TEST REPORT

Reference No.	:	WTH24X08197401W001
FCC ID	:	XOM-G50Y
Applicant	:	Shenzhen Qiyue Optronics Company Limited
Address	:	Flat3,Tower 3, Excellence Meilin Center Plaza, Zhongkang Road 128, Shangmeilin, Futian District, Shenzhen , China
Manufacturer	:	SHENZHEN QIYUE OPTRONICS COMPANY LIMITED BRANCH
Address	:	A/B/C/D Building, Xitian Industrial Park, Dashuikeng Community,Guanlan Street, Longhua New District, Shenzhen City, China
Product Name	:	50” UHD LED TV
Model No.	:	G50Y
Standards	:	FCC Part 15.407
Date of Receipt sample	:	2024-08-21
Date of Test	:	2024-08-21 to 2024-09-09
Date of Issue	:	2024-09-09
Test Report Form No.	:	WTX_Part 15_407W
Test Result	:	**Pass**

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

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Report version

Version No.	Date of issue	Description
Rev.00	2024-09-09	Original
/	/	/

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Factory:	YIBIN WANXIN Electronic Technology Co.,LTD
Address of factory	Building 5, building6, Yibin Wanxin Electronic Technology Intelligent Terminal Industrial Park, Xinggang Road West 136, Lingang Economic Development Zone Yibin city, Sichuan province

General Description of EUT	
Product Name:	50” UHD LED TV
Trade Name:	GOYO
Model No.:	G50Y
Adding Model(s):	D50F115_35-U-A-WH, XXXXXXXX50XXXXXXX(Where “X”can be any alphanumeric of A-Z or 0-9 or blank or -，indicates different client)
Rated Voltage:	AC120V/60Hz
Battery Capacity:	/
Power Adapter:	/
Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model G50Y, but the circuit and the electronic construction do not change, declared by the manufacturer.	

Technical Characteristics of EUT	
Support Standards:	802.11a, 802.11n-HT20, 802.11n-HT40, 802.11ac-VHT20, 802.11ac-VHT40, 802.11ac-VHT80
Frequency Range:	5180-5240MHz, 5260-5320MHz 5500-5700MHz, 5745-5825MHz
Max. RF Output Power:	5180-5240MHz: Antenna 1: 15.84dBm (Conducted) Antenna 2: 15.44dBm (Conducted) 5260-5320MHz: Antenna 1: 15.16dBm (Conducted) Antenna 2: 14.38dBm (Conducted) 5500-5700MH: Antenna 1: 15.64dBm (Conducted) Antenna 2: 15.66dBm (Conducted) 5745-5825MHz: Antenna 1: 15.01dBm (Conducted) Antenna 2: 15.23dBm (Conducted)
Type of Modulation:	QPSK, 16QAM, 64QAM,256QAM
Type of Antenna:	dipole Antenna
Antenna Gain:	5180-5240MHz:2.07dBi, 5260-5320MHz:2.25dBi, 5500-5700MHz:2.21dBi, 5745-5825MHz:2.10dBi
Note The Antenna Gain is provided by the customer and can affect the validity of results.	

1.2 Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.407: General technical requirements.
ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.
KDB789033 D02 v02r01: Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-Nii) Devices Part 15, Subparte.
KDB662911 D01 Multiple Transmitter Output v02r01: Emissions Testing of Transmitters with Multiple Outputs in the Same Band.

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

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, KDB789033 D02 v02r01 The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the Operating Instructions.

1.4 Table for parameters of Test Software setting

Run commands and follow the instructions given by the manufacturer, you can start to test. During testing, C hannel and Power Controlling commands provided by the customer was used to control the operating chann el as well as the output power level. Test use the customer default power level, and to measure its highest po ssible emissions level, more detailed description as follows:

Mode	Ant.	Test Frequency (MHz)												
		NCB: 20MHz												
		5180	5200	5240	5260	5280	5320	5500	5580	5700	5720	5745	5785	5825
802.11a 6Mbps	ANT 1	87	87	87	87	87	87	87	87	87	87	75	75	75
	ANT 2	85	85	85	85	85	85	85	85	85	85	75	75	75
802.11n-HT20 MCS0	ANT 1	85	85	85	85	85	85	85	85	85	85	70	70	70
	ANT 2	78	78	78	78	78	78	78	78	78	78	65	65	65
802.11ac-VHT20 MCS0	ANT 1	85	85	85	85	85	85	85	85	85	85	70	70	70
	ANT 2	78	78	78	78	78	78	78	78	78	78	65	65	65

Mode	Ant.	NCB: 40MHz									
		5190	5230	5270	5310	5510	5550	5670	5710	5755	5795
802.11n-HT40	ANT 1	85	85	85	85	85	85	85	85	70	70
	ANT 2	75	75	75	75	75	75	75	70	70	70

MCS0											
802.11ac-VHT40 MCS0	ANT 1	85	85	85	85	85	85	85	85	70	70
	ANT 2	75	75	75	75	75	75	75	70	70	70

Mode	Ant.	NCB: 80MHz				
		5210	5290	5530	5610	5775
802.11ac-VH80 MCS0	ANT 1	85	85	85	85	75
	ANT 2	80	80	80	80	70

1.5 EUT Operating during test

EUT was programmed to be in continuously transmitting mode. During the test, EUT operation to normal function and programs under Android were executed.

1.6 Test Facility

Address of the test laboratory

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.
Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C. (518101）

FCC – Registration No.: 125990

Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is mai ntained in our files. The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A and the CAB identifier is CN0057.

1.7 EUT Setup and Test Mode

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. All testing shall be performed under maximum output power condition, with a duty cycle equal to 100%, and to measure its highest possible emissions level, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	802.11a	5180MHz,5200MHz,5240MHz,5260 MHz,5280 MHz,5320 MHz,5500 MHz,5600 MHz,5700 MHz,5745MHz, 5785MHz,5825MHz
TM2	802.11n-HT20	5180MHz,5200MHz,5240MHz,5260 MHz,5280 MHz,5320 MHz,5500 MHz,5600 MHz,5700 MHz,5745MHz, 5785MHz,5825MHz
TM3	802.11ac-VHT20	5180MHz,5200MHz,5240MHz,5260 MHz,5280 MHz,5320 MHz,5500 MHz,5600 MHz,5700 MHz,5745MHz, 5785MHz,5825MHz
TM4	802.11n-HT40	5190MHz,5230MHz,5270MHz,5310 MHz,5510MHz,5590MHz,567 MHz,5755MHz,5795MHz
TM5	802.11ac-VHT40	5190MHz,5230MHz,5270MHz,5310 MHz,5510MHz,5590MHz,567 MHz,5755MHz,5795MHz
TM6	802.11ac-VHT80	5210MHz,5290 MHz,5530MHz,5610MHz,5775 MHz
Note1 : All test modes (different data rate and different modulation) are performed, but only the worst case is recorded in this report; Note 2: The 5GHz WIFI has two antennas and support Multiple Outputs for 802.11n/ac mode for this report; For 5180-5240MHz: Antenna 1&2 Gain is 2.07dBi; For 5260-5320MHz: Antenna 1&2 Gain is 2.25dBi; For 5500-5700MHz: Antenna 1&2 Gain is 2.21dBi; For 5745-5825MHz: Antenna 1&2 Gain is 2.10dBi According to KDB 662911, for same directional gain: Directional gain = GANT + 10 log(NANT) dBi =2.07+10log(2) dBi=5.08dBi Directional gain = GANT + 10 log(NANT) dBi =2.25+10log(2) dBi=5.26dBi Directional gain = GANT + 10 log(NANT) dBi =2.21+10log(2) dBi=5.22dBi Directional gain = GANT + 10 log(NANT) dBi =2.10+10log(2) dBi=5.11dBi		

Test Conditions	
Temperature:	22~25 °C
Relative Humidity:	45~75 %
ATM Pressure:	1019 mbar

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
AC Cable	1.5	Unshielded	Without Ferrite

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
HDMI Cable	1.5	Shielded	With Ferrite

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Computer	Lenovo	Legion R7000P ARH7	/

1.8 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
RF Output Power	Conducted	±0.42dB
Occupied Bandwidth	Conducted	±1.5%
Power Spectral Density	Conducted	±1.8dB
Conducted Spurious Emission	Conducted	±2.17dB
Conducted Emissions	Conducted	9-150kHz ±3.74dB
		0.15-30MHz ±3.34dB
Transmitter Spurious Emissions	Radiated	30-200MHz ±4.52dB
		0.2-1GHz ±5.56dB
		1-6GHz ±3.84dB
		6-18GHz ±3.92dB

1.9 Test Equipment List and Details

Fixed asset Number	Description	Manufacturer	Model	Serial No.	Cal Date	Due. Date
WTXE1041A 1001	Communication Tester	Rohde & Schwarz	CMW500	148650	2024-02-24	2025-02-23
WTXE1005A 1005	Spectrum Analyzer	Agilent	N9020A	US47140102	2024-03-19	2025-03-18
WTXE1084A 1001	Spectrum Analyzer	Agilent	N9020A	MY54320548	2024-02-24	2025-02-23
WTXE1004A 1-001	Spectrum Analyzer	Rohde & Schwarz	FSP40	100612	2024-02-27	2025-02-26
☐Chamber A: Below 1GHz						
WTXE1005A 1003	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2024-02-24	2025-02-23
WTXE1001A 1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2024-03-19	2025-03-18
WTXE1007A 1001	Amplifier	HP	8447F	2805A03475	2024-02-24	2025-02-23
WTXE1010A 1007	Loop Antenna	Schwarz beck	FMZB 1516	9773	2024-02-26	2025-02-25
WTXE1010A 1006	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2024-02-24	2025-02-23
☐Chamber A: Above 1GHz						
WTXE1005A 1003	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2024-02-24	2025-02-23
WTXE1001A 1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2024-03-19	2025-03-18
WTXE1065A 1001	Amplifier	C&D	PAP-1G18	2002	2024-02-27	2025-02-26
WTXE1010A 1005	Horn Antenna	ETS	3117	00086197	2024-02-26	2025-02-25
WTXE1010A 1010	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2024-03-17	2025-03-16
WTXE1003A 1001	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2024-02-29	2025-02-28
☐Chamber B:Below 1GHz						
WTXE1010A 1006	Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-635	2024-03-17	2027-03-16
WTXE1038A 1001	Amplifier	Agilent	8447D	2944A10457	2024-02-24	2025-02-23

WTXE1001A 1002	EMI Test Receiver	Rohde & Schwarz	ESPI	101391	2024-02-24	2025-02-23
☒Chamber C:Below 1GHz						
WTXE1093A 1001	EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2024-02-27	2025-02-26
WTXE1010A 1013-1	Trilog Broadband Antenna	Schwarz beck	VULB 9168	1194	2024-04-18	2027-04-17
WTXE1007A 1002	Amplifier	HP	8447F	2944A038 69	2024-02-24	2025-02-23
WTXE1010A 1007	Loop Antenna	Schwarz beck	FMZB 1516	9773	2024-02-26	2025-02-25
☒Chamber C: Above 1GHz						
WTXE1093A 1001	EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2024-02-27	2025-02-26
WTXE1103A 1005	Horn Antenna	POAM	RTF-118A	1820	2023-03-10	2026-03-09
WTXE1103A 1006	Amplifier	Tonscend	TAP01018050	AP22E806 235	2024-02-27	2025-02-26
WTXE1010A 1010	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2024-03-17	2025-03-16
WTXE1003A 1001	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2024-02-29	2025-02-28
☐Conducted Room 1#						
WTXE1104A 1029	EMI Test Receiver	Rohde & Schwarz	ESCI	100525	2023-12-12	2024-12-11
WTXE1002A 1001	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2024-02-24	2025-02-23
WTXE1003A 1001	AC LISN	Schwarz beck	NSLK8126	8126-279	2024-02-24	2025-02-23
☒Conducted Room 2#						
WTXE1001A 1004	EMI Test Receiver	Rohde & Schwarz	ESPI	101259	2024-02-24	2025-02-23
WTXE1003A 1003	LISN	Rohde & Schwarz	ENV 216	100097	2024-02-24	2025-02-23

Software List			
Description	**Manufacturer**	**Model**	**Version**
EMI Test Software (Radiated Emission)*	Farad	EZ-EMC	RA-03A1
EMI Test Software (Conducted Emission Room 1#)*	Farad	EZ-EMC	RA-03A1
EMI Test Software (Conducted Emission Room 2#)*	SKET	EMC-I	V2.0

*Remark: indicates software version used in the compliance certification testing.

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§15.203; §15.405	Antenna Requirement	Compliant
15.407 (c)	Automatically Discontinue Transmission	Compliant
§15.207; §15.407(b)(6)	Conducted Emission	Compliant
§15.407(a)(1),(2)	Power Spectral Density	Compliant
§15.407(e)	Emission Bandwidth and Occupied Bandwidth	Compliant
§15.407(a)(1),(2)	Maximum Conducted Output Power	Compliant
§15.407(b)(1),(2),(3),(4)	Undesirable emission	Compliant
§15.205; §15.407(b)(1),(2),(3)	Radiated Emission	Compliant
§15.407(g)	Frequency Stability	Compliant
§15.407(h)	Dynamic Frequency Selection (DFS)	Compliant

N/A: Not applicable.

3. Antenna Requirement

3.1 Standard Applicable

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

3.2 Evaluation Information

This product has two dipole Antennas, fulfill the requirement of this section.

4. Automatically Discontinue Transmission

4.1 Standard Applicable

According to FCC Part 15.407(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 signaling 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 to describe how this requirement is met.

4.2 Summary of Test Results

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

5. Power Spectral Density

5.1 Standard Applicable

Section 15.407(a) Power limits:

(1) For the band 5.15-5.25GHz.
(iv) For mobile and portable client devices in the 5.15-5.25GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250mW provided the maximum antenna gain does not exceed 6dBi. In addition, the maximum power spectral density shall not exceed 11dBm 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 6dBi.

(2) For the 5.25-5.35GHz and 5.47-5.725GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250mW or 11dBm + 10 log B, where B is the 26dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6dBi 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 6dBi.

(3) For the band 5.725-5.85GHz, 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 30dBm in any 500kHz band. If transmitting antennas of directional gain greater than 6dBi 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 6dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6dBi 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.

5.2 Test Procedure

According to 789033 D02 v02r01 General UNII Test Procedures New Rules v02, the following is the measurement procedure.
For devices operating in the bands 5.15-5.25GHz, 5.25-5.35GHz, and 5.47-5.725GHz, the above procedures make use of 1MHz RBW to satisfy directly the 1MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85GHz, the rules specify a measurement bandwidth of 500kHz. Many spectrum analyzers do not have 500kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1MHz, or 500kHz, “provided that the measured power is integrated over the full

reference bandwidth" to show the total power over the specified measurement bandwidth (i.e., 1MHz, or 500kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500kHz) and integrated over 1 MHz, or 500kHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW ≥ 1/T, where T is defined in section II.B.I.a).
b) Set VBW ≥ 3 RBW.
c) If measurement bandwidth of Maximum PSD is specified in 500kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
d) If measurement bandwidth of Maximum PSD is specified in 1MHz, add 10log(1MHz/RBW) to the measured result, whereas RBW (< 1MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100kHz for the sections 5.c) and 5.d) above, since RBW=100kHZ is available on nearly all spectrum analyzers.

5.3 Summary of Test Results/Plots

Please refer to Appendix A

6. Emission Bandwidth and Occupied Bandwidth

6.1 Standard Applicable

According to 15.407(a) and (e):

(1) For the band 5.15-5.25GHz.
(iv) For mobile and portable client devices in the 5.15-5.25GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250mW provided the maximum antenna gain does not exceed 6dBi. In addition, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6dBi 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 6dBi.

(2) For the 5.25-5.35GHz and 5.47-5.725GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250mW or 11dBm + 10 log B, where B is the 26dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6dBi 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 6dBi.

(3) For the band 5.725-5.85GHz, 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 30dBm in any 500kHz band. If transmitting antennas of directional gain greater than 6dBi 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 6dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6dBi 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.

(e) Within the 5.725-5.85GHz band, the minimum 6dB bandwidth of U-NII devices shall be at least 500kHz.

6.2 Test Procedure

According to 789033 D02 v02r0r section C&D, the following is the measurement procedure.

1. Emission Bandwidth (EBW)
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 26dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

2. Minimum Emission Bandwidth for the band 5.725-5.85GHz
Section 15.407(e) specifies the minimum 6dB emission bandwidth of at least 500KHz for the band 5.715-5.85GHz. The following procedure shall be used for measuring this bandwidth:
a) Set RBW = 100kHz.
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 above.

D. 99 Percent Occupied Bandwidth
The 99-percent 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. Measurement of the 99-percent occupied bandwidth is required only as a condition for using the optional band-edge measurement techniques described in section II.G.3.d). Measurements of 99-percent occupied bandwidth may also optionally be used in lieu of the EBW to 789033 D02 v02r01 General UNII Test Procedures New Rules v01 define the minimum frequency range over which the spectrum is integrated when measuring maximum conducted output power as described in section II.E. However, the EBW must be measured to determine bandwidth dependent limits on maximum conducted output power in accordance with 15.407(a).

The following procedure shall be used for measuring (99 %) power bandwidth:
1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ≥ 3 * RBW
5. 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.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. 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% occupied bandwidth is the difference between these two frequencies.

6.3 Summary of Test Results/Plots

Please refer to Appendix B

7. Maximum Conducted Output Power

7.1 Standard Applicable

Section 15.407(a) Power limits:

(1) For the band 5.15-5.25GHz.
(iv) For mobile and portable client devices in the 5.15-5.25GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250mW provided the maximum antenna gain does not exceed 6dBi. In addition, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6dBi 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 6dBi.

(2) For the 5.25-5.35GHz and 5.47-5.725GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250mW or 11dBm + 10 log B, where B is the 26dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6dBi 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 6dBi.

(3) For the band 5.725-5.85GHz, 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 30dBm in any 500kHz band. If transmitting antennas of directional gain greater than 6dBi 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 6dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6dBi 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.

7.2 Test Procedure

According to KDB789033 D02 v02r01 section E, the following is the measurement procedure.

(i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.

(ii) Set RBW = 1MHz.

(iii) Set VBW ≥ 3MHz.

(iv) 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.)

(v) Sweep time = auto.

(vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.

(vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run”.

(viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.

(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

7.3 Summary of Test Results/Plots

Please refer to Appendix C

8. Radiated Spurious Emissions

8.1 Standard Applicable

According to §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 5.15-5.25GHz band: All emissions outside of the 5.15-5.35GHz band shall not exceed an e.i.r.p. of −27dBm/MHz.

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

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

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

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

According to §15.407(b)(6), Unwanted emissions below 1GHz 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.

According to §15.407(b)(7), The provisions of §15.205 apply to intentional radiators operating under this section.

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If radiated measurements are performed, field strength is then converted to EIRP as follows:

EIRP = ((E*d)^2) / 30

where:

• E is the field strength in V/m;

• d is the measurement distance in meters;

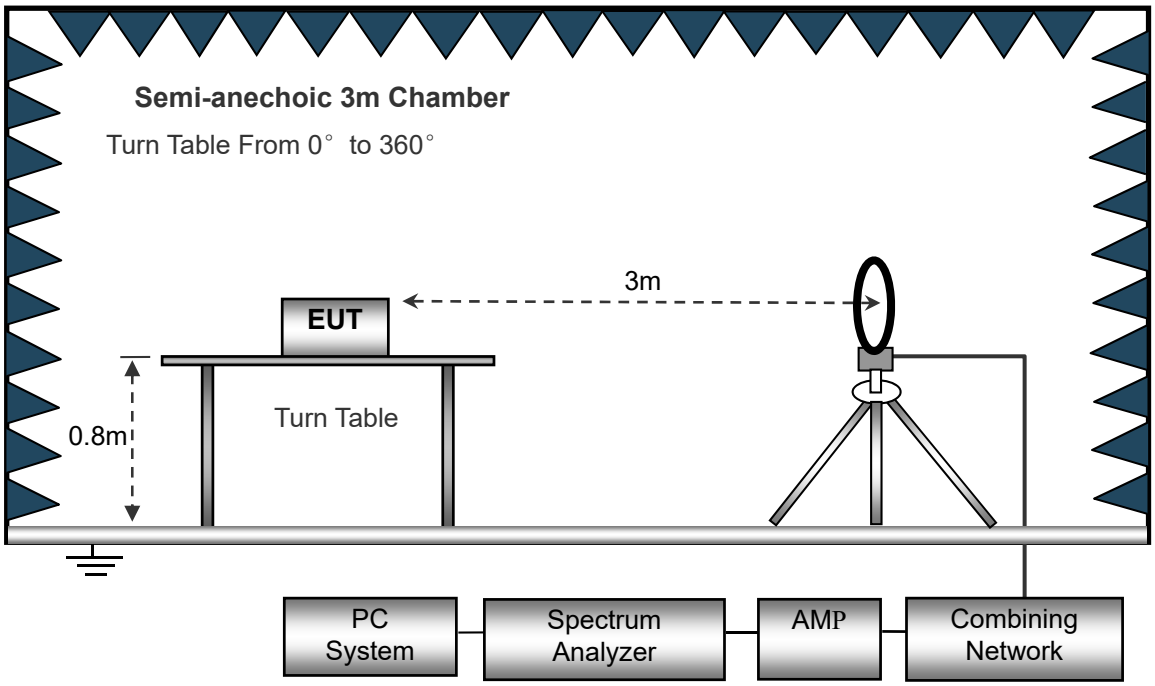
• EIRP is the equivalent isotropically radiated power in watts.

8.2 Test Procedure

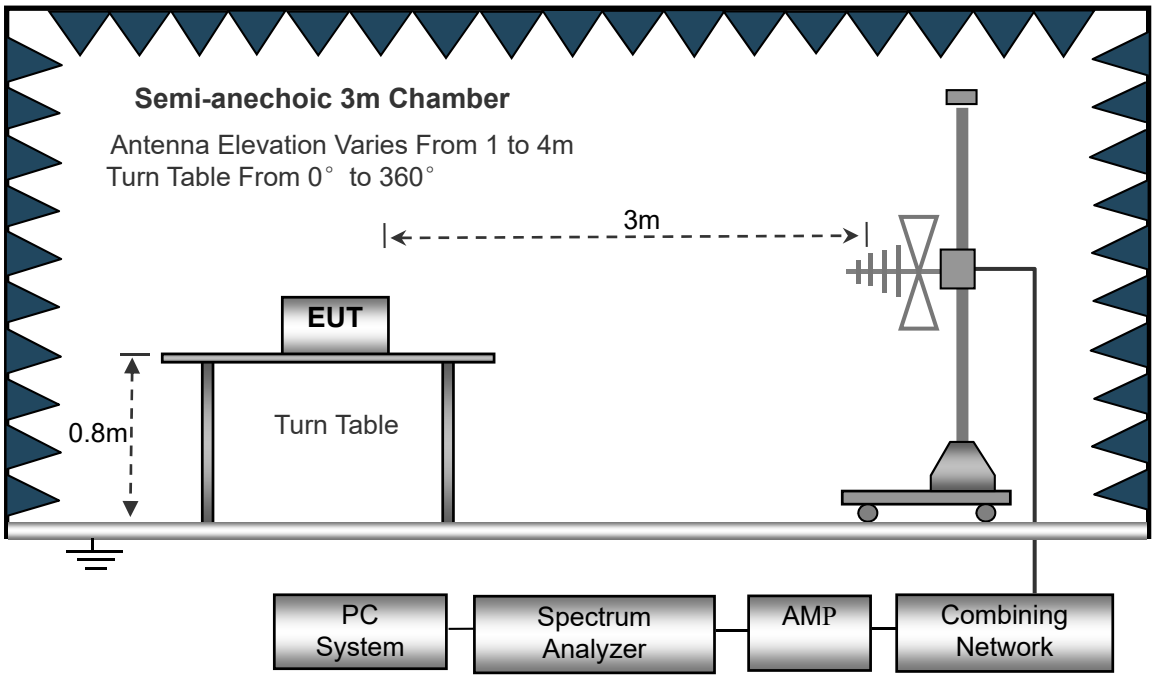
The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.205 15.407(b)(6) and FCC Part 15.209 Limit..

The external I/O cables were draped along the test table and formed a bundle 30 to 40cm long in the middle. The spacing between the peripherals was 10cm.

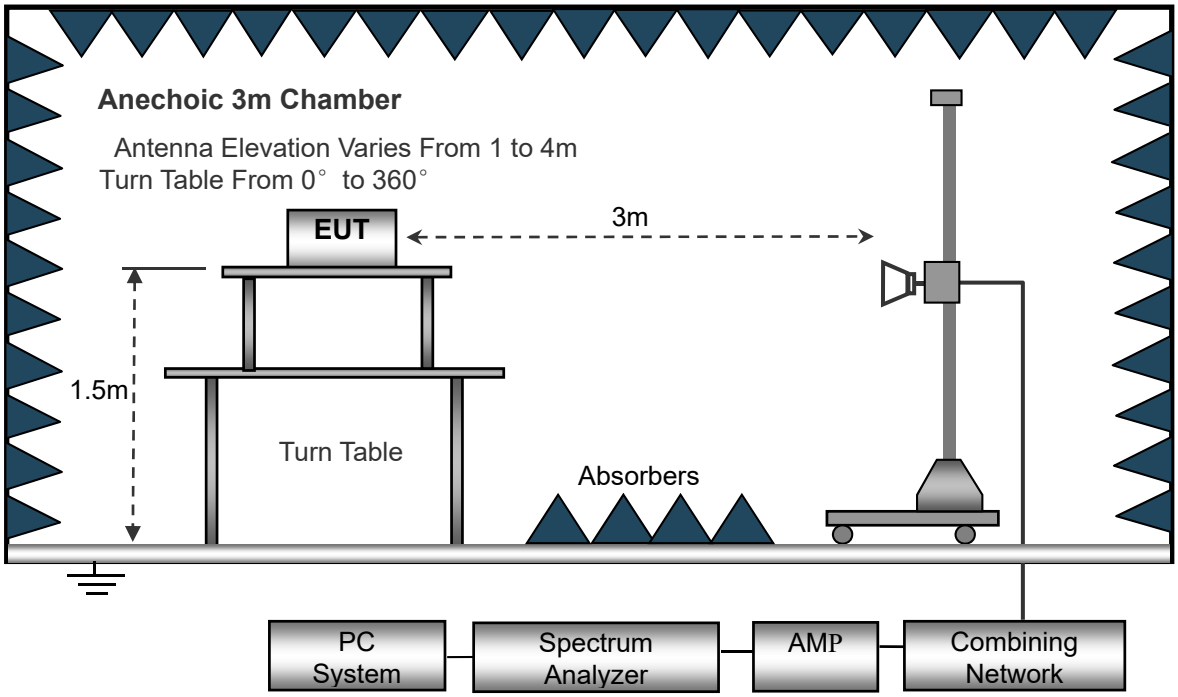
The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30 MHz to 1 GHz.



The test setup for emission measurement above 1GHz.



8.3 Test Receiver Setup

During the radiated emission test for above 1GHz, the test receiver was set with the following configurations:

For peak detector:
RBW = 1000kHz, VBW = 3000kHz, Sweep Time = Auto

For average detector:
RBW = 1000kHz, VBW = 10Hz, Sweep Time = Auto

8.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading + Ant. Factor + Cable Loss – Ampl. Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dBμV means the emission is 6dBμV below the maximum limit for Class B. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – FCC Part 15 Limit

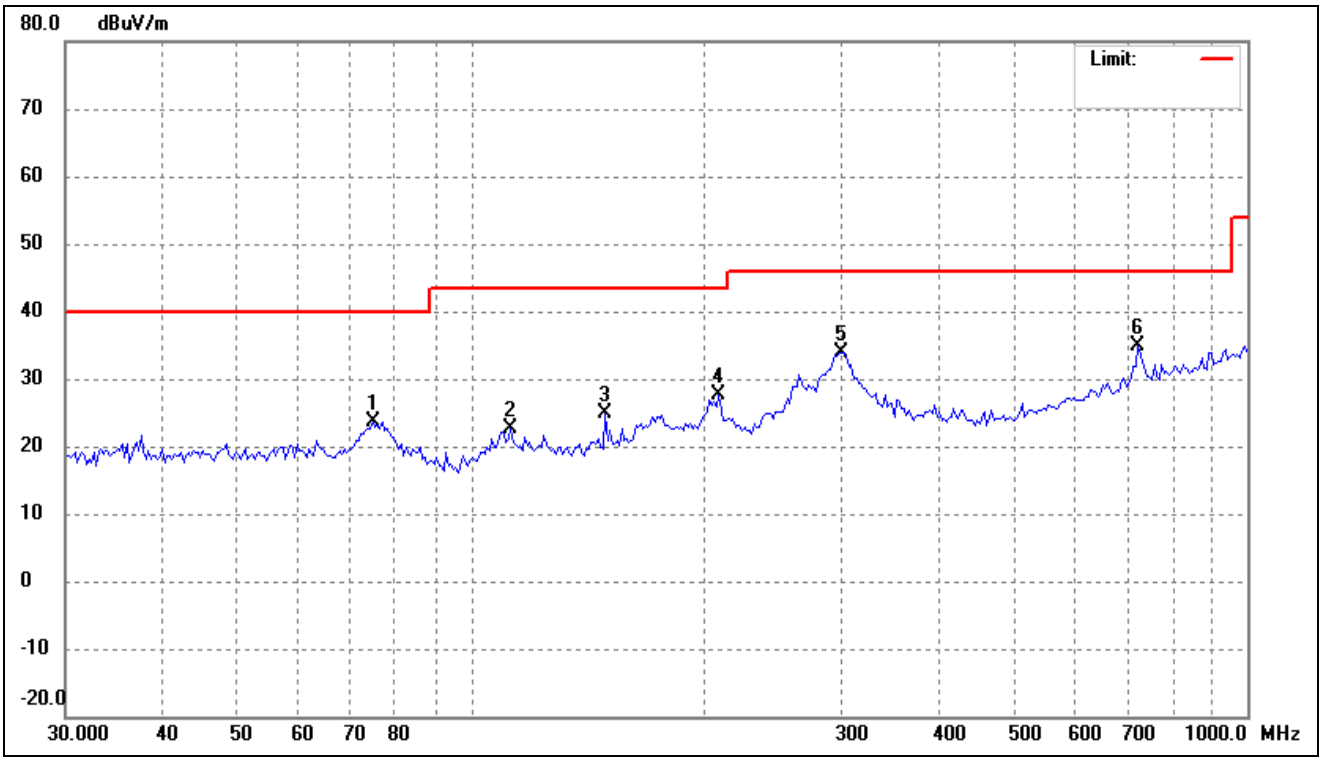
8.5 Summary of Test Results/Plots

Note: *this EUT was tested in 3 orthogonal positions and the worst case position data was reported.*

- Spurious Emission From 30MHz to 1GHz

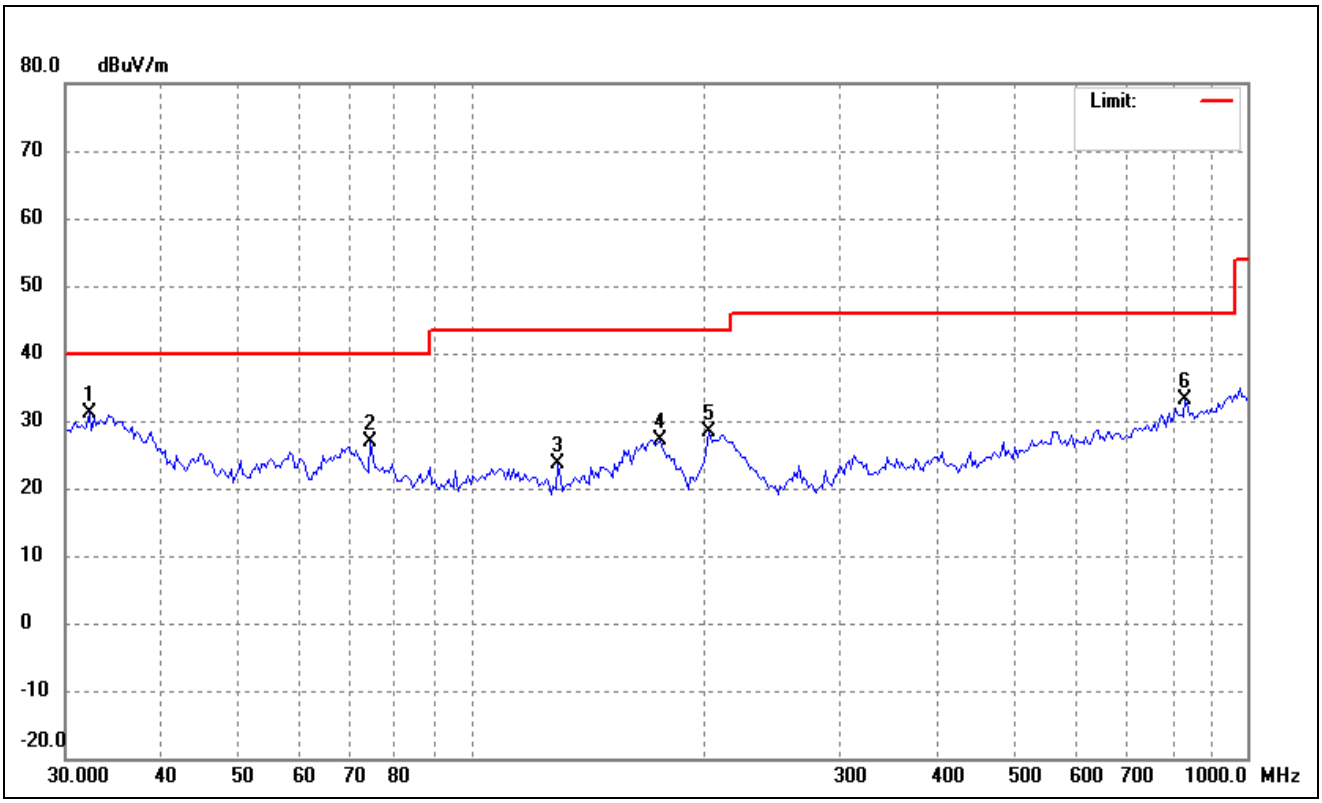
- Antenna 1(Worst case)
- 5150-5250MHz

802.11a			
Test Channel	5180MHz(Worst case)	Polarity:	Horizontal



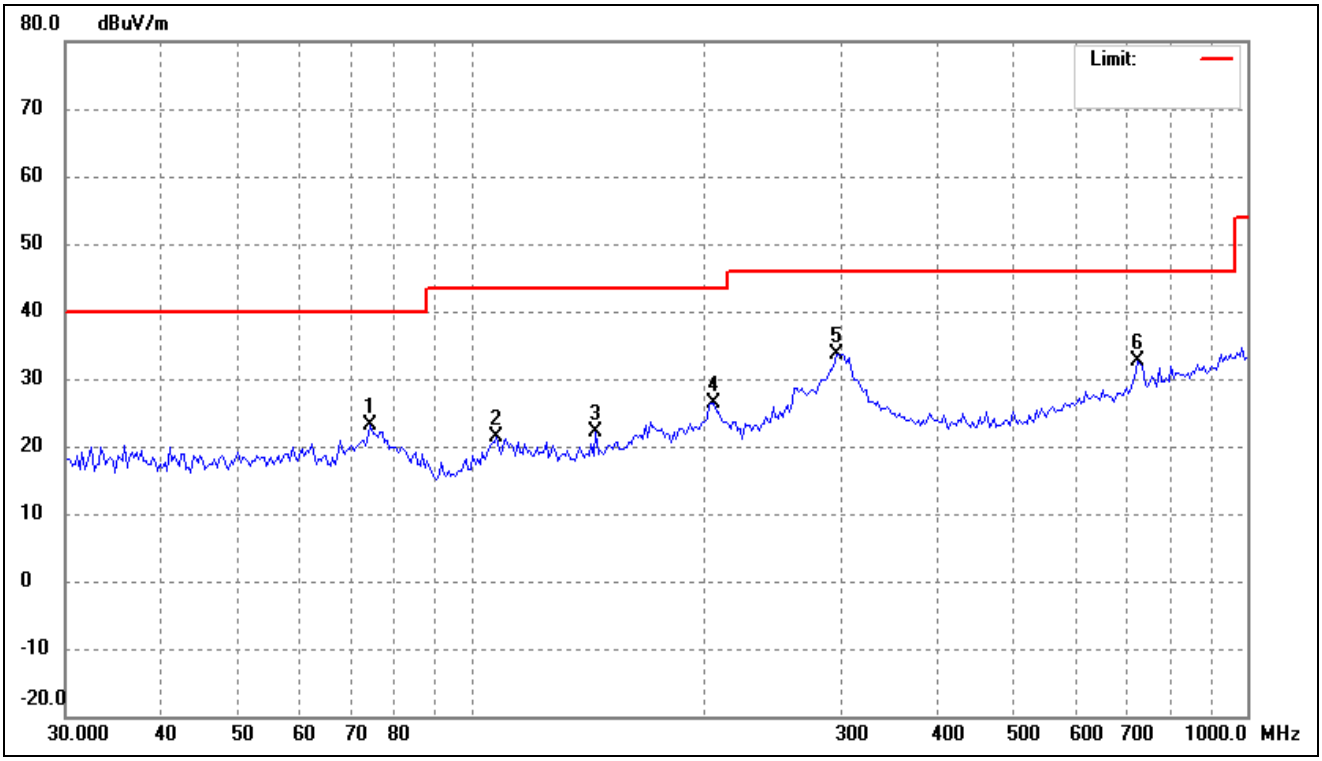
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	74.7934	35.03	-11.30	23.73	40.00	-16.27	-	-	peak
2	112.4271	33.56	-10.81	22.75	43.50	-20.75	-	-	peak
3	148.9175	32.94	-8.14	24.80	43.50	-18.70	-	-	peak
4	208.6580	39.24	-11.58	27.66	43.50	-15.84	-	-	peak
5	300.6988	41.66	-7.85	33.81	46.00	-12.19	-	-	peak
6	723.7930	35.34	-0.49	34.85	46.00	-11.15	-	-	peak

802.11a			
Test Channel	5180MHz(Worst case)	Polarity:	Vertical



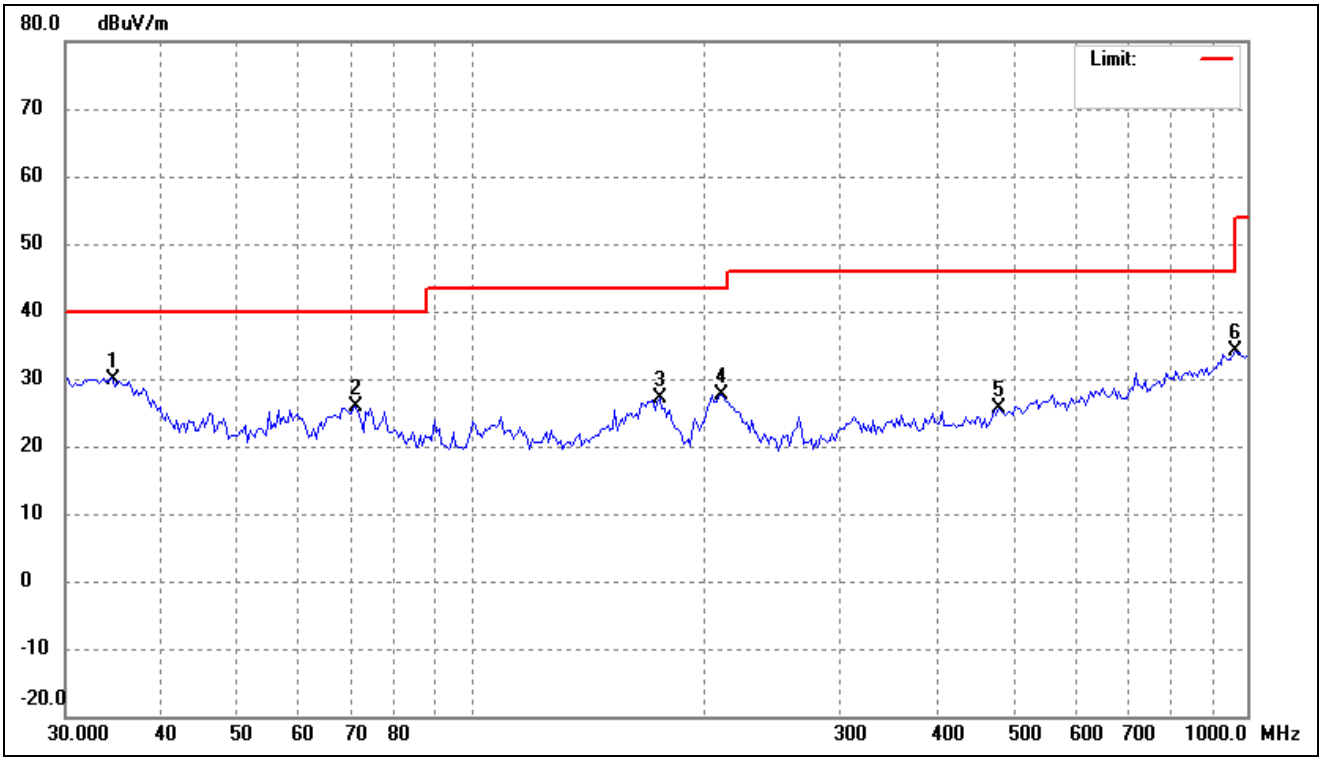
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	32.1840	40.47	-9.37	31.10	40.00	-8.90	-	-	peak
2	74.2696	38.11	-11.18	26.93	40.00	-13.07	-	-	peak
3	129.3923	32.96	-9.36	23.60	43.50	-19.90	-	-	peak
4	175.0404	36.27	-9.03	27.24	43.50	-16.26	-	-	peak
5	202.8745	39.81	-11.44	28.37	43.50	-15.13	-	-	peak
6	833.0127	31.71	1.36	33.07	46.00	-12.93	-	-	peak

802.11n-HT20			
Test Channel	5180MHz(worst case)	Polarity:	Horizontal



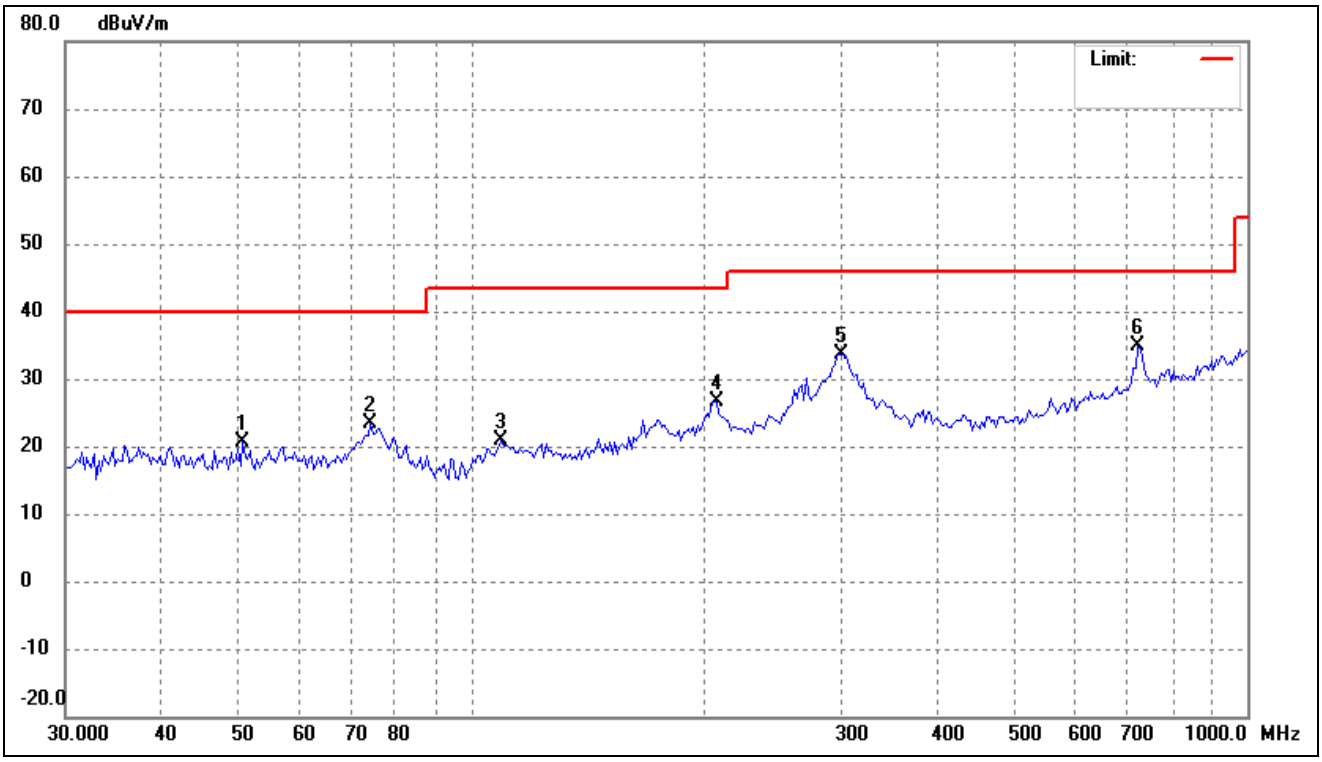
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	74.2696	34.41	-11.18	23.23	40.00	-16.77	-	-	peak
2	107.7854	32.66	-11.27	21.39	43.50	-22.11	-	-	peak
3	144.7899	30.55	-8.49	22.06	43.50	-21.44	-	-	peak
4	205.7459	37.81	-11.51	26.30	43.50	-17.20	-	-	peak
5	296.5023	41.66	-7.98	33.68	46.00	-12.32	-	-	peak
6	723.7930	33.08	-0.49	32.59	46.00	-13.41	-	-	peak

802.11n-HT20			
Test Channel	5180MHz(worst case)	Polarity:	Vertical



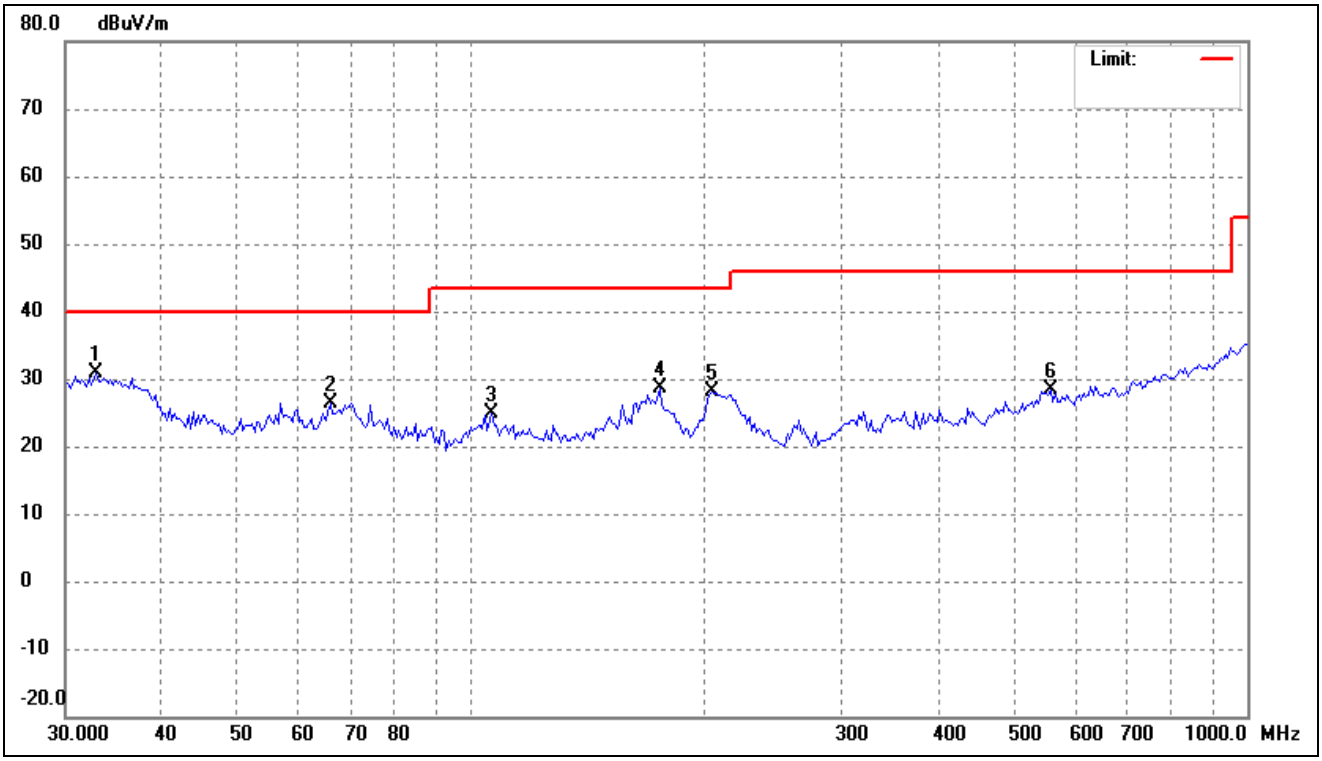
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	34.5270	38.97	-9.07	29.90	40.00	-10.10	-	-	peak
2	71.2033	36.52	-10.52	26.00	40.00	-14.00	-	-	peak
3	175.0404	36.16	-9.03	27.13	43.50	-16.37	-	-	peak
4	210.1294	39.13	-11.60	27.53	43.50	-15.97	-	-	peak
5	478.1394	30.50	-4.97	25.53	46.00	-20.47	-	-	peak
6	965.4742	30.79	3.37	34.16	54.00	-19.84	-	-	peak

802.11ac-VHT20			
Test Channel	5180MHz(worst case)	Polarity:	Horizontal



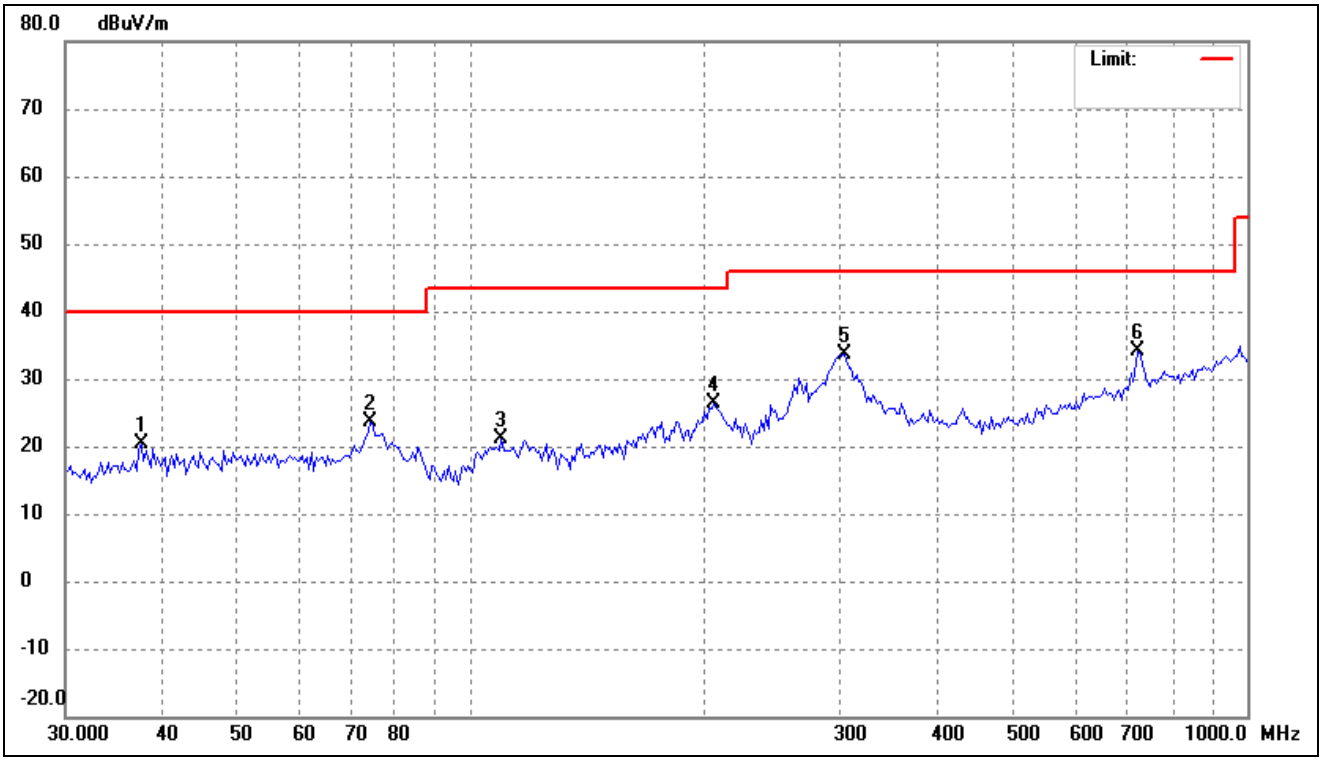
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	50.8172	28.23	-7.67	20.56	40.00	-19.44	-	-	peak
2	74.2696	34.67	-11.18	23.49	40.00	-16.51	-	-	peak
3	109.3110	32.02	-11.13	20.89	43.50	-22.61	-	-	peak
4	207.1968	38.14	-11.55	26.59	43.50	-16.91	-	-	peak
5	300.6988	41.50	-7.85	33.65	46.00	-12.35	-	-	peak
6	723.7930	35.33	-0.49	34.84	46.00	-11.16	-	-	peak

802.11ac-VHT20			
Test Channel	5180MHz(worst case)	Polarity:	Vertical



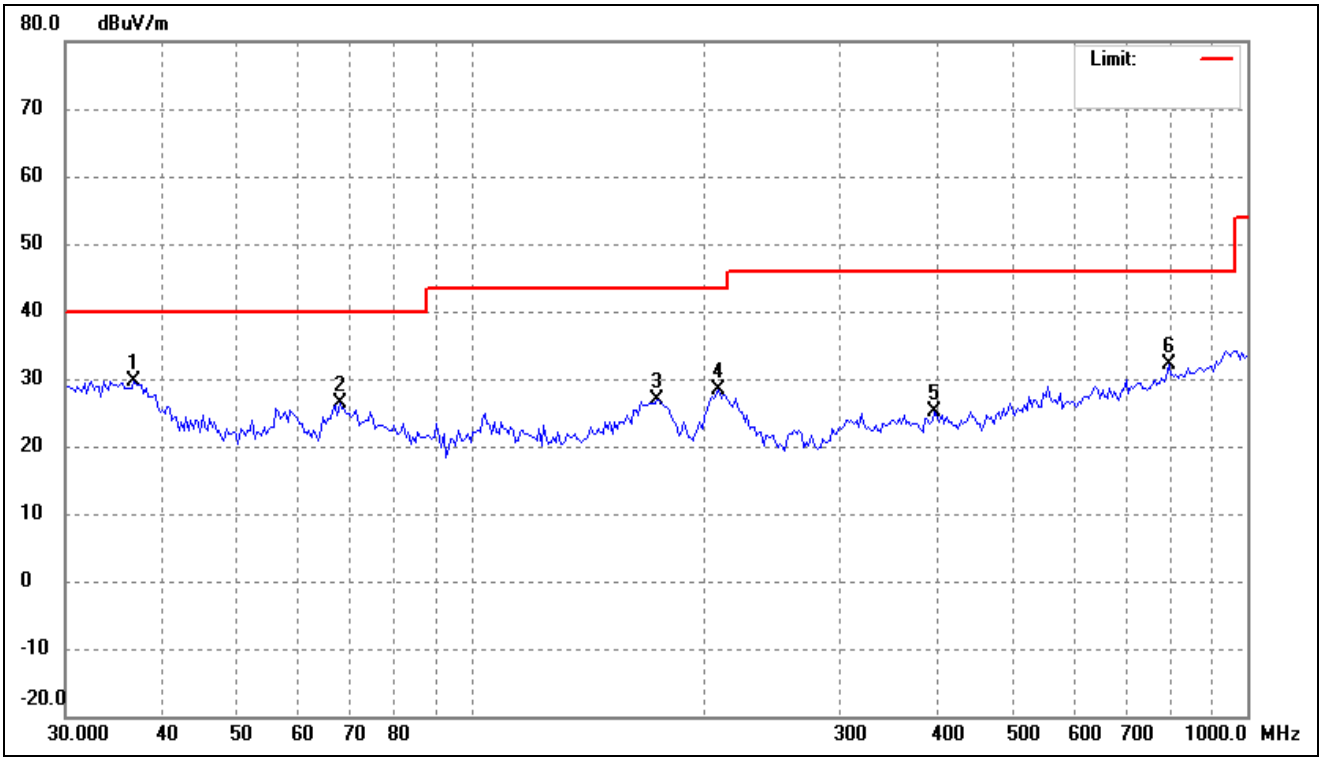
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	32.8697	40.10	-9.28	30.82	40.00	-9.18	-	-	peak
2	65.9067	35.91	-9.51	26.40	40.00	-13.60	-	-	peak
3	106.2812	36.30	-11.41	24.89	43.50	-18.61	-	-	peak
4	175.0404	37.73	-9.03	28.70	43.50	-14.80	-	-	peak
5	204.3052	39.51	-11.47	28.04	43.50	-15.46	-	-	peak
6	558.0788	31.71	-3.33	28.38	46.00	-17.62	-	-	peak

802.11n-HT40			
Test Channel	5190MHz(worst case)	Polarity:	Horizontal



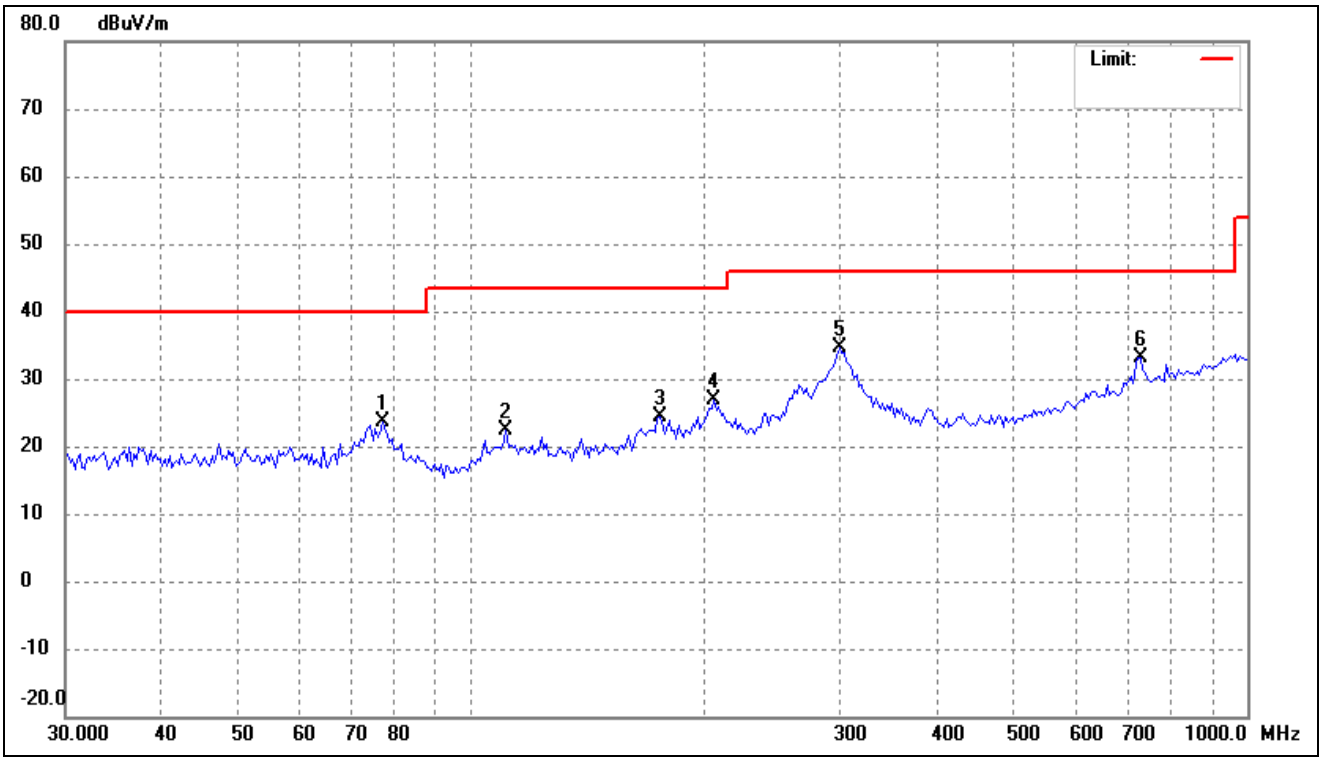
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	37.5648	28.77	-8.47	20.30	40.00	-19.70	-	-	peak
2	74.2696	34.78	-11.18	23.60	40.00	-16.40	-	-	peak
3	109.3110	32.14	-11.13	21.01	43.50	-22.49	-	-	peak
4	205.7459	37.86	-11.51	26.35	43.50	-17.15	-	-	peak
5	302.8193	41.50	-7.80	33.70	46.00	-12.30	-	-	peak
6	723.7930	34.65	-0.49	34.16	46.00	-11.84	-	-	peak

802.11n-HT40			
Test Channel	5190MHz(worst case)	Polarity:	Vertical



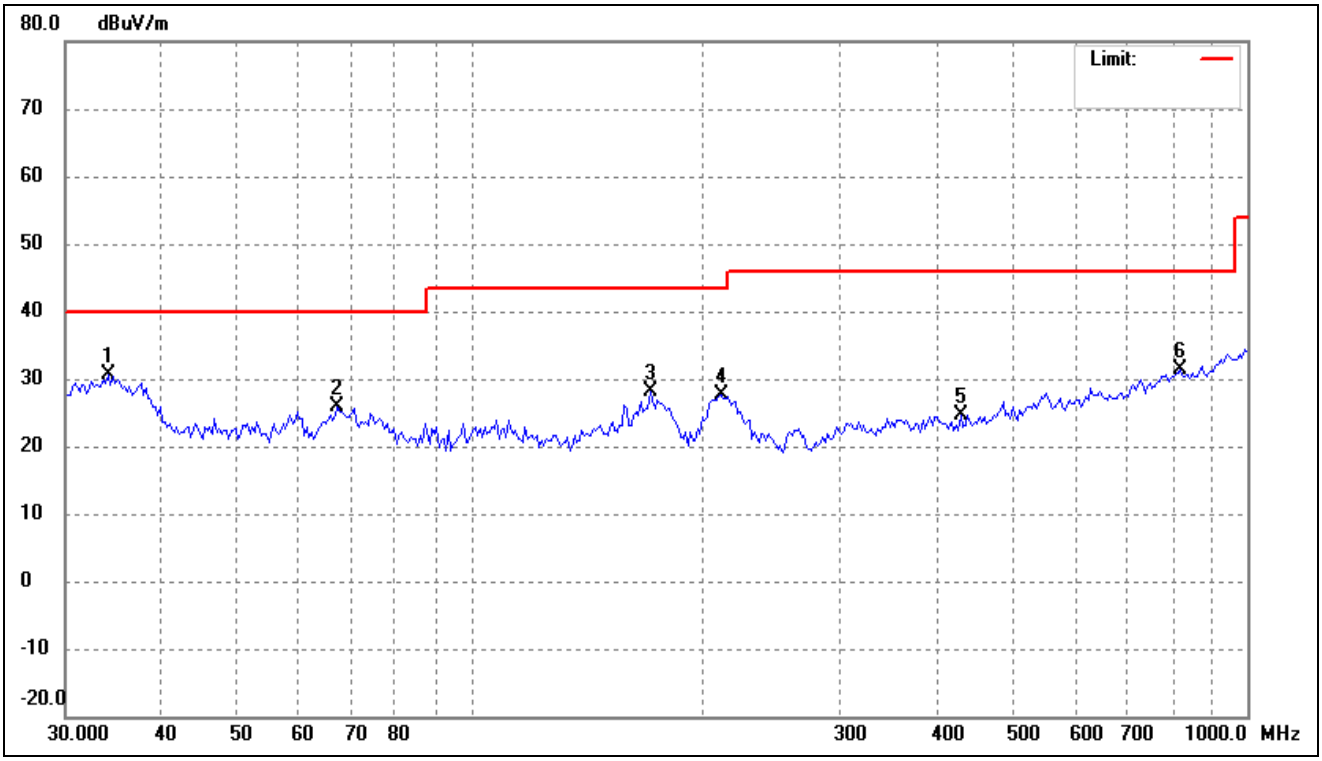
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	36.7811	38.35	-8.64	29.71	40.00	-10.29	-	-	peak
2	67.7856	36.31	-9.85	26.46	40.00	-13.54	-	-	peak
3	173.8147	35.70	-8.85	26.85	43.50	-16.65	-	-	peak
4	208.6580	40.04	-11.58	28.46	43.50	-15.04	-	-	peak
5	395.5071	31.38	-6.31	25.07	46.00	-20.93	-	-	peak
6	793.0281	31.30	0.88	32.18	46.00	-13.82	-	-	peak

802.11ac-VHT40			
Test Channel	5190MHz(worst case)	Polarity:	Horizontal



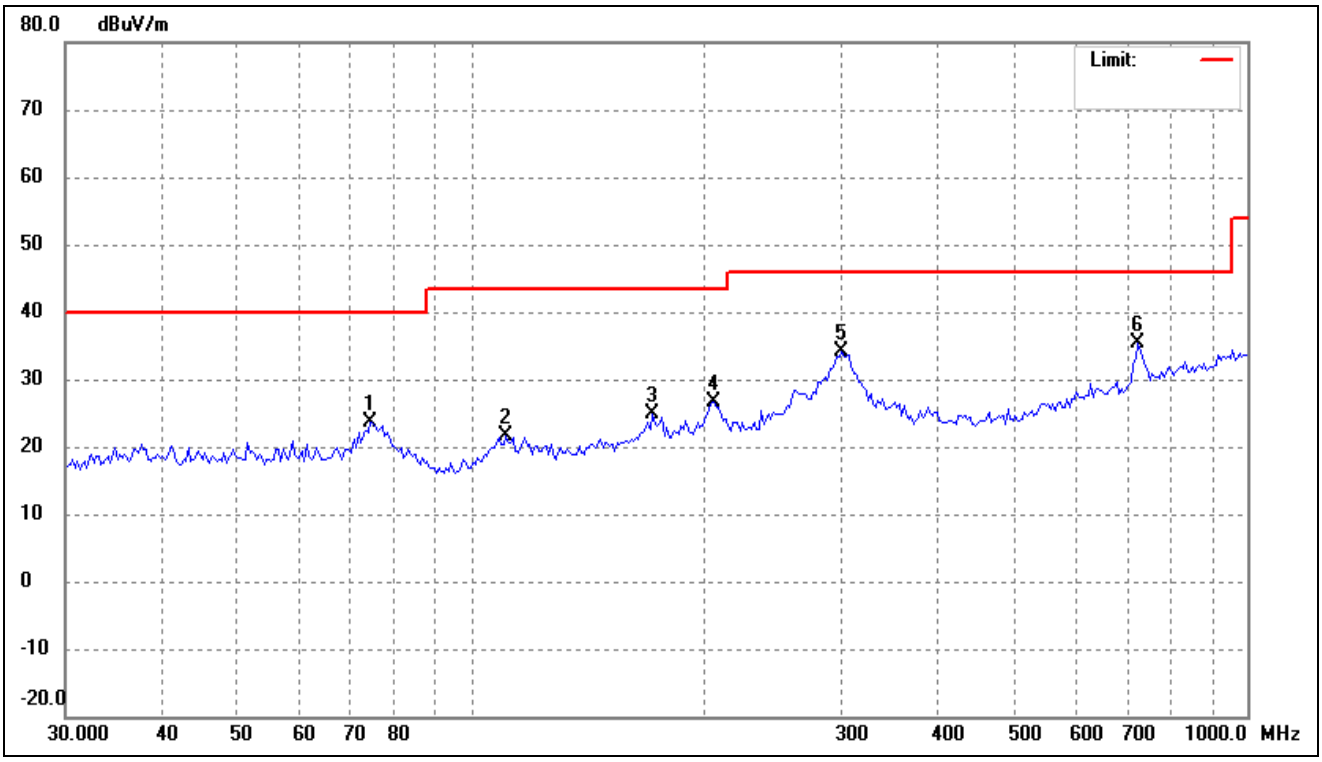
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	76.9256	35.37	-11.76	23.61	40.00	-16.39	-	-	peak
2	110.8581	33.42	-10.98	22.44	43.50	-21.06	-	-	peak
3	175.0404	33.49	-9.03	24.46	43.50	-19.04	-	-	peak
4	205.7459	38.29	-11.51	26.78	43.50	-16.72	-	-	peak
5	298.5932	42.45	-7.90	34.55	46.00	-11.45	-	-	peak
6	728.8971	33.52	-0.36	33.16	46.00	-12.84	-	-	peak

802.11ac-VHT40			
Test Channel	5190MHz(worst case)	Polarity:	Vertical



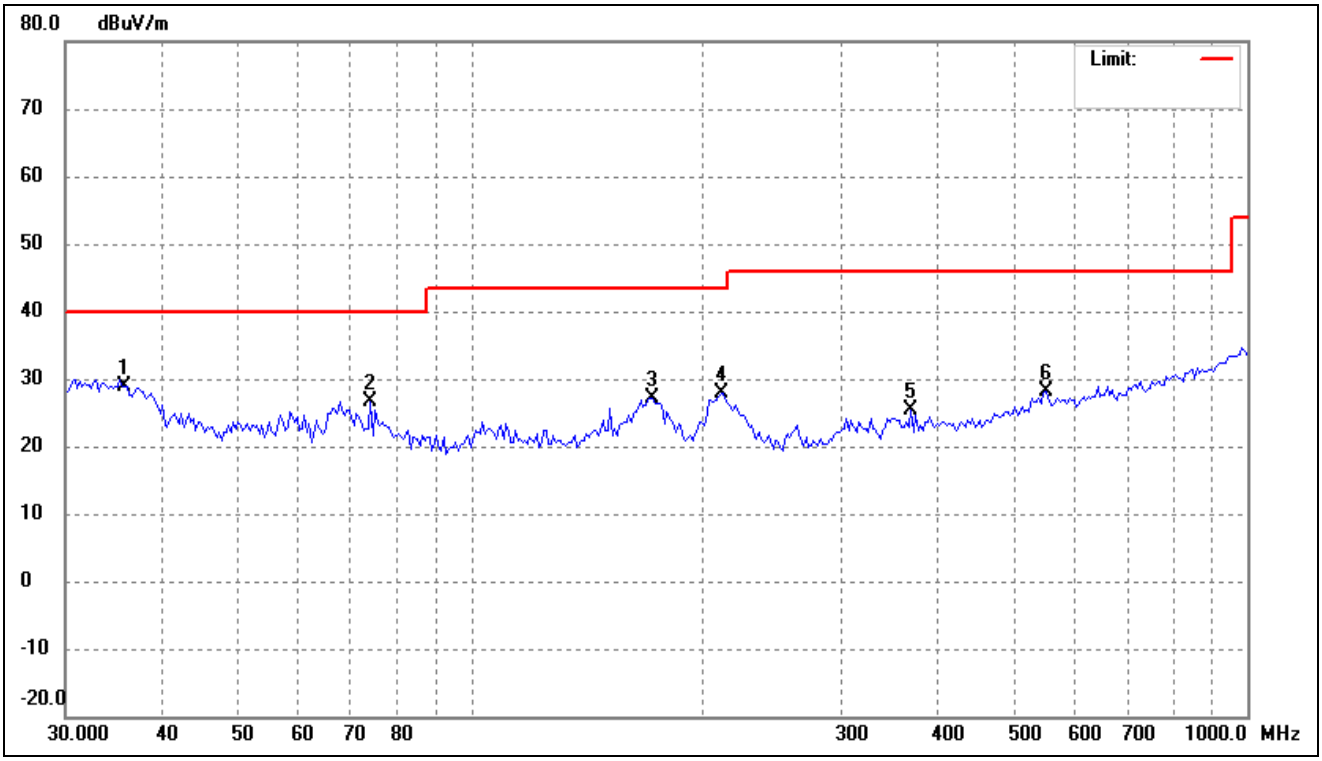
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	34.0451	39.64	-9.13	30.51	40.00	-9.49	-	-	peak
2	67.3109	35.53	-9.76	25.77	40.00	-14.23	-	-	peak
3	170.1888	36.51	-8.34	28.17	43.50	-15.33	-	-	peak
4	210.1294	39.16	-11.60	27.56	43.50	-15.94	-	-	peak
5	427.2920	30.22	-5.68	24.54	46.00	-21.46	-	-	peak
6	821.3871	30.13	1.23	31.36	46.00	-14.64	-	-	peak

802.11ac-VHT80			
Test Channel	5210MHz(worst case)	Polarity:	Horizontal



No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	74.2696	34.82	-11.18	23.64	40.00	-16.36	-	-	peak
2	110.8581	32.73	-10.98	21.75	43.50	-21.75	-	-	peak
3	171.3890	33.32	-8.51	24.81	43.50	-18.69	-	-	peak
4	205.7459	38.22	-11.51	26.71	43.50	-16.79	-	-	peak
5	300.6988	41.97	-7.85	34.12	46.00	-11.88	-	-	peak
6	723.7930	35.78	-0.49	35.29	46.00	-10.71	-	-	peak

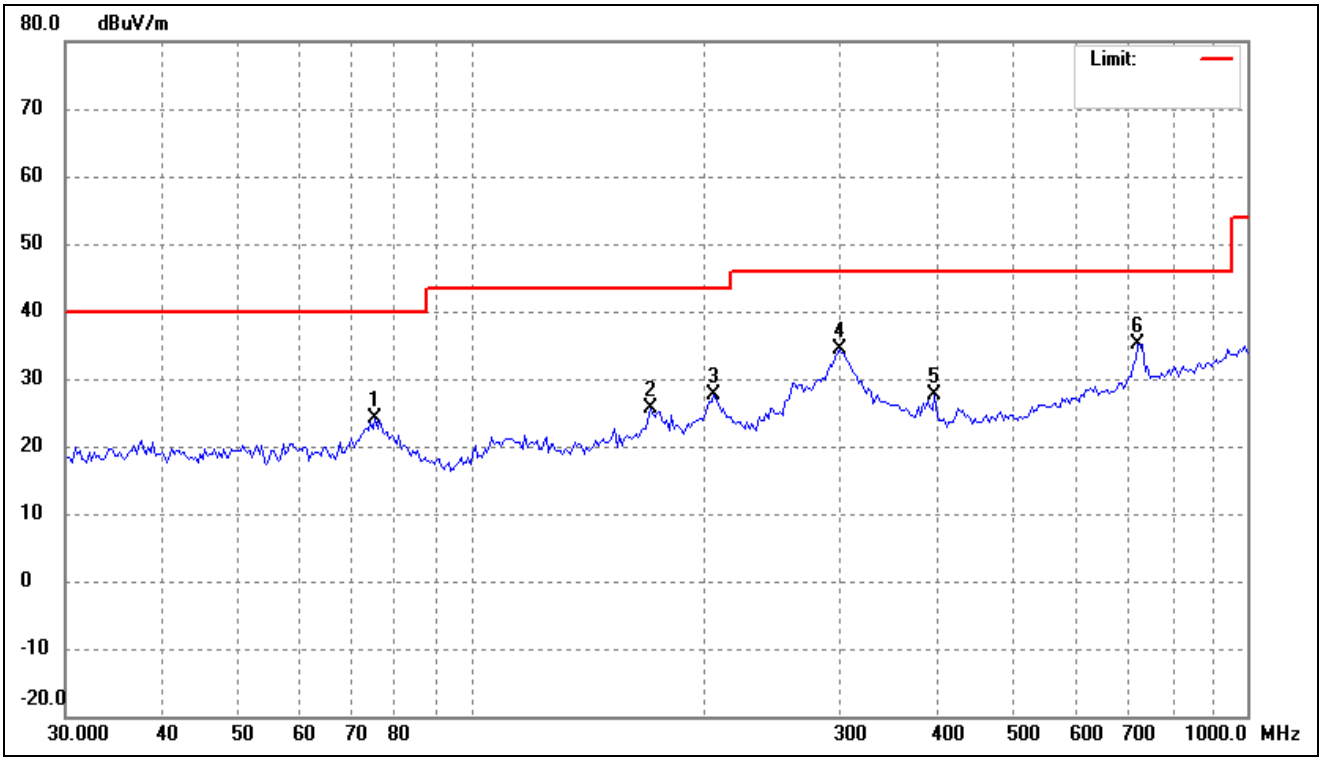
802.11ac-VHT80			
Test Channel	5210MHz(worst case)	Polarity:	Vertical



No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	35.7617	37.81	-8.85	28.96	40.00	-11.04	-	-	peak
2	74.2696	37.74	-11.18	26.56	40.00	-13.44	-	-	peak
3	171.3890	35.76	-8.51	27.25	43.50	-16.25	-	-	peak
4	210.1294	39.56	-11.60	27.96	43.50	-15.54	-	-	peak
5	368.6682	32.07	-6.71	25.36	46.00	-20.64	-	-	peak
6	550.2902	31.57	-3.54	28.03	46.00	-17.97	-	-	peak

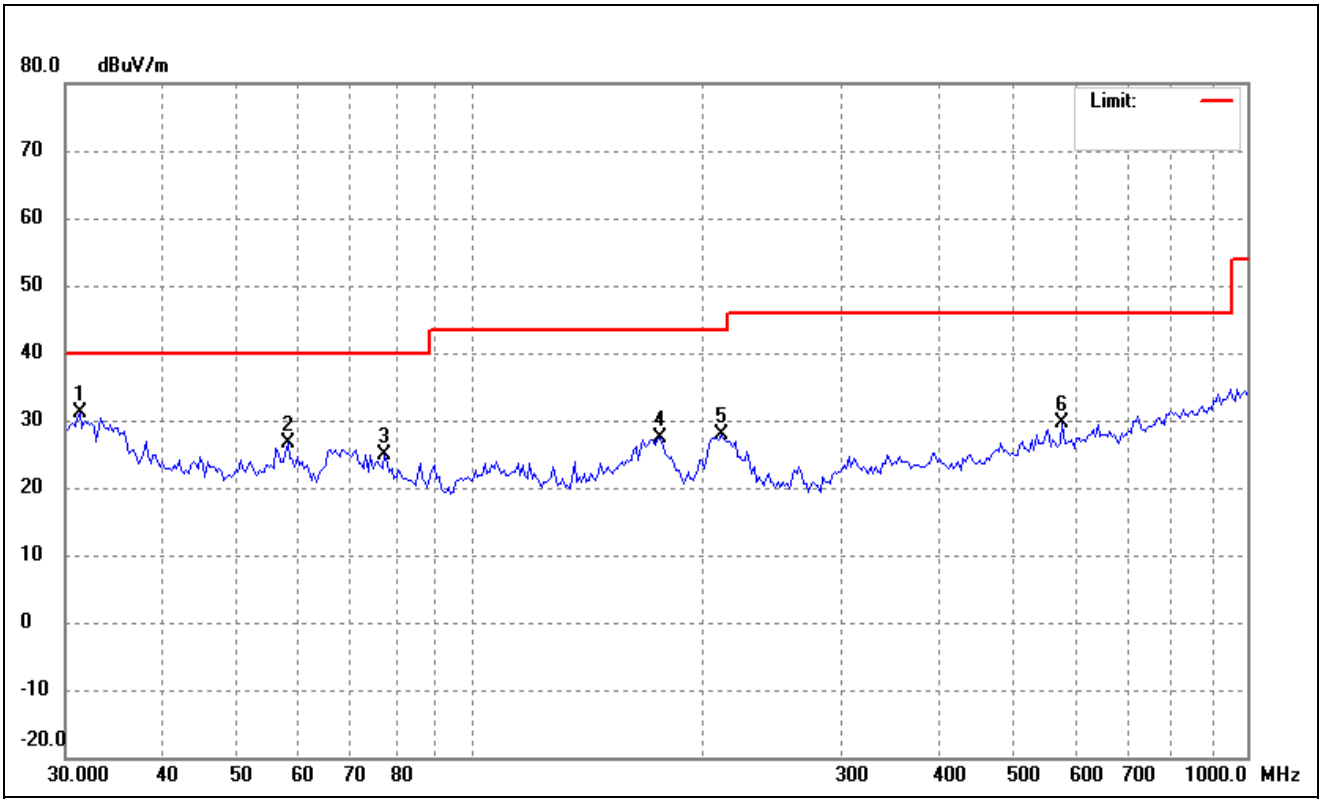
➢ 5250~5350MHz

802.11a			
Test Channel	5260MHz(Worst case)	Polarity:	Horizontal



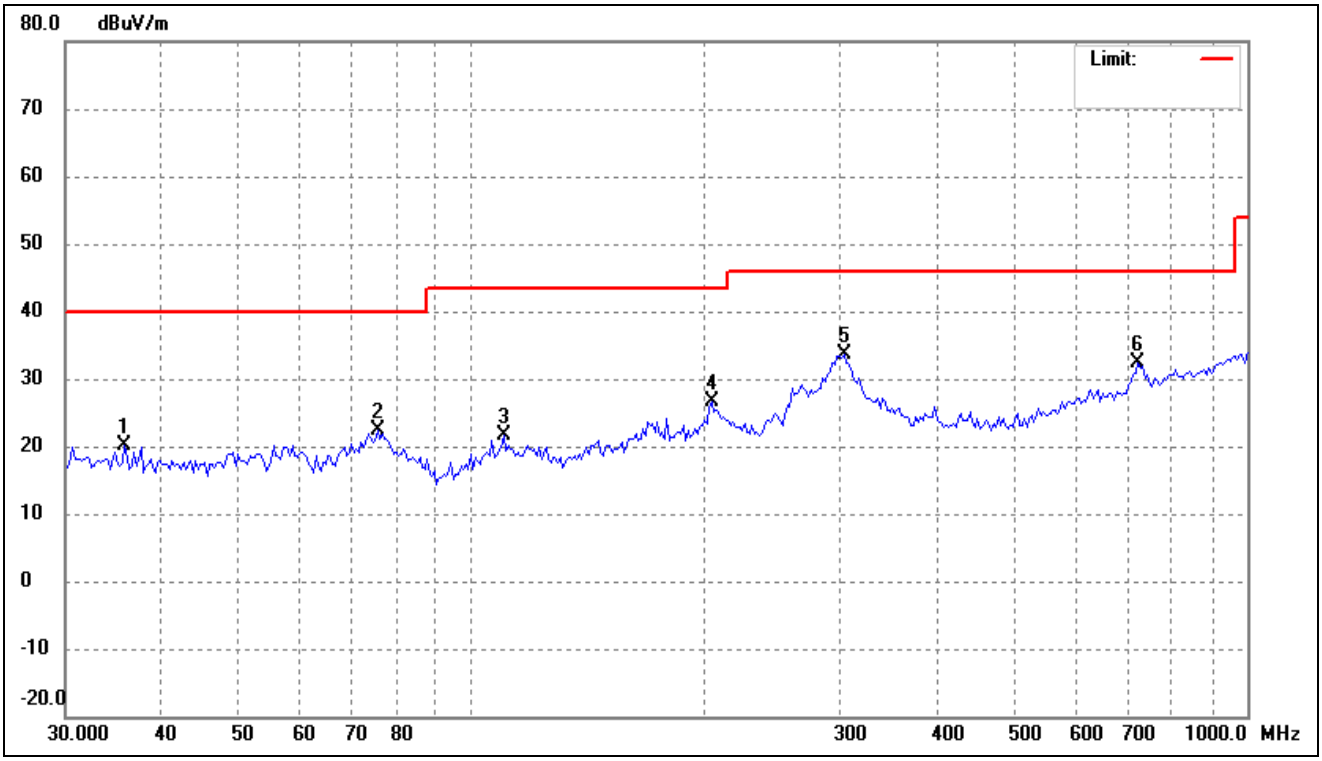
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	75.3208	35.66	-11.42	24.24	40.00	-15.76	-	-	peak
2	170.1887	33.90	-8.34	25.56	43.50	-17.94	-	-	peak
3	205.7459	39.23	-11.51	27.72	43.50	-15.78	-	-	peak
4	298.5931	42.23	-7.90	34.33	46.00	-11.67	-	-	peak
5	395.5071	33.98	-6.31	27.67	46.00	-18.33	-	-	peak
6	723.7930	35.62	-0.49	35.13	46.00	-10.87	-	-	peak

