TEST REPORT

Reference No.	:	WTX23X10233365W001
FCC ID	:	2ART9-ELLIQ3P0S
Applicant	:	Intuition Robotics
Address	:	Hayezira 3 St. Ramat-Gan, Israel
Manufacturer	:	The same as Applicant
Address	:	The same as Applicant
Product Name	:	ElliQ
Model No.	:	ElliQ 3.0S
Standards	:	FCC Part 15.407
Date of Receipt sample	:	2023-10-31
Date of Test	:	2023-10-31 to 2023-11-28
Date of Issue	:	2023-11-28
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.

Prepared By:

Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road,
Block 70 Bao'an District, Shenzhen, Guangdong, China

Tel.: +86-755-33663308 Fax.: +86-755-33663309 Email: sem@waltek.com.cn

Tested by:

Mike Shi

Approved by:

Silin Chen

TABLE OF CONTENTS

Report version

Version No.	Date of issue	Description
Rev.00	2023-11-28	Original
/	/	/

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT	
Product Name:	ElliQ
Trade Name:	ElliQ
Model No.:	ElliQ 3.0S
Adding Model(s):	/
Rated Voltage:	DC12V
Battery Capacity:	/
Power Adapter:	MOEDLl:NBS65A120500M3 INPUT:AC100-240V~ 50/60Hz, 1.5A OUTPUT:DC12V,5A
Note: The test data is gathered from a production sample, provided 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:	15.51dBm (Conducted)
Type of Modulation:	QPSK, 16QAM, 64QAM,256QAM
Type of Antenna:	FPC Antenna
Antenna Gain:	2.97dBi

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.

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

Enter “3646631+=” into the calculator to enter the engineer mode, you can start to test. During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Mode	Test Frequency (MHz)												
	NCB: 20MHz												
	5180	5200	5240	5260	5300	5320	5500	5580	5700	5720	5745	5785	5825
802.11a	Default	Default	Default	Default	Default	Default	Default	Default	Default	Default	Default	Default	Default
802.11n-HT20	Default	Default	Default	Default	Default	Default	Default	Default	Default	Default	Default	Default	Default
802.11ac-VHT20	Default	Default	Default	Default	Default	Default	Default	Default	Default	Default	Default	Default	Default
Mode	NCB: 40MHz												
	5190	5230	5270	5310	5510	5550	5670	5710	5755	5795			
802.11n-HT40	Default	Default	Default	Default	Default	Default	Default	Default	Default	Default			
802.11ac-VHT40	Default	Default	Default	Default	Default	Default	Default	Default	Default	Default			

Mode	NCB: 80MHz					
	5210	5290	5530	5610	5690	5775
802.11ac-VHT 80	Default	Default	Default	Default	Default	Default

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, Block 70 Bao'an District, Shenzhen, Guangdong, China

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,5260MHz,5280MHz,5320MHz,5500MHz, 5600MHz,5700MHz,5745MHz, 5785MHz,5825MHz
TM2	802.11n-HT20	5180MHz,5200MHz,5240MHz,5260MHz,5280MHz,5320MHz,5500MHz,5600MHz, 5700MHz,5745MHz, 5785MHz,5825MHz
TM3	802.11n-HT40	5190MHz,5230MHz,5270MHz,5310MHz,5510MHz,5590MHz,5670MHz,5755MHz, 5795MHz
TM4	802.11ac-VH80	5210MHz,5290MHz,5530MHz,5610MHz,5775MHz
Note: 802.11ac-VHT20, 802.11ac-VHT40 covered by 802.11n-HT20 an802.11n-HT40.		

Test Conditions	
Temperature:	22~25 °C
Relative Humidity:	45~55 %.
ATM Pressure:	1019 mbar

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
DC Cable	1.8	Unshielded	With Ferrite
AC cable	1.2	Unshielded	Without Ferrite

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

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
/	/	/	/

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
WTXE1041A1001	Communication Tester	Rohde & Schwarz	CMW500	148650	2023-02-25	2024-02-24
WTXE1022A1002	GSM Tester	Rohde & Schwarz	CMU200	114403	2023-02-25	2024-02-24
WTXE1005A1005	Spectrum Analyzer	Agilent	N9020A	US47140102	2023-02-25	2024-02-24
WTXE1084A1001	Spectrum Analyzer	Agilent	N9020A	MY54320548	2023-02-25	2024-02-24
WTXE1044A1001	Signal Generator	Agilent	83752A	3610A01453	2023-02-25	2024-02-24
WTXE1045A1001	Vector Signal Generator	Agilent	N5182A	MY47070202	2023-02-25	2024-02-24
WTXE1018A1001	Power Divider	Weinschel	1506A	PM204	2023-02-25	2024-02-24
WTXE1045A1001	Power Divider	RF-Lambda	RFLT4W5M18G	14110400027	2023-02-25	2024-02-24
☐Chamber A: Below 1GHz						
WTXE1005A1003	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2023-02-25	2024-02-24
WTXE1007A1001	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2023-02-25	2024-02-24
WTXE1007A1001	Amplifier	HP	8447F	2805A03475	2023-02-25	2024-02-24
WTXE1010A1007	Loop Antenna	Schwarz beck	FMZB 1516	9773	2021-03-20	2024-03-19
WTXE1010A1006	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2023-03-20	2026-03-19
☐Chamber A: Above 1GHz						
WTXE1005A1003	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2023-02-25	2024-02-24
WTXE1007A1001	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2023-02-25	2024-02-24
WTXE1065A1001	Amplifier	C&D	PAP-1G18	14918	2023-02-25	2024-02-24
WTXE1010A1005	Horn Antenna	ETS	3117	00086197	2021-03-19	2024-03-18
WTXE1010A1010	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2021-03-19	2024-03-18

WTXE1003A 1001	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2023-02-25	2024-02-24
☐Chamber B:Below 1GHz						
WTXE1010A 1006	Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-635	2021-04-09	2024-04-08
WTXE1038A 1001	Amplifier	Agilent	8447D	2944A104 57	2023-02-25	2024-02-24
WTXE1001A 1002	EMI Test Receiver	Rohde & Schwarz	ESPI	101391	2023-02-25	2024-02-24
☒Chamber C:Below 1GHz						
WTXE1093A 1001	EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2023-02-25	2024-02-24
WTXE1010A 1013-1	Trilog Broadband Antenna	Schwarz beck	VULB 9168	1194	2021-05-28	2024-05-27
WTXE1010A 1007	Loop Antenna	Schwarz beck	FMZB 1516	9773	2021-03-20	2024-03-19
WTXE1007A 1002	Amplifier	HP	8447F	2944A038 69	2023-02-25	2024-02-24
☒Chamber C: Above 1GHz						
WTXE1093A 1001	EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2023-02-25	2024-02-24
WTXE1103A 1005	Horn Antenna	POAM	RTF-118A	1820	2023-03-10	2026-03-09
WTXE1103A 1006	Amplifier	Tonscend	TAP01018050	AP22E806 235	2023-02-25	2024-02-24
WTXE1010A 1010	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2021-03-19	2024-03-18
WTXE1003A 1001	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2023-02-25	2024-02-24
☐Conducted Room 1#						
WTXE1001A 1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2023-02-25	2024-02-24
WTXE1002A 1001	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2023-02-25	2024-02-24
WTXE1003A 1001	AC LISN	Schwarz beck	NSLK8126	8126-279	2023-02-25	2024-02-24
☒Conducted Room 2#						
WTXE1001A 1004	EMI Test Receiver	Rohde & Schwarz	ESPI	101259	2023-02-25	2024-02-24
WTXE1003A	LISN	Rohde &	ENV 216	100097	2023-02-25	2024-02-24

1003		Schwarz				

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 an FPC antenna, 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 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 11 dBm + 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 1 MHz RBW to satisfy directly the 1 MHz 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 1 MHz, 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 (< 1MHz, 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 1 MHz, 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 6 dBi. 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 6 dB emission bandwidth of at least 500KHz for the band 5.715-5.85 GHz. 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 6dB 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 6 dBi. 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.

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 1MHz 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 75MHz 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.

789033 D02 v02r01 General UNII Test Procedures New Rules v01

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;

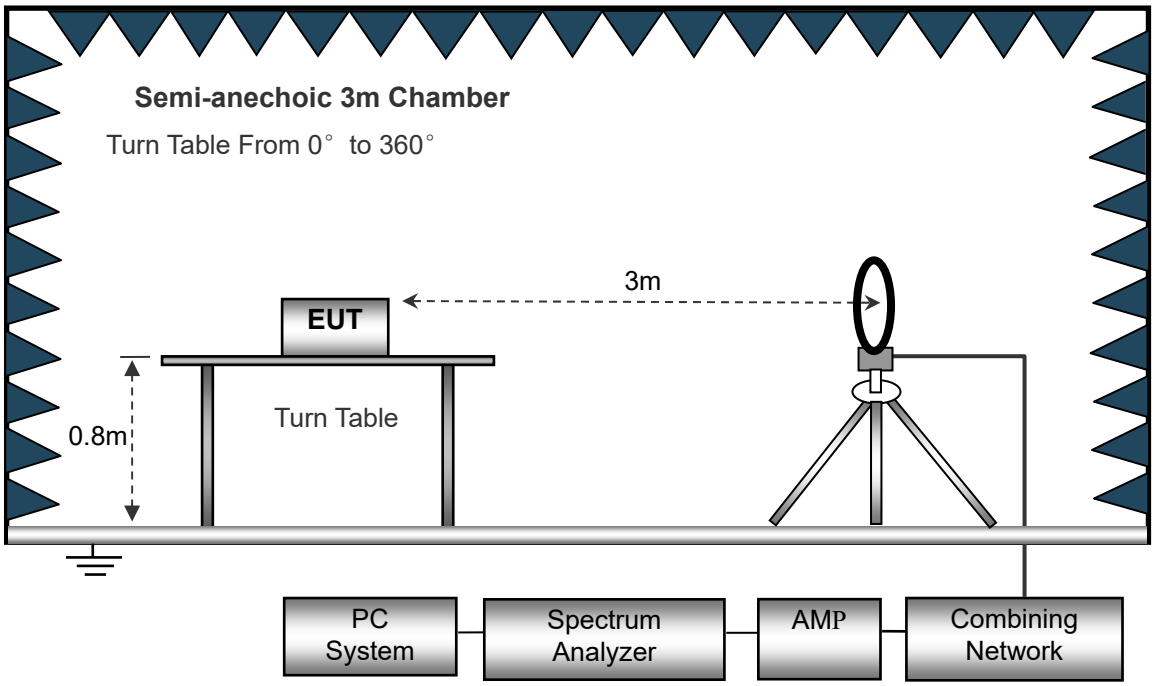
• EIRP is the equivalent isotropically radiated power in watts.

8.2 Test Procedure

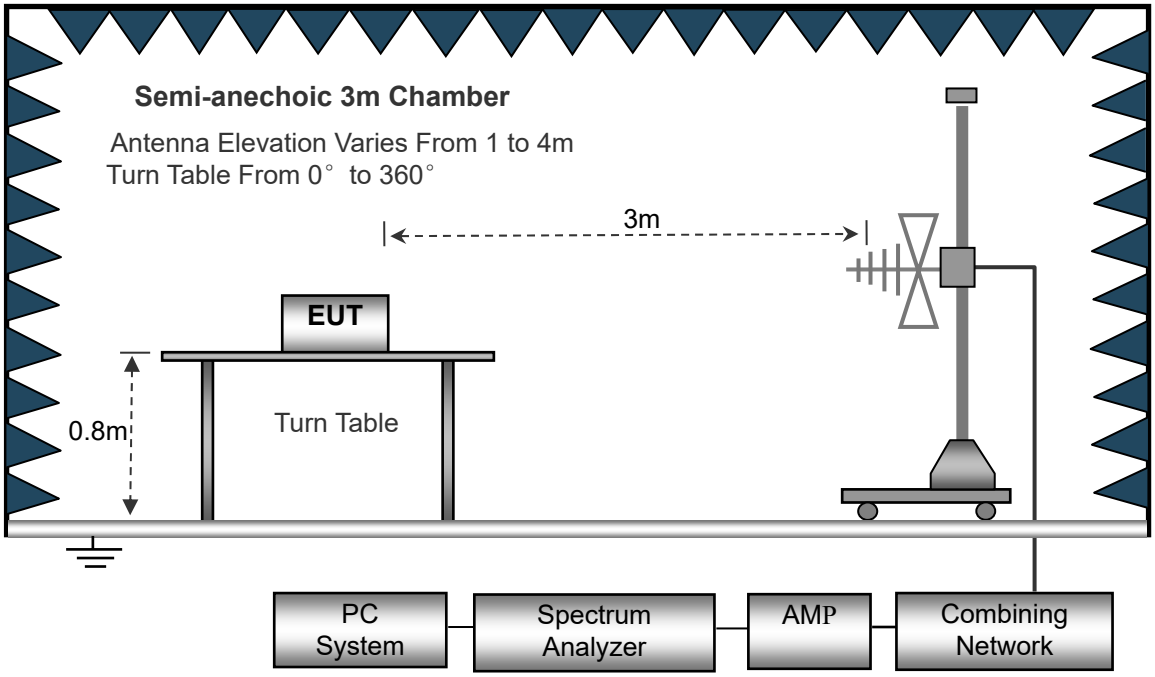
The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.205 15.407(b)(6) and FCC Part 15.209 Limit..

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.

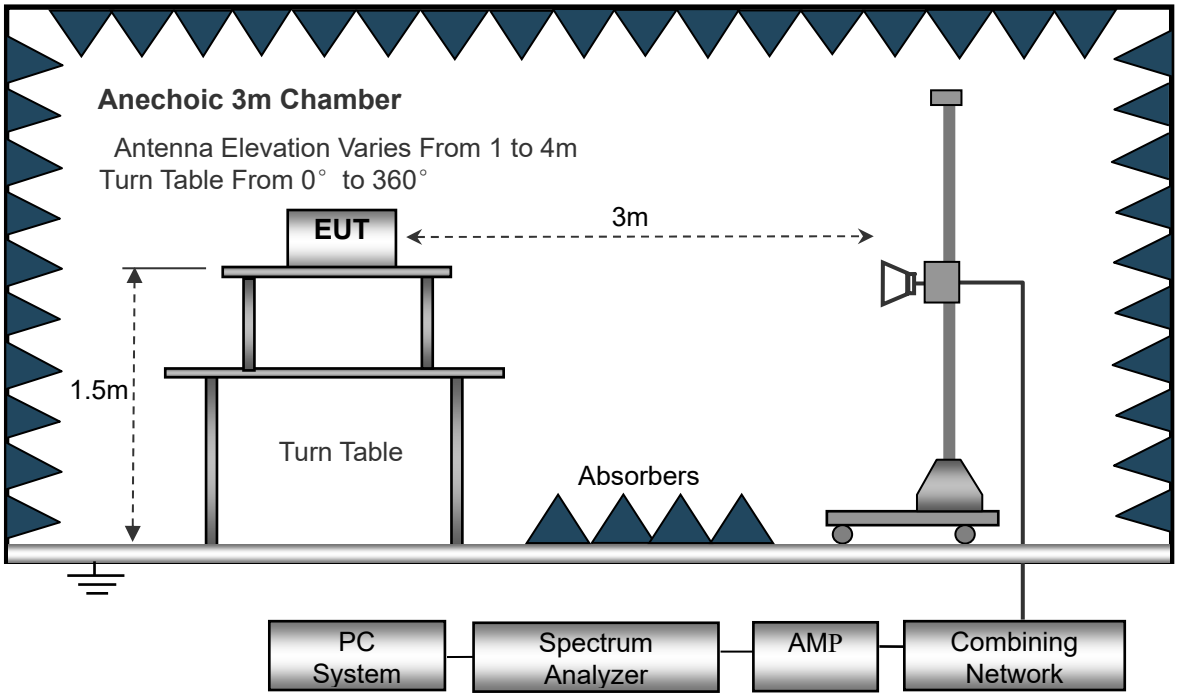
The test setup for emission measurement below 30MHz.



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



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:

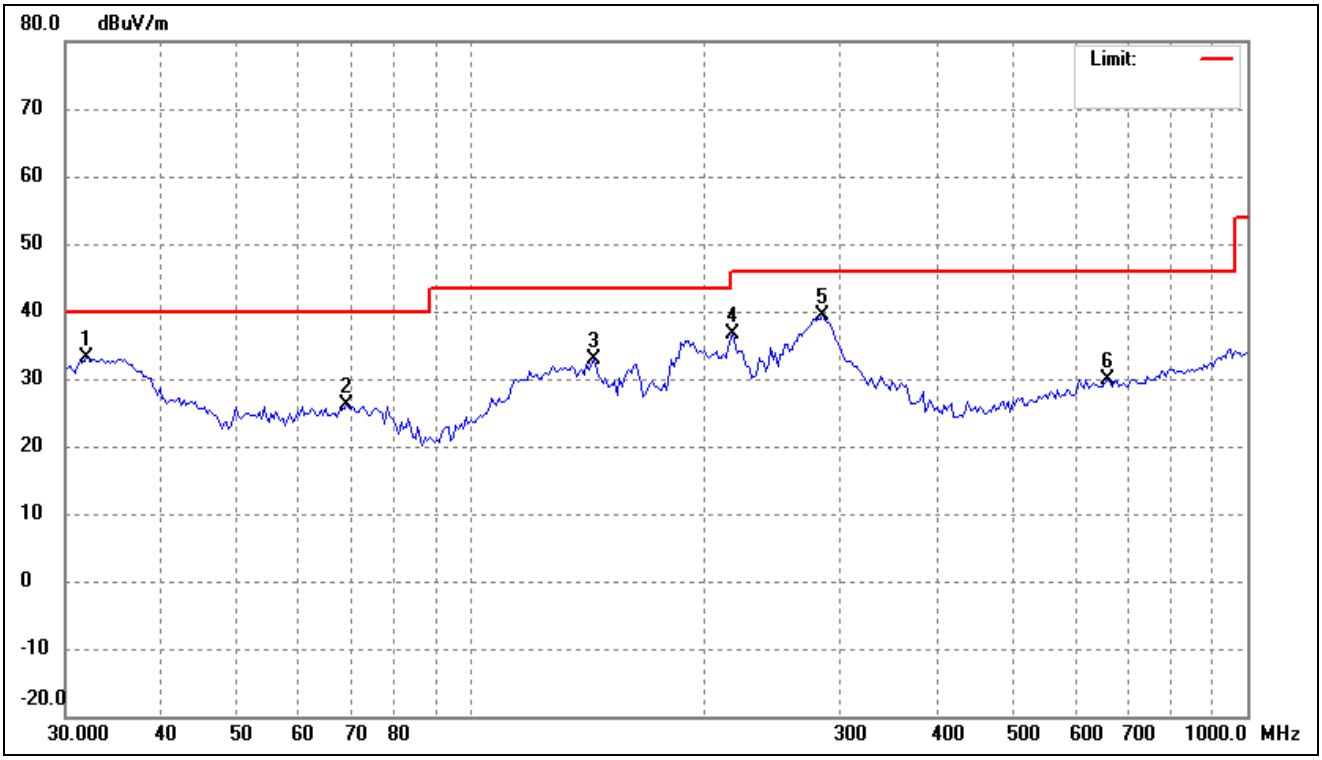
Margin = Corr. Ampl. – FCC Part 15 Limit

8.5 Summary of Test Results/Plots

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

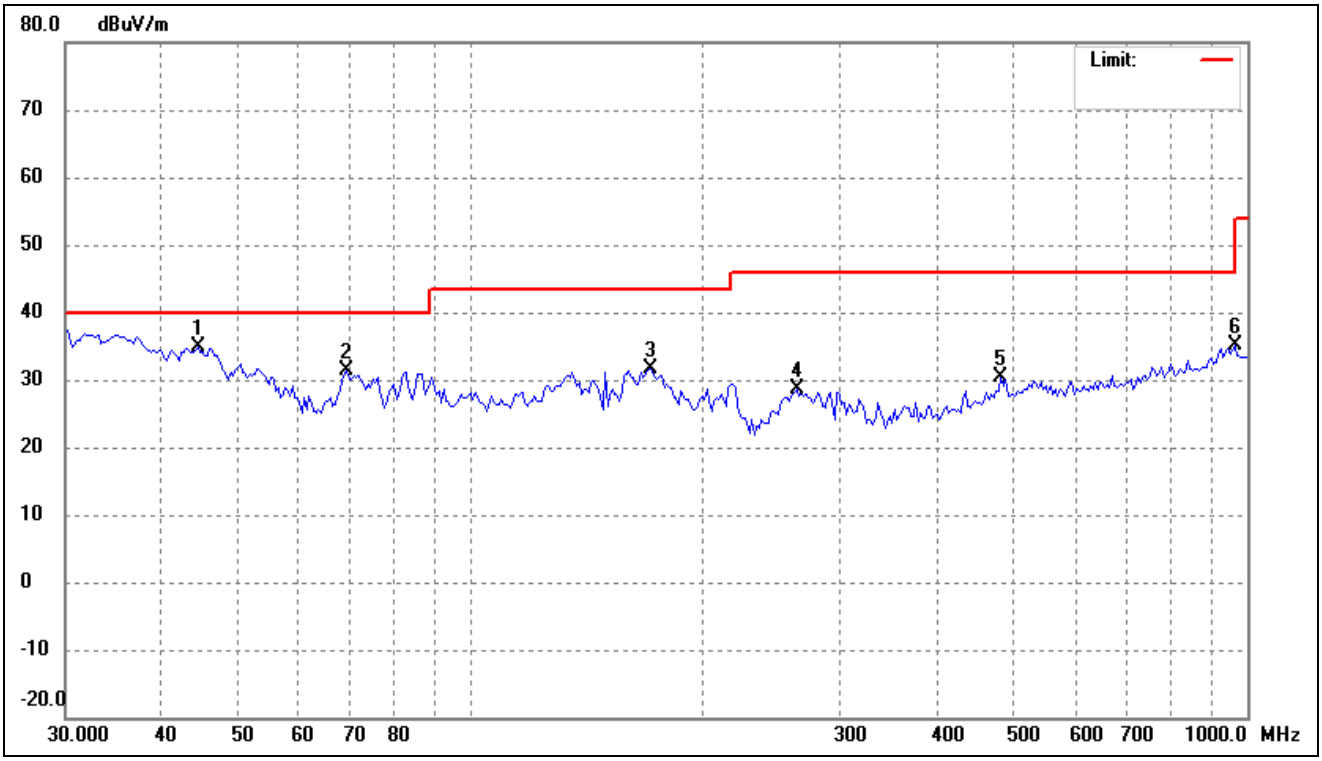
- Spurious Emission From 30MHz to 1GHz
- 5150-5250MHz

