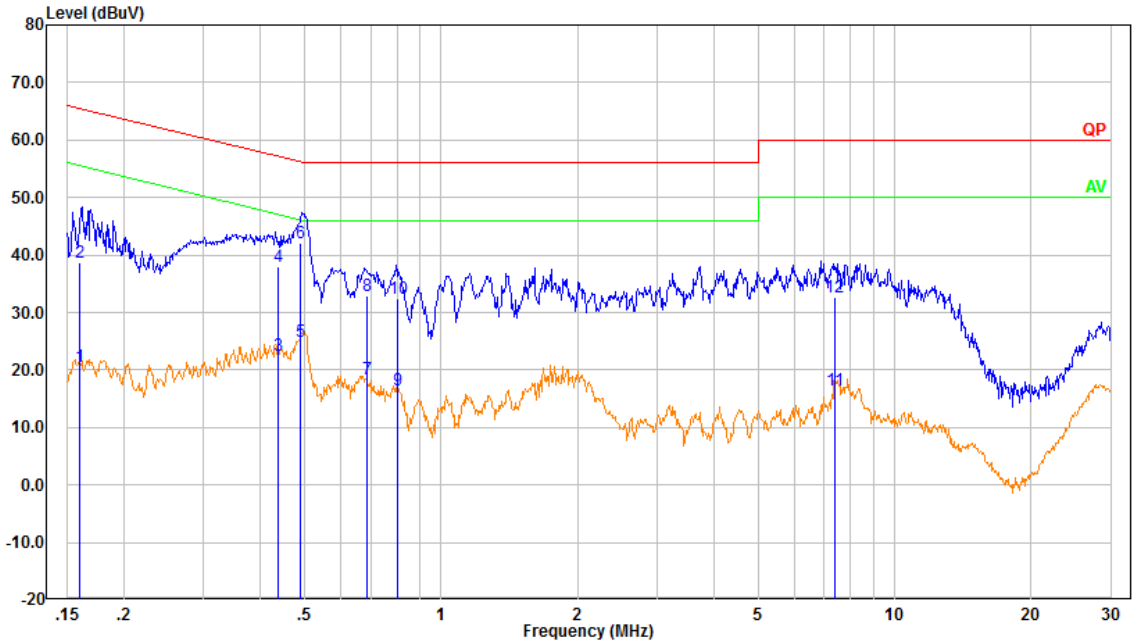
Environmental Conditions:					
Temperature: (℃)	19.9	Relative Humidity: (%)	70	ATM Pressure: (kPa)	101.0

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV216	101134	2022-04-01	2023-03-31
R&S	EMI Test Receiver	ESR3	102726	2021-07-22	2022-07-21
MICRO-COAX	Coaxial Cable	UTIFLEX	C-0200-01	2021-08-08	2022-08-07
Audix	Test Software	E3	190306 (V9)	N/A	N/A

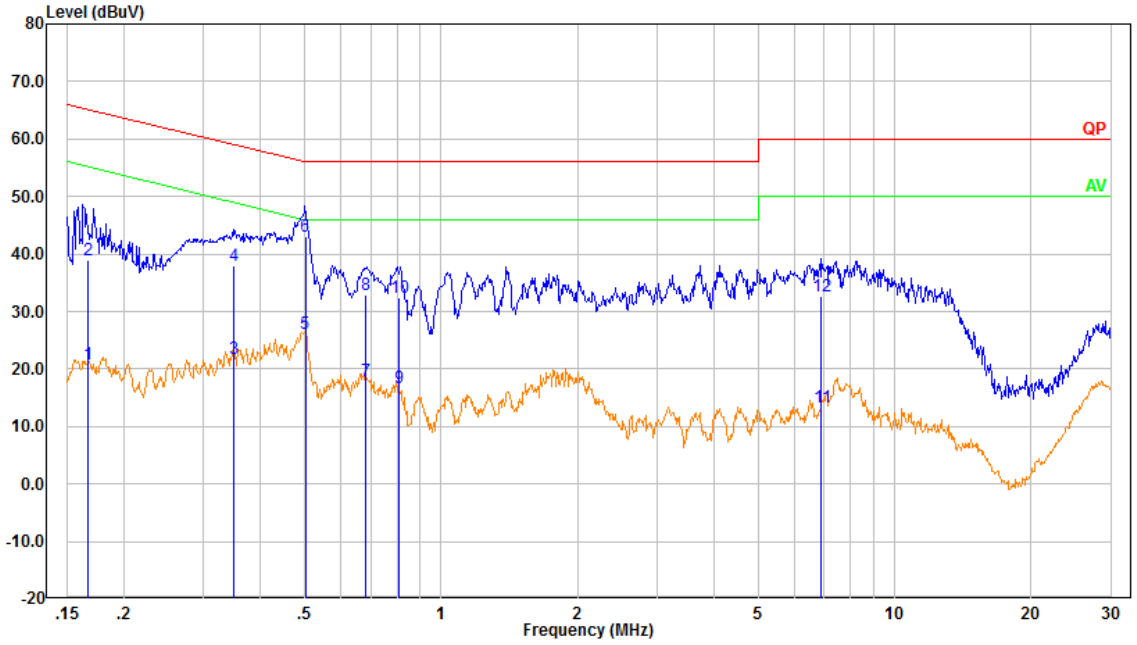
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Line:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.160	11.00	9.61	20.61	55.48	34.87	Average
2	0.160	29.03	9.61	38.64	65.48	26.84	QP
3	0.437	13.02	9.61	22.63	47.13	24.50	Average
4	0.437	28.47	9.61	38.08	57.13	19.05	QP
5	0.489	15.34	9.61	24.95	46.18	21.23	Average
6	0.489	32.53	9.61	42.14	56.18	14.04	QP
7	0.687	8.73	9.62	18.35	46.00	27.65	Average
8	0.687	23.18	9.62	32.80	56.00	23.20	QP
9	0.805	6.81	9.62	16.43	46.00	29.57	Average
10	0.805	22.91	9.62	32.53	56.00	23.47	QP
11	7.362	6.71	9.66	16.38	50.00	33.62	Average
12	7.362	22.99	9.66	32.66	60.00	27.34	QP

Neutral:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.166	11.13	9.61	20.74	55.15	34.41	Average
2	0.166	29.42	9.61	39.03	65.15	26.12	QP
3	0.350	12.28	9.61	21.89	48.97	27.08	Average
4	0.350	28.32	9.61	37.93	58.97	21.04	QP
5	0.502	16.61	9.61	26.22	46.00	19.78	Average
6	0.502	33.48	9.61	43.09	56.00	12.91	QP
7	0.684	8.24	9.62	17.86	46.00	28.14	Average
8	0.684	23.29	9.62	32.91	56.00	23.09	QP
9	0.808	7.05	9.62	16.67	46.00	29.33	Average
10	0.808	22.85	9.62	32.47	56.00	23.53	QP
11	6.903	3.66	9.66	13.32	50.00	36.68	Average
12	6.903	22.88	9.66	32.54	60.00	27.46	QP

4.2 Radiation Spurious Emissions

Serial Number:	CR22010029-RF-S1 CR22010029-RF-S2	Test Date:	2022-02-23~2022-5-10
Test Site:	966-1,966-2	Test Mode:	Transmitting
Tester:	Great Qiao	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	17.5~23.3	Relative Humidity: (%)	53~72	ATM Pressure: (kPa)	101.1~102.1

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB6	A082520-5	2020-10-19	2023-10-18
R&S	EMI Test Receiver	ESR3	102724	2021-07-22	2022-07-21
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2021-07-18	2022-07-17
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2021-07-18	2022-07-17
Sonoma	Amplifier	310N	186165	2021-07-18	2022-07-17
Audix	Test Software	E3	201021 (V9)	N/A	N/A
ETS-Lindgren	Horn Antenna	3115	9912-5985	2020-10-13	2023-10-12
R&S	Spectrum Analyzer	FSV40	101591	2021-07-22	2022-07-21
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2021-08-08	2022-08-07
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2021-08-08	2022-08-07
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2021-11-10	2022-11-09
Audix	Test Software	E3	201021 (V9)	N/A	N/A
PASTERNACK	Horn Antenna	PE9852/2F-20	112002	2021-02-05	2024-02-04
AH	Preamplifier	PAM-1840VH	190	2021-11-19	2022-11-18
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2021-08-08	2022-08-07
E-Microwave	Band Rejection Filter	5150-5850MHz	OE01902423	2021-08-08	2022-08-07
Mini Circuits	High Pass Filter	VHF-6010+	31119	2021-08-08	2022-08-07
PASTERNACK	Horn Antenna	PE9850/2F-20	072001	2021-02-05	2024-02-04

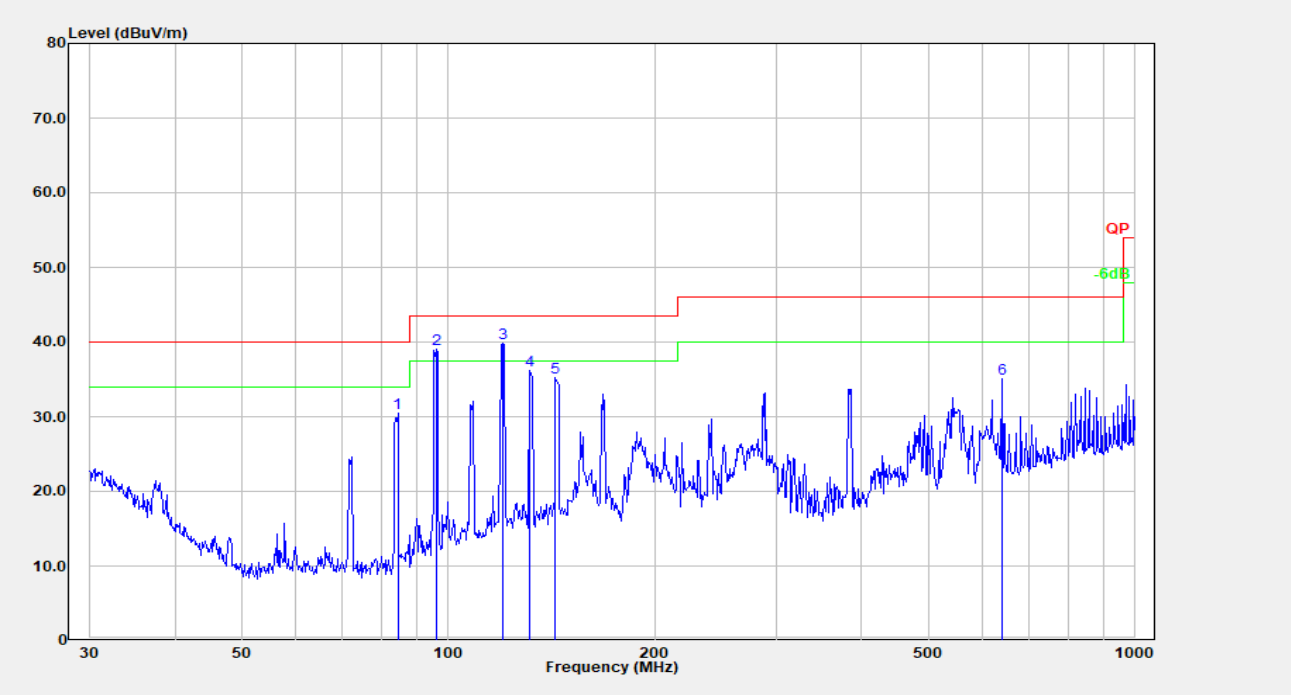
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

Please refer to the below table and plots.

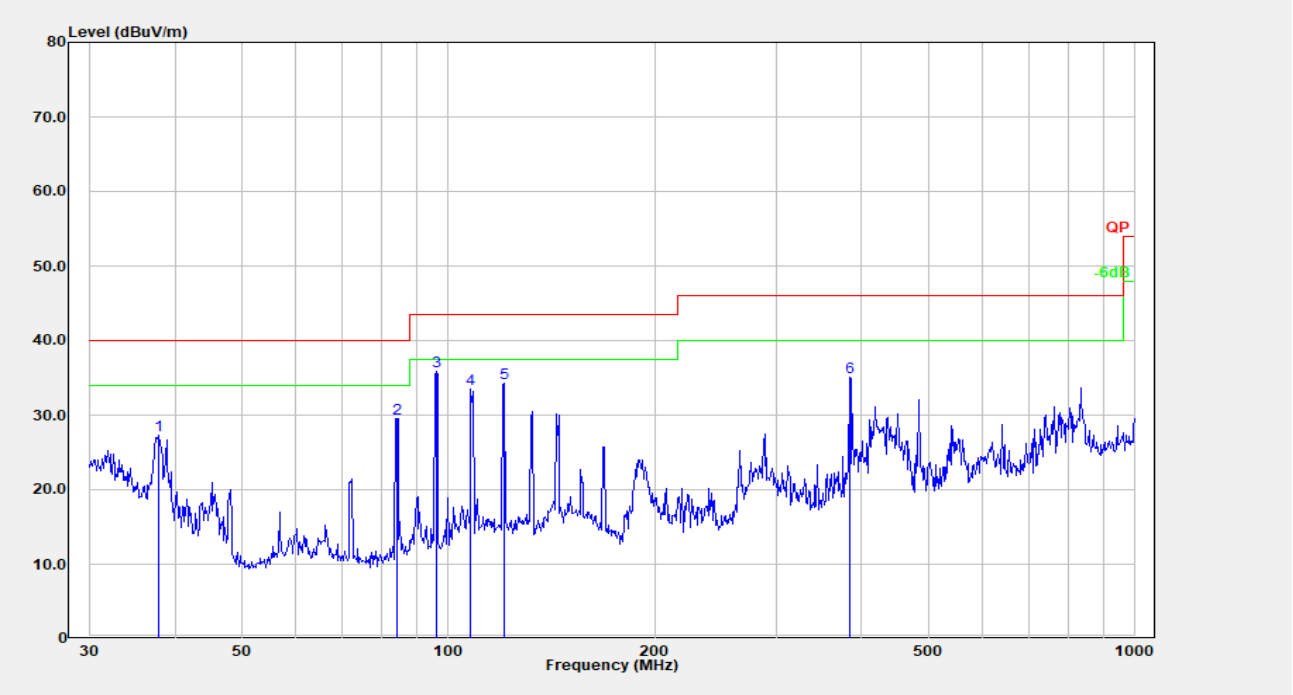
Note: The device can be mounted in multiple orientations, test was performed with X,Y, Z Axis according to C63.10 figure 8, the worst orientation was photographed and it`s data was recorded.

1) 30MHz-1GHz(802.11a 5785MHz Chain 0 was the worst)
Chip Antenna:
Horizontal:



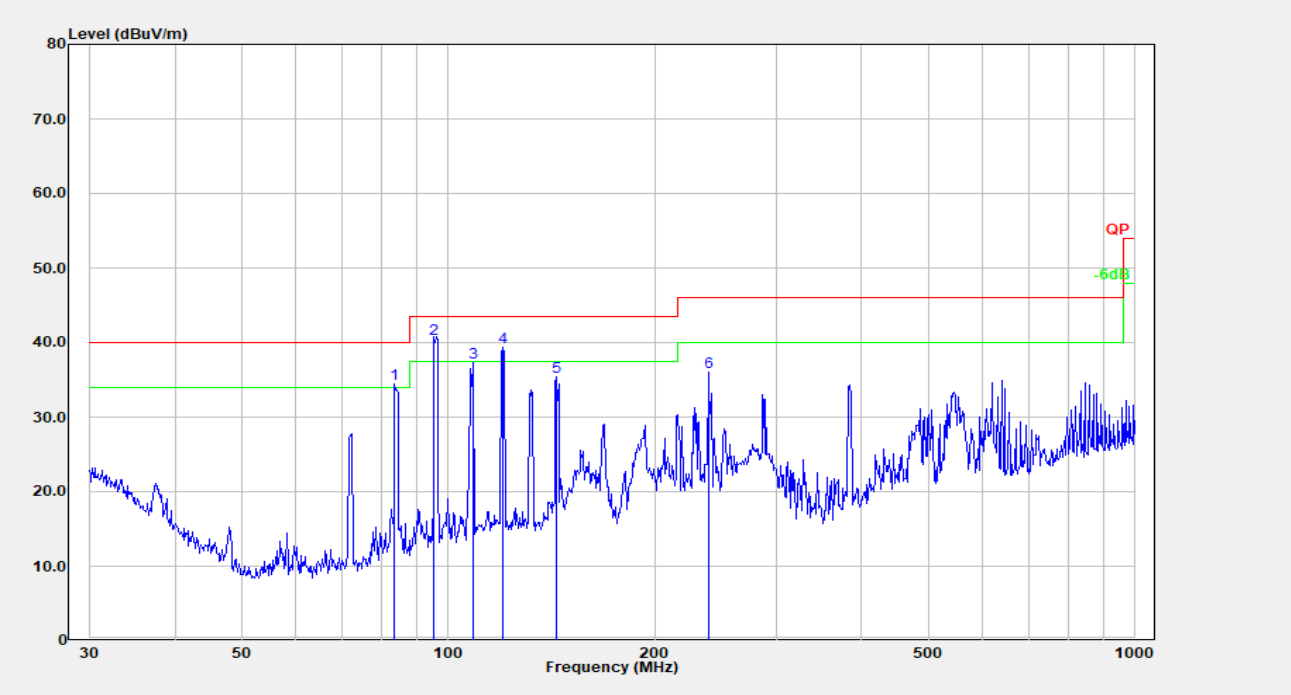
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	84.405	47.98	-17.47	30.51	40.00	9.49	Peak
2	96.099	54.63	-15.57	39.06	43.50	4.44	QP
3	119.856	51.56	-11.75	39.81	43.50	3.69	QP
4	131.297	47.78	-11.61	36.18	43.50	7.32	Peak
5	143.326	47.44	-12.18	35.26	43.50	8.24	Peak
6	640.611	39.72	-4.59	35.13	46.00	10.87	Peak

Vertical:



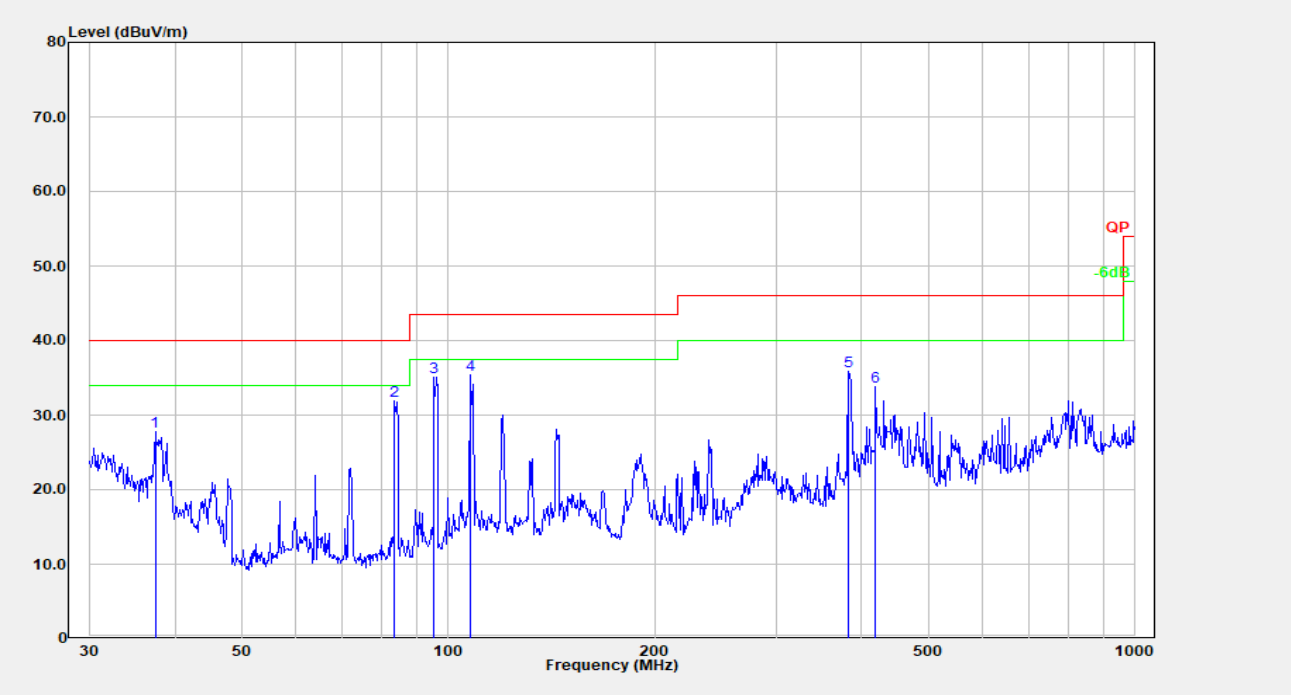
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	37.812	37.11	-9.77	27.33	40.00	12.67	Peak
2	84.110	47.06	-17.48	29.57	40.00	10.43	Peak
3	96.099	51.40	-15.57	35.84	43.50	7.66	Peak
4	107.888	46.52	-12.99	33.53	43.50	9.97	Peak
5	120.699	46.10	-11.73	34.36	43.50	9.14	Peak
6	383.932	44.39	-9.26	35.13	46.00	10.87	Peak

Whip Antenna:
Horizontal:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	83.522	51.96	-17.49	34.47	40.00	5.53	QP
2	95.427	56.14	-15.74	40.40	43.50	3.10	QP
3	108.647	50.06	-12.82	37.24	43.50	6.26	Peak
4	119.856	51.07	-11.75	39.31	43.50	4.19	QP
5	143.830	47.64	-12.20	35.44	43.50	8.06	Peak
6	239.147	49.26	-13.18	36.07	46.00	9.93	Peak

Vertical:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	37.416	37.21	-9.49	27.72	40.00	12.28	Peak
2	83.522	49.47	-17.49	31.98	40.00	8.02	Peak
3	95.427	50.88	-15.74	35.13	43.50	8.37	Peak
4	107.510	48.49	-13.06	35.43	43.50	8.07	Peak
5	382.588	45.13	-9.28	35.84	46.00	10.16	Peak
6	419.108	42.06	-8.18	33.88	46.00	12.12	Peak

2) 1-40GHz:
Whip Antenna:
5150-5250MHz:
802.11a, Chain 0:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
5180.00	69.81	PK	H	38.68	102.47	N/A	N/A
5180.00	59.74	AV	H	38.68	92.40	N/A	N/A
5180.00	76.06	PK	V	38.68	108.72	N/A	N/A
5180.00	65.92	AV	V	38.68	98.58	N/A	N/A
5150.00	35.80	PK	V	38.64	68.42	74.00	5.58
5150.00	19.01	AV	V	38.64	51.63	54.00	2.37
10360.00	34.07	PK	V	19.18	47.23	68.20	20.97
15540.00	34.13	PK	V	22.44	50.55	74.00	23.45
15540.00	22.05	AV	V	22.44	38.47	54.00	15.53
2793.00	51.98	PK	V	5.08	51.04	74.00	22.96
2793.00	33.76	AV	V	5.08	32.82	54.00	21.18
Middle Channel: 5200 MHz							
5200.00	68.88	PK	H	38.70	101.56	N/A	N/A
5200.00	59.79	AV	H	38.70	92.47	N/A	N/A
5200.00	76.33	PK	V	38.70	109.01	N/A	N/A
5200.00	66.63	AV	V	38.70	99.31	N/A	N/A
10400.00	34.69	PK	V	19.16	47.83	68.20	20.37
15600.00	36.53	PK	V	22.41	52.92	74.00	21.08
15600.00	24.17	AV	V	22.41	40.56	54.00	13.44
2793.00	51.08	PK	V	5.08	50.14	74.00	23.86
2793.00	32.64	AV	V	5.08	31.70	54.00	22.30
High Channel: 5240 MHz							
5240.00	69.24	PK	H	38.85	102.07	N/A	N/A
5240.00	59.70	AV	H	38.85	92.53	N/A	N/A
5240.00	76.07	PK	V	38.85	108.90	N/A	N/A
5240.00	65.93	AV	V	38.85	98.76	N/A	N/A
5350.00	30.74	PK	V	39.03	63.75	74.00	10.25
5350.00	16.50	AV	V	39.03	49.51	54.00	4.49
10480.00	33.45	PK	V	18.86	46.29	68.20	21.91
15720.00	35.47	PK	V	22.28	51.73	74.00	22.27
15720.00	23.16	AV	V	22.28	39.42	54.00	14.58
2813.00	52.43	PK	V	5.17	51.58	74.00	22.42
2813.00	33.59	AV	V	5.17	32.74	54.00	21.26

Chain 1:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
5180.00	67.36	PK	H	38.68	100.02	N/A	N/A
5180.00	57.11	AV	H	38.68	89.77	N/A	N/A
5180.00	72.68	PK	V	38.68	105.34	N/A	N/A
5180.00	63.56	AV	V	38.68	96.22	N/A	N/A
5150.00	35.01	PK	V	38.64	67.63	74.00	6.37
5150.00	18.34	AV	V	38.64	50.96	54.00	3.04
10360.00	33.60	PK	V	19.18	46.76	68.20	21.44
15540.00	34.20	PK	V	22.44	50.62	74.00	23.38
15540.00	22.04	AV	V	22.44	38.46	54.00	15.54
2813.00	50.51	PK	V	5.17	49.66	74.00	24.34
2813.00	32.40	AV	V	5.17	31.55	54.00	22.45
Middle Channel: 5200 MHz							
5200.00	68.34	PK	H	38.70	101.02	N/A	N/A
5200.00	57.13	AV	H	38.70	89.81	N/A	N/A
5200.00	72.39	PK	V	38.70	105.07	N/A	N/A
5200.00	64.01	AV	V	38.70	96.69	N/A	N/A
10400.00	33.50	PK	V	19.16	46.64	68.20	21.56
15600.00	36.29	PK	V	22.41	52.68	74.00	21.32
15600.00	23.91	AV	V	22.41	40.30	54.00	13.70
2790.00	51.37	PK	V	5.07	50.42	74.00	23.58
2790.00	32.66	AV	V	5.07	31.71	54.00	22.29
High Channel: 5240 MHz							
5240.00	69.07	PK	H	38.85	101.90	N/A	N/A
5240.00	58.49	AV	H	38.85	91.32	N/A	N/A
5240.00	74.10	PK	V	38.85	106.93	N/A	N/A
5240.00	63.86	AV	V	38.85	96.69	N/A	N/A
5350.00	29.46	PK	V	39.03	62.47	74.00	11.53
5350.00	16.49	AV	V	39.03	49.50	54.00	4.50
10480.00	32.31	PK	V	18.86	45.15	68.20	23.05
15720.00	37.53	PK	V	22.28	53.79	74.00	20.21
15720.00	25.11	AV	V	22.28	41.37	54.00	12.63
2813.00	51.97	PK	V	5.17	51.12	74.00	22.88
2813.00	33.04	AV	V	5.17	32.19	54.00	21.81

802.11n ht20(MIMO mode was the worst)

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
5180.00	69.76	PK	H	38.68	102.42	N/A	N/A
5180.00	59.66	AV	H	38.68	92.32	N/A	N/A
5180.00	77.76	PK	V	38.68	110.42	N/A	N/A
5180.00	67.11	AV	V	38.68	99.77	N/A	N/A
5150.00	36.40	PK	V	38.64	69.02	74.00	4.98
5150.00	20.10	AV	V	38.64	52.72	54.00	1.28
10360.00	33.88	PK	V	19.18	47.04	68.20	21.16
15540.00	34.96	PK	V	22.44	51.38	74.00	22.62
15540.00	22.45	AV	V	22.44	38.87	54.00	15.13
2830.00	51.10	PK	V	5.25	50.33	74.00	23.67
2830.00	32.83	AV	V	5.25	32.06	54.00	21.94
Middle Channel: 5200 MHz							
5200.00	69.14	PK	H	38.70	101.82	N/A	N/A
5200.00	59.29	AV	H	38.70	91.97	N/A	N/A
5200.00	78.05	PK	V	38.70	110.73	N/A	N/A
5200.00	68.18	AV	V	38.70	100.86	N/A	N/A
10400.00	33.90	PK	V	19.16	47.04	68.20	21.16
15600.00	38.76	PK	V	22.41	55.15	74.00	18.85
15600.00	26.24	AV	V	22.41	42.63	54.00	11.37
2807.00	51.45	PK	V	5.14	50.57	74.00	23.43
2807.00	32.69	AV	V	5.14	31.81	54.00	22.19
High Channel: 5240 MHz							
5240.00	69.90	PK	H	38.85	102.73	N/A	N/A
5240.00	59.96	AV	H	38.85	92.79	N/A	N/A
5240.00	78.55	PK	V	38.85	111.38	N/A	N/A
5240.00	68.60	AV	V	38.85	101.43	N/A	N/A
5350.00	29.02	PK	V	39.03	62.03	74.00	11.97
5350.00	16.49	AV	V	39.03	49.50	54.00	4.50
10480.00	33.37	PK	V	18.86	46.21	68.20	21.99
15720.00	36.54	PK	V	22.28	52.80	74.00	21.20
15720.00	24.13	AV	V	22.28	40.39	54.00	13.61
2807.00	50.61	PK	V	5.14	49.73	74.00	24.27
2807.00	31.85	AV	V	5.14	30.97	54.00	23.03

802.11ac vht20 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
5180.00	70.54	PK	H	38.68	103.20	N/A	N/A
5180.00	60.08	AV	H	38.68	92.74	N/A	N/A
5180.00	81.18	PK	V	38.68	113.84	N/A	N/A
5180.00	70.58	AV	V	38.68	103.24	N/A	N/A
5150.00	34.64	PK	V	38.64	67.26	74.00	6.74
5150.00	19.54	AV	V	38.64	52.16	54.00	1.84
10360.00	34.26	PK	V	19.18	47.42	68.20	20.78
15540.00	37.66	PK	V	22.44	54.08	74.00	19.92
15540.00	25.30	AV	V	22.44	41.72	54.00	12.28
2810.00	51.44	PK	V	5.15	50.57	74.00	23.43
2810.00	32.87	AV	V	5.15	32.00	54.00	22.00
Middle Channel: 5200 MHz							
5200.00	68.74	PK	H	38.70	101.42	N/A	N/A
5200.00	59.16	AV	H	38.70	91.84	N/A	N/A
5200.00	80.30	PK	V	38.70	112.98	N/A	N/A
5200.00	69.34	AV	V	38.70	102.02	N/A	N/A
10400.00	35.04	PK	V	19.16	48.18	68.20	20.02
15600.00	37.29	PK	V	22.41	53.68	74.00	20.32
15600.00	25.01	AV	V	22.41	41.40	54.00	12.60
2803.00	50.74	PK	V	5.12	49.84	74.00	24.16
2803.00	32.20	AV	V	5.12	31.30	54.00	22.70
High Channel: 5240 MHz							
5240.00	69.82	PK	H	38.85	102.65	N/A	N/A
5240.00	59.08	AV	H	38.85	91.91	N/A	N/A
5240.00	79.42	PK	V	38.85	112.25	N/A	N/A
5240.00	68.32	AV	V	38.85	101.15	N/A	N/A
5350.00	29.72	PK	V	39.03	62.73	74.00	11.27
5350.00	16.58	AV	V	39.03	49.59	54.00	4.41
10480.00	33.91	PK	V	18.86	46.75	68.20	21.45
15720.00	36.63	PK	V	22.28	52.89	74.00	21.11
15720.00	24.21	AV	V	22.28	40.47	54.00	13.53
2786.00	51.95	PK	V	5.05	50.98	74.00	23.02
2786.00	33.26	AV	V	5.05	32.29	54.00	21.71

802.11ax hew20 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
5180.00	73.44	PK	H	38.68	106.10	N/A	N/A
5180.00	60.91	AV	H	38.68	93.57	N/A	N/A
5180.00	79.74	PK	V	38.68	112.40	N/A	N/A
5180.00	66.70	AV	V	38.68	99.36	N/A	N/A
5150.00	34.69	PK	V	38.64	67.31	74.00	6.69
5150.00	19.83	AV	V	38.64	52.45	54.00	1.55
10360.00	33.29	PK	V	19.18	46.45	68.20	21.75
15540.00	38.52	PK	V	22.44	54.94	74.00	19.06
15540.00	27.46	AV	V	22.44	43.88	54.00	10.12
2800.00	51.50	PK	V	5.10	50.58	74.00	23.42
2800.00	32.63	AV	V	5.10	31.71	54.00	22.29
Middle Channel: 5200 MHz							
5200.00	73.01	PK	H	38.70	105.69	N/A	N/A
5200.00	60.42	AV	H	38.70	93.10	N/A	N/A
5200.00	79.62	PK	V	38.70	112.30	N/A	N/A
5200.00	69.87	AV	V	38.70	102.55	N/A	N/A
10400.00	33.54	PK	V	19.16	46.68	68.20	21.52
15600.00	38.47	PK	V	22.41	54.86	74.00	19.14
15600.00	26.11	AV	V	22.41	42.50	54.00	11.50
2803.00	50.98	PK	V	5.12	50.08	74.00	23.92
2803.00	32.34	AV	V	5.12	31.44	54.00	22.56
High Channel: 5240 MHz							
5240.00	73.54	PK	H	38.85	106.37	N/A	N/A
5240.00	60.88	AV	H	38.85	93.71	N/A	N/A
5240.00	81.06	PK	V	38.85	113.89	N/A	N/A
5240.00	69.21	AV	V	38.85	102.04	N/A	N/A
5350.00	29.41	PK	V	39.03	62.42	74.00	11.58
5350.00	16.52	AV	V	39.03	49.53	54.00	4.47
10480.00	33.96	PK	V	18.86	46.80	68.20	21.40
15720.00	36.86	PK	V	22.28	53.12	74.00	20.88
15720.00	24.53	AV	V	22.28	40.79	54.00	13.21
2804.00	52.93	PK	V	5.12	52.03	74.00	21.97
2804.00	33.80	AV	V	5.12	32.90	54.00	21.10

802.11n ht40 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5190MHz							
5190.00	62.12	PK	H	38.69	94.79	N/A	N/A
5190.00	52.12	AV	H	38.69	84.79	N/A	N/A
5190.00	72.28	PK	V	38.69	104.95	N/A	N/A
5190.00	60.92	AV	V	38.69	93.59	N/A	N/A
5150.00	37.06	PK	V	38.64	69.68	74.00	4.32
5150.00	19.20	AV	V	38.64	51.82	54.00	2.18
10380.00	33.75	PK	V	19.17	46.90	68.20	21.30
15570.00	34.37	PK	V	22.43	50.78	74.00	23.22
15570.00	22.12	AV	V	22.43	38.53	54.00	15.47
2813.00	51.36	PK	V	5.17	50.51	74.00	23.49
2813.00	33.07	AV	V	5.17	32.22	54.00	21.78
High Channel: 5230 MHz							
5230.00	66.60	PK	H	38.81	99.39	N/A	N/A
5230.00	55.89	AV	H	38.81	88.68	N/A	N/A
5230.00	74.89	PK	V	38.81	107.68	N/A	N/A
5230.00	64.98	AV	V	38.81	97.77	N/A	N/A
5350.00	29.09	PK	V	39.03	62.10	74.00	11.90
5350.00	16.57	AV	V	39.03	49.58	54.00	4.42
10460.00	33.29	PK	V	18.94	46.21	68.20	21.99
15690.00	37.64	PK	V	22.29	53.91	74.00	20.09
15690.00	25.43	AV	V	22.29	41.70	54.00	12.30
2807.00	53.80	PK	V	5.14	52.92	74.00	21.08
2807.00	34.19	AV	V	5.14	33.31	54.00	20.69

802.11ac vht40 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5190MHz							
5190.00	69.24	PK	H	38.69	101.91	N/A	N/A
5190.00	58.80	AV	H	38.69	91.47	N/A	N/A
5190.00	77.78	PK	V	38.69	110.45	N/A	N/A
5190.00	67.21	AV	V	38.69	99.88	N/A	N/A
5150.00	35.51	PK	V	38.64	68.13	74.00	5.87
5150.00	19.45	AV	V	38.64	52.07	54.00	1.93
10380.00	35.04	PK	V	19.17	48.19	68.20	20.01
15570.00	36.14	PK	V	22.43	52.55	74.00	21.45
15570.00	23.73	AV	V	22.43	40.14	54.00	13.86
2813.00	52.16	PK	V	5.17	51.31	74.00	22.69
2813.00	33.42	AV	V	5.17	32.57	54.00	21.43
High Channel: 5230 MHz							
5230.00	69.54	PK	H	38.81	102.33	N/A	N/A
5230.00	57.33	AV	H	38.81	90.12	N/A	N/A
5230.00	77.51	PK	V	38.81	110.30	N/A	N/A
5230.00	67.37	AV	V	38.81	100.16	N/A	N/A
5350.00	29.59	PK	V	39.03	62.60	74.00	11.40
5350.00	16.21	AV	V	39.03	49.22	54.00	4.78
10460.00	33.40	PK	V	18.94	46.32	68.20	21.88
15690.00	37.36	PK	V	22.29	53.63	74.00	20.37
15690.00	24.82	AV	V	22.29	41.09	54.00	12.91
2807.00	51.64	PK	V	5.14	50.76	74.00	23.24
2807.00	33.42	AV	V	5.14	32.54	54.00	21.46

802.11ax hew40 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5190MHz							
5190.00	69.54	PK	H	38.69	102.21	N/A	N/A
5190.00	56.89	AV	H	38.69	89.56	N/A	N/A
5190.00	77.07	PK	V	38.69	109.74	N/A	N/A
5190.00	64.36	AV	V	38.69	97.03	N/A	N/A
5150.00	36.99	PK	V	38.64	69.61	74.00	4.39
5150.00	19.35	AV	V	38.64	51.97	54.00	2.03
10380.00	34.87	PK	V	19.17	48.02	68.20	20.18
15570.00	35.38	PK	V	22.43	51.79	74.00	22.21
15570.00	23.09	AV	V	22.43	39.50	54.00	14.50
2777.00	51.81	PK	V	5.02	50.81	74.00	23.19
2777.00	33.14	AV	V	5.02	32.14	54.00	21.86
High Channel: 5230 MHz							
5230.00	69.66	PK	H	38.81	102.45	N/A	N/A
5230.00	56.84	AV	H	38.81	89.63	N/A	N/A
5230.00	76.25	PK	V	38.81	109.04	N/A	N/A
5230.00	63.22	AV	V	38.81	96.01	N/A	N/A
5350.00	29.12	PK	V	39.03	62.13	74.00	11.87
5350.00	16.56	AV	V	39.03	49.57	54.00	4.43
10460.00	33.32	PK	V	18.94	46.24	68.20	21.96
15690.00	37.95	PK	V	22.29	54.22	74.00	19.78
15690.00	25.34	AV	V	22.29	41.61	54.00	12.39
2804.00	51.54	PK	V	5.12	50.64	74.00	23.36
2804.00	33.05	AV	V	5.12	32.15	54.00	21.85

802.11ac vht80(MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Middle Channel: 5210 MHz							
5210.00	62.34	PK	H	38.74	95.06	N/A	N/A
5210.00	51.16	AV	H	38.74	83.88	N/A	N/A
5210.00	68.78	PK	V	38.74	101.50	N/A	N/A
5210.00	56.79	AV	V	38.74	89.51	N/A	N/A
5150.00	35.68	PK	V	38.64	68.30	74.00	5.70
5150.00	19.86	AV	V	38.64	52.48	54.00	1.52
5350.00	29.80	PK	V	39.03	62.81	74.00	11.19
5350.00	16.54	AV	V	39.03	49.55	54.00	4.45
10420.00	33.48	PK	V	19.09	46.55	68.20	21.65
15630.00	37.81	PK	V	22.37	54.16	74.00	19.84
15630.00	25.46	AV	V	22.37	41.81	54.00	12.19
2803.00	50.60	PK	V	5.12	49.70	74.00	24.30
2803.00	31.82	AV	V	5.12	30.92	54.00	23.08

802.11ax hew80(MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Middle Channel: 5210 MHz							
5210.00	62.68	PK	H	38.74	95.40	N/A	N/A
5210.00	50.41	AV	H	38.74	83.13	N/A	N/A
5210.00	70.98	PK	V	38.74	103.70	N/A	N/A
5210.00	57.60	AV	V	38.74	90.32	N/A	N/A
5150.00	33.69	PK	V	38.64	66.31	74.00	7.69
5150.00	18.92	AV	V	38.64	51.54	54.00	2.46
5350.00	29.95	PK	V	39.03	62.96	74.00	11.04
5350.00	16.54	AV	V	39.03	49.55	54.00	4.45
10420.00	33.71	PK	V	19.09	46.78	68.20	21.42
15630.00	36.78	PK	V	22.37	53.13	74.00	20.87
15630.00	24.41	AV	V	22.37	40.76	54.00	13.24
2803.00	50.69	PK	V	5.12	49.79	74.00	24.21
2803.00	32.03	AV	V	5.12	31.13	54.00	22.87

5725-5850MHz:
802.11a, Chain 0:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5745MHz							
5745.00	63.78	PK	H	39.46	97.22	N/A	N/A
5745.00	54.55	AV	H	39.46	87.99	N/A	N/A
5745.00	75.06	PK	V	39.46	108.50	N/A	N/A
5745.00	64.87	AV	V	39.46	98.31	N/A	N/A
5725.00	53.02	PK	V	39.48	86.48	122.20	35.72
5720.00	40.88	PK	V	39.49	74.35	110.80	36.45
5700.00	32.85	PK	V	39.51	66.34	105.20	38.86
5650.00	30.31	PK	V	39.49	63.78	68.20	4.42
11490.00	34.10	PK	V	20.67	48.75	74.00	25.25
11490.00	21.67	AV	V	20.67	36.32	54.00	17.68
17235.00	43.37	PK	V	26.76	64.11	68.20	4.09
2807.00	51.06	PK	V	5.14	50.18	74.00	23.82
2807.00	32.83	AV	V	5.14	31.95	54.00	22.05
Middle Channel: 5785 MHz							
5785.00	65.22	PK	H	39.44	98.64	N/A	N/A
5785.00	53.98	AV	H	39.44	87.40	N/A	N/A
5785.00	75.17	PK	V	39.44	108.59	N/A	N/A
5785.00	65.06	AV	V	39.44	98.48	N/A	N/A
11570.00	35.22	PK	V	20.83	50.03	74.00	23.97
11570.00	23.07	AV	V	20.83	37.88	54.00	16.12
17355.00	42.04	PK	V	27.74	63.76	68.20	4.44
2779.00	52.48	PK	V	5.03	51.49	74.00	22.51
2779.00	33.36	AV	V	5.03	32.37	54.00	21.63
High Channel: 5825 MHz							
5825.00	65.68	PK	H	39.46	99.12	N/A	N/A
5825.00	54.70	AV	H	39.46	88.14	N/A	N/A
5825.00	74.83	PK	V	39.46	108.27	N/A	N/A
5825.00	64.84	AV	V	39.46	98.28	N/A	N/A
5850.00	46.78	PK	V	39.49	80.25	122.20	41.95
5855.00	44.53	PK	V	39.51	78.02	110.80	32.78
5875.00	32.64	PK	V	39.60	66.22	105.20	38.98
5925.00	31.21	PK	V	39.68	64.87	68.20	3.33
11650.00	34.11	PK	V	21.07	49.16	74.00	24.84
11650.00	21.64	AV	V	21.07	36.69	54.00	17.31
17475.00	42.95	PK	V	28.61	65.54	68.20	2.66
2793.00	51.97	PK	V	5.08	51.03	74.00	22.97
2793.00	33.02	AV	V	5.08	32.08	54.00	21.92

Chain 1:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5745MHz							
5745.00	59.80	PK	H	39.46	93.24	N/A	N/A
5745.00	49.74	AV	H	39.46	83.18	N/A	N/A
5745.00	66.87	PK	V	39.46	100.31	N/A	N/A
5745.00	56.70	AV	V	39.46	90.14	N/A	N/A
5725.00	47.57	PK	V	39.48	81.03	122.20	41.17
5720.00	38.81	PK	V	39.49	72.28	110.80	38.52
5700.00	30.96	PK	V	39.51	64.45	105.20	40.75
5650.00	30.88	PK	V	39.49	64.35	68.20	3.85
11490.00	35.01	PK	V	20.67	49.66	74.00	24.34
11490.00	22.57	AV	V	20.67	37.22	54.00	16.78
17235.00	41.72	PK	V	26.76	62.46	68.20	5.74
2807.00	52.69	PK	V	5.14	51.81	74.00	22.19
2807.00	34.02	AV	V	5.14	33.14	54.00	20.86
Middle Channel: 5785 MHz							
5785.00	66.81	PK	H	39.44	100.23	N/A	N/A
5785.00	56.90	AV	H	39.44	90.32	N/A	N/A
5785.00	71.21	PK	V	39.44	104.63	N/A	N/A
5785.00	61.14	AV	V	39.44	94.56	N/A	N/A
11570.00	34.86	PK	V	20.83	49.67	74.00	24.33
11570.00	22.53	AV	V	20.83	37.34	54.00	16.66
17355.00	41.89	PK	V	27.74	63.61	68.20	4.59
2786.00	52.51	PK	V	5.05	51.54	74.00	22.46
2786.00	33.58	AV	V	5.05	32.61	54.00	21.39
High Channel: 5825 MHz							
5825.00	65.57	PK	H	39.46	99.01	N/A	N/A
5825.00	55.48	AV	H	39.46	88.92	N/A	N/A
5825.00	70.31	PK	V	39.46	103.75	N/A	N/A
5825.00	60.20	AV	V	39.46	93.64	N/A	N/A
5850.00	43.35	PK	V	39.49	76.82	122.20	45.38
5855.00	38.74	PK	V	39.51	72.23	110.80	38.57
5875.00	31.70	PK	V	39.60	65.28	105.20	39.92
5925.00	31.45	PK	V	39.68	65.11	68.20	3.09
11650.00	35.07	PK	V	21.07	50.12	74.00	23.88
11650.00	22.42	AV	V	21.07	37.47	54.00	16.53
17475.00	40.03	PK	V	28.61	62.62	68.20	5.58
2796.00	52.68	PK	V	5.09	51.75	74.00	22.25
2796.00	34.11	AV	V	5.09	33.18	54.00	20.82

802.11n ht20(MIMO mode was the worst)

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5745MHz							
5745.00	65.14	PK	H	39.46	98.58	N/A	N/A
5745.00	53.96	AV	H	39.46	87.40	N/A	N/A
5745.00	76.18	PK	V	39.46	109.62	N/A	N/A
5745.00	65.38	AV	V	39.46	98.82	N/A	N/A
5725.00	53.63	PK	V	39.48	87.09	122.20	35.11
5720.00	44.82	PK	V	39.49	78.29	110.80	32.51
5700.00	33.28	PK	V	39.51	66.77	105.20	38.43
5650.00	30.37	PK	V	39.49	63.84	68.20	4.36
11490.00	35.17	PK	V	20.67	49.82	74.00	24.18
11490.00	22.64	AV	V	20.67	37.29	54.00	16.71
17235.00	45.30	PK	V	26.76	66.04	68.20	2.16
2786.00	52.54	PK	V	5.05	51.57	74.00	22.43
2786.00	33.41	AV	V	5.05	32.44	54.00	21.56
Middle Channel: 5785 MHz							
5785.00	70.41	PK	H	39.44	103.83	N/A	N/A
5785.00	59.43	AV	H	39.44	92.85	N/A	N/A
5785.00	76.70	PK	V	39.44	110.12	N/A	N/A
5785.00	65.73	AV	V	39.44	99.15	N/A	N/A
11570.00	34.60	PK	V	20.83	49.41	74.00	24.59
11570.00	22.53	AV	V	20.83	37.34	54.00	16.66
17355.00	43.89	PK	V	27.74	65.61	68.20	2.59
2807.00	51.63	PK	V	5.14	50.75	74.00	23.25
2807.00	32.84	AV	V	5.14	31.96	54.00	22.04
High Channel: 5825 MHz							
5825.00	73.35	PK	H	39.46	106.79	N/A	N/A
5825.00	61.61	AV	H	39.46	95.05	N/A	N/A
5825.00	76.55	PK	V	39.46	109.99	N/A	N/A
5825.00	65.80	AV	V	39.46	99.24	N/A	N/A
5850.00	47.97	PK	V	39.49	81.44	122.20	40.76
5855.00	41.79	PK	V	39.51	75.28	110.80	35.52
5875.00	30.56	PK	V	39.60	64.14	105.20	41.06
5925.00	30.18	PK	V	39.68	63.84	68.20	4.36
11650.00	35.12	PK	V	21.07	50.17	74.00	23.83
11650.00	22.69	AV	V	21.07	37.74	54.00	16.26
17475.00	41.77	PK	V	28.61	64.36	68.20	3.84
2820.00	51.66	PK	V	5.20	50.84	74.00	23.16
2820.00	32.89	AV	V	5.20	32.07	54.00	21.93

802.11ac vht20 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5745MHz							
5745.00	69.99	PK	H	39.46	103.43	N/A	N/A
5745.00	60.03	AV	H	39.46	93.47	N/A	N/A
5745.00	78.31	PK	V	39.46	111.75	N/A	N/A
5745.00	67.96	AV	V	39.46	101.40	N/A	N/A
5725.00	49.77	PK	V	39.48	83.23	122.20	38.97
5720.00	46.59	PK	V	39.49	80.06	110.80	30.74
5700.00	32.11	PK	V	39.51	65.60	105.20	39.60
5650.00	28.76	PK	V	39.49	62.23	68.20	5.97
11490.00	34.66	PK	V	20.67	49.31	74.00	24.69
11490.00	22.35	AV	V	20.67	37.00	54.00	17.00
17235.00	45.02	PK	V	26.76	65.76	68.20	2.44
2793.00	53.29	PK	V	5.08	52.35	74.00	21.65
2793.00	34.06	AV	V	5.08	33.12	54.00	20.88
Middle Channel: 5785 MHz							
5785.00	72.75	PK	H	39.44	106.17	N/A	N/A
5785.00	61.59	AV	H	39.44	95.01	N/A	N/A
5785.00	77.92	PK	V	39.44	111.34	N/A	N/A
5785.00	68.09	AV	V	39.44	101.51	N/A	N/A
11570.00	35.29	PK	V	20.83	50.10	74.00	23.90
11570.00	23.01	AV	V	20.83	37.82	54.00	16.18
17355.00	44.40	PK	V	27.74	66.12	68.20	2.08
2807.00	52.96	PK	V	5.14	52.08	74.00	21.92
2807.00	33.87	AV	V	5.14	32.99	54.00	21.01
High Channel: 5825 MHz							
5825.00	74.71	PK	H	39.46	108.15	N/A	N/A
5825.00	64.29	AV	H	39.46	97.73	N/A	N/A
5825.00	79.61	PK	V	39.46	113.05	N/A	N/A
5825.00	68.41	AV	V	39.46	101.85	N/A	N/A
5850.00	46.84	PK	V	39.49	80.31	122.20	41.89
5855.00	45.23	PK	V	39.51	78.72	110.80	32.08
5875.00	32.21	PK	V	39.60	65.79	105.20	39.41
5925.00	30.51	PK	V	39.68	64.17	68.20	4.03
11650.00	37.78	PK	V	21.07	52.83	74.00	21.17
11650.00	26.95	AV	V	21.07	42.00	54.00	12.00
17475.00	43.25	PK	V	28.61	65.84	68.20	2.36
2813.00	54.40	PK	V	5.17	53.55	74.00	20.45
2813.00	35.28	AV	V	5.17	34.43	54.00	19.57

802.11ax hew20 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
	Reading (dBµV)	Detector					
Low Channel: 5745MHz							
5745.00	71.58	PK	H	39.46	105.02	N/A	N/A
5745.00	60.16	AV	H	39.46	93.60	N/A	N/A
5745.00	79.47	PK	V	39.46	112.91	N/A	N/A
5745.00	68.02	AV	V	39.46	101.46	N/A	N/A
5725.00	55.63	PK	V	39.48	89.09	122.20	33.11
5720.00	49.60	PK	V	39.49	83.07	110.80	27.73
5700.00	34.68	PK	V	39.51	68.17	105.20	37.03
5650.00	30.27	PK	V	39.49	63.74	68.20	4.46
11490.00	34.95	PK	V	20.67	49.60	74.00	24.40
11490.00	22.53	AV	V	20.67	37.18	54.00	16.82
17235.00	45.58	PK	V	26.76	66.32	68.20	1.88
2796.00	51.64	PK	V	5.09	50.71	74.00	23.29
2796.00	33.01	AV	V	5.09	32.08	54.00	21.92
Middle Channel: 5785 MHz							
5785.00	73.32	PK	H	39.44	106.74	N/A	N/A
5785.00	61.63	AV	H	39.44	95.05	N/A	N/A
5785.00	79.33	PK	V	39.44	112.75	N/A	N/A
5785.00	68.27	AV	V	39.44	101.69	N/A	N/A
11570.00	34.53	PK	V	20.83	49.34	74.00	24.66
11570.00	22.17	AV	V	20.83	36.98	54.00	17.02
17355.00	44.56	PK	V	27.74	66.28	68.20	1.92
2807.00	52.55	PK	V	5.14	51.67	74.00	22.33
2807.00	33.60	AV	V	5.14	32.72	54.00	21.28
High Channel: 5825 MHz							
5825.00	75.09	PK	H	39.46	108.53	N/A	N/A
5825.00	63.49	AV	H	39.46	96.93	N/A	N/A
5825.00	80.51	PK	V	39.46	113.95	N/A	N/A
5825.00	68.75	AV	V	39.46	102.19	N/A	N/A
5850.00	55.30	PK	V	39.49	88.77	122.20	33.43
5855.00	67.68	PK	V	39.51	101.17	110.80	9.63
5875.00	36.10	PK	V	39.60	69.68	105.20	35.52
5925.00	29.92	PK	V	39.68	63.58	68.20	4.62
11650.00	35.61	PK	V	21.07	50.66	74.00	23.34
11650.00	23.24	AV	V	21.07	38.29	54.00	15.71
17475.00	42.96	PK	V	28.61	65.55	68.20	2.65
2813.00	51.92	PK	V	5.17	51.07	74.00	22.93
2813.00	33.12	AV	V	5.17	32.27	54.00	21.73

802.11n ht40 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5755MHz							
5755.00	67.54	PK	H	39.45	100.97	N/A	N/A
5755.00	56.05	AV	H	39.45	89.48	N/A	N/A
5755.00	74.96	PK	V	39.45	108.39	N/A	N/A
5755.00	63.18	AV	V	39.45	96.61	N/A	N/A
5725.00	55.43	PK	V	39.48	88.89	122.20	33.31
5720.00	54.32	PK	V	39.49	87.79	110.80	23.01
5700.00	42.41	PK	V	39.51	75.90	105.20	29.30
5650.00	31.65	PK	V	39.49	65.12	68.20	3.08
11510.00	33.73	PK	V	20.67	48.38	74.00	25.62
11510.00	21.24	AV	V	20.67	35.89	54.00	18.11
17265.00	44.12	PK	V	26.94	65.04	68.20	3.16
2800.00	52.11	PK	V	5.10	51.19	74.00	22.81
2800.00	33.43	AV	V	5.10	32.51	54.00	21.49
High Channel: 5795MHz							
5795.00	69.59	PK	H	39.43	103.00	N/A	N/A
5795.00	58.87	AV	H	39.43	92.28	N/A	N/A
5795.00	74.74	PK	V	39.43	108.15	N/A	N/A
5795.00	63.53	AV	V	39.43	96.94	N/A	N/A
5850.00	45.71	PK	V	39.49	79.18	122.20	43.02
5855.00	43.73	PK	V	39.51	77.22	110.80	33.58
5875.00	36.72	PK	V	39.60	70.30	105.20	34.90
5925.00	31.86	PK	V	39.68	65.52	68.20	2.68
11590.00	35.07	PK	V	20.88	49.93	74.00	24.07
11590.00	22.63	AV	V	20.88	37.49	54.00	16.51
17385.00	41.75	PK	V	28.07	63.80	68.20	4.40
2800.00	50.79	PK	V	5.10	49.87	74.00	24.13
2800.00	32.14	AV	V	5.10	31.22	54.00	22.78