802.11a			
Test Channel	5260MHz(Worst case)	Polarity:	Vertical



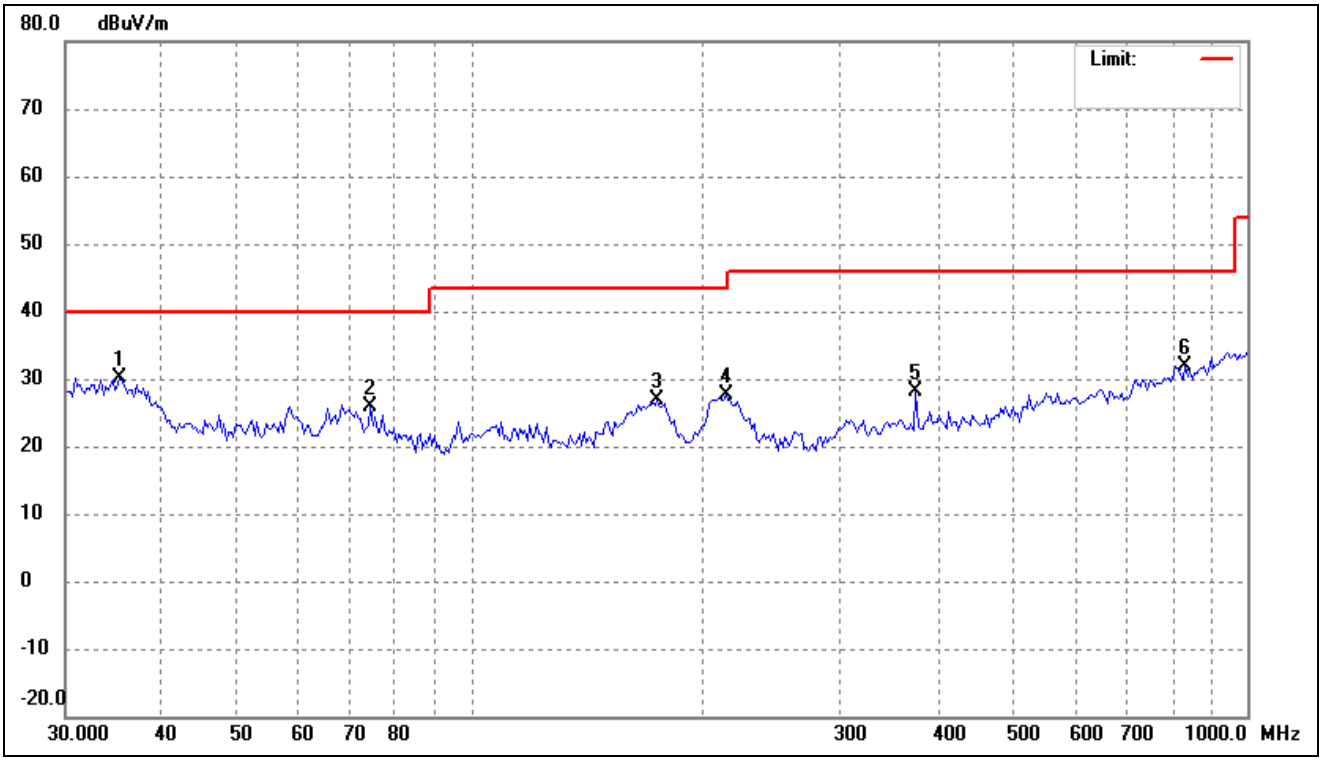
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	31.2919	40.49	-9.47	31.02	40.00	-8.98	-	-	peak
2	58.0759	35.02	-8.32	26.70	40.00	-13.30	-	-	peak
3	77.4680	36.69	-11.89	24.80	40.00	-15.20	-	-	peak
4	175.0404	36.46	-9.03	27.43	43.50	-16.07	-	-	peak
5	210.1294	39.54	-11.60	27.94	43.50	-15.56	-	-	peak
6	578.0359	32.50	-2.78	29.72	46.00	-16.28	-	-	peak

802.11n-HT20			
Test Channel	5260MHz(worst case)	Polarity:	Horizontal



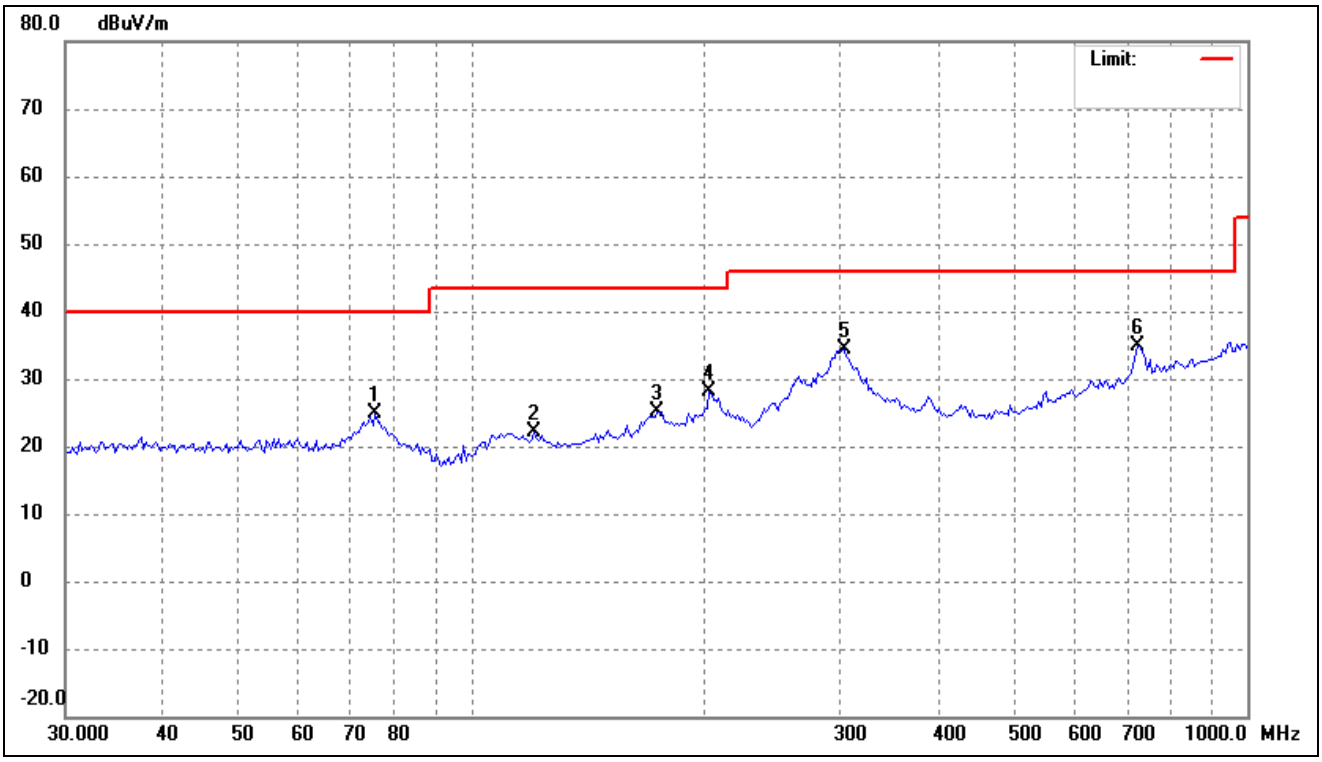
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	35.7617	28.97	-8.85	20.12	40.00	-19.88	-	-	peak
2	75.8520	33.87	-11.54	22.33	40.00	-17.67	-	-	peak
3	110.0818	32.66	-11.06	21.60	43.50	-21.90	-	-	peak
4	204.3052	38.10	-11.47	26.63	43.50	-16.87	-	-	peak
5	302.8193	41.47	-7.80	33.67	46.00	-12.33	-	-	peak
6	723.7930	32.87	-0.49	32.38	46.00	-13.62	-	-	peak

802.11n-HT20			
Test Channel	5260MHz(worst case)	Polarity:	Vertical



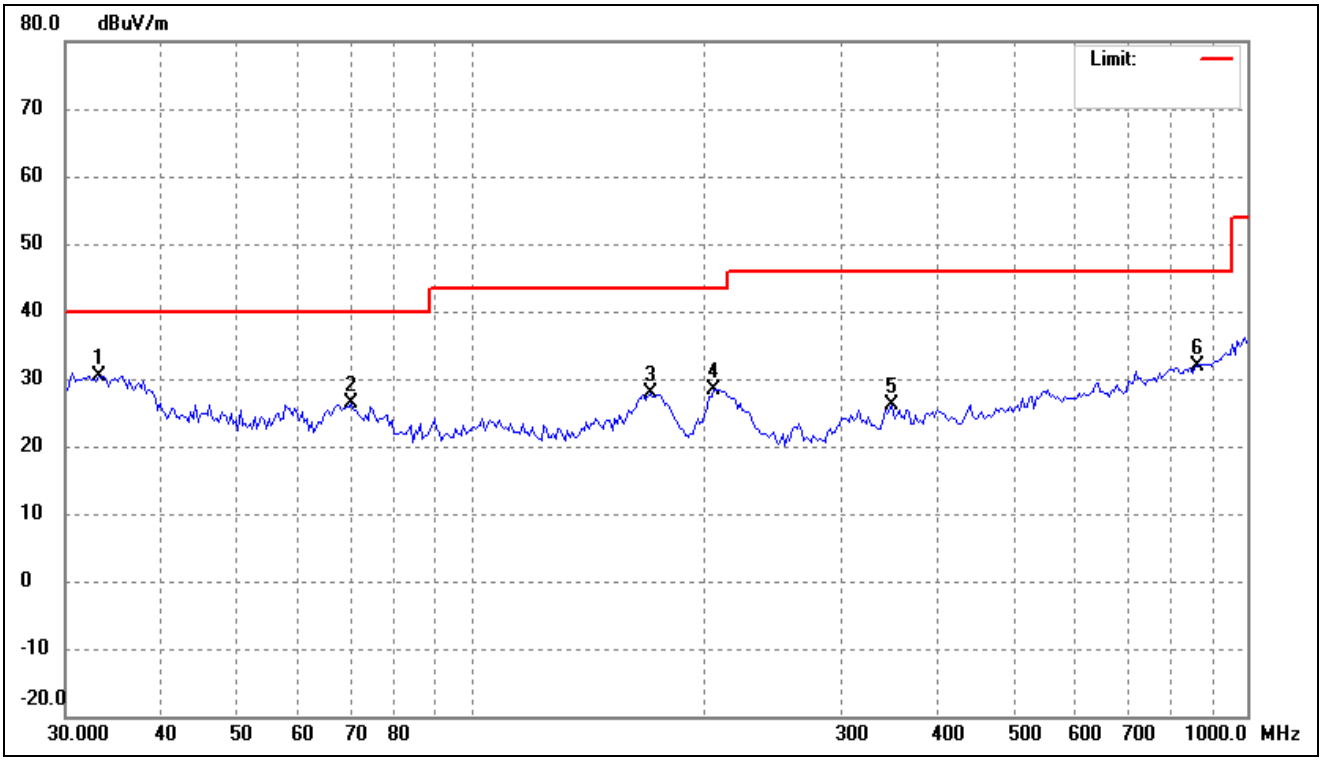
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	35.2626	39.05	-8.96	30.09	40.00	-9.91	-	-	peak
2	74.2696	37.11	-11.18	25.93	40.00	-14.07	-	-	peak
3	173.8147	35.66	-8.85	26.81	43.50	-16.69	-	-	peak
4	213.1035	39.15	-11.57	27.58	43.50	-15.92	-	-	peak
5	373.8862	34.79	-6.62	28.17	46.00	-17.83	-	-	peak
6	833.0127	30.64	1.36	32.00	46.00	-14.00	-	-	peak

802.11ac-VHT20			
Test Channel	5260MHz(worst case)	Polarity:	Horizontal



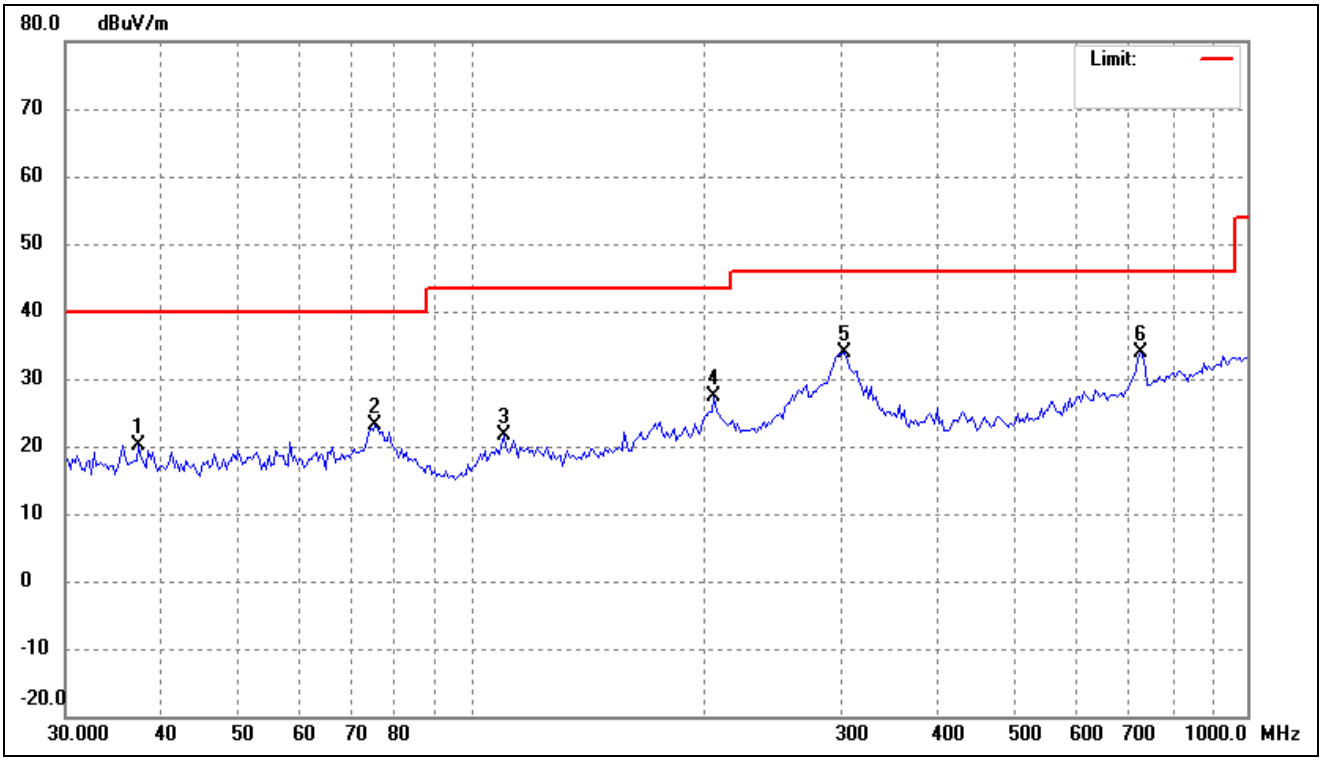
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	75.3208	36.33	-11.42	24.91	40.00	-15.09	-	-	peak
2	120.6118	32.09	-9.97	22.12	43.50	-21.38	-	-	peak
3	173.8147	33.97	-8.85	25.12	43.50	-18.38	-	-	peak
4	202.8745	39.67	-11.44	28.23	43.50	-15.27	-	-	peak
5	302.8193	42.10	-7.80	34.30	46.00	-11.70	-	-	peak
6	723.7930	35.48	-0.49	34.99	46.00	-11.01	-	-	peak

802.11ac-VHT20			
Test Channel	5260MHz(worst case)	Polarity:	Vertical



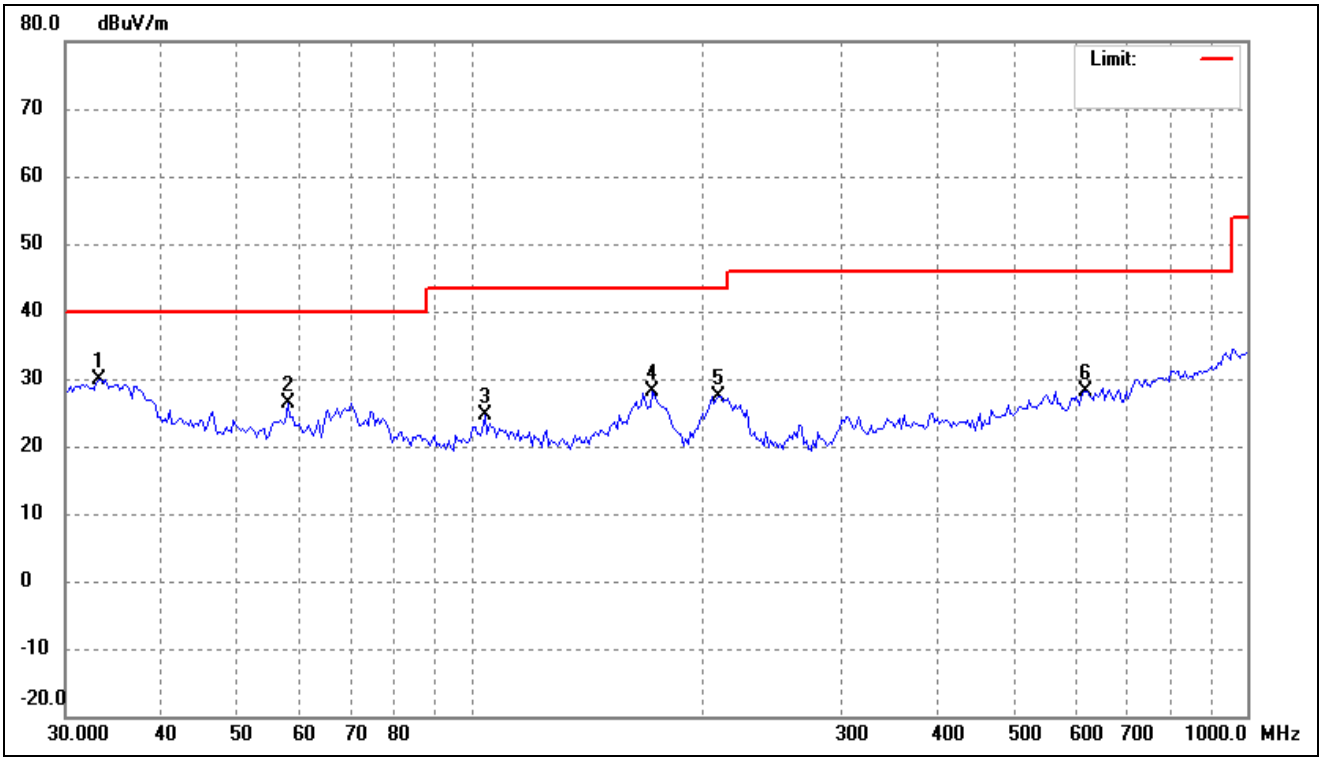
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.1015	39.76	-9.26	30.50	40.00	-9.50	-	-	peak
2	70.2096	36.79	-10.30	26.49	40.00	-13.51	-	-	peak
3	170.1888	36.33	-8.34	27.99	43.50	-15.51	-	-	peak
4	205.7459	39.85	-11.51	28.34	43.50	-15.16	-	-	peak
5	348.5145	33.30	-7.08	26.22	46.00	-19.78	-	-	peak
6	862.8015	30.25	1.68	31.93	46.00	-14.07	-	-	peak

802.11n-HT40			
Test Channel	5270MHz(worst case)	Polarity:	Horizontal



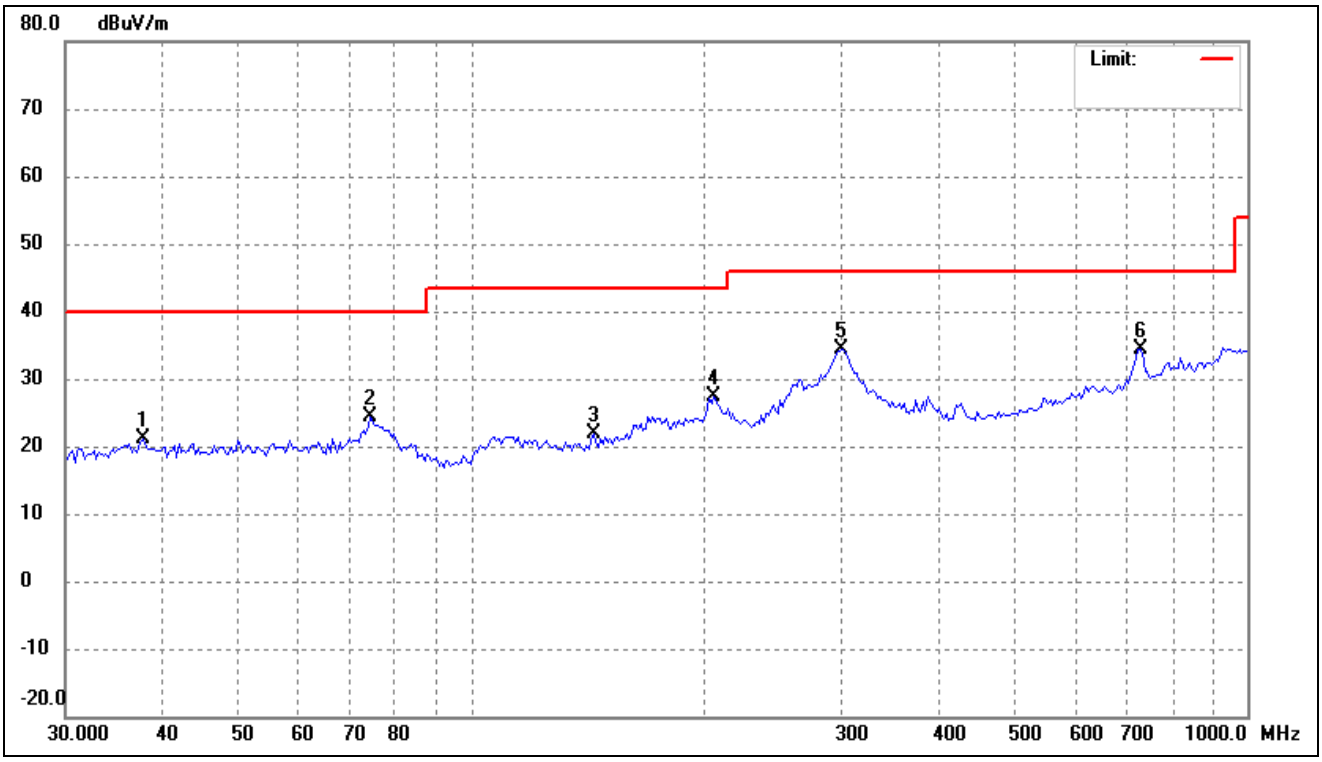
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	37.3017	28.71	-8.53	20.18	40.00	-19.82	-	-	peak
2	75.3208	34.46	-11.42	23.04	40.00	-16.96	-	-	peak
3	110.0818	32.81	-11.06	21.75	43.50	-21.75	-	-	peak
4	205.7459	38.93	-11.51	27.42	43.50	-16.08	-	-	peak
5	302.8193	41.65	-7.80	33.85	46.00	-12.15	-	-	peak
6	728.8971	34.29	-0.36	33.93	46.00	-12.07	-	-	peak

802.11n-HT40			
Test Channel	5270MHz(worst case)	Polarity:	Vertical



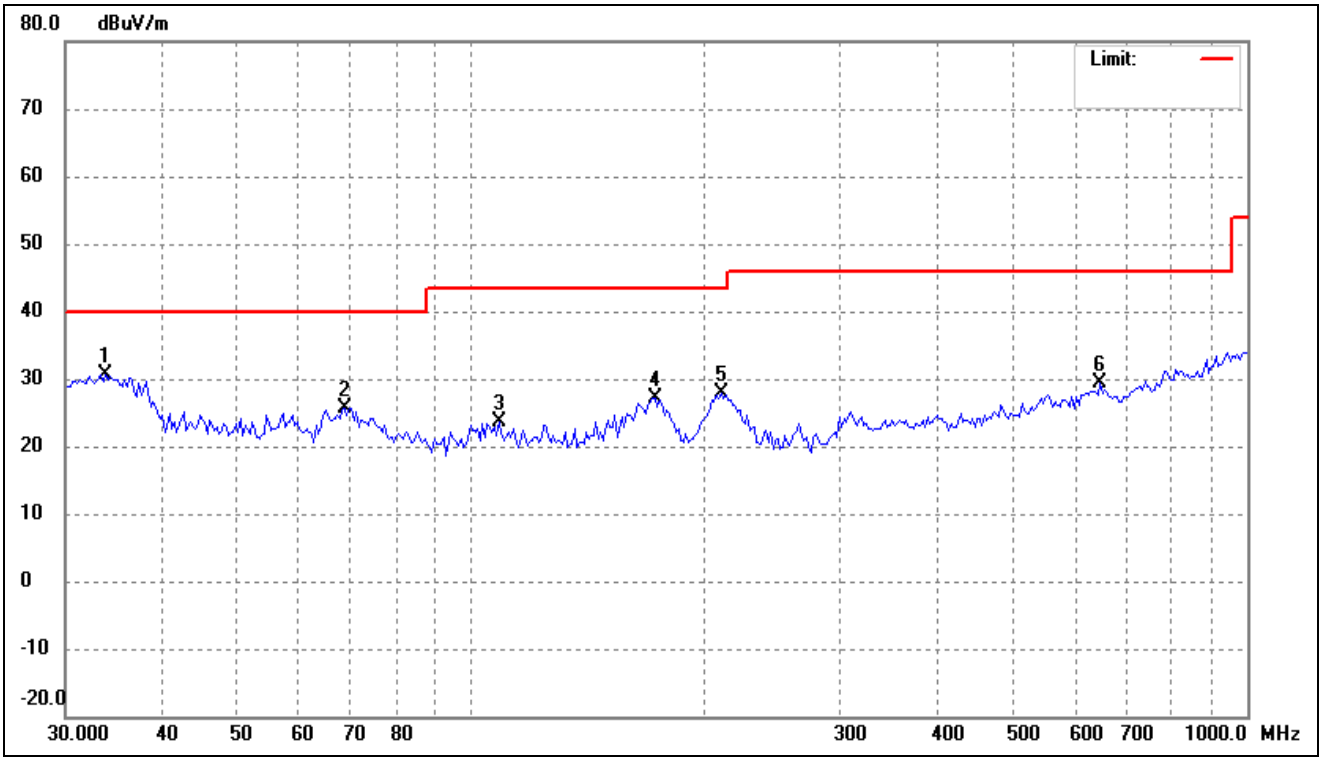
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.1015	39.12	-9.26	29.86	40.00	-10.14	-	-	peak
2	58.0759	34.78	-8.32	26.46	40.00	-13.54	-	-	peak
3	104.0640	36.28	-11.62	24.66	43.50	-18.84	-	-	peak
4	171.3890	36.52	-8.51	28.01	43.50	-15.49	-	-	peak
5	208.6580	38.89	-11.58	27.31	43.50	-16.19	-	-	peak
6	620.1167	30.05	-1.86	28.19	46.00	-17.81	-	-	peak

802.11ac-VHT40			
Test Channel	5270MHz(worst case)	Polarity:	Horizontal



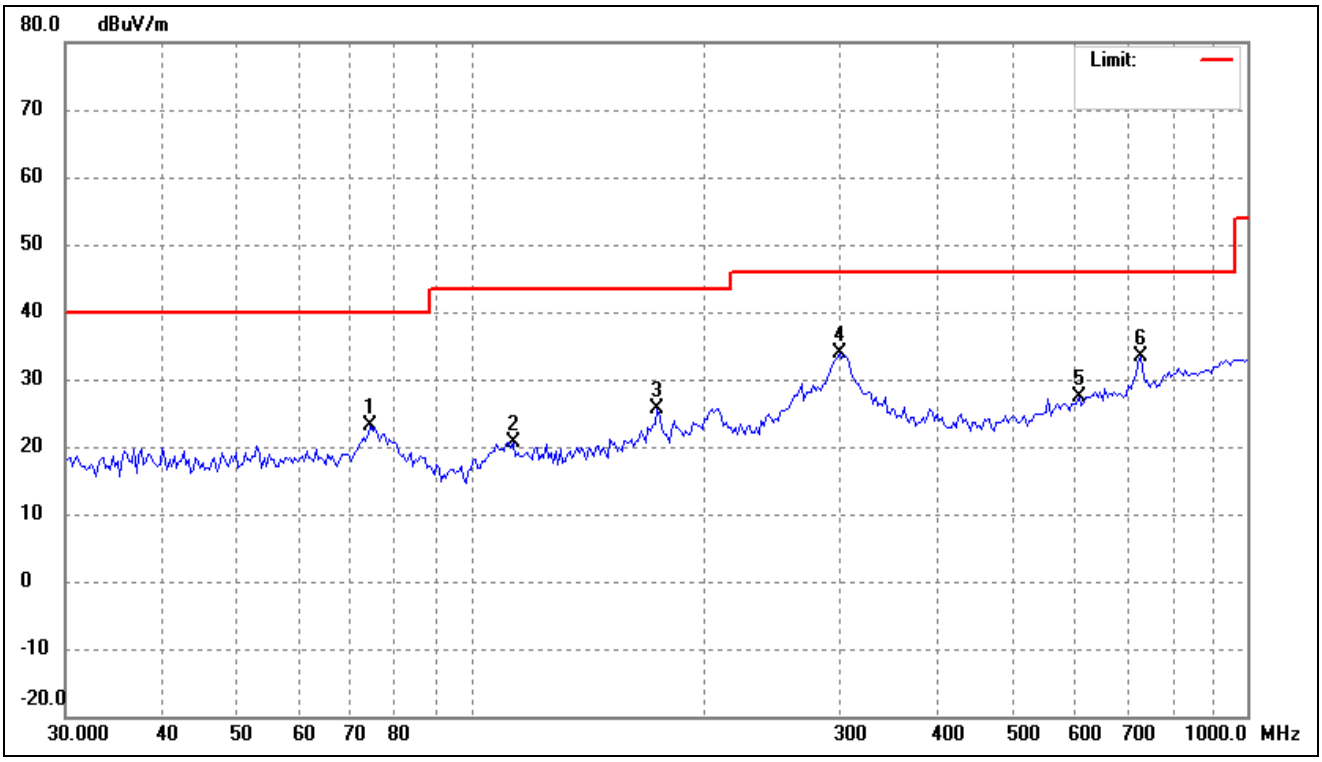
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	37.8297	29.42	-8.41	21.01	40.00	-18.99	-	-	peak
2	74.2696	35.55	-11.18	24.37	40.00	-15.63	-	-	peak
3	143.7760	30.37	-8.57	21.80	43.50	-21.70	-	-	peak
4	205.7459	38.92	-11.51	27.41	43.50	-16.09	-	-	peak
5	300.6988	42.27	-7.85	34.42	46.00	-11.58	-	-	peak
6	728.8971	34.84	-0.36	34.48	46.00	-11.52	-	-	peak

802.11ac-VHT40			
Test Channel	5270MHz(worst case)	Polarity:	Vertical



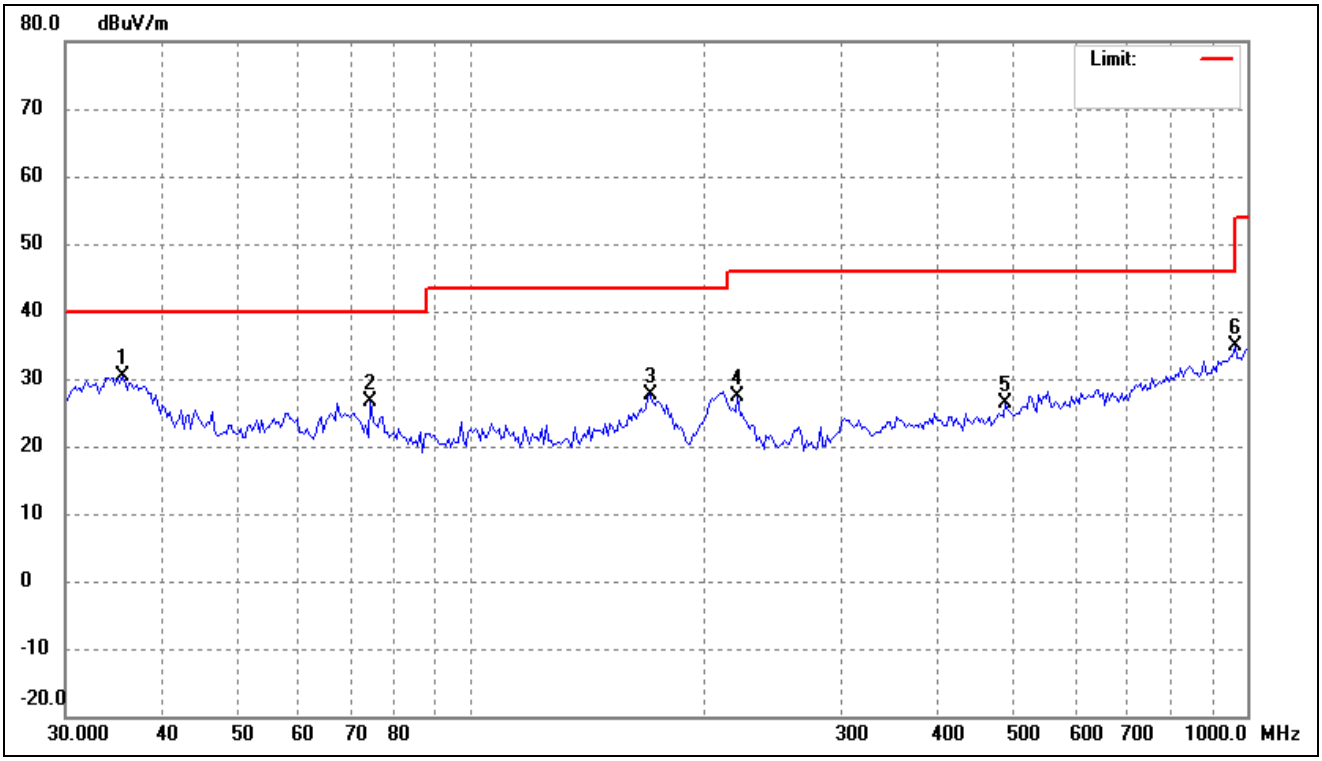
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.8067	39.69	-9.16	30.53	40.00	-9.47	-	-	peak
2	68.7450	35.65	-10.03	25.62	40.00	-14.38	-	-	peak
3	108.5455	34.79	-11.21	23.58	43.50	-19.92	-	-	peak
4	172.5976	35.89	-8.68	27.21	43.50	-16.29	-	-	peak
5	210.1294	39.37	-11.60	27.77	43.50	-15.73	-	-	peak
6	646.8217	30.85	-1.59	29.26	46.00	-16.74	-	-	peak

802.11ac-VHT80			
Test Channel	5290MHz(worst case)	Polarity:	Horizontal



No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	74.2696	34.42	-11.18	23.24	40.00	-16.76	-	-	peak
2	113.2200	31.44	-10.72	20.72	43.50	-22.78	-	-	peak
3	173.8147	34.41	-8.85	25.56	43.50	-17.94	-	-	peak
4	298.5932	41.67	-7.90	33.77	46.00	-12.23	-	-	peak
5	607.1806	29.39	-2.11	27.28	46.00	-18.72	-	-	peak
6	728.8971	33.72	-0.36	33.36	46.00	-12.64	-	-	peak

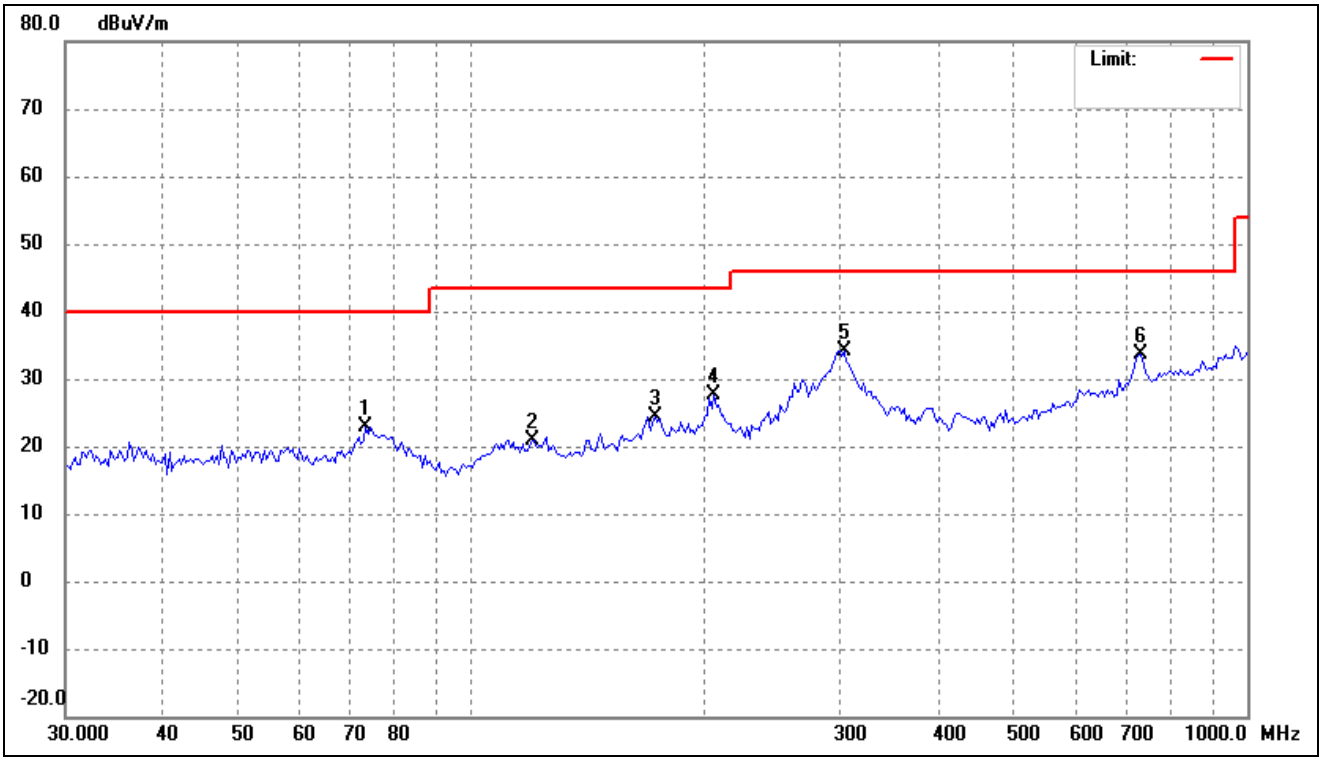
802.11ac-VHT80			
Test Channel	5290MHz(worst case)	Polarity:	Vertical



No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	35.5112	39.26	-8.90	30.36	40.00	-9.64	-	-	peak
2	74.2696	37.84	-11.18	26.66	40.00	-13.34	-	-	peak
3	170.1888	35.88	-8.34	27.54	43.50	-15.96	-	-	peak
4	220.7241	38.77	-11.48	27.29	46.00	-18.71	-	-	peak
5	488.3263	31.19	-4.89	26.30	46.00	-19.70	-	-	peak
6	965.4742	31.62	3.37	34.99	54.00	-19.01	-	-	peak

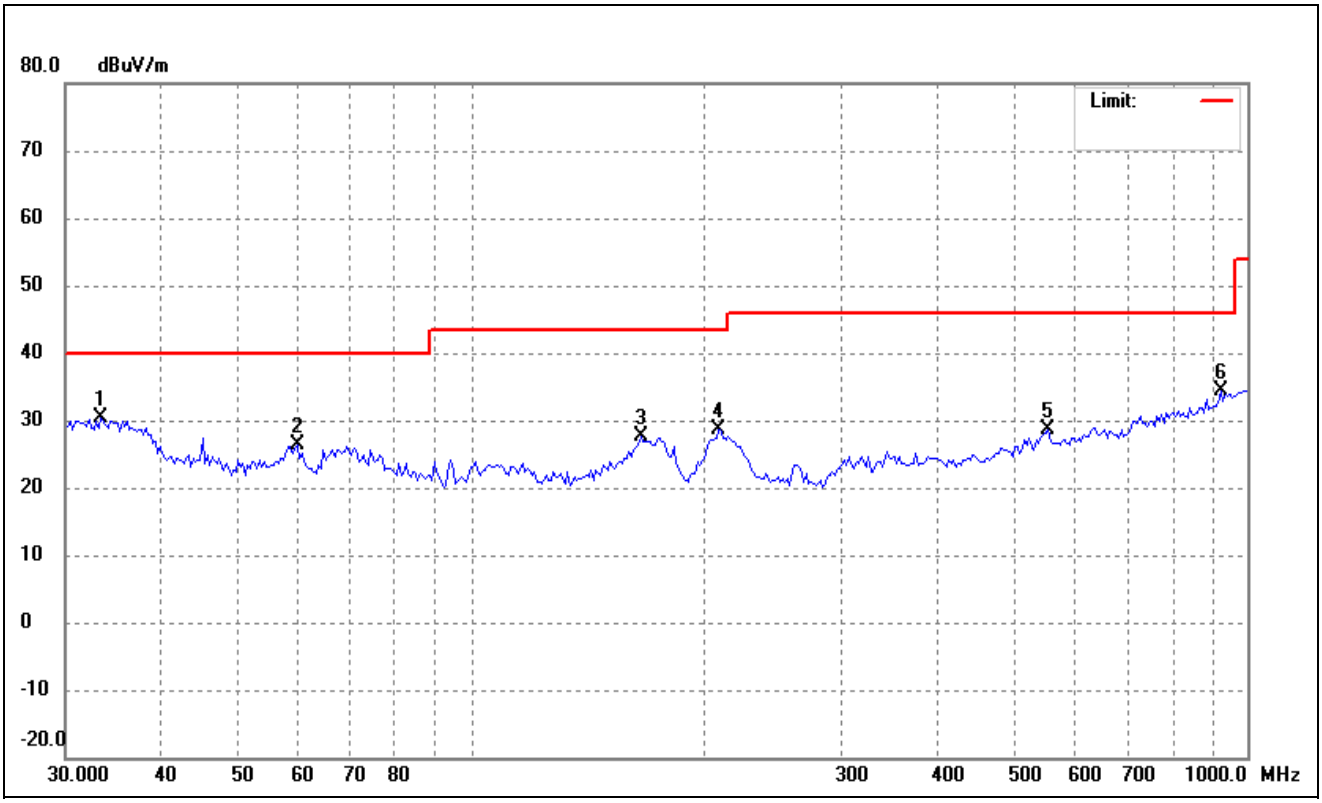
➢ 5470~5725 MHz

802.11a			
Test Channel	5500MHz(Worst case)	Polarity:	Horizontal



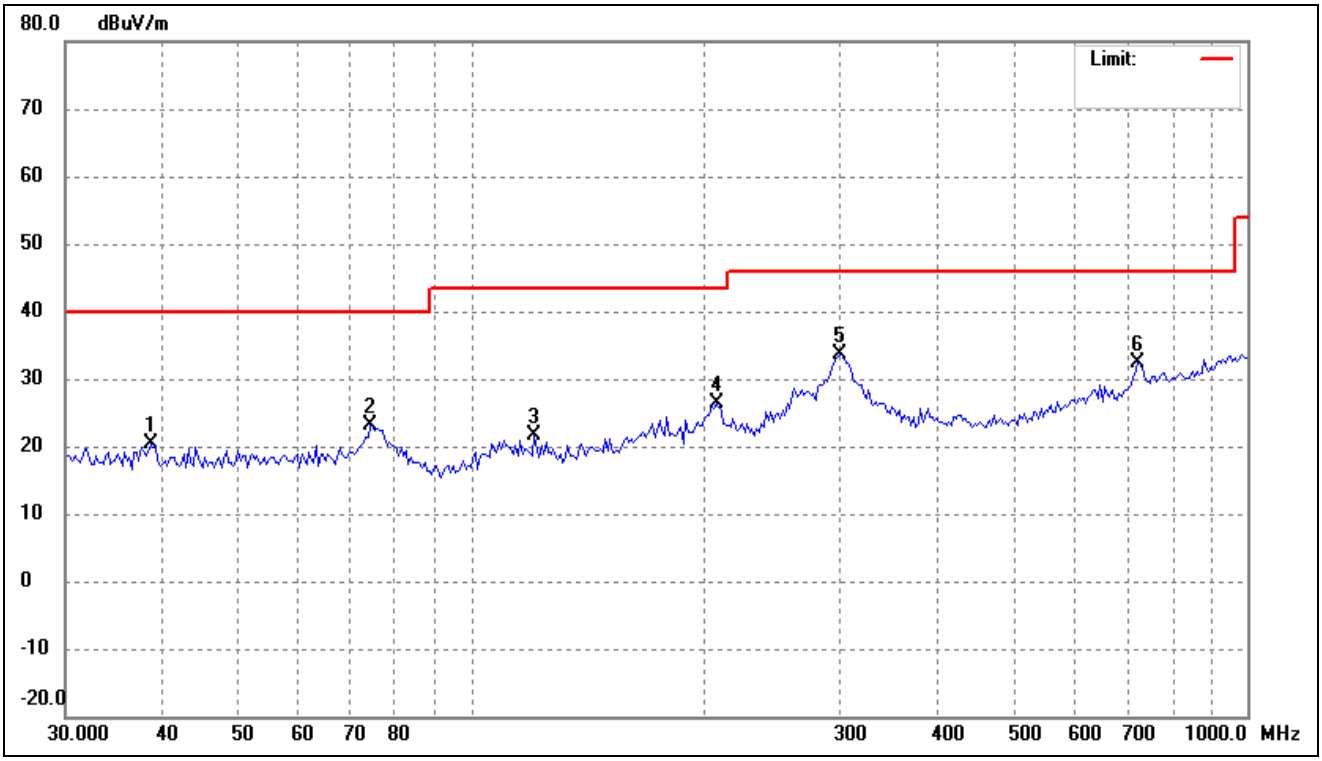
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	73.2331	33.77	-10.96	22.81	40.00	-17.19	-	-	peak
2	119.7672	31.00	-10.03	20.97	43.50	-22.53	-	-	peak
3	172.5976	32.99	-8.68	24.31	43.50	-19.19	-	-	peak
4	205.7459	39.04	-11.51	27.53	43.50	-15.97	-	-	peak
5	302.8193	41.89	-7.80	34.09	46.00	-11.91	-	-	peak
6	728.8971	33.96	-0.36	33.60	46.00	-12.40	-	-	peak

802.11a			
Test Channel	5500MHz(Worst case)	Polarity:	Vertical



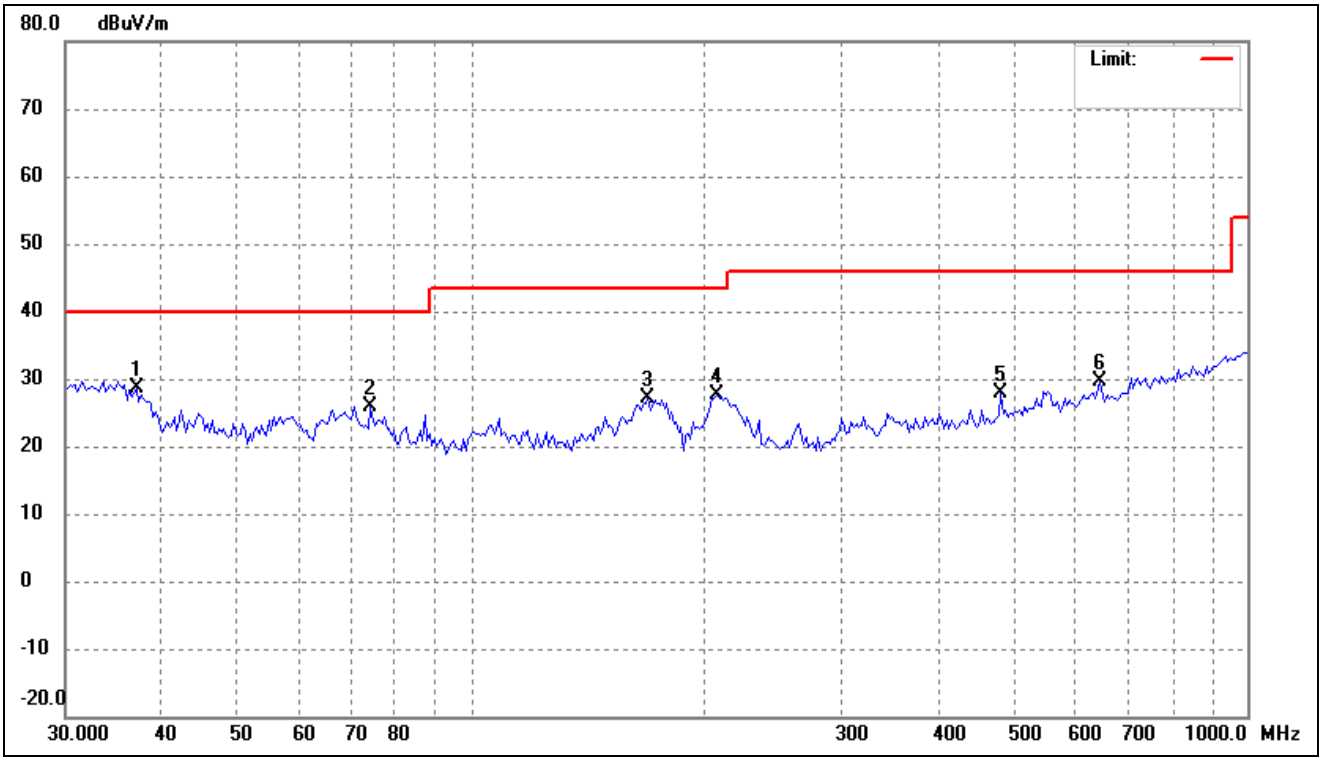
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.3349	39.48	-9.22	30.26	40.00	-9.74	-	-	peak
2	59.7315	34.79	-8.41	26.38	40.00	-13.62	-	-	peak
3	165.4716	35.85	-8.19	27.66	43.50	-15.84	-	-	peak
4	208.6580	40.13	-11.58	28.55	43.50	-14.95	-	-	peak
5	554.1708	32.18	-3.43	28.75	46.00	-17.25	-	-	peak
6	925.6132	31.58	2.72	34.30	46.00	-11.70	-	-	peak

802.11n-HT20			
Test Channel	5500MHz(Worst case)	Polarity:	Horizontal



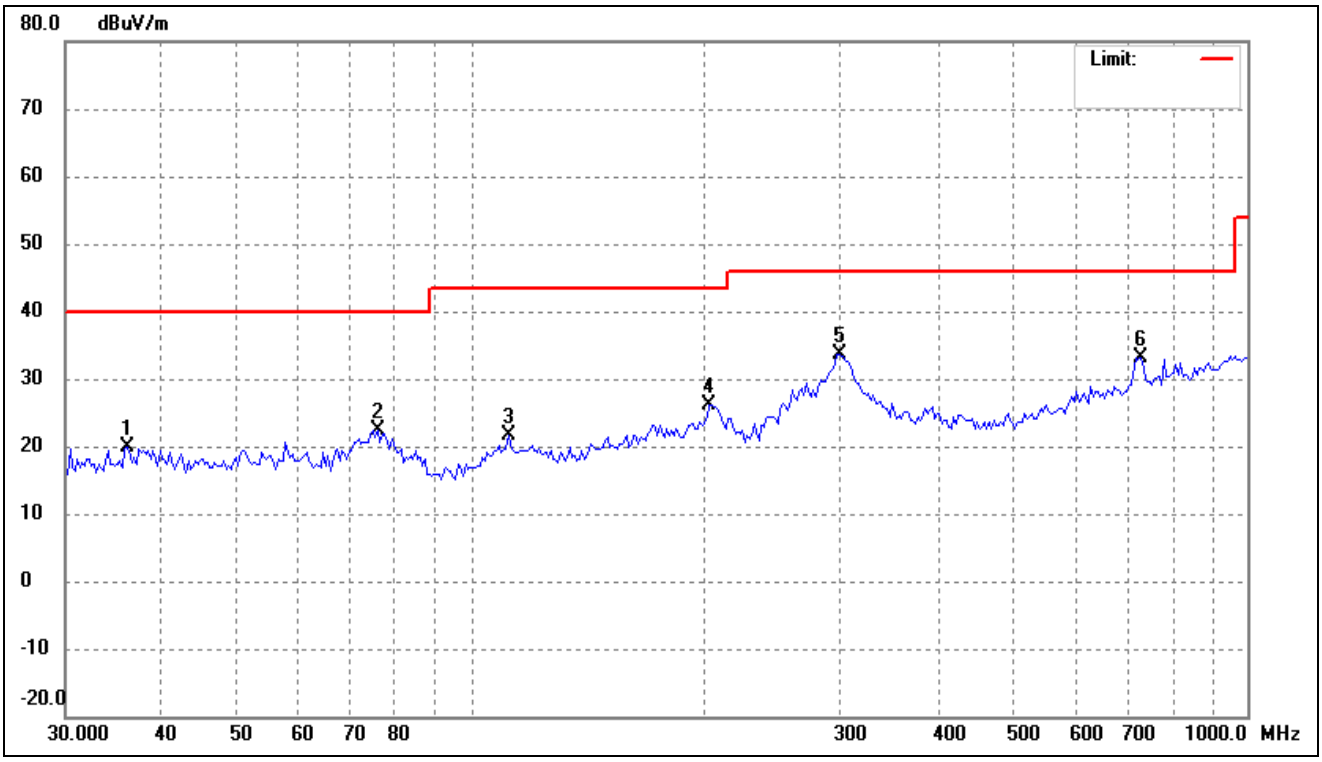
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	38.6357	28.56	-8.25	20.31	40.00	-19.69	-	-	peak
2	74.2696	34.34	-11.18	23.16	40.00	-16.84	-	-	peak
3	120.6118	31.52	-9.97	21.55	43.50	-21.95	-	-	peak
4	207.1968	37.87	-11.55	26.32	43.50	-17.18	-	-	peak
5	298.5932	41.61	-7.90	33.71	46.00	-12.29	-	-	peak
6	723.7930	32.98	-0.49	32.49	46.00	-13.51	-	-	peak

802.11n-HT20			
Test Channel	5500MHz(Worst case)	Polarity:	Vertical



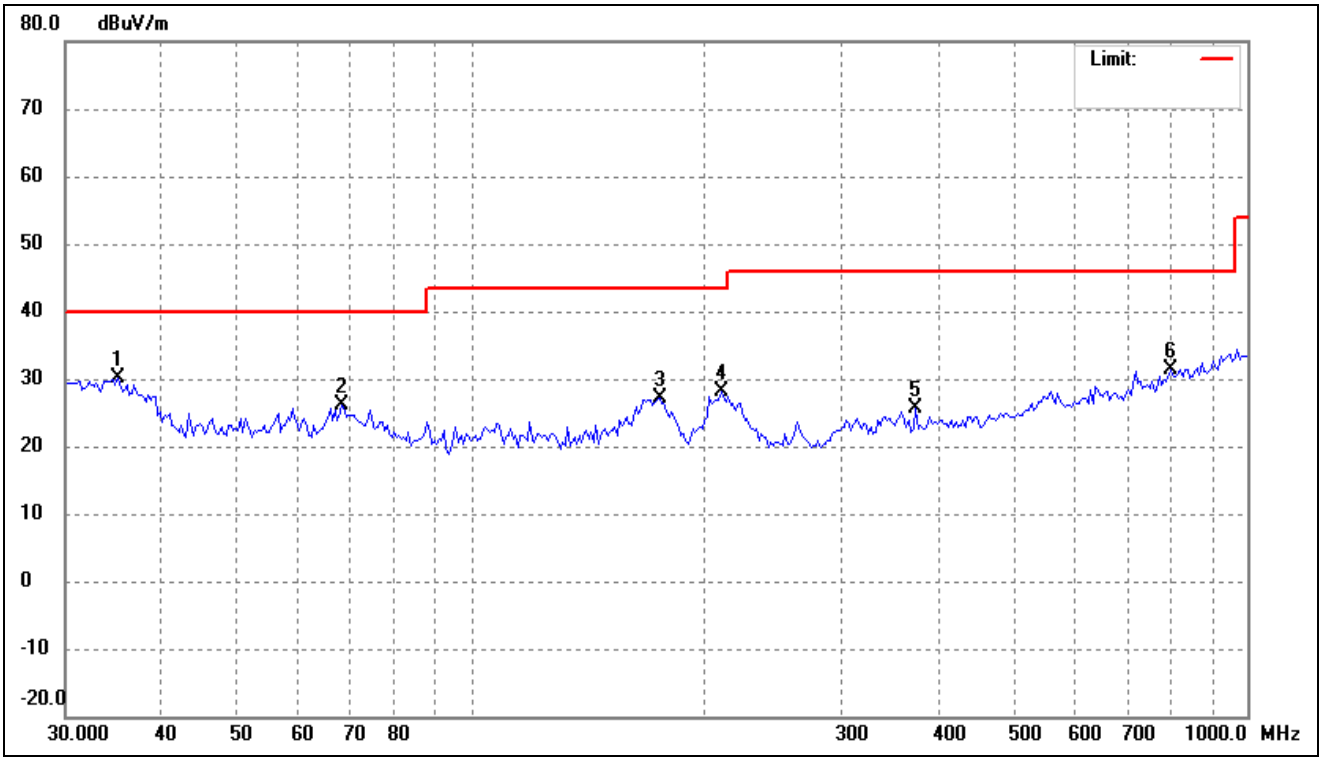
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	37.0405	37.09	-8.58	28.51	40.00	-11.49	-	-	peak
2	74.2696	37.01	-11.18	25.83	40.00	-14.17	-	-	peak
3	168.9970	35.35	-8.29	27.06	43.50	-16.44	-	-	peak
4	207.1968	39.16	-11.55	27.61	43.50	-15.89	-	-	peak
5	481.5112	32.87	-4.94	27.93	46.00	-18.07	-	-	peak
6	646.8217	31.25	-1.59	29.66	46.00	-16.34	-	-	peak

802.11ac-VHT20			
Test Channel	5500MHz(Worst case)	Polarity:	Horizontal



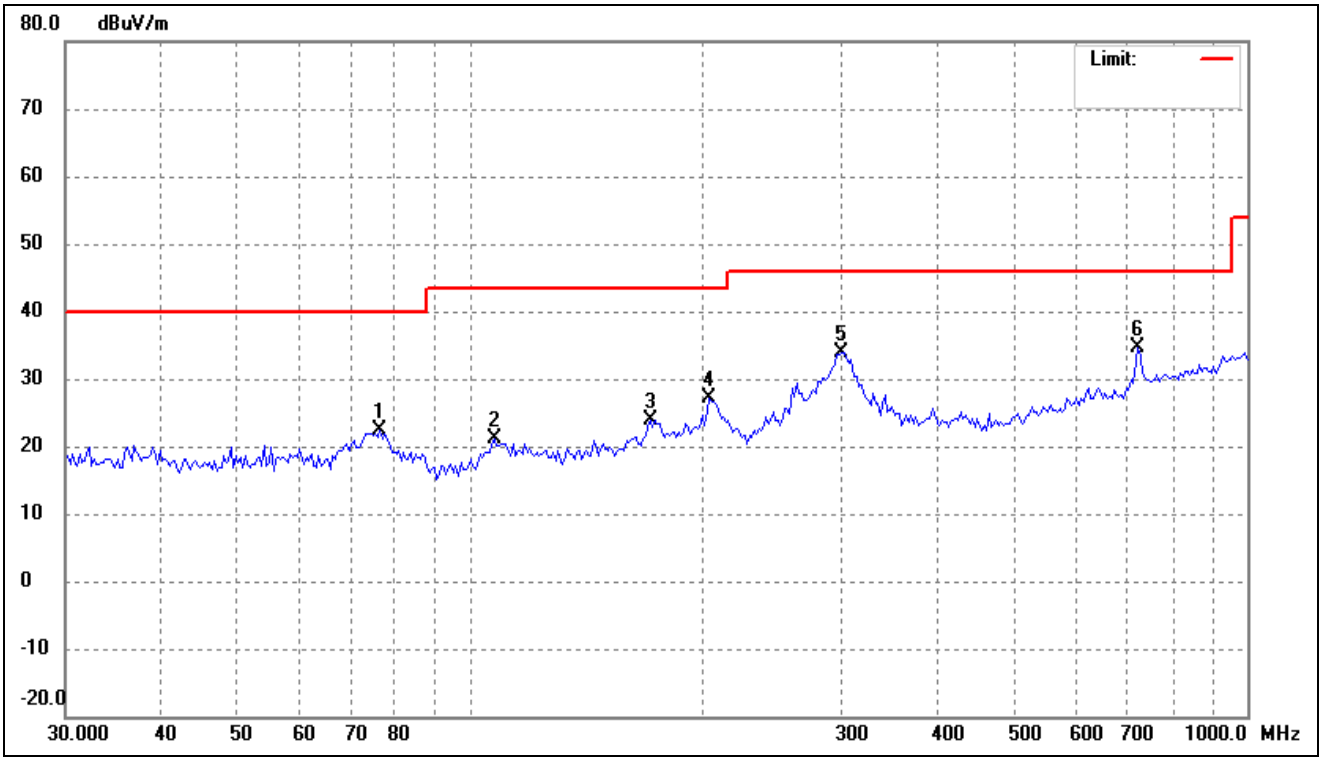
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	36.0139	28.68	-8.80	19.88	40.00	-20.12	-	-	peak
2	75.8520	33.97	-11.54	22.43	40.00	-17.57	-	-	peak
3	111.6399	32.61	-10.89	21.72	43.50	-21.78	-	-	peak
4	202.8745	37.58	-11.44	26.14	43.50	-17.36	-	-	peak
5	298.5932	41.48	-7.90	33.58	46.00	-12.42	-	-	peak
6	728.8971	33.53	-0.36	33.17	46.00	-12.83	-	-	peak

802.11ac-VHT20			
Test Channel	5500MHz(Worst case)	Polarity:	Vertical



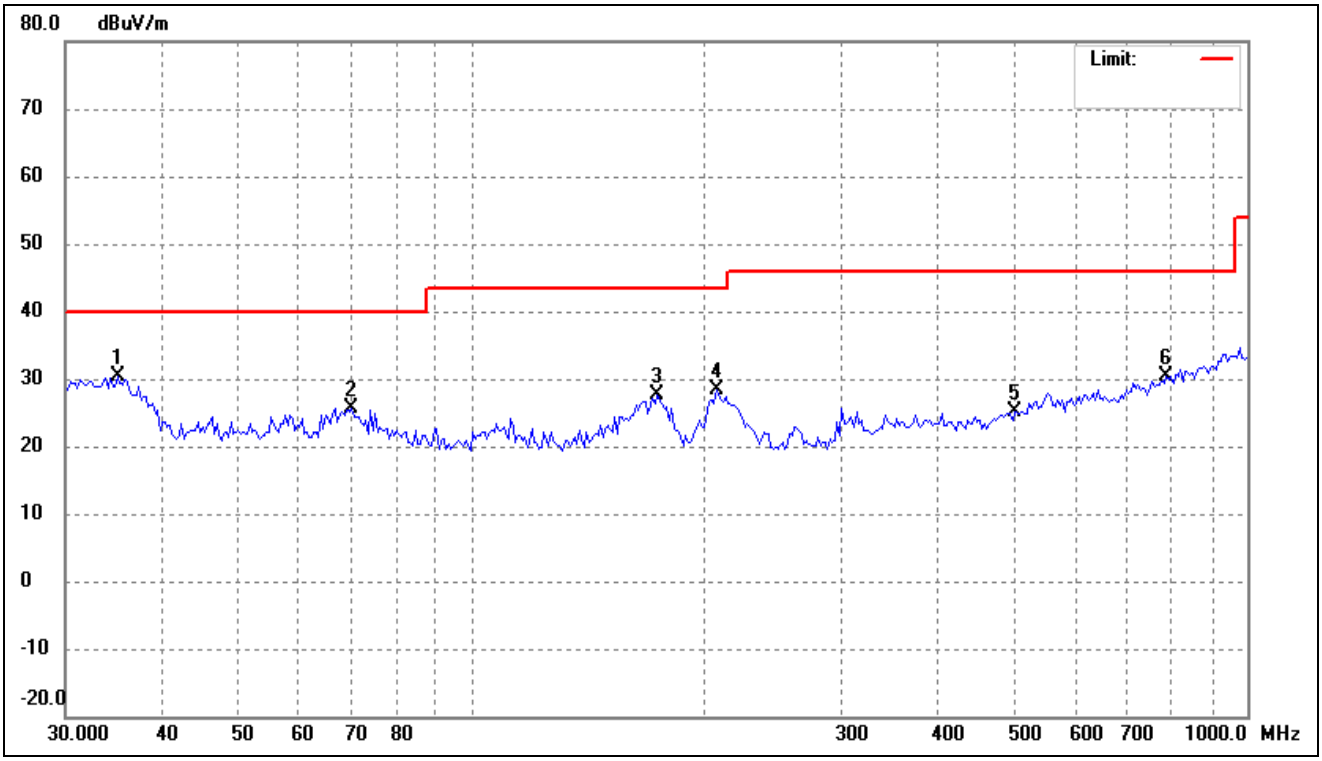
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	35.0157	39.10	-9.01	30.09	40.00	-9.91	-	-	peak
2	68.2636	35.95	-9.94	26.01	40.00	-13.99	-	-	peak
3	175.0404	36.10	-9.03	27.07	43.50	-16.43	-	-	peak
4	210.1294	39.68	-11.60	28.08	43.50	-15.42	-	-	peak
5	373.8862	32.20	-6.62	25.58	46.00	-20.42	-	-	peak
6	798.6205	30.39	0.98	31.37	46.00	-14.63	-	-	peak

802.11n-HT40			
Test Channel	5510MHz(worst case)	Polarity:	Horizontal



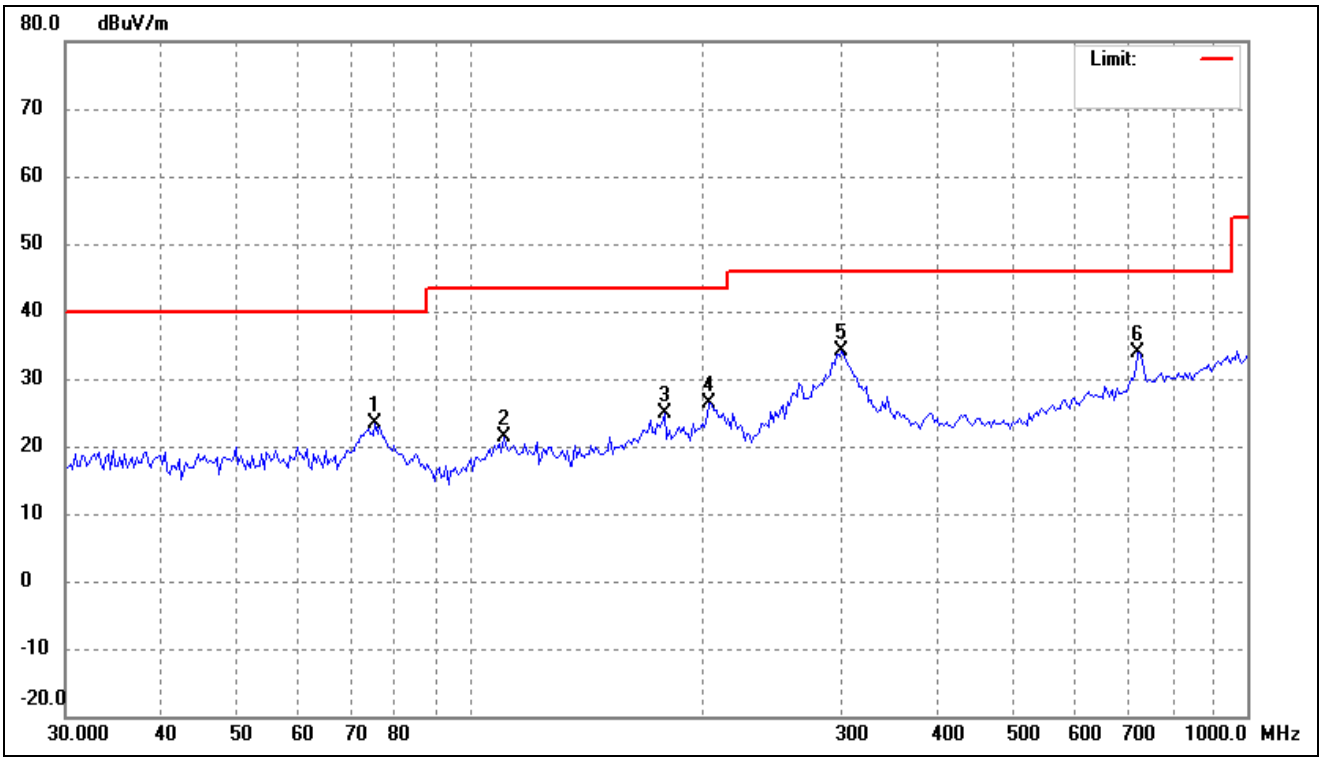
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	76.3869	33.93	-11.64	22.29	40.00	-17.71	-	-	peak
2	107.0306	32.59	-11.34	21.25	43.50	-22.25	-	-	peak
3	170.1888	32.29	-8.34	23.95	43.50	-19.55	-	-	peak
4	202.8745	38.50	-11.44	27.06	43.50	-16.44	-	-	peak
5	300.6988	41.76	-7.85	33.91	46.00	-12.09	-	-	peak
6	723.7930	35.00	-0.49	34.51	46.00	-11.49	-	-	peak

802.11n-HT40			
Test Channel	5510MHz(worst case)	Polarity:	Vertical



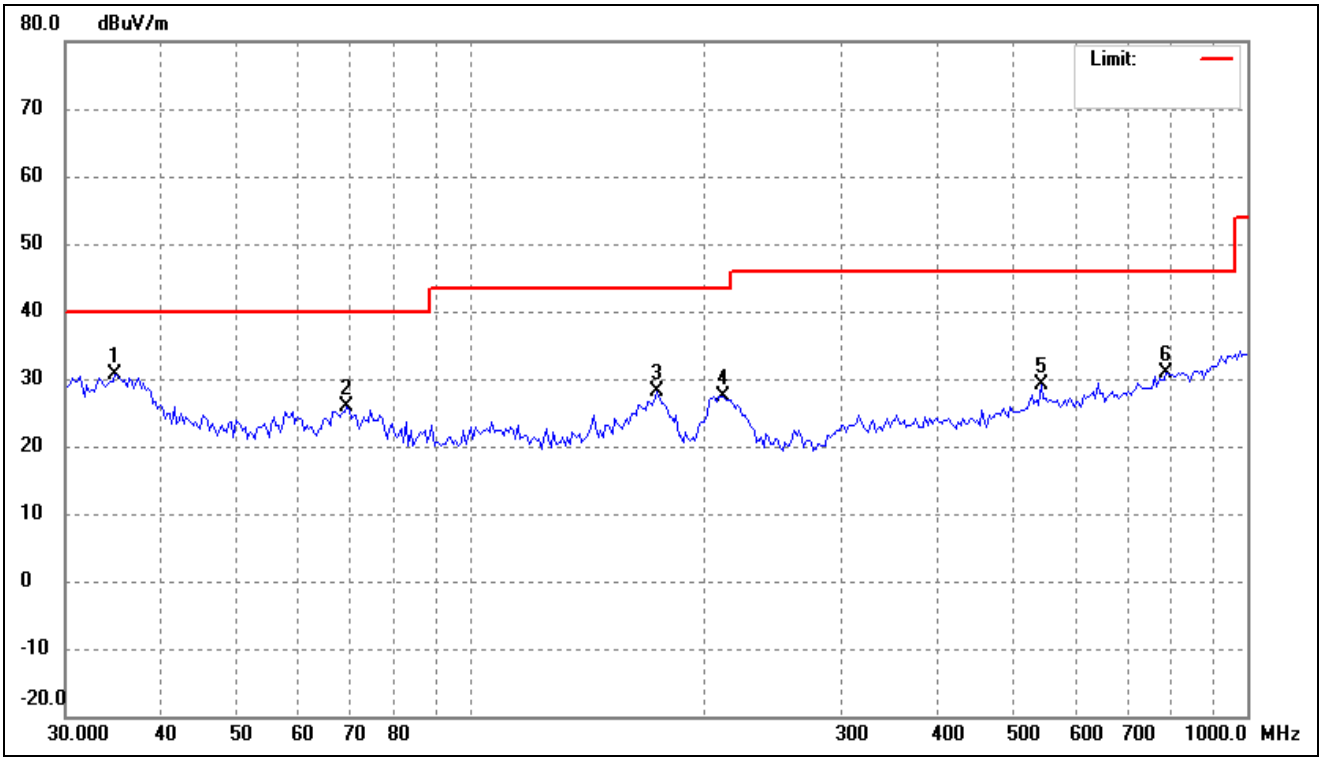
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	35.0157	39.47	-9.01	30.46	40.00	-9.54	-	-	peak
2	70.2096	35.91	-10.30	25.61	40.00	-14.39	-	-	peak
3	173.8147	36.60	-8.85	27.75	43.50	-15.75	-	-	peak
4	207.1968	39.81	-11.55	28.26	43.50	-15.24	-	-	peak
5	502.2473	29.92	-4.76	25.16	46.00	-20.84	-	-	peak
6	787.4749	29.55	0.80	30.35	46.00	-15.65	-	-	peak

802.11ac-VHT40			
Test Channel	5510MHz(worst case)	Polarity:	Horizontal



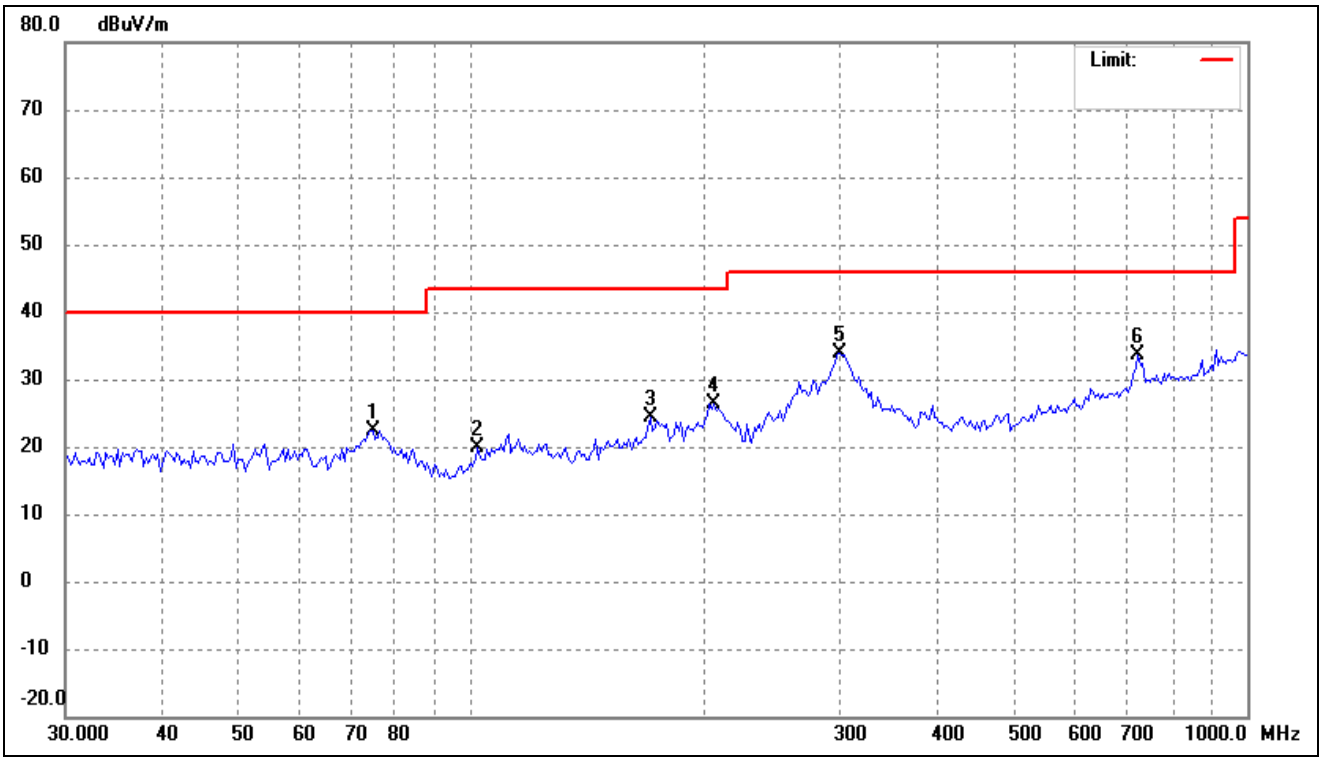
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	75.3208	34.78	-11.42	23.36	40.00	-16.64	-	-	peak
2	110.0818	32.38	-11.06	21.32	43.50	-22.18	-	-	peak
3	177.5179	34.22	-9.38	24.84	43.50	-18.66	-	-	peak
4	202.8745	37.83	-11.44	26.39	43.50	-17.11	-	-	peak
5	300.6988	42.02	-7.85	34.17	46.00	-11.83	-	-	peak
6	723.7930	34.30	-0.49	33.81	46.00	-12.19	-	-	peak

802.11ac-VHT40			
Test Channel	5510MHz(worst case)	Polarity:	Vertical



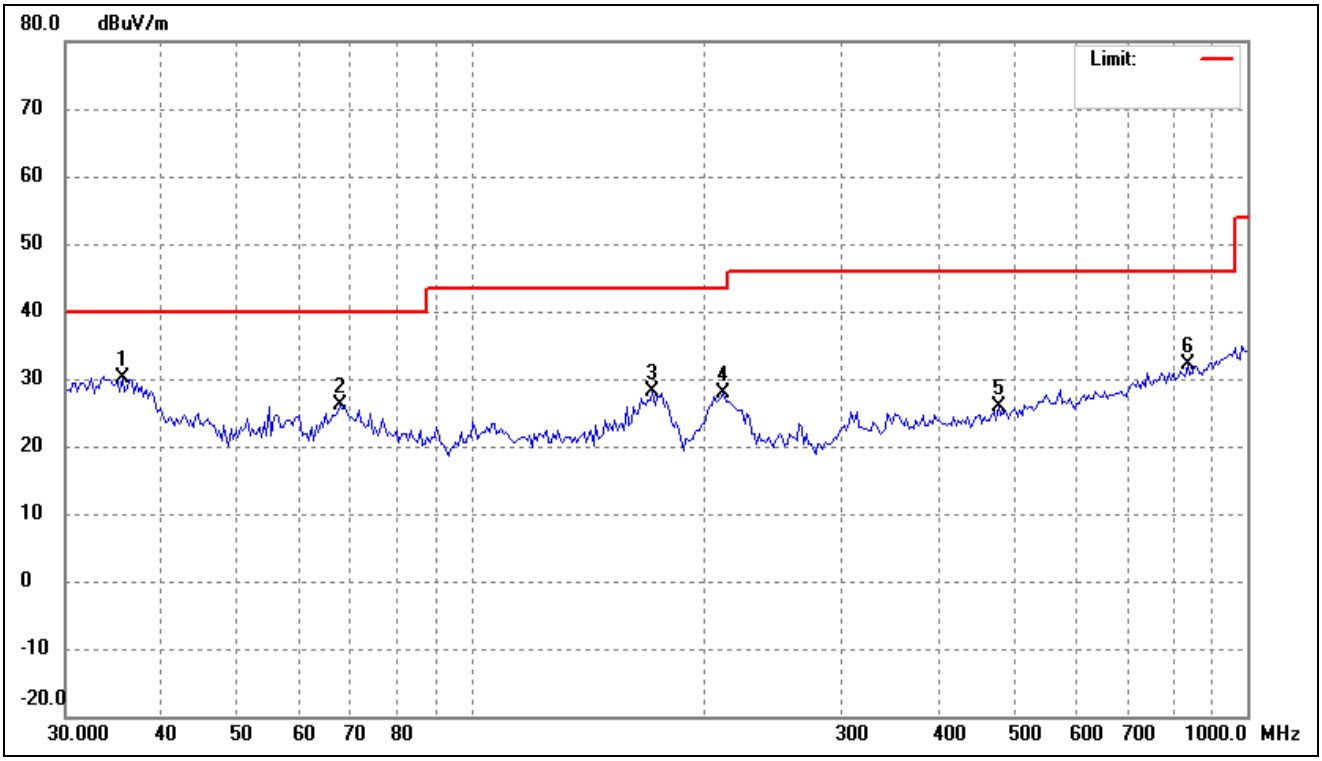
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	34.7705	39.78	-9.05	30.73	40.00	-9.27	-	-	peak
2	69.2297	36.07	-10.11	25.96	40.00	-14.04	-	-	peak
3	173.8147	36.90	-8.85	28.05	43.50	-15.45	-	-	peak
4	211.6112	39.01	-11.59	27.42	43.50	-16.08	-	-	peak
5	542.6104	32.89	-3.78	29.11	46.00	-16.89	-	-	peak
6	787.4749	29.99	0.80	30.79	46.00	-15.21	-	-	peak

802.11ac-VHT80			
Test Channel	5530MHz(worst case)	Polarity:	Horizontal



No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	74.7934	33.73	-11.30	22.43	40.00	-17.57	-	-	peak
2	101.8932	31.76	-11.82	19.94	43.50	-23.56	-	-	peak
3	170.1888	32.73	-8.34	24.39	43.50	-19.11	-	-	peak
4	205.7459	37.83	-11.51	26.32	43.50	-17.18	-	-	peak
5	298.5932	41.68	-7.90	33.78	46.00	-12.22	-	-	peak
6	723.7930	34.01	-0.49	33.52	46.00	-12.48	-	-	peak

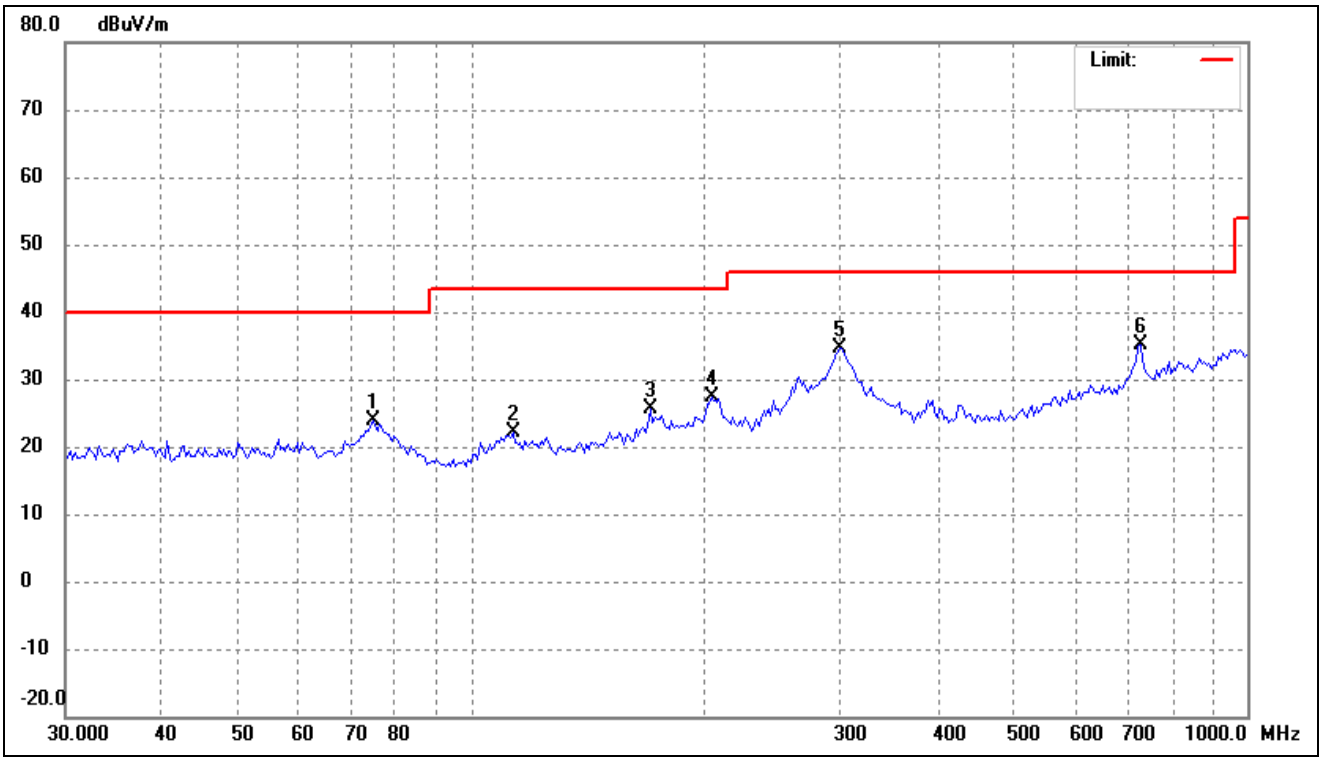
802.11ac-VHT80			
Test Channel	5530MHz(worst case)	Polarity:	Vertical