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



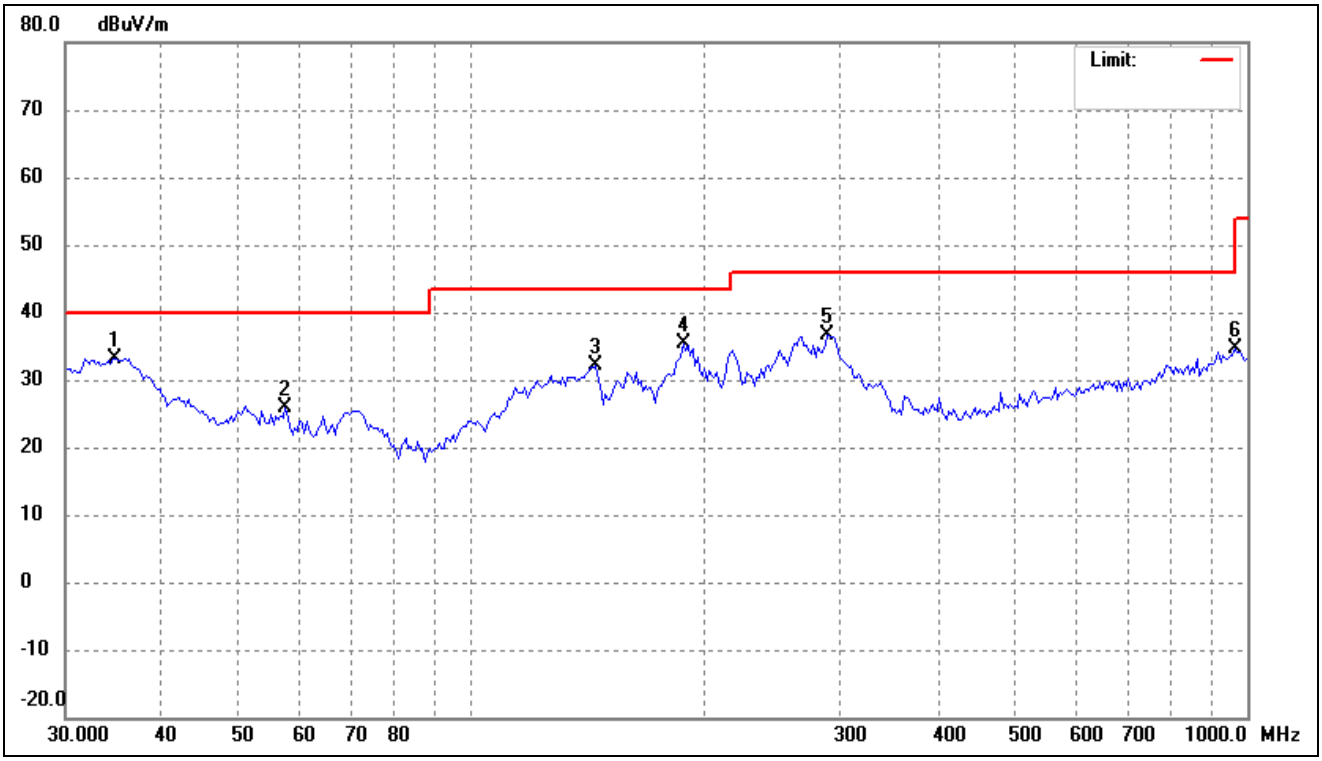
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	31.9586	43.11	-9.94	33.17	40.00	-6.83	-	-	peak
2	69.2297	36.80	-10.63	26.17	40.00	-13.83	-	-	peak
3	143.7760	42.03	-9.11	32.92	43.50	-10.58	-	-	peak
4	217.6437	48.78	-12.09	36.69	46.00	-9.31	-	-	peak
5	284.2607	48.26	-8.79	39.47	46.00	-6.53	-	-	peak
6	660.6025	31.25	-1.28	29.97	46.00	-16.03	-	-	peak

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



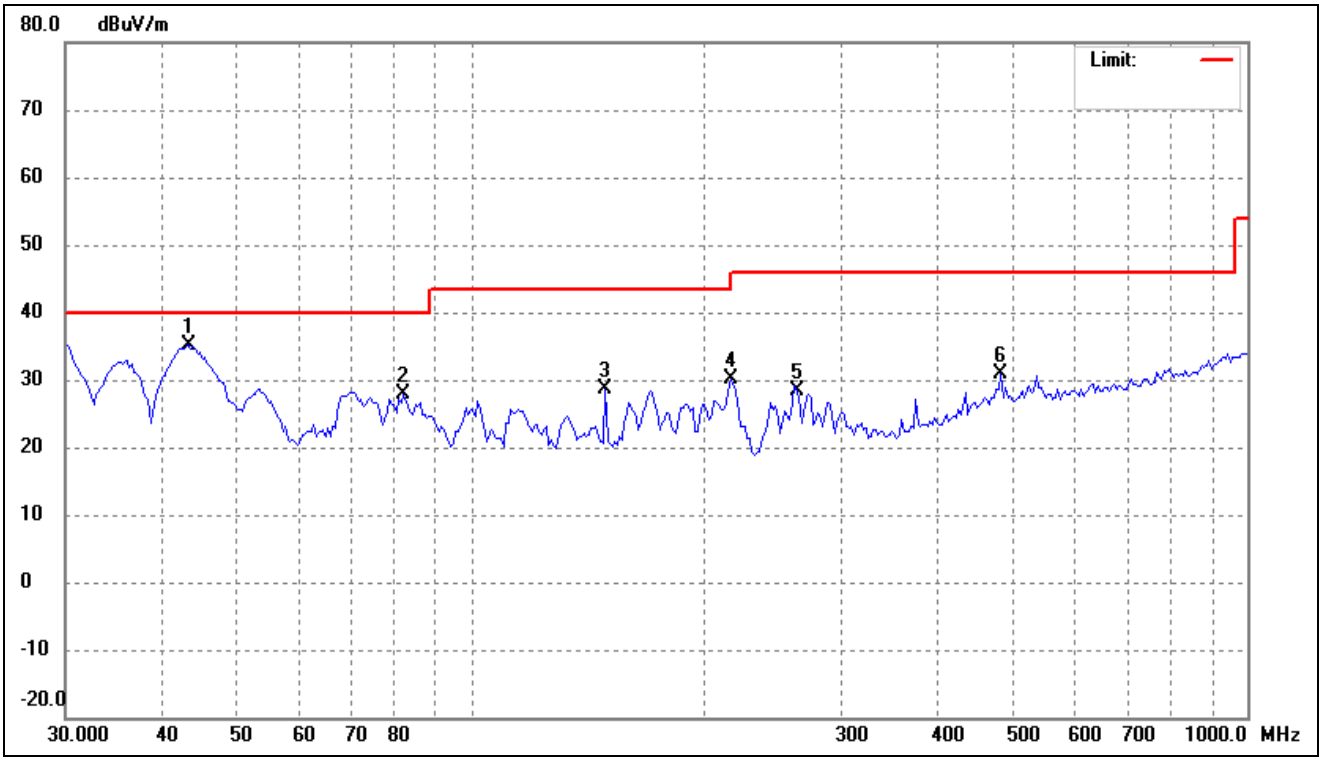
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	44.4657	43.33	-8.47	34.86	40.00	-5.14	-	-	peak
2	69.2297	41.94	-10.63	31.31	40.00	-8.69	-	-	peak
3	170.1888	40.66	-8.91	31.75	43.50	-11.75	-	-	peak
4	263.1155	38.39	-9.64	28.75	46.00	-17.25	-	-	peak
5	481.5112	34.46	-4.15	30.31	46.00	-15.69	-	-	peak
6	965.4742	32.90	2.27	35.17	54.00	-18.83	-	-	peak

802.11a(Worst case)			
Test Channel	5240MHz	Polarity:	Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	34.5270	42.76	-9.61	33.15	40.00	-6.85	-	-	peak
2	57.6693	34.61	-8.79	25.82	40.00	-14.18	-	-	peak
3	144.7899	41.04	-9.03	32.01	43.50	-11.49	-	-	peak
4	187.7833	46.58	-11.18	35.40	43.50	-8.10	-	-	peak
5	288.2840	45.26	-8.66	36.60	46.00	-9.40	-	-	peak
6	965.4742	32.25	2.27	34.52	54.00	-19.48	-	-	peak

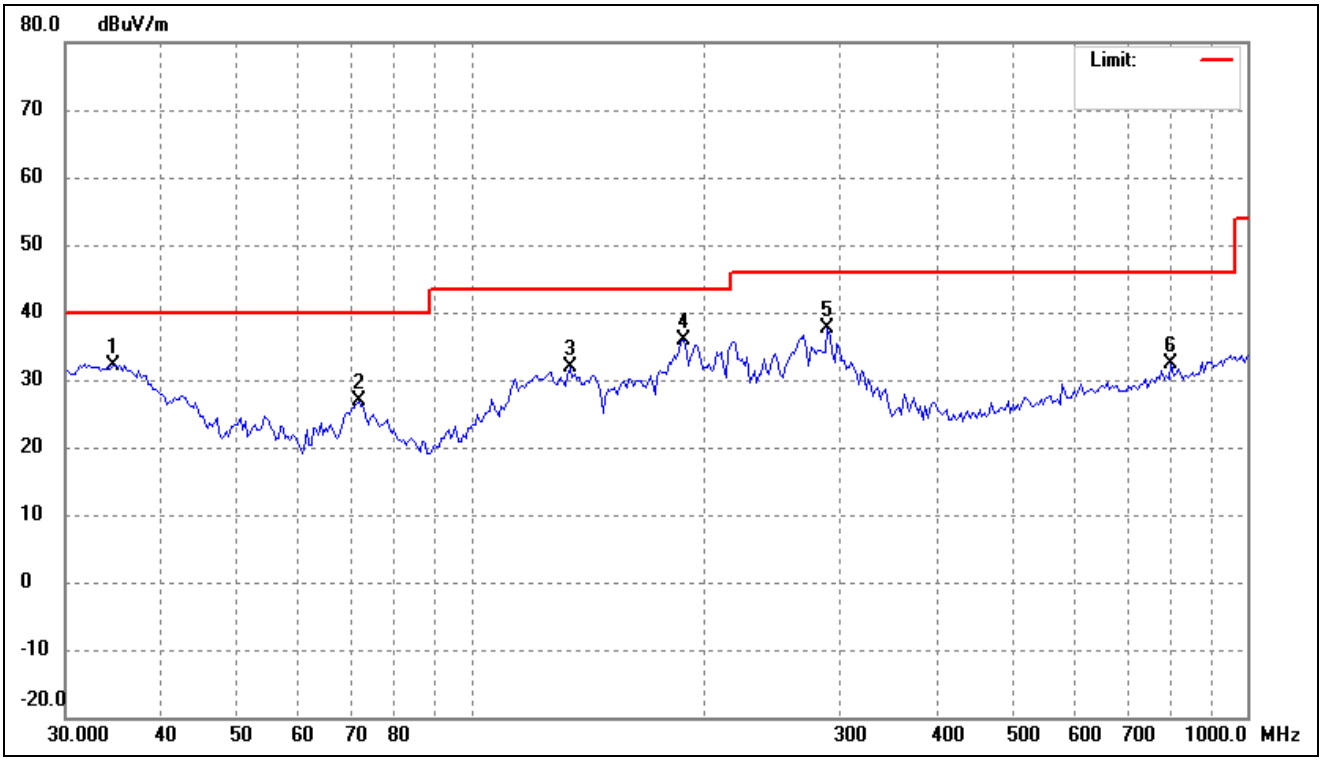
802.11a(Worst case)			
Test Channel	5240MHz	Polarity:	Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	43.2333	43.58	-8.47	35.11	40.00	-4.89	-	-	peak
2	81.9478	40.84	-12.99	27.85	40.00	-12.15	-	-	peak
3	148.9175	37.38	-8.68	28.70	43.50	-14.80	-	-	peak
4	216.1197	42.16	-12.12	30.04	46.00	-15.96	-	-	peak
5	263.1155	37.99	-9.64	28.35	46.00	-17.65	-	-	peak
6	481.5112	35.15	-4.15	31.00	46.00	-15.00	-	-	peak

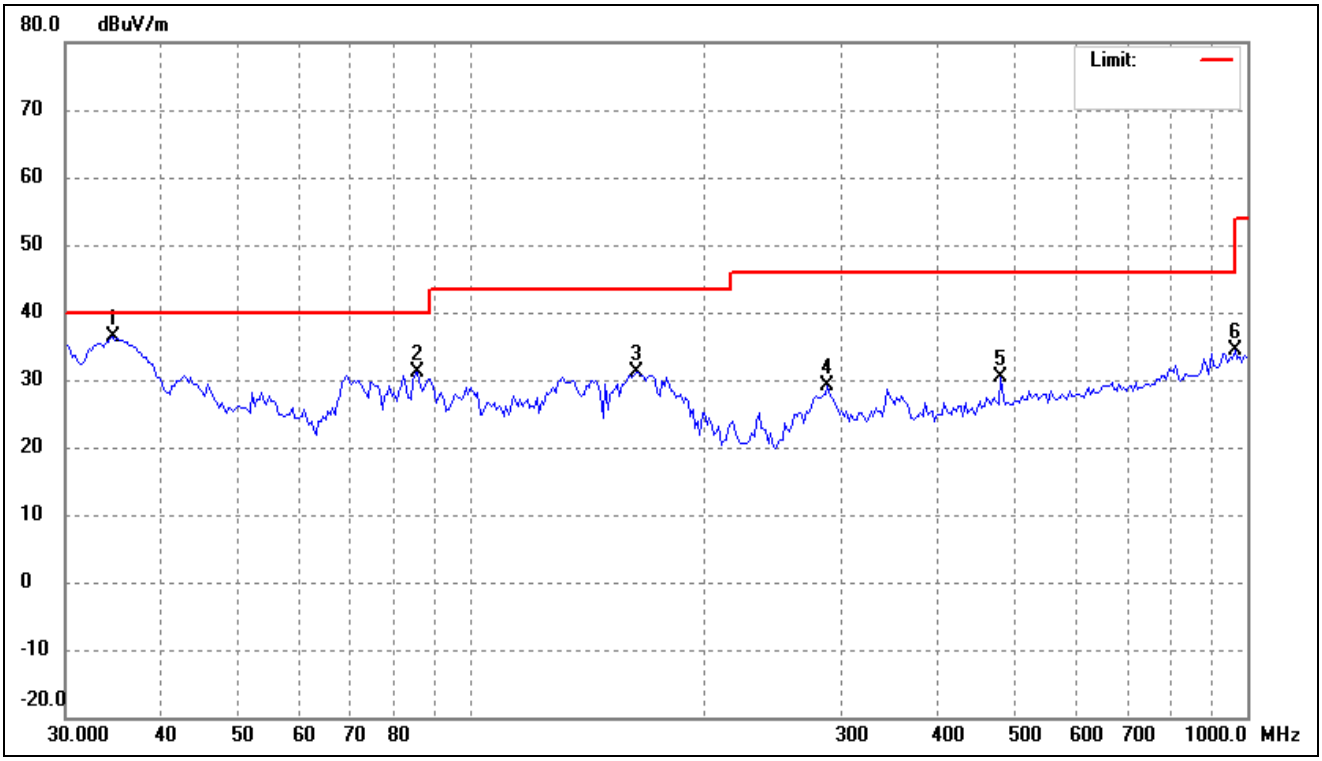
➢ 5250-5350MHz

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



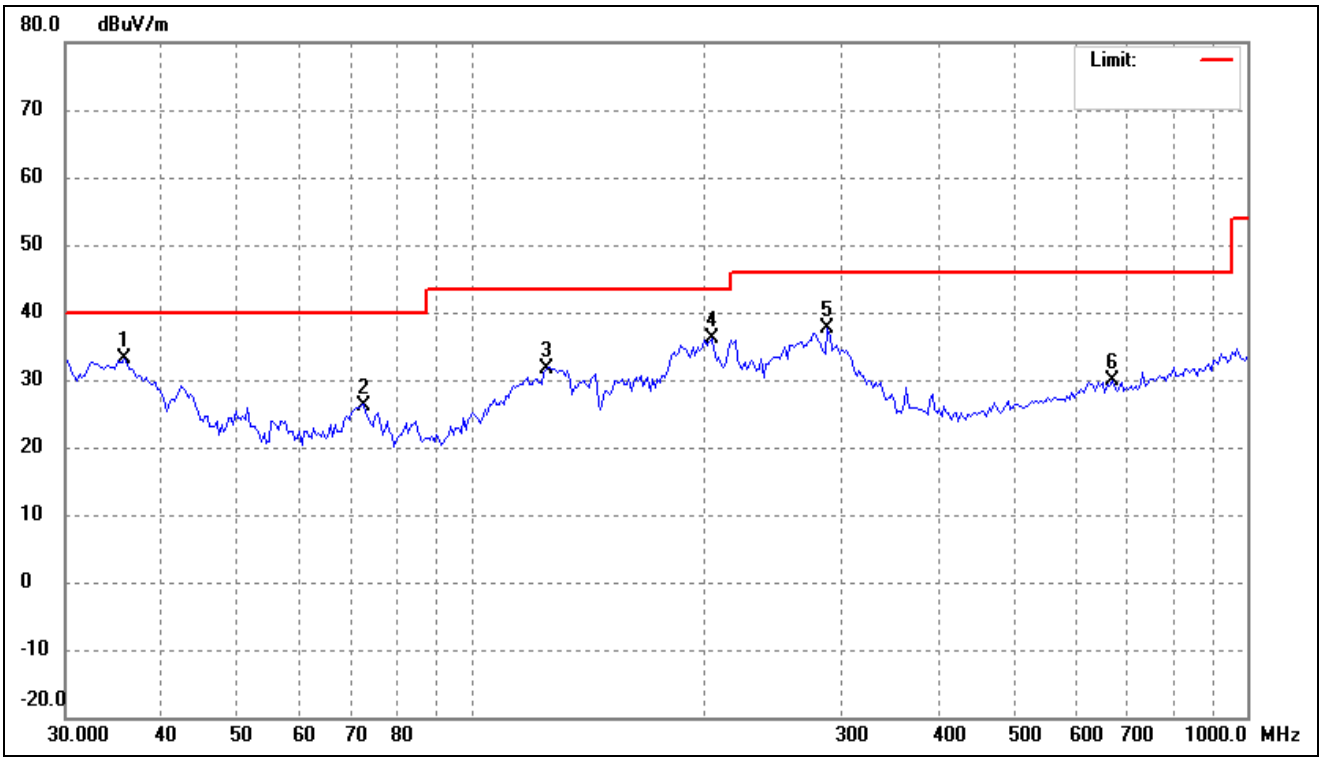
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	34.5270	41.83	-9.61	32.22	40.00	-7.78	-	-	peak
2	71.7054	38.11	-11.14	26.97	40.00	-13.03	-	-	peak
3	134.0194	41.47	-9.68	31.79	43.50	-11.71	-	-	peak
4	187.7833	47.08	-11.18	35.90	43.50	-7.60	-	-	peak
5	288.2840	46.33	-8.66	37.67	46.00	-8.33	-	-	peak
6	798.6205	32.01	0.29	32.30	46.00	-13.70	-	-	peak

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



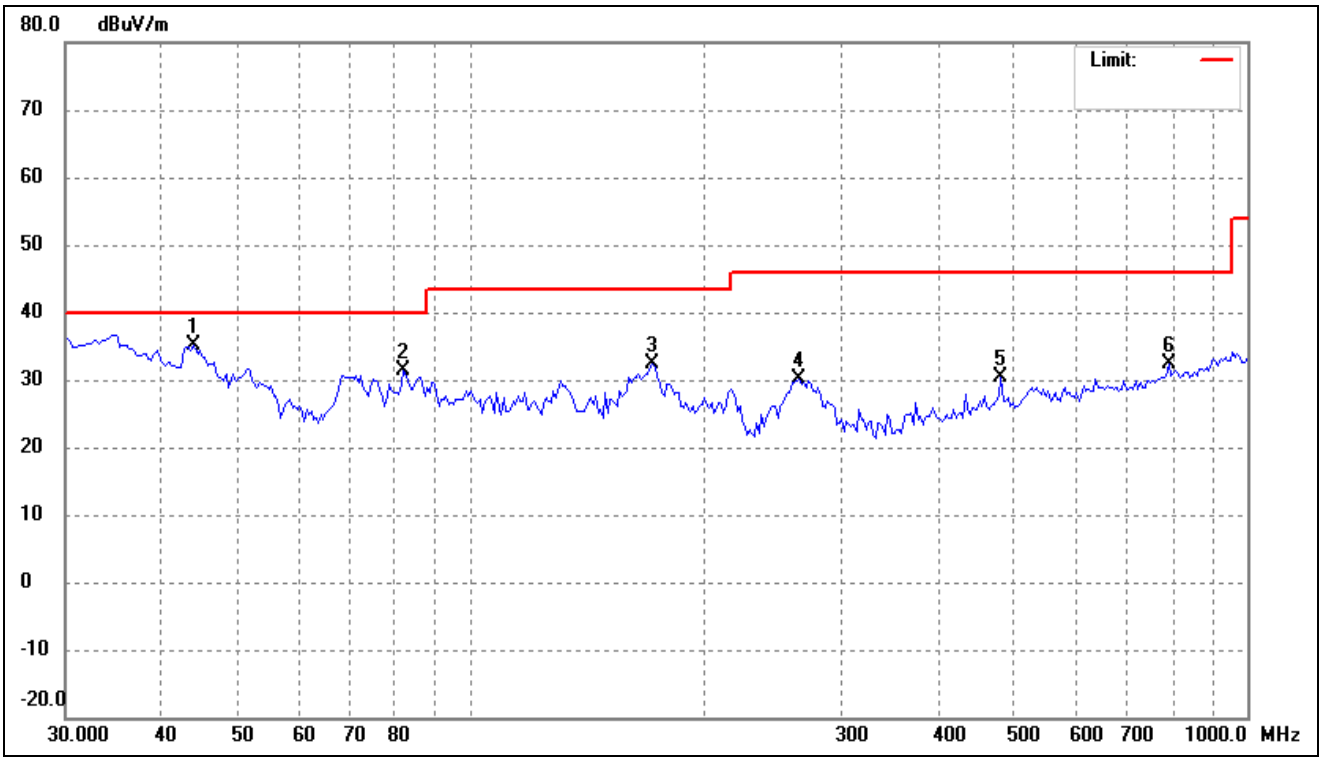
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	34.5270	46.06	-9.61	36.45	40.00	-3.55	-	-	peak
2	85.4769	44.14	-13.04	31.10	40.00	-8.90	-	-	peak
3	163.1623	39.92	-8.70	31.22	43.50	-12.28	-	-	peak
4	288.2840	37.89	-8.66	29.23	46.00	-16.77	-	-	peak
5	481.5112	34.54	-4.15	30.39	46.00	-15.61	-	-	peak
6	965.4742	32.11	2.27	34.38	54.00	-19.62	-	-	peak