802.11ac vht40 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5755MHz							
5755.00	69.80	PK	H	39.45	103.23	N/A	N/A
5755.00	58.46	AV	H	39.45	91.89	N/A	N/A
5755.00	76.94	PK	V	39.45	110.37	N/A	N/A
5755.00	65.46	AV	V	39.45	98.89	N/A	N/A
5725.00	54.90	PK	V	39.48	88.36	122.20	33.84
5720.00	52.43	PK	V	39.49	85.90	110.80	24.90
5700.00	40.75	PK	V	39.51	74.24	105.20	30.96
5650.00	30.84	PK	V	39.49	64.31	68.20	3.89
11510.00	33.54	PK	V	20.67	48.19	74.00	25.81
11510.00	21.16	AV	V	20.67	35.81	54.00	18.19
17265.00	45.38	PK	V	26.94	66.30	68.20	1.90
2807.00	52.18	PK	V	5.14	51.30	74.00	22.70
2807.00	33.20	AV	V	5.14	32.32	54.00	21.68
High Channel: 5795 MHz							
5795.00	70.71	PK	H	39.43	104.12	N/A	N/A
5795.00	61.13	AV	H	39.43	94.54	N/A	N/A
5795.00	75.69	PK	V	39.43	109.10	N/A	N/A
5795.00	64.89	AV	V	39.43	98.30	N/A	N/A
5850.00	45.25	PK	V	39.49	78.72	122.20	43.48
5855.00	42.98	PK	V	39.51	76.47	110.80	34.33
5875.00	36.29	PK	V	39.60	69.87	105.20	35.33
5925.00	30.78	PK	V	39.68	64.44	68.20	3.76
11590.00	34.45	PK	V	20.88	49.31	74.00	24.69
11590.00	22.21	AV	V	20.88	37.07	54.00	16.93
17385.00	44.14	PK	V	28.07	66.19	68.20	2.01
2820.00	52.22	PK	V	5.20	51.40	74.00	22.60
2820.00	33.50	AV	V	5.20	32.68	54.00	21.32

802.11ax hew40 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5755MHz							
5755.00	71.52	PK	H	39.45	104.95	N/A	N/A
5755.00	60.11	AV	H	39.45	93.54	N/A	N/A
5755.00	77.09	PK	V	39.45	110.52	N/A	N/A
5755.00	65.79	AV	V	39.45	99.22	N/A	N/A
5725.00	59.43	PK	V	39.48	92.89	122.20	29.31
5720.00	54.87	PK	V	39.49	88.34	110.80	22.46
5700.00	45.99	PK	V	39.51	79.48	105.20	25.72
5650.00	30.24	PK	V	39.49	63.71	68.20	4.49
11510.00	34.87	PK	V	20.67	49.52	74.00	24.48
11510.00	22.53	AV	V	20.67	37.18	54.00	16.82
17265.00	45.87	PK	V	26.94	66.79	68.20	**1.41**
2796.00	51.83	PK	V	5.09	50.90	74.00	23.10
2796.00	32.96	AV	V	5.09	32.03	54.00	21.97
High Channel: 5795 MHz							
5795.00	71.72	PK	H	39.43	105.13	N/A	N/A
5795.00	60.94	AV	H	39.43	94.35	N/A	N/A
5795.00	76.75	PK	V	39.43	110.16	N/A	N/A
5795.00	65.63	AV	V	39.43	99.04	N/A	N/A
5850.00	51.37	PK	V	39.49	84.84	122.20	37.36
5855.00	48.76	PK	V	39.51	82.25	110.80	28.55
5875.00	39.22	PK	V	39.60	72.80	105.20	32.40
5925.00	30.77	PK	V	39.68	64.43	68.20	3.77
11590.00	34.45	PK	V	20.88	49.31	74.00	24.69
11590.00	22.16	AV	V	20.88	37.02	54.00	16.98
17385.00	43.57	PK	V	28.07	65.62	68.20	2.58
2796.00	52.96	PK	V	5.09	52.03	74.00	21.97
2796.00	33.75	AV	V	5.09	32.82	54.00	21.18

802.11ac vht80(MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Middle Channel: 5775 MHz							
5775.00	65.02	PK	H	39.44	98.44	N/A	N/A
5775.00	54.78	AV	H	39.44	88.20	N/A	N/A
5775.00	71.51	PK	V	39.44	104.93	N/A	N/A
5775.00	60.70	AV	V	39.44	94.12	N/A	N/A
5725.00	47.16	PK	V	39.48	80.62	122.20	41.58
5720.00	48.32	PK	V	39.49	81.79	110.80	29.01
5700.00	44.73	PK	V	39.51	78.22	105.20	26.98
5650.00	31.15	PK	V	39.49	64.62	68.20	3.58
5850.00	45.23	PK	V	39.49	78.70	122.20	43.50
5855.00	44.16	PK	V	39.51	77.65	110.80	33.15
5875.00	39.30	PK	V	39.60	72.88	105.20	32.32
5925.00	30.82	PK	V	39.68	64.48	68.20	3.72
11550.00	33.32	PK	V	20.78	48.08	74.00	25.92
11550.00	21.17	AV	V	20.78	35.93	54.00	18.07
17325.00	38.38	PK	V	27.41	59.77	68.20	8.43
1919.00	56.40	PK	V	1.96	52.34	68.20	15.86
2824.00	52.75	PK	V	5.22	51.95	74.00	22.05
2824.00	34.26	AV	V	5.22	33.46	54.00	20.54

802.11ax hew80(MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Middle Channel: 5775 MHz							
5775.00	67.51	PK	H	39.44	100.93	N/A	N/A
5775.00	55.20	AV	H	39.44	88.62	N/A	N/A
5775.00	72.03	PK	V	39.44	105.45	N/A	N/A
5775.00	59.86	AV	V	39.44	93.28	N/A	N/A
5725.00	48.07	PK	V	39.48	81.53	122.20	40.67
5720.00	47.08	PK	V	39.49	80.55	110.80	30.25
5700.00	43.59	PK	V	39.51	77.08	105.20	28.12
5650.00	30.81	PK	V	39.49	64.28	68.20	3.92
5850.00	46.39	PK	V	39.49	79.86	122.20	42.34
5855.00	46.38	PK	V	39.51	79.87	110.80	30.93
5875.00	41.99	PK	V	39.60	75.57	105.20	29.63
5925.00	30.86	PK	V	39.68	64.52	68.20	3.68
11550.00	33.07	PK	V	20.78	47.83	74.00	26.17
11550.00	20.54	AV	V	20.78	35.30	54.00	18.70
17325.00	34.72	PK	V	27.41	56.11	68.20	12.09
2813.00	52.07	PK	V	5.17	51.22	74.00	22.78
2813.00	33.87	AV	V	5.17	33.02	54.00	20.98

Chip Antenna:
5150-5250MHz:
802.11a, Chain 0:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
5180.00	70.51	PK	H	38.68	103.17	N/A	N/A
5180.00	59.63	AV	H	38.68	92.29	N/A	N/A
5180.00	65.76	PK	V	38.68	98.42	N/A	N/A
5180.00	55.96	AV	V	38.68	88.62	N/A	N/A
5150.00	31.21	PK	H	38.64	63.83	74.00	10.17
5150.00	17.13	AV	H	38.64	49.75	54.00	4.25
10360.00	33.49	PK	H	19.18	46.65	68.20	21.55
15540.00	34.12	PK	H	22.44	50.54	74.00	23.46
15540.00	20.93	AV	H	22.44	37.35	54.00	16.65
Middle Channel: 5200 MHz							
5200.00	69.74	PK	H	38.70	102.42	N/A	N/A
5200.00	59.92	AV	H	38.70	92.60	N/A	N/A
5200.00	67.48	PK	V	38.70	100.16	N/A	N/A
5200.00	57.42	AV	V	38.70	90.10	N/A	N/A
10400.00	33.32	PK	H	19.16	46.46	68.20	21.74
15600.00	34.18	PK	H	22.41	50.57	74.00	23.43
15600.00	21.56	AV	H	22.41	37.95	54.00	16.05
High Channel: 5240 MHz							
5240.00	71.26	PK	H	38.85	104.09	N/A	N/A
5240.00	61.22	AV	H	38.85	94.05	N/A	N/A
5240.00	68.73	PK	V	38.85	101.56	N/A	N/A
5240.00	58.62	AV	V	38.85	91.45	N/A	N/A
5350.00	29.47	PK	H	39.03	62.48	74.00	11.52
5350.00	16.53	AV	H	39.03	49.54	54.00	4.46
10480.00	33.93	PK	H	18.86	46.77	68.20	21.43
15720.00	34.63	PK	H	22.28	50.89	74.00	23.11
15720.00	22.89	AV	H	22.28	39.15	54.00	14.85

Chain 1:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
5180.00	74.15	PK	H	38.68	106.81	N/A	N/A
5180.00	64.16	AV	H	38.68	96.82	N/A	N/A
5180.00	68.83	PK	V	38.68	101.49	N/A	N/A
5180.00	58.49	AV	V	38.68	91.15	N/A	N/A
5150.00	35.77	PK	H	38.64	68.39	74.00	5.61
5150.00	19.38	AV	H	38.64	52.00	54.00	2.00
10360.00	33.46	PK	H	19.18	46.62	68.20	21.58
15540.00	34.42	PK	H	22.44	50.84	74.00	23.16
15540.00	22.84	AV	H	22.44	39.26	54.00	14.74
Middle Channel: 5200 MHz							
5200.00	73.24	PK	H	38.70	105.92	N/A	N/A
5200.00	63.36	AV	H	38.70	96.04	N/A	N/A
5200.00	69.91	PK	V	38.70	102.59	N/A	N/A
5200.00	59.83	AV	V	38.70	92.51	N/A	N/A
10400.00	32.16	PK	H	19.16	45.30	68.20	22.90
15600.00	35.67	PK	H	22.41	52.06	74.00	21.94
15600.00	22.53	AV	H	22.41	38.92	54.00	15.08
High Channel: 5240 MHz							
5240.00	72.52	PK	H	38.85	105.35	N/A	N/A
5240.00	62.59	AV	H	38.85	95.42	N/A	N/A
5240.00	65.75	PK	V	38.85	98.58	N/A	N/A
5240.00	56.47	AV	V	38.85	89.30	N/A	N/A
5350.00	29.32	PK	H	39.03	62.33	74.00	11.67
5350.00	16.50	AV	H	39.03	49.51	54.00	4.49
10480.00	35.96	PK	H	18.86	48.80	68.20	19.40
15720.00	34.10	PK	H	22.28	50.36	74.00	23.64
15720.00	22.96	AV	H	22.28	39.22	54.00	14.78

802.11n ht20(MIMO mode was the worst)

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
5180.00	73.90	PK	H	38.68	106.56	N/A	N/A
5180.00	62.33	AV	H	38.68	94.99	N/A	N/A
5180.00	70.42	PK	V	38.68	103.08	N/A	N/A
5180.00	59.23	AV	V	38.68	91.89	N/A	N/A
5150.00	37.32	PK	H	38.64	69.94	74.00	4.06
5150.00	19.29	AV	H	38.64	51.91	54.00	2.09
10360.00	33.69	PK	H	19.18	46.85	68.20	21.35
15540.00	34.05	PK	H	22.44	50.47	74.00	23.53
15540.00	22.16	AV	H	22.44	38.58	54.00	15.42
Middle Channel: 5200 MHz							
5200.00	76.00	PK	H	38.70	108.68	N/A	N/A
5200.00	63.11	AV	H	38.70	95.79	N/A	N/A
5200.00	70.20	PK	V	38.70	102.88	N/A	N/A
5200.00	58.25	AV	V	38.70	90.93	N/A	N/A
10400.00	32.40	PK	H	19.16	45.54	68.20	22.66
15600.00	33.67	PK	H	22.41	50.06	74.00	23.94
15600.00	23.16	AV	H	22.41	39.55	54.00	14.45
High Channel: 5240 MHz							
5240.00	73.99	PK	H	38.85	106.82	N/A	N/A
5240.00	62.96	AV	H	38.85	95.79	N/A	N/A
5240.00	69.94	PK	V	38.85	102.77	N/A	N/A
5240.00	58.79	AV	V	38.85	91.62	N/A	N/A
5350.00	29.57	PK	H	39.03	62.58	74.00	11.42
5350.00	16.53	AV	H	39.03	49.54	54.00	4.46
10480.00	31.81	PK	H	18.86	44.65	68.20	23.55
15720.00	36.01	PK	H	22.28	52.27	74.00	21.73
15720.00	25.69	AV	H	22.28	41.95	54.00	12.05

802.11ac vht20 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
5180.00	76.61	PK	H	38.68	109.27	N/A	N/A
5180.00	65.82	AV	H	38.68	98.48	N/A	N/A
5180.00	71.18	PK	V	38.68	103.84	N/A	N/A
5180.00	59.92	AV	V	38.68	92.58	N/A	N/A
5150.00	36.46	PK	H	38.64	69.08	74.00	4.92
5150.00	19.83	AV	H	38.64	52.45	54.00	1.55
10360.00	31.18	PK	H	19.18	44.34	68.20	23.86
15540.00	35.16	PK	H	22.44	51.58	74.00	22.42
15540.00	23.18	AV	H	22.44	39.60	54.00	14.40
Middle Channel: 5200 MHz							
5200.00	78.24	PK	H	38.70	110.92	N/A	N/A
5200.00	67.11	AV	H	38.70	99.79	N/A	N/A
5200.00	72.06	PK	V	38.70	104.74	N/A	N/A
5200.00	60.92	AV	V	38.70	93.60	N/A	N/A
10400.00	31.89	PK	H	19.16	45.03	68.20	23.17
15600.00	35.41	PK	H	22.41	51.80	74.00	22.20
15600.00	23.60	AV	H	22.41	39.99	54.00	14.01
High Channel: 5240 MHz							
5240.00	77.94	PK	H	38.85	110.77	N/A	N/A
5240.00	66.67	AV	H	38.85	99.50	N/A	N/A
5240.00	72.93	PK	V	38.85	105.76	N/A	N/A
5240.00	62.03	AV	V	38.85	94.86	N/A	N/A
5350.00	29.81	PK	H	39.03	62.82	74.00	11.18
5350.00	16.68	AV	H	39.03	49.69	54.00	4.31
10480.00	36.75	PK	H	18.86	49.59	68.20	18.61
15720.00	33.11	PK	H	22.28	49.37	74.00	24.63
15720.00	20.43	AV	H	22.28	36.69	54.00	17.31

802.11n ht40 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5190MHz							
5190.00	67.84	PK	H	38.69	100.51	N/A	N/A
5190.00	56.95	AV	H	38.69	89.62	N/A	N/A
5190.00	64.76	PK	V	38.69	97.43	N/A	N/A
5190.00	53.01	AV	V	38.69	85.68	N/A	N/A
5150.00	38.99	PK	H	38.64	71.61	74.00	2.39
5150.00	19.28	AV	H	38.64	51.90	54.00	2.10
10380.00	31.84	PK	H	19.17	44.99	68.20	23.21
15570.00	33.48	PK	H	22.43	49.89	74.00	24.11
15570.00	20.16	AV	H	22.43	36.57	54.00	17.43
High Channel: 5230 MHz							
5230.00	72.13	PK	H	38.81	104.92	N/A	N/A
5230.00	60.14	AV	H	38.81	92.93	N/A	N/A
5230.00	67.02	PK	V	38.81	99.81	N/A	N/A
5230.00	55.77	AV	V	38.81	88.56	N/A	N/A
5350.00	29.60	PK	H	39.03	62.61	74.00	11.39
5350.00	16.56	AV	H	39.03	49.57	54.00	4.43
10460.00	31.50	PK	H	18.94	44.42	68.20	23.78
15690.00	35.08	PK	H	22.29	51.35	74.00	22.65
15690.00	22.82	AV	H	22.29	39.09	54.00	14.91

802.11ac vht40 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5190MHz							
5190.00	74.18	PK	H	38.69	106.85	N/A	N/A
5190.00	63.79	AV	H	38.69	96.46	N/A	N/A
5190.00	66.48	PK	V	38.69	99.15	N/A	N/A
5190.00	55.93	AV	V	38.69	88.60	N/A	N/A
5150.00	35.48	PK	H	38.64	68.10	74.00	5.90
5150.00	20.49	AV	H	38.64	53.11	54.00	0.89
10380.00	31.28	PK	H	19.17	44.43	68.20	23.77
15570.00	35.67	PK	H	22.43	52.08	74.00	21.92
15570.00	22.40	AV	H	22.43	38.81	54.00	15.19
High Channel: 5230 MHz							
5230.00	74.10	PK	H	38.81	106.89	N/A	N/A
5230.00	63.67	AV	H	38.81	96.46	N/A	N/A
5230.00	68.68	PK	V	38.81	101.47	N/A	N/A
5230.00	58.55	AV	V	38.81	91.34	N/A	N/A
5350.00	31.48	PK	H	39.03	64.49	74.00	9.51
5350.00	16.82	AV	H	39.03	49.83	54.00	4.17
10460.00	31.46	PK	H	18.94	44.38	68.20	23.82
15690.00	35.43	PK	H	22.29	51.70	74.00	22.30
15690.00	23.64	AV	H	22.29	39.91	54.00	14.09

802.11ac vht80(MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Middle Channel: 5210 MHz							
5210.00	64.38	PK	H	38.74	97.10	N/A	N/A
5210.00	50.67	AV	H	38.74	83.39	N/A	N/A
5210.00	57.19	PK	V	38.74	89.91	N/A	N/A
5210.00	42.62	AV	V	38.74	75.34	N/A	N/A
5150.00	35.19	PK	H	38.64	67.81	74.00	6.19
5150.00	20.18	AV	H	38.64	52.80	54.00	1.20
5350.00	30.46	PK	H	39.03	63.47	74.00	10.53
5350.00	16.83	AV	H	39.03	49.84	54.00	4.16
10420.00	31.68	PK	H	19.09	44.75	68.20	23.45
15630.00	34.86	PK	H	22.37	51.21	74.00	22.79
15630.00	23.19	AV	H	22.37	39.54	54.00	14.46

802.11ax hew20 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5180MHz							
5180.00	75.99	PK	H	38.68	108.65	N/A	N/A
5180.00	65.73	AV	H	38.68	98.39	N/A	N/A
5180.00	70.52	PK	V	38.68	103.18	N/A	N/A
5180.00	58.92	AV	V	38.68	91.58	N/A	N/A
5150.00	37.10	PK	H	38.64	69.72	74.00	4.28
5150.00	19.42	AV	H	38.64	52.04	54.00	1.96
10360.00	31.79	PK	H	19.18	44.95	68.20	23.25
15540.00	35.92	PK	H	22.44	52.34	74.00	21.66
15540.00	23.07	AV	H	22.44	39.49	54.00	14.51
Middle Channel: 5200 MHz							
5200.00	78.07	PK	H	38.70	110.75	N/A	N/A
5200.00	66.51	AV	H	38.70	99.19	N/A	N/A
5200.00	72.97	PK	V	38.70	105.65	N/A	N/A
5200.00	60.26	AV	V	38.70	92.94	N/A	N/A
10400.00	32.84	PK	H	19.16	45.98	68.20	22.22
15600.00	34.59	PK	H	22.41	50.98	74.00	23.02
15600.00	23.74	AV	H	22.41	40.13	54.00	13.87
High Channel: 5240 MHz							
5240.00	77.71	PK	H	38.85	110.54	N/A	N/A
5240.00	67.37	AV	H	38.85	100.20	N/A	N/A
5240.00	73.81	PK	V	38.85	106.64	N/A	N/A
5240.00	61.26	AV	V	38.85	94.09	N/A	N/A
5350.00	28.99	PK	H	39.03	62.00	74.00	12.00
5350.00	16.21	AV	H	39.03	49.22	54.00	4.78
10480.00	35.82	PK	H	18.86	48.66	68.20	19.54
15720.00	33.37	PK	H	22.28	49.63	74.00	24.37
15720.00	19.46	AV	H	22.28	35.72	54.00	18.28

802.11ax hew40 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5190MHz							
5190.00	74.80	PK	H	38.69	107.47	N/A	N/A
5190.00	64.17	AV	H	38.69	96.84	N/A	N/A
5190.00	66.77	PK	V	38.69	99.44	N/A	N/A
5190.00	56.63	AV	V	38.69	89.30	N/A	N/A
5150.00	34.91	PK	H	38.64	67.53	74.00	6.47
5150.00	19.58	AV	H	38.64	52.20	54.00	1.80
10380.00	31.41	PK	H	19.17	44.56	68.20	23.64
15570.00	36.36	PK	H	22.43	52.77	74.00	21.23
15570.00	21.45	AV	H	22.43	37.86	54.00	16.14
High Channel: 5230 MHz							
5230.00	74.79	PK	H	38.81	107.58	N/A	N/A
5230.00	63.99	AV	H	38.81	96.78	N/A	N/A
5230.00	69.11	PK	V	38.81	101.90	N/A	N/A
5230.00	57.99	AV	V	38.81	90.78	N/A	N/A
5350.00	31.18	PK	H	39.03	64.19	74.00	9.81
5350.00	17.68	AV	H	39.03	50.69	54.00	3.31
10460.00	31.36	PK	H	18.94	44.28	68.20	23.92
15690.00	34.51	PK	H	22.29	50.78	74.00	23.22
15690.00	23.71	AV	H	22.29	39.98	54.00	14.02

802.11ax hew80(MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Middle Channel: 5210 MHz							
5210.00	64.25	PK	H	38.74	96.97	N/A	N/A
5210.00	50.60	AV	H	38.74	83.32	N/A	N/A
5210.00	57.95	PK	V	38.74	90.67	N/A	N/A
5210.00	42.14	AV	V	38.74	74.86	N/A	N/A
5150.00	34.56	PK	H	38.64	67.18	74.00	6.82
5150.00	19.64	AV	H	38.64	52.26	54.00	1.74
5350.00	30.26	PK	H	39.03	63.27	74.00	10.73
5350.00	16.66	AV	H	39.03	49.67	54.00	4.33
10420.00	31.84	PK	H	19.09	44.91	68.20	23.29
15630.00	33.91	PK	H	22.37	50.26	74.00	23.74
15630.00	22.58	AV	H	22.37	38.93	54.00	15.07

5725-5850MHz:
802.11a, Chain 0:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5745MHz							
5745.00	81.16	PK	H	39.46	114.60	N/A	N/A
5745.00	66.86	AV	H	39.46	100.30	N/A	N/A
5745.00	76.45	PK	V	39.46	109.89	N/A	N/A
5745.00	61.26	AV	V	39.46	94.70	N/A	N/A
5725.00	60.24	PK	H	39.48	93.70	122.20	28.50
5720.00	52.74	PK	H	39.49	86.21	110.80	24.59
5700.00	38.19	PK	H	39.51	71.68	105.20	33.52
5650.00	31.14	PK	H	39.49	64.61	68.20	3.59
11490.00	31.98	PK	H	20.67	46.63	74.00	27.37
11490.00	20.17	AV	H	20.67	34.82	54.00	19.18
17235.00	42.00	PK	H	26.76	62.74	68.20	5.46
Middle Channel: 5785 MHz							
5785.00	80.60	PK	H	39.44	114.02	N/A	N/A
5785.00	70.11	AV	H	39.44	103.53	N/A	N/A
5785.00	75.63	PK	V	39.44	109.05	N/A	N/A
5785.00	65.48	AV	V	39.44	98.90	N/A	N/A
11570.00	32.66	PK	H	20.83	47.47	74.00	26.53
11570.00	22.61	AV	H	20.83	37.42	54.00	16.58
17355.00	34.86	PK	H	27.74	56.58	68.20	11.62
High Channel: 5825 MHz							
5825.00	79.26	PK	H	39.46	112.70	N/A	N/A
5825.00	69.20	AV	H	39.46	102.64	N/A	N/A
5825.00	74.81	PK	V	39.46	108.25	N/A	N/A
5825.00	64.13	AV	V	39.46	97.57	N/A	N/A
5850.00	55.54	PK	H	39.49	89.01	122.20	33.19
5855.00	53.36	PK	H	39.51	86.85	110.80	23.95
5875.00	44.56	PK	H	39.60	78.14	105.20	27.06
5925.00	31.46	PK	H	39.68	65.12	68.20	3.08
11650.00	32.75	PK	H	21.07	47.80	74.00	26.20
11650.00	20.64	AV	H	21.07	35.69	54.00	18.31
17475.00	34.19	PK	H	28.61	56.78	68.20	11.42

Chain 1:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5745MHz							
5745.00	71.79	PK	H	39.46	105.23	N/A	N/A
5745.00	61.90	AV	H	39.46	95.34	N/A	N/A
5745.00	68.68	PK	V	39.46	102.12	N/A	N/A
5745.00	58.86	AV	V	39.46	92.30	N/A	N/A
5725.00	52.17	PK	H	39.48	85.63	122.20	36.57
5720.00	42.68	PK	H	39.49	76.15	110.80	34.65
5700.00	30.85	PK	H	39.51	64.34	105.20	40.86
5650.00	29.95	PK	H	39.49	63.42	68.20	4.78
11490.00	32.07	PK	H	20.67	46.72	74.00	27.28
11490.00	22.67	AV	H	20.67	37.32	54.00	16.68
17235.00	35.75	PK	H	26.76	56.49	68.20	11.71
Middle Channel: 5785 MHz							
5785.00	72.02	PK	H	39.44	105.44	N/A	N/A
5785.00	62.69	AV	H	39.44	96.11	N/A	N/A
5785.00	70.65	PK	V	39.44	104.07	N/A	N/A
5785.00	60.83	AV	V	39.44	94.25	N/A	N/A
11570.00	31.46	PK	H	20.83	46.27	74.00	27.73
11570.00	23.68	AV	H	20.83	38.49	54.00	15.51
17355.00	33.46	PK	H	27.74	55.18	68.20	13.02
High Channel: 5825 MHz							
5825.00	71.98	PK	H	39.46	105.42	N/A	N/A
5825.00	62.48	AV	H	39.46	95.92	N/A	N/A
5825.00	70.24	PK	V	39.46	103.68	N/A	N/A
5825.00	60.60	AV	V	39.46	94.04	N/A	N/A
5850.00	43.57	PK	H	39.49	77.04	122.20	45.16
5855.00	41.99	PK	H	39.51	75.48	110.80	35.32
5875.00	31.63	PK	H	39.60	65.21	105.20	39.99
5925.00	31.10	PK	H	39.68	64.76	68.20	3.44
11650.00	32.06	PK	H	21.07	47.11	74.00	26.89
11650.00	22.82	AV	H	21.07	37.87	54.00	16.13
17475.00	33.71	PK	H	28.61	56.30	68.20	11.90

802.11n ht20(MIMO mode was the worst)

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5745MHz							
5745.00	80.41	PK	H	39.46	113.85	N/A	N/A
5745.00	70.43	AV	H	39.46	103.87	N/A	N/A
5745.00	75.19	PK	V	39.46	108.63	N/A	N/A
5745.00	63.98	AV	V	39.46	97.42	N/A	N/A
5725.00	63.04	PK	H	39.48	96.50	122.20	25.70
5720.00	56.02	PK	H	39.49	89.49	110.80	21.31
5700.00	40.51	PK	H	39.51	74.00	105.20	31.20
5650.00	30.08	PK	H	39.49	63.55	68.20	4.65
11490.00	32.10	PK	H	20.67	46.75	74.00	27.25
11490.00	20.85	AV	H	20.67	35.50	54.00	18.50
17235.00	35.64	PK	H	26.76	56.38	68.20	11.82
Middle Channel: 5785 MHz							
5785.00	81.25	PK	H	39.44	114.67	N/A	N/A
5785.00	70.76	AV	H	39.44	104.18	N/A	N/A
5785.00	76.54	PK	V	39.44	109.96	N/A	N/A
5785.00	65.61	AV	V	39.44	99.03	N/A	N/A
11570.00	32.24	PK	H	20.83	47.05	74.00	26.95
11570.00	20.46	AV	H	20.83	35.27	54.00	18.73
17355.00	34.69	PK	H	27.74	56.41	68.20	11.79
High Channel: 5825 MHz							
5825.00	80.42	PK	H	39.46	113.86	N/A	N/A
5825.00	69.47	AV	H	39.46	102.91	N/A	N/A
5825.00	75.16	PK	V	39.46	108.60	N/A	N/A
5825.00	64.32	AV	V	39.46	97.76	N/A	N/A
5850.00	57.34	PK	H	39.49	90.81	122.20	31.39
5855.00	53.04	PK	H	39.51	86.53	110.80	24.27
5875.00	41.22	PK	H	39.60	74.80	105.20	30.40
5925.00	31.85	PK	H	39.68	65.51	68.20	2.69
11650.00	31.60	PK	H	21.07	46.65	74.00	27.35
11650.00	20.83	AV	H	21.07	35.88	54.00	18.12
17475.00	34.76	PK	H	28.61	57.35	68.20	10.85

802.11ac vht20 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
	Reading (dBµV)	Detector					
Low Channel: 5745MHz							
5745.00	78.40	PK	H	39.46	111.84	N/A	N/A
5745.00	66.76	AV	H	39.46	100.20	N/A	N/A
5745.00	74.85	PK	V	39.46	108.29	N/A	N/A
5745.00	64.67	AV	V	39.46	98.11	N/A	N/A
5725.00	60.80	PK	H	39.48	94.26	122.20	27.94
5720.00	55.82	PK	H	39.49	89.29	110.80	21.51
5700.00	39.61	PK	H	39.51	73.10	105.20	32.10
5650.00	31.70	PK	H	39.49	65.17	68.20	3.03
11490.00	32.89	PK	H	20.67	47.54	74.00	26.46
11490.00	20.22	AV	H	20.67	34.87	54.00	19.13
17235.00	32.67	PK	H	26.76	53.41	68.20	14.79
Middle Channel: 5785 MHz							
5785.00	77.87	PK	H	39.44	111.29	N/A	N/A
5785.00	65.92	AV	H	39.44	99.34	N/A	N/A
5785.00	73.60	PK	V	39.44	107.02	N/A	N/A
5785.00	62.61	AV	V	39.44	96.03	N/A	N/A
11570.00	33.25	PK	H	20.83	48.06	74.00	25.94
11570.00	23.18	AV	H	20.83	37.99	54.00	16.01
17355.00	32.49	PK	H	27.74	54.21	68.20	13.99
High Channel: 5825 MHz							
5825.00	80.49	PK	H	39.46	113.93	N/A	N/A
5825.00	67.15	AV	H	39.46	100.59	N/A	N/A
5825.00	76.15	PK	V	39.46	109.59	N/A	N/A
5825.00	62.85	AV	V	39.46	96.29	N/A	N/A
5850.00	54.87	PK	H	39.49	88.34	122.20	33.86
5855.00	53.12	PK	H	39.51	86.61	110.80	24.19
5875.00	39.78	PK	H	39.60	73.36	105.20	31.84
5925.00	31.73	PK	H	39.68	65.39	68.20	2.81
11650.00	34.21	PK	H	21.07	49.26	74.00	24.74
11650.00	21.48	AV	H	21.07	36.53	54.00	17.47
17475.00	32.64	PK	H	28.61	55.23	68.20	12.97

802.11n ht40 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5755MHz							
5755.00	79.41	PK	H	39.45	112.84	N/A	N/A
5755.00	68.54	AV	H	39.45	101.97	N/A	N/A
5755.00	72.51	PK	V	39.45	105.94	N/A	N/A
5755.00	62.48	AV	V	39.45	95.91	N/A	N/A
5725.00	62.29	PK	H	39.48	95.75	122.20	26.45
5720.00	60.79	PK	H	39.49	94.26	110.80	16.54
5700.00	48.93	PK	H	39.51	82.42	105.20	22.78
5650.00	34.52	PK	H	39.49	67.99	68.20	0.21
11510.00	31.21	PK	H	20.67	45.86	74.00	28.14
11510.00	22.68	AV	H	20.67	37.33	54.00	16.67
17265.00	36.01	PK	H	26.94	56.93	68.20	11.27
High Channel: 5795MHz							
5795.00	78.01	PK	H	39.43	111.42	N/A	N/A
5795.00	67.03	AV	H	39.43	100.44	N/A	N/A
5795.00	71.69	PK	V	39.43	105.10	N/A	N/A
5795.00	61.90	AV	V	39.43	95.31	N/A	N/A
5850.00	49.98	PK	H	39.49	83.45	122.20	38.75
5855.00	47.71	PK	H	39.51	81.20	110.80	29.60
5875.00	41.14	PK	H	39.60	74.72	105.20	30.48
5925.00	32.29	PK	H	39.68	65.95	68.20	2.25
11590.00	3.00	PK	H	20.88	17.86	74.00	56.14
11590.00	19.94	AV	H	20.88	34.80	54.00	19.20
17385.00	35.85	PK	H	28.07	57.90	68.20	10.30

802.11ac vht40 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5755MHz							
5755.00	78.79	PK	H	39.45	112.22	N/A	N/A
5755.00	68.36	AV	H	39.45	101.79	N/A	N/A
5755.00	71.03	PK	V	39.45	104.46	N/A	N/A
5755.00	60.41	AV	V	39.45	93.84	N/A	N/A
5725.00	59.57	PK	H	39.48	93.03	122.20	29.17
5720.00	54.87	PK	H	39.49	88.34	110.80	22.46
5700.00	42.93	PK	H	39.51	76.42	105.20	28.78
5650.00	32.96	PK	H	39.49	66.43	68.20	1.77
11510.00	33.23	PK	H	20.67	47.88	74.00	26.12
11510.00	22.46	AV	H	20.67	37.11	54.00	16.89
17265.00	34.50	PK	H	26.94	55.42	68.20	12.78
High Channel: 5795 MHz							
5795.00	81.23	PK	H	39.43	114.64	N/A	N/A
5795.00	70.28	AV	H	39.43	103.69	N/A	N/A
5795.00	71.95	PK	V	39.43	105.36	N/A	N/A
5795.00	60.88	AV	V	39.43	94.29	N/A	N/A
5850.00	49.17	PK	H	39.49	82.64	122.20	39.56
5855.00	48.67	PK	H	39.51	82.16	110.80	28.64
5875.00	41.98	PK	H	39.60	75.56	105.20	29.64
5925.00	32.64	PK	H	39.68	66.30	68.20	1.90
11590.00	35.68	PK	H	20.88	50.54	74.00	23.46
11590.00	22.82	AV	H	20.88	37.68	54.00	16.32
17385.00	36.99	PK	H	28.07	59.04	68.20	9.16

802.11ac vht80(MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
	Reading (dBµV)	Detector					
Middle Channel: 5775 MHz							
5755.00	71.56	PK	H	39.45	104.99	N/A	N/A
5755.00	57.98	AV	H	39.45	91.41	N/A	N/A
5755.00	60.89	PK	V	39.45	94.32	N/A	N/A
5755.00	45.99	AV	V	39.45	79.42	N/A	N/A
5725.00	72.49	PK	H	39.48	105.95	122.20	16.25
5720.00	69.31	PK	H	39.49	102.78	110.80	8.02
5700.00	45.10	PK	H	39.51	78.59	105.20	26.61
5650.00	33.51	PK	H	39.49	66.98	68.20	1.22
5850.00	38.59	PK	H	39.49	72.06	122.20	50.14
5855.00	38.23	PK	H	39.51	71.72	110.80	39.08
5875.00	32.69	PK	H	39.60	66.27	105.20	38.93
5925.00	31.47	PK	H	39.68	65.13	68.20	3.07
11510.00	32.48	PK	H	20.67	47.13	74.00	26.87
11510.00	20.65	AV	H	20.67	35.30	54.00	18.70
17265.00	32.68	PK	H	26.94	53.60	68.20	14.60

802.11ax hew20 (MIMO mode was the worst):

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5745MHz							
5745.00	78.47	PK	H	39.46	111.91	N/A	N/A
5745.00	67.74	AV	H	39.46	101.18	N/A	N/A
5745.00	75.18	PK	V	39.46	108.62	N/A	N/A
5745.00	64.46	AV	V	39.46	97.90	N/A	N/A
5725.00	61.33	PK	H	39.48	94.79	122.20	27.41
5720.00	55.80	PK	H	39.49	89.27	110.80	21.53
5700.00	38.87	PK	H	39.51	72.36	105.20	32.84
5650.00	31.23	PK	H	39.49	64.70	68.20	3.50
11490.00	32.73	PK	H	20.67	47.38	74.00	26.62
11490.00	20.70	AV	H	20.67	35.35	54.00	18.65
17235.00	32.18	PK	H	26.76	52.92	68.20	15.28
Middle Channel: 5785 MHz							
5785.00	77.44	PK	H	39.44	110.86	N/A	N/A
5785.00	65.36	AV	H	39.44	98.78	N/A	N/A
5785.00	73.39	PK	V	39.44	106.81	N/A	N/A
5785.00	62.42	AV	V	39.44	95.84	N/A	N/A
11570.00	34.00	PK	H	20.83	48.81	74.00	25.19
11570.00	22.73	AV	H	20.83	37.54	54.00	16.46
17355.00	32.78	PK	H	27.74	54.50	68.20	13.70
High Channel: 5825 MHz							
5825.00	80.63	PK	H	39.46	114.07	N/A	N/A
5825.00	67.67	AV	H	39.46	101.11	N/A	N/A
5825.00	75.43	PK	V	39.46	108.87	N/A	N/A
5825.00	62.28	AV	V	39.46	95.72	N/A	N/A
5850.00	54.66	PK	H	39.49	88.13	122.20	34.07
5855.00	52.59	PK	H	39.51	86.08	110.80	24.72
5875.00	39.37	PK	H	39.60	72.95	105.20	32.25
5925.00	31.33	PK	H	39.68	64.99	68.20	3.21
11650.00	34.28	PK	H	21.07	49.33	74.00	24.67
11650.00	21.59	AV	H	21.07	36.64	54.00	17.36
17475.00	33.36	PK	H	28.61	55.95	68.20	12.25

802.11ax hew40 (MIMO mode was the worst):

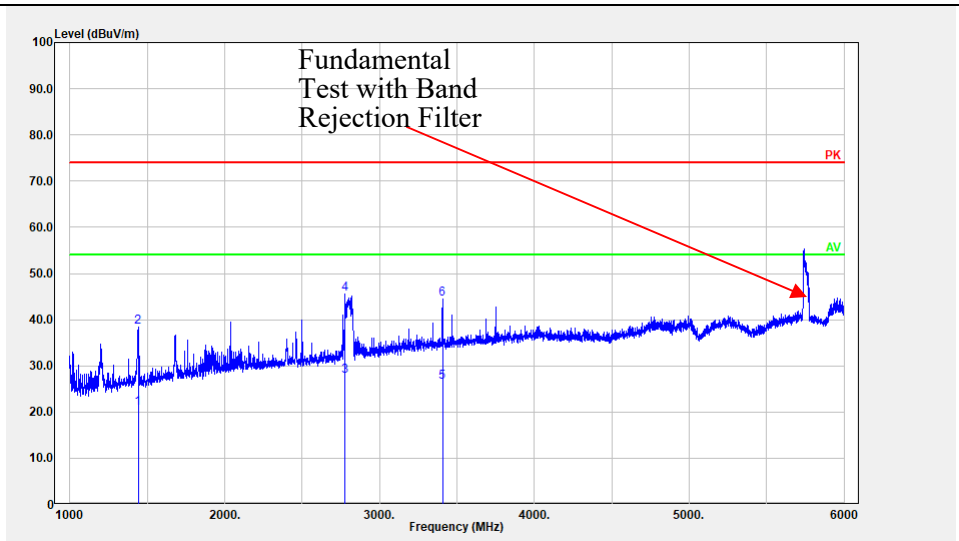
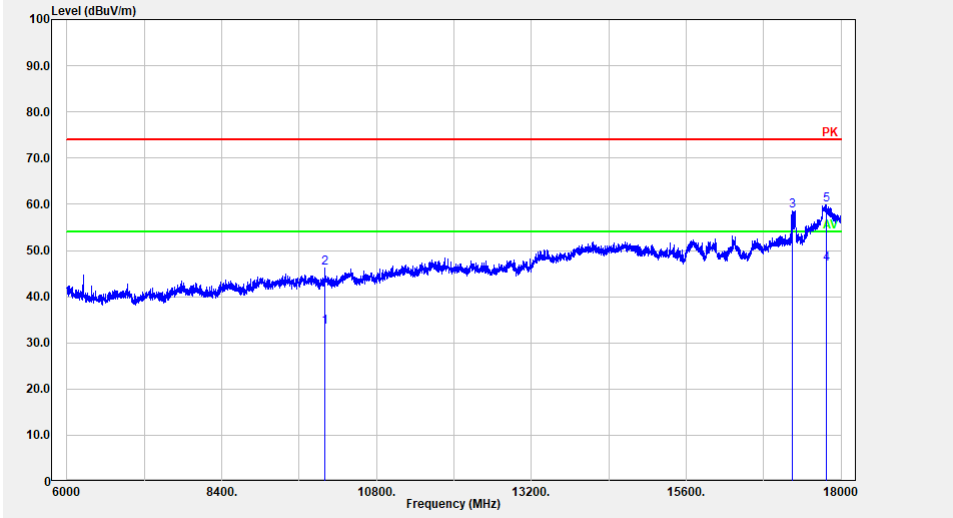
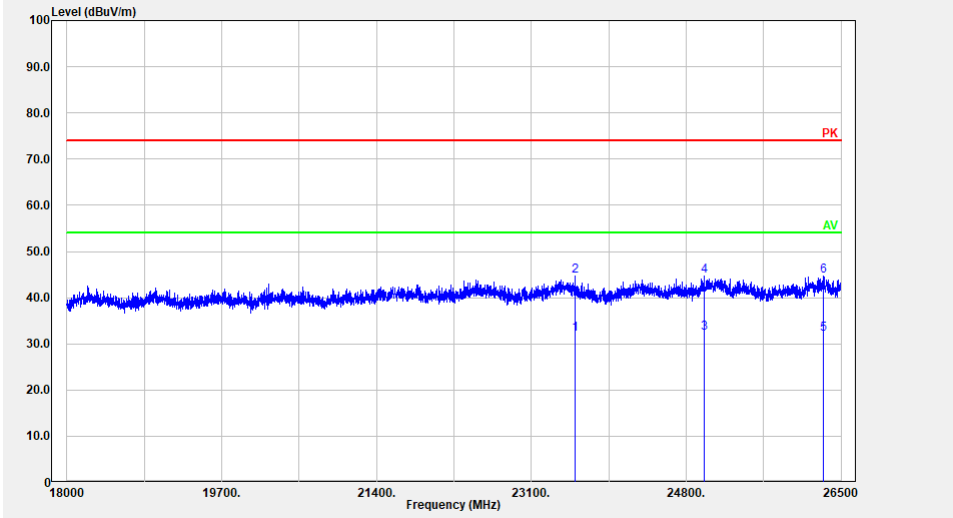
Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 5755MHz							
5755.00	79.27	PK	H	39.45	112.70	N/A	N/A
5755.00	68.76	AV	H	39.45	102.19	N/A	N/A
5755.00	71.62	PK	V	39.45	105.05	N/A	N/A
5755.00	61.11	AV	V	39.45	94.54	N/A	N/A
5725.00	60.42	PK	H	39.48	93.88	122.20	28.32
5720.00	54.59	PK	H	39.49	88.06	110.80	22.74
5700.00	43.47	PK	H	39.51	76.96	105.20	28.24
5650.00	33.16	PK	H	39.49	66.63	68.20	1.57
11510.00	33.02	PK	H	20.67	47.67	74.00	26.33
11510.00	21.89	AV	H	20.67	36.54	54.00	17.46
17265.00	34.89	PK	H	26.94	55.81	68.20	12.39
High Channel: 5795 MHz							
5795.00	81.35	PK	H	39.43	114.76	N/A	N/A
5795.00	71.14	AV	H	39.43	104.55	N/A	N/A
5795.00	72.54	PK	V	39.43	105.95	N/A	N/A
5795.00	61.35	AV	V	39.43	94.76	N/A	N/A
5850.00	48.50	PK	H	39.49	81.97	122.20	40.23
5855.00	48.51	PK	H	39.51	82.00	110.80	28.80
5875.00	41.65	PK	H	39.60	75.23	105.20	29.97
5925.00	33.45	PK	H	39.68	67.11	68.20	1.09
11590.00	35.04	PK	H	20.88	49.90	74.00	24.10
11590.00	23.67	AV	H	20.88	38.53	54.00	15.47
17385.00	36.58	PK	H	28.07	58.63	68.20	9.57

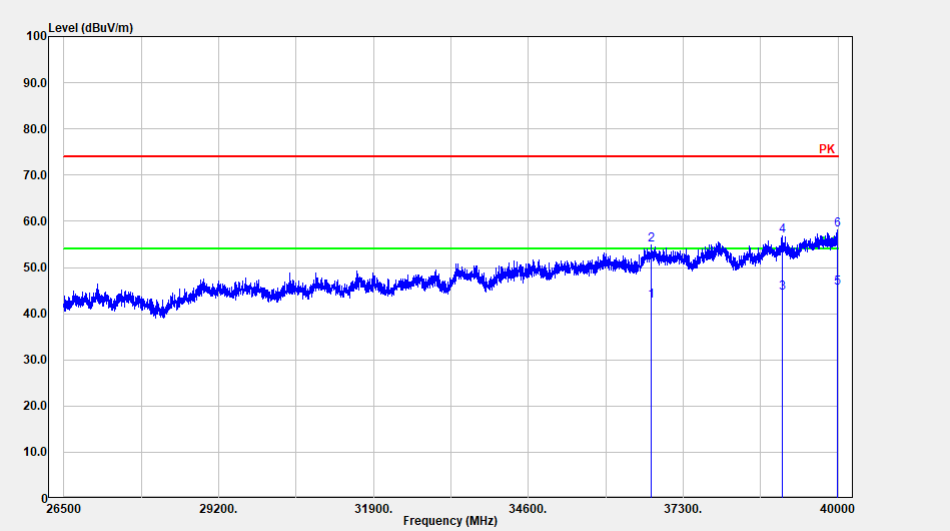
802.11ax hew80(MIMO mode was the worst):

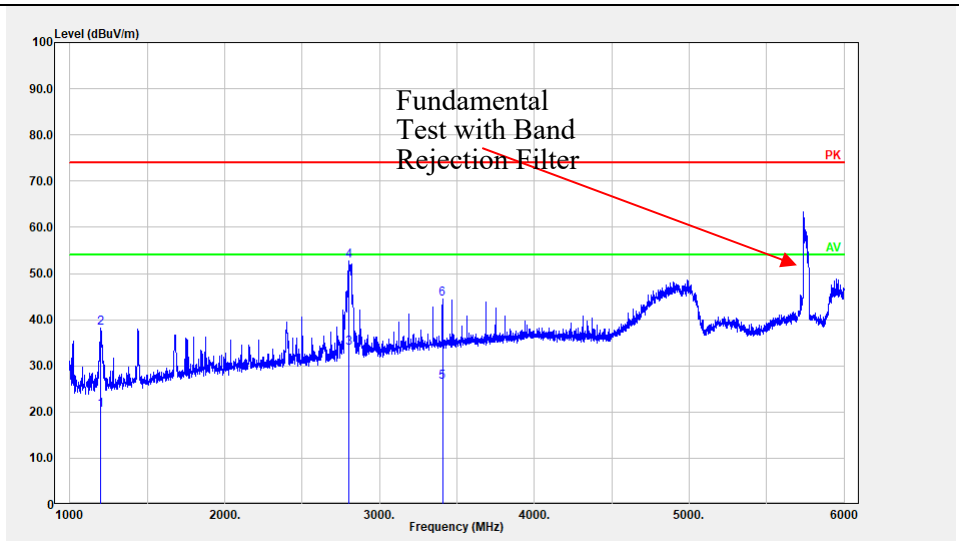
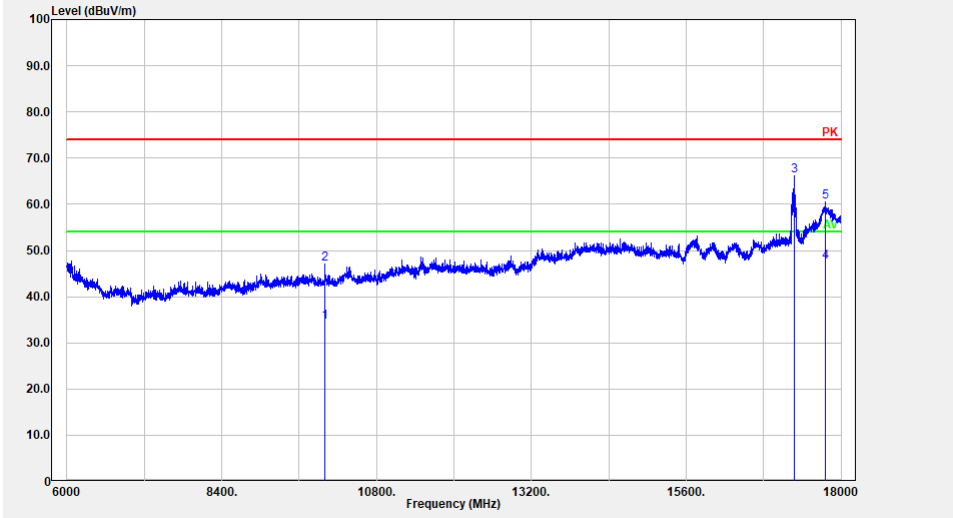
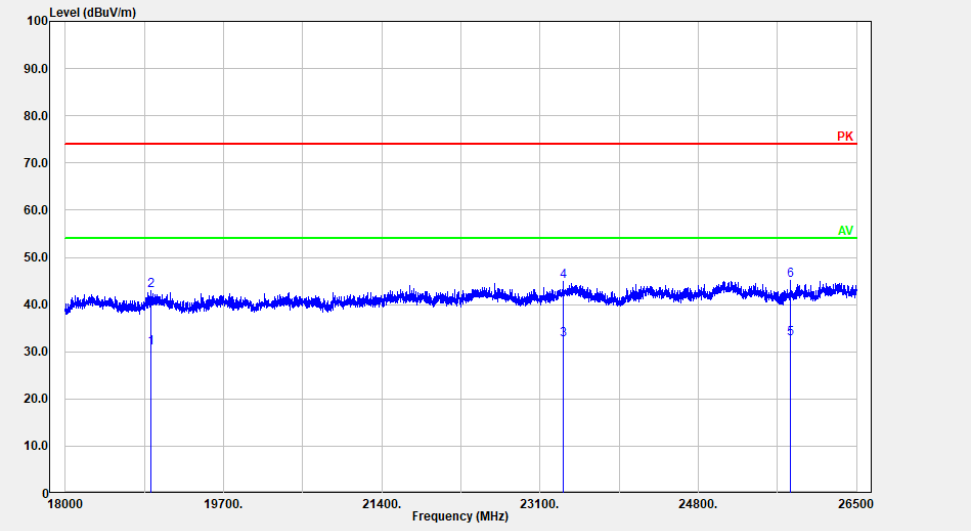
Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Middle Channel: 5775 MHz							
5755.00	71.27	PK	H	39.45	104.70	N/A	N/A
5755.00	58.62	AV	H	39.45	92.05	N/A	N/A
5755.00	60.07	PK	V	39.45	93.50	N/A	N/A
5755.00	46.17	AV	V	39.45	79.60	N/A	N/A
5725.00	72.88	PK	H	39.48	106.34	122.20	15.86
5720.00	69.99	PK	H	39.49	103.46	110.80	7.34
5700.00	45.24	PK	H	39.51	78.73	105.20	26.47
5650.00	33.35	PK	H	39.49	66.82	68.20	1.38
5850.00	38.40	PK	H	39.49	71.87	122.20	50.33
5855.00	37.95	PK	H	39.51	71.44	110.80	39.36
5875.00	33.16	PK	H	39.60	66.74	105.20	38.46
5925.00	32.28	PK	H	39.68	65.94	68.20	2.26
11510.00	31.59	PK	H	20.67	46.24	74.00	27.76
11510.00	20.87	AV	H	20.67	35.52	54.00	18.48
17265.00	32.15	PK	H	26.94	53.07	68.20	15.13

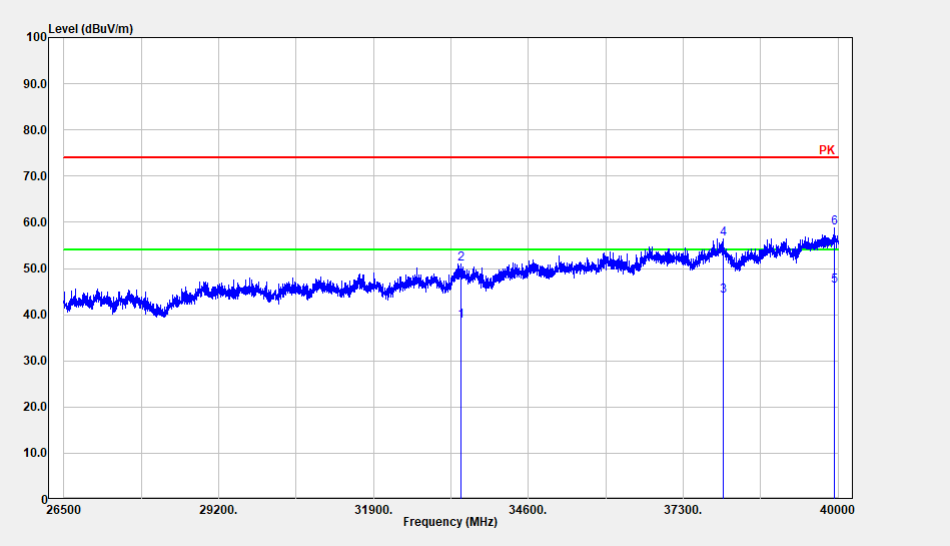
Note:
Result = Reading + Factor- Distance extrapolation Factor
For 1-26.5GHz:
Distance extrapolation Factor =20 log (specific distance [3m]/test distance [1.5m]) dB= 6.02 dB
For 26.5-40GHz:
Distance extrapolation Factor =20 log (specific distance [3m]/test distance [1m]) dB= 9.54 dB

Worst Test plots(Whip Antenna 802.11ax hew40 MIMI mode 5755MHz was the worst)