No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	35.5112	39.13	-8.90	30.23	40.00	-9.77	-	-	peak
2	67.7856	36.10	-9.85	26.25	40.00	-13.75	-	-	peak
3	171.3890	36.58	-8.51	28.07	43.50	-15.43	-	-	peak
4	211.6112	39.43	-11.59	27.84	43.50	-15.66	-	-	peak
5	478.1394	30.90	-4.97	25.93	46.00	-20.07	-	-	peak
6	838.8870	30.72	1.42	32.14	46.00	-13.86	-	-	peak

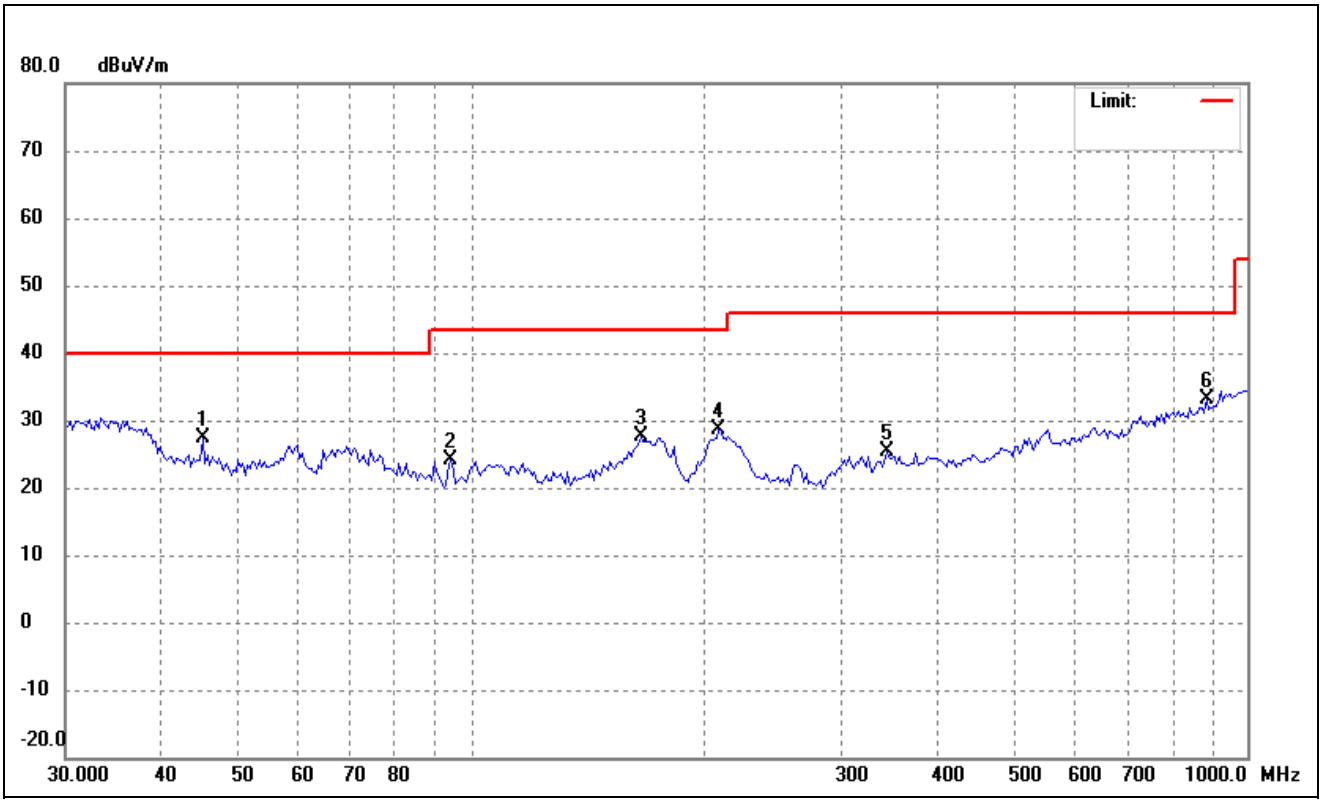
5725-5850MHz

802.11a			
Test Channel	5745MHz(worst case)	Polarity:	Horizontal



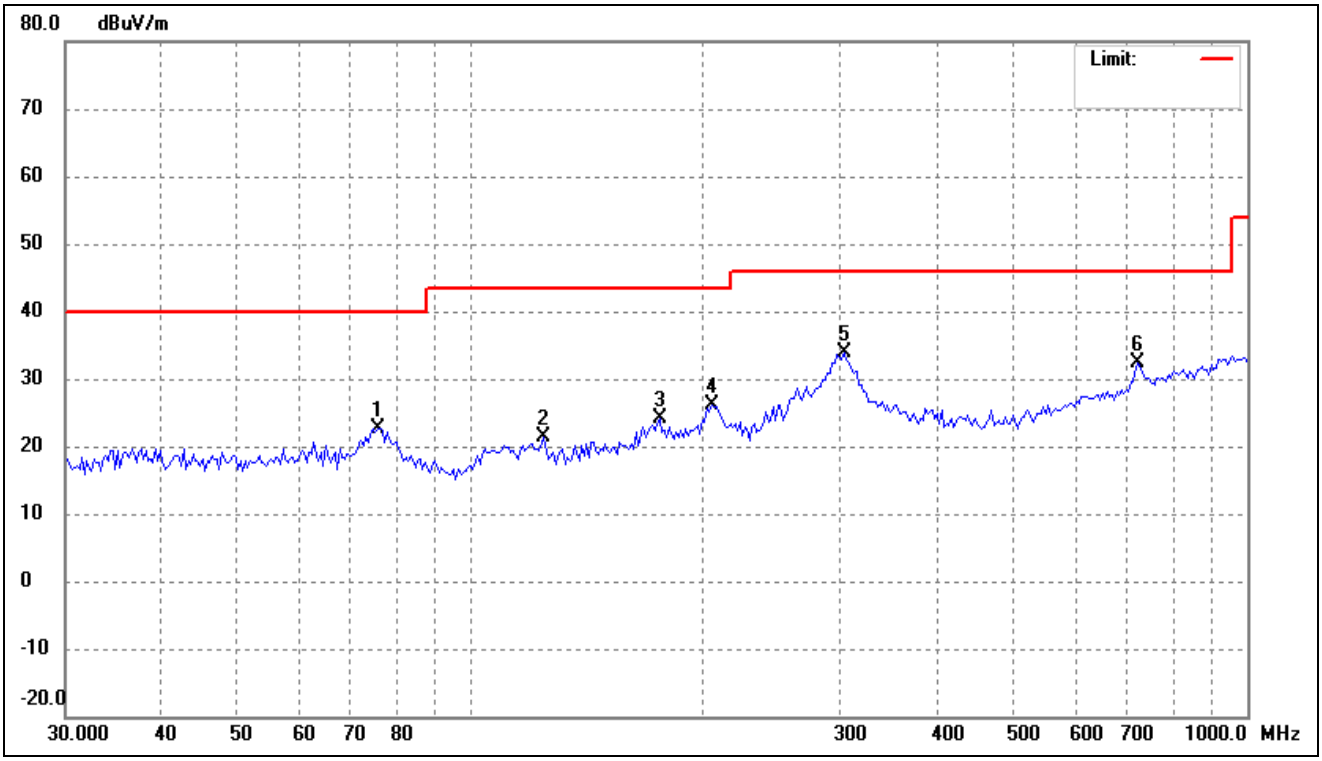
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	74.7934	35.18	-11.30	23.88	40.00	-16.12	-	-	peak
2	113.2200	32.82	-10.72	22.10	43.50	-21.40	-	-	peak
3	170.1888	33.91	-8.34	25.57	43.50	-17.93	-	-	peak
4	204.3052	38.76	-11.47	27.29	43.50	-16.21	-	-	peak
5	298.5932	42.49	-7.90	34.59	46.00	-11.41	-	-	peak
6	728.8971	35.58	-0.36	35.22	46.00	-10.78	-	-	peak

802.11a			
Test Channel	5745MHz(worst case)	Polarity:	Vertical



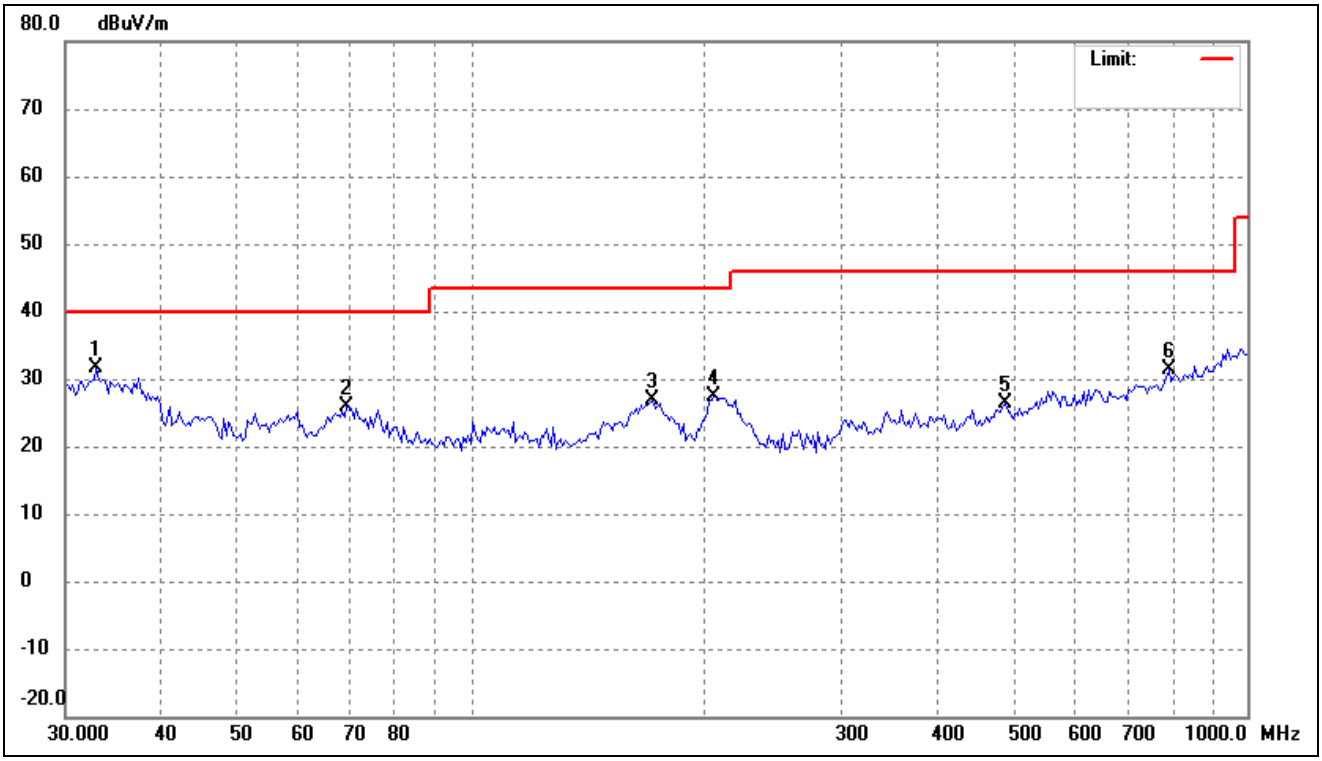
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	45.0951	35.45	-7.95	27.50	40.00	-12.50	-	-	peak
2	94.3137	36.41	-12.33	24.08	43.50	-19.42	-	-	peak
3	165.4716	35.85	-8.19	27.66	43.50	-15.84	-	-	peak
4	208.6580	40.13	-11.58	28.55	43.50	-14.95	-	-	peak
5	343.6506	32.60	-7.13	25.47	46.00	-20.53	-	-	peak
6	887.3978	31.07	1.95	33.02	46.00	-12.98	-	-	peak

802.11n-HT20			
Test Channel	5745MHz(worst case)	Polarity:	Horizontal



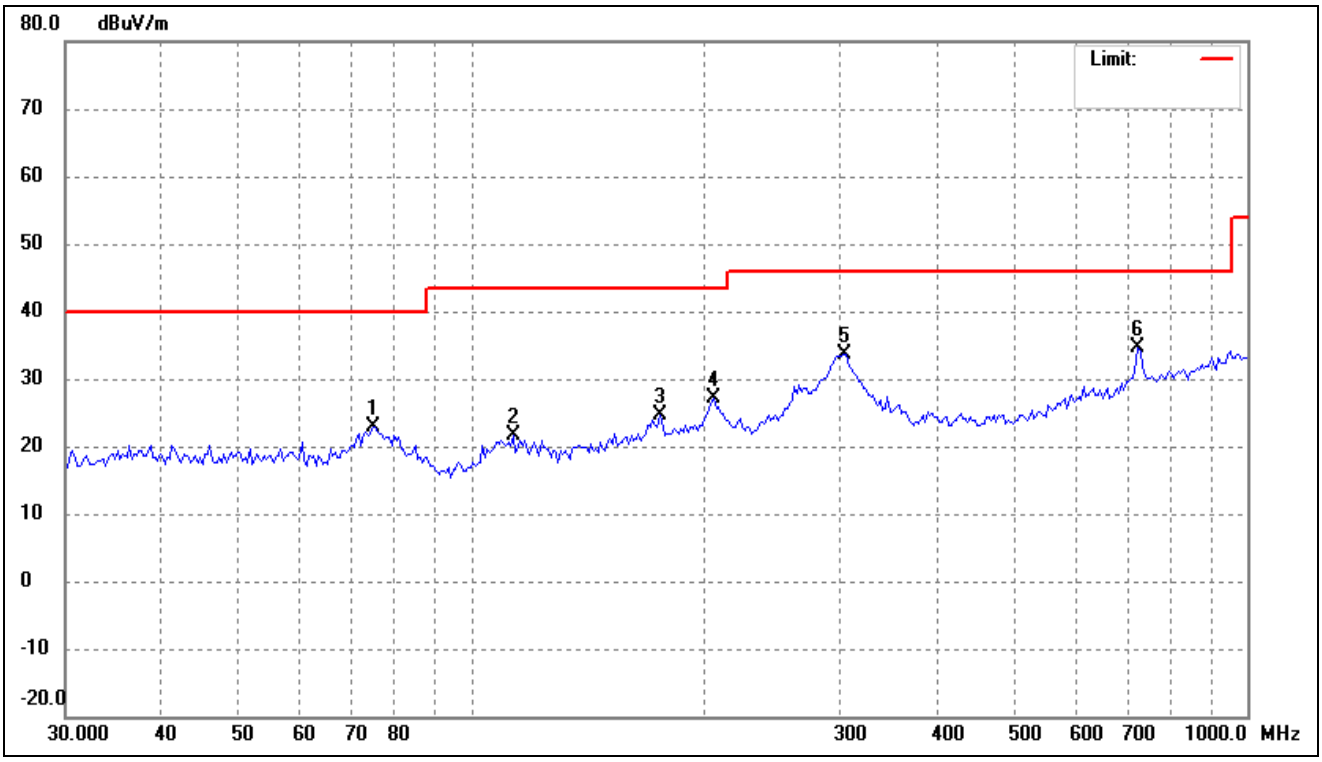
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	75.8520	34.23	-11.54	22.69	40.00	-17.31	-	-	peak
2	124.0501	31.20	-9.73	21.47	43.50	-22.03	-	-	peak
3	175.0404	33.08	-9.03	24.05	43.50	-19.45	-	-	peak
4	204.3052	37.57	-11.47	26.10	43.50	-17.40	-	-	peak
5	302.8193	41.56	-7.80	33.76	46.00	-12.24	-	-	peak
6	723.7930	32.92	-0.49	32.43	46.00	-13.57	-	-	peak

802.11n-HT20			
Test Channel	5745MHz(worst case)	Polarity:	Vertical



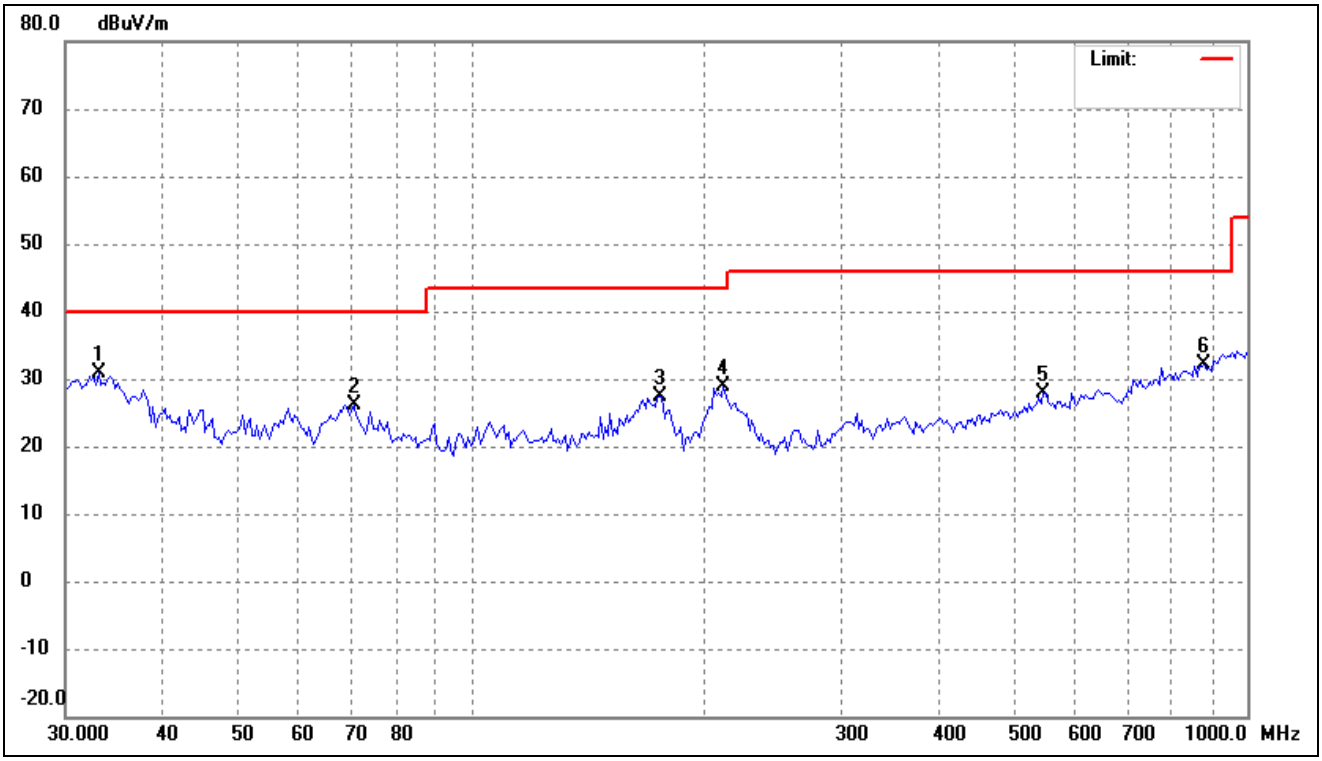
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	32.8697	40.86	-9.28	31.58	40.00	-8.42	-	-	peak
2	69.2297	36.03	-10.11	25.92	40.00	-14.08	-	-	peak
3	171.3890	35.46	-8.51	26.95	43.50	-16.55	-	-	peak
4	205.7459	39.01	-11.51	27.50	43.50	-16.00	-	-	peak
5	488.3263	31.28	-4.89	26.39	46.00	-19.61	-	-	peak
6	793.0281	30.57	0.88	31.45	46.00	-14.55	-	-	peak

802.11ac-VHT20			
Test Channel	5745MHz(worst case)	Polarity:	Horizontal



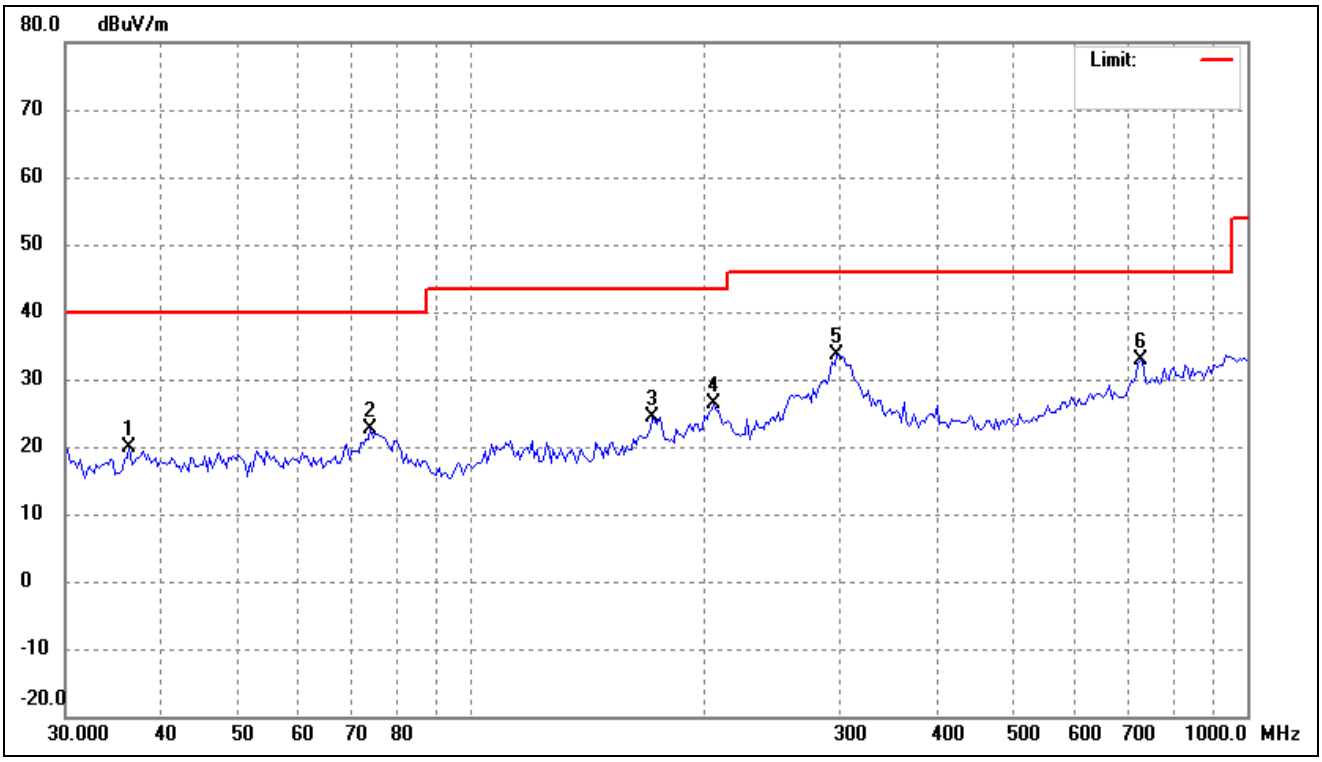
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	74.7934	34.19	-11.30	22.89	40.00	-17.11	-	-	peak
2	113.2200	32.23	-10.72	21.51	43.50	-21.99	-	-	peak
3	175.0404	33.64	-9.03	24.61	43.50	-18.89	-	-	peak
4	205.7459	38.76	-11.51	27.25	43.50	-16.25	-	-	peak
5	302.8193	41.43	-7.80	33.63	46.00	-12.37	-	-	peak
6	723.7930	35.16	-0.49	34.67	46.00	-11.33	-	-	peak

802.11ac-VHT20			
Test Channel	5745MHz(worst case)	Polarity:	Vertical



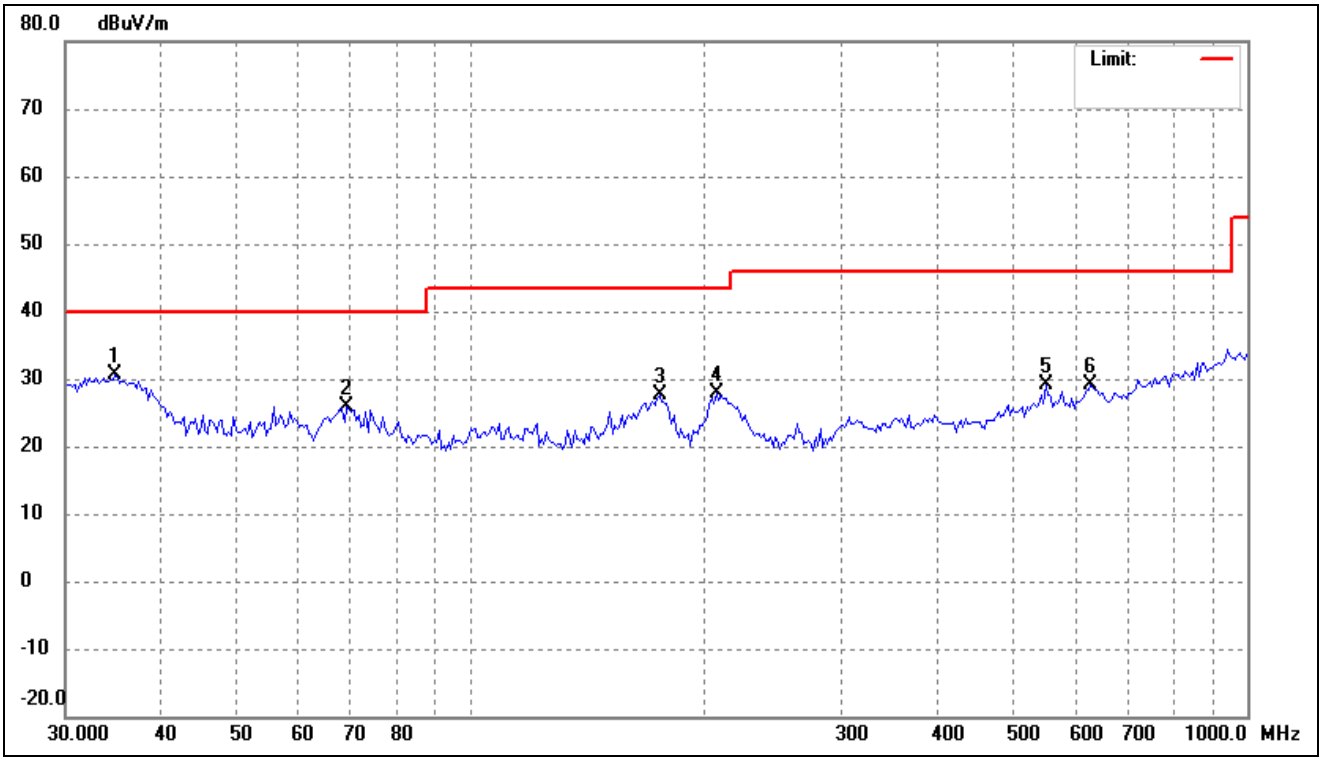
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.1015	40.02	-9.26	30.76	40.00	-9.24	-	-	peak
2	70.7047	36.64	-10.41	26.23	40.00	-13.77	-	-	peak
3	175.0404	36.49	-9.03	27.46	43.50	-16.04	-	-	peak
4	211.6112	40.50	-11.59	28.91	43.50	-14.59	-	-	peak
5	546.4368	31.61	-3.65	27.96	46.00	-18.04	-	-	peak
6	881.1838	30.20	1.88	32.08	46.00	-13.92	-	-	peak

802.11n-HT40			
Test Channel	5755MHz(worst case)	Polarity:	Horizontal



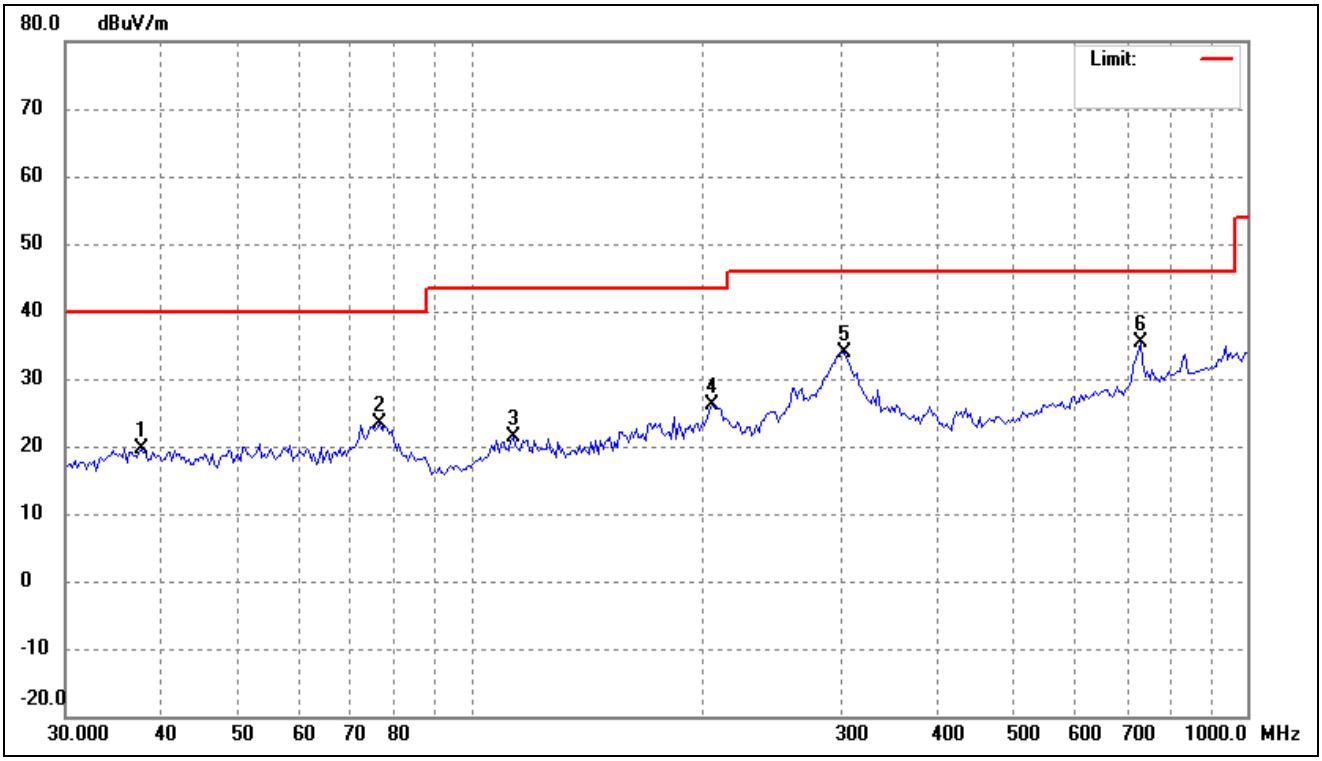
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	36.2678	28.55	-8.75	19.80	40.00	-20.20	-	-	peak
2	74.2696	33.88	-11.18	22.70	40.00	-17.30	-	-	peak
3	171.3890	32.89	-8.51	24.38	43.50	-19.12	-	-	peak
4	205.7459	37.95	-11.51	26.44	43.50	-17.06	-	-	peak
5	296.5023	41.51	-7.98	33.53	46.00	-12.47	-	-	peak
6	728.8971	33.17	-0.36	32.81	46.00	-13.19	-	-	peak

802.11n-HT40			
Test Channel	5755MHz(worst case)	Polarity:	Vertical



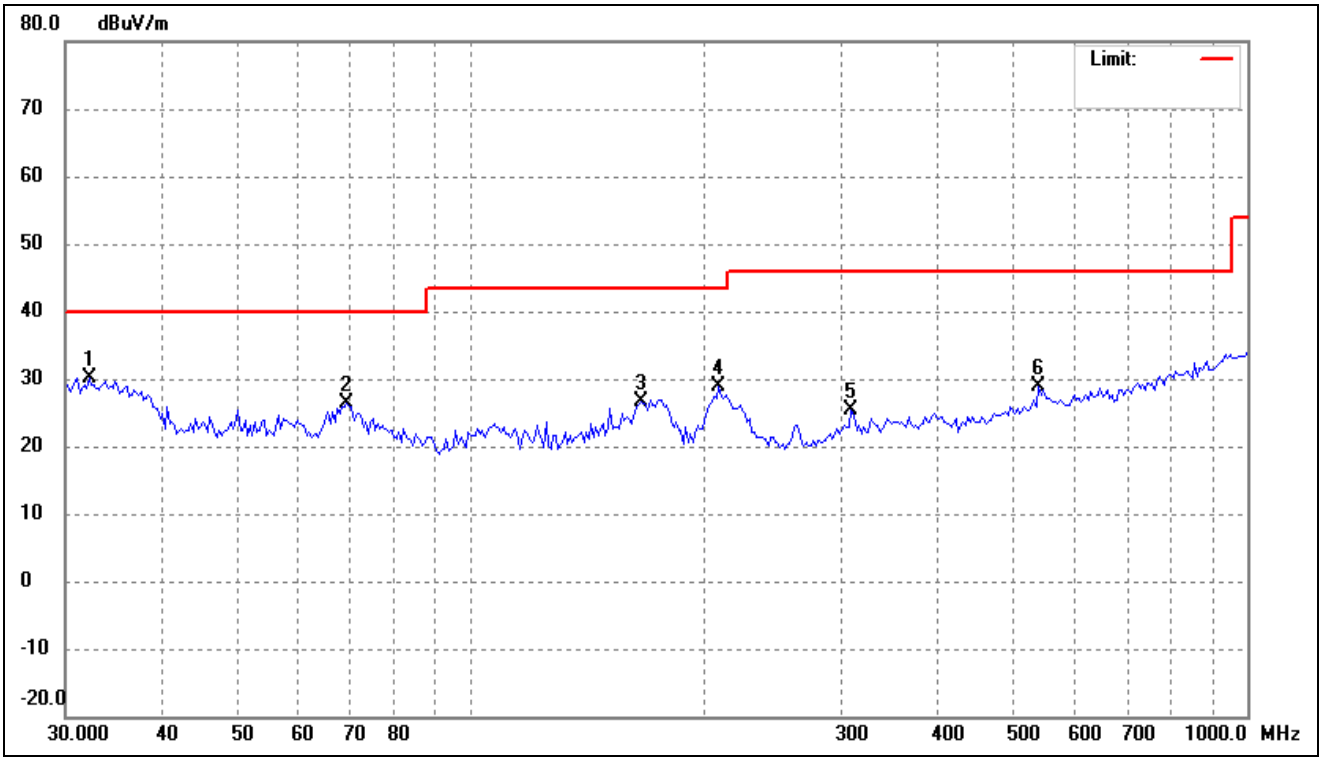
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	34.7705	39.61	-9.05	30.56	40.00	-9.44	-	-	peak
2	69.2297	35.95	-10.11	25.84	40.00	-14.16	-	-	peak
3	175.0404	36.78	-9.03	27.75	43.50	-15.75	-	-	peak
4	207.1968	39.32	-11.55	27.77	43.50	-15.73	-	-	peak
5	550.2902	32.56	-3.54	29.02	46.00	-16.98	-	-	peak
6	628.8936	30.85	-1.74	29.11	46.00	-16.89	-	-	peak

802.11ac-VHT40			
Test Channel	5755MHz(worst case)	Polarity:	Horizontal



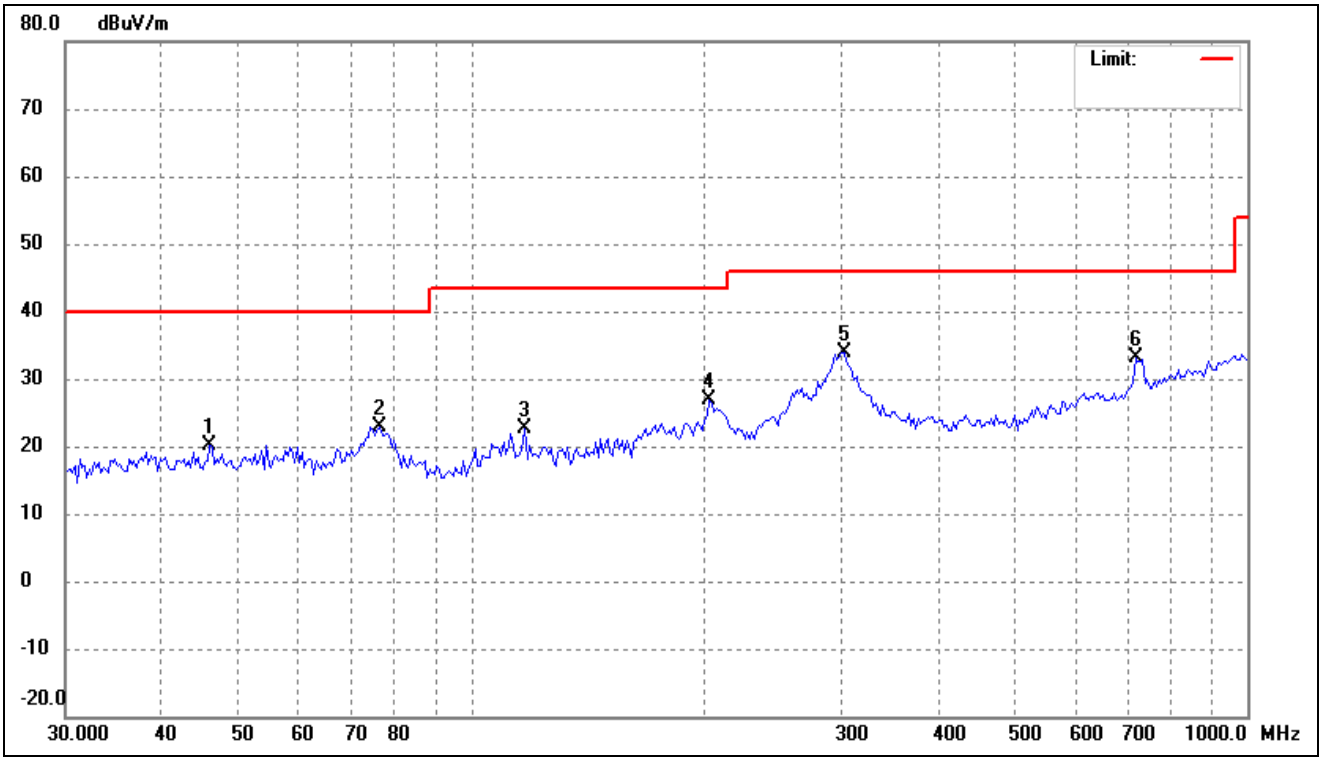
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	37.5648	28.08	-8.47	19.61	40.00	-20.39	-	-	peak
2	76.3869	34.91	-11.64	23.27	40.00	-16.73	-	-	peak
3	113.2200	31.98	-10.72	21.26	43.50	-22.24	-	-	peak
4	204.3052	37.67	-11.47	26.20	43.50	-17.30	-	-	peak
5	302.8193	41.67	-7.80	33.87	46.00	-12.13	-	-	peak
6	728.8971	35.63	-0.36	35.27	46.00	-10.73	-	-	peak

802.11ac-VHT40			
Test Channel	5755MHz(worst case)	Polarity:	Vertical



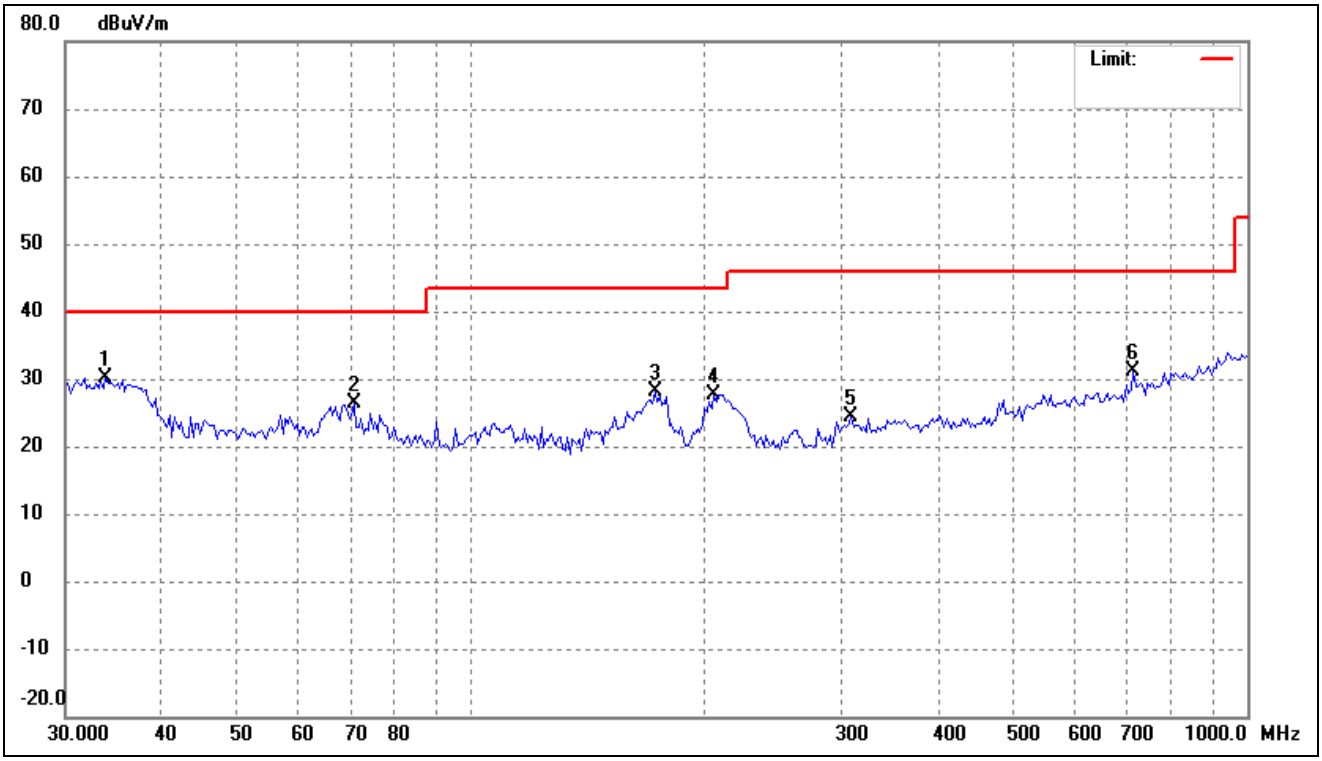
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	32.1840	39.61	-9.37	30.24	40.00	-9.76	-	-	peak
2	69.2297	36.38	-10.11	26.27	40.00	-13.73	-	-	peak
3	165.4716	34.92	-8.19	26.73	43.50	-16.77	-	-	peak
4	208.6580	40.35	-11.58	28.77	43.50	-14.73	-	-	peak
5	309.2710	32.98	-7.66	25.32	46.00	-20.68	-	-	peak
6	538.8107	32.85	-3.90	28.95	46.00	-17.05	-	-	peak

802.11ac-VHT80			
Test Channel	5775MHz(worst case)	Polarity:	Horizontal



No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	46.0558	28.11	-7.87	20.24	40.00	-19.76	-	-	peak
2	76.3869	34.49	-11.64	22.85	40.00	-17.15	-	-	peak
3	117.2688	32.83	-10.30	22.53	43.50	-20.97	-	-	peak
4	202.8745	38.21	-11.44	26.77	43.50	-16.73	-	-	peak
5	302.8193	41.61	-7.80	33.81	46.00	-12.19	-	-	peak
6	718.7246	33.68	-0.62	33.06	46.00	-12.94	-	-	peak

802.11ac-VHT80			
Test Channel	5775MHz(worst case)	Polarity:	Vertical



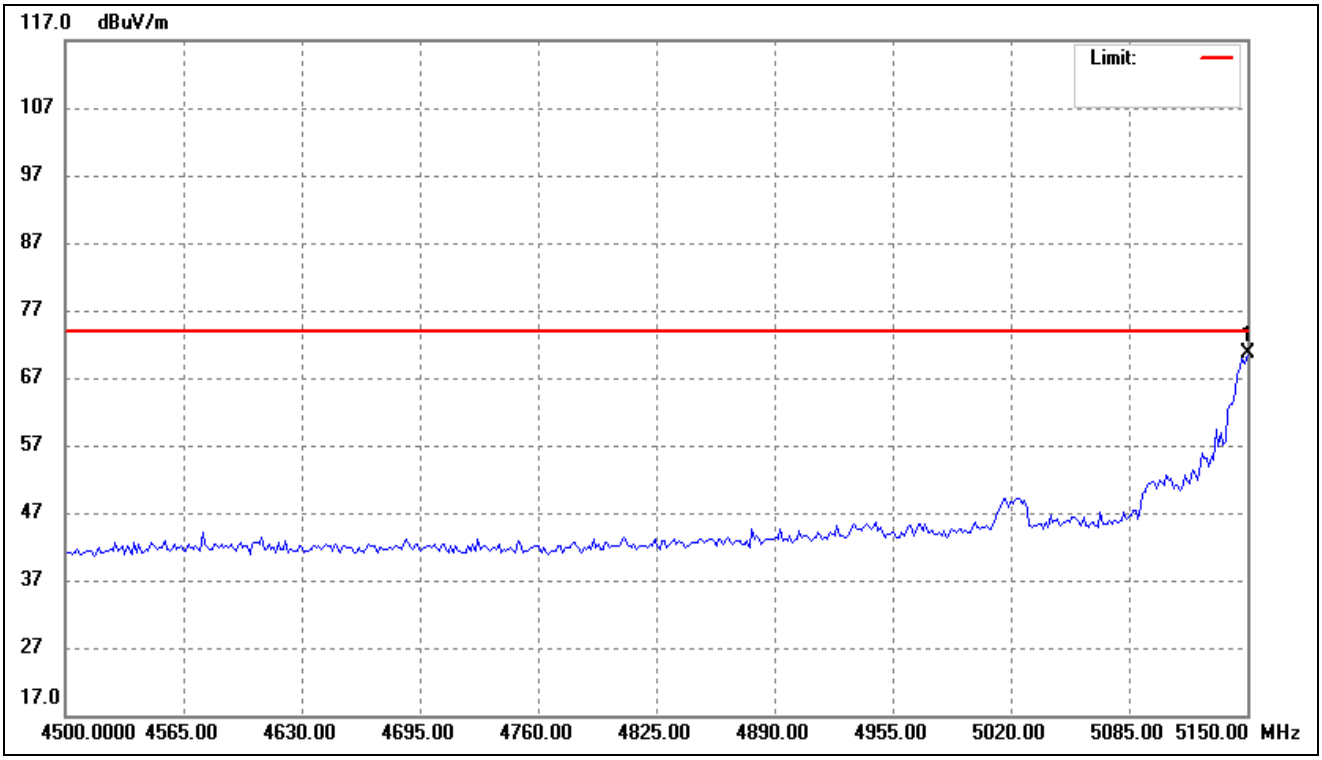
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.8067	39.19	-9.16	30.03	40.00	-9.97	-	-	peak
2	70.7047	36.68	-10.41	26.27	40.00	-13.73	-	-	peak
3	172.5976	36.85	-8.68	28.17	43.50	-15.33	-	-	peak
4	205.7459	39.23	-11.51	27.72	43.50	-15.78	-	-	peak
5	309.2710	32.15	-7.66	24.49	46.00	-21.51	-	-	peak
6	713.6917	31.85	-0.75	31.10	46.00	-14.90	-	-	peak

Remark: '-'Means' the test Degree and Height are not recorded by the test software and only show the worst case in the test report.

- Spurious Emission above 1GHz

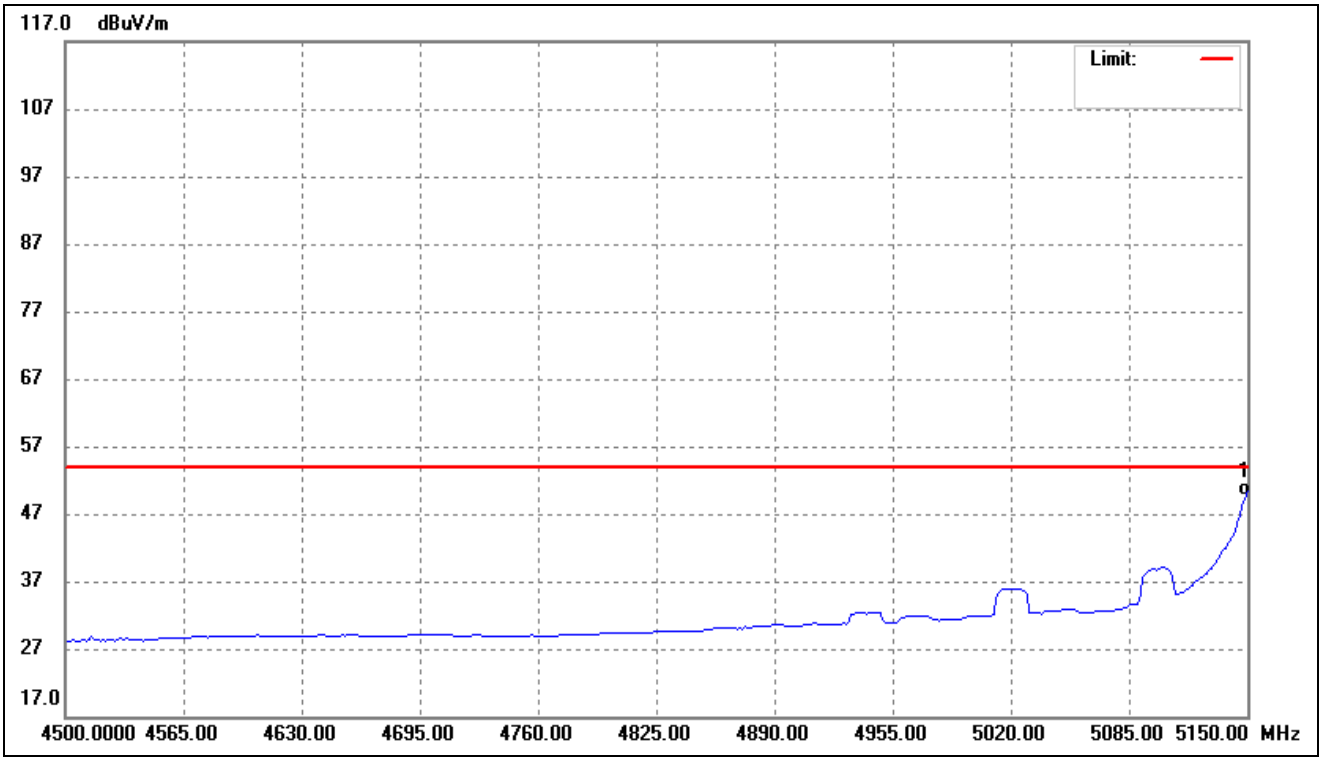
- Antenna 1(worst case)

802.11a- Restricted Bandedge			
Test Channel	band 5.15-5.25GHz	Polarity:	Horizontal(worst case)



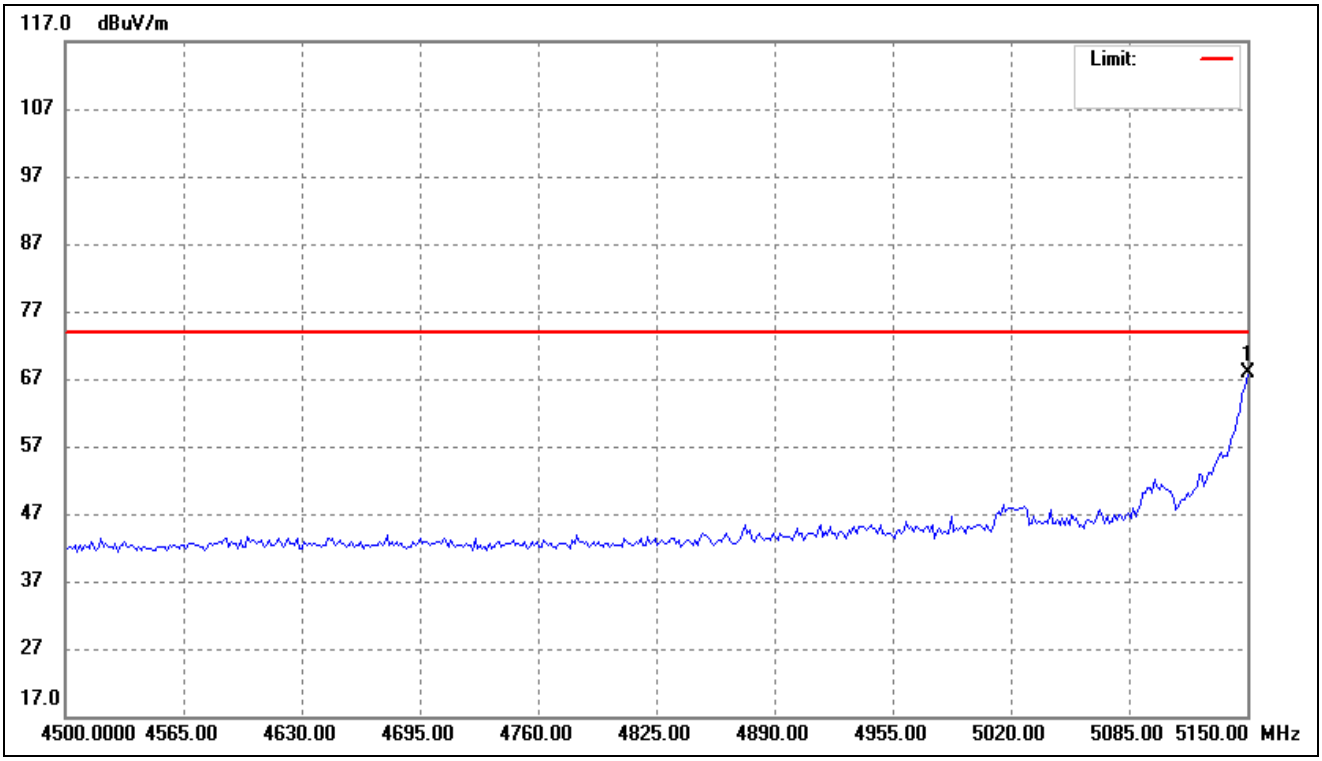
No.	Frequency	Reading	Corr.	Result	Limit	Margin	Deg.	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5150.000	83.28	-12.53	70.75	74.00	-3.25	-	-	peak

802.11a- Restricted Bandedge			
Test Channel	band 5.15-5.25GHz	Polarity:	Horizontal(worst case)



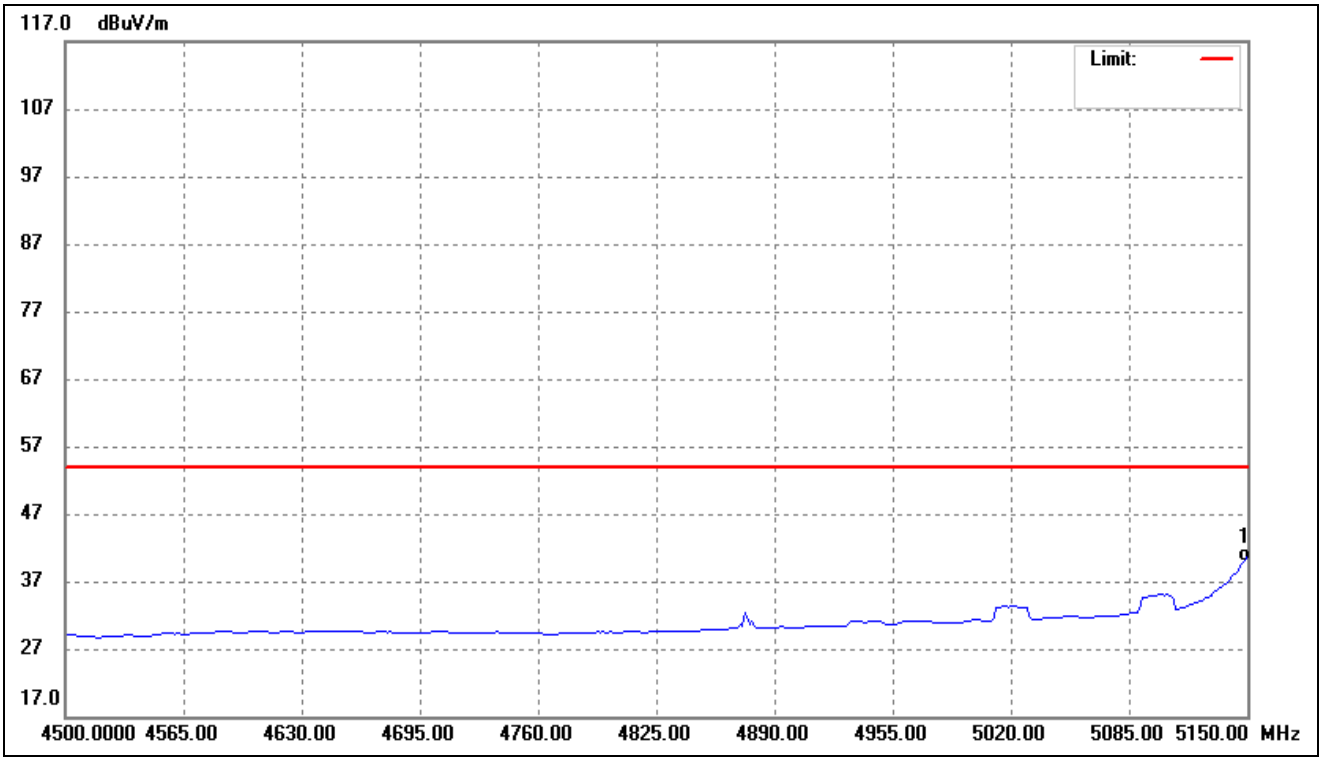
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5150.000	63.09	-12.53	50.56	54.00	-3.44	-	-	AVG

802.11n-HT20- Restricted Bandedge			
Test Channel	band 5.15-5.25GHz	Polarity:	Horizontal(worst case)



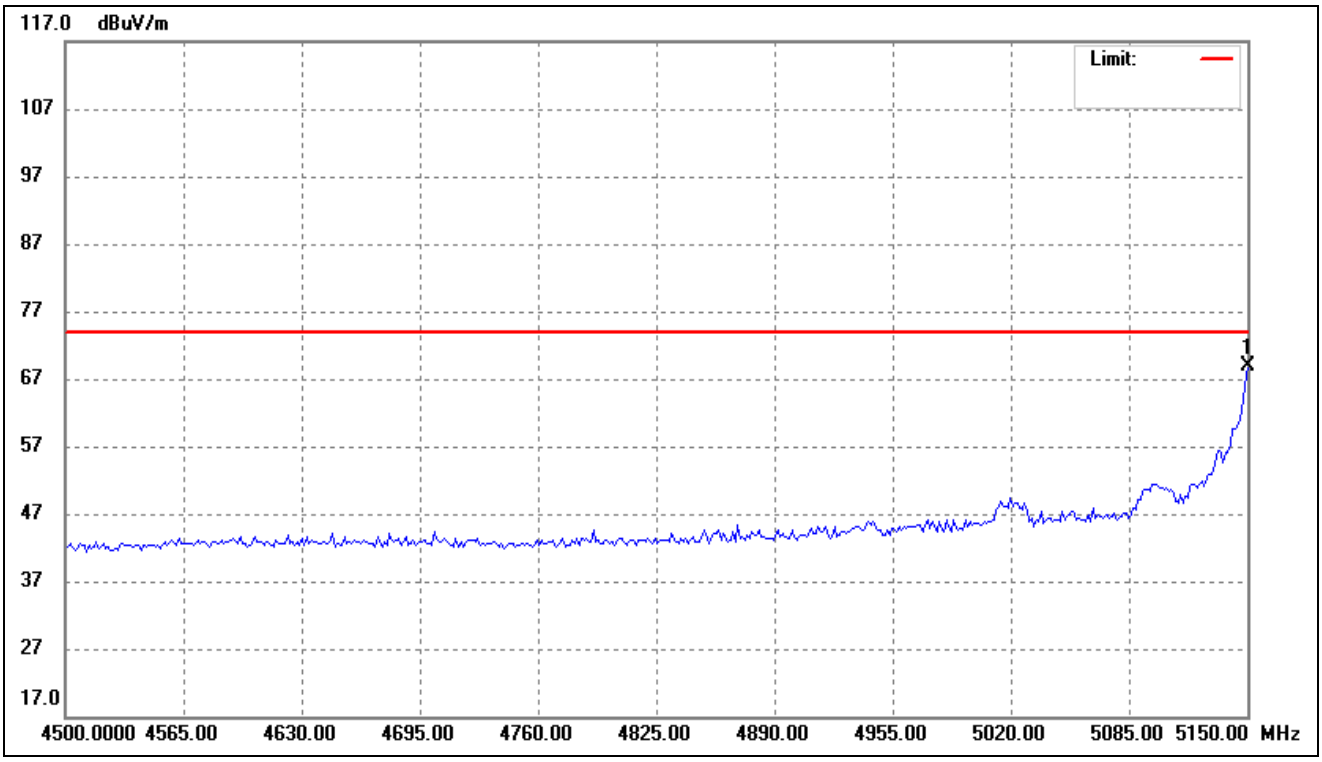
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5150.000	80.46	-12.53	67.93	74.00	-6.07	-	-	peak

802.11n-HT20- Restricted Bandedge			
Test Channel	band 5.15-5.25GHz	Polarity:	Horizontal(worst case)



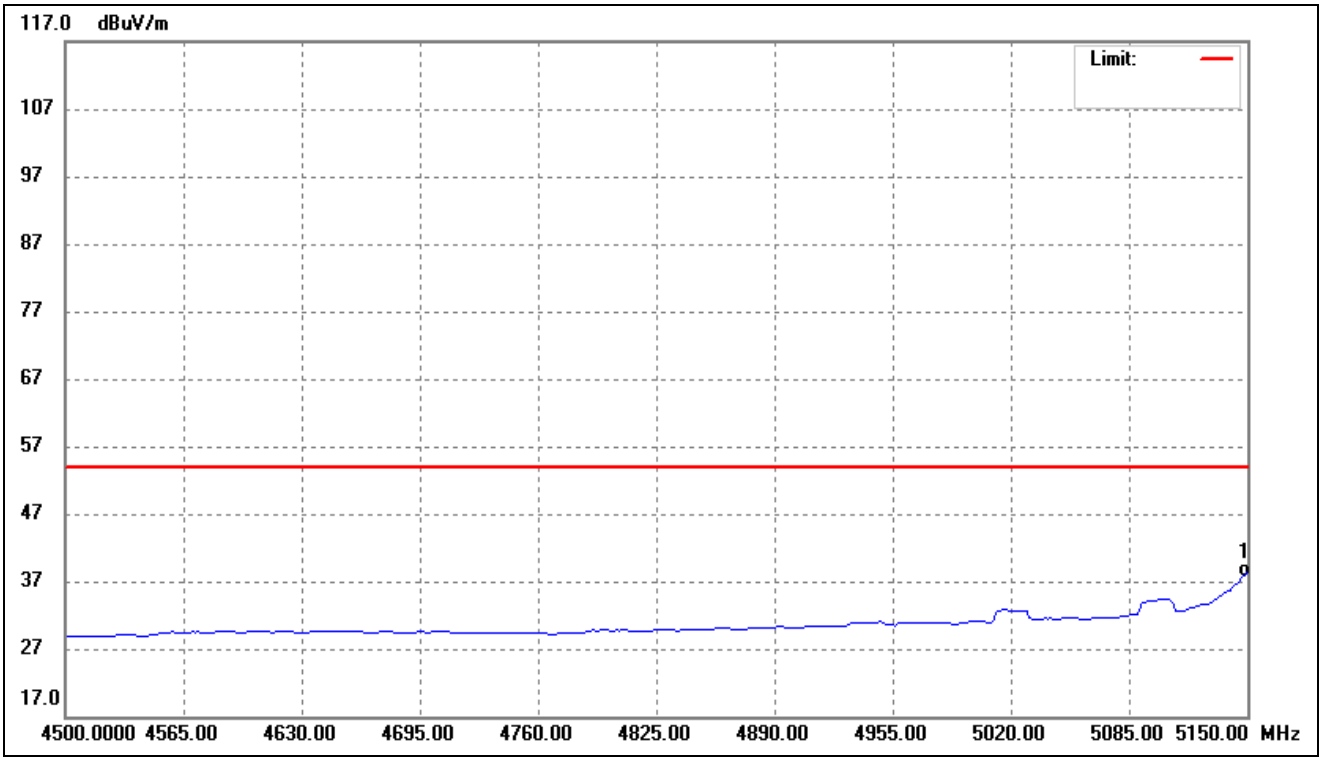
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5150.000	53.40	-12.53	40.87	54.00	-13.13	-	-	AVG

802.11ac-VHT20- Restricted Bandedge			
Test Channel	band 5.15-5.25GHz	Polarity:	Horizontal(worst case)



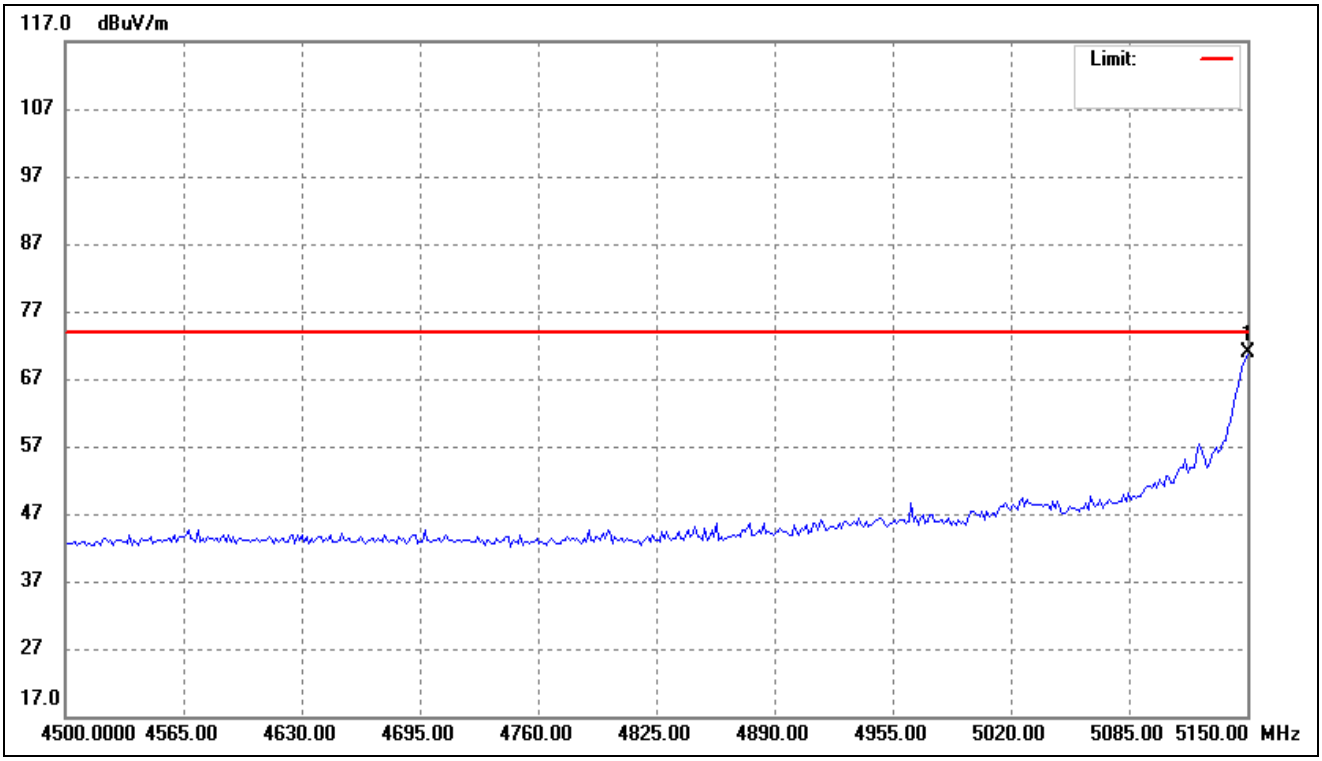
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5150.000	81.50	-12.53	68.97	74.00	-5.03	-	-	peak

802.11ac-VHT20- Restricted Bandedge			
Test Channel	band 5.15-5.25GHz	Polarity:	Horizontal(worst case)



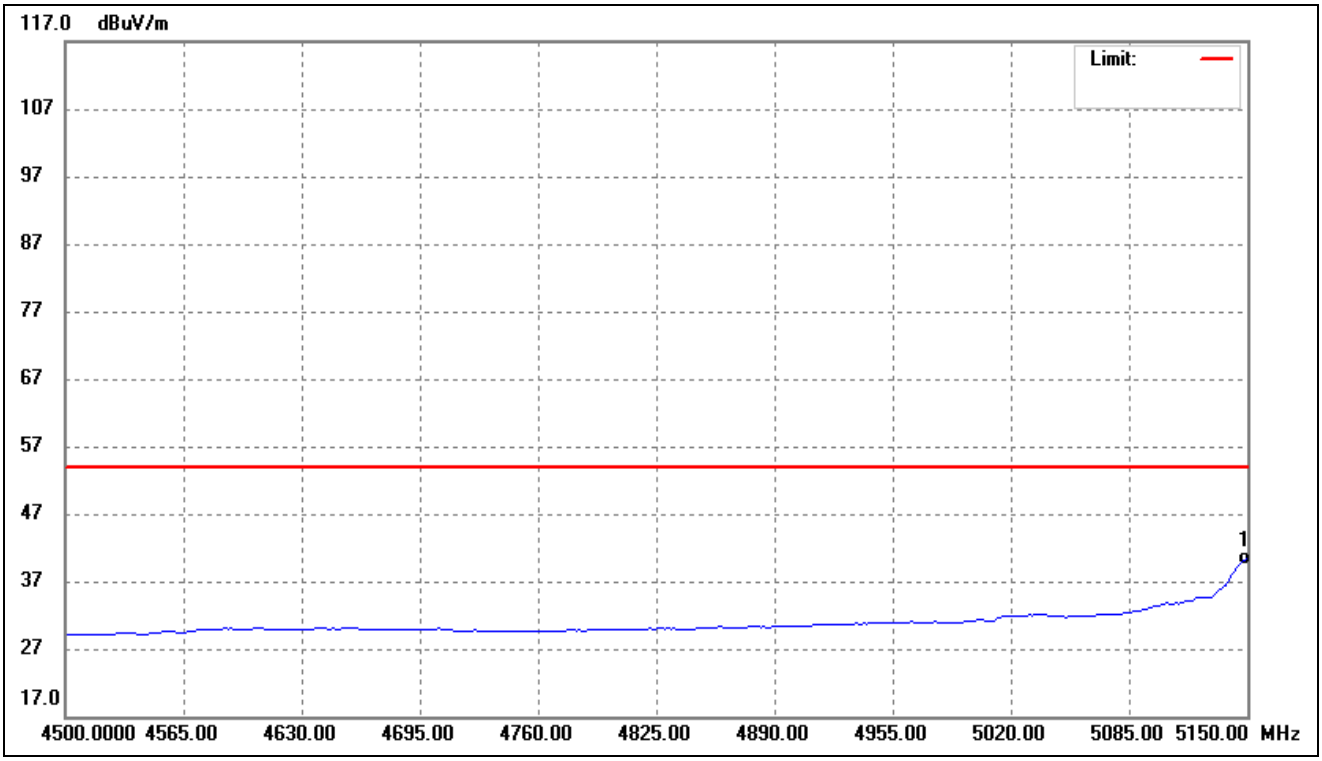
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5150.000	51.22	-12.53	38.69	54.00	-15.31	-	-	AVG

802.11n-HT40- Restricted Bandedge			
Test Channel	band 5.15-5.25GHz	Polarity:	Horizontal(worst case)



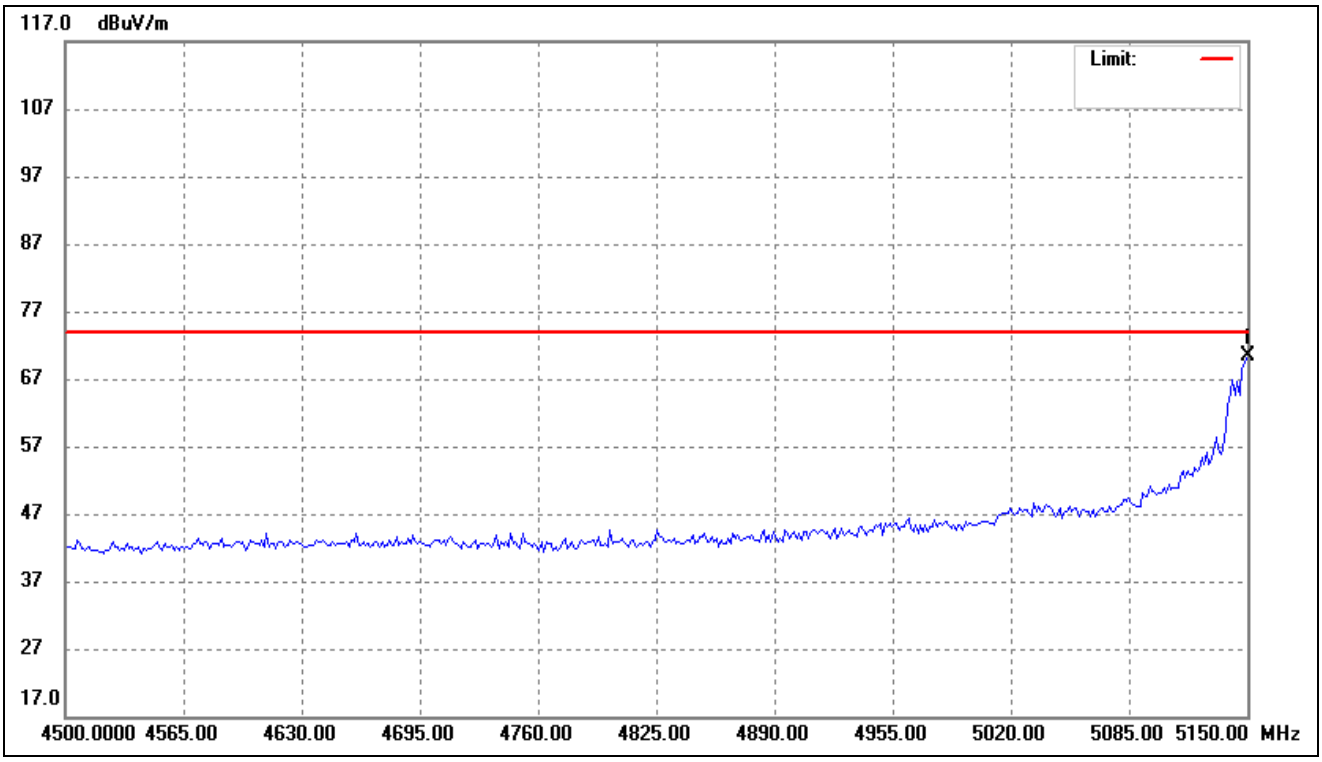
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5150.000	83.53	-12.53	71.00	74.00	-3.00	-	-	peak

802.11n-HT40- Restricted Bandedge			
Test Channel	band 5.15-5.25GHz	Polarity:	Horizontal(worst case)



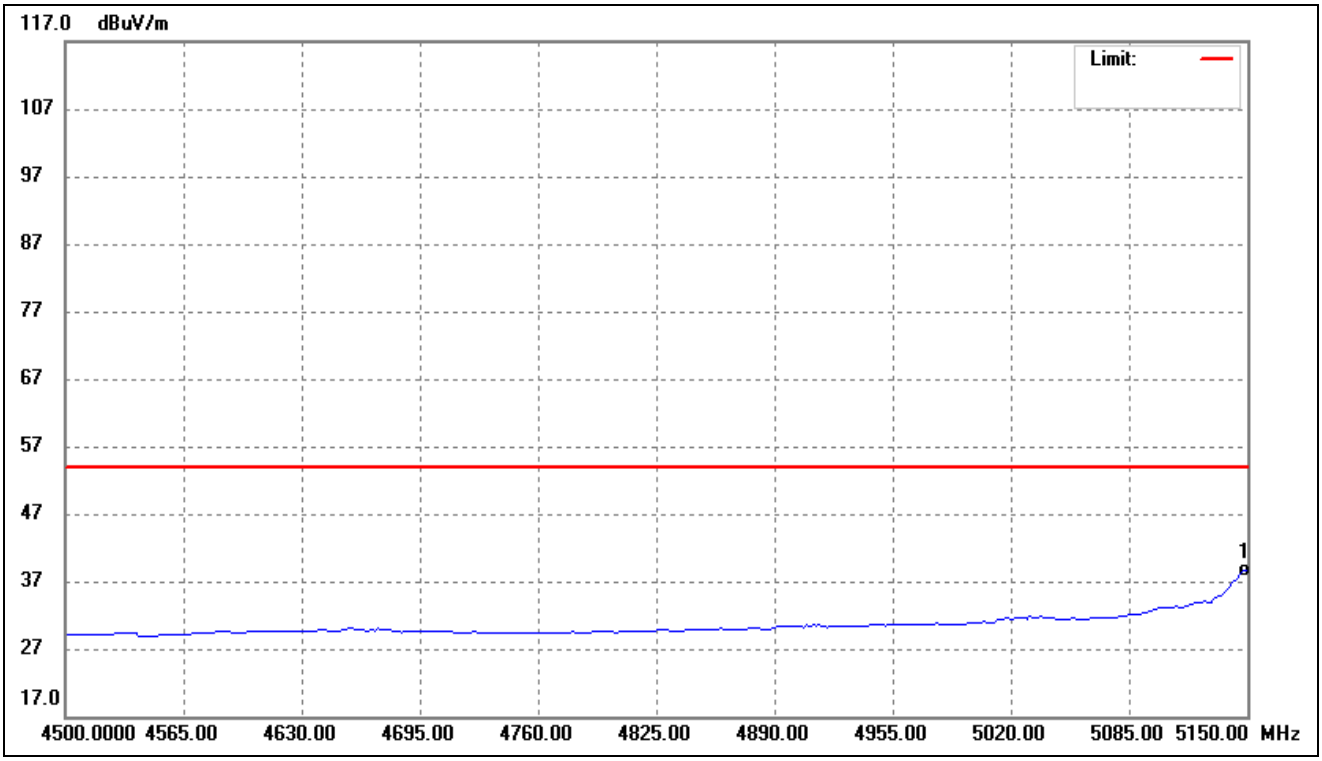
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5150.000	52.80	-12.53	40.27	54.00	-13.73	-	-	AVG

802.11ac-VHT40- Restricted Bandedge			
Test Channel	band 5.15-5.25GHz	Polarity:	Horizontal(worst case)



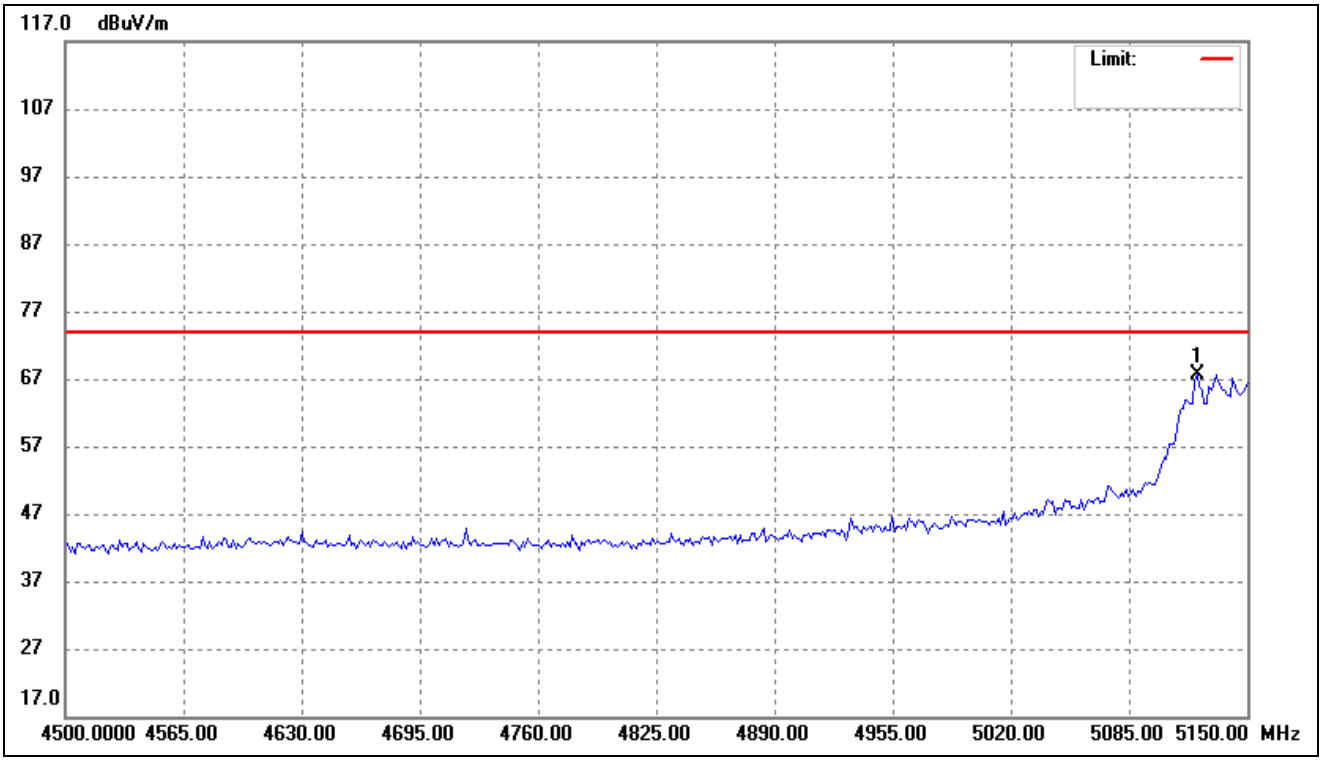
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5150.000	82.82	-12.53	70.29	74.00	-3.71	-	-	peak

802.11ac-VHT40- Restricted Bandedge			
Test Channel	band 5.15-5.25GHz	Polarity:	Horizontal(worst case)



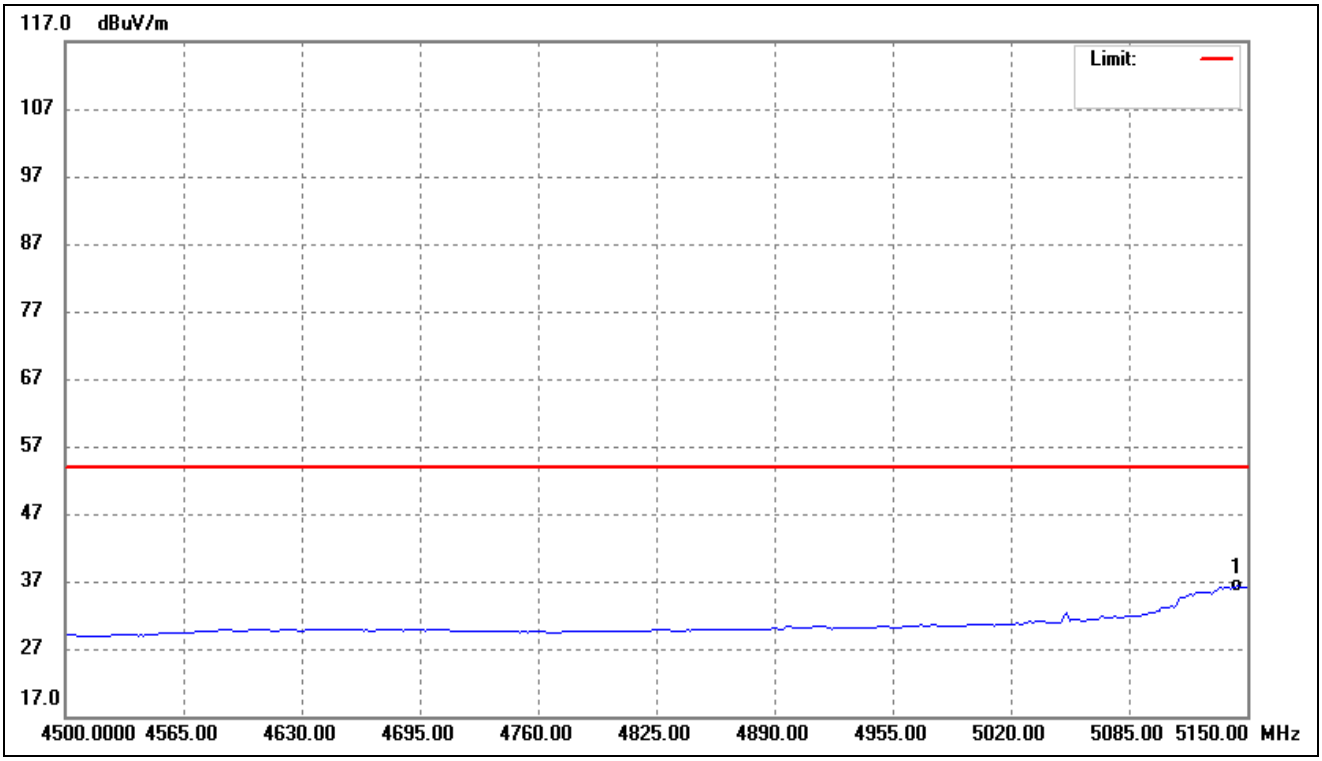
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5148.697	51.08	-12.53	38.55	54.00	-15.45	-	-	AVG

802.11ac-VHT80- Restricted Bandedge			
Test Channel	band 5.15-5.25GHz	Polarity:	Horizontal(worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5122.645	80.30	-12.67	67.63	74.00	-6.37	-	-	peak

802.11ac-VHT80- Restricted Bandedge			
Test Channel	band 5.15-5.25GHz	Polarity:	Vertical(worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5144.790	48.95	-12.57	36.38	54.00	-17.62	-	-	AVG

Note: The Restricted Bandedge was tested in Horizontal /Vertical and the worst case position data was reported.