802.11a(Worst case)			
Test Channel	5320MHz	Polarity:	Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	35.7617	42.50	-9.39	33.11	40.00	-6.89	-	-	peak
2	72.2111	37.34	-11.26	26.08	40.00	-13.92	-	-	peak
3	124.9249	41.73	-10.19	31.54	43.50	-11.96	-	-	peak
4	204.3052	48.28	-12.06	36.22	43.50	-7.28	-	-	peak
5	288.2840	46.31	-8.66	37.65	46.00	-8.35	-	-	peak
6	669.9523	31.16	-1.27	29.89	46.00	-16.11	-	-	peak

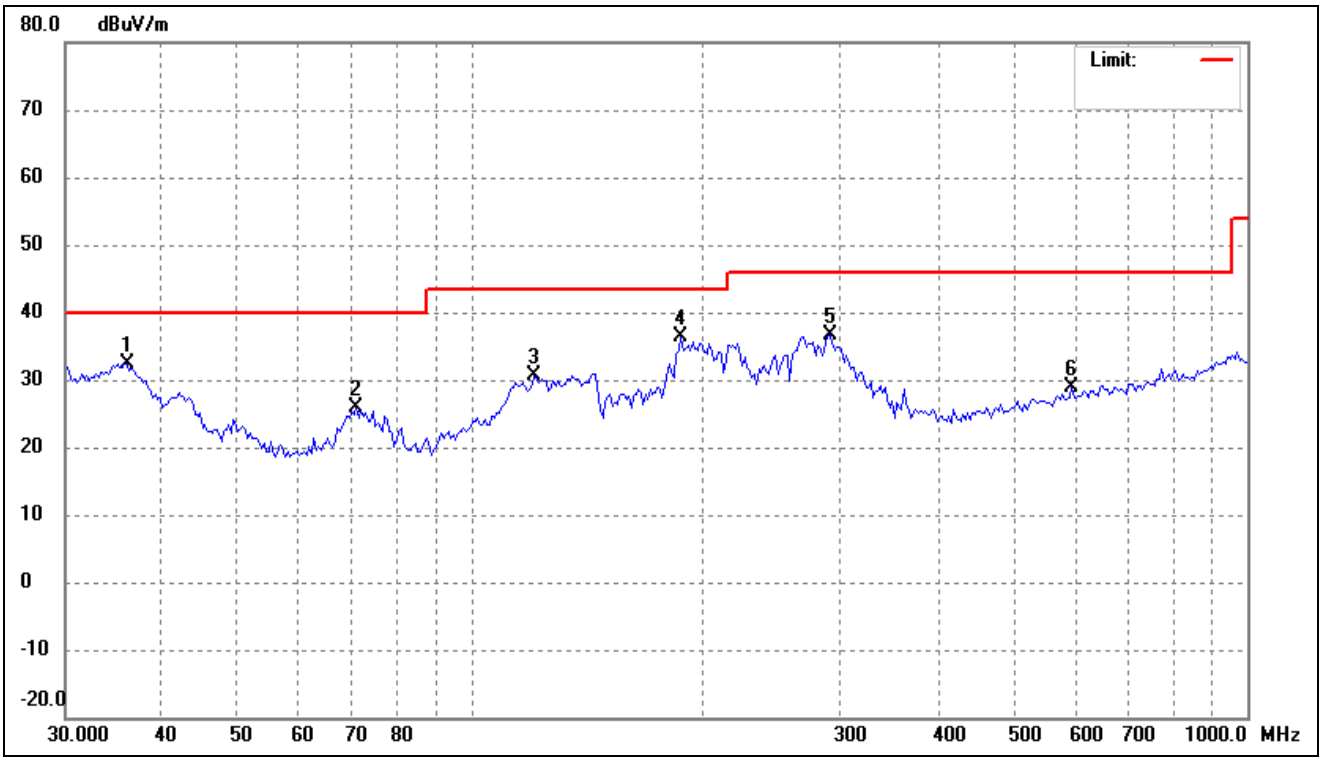
802.11a(Worst case)			
Test Channel	5320MHz	Polarity:	Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	43.8452	43.67	-8.48	35.19	40.00	-4.81	-	-	peak
2	81.9478	44.28	-12.99	31.29	40.00	-8.71	-	-	peak
3	171.3890	41.46	-9.08	32.38	43.50	-11.12	-	-	peak
4	264.9709	39.79	-9.55	30.24	46.00	-15.76	-	-	peak
5	481.5112	34.58	-4.15	30.43	46.00	-15.57	-	-	peak
6	793.0281	32.19	0.23	32.42	46.00	-13.58	-	-	peak

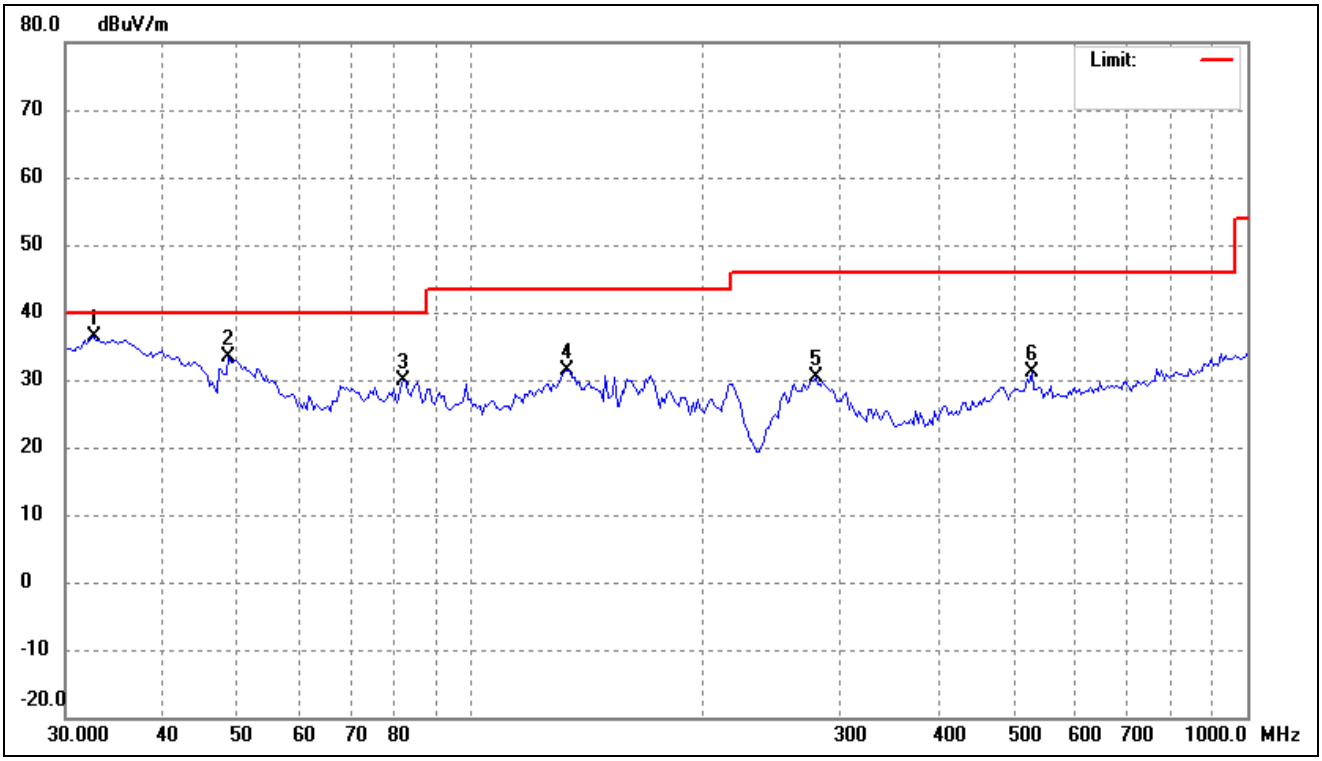
➢ 5470-5725MHz

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



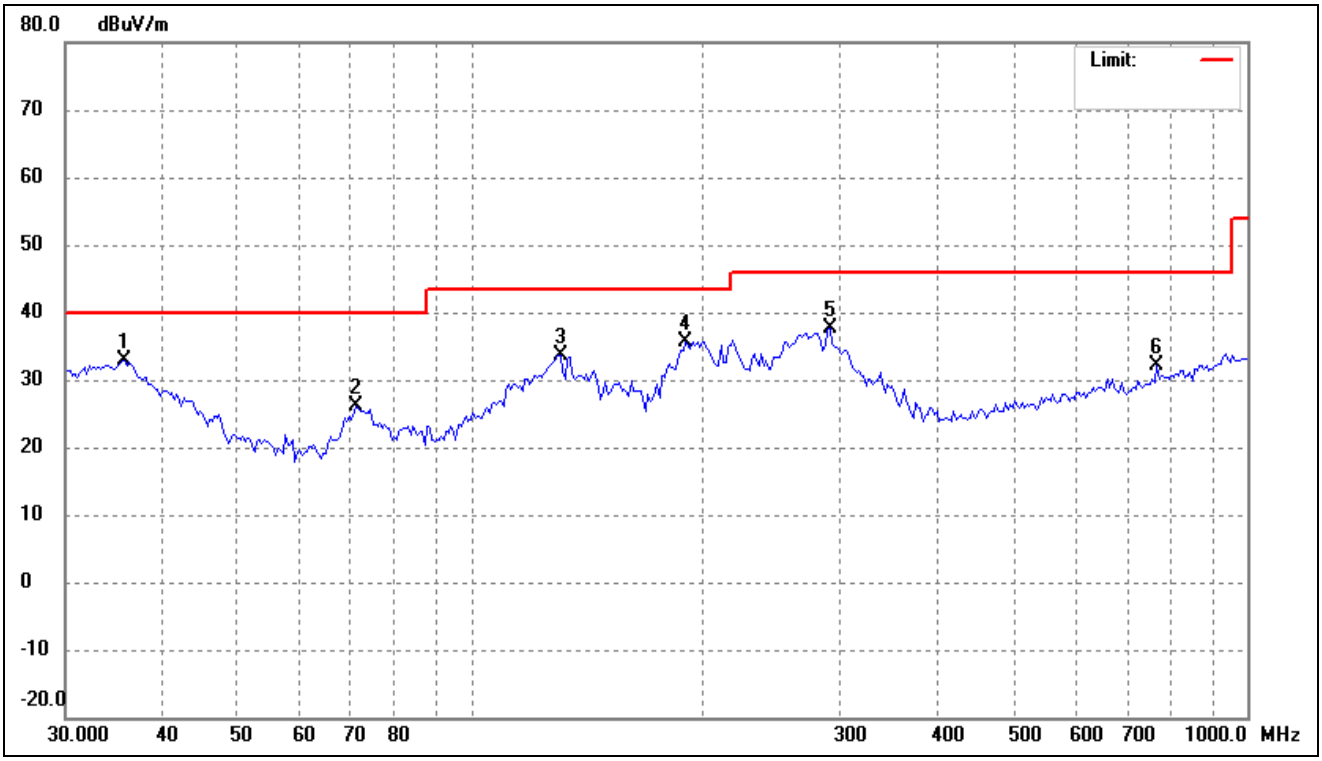
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	36.0139	41.74	-9.33	32.41	40.00	-7.59	-	-	peak
2	71.2033	36.84	-11.03	25.81	40.00	-14.19	-	-	peak
3	120.6118	41.11	-10.49	30.62	43.50	-12.88	-	-	peak
4	186.4684	47.51	-11.03	36.48	43.50	-7.02	-	-	peak
5	290.3170	45.20	-8.59	36.61	46.00	-9.39	-	-	peak
6	594.5143	30.70	-1.86	28.84	46.00	-17.16	-	-	peak

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



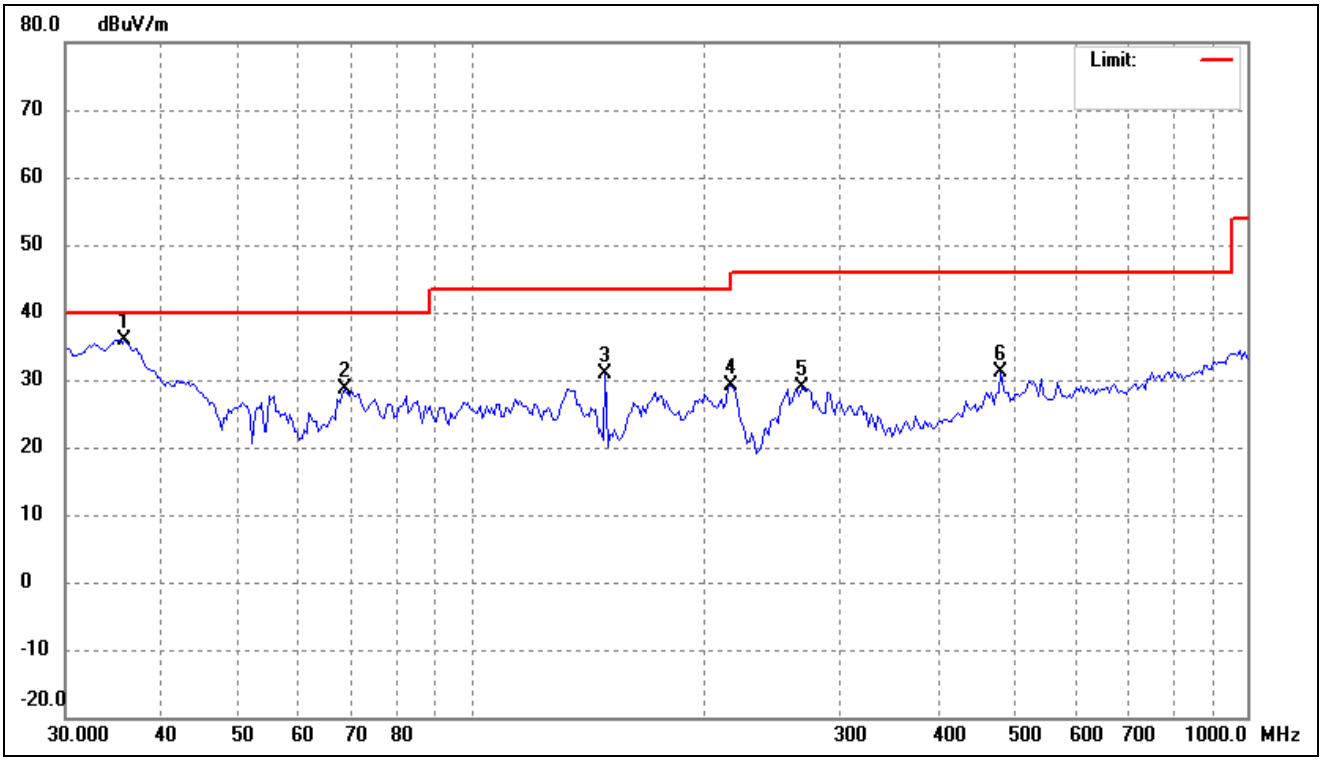
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	32.6395	46.26	-9.85	36.41	40.00	-3.59	-	-	peak
2	48.7191	41.44	-8.18	33.26	40.00	-6.74	-	-	peak
3	81.9478	42.97	-12.99	29.98	40.00	-10.02	-	-	peak
4	133.0809	41.17	-9.72	31.45	43.50	-12.05	-	-	peak
5	278.3308	39.41	-9.00	30.41	46.00	-15.59	-	-	peak
6	527.5707	34.47	-3.45	31.02	46.00	-14.98	-	-	peak

802.11a(Worst case)			
Test Channel	5600MHz	Polarity:	Horizontal



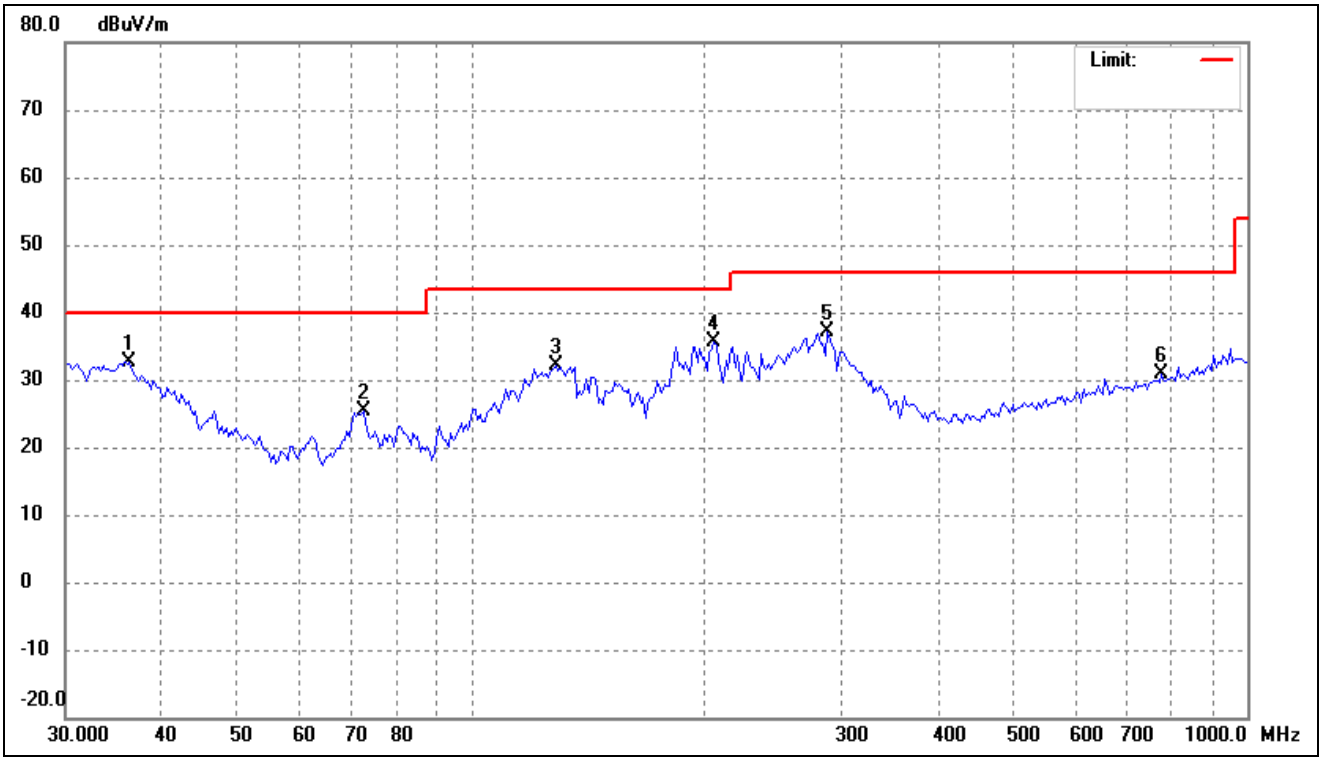
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	35.7617	42.33	-9.39	32.94	40.00	-7.06	-	-	peak
2	71.2033	37.05	-11.03	26.02	40.00	-13.98	-	-	peak
3	130.3048	43.49	-9.84	33.65	43.50	-9.85	-	-	peak
4	189.1076	47.05	-11.32	35.73	43.50	-7.77	-	-	peak
5	290.3170	46.17	-8.59	37.58	46.00	-8.42	-	-	peak
6	765.6482	32.26	-0.01	32.25	46.00	-13.75	-	-	peak