Horizontal	
1-6GHz	
6-18GHz	
18-26.5GHz	

26.5-40GHz	 Level (dBuV/m) 100 90.0 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 0 PK 1 2 3 4 5 6 26500 29200. 31900. 34600. 37300. 40000 Frequency (MHz)

Vertical	
1-6GHz	
6-18GHz	
18-26.5GHz	

Vertical	
26.5-40GHz	

4.3 26dB attenuated below the channel power:

Serial Number:	CR22010029-RF-S1	Test Date:	2023-01-03
Test Site:	RF	Test Mode:	Transmitting
Tester:	Julie Tan	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	22.5	Relative Humidity: (%)	52	ATM Pressure: (kPa)	100.8

Test Equipment List and Details:

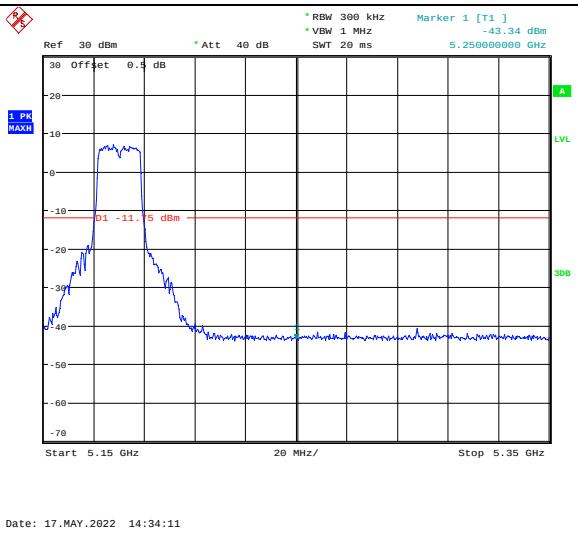
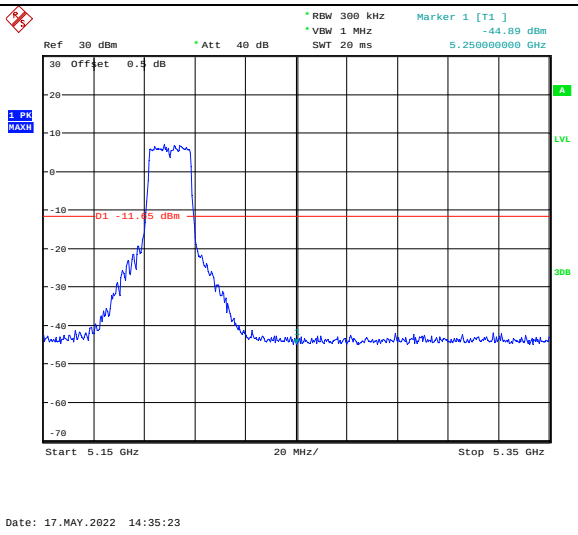
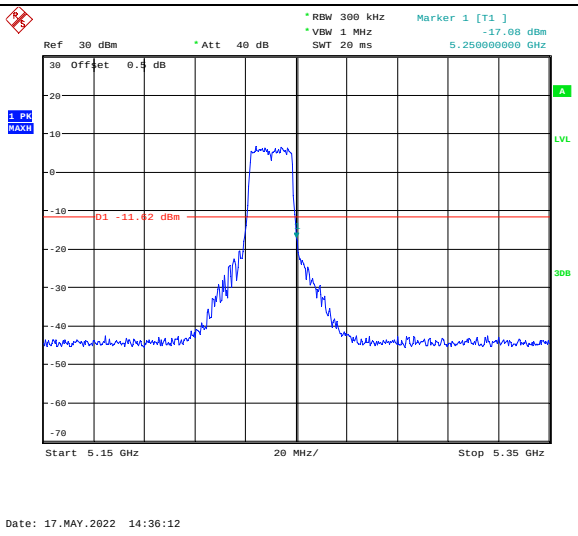
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2021-07-22	2022-07-21
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A

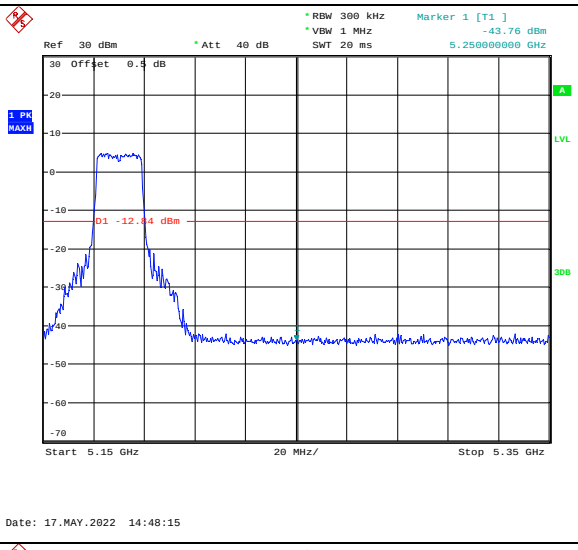
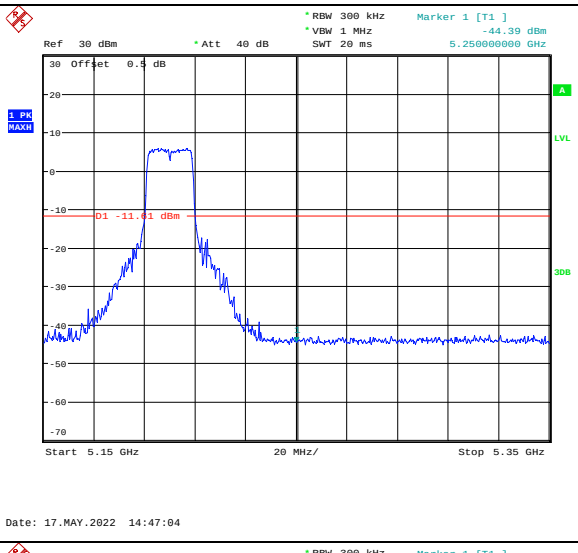
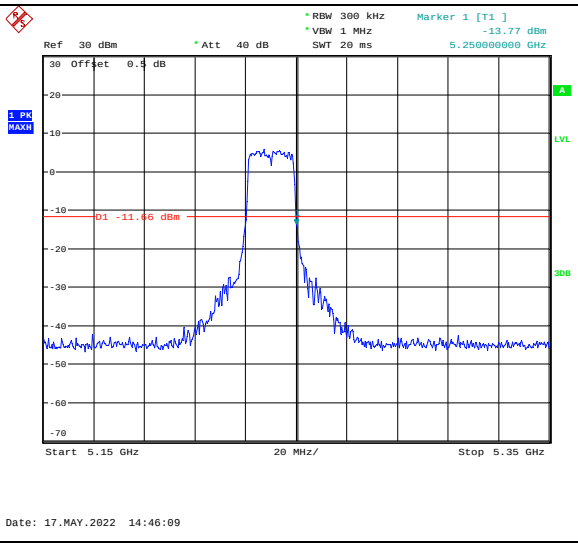
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

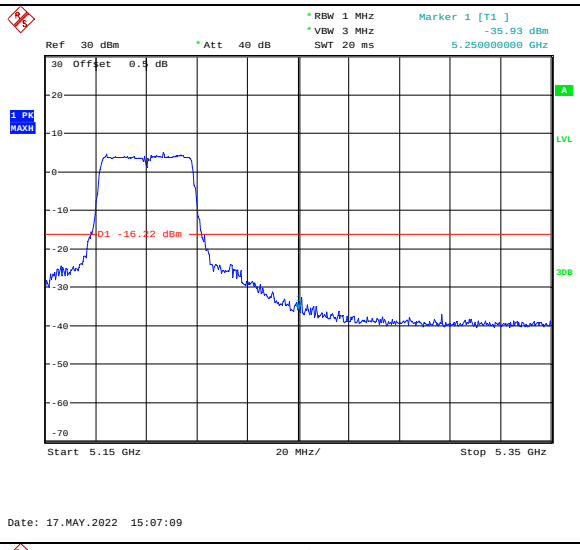
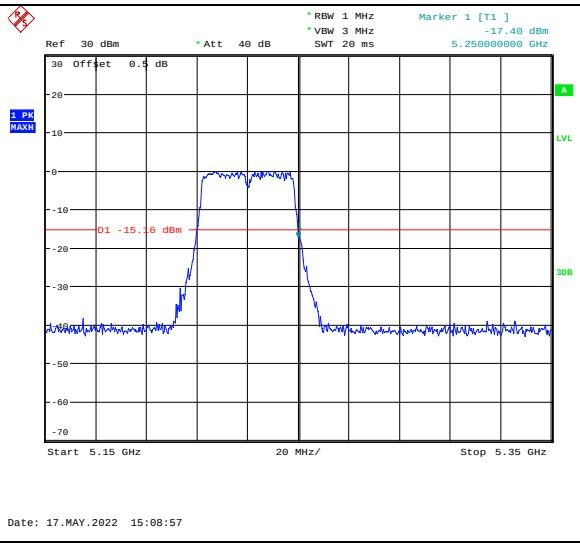
Test Data:

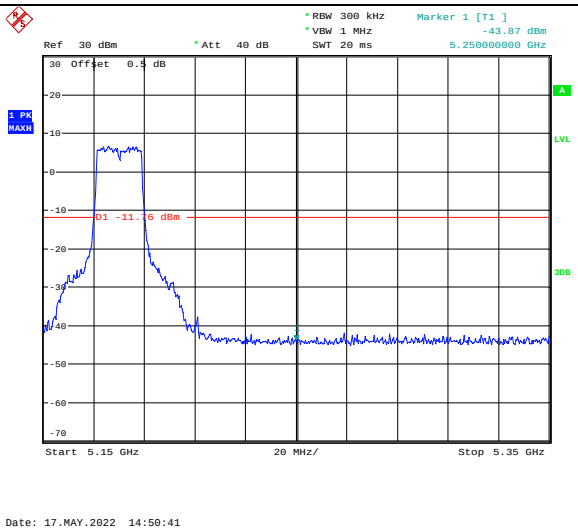
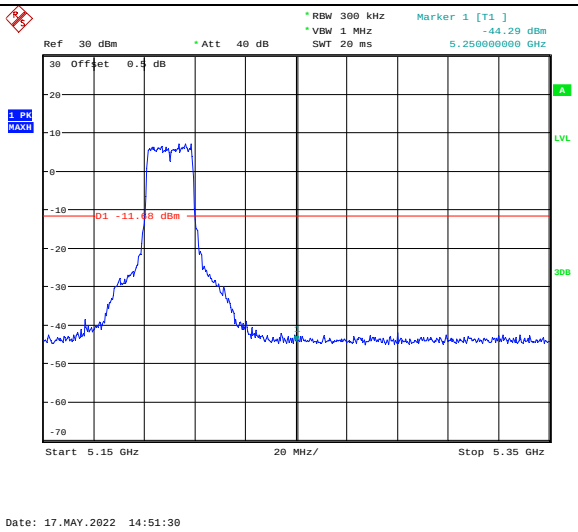
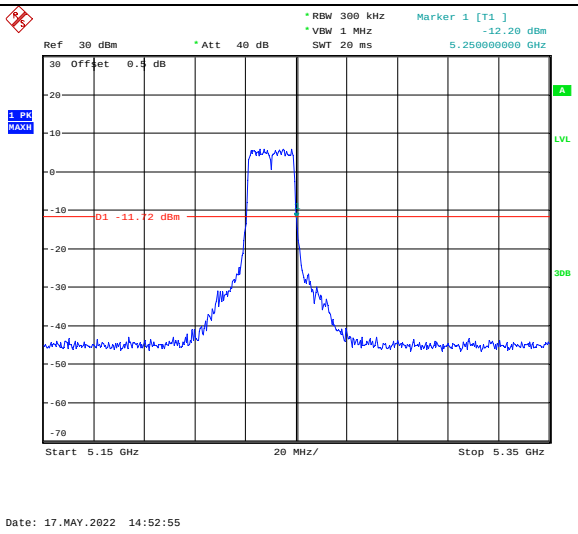
Note: the requirement is for 5150-5250 MHz band. The channel power please refer to the power test result in section 4.5.

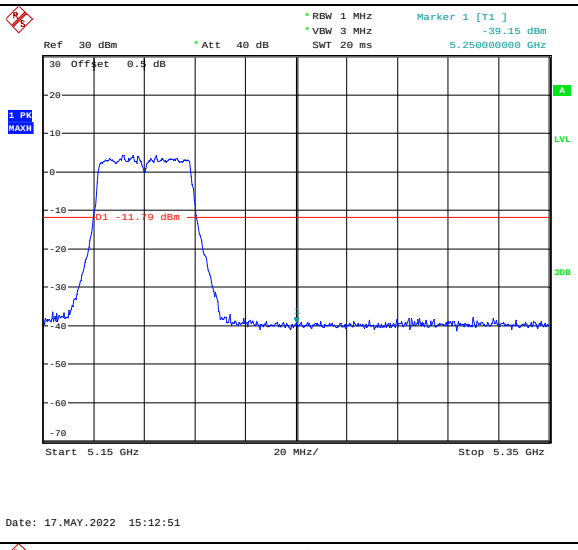
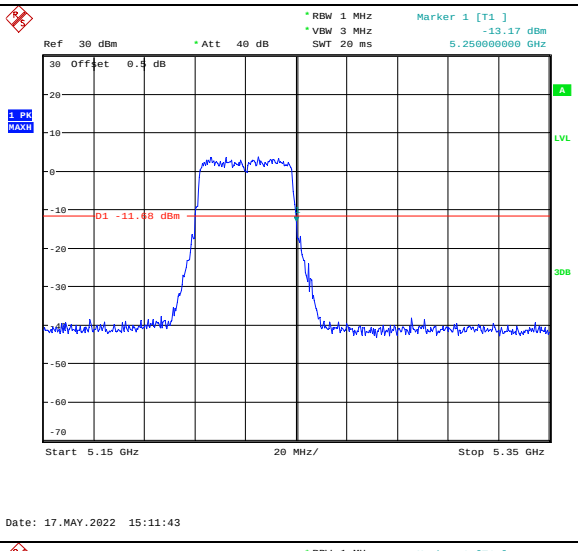
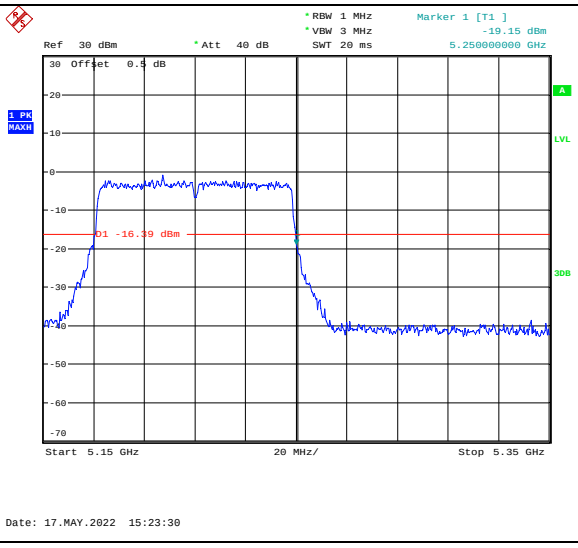
5150-5250MHz:
Chain 0:

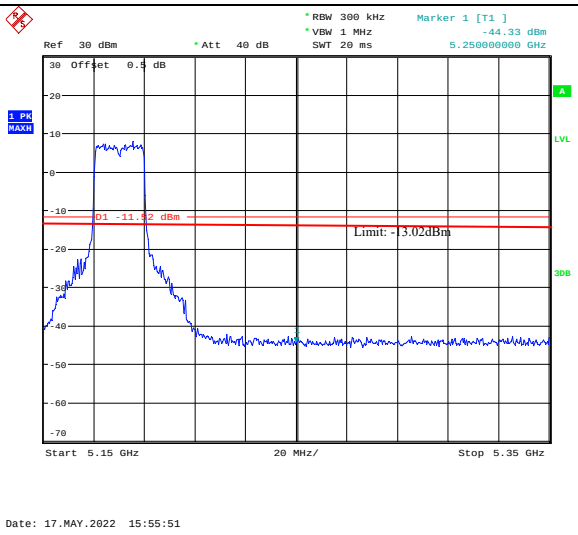
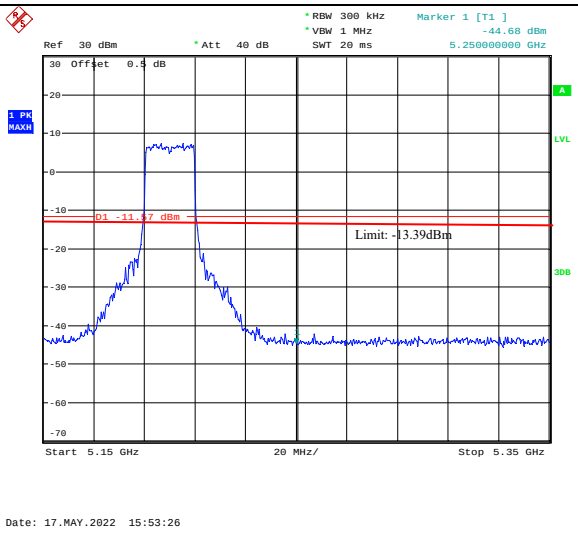
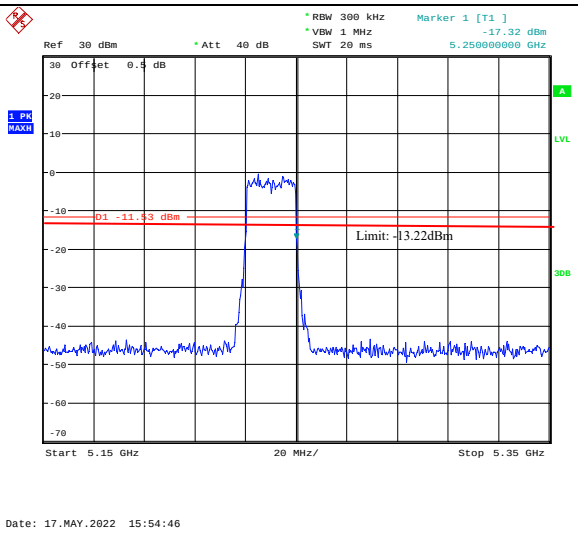
26dB attenuated below the channel power	
802.11a Lowest Channel	
802.11a Middle Channel	
802.11a Highest Channel	

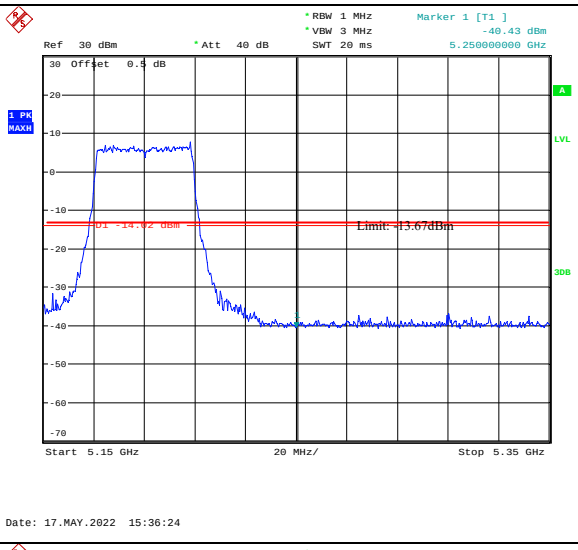
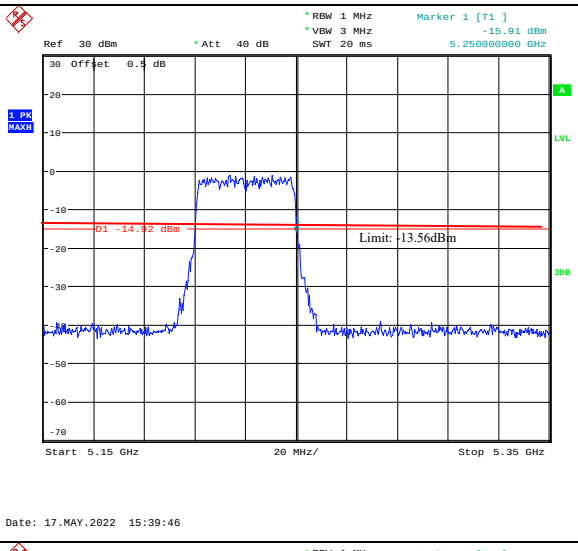
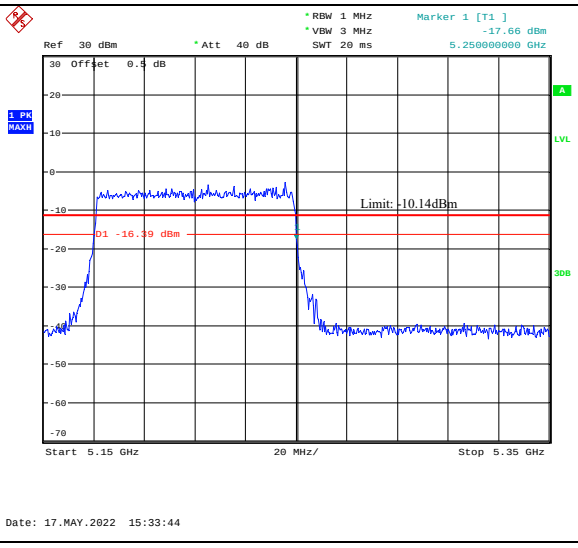
26dB attenuated below the channel power	
802.11n ht20 Lowest Channel	
802.11n ht20 Middle Channel	
802.11n ht20 Highest Channel	

26dB attenuated below the channel power	
802.11n ht40 Lowest Channel	
802.11n ht40 Highest Channel	

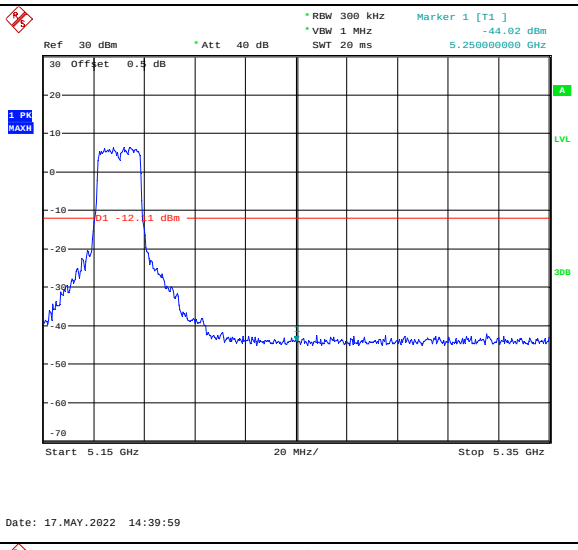
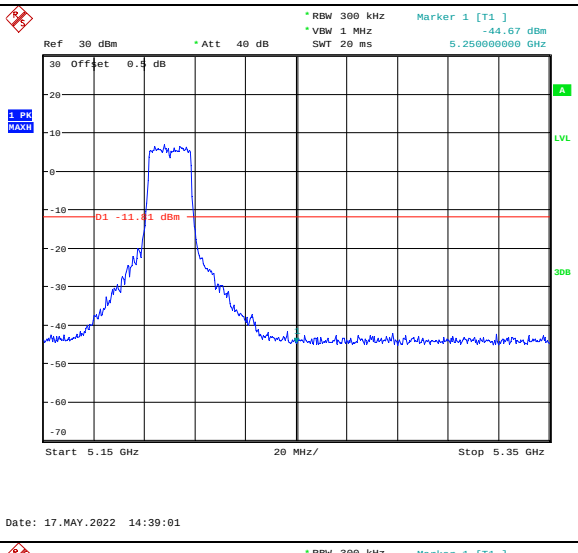
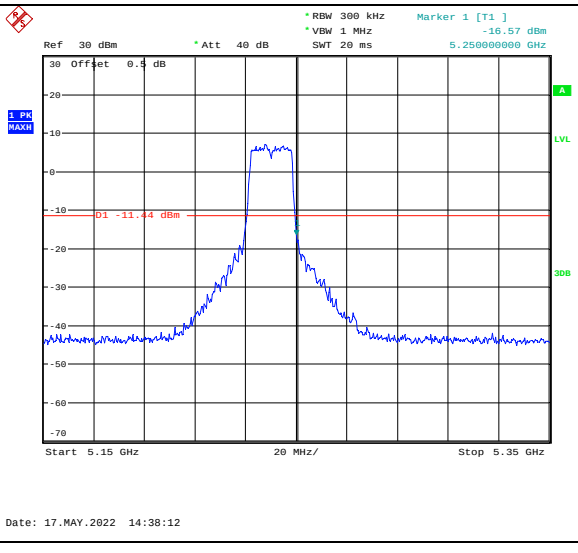
26dB attenuated below the channel power	
802.11ac vht20 Lowest Channel	
802.11ac vht20 Middle Channel	
802.11ac vht20 Highest Channel	

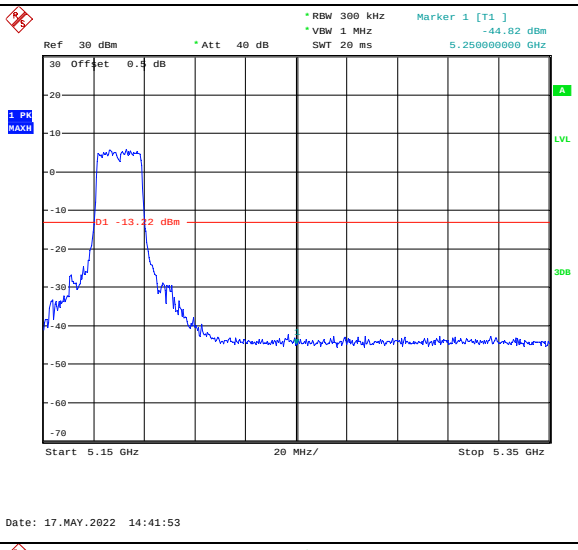
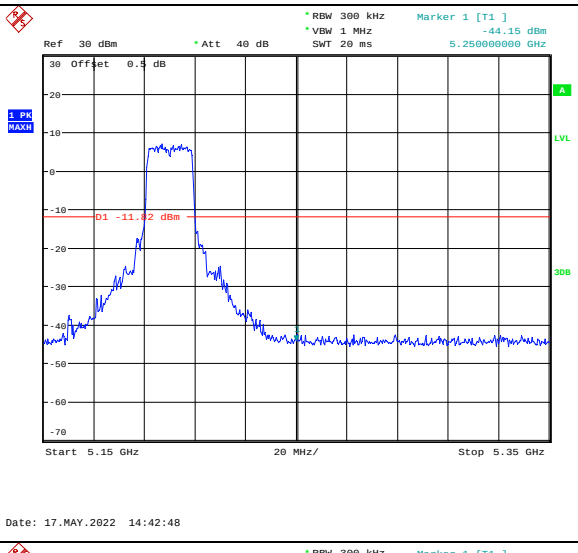
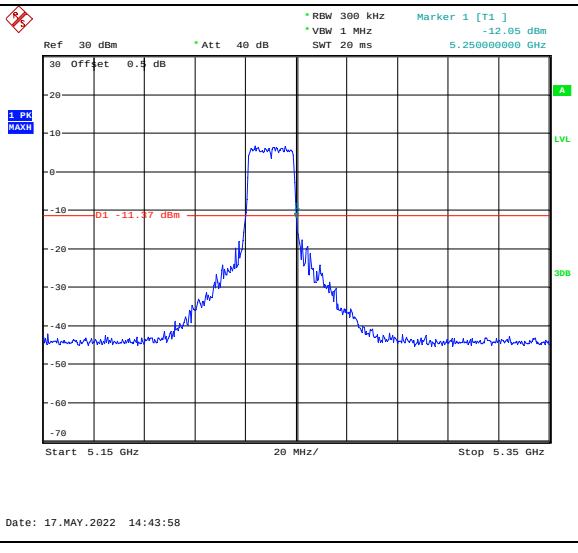
26dB attenuated below the channel power	
802.11ac vht40 Lowest Channel	
802.11ac vht40 Highest Channel	
802.11ac vht80 Middle Channel	

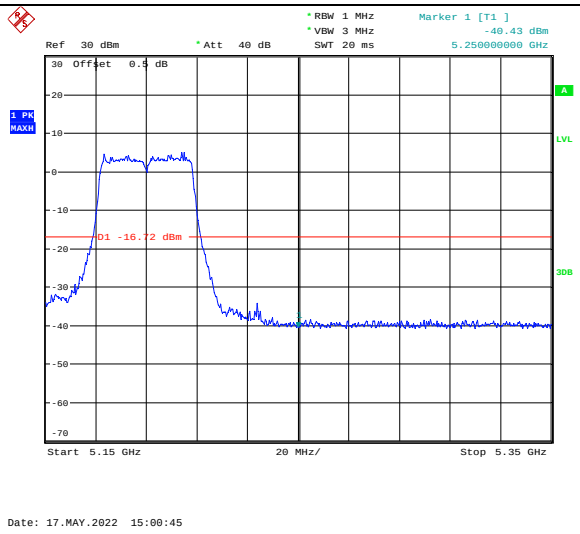
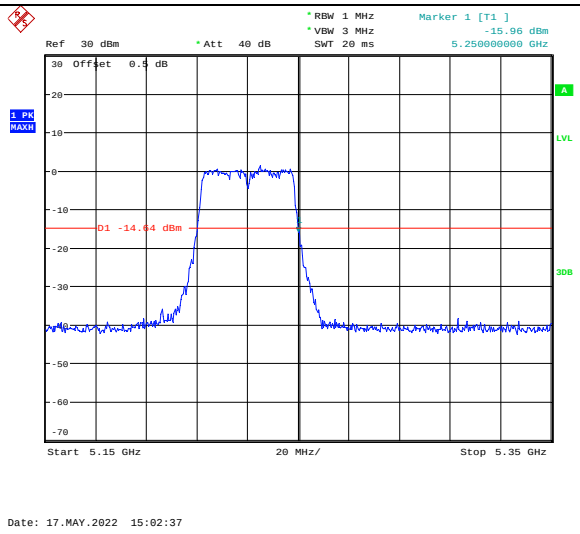
26dB attenuated below the channel power	
802.11ax hew20 Lowest Channel	
802.11ax hew20 Middle Channel	
802.11ax hew20 Highest Channel	

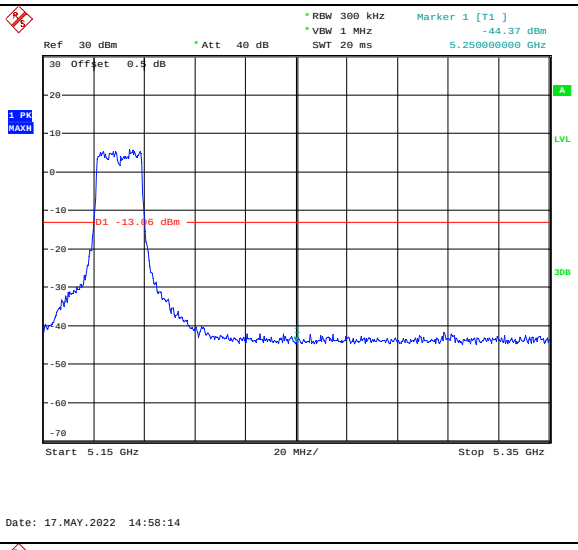
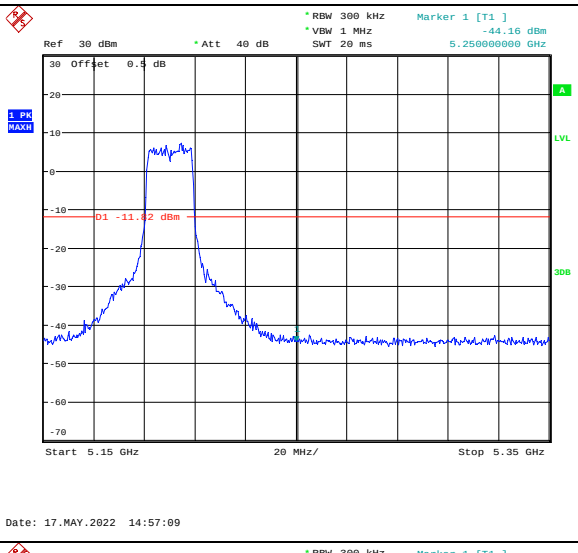
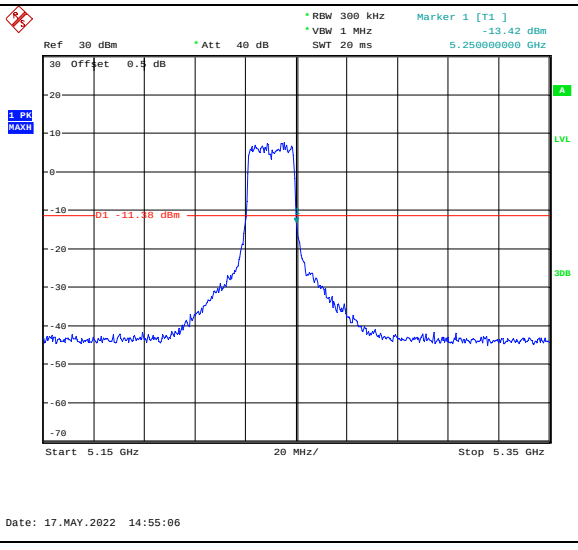
26dB attenuated below the channel power	
802.11ax hew40 Lowest Channel	
802.11ax hew40 Highest Channel	
802.11ax hew80 Middle Channel	

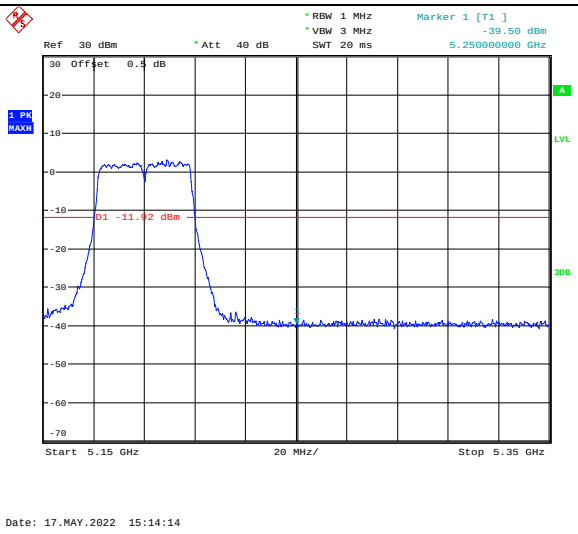
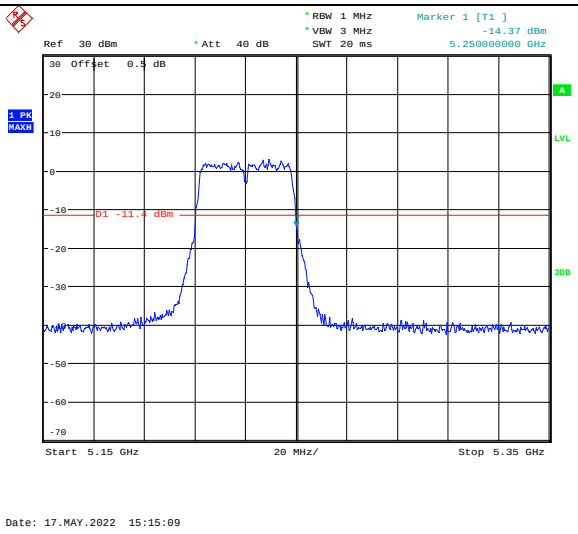
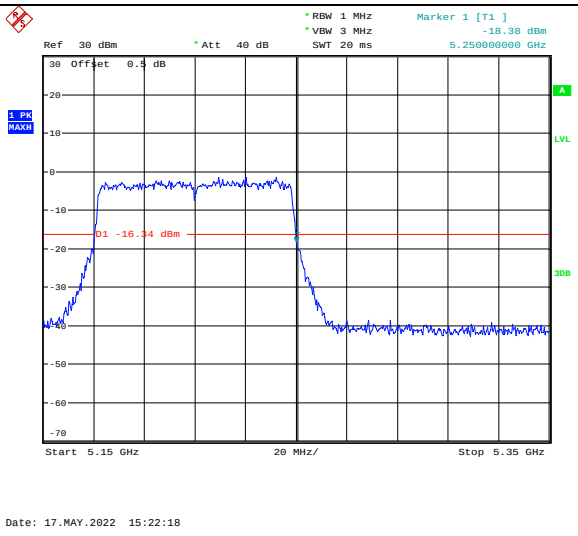
Chain 1:

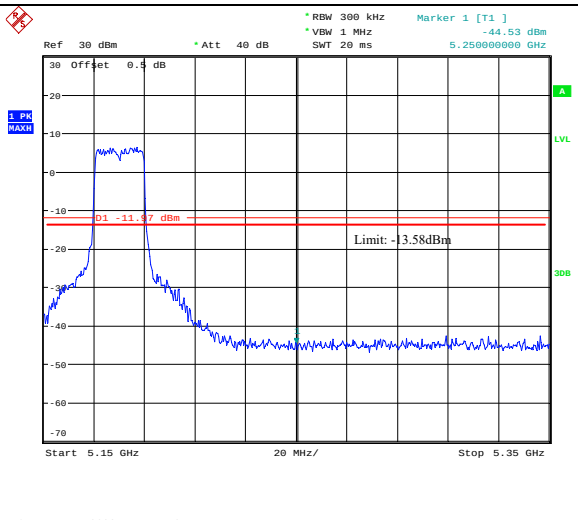
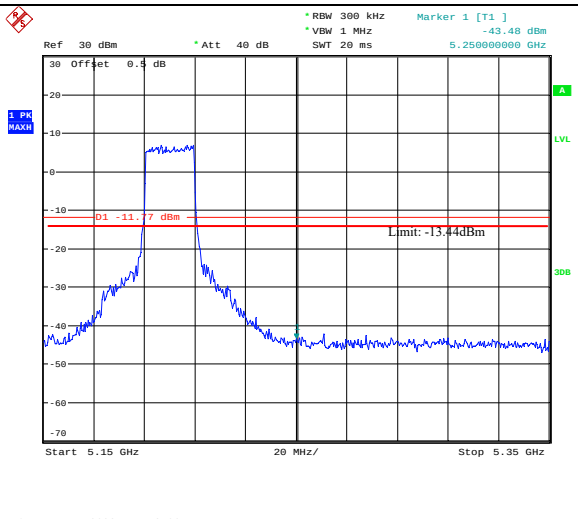
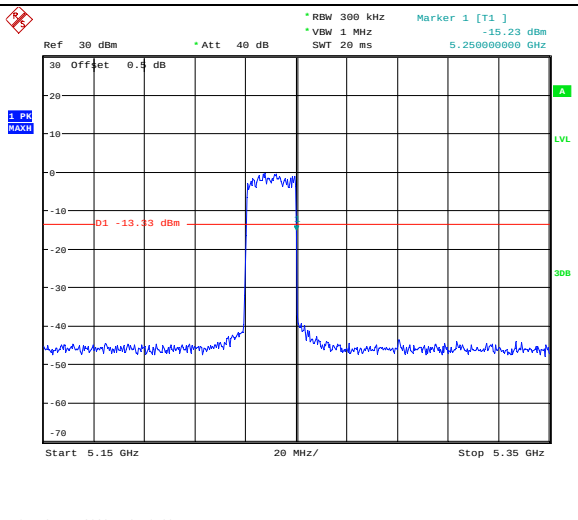
26dB attenuated below the channel power	
802.11a Lowest Channel	
802.11a Middle Channel	
802.11a Highest Channel	

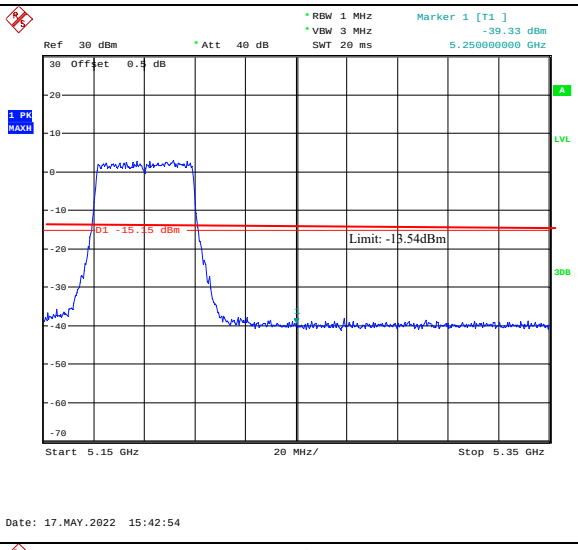
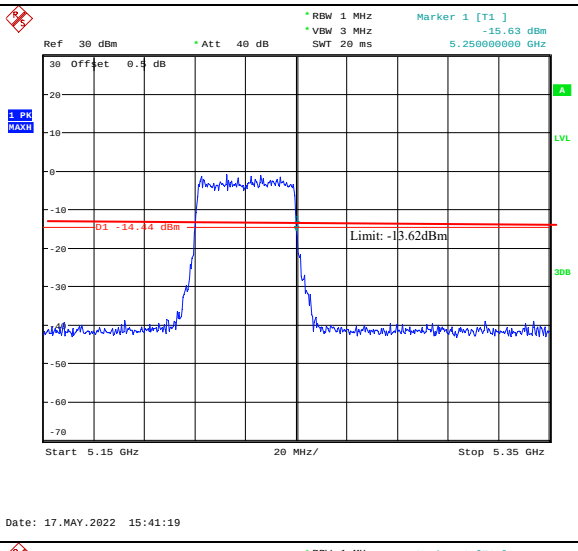
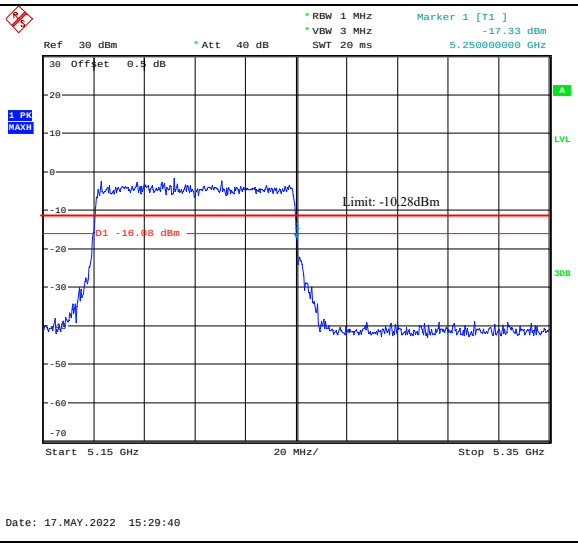
26dB attenuated below the channel power	
802.11n ht20 Lowest Channel	
802.11n ht20 Middle Channel	
802.11n ht20 Highest Channel	

26dB attenuated below the channel power	
802.11n ht40 Lowest Channel	
802.11n ht40 Highest Channel	

26dB attenuated below the channel power	
802.11ac vht20 Lowest Channel	
802.11ac vht20 Middle Channel	
802.11ac vht20 Highest Channel	

26dB attenuated below the channel power	
802.11ac vht40 Lowest Channel	
802.11ac vht40 Highest Channel	
802.11ac vht80 Middle Channel	

26dB attenuated below the channel power	
802.11ax hew20 Lowest Channel	
802.11ax hew20 Middle Channel	
802.11ax hew20 Highest Channel	

26dB attenuated below the channel power	
802.11ax hew40 Lowest Channel	
802.11ax hew40 Highest Channel	
802.11ax hew80 Middle Channel	

4.4 Emission Bandwidth:

Serial Number:	CR22010029-RF-S1	Test Date:	2022-05-17
Test Site:	RF	Test Mode:	Transmitting
Tester:	Julie Tan	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	22.5	Relative Humidity: (%)	52	ATM Pressure: (kPa)	100.8

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2021-07-22	2022-07-21
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A

** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

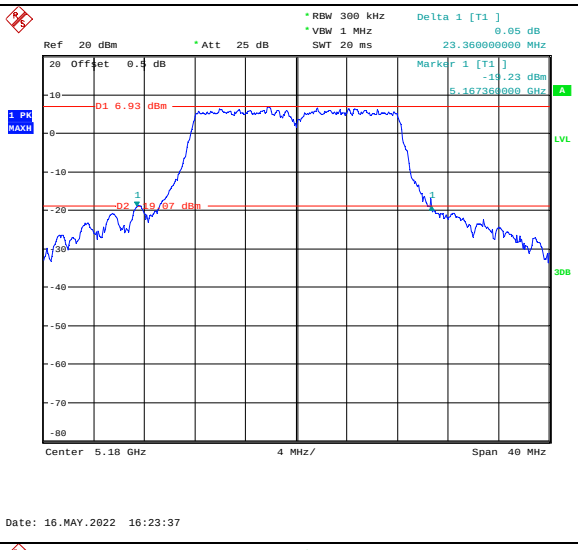
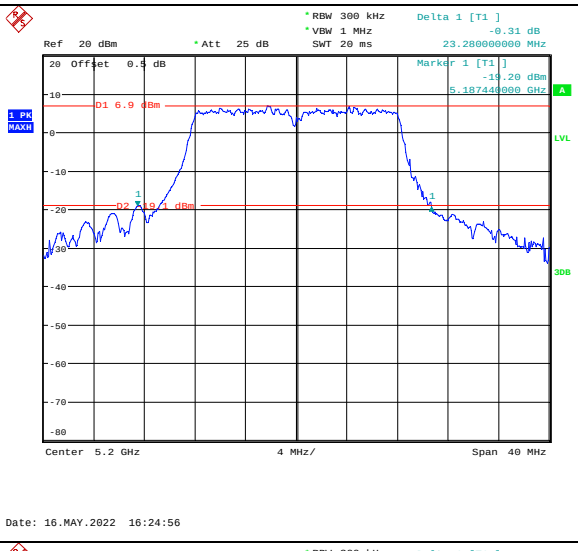
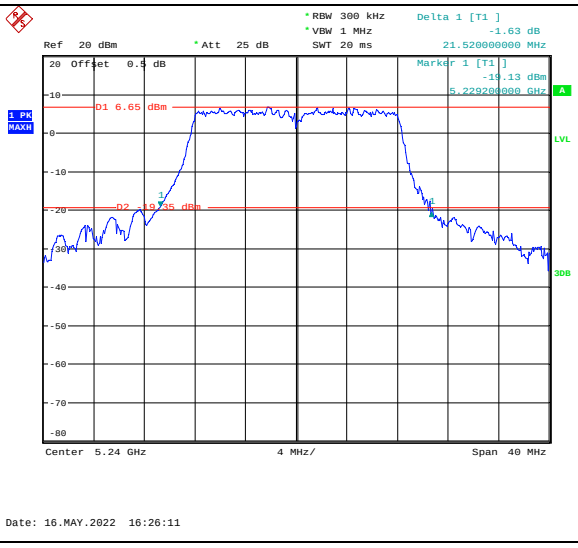
5150-5250 MHz:

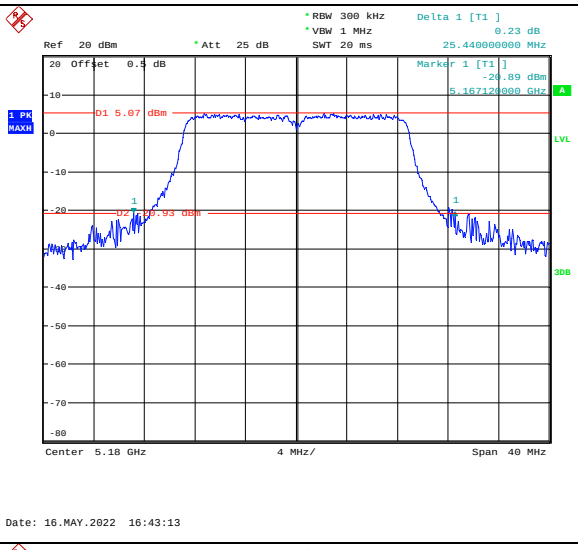
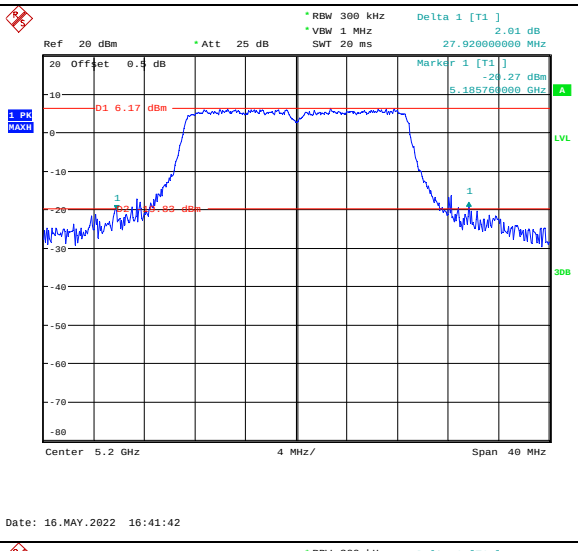
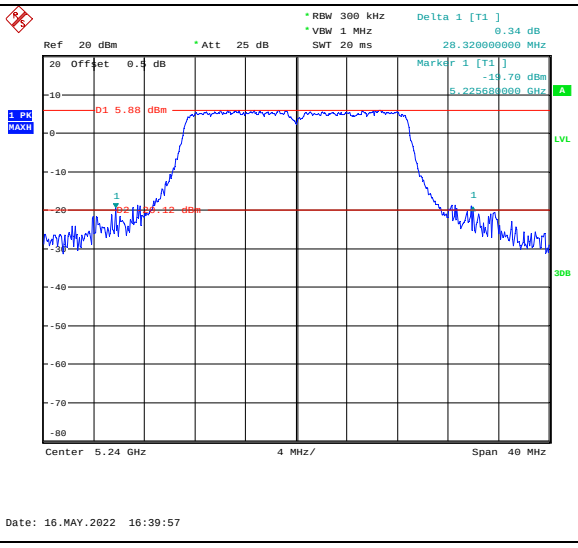
Test Modes	Test Frequency (MHz)	26 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5180	23.360	16.880
	5200	23.280	16.960
	5240	21.520	16.960
802.11n ht20	5180	25.440	18.160
	5200	27.920	18.240
	5240	28.320	18.240
802.11n ht40	5190	44.320	37.120
	5230	44.000	37.120
802.11ac vht20	5180	22.160	17.920
	5200	22.160	18.000
	5240	22.080	17.920
802.11ac vht40	5190	43.520	37.120
	5230	43.360	36.960
802.11ac vht80	5210	87.680	76.800
802.11ax hew20	5180	22.720	19.200
	5200	22.560	19.200
	5240	22.400	19.200
802.11ax hew40	5190	43.520	38.080
	5230	43.680	38.240
802.11ax hew80	5210	88.960	78.080
Note: Test only was performed at Chain 0. The 99% Occupied Bandwidths are not fall into the range of 5250-5350MHz, please refer to the test plots.			