Remark: '-'Means' the test Degree and Height is not recorded by the test software and only show the worst case in the test report.

- Antenna 1(worst case)
- For the frequency band 5.150-5.250GHz, 5250~5350MHz, 5470~5725 MHz 5.725-5.850GHz (802.11a)

Frequency (MHz)	Reading (dBuV/m)	Correct dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel (5180MHz)							
10360	58.19	-6.13	52.06	74	-21.94	H	PK
10360	40.07	-6.13	33.94	54	-20.06	H	AV
15540	58.19	-1.64	56.55	74	-17.45	H	PK
15540	40.53	-1.64	38.89	54	-15.11	H	AV
10360	55.33	-6.13	49.2	74	-24.8	V	PK
10360	41.82	-6.13	35.69	54	-18.31	V	AV
15540	58.7	-1.64	57.06	74	-16.94	V	PK
15540	38.34	-1.64	36.7	54	-17.3	V	AV
Middle Channel (5200MHz)							
10400	59.27	-5.93	53.34	74	-20.66	H	PK
10400	41.04	-5.93	35.11	54	-18.89	H	AV
15600	61.99	-1.58	60.41	74	-13.59	H	PK
15600	38.76	-1.58	37.18	54	-16.82	H	AV
10400	61.41	-5.93	55.48	74	-18.52	V	PK
10400	39.77	-5.93	33.84	54	-20.16	V	AV
15600	60.68	-1.58	59.1	74	-14.9	V	PK
15600	41.94	-1.58	40.36	54	-13.64	V	AV
High Channel (5240MHz)							
10480	58.68	-5.71	52.97	74	-21.03	H	PK
10480	40.13	-5.71	34.42	54	-19.58	H	AV
15720	61.8	-1.52	60.28	74	-13.72	H	PK
15720	39.39	-1.52	37.87	54	-16.13	H	AV
10480	59.55	-5.71	53.84	74	-20.16	V	PK
10480	38.14	-5.71	32.43	54	-21.57	V	AV
15720	58.19	-1.52	56.67	74	-17.33	V	PK
15720	38.54	-1.52	37.02	54	-16.98	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5260MHz)							
10520	59.78	-6.13	53.65	74	-20.35	H	PK
10520	40.18	-6.13	34.05	54	-19.95	H	AV
15780	56.91	-1.64	55.27	74	-18.73	H	PK
15780	39.64	-1.64	38	54	-16	H	AV
10520	57.81	-6.13	51.68	74	-22.32	V	PK
10520	41.74	-6.13	35.61	54	-18.39	V	AV
15780	56.03	-1.64	54.39	74	-19.61	V	PK
15780	41.31	-1.64	39.67	54	-14.33	V	AV
Middle Channel (5280MHz)							
10560	61.9	-5.93	55.97	74	-18.03	H	PK
10560	40.22	-5.93	34.29	54	-19.71	H	AV
15840	61.68	-1.58	60.1	74	-13.9	H	PK
15840	40.75	-1.58	39.17	54	-14.83	H	AV
10560	59.84	-5.93	53.91	74	-20.09	V	PK
10560	39.87	-5.93	33.94	54	-20.06	V	AV
15840	58.26	-1.58	56.68	74	-17.32	V	PK
15840	39.84	-1.58	38.26	54	-15.74	V	AV
High Channel (5320MHz)							
10640	58.01	-5.71	52.3	74	-21.7	H	PK
10640	41.5	-5.71	35.79	54	-18.21	H	AV
15960	58.07	-1.52	56.55	74	-17.45	H	PK
15960	41.18	-1.52	39.66	54	-14.34	H	AV
10640	58.04	-5.71	52.33	74	-21.67	V	PK
10640	41.01	-5.71	35.3	54	-18.7	V	AV
15960	58.56	-1.52	57.04	74	-16.96	V	PK
15960	38.12	-1.52	36.6	54	-17.4	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5500MHz)							
11000	60.14	-6.13	54.01	74	-19.99	H	PK
11000	41.62	-6.13	35.49	54	-18.51	H	AV
16500	55.41	-1.64	53.77	74	-20.23	H	PK
16500	38.62	-1.64	36.98	54	-17.02	H	AV
11000	57.1	-6.13	50.97	74	-23.03	V	PK
11000	40.92	-6.13	34.79	54	-19.21	V	AV
16500	55.33	-1.64	53.69	74	-20.31	V	PK
16500	38.75	-1.64	37.11	54	-16.89	V	AV
Middle Channel (5600MHz)							
11000	60.67	-5.93	54.74	74	-19.26	H	PK
11000	41.89	-5.93	35.96	54	-18.04	H	AV
16800	60.62	-1.58	59.04	74	-14.96	H	PK
16800	41.86	-1.58	40.28	54	-13.72	H	AV
11000	58.01	-5.93	52.08	74	-21.92	V	PK
11000	39.7	-5.93	33.77	54	-20.23	V	AV
16800	59.24	-1.58	57.66	74	-16.34	V	PK
16800	40.87	-1.58	39.29	54	-14.71	V	AV
High Channel (5700MHz)							
11400	61.73	-5.71	56.02	74	-17.98	H	PK
11400	39.78	-5.71	34.07	54	-19.93	H	AV
17100	58.74	-1.52	57.22	74	-16.78	H	PK
17100	38.95	-1.52	37.43	54	-16.57	H	AV
11400	61.63	-5.71	55.92	74	-18.08	V	PK
11400	39.84	-5.71	34.13	54	-19.87	V	AV
17100	61.43	-1.52	59.91	74	-14.09	V	PK
17100	40.76	-1.52	39.24	54	-14.76	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5745MHz)							
11490	58.15	-6.13	52.02	74	-21.98	H	PK
11490	42.12	-6.13	35.99	54	-18.01	H	AV
17235	57.21	-1.64	55.57	74	-18.43	H	PK
17235	41.55	-1.64	39.91	54	-14.09	H	AV
11490	58.1	-6.13	51.97	74	-22.03	V	PK
11490	38.22	-6.13	32.09	54	-21.91	V	AV
17235	57.58	-1.64	55.94	74	-18.06	V	PK
17235	39.63	-1.64	37.99	54	-16.01	V	AV
Middle Channel (5785MHz)							
11570	59.77	-5.93	53.84	74	-20.16	H	PK
11570	41.37	-5.93	35.44	54	-18.56	H	AV
17355	60.39	-1.58	58.81	74	-15.19	H	PK
17355	40.56	-1.58	38.98	54	-15.02	H	AV
11570	60.36	-5.93	54.43	74	-19.57	V	PK
11570	40.26	-5.93	34.33	54	-19.67	V	AV
17355	60.11	-1.58	58.53	74	-15.47	V	PK
17355	40.79	-1.58	39.21	54	-14.79	V	AV
High Channel (5825MHz)							
11650	59.95	-5.71	54.24	74	-19.76	H	PK
11650	39.24	-5.71	33.53	54	-20.47	H	AV
17475	58.59	-1.52	57.07	74	-16.93	H	PK
17475	39.31	-1.52	37.79	54	-16.21	H	AV
11650	60.29	-5.71	54.58	74	-19.42	V	PK
11650	41.65	-5.71	35.94	54	-18.06	V	AV
17475	58.91	-1.52	57.39	74	-16.61	V	PK
17475	41.17	-1.52	39.65	54	-14.35	V	AV

➢ Out of Band edge for 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-36.51	-27
Highest	Above 5350	-35.69	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5250-5350MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-43.37	-27
Highest	Above 5350	-41.50	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5470-5725MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5470	-39.68	-27
Highest	Above 5725	-37.29	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5725-5850MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5715	-36.35	-27
	5715 to 5725	-35.46	-17
Highest	5850 to 5860	-26.72	-17
	Above 5860	-35.59	-27
Note: the data just list the worst cases			

- For the frequency band 5.150-5.250GHz, , 5.250-5.350GHz, 5.470-5.725GHz, 5.725-5.850GHz (802.11n HT20)
- Harmonics And Spurious Emissions

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5180MHz)							
10360	56.81	7.11	63.92	74	-10.08	H	PK
10360	39.08	7.11	46.19	54	-7.81	H	AV
10360	57.95	7.11	65.06	74	-8.94	V	PK
10360	38.46	7.11	45.57	54	-8.43	V	AV
Middle Channel (5200MHz)							
10400	58.86	7.22	66.08	74	-7.92	H	PK
10400	39.08	7.22	46.30	54	-7.70	H	AV
10400	56.44	7.22	63.66	74	-10.34	V	PK
10400	41.52	7.22	48.74	54	-5.26	V	AV
High Channel (5240MHz)							
10480	57.05	7.69	64.74	74	-9.26	H	PK
10480	41.53	7.69	49.22	54	-4.78	H	AV
10480	58.37	7.69	66.06	74	-7.94	V	PK
10480	40.21	7.69	47.90	54	-6.10	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5260MHz)							
10520	56.18	7.96	64.14	74	-9.86	H	PK
10520	40.49	7.96	48.45	54	-5.55	H	AV
10520	57.08	7.96	65.04	74	-8.96	V	PK
10520	41.16	7.96	49.12	54	-4.88	V	AV
Middle Channel (5280MHz)							
10560	57.80	8.02	65.82	74	-8.18	H	PK
10560	40.22	8.02	48.24	54	-5.76	H	AV
10560	58.60	8.02	66.62	74	-7.38	V	PK
10560	41.62	8.02	49.64	54	-4.36	V	AV
High Channel (5320MHz)							
10640	58.28	8.35	66.63	74	-7.37	H	PK
10640	38.60	8.35	46.95	54	-7.05	H	AV
10640	55.26	8.35	63.61	74	-10.39	V	PK
10640	39.56	8.35	47.91	54	-6.09	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5500MHz)							
11000	55.38	8.82	64.20	74	-9.80	H	PK
11000	39.75	8.82	48.57	54	-5.43	H	AV
11000	55.20	8.82	64.02	74	-9.98	V	PK
11000	40.74	8.82	49.56	54	-4.44	V	AV
Middle Channel (5600MHz)							
11200	58.02	8.92	66.94	74	-7.06	H	PK
11200	41.19	8.92	50.11	54	-3.89	H	AV
11200	56.12	8.92	65.04	74	-8.96	V	PK
11200	40.77	8.92	49.69	54	-4.31	V	AV
High Channel (5700MHz)							
11400	56.01	9.84	65.85	74	-8.15	H	PK
11400	41.61	9.84	51.45	54	-2.55	H	AV
11400	58.72	9.84	68.56	74	-5.44	V	PK
11400	39.75	9.84	49.59	54	-4.41	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5745MHz)							
11490	55.33	9.45	64.78	74	-9.22	H	PK
11490	38.31	9.45	47.76	54	-6.24	H	AV
11490	57.44	9.45	66.89	74	-7.11	V	PK
11490	40.05	9.45	49.50	54	-4.50	V	AV
Middle Channel (5785MHz)							
11570	58.52	9.62	68.14	74	-5.86	H	PK
11570	38.15	9.62	47.77	54	-6.23	H	AV
11570	57.53	9.62	67.15	74	-6.85	V	PK
11570	41.41	9.62	51.03	54	-2.97	V	AV
High Channel (5825MHz)							
11650	56.35	9.84	66.19	74	-7.81	H	PK
11650	39.29	9.84	49.13	54	-4.87	H	AV
11650	57.78	9.84	67.62	74	-6.38	V	PK
11650	38.83	9.84	48.67	54	-5.33	V	AV

➢ Out of Band edge 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-38.67	-27
Highest	Above 5350	-42.53	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5250-5350MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-41.71	-27
Highest	Above 5350	-42.16	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5470-5725MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5470	-37.38	-27
Highest	Above 5725	-39.57	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5725-5850MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5715	-39.70	-27
	5715 to 5725	-35.62	-17
Highest	5850 to 5860	-34.53	-17
	Above 5860	-36.41	-27
Note: the data just list the worst cases			

Note: this EUT was tested in the low, high channel and the worst case position data was reported.

- For the frequency band 5.15-5.25GHz, 5.250-5.350GHz, 5.470-5.725GHz, 5.725-5.850GHz (802.11ac-VHT20)
- Harmonics And Spurious Emissions

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5180MHz)							
10360	56.29	7.11	63.40	74	-10.60	H	PK
10360	39.18	7.11	46.29	54	-7.71	H	AV
10360	58.92	7.11	66.03	74	-7.97	V	PK
10360	39.95	7.11	47.06	54	-6.94	V	AV
Middle Channel (5200MHz)							
10400	58.46	7.22	65.68	74	-8.32	H	PK
10400	42.00	7.22	49.22	54	-4.78	H	AV
10400	58.25	7.22	65.47	74	-8.53	V	PK
10400	41.57	7.22	48.79	54	-5.21	V	AV
High Channel (5240MHz)							
10480	58.70	7.69	66.39	74	-7.61	H	PK
10480	38.86	7.69	46.55	54	-7.45	H	AV
10480	57.66	7.69	65.35	74	-8.65	V	PK
10480	39.67	7.69	47.36	54	-6.64	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5260MHz)							
10520	55.59	7.96	63.55	74	-10.45	H	PK
10520	39.71	7.96	47.67	54	-6.33	H	AV
10520	58.44	7.96	66.40	74	-7.60	V	PK
10520	40.67	7.96	48.63	54	-5.37	V	AV
Middle Channel (5280MHz)							
10560	56.96	8.02	64.98	74	-9.02	H	PK
10560	39.65	8.02	47.67	54	-6.33	H	AV
10560	57.62	8.02	65.64	74	-8.36	V	PK
10560	38.96	8.02	46.98	54	-7.02	V	AV
High Channel (5320MHz)							
10640	58.52	8.35	66.87	74	-7.13	H	PK
10640	38.40	8.35	46.75	54	-7.25	H	AV
10640	57.39	8.35	65.74	74	-8.26	V	PK
10640	39.35	8.35	47.70	54	-6.30	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5500MHz)							
11000	57.63	8.82	66.45	74	-7.55	H	PK
11000	38.04	8.82	46.86	54	-7.14	H	AV
11000	55.01	8.82	63.83	74	-10.17	V	PK
11000	41.57	8.82	50.39	54	-3.61	V	AV
Middle Channel (5600MHz)							
11200	56.50	8.92	65.42	74	-8.58	H	PK
11200	38.41	8.92	47.33	54	-6.67	H	AV
11200	58.23	8.92	67.15	74	-6.85	V	PK
11200	38.35	8.92	47.27	54	-6.73	V	AV
High Channel (5700MHz)							
11400	56.16	9.84	66.00	74	-8.00	H	PK
11400	41.71	9.84	51.55	54	-2.45	H	AV
11400	56.71	9.84	66.55	74	-7.45	V	PK
11400	39.59	9.84	49.43	54	-4.57	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5745MHz)							
11490	57.71	9.45	67.16	74	-6.84	H	PK
11490	41.57	9.45	51.02	54	-2.98	H	AV
11490	57.52	9.45	66.97	74	-7.03	V	PK
11490	39.05	9.45	48.50	54	-5.50	V	AV
Middle Channel (5785MHz)							
11570	55.43	9.62	65.05	74	-8.95	H	PK
11570	40.66	9.62	50.28	54	-3.72	H	AV
11570	56.37	9.62	65.99	74	-8.01	V	PK
11570	40.67	9.62	50.29	54	-3.71	V	AV
High Channel (5825MHz)							
11650	56.87	9.84	66.71	74	-7.29	H	PK
11650	41.38	9.84	51.22	54	-2.78	H	AV
11650	58.77	9.84	68.61	74	-5.39	V	PK
11650	40.00	9.84	49.84	54	-4.16	V	AV

➢ Out of Band edge 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-38.59	-27
Highest	Above 5350	-42.75	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5250-5350MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-41.79	-27
Highest	Above 5350	-42.63	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5470-5725MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5470	-37.59	-27
Highest	Above 5725	-39.62	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5725-5850MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5715	-39.71	-27
	5715 to 5725	-35.51	-17
Highest	5850 to 5860	-34.65	-17
	Above 5860	-36.33	-27
Note: the data just list the worst cases			

Note: this EUT was tested in the low, high channel and the worst case position data was reported.

- For the frequency band 5.15-5.25GHz,5.250-5.350GHz, 5.470-5.725GHz, 5.725-5.850GHz (802.11n HT40)
- Harmonics And Spurious Emissions

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5190MHz)							
10380	55.91	7.89	63.80	74	-10.20	H	PK
10380	39.55	7.89	47.44	54	-6.56	H	AV
10380	58.33	7.89	66.22	74	-7.78	V	PK
10380	41.92	7.89	49.81	54	-4.19	V	AV
High Channel (5230MHz)							
10460	58.36	7.97	66.33	74	-7.67	H	PK
10460	40.91	7.97	48.88	54	-5.12	H	AV
10460	55.15	7.97	63.12	74	-10.88	V	PK
10460	39.56	7.97	47.53	54	-6.47	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5270MHz)							
10540	56.61	8.16	64.77	74	-9.23	H	PK
10540	41.47	8.16	49.63	54	-4.37	H	AV
10540	55.47	8.16	63.63	74	-10.37	V	PK
10540	38.54	8.16	46.70	54	-7.30	V	AV
High Channel (5310MHz)							
10620	56.16	8.57	64.73	74	-9.27	H	PK
10620	40.25	8.57	48.82	54	-5.18	H	AV
10620	56.34	8.57	64.91	74	-9.09	V	PK
10620	40.82	8.57	49.39	54	-4.61	V	AV

Frequency (MHz)	Reading (dBuV/m)	Correct dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel (5510MHz)							
11020	56.18	9.16	65.34	74	-8.66	H	PK
11020	38.50	9.16	47.66	54	-6.34	H	AV
11020	57.63	9.16	66.79	74	-7.21	V	PK
11020	39.43	9.16	48.59	54	-5.41	V	AV
Middle Channel (5590MHz)							
11180	57.57	9.29	66.86	74	-7.14	H	PK
11180	38.10	9.29	47.39	54	-6.61	H	AV
11180	57.70	9.29	66.99	74	-7.01	V	PK
11180	38.58	9.29	47.87	54	-6.13	V	AV
High Channel (5670MHz)							
11340	56.20	9.43	65.63	74	-8.37	H	PK
11340	41.53	9.43	50.96	54	-3.04	H	AV
11340	56.84	9.43	66.27	74	-7.73	V	PK
11340	41.98	9.43	51.41	54	-2.59	V	AV

Frequency (MHz)	Reading (dBuV/m)	Correct dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel (5755MHz)							
11510	55.46	9.45	64.91	74	-9.09	H	PK
11510	41.03	9.45	50.48	54	-3.52	H	AV
11510	55.57	9.45	65.02	74	-8.98	V	PK
11510	41.70	9.45	51.15	54	-2.85	V	AV
High Channel (5795MHz)							
11590	55.68	9.27	64.95	74	-9.05	H	PK
11590	40.98	9.27	50.25	54	-3.75	H	AV
11590	55.27	9.27	64.54	74	-9.46	V	PK
11590	39.49	9.27	48.76	54	-5.24	V	AV

➢ Out of Band edge for 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-35.79	-27
Highest	Above 5350	-36.50	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5250-5350MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-36.62	-27
Highest	Above 5350	-37.39	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5470-5725MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5470	-35.51	-27
Highest	Above 5725	-37.65	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5725-5850MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5715	-38.76	-27
	5715 to 5725	-32.63	-17
Highest	5850 to 5860	-36.48	-17
	Above 5860	-37.32	-27
Note: the data just list the worst cases			

- For the frequency band 5.15-5.25GHz,5.250-5.350GHz, 5.470-5.725GHz, 5.725-5.850GHz (802.11ac-VHT40)
- Harmonics And Spurious Emissions

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5190MHz)							
10380	57.33	7.89	65.22	74	-8.78	H	PK
10380	40.73	7.89	48.62	54	-5.38	H	AV
10380	57.91	7.89	65.80	74	-8.20	V	PK
10380	41.27	7.89	49.16	54	-4.84	V	AV
High Channel (5230MHz)							
10460	58.00	7.97	65.97	74	-8.03	H	PK
10460	38.48	7.97	46.45	54	-7.55	H	AV
10460	56.09	7.97	64.06	74	-9.94	V	PK
10460	39.94	7.97	47.91	54	-6.09	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5270MHz)							
10540	58.84	8.16	67.00	74	-7.00	H	PK
10540	39.89	8.16	48.05	54	-5.95	H	AV
10540	58.12	8.16	66.28	74	-7.72	V	PK
10540	41.89	8.16	50.05	54	-3.95	V	AV
High Channel (5310MHz)							
10620	55.96	8.57	64.53	74	-9.47	H	PK
10620	40.17	8.57	48.74	54	-5.26	H	AV
10620	58.68	8.57	67.25	74	-6.75	V	PK
10620	38.65	8.57	47.22	54	-6.78	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5510MHz)							
11020	58.70	9.16	67.86	74	-6.14	H	PK
11020	38.95	9.16	48.11	54	-5.89	H	AV
11020	58.03	9.16	67.19	74	-6.81	V	PK
11020	38.16	9.16	47.32	54	-6.68	V	AV
Middle Channel (5590MHz)							
11180	56.20	9.29	65.49	74	-8.51	H	PK
11180	39.60	9.29	48.89	54	-5.11	H	AV
11180	56.88	9.29	66.17	74	-7.83	V	PK
11180	40.37	9.29	49.66	54	-4.34	V	AV
High Channel (5670MHz)							
11340	55.13	9.43	64.56	74	-9.44	H	PK
11340	40.20	9.43	49.63	54	-4.37	H	AV
11340	56.04	9.43	65.47	74	-8.53	V	PK
11340	38.09	9.43	47.52	54	-6.48	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5755MHz)							
11510	58.85	9.45	68.30	74	-5.70	H	PK
11510	38.00	9.45	47.45	54	-6.55	H	AV
11510	58.49	9.45	67.94	74	-6.06	V	PK
11510	40.93	9.45	50.38	54	-3.62	V	AV
High Channel (5795MHz)							
11590	58.22	9.27	67.49	74	-6.51	H	PK
11590	38.98	9.27	48.25	54	-5.75	H	AV
11590	57.76	9.27	67.03	74	-6.97	V	PK
11590	41.67	9.27	50.94	54	-3.06	V	AV

➢ Out of Band edge for 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-35.79	-27
Highest	Above 5350	-36.53	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5250-5350MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-36.72	-27
Highest	Above 5350	-37.35	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5470-5725MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5470	-35.65	-27
Highest	Above 5725	-37.39	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5725-5850MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5715	-38.77	-27
	5715 to 5725	-32.52	-17
Highest	5850 to 5860	-36.13	-17
	Above 5860	-37.65	-27
Note: the data just list the worst cases			

- For the frequency band 5.15-5.25GHz, 5.250-5.350GHz, 5.470-5.725GHz,5.725-5.850GHz (802.11ac-VHT80)
- Harmonics And Spurious Emissions

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
5210MHz							
10420	55.84	7.53	63.37	74	-10.63	H	PK
10420	38.37	7.53	45.90	54	-8.10	H	AV
10420	56.05	7.53	63.58	74	-10.42	H	PK
10420	38.43	7.53	45.96	54	-8.04	H	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
5290MHz							
10580	58.27	7.95	66.22	74	-7.78	H	PK
10580	39.52	7.95	47.47	54	-6.53	H	AV
10580	58.72	7.95	66.67	74	-7.33	V	PK
10580	41.96	7.95	49.91	54	-4.09	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5530MHz)							
11060	55.16	9.42	64.58	74	-9.42	H	PK
11060	39.70	9.42	49.12	54	-4.88	H	AV
11060	55.81	9.42	65.23	74	-8.77	V	PK
11060	38.02	9.42	47.44	54	-6.56	V	AV
High Channel (5610MHz)							
11220	58.38	9.69	68.07	74	-5.93	H	PK
11220	39.01	9.69	48.70	54	-5.30	H	AV
11220	57.27	9.69	66.96	74	-7.04	V	PK
11220	40.26	9.69	49.95	54	-4.05	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
5775MHz							
11550	58.28	9.93	68.21	74	-5.79	H	PK
11550	38.19	9.93	48.12	54	-5.88	H	AV
11550	55.76	9.93	65.69	74	-8.31	V	PK
11550	39.32	9.93	49.25	54	-4.75	V	AV

➢ Out of Band edge for 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-38.69	-27
Highest	Above 5350	-36.53	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5250-5350MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-38.72	-27
Highest	Above 5350	-36.42	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5470-5725MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5470	-39.79	-27
Highest	Above 5725	-37.66	-27
Note: the data just list the worst cases			

➢ Out of Band edge for 5725-5850MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5715	-39.43	-27
	5715 to 5725	-33.53	-17
Highest	5850 to 5860	-30.36	-17
	Above 5860	-38.42	-27
Note: the data just list the worst cases			

Note: Testing is carried out with frequency rang 9kHz to 40GHz, other than listed in the table above are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

9. Frequency Stability

9.1 Standard Applicable

According to §15.407(g), manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

9.2 Test Procedure

According to §2.1055, the following test procedure was performed.
The Frequency Stability is measured directly with a Frequency Domain Analyzer. Frequency Deviation in ppm is calculated from the measured peak to peak value.
The Carrier Frequency Stability over Power Supply Voltage and over Temperature is measured with a Frequency Domain Analyzer in histogram mode.

9.3 Summary of Test Results/Plots

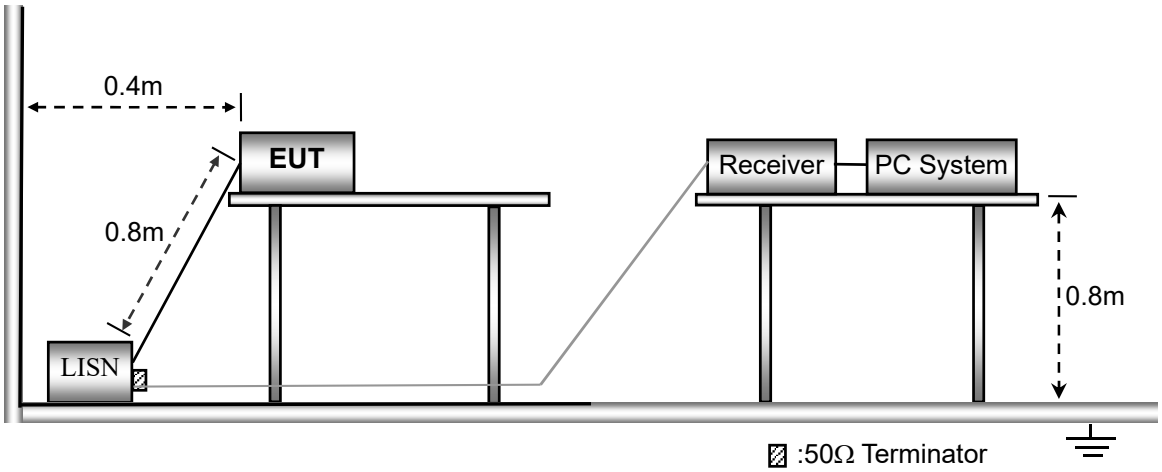
Please refer to Appendix D

10 Conducted Emissions

10.1 Test Procedure

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 Limit.
The external I/O cables were draped along the test table and formed a bundle 30 to 40cm long in the middle. The spacing between the peripherals was 10cm.

10.2 Basic Test Setup Block Diagram



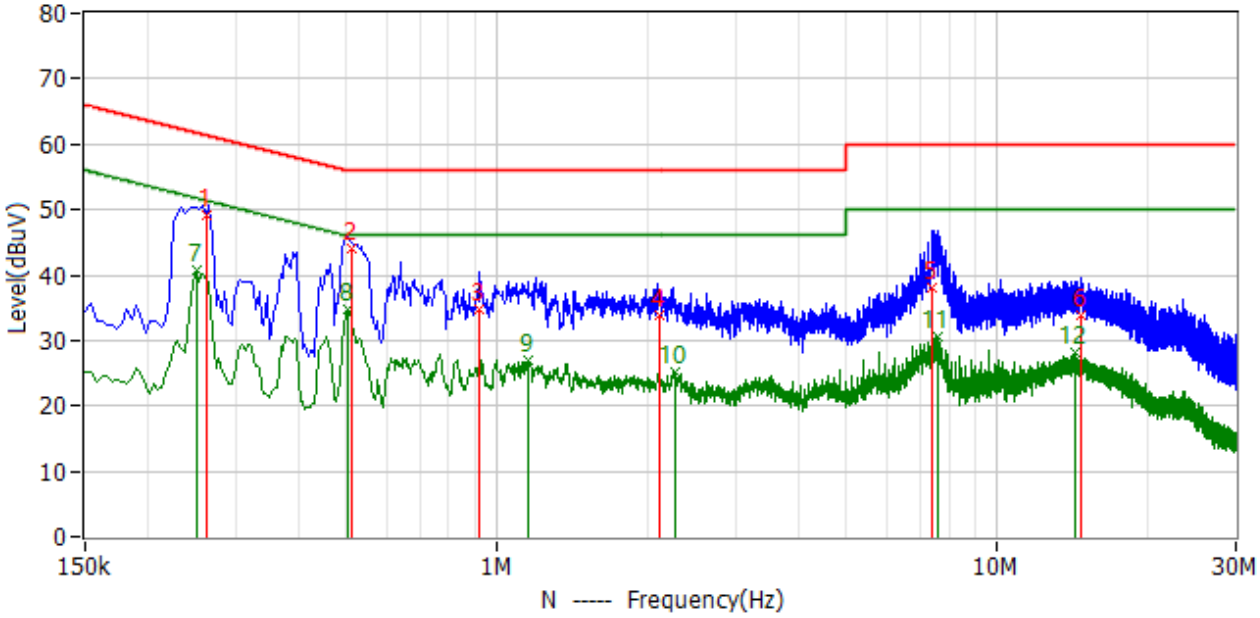
10.3 Test Receiver Setup

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

Start Frequency 150kHz
Stop Frequency 30MHz
Sweep Speed ..... Auto
IF Bandwidth..... 10kHz
Quasi-Peak Adapter Bandwidth 9kHz
Quasi-Peak Adapter Mode ..... Normal

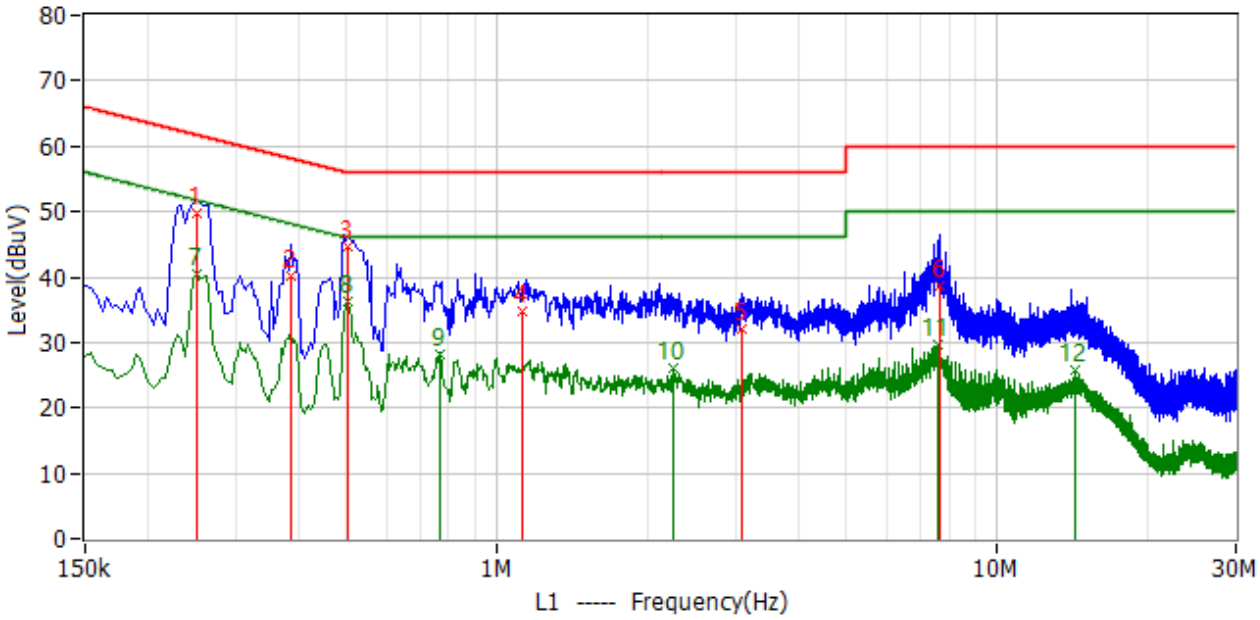
10.4 Summary of Test Results/Plots

Test Mode	Communication	AC120V 60Hz	Polarity:	Neutral



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Delta dB	Detector
1	262.000kHz	39.6	9.6	49.2	61.4	-12.1	QP
2	510.000kHz	34.4	9.7	44.1	56.0	-11.9	QP
3	918.000kHz	25.3	9.6	34.9	56.0	-21.1	QP
4	2.114MHz	24.4	9.6	34.0	56.0	-22.0	QP
5	7.434MHz	28.5	9.7	38.2	60.0	-21.8	QP
6	14.750MHz	23.9	9.9	33.8	60.0	-26.2	QP
7*	250.000kHz	31.2	9.6	40.8	51.8	-10.9	AV
8*	502.000kHz	25.1	9.7	34.8	46.0	-11.2	AV
9*	1.154MHz	17.3	9.6	26.9	46.0	-19.1	AV
10*	2.274MHz	15.6	9.6	25.2	46.0	-20.8	AV
11*	7.630MHz	20.9	9.7	30.6	50.0	-19.4	AV
12*	14.334MHz	18.4	9.9	28.3	50.0	-21.7	AV

Test Mode	Communication	AC120V 60Hz	Polarity:	Line



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Delta dB	Detector
1	250.000kHz	40.1	9.6	49.7	61.8	-12.1	QP
2	386.000kHz	30.5	9.6	40.1	58.1	-18.0	QP
3	502.000kHz	34.9	9.7	44.6	56.0	-11.4	QP
4	1.126MHz	25.3	9.6	34.9	56.0	-21.1	QP
5	3.094MHz	22.5	9.6	32.1	56.0	-23.9	QP
6	7.666MHz	29.1	9.7	38.8	60.0	-21.2	QP
7*	250.000kHz	30.9	9.6	40.5	51.8	-11.2	AV
8*	502.000kHz	26.6	9.7	36.3	46.0	-9.7	AV
9*	766.000kHz	18.7	9.6	28.3	46.0	-17.7	AV
10*	2.250MHz	16.4	9.6	26.0	46.0	-20.0	AV
11*	7.622MHz	19.9	9.7	29.6	50.0	-20.4	AV
12*	14.334MHz	15.9	9.8	25.7	50.0	-24.3	AV

APPENDIX SUMMARY

Project No.	WTH24X08197401W	Test Engineer	Timi Huang
Start date	2024/9/4	Finish date	2024/9/6
Temperature	24℃	Humidity	62%
RF specifications	U-NII		

APPENDIX	Description of Test Item	Result
A	Power Spectral Density	Compliant
B	Emission Bandwidth and Occupied Bandwidth	Compliant
C	Maximum Conducted Output Power	Compliant
D	Frequency Stability	Compliant

APPENDIX A

Power Spectral Density					
U-NII-1:5150-5250MHz					
Operating mode	Test Channel	ANT 1 dBm/MHz	ANT 2 dBm/MHz	Total dBm/MHz	Limit (dBm/MHz)
802.11a	5180	2.67	2.03	/	11
	5200	3.18	2.69	/	11
	5240	4.49	3.86	/	11
802.11n-HT20	5180	-0.36	-0.62	2.52	11
	5200	0.05	0.01	3.04	11
	5240	1.22	1.02	4.13	11
802.11n-HT40	5190	-4.88	-4.76	-1.81	11
	5230	-3.78	-3.69	-0.72	11
802.11ac-VHT20	5180	-0.62	-0.83	2.29	11
	5200	-0.07	-0.45	2.75	11
	5240	1.06	0.76	3.92	11
802.11ac-VHT40	5190	-5.23	-5.45	-2.33	11
	5230	-4.17	-4.16	-1.15	11
802.11ac-VHT80	5210	-9.97	-9.41	-6.67	11

Power Spectral Density					
U-NII-2A: 5250-5350MHz					
Operating mode	Test Channel	ANT 1 dBm/MHz	ANT 2 dBm/MHz	Total dBm/MHz	Limit (dBm/MHz)
802.11a	5260	3.31	2.65	/	11
	5280	3.44	2.82	/	11
	5320	3.59	2.94	/	11
802.11n-HT20	5260	0.17	-0.28	2.96	11
	5280	0.62	-0.06	3.30	11
	5320	0.29	-0.23	3.05	11
802.11n-HT40	5270	-4.35	-4.74	-1.53	11
	5310	-4.29	-4.41	-1.34	11
802.11ac-VHT20	5260	-0.59	-0.84	2.30	11
	5280	-0.56	-0.60	2.43	11
	5320	-0.14	-3.82	1.41	11
802.11ac-VHT40	5270	-4.99	-5.13	-2.05	11
	5310	-4.74	-5.20	-1.95	11
802.11ac-VHT80	5290	-9.51	-8.95	-6.21	11

Power Spectral Density					
U-NII-2C: 5470-5725MHz					
Operating mode	Test Channel	ANT 1 dBm/MHz	ANT 2 dBm/MHz	Total dBm/MHz	Limit (dBm/MHz)
802.11a	5500	2.34	3.43	/	11
	5600	2.20	2.55	/	11
	5700	4.05	4.32	/	11
802.11n-HT20	5500	-0.23	0.56	3.19	11
	5600	-0.28	-0.51	2.62	11
	5700	1.00	1.37	4.20	11
802.11n-HT40	5510	-4.73	-4.14	-1.41	11
	5590	-5.04	-4.14	-1.56	11
	5670	-3.50	-3.84	-0.66	11
802.11ac-VHT20	5500	-0.73	0.42	2.89	11
	5600	-0.91	-0.90	2.11	11
	5700	1.29	0.88	4.10	11
802.11ac-VHT40	5510	-5.52	-4.64	-2.05	11
	5590	-5.04	-4.14	-1.56	11
	5670	-3.90	-3.81	-0.84	11
802.11ac-VHT80	5530	-9.57	-9.07	-6.30	11
	5610	-9.30	-9.73	-6.50	11

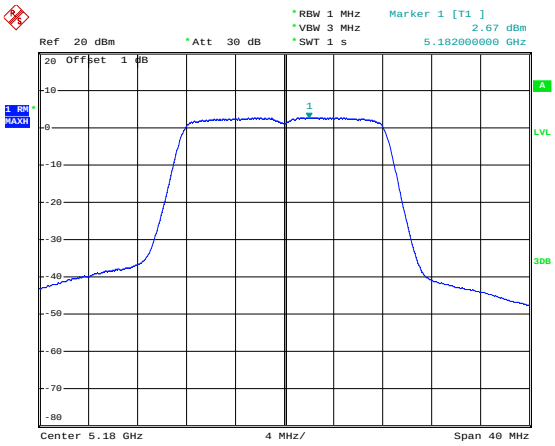
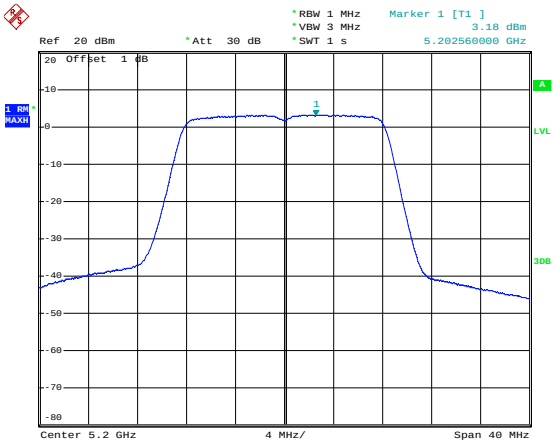
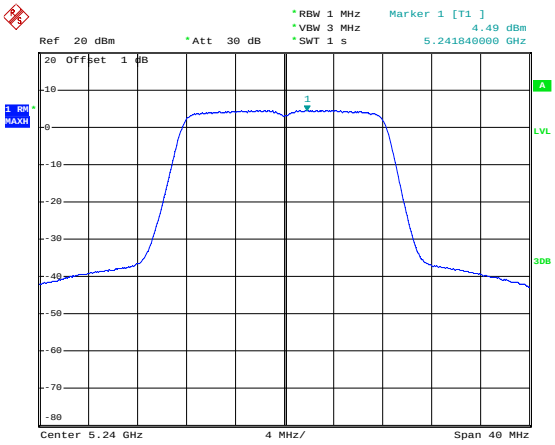
Power Spectral Density							
U-NII-3: 5725-5850MHz							
Operating mode	Test Channel	ANT 1 dBm/300kHz	ANT 2 dBm/300kHz	Factor	ANT 1 dBm/500kHz*	ANT 2 dBm/500kHz*	Limit dBm/500kHz
802.11a	5745	-1.59	-1.03	2.22	0.63	1.19	30
	5785	-1.31	-1.06	2.22	0.91	1.16	30
	5825	-2.37	-2.01	2.22	-0.15	0.21	30
*Note: Maximum PSD=PSD(dBm/300kHz)+10log(500kHz/300kHz)=2.22							

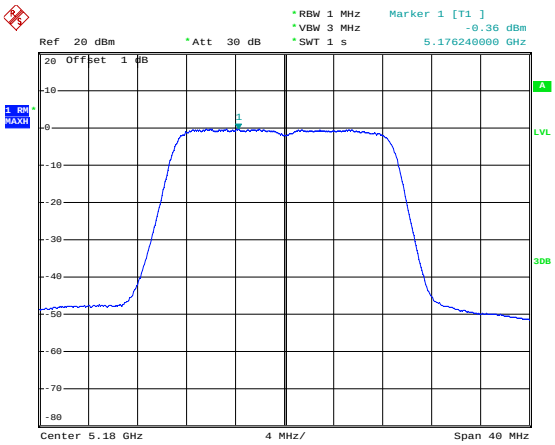
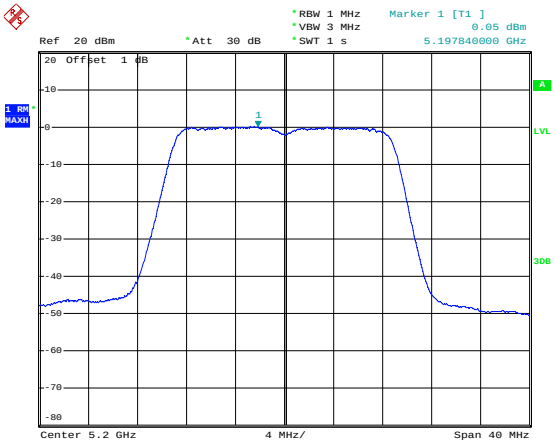
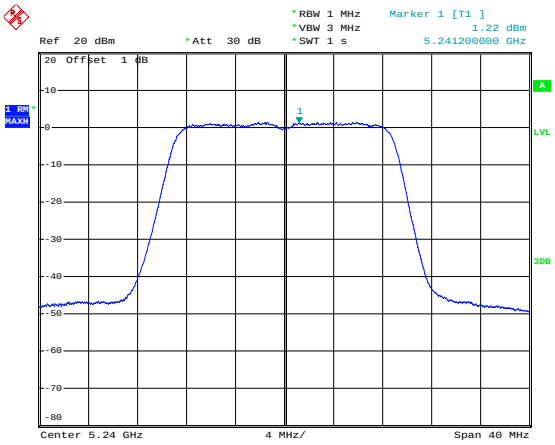
Power Spectral Density						
U-NII-3: 5725-5850MHz						
Operating mode	Test Channel	ANT 1 dBm/300kHz	ANT 2 dBm/300kHz	Factor	Total dBm/500kHz*	Limit dBm/500kHz
802.11n-HT20	5745	-4.30	-4.09	2.22	0.93	30
	5785	-3.81	-3.95	2.22	1.42	30
	5825	-4.65	-4.72	2.22	0.58	30
802.11n-HT40	5755	-8.94	-9.40	2.22	-3.71	30
	5795	-8.98	-9.99	2.22	-3.75	30

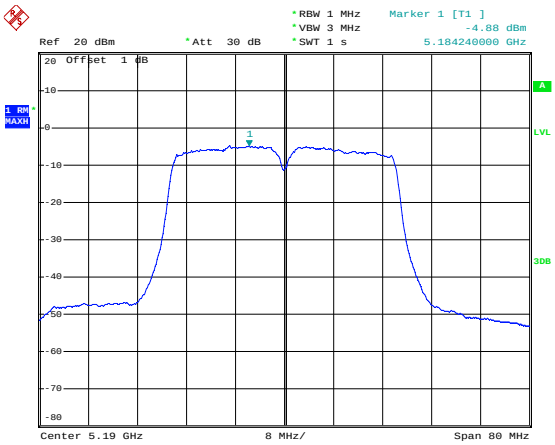
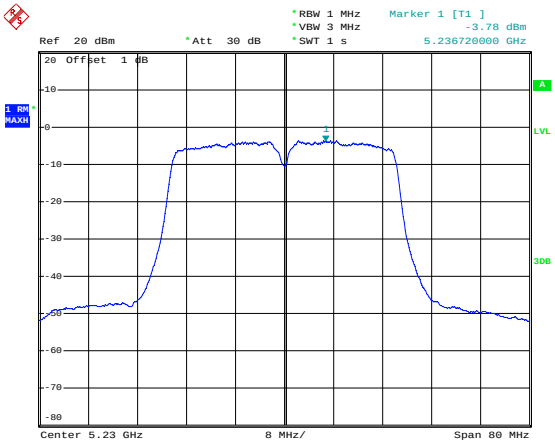
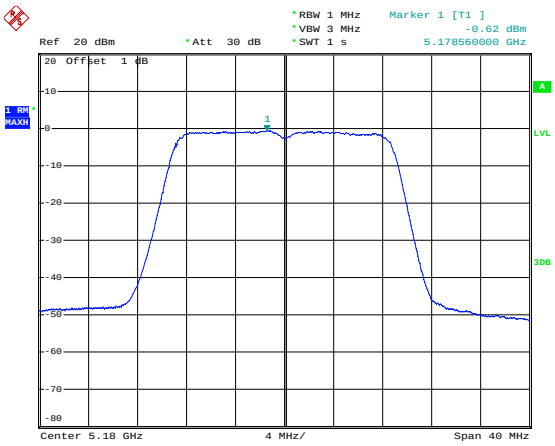
802.11ac-VHT20	5745	-4.39	-4.20	2.22	0.84	30
	5785	-3.83	-3.90	2.22	1.40	30
	5825	-4.67	-4.95	2.22	0.56	30
802.11ac-VHT40	5755	-9.27	-9.48	2.22	-4.04	30
	5795	-9.59	-10.05	2.22	-4.36	30
802.11ac-VHT80	5775	-13.11	-13.21	2.22	-7.88	30
*Note: Maximum PSD=PSD(dBm/300kHz)+10log(500kHz/300kHz)=2.22						

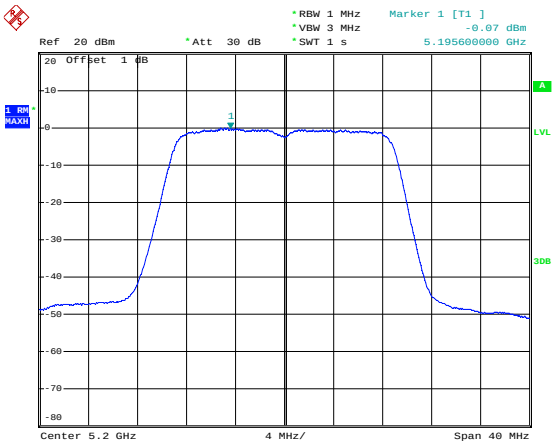
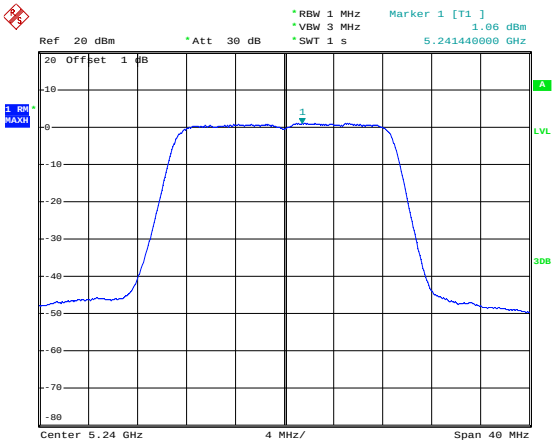
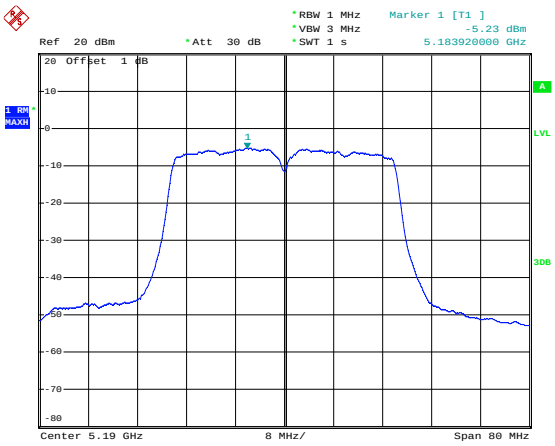
ANT 1

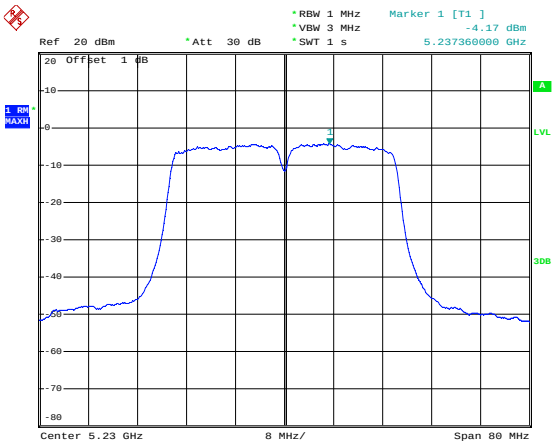
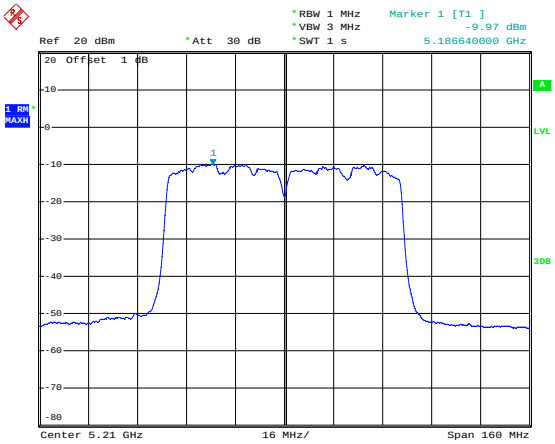
5150-5250MHz

802.11a-Low	 Date: 4.SEP.2024 19:28:25
802.11a-Middle	 Date: 4.SEP.2024 19:28:00
802.11a-High	 Date: 4.SEP.2024 19:27:36

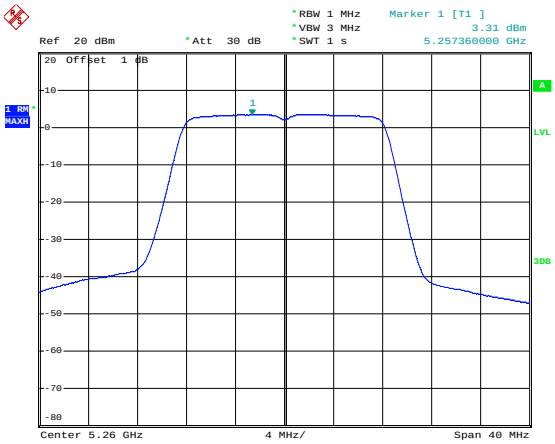
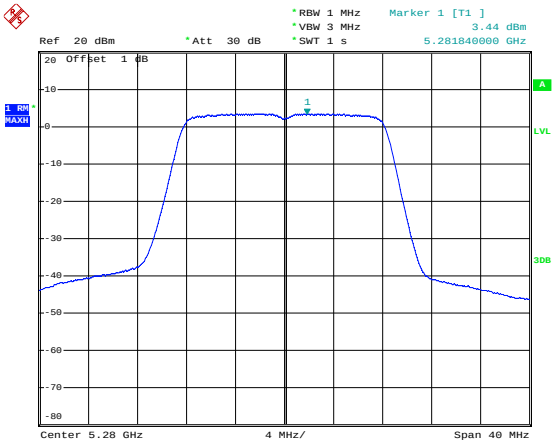
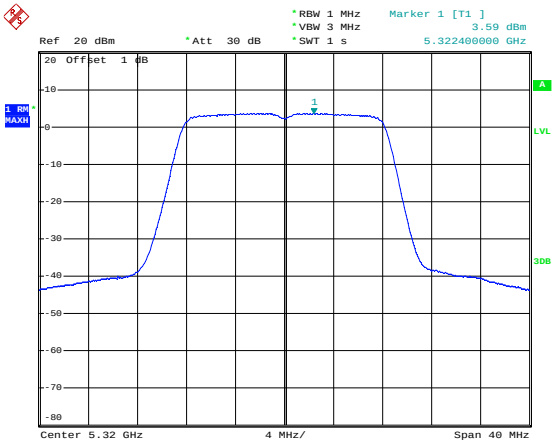
802.11n-HT20-Low	 Date: 4.SEP.2024 19:26:21
802.11n-HT20-Middle	 Date: 4.SEP.2024 19:26:47
802.11n-HT20-High	 Date: 4.SEP.2024 19:27:11

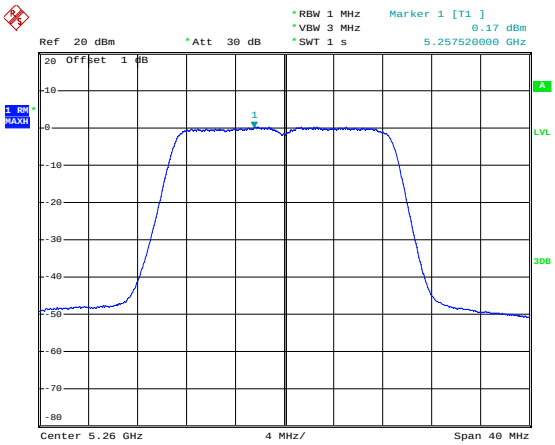
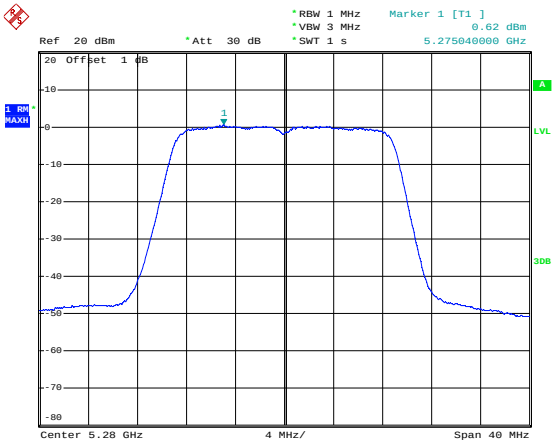
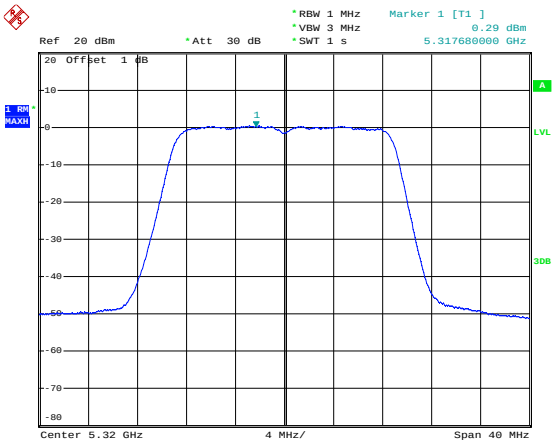
802.11n-HT40-Low	 Date: 4.SEP.2024 19:23:25
802.11n-HT40-High	 Date: 4.SEP.2024 19:22:49
802.11ac-VHT20-Low	 Date: 4.SEP.2024 19:25:44

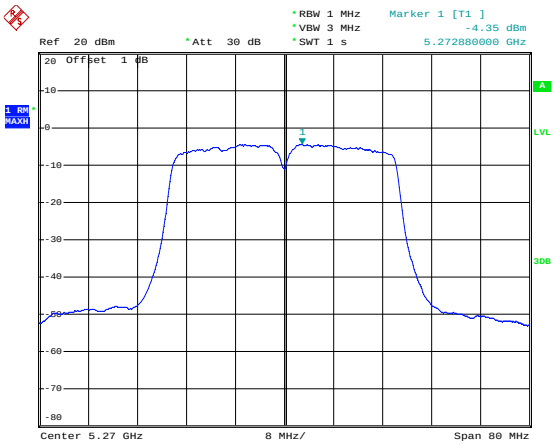
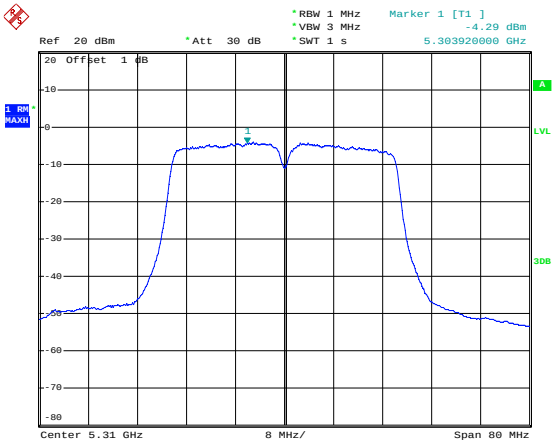
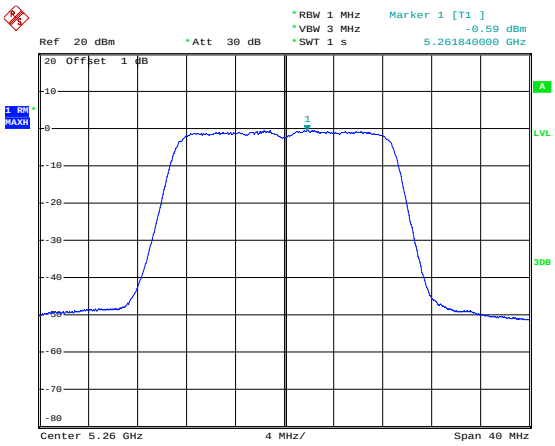
802.11ac-VHT20-Middle	 Date: 4.SEP.2024 19:25:17
802.11ac-VHT20-High	 Date: 4.SEP.2024 19:24:46
802.11ac-VHT40-Low	 Date: 4.SEP.2024 19:21:26

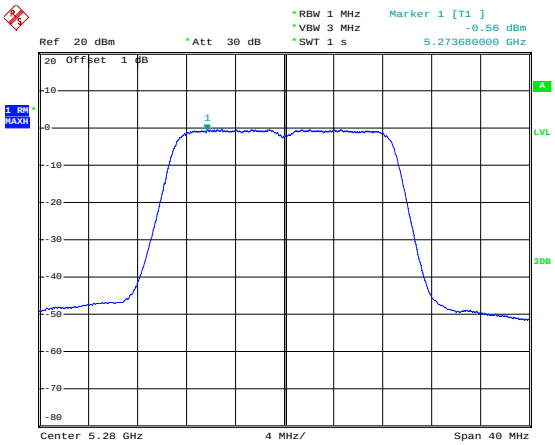
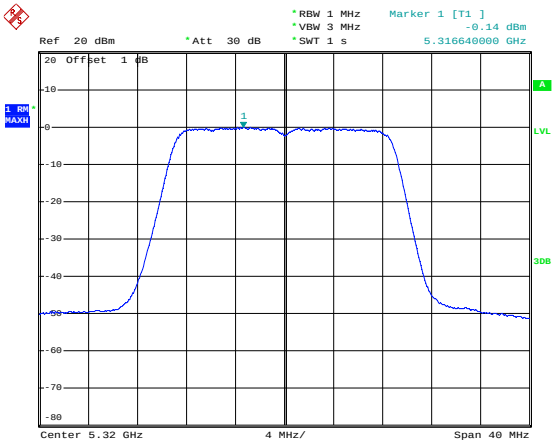
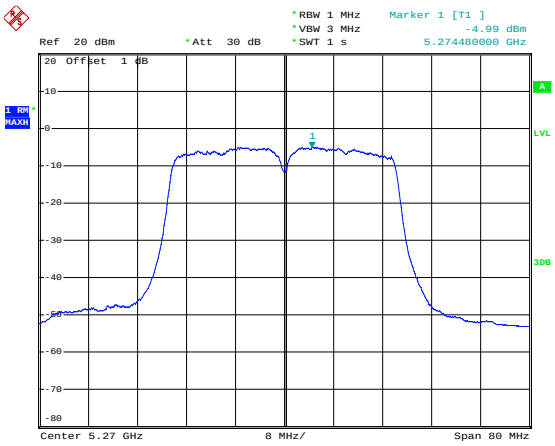
802.11ac-VHT40-High	 Date: 4.SEP.2024 19:22:17
802.11ac-VHT80	 Date: 4.SEP.2024 19:19:28

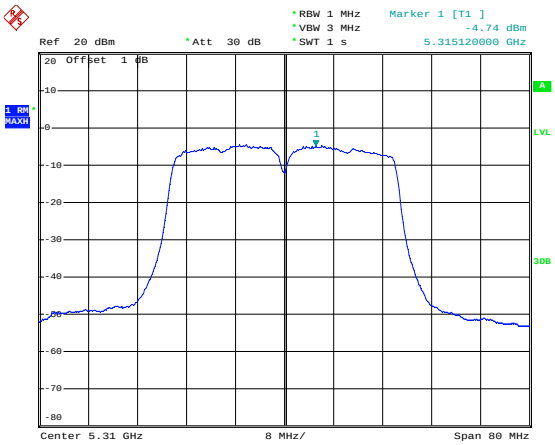
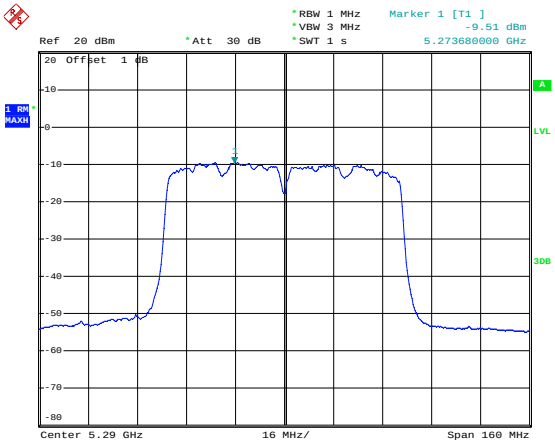
5250-5350MHz

802.11a-Low	 Date: 5.SEP.2024 16:23:48
802.11a-Middle	 Date: 5.SEP.2024 16:24:38
802.11a-High	 Date: 5.SEP.2024 16:25:16

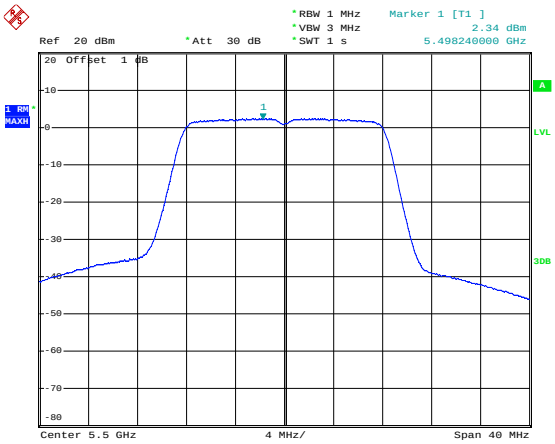
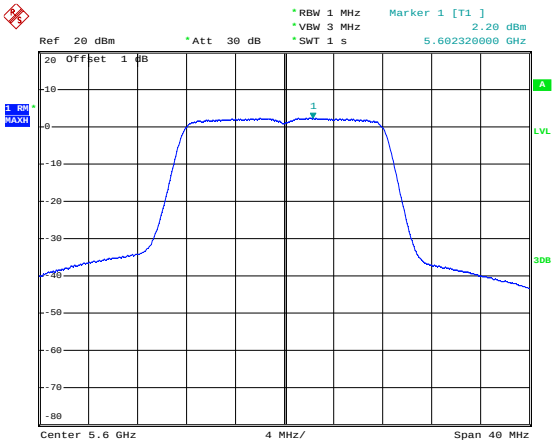
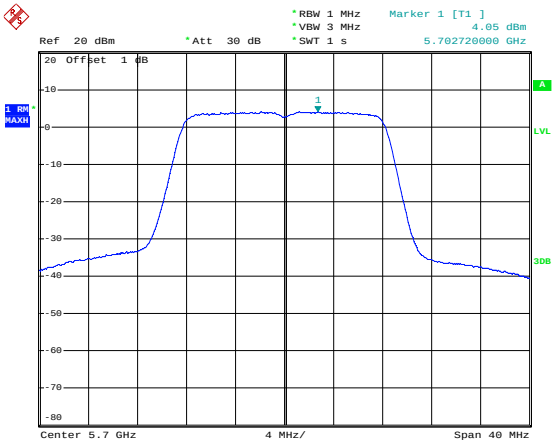
802.11n-HT20-Low	 Date: 5.SEP.2024 16:26:46
802.11n-HT20-Middle	 Date: 5.SEP.2024 16:26:21
802.11n-HT20-High	 Date: 5.SEP.2024 16:25:54

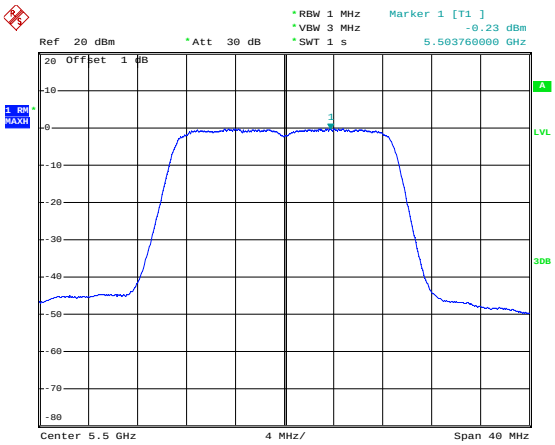
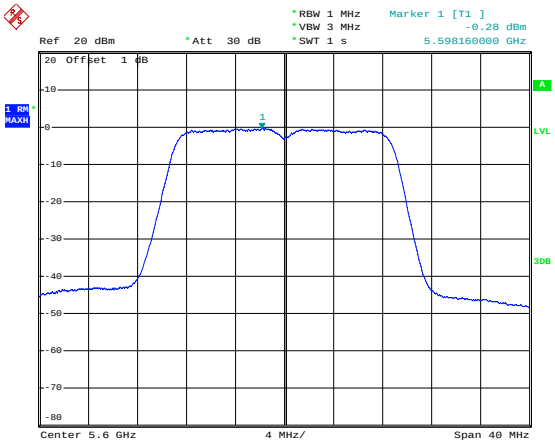
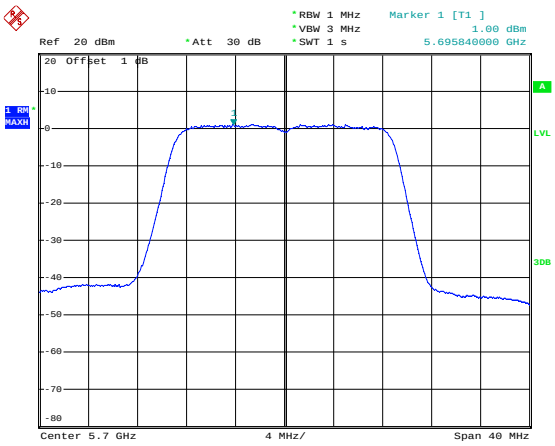
802.11n-HT40-Low	 Date: 5.SEP.2024 16:29:57
802.11n-HT40-High	 Date: 5.SEP.2024 16:30:26
802.11ac-VHT20-Low	 Date: 5.SEP.2024 16:27:42

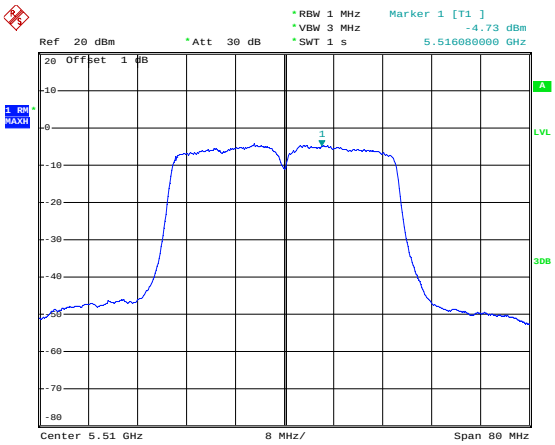
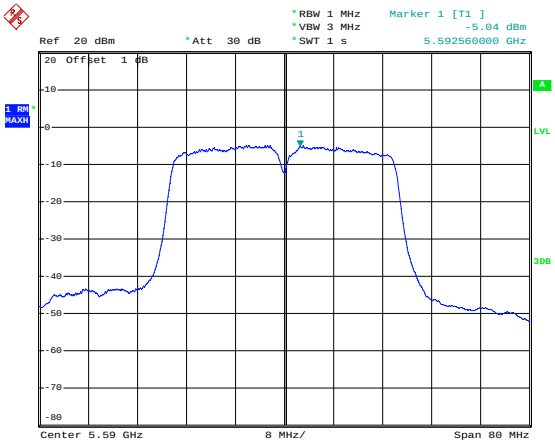
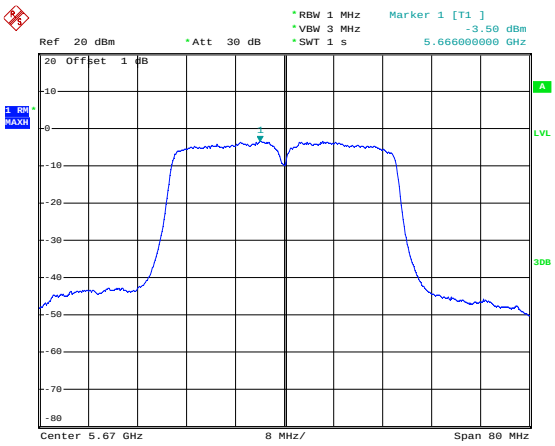
802.11ac-VHT20-Middle	 Date: 5.SEP.2024 16:28:06
802.11ac-VHT20-High	 Date: 5.SEP.2024 16:28:33
802.11ac-VHT40-Low	 Date: 5.SEP.2024 16:31:31

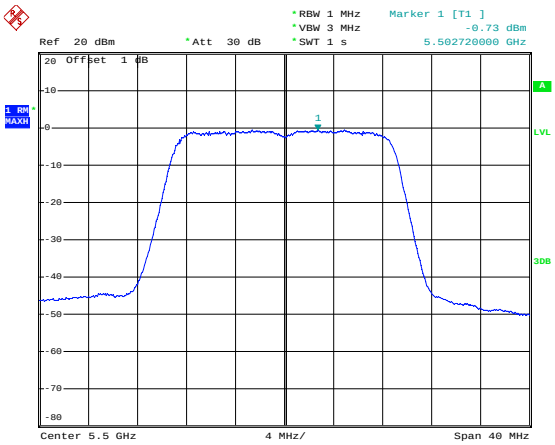
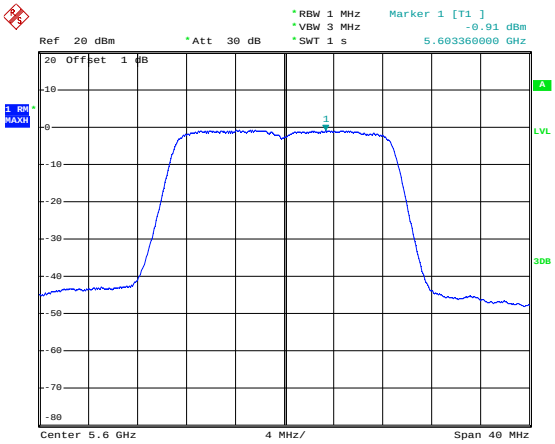
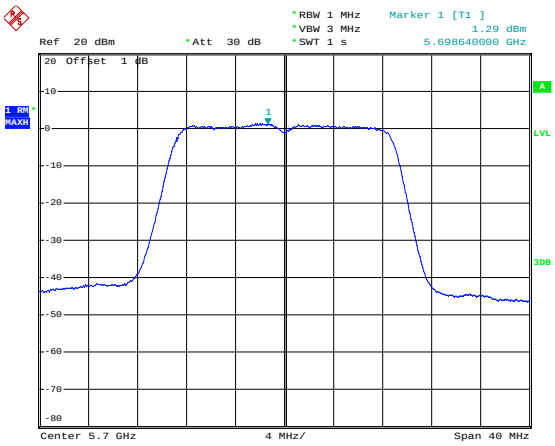
802.11ac-VHT40-High	 Date: 5.SEP.2024 16:31:01
802.11ac-VHT80	 Date: 5.SEP.2024 16:32:14

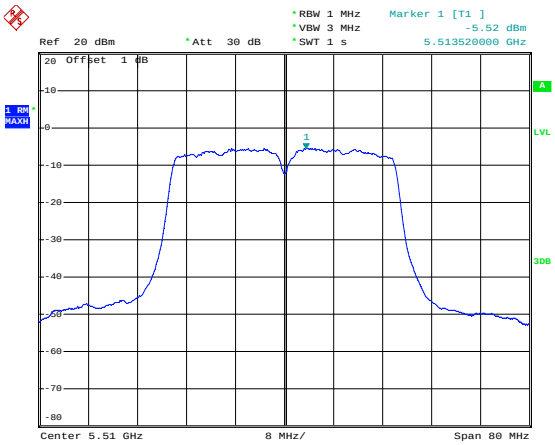
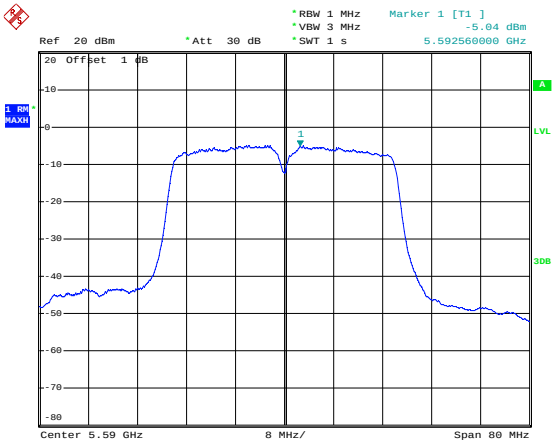
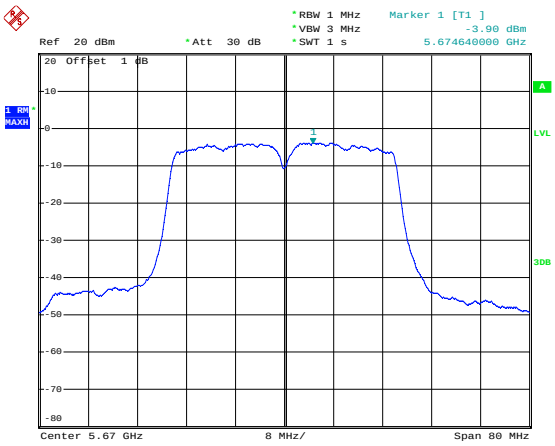
5470-5725MHz

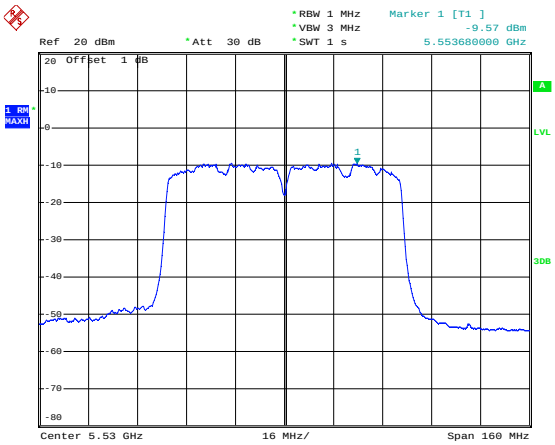
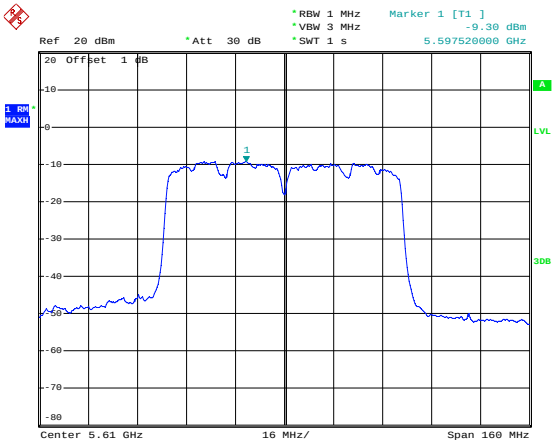
802.11a-Low	 Date: 5.SEP.2024 18:52:01
802.11a-Middle	 Date: 5.SEP.2024 18:51:28
802.11a-High	 Date: 5.SEP.2024 18:51:01

802.11n-HT20-Low	 Date: 5.SEP.2024 18:49:47
802.11n-HT20-Middle	 Date: 5.SEP.2024 18:50:12
802.11n-HT20-High	 Date: 5.SEP.2024 18:50:40

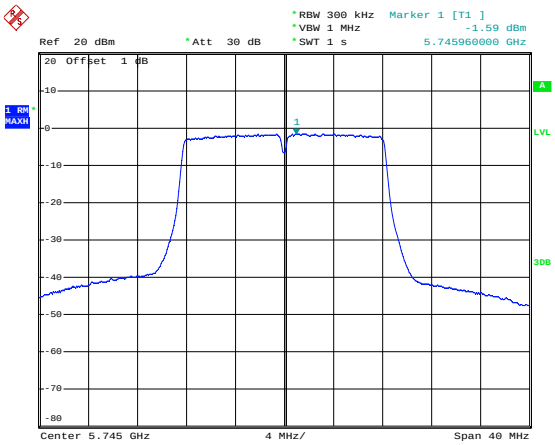
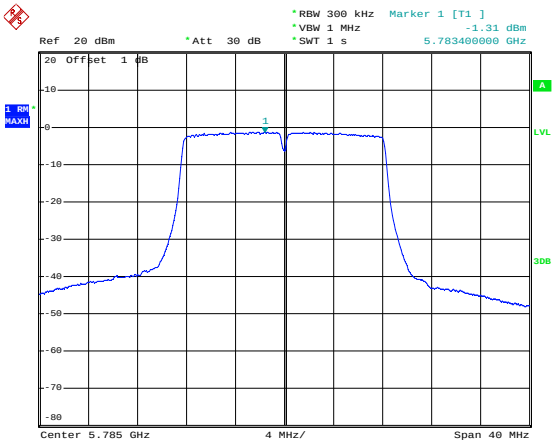
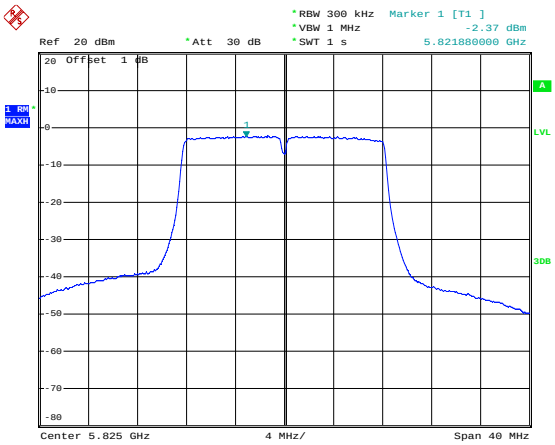
802.11n-HT40-Low	 Date: 5.SEP.2024 18:45:57
802.11n-HT40-Middle	 Date: 5.SEP.2024 18:46:26
802.11n-HT40-High	 Date: 5.SEP.2024 18:47:21