802.11a(Worst case)			
Test Channel	5600MHz	Polarity:	Vertical



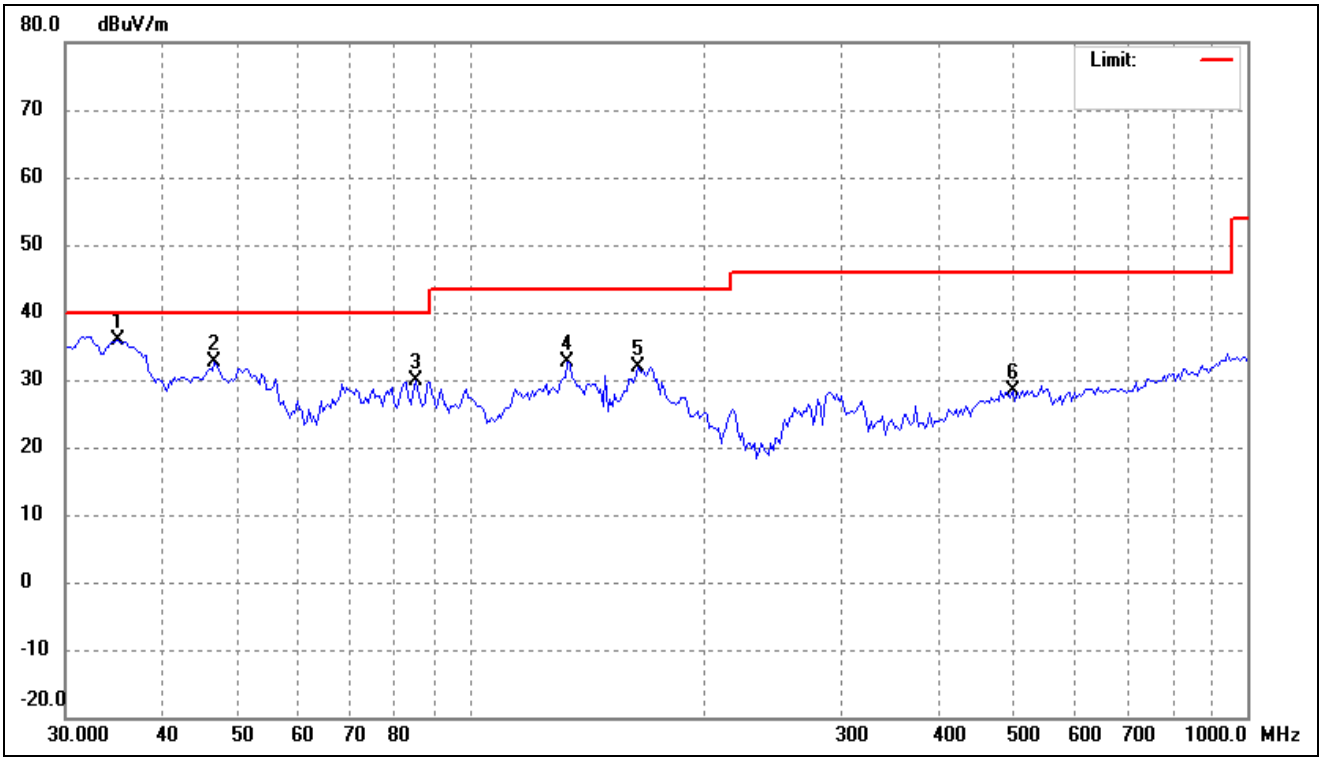
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	35.7617	45.28	-9.39	35.89	40.00	-4.11	-	-	peak
2	68.7450	39.21	-10.54	28.67	40.00	-11.33	-	-	peak
3	148.9175	39.65	-8.68	30.97	43.50	-12.53	-	-	peak
4	216.1197	41.24	-12.12	29.12	46.00	-16.88	-	-	peak
5	266.8395	38.22	-9.46	28.76	46.00	-17.24	-	-	peak
6	481.5112	35.33	-4.15	31.18	46.00	-14.82	-	-	peak

802.11a(Worst case)			
Test Channel	5700MHz	Polarity:	Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	36.2678	42.00	-9.28	32.72	40.00	-7.28	-	-	peak
2	72.7203	36.64	-11.36	25.28	40.00	-14.72	-	-	peak
3	128.4861	41.99	-9.96	32.03	43.50	-11.47	-	-	peak
4	205.7458	47.68	-12.10	35.58	43.50	-7.92	-	-	peak
5	288.2840	45.73	-8.66	37.07	46.00	-8.93	-	-	peak
6	776.4849	30.89	0.08	30.97	46.00	-15.03	-	-	peak

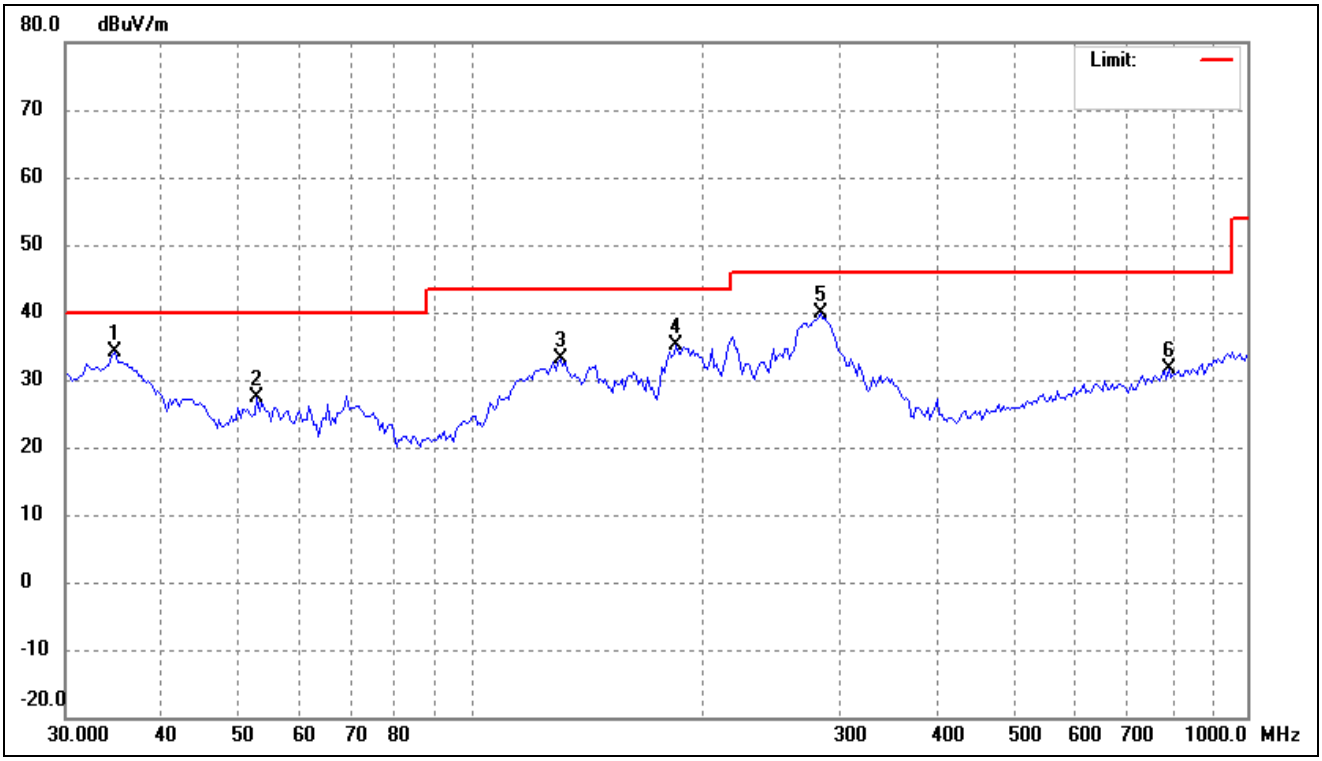
802.11a(Worst case)			
Test Channel	5700MHz	Polarity:	Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	35.0157	45.33	-9.55	35.78	40.00	-4.22	-	-	peak
2	46.7077	40.87	-8.34	32.53	40.00	-7.47	-	-	peak
3	84.8783	42.79	-13.03	29.76	40.00	-10.24	-	-	peak
4	133.0809	42.34	-9.72	32.62	43.50	-10.88	-	-	peak
5	164.3129	40.55	-8.72	31.83	43.50	-11.67	-	-	peak
6	498.7303	32.37	-3.92	28.45	46.00	-17.55	-	-	peak

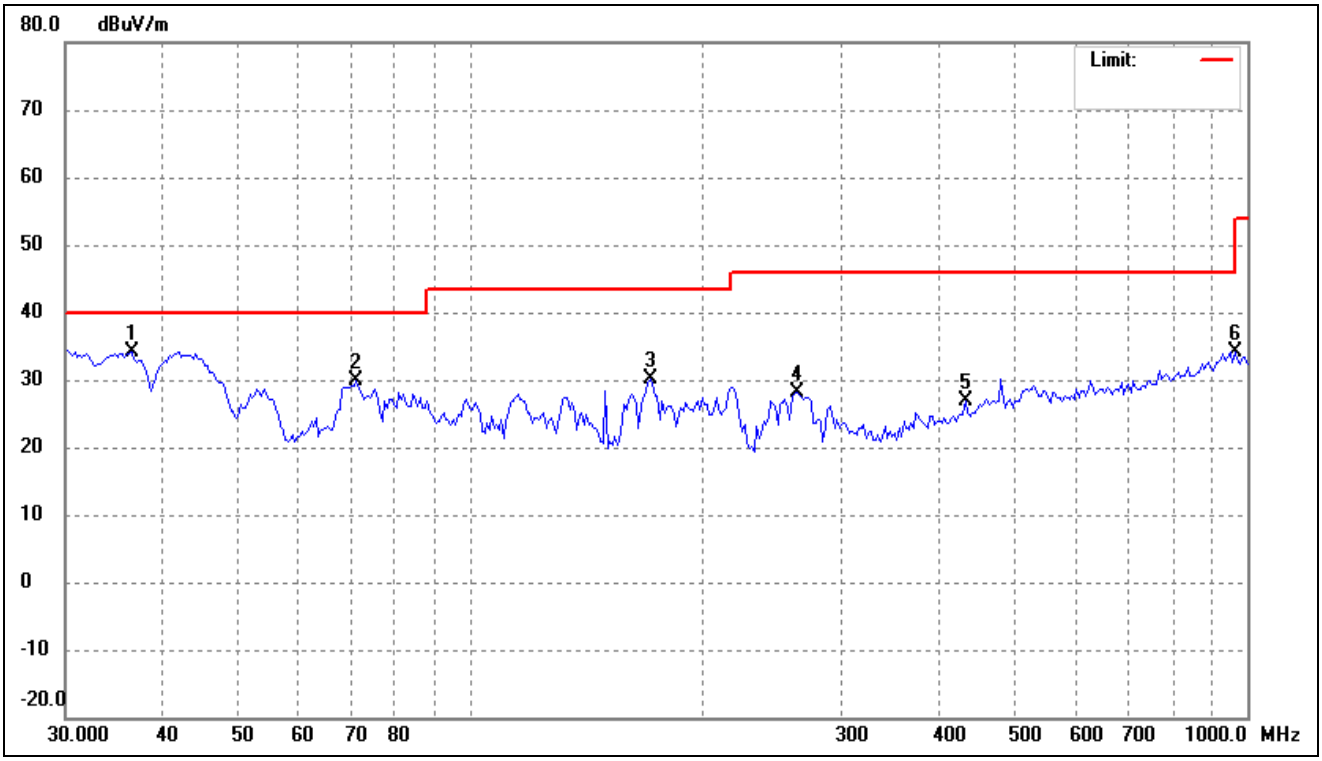
➢ 5725-5850MHz

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



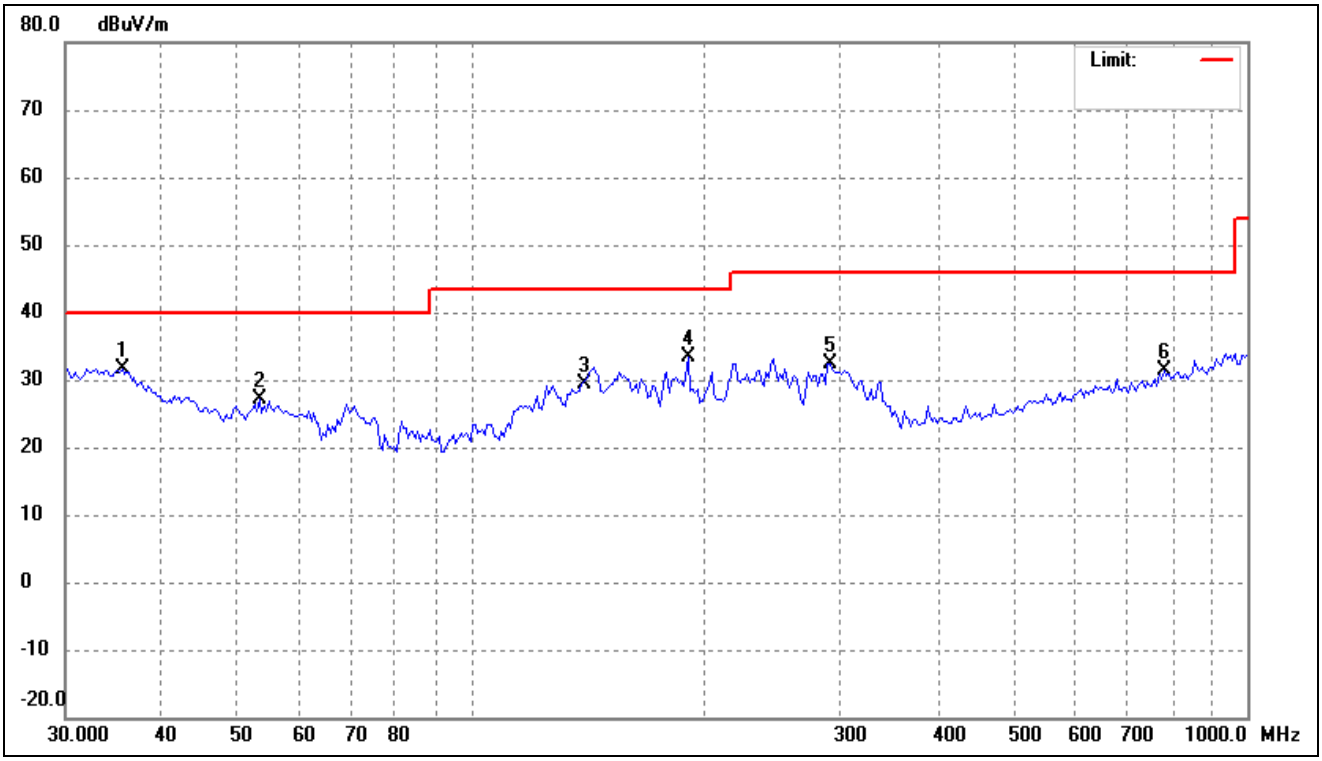
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	34.7705	43.60	-9.59	34.01	40.00	-5.99	-	-	peak
2	53.0056	35.72	-8.41	27.31	40.00	-12.69	-	-	peak
3	130.3048	43.00	-9.84	33.16	43.50	-10.34	-	-	peak
4	183.8660	45.88	-10.74	35.14	43.50	-8.36	-	-	peak
5	282.2702	48.70	-8.86	39.84	46.00	-6.16	-	-	peak
6	793.0281	31.35	0.23	31.58	46.00	-14.42	-	-	peak

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



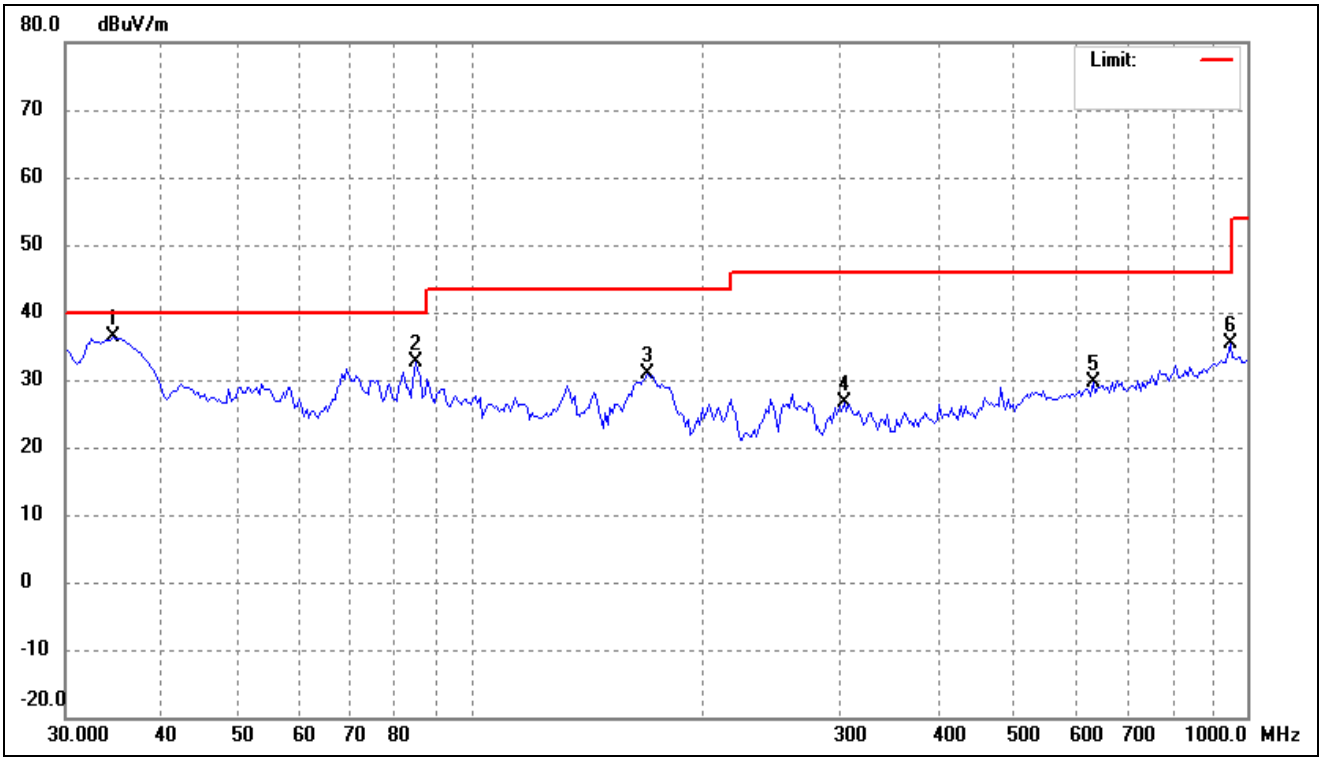
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	36.5236	43.30	-9.22	34.08	40.00	-5.92	-	-	peak
2	71.2033	40.80	-11.03	29.77	40.00	-10.23	-	-	peak
3	170.1888	38.95	-8.91	30.04	43.50	-13.46	-	-	peak
4	263.1155	37.87	-9.64	28.23	46.00	-17.77	-	-	peak
5	433.3397	32.04	-5.05	26.99	46.00	-19.01	-	-	peak
6	965.4742	31.84	2.27	34.11	54.00	-19.89	-	-	peak

802.11a(Worst case)			
Test Channel	5785MHz	Polarity:	Horizontal



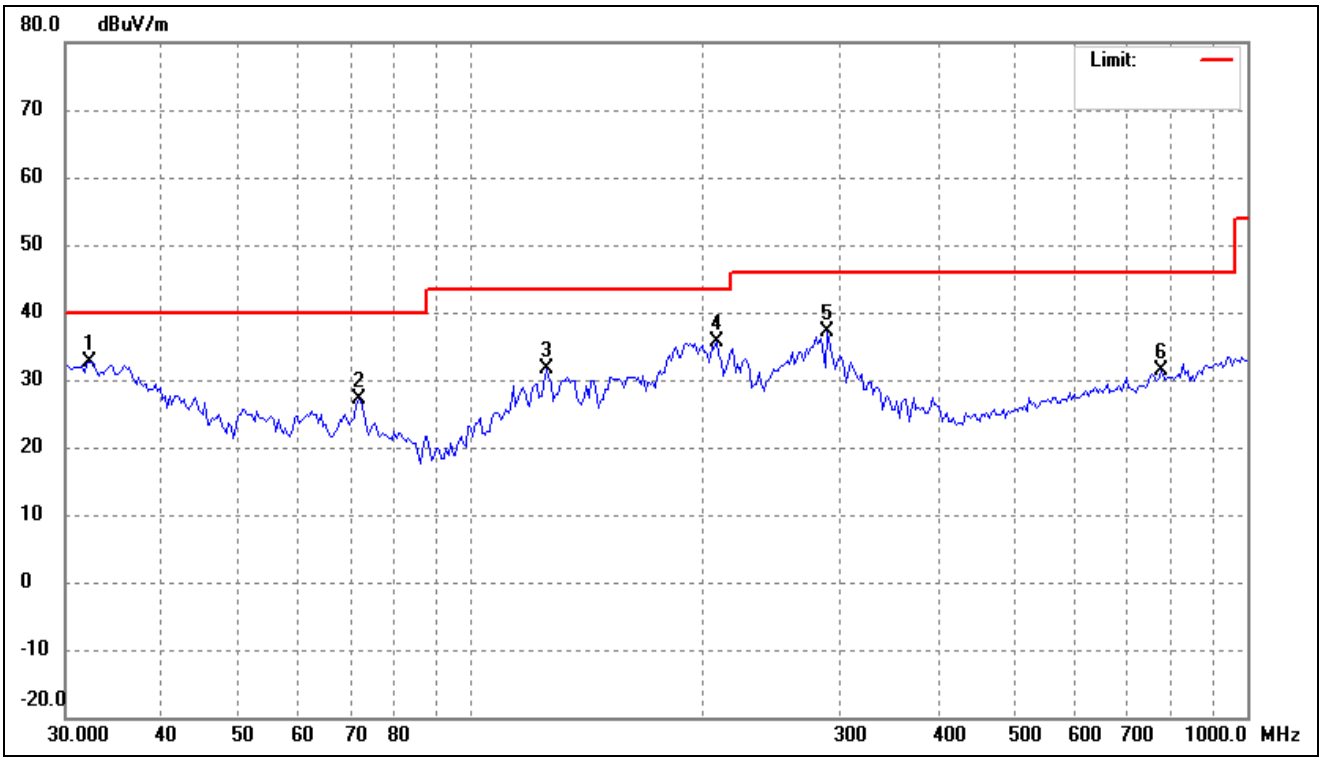
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	35.5112	41.02	-9.44	31.58	40.00	-8.42	-	-	peak
2	53.3794	35.62	-8.45	27.17	40.00	-12.83	-	-	peak
3	138.8120	38.98	-9.48	29.50	43.50	-14.00	-	-	peak
4	190.4411	44.86	-11.45	33.41	43.50	-10.09	-	-	peak
5	290.3170	41.03	-8.59	32.44	46.00	-13.56	-	-	peak
6	781.9606	31.13	0.13	31.26	46.00	-14.74	-	-	peak