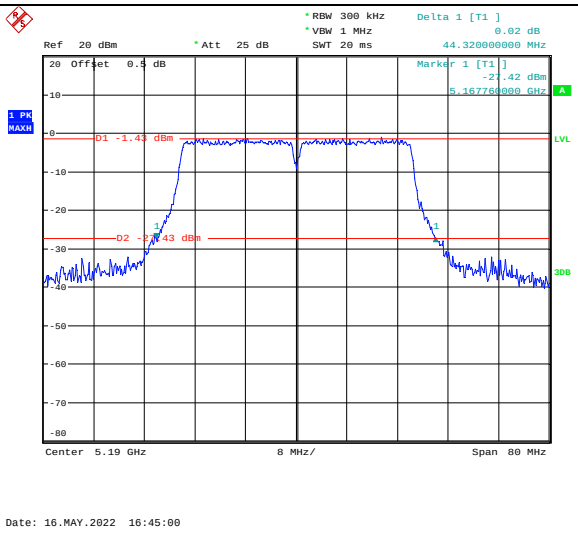
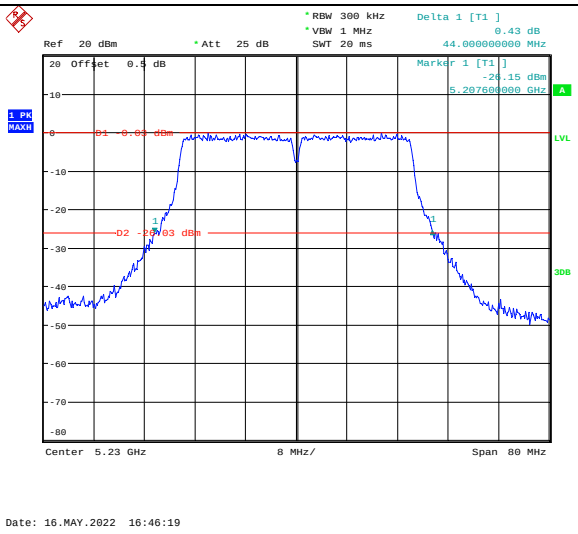
5725-5850 MHz:

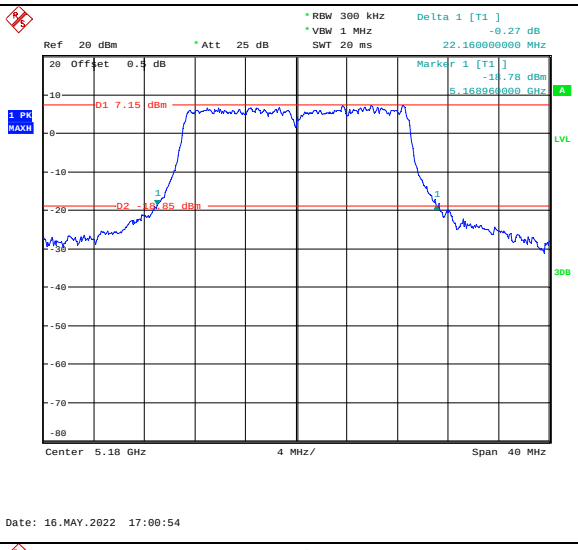
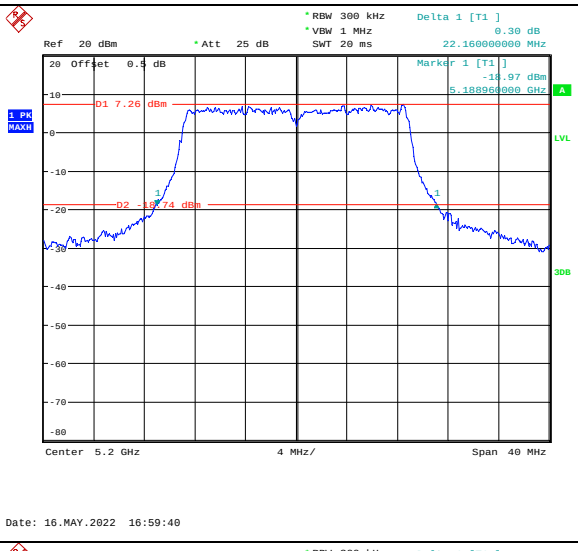
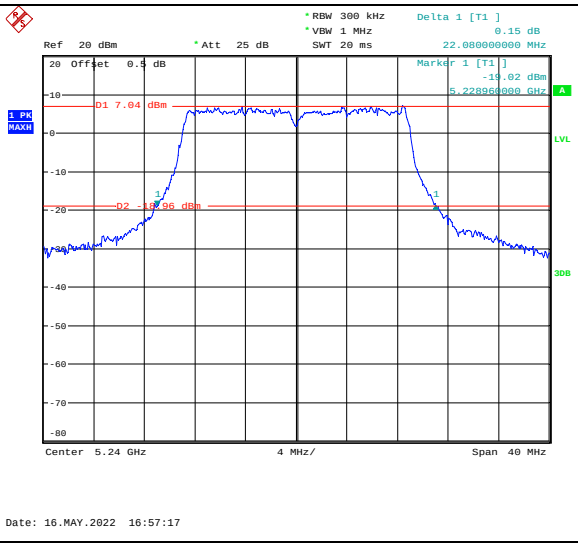
Test Modes	Test Frequency (MHz)	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5745	16.400	17.200
	5785	16.400	17.440
	5825	16.400	17.200
802.11n ht20	5745	17.680	18.240
	5785	17.680	18.400
	5825	17.680	18.400
802.11n ht40	5755	36.320	37.600
	5795	36.320	38.240
802.11ac vht20	5745	17.840	18.000
	5785	17.840	18.080
	5825	17.840	18.240
802.11ac vht40	5755	36.640	37.280
	5795	36.640	37.280
802.11ac vht80	5775	76.800	76.800
802.11ax hew20	5745	19.120	19.280
	5785	19.120	19.280
	5825	19.120	19.440
802.11ax hew40	5755	38.240	38.400
	5795	38.240	38.400
802.11ax hew80	5775	78.400	78.400
Note: 6dB Emission Bandwidth Limit: ≥0.5 MHz Test only was performed at Chain 0. The 99% Occupied Bandwidths are not fall into the range of 5470-5725MHz			

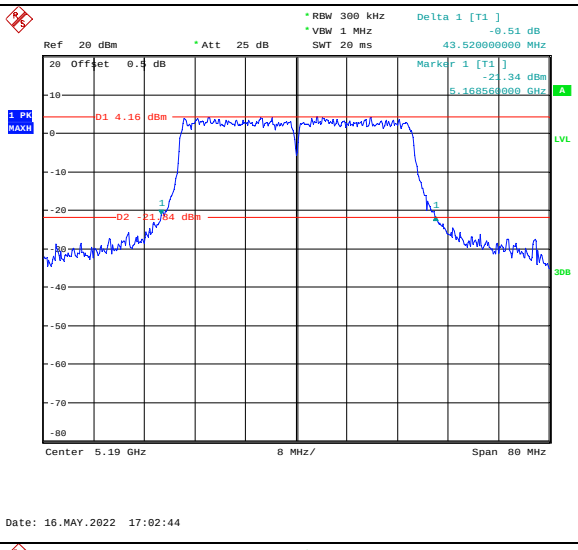
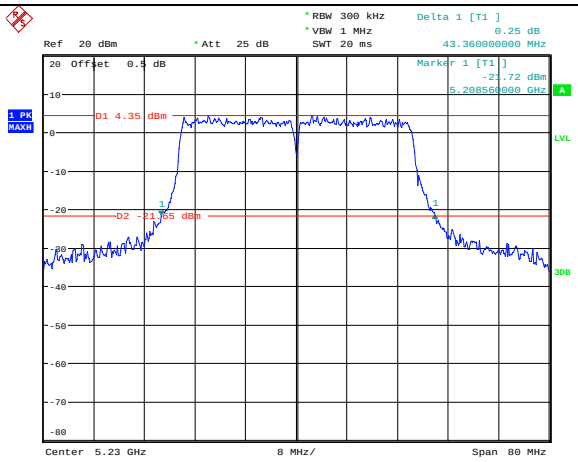
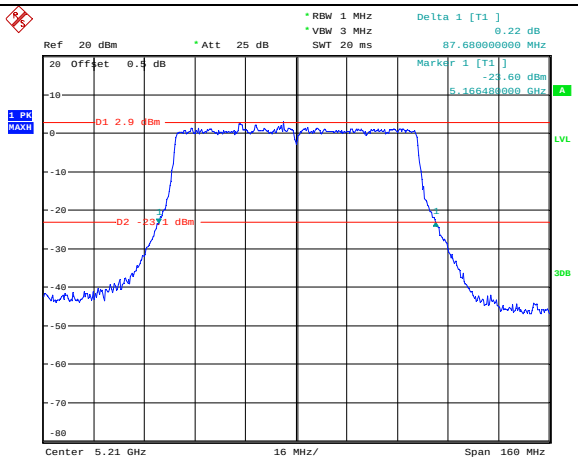
5150-5250MHz:

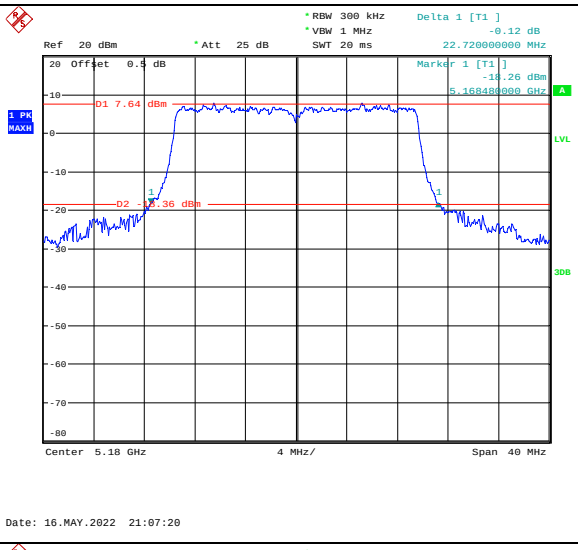
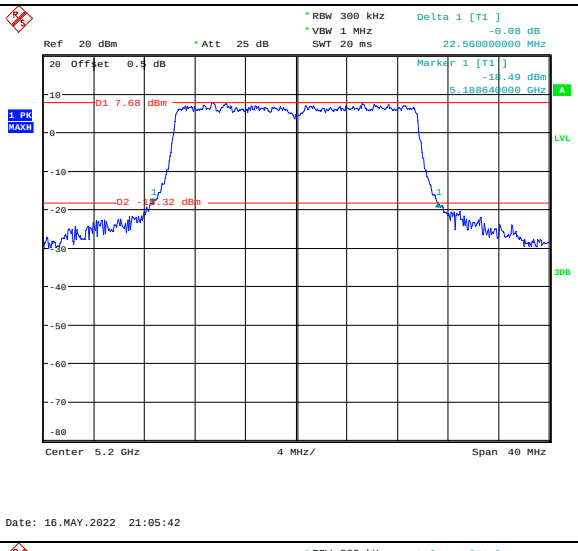
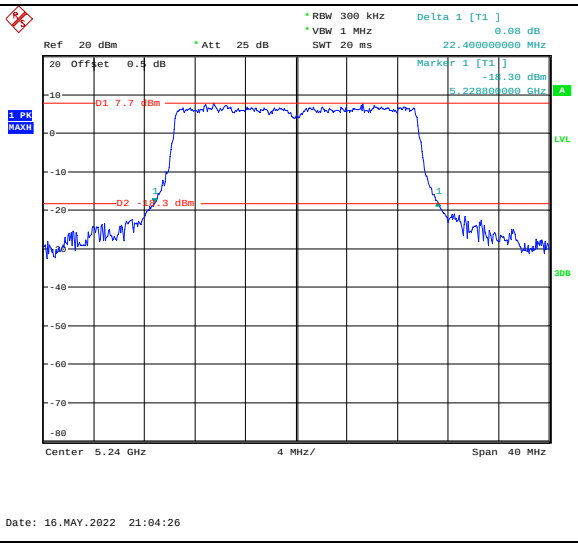
26dB Emission Bandwidth	
802.11a Lowest Channel	
802.11a Middle Channel	
802.11a Highest Channel	

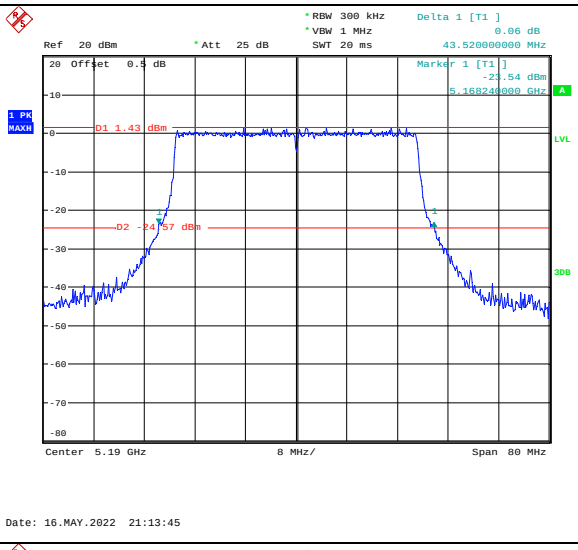
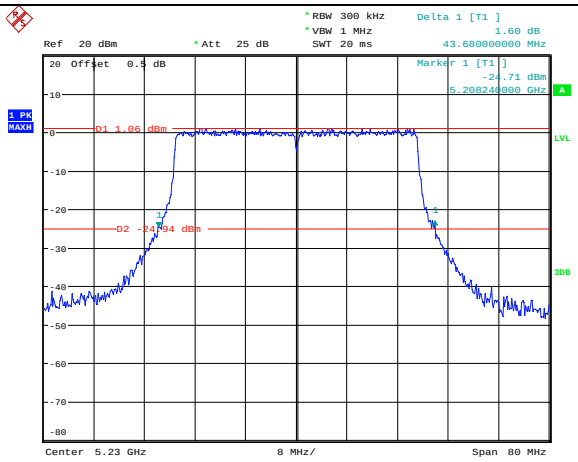
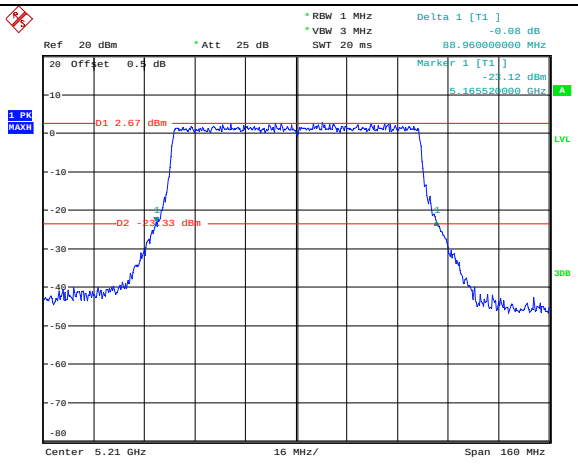
26dB Emission Bandwidth	
802.11n ht20 Lowest Channel	
802.11n ht20 Middle Channel	
802.11n ht20 Highest Channel	

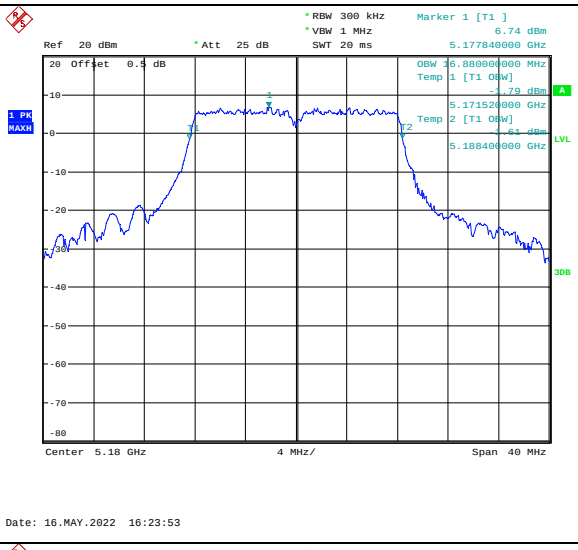
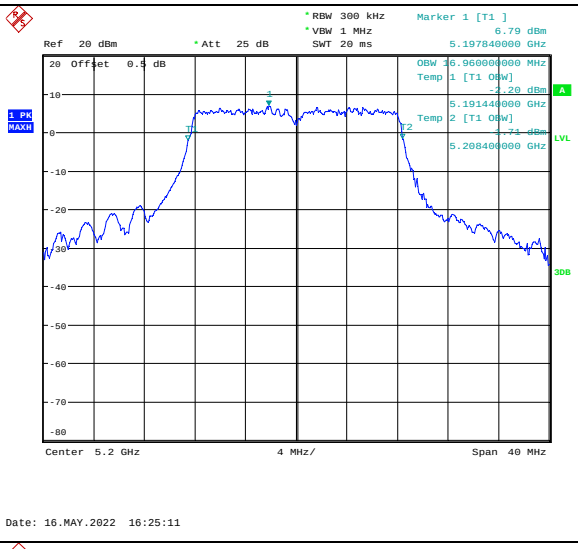
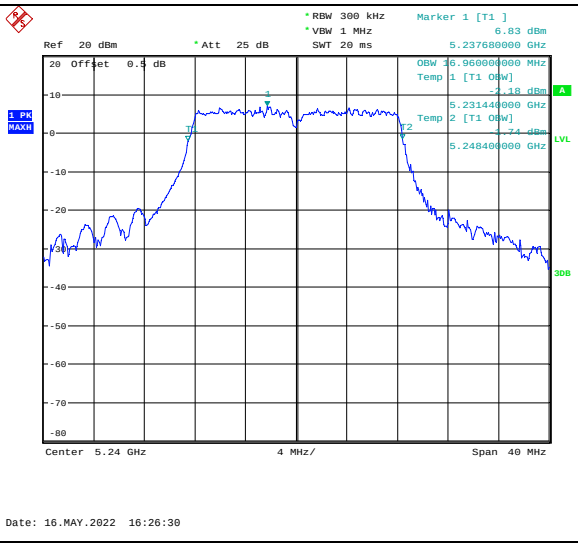
26dB Emission Bandwidth	
802.11n ht40 Lowest Channel	
802.11n ht40 Highest Channel	

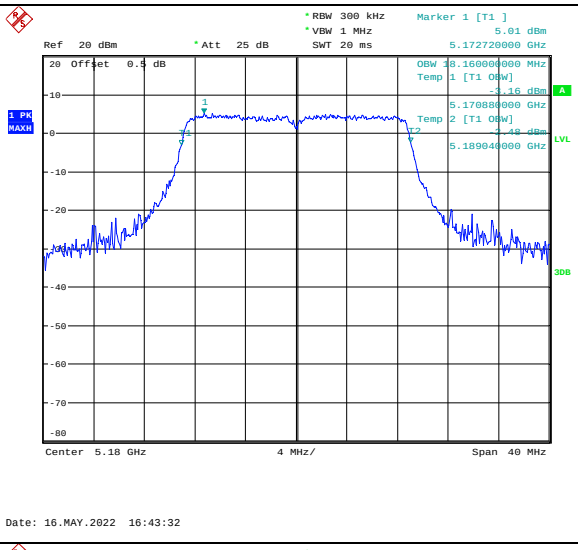
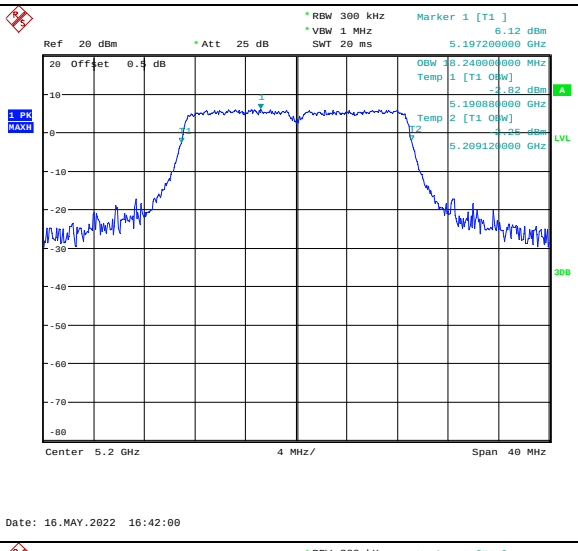
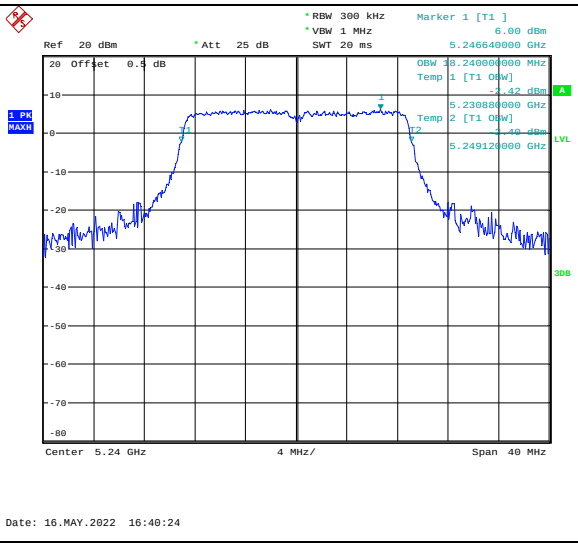
26dB Emission Bandwidth	
802.11ac vht20 Lowest Channel	
802.11ac vht20 Middle Channel	
802.11ac vht20 Highest Channel	

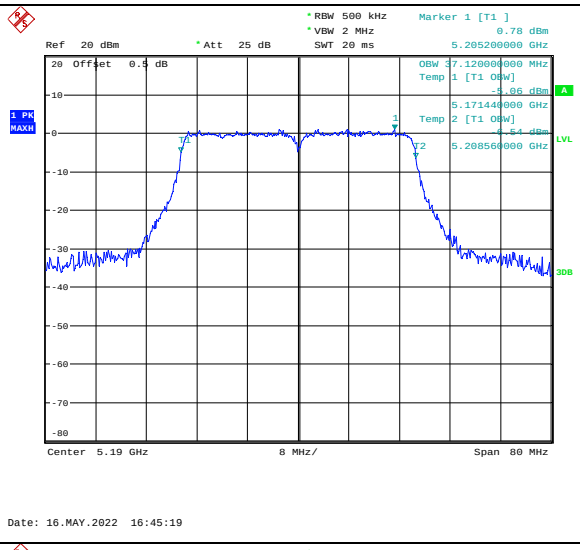
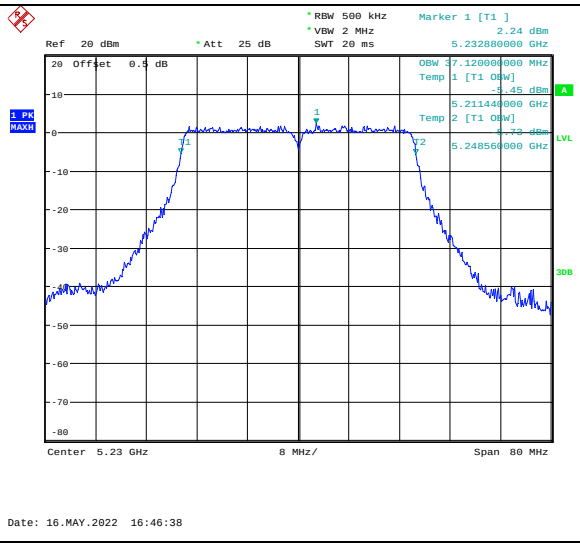
26dB Emission Bandwidth	
802.11ac vht40 Lowest Channel	
802.11ac vht40 Highest Channel	
802.11ac vht80 Middle Channel	

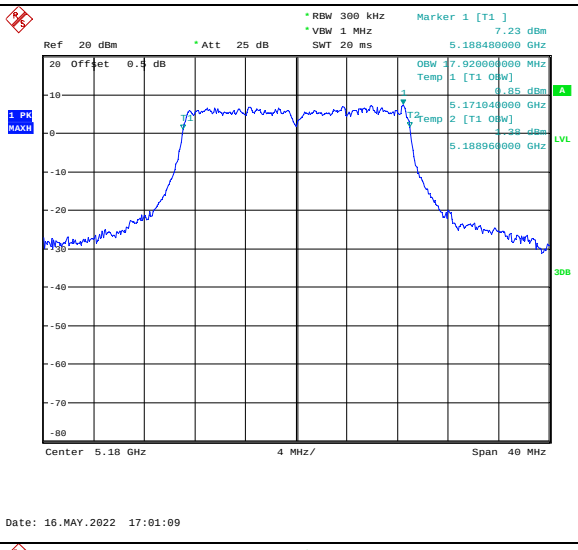
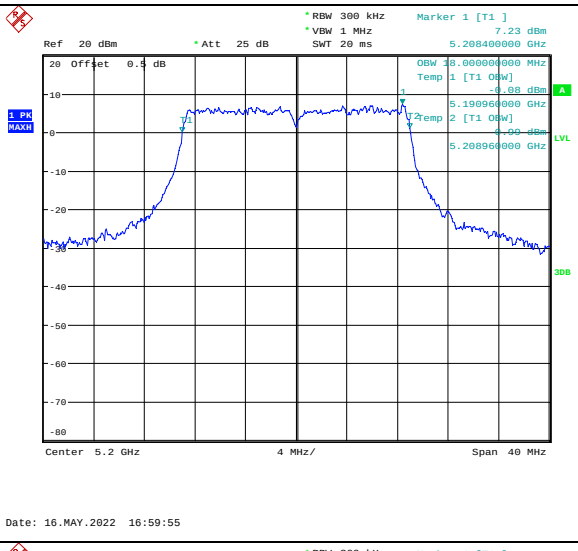
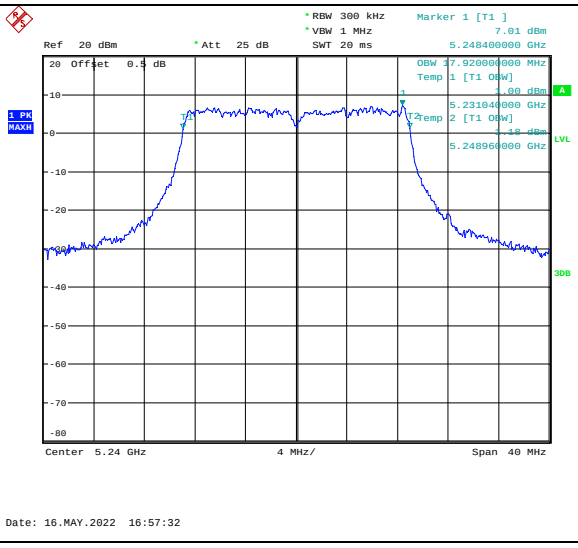
26dB Emission Bandwidth	
802.11ax hew20 Lowest Channel	
802.11 ax vht20 Middle Channel	
802.11 ax vht20 Highest Channel	

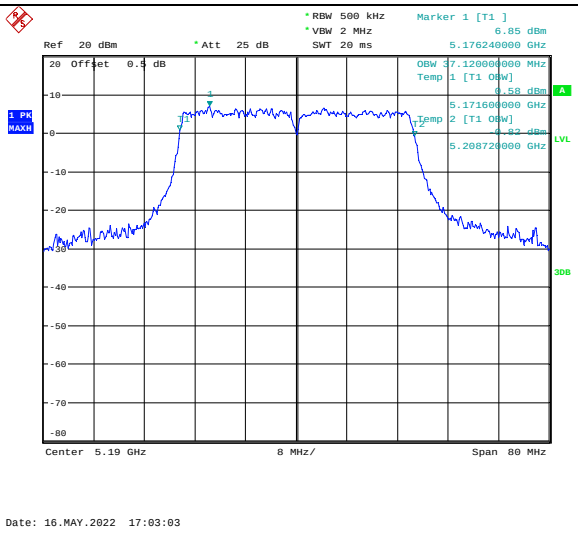
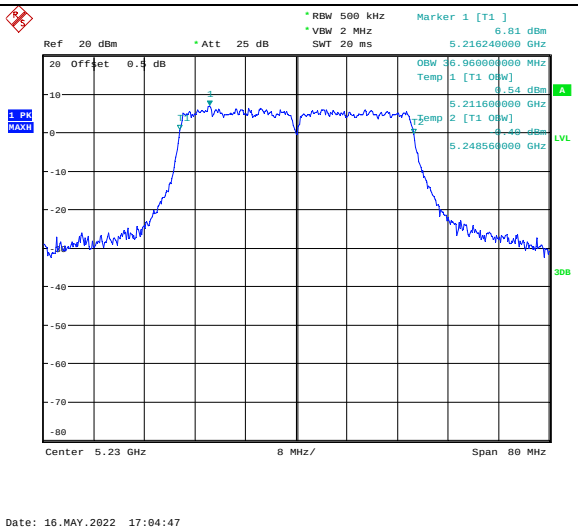
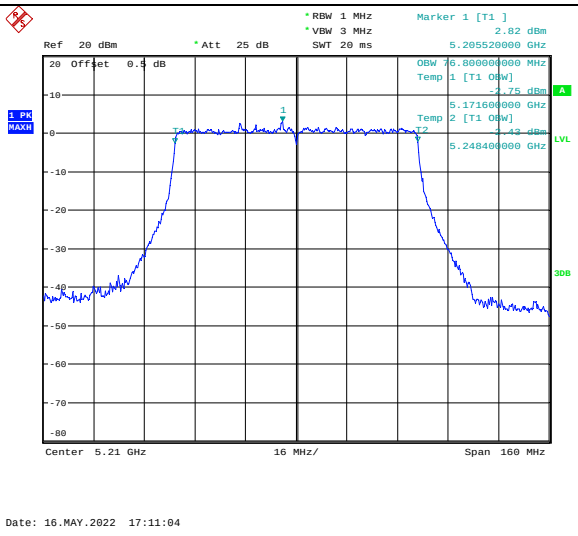
26dB Emission Bandwidth	
802.11ax hew40 Lowest Channel	
802.11 ax vht40 Highest Channel	
802.11ax hew80 Middle Channel	

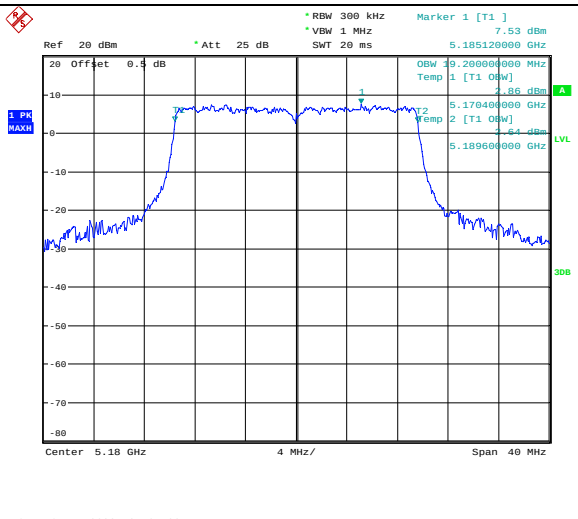
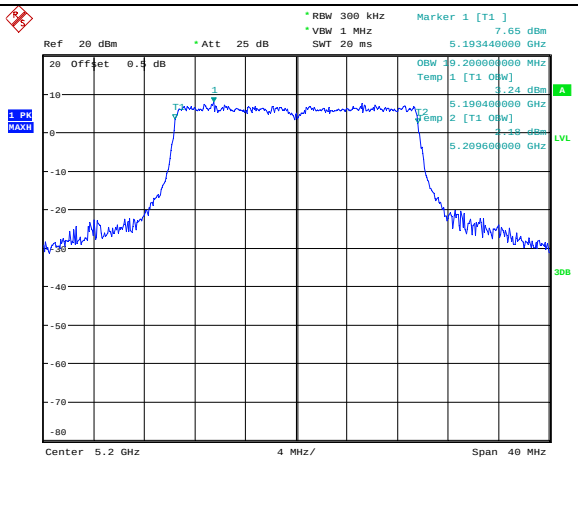
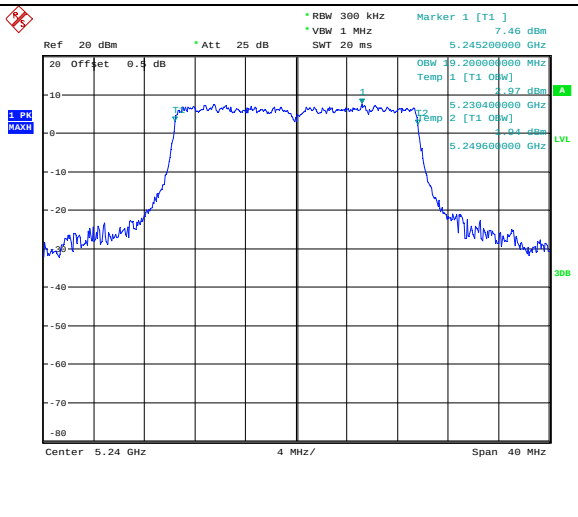
99% Emission Bandwidth	
802.11a Lowest Channel	
802.11a Middle Channel	
802.11a Highest Channel	

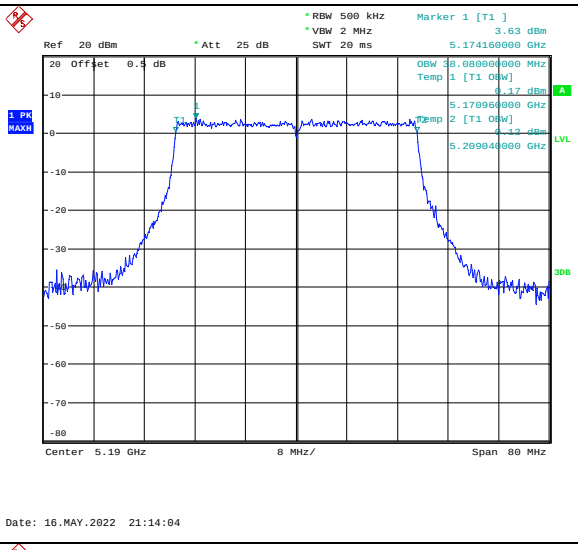
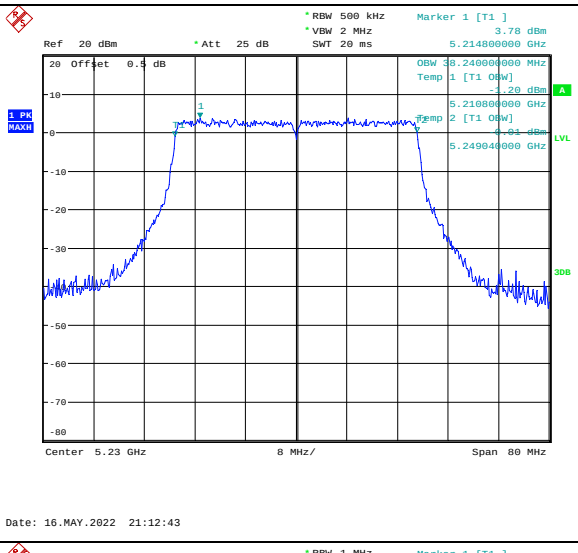
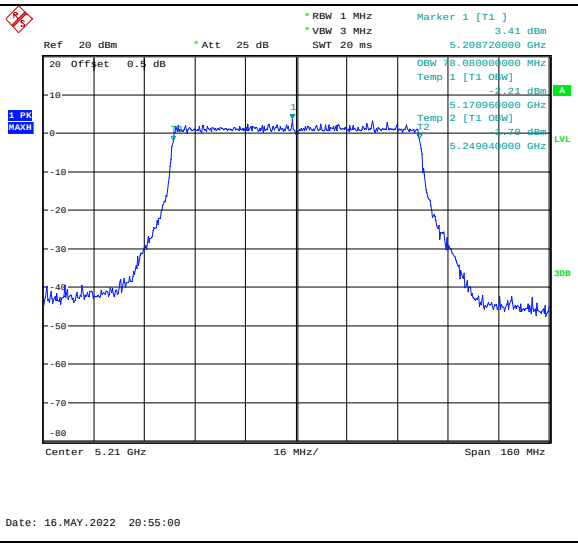
99% Emission Bandwidth	
802.11n ht20 Lowest Channel	
802.11n ht20 Middle Channel	
802.11n ht20 Highest Channel	

99% Emission Bandwidth	
802.11n ht40 Lowest Channel	
802.11n ht40 Highest Channel	

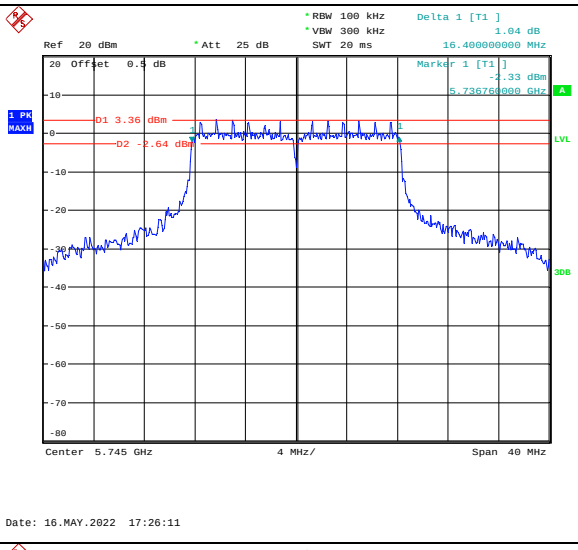
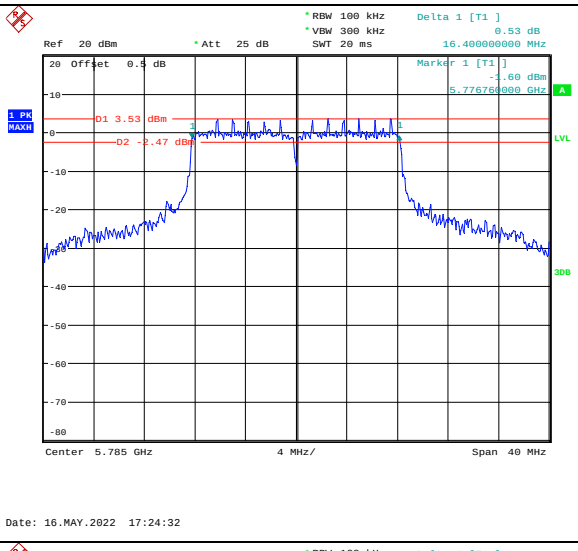
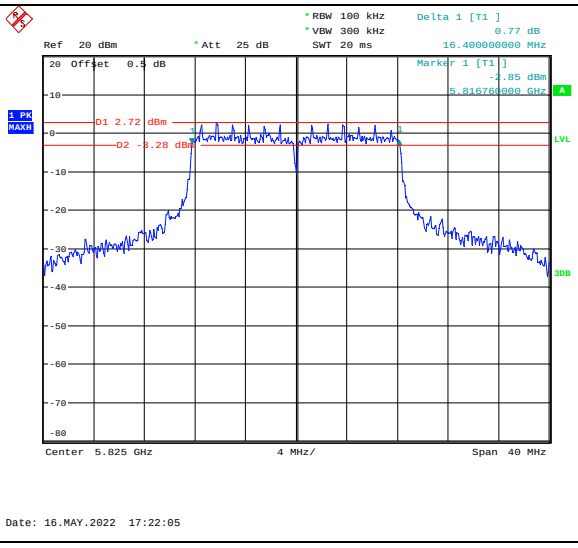
99% Emission Bandwidth	
802.11ac vht20 Lowest Channel	
802.11ac vht20 Middle Channel	
802.11ac vht20 Highest Channel	

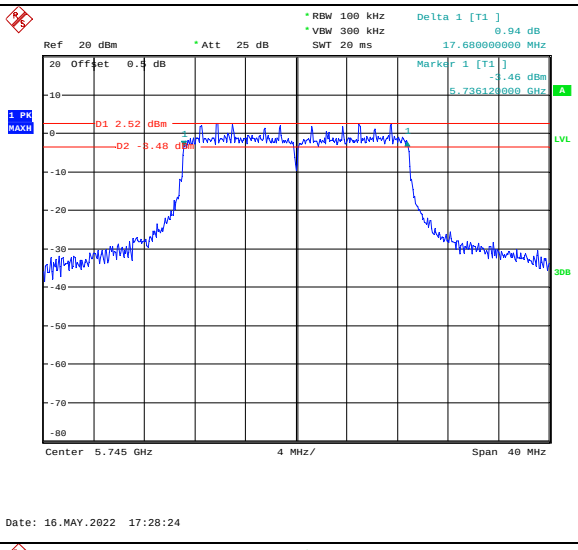
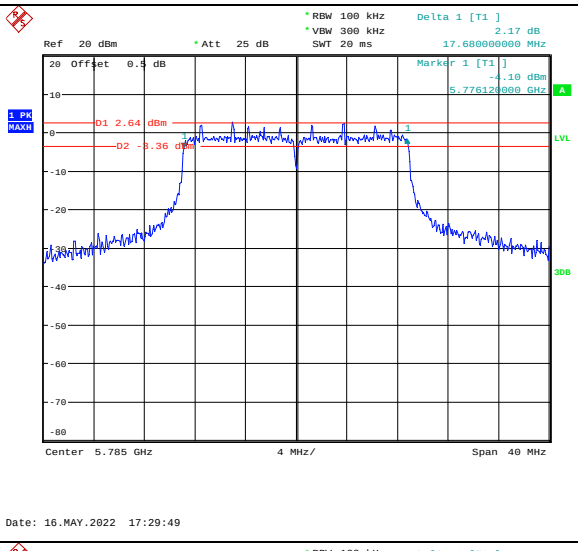
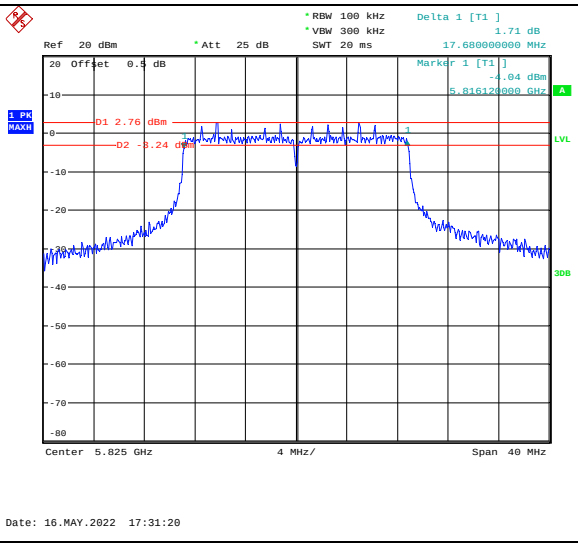
99% Emission Bandwidth	
802.11ac vht40 Lowest Channel	
802.11ac vht40 Highest Channel	
802.11ac vht80 Middle Channel	

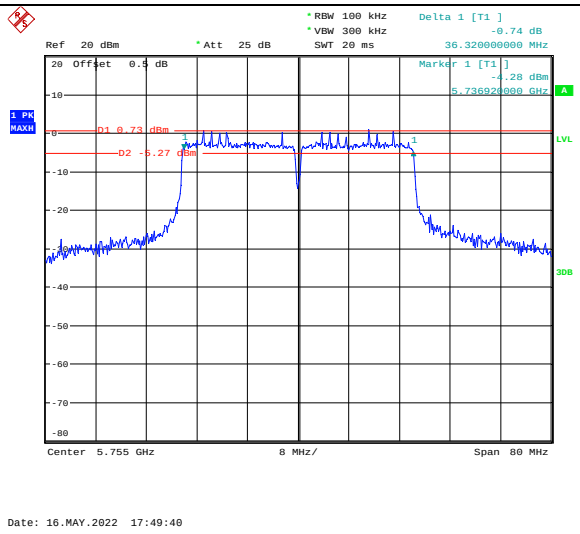
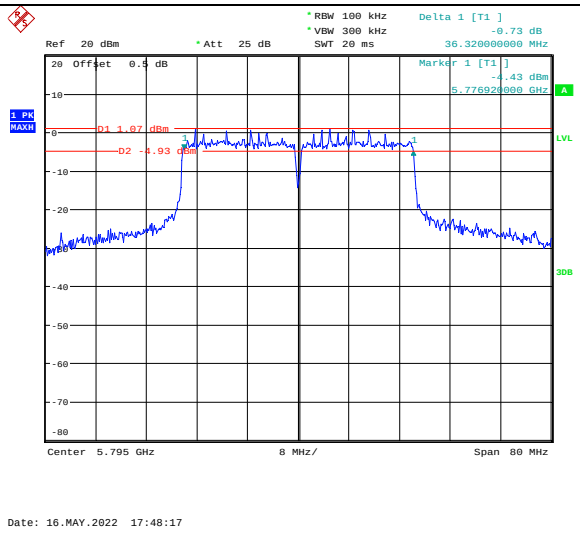
99% Emission Bandwidth	
802.11ax hew20 Lowest Channel	
802.11ax hew20 Middle Channel	
802.11ax hew20 Highest Channel	

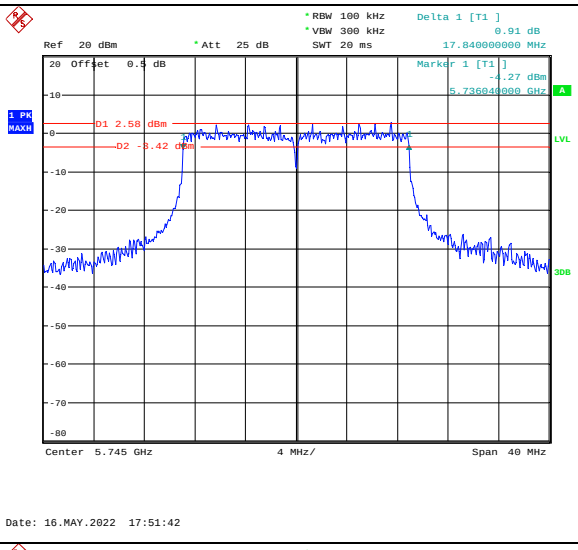
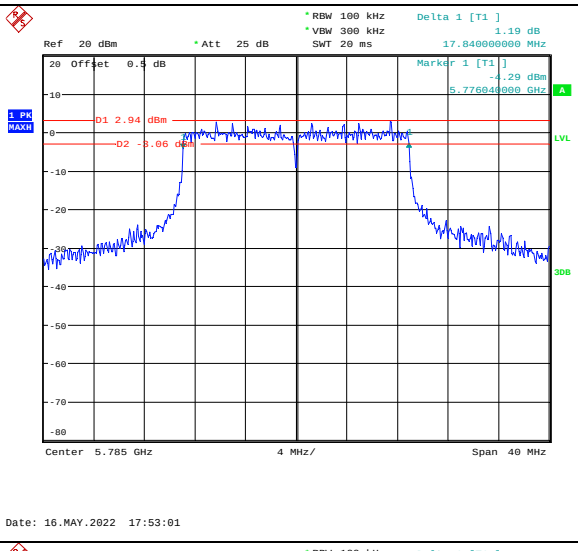
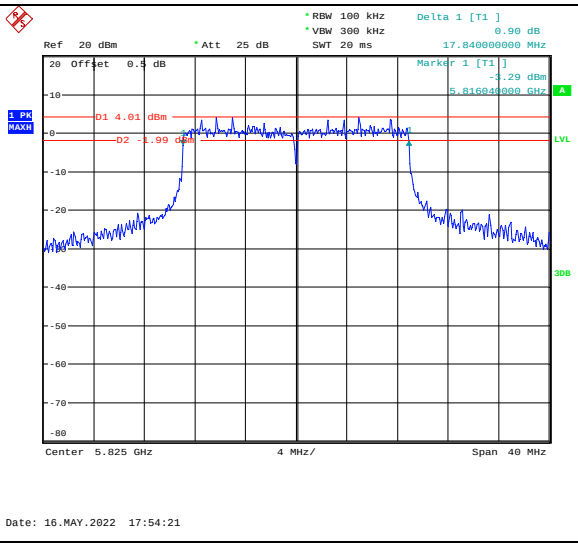
99% Emission Bandwidth	
802.11ax hew40 Lowest Channel	
802.11ax hew40 Highest Channel	
802.11ax hew80 Middle Channel	

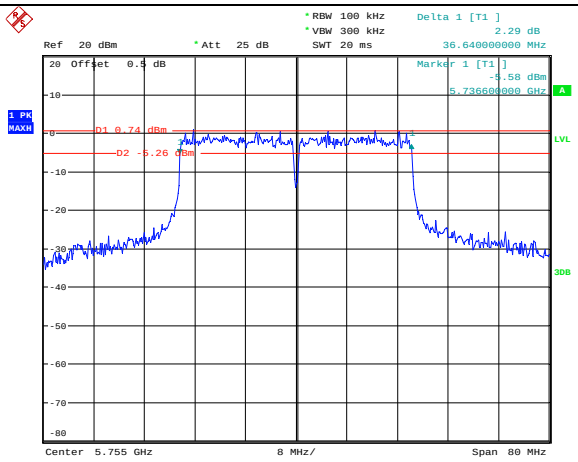
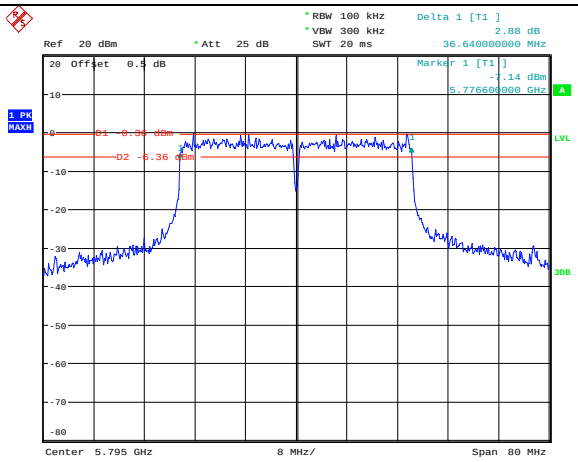
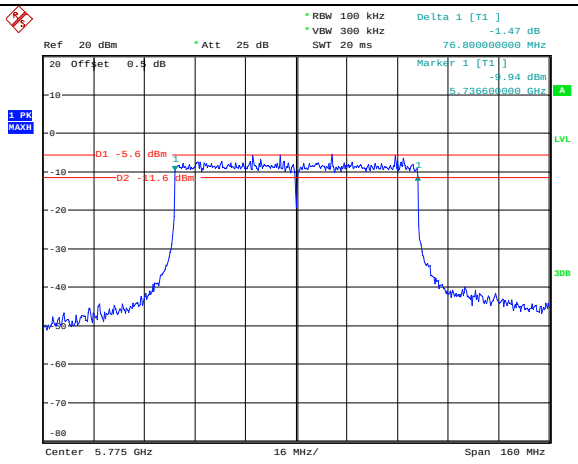
5725-5850MHz:

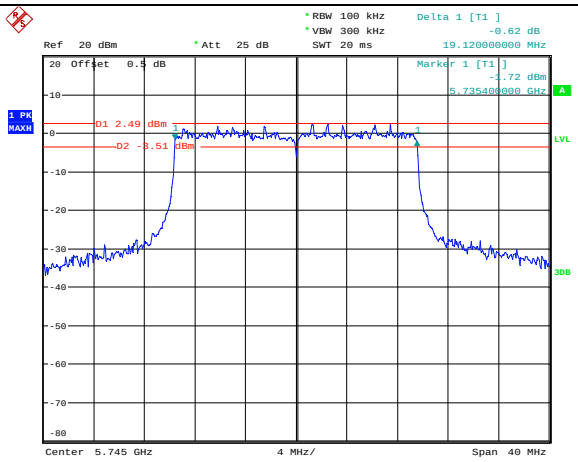
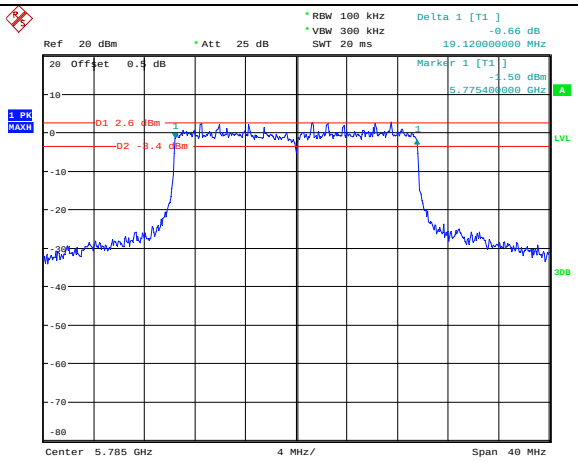
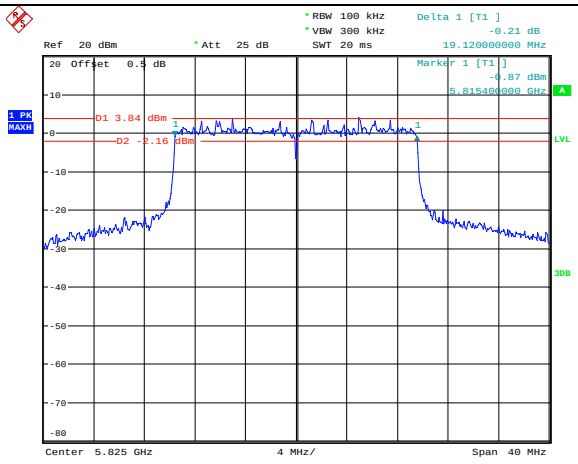
6dB Emission Bandwidth	
802.11a Lowest Channel	
802.11a Middle Channel	
802.11a Highest Channel	

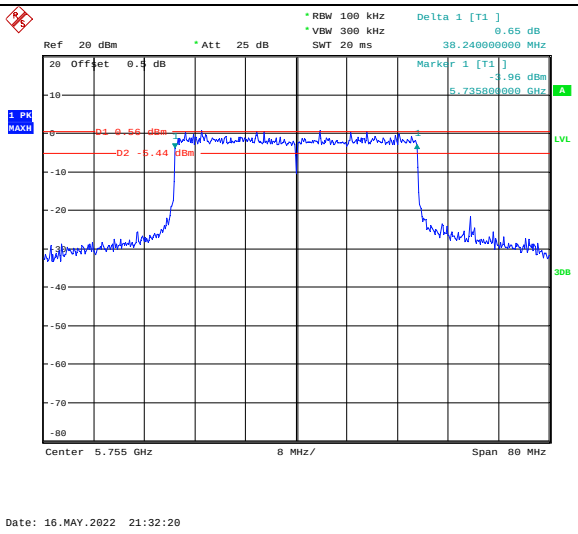
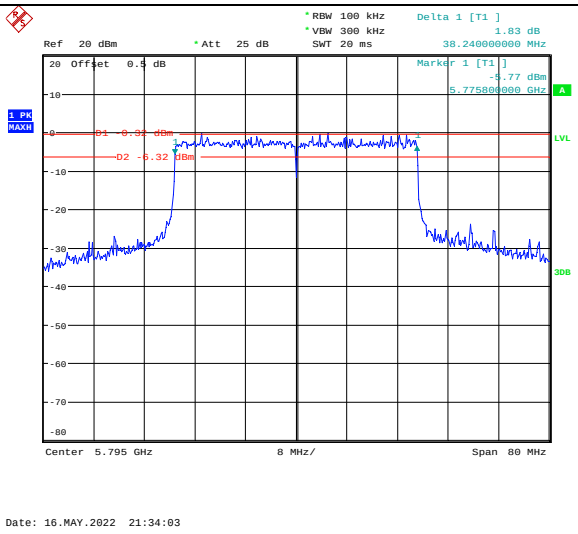
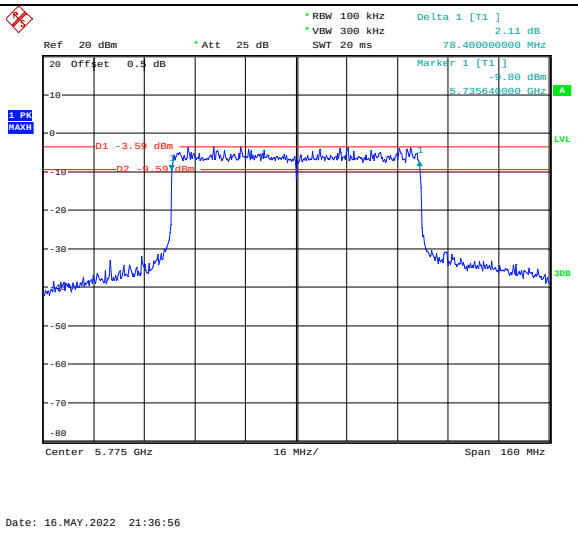
6dB Emission Bandwidth	
802.11n ht20 Lowest Channel	
802.11n ht20 Middle Channel	
802.11n ht20 Highest Channel	

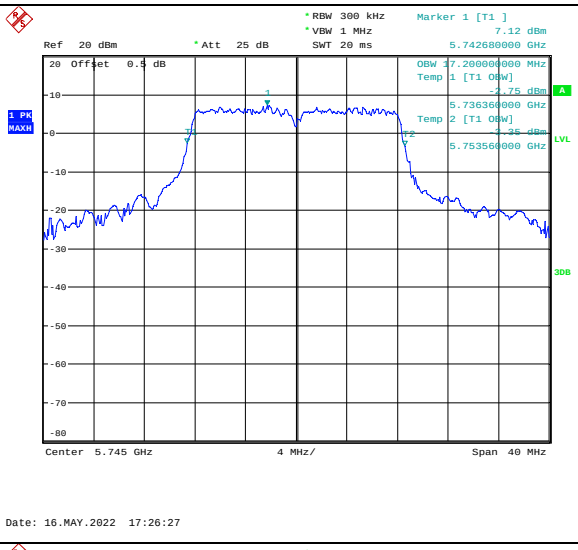
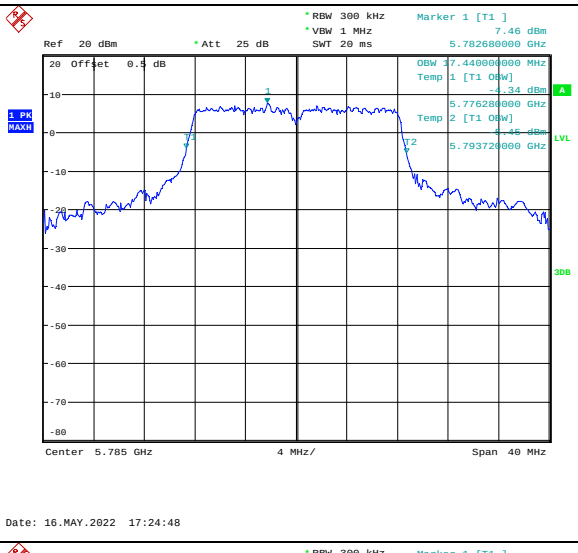
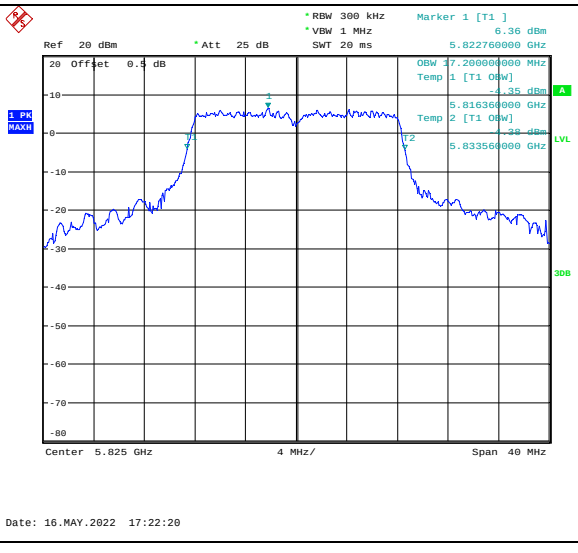
6dB Emission Bandwidth	
802.11n ht40 Lowest Channel	
802.11n ht40 Highest Channel	