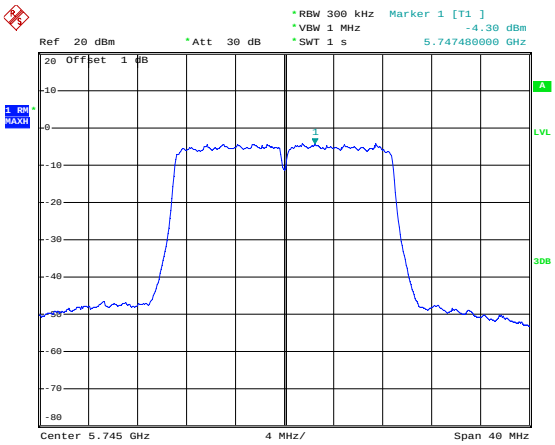
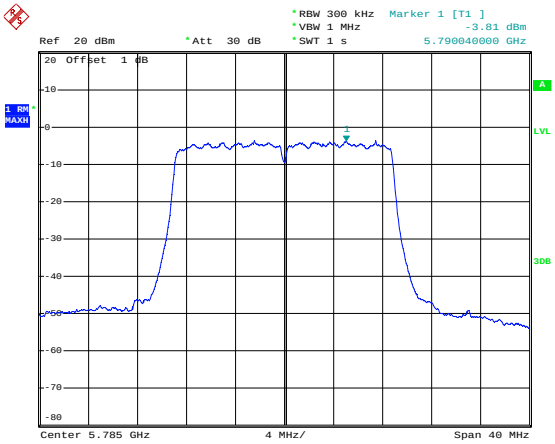
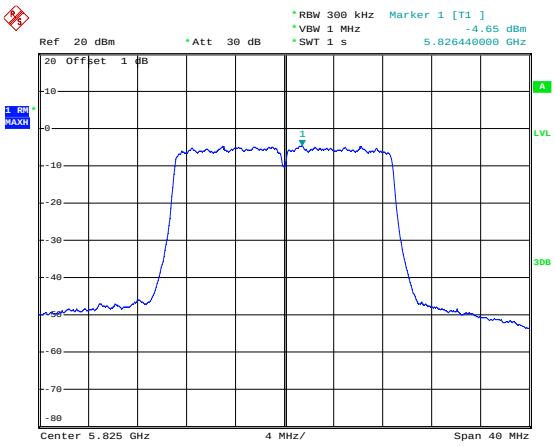
802.11ac-VHT20-Low	 Date: 5.SEP.2024 18:49:07
802.11ac-VHT20-Middle	 Date: 5.SEP.2024 18:48:43
802.11ac-VHT20-High	 Date: 5.SEP.2024 18:48:06

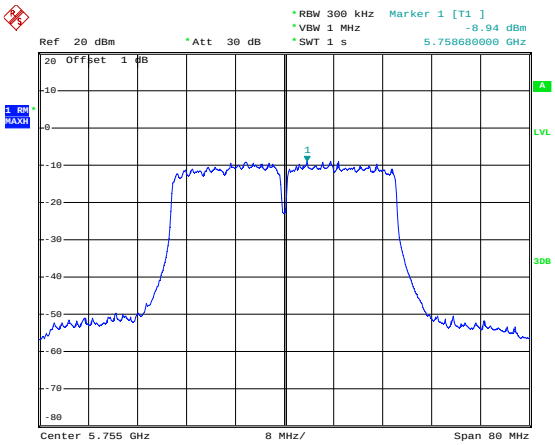
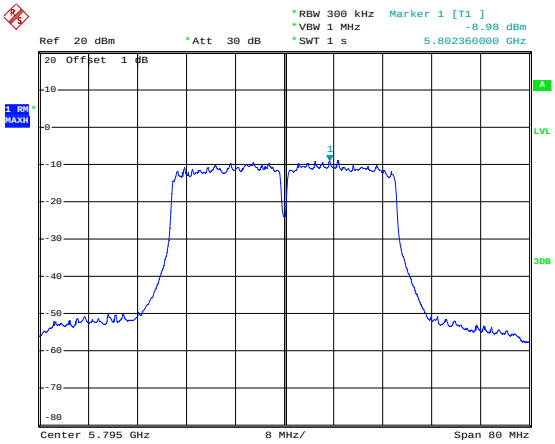
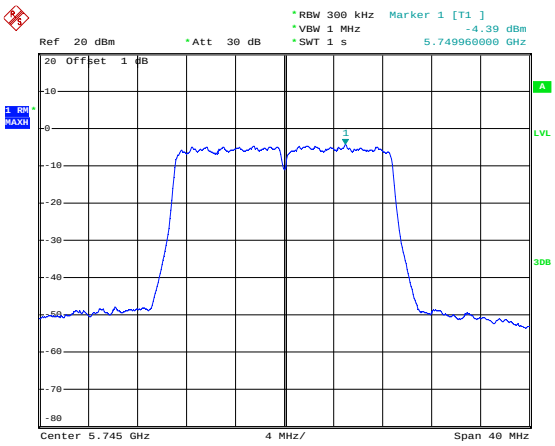
802.11ac-VHT40-Low	 Date: 5.SEP.2024 18:44:18
802.11ac-VHT40-Middle	 Date: 5.SEP.2024 18:46:26
802.11ac-VHT40-High	 Date: 5.SEP.2024 18:43:13

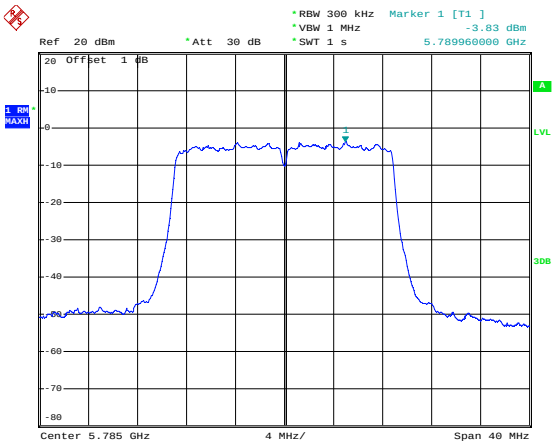
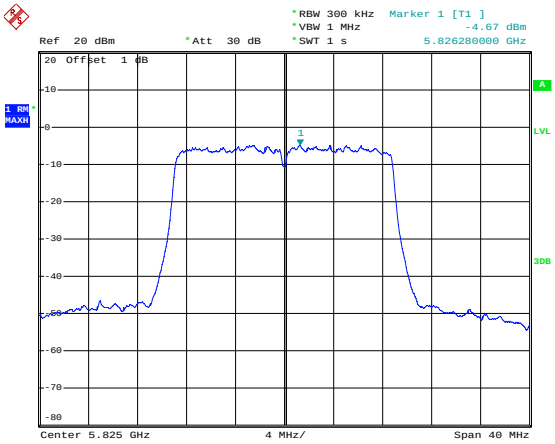
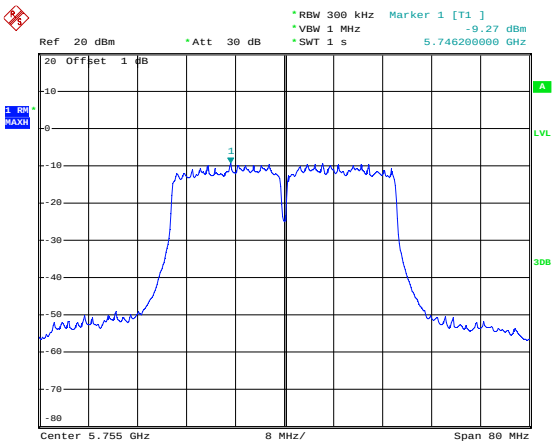
802.11ac-VHT80-Low	 Date: 5.SEP.2024 18:42:11
802.11ac-VHT80-High	 Date: 5.SEP.2024 18:41:27

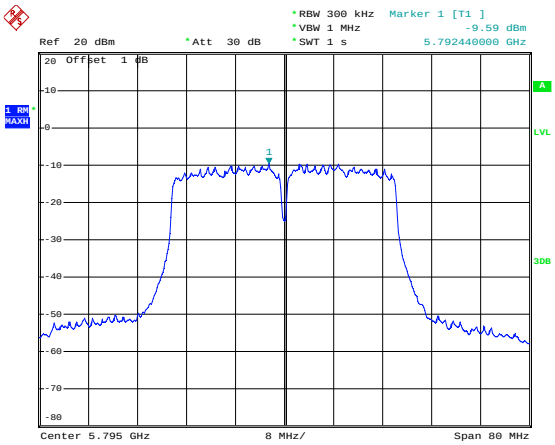
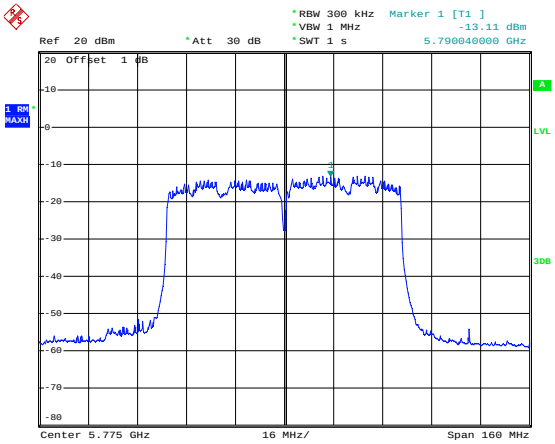
5725-5850MHz

802.11a-Low	 Date: 5.SEP.2024 19:54:25
802.11a-Middle	 Date: 5.SEP.2024 19:54:47
802.11a-High	 Date: 5.SEP.2024 19:55:10

802.11n-HT20-Low	 Date: 5.SEP.2024 19:53:58
802.11n-HT20-Middle	 Date: 5.SEP.2024 19:53:36
802.11n-HT20-High	 Date: 5.SEP.2024 19:53:12

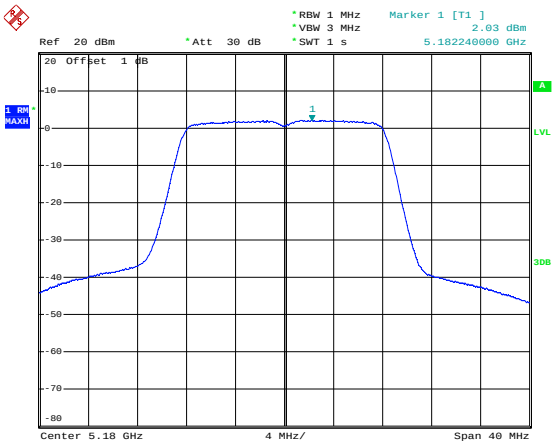
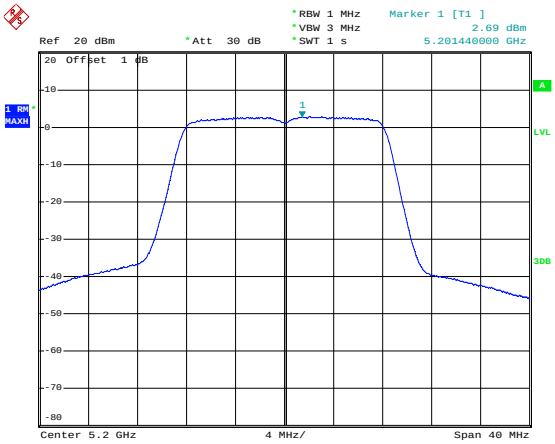
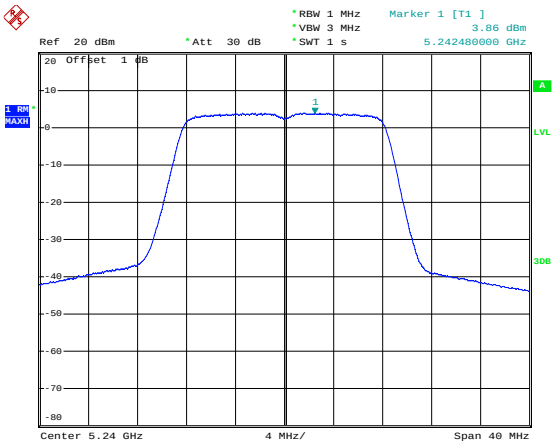
802.11n-HT40-Low	 Date: 5.SEP.2024 19:50:52
802.11n-HT40-High	 Date: 5.SEP.2024 19:50:28
802.11ac-VHT20-Low	 Date: 5.SEP.2024 19:51:42

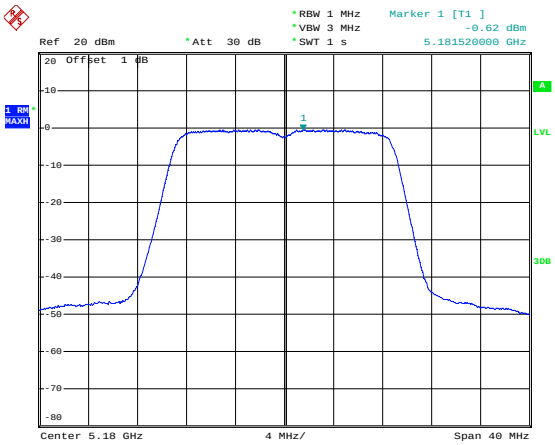
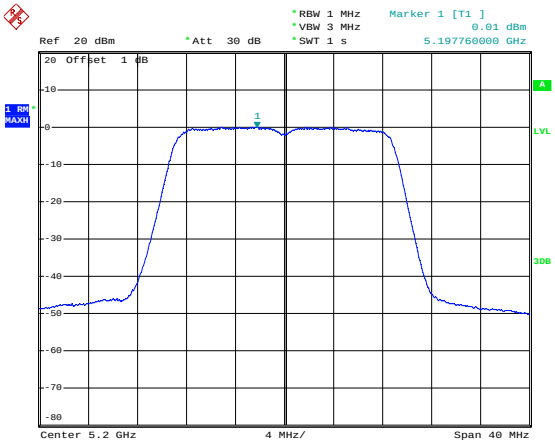
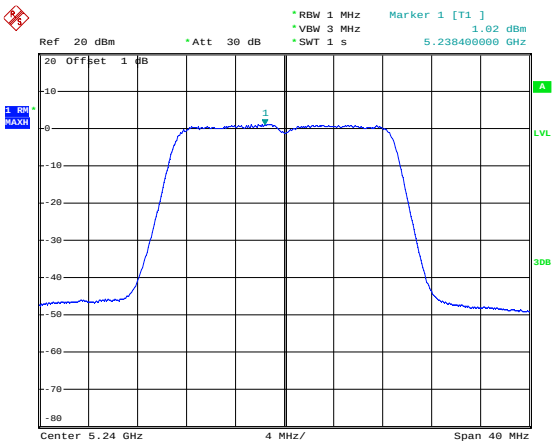
802.11ac-VHT20-Middle	 Date: 5.SEP.2024 19:52:09
802.11ac-VHT20-High	 Date: 5.SEP.2024 19:52:33
802.11ac-VHT40-Low	 Date: 5.SEP.2024 19:49:26

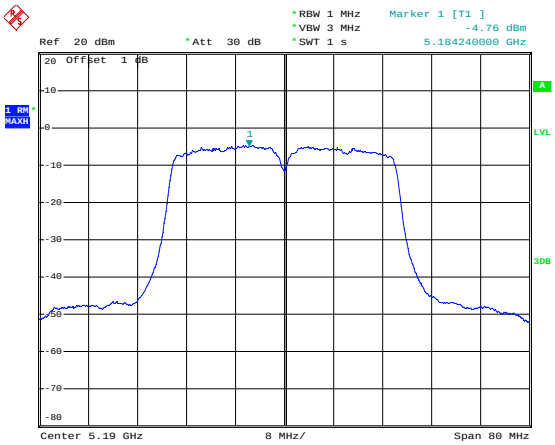
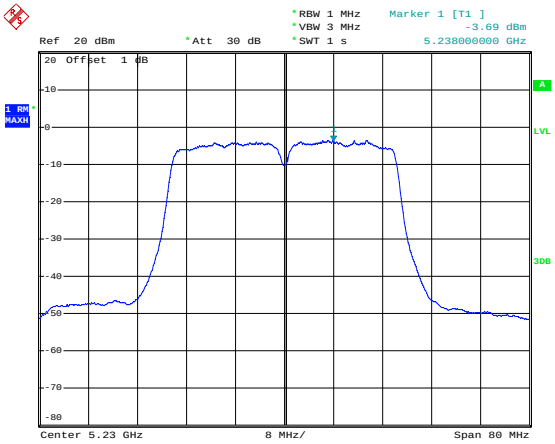
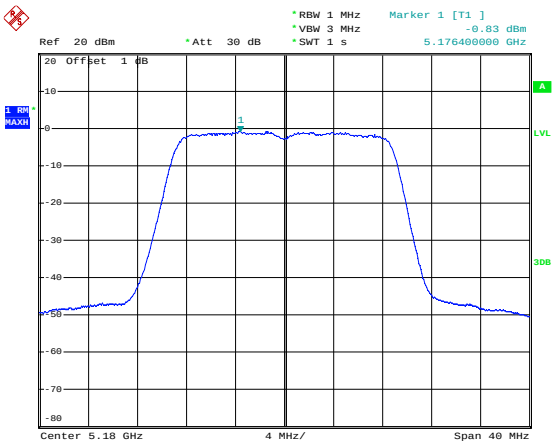
802.11ac-VHT40-High	 Date: 5.SEP.2024 19:49:54
802.11ac-VHT80	 Date: 5.SEP.2024 19:46:27

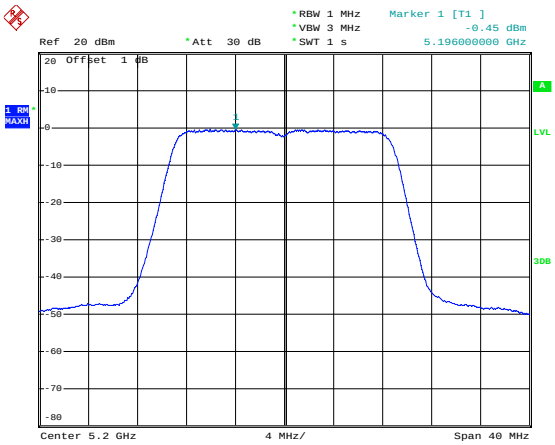
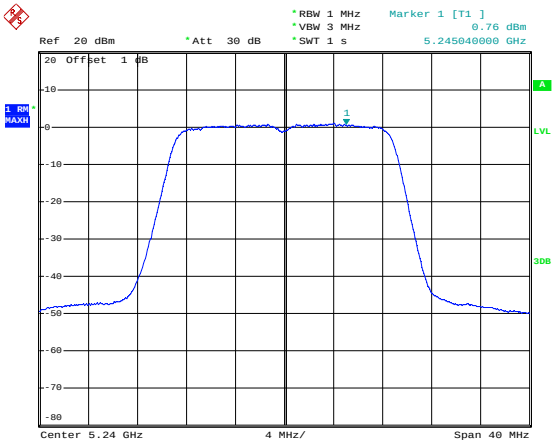
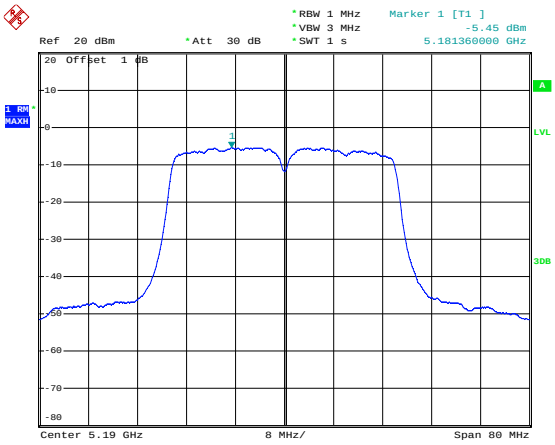
ANT 2

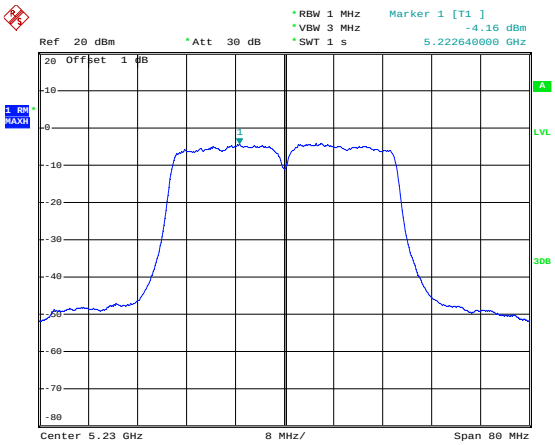
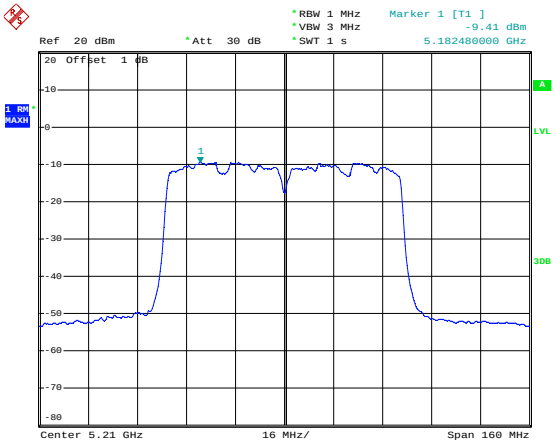
5150-5250MHz

802.11a-Low	 Date: 6.SEP.2024 09:14:56
802.11a-Middle	 Date: 6.SEP.2024 09:14:31
802.11a-High	 Date: 6.SEP.2024 09:14:05

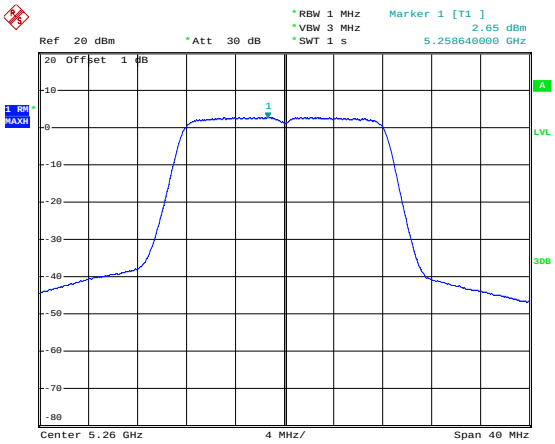
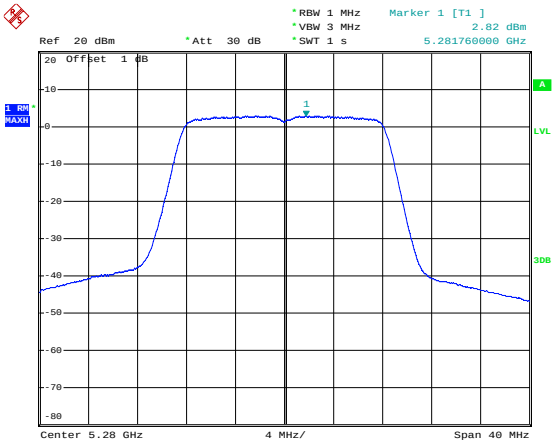
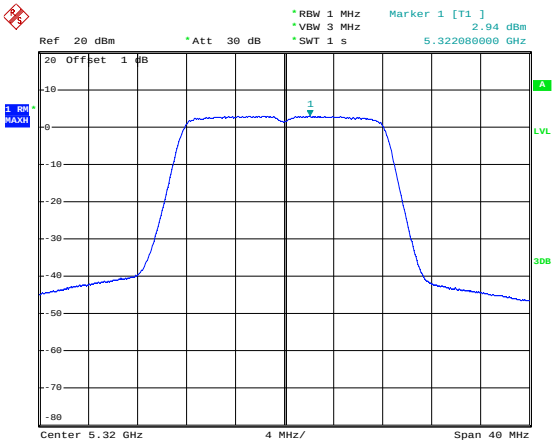
802.11n-HT20-Low	 Date: 6.SEP.2024 09:13:02
802.11n-HT20-Middle	 Date: 6.SEP.2024 09:13:26
802.11n-HT20-High	 Date: 6.SEP.2024 09:13:50

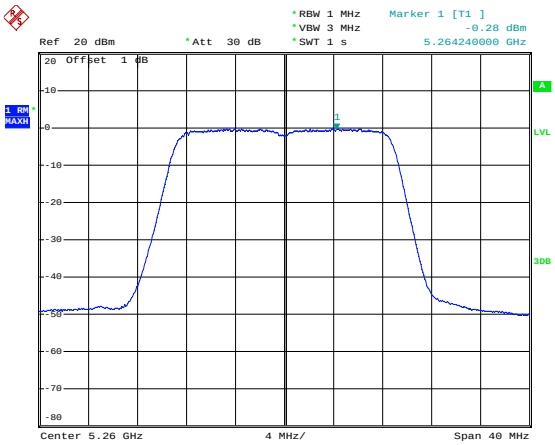
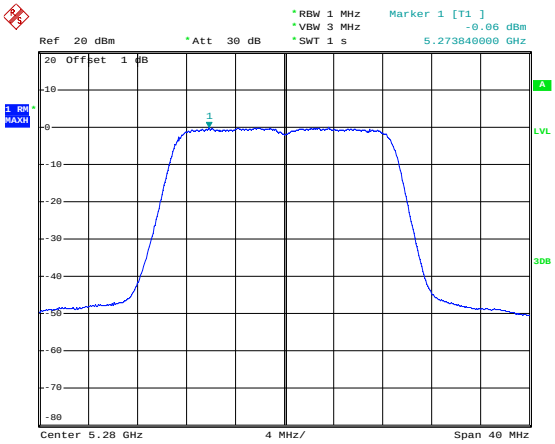
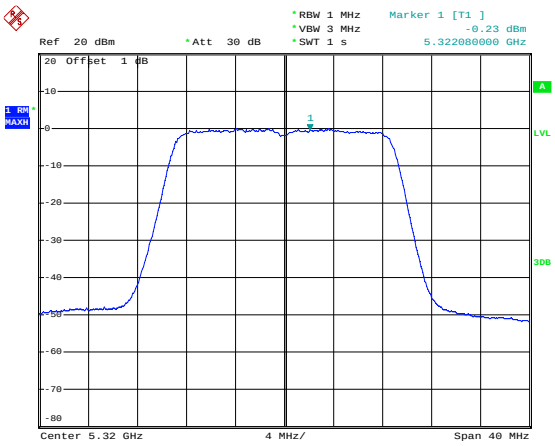
802.11n-HT40-Low	 Date: 6.SEP.2024 09:10:42
802.11n-HT40-High	 Date: 6.SEP.2024 09:11:09
802.11ac-VHT20-Low	 Date: 6.SEP.2024 09:12:30

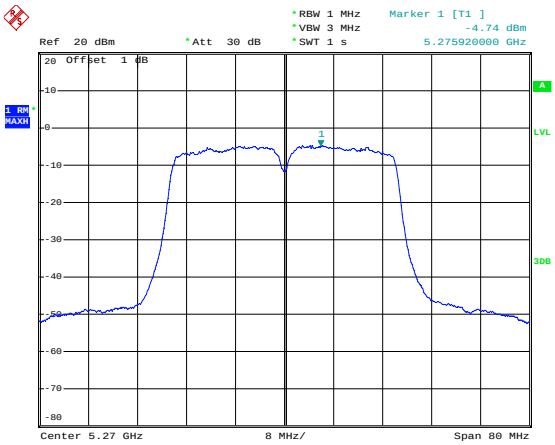
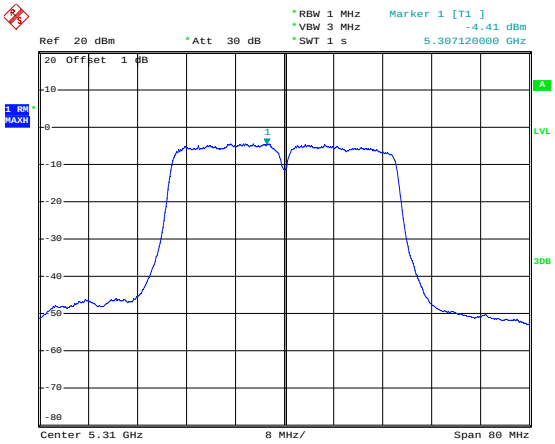
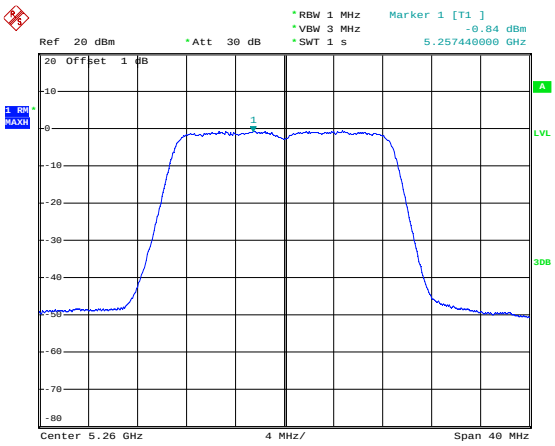
802.11ac-VHT20-Middle	 Date: 6.SEP.2024 09:12:05
802.11ac-VHT20-High	 Date: 6.SEP.2024 09:11:40
802.11ac-VHT40-Low	 Date: 6.SEP.2024 09:09:58

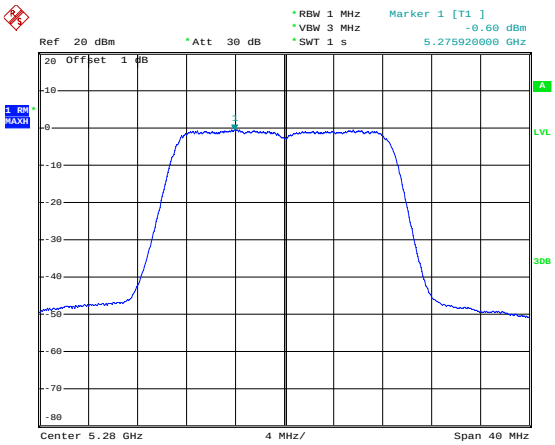
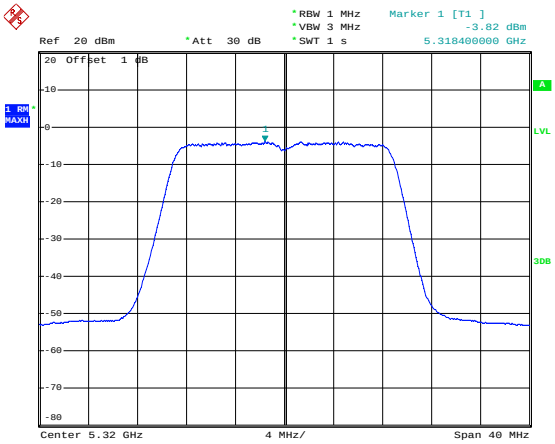
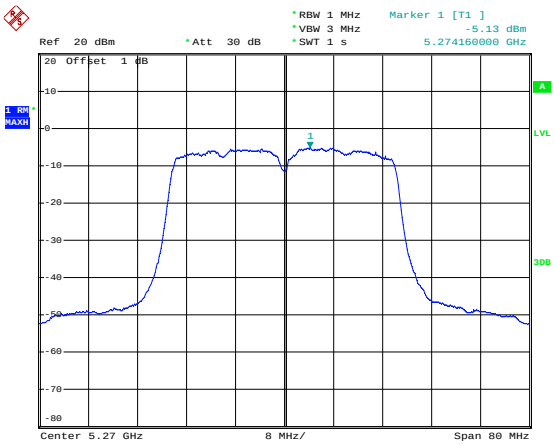
802.11ac-VHT40-High	 Date: 6.SEP.2024 09:08:19
802.11ac-VHT80	 Date: 6.SEP.2024 09:07:38

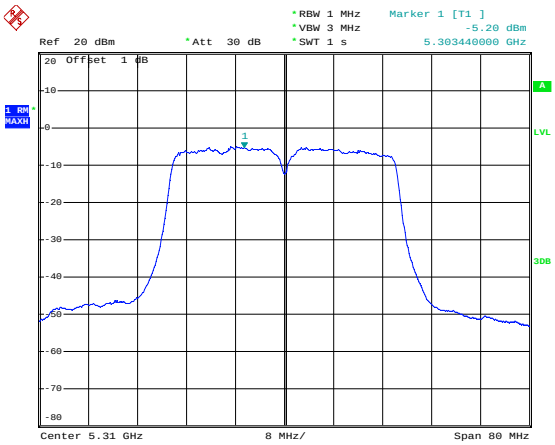
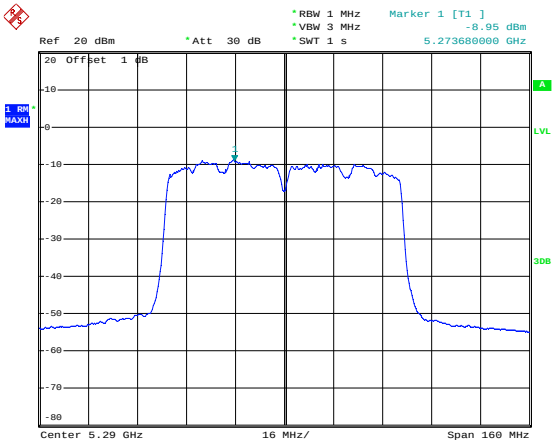
5250-5350MHz

802.11a-Low	 Date: 6.SEP.2024 10:05:07
802.11a-Middle	 Date: 6.SEP.2024 10:04:44
802.11a-High	 Date: 6.SEP.2024 10:04:22

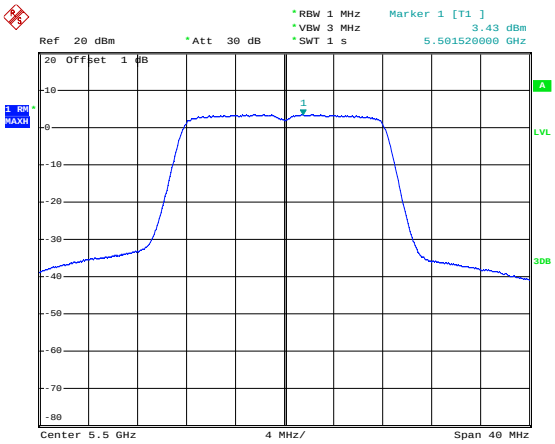
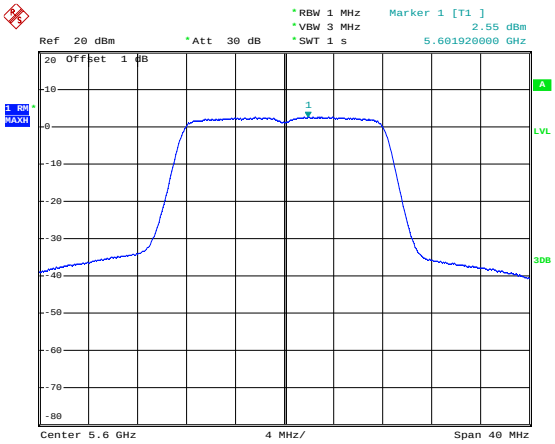
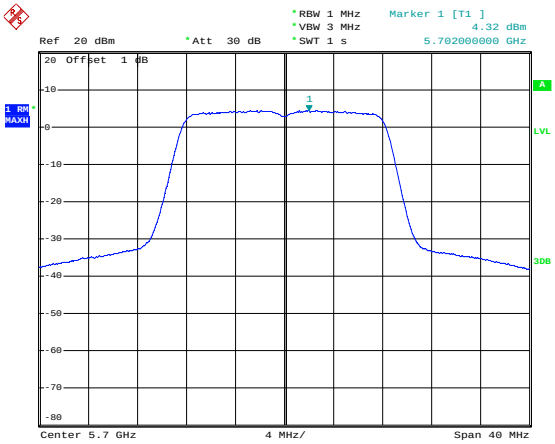
802.11n-HT20-Low	 Date: 6.SEP.2024 10:03:21
802.11n-HT20-Middle	 Date: 6.SEP.2024 10:03:42
802.11n-HT20-High	 Date: 6.SEP.2024 10:04:03

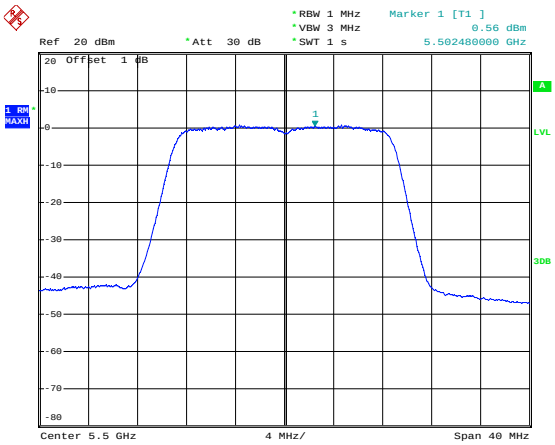
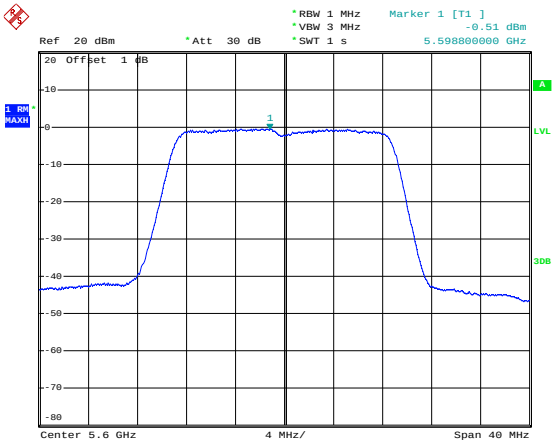
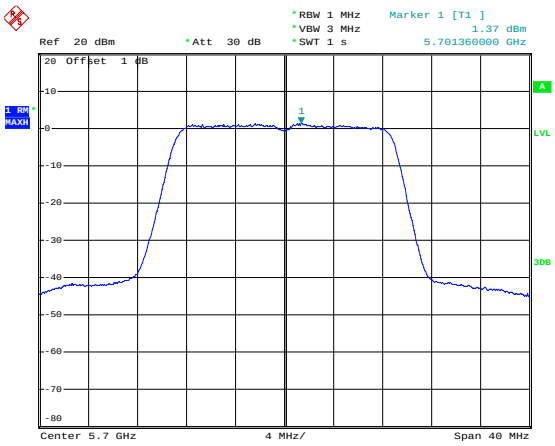
802.11n-HT40-Low	 Date: 6.SEP.2024 10:01:28
802.11n-HT40-High	 Date: 6.SEP.2024 10:01:01
802.11ac-VHT20-Low	 Date: 6.SEP.2024 10:02:48

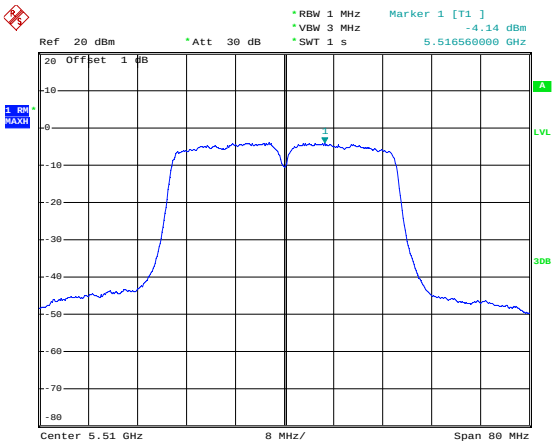
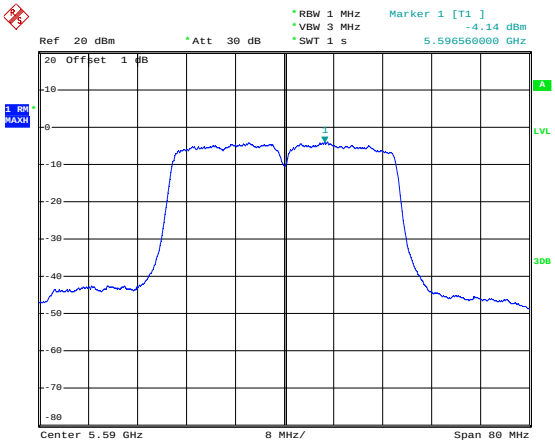
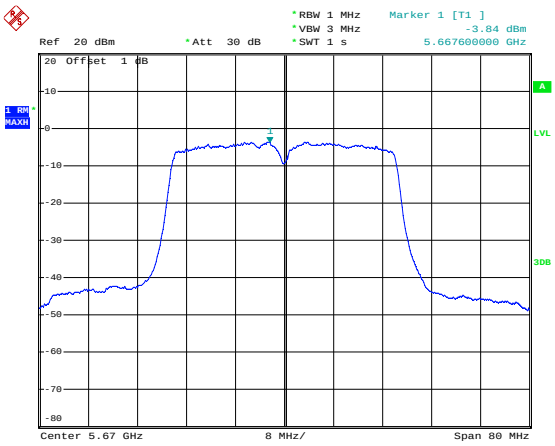
802.11ac-VHT20-Middle	 Date: 6.SEP.2024 10:02:26
802.11ac-VHT20-High	 Date: 6.SEP.2024 10:01:52
802.11ac-VHT40-Low	 Date: 6.SEP.2024 10:00:09

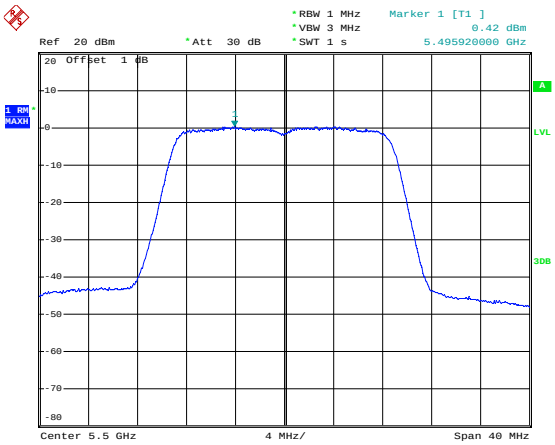
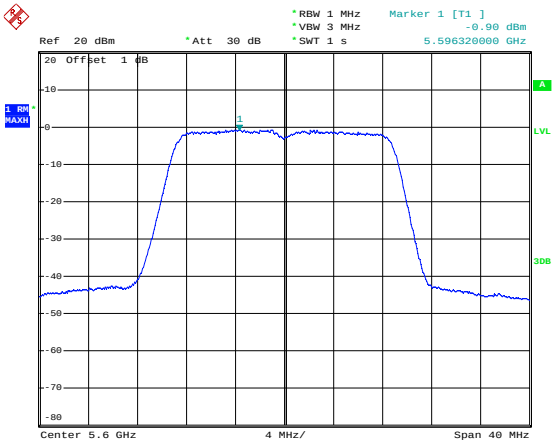
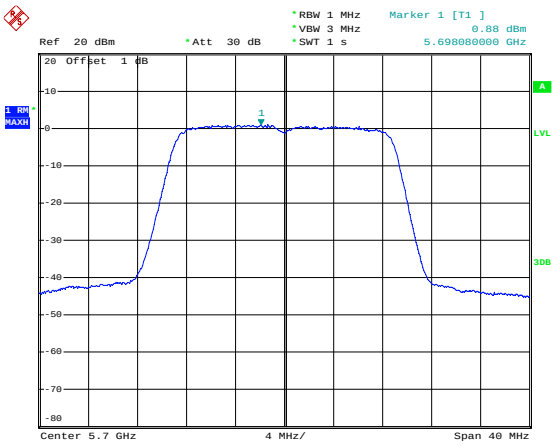
802.11ac-VHT40-High	 Date: 6.SEP.2024 10:00:36
802.11ac-VHT80	 Date: 6.SEP.2024 09:59:36

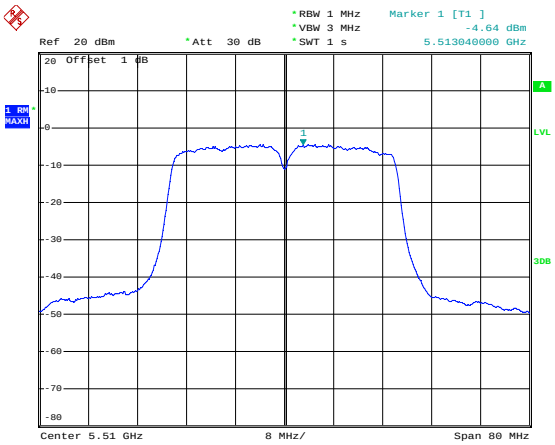
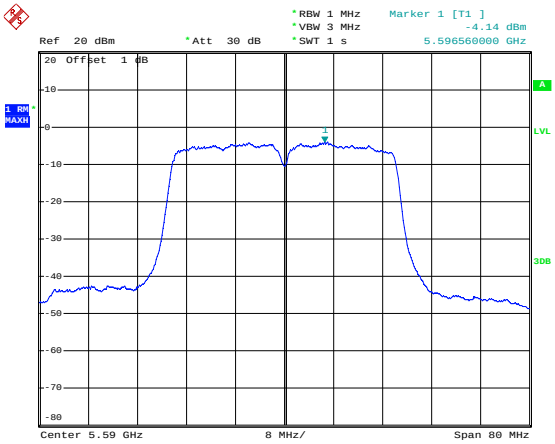
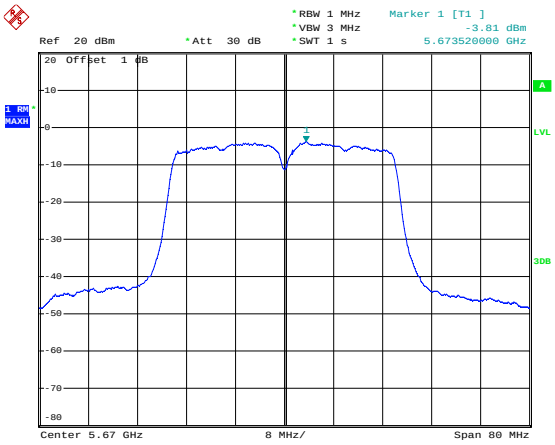
5470-5725MHz

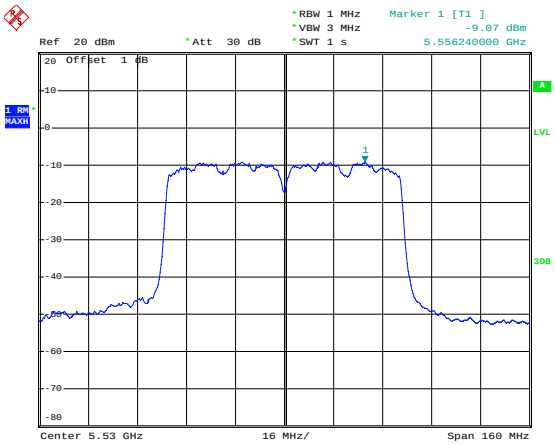
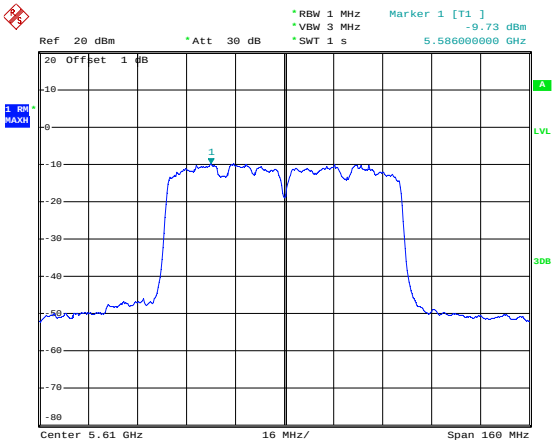
802.11a-Low	 Date: 6.SEP.2024 11:19:55
802.11a-Middle	 Date: 6.SEP.2024 11:19:29
802.11a-High	 Date: 6.SEP.2024 11:19:09

802.11n-HT20-Low	 Date: 6.SEP.2024 11:18:14
802.11n-HT20-Middle	 Date: 6.SEP.2024 11:18:34
802.11n-HT20-High	 Date: 6.SEP.2024 11:18:54

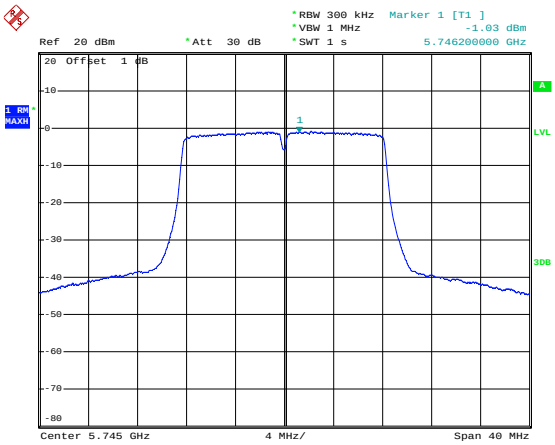
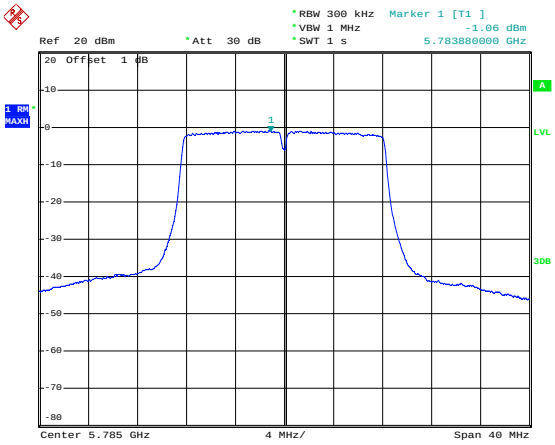
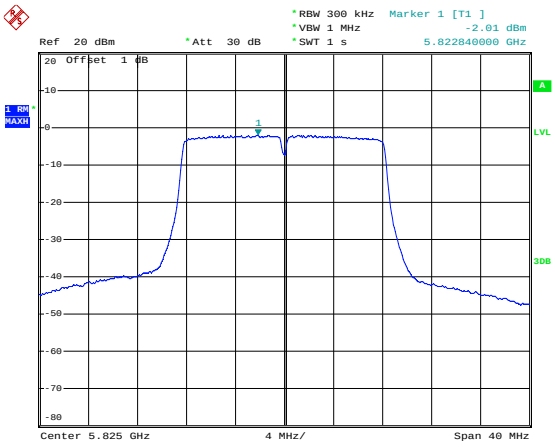
802.11n-HT40-Low	 Date: 6.SEP.2024 11:16:46
802.11n-HT40-Middle	 Date: 6.SEP.2024 11:16:04
802.11n-HT40-High	 Date: 6.SEP.2024 11:15:41

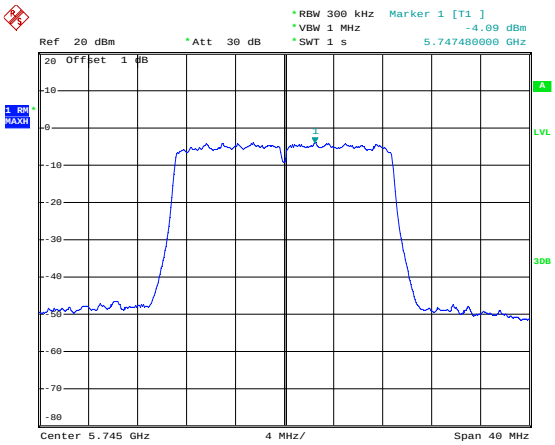
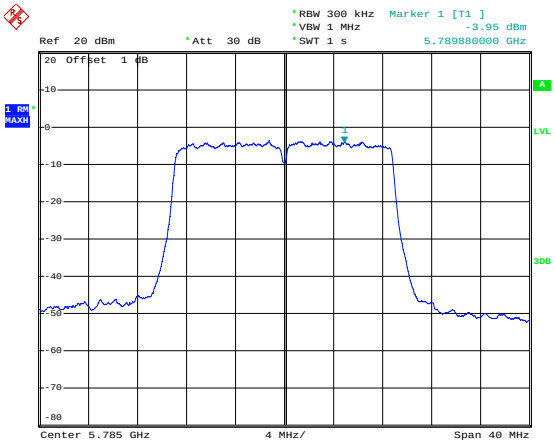
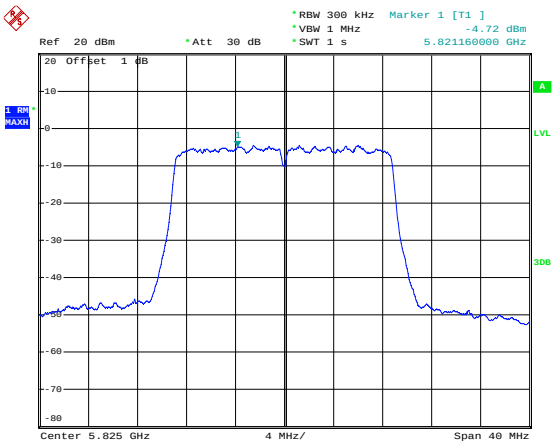
802.11ac-VHT20-Low	 Date: 6.SEP.2024 11:17:52
802.11ac-VHT20-Middle	 Date: 6.SEP.2024 11:17:28
802.11ac-VHT20-High	 Date: 6.SEP.2024 11:17:07

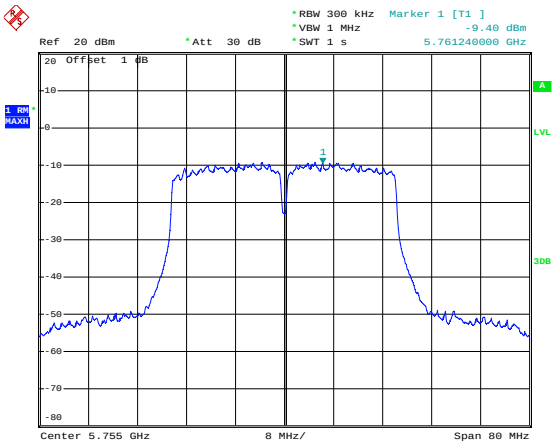
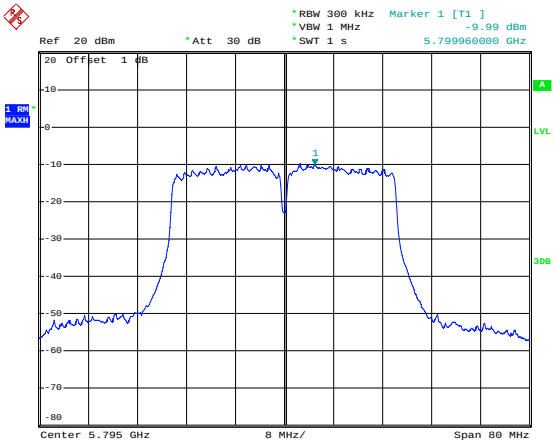
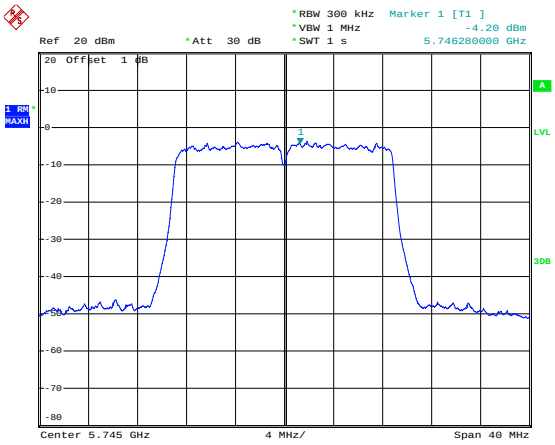
802.11ac-VHT40-Low	 Date: 6.SEP.2024 11:14:35
802.11ac-VHT40-Middle	 Date: 6.SEP.2024 11:16:04
802.11ac-VHT40-High	 Date: 6.SEP.2024 11:15:17

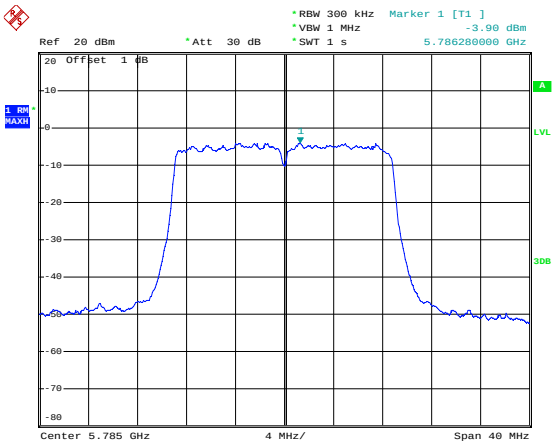
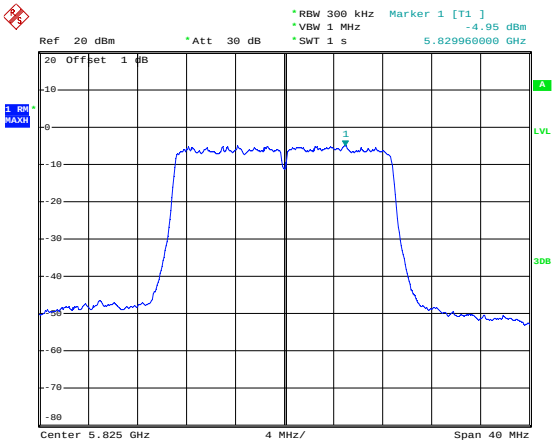
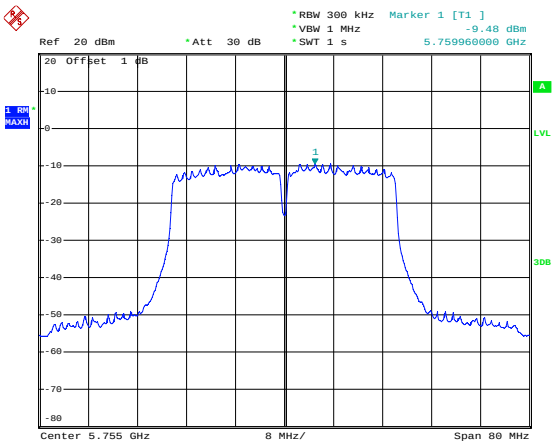
802.11ac-VHT80-Low	 Date: 6.SEP.2024 11:13:41
802.11ac-VHT80-High	 Date: 6.SEP.2024 11:14:09

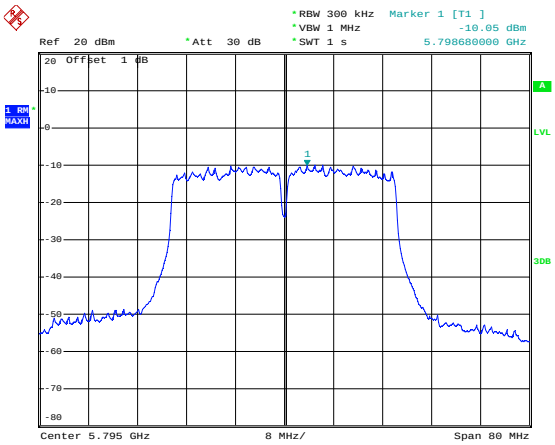
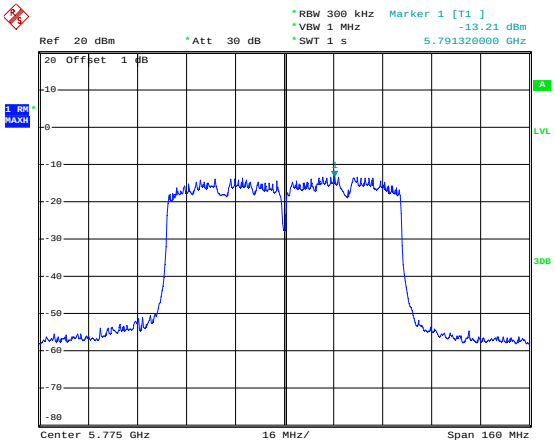
5725-5850MHz

802.11a-Low	
802.11a-Middle	
802.11a-High	

802.11n-HT20-Low	 Date: 6.SEP.2024 14:00:13
802.11n-HT20-Middle	 Date: 6.SEP.2024 13:59:50
802.11n-HT20-High	 Date: 6.SEP.2024 13:59:27

802.11n-HT40-Low	 Date: 6.SEP.2024 13:57:27
802.11n-HT40-High	 Date: 6.SEP.2024 13:57:58
802.11ac-VHT20-Low	 Date: 6.SEP.2024 13:58:21

802.11ac-VHT20-Middle	 Date: 6.SEP.2024 13:58:44
802.11ac-VHT20-High	 Date: 6.SEP.2024 13:59:06
802.11ac-VHT40-Low	 Date: 6.SEP.2024 13:57:04

802.11ac-VHT40-High	
802.11ac-VHT80	

APPENDIX B

Emission Bandwidth and Occupied Bandwidth

U-NII-1:5150-5250MHz						
Test Mode	Test Channel MHz	ANT 1		ANT 2		Result
		26 dB Bandwidth MHz	99% Bandwidth MHz	26 dB Bandwidth MHz	99% Bandwidth MHz	
802.11a	5180	19.04	16.56	18.96	16.48	Pass
	5200	18.88	16.48	19.12	16.48	Pass
	5240	18.88	16.48	18.88	16.48	Pass
802.11n-HT20	5180	19.68	17.76	19.68	17.76	Pass
	5200	19.44	17.76	19.52	17.76	Pass
	5240	19.76	17.68	19.52	17.76	Pass
802.11n-HT40	5190	39.52	36.64	40.00	36.48	Pass
	5230	39.68	36.64	40.20	36.64	Pass
802.11ac-VHT20	5180	19.60	17.68	19.60	17.76	Pass
	5200	19.52	17.76	19.52	17.68	Pass
	5240	19.52	17.76	19.60	17.76	Pass
802.11ac-VHT40	5190	40.00	36.80	40.00	36.64	Pass
	5230	40.20	36.64	40.20	36.48	Pass
802.11ac-VHT80	5210	82.08	75.84	81.72	75.84	Pass

U-NII-2A: 5250-5350MHz						
Test Mode	Test Channel MHz	ANT 1		ANT 2		Result
		26 dB Bandwidth MHz	99% Bandwidth MHz	26 dB Bandwidth MHz	99% Bandwidth MHz	
802.11a	5260	19.04	16.48	19.12	16.48	Pass
	5280	18.96	16.48	19.04	16.48	Pass
	5320	19.04	16.48	18.96	16.56	Pass
802.11n-HT20	5260	19.76	17.84	19.52	17.76	Pass
	5280	19.52	17.68	19.76	17.68	Pass
	5320	19.68	17.84	19.52	17.68	Pass
802.11n-HT40	5270	39.84	36.80	40.20	36.64	Pass
	5310	39.84	36.64	39.84	36.48	Pass
802.11ac-VHT20	5260	19.52	17.76	19.68	17.68	Pass
	5280	19.76	17.76	19.68	17.76	Pass

	5320	19.68	17.76	19.68	17.76	Pass
802.11ac-VHT40	5270	40.20	36.80	40.40	36.96	Pass
	5310	40.60	36.64	39.68	36.64	Pass
802.11ac-VHT80	5290	82.08	75.84	82.08	75.84	Pass

U-NII-2C: 5470-5725MHz						
Test Mode	**Test Channel MHz**	**ANT 1**		**ANT 2**		**Result**
		26 dB Bandwidth MHz	**99% Bandwidth MHz**	**26 dB Bandwidth MHz**	**99% Bandwidth MHz**	
802.11a	5500	19.04	16.48	19.12	16.56	Pass
	5600	19.04	16.48	19.04	16.48	Pass
	5700	18.96	16.48	19.12	16.48	Pass
802.11n-HT20	5500	19.60	17.68	19.52	17.68	Pass
	5600	19.76	17.76	19.68	17.84	Pass
	5700	19.52	17.68	19.60	17.68	Pass
802.11n-HT40	5510	40.40	36.48	40.20	36.64	Pass
	5590	39.52	36.48	40.40	36.96	Pass
	5670	40.00	36.64	39.84	36.96	Pass
802.11ac-VHT20	5500	19.60	17.76	19.60	17.76	Pass
	5600	19.52	17.68	19.68	17.84	Pass
	5700	19.52	17.76	19.60	17.84	Pass
802.11ac-VHT40	5510	39.84	36.48	40.40	36.64	Pass
	5590	39.52	36.48	40.40	36.96	Pass
	5670	39.84	36.48	40.40	36.80	Pass
802.11ac-VHT80	5530	82.08	75.52	82.08	75.52	Pass
	5610	82.08	75.84	82.08	75.84	Pass

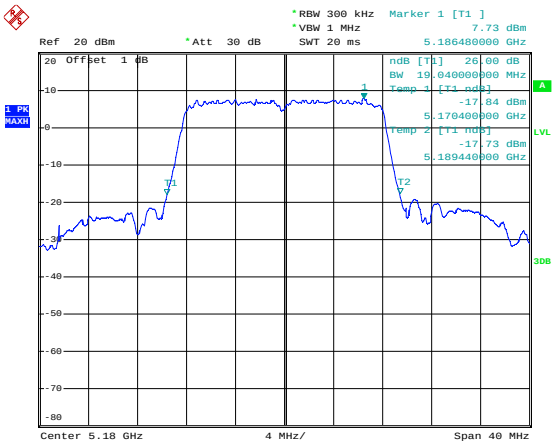
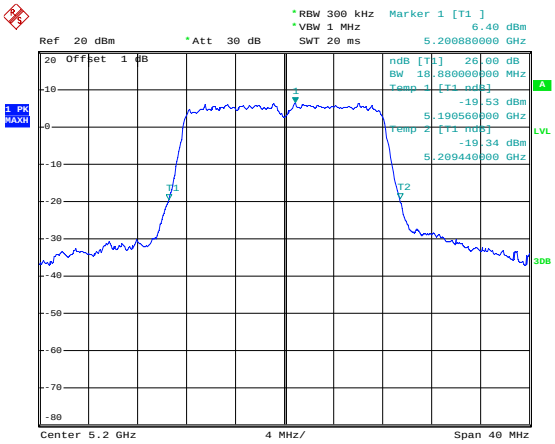
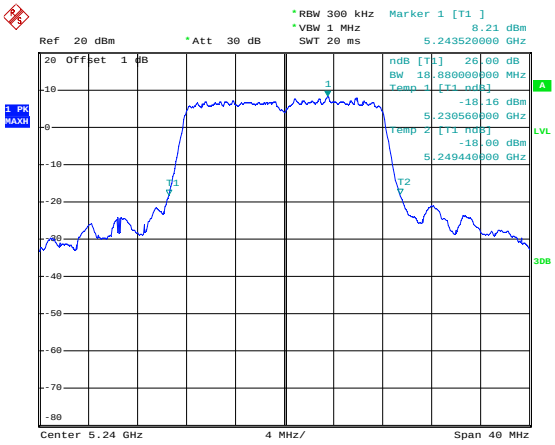
U-NII-3: 5725-5850MHz						
Test Mode	**Test Channel MHz**	**ANT 1**		**ANT 2**		**Limit kHz**
		6 dB Bandwidth MHz	**99% Bandwidth MHz**	**6 dB Bandwidth MHz**	**99% Bandwidth MHz**	
802.11a	5745	16.48	16.48	16.48	16.48	≥500
	5785	16.56	16.48	16.56	16.56	≥500

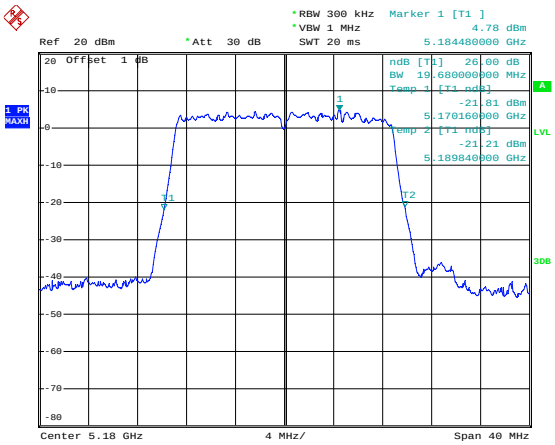
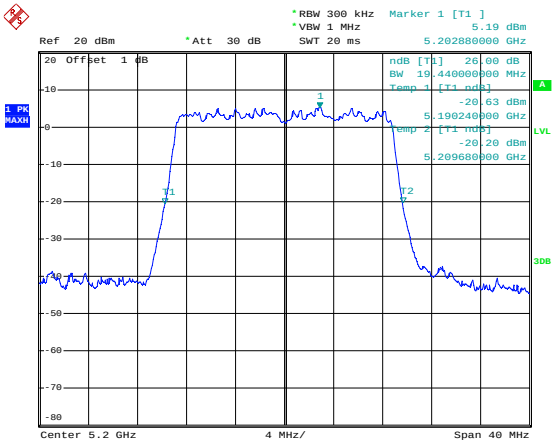
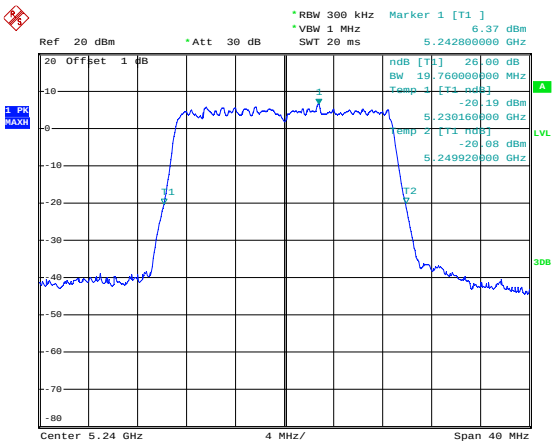
	5825	16.56	16.56	16.56	16.48	≥500
802.11n-HT20	5745	17.68	17.68	17.84	17.76	≥500
	5785	17.68	17.76	17.84	17.76	≥500
	5825	17.84	17.76	17.60	17.76	≥500
802.11n-HT40	5755	36.00	36.80	35.84	36.80	≥500
	5795	35.84	36.64	36.48	36.48	≥500
802.11ac-VHT20	5745	17.92	17.76	17.76	17.76	≥500
	5785	17.76	17.76	17.84	17.84	≥500
	5825	17.84	17.84	17.68	17.76	≥500
802.11ac-VHT40	5755	36.00	36.80	35.52	36.80	≥500
	5795	36.16	36.48	36.00	36.64	≥500
802.11ac-VHT80	5775	76.48	75.84	76.16	75.84	≥500

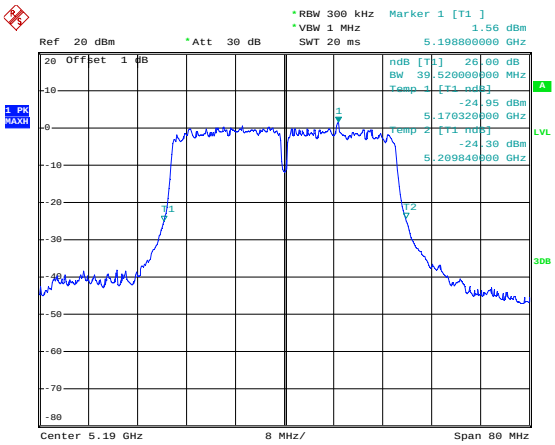
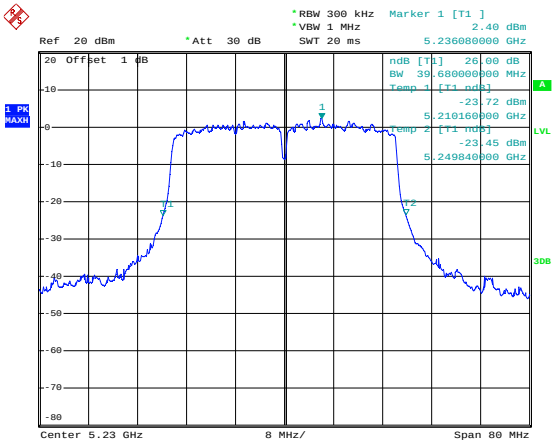
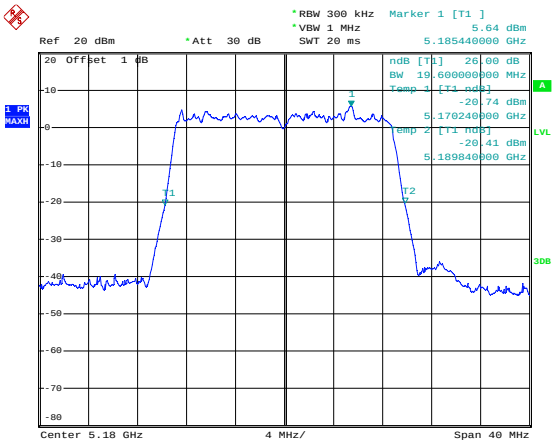
ANT 1

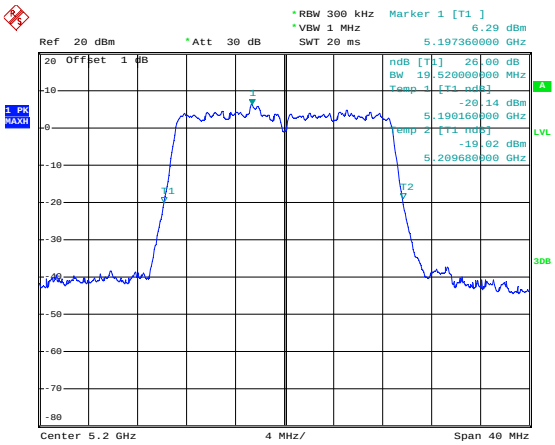
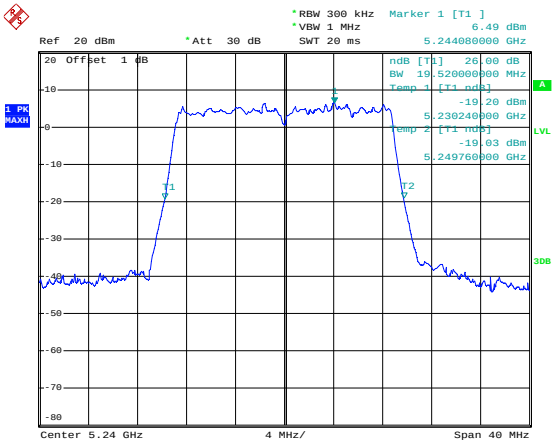
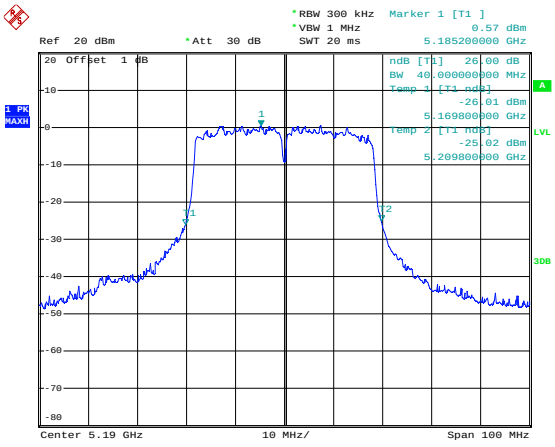
26 dB BandwidthMHz

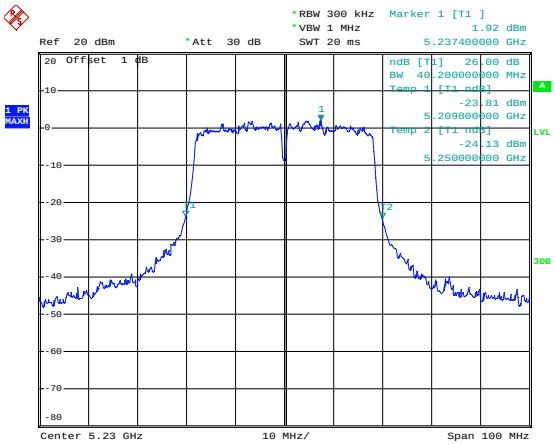
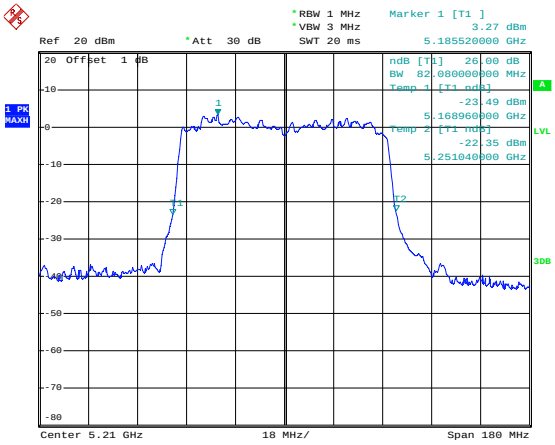
5150-5250MHz

802.11a-Low	
802.11a-Middle	
802.11a-High	

802.11n-HT20-Low	
802.11n-HT20-Middle	
802.11n-HT20-High	

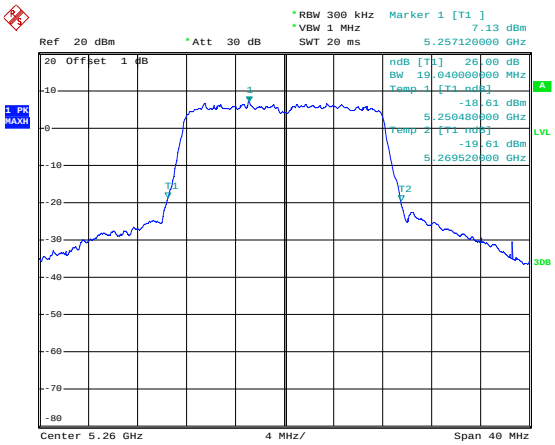
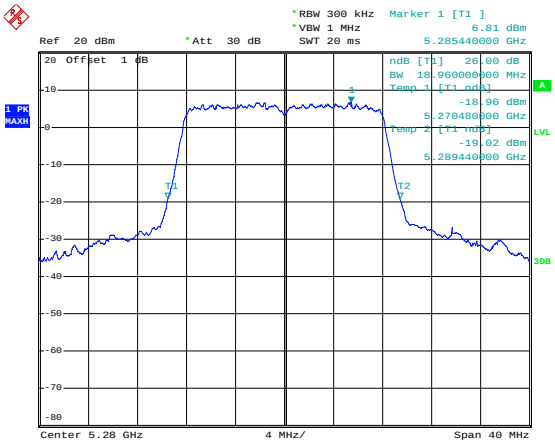
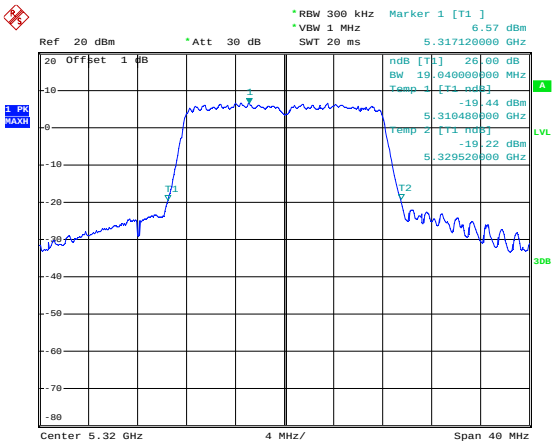
802.11n-HT40-Low	
802.11n-HT40-High	
802.11ac-VHT20-Low	

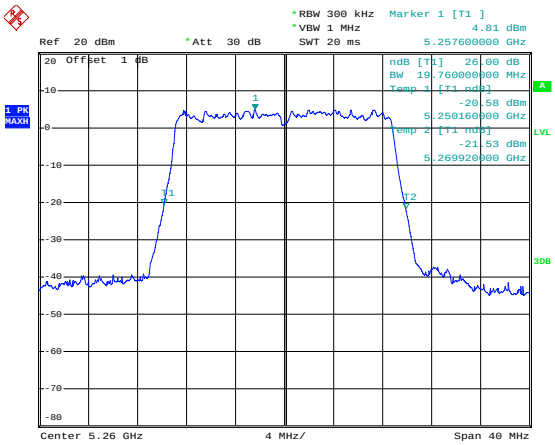
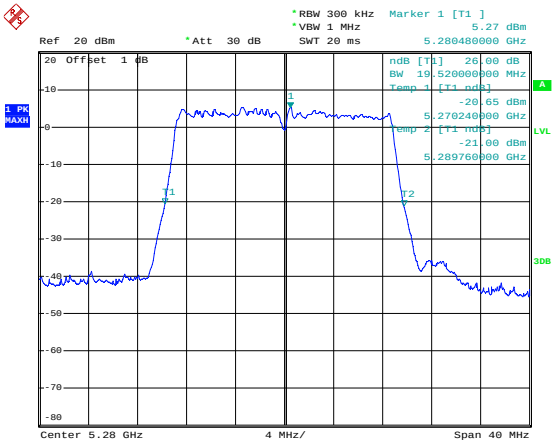
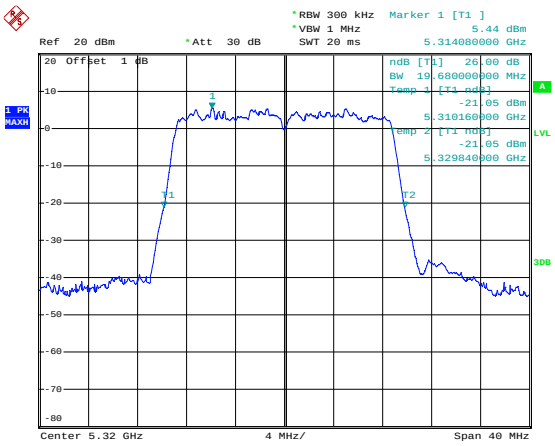
802.11ac-VHT20-Middle	
802.11ac-VHT20-High	
802.11ac-VHT40-Low	

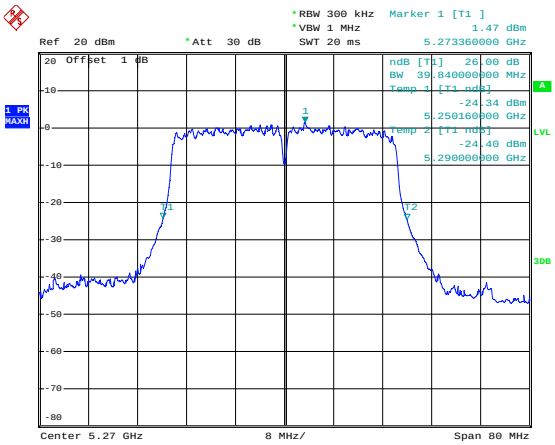
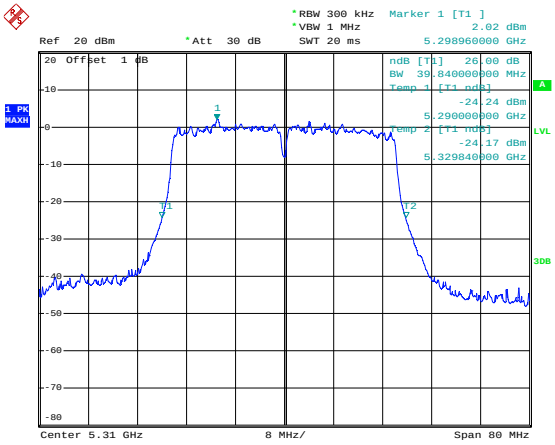
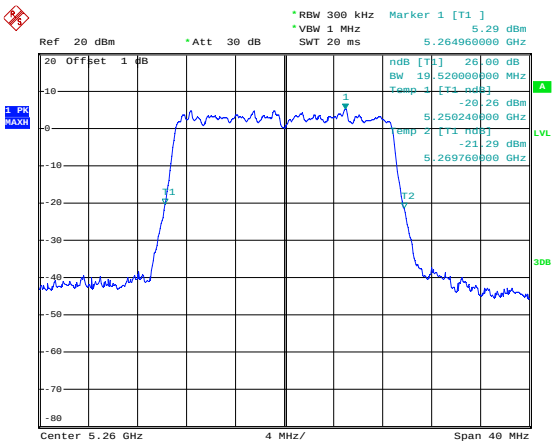
802.11ac-VHT40-High	
802.11ac-VHT80	