802.11a(Worst case)			
Test Channel	5785MHz	Polarity:	Vertical



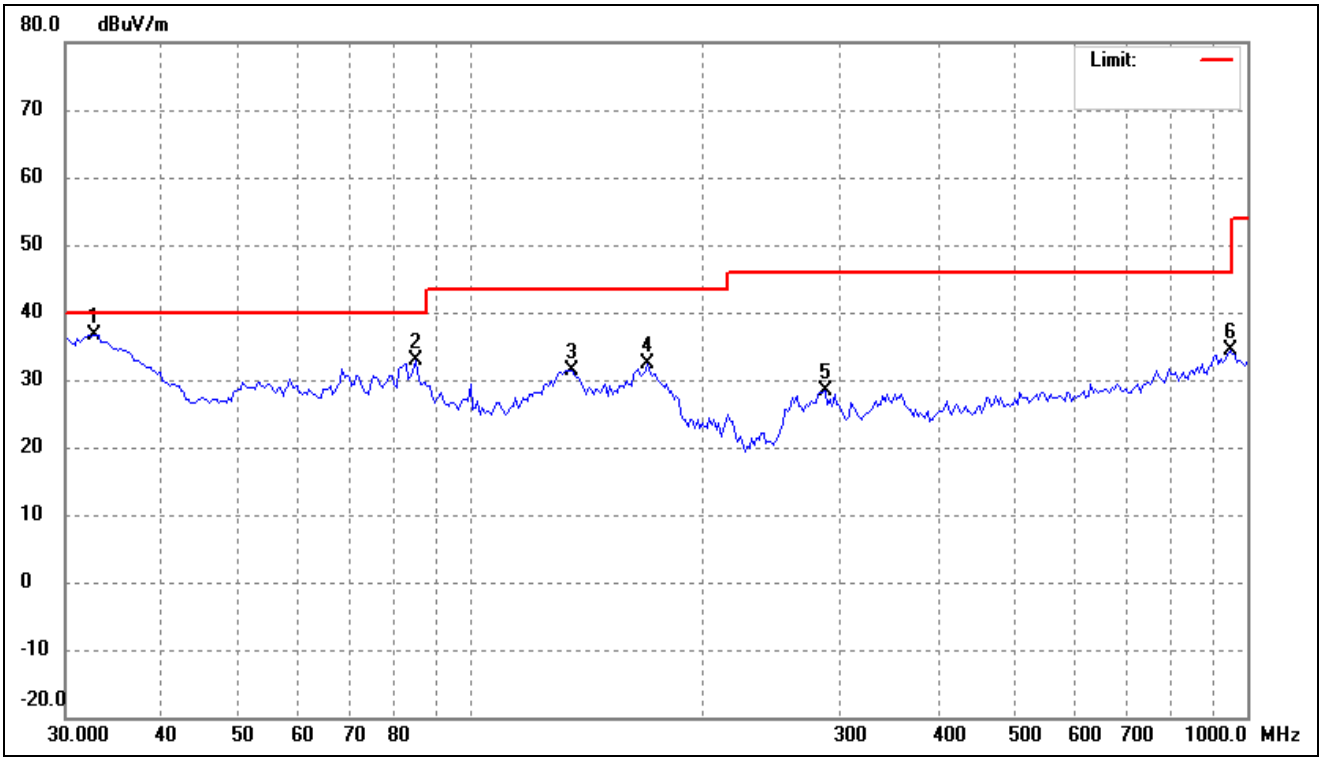
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	34.5270	45.90	-9.61	36.29	40.00	-3.71	-	-	peak
2	84.8783	45.58	-13.03	32.55	40.00	-7.45	-	-	peak
3	168.9970	39.80	-8.85	30.95	43.50	-12.55	-	-	peak
4	302.8193	34.92	-8.18	26.74	46.00	-19.26	-	-	peak
5	633.3285	30.93	-1.37	29.56	46.00	-16.44	-	-	peak
6	952.0001	33.19	2.25	35.44	46.00	-10.56	-	-	peak

802.11a(Worst case)			
Test Channel	5825MHz	Polarity:	Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	32.1840	42.66	-9.91	32.75	40.00	-7.25	-	-	peak
2	71.7054	38.28	-11.14	27.14	40.00	-12.86	-	-	peak
3	124.9249	41.85	-10.19	31.66	43.50	-11.84	-	-	peak
4	207.1968	47.76	-12.13	35.63	43.50	-7.87	-	-	peak
5	288.2840	45.79	-8.66	37.13	46.00	-8.87	-	-	peak
6	776.4849	31.20	0.08	31.28	46.00	-14.72	-	-	peak

802.11a(Worst case)			
Test Channel	5825MHz	Polarity:	Vertical



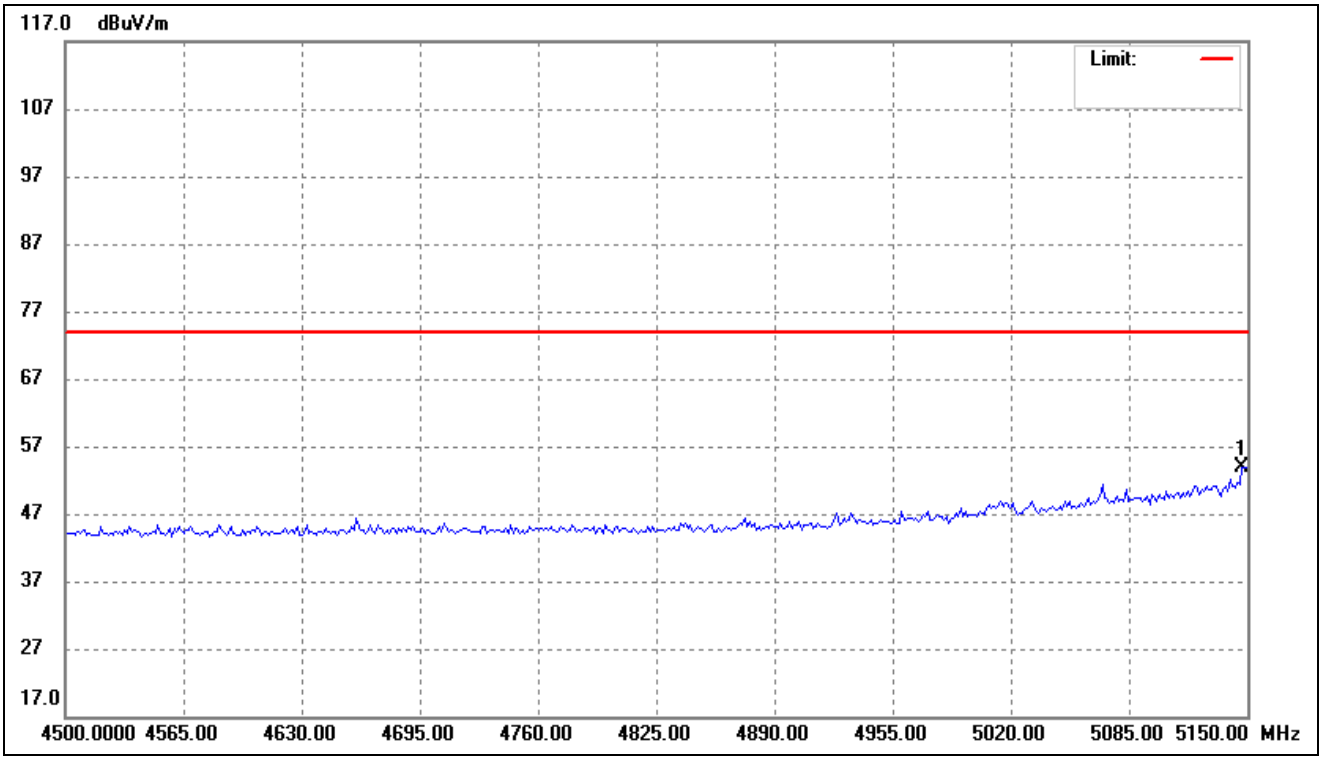
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	32.6395	46.50	-9.85	36.65	40.00	-3.35	-	-	peak
2	84.8783	46.01	-13.03	32.98	40.00	-7.02	-	-	peak
3	134.9645	41.05	-9.64	31.41	43.50	-12.09	-	-	peak
4	168.9970	41.12	-8.85	32.27	43.50	-11.23	-	-	peak
5	286.2653	36.98	-8.72	28.26	46.00	-17.74	-	-	peak
6	952.0001	32.13	2.25	34.38	46.00	-11.62	-	-	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

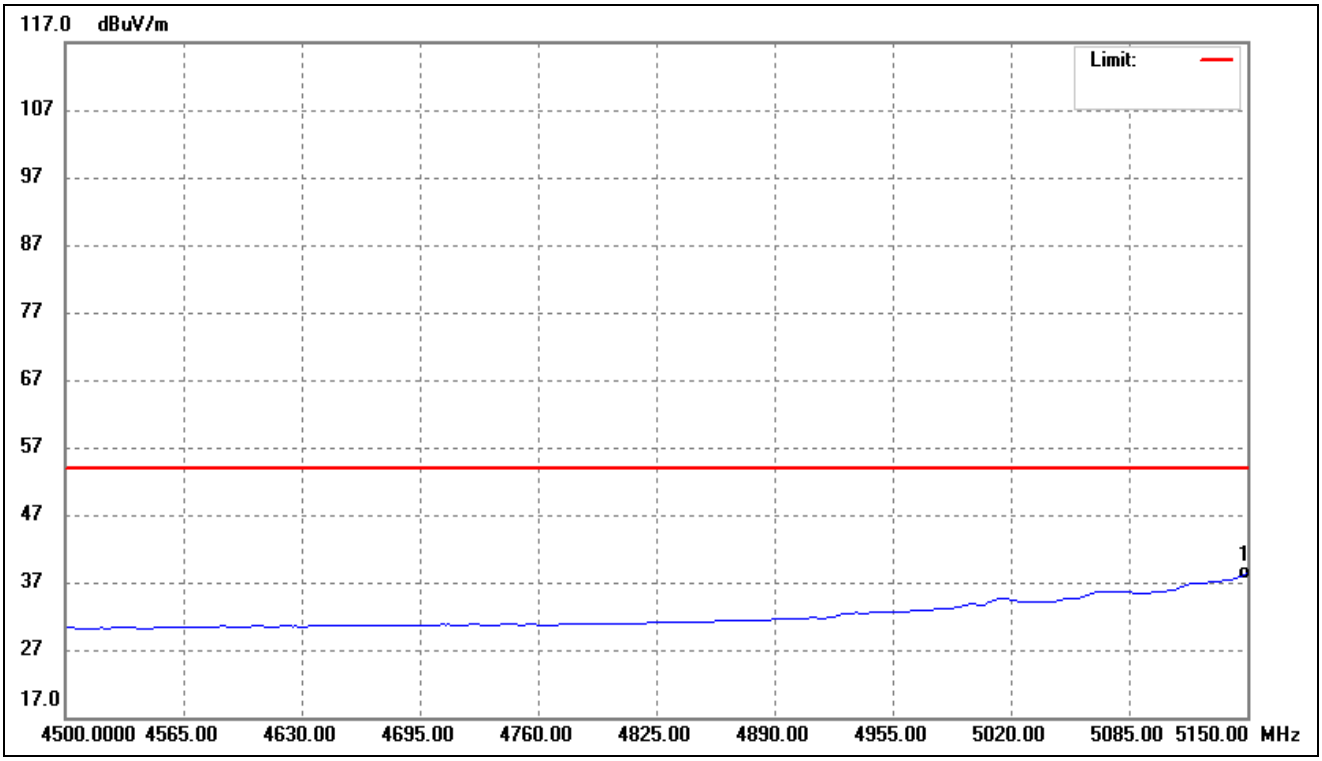
5470-5725MHz

802.11a- Restricted Bandedge			
Test Channel	band 4.50-5.15GHz	Polarity:	Horizontal(worst case)



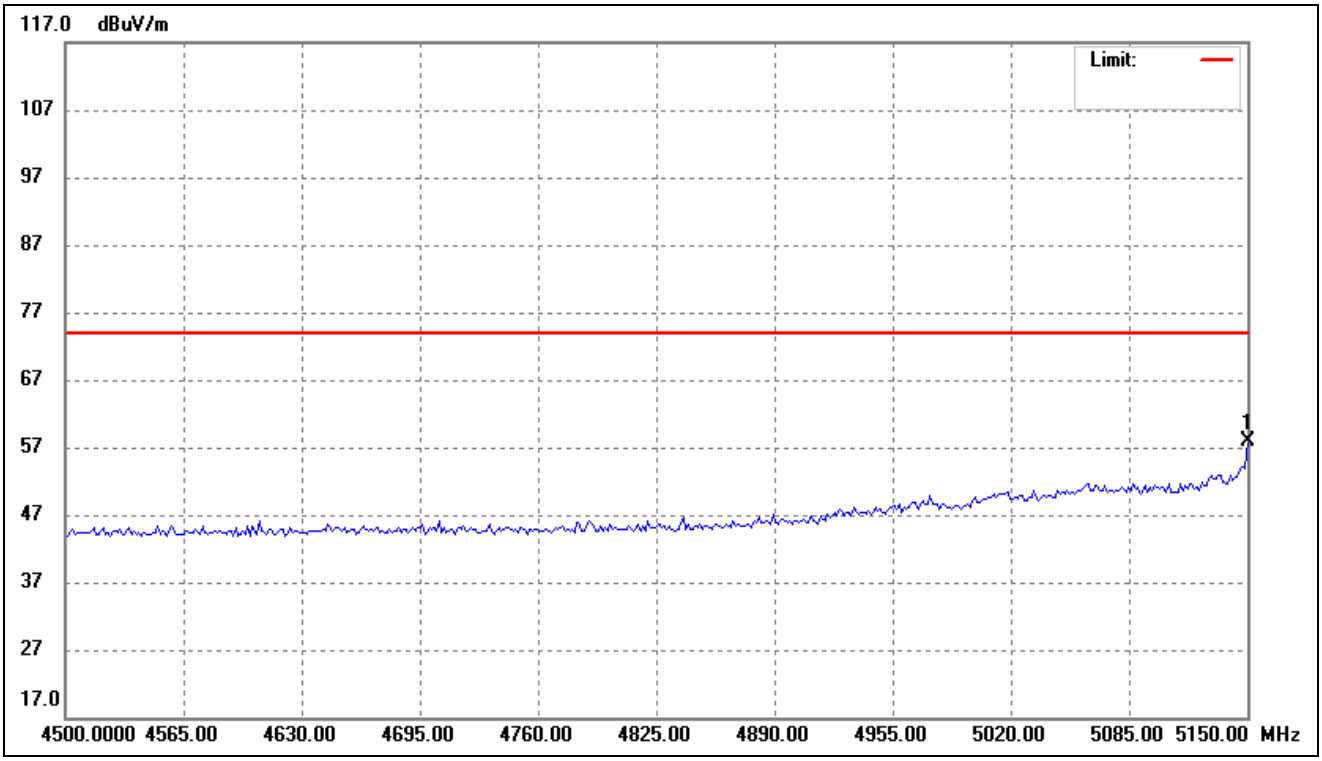
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5147.395	65.61	-11.67	53.94	74.00	-20.06	-	-	peak

802.11a- Restricted Bandedge			
Test Channel	band 4.50-5.15GHz	Polarity:	Horizontal(worst case)



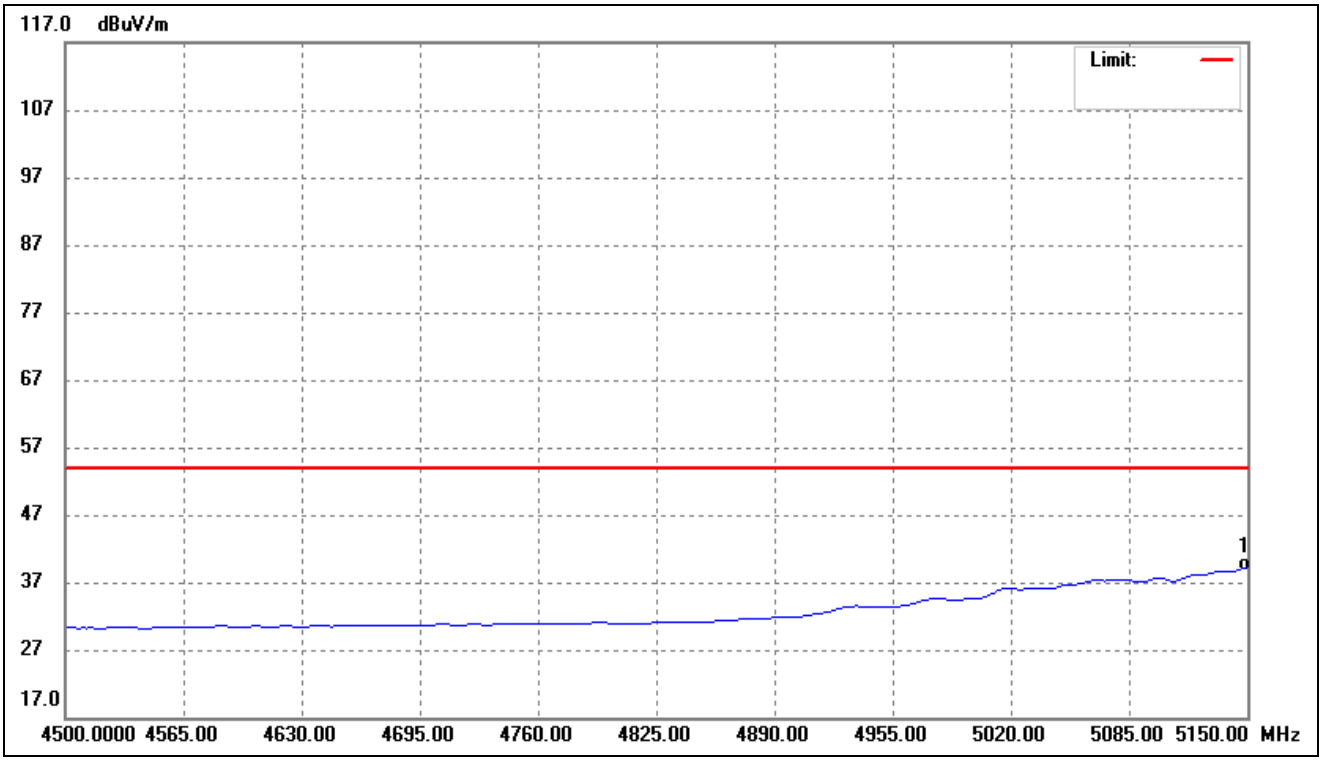
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5150.000	50.10	-11.66	38.44	54.00	-15.56	-	-	AVG

802.11n-HT20- Restricted Bandedge			
Test Channel	band 4.50-5.15GHz	Polarity:	Horizontal(worst case)



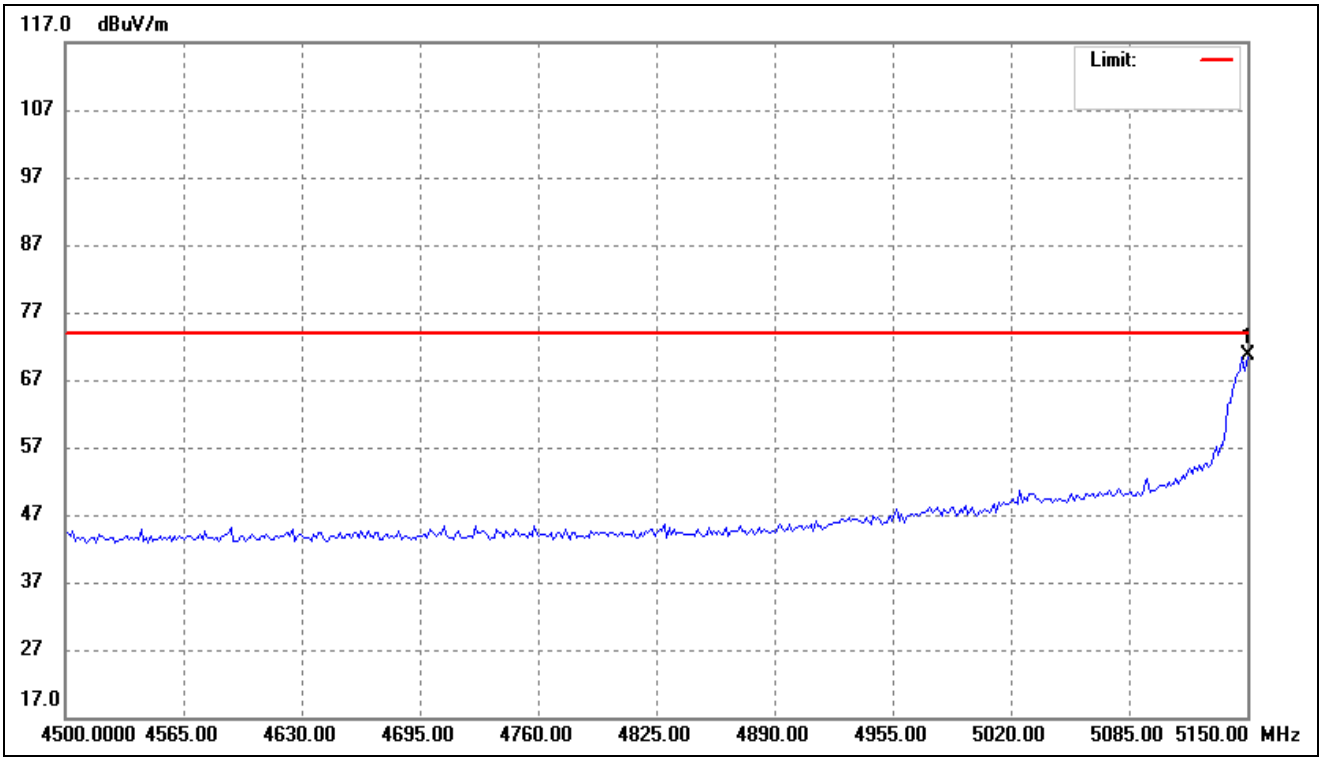
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5150.000	69.45	-11.66	57.79	74.00	-16.21	-	-	peak

802.11n-HT20- Restricted Bandedge			
Test Channel	band 4.50-5.15GHz	Polarity:	Horizontal(worst case)