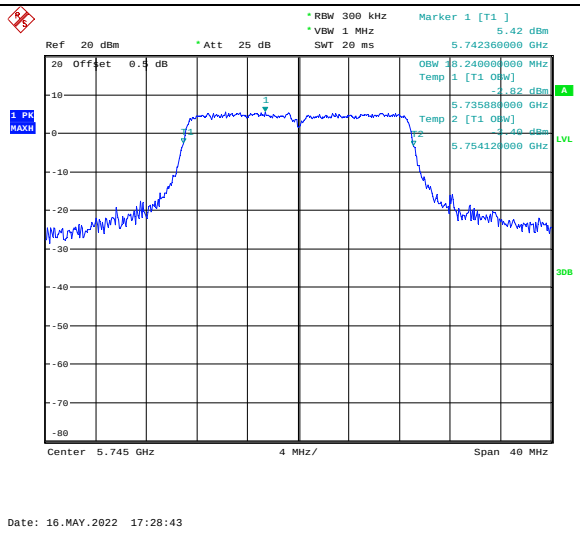
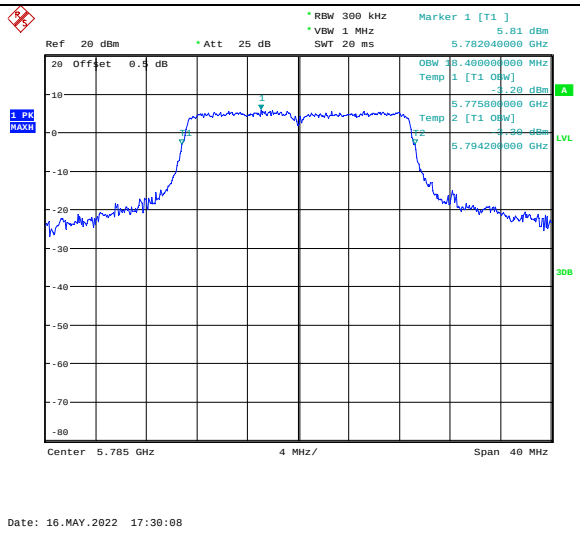
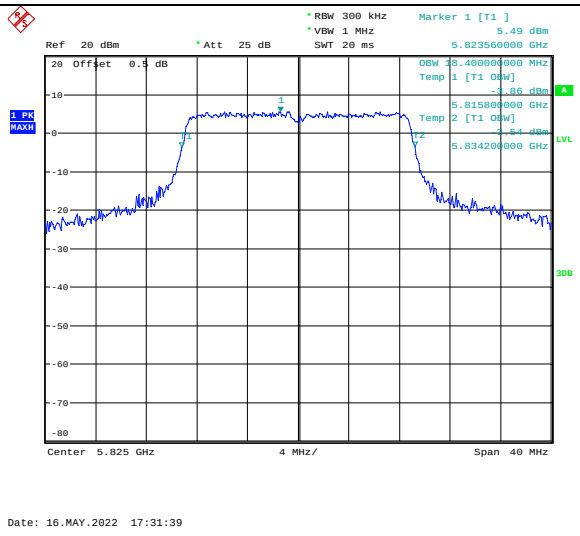
6dB Emission Bandwidth	
802.11ac vht20 Lowest Channel	
802.11ac vht20 Middle Channel	
802.11ac vht20 Highest Channel	

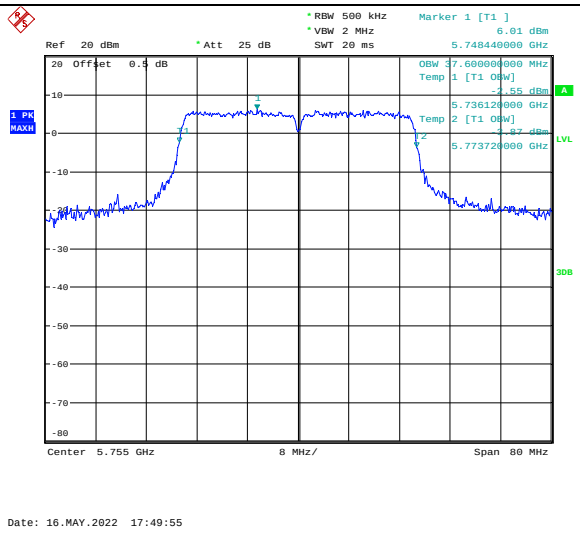
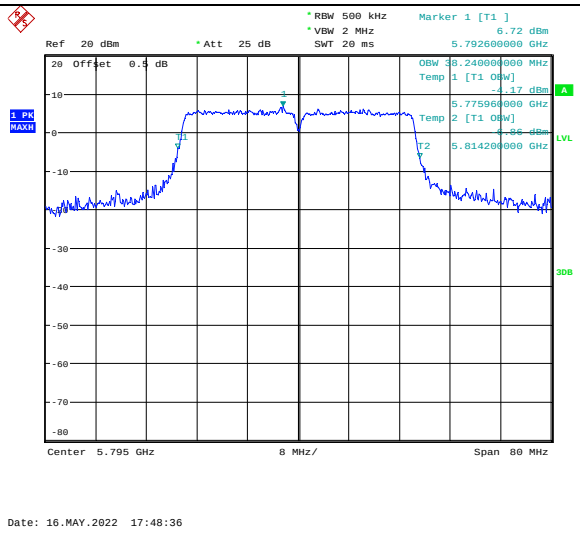
6dB Emission Bandwidth	
802.11ac vht40 Lowest Channel	
802.11ac vht40 Highest Channel	
802.11ac vht80 Middle Channel	

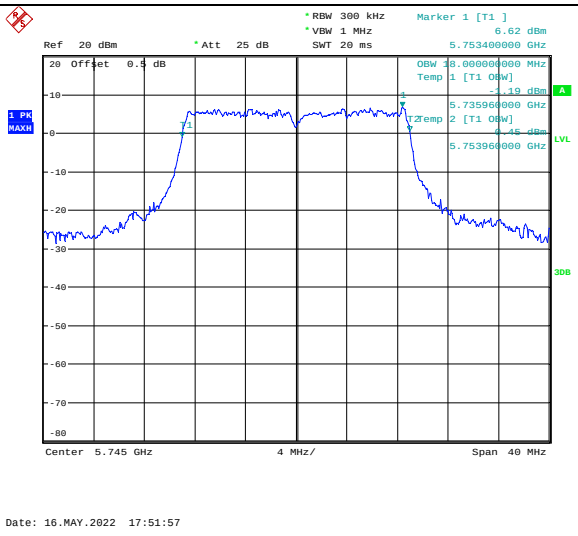
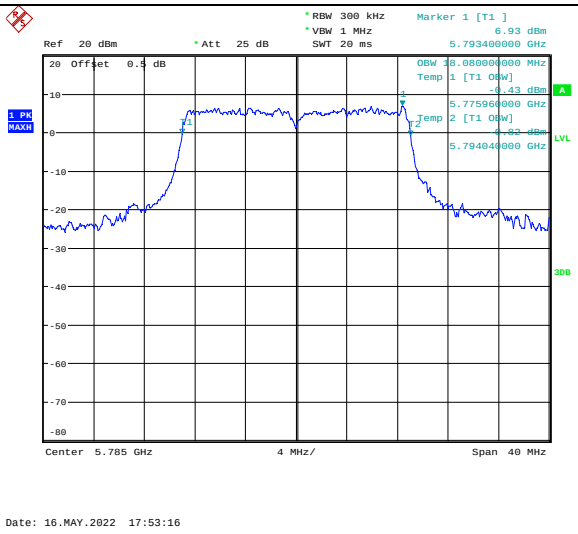
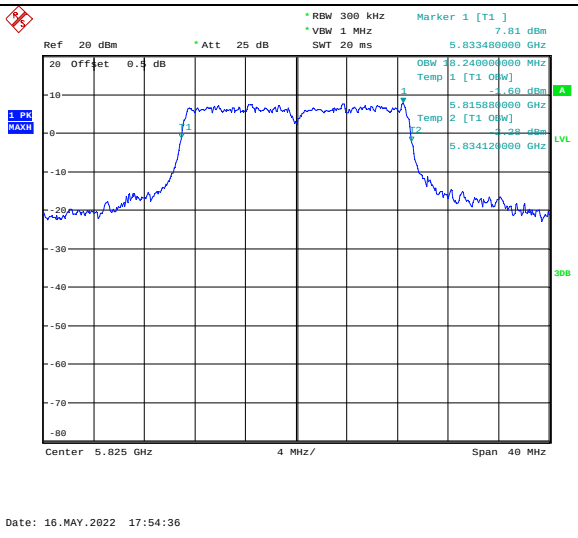
6dB Emission Bandwidth	
802.11ax hew20 Lowest Channel	
802.11ax hew20 Middle Channel	
802.11ax hew20 Highest Channel	

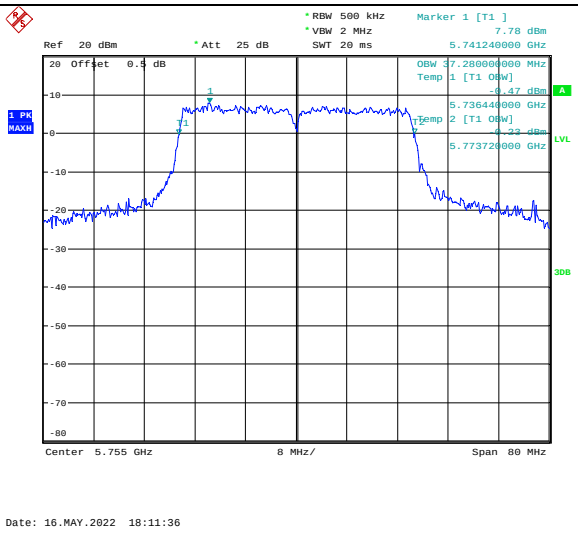
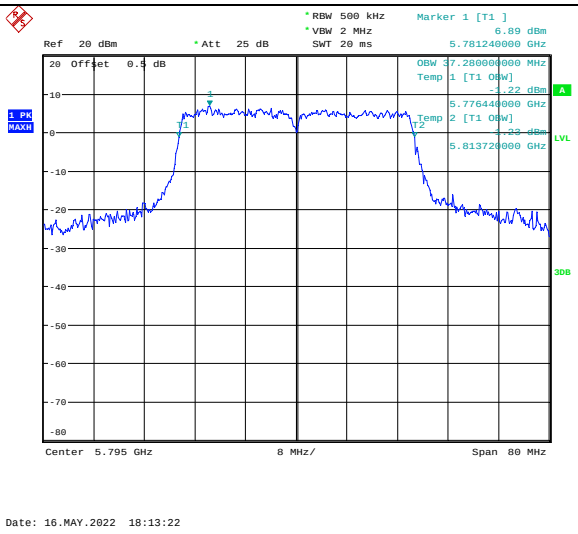
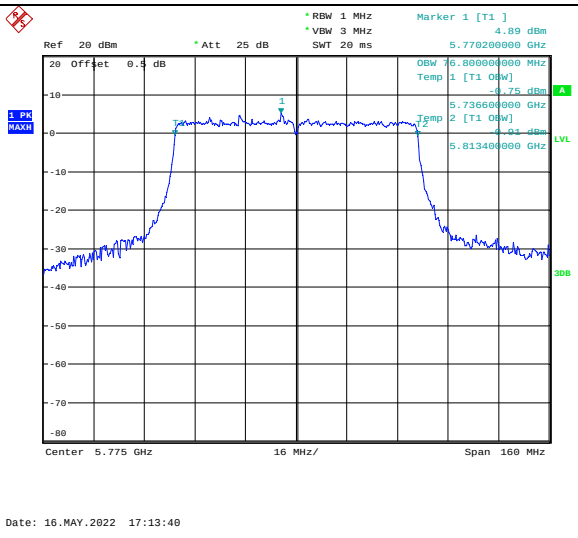
6dB Emission Bandwidth	
802.11ax hew40 Lowest Channel	
802.11ax hew40 Highest Channel	
802.11ax hew80 Middle Channel	

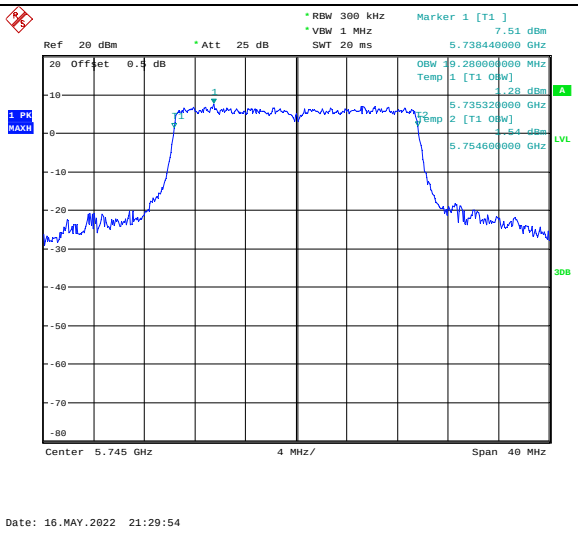
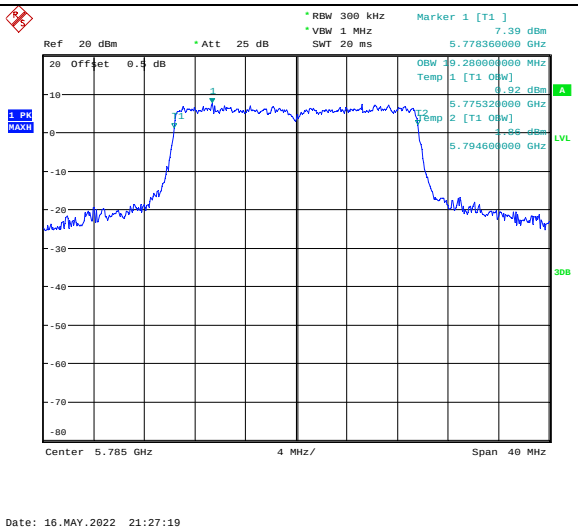
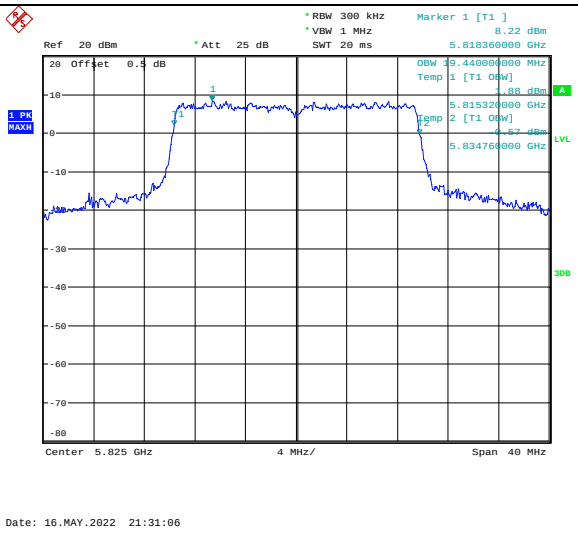
99% Emission Bandwidth	
802.11a Lowest Channel	
802.11a Middle Channel	
802.11a Highest Channel	

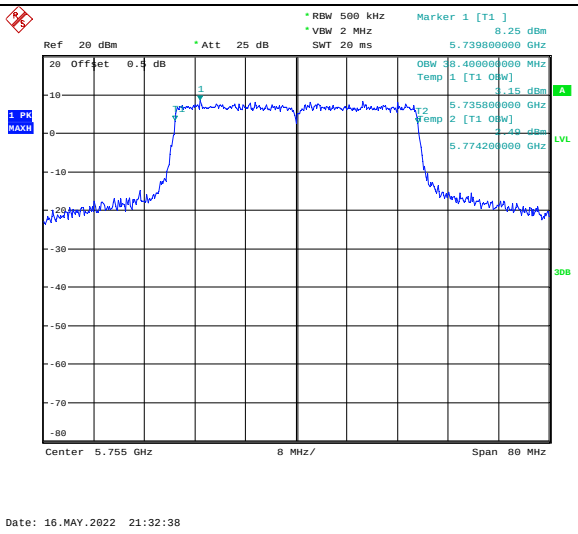
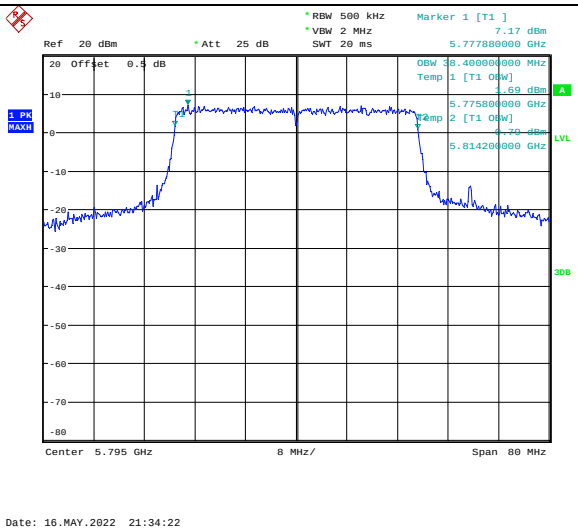
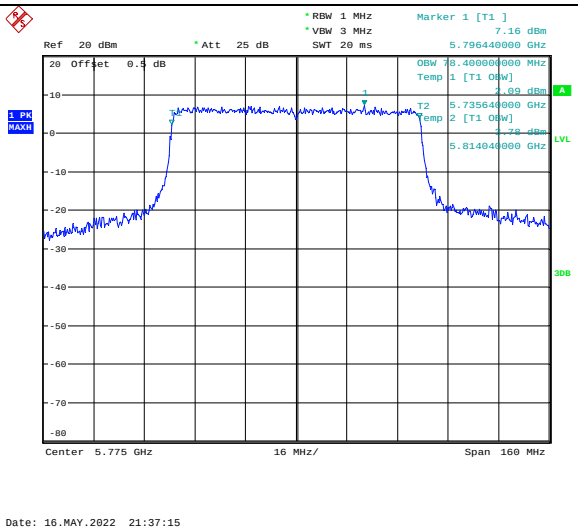
99% Emission Bandwidth	
802.11n ht20 Lowest Channel	
802.11n ht20 Middle Channel	
802.11n ht20 Highest Channel	

99% Emission Bandwidth	
802.11n ht40 Lowest Channel	
802.11n ht40 Highest Channel	

99% Emission Bandwidth	
802.11ac vht20 Lowest Channel	
802.11ac vht20 Middle Channel	
802.11ac vht20 Highest Channel	

99% Emission Bandwidth	
802.11ac vht40 Lowest Channel	
802.11ac vht40 Highest Channel	
802.11ac vht80 Middle Channel	

99% Emission Bandwidth	
802.11ax hew20 Lowest Channel	
802.11ax hew20 Middle Channel	
802.11ax hew20 Highest Channel	

99% Emission Bandwidth	
802.11ax hew40 Lowest Channel	
802.11ax hew40 Highest Channel	
802.11ax hew80 Middle Channel	

4.5 Maximum Conducted Output Power:

Serial Number:	CR22010029-RF-S1	Test Date:	2022-05-17~2022-10-10
Test Site:	RF	Test Mode:	Transmitting
Tester:	Julie Tan	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	22.5~27.1	Relative Humidity: (%)	43~52	ATM Pressure: (kPa)	100.8~101.4

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	USB Wideband Power Sensor	U2021XA	MY54080015	2021-07-22	2022/07/21
Agilent	USB Wideband Power Sensor	U2021XA	MY54080015	2022/07/15	2023/07/14
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A

** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

5150-5250 MHz:

802.11a/n/ac:

Test Modes	Test Frequency (MHz)	Max. Conducted Average (dBm)				EIRP (dBm)	
		Chain 0	Chain 1	Total	FCC Limit	Maximum Result	RSS-247 Limit
802.11a	5180	14.25	13.89	/	24.00	18.75	22.27
	5200	14.35	14.19	/	24.00	18.85	22.29
	5240	14.38	14.56	/	24.00	19.06	22.29
802.11n ht20	5180	13.16	12.78	15.98	24.00	20.48	22.59
	5200	14.39	14.18	17.30	24.00	21.8	22.61
	5240	14.34	14.63	17.50	24.00	22	22.61
802.11n ht40	5190	9.78	9.28	12.55	24.00	17.05	23.00
	5230	10.84	11.36	14.12	24.00	18.62	23.00
802.11ac vht20	5180	14.24	12.94	16.65	24.00	21.15	22.53
	5200	14.32	14.18	17.26	24.00	21.76	22.55
	5240	14.28	14.62	17.46	24.00	21.96	22.53
802.11ac vht40	5190	14.21	14.08	17.16	24.00	21.66	23.00
	5230	14.32	14.6	17.47	24.00	21.97	23.00
802.11ac vht80	5210	9.61	9.66	12.65	24.00	17.15	23.00

Test Modes	Test Frequency (MHz)	Max. Conducted Average (dBm)					Maximum EIRP (dBm)	
		RU Config.	Chain 0	Chain 1	Total	FCC Limit	Result	RSS-247 Limit
802.11ax hew20	5180	26/0	6.77	6.15	9.48	24.00	13.98	22.83
		52/37	7.56	7.18	10.38	24.00	14.88	22.83
		106/53	9.77	9.28	12.54	24.00	17.04	22.83
		242/61	12.98	12.42	15.72	24.00	20.22	22.83
	5200	26/0	6.51	6.46	9.50	24.00	14	22.83
		52/37	7.34	7.49	10.43	24.00	14.93	22.83
		106/53	9.46	9.39	12.44	24.00	16.94	22.83
		242/61	12.61	12.56	15.60	24.00	20.1	22.83
	5240	26/0	6.56	6.61	9.60	24.00	14.1	22.83
		52/37	7.88	7.80	10.85	24.00	15.35	22.83
		106/53	9.87	9.92	12.91	24.00	17.41	22.83
		242/61	12.78	12.67	15.74	24.00	20.24	22.83
802.11ax hew40	5190	26/0	4.56	4.75	7.67	24.00	12.17	23.0
		52/37	5.86	5.77	8.83	24.00	13.33	23.0
		106/53	7.66	7.54	10.61	24.00	15.11	23.0
		242/61	10.48	10.42	13.46	24.00	17.96	23.0
		484/65	12.33	12.46	15.41	24.00	19.91	23.0
	5230	26/0	4.57	4.34	7.47	24.00	11.97	23.0
		52/37	5.62	5.56	8.60	24.00	13.1	23.0
		106/53	7.51	7.45	10.49	24.00	14.99	23.0
		242/61	10.56	10.71	13.65	24.00	18.15	23.0
		484/65	12.44	12.38	15.42	24.00	19.92	23.0
802.11ax hew80	5210	26/0	1.63	1.56	4.61	24.00	9.11	23.0
		52/37	3.54	3.61	6.59	24.00	11.09	23.0
		106/53	5.58	5.62	8.61	24.00	13.11	23.0
		242/61	7.53	7.78	10.67	24.00	15.17	23.0
		484/65	10.61	10.54	13.59	24.00	18.09	23.0
		996/67	15.41	15.32	18.38	24.00	22.88	23.0

Note:
The duty cycle factor has been calculated into the result.
The device is a Client device.
The maximum antenna gain is 4.5dBi in 5GHz band. The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

So:

Directional gain =4.5dBi

5725-5850 MHz:
802.11a/n/ac:

Test Modes	Test Frequency (MHz)	Max. Conducted Average Output Power (dBm)			
		Chain 0	Chain 1	Total	Limit
802.11a	5745	14.57	14.3	/	30
	5785	14.94	14.39	/	30
	5825	13.93	13.79	/	30
802.11n ht20	5745	14.85	14.33	17.61	30
	5785	14.35	14.48	17.43	30
	5825	14.27	13.87	17.08	30
802.11n ht40	5755	14.97	15.05	18.02	30
	5795	15.35	15.03	18.20	30
802.11ac vht20	5745	14.88	14.41	17.66	30
	5785	14.49	14.53	17.52	30
	5825	14.37	13.96	17.18	30
802.11ac vht40	5755	14.72	14.99	17.87	30
	5795	15.17	14.97	18.08	30
802.11ac vht80	5775	13.02	12.5	15.78	30

802.11ax:

Test Modes	Test Frequency (MHz)	RU Config.	Max. Conducted Average Output Power (dBm)			
			Chain 0	Chain 1	Total	Limit
802.11ax hew20	5745	26/0	3.67	3.78	6.74	30
		52/37	5.61	5.73	8.68	30
		106/53	7.76	7.56	10.67	30
		242/61	11.93	12.06	15.01	30
	5785	26/0	3.58	3.45	6.53	30
		52/37	5.61	5.45	8.54	30
		106/53	7.55	7.49	10.53	30
		242/61	12.22	12.34	15.29	30
	5825	26/0	3.56	3.33	6.46	30
		52/37	5.34	5.75	8.56	30
		106/53	7.31	7.46	10.40	30
		242/61	12.56	12.69	15.64	30
802.11ax hew40	5755	26/0	2.31	2.44	5.39	30
		52/37	4.12	4.06	7.10	30
		106/53	7.37	7.45	10.42	30
		242/61	9.66	9.58	12.63	30
		484/65	13.65	13.74	16.71	30
	5795	26/0	2.27	2.55	5.42	30
		52/37	4.37	4.21	7.30	30
		106/53	7.39	7.56	10.49	30
		242/61	9.78	9.34	12.58	30
		484/65	13.45	13.68	16.58	30
802.11ax hew80	5775	26/0	-1.09	-0.98	1.98	30
		52/37	1.29	1.38	4.35	30
		106/53	3.78	3.39	6.60	30
		242/61	5.45	5.67	8.57	30
		484/65	8.32	8.44	11.39	30
		996/67	13.25	13.34	16.31	30

Note:
The duty cycle factor has been calculated into the result.
The maximum antenna gain is 5dBi in 5GHz band. The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

So:

Directional gain =5dBi

4.6 Maximum power spectral density:

Serial Number:	CR22010029-RF-S1	Test Date:	2022-05-17~2022-10-10
Test Site:	RF	Test Mode:	Transmitting
Tester:	Julie Tan	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	22.5~27.1	Relative Humidity: (%)	43~52	ATM Pressure: (kPa)	100.8~101.4

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2021-07-22	2022/07/21
R&S	Spectrum Analyzer	FSU26	200256	2022/07/15	2023/07/14
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A

** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

5150-5250 MHz:

Test Modes	Test Frequency (MHz)	Maximum Power Spectral Density (dBm/MHz)				Maximum EIRP Power Spectral Density (dBm/MHz)	
		Chain 0	Chain 1	Total	FCC Limit	Maximum Result	RSS-247 Limit
802.11a	5180	3.83	3.40	/	11	8.33	10
	5200	3.69	3.79	/	11	8.29	10
	5240	3.70	3.86	/	11	8.36	10
802.11n ht20	5180	2.54	2.33	5.45	9.5	9.95	10
	5200	3.69	3.78	6.75	9.5	6.68	10
	5240	3.57	3.87	6.73	9.5	6.89	10
802.11n ht40	5190	-3.95	-3.94	-0.93	9.5	3.57	10
	5230	-3.09	-2.24	0.37	9.5	4.87	10
802.11ac vht20	5180	3.96	2.95	6.49	9.5	6.68	10
	5200	4.06	4.21	7.15	9.5	6.89	10
	5240	4.01	4.34	7.19	9.5	6.88	10
802.11ac vht40	5190	1.76	0.94	4.38	9.5	8.88	10
	5230	1.63	0.99	4.33	9.5	8.83	10
802.11ac vht80	5210	-6.78	-6.61	-3.68	9.5	0.82	10

Test Modes	Test Frequency (MHz)	RU Config.	Maximum Power Spectral Density (dBm/MHz)				Maximum EIRP Power Spectral Density (dBm/MHz)	
			Chain 0	Chain 1	Total	FCC Limit	Maximum Result	RSS-247 Limit
802.11ax hew20	5180	26/0	0.51	0.39	3.46	9.5	7.96	10
		52/37	0.23	0.59	3.42	9.5	7.92	10
		106/53	0.23	0.32	3.29	9.5	7.79	10
		242/61	0.89	0.61	3.76	9.5	8.26	10
	5200	26/0	0.23	0.26	3.26	9.5	7.76	10
		52/37	0.32	0.64	3.49	9.5	7.99	10
		106/53	0.43	0.46	3.46	9.5	7.96	10
		242/61	0.12	0.10	3.12	9.5	7.62	10
	5240	26/0	0.66	0.59	3.64	9.5	8.14	10
		52/40	0.84	0.80	3.83	9.5	8.33	10
		106/54	0.84	0.75	3.81	9.5	8.31	10
		242/61	0.56	0.91	3.75	9.5	8.25	10
802.11ax hew40	5190	26/0	-1.13	-1.31	1.79	9.5	6.29	10
		52/37	-1.36	-1.53	1.57	9.5	6.07	10
		106/53	-1.58	-1.64	1.40	9.5	5.90	10
		242/61	-1.67	-1.56	1.40	9.5	5.90	10
	5230	26/0	-1.79	-1.96	1.14	9.5	5.64	10
		52/37	-1.53	-1.62	1.44	9.5	5.94	10
		106/53	-1.00	-1.19	1.92	9.5	6.42	10
		242/61	-1.00	-1.04	1.99	9.5	6.49	10
802.11ax hew80	5210	26/0	-4.31	-4.33	-1.31	9.5	6.46	10
		52/37	-4.18	-4.15	-1.15	9.5	6.20	10
		106/53	-4.19	-4.24	-1.20	9.5	3.19	10
		242/61	-4.90	-4.94	-1.91	9.5	3.35	10
		484/65	-4.59	-4.57	-1.57	9.5	3.30	10
		996/67	-4.36	-4.22	-1.28	9.5	2.59	10

Note:
The maximum antenna gain is 4.5 dBi. The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:

$$\text{Array Gain} = 10 \log(N_{ANT}/N_{SS}) \text{ dB.}$$

So:

$$\text{Directional gain} = G_{ANT} + \text{Array Gain} = 4.5+10*\log(2/1)=7.5 \text{ dBi}$$

Method SA-3 in KDB 789033 D02 General UNII Test Procedures New Rules v02r01was used for PSD test.

5725-5850 MHz:

Test Modes	Test Frequency (MHz)	Reading (dBm/300kHz)		Maximum Power Spectral Density (dBm/500kHz)			
		Chain 0	Chain 1	Chain 0	Chain 1	Total	Limit
802.11a	5745	0.58	-0.22	2.8	2	/	30
	5785	0.74	0.91	2.96	3.13	/	30
	5825	-0.69	0.32	1.53	2.54	/	30
802.11n ht20	5745	0.05	0.57	2.27	2.79	5.55	28
	5785	0.20	1.21	2.42	3.43	5.96	28
	5825	0.36	1.12	2.58	3.34	5.99	28
802.11n ht40	5755	-1.64	-2.43	0.58	-0.21	3.21	28
	5795	-2.23	-2.38	-0.01	-0.16	2.93	28
802.11ac vht20	5745	0.05	0.99	2.27	3.21	5.78	28
	5785	0.08	0.64	2.3	2.86	5.60	28
	5825	1.59	0.57	3.81	2.79	6.34	28
802.11ac vht40	5755	-1.55	-2.41	0.67	-0.19	3.27	28
	5795	-2.55	-1.31	-0.33	0.91	3.34	28
802.11ac vht80	5775	-8.80	-7.56	-6.58	-5.34	-2.91	28

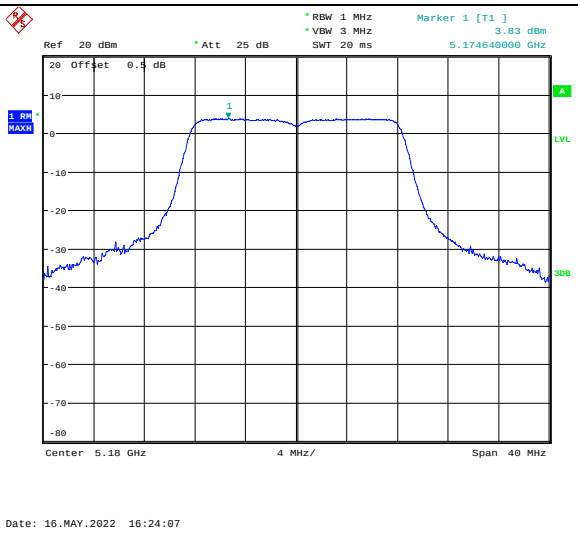
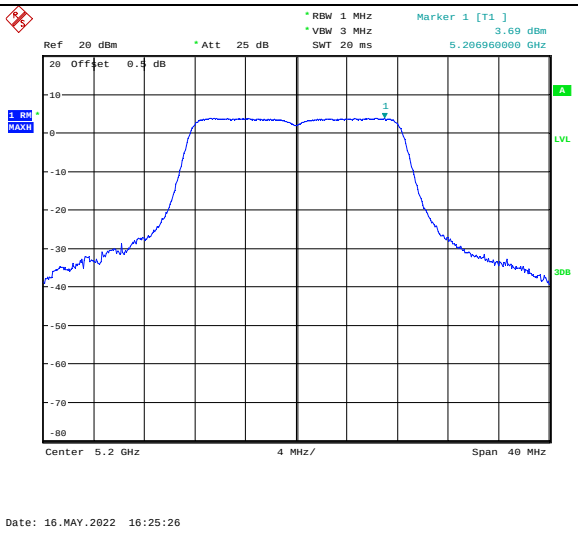
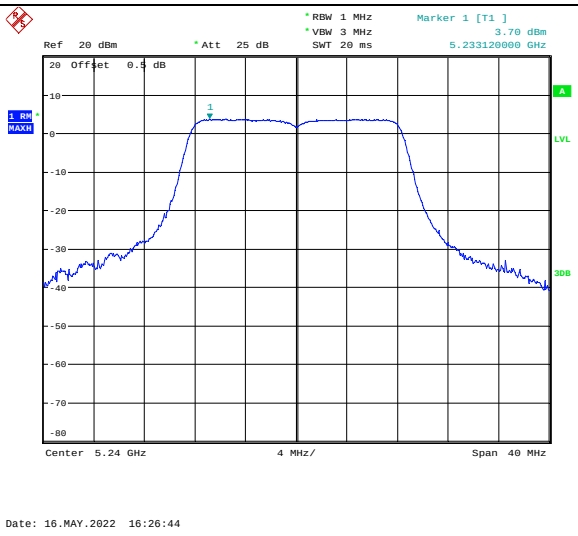
Test Modes	Test Frequency (MHz)	RU Config.	Reading (dBm/300kHz)		Maximum Power Spectral Density (dBm/500kHz)			
			Chain 0	Chain 1	Chain 0	Chain 1	Total	Limit
802.11ax hew20	5745	26/0	-6.38	-6.95	-4.16	-4.73	-1.43	28
		52/37	-6.26	-6.36	-4.04	-4.14	-1.08	28
		106/53	-6.39	-6.38	-4.17	-4.16	-1.15	28
		242/61	-6.69	-6.76	-4.47	-4.54	-1.49	28
	5785	26/0	-6.36	-6.89	-4.14	-4.67	-1.39	28
		52/37	-6.13	-6.3	-3.91	-4.08	-0.98	28
		106/53	-6.16	-6.28	-3.94	-4.06	-0.99	28
		242/61	-6.46	-6.54	-4.24	-4.32	-1.27	28
	5825	26/0	-6.94	-6.45	-4.72	-4.23	-1.46	28
		52/40	-6.27	-6.29	-4.05	-4.07	-1.05	28
		106/54	-6.25	-6.44	-4.03	-4.22	-1.11	28
		242/61	-6.11	-6.79	-3.89	-4.57	-1.21	28
802.11ax hew40	5755	26/0	-7.67	-7.71	-5.45	-5.49	-2.46	28
		52/37	-7.88	-7.57	-5.66	-5.35	-2.49	28
		106/53	-7.05	-7.03	-4.83	-4.81	-1.81	28
		242/61	-7.74	-7.72	-5.52	-5.5	-2.50	28
		484/65	-7.81	-7.85	-5.59	-5.63	-2.60	28
	5795	26/0	-7.63	-7.79	-5.41	-5.57	-2.48	28
		52/37	-7.3	-7.76	-5.08	-5.54	-2.29	28
		106/53	-7.28	-7.4	-5.06	-5.18	-2.11	28
		242/61	-7.71	-7.87	-5.49	-5.65	-2.56	28
		484/65	-7.63	-7.68	-5.41	-5.46	-2.42	28
802.11ax hew80	5775	26/0	-11.2	-11.14	-8.98	-8.92	-5.94	28
		52/37	-11.49	-11.45	-9.27	-9.23	-6.24	28
		106/53	-11.19	-11.41	-8.97	-9.19	-6.07	28
		242/61	-11.85	-11.93	-9.63	-9.71	-6.66	28
		484/65	-11.56	-11.55	-9.34	-9.33	-6.32	28
		996/67	-11.28	-11.34	-9.06	-9.12	-6.08	28

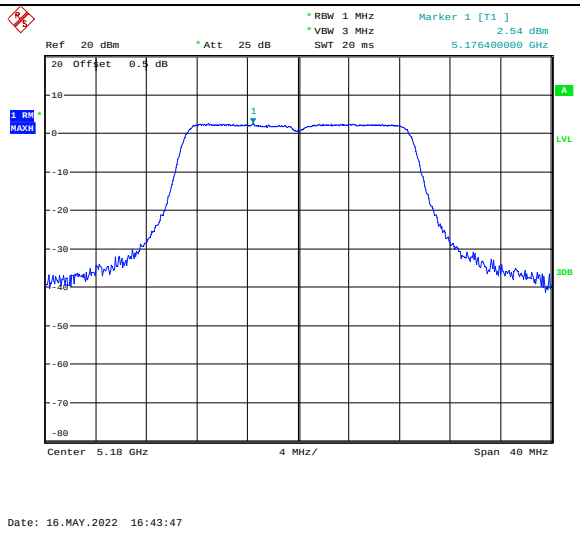
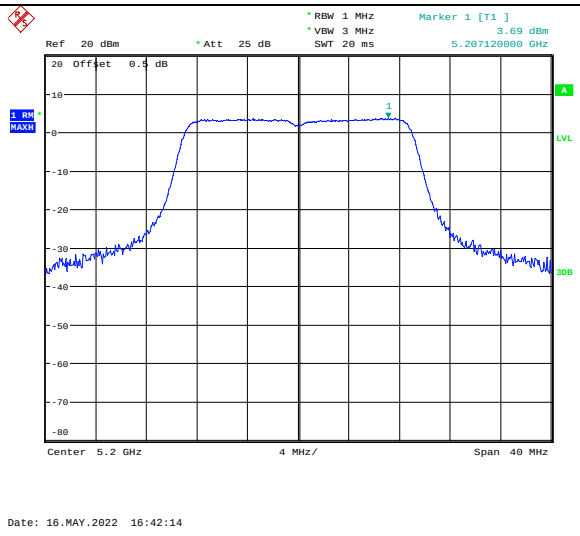
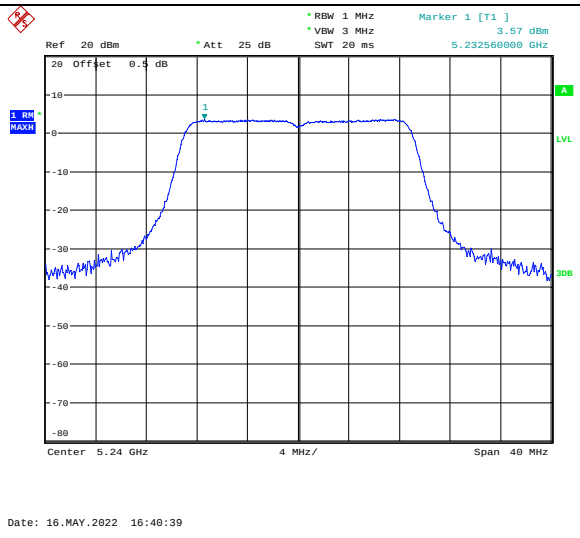
Note:
The maximum antenna gain is 5.0 dBi.
The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:
Array Gain = 10 log(N_{ANT}/N_{SS}) dB
So:
Directional gain = G_{ANT} + Array Gain = 5+10*log(2/1)=8.0 dBi

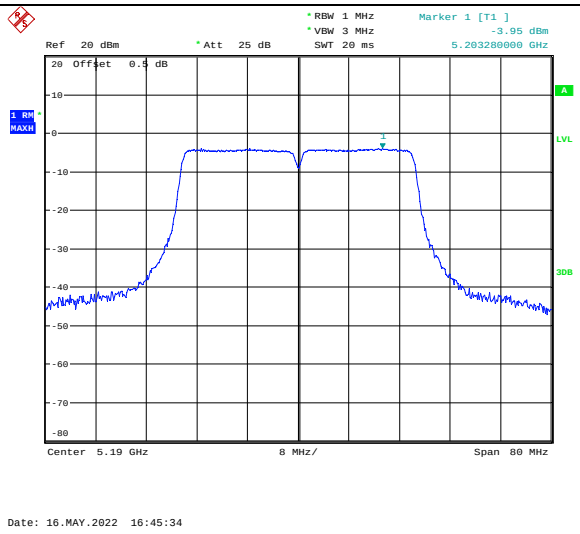
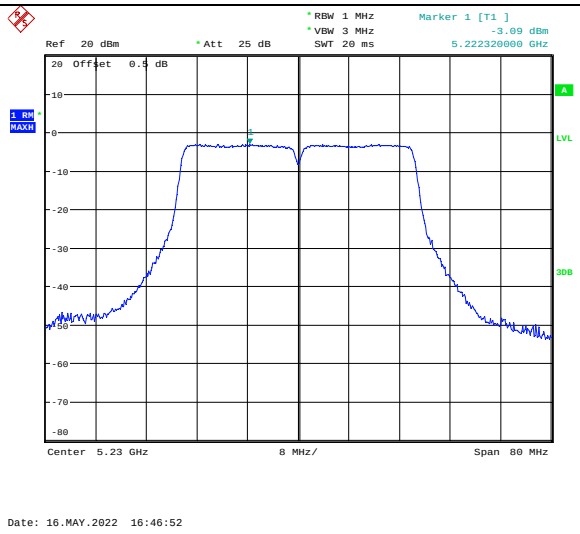
Method SA-3 in KDB 789033 D02 General UNII Test Procedures New Rules v02r01was used for PSD test.

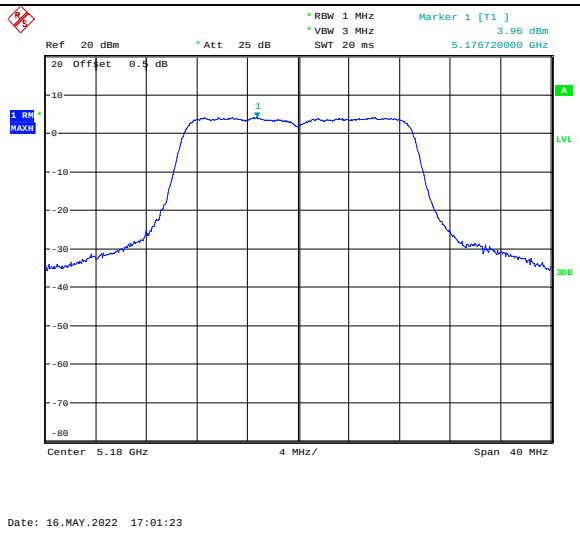
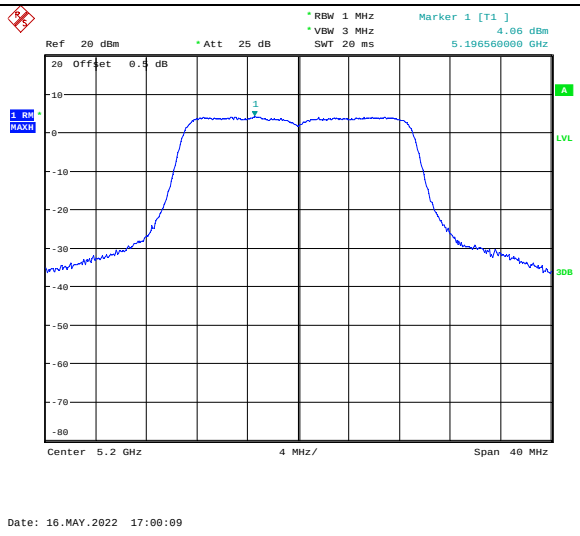
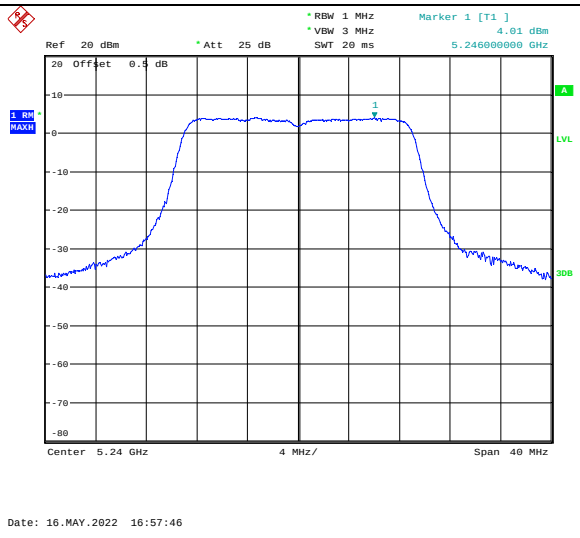
If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW)to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement

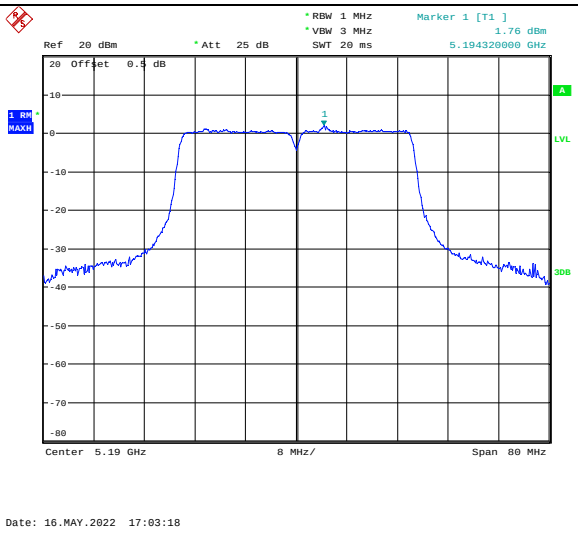
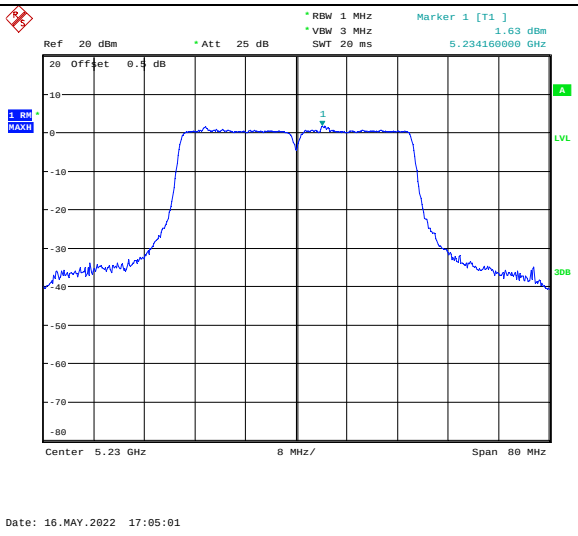
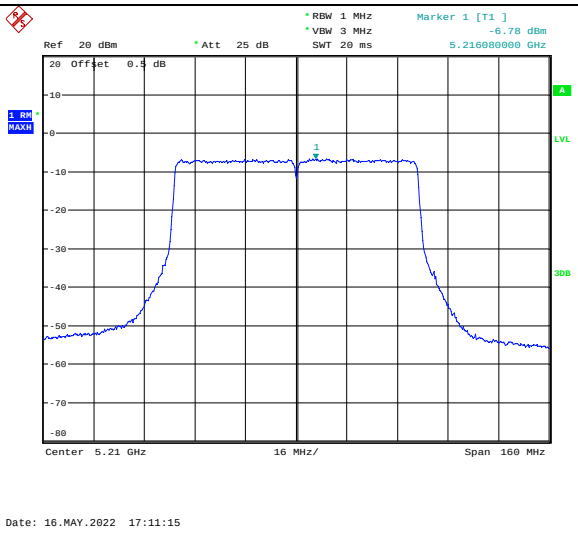
5150-5250MHz:
Chain 0

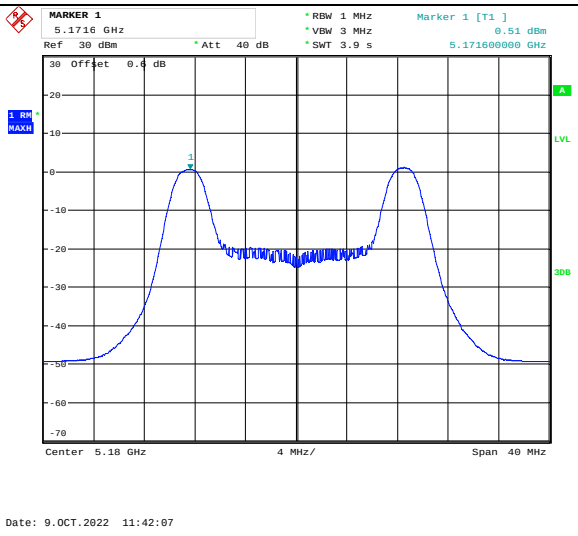
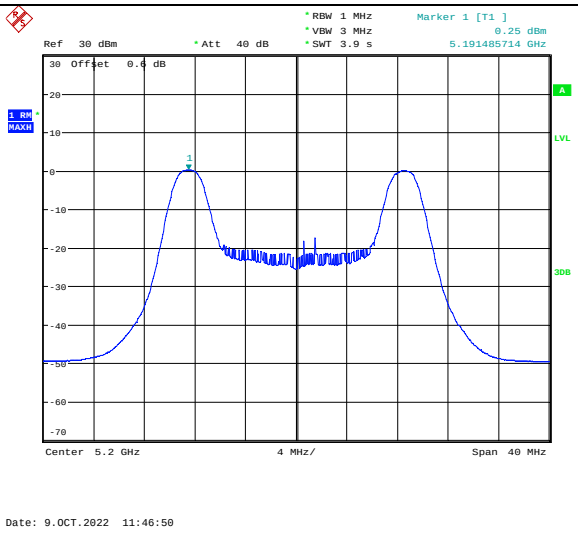
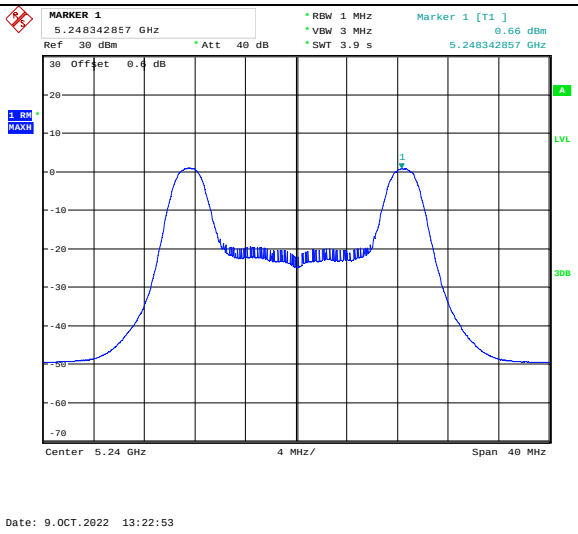
Maximum power spectral density	
802.11a Lowest Channel	
802.11a Middle Channel	
802.11a Highest Channel	

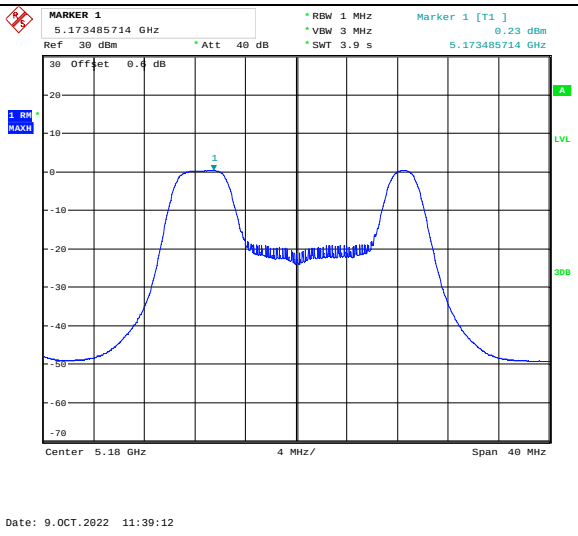
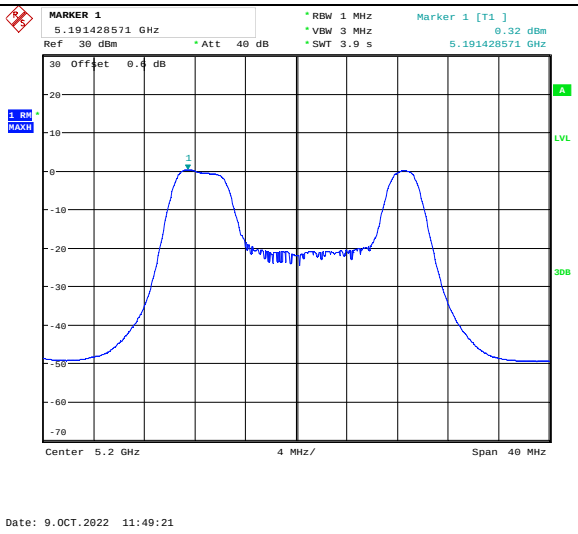
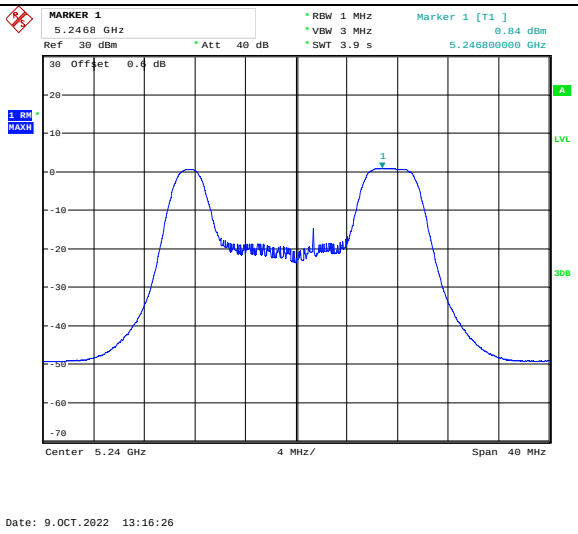
Maximum power spectral density	
802.11n ht20 Lowest Channel	
802.11n ht20 Middle Channel	
802.11n ht20 Highest Channel	