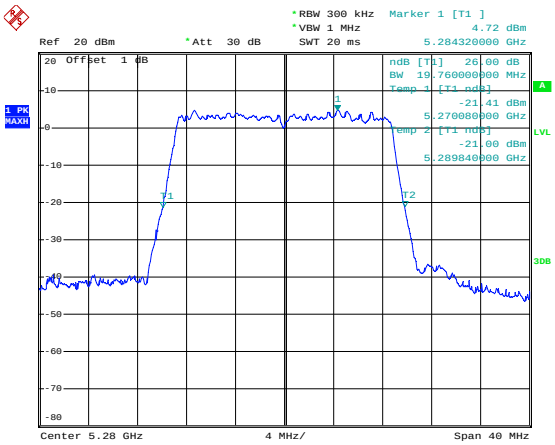
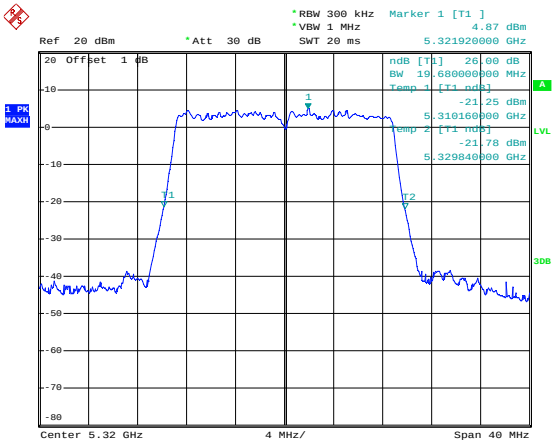
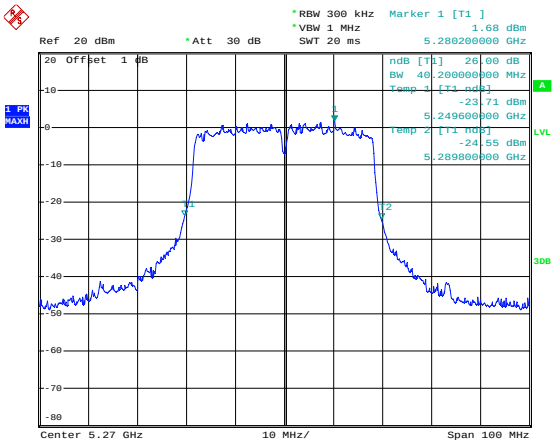
26 dB BandwidthMHz

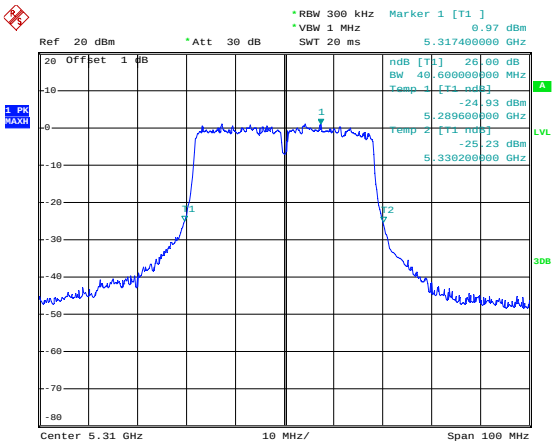
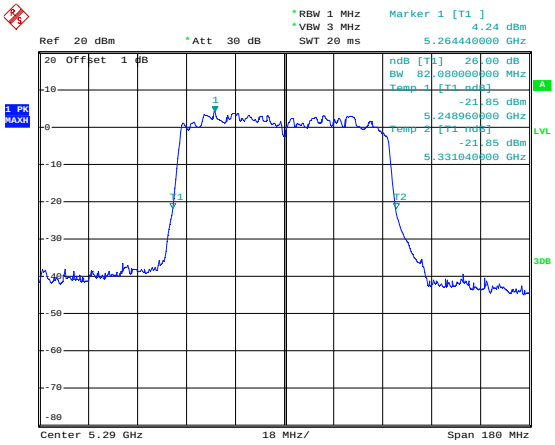
5250-5350MHz

802.11a-Low	
802.11a-Middle	
802.11a-High	

802.11n-HT20-Low	
802.11n-HT20-Middle	
802.11n-HT20-High	

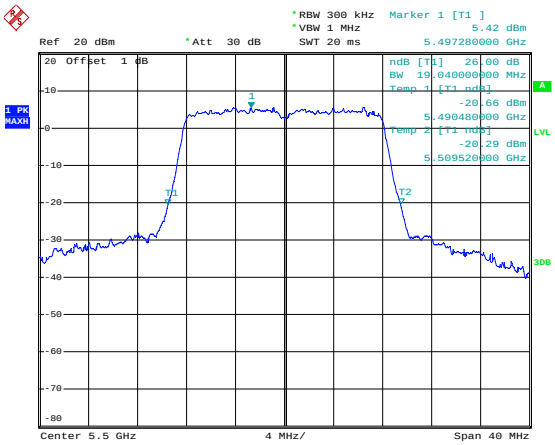
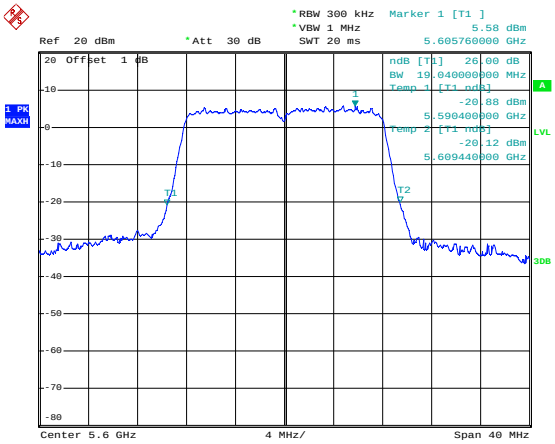
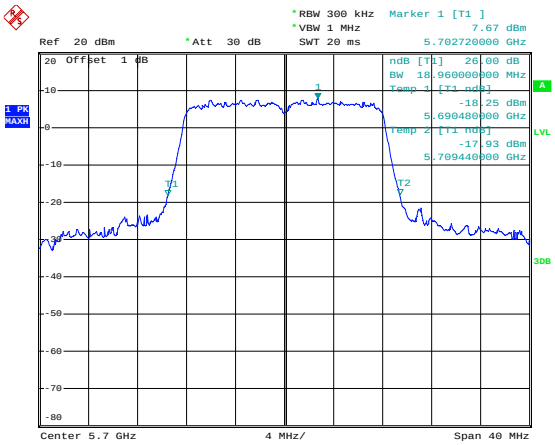
802.11n-HT40-Low	
802.11n-HT40-High	
802.11ac-VHT20-Low	

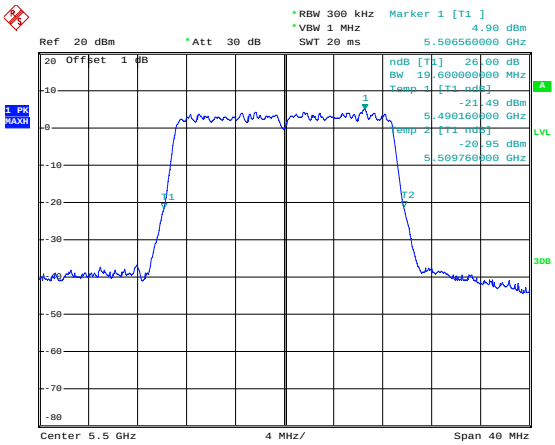
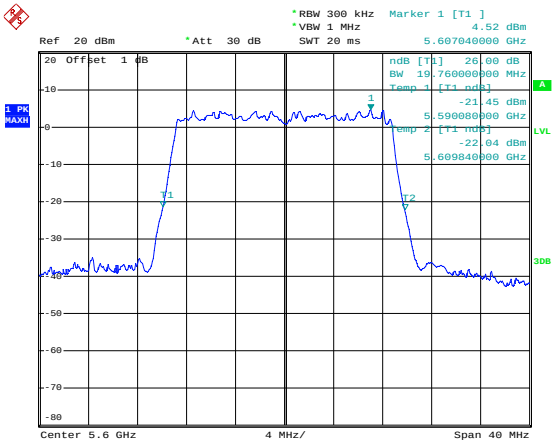
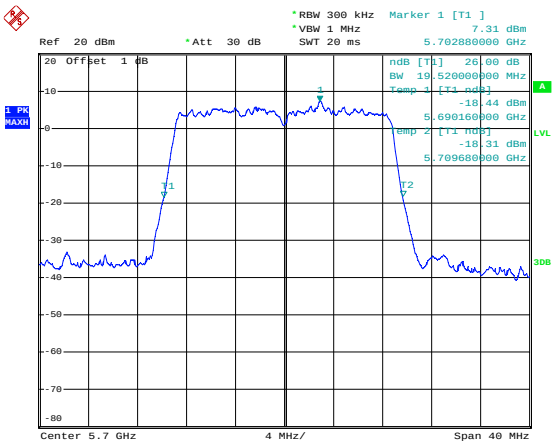
802.11ac-VHT20-Middle	 Date: 5.SEP.2024 16:44:07
802.11ac-VHT20-High	 Date: 5.SEP.2024 16:44:30
802.11ac-VHT40-Low	 Date: 5.SEP.2024 16:46:44

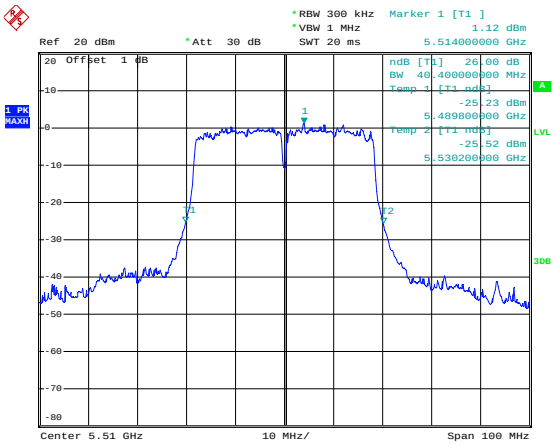
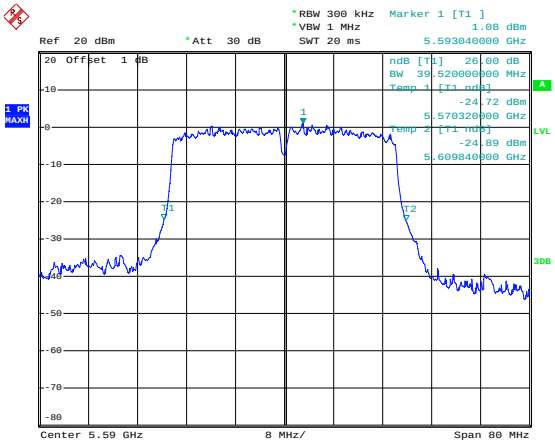
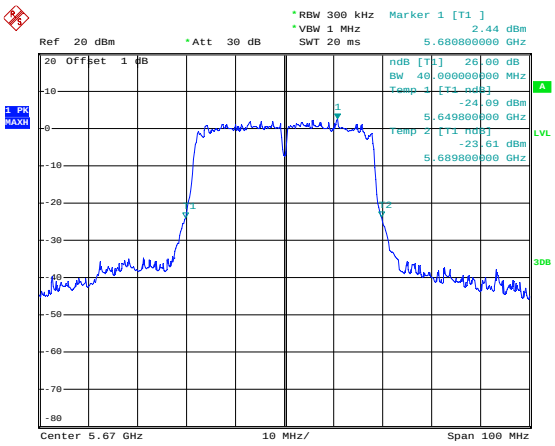
802.11ac-VHT40-High	
802.11ac-VHT80	

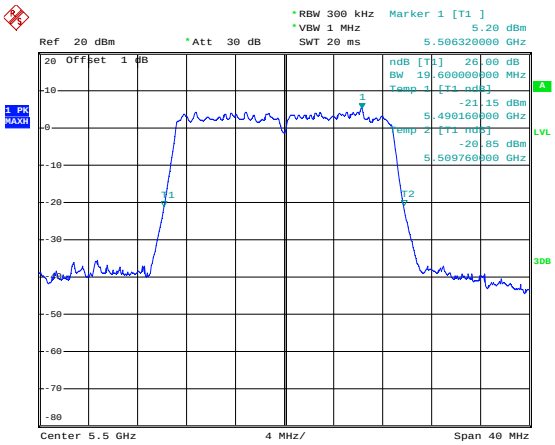
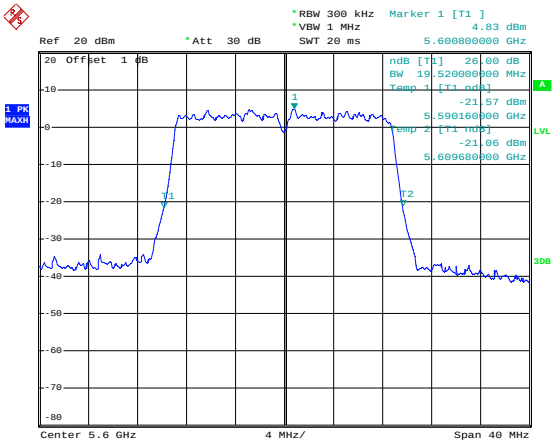
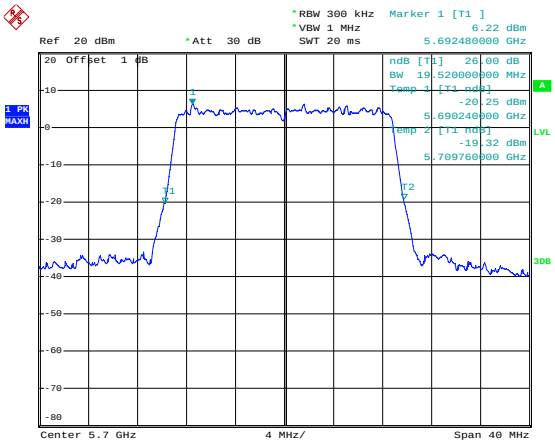
26 dB BandwidthMHz

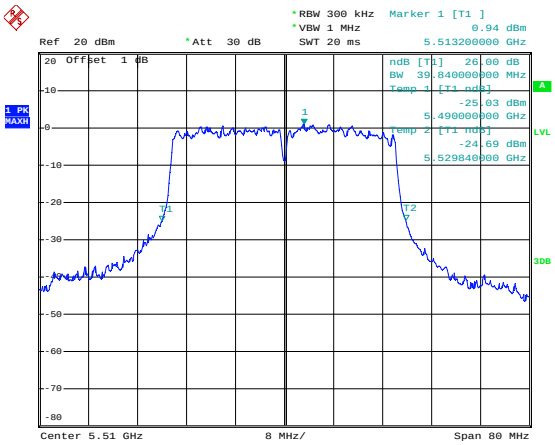
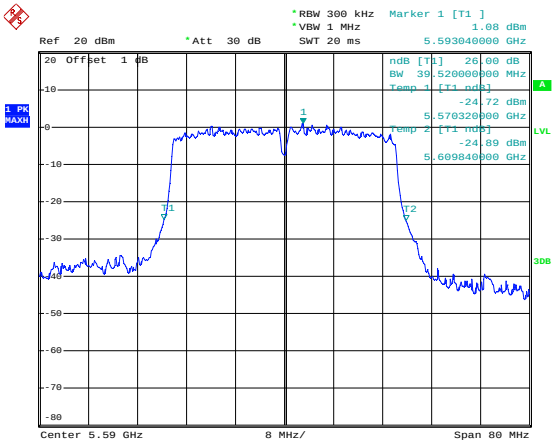
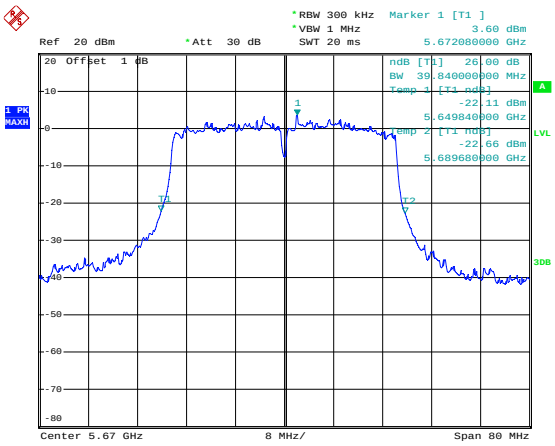
5470-5725MHz

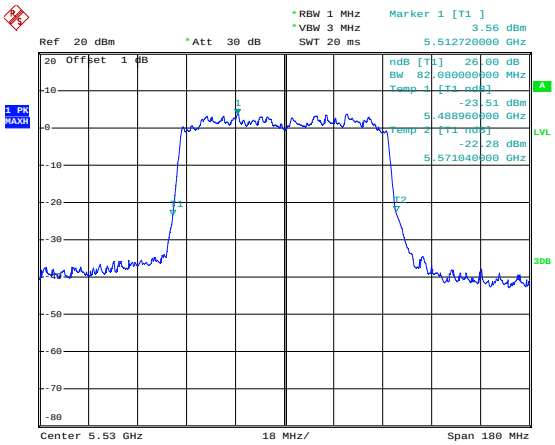
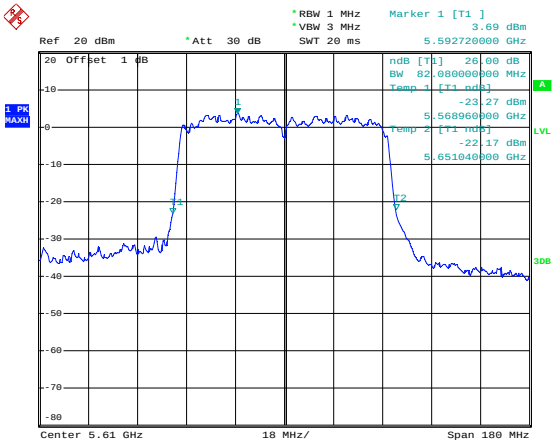
802.11a-Low	
802.11a-Middle	
802.11a-High	

802.11n-HT20-Low	 Date: 5.SEP.2024 19:11:25
802.11n-HT20-Middle	 Date: 5.SEP.2024 19:11:52
802.11n-HT20-High	 Date: 5.SEP.2024 19:12:20

802.11n-HT40-Low	 Date: 5.SEP.2024 19:07:30
802.11n-HT40-Middle	 Date: 5.SEP.2024 19:08:14
802.11n-HT40-High	 Date: 5.SEP.2024 19:09:24

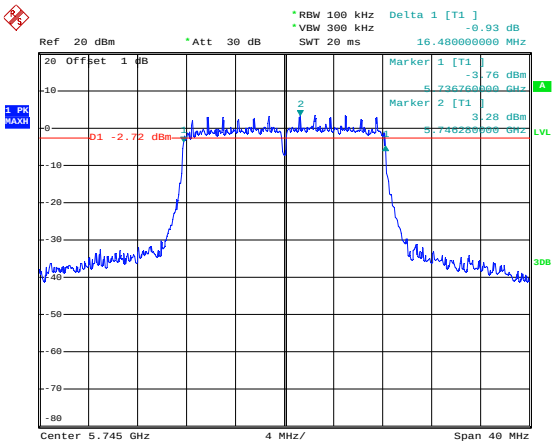
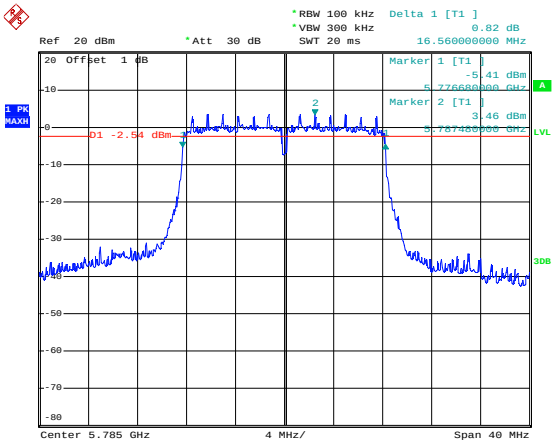
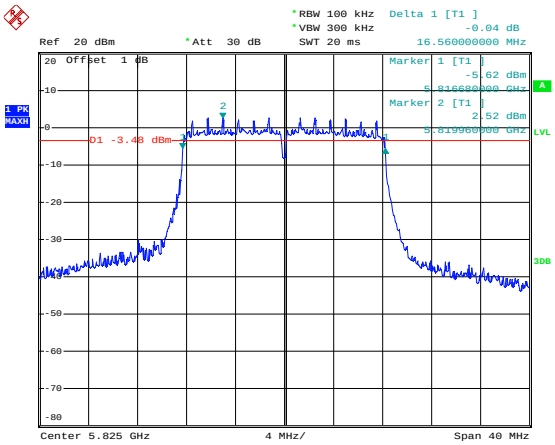
802.11ac-VHT20-Low	 Date: 5.SEP.2024 19:10:55
802.11ac-VHT20-Middle	 Date: 5.SEP.2024 19:10:30
802.11ac-VHT20-High	 Date: 5.SEP.2024 19:10:06

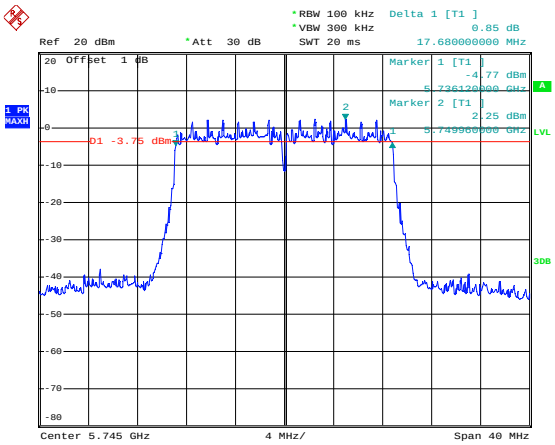
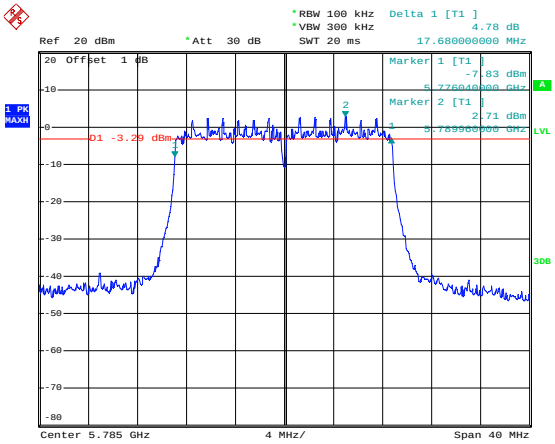
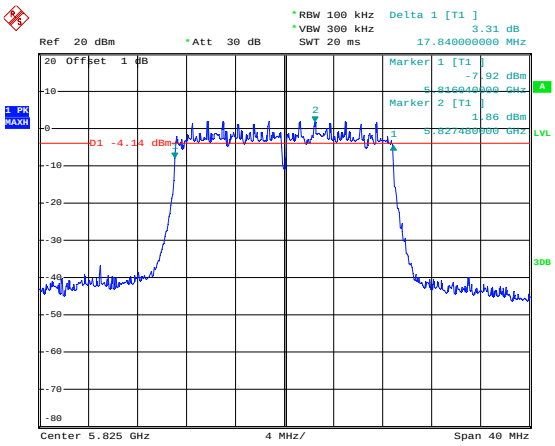
802.11ac-VHT40-Low	
802.11ac-VHT40-Middle	
802.11ac-VHT40-High	

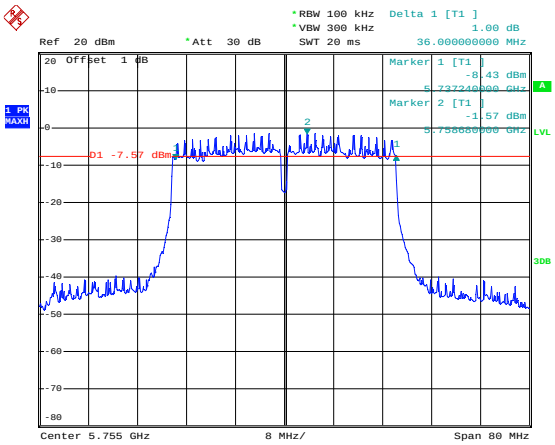
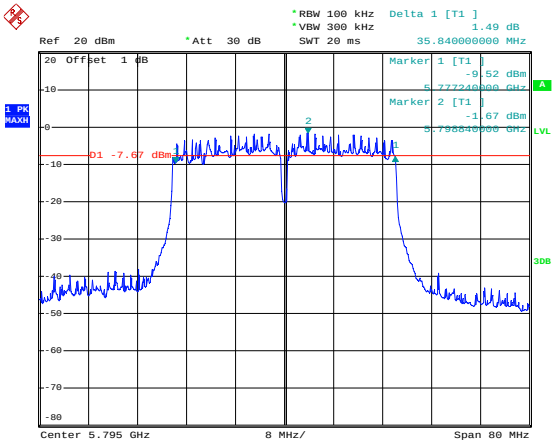
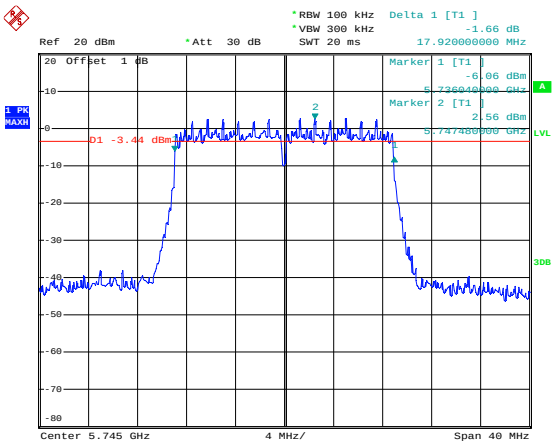
802.11ac-VHT80-Low	 Date: 5.SEP.2024 19:04:45
802.11ac-VHT80-High	 Date: 5.SEP.2024 19:04:14

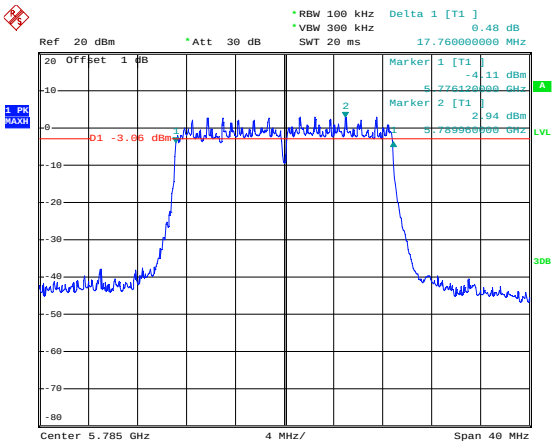
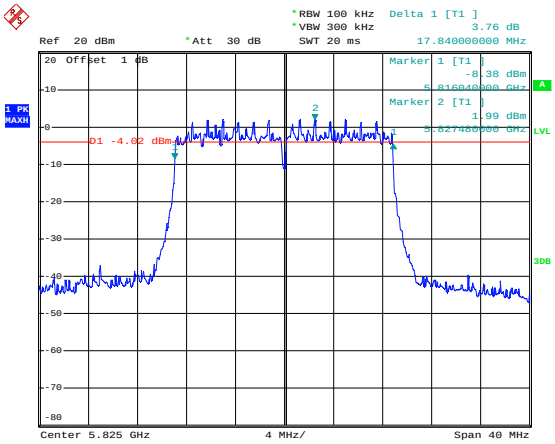
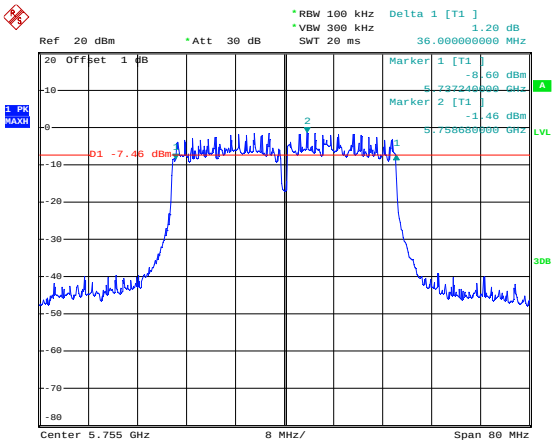
6 dB BandwidthMHz

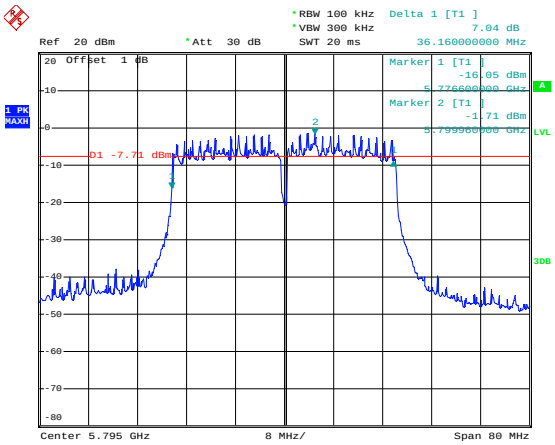
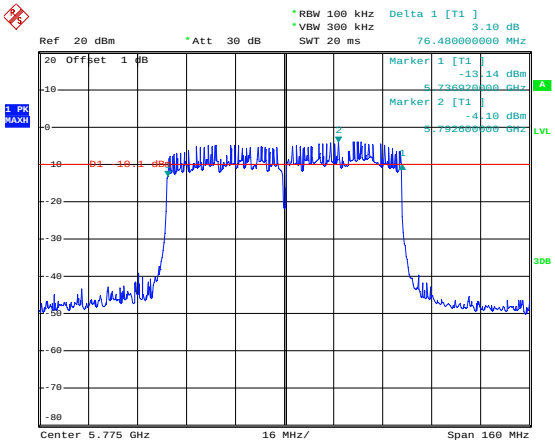
5725-5850MHz

802.11a-Low	 Date: 5.SEP.2024 20:11:31
802.11a-Middle	 Date: 5.SEP.2024 20:12:30
802.11a-High	 Date: 5.SEP.2024 20:13:16

802.11n-HT20-Low	 Date: 5.SEP.2024 20:10:55
802.11n-HT20-Middle	 Date: 5.SEP.2024 20:10:09
802.11n-HT20-High	 Date: 5.SEP.2024 20:09:11

802.11n-HT40-Low	 Date: 5.SEP.2024 20:05:46
802.11n-HT40-High	 Date: 5.SEP.2024 20:05:03
802.11ac-VHT20-Low	 Date: 5.SEP.2024 20:06:47

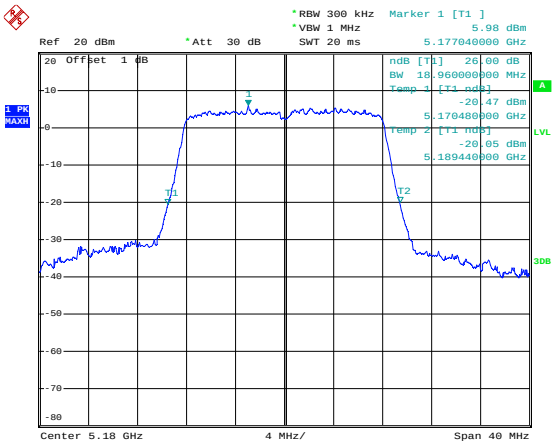
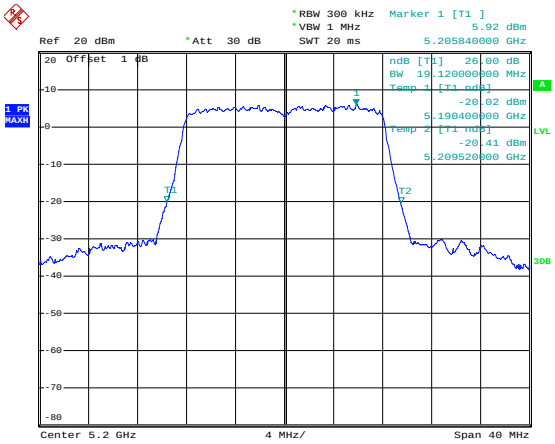
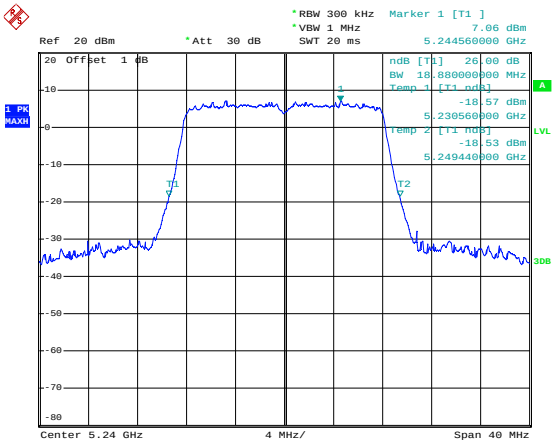
802.11ac-VHT20-Middle	 Date: 5.SEP.2024 20:07:37
802.11ac-VHT20-High	 Date: 5.SEP.2024 20:08:16
802.11ac-VHT40-Low	 Date: 5.SEP.2024 20:03:28

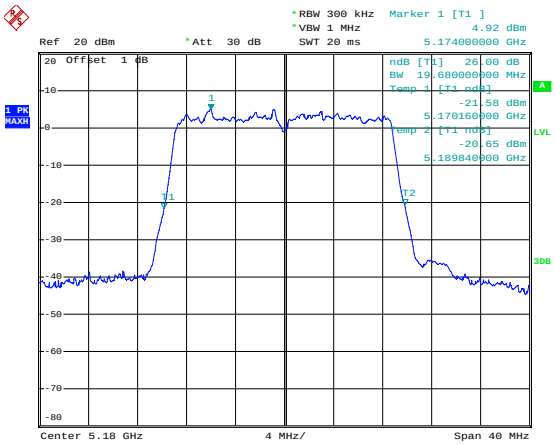
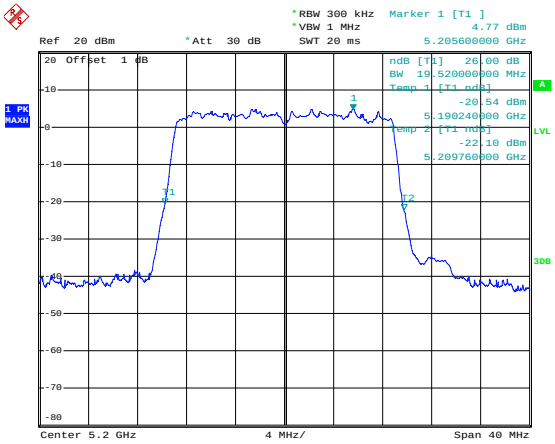
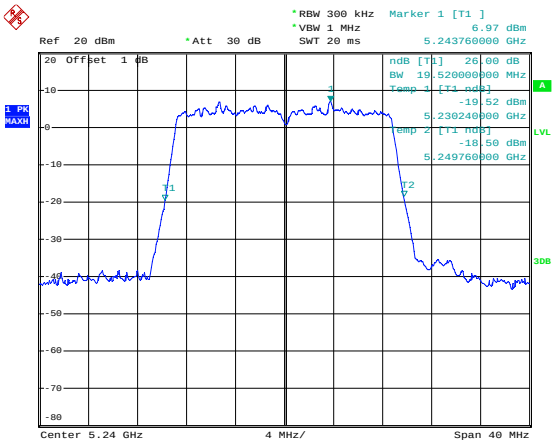
802.11ac-VHT40-High	 Date: 5.SEP.2024 20:04:07
802.11ac-VHT80	 Date: 5.SEP.2024 20:02:40

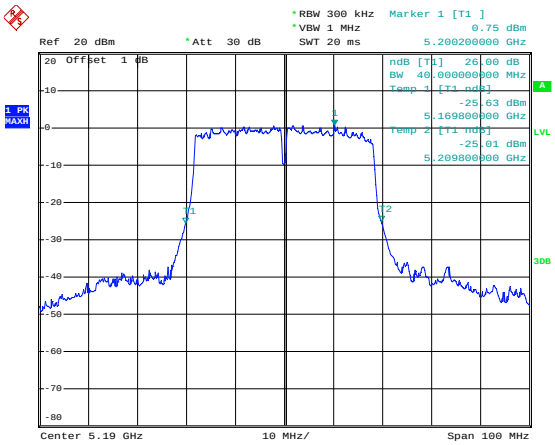
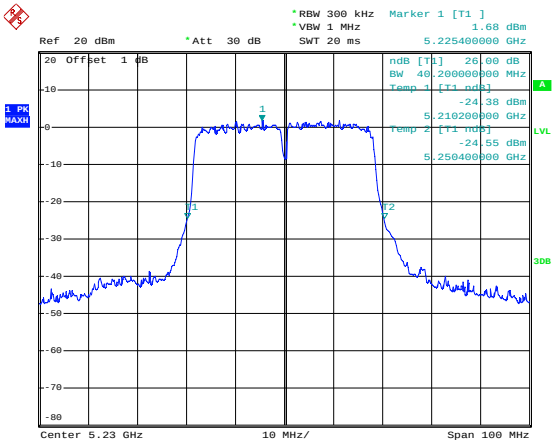
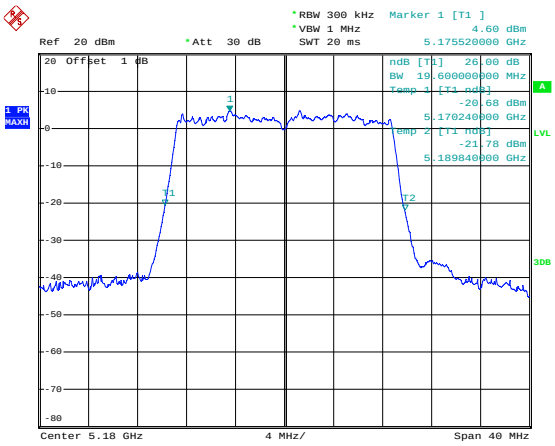
ANT 2

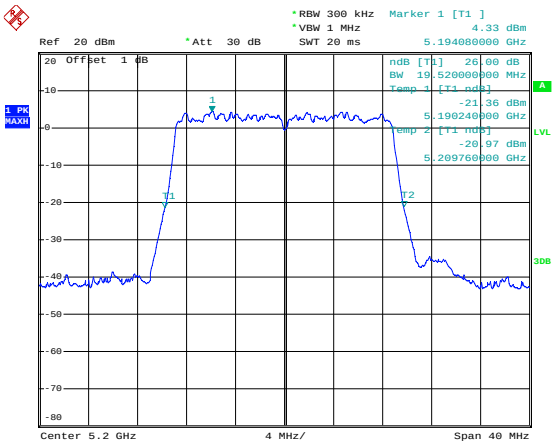
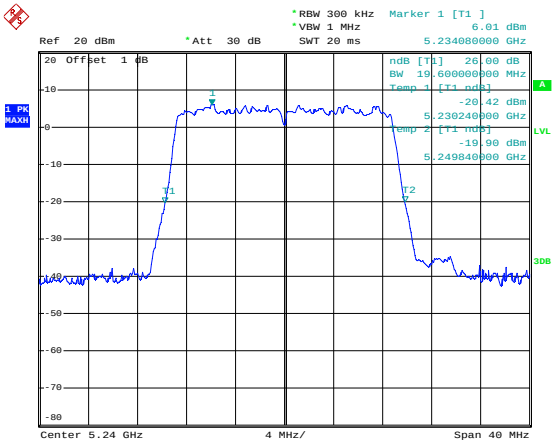
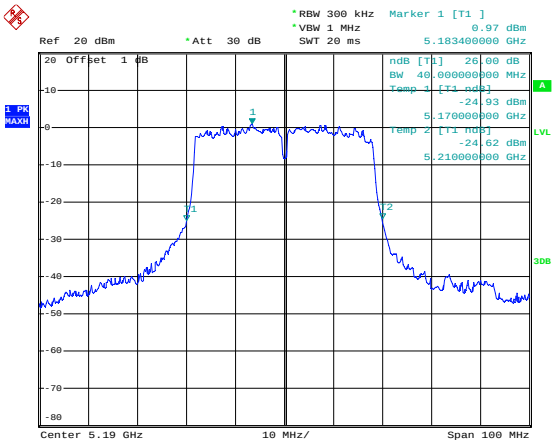
26 dB BandwidthMHz

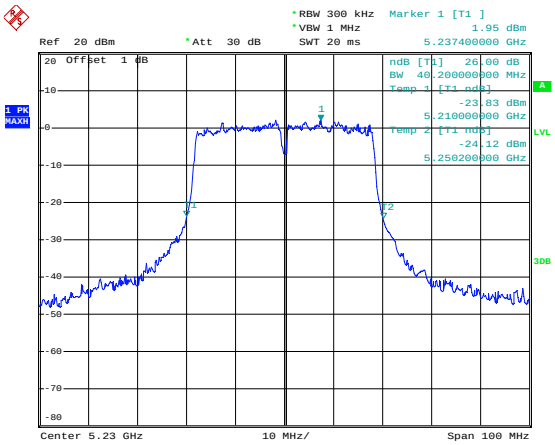
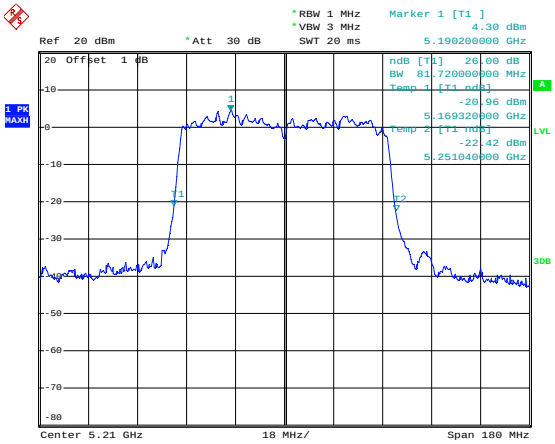
5150-5250MHz

802.11a-Low	
802.11a-Middle	
802.11a-High	

802.11n-HT20-Low	 Date: 6.SEP.2024 09:30:27
802.11n-HT20-Middle	 Date: 6.SEP.2024 09:30:50
802.11n-HT20-High	 Date: 6.SEP.2024 09:31:12

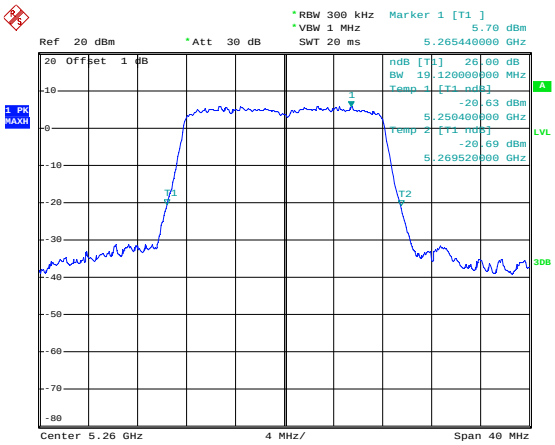
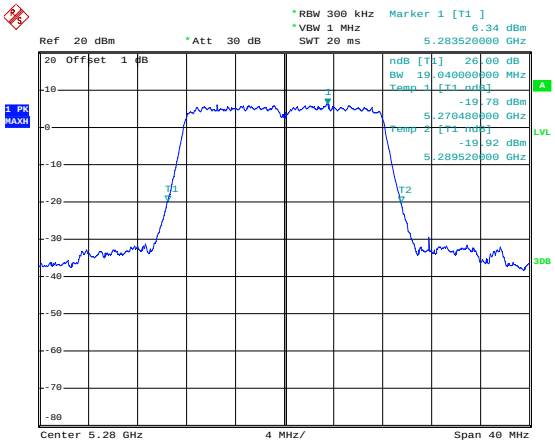
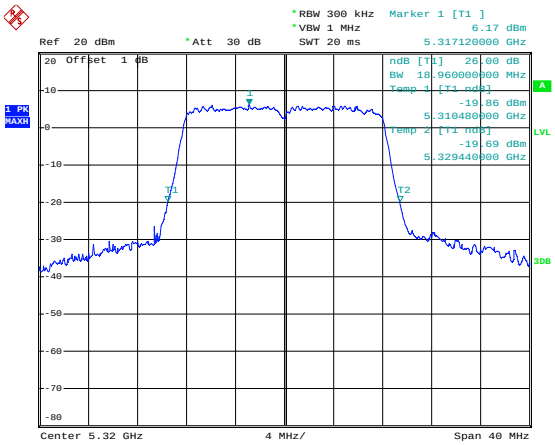
802.11n-HT40-Low	 Date: 6.SEP.2024 09:28:32
802.11n-HT40-High	 Date: 6.SEP.2024 09:28:07
802.11ac-VHT20-Low	 Date: 6.SEP.2024 09:30:00

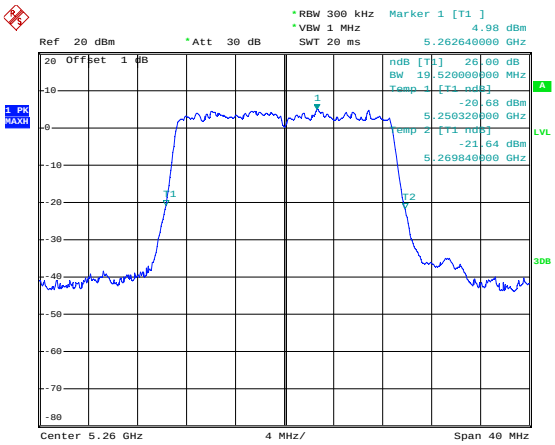
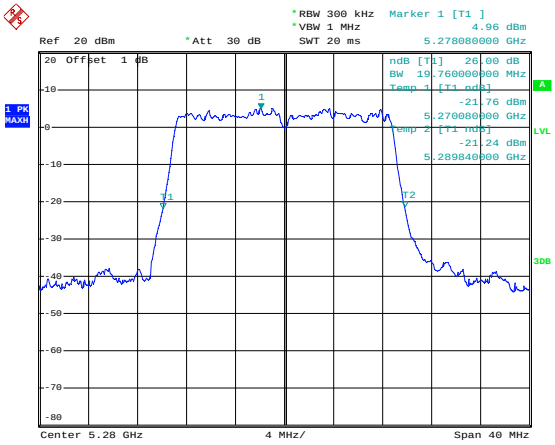
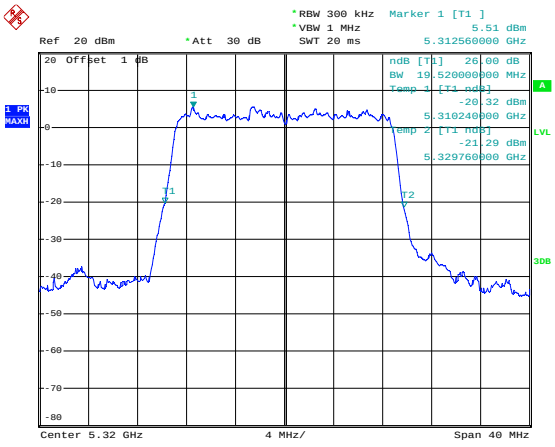
802.11ac-VHT20-Middle	
802.11ac-VHT20-High	
802.11ac-VHT40-Low	

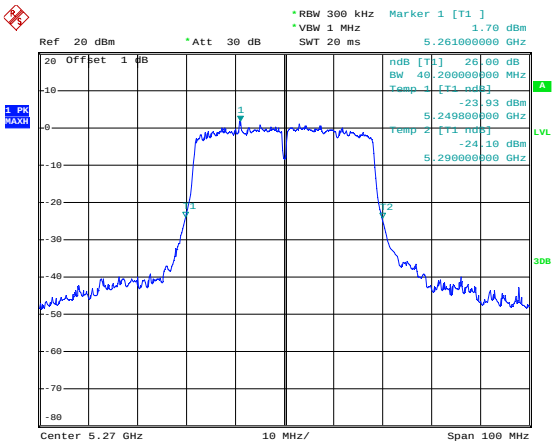
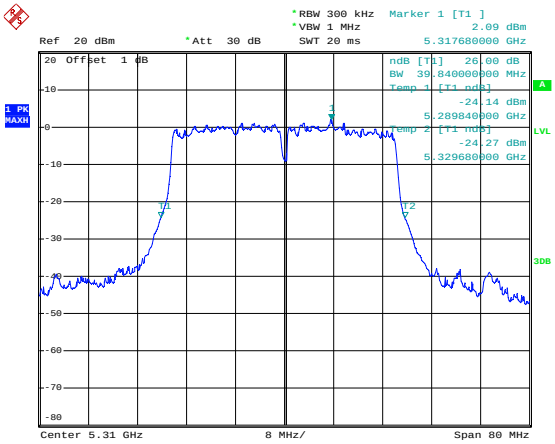
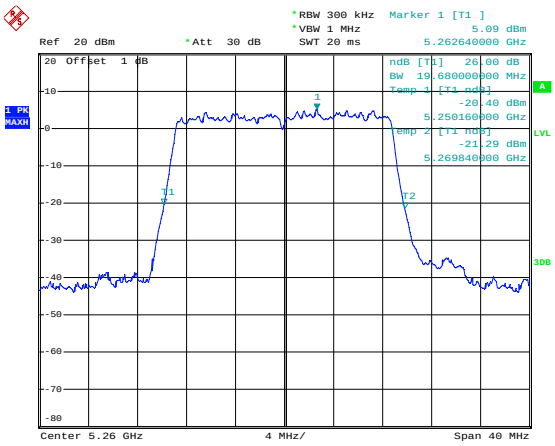
802.11ac-VHT40-High	 Date: 6.SEP.2024 09:27:32
802.11ac-VHT80	 Date: 6.SEP.2024 09:43:57

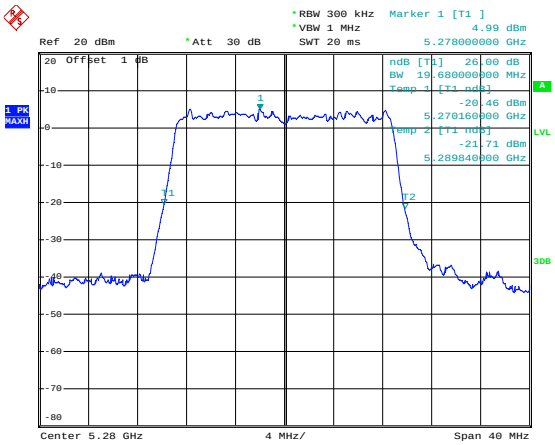
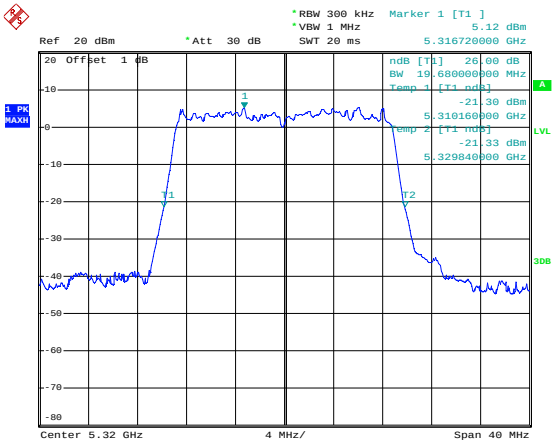
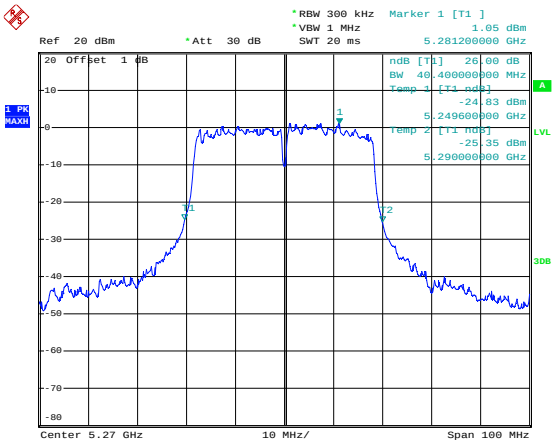
26 dB BandwidthMHz

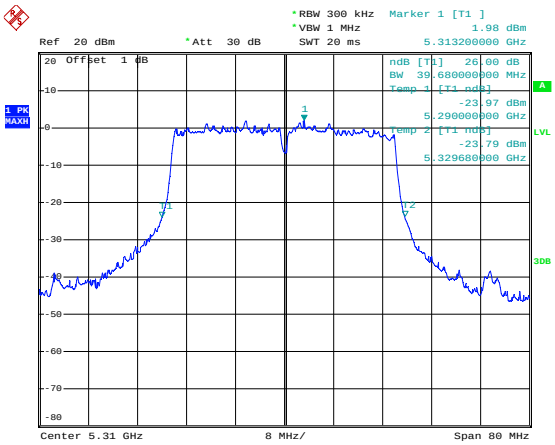
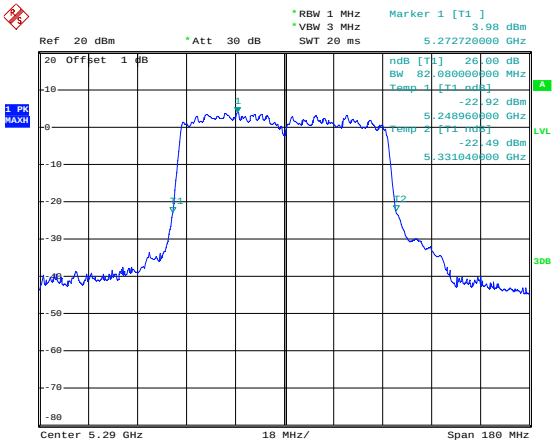
5250-5350MHz

802.11a-Low	
802.11a-Middle	
802.11a-High	

802.11n-HT20-Low	
802.11n-HT20-Middle	
802.11n-HT20-High	

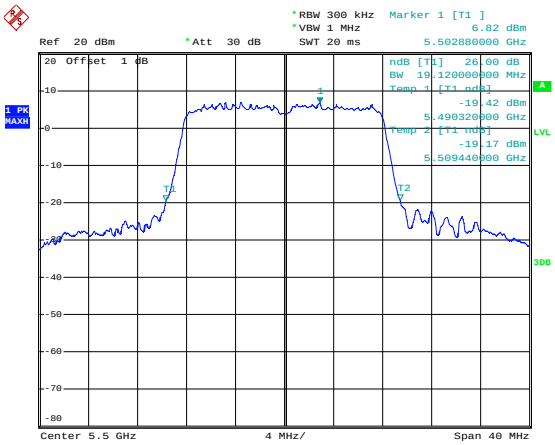
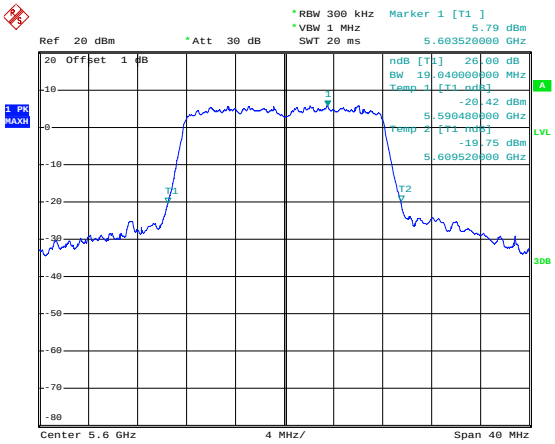
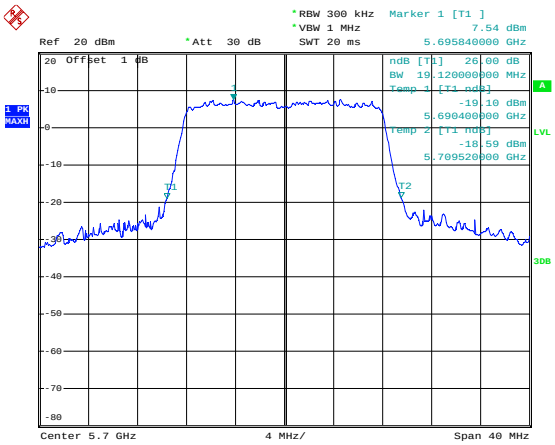
802.11n-HT40-Low	 Date: 6.SEP.2024 10:15:51
802.11n-HT40-High	 Date: 6.SEP.2024 10:15:13
802.11ac-VHT20-Low	 Date: 6.SEP.2024 10:17:03

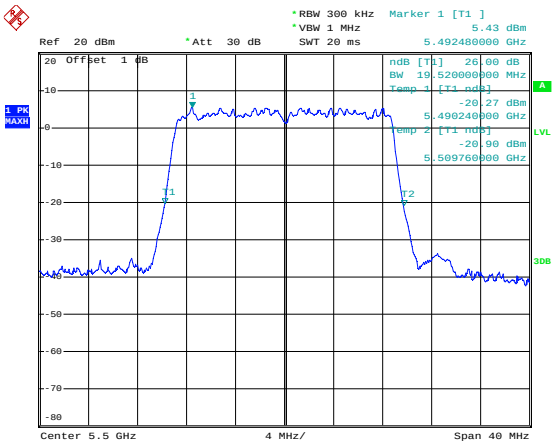
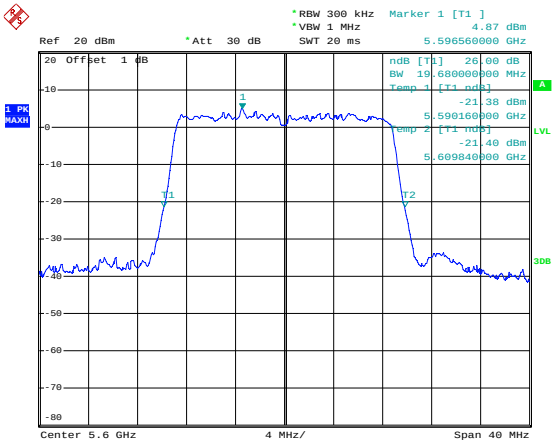
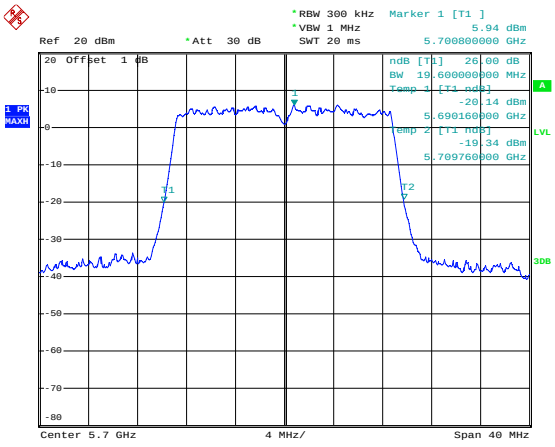
802.11ac-VHT20-Middle	
802.11ac-VHT20-High	
802.11ac-VHT40-Low	

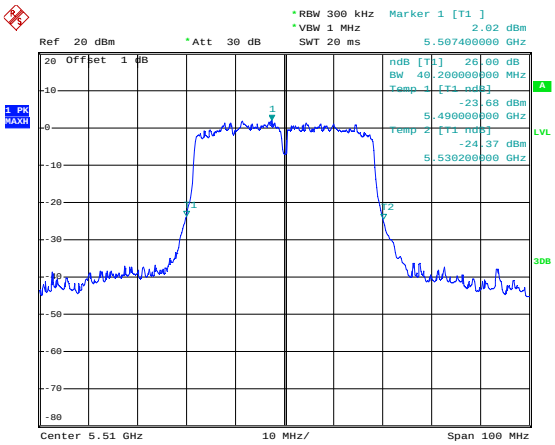
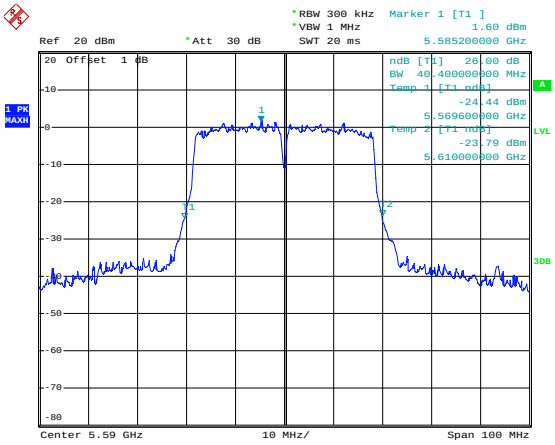
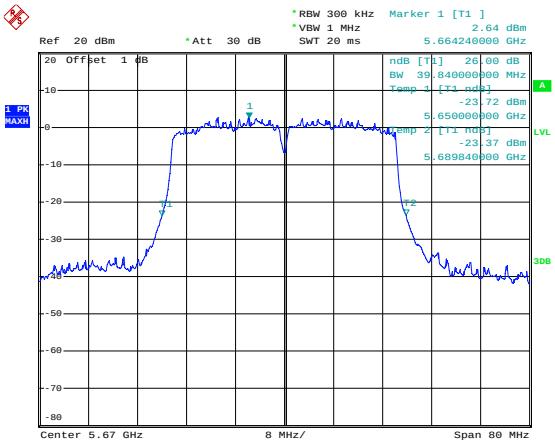
802.11ac-VHT40-High	 Date: 6.SEP.2024 10:14:49
802.11ac-VHT80	 Date: 6.SEP.2024 10:13:35

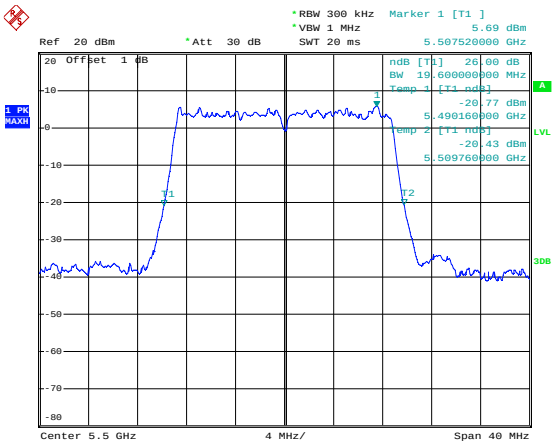
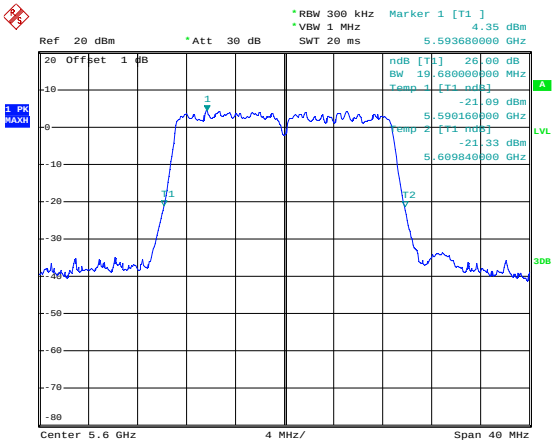
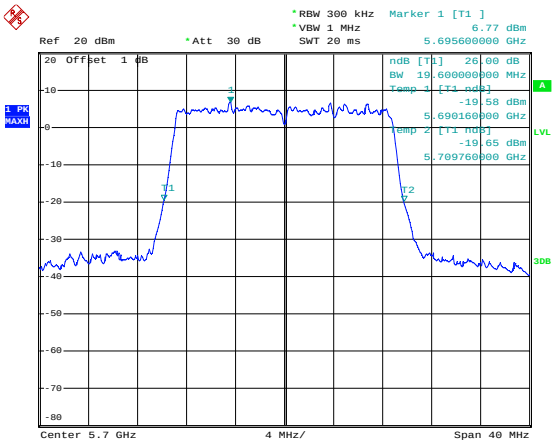
26 dB BandwidthMHz

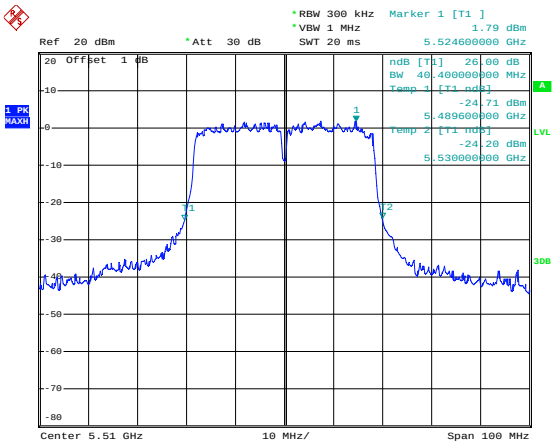
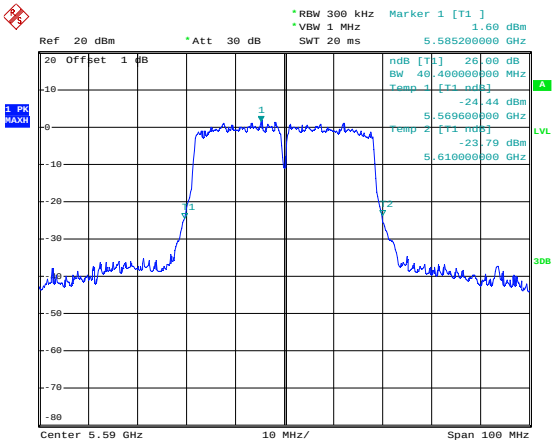
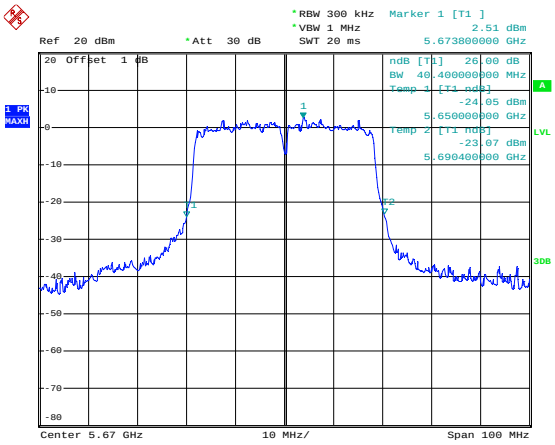
5470-5725MHz

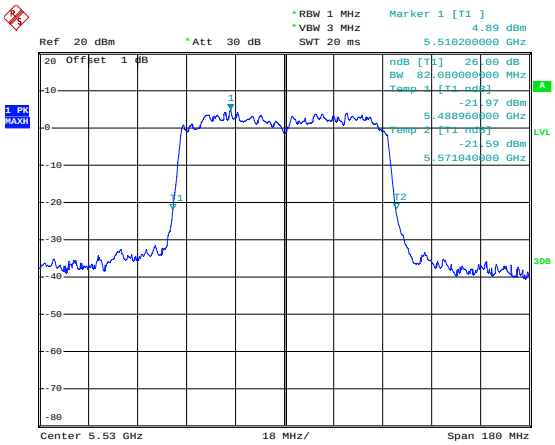
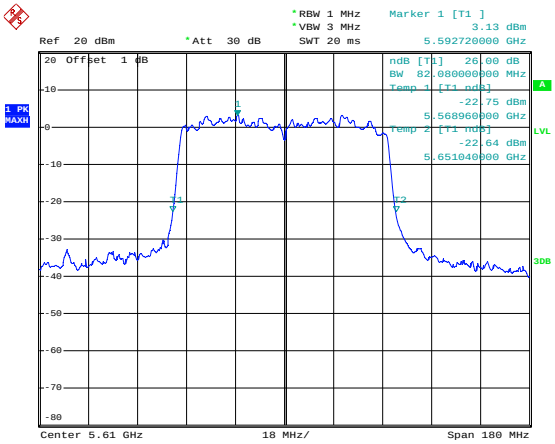
802.11a-Low	
802.11a-Middle	
802.11a-High	

802.11n-HT20-Low	
802.11n-HT20-Middle	
802.11n-HT20-High	

802.11n-HT40-Low	 Date: 6.SEP.2024 11:32:19
802.11n-HT40-Middle	 Date: 6.SEP.2024 11:31:56
802.11n-HT40-High	 Date: 6.SEP.2024 11:31:27

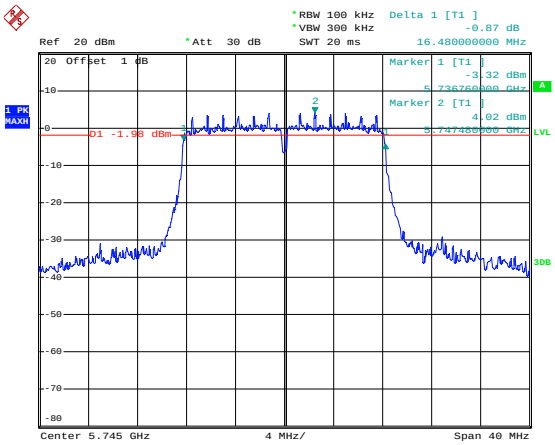
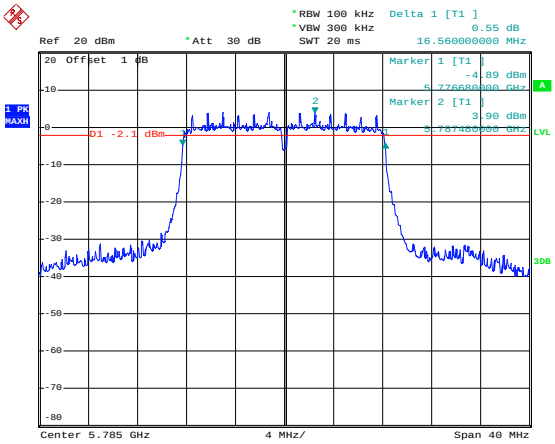
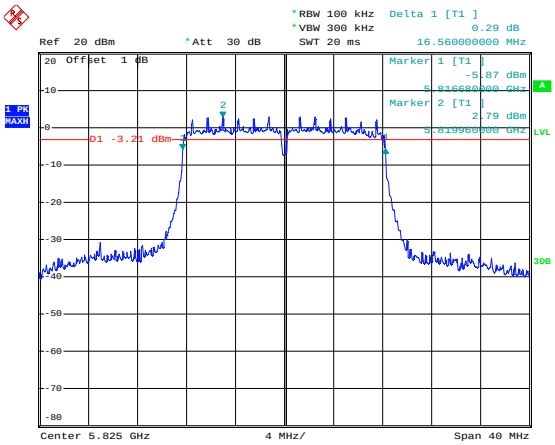
802.11ac-VHT20-Low	 Date: 6.SEP.2024 11:33:49
802.11ac-VHT20-Middle	 Date: 6.SEP.2024 11:33:15
802.11ac-VHT20-High	 Date: 6.SEP.2024 11:32:53

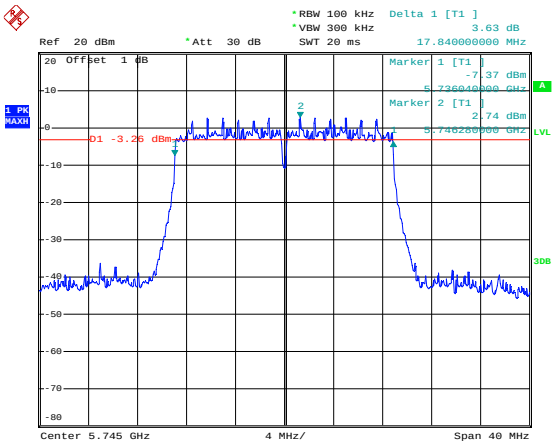
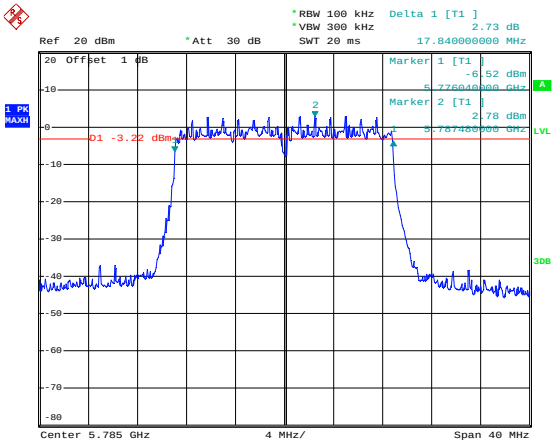
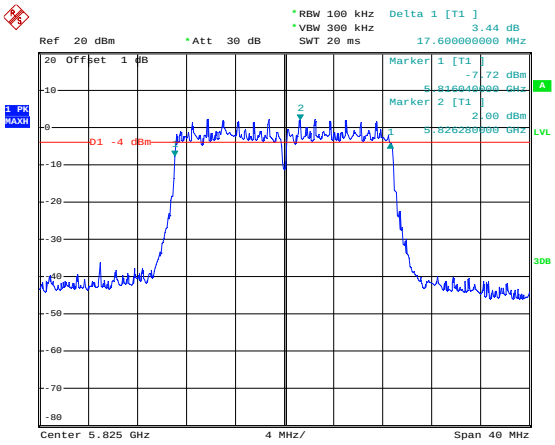
802.11ac-VHT40-Low	 Date: 6.SEP.2024 11:29:44
802.11ac-VHT40-Middle	 Date: 6.SEP.2024 11:31:56
802.11ac-VHT40-High	 Date: 6.SEP.2024 11:30:53

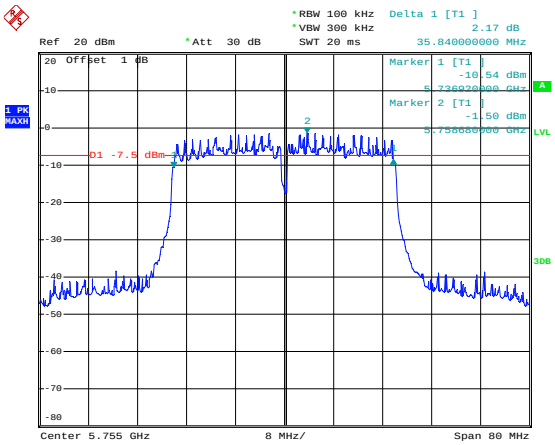
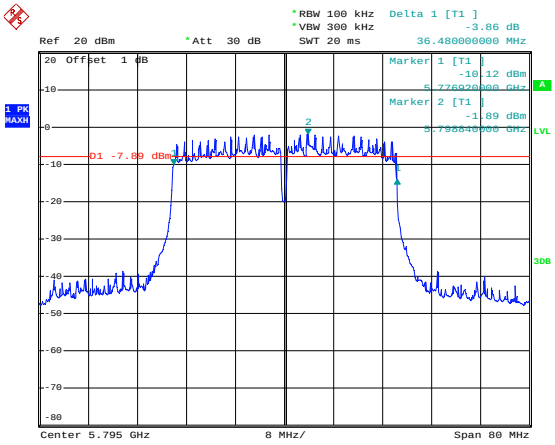
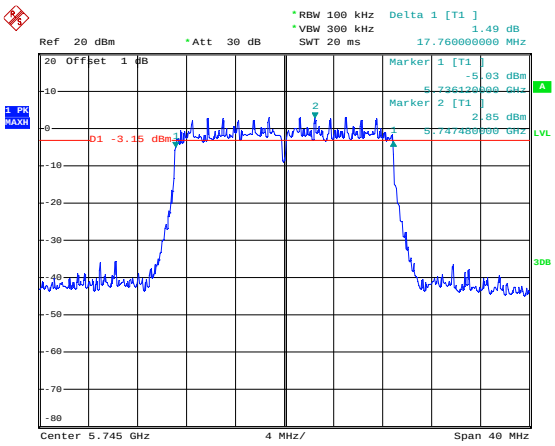
802.11ac-VHT80-Low	 Date: 6.SEP.2024 11:28:54
802.11ac-VHT80-High	 Date: 6.SEP.2024 11:28:31

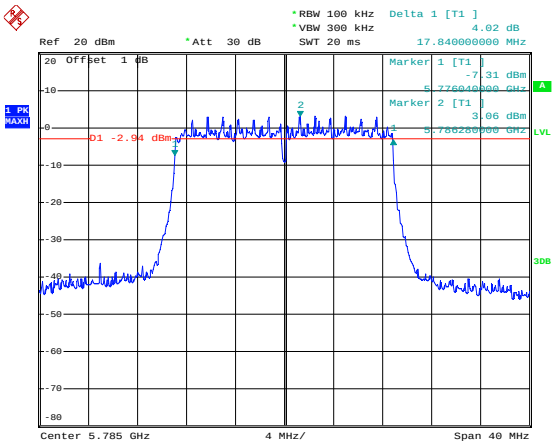
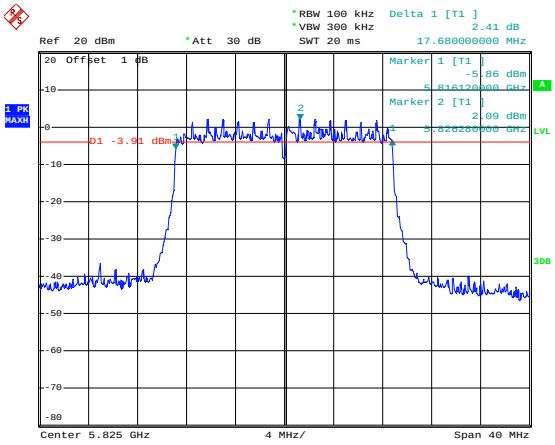
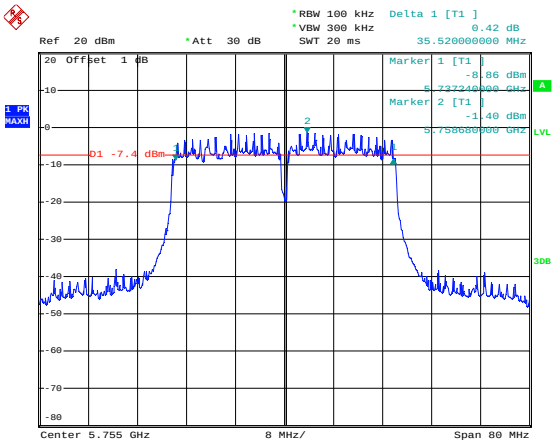
6 dB BandwidthMHz

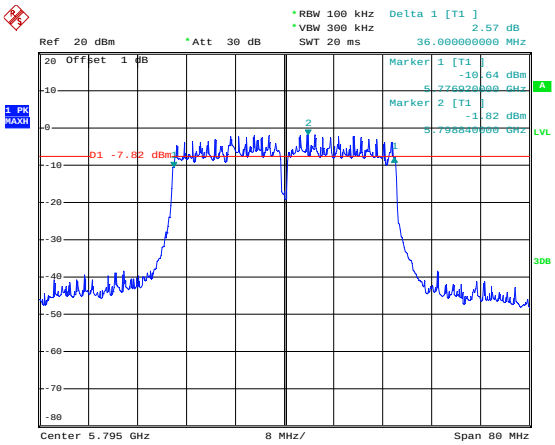
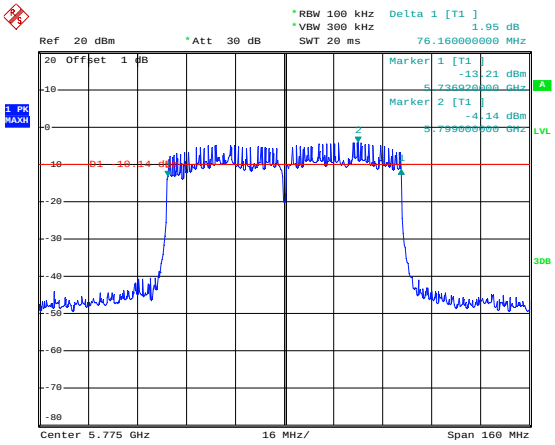
5725-5850MHz

802.11a-Low	 Date: 6.SEP.2024 14:18:08
802.11a-Middle	 Date: 6.SEP.2024 14:18:56
802.11a-High	 Date: 6.SEP.2024 14:19:54

802.11n-HT20-Low	 Date: 6.SEP.2024 14:17:30
802.11n-HT20-Middle	 Date: 6.SEP.2024 14:16:45
802.11n-HT20-High	 Date: 6.SEP.2024 14:16:00

802.11n-HT40-Low	 Date: 6.SEP.2024 14:11:30
802.11n-HT40-High	 Date: 6.SEP.2024 14:12:24
802.11ac-VHT20-Low	 Date: 6.SEP.2024 14:13:34

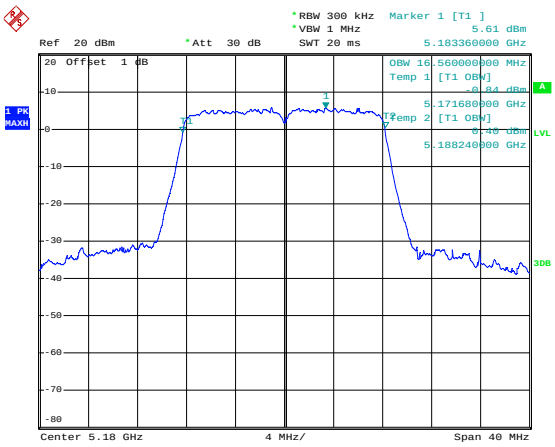
802.11ac-VHT20-Middle	
802.11ac-VHT20-High	
802.11ac-VHT40-Low	

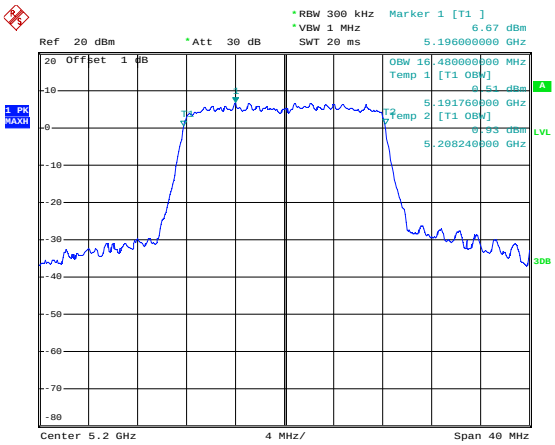
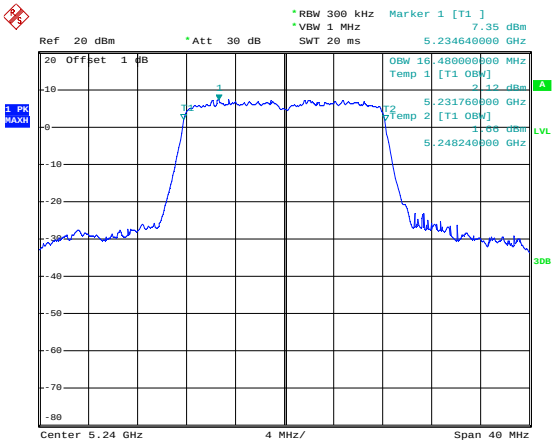
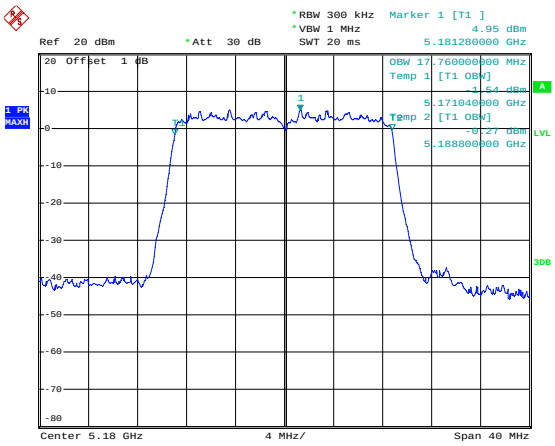
802.11ac-VHT40-High	
802.11ac-VHT80	

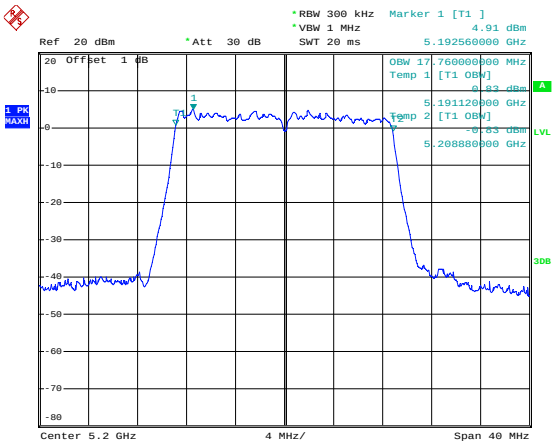
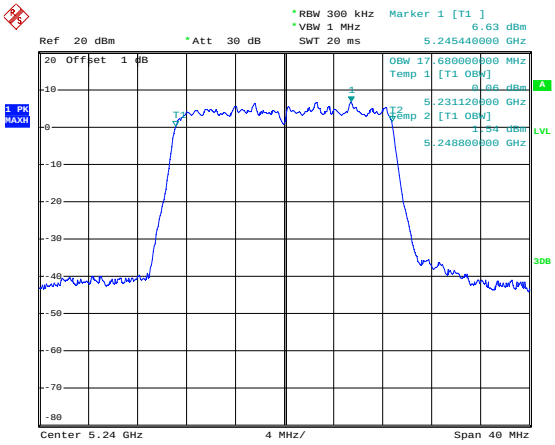
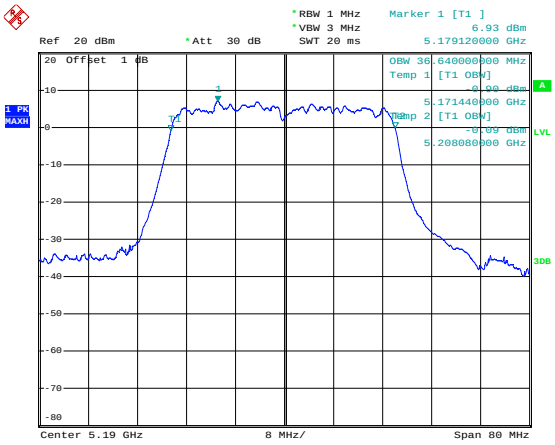
ANT 1