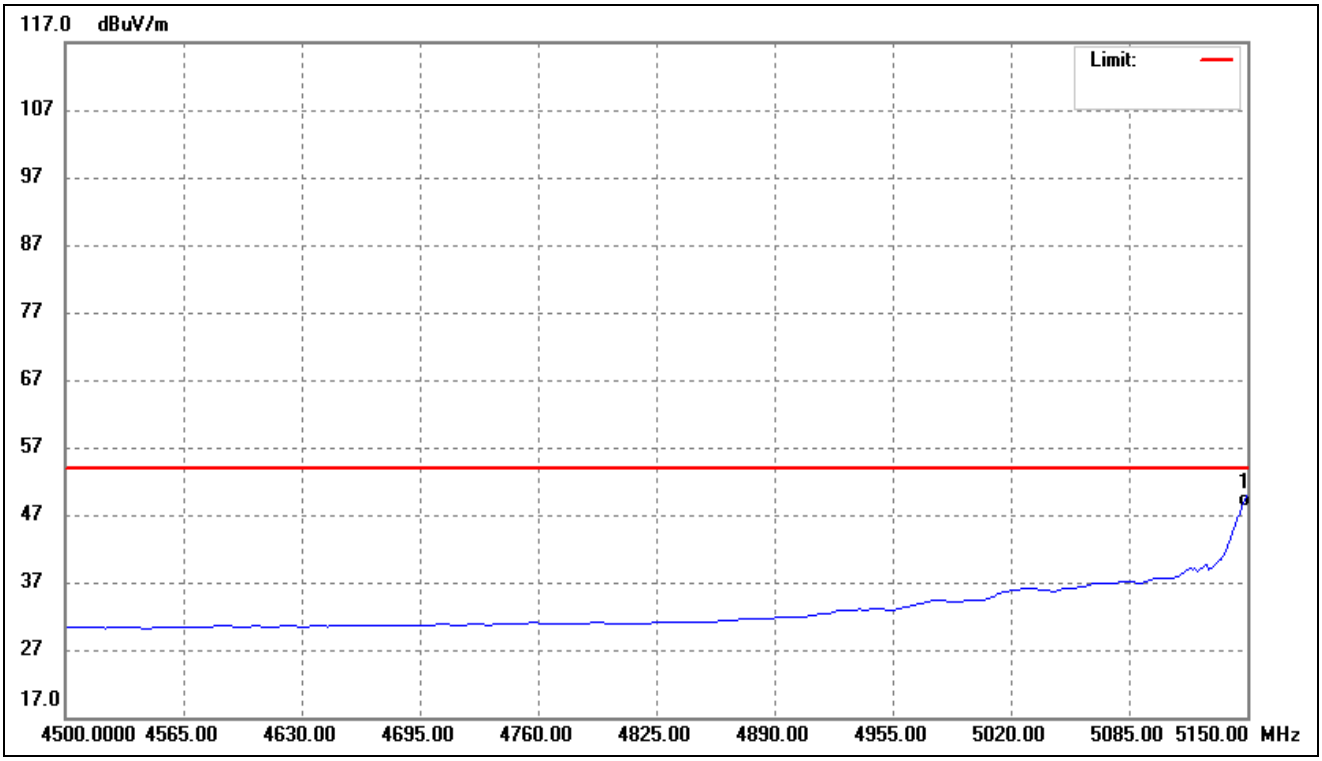
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5150.000	51.20	-11.66	39.54	54.00	-14.46	-	-	AVG

802.11n-HT40- Restricted Bandedge			
Test Channel	band 4.50-5.15GHz	Polarity:	Horizontal(worst case)



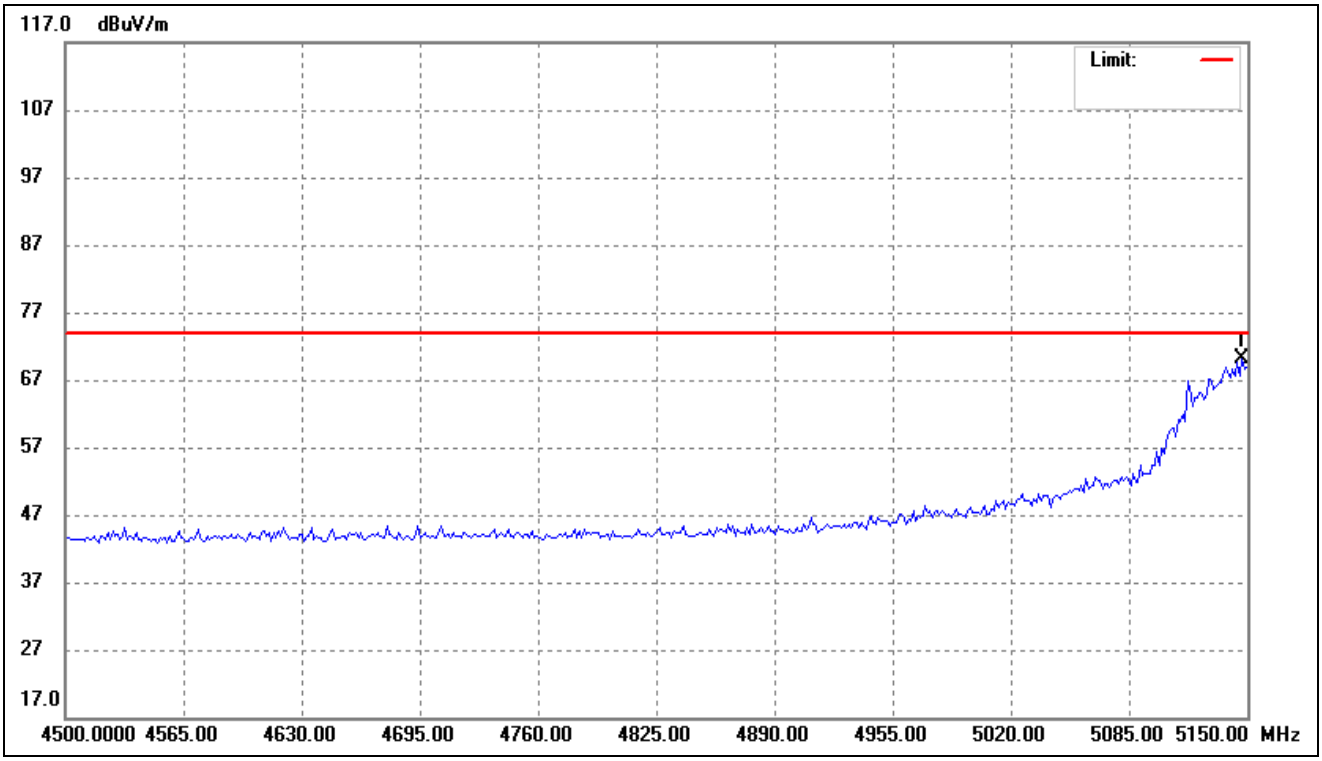
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5150.000	82.27	-11.66	70.61	74.00	-3.39	-	-	peak

802.11n-HT40- Restricted Bandedge			
Test Channel	band 4.50-5.15GHz	Polarity:	Horizontal(worst case)



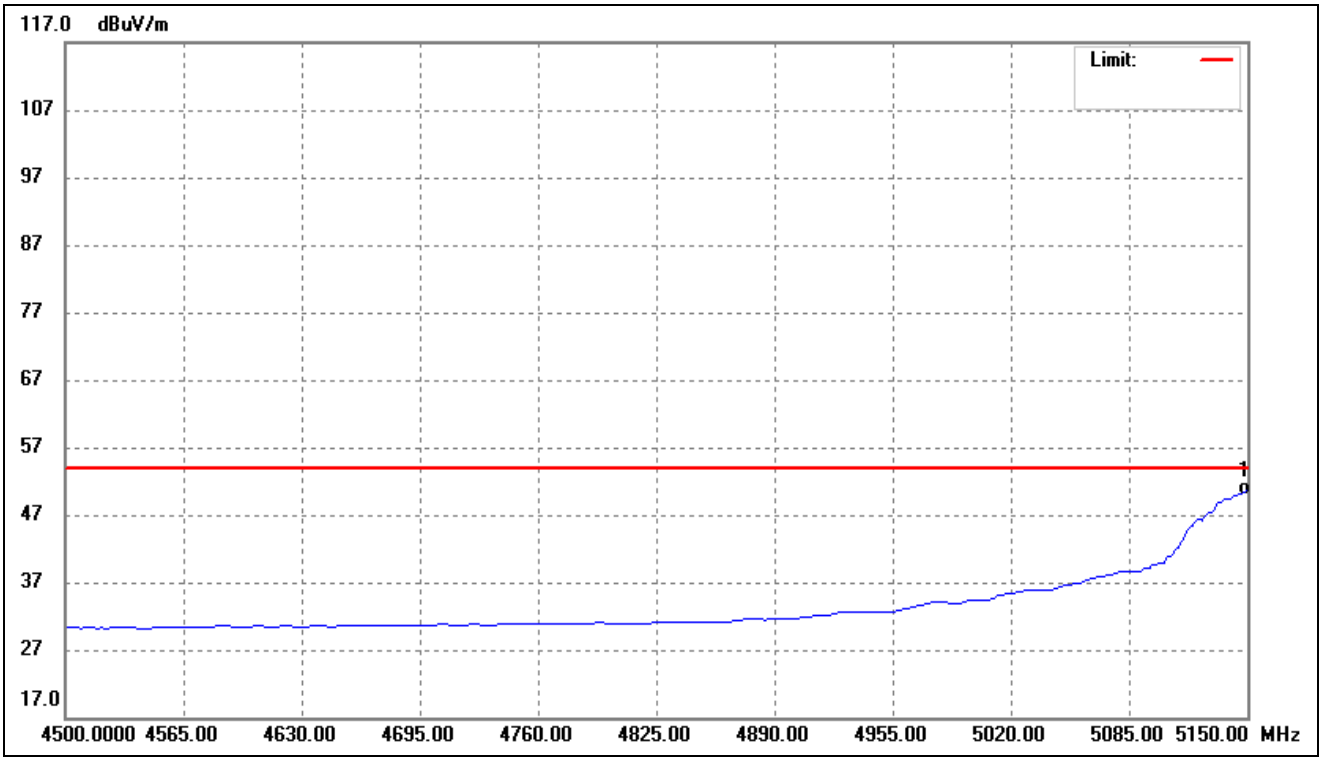
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5148.697	60.86	-11.66	49.20	54.00	-4.80	-	-	AVG

802.11ac-HT80- Restricted Bandedge			
Test Channel	band 4.50-5.15GHz	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	5147.395	81.84	-11.67	70.17	74.00	-3.83	-	-	peak

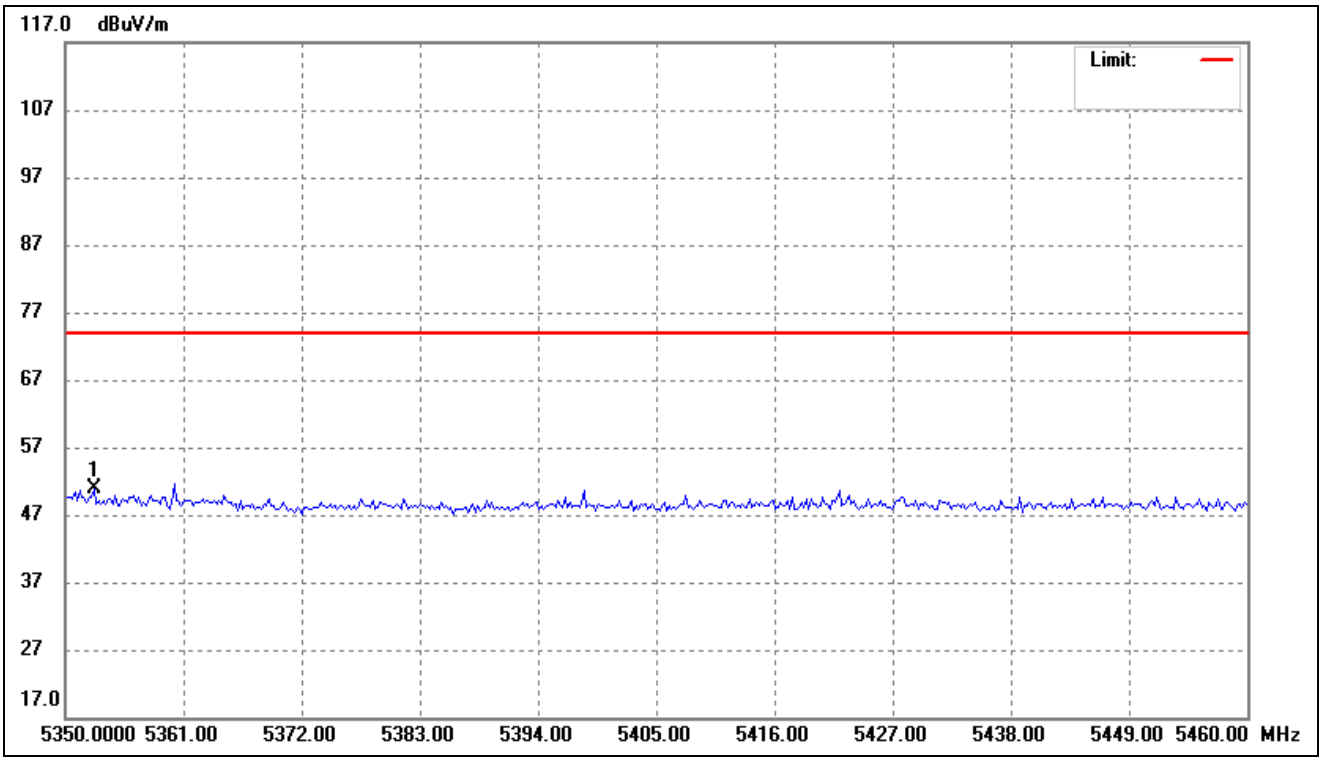
802.11ac-HT80- Restricted Bandedge			
Test Channel	band 4.50-5.15GHz	Polarity:	Horizontal(worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5150.000	62.47	-11.66	50.81	54.00	-3.19	-	-	AVG

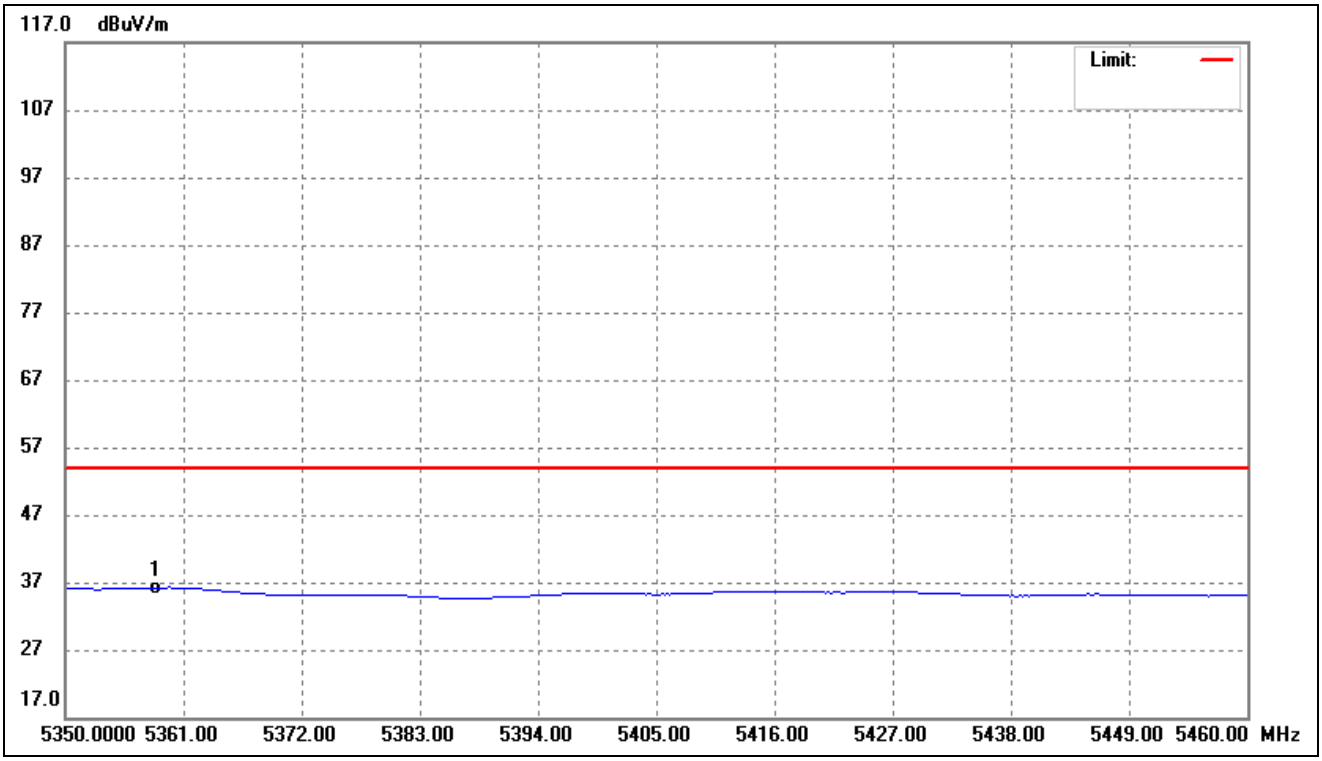
5250-5350MHz

802.11a- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	Polarity:	Horizontal(worst case)



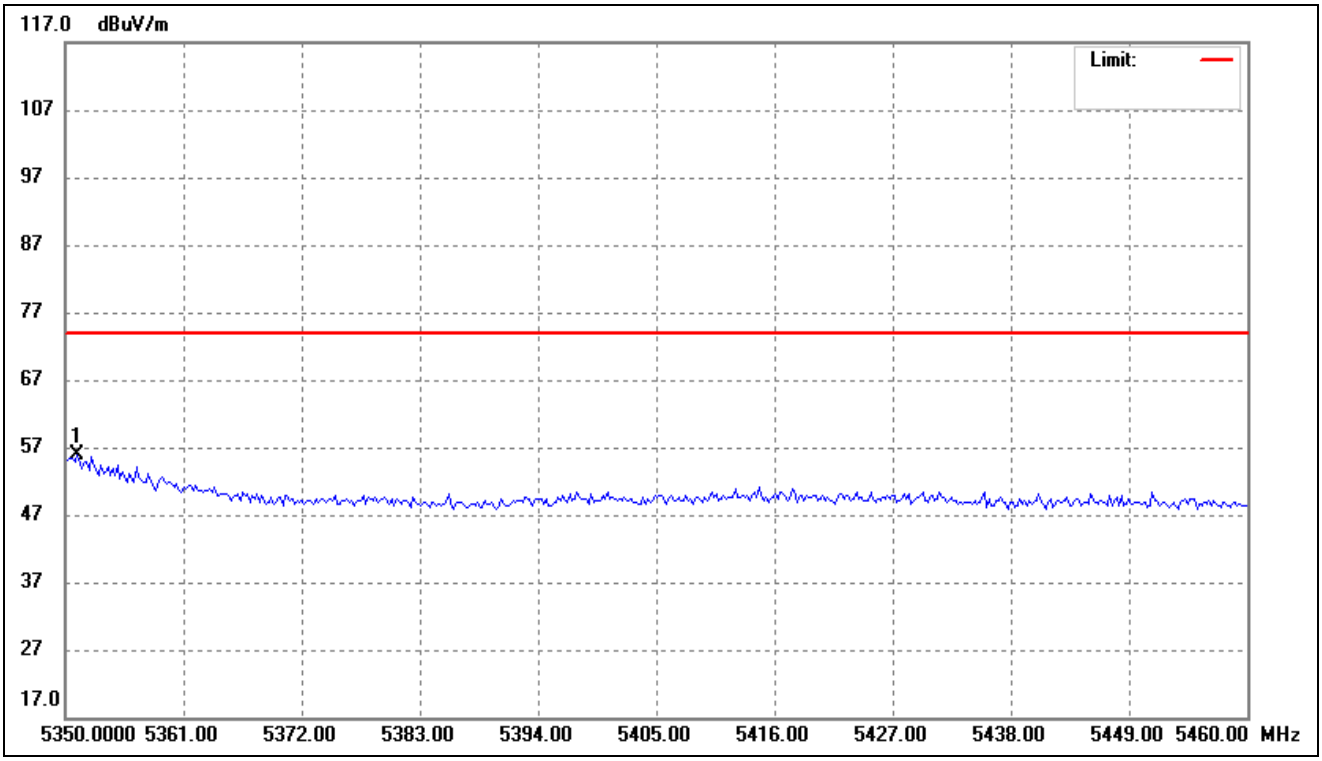
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5352.645	61.42	-10.66	50.76	74.00	-23.24	-	-	peak

802.11a- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	Polarity:	Horizontal(worst case)