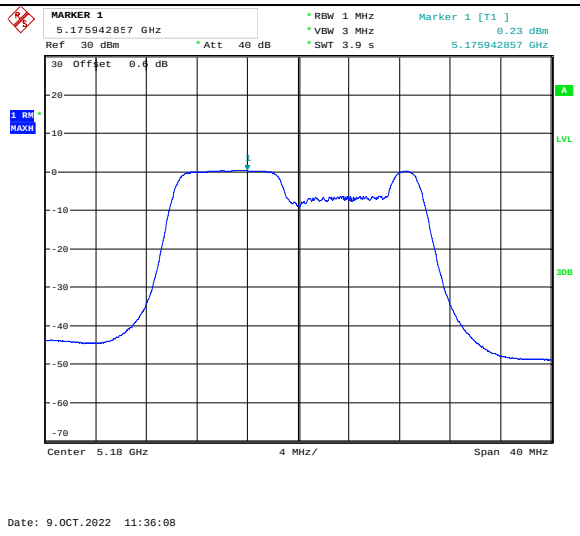
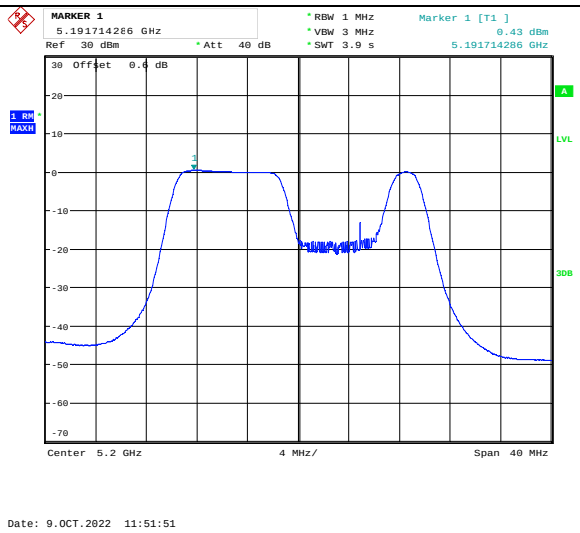
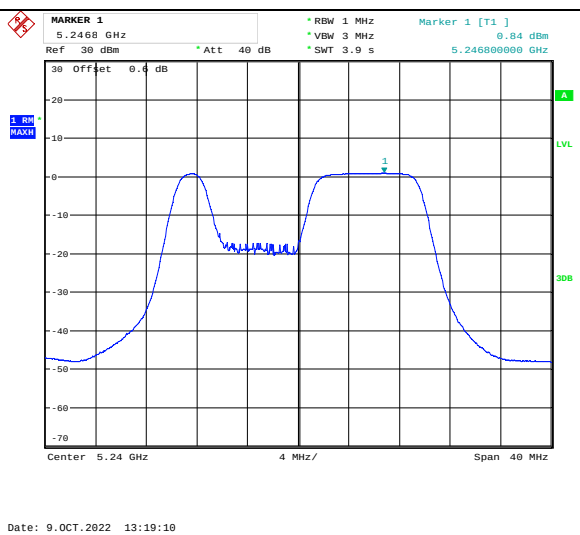
Maximum power spectral density	
802.11n ht40 Lowest Channel	
802.11n ht40 Highest Channel	

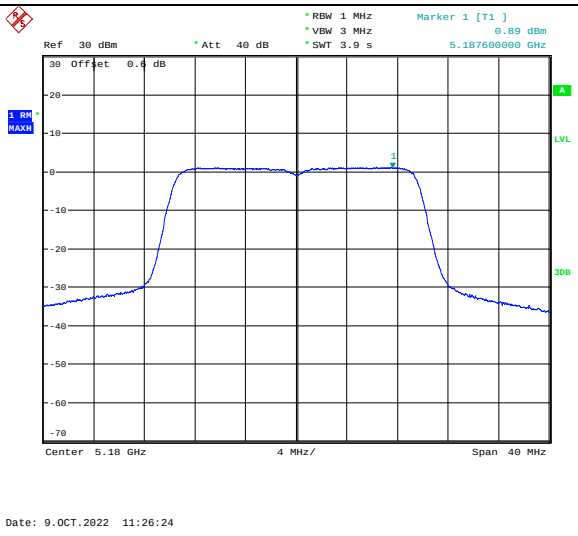
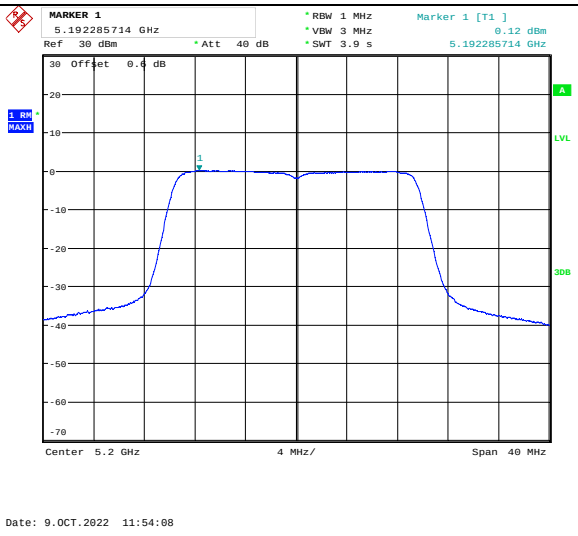
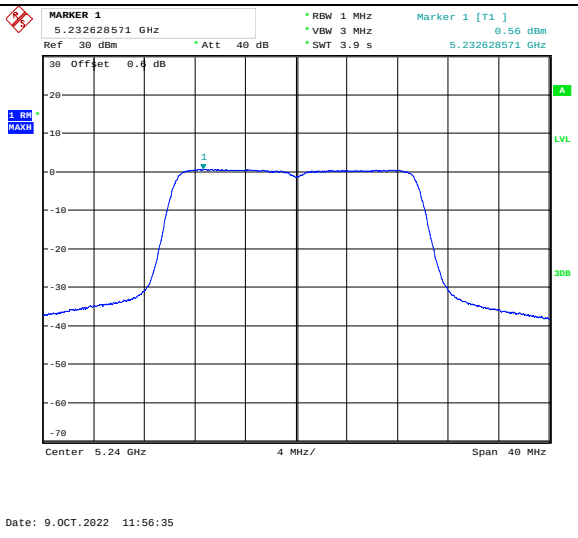
Maximum power spectral density	
802.11ac vht20 Lowest Channel	
802.11ac vht20 Middle Channel	
802.11ac vht20 Highest Channel	

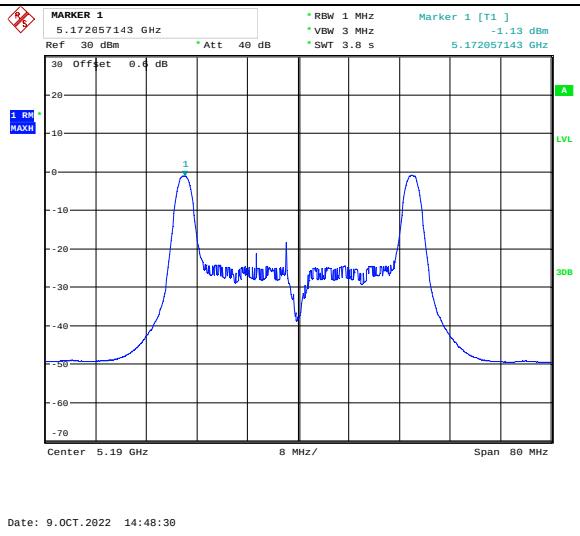
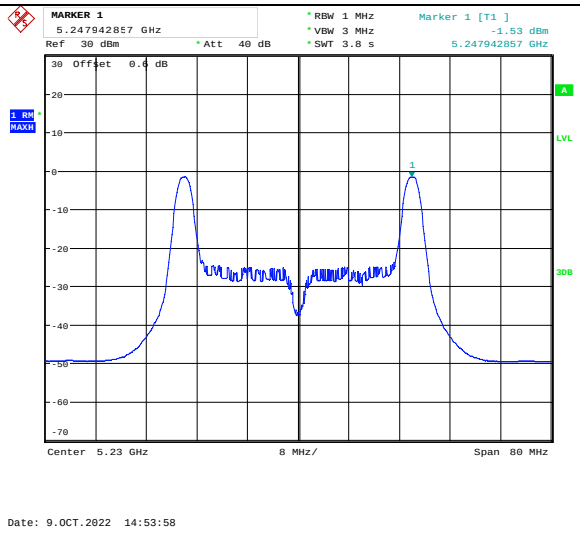
Maximum power spectral density	
802.11ac vht40 Lowest Channel	
802.11ac vht40 Highest Channel	
802.11ac vht80 Middle Channel	

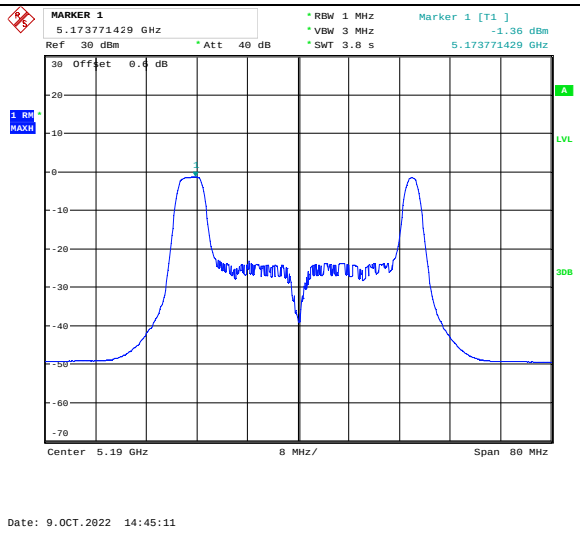
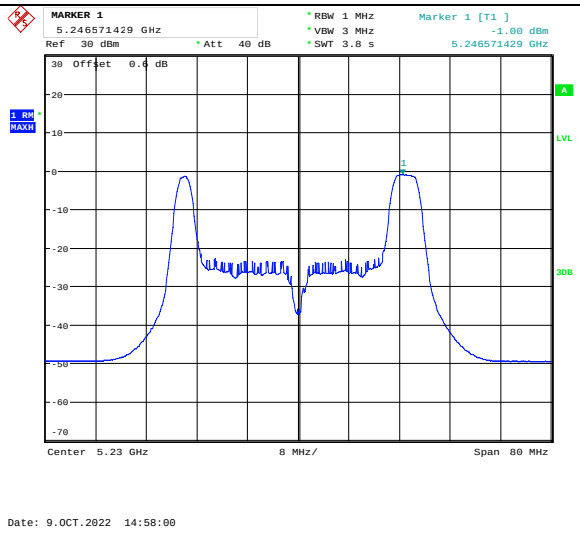
Maximum power spectral density	
802.11ax hew20 Lowest Channel 26Tone	
802.11ax hew20 Middle Channel 26Tone	
802.11ax hew20 Highest Channel 26Tone	

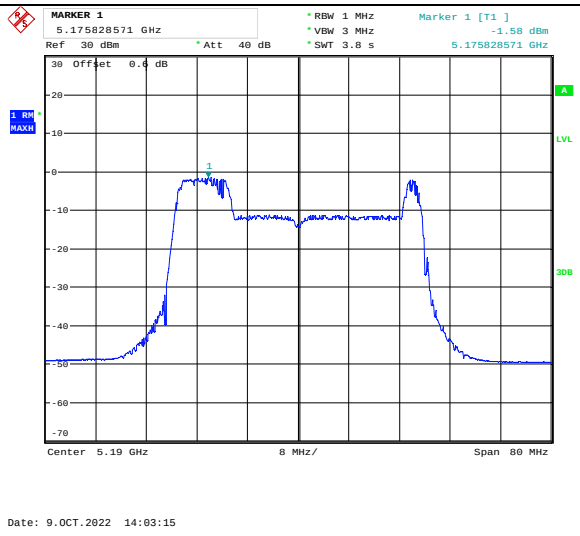
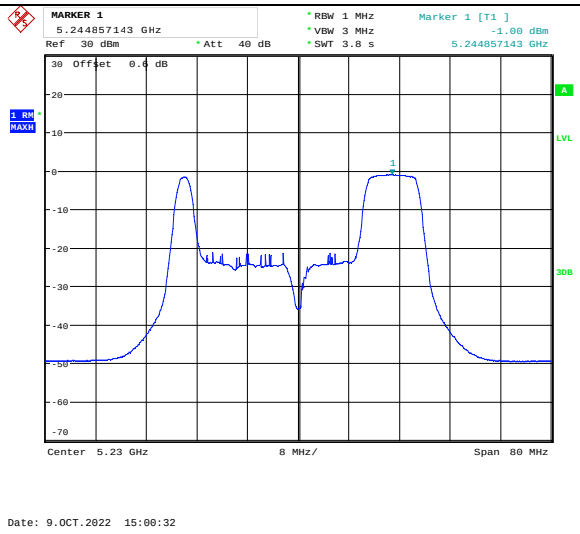
Maximum power spectral density	
802.11ax hew20 Lowest Channel 52Tone	
802.11ax hew20 Middle Channel 52Tone	
802.11ax hew20 Highest Channel 52Tone	

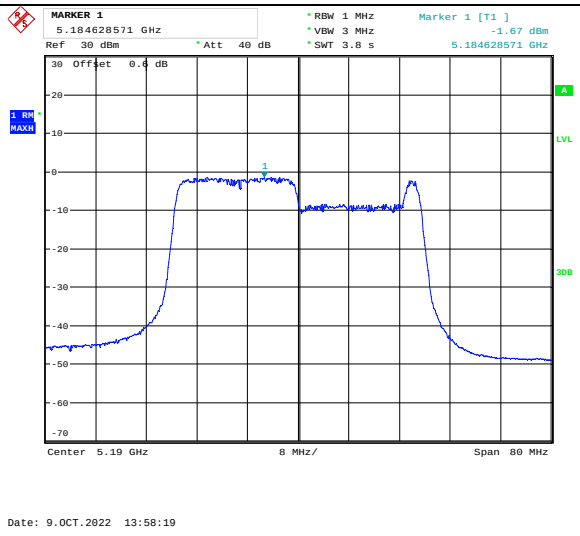
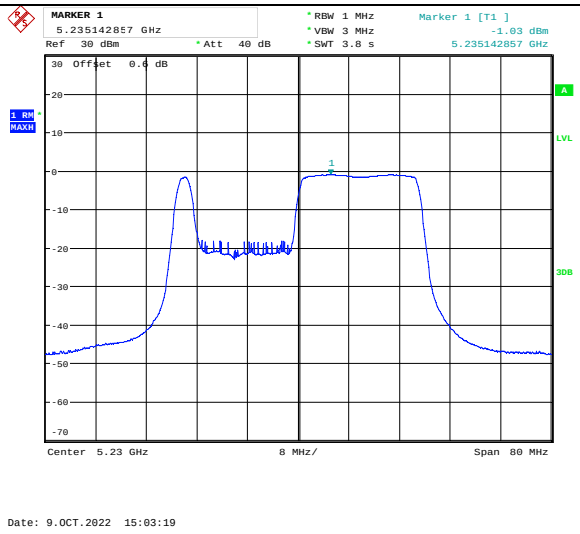
Maximum power spectral density	
802.11ax hew20 Lowest Channel 106Tone	
802.11ax hew20 Middle Channel 106Tone	
802.11ax hew20 Highest Channel 106Tone	

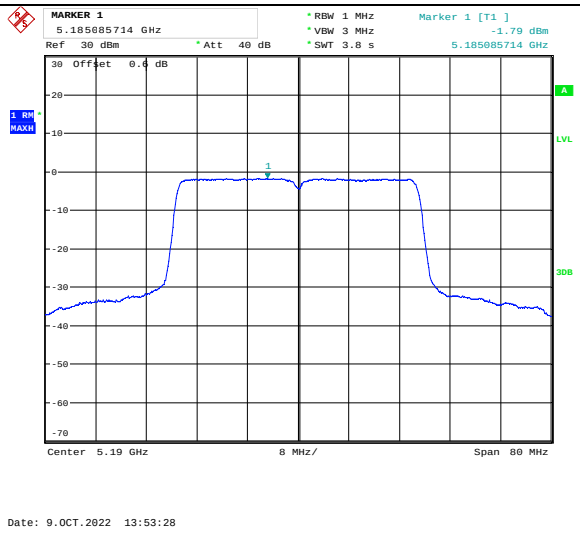
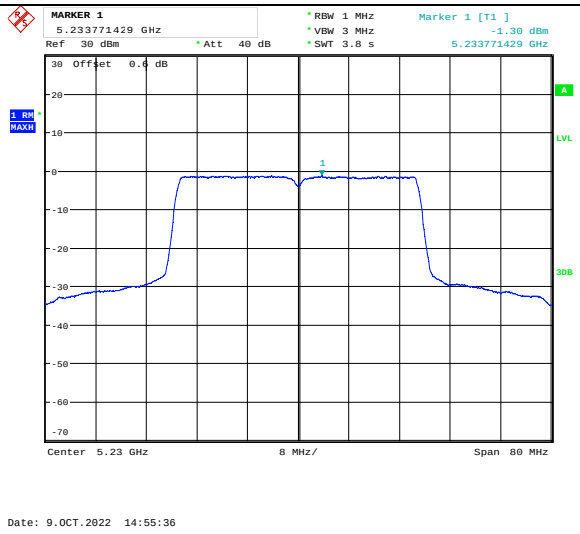
Maximum power spectral density	
802.11ax hew20 Lowest Channel 242Tone	
802.11ax hew20 Middle Channel 242Tone	
802.11ax hew20 Highest Channel 242Tone	

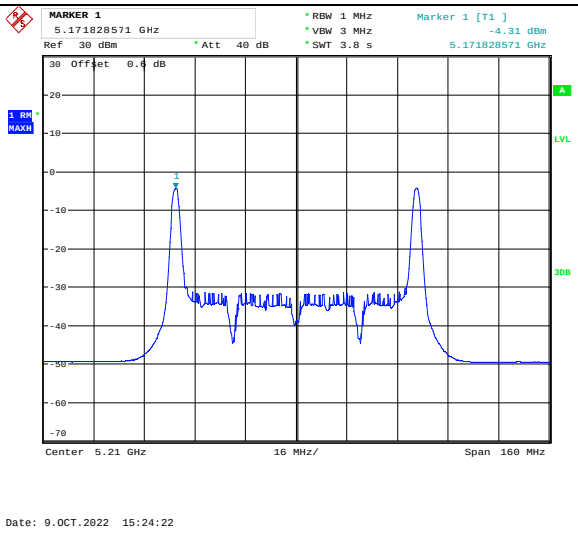
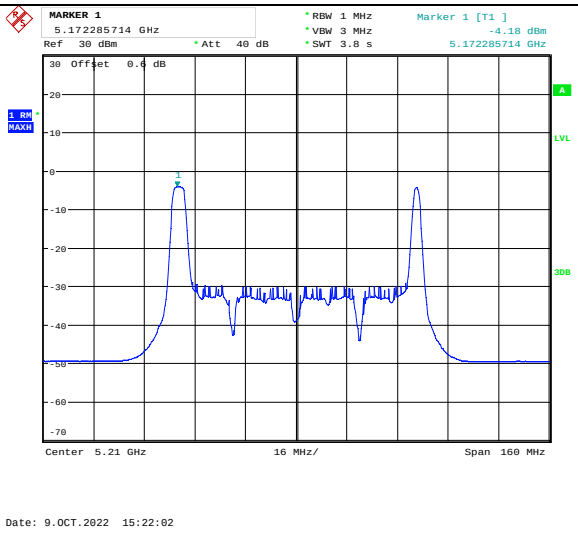
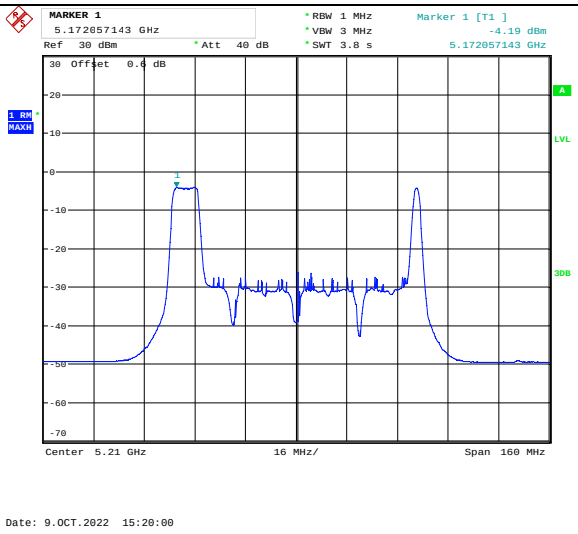
Maximum power spectral density	
802.11ax hew40 Lowest Channel 26Tone	
802.11ax hew40 Highest Channel 26Tone	

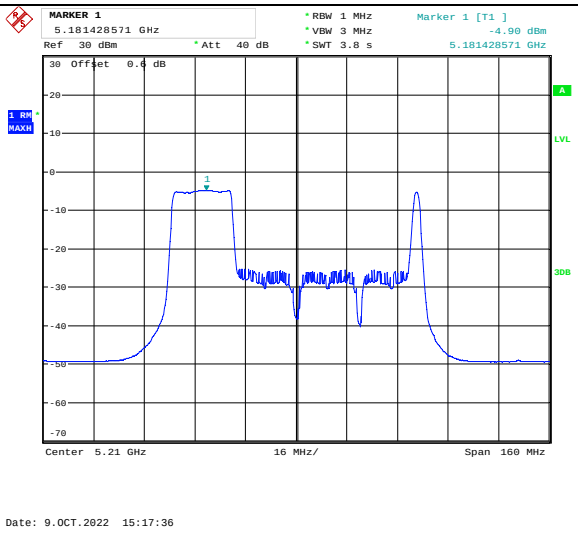
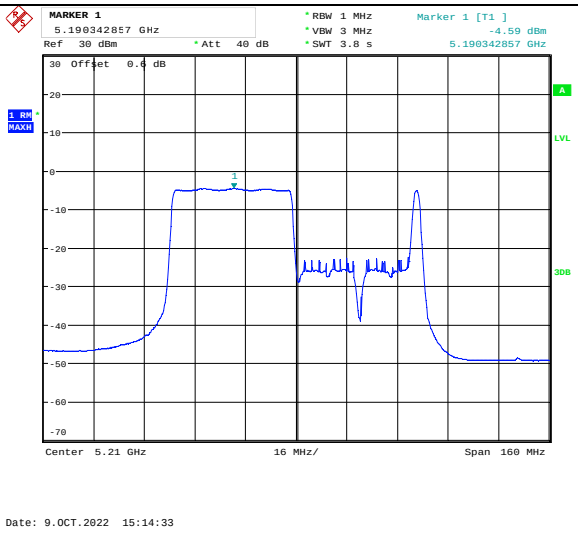
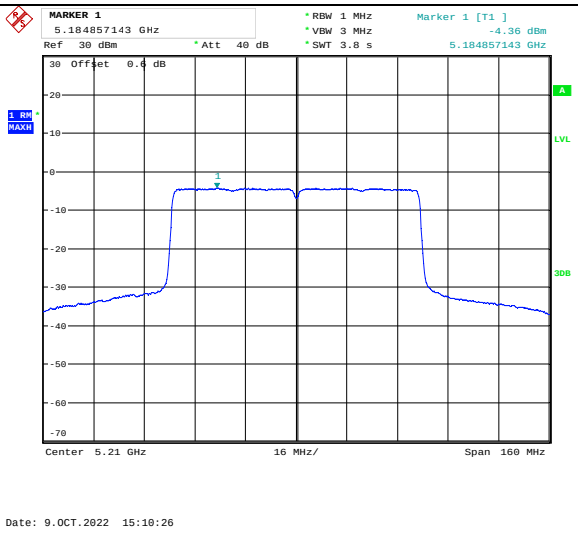
Maximum power spectral density	
802.11ax hew40 Lowest Channel 52Tone	
802.11ax hew40 Highest Channel 52Tone	

Maximum power spectral density	
802.11ax hew40 Lowest Channel 106Tone	
802.11ax hew40 Highest Channel 106Tone	

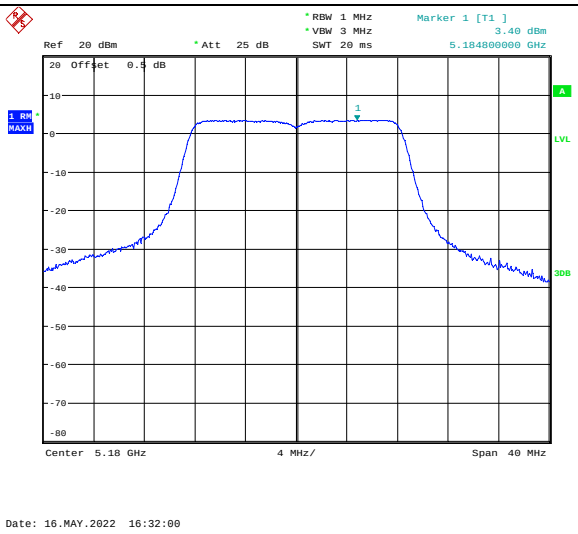
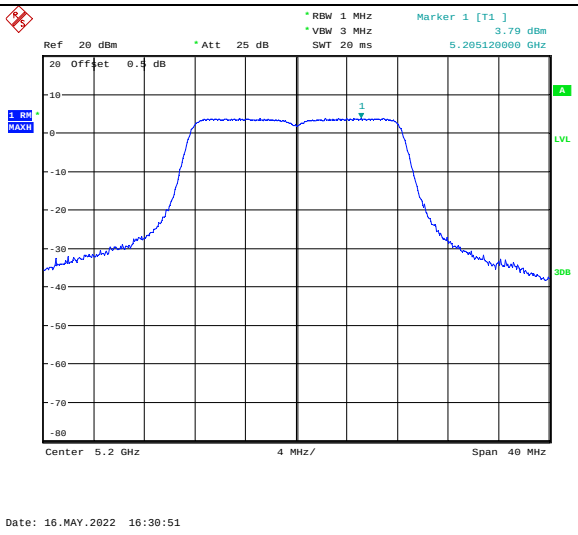
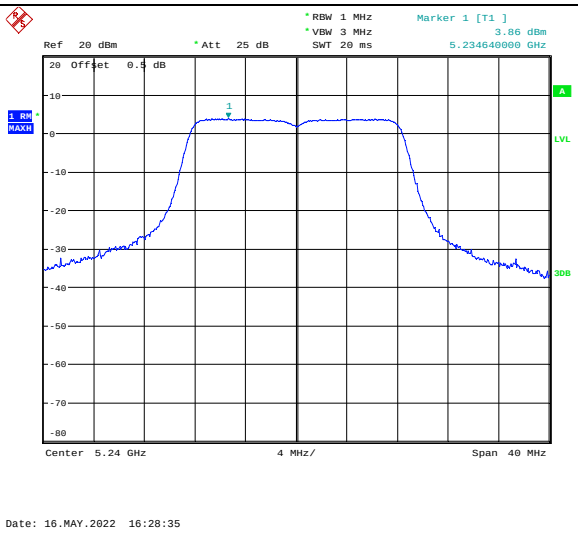
Maximum power spectral density	
802.11ax hew40 Lowest Channel 242Tone	
802.11ax hew40 Highest Channel 242Tone	

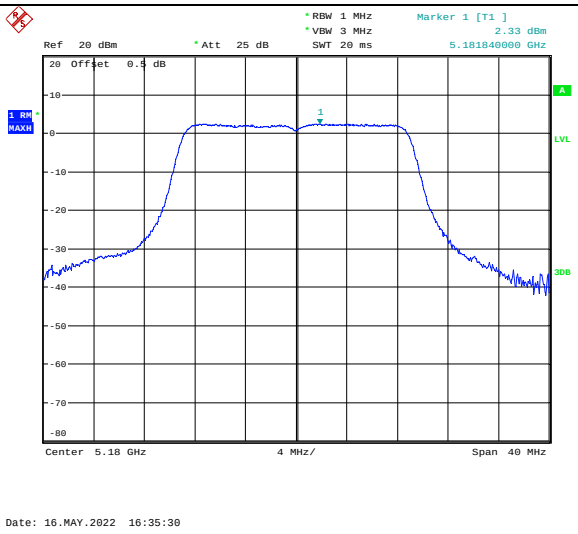
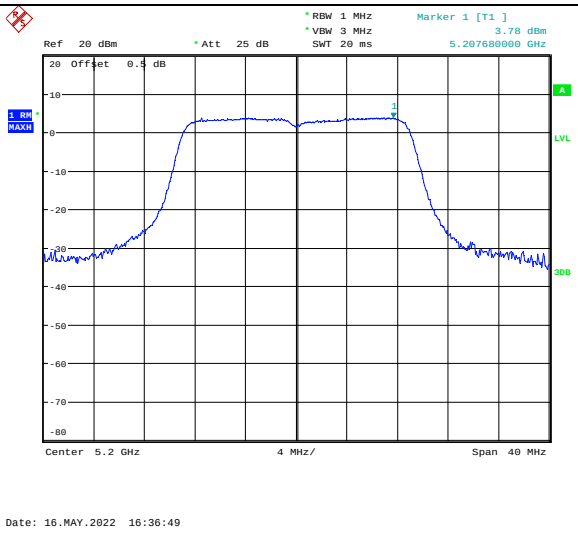
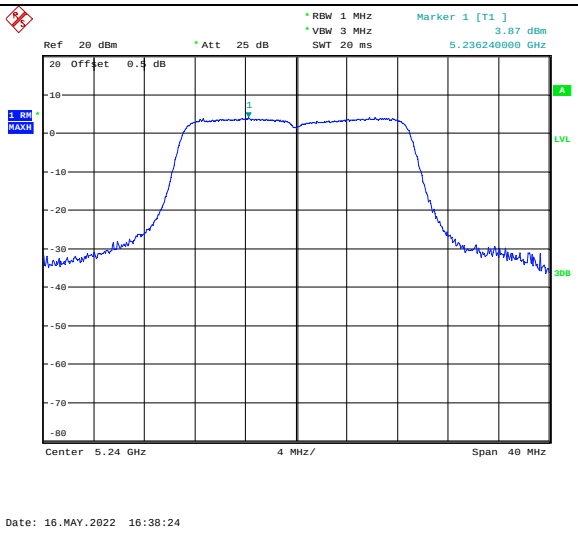
Maximum power spectral density	
802.11ax hew40 Lowest Channel 484Tone	
802.11ax hew40 Highest Channel 484Tone	

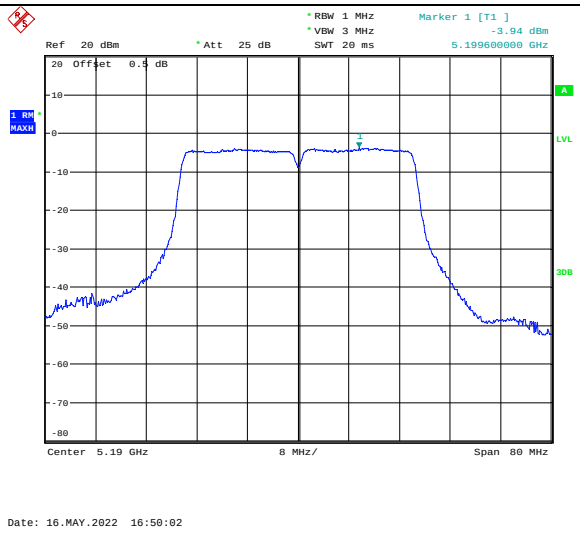
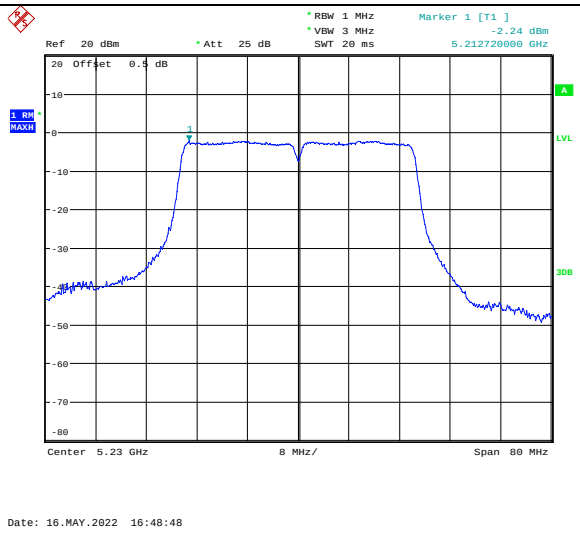
Maximum power spectral density	
802.11ax hew80 Lowest Channel 26Tone	
802.11ax hew80 Highest Channel 52Tone	
802.11ax hew80 Highest Channel 106Tone	

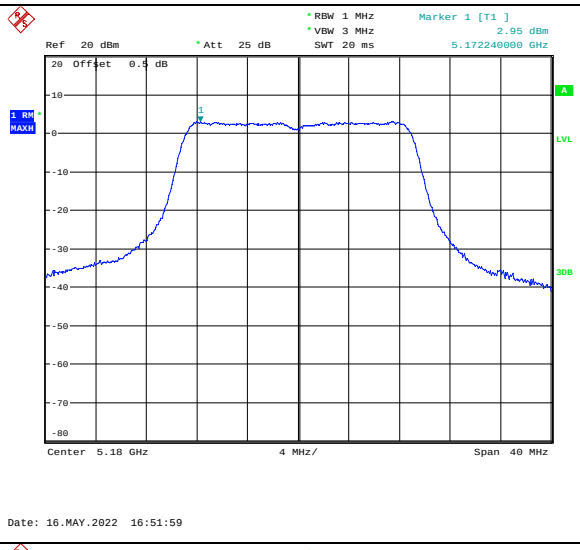
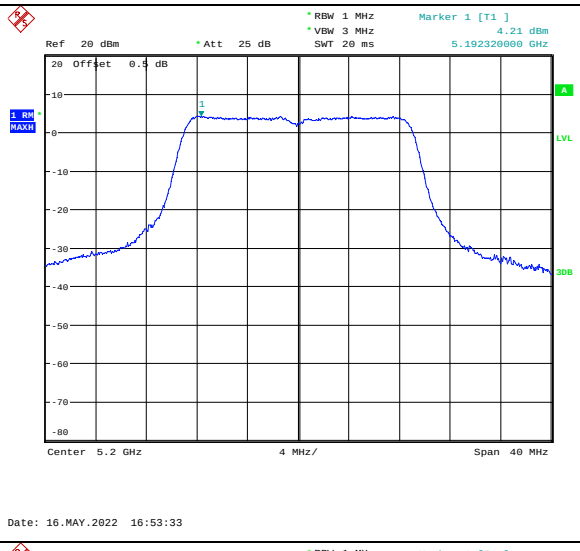
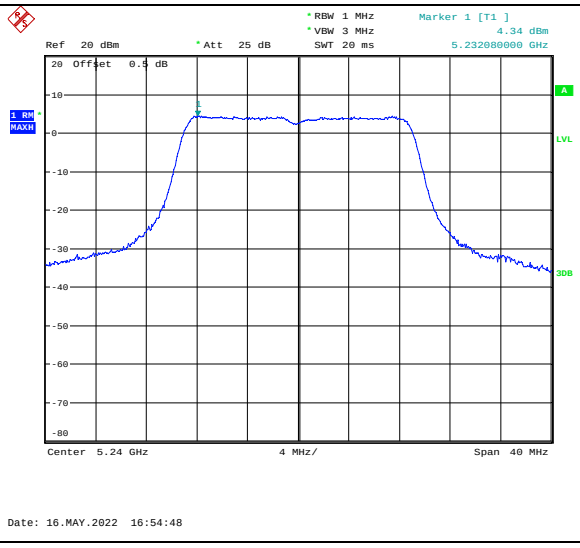
Maximum power spectral density	
802.11ax hew80 Lowest Channel 242Tone	
802.11ax hew80 Highest Channel 484Tone	
802.11ax hew80 Highest Channel 996Tone	

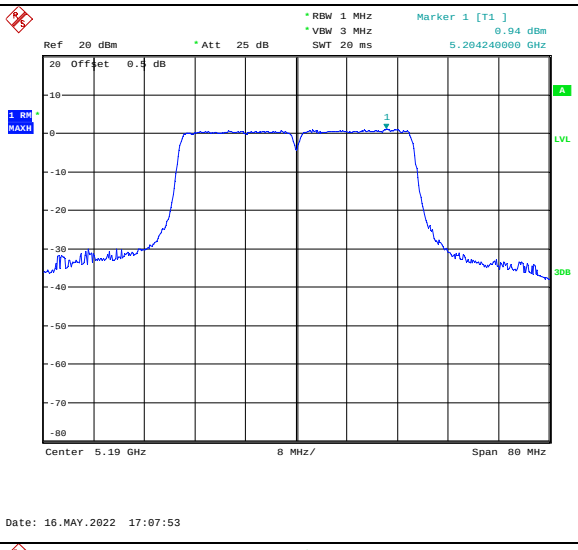
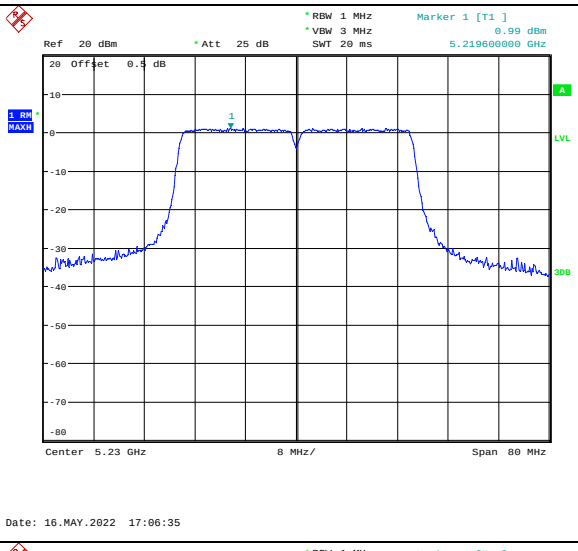
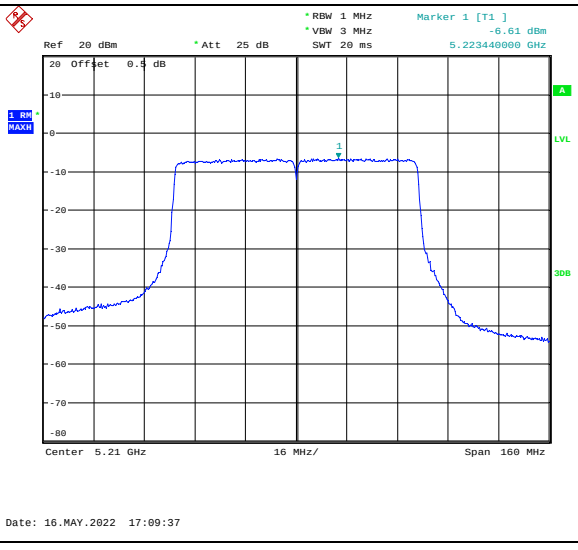
Chain 1:

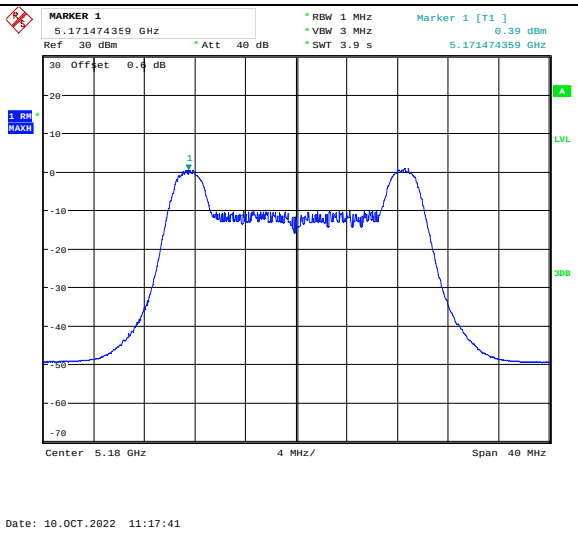
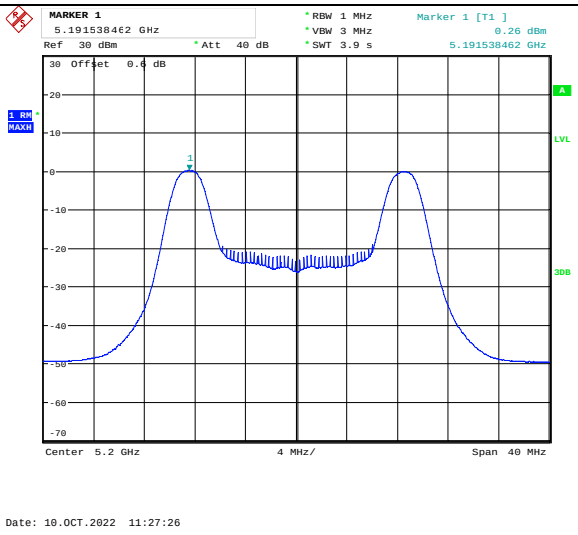
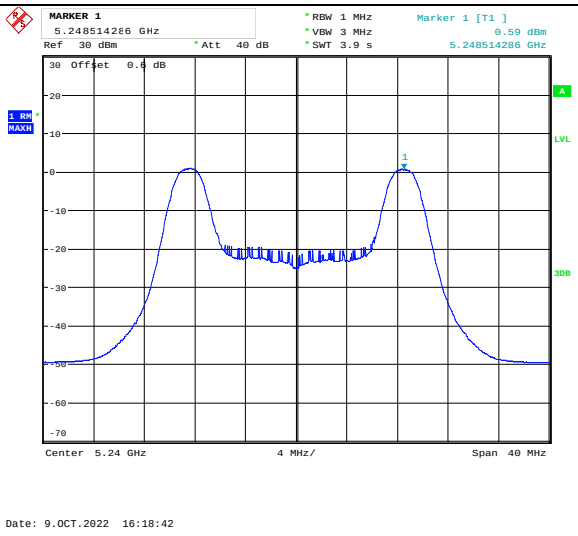
Maximum power spectral density	
802.11a Lowest Channel	
802.11a Middle Channel	
802.11a Highest Channel	

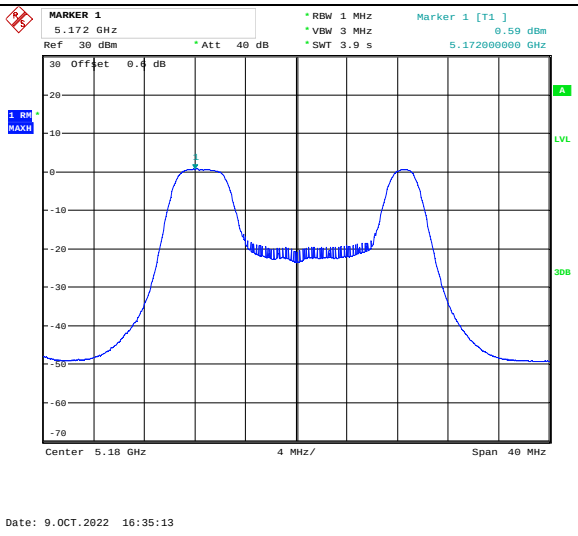
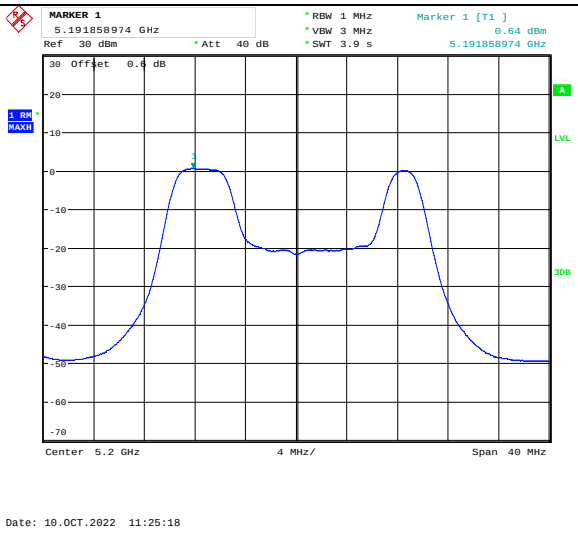
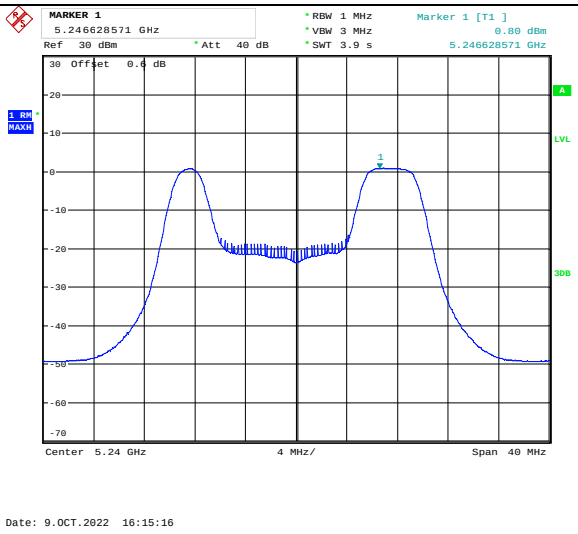
Maximum power spectral density	
802.11n ht20 Lowest Channel	
802.11n ht20 Middle Channel	
802.11n ht20 Highest Channel	

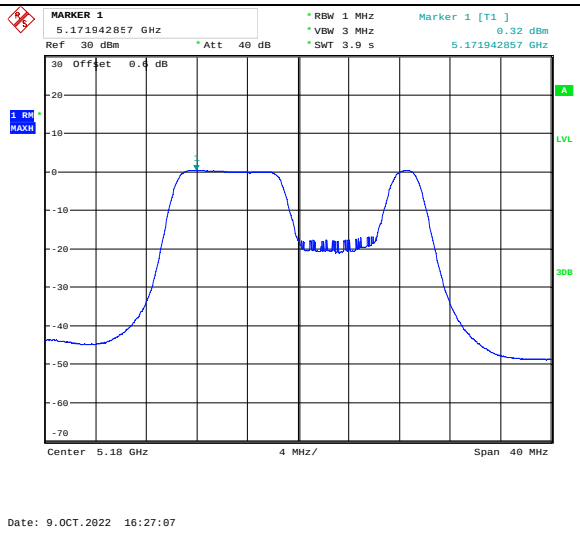
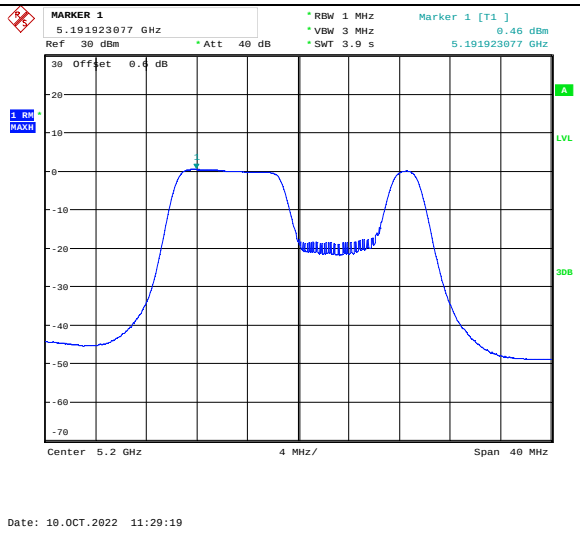
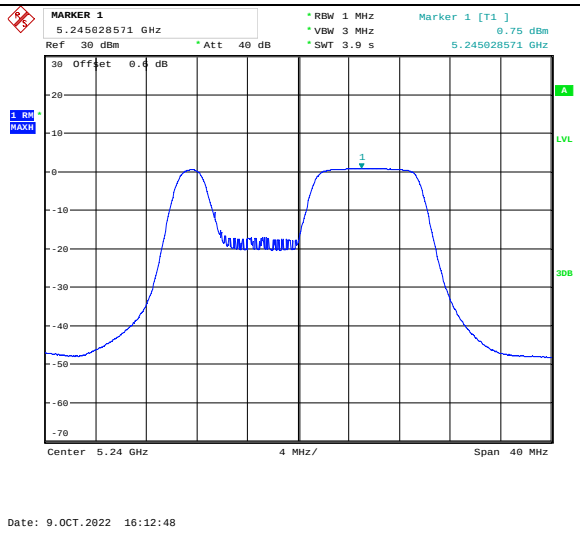
Maximum power spectral density	
802.11n ht40 Lowest Channel	
802.11n ht40 Highest Channel	

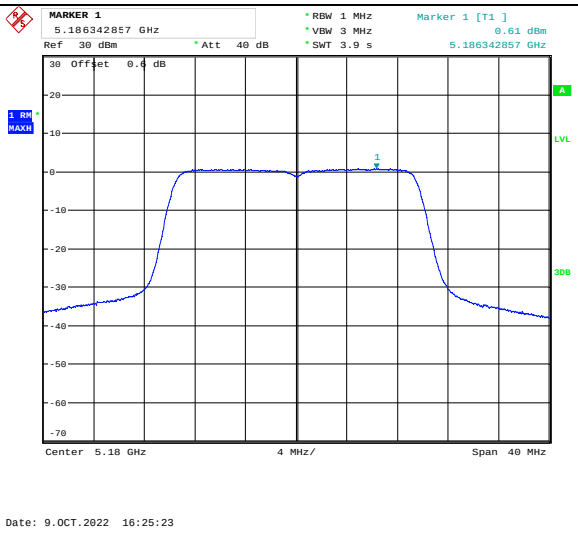
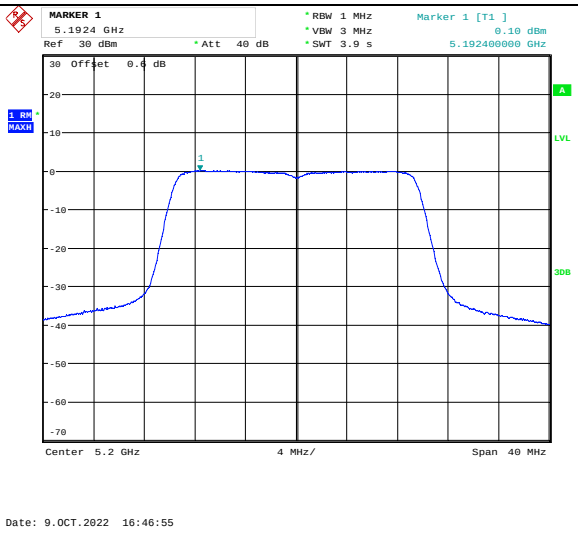
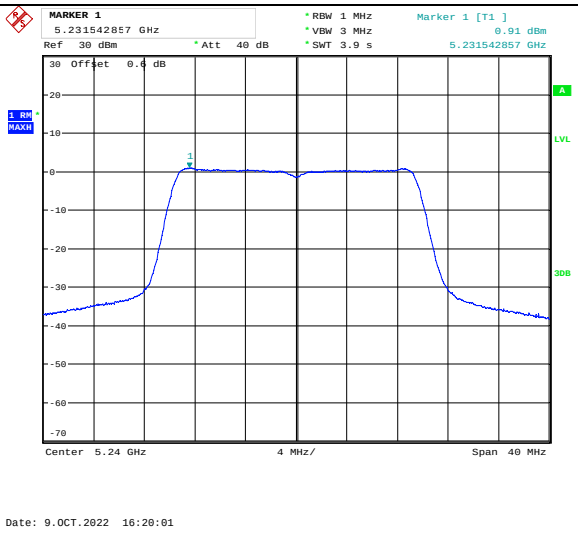
Maximum power spectral density	
802.11ac vht20 Lowest Channel	
802.11ac vht20 Middle Channel	
802.11ac vht20 Highest Channel	

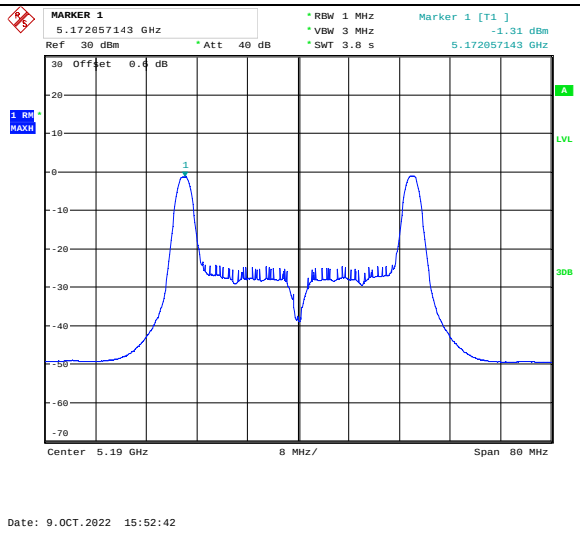
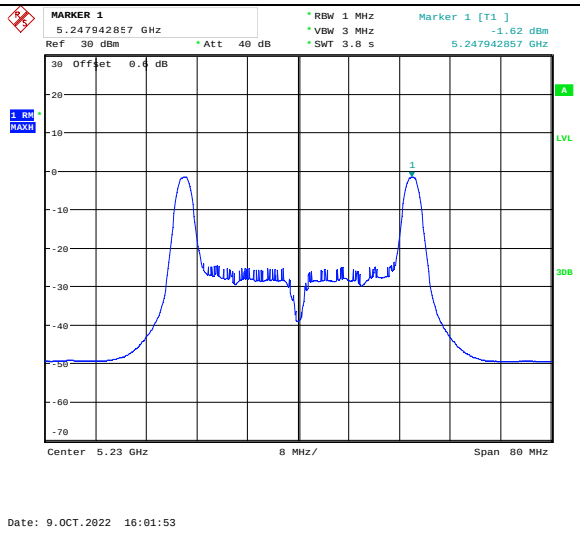
Maximum power spectral density	
802.11ac vht40 Lowest Channel	
802.11ac vht40 Highest Channel	
802.11ac vht80 Middle Channel	

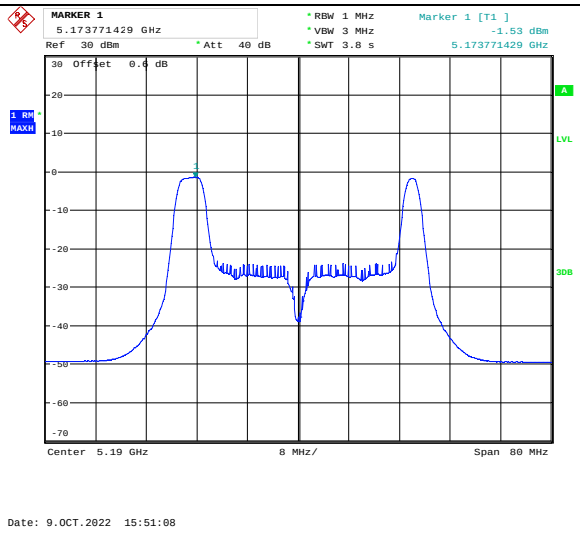
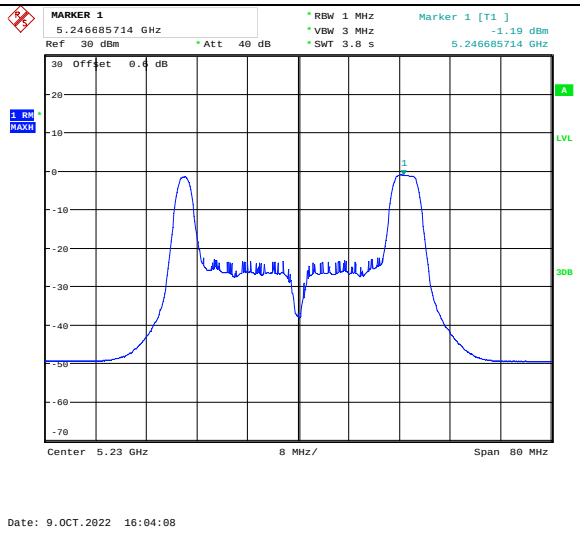
Maximum power spectral density	
802.11ax hew20 Lowest Channel 26Tone	
802.11ax hew20 Middle Channel 26Tone	
802.11ax hew20 Highest Channel 26Tone	