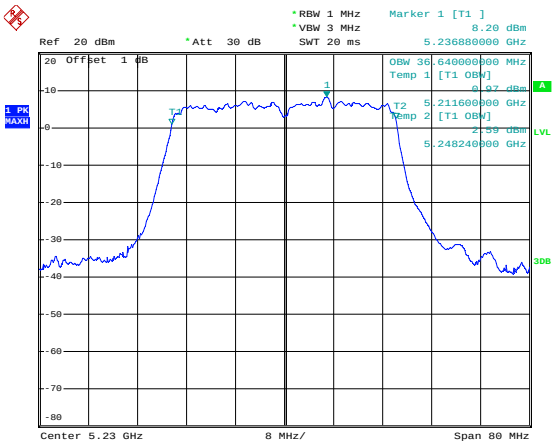
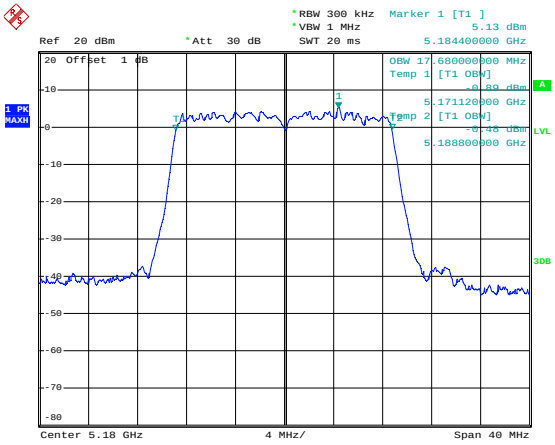
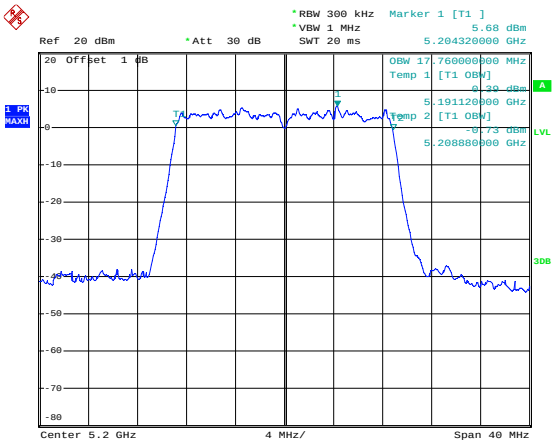
99% BandwidthMHz

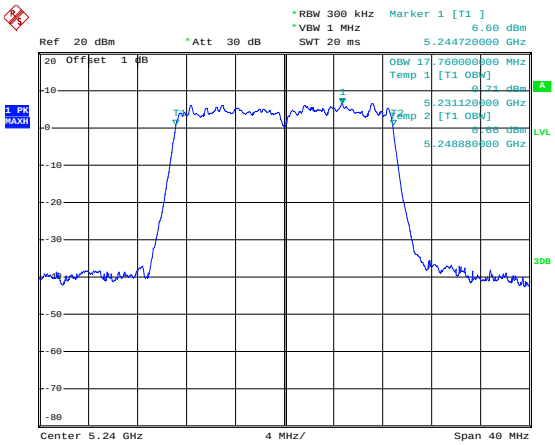
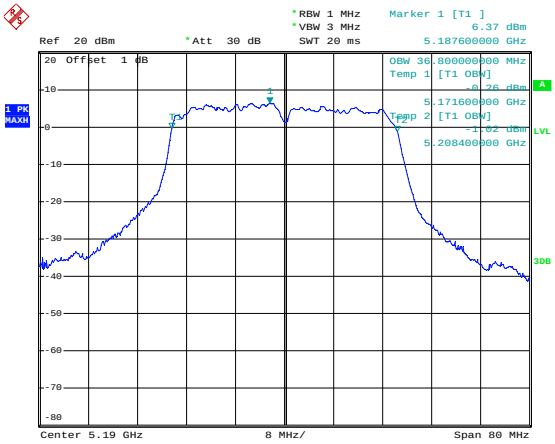
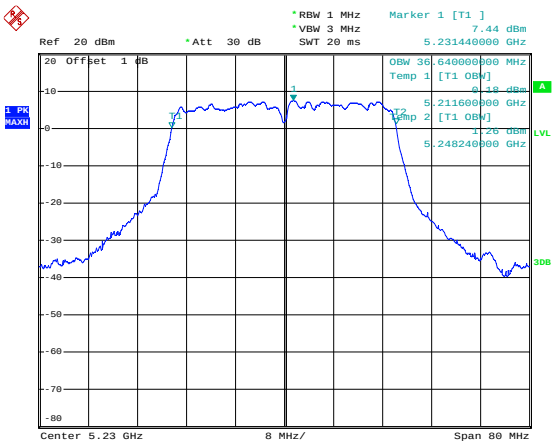
5150-5250MHz

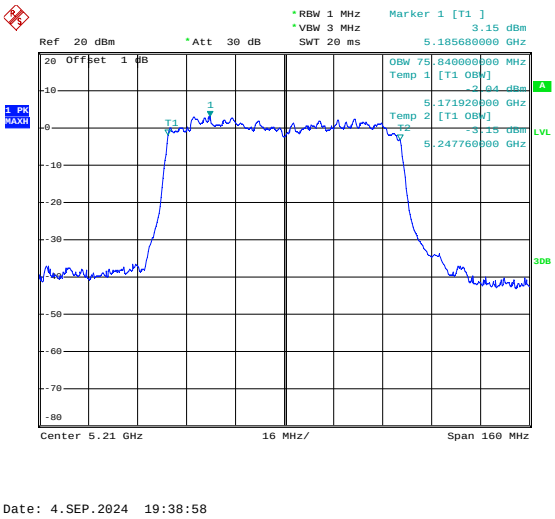
802.11a-Low	

802.11a-Middle	 Date: 4.SEP.2024 19:30:03
802.11a-High	 Date: 4.SEP.2024 20:03:17
802.11n-HT20-Low	 Date: 4.SEP.2024 19:32:00

802.11n-HT20-Middle	 Date: 4.SEP.2024 19:31:26
802.11n-HT20-High	 Date: 4.SEP.2024 19:31:01
802.11n-HT40-Low	 Date: 4.SEP.2024 19:36:39

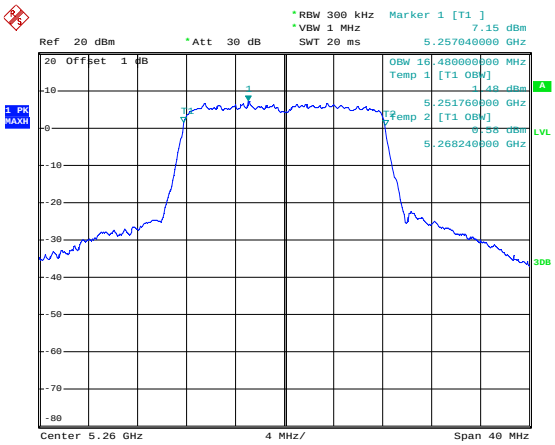
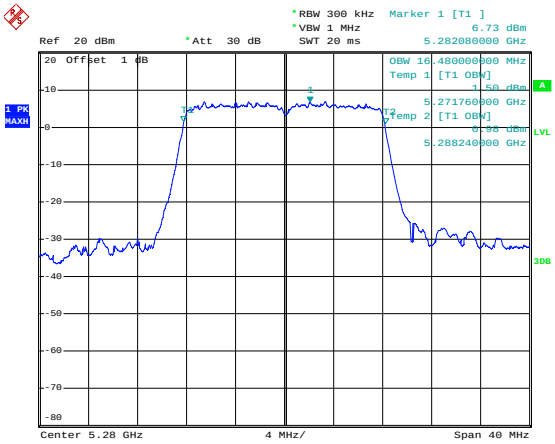
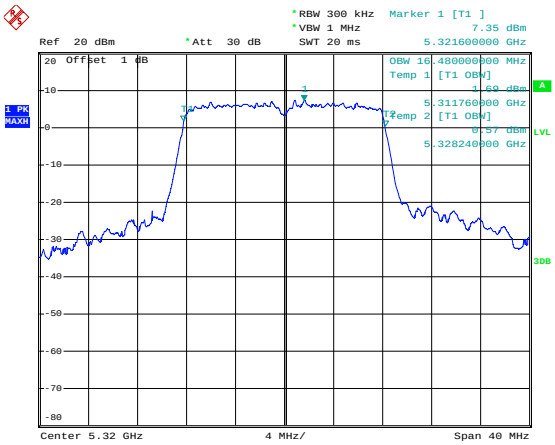
802.11n-HT40-High	 Date: 4.SEP.2024 19:37:17
802.11ac-VHT20-Low	 Date: 4.SEP.2024 19:32:46
802.11ac-VHT20-Middle	 Date: 4.SEP.2024 19:33:36

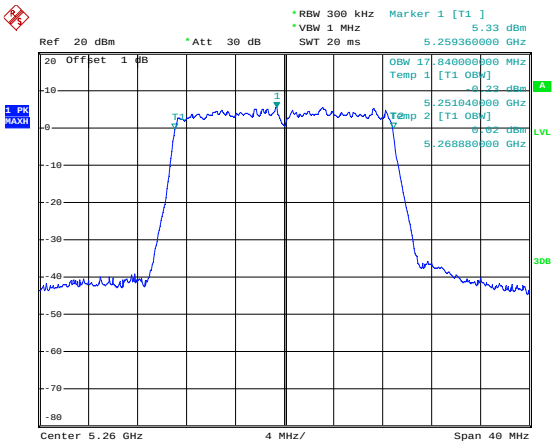
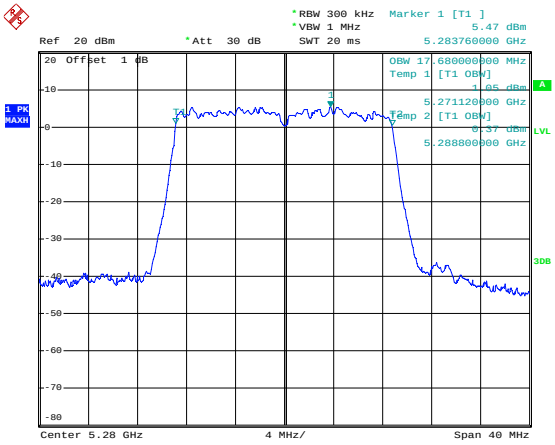
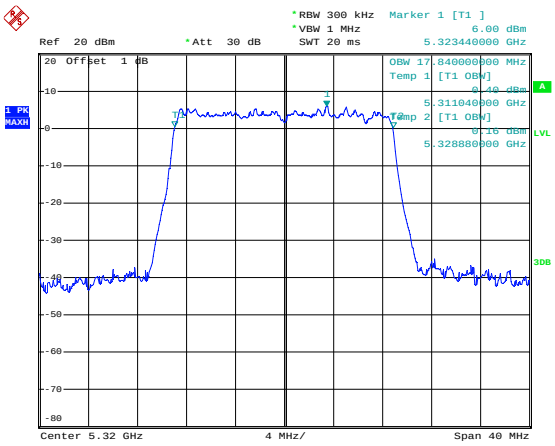
802.11ac-VHT20-High	 Date: 4.SEP.2024 19:35:46
802.11ac-VHT40-Low	 Date: 4.SEP.2024 19:38:19
802.11ac-VHT40-High	 Date: 4.SEP.2024 19:37:49

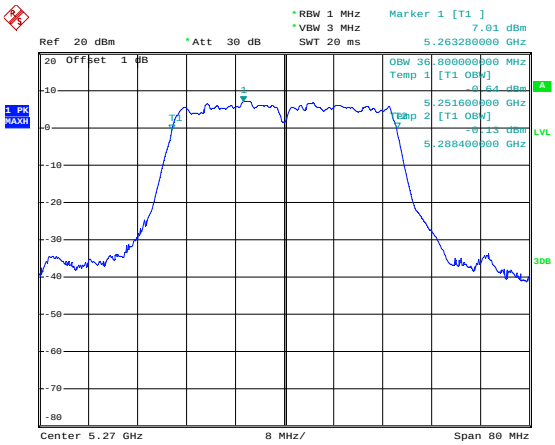
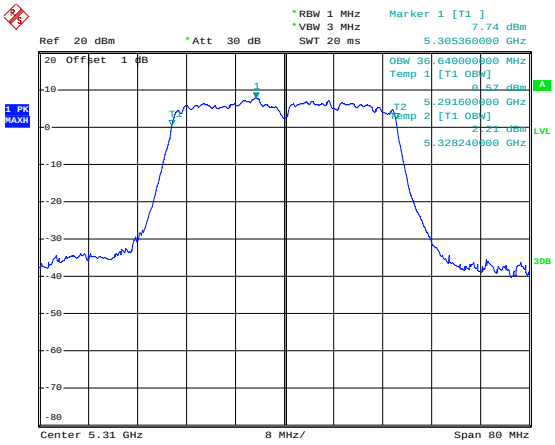
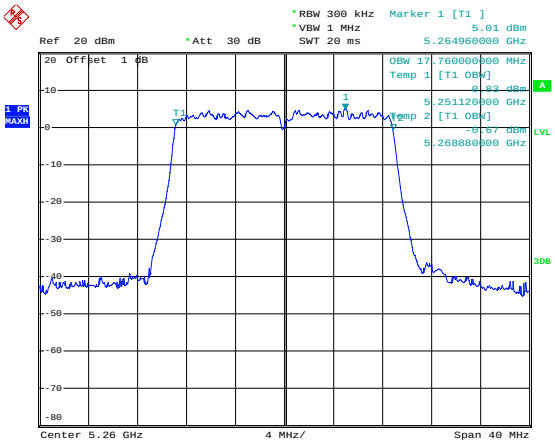
802.11ac-VHT80	

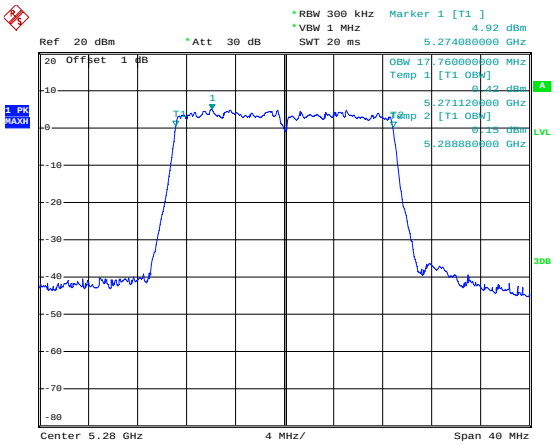
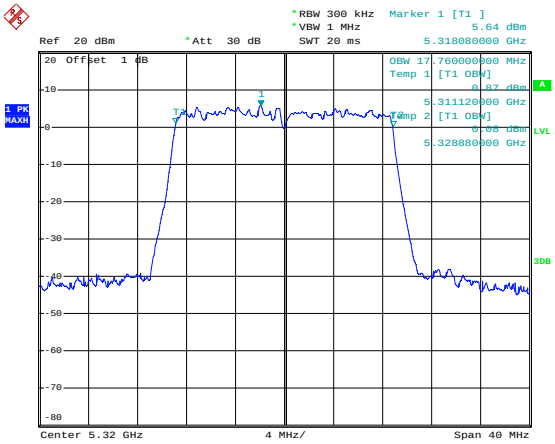
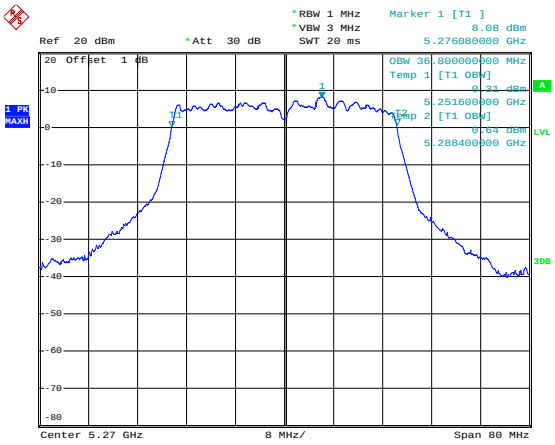
99% BandwidthMHz

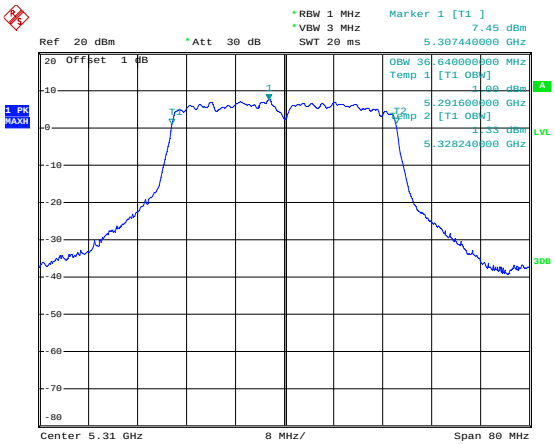
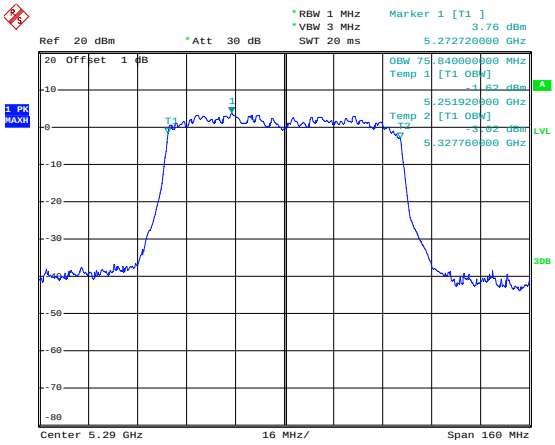
5250-5350MHz

802.11a-Low	 Date: 5.SEP.2024 16:39:52
802.11a-Middle	 Date: 5.SEP.2024 16:39:16
802.11a-High	 Date: 5.SEP.2024 16:38:47

802.11n-HT20-Low	 Date: 5.SEP.2024 16:37:29
802.11n-HT20-Middle	 Date: 5.SEP.2024 16:37:58
802.11n-HT20-High	 Date: 5.SEP.2024 16:38:24

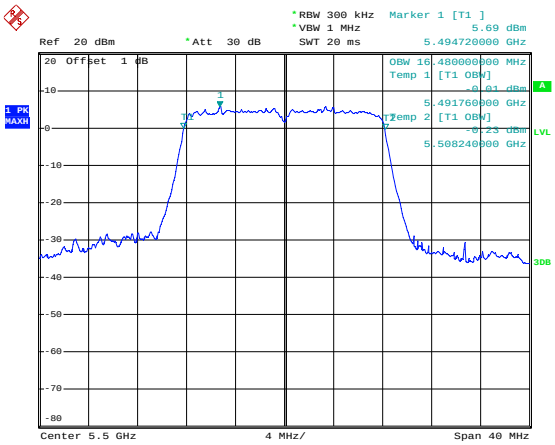
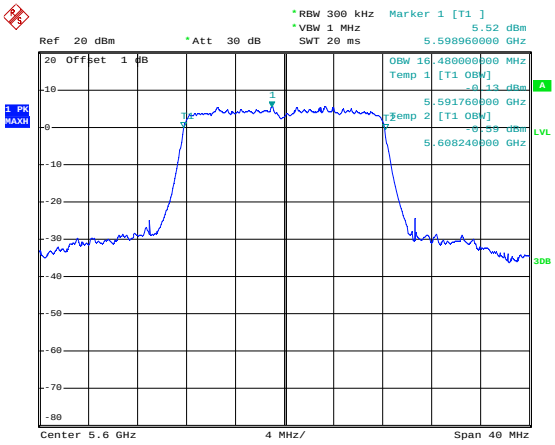
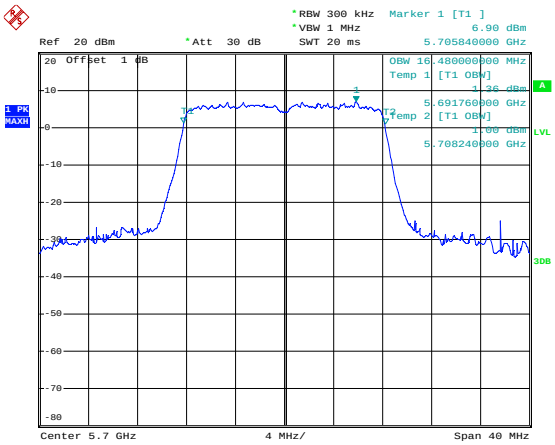
802.11n-HT40-Low	 Date: 5.SEP.2024 16:35:21
802.11n-HT40-High	 Date: 5.SEP.2024 16:34:54
802.11ac-VHT20-Low	 Date: 5.SEP.2024 16:36:55

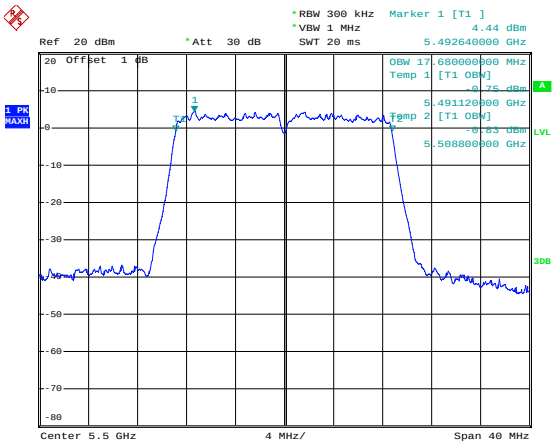
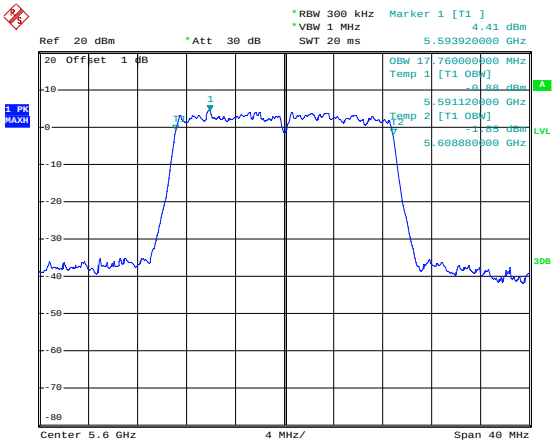
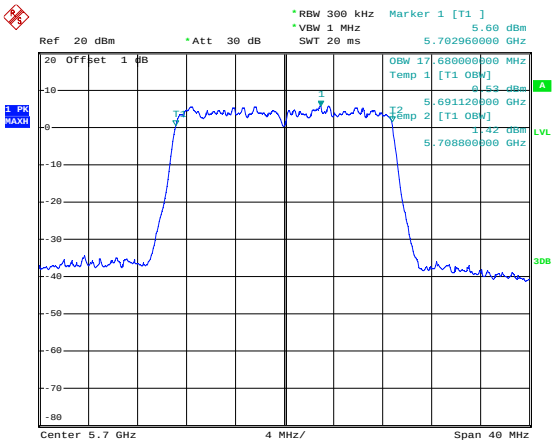
802.11ac-VHT20-Middle	 Date: 5.SEP.2024 16:36:31
802.11ac-VHT20-High	 Date: 5.SEP.2024 16:36:05
802.11ac-VHT40-Low	 Date: 5.SEP.2024 16:33:51

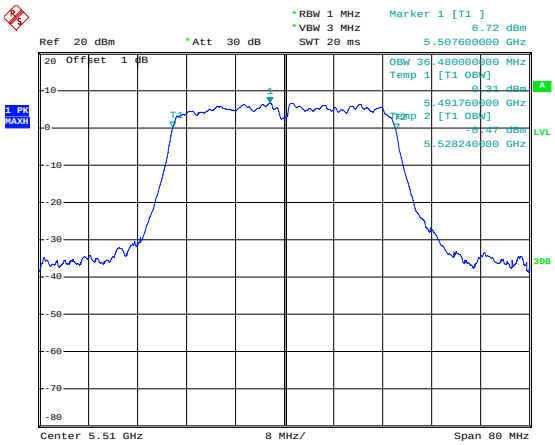
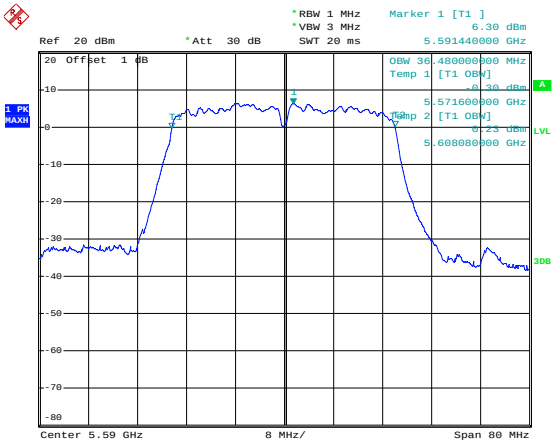
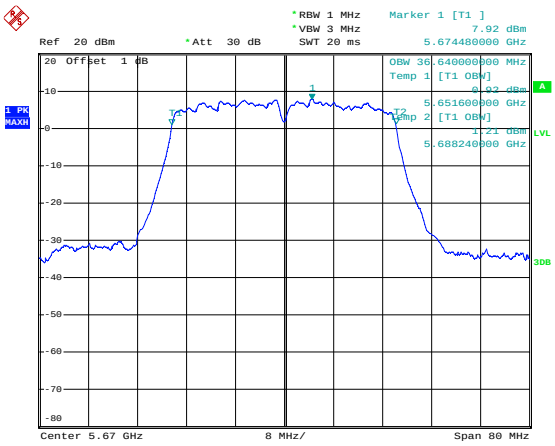
802.11ac-VHT40-High	
802.11ac-VHT80	

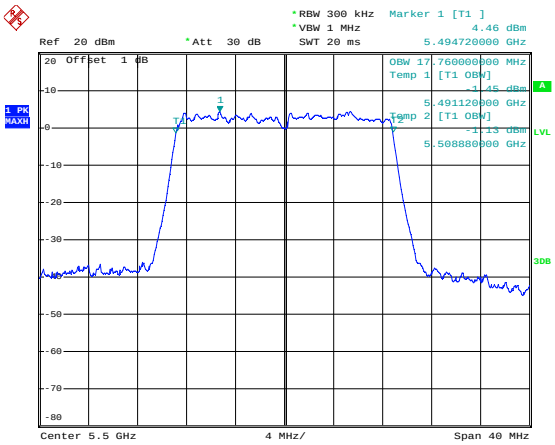
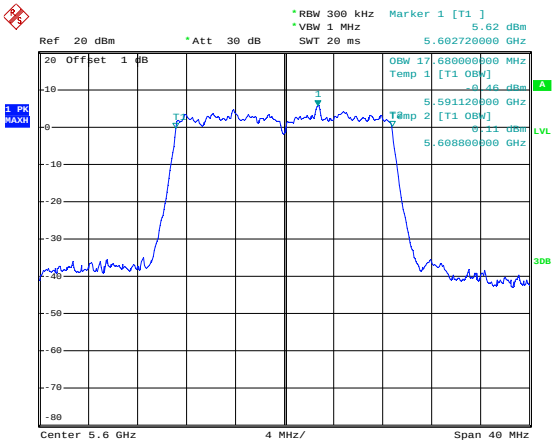
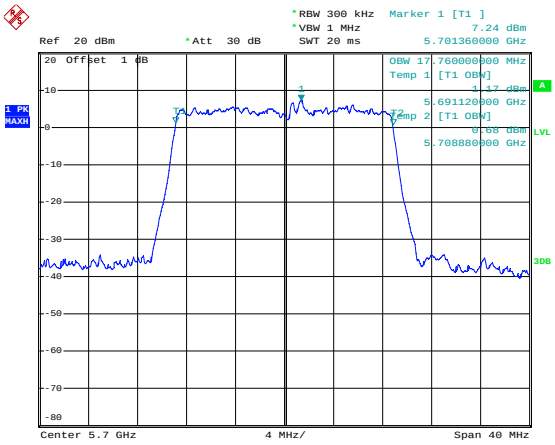
99% BandwidthMHz

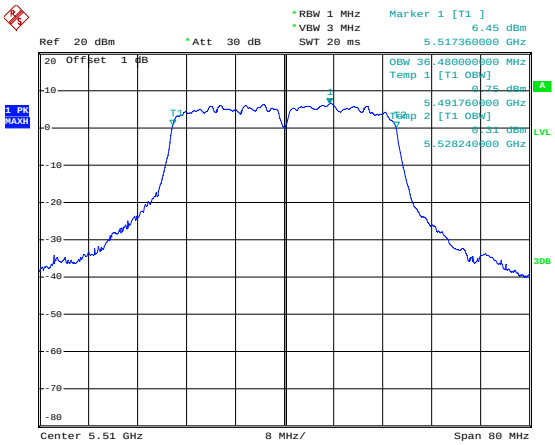
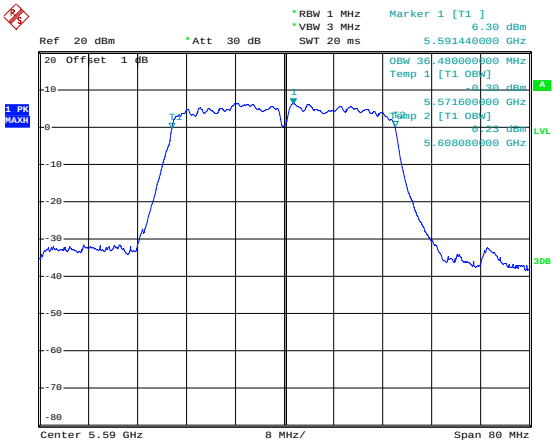
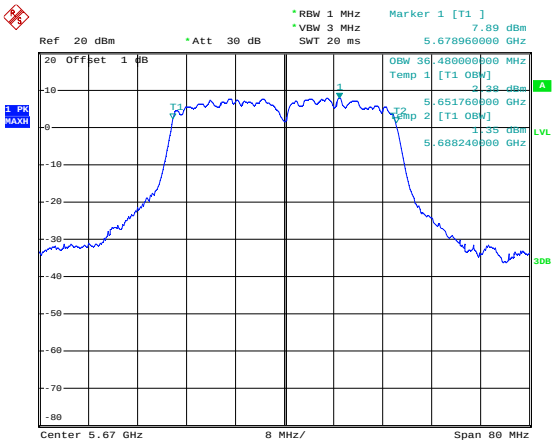
5470-5725MHz

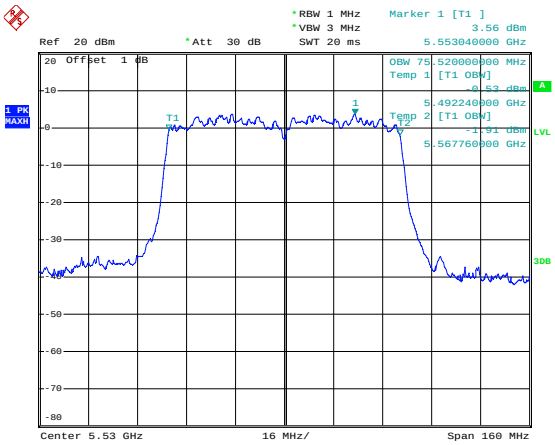
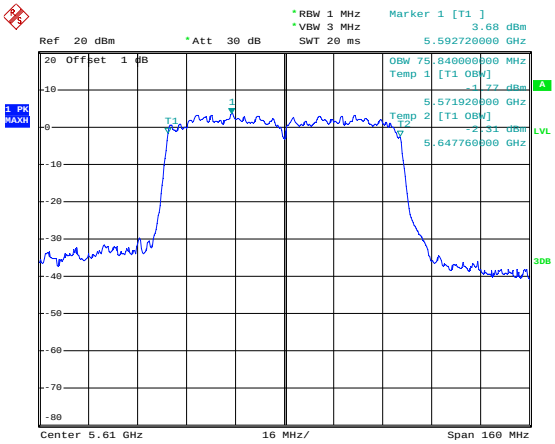
802.11a-Low	
802.11a-Middle	
802.11a-High	

802.11n-HT20-Low	
802.11n-HT20-Middle	
802.11n-HT20-High	

802.11n-HT40-Low	 Date: 5.SEP.2024 19:00:32
802.11n-HT40-Middle	 Date: 5.SEP.2024 19:00:04
802.11n-HT40-High	 Date: 5.SEP.2024 18:59:31

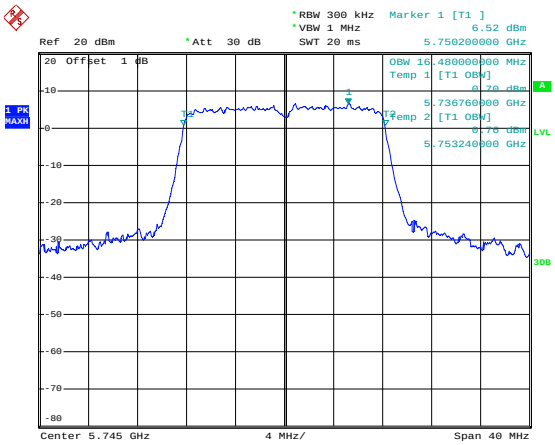
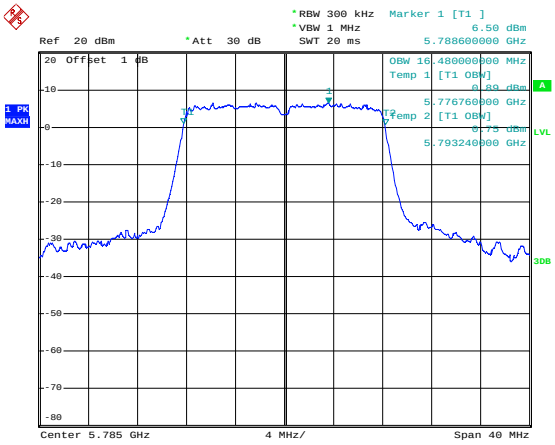
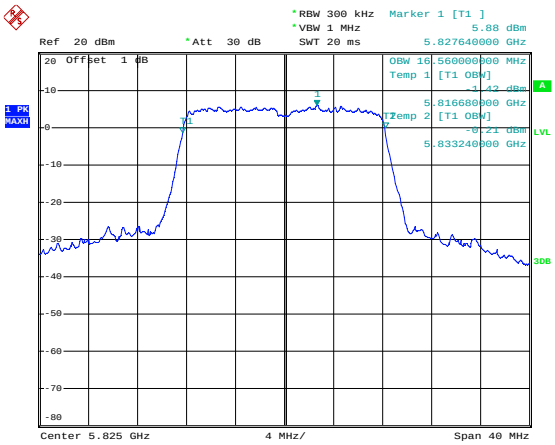
802.11ac-VHT20-Low	 Date: 5.SEP.2024 18:57:18
802.11ac-VHT20-Middle	 Date: 5.SEP.2024 18:57:45
802.11ac-VHT20-High	 Date: 5.SEP.2024 18:58:15

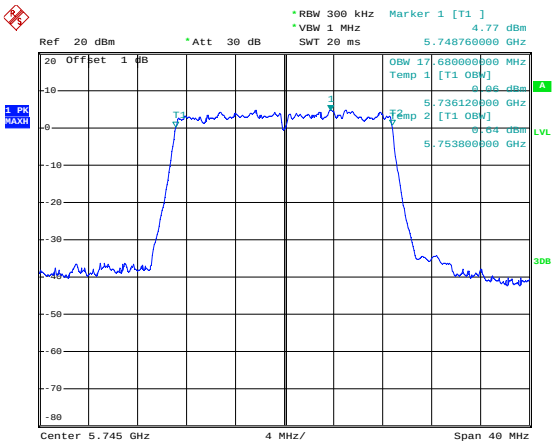
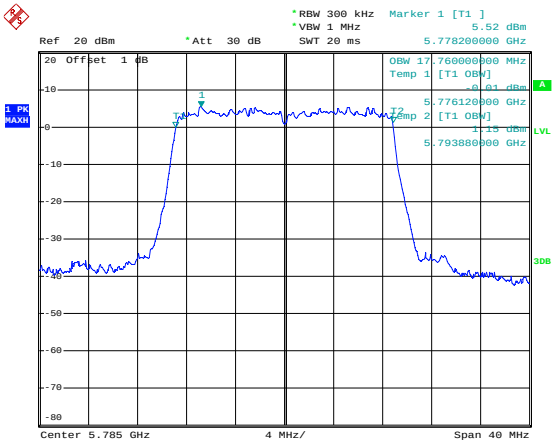
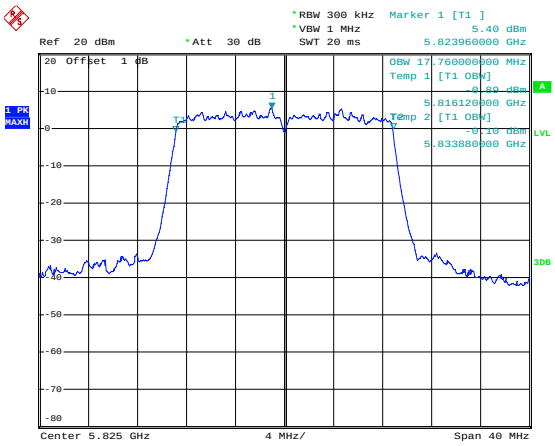
802.11ac-VHT40-Low	 Date: 5.SEP.2024 19:00:58
802.11ac-VHT40-Middle	 Date: 5.SEP.2024 19:00:04
802.11ac-VHT40-High	 Date: 5.SEP.2024 19:01:49

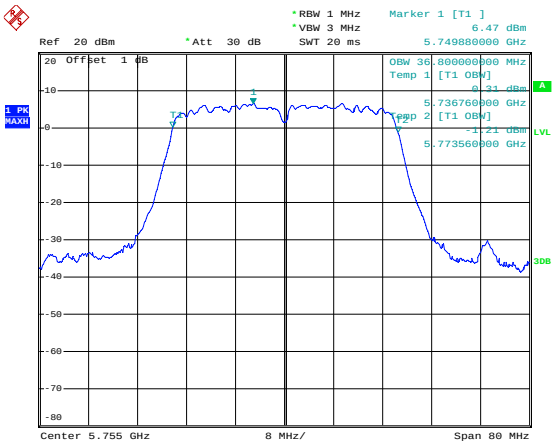
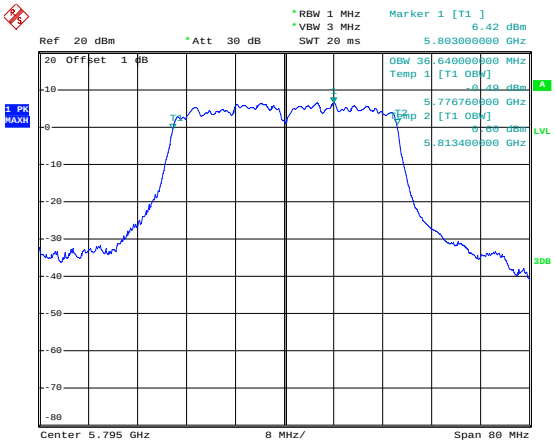
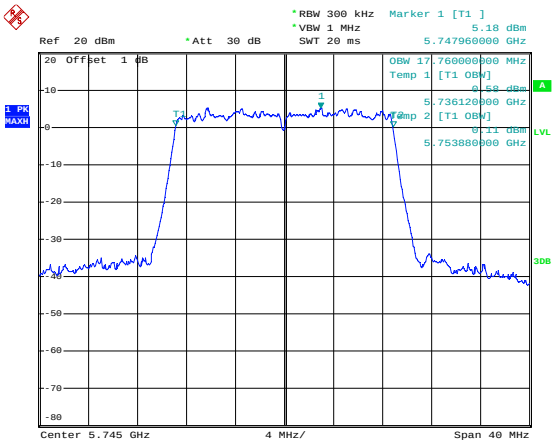
802.11ac-VHT80-Low	 Date: 5.SEP.2024 19:02:29
802.11ac-VHT80-High	 Date: 5.SEP.2024 19:02:59

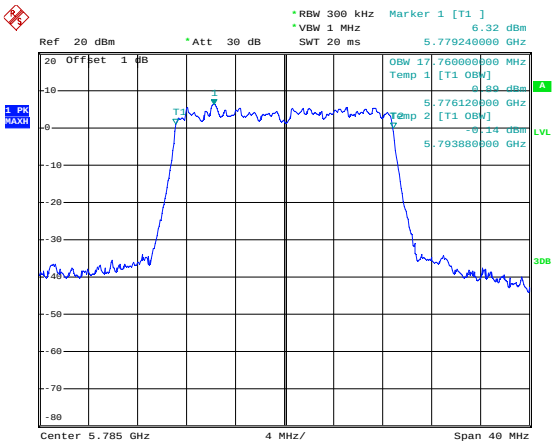
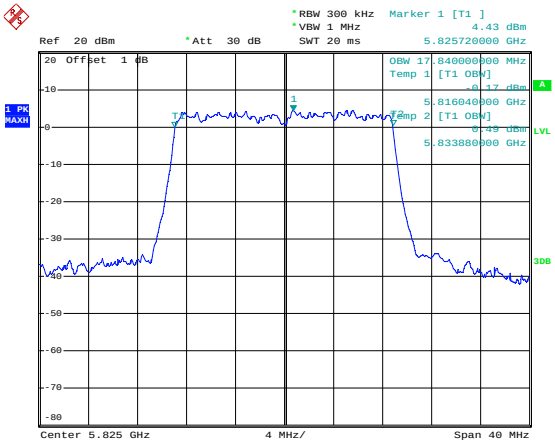
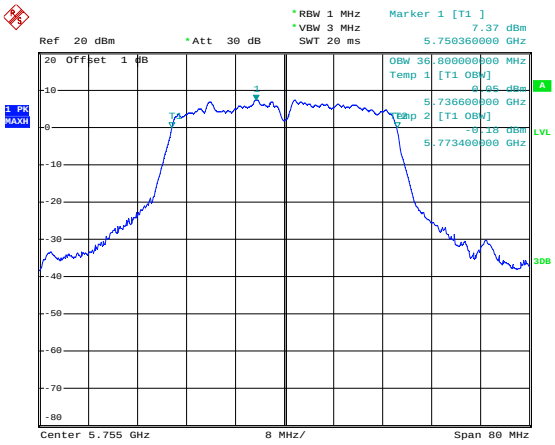
99% BandwidthMHz

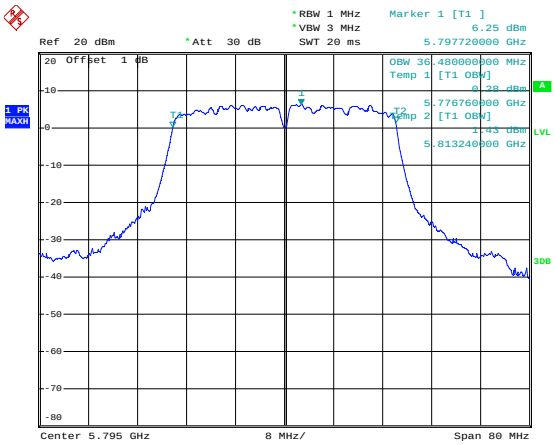
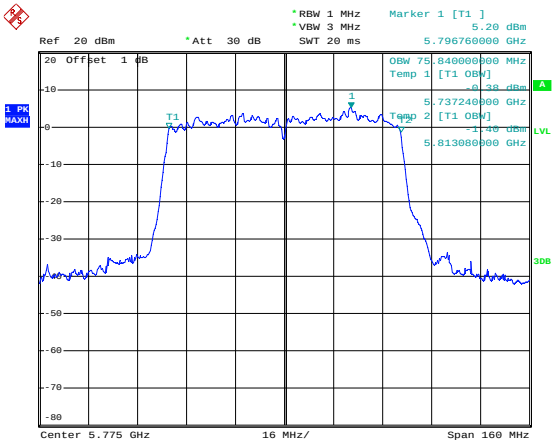
5725-5850MHz

802.11a-Low	
802.11a-Middle	
802.11a-High	

802.11n-HT20-Low	 Date: 5.SEP.2024 19:57:11
802.11n-HT20-Middle	 Date: 5.SEP.2024 19:57:35
802.11n-HT20-High	 Date: 5.SEP.2024 19:58:03

802.11n-HT40-Low	 Date: 5.SEP.2024 20:00:00
802.11n-HT40-High	 Date: 5.SEP.2024 20:00:24
802.11ac-VHT20-Low	 Date: 5.SEP.2024 19:59:21

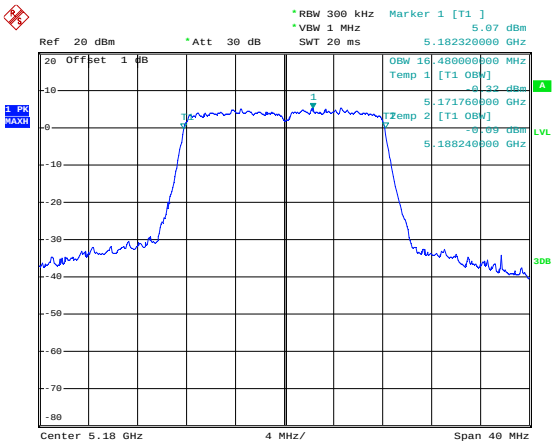
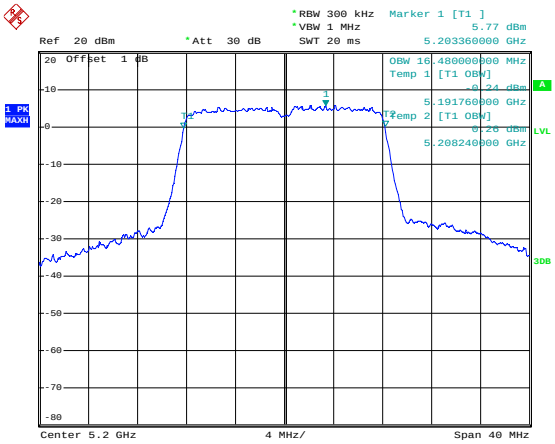
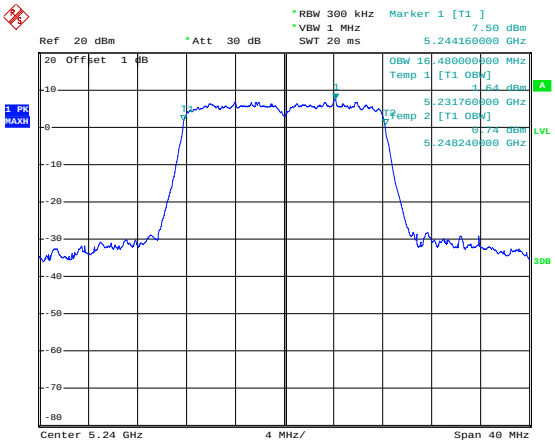
802.11ac-VHT20-Middle	 Date: 5.SEP.2024 19:58:58
802.11ac-VHT20-High	 Date: 5.SEP.2024 19:58:36
802.11ac-VHT40-Low	 Date: 5.SEP.2024 20:01:16

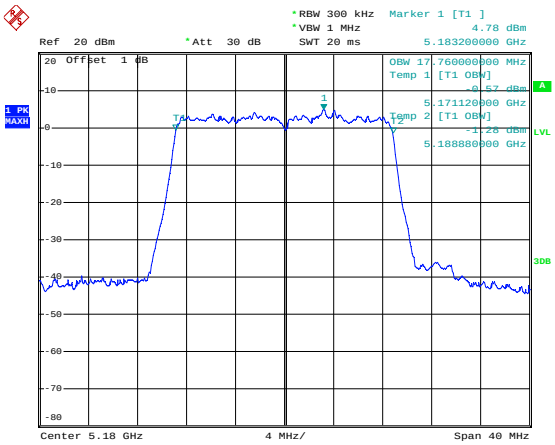
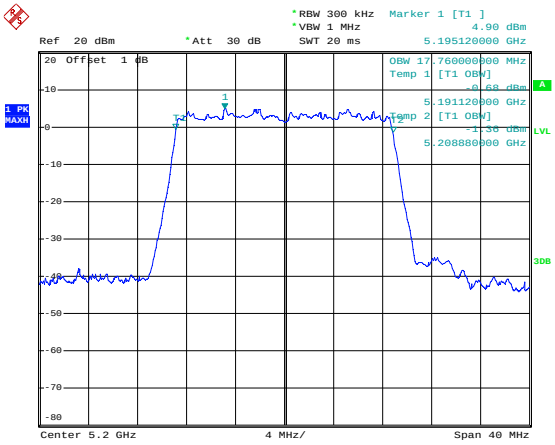
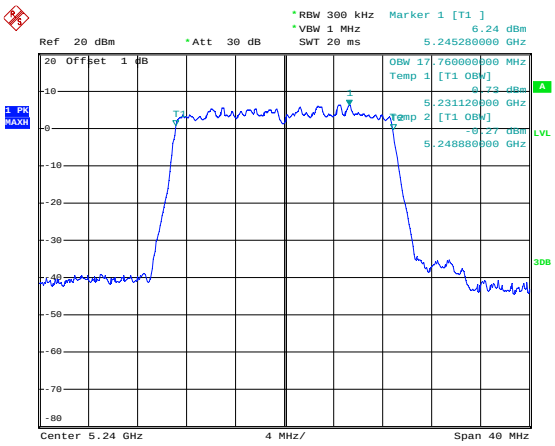
802.11ac-VHT40-High	 Date: 5.SEP.2024 20:00:45
802.11ac-VHT80	 Date: 5.SEP.2024 20:01:46

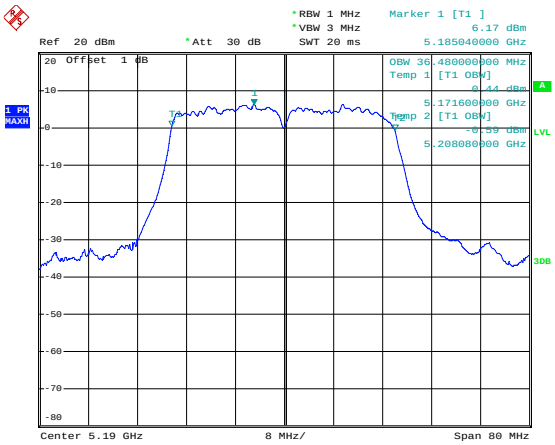
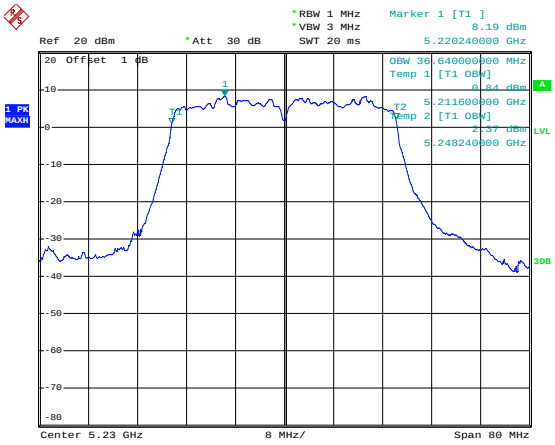
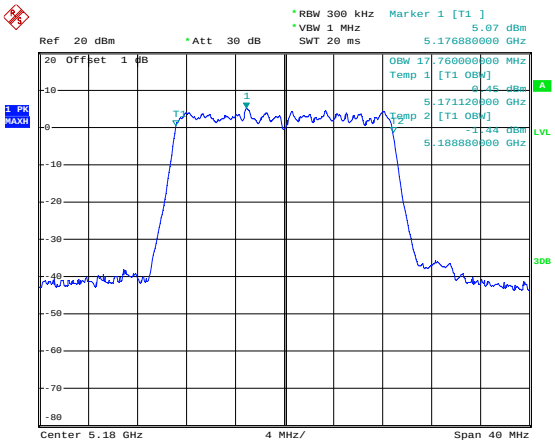
ANT 2

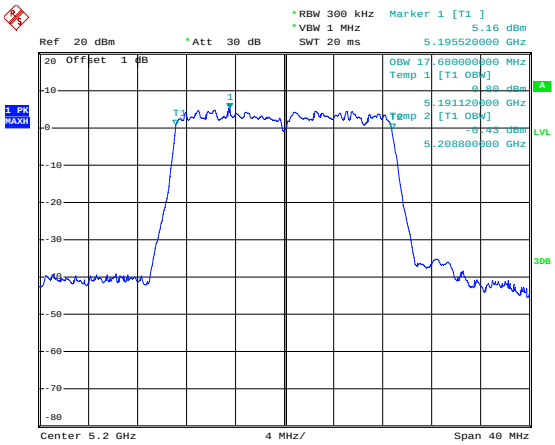
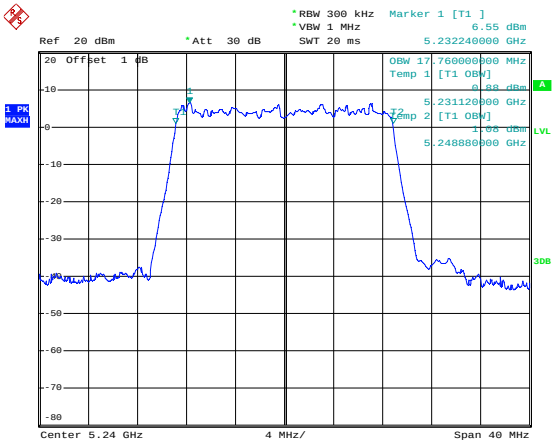
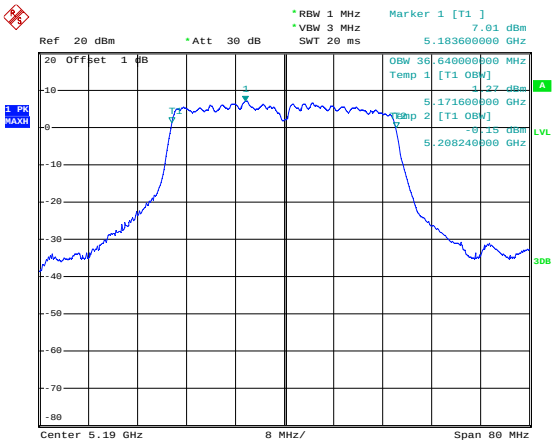
99% BandwidthMHz

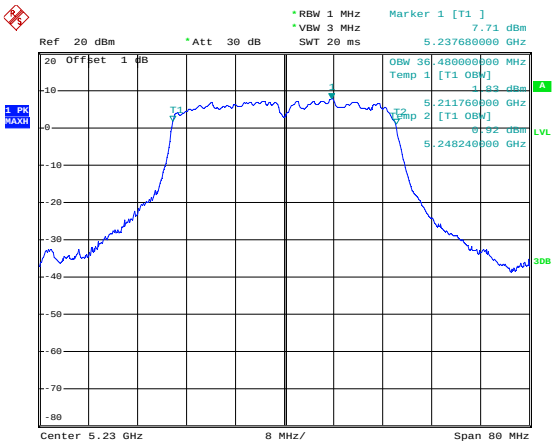
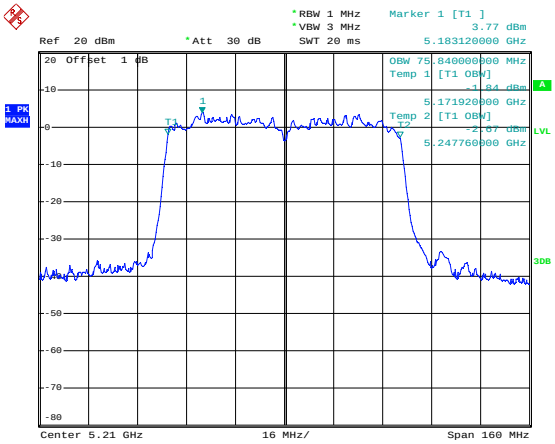
5150-5250MHz

802.11a-Low	
802.11a-Middle	
802.11a-High	

802.11n-HT20-Low	 Date: 6.SEP.2024 09:18:47
802.11n-HT20-Middle	 Date: 6.SEP.2024 09:18:14
802.11n-HT20-High	 Date: 6.SEP.2024 09:17:50

802.11n-HT40-Low	 Date: 6.SEP.2024 09:21:39
802.11n-HT40-High	 Date: 6.SEP.2024 09:23:05
802.11ac-VHT20-Low	 Date: 6.SEP.2024 09:19:19

802.11ac-VHT20-Middle	
802.11ac-VHT20-High	
802.11ac-VHT40-Low	

802.11ac-VHT40-High	 Date: 6.SEP.2024 09:23:44
802.11ac-VHT80	 Date: 6.SEP.2024 09:24:55

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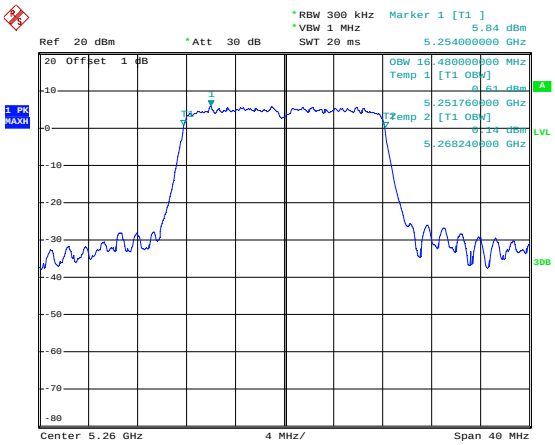
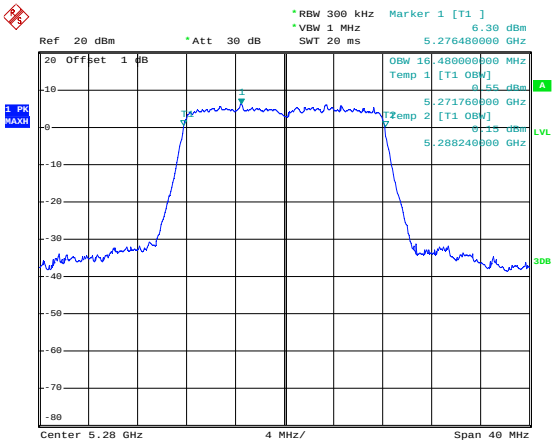
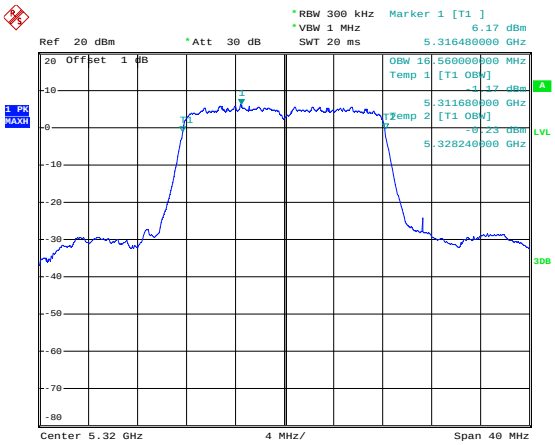
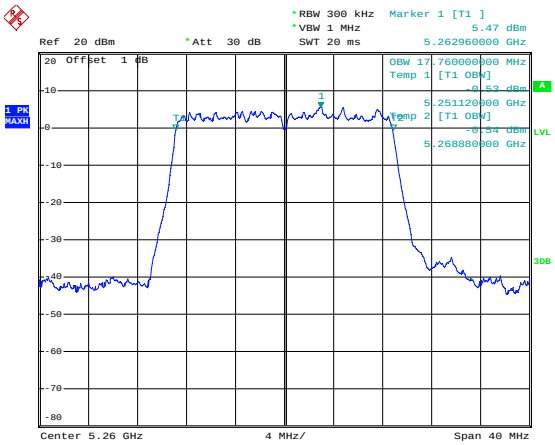
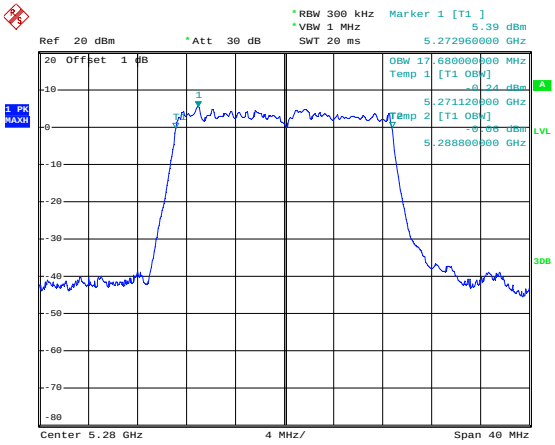
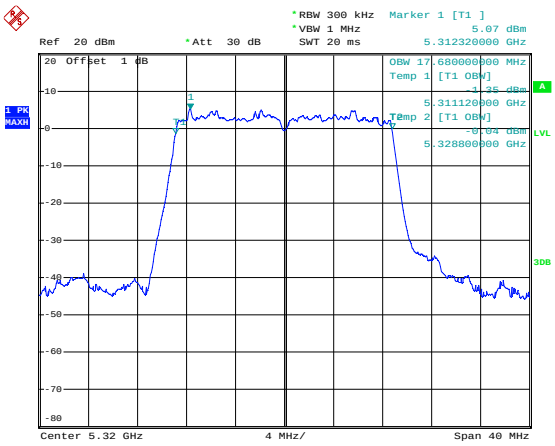
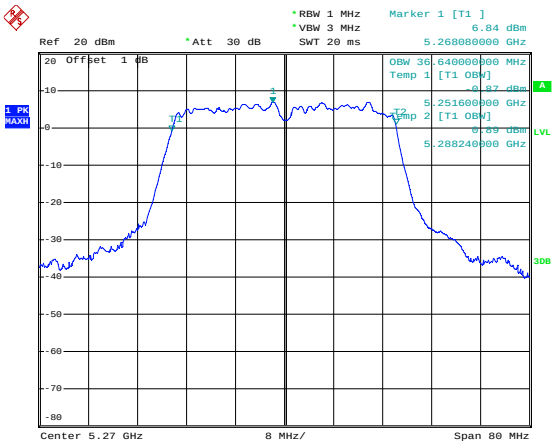
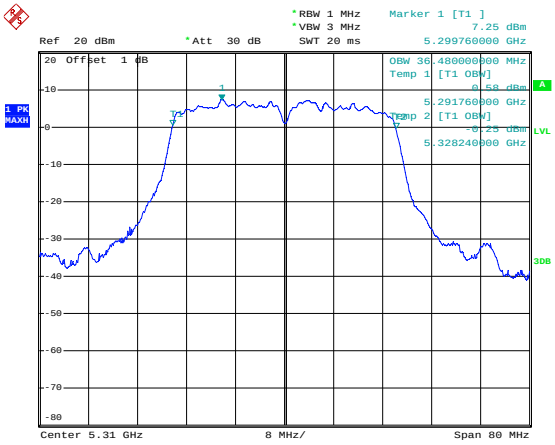
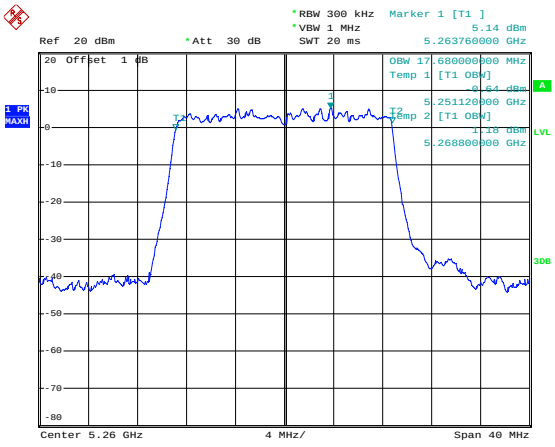
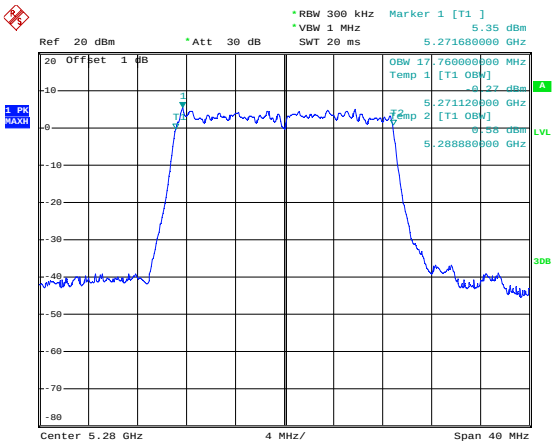
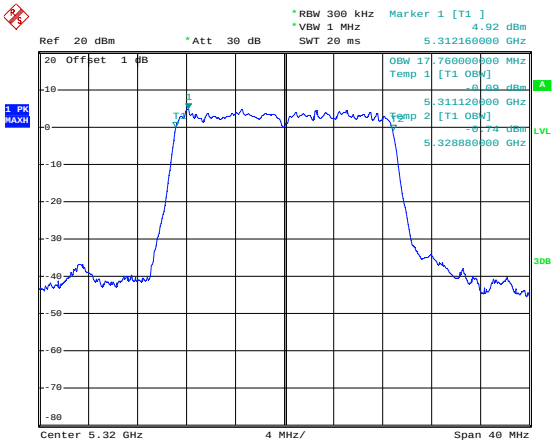
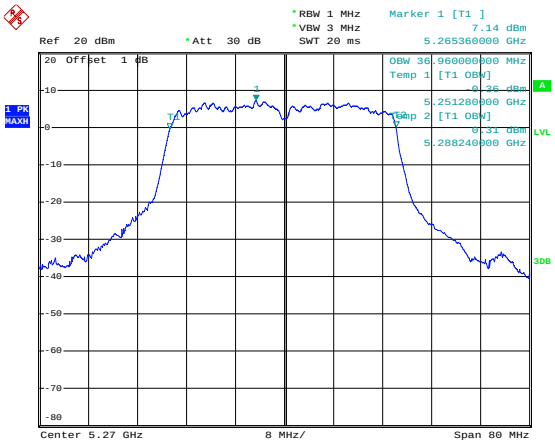
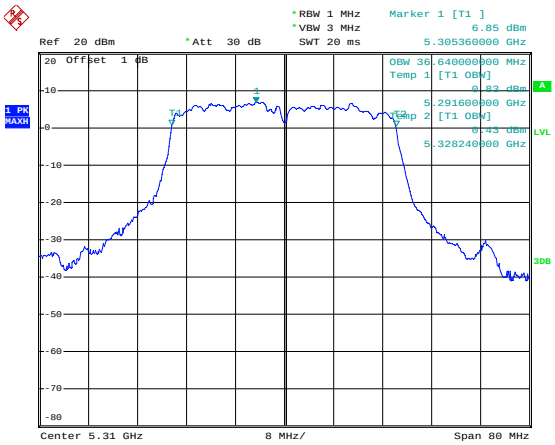
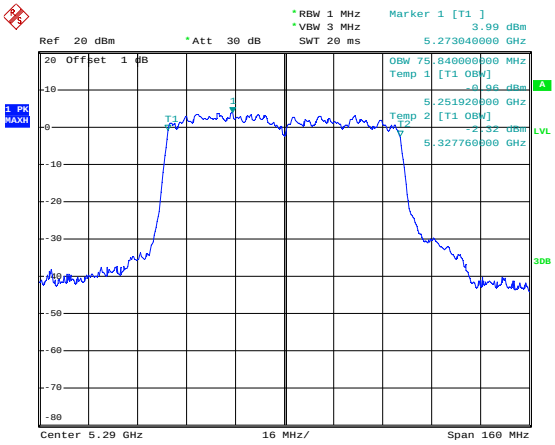
802.11a-Low	
802.11a-Middle	
802.11a-High	

802.11n-HT20-Low	 Date: 6.SEP.2024 10:09:44
802.11n-HT20-Middle	 Date: 6.SEP.2024 10:09:13
802.11n-HT20-High	 Date: 6.SEP.2024 10:08:50

802.11n-HT40-Low	
802.11n-HT40-High	
802.11ac-VHT20-Low	

802.11ac-VHT20-Middle	
802.11ac-VHT20-High	
802.11ac-VHT40-Low	

802.11ac-VHT40-High	
802.11ac-VHT80	

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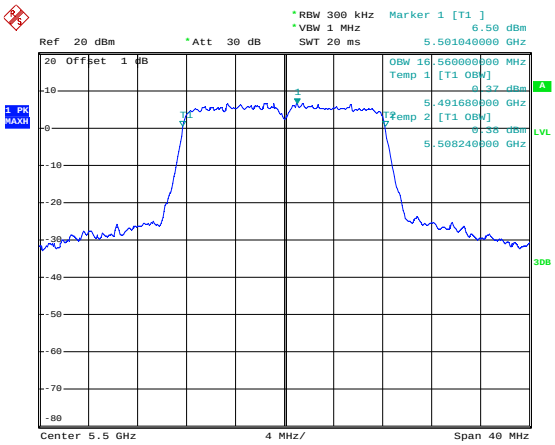
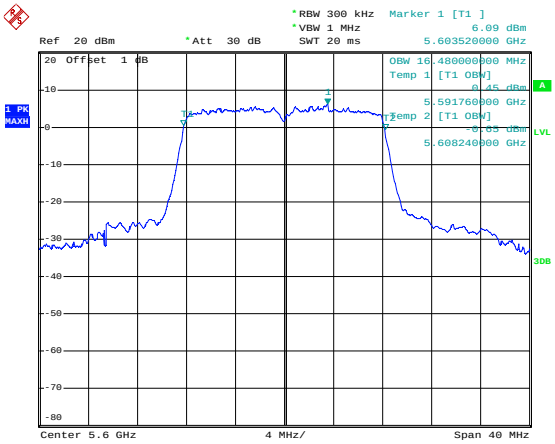
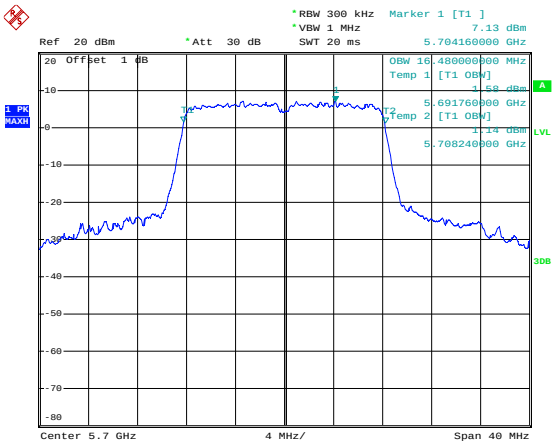
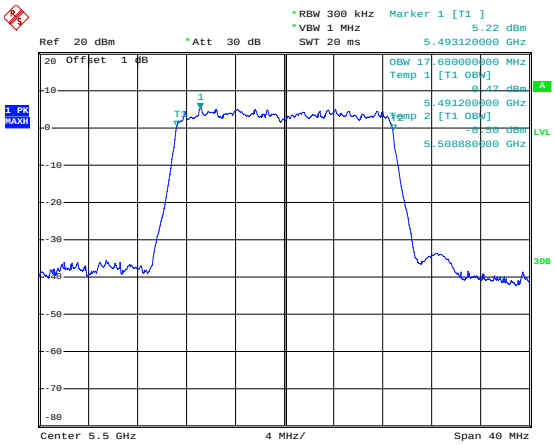
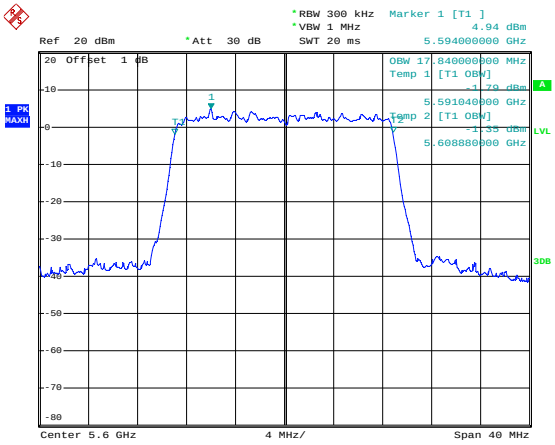
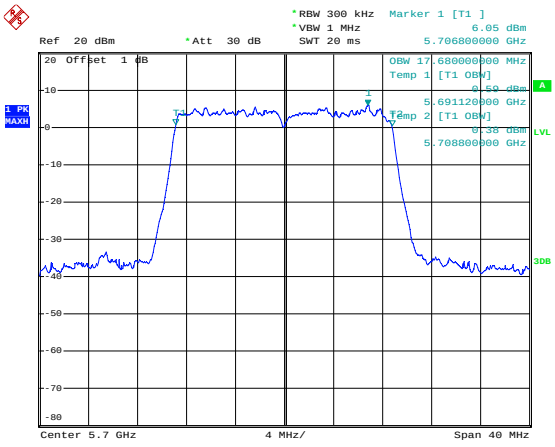
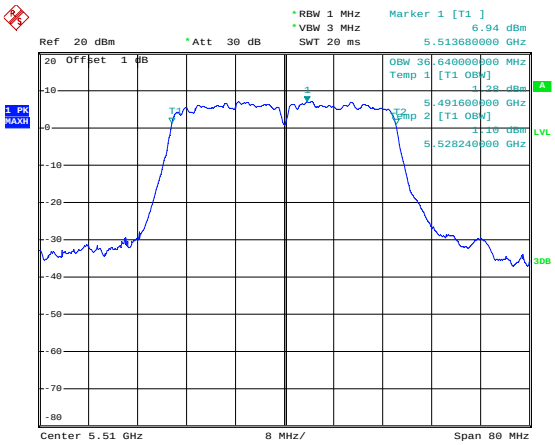
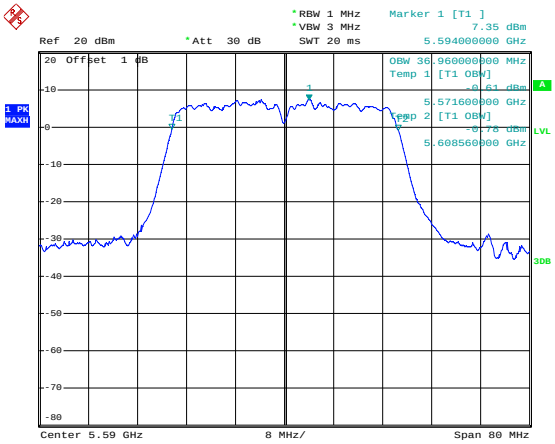
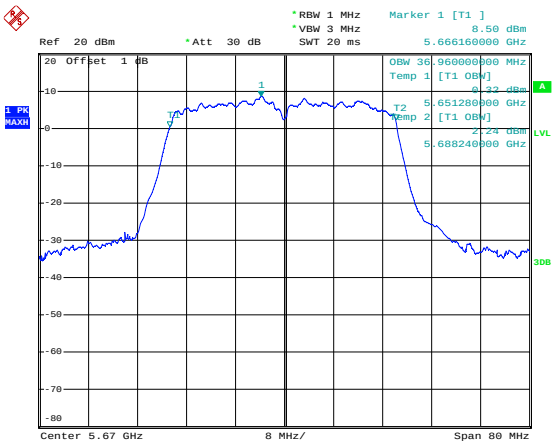
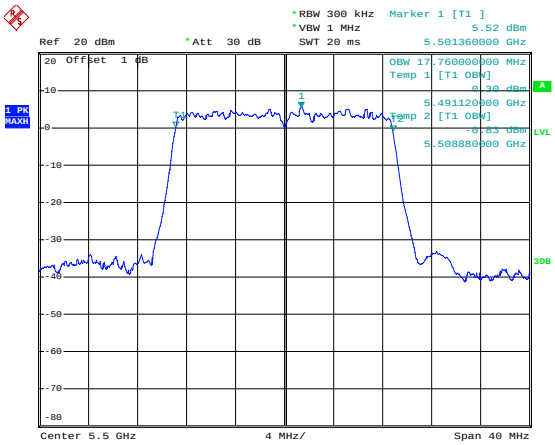
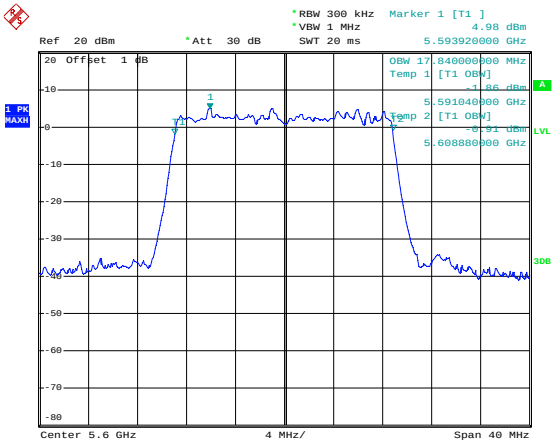
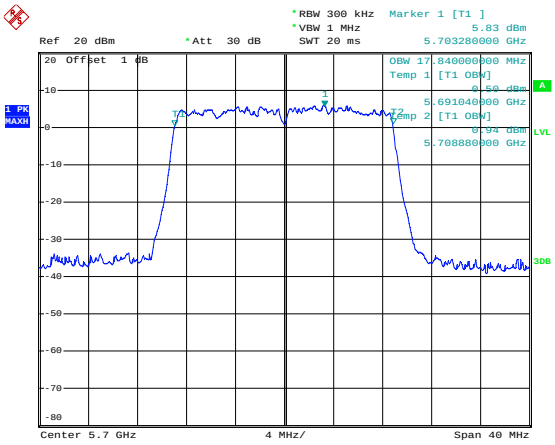
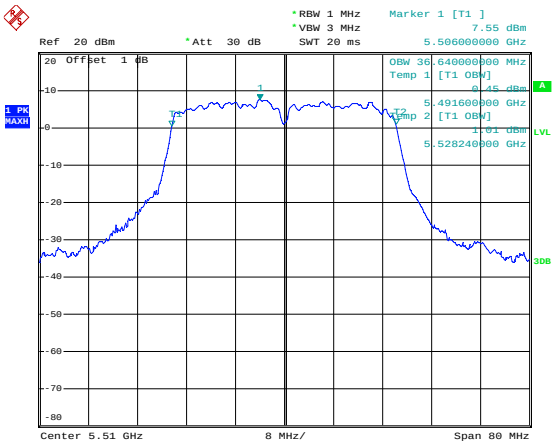
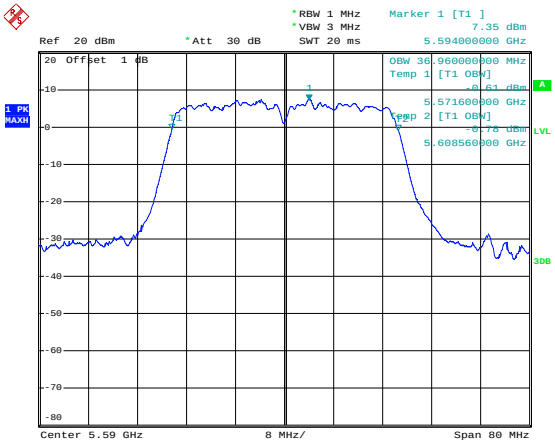
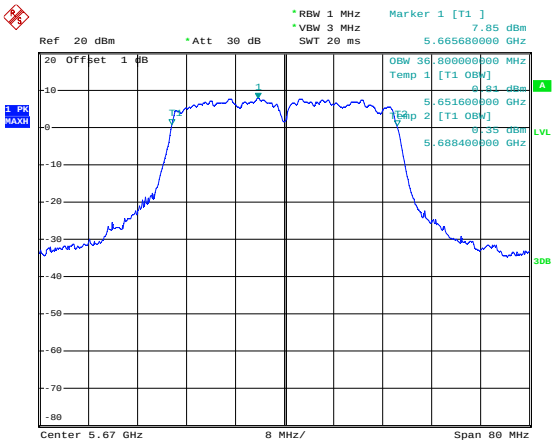
5470-5725MHz

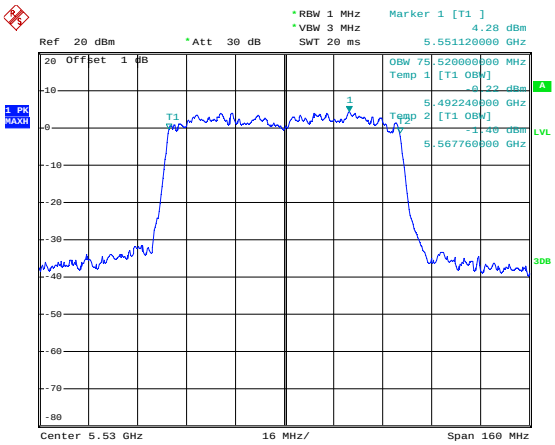
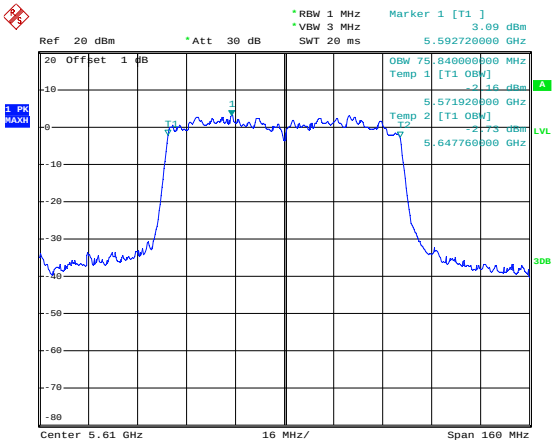
802.11a-Low	
802.11a-Middle	
802.11a-High	

802.11n-HT20-Low	
802.11n-HT20-Middle	
802.11n-HT20-High	

802.11n-HT40-Low	 Date: 6.SEP.2024 11:24:02
802.11n-HT40-Middle	 Date: 6.SEP.2024 11:24:22
802.11n-HT40-High	 Date: 6.SEP.2024 11:24:48

802.11ac-VHT20-Low	 Date: 6.SEP.2024 11:22:44
802.11ac-VHT20-Middle	 Date: 6.SEP.2024 11:23:06
802.11ac-VHT20-High	 Date: 6.SEP.2024 11:23:29

802.11ac-VHT40-Low	 Date: 6.SEP.2024 11:26:08
802.11ac-VHT40-Middle	 Date: 6.SEP.2024 11:24:22
802.11ac-VHT40-High	 Date: 6.SEP.2024 11:25:14

802.11ac-VHT80-Low	 Date: 6.SEP.2024 11:26:44
802.11ac-VHT80-High	 Date: 6.SEP.2024 11:27:06