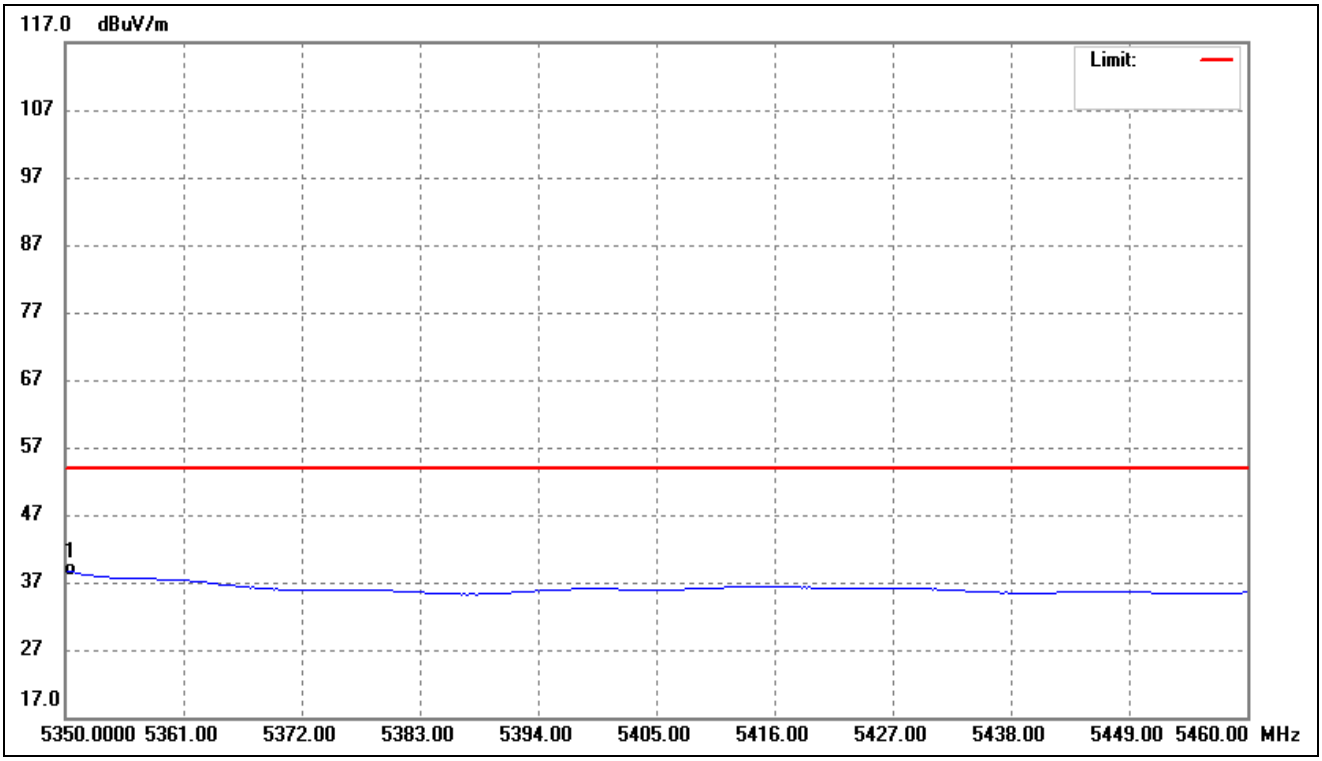
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5358.377	46.86	-10.62	36.24	54.00	-17.76	-	-	AVG

802.11n-HT20- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	Polarity:	Horizontal(worst case)



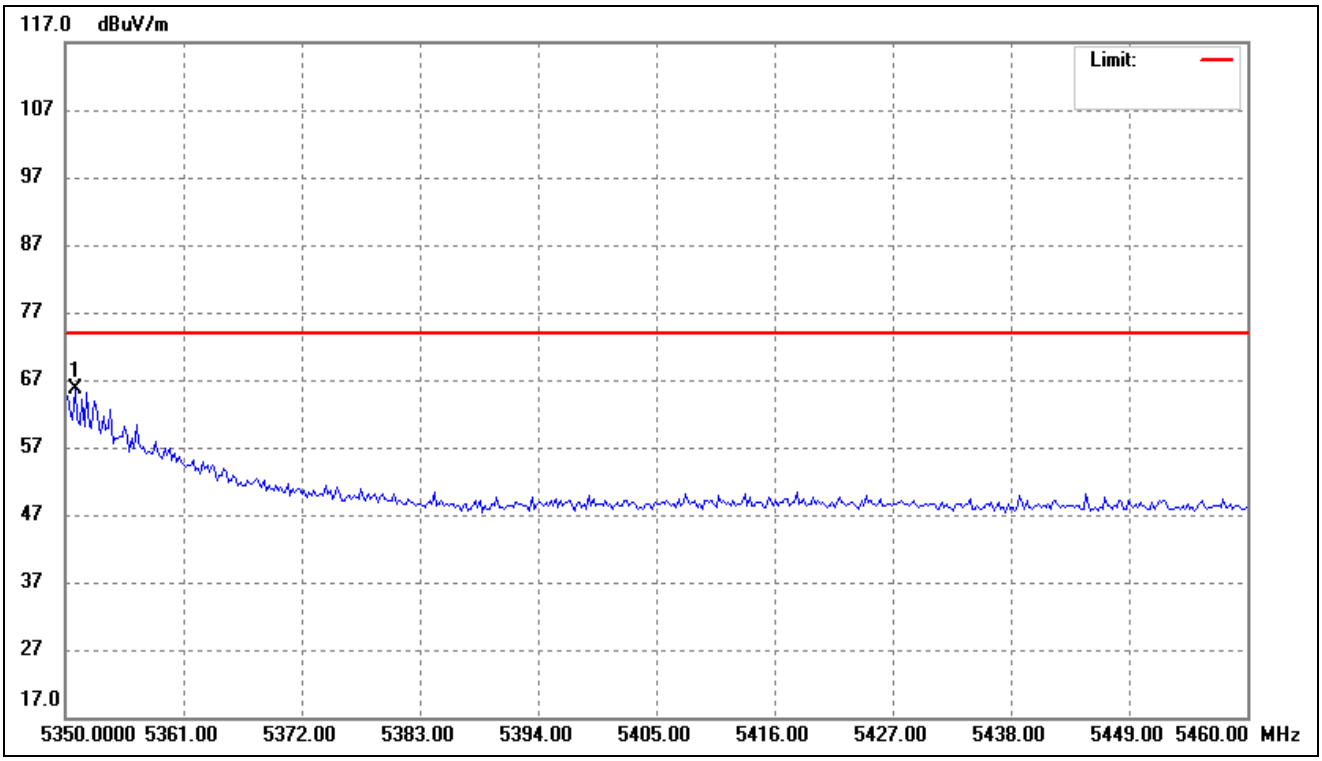
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5351.102	66.51	-10.67	55.84	74.00	-18.16	-	-	peak

802.11n-HT20- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	Polarity:	Horizontal(worst case)



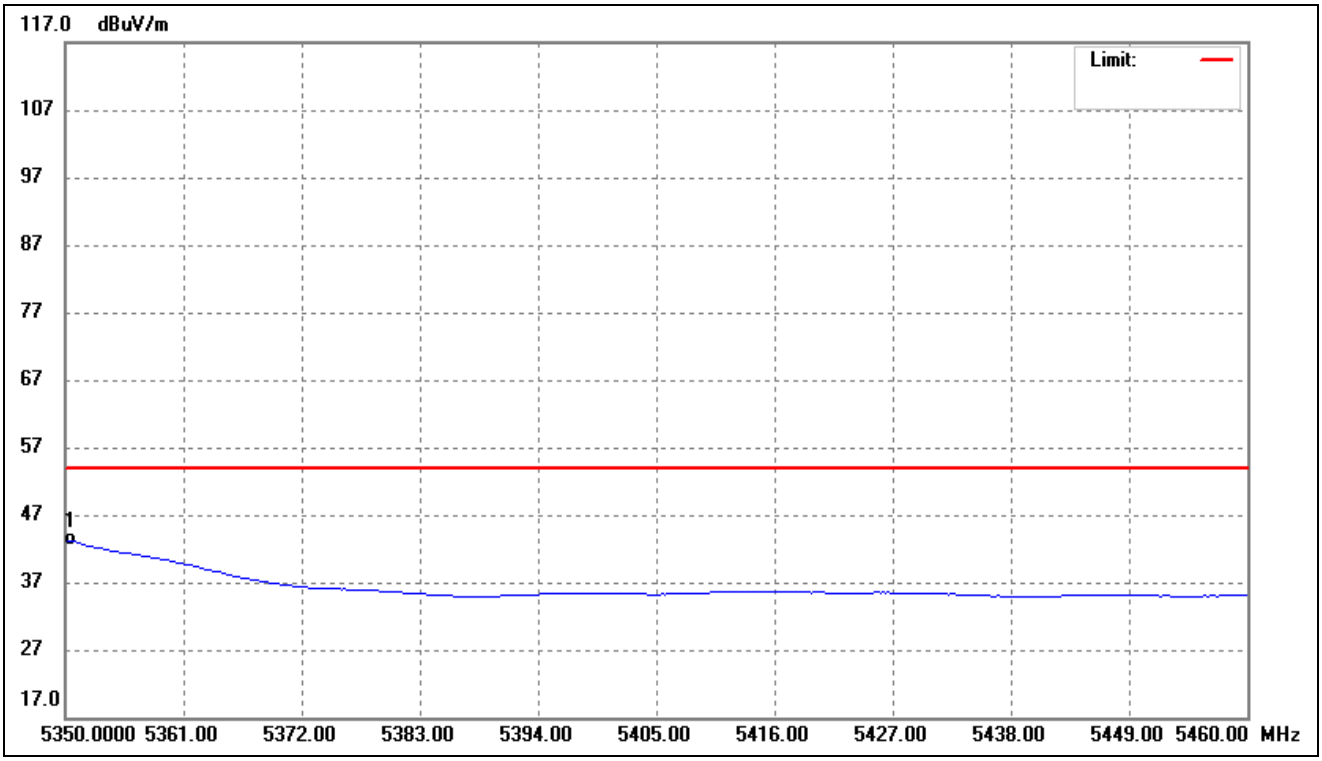
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5350.000	49.43	-10.67	38.76	54.00	-15.24	-	-	AVG

802.11n-HT40- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	Polarity:	Horizontal(worst case)



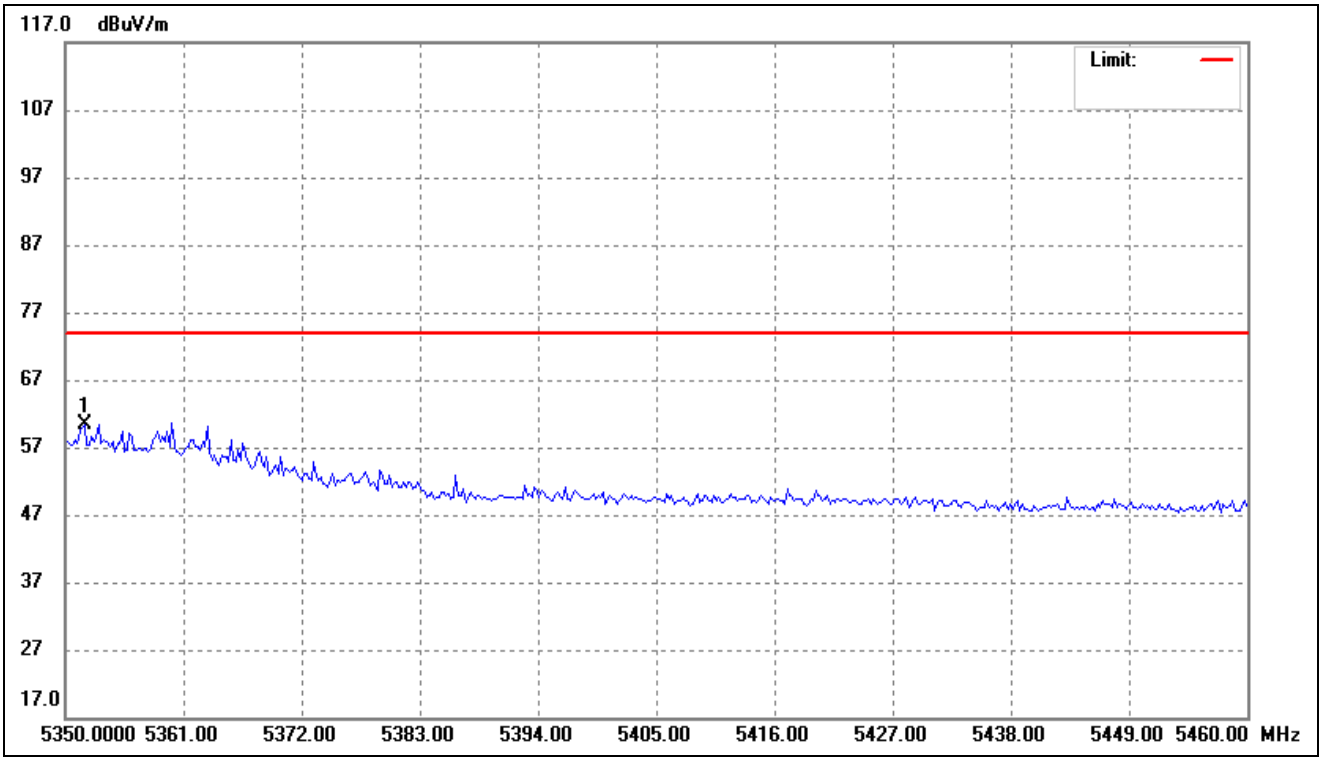
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5350.882	76.19	-10.67	65.52	74.00	-8.48	-	-	peak

802.11n-HT40- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	Polarity:	Horizontal(worst case)



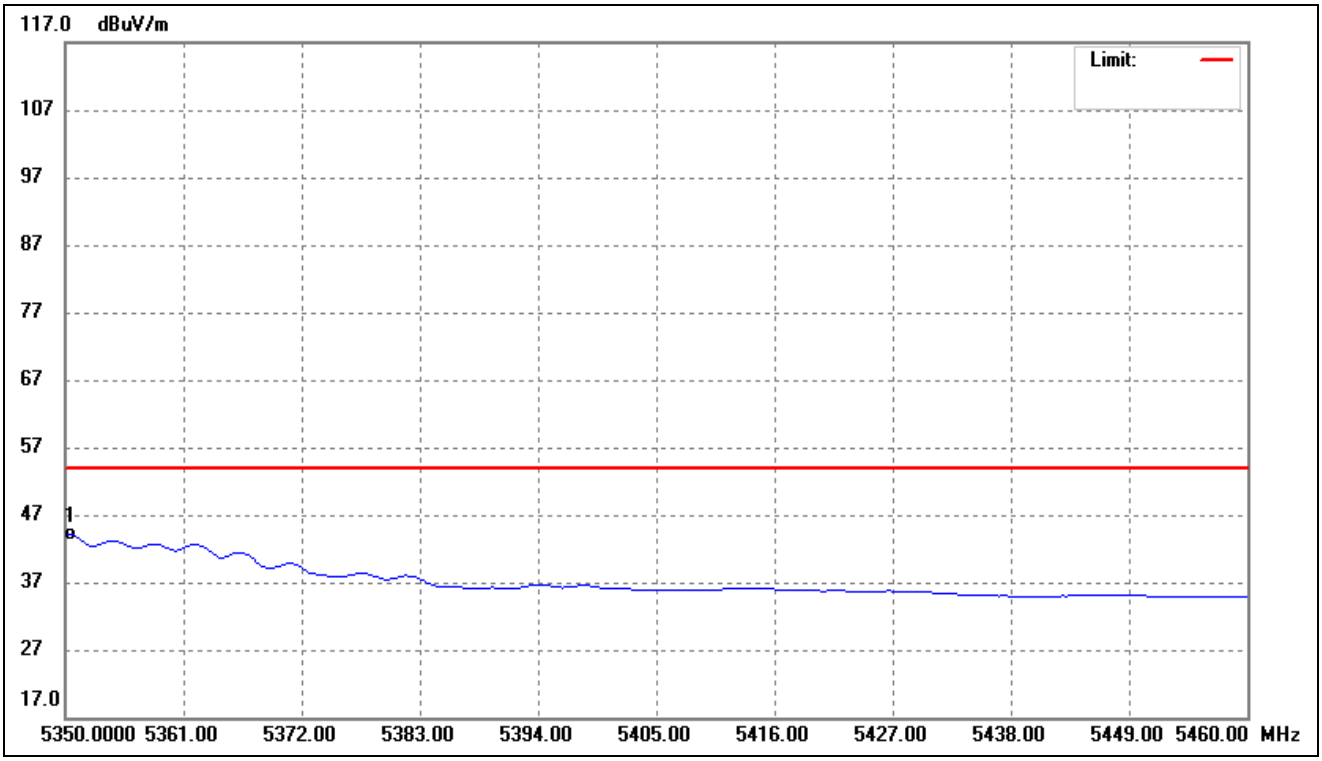
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5350.000	53.98	-10.67	43.31	54.00	-10.69	-	-	AVG

802.11ac-HT80- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	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	5351.764	71.14	-10.67	60.47	74.00	-13.53	-	-	peak

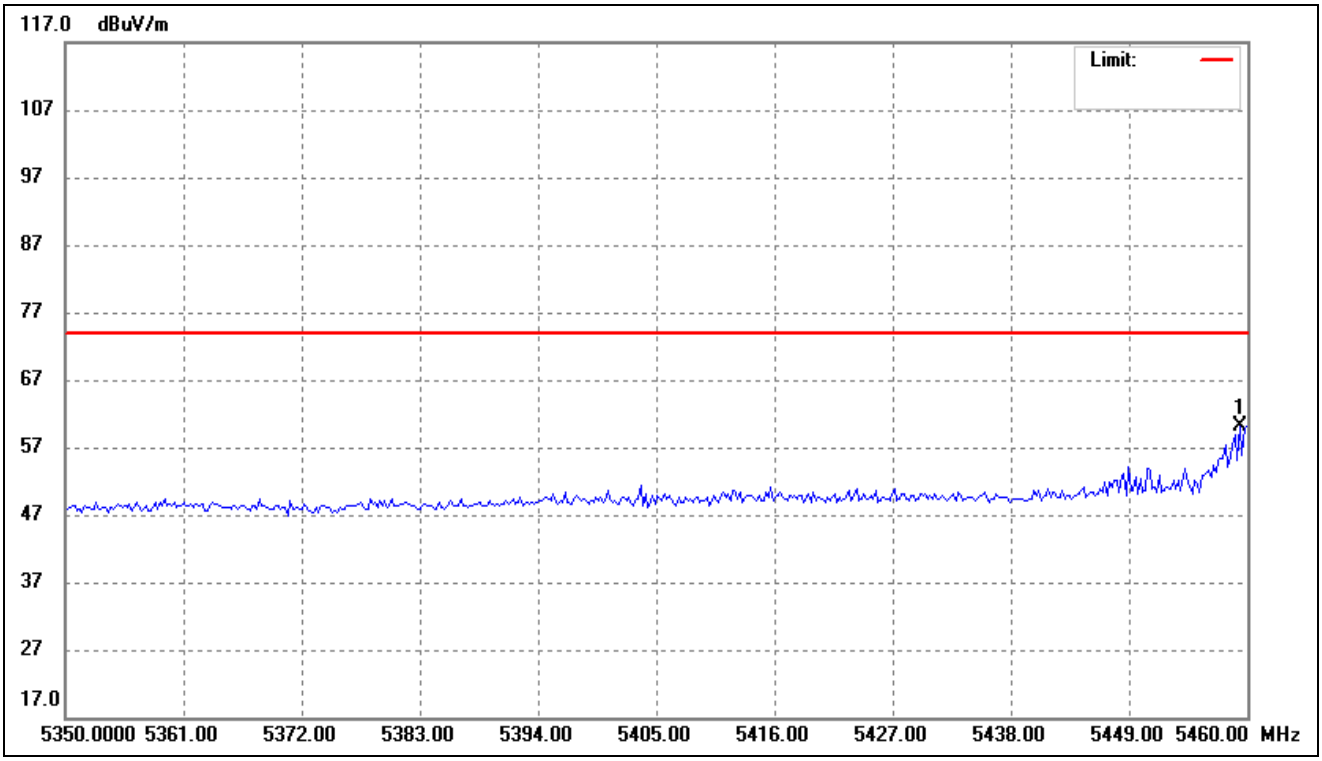
802.11ac-HT80- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	Polarity:	Horizontal(worst case)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5350.220	54.88	-10.67	44.21	54.00	-9.79	-	-	AVG

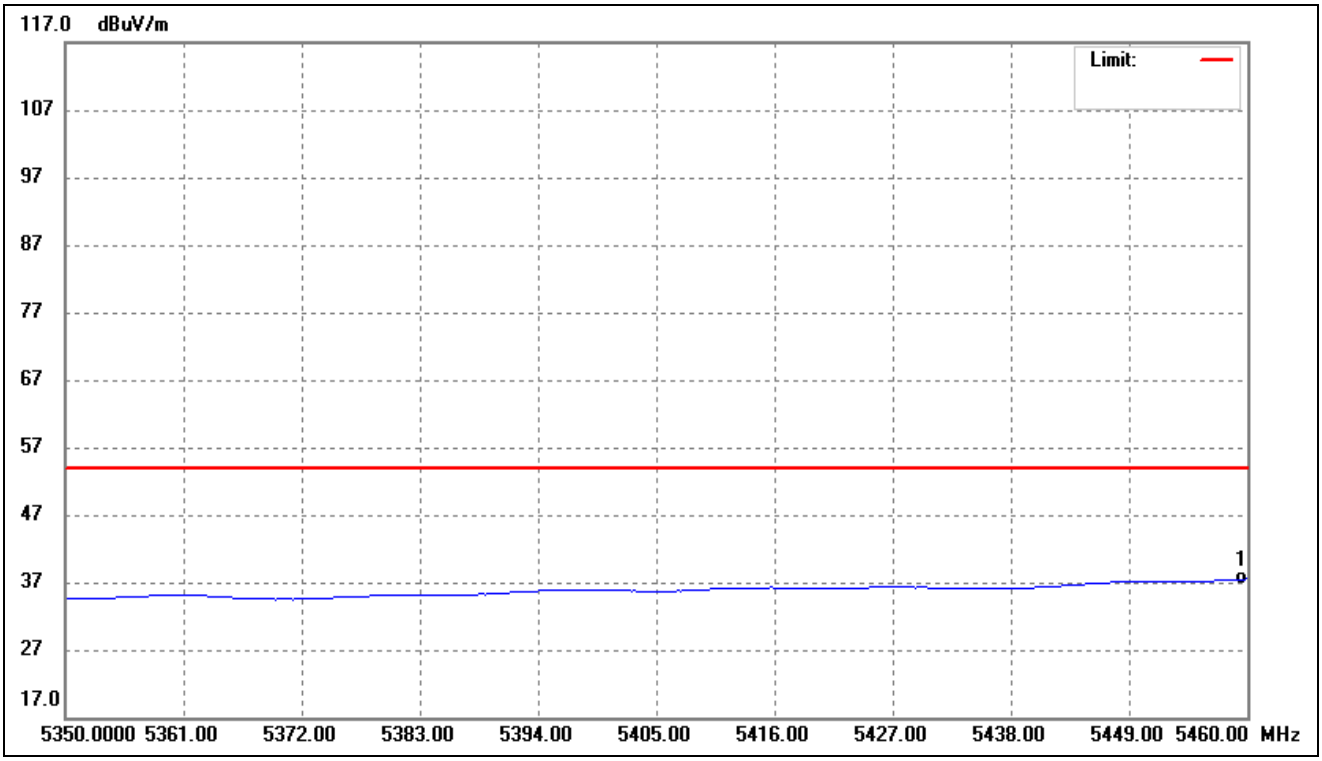
5470-5725MHz

802.11a- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	Polarity:	Horizontal(worst case)