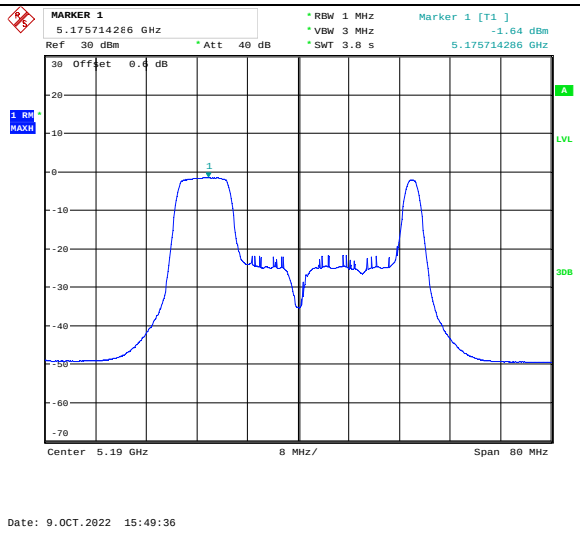
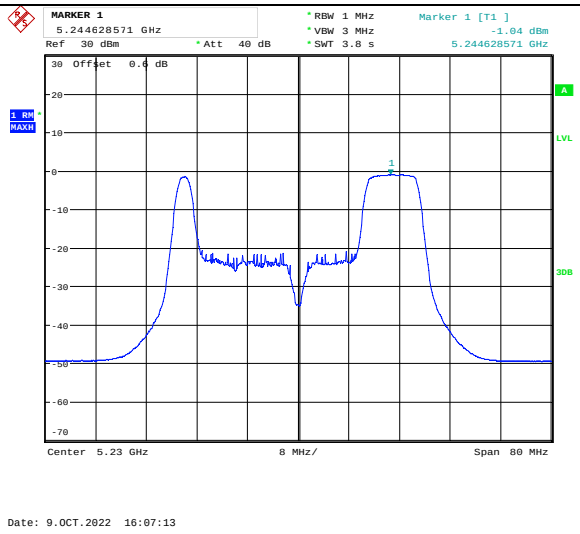
Maximum power spectral density	
802.11ax hew20 Lowest Channel 52Tone	
802.11ax hew20 Middle Channel 52Tone	
802.11ax hew20 Highest Channel 52Tone	

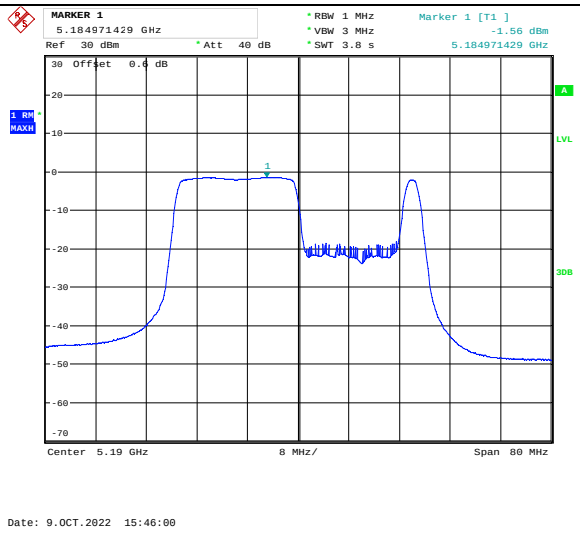
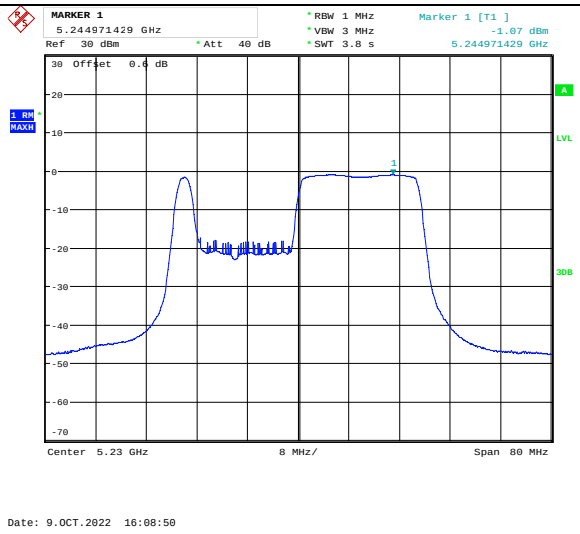
Maximum power spectral density	
802.11ax hew20 Lowest Channel 106Tone	
802.11ax hew20 Middle Channel 106Tone	
802.11ax hew20 Highest Channel 106Tone	

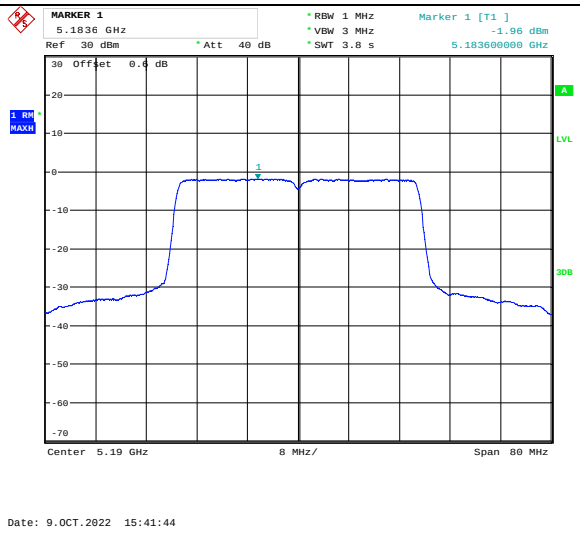
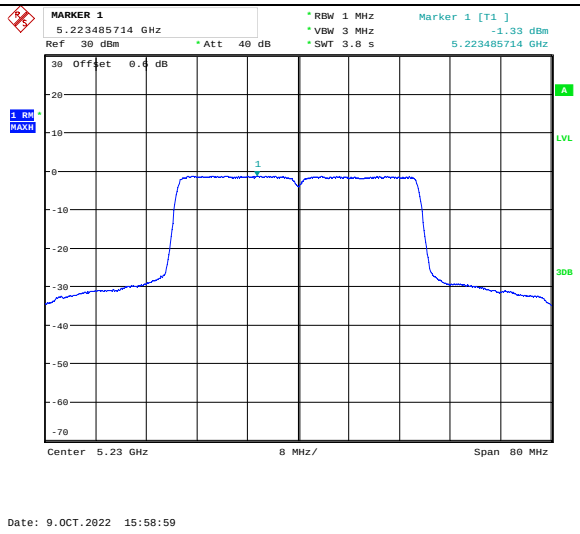
Maximum power spectral density	
802.11ax hew20 Lowest Channel 242Tone	
802.11ax hew20 Middle Channel 242Tone	
802.11ax hew20 Highest Channel 242Tone	

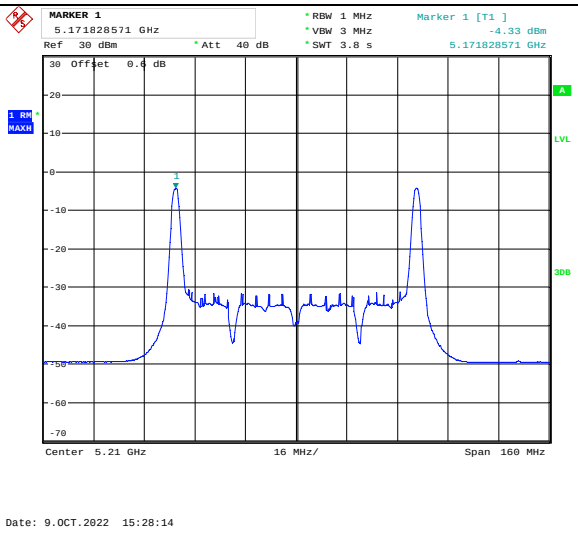
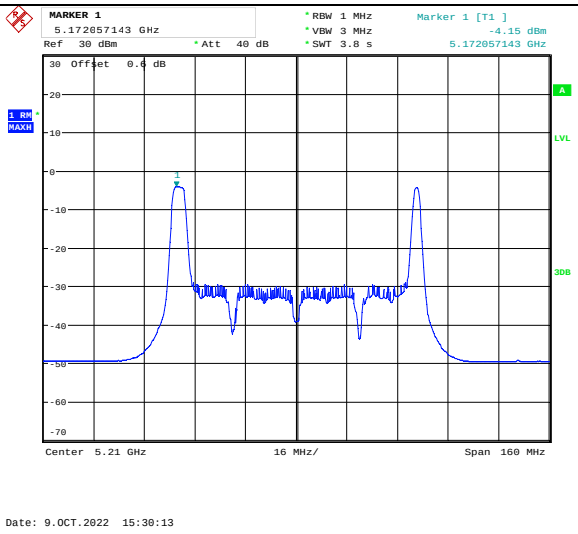
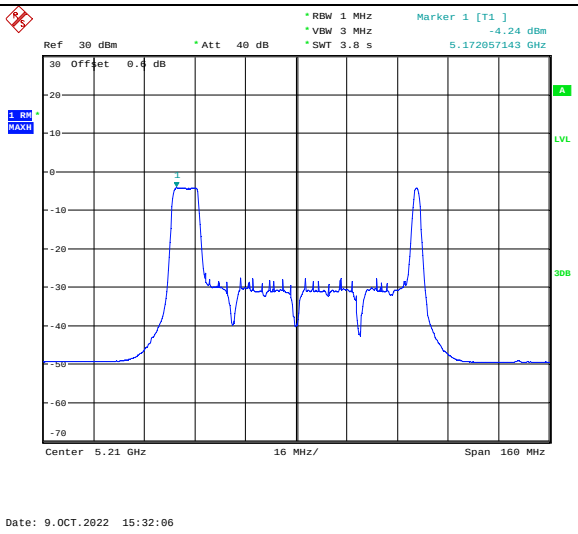
Maximum power spectral density	
802.11ax hew40 Lowest Channel 26Tone	
802.11ax hew40 Highest Channel 26Tone	

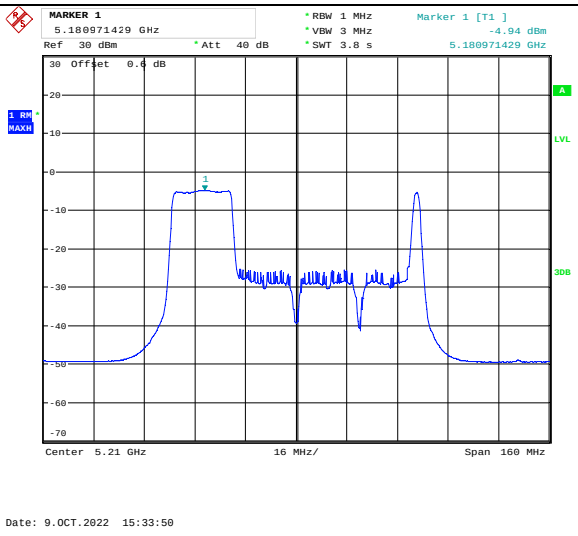
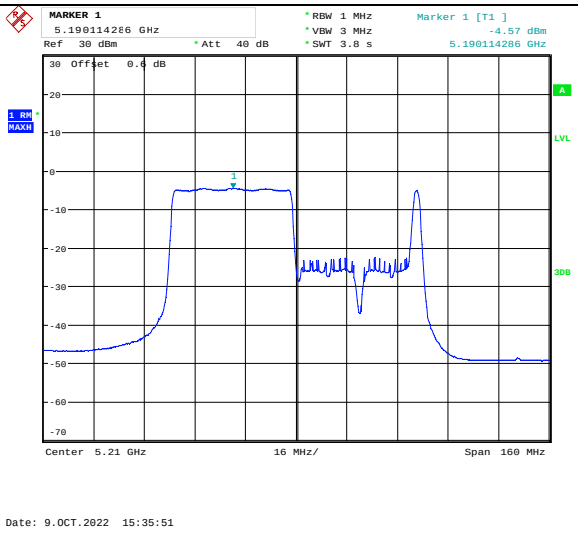
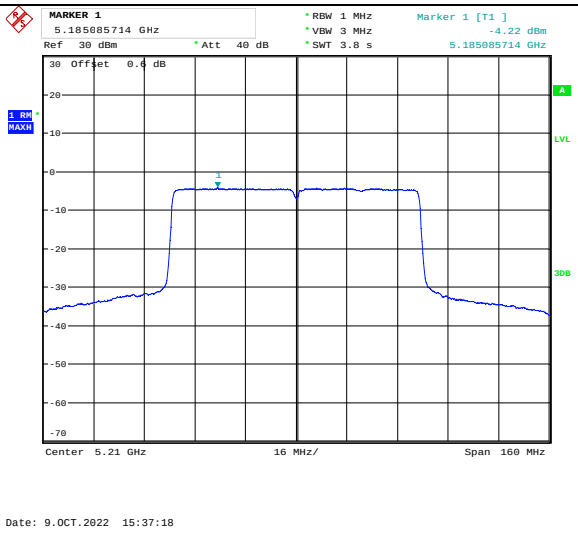
Maximum power spectral density	
802.11ax hew40 Lowest Channel 52Tone	
802.11ax hew40 Highest Channel 52Tone	

Maximum power spectral density	
802.11ax hew40 Lowest Channel 106Tone	
802.11ax hew40 Highest Channel 106Tone	

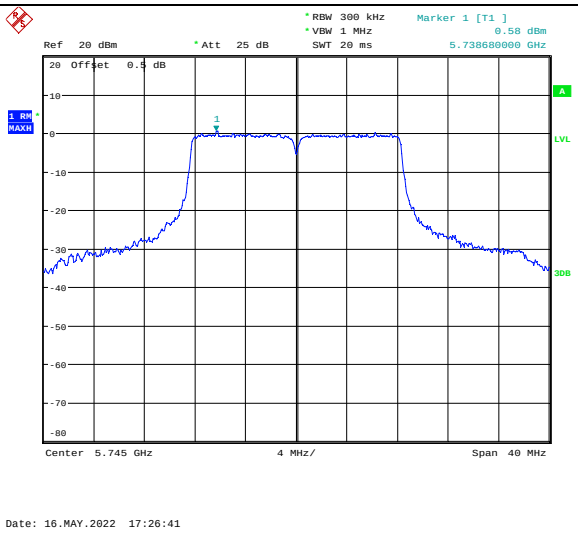
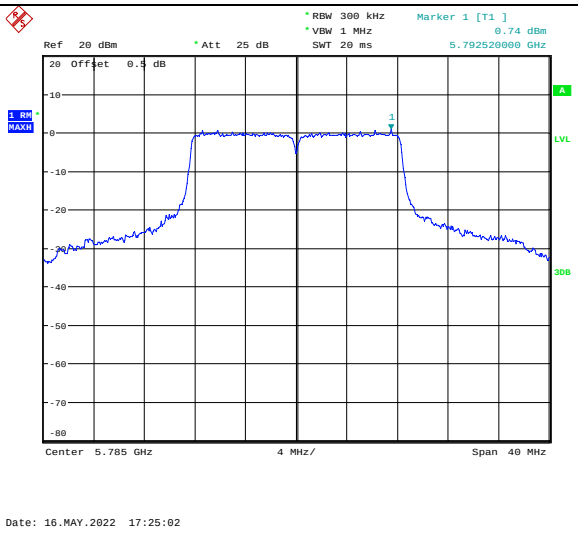
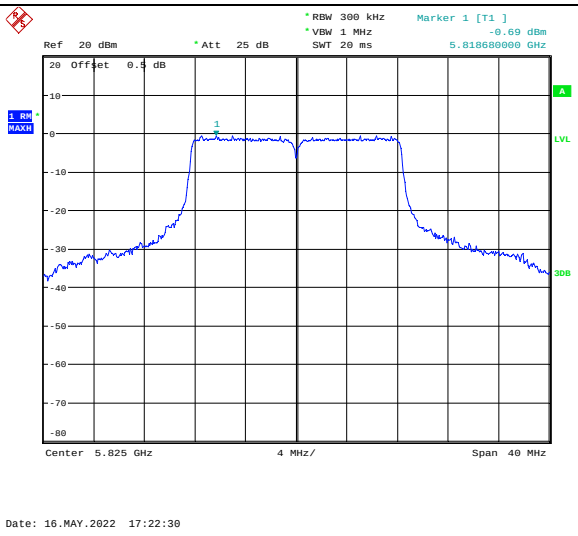
Maximum power spectral density	
802.11ax hew40 Lowest Channel 242Tone	
802.11ax hew40 Highest Channel 242Tone	

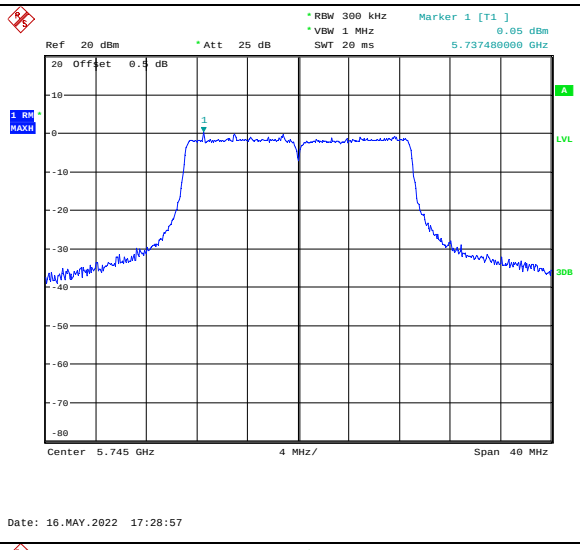
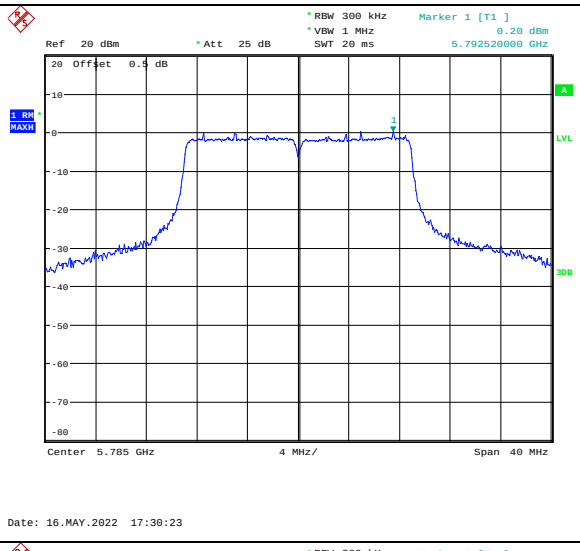
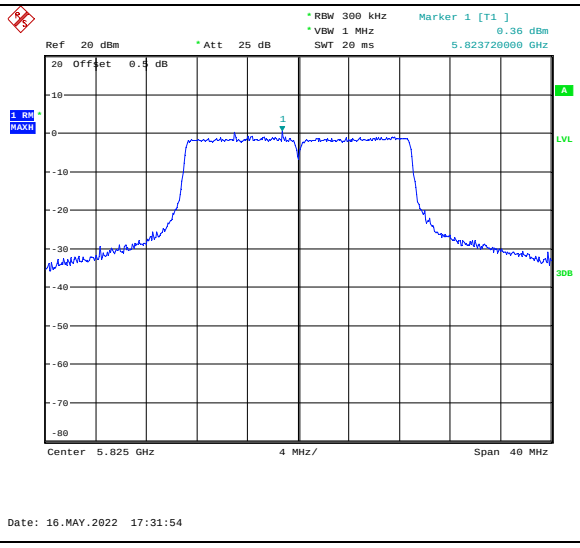
Maximum power spectral density	
802.11ax hew40 Lowest Channel 484Tone	
802.11ax hew40 Highest Channel 484Tone	

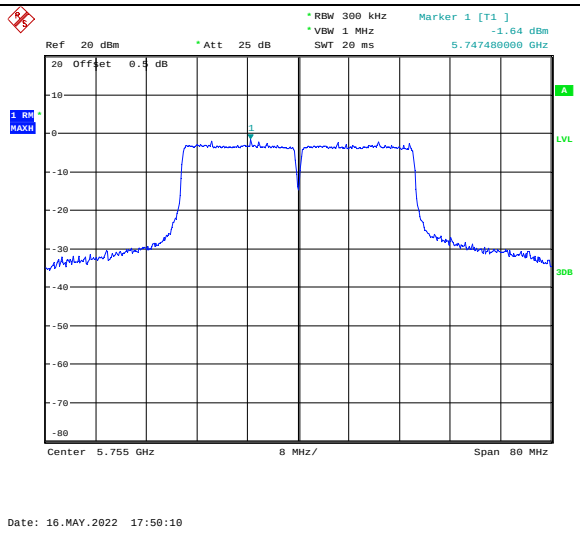
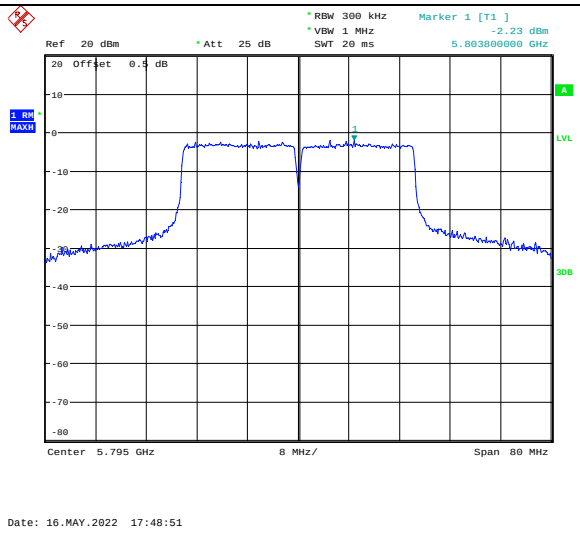
Maximum power spectral density	
802.11ax hew80 Lowest Channel 26Tone	
802.11ax hew80 Highest Channel 52Tone	
802.11ax hew80 Highest Channel 106Tone	

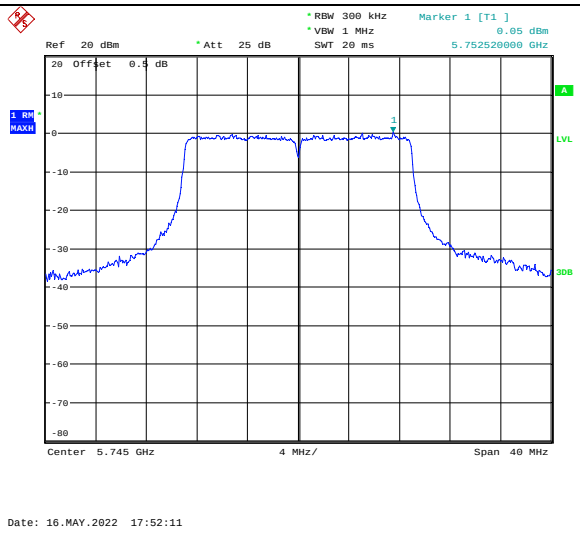
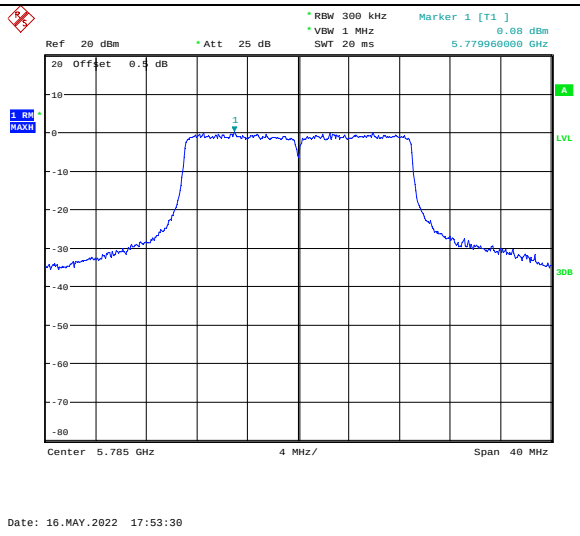
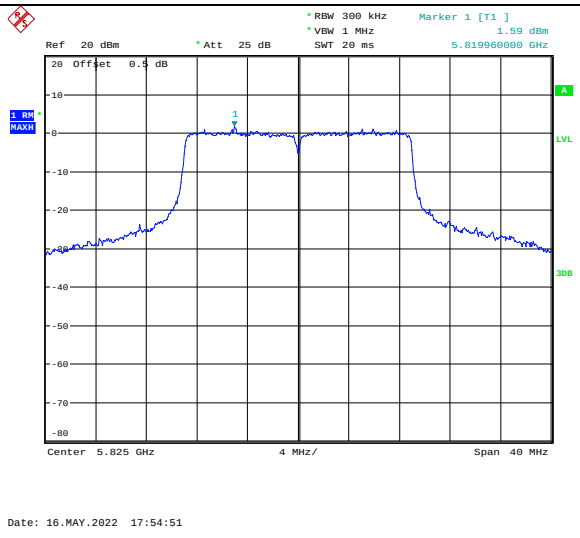
Maximum power spectral density	
802.11ax hew80 Lowest Channel 242Tone	
802.11ax hew80 Highest Channel 484Tone	
802.11ax hew80 Highest Channel 996Tone	

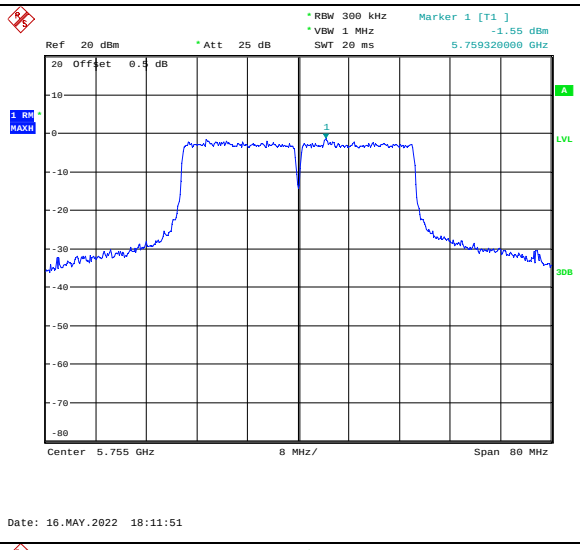
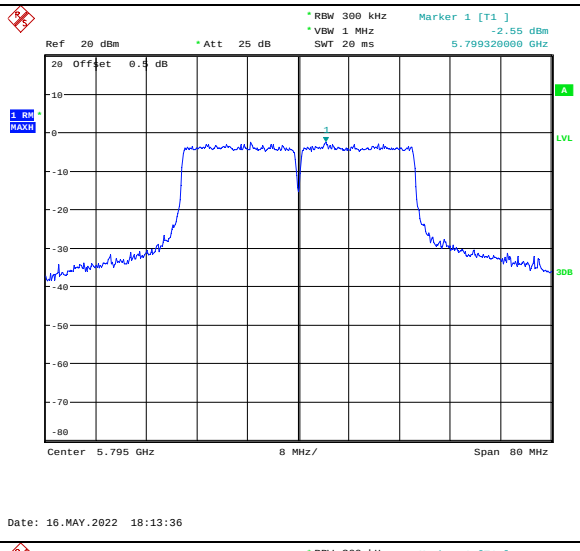
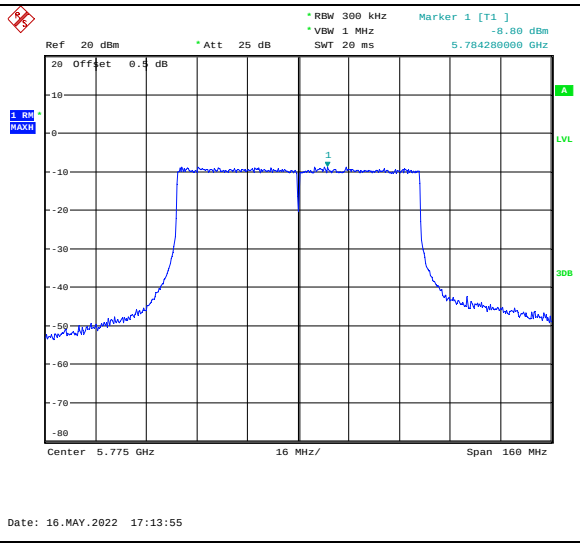
5725-5850MHz:
Chain 0

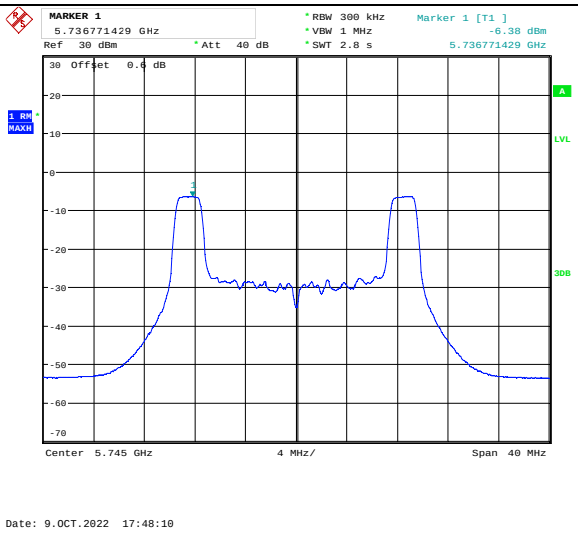
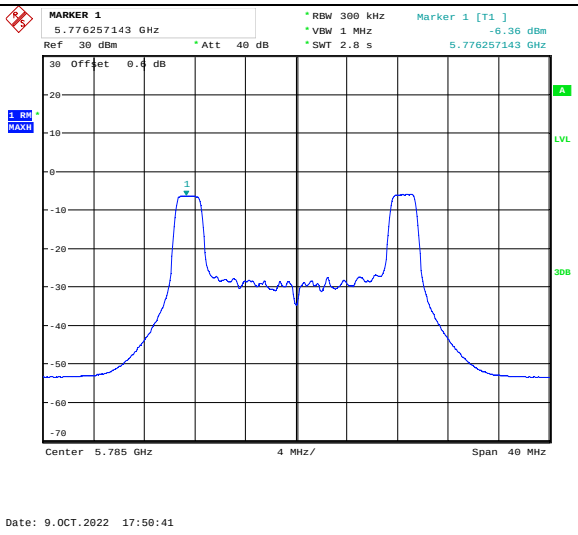
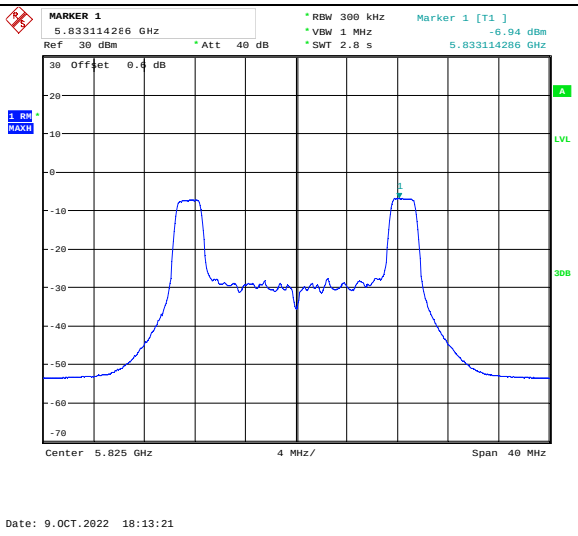
Maximum power spectral density	
802.11a Lowest Channel	
802.11a Middle Channel	
802.11a Highest Channel	

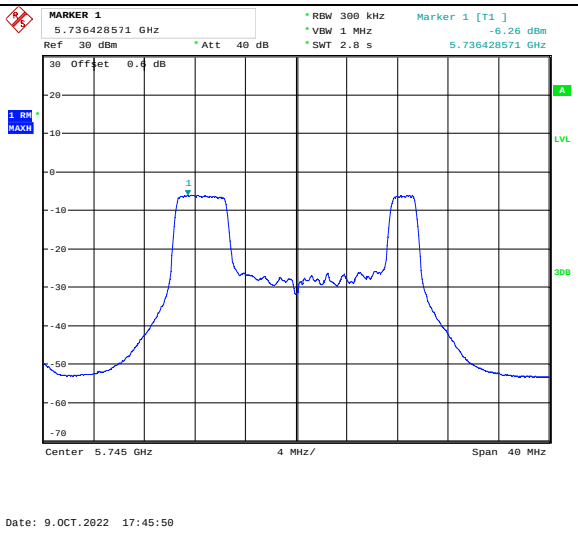
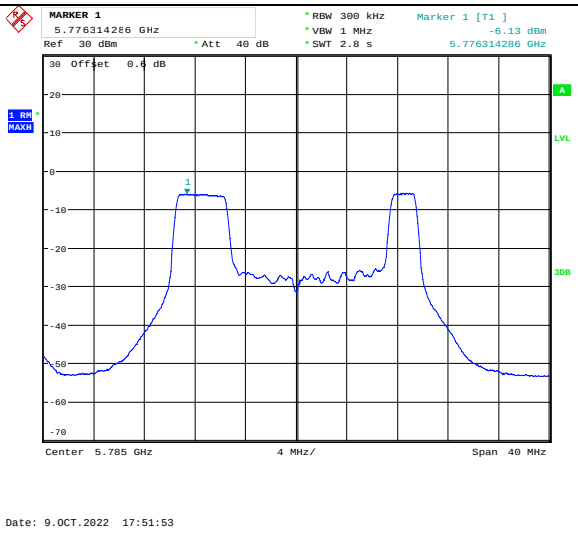
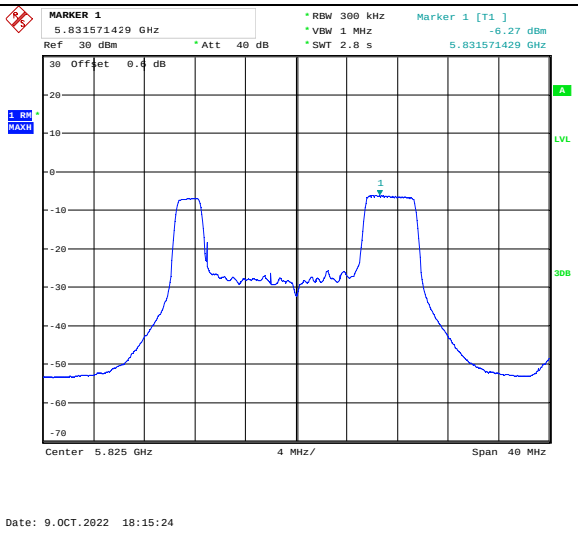
Maximum power spectral density	
802.11n ht20 Lowest Channel	
802.11n ht20 Middle Channel	
802.11n ht20 Highest Channel	

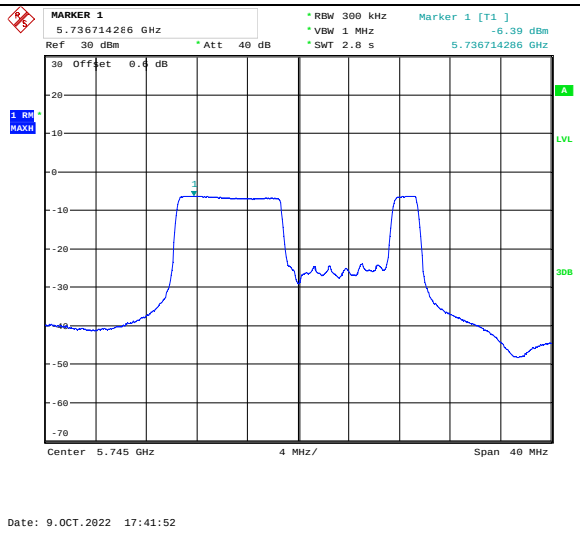
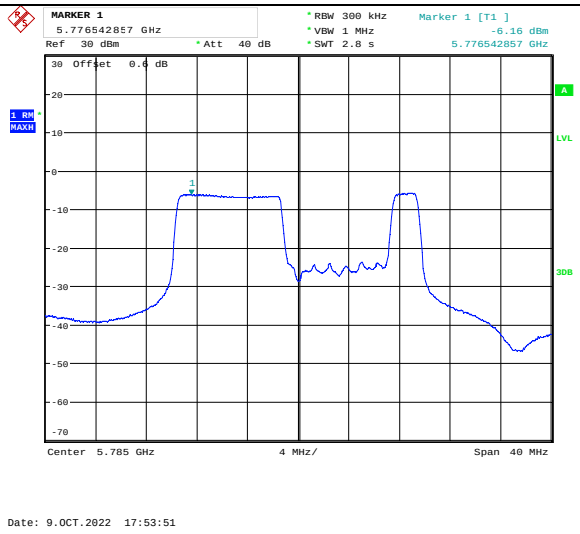
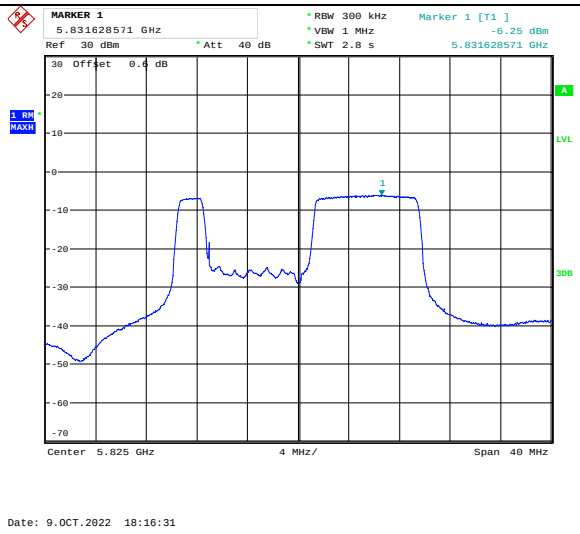
Maximum power spectral density	
802.11n ht40 Lowest Channel	
802.11n ht40 Highest Channel	

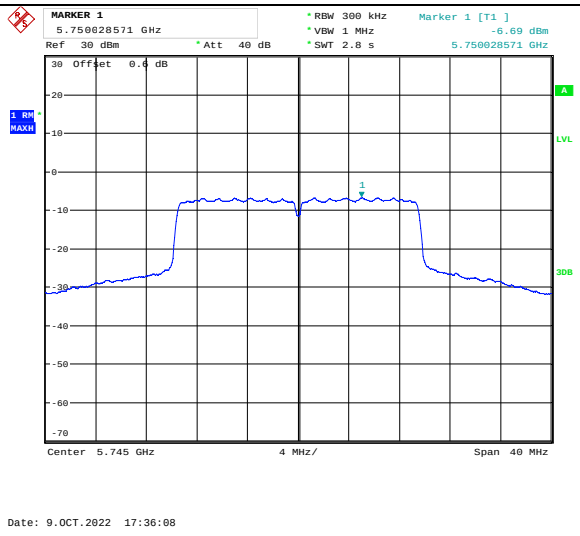
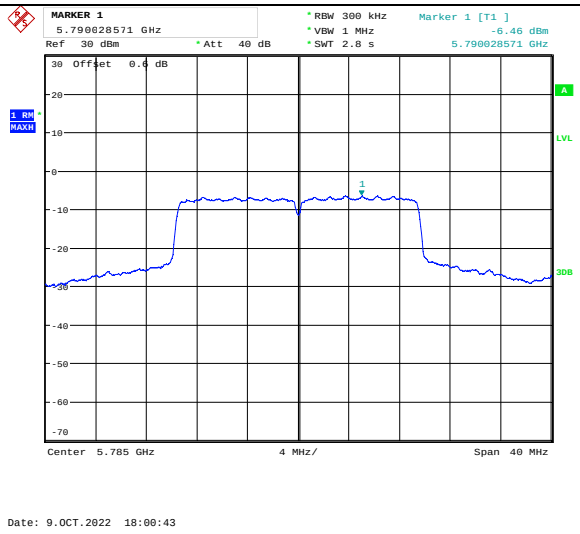
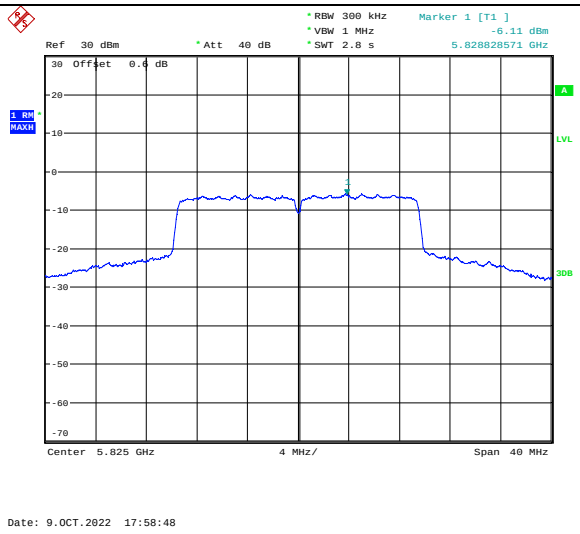
Maximum power spectral density	
802.11ac vht20 Lowest Channel	
802.11ac vht20 Middle Channel	
802.11ac vht20 Highest Channel	

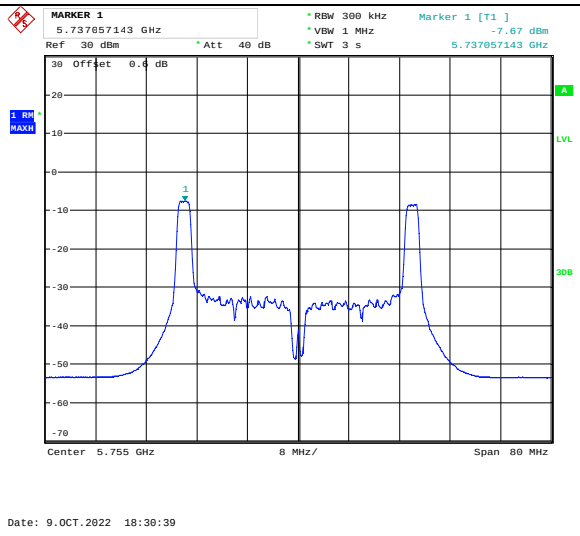
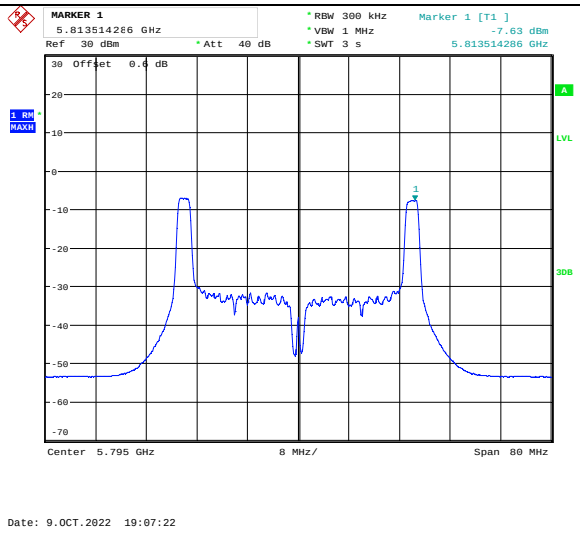
Maximum power spectral density	
802.11ac vht40 Lowest Channel	
802.11ac vht40 Highest Channel	
802.11ac vht80 Middle Channel	

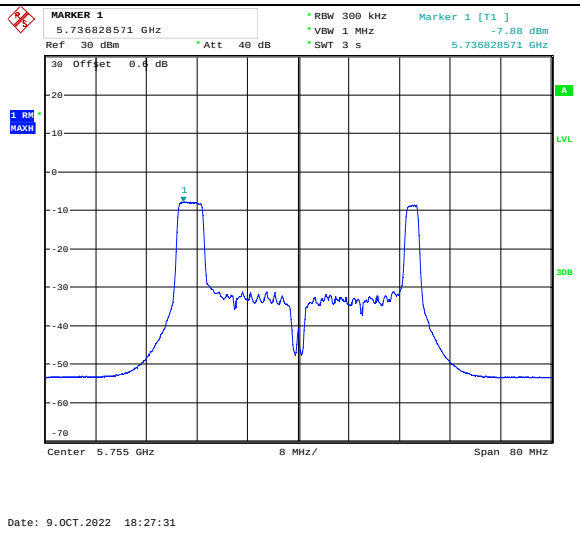
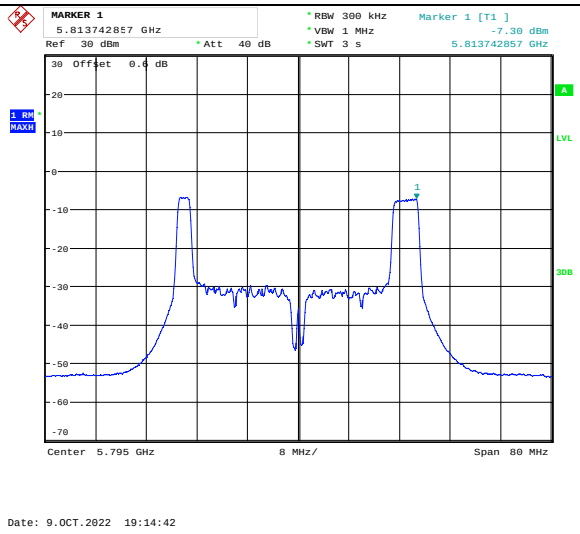
Maximum power spectral density	
802.11ax hew20 Lowest Channel 26Tone	
802.11ax hew20 Middle Channel 26Tone	
802.11ax hew20 Highest Channel 26Tone	

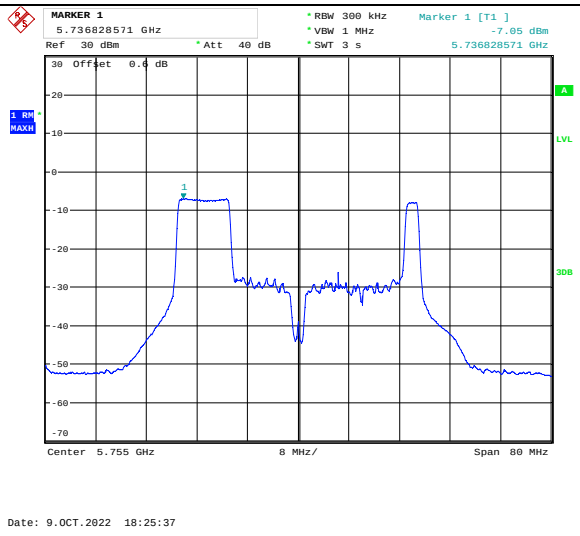
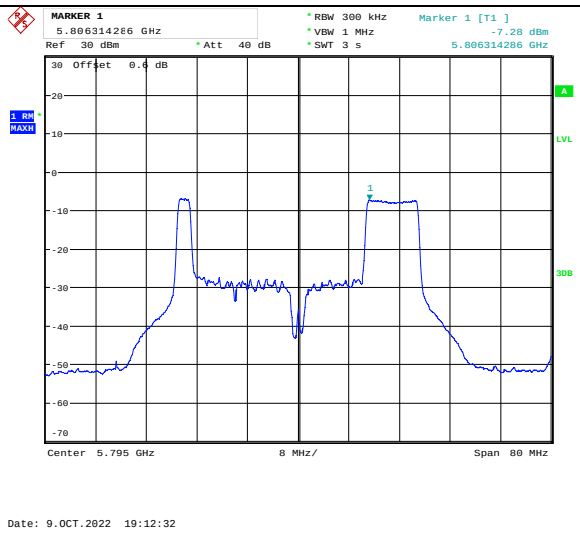
Maximum power spectral density	
802.11ax hew20 Lowest Channel 52Tone	
802.11ax hew20 Middle Channel 52Tone	
802.11ax hew20 Highest Channel 52Tone	

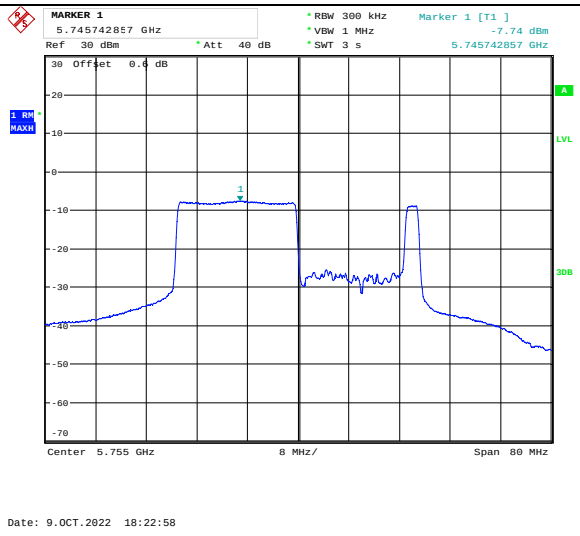
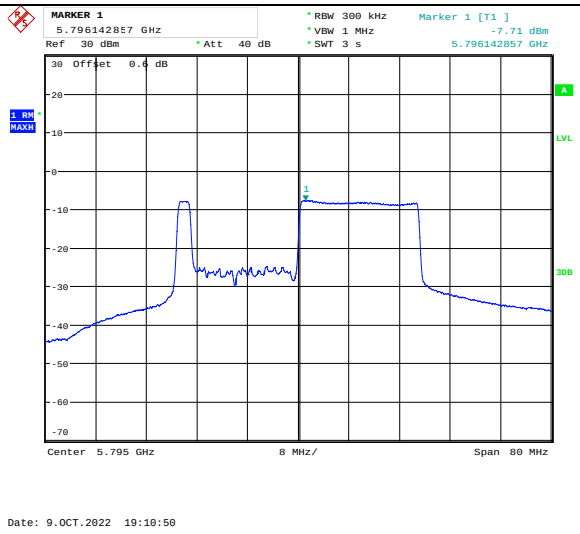
Maximum power spectral density	
802.11ax hew20 Lowest Channel 106Tone	
802.11ax hew20 Middle Channel 106Tone	
802.11ax hew20 Highest Channel 106Tone	

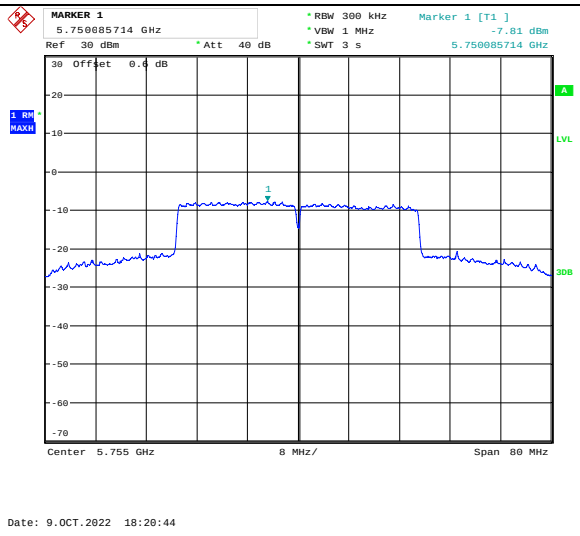
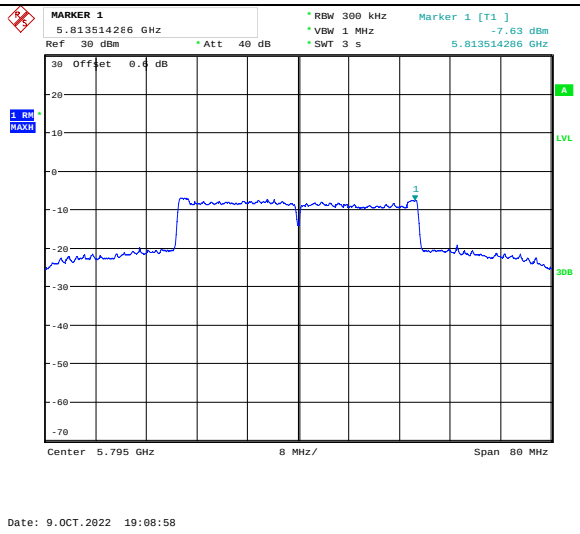
Maximum power spectral density	
802.11ax hew20 Lowest Channel 242Tone	
802.11ax hew20 Middle Channel 242Tone	
802.11ax hew20 Highest Channel 242Tone	

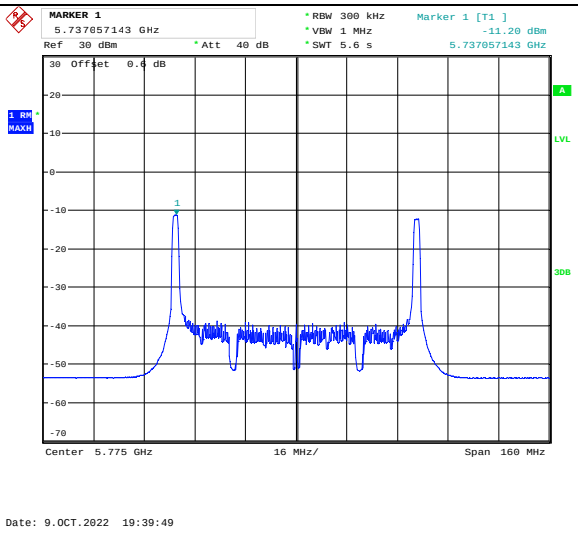
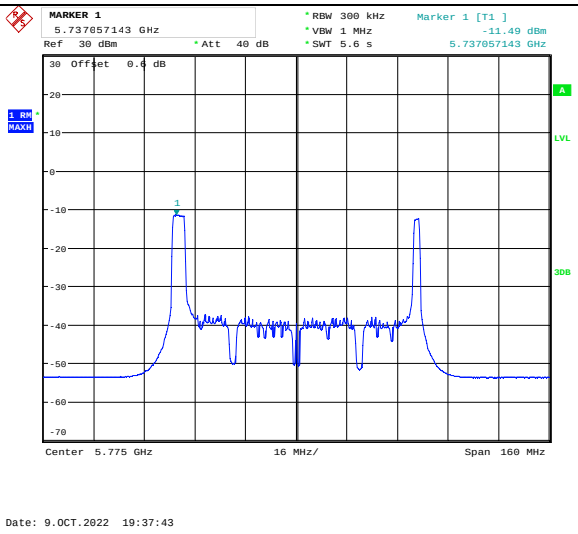
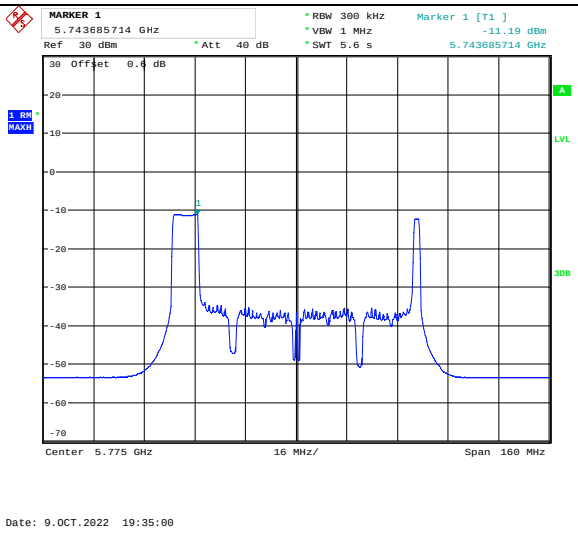
Maximum power spectral density	
802.11ax hew40 Lowest Channel 26Tone	
802.11ax hew40 Highest Channel 26Tone	