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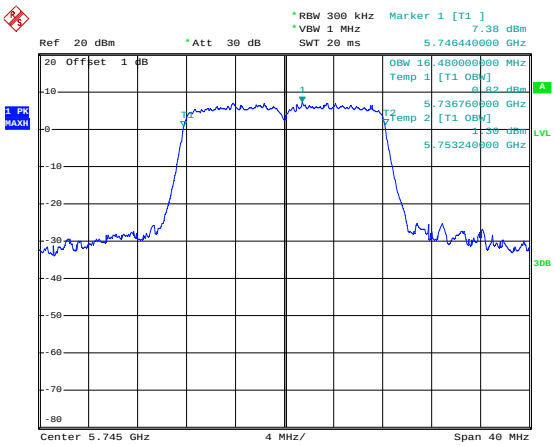
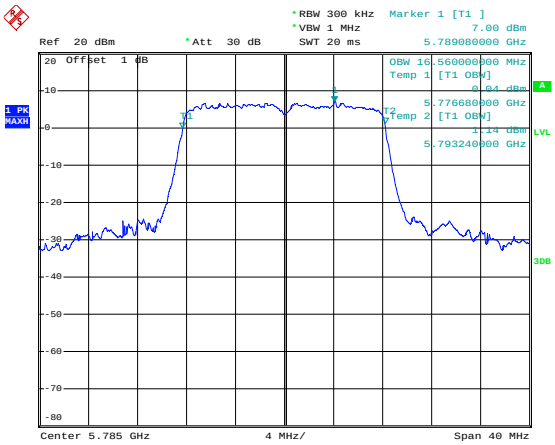
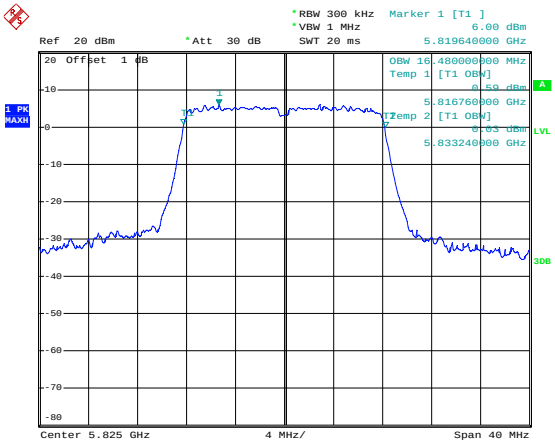
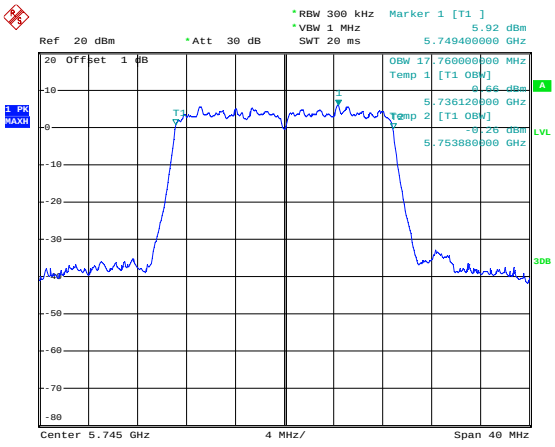
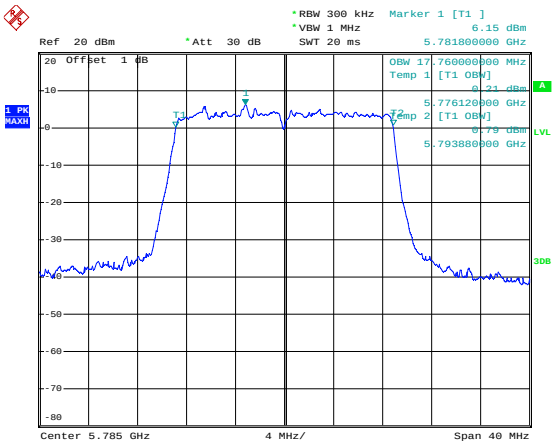
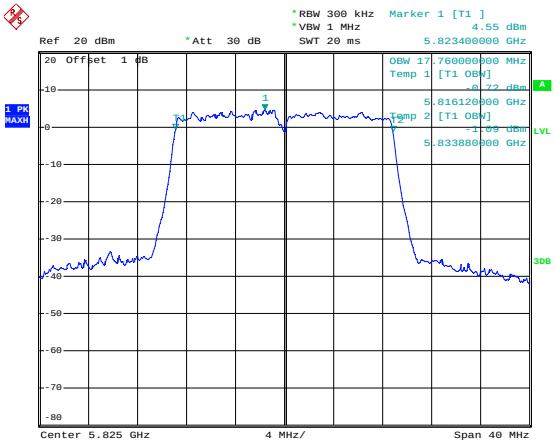
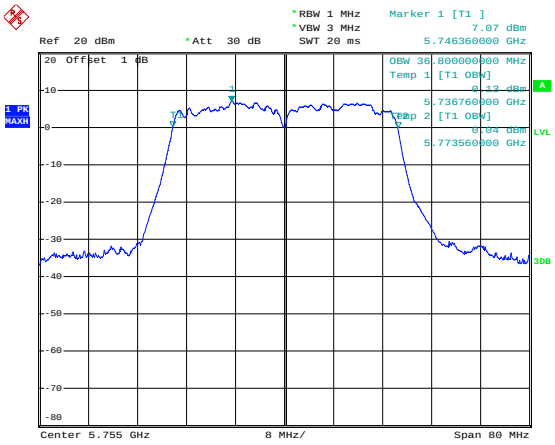
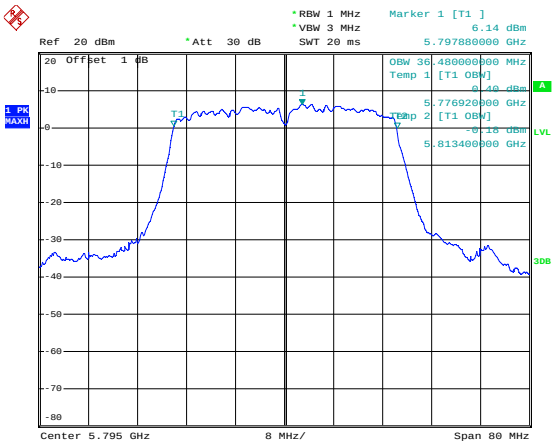
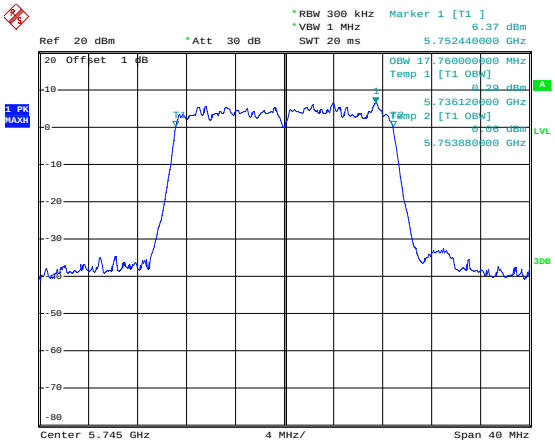
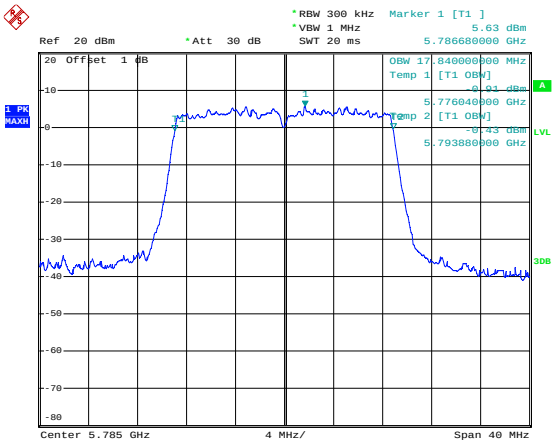
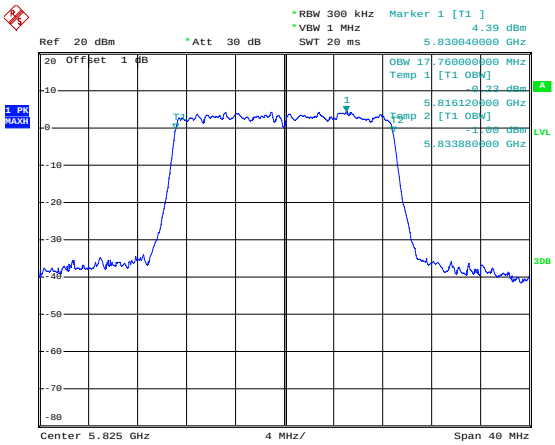
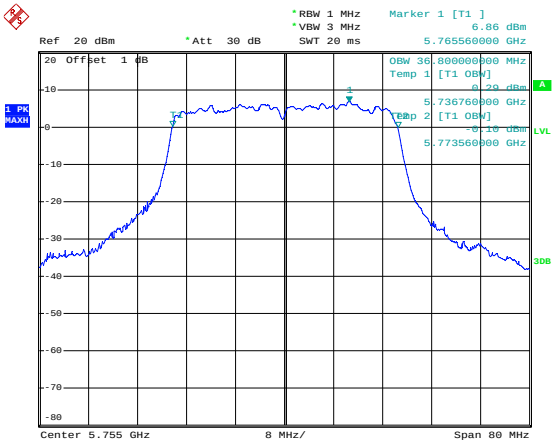
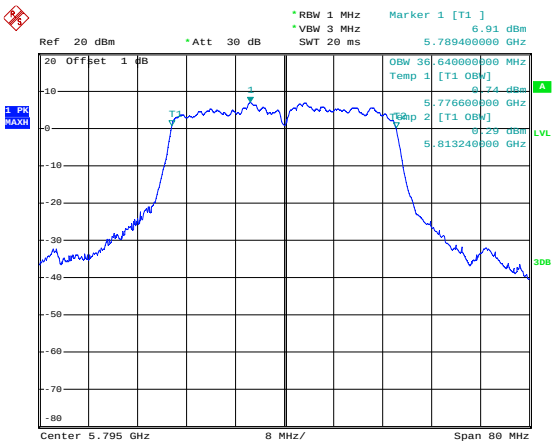
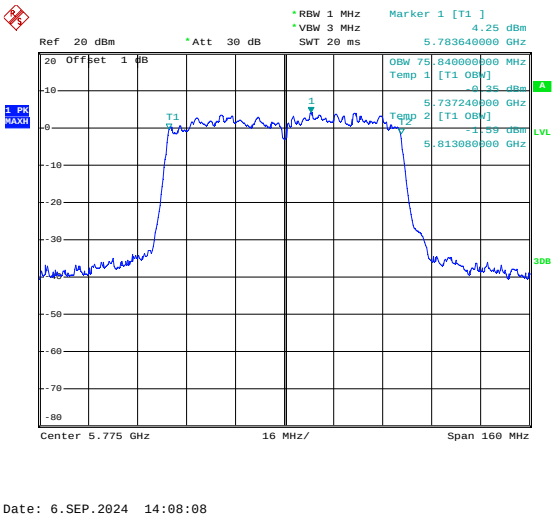
802.11a-Low	 Date: 6.SEP.2024 14:03:19

802.11a-Middle	 Date: 6.SEP.2024 14:02:54
802.11a-High	 Date: 6.SEP.2024 14:02:27
802.11n-HT20-Low	 Date: 6.SEP.2024 14:03:36

802.11n-HT20-Middle	 Date: 6.SEP.2024 14:03:58
802.11n-HT20-High	 Date: 6.SEP.2024 14:04:36
802.11n-HT40-Low	 Date: 6.SEP.2024 14:06:59

802.11n-HT40-High	 Date: 6.SEP.2024 14:06:38
802.11ac-VHT20-Low	 Date: 6.SEP.2024 14:06:07
802.11ac-VHT20-Middle	 Date: 6.SEP.2024 14:05:38

802.11ac-VHT20-High	
802.11ac-VHT40-Low	
802.11ac-VHT40-High	

802.11ac-VHT80	

APPENDIX C

Maximum Conducted Output Power

U-NII-1:5150-5250MHz					
Test mode	Frequency MHz	Output Power dBm		Total dBm	Limit dBm
		ANT 1	ANT 2		
802.11a	5180	14.34	14.12	/	23.98
	5200	14.72	14.52	/	23.98
	5240	15.84	15.44	/	23.98
802.11n-HT20	5180	13.23	13.19	16.22	23.98
	5200	13.66	13.77	16.73	23.98
	5240	14.85	14.83	17.85	23.98
802.11n-HT40	5190	12.21	12.46	15.35	23.98
	5230	13.53	13.75	16.65	23.98
802.11ac-VHT20	5180	13.30	13.30	16.31	23.98
	5200	13.84	13.83	16.85	23.98
	5240	14.99	14.85	17.93	23.98
802.11ac-VHT40	5190	12.30	12.55	15.44	23.98
	5230	13.62	13.72	16.68	23.98
802.11ac-VHT80	5210	12.08	12.42	15.26	23.98

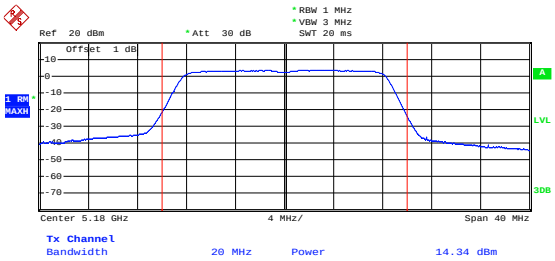
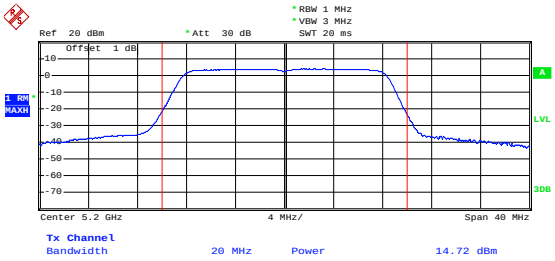
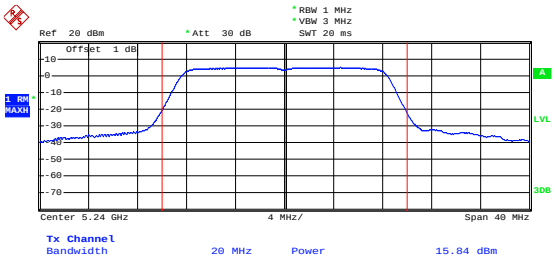
U-NII-2A: 5250-5350MHz					
Test mode	Frequency MHz	Output Power dBm		Total dBm	Limit dBm
		ANT 1	ANT 2		
802.11a	5260	14.97	14.37	/	23.98
	5280	15.01	14.34	/	23.98
	5320	15.16	14.38	/	23.98
802.11n-HT20	5260	13.91	13.39	16.67	23.98
	5280	13.97	13.42	16.71	23.98
	5320	14.04	13.42	16.75	23.98
802.11n-HT40	5270	12.76	12.65	15.72	23.98
	5310	13.04	12.86	15.96	23.98
802.11ac-VHT20	5260	13.70	13.59	16.66	23.98
	5280	13.78	13.67	16.74	23.98
	5320	13.91	13.66	16.80	23.98
802.11ac-VHT40	5270	12.90	12.67	15.80	23.98
	5310	13.10	12.89	16.01	23.98
802.11ac-VHT80	5290	12.56	12.71	15.65	23.98

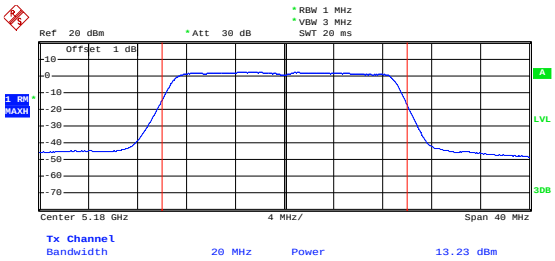
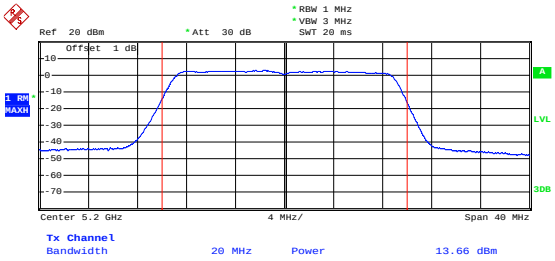
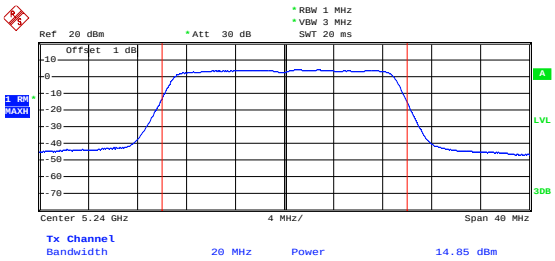
U-NII-2C: 5470-5725MHz					
Test mode	Frequency MHz	Output Power dBm		Total dBm	Limit dBm
		ANT 1	ANT 2		
802.11a	5500	14.48	14.99	/	23.98
	5600	14.08	14.07	/	23.98
	5700	15.64	15.66	/	23.98
802.11n-HT20	5500	13.33	14.18	16.79	23.98
	5600	13.20	13.11	16.17	23.98
	5700	14.88	14.80	17.85	23.98
802.11n-HT40	5510	12.78	13.38	16.10	23.98
	5590	12.51	13.13	15.84	23.98
	5670	13.94	13.83	16.90	23.98
802.11ac-VHT20	5500	13.47	14.28	16.90	23.98
	5600	13.42	13.22	16.33	23.98
	5700	14.98	14.92	17.96	23.98
802.11ac-VHT40	5510	12.57	13.52	16.08	23.98
	5590	12.51	13.13	15.84	23.98
	5670	13.96	13.87	16.93	23.98
802.11ac-VHT80	5530	12.70	13.07	15.90	23.98
	5610	12.58	12.06	15.34	23.98

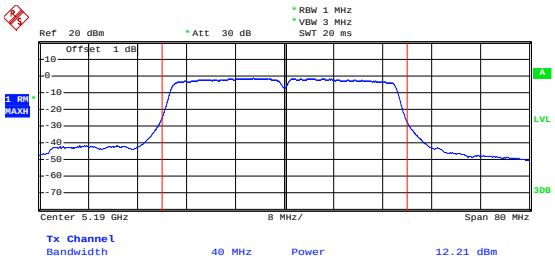
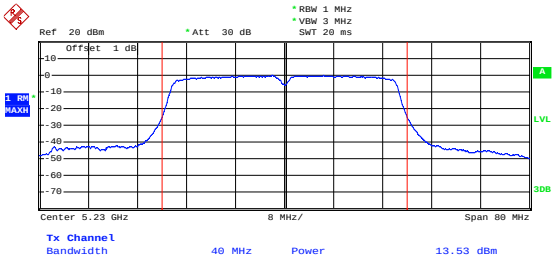
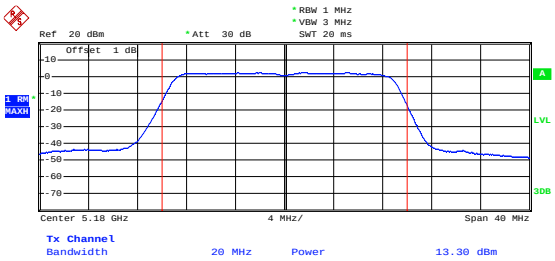
U-NII-3: 5725-5850MHz					
Test mode	Frequency MHz	Output Power dBm		Total dBm	Limit dBm
		ANT 1	ANT 2		
802.11a	5745	14.63	15.14	/	30.00
	5785	15.01	15.23	/	30.00
	5825	14.19	14.31	/	30.00
802.11n-HT20	5745	13.75	14.24	17.01	30.00
	5785	14.25	14.37	17.32	30.00
	5825	13.47	13.44	16.47	30.00
802.11n-HT40	5755	12.63	12.71	15.68	30.00
	5795	12.37	12.22	15.31	30.00
802.11ac-VHT20	5745	14.05	14.33	17.20	30.00
	5785	14.49	14.43	17.47	30.00
	5825	13.74	13.61	16.69	30.00
802.11ac-VHT40	5755	12.71	12.78	15.76	30.00
	5795	12.39	12.36	15.39	30.00
802.11ac-VHT80	5775	12.83	12.70	15.78	30.00

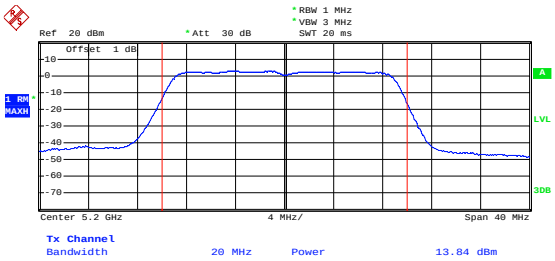
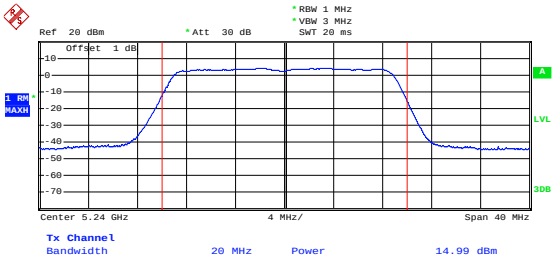
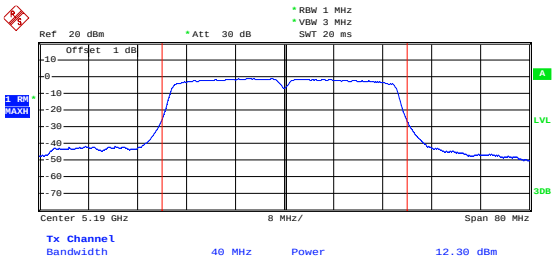
ANT 1

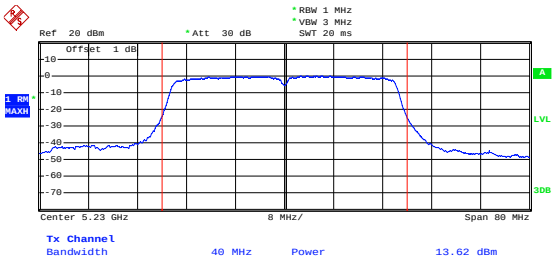
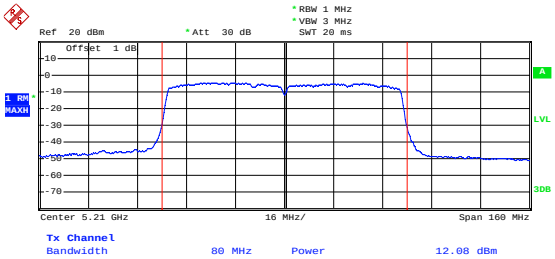
5150-5250MHz

802.11a-Low	 Date: 4.SEP.2024 18:58:15
802.11a-Middle	 Date: 4.SEP.2024 18:58:56
802.11a-High	 Date: 4.SEP.2024 18:59:39

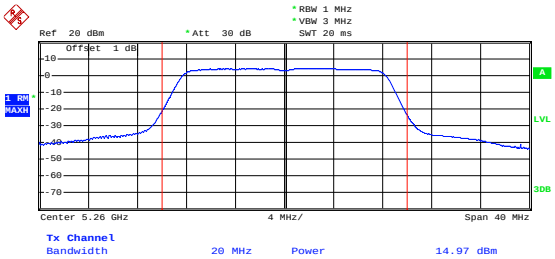
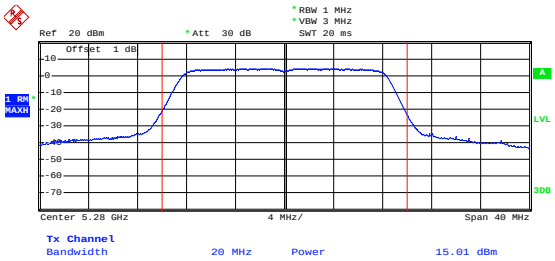
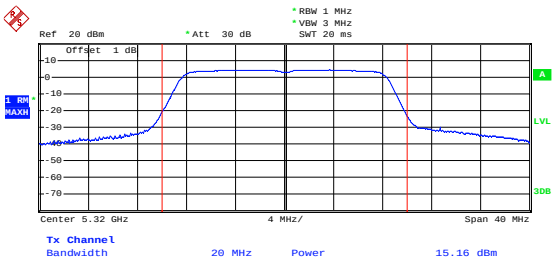
802.11n-HT20-Low	 Date: 4.SEP.2024 19:01:16
802.11n-HT20-Middle	 Date: 4.SEP.2024 19:01:41
802.11n-HT20-High	 Date: 4.SEP.2024 19:02:07

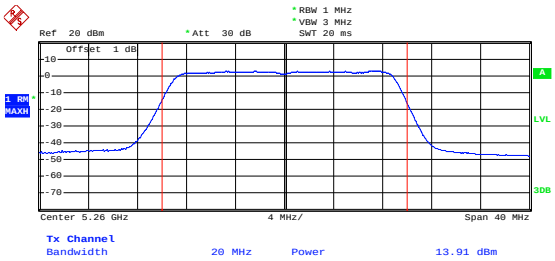
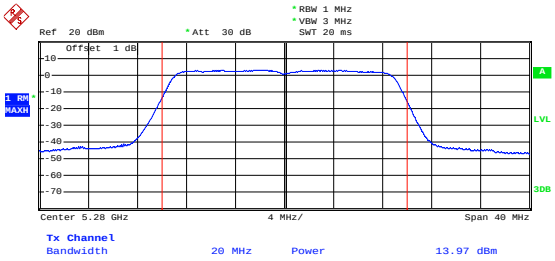
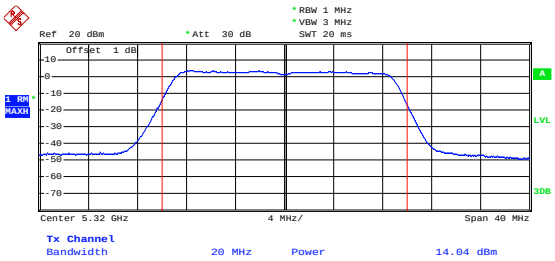
802.11n-HT40-Low	 Date: 4.SEP.2024 19:06:30
802.11n-HT40-High	 Date: 4.SEP.2024 19:07:06
802.11ac-VHT20-Low	 Date: 4.SEP.2024 19:03:05

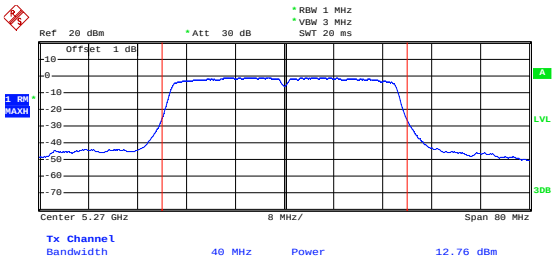
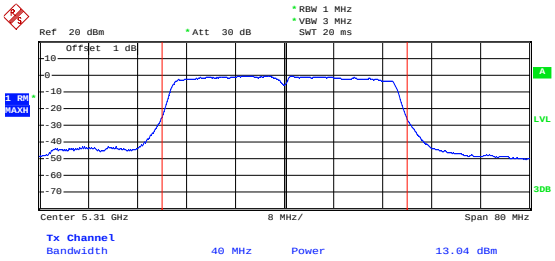
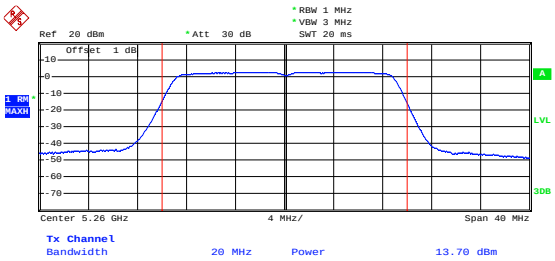
802.11ac-VHT20-Middle	 Date: 4.SEP.2024 19:03:30
802.11ac-VHT20-High	 Date: 4.SEP.2024 19:03:59
802.11ac-VHT40-Low	 Date: 4.SEP.2024 19:07:52

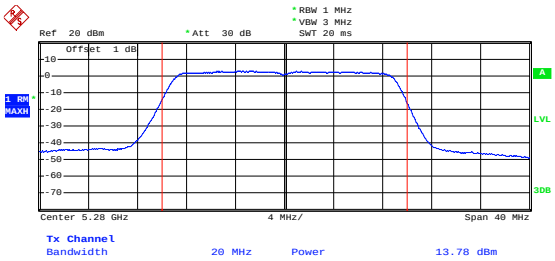
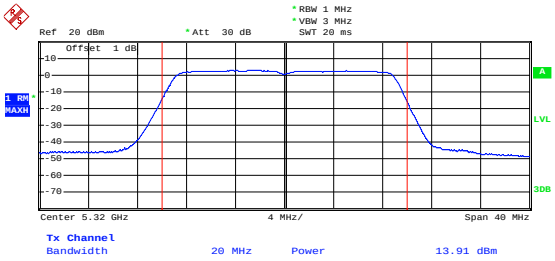
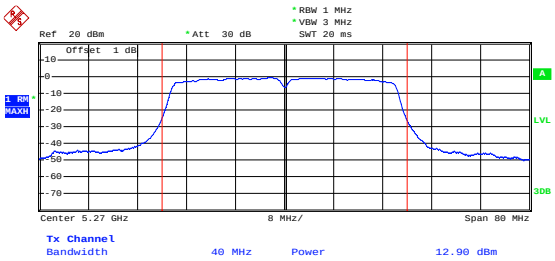
802.11ac-VHT40-High	 Date: 4.SEP.2024 19:08:20
802.11ac-VHT80	 Date: 4.SEP.2024 19:17:30

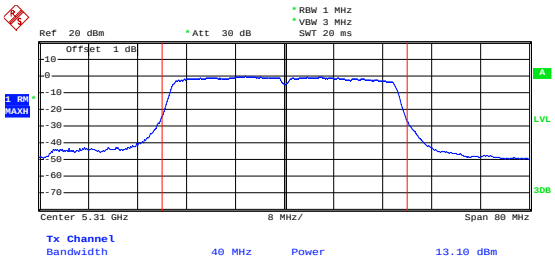
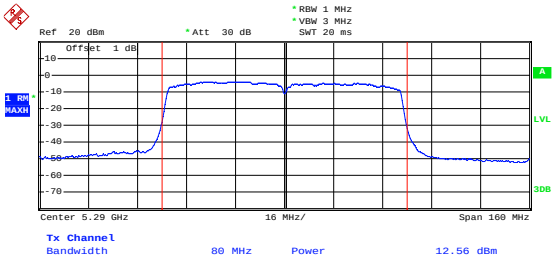
5250-5350MHz

802.11a-Low	 Date: 4.SEP.2024 20:12:18
802.11a-Middle	 Date: 4.SEP.2024 20:13:15
802.11a-High	 Date: 4.SEP.2024 20:13:49

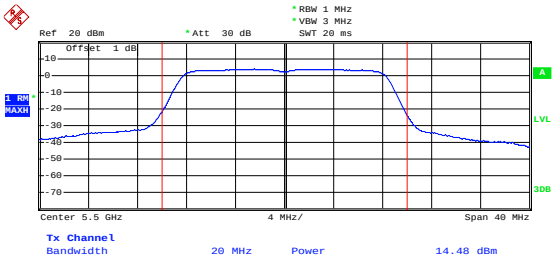
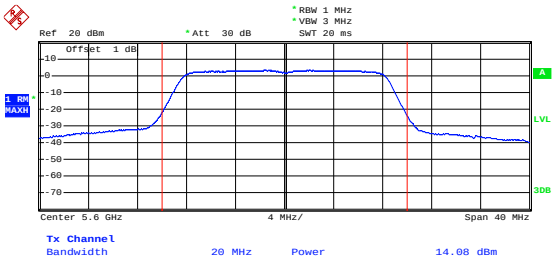
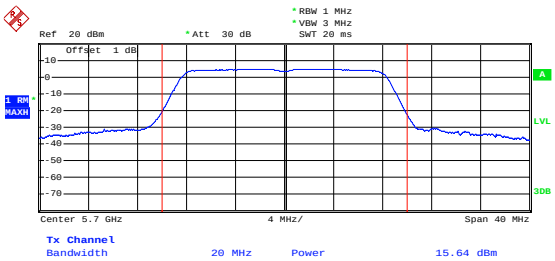
802.11n-HT20-Low	 Date: 4.SEP.2024 20:15:26
802.11n-HT20-Middle	 Date: 4.SEP.2024 20:15:00
802.11n-HT20-High	 Date: 4.SEP.2024 20:14:32

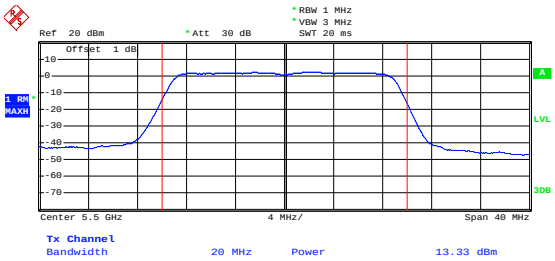
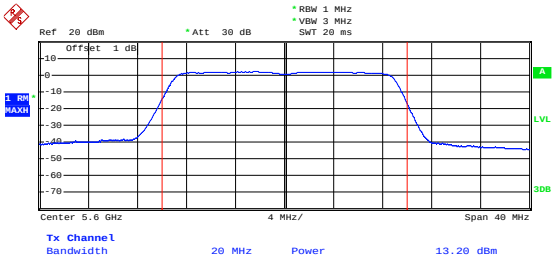
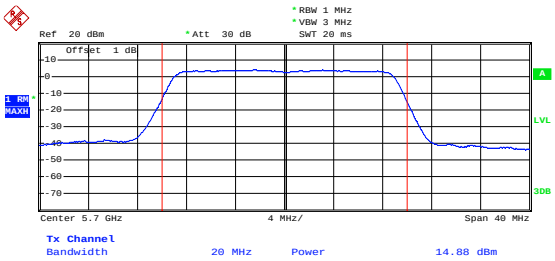
802.11n-HT40-Low	 Date: 4.SEP.2024 20:19:42
802.11n-HT40-High	 Date: 4.SEP.2024 20:20:19
802.11ac-VHT20-Low	 Date: 4.SEP.2024 20:16:56

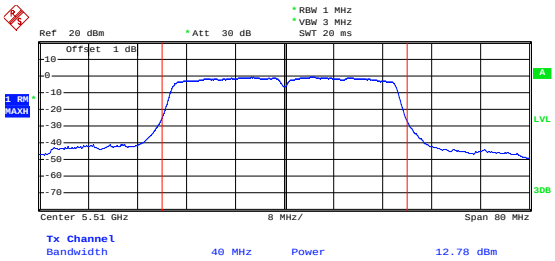
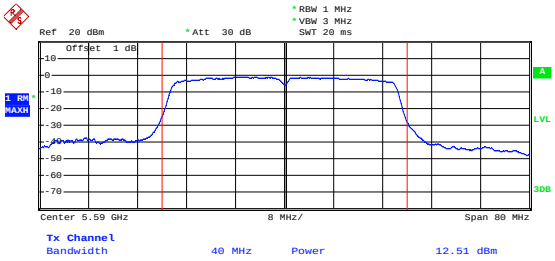
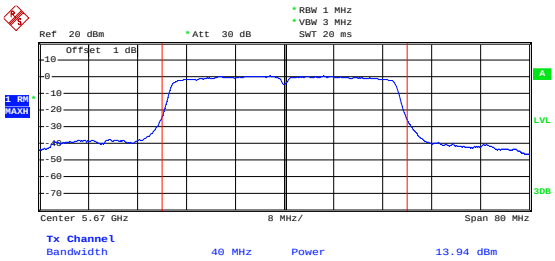
802.11ac-VHT20-Middle	 Date: 4.SEP.2024 20:17:23
802.11ac-VHT20-High	 Date: 4.SEP.2024 20:17:46
802.11ac-VHT40-Low	 Date: 4.SEP.2024 20:21:36

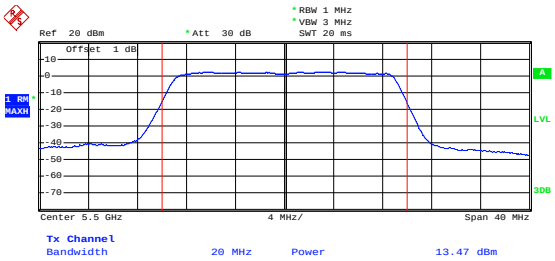
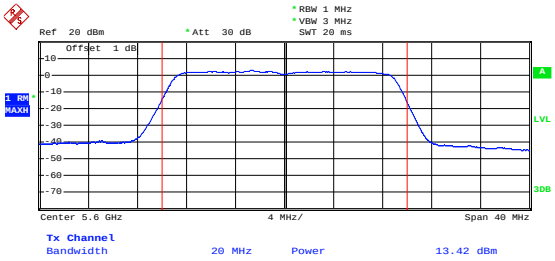
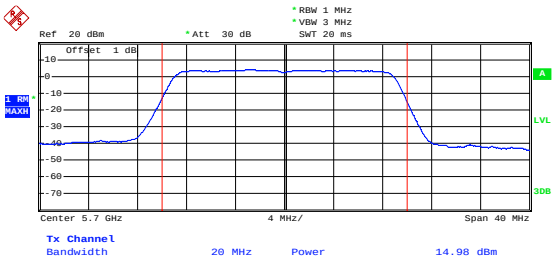
802.11ac-VHT40-High	 Date: 4.SEP.2024 20:21:00
802.11ac-VHT80	 Date: 4.SEP.2024 20:23:35

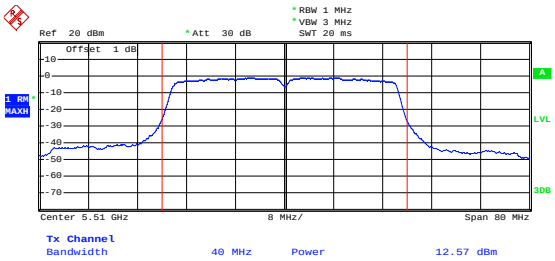
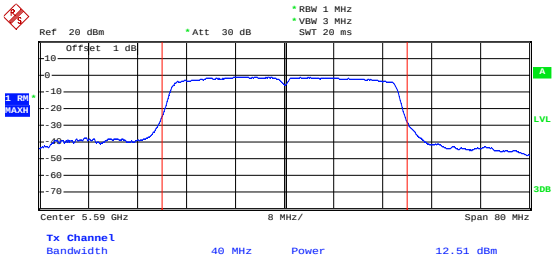
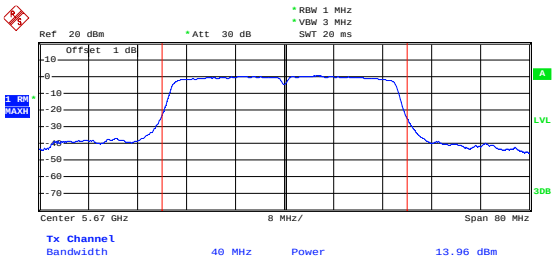
5470-5725MHz

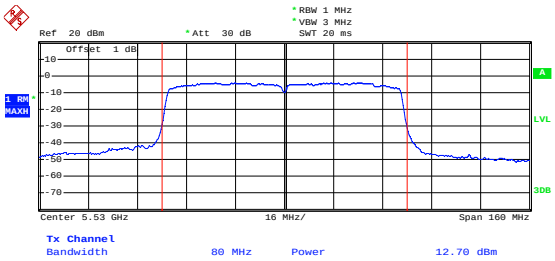
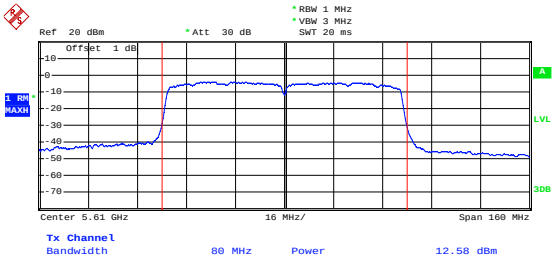
802.11a-Low	 Date: 5.SEP.2024 17:11:50
802.11a-Middle	 Date: 5.SEP.2024 17:12:18
802.11a-High	 Date: 5.SEP.2024 17:12:43

802.11n-HT20-Low	 Date: 5.SEP.2024 17:14:41
802.11n-HT20-Middle	 Date: 5.SEP.2024 17:15:13
802.11n-HT20-High	 Date: 5.SEP.2024 17:15:39

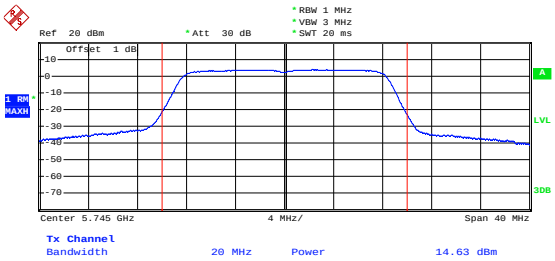
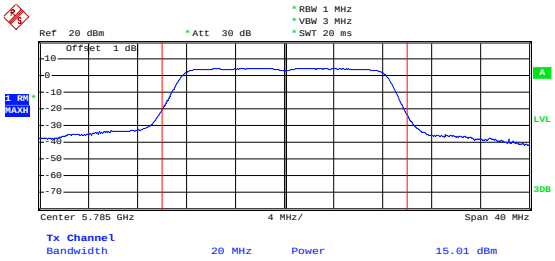
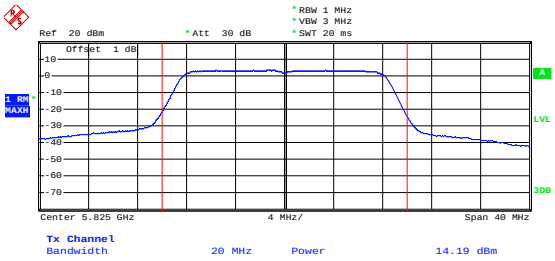
802.11n-HT40-Low	 Date: 5.SEP.2024 17:19:42
802.11n-HT40-Middle	 Date: 5.SEP.2024 17:20:13
802.11n-HT40-High	 Date: 5.SEP.2024 17:24:24

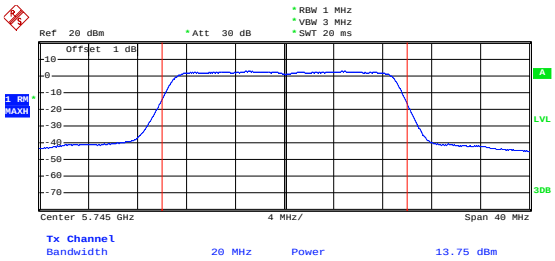
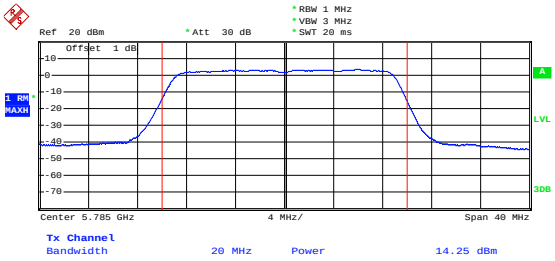
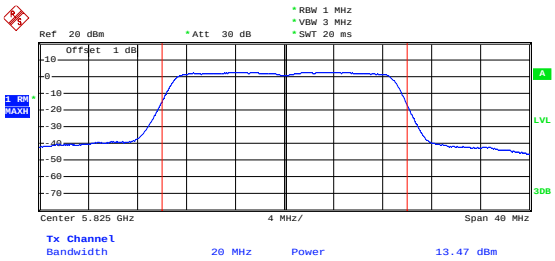
802.11ac-VHT20-Low	 Date: 5.SEP.2024 17:16:57
802.11ac-VHT20-Middle	 Date: 5.SEP.2024 17:17:28
802.11ac-VHT20-High	 Date: 5.SEP.2024 17:17:50

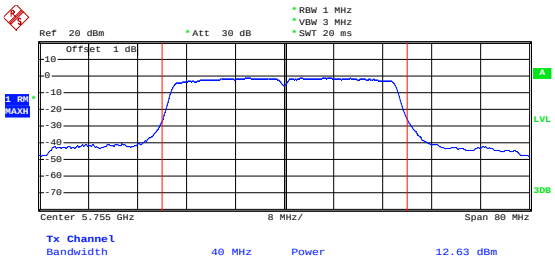
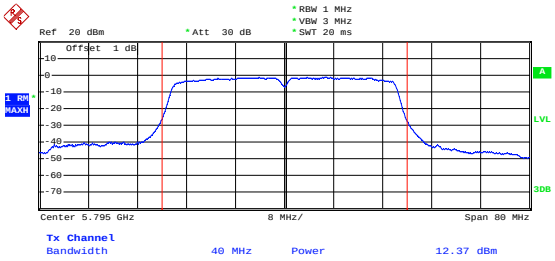
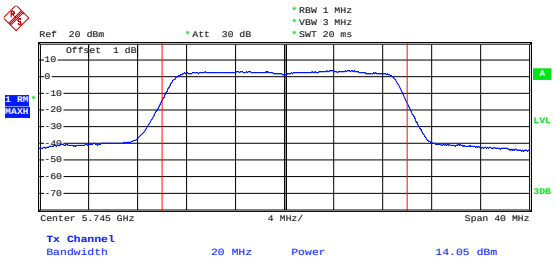
802.11ac-VHT40-Low	 Date: 5.SEP.2024 17:25:26
802.11ac-VHT40-Middle	 Date: 5.SEP.2024 17:20:13
802.11ac-VHT40-High	 Date: 5.SEP.2024 17:26:29

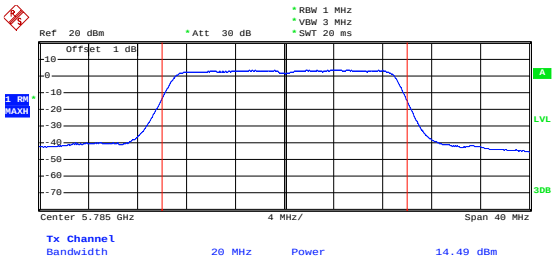
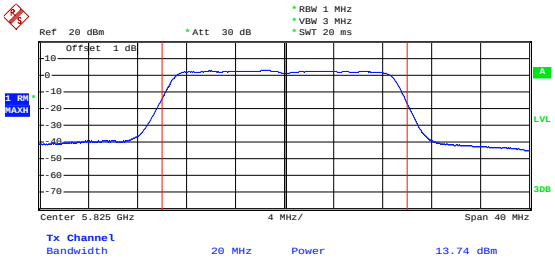
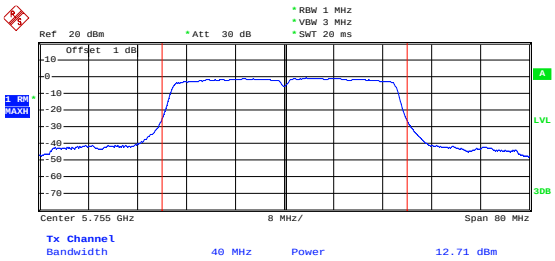
802.11ac-VHT80-Low	 Date: 5.SEP.2024 17:27:53
802.11ac-VHT80-High	 Date: 5.SEP.2024 17:28:47

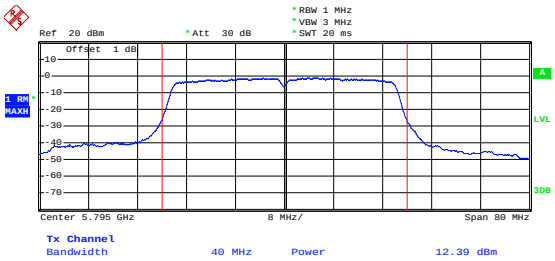
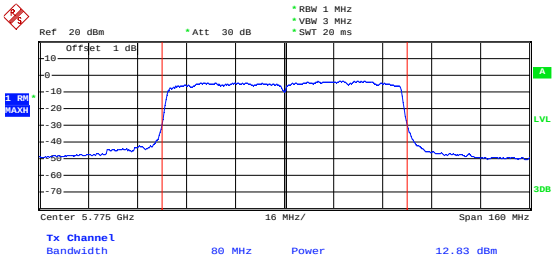
5725-5850MHz

802.11a-Low	 Date: 5.SEP.2024 19:38:26
802.11a-Middle	 Date: 5.SEP.2024 19:37:57
802.11a-High	 Date: 5.SEP.2024 19:37:15

802.11n-HT20-Low	 Date: 5.SEP.2024 19:39:05
802.11n-HT20-Middle	 Date: 5.SEP.2024 19:39:31
802.11n-HT20-High	 Date: 5.SEP.2024 19:39:53

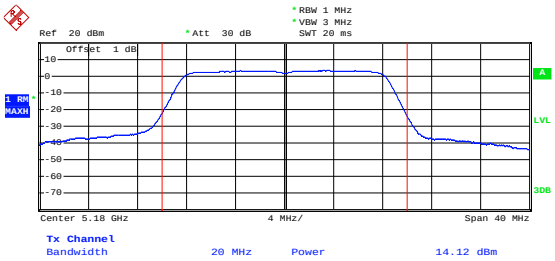
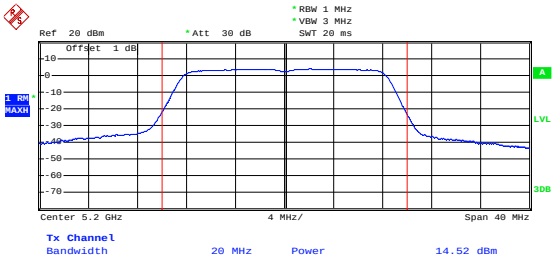
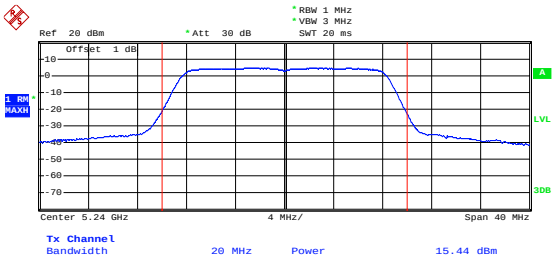
802.11n-HT40-Low	 Date: 5.SEP.2024 19:42:58
802.11n-HT40-High	 Date: 5.SEP.2024 19:43:23
802.11ac-VHT20-Low	 Date: 5.SEP.2024 19:41:23

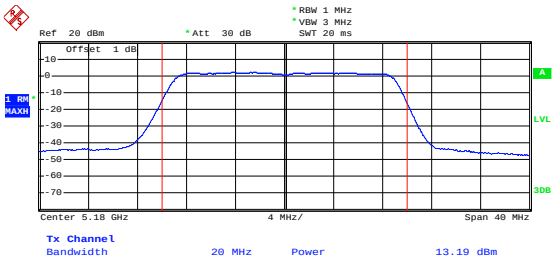
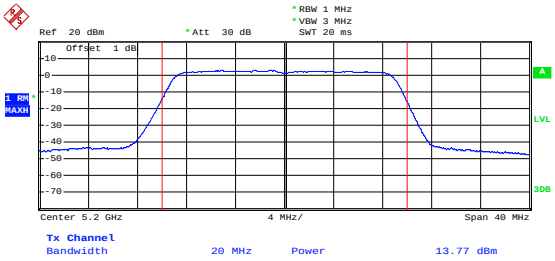
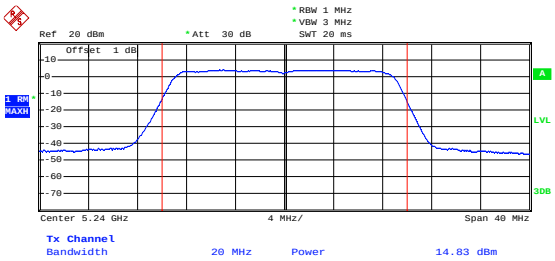
802.11ac-VHT20-Middle	 Date: 5.SEP.2024 19:40:55
802.11ac-VHT20-High	 Date: 5.SEP.2024 19:40:32
802.11ac-VHT40-Low	 Date: 5.SEP.2024 19:44:17

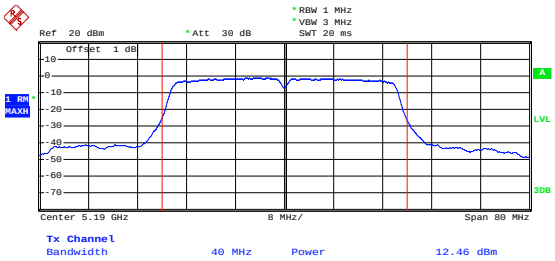
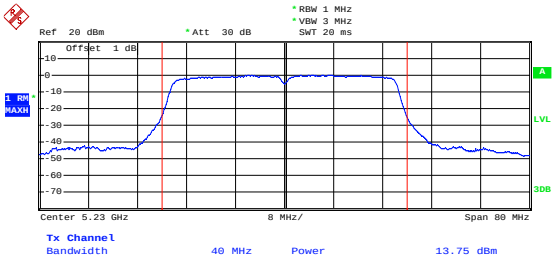
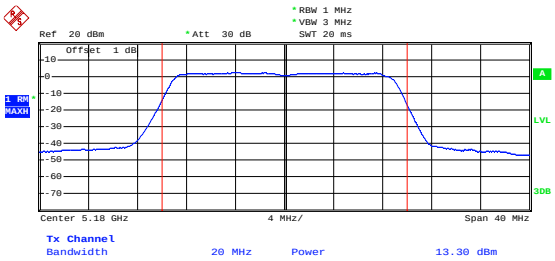
802.11ac-VHT40-High	 Date: 5.SEP.2024 19:43:52
802.11ac-VHT80	 Date: 5.SEP.2024 19:45:08

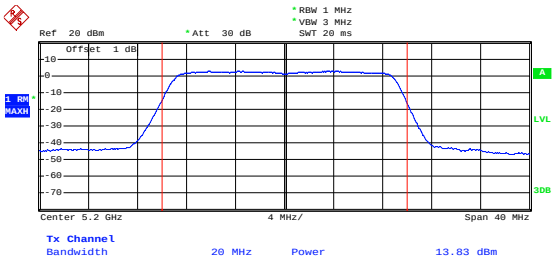
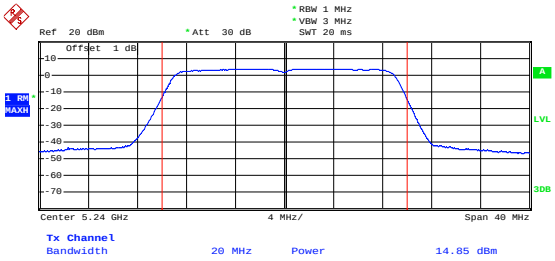
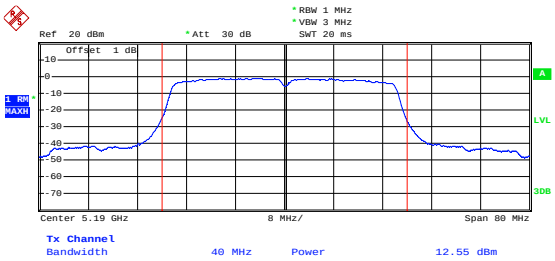
ANT 2

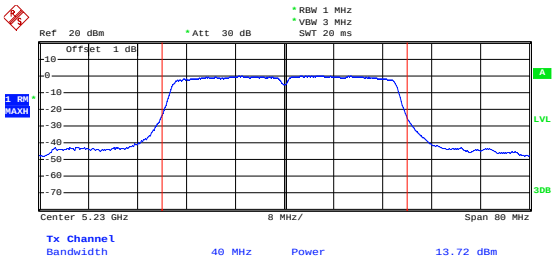
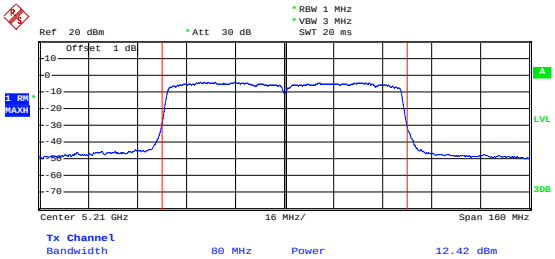
5150-5250MHz

802.11a-Low	 Date: 6.SEP.2024 08:49:11
802.11a-Middle	 Date: 6.SEP.2024 08:49:51
802.11a-High	 Date: 6.SEP.2024 08:50:32

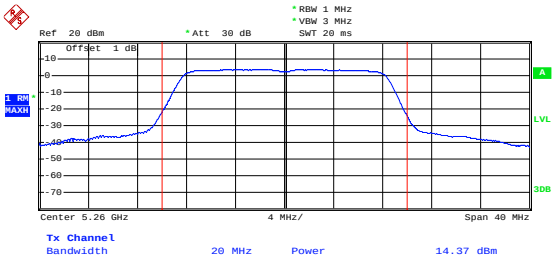
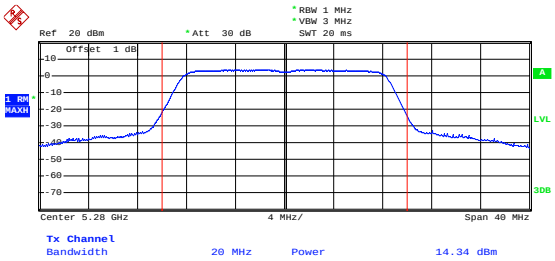
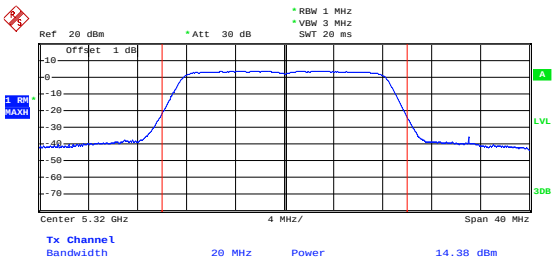
802.11n-HT20-Low	 Date: 6.SEP.2024 08:52:04
802.11n-HT20-Middle	 Date: 6.SEP.2024 08:52:31
802.11n-HT20-High	 Date: 6.SEP.2024 08:53:02

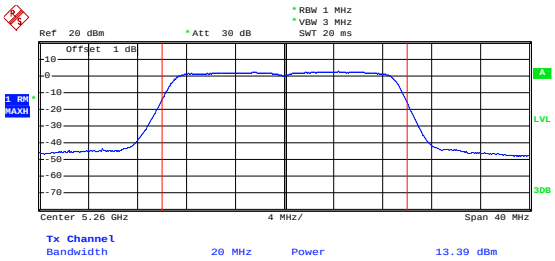
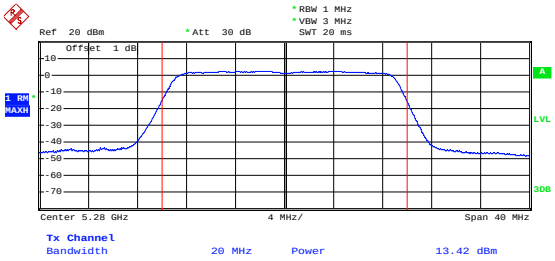
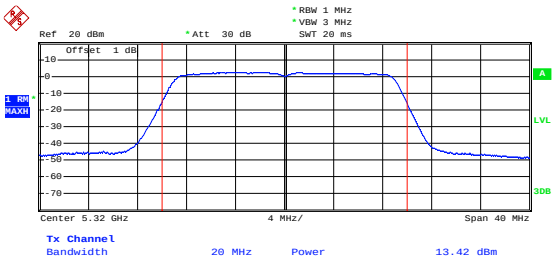
802.11n-HT40-Low	 Date: 6.SEP.2024 08:56:43
802.11n-HT40-High	 Date: 6.SEP.2024 08:57:24
802.11ac-VHT20-Low	 Date: 6.SEP.2024 08:53:57

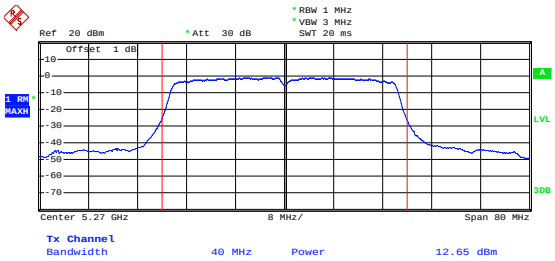
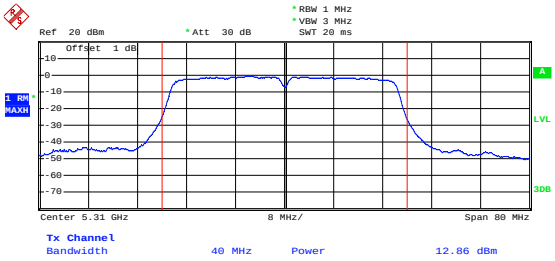
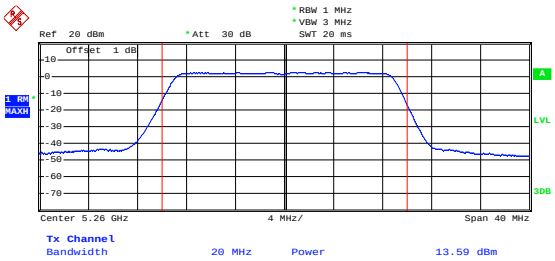
802.11ac-VHT20-Middle	 Date: 6.SEP.2024 08:54:26
802.11ac-VHT20-High	 Date: 6.SEP.2024 08:54:53
802.11ac-VHT40-Low	 Date: 6.SEP.2024 08:58:13

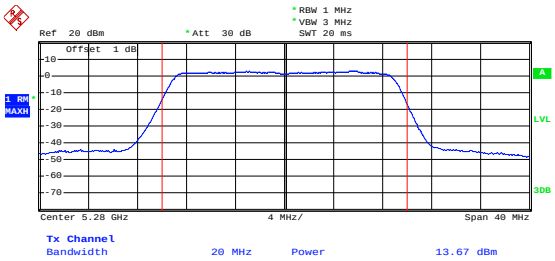
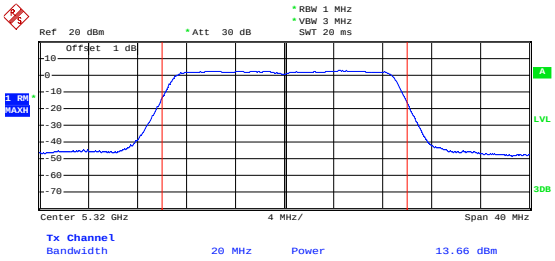
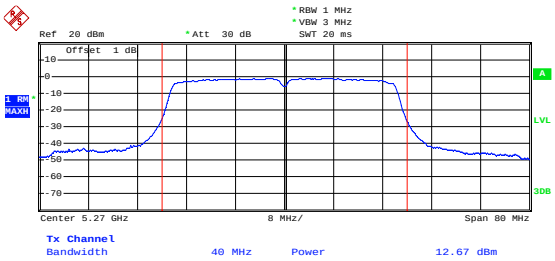
802.11ac-VHT40-High	 Date: 6.SEP.2024 08:58:41
802.11ac-VHT80	 Date: 6.SEP.2024 09:00:04

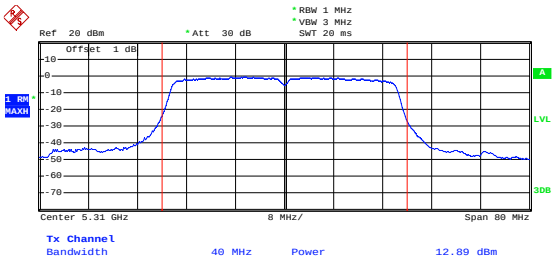
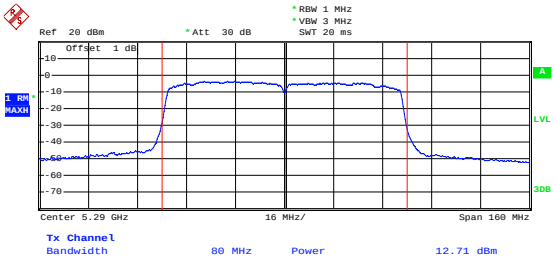
5250-5350MHz

802.11a-Low	 Date: 6.SEP.2024 09:51:37
802.11a-Middle	 Date: 6.SEP.2024 09:52:11
802.11a-High	 Date: 6.SEP.2024 09:52:49

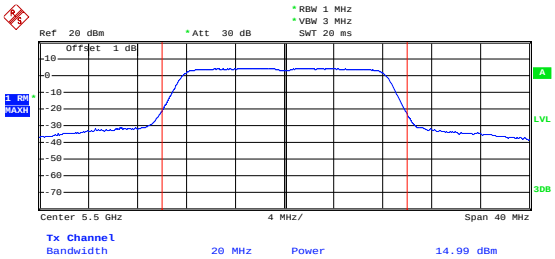
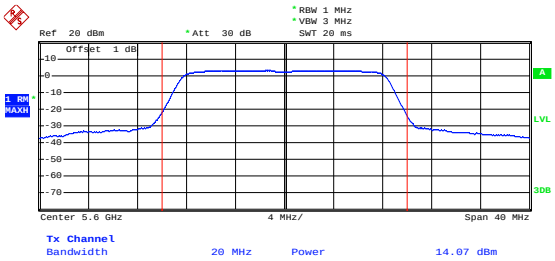
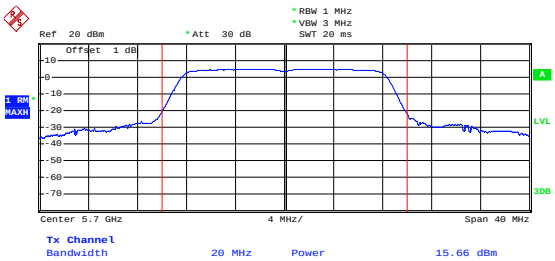
802.11n-HT20-Low	 Date: 6.SEP.2024 09:54:32
802.11n-HT20-Middle	 Date: 6.SEP.2024 09:54:09
802.11n-HT20-High	 Date: 6.SEP.2024 09:53:42

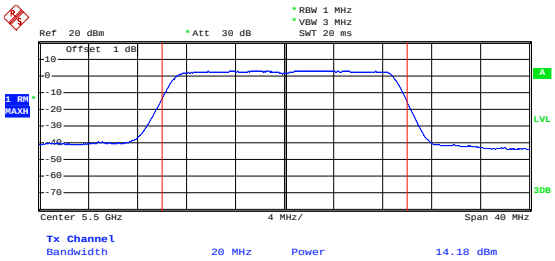
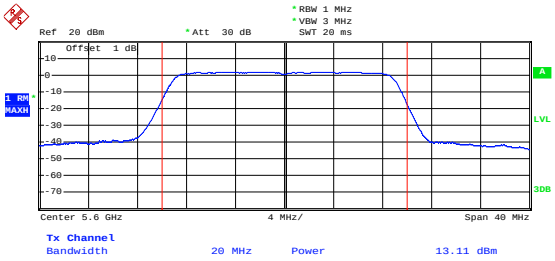
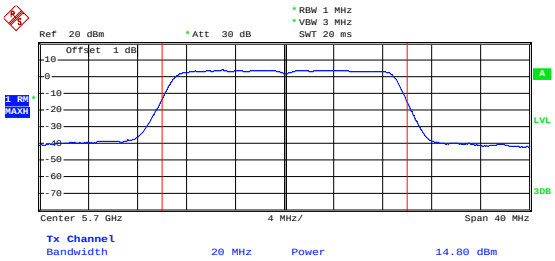
802.11n-HT40-Low	 Date: 6.SEP.2024 09:57:04
802.11n-HT40-High	 Date: 6.SEP.2024 09:57:30
802.11ac-VHT20-Low	 Date: 6.SEP.2024 09:55:06

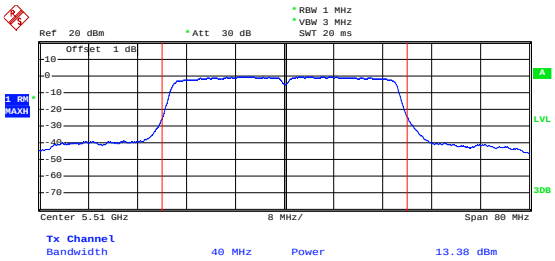
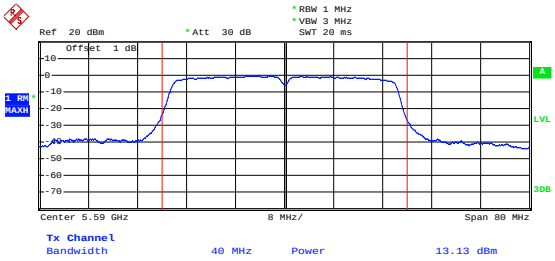
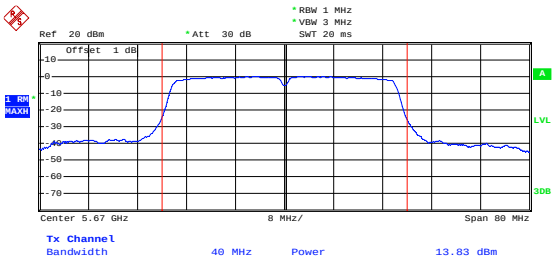
802.11ac-VHT20-Middle	 Date: 6.SEP.2024 09:55:27
802.11ac-VHT20-High	 Date: 6.SEP.2024 09:55:54
802.11ac-VHT40-Low	 Date: 6.SEP.2024 09:58:23

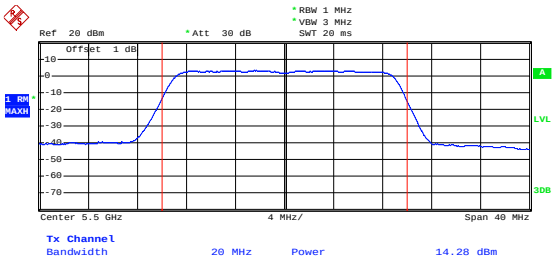
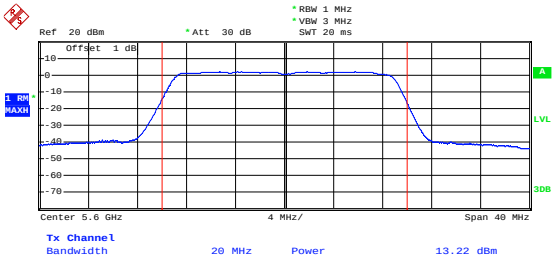
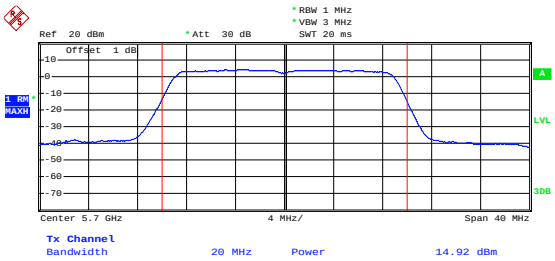
802.11ac-VHT40-High	 Date: 6.SEP.2024 09:57:59
802.11ac-VHT80	 Date: 6.SEP.2024 09:59:06

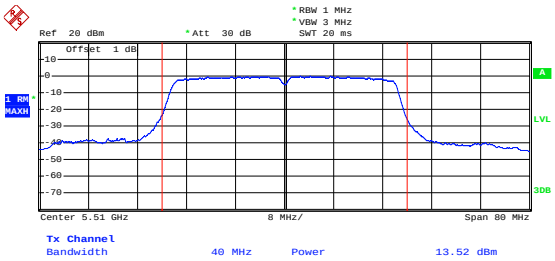
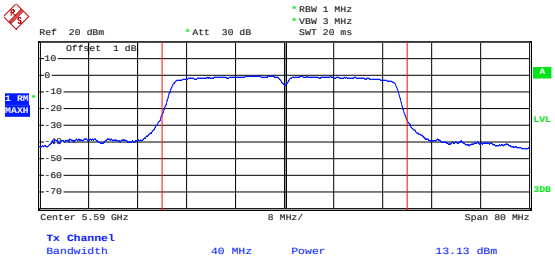
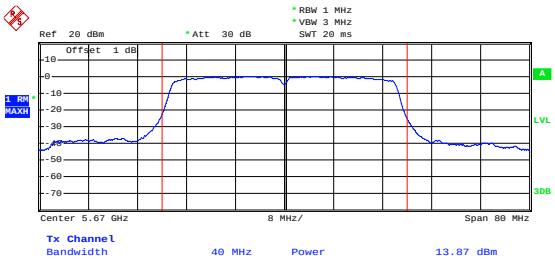
5470-5725MHz

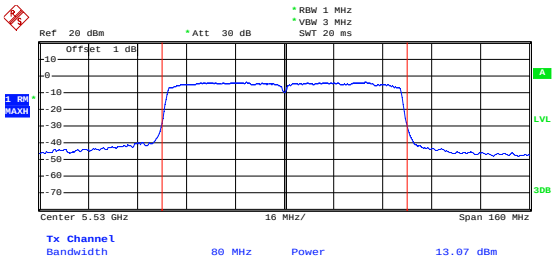
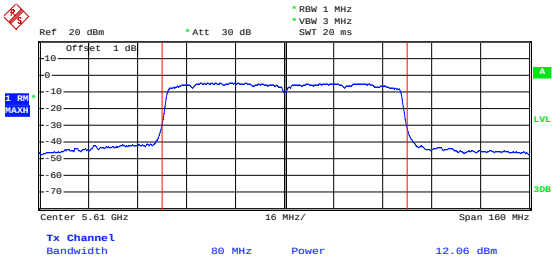
802.11a-Low	 Date: 6.SEP.2024 10:59:58
802.11a-Middle	 Date: 6.SEP.2024 11:00:37
802.11a-High	 Date: 6.SEP.2024 11:00:59

802.11n-HT20-Low	 Date: 6.SEP.2024 11:04:09
802.11n-HT20-Middle	 Date: 6.SEP.2024 11:03:45
802.11n-HT20-High	 Date: 6.SEP.2024 11:03:15

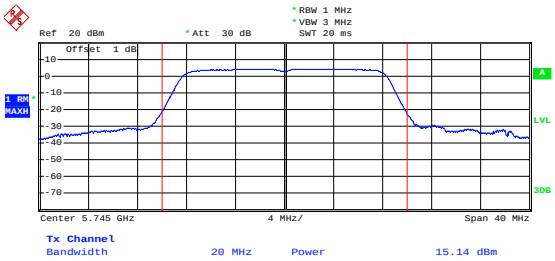
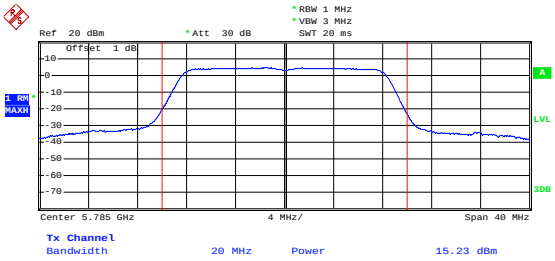
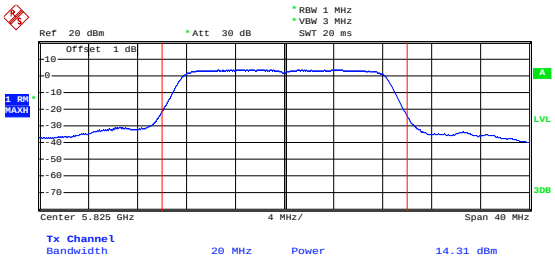
802.11n-HT40-Low	 Date: 6.SEP.2024 11:07:30
802.11n-HT40-Middle	 Date: 6.SEP.2024 11:07:56
802.11n-HT40-High	 Date: 6.SEP.2024 11:08:19

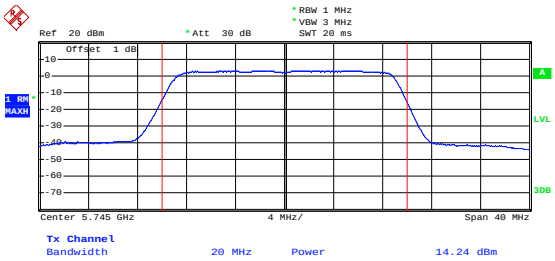
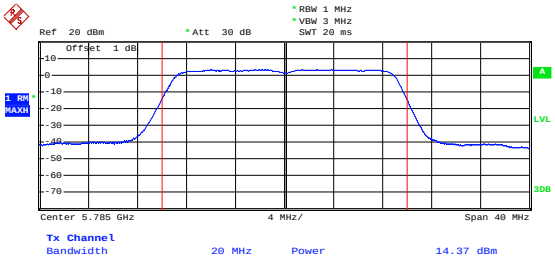
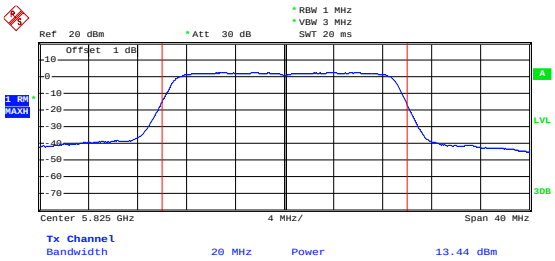
802.11ac-VHT20-Low	 Date: 6.SEP.2024 11:05:29
802.11ac-VHT20-Middle	 Date: 6.SEP.2024 11:05:52
802.11ac-VHT20-High	 Date: 6.SEP.2024 11:06:14

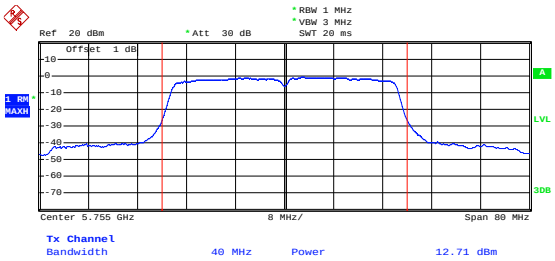
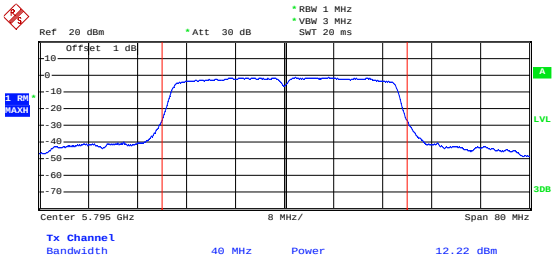
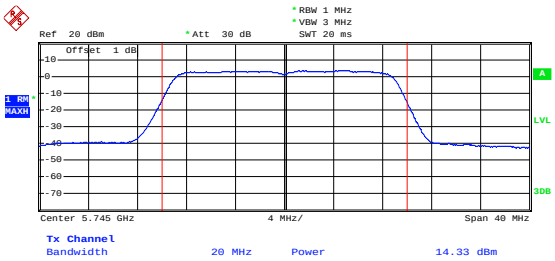
802.11ac-VHT40-Low	 Date: 6.SEP.2024 11:09:35
802.11ac-VHT40-Middle	 Date: 6.SEP.2024 11:07:56
802.11ac-VHT40-High	 Date: 6.SEP.2024 11:08:46

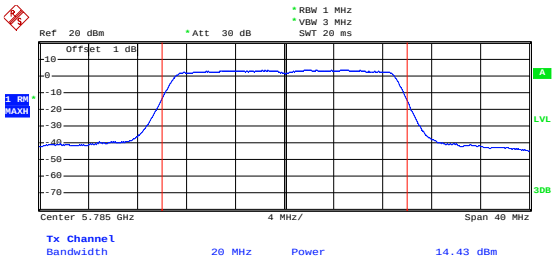
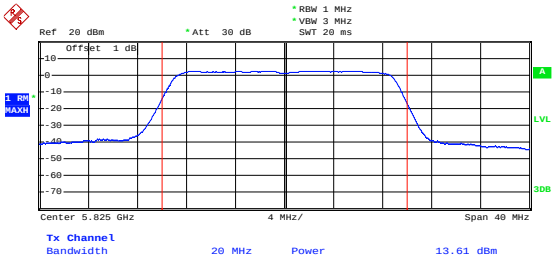
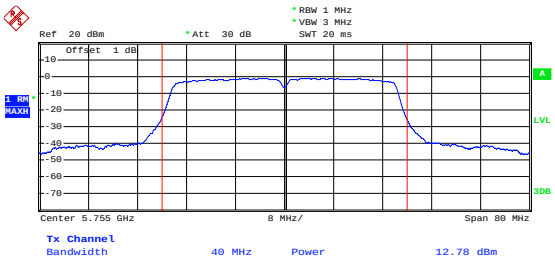
802.11ac-VHT80-Low	 Date: 6.SEP.2024 11:13:07
802.11ac-VHT80-High	 Date: 6.SEP.2024 11:12:31

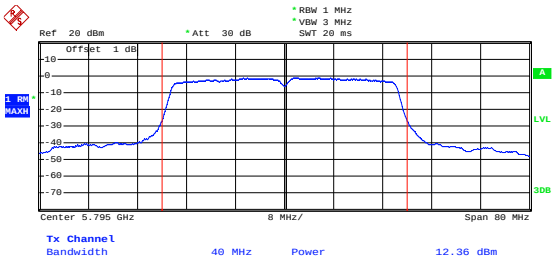
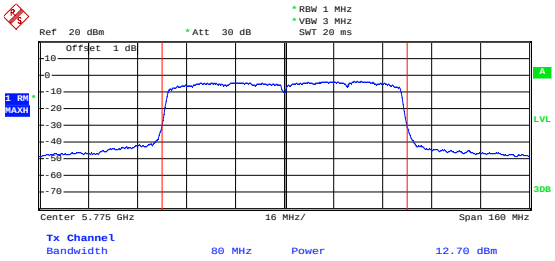
5725-5850MHz

802.11a-Low	 Date: 6.SEP.2024 13:44:56
802.11a-Middle	 Date: 6.SEP.2024 13:44:36
802.11a-High	 Date: 6.SEP.2024 13:44:08

802.11n-HT20-Low	 Date: 6.SEP.2024 13:46:59
802.11n-HT20-Middle	 Date: 6.SEP.2024 13:47:26
802.11n-HT20-High	 Date: 6.SEP.2024 13:47:53

802.11n-HT40-Low	 Date: 6.SEP.2024 13:53:06
802.11n-HT40-High	 Date: 6.SEP.2024 13:52:18
802.11ac-VHT20-Low	 Date: 6.SEP.2024 13:49:14

802.11ac-VHT20-Middle	 Date: 6.SEP.2024 13:48:50
802.11ac-VHT20-High	 Date: 6.SEP.2024 13:48:27
802.11ac-VHT40-Low	 Date: 6.SEP.2024 13:53:44

802.11ac-VHT40-High	 Date: 6.SEP.2024 13:54:12
802.11ac-VHT80	 Date: 6.SEP.2024 13:55:00

APPENDIX D

Frequency Stability

U-NII-1:5150-5250MHz worst case at 802.11a middle channel				
Voltage(%)	Power(VDC)	TEMP(°C)	Freq.Dev(Hz)	Deviation
100%	120	-30	498	0.096
100%		-20	503	0.097
100%		-10	504	0.097
100%		0	497	0.095
100%		+10	502	0.097
100%		+20	502	0.096
100%		+30	504	0.097
100%		+40	498	0.096
100%		+50	503	0.097
Low Battery power	102	+20	504	0.097
High Battery power	138	+20	502	0.096

U-NII-1: 5250-5350MHz worst case at 802.11a middle channel				
Voltage(%)	Power(VDC)	TEMP(°C)	Freq.Dev(Hz)	Deviation
100%	120	-30	501	0.095
100%		-20	505	0.096
100%		-10	497	0.094
100%		0	496	0.094
100%		+10	504	0.095
100%		+20	502	0.095
100%		+30	505	0.096
100%		+40	499	0.095
100%		+50	495	0.094
Low Battery power	102	+20	496	0.094
High Battery power	138	+20	501	0.095

U-NII-1: 5470-5725MHz worst case at 802.11a middle channel				
Voltage(%)	Power(VDC)	TEMP(°C)	Freq.Dev(Hz)	Deviation
100%	120	-30	505	0.090
100%		-20	500	0.089
100%		-10	498	0.089
100%		0	500	0.089
100%		+10	498	0.089
100%		+20	500	0.089
100%		+30	500	0.089
100%		+40	501	0.089
100%		+50	505	0.090
Low Battery power	102	+20	503	0.090
High Battery power	138	+20	501	0.089

U-NII-1:5725-5850MHz worst case at 802.11a middle channel				
Voltage(%)	Power(VDC)	TEMP(°C)	Freq.Dev(Hz)	Deviation
100%	120	-30	496	0.086
100%		-20	504	0.087
100%		-10	504	0.087
100%		0	498	0.086
100%		+10	496	0.086
100%		+20	499	0.086
100%		+30	499	0.086
100%		+40	499	0.086
100%		+50	505	0.087
Low Battery power	102	+20	500	0.086
High Battery power	138	+20	498	0.086

APPENDIX PHOTOGRAPHS

Please refer to “ANNEX”

******* END OF REPORT *******