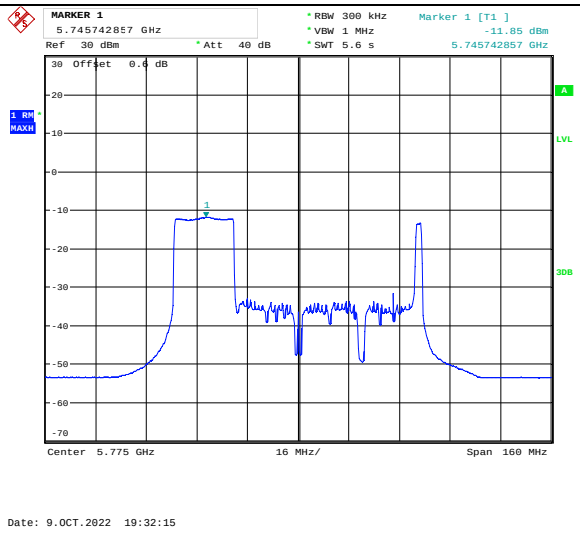
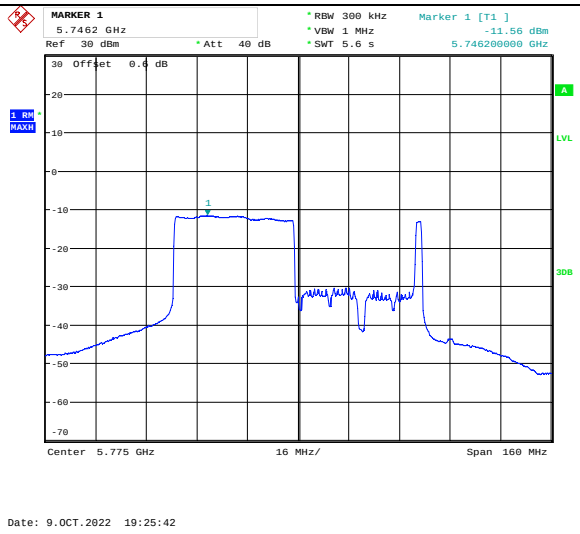
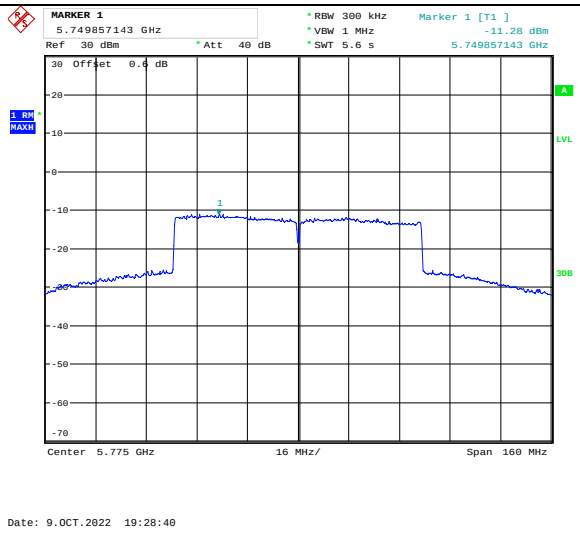
Maximum power spectral density	
802.11ax hew40 Lowest Channel 52Tone	
802.11ax hew40 Highest Channel 52Tone	

Maximum power spectral density	
802.11ax hew40 Lowest Channel 106Tone	
802.11ax hew40 Highest Channel 106Tone	

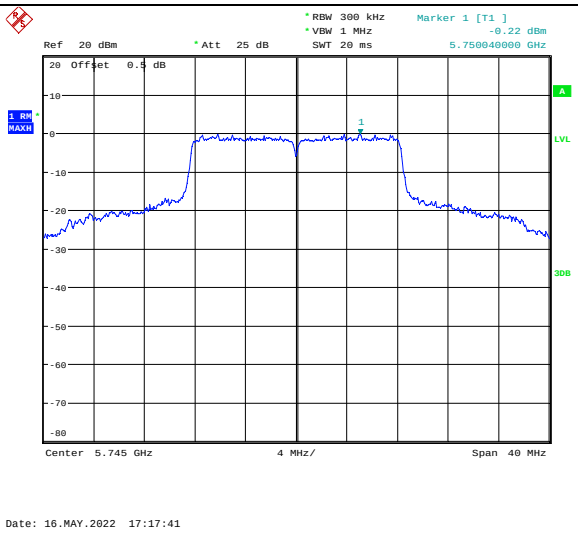
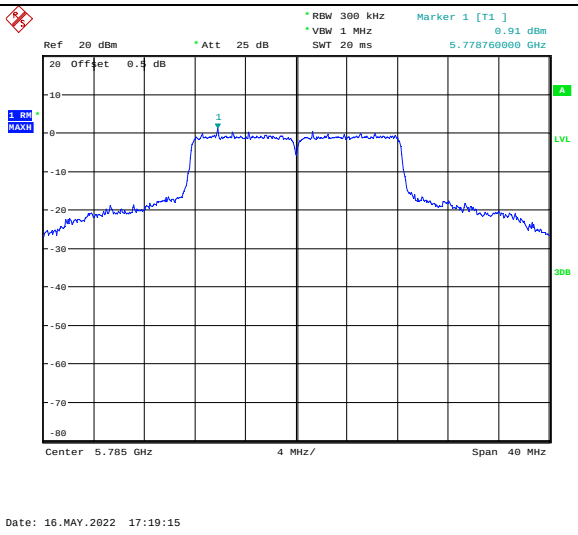
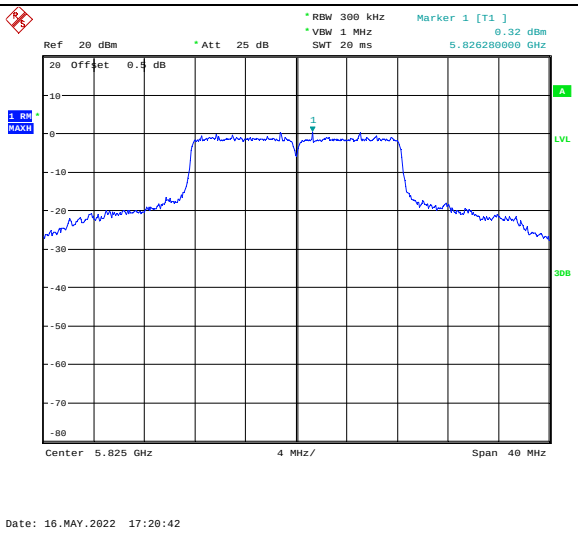
Maximum power spectral density	
802.11ax hew40 Lowest Channel 242Tone	
802.11ax hew40 Highest Channel 242Tone	

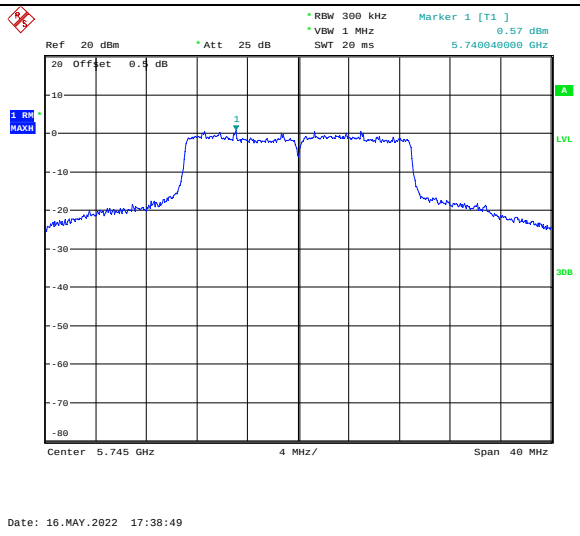
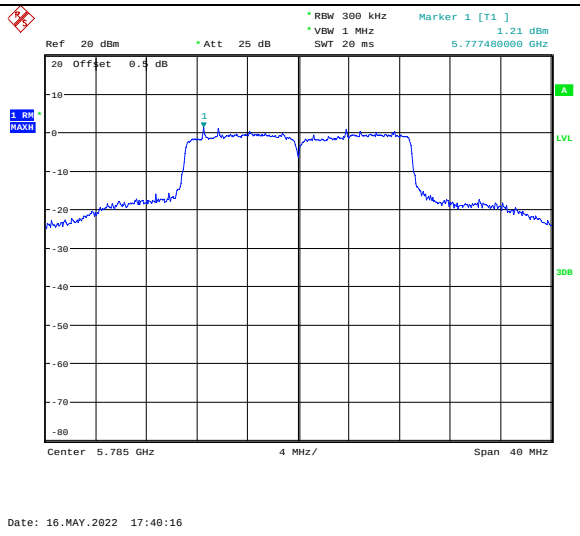
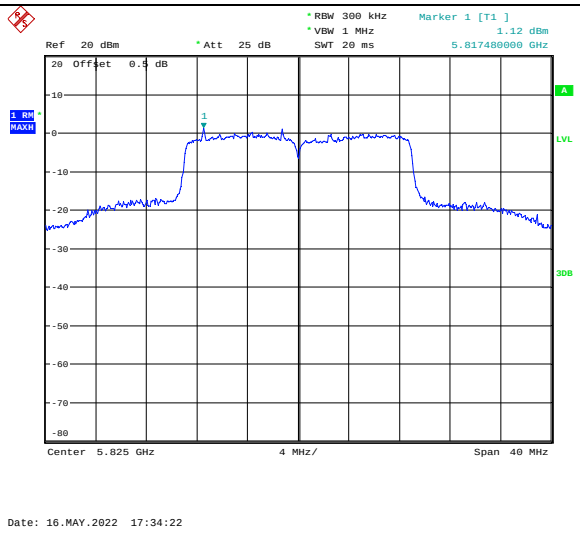
Maximum power spectral density	
802.11ax hew40 Lowest Channel 484Tone	
802.11ax hew40 Highest Channel 484Tone	

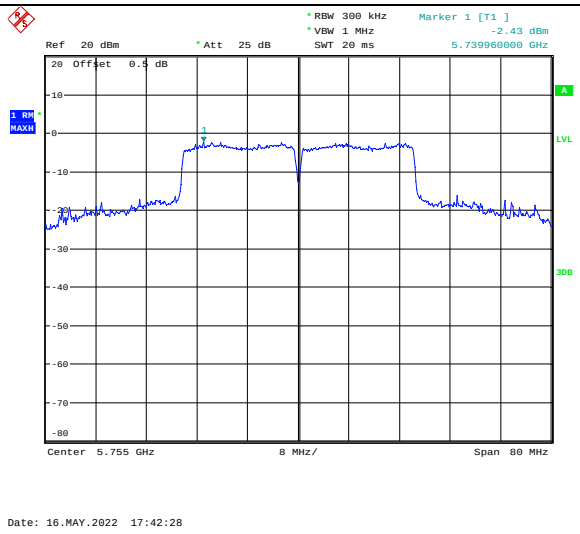
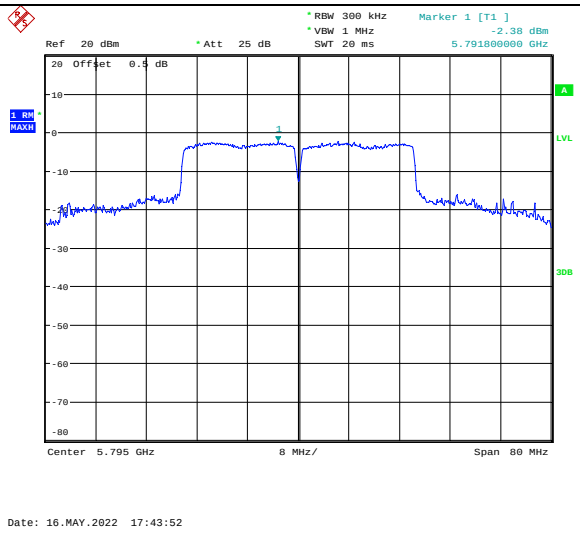
Maximum power spectral density	
802.11ax hew80 Lowest Channel 26Tone	
802.11ax hew80 Highest Channel 52Tone	
802.11ax hew80 Highest Channel 106Tone	

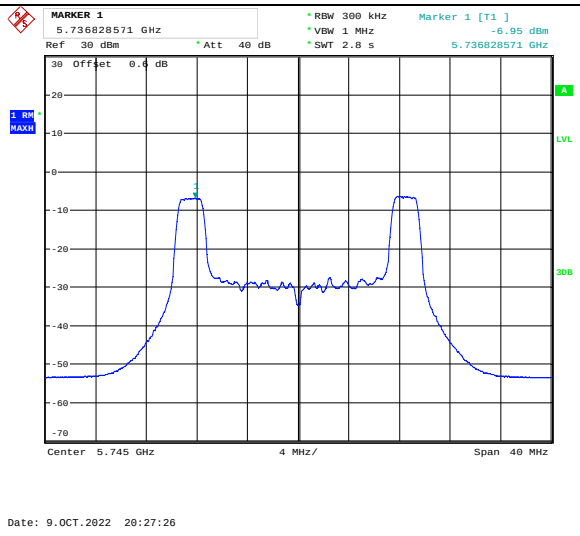
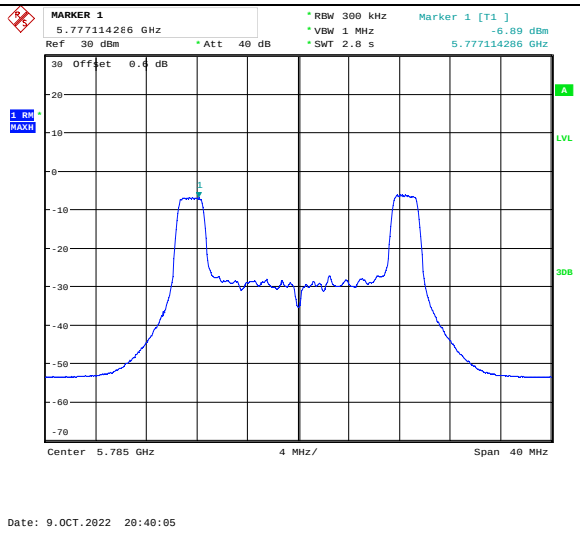
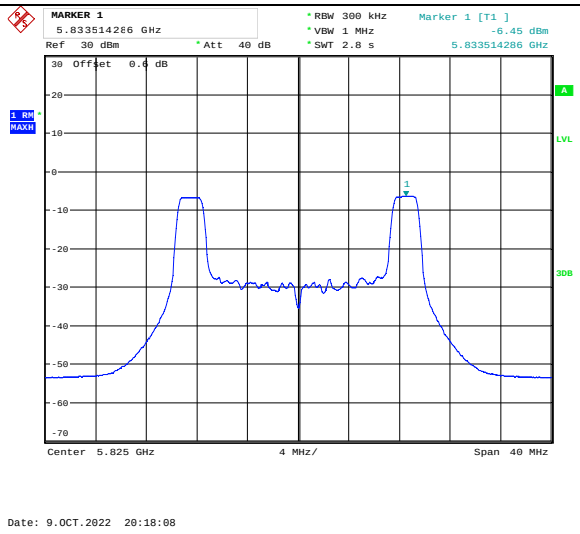
Maximum power spectral density	
802.11ax hew80 Lowest Channel 242Tone	
802.11ax hew80 Highest Channel 484Tone	
802.11ax hew80 Highest Channel 996Tone	

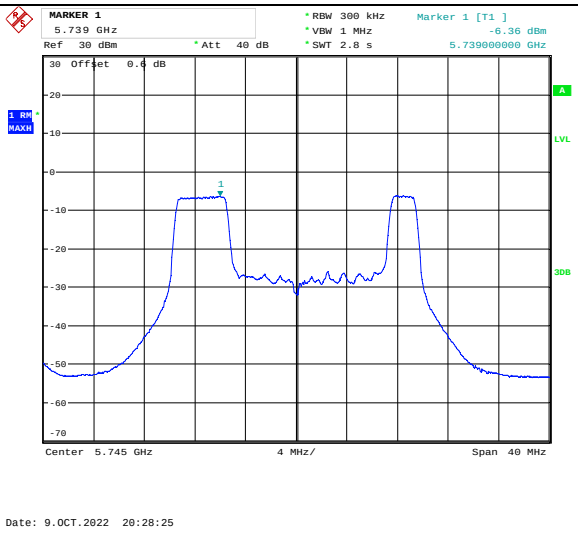
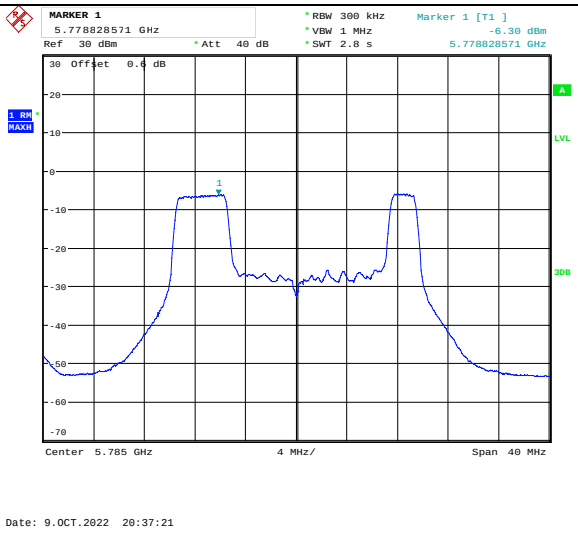
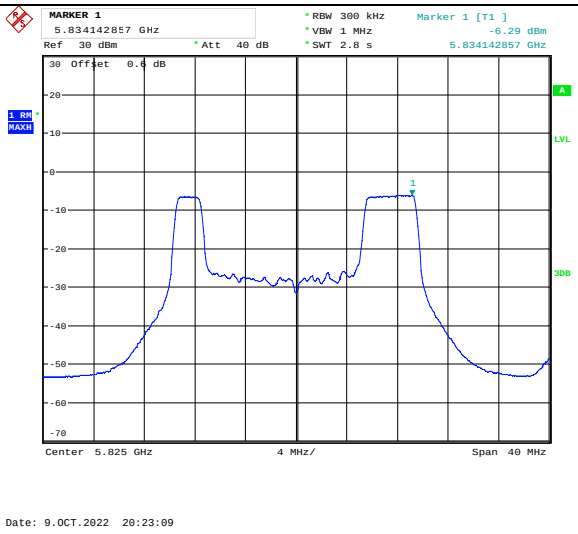
Chain 1:

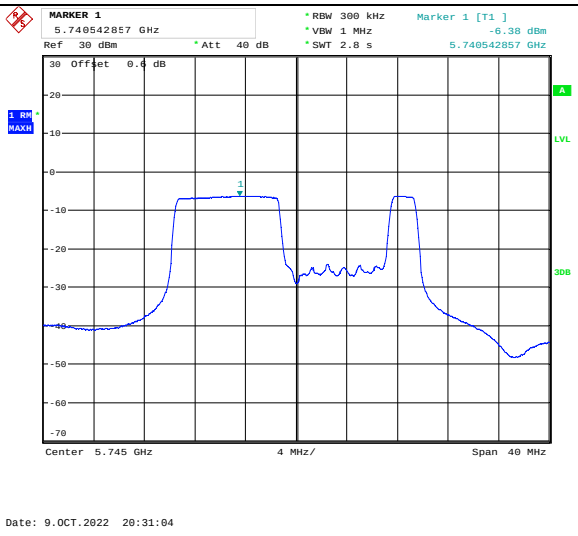
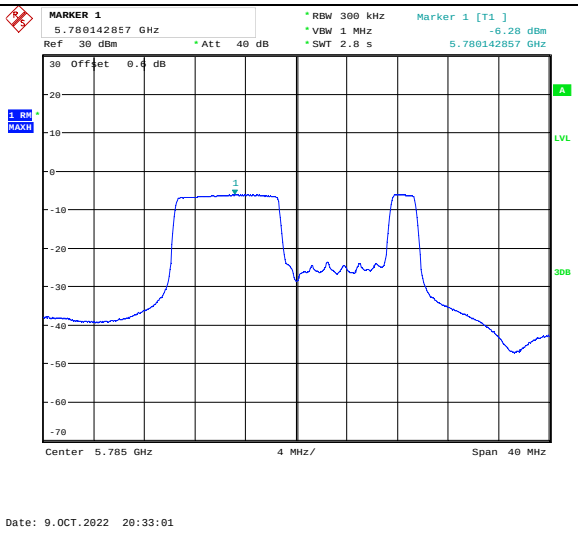
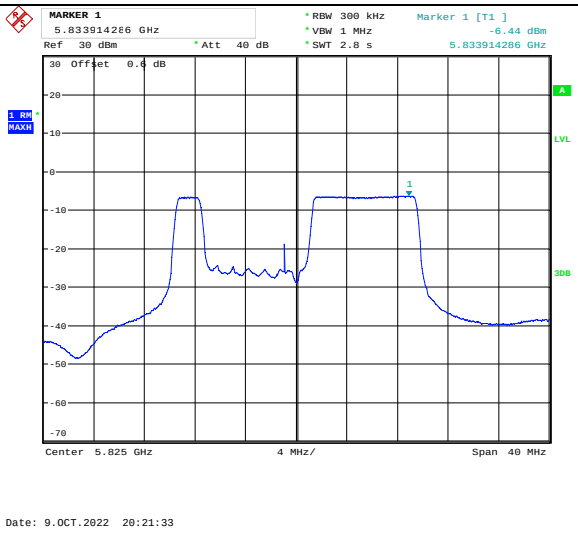
Maximum power spectral density	
802.11a Lowest Channel	
802.11a Middle Channel	
802.11a Highest Channel	

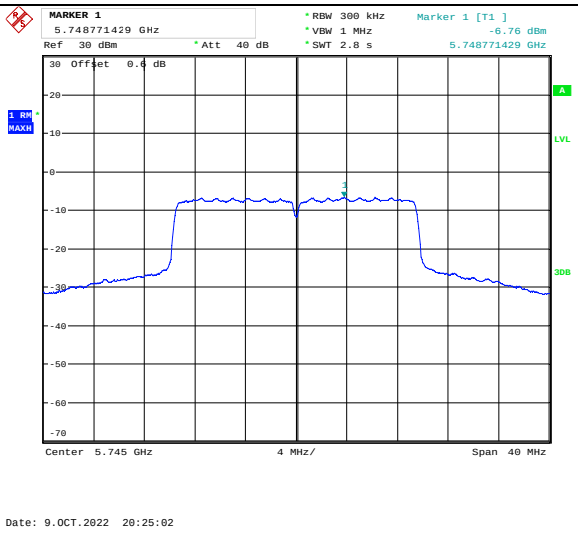
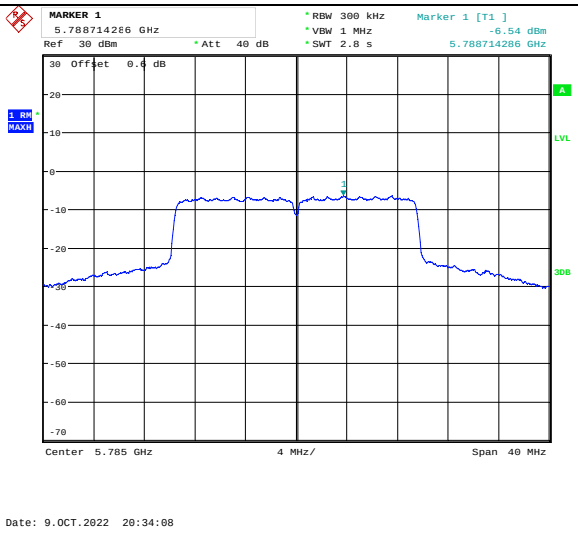
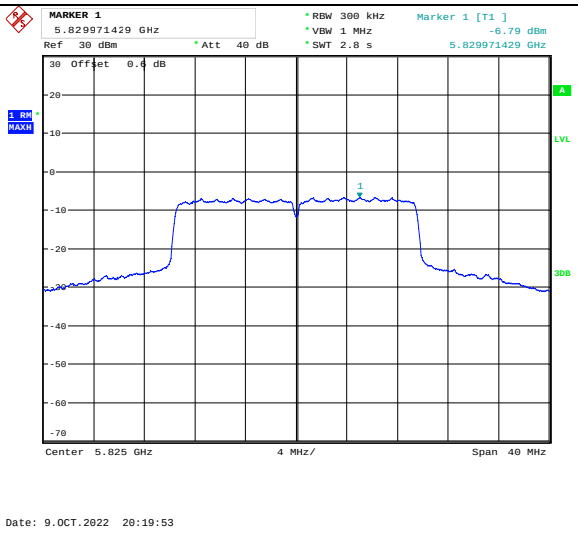
Maximum power spectral density	
802.11n ht20 Lowest Channel	
802.11n ht20 Middle Channel	
802.11n ht20 Highest Channel	

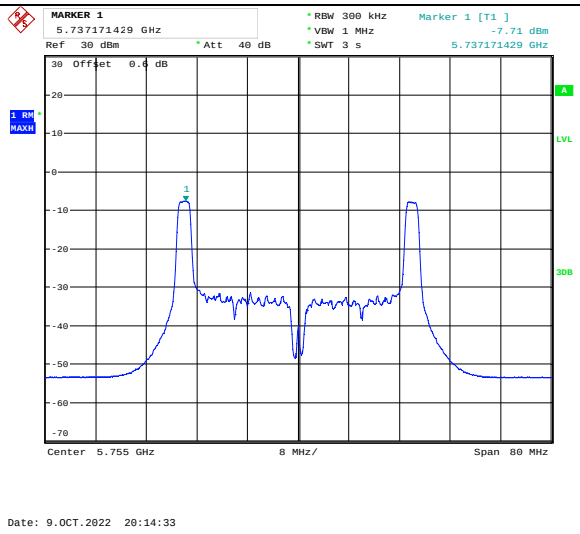
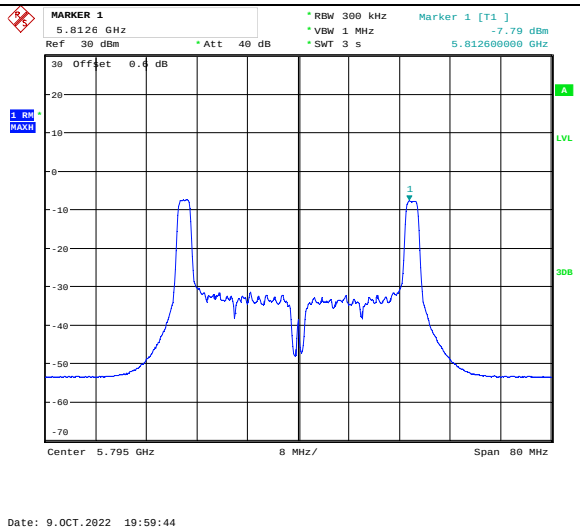
Maximum power spectral density	
802.11n ht40 Lowest Channel	
802.11n ht40 Highest Channel	

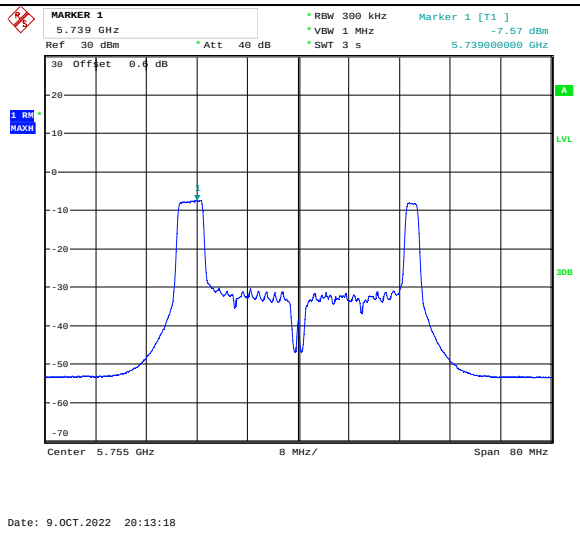
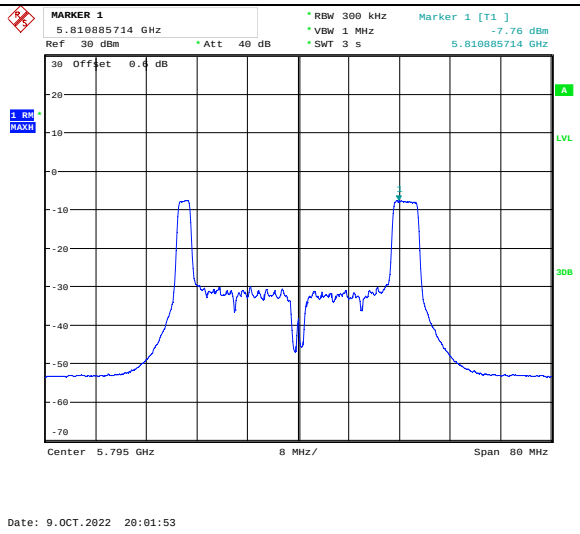
Maximum power spectral density	
802.11ax hew20 Lowest Channel 26Tone	
802.11ax hew20 Middle Channel 26Tone	
802.11ax hew20 Highest Channel 26Tone	

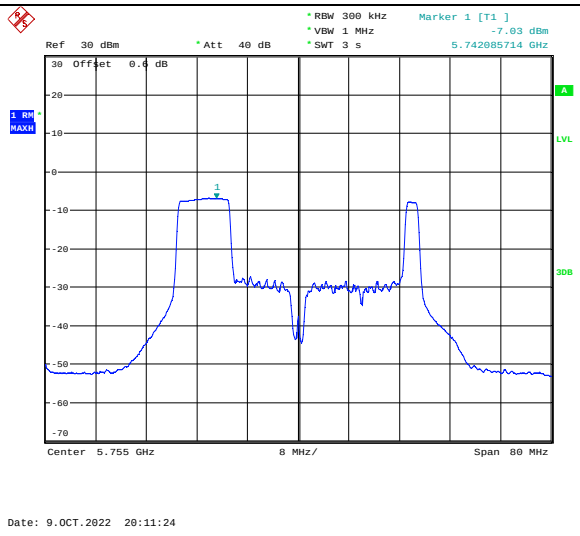
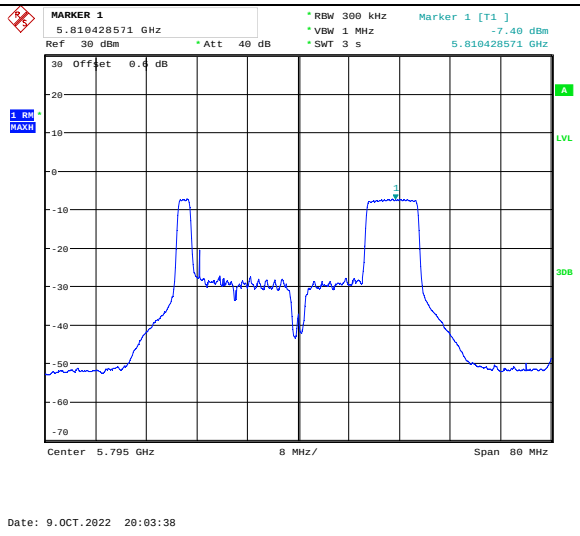
Maximum power spectral density	
802.11ax hew20 Lowest Channel 52Tone	
802.11ax hew20 Middle Channel 52Tone	
802.11ax hew20 Highest Channel 52Tone	

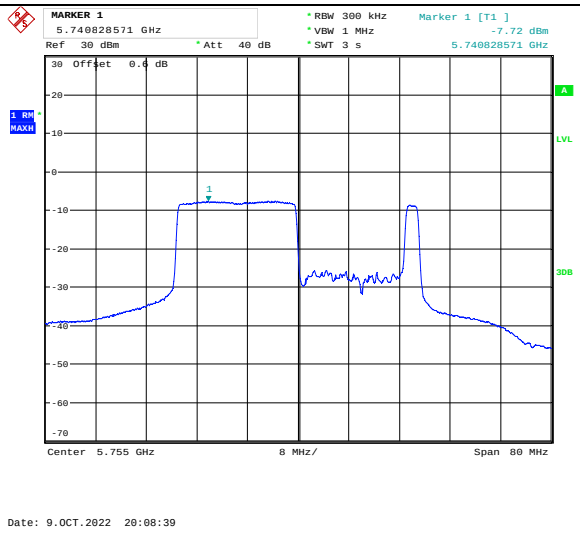
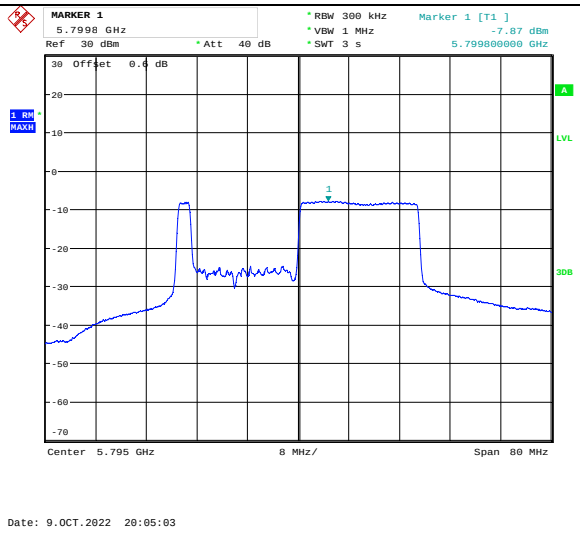
Maximum power spectral density	
802.11ax hew20 Lowest Channel 106Tone	
802.11ax hew20 Middle Channel 106Tone	
802.11ax hew20 Highest Channel 106Tone	

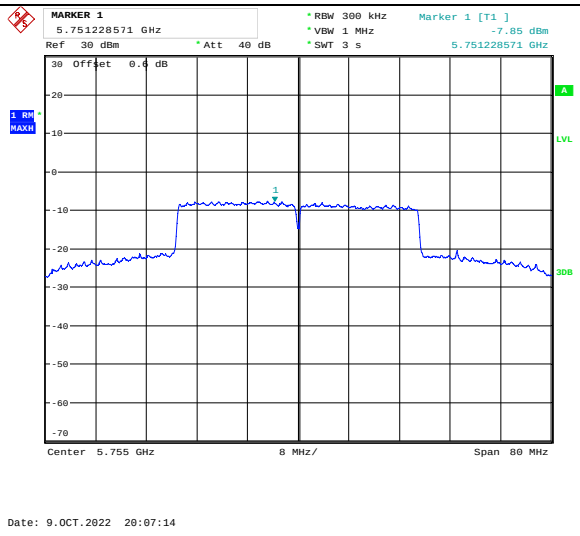
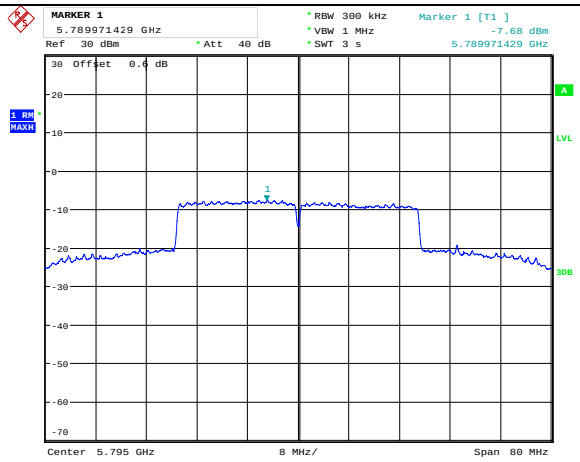
Maximum power spectral density	
802.11ax hew20 Lowest Channel 242Tone	
802.11ax hew20 Middle Channel 242Tone	
802.11ax hew20 Highest Channel 242Tone	

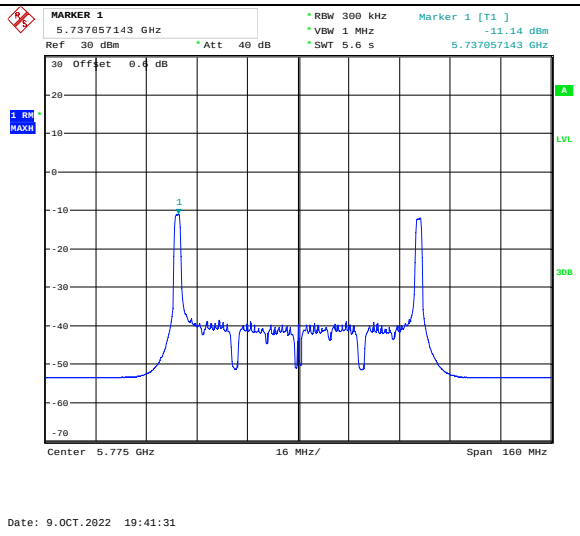
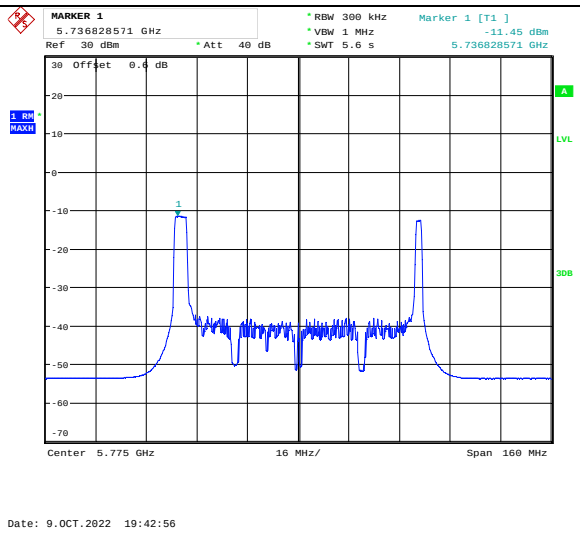
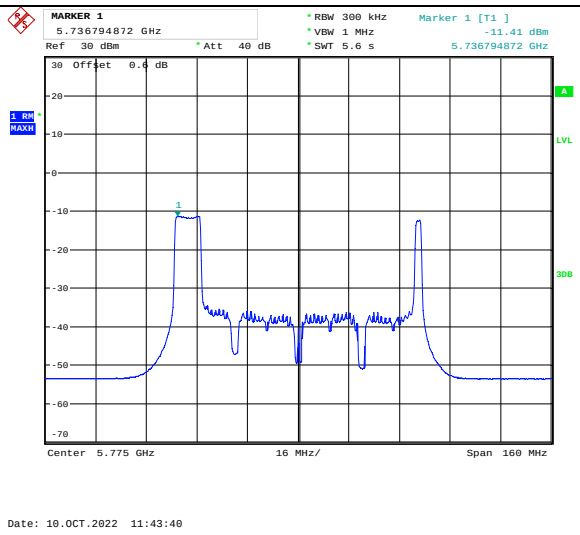
Maximum power spectral density	
802.11ax hew40 Lowest Channel 26Tone	
802.11ax hew40 Highest Channel 26Tone	

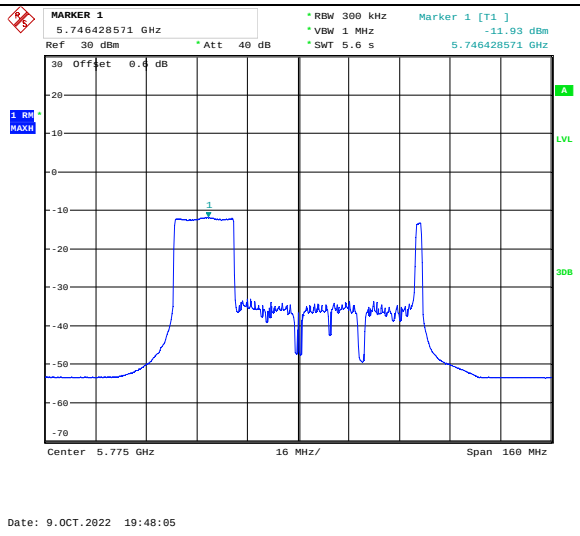
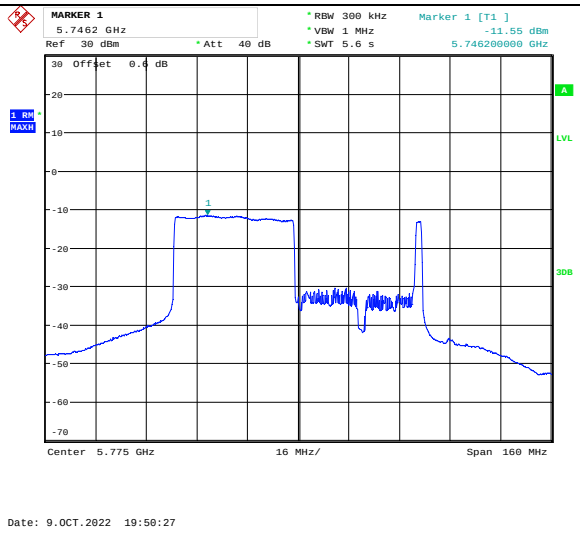
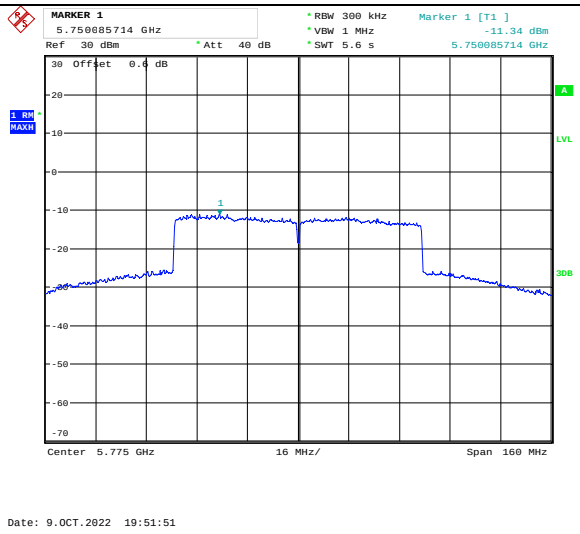
Maximum power spectral density	
802.11ax hew40 Lowest Channel 52Tone	
802.11ax hew40 Highest Channel 52Tone	

Maximum power spectral density	
802.11ax hew40 Lowest Channel 106Tone	
802.11ax hew40 Highest Channel 106Tone	

Maximum power spectral density	
802.11ax hew40 Lowest Channel 242Tone	
802.11ax hew40 Highest Channel 242Tone	

Maximum power spectral density	
802.11ax hew40 Lowest Channel 484Tone	
802.11ax hew40 Highest Channel 484Tone	

Maximum power spectral density	
802.11ax hew80 Lowest Channel 26Tone	
802.11ax hew80 Highest Channel 52Tone	
802.11ax hew80 Highest Channel 106Tone	

Maximum power spectral density	
802.11ax hew80 Lowest Channel 242Tone	
802.11ax hew80 Highest Channel 484Tone	
802.11ax hew80 Highest Channel 996Tone	

4.7 Duty Cycle:

Serial Number:	CR22010029-RF-S1	Test Date:	2022-05-17
Test Site:	RF	Test Mode:	Transmitting
Tester:	Julie Tan	Test Result:	N/A

Environmental Conditions:					
Temperature: (℃)	22.5	Relative Humidity: (%)	52	ATM Pressure: (kPa)	100.8

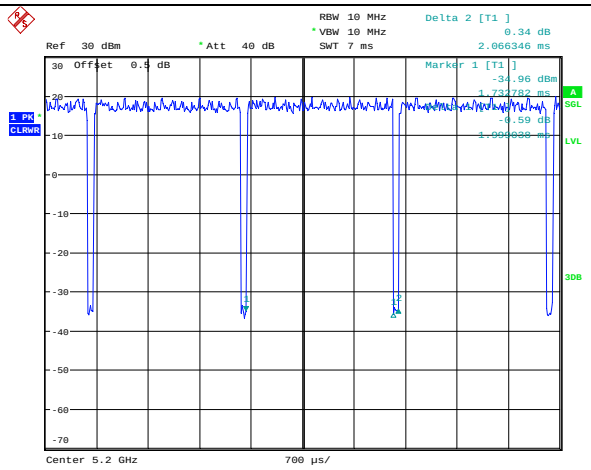
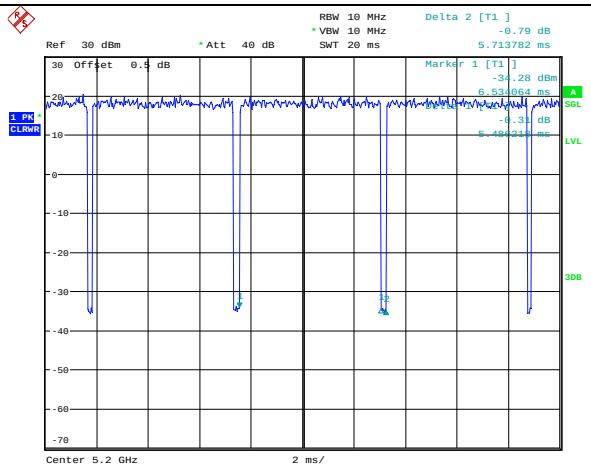
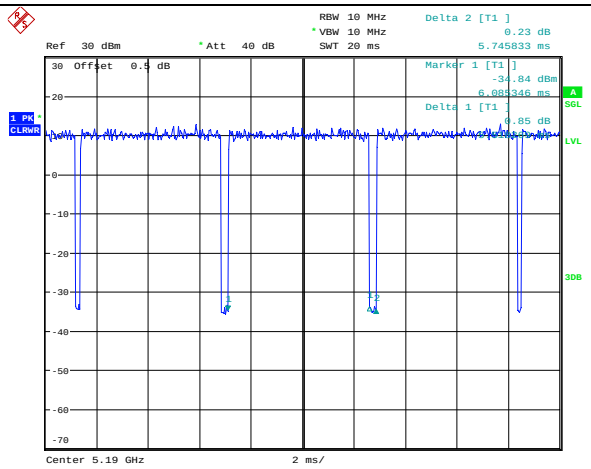
Test Equipment List and Details:

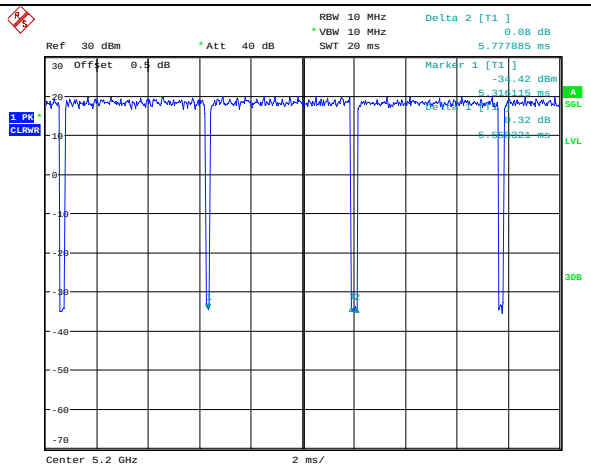
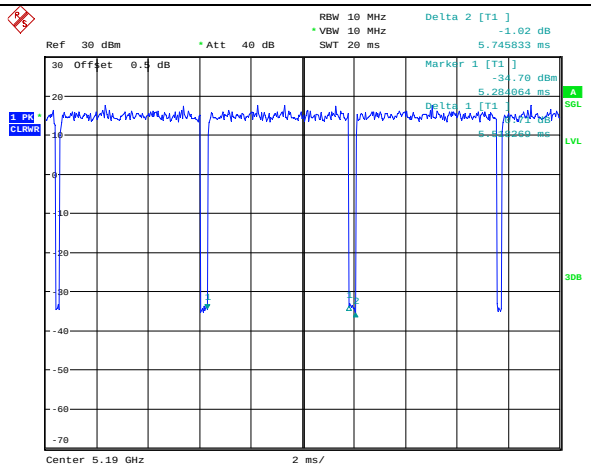
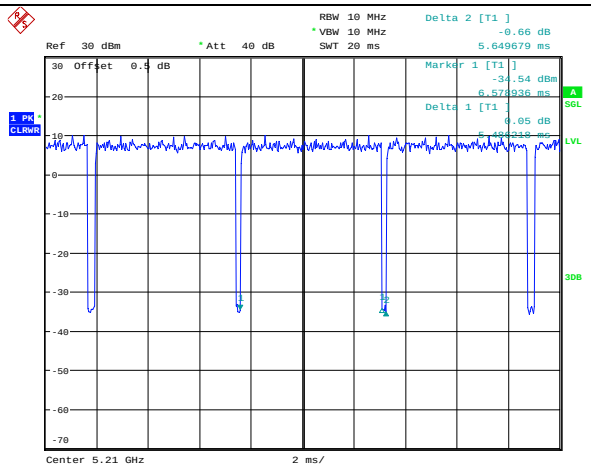
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	200256	2021-07-22	2022-07-21
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A

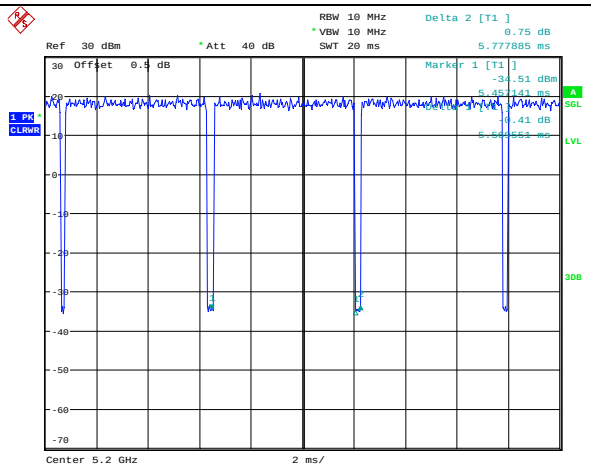
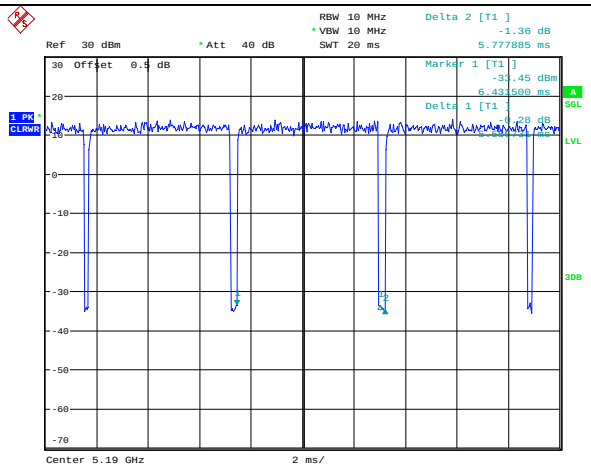
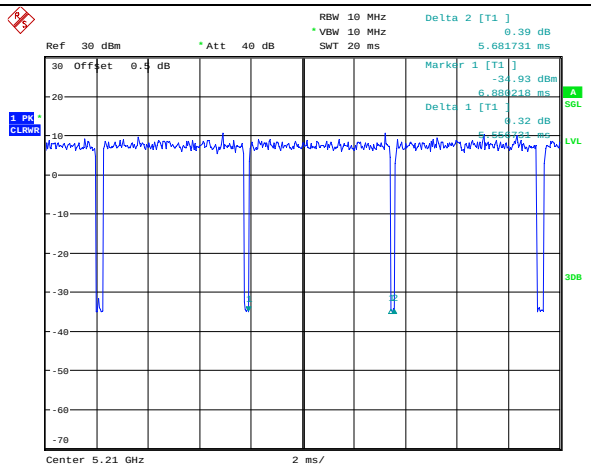
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

Test Modes	Ton (ms)	Ton+off (ms)	Duty cycle (%)
802.11a	1.999	2.066	96.76
802.11n ht20	5.486	5.714	96.01
802.11n ht40	5.518	5.746	96.03
802.11ac vht20	5.57	5.778	96.40
802.11ac vht40	5.518	5.746	96.03
802.11ac vht80	5.486	5.65	97.10
802.11ax hew20	5.57	5.778	96.40
802.11ax hew40	5.557	5.778	96.18
802.11ax hew80	5.557	5.682	97.80

Duty Cycle	
802.11a	
802.11n ht20	
802.11n ht40	

Duty Cycle	
802.11ac vht20	
802.11ac vht40	
802.11ac vht80	

Duty Cycle	
802.11ax hew20	 Date: 16.MAY.2022 20:47:43
802.11ax hew40	 Date: 16.MAY.2022 20:49:15
802.11ax hew80	 Date: 16.MAY.2022 20:50:36

5. RF EXPOSURE EVALUATION

5.1 MAXIMUM PERMISSIBLE EXPOSURE (MPE)

5.1.1 Applicable Standard

FCC §15.407 (f) & §1.1310 & §2.1091

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See §1.1307(b)(1) of this chapter.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f²)	30
30–300	27.5	0.073	0.2	30
300–1500	/	/	f/1500	30
1500–100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

5.1.2 Procedure

Prediction of power density at the distance of the applicable MPE limit
$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm^2);
P = power input to the antenna (in appropriate units, e.g., mW);
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

5.1.3 Calculated Result

Operation Bands	**Frequency (MHz)**	**Antenna Gain**		**Conducted output power including Tune-up Tolerance**		**Evaluation Distance (cm)**	**Power Density (mW/cm^2)**	**MPE Limit (mW/cm^2)**
		(dBi)	**(numeric)**	**(dBm)**	**(mW)**			
2.4GHz	2412-2462	4	2.51	30	1000.00	20.00	0.50	1.0
5.2GHz	5150-5250	4.5	2.82	18.5	70.79	20.00	0.04	1.0
5.8GHz	5725-5850	5	3.16	18.5	70.79	20.00	0.04	1.0

Note: Non simultaneously transmission in the band 2.4GHz, 5.2GHz or 5.8GHz.

Result: The device meet FCC MPE at 20 cm distance.

5.2 Exemption limits for Routine Evaluation – RF Exposure Evaluation

5.2.1 Applicable Standard

According to RSS-102 § (2.5.2):

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $4.49/f^{0.5}$ W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

In these cases, the information contained in the RF exposure technical brief may be limited to information that demonstrates how the e.i.r.p. was derived.

5.2.2 Calculated Data:

Operation Bands	Frequency (MHz)	Antenna Gain	Conducted output power including Tune-up Tolerance	EIRP		Exemption limits (mW)
		(dBi)	(dBm)	(dBm)	(mW)	
2.4GHz	2412-2462	4	30	34	2512	2684
5.2GHz	5150-5250	4.5	18.5	23	200	4525
5.8GHz	5725-5850	5	18.5	23.5	224	4857

So the device is compliance exemption from Routine Evaluation Limits –RF exposure Evaluation.

Result: Compliance

===== END OF REPORT =====