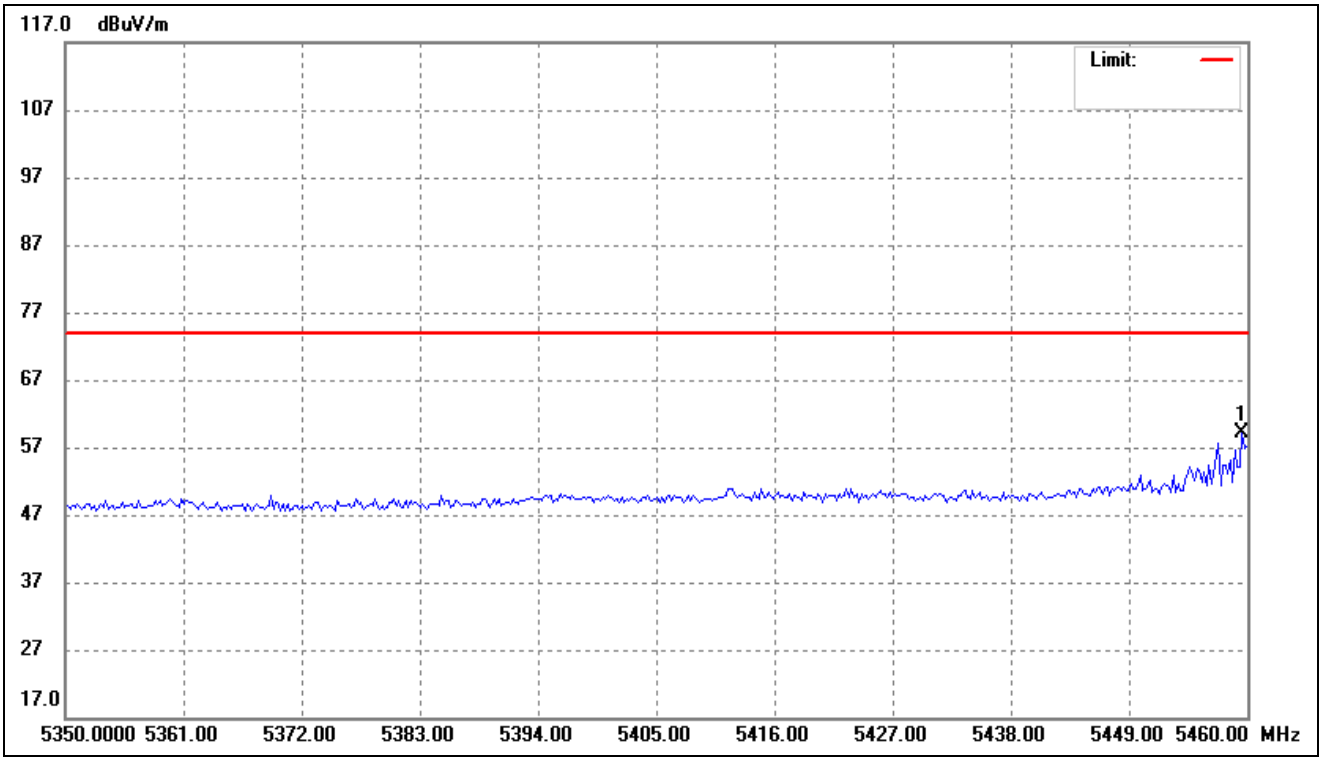
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5459.339	70.36	-10.13	60.23	74.00	-13.77	-	-	peak

802.11a- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	Polarity:	Horizontal(worst case)



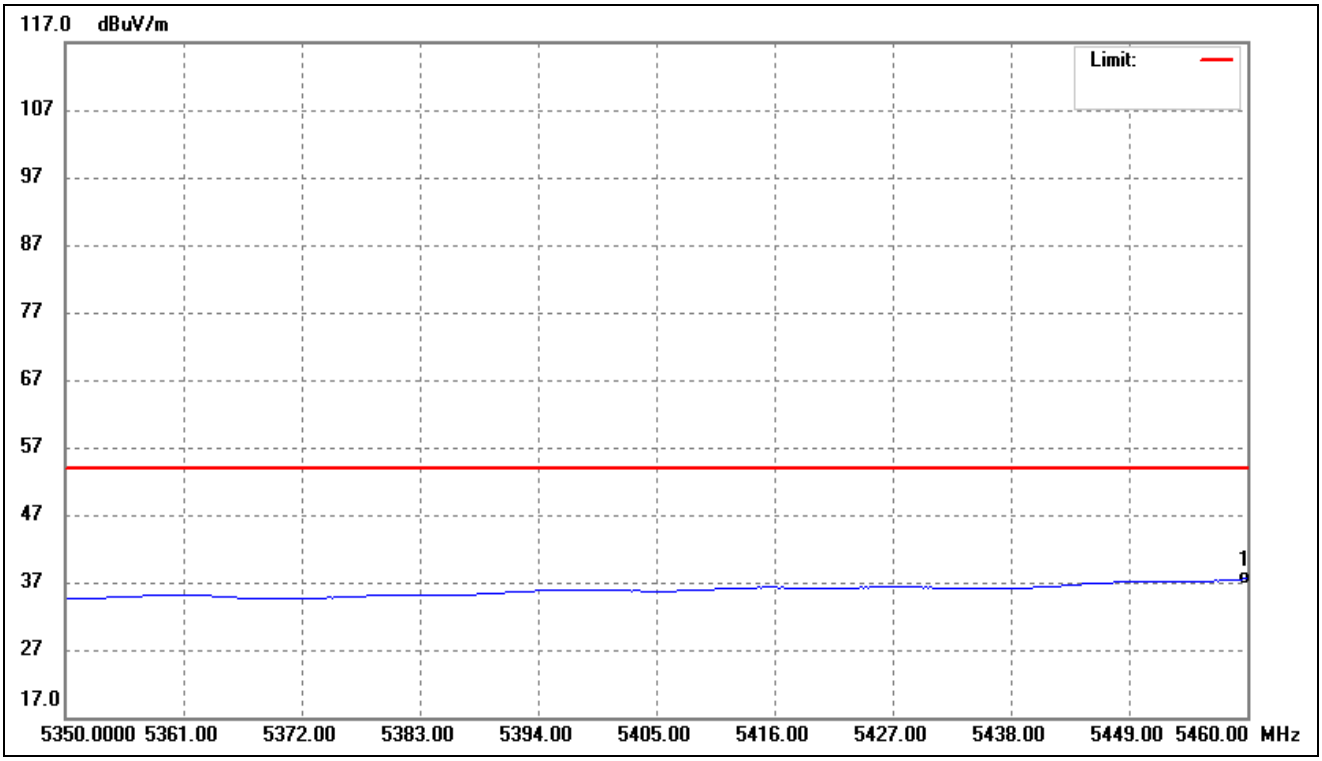
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5460.000	47.64	-10.13	37.51	54.00	-16.49	-	-	AVG

802.11n-HT20- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	Polarity:	Horizontal(worst case)



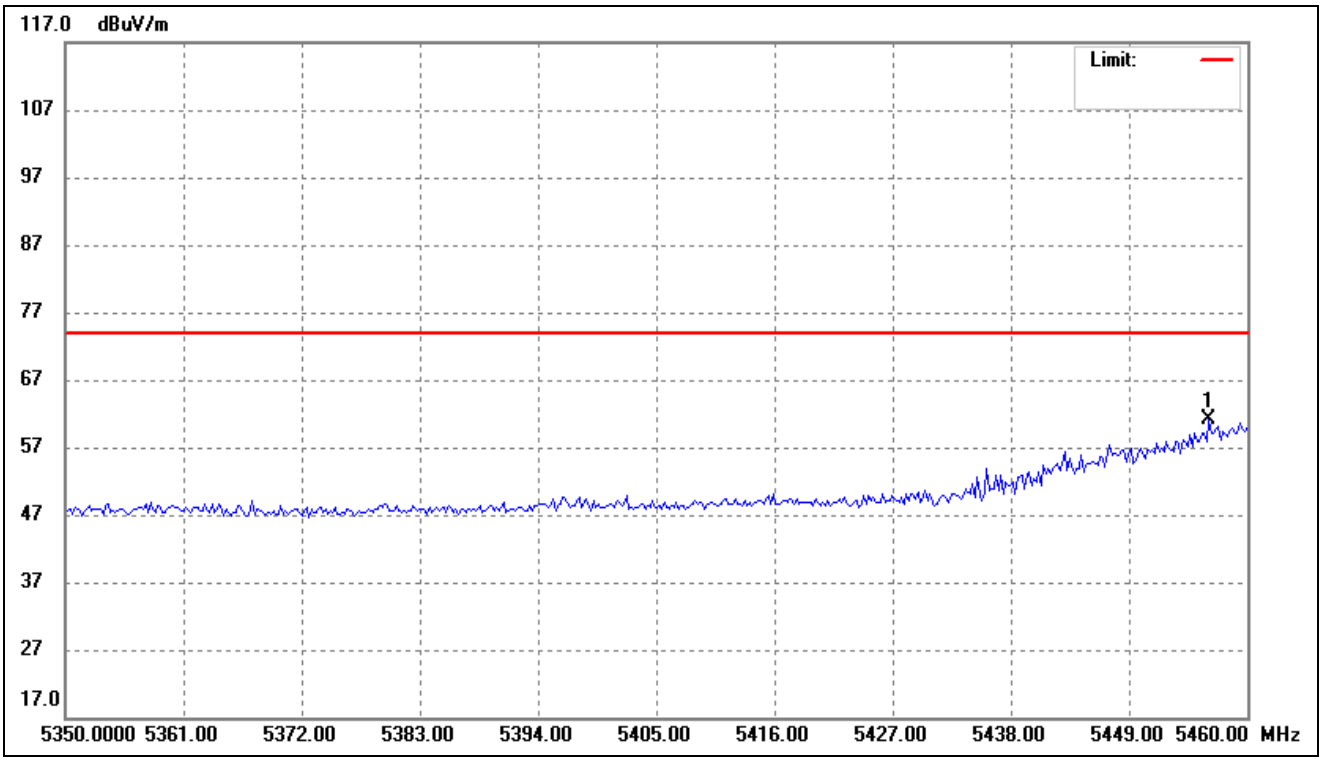
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5459.559	69.18	-10.13	59.05	74.00	-14.95	-	-	peak

802.11n-HT20- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	Polarity:	Horizontal(worst case)



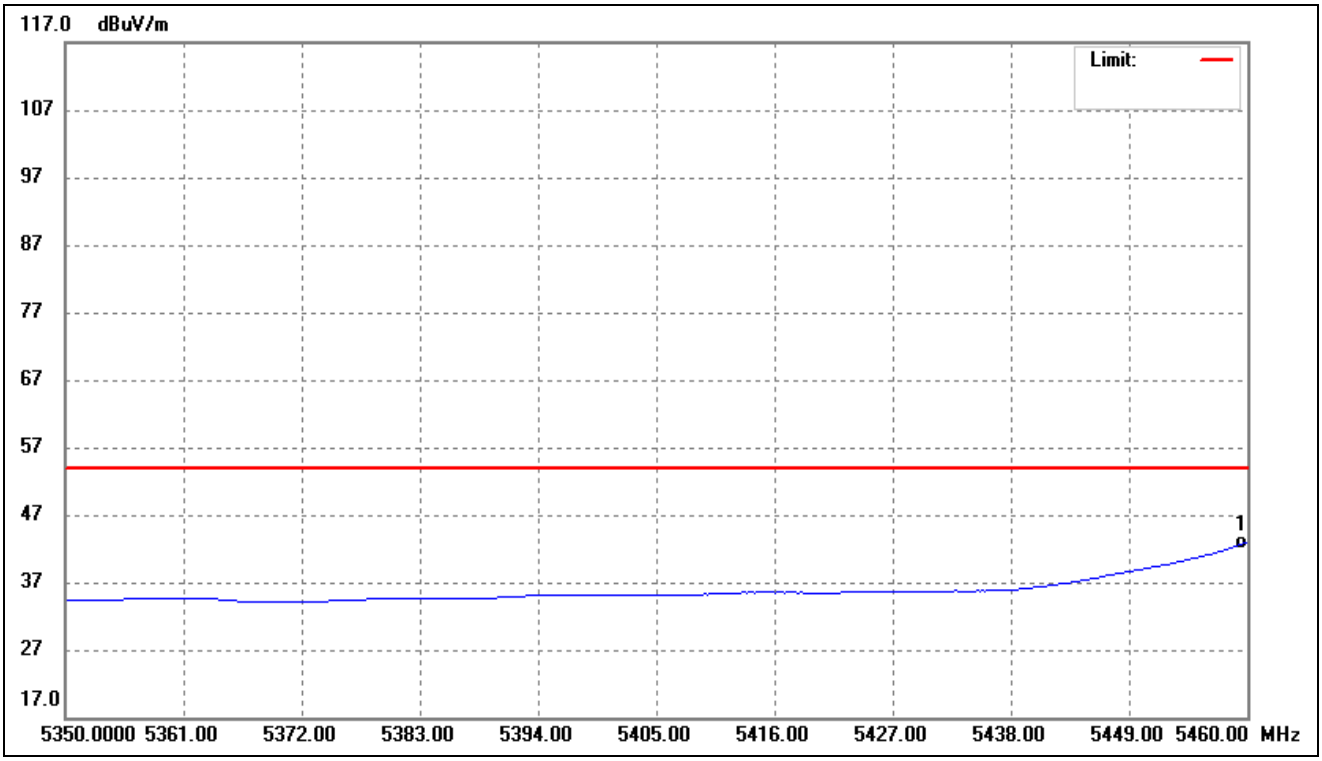
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5460.000	47.65	-10.13	37.52	54.00	-16.48	-	-	AVG

802.11n-HT40- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	Polarity:	Horizontal(worst case)



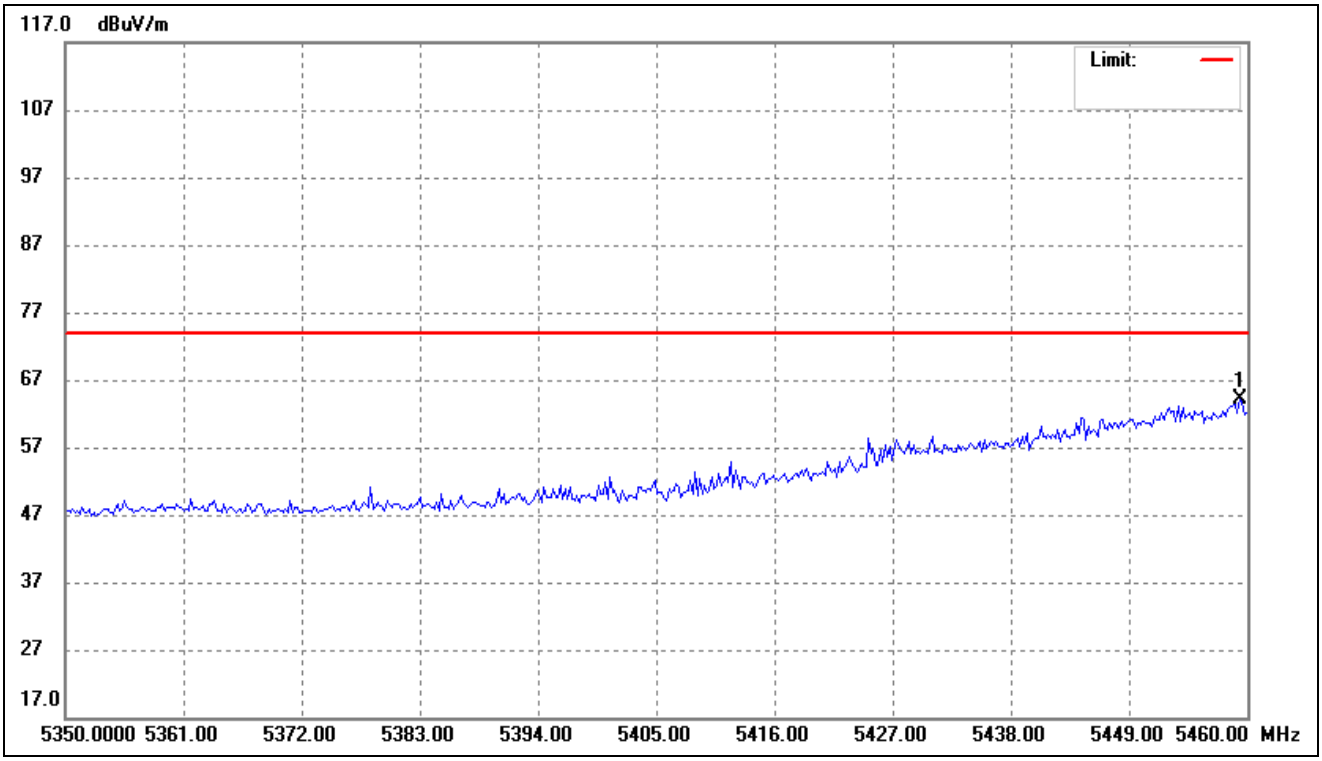
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5456.473	71.28	-10.14	61.14	74.00	-12.86	-	-	peak

802.11n-HT40- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	Polarity:	Horizontal(worst case)



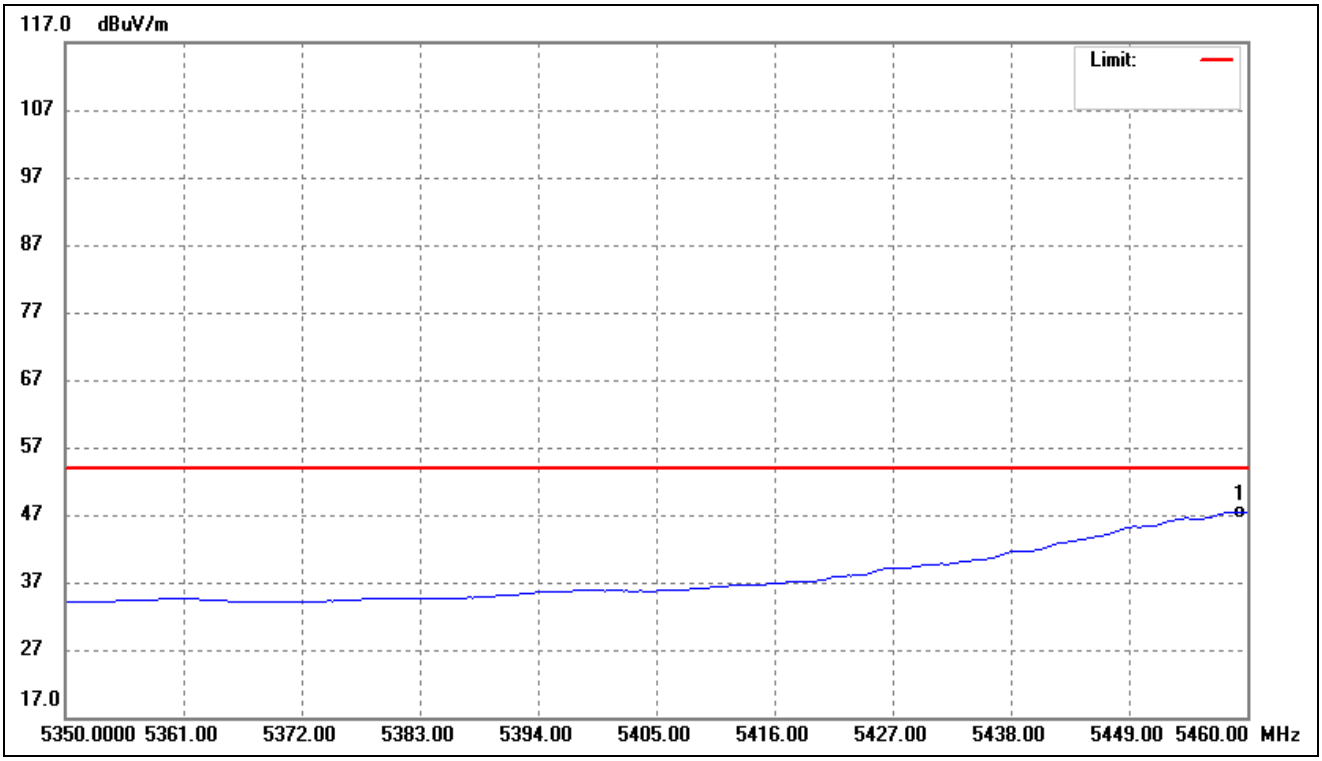
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	5460.000	53.09	-10.13	42.96	54.00	-11.04	-	-	AVG

802.11ac-HT80- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	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	5459.339	74.26	-10.13	64.13	74.00	-9.87	-	-	peak

802.11ac-HT80- Restricted Bandedge			
Test Channel	band 5.35-5.46GHz	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	5460.000	57.52	-10.13	47.39	54.00	-6.61	-	-	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.

- For the frequency band 5.15-5.25GHz, 5.250-5.350GHz, 5.470-5.725GHz, 5.725-5.850GHz (802.11a)
- 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	44.30	7.11	51.41	74	-22.59	H	PK
15540	38.48	7.11	45.59	54	-8.41	H	AV
10360	44.33	7.11	51.44	74	-22.56	V	PK
15540	38.57	7.11	45.68	54	-8.32	V	AV
Middle Channel (5200MHz)							
10400	45.49	7.22	52.71	74	-21.29	H	PK
15600	39.52	7.22	46.74	54	-7.26	H	AV
10400	45.63	7.22	52.85	74	-21.15	V	PK
15600	38.76	7.22	45.98	54	-8.02	V	AV
High Channel (5240MHz)							
10480	45.67	7.69	53.36	74	-20.64	H	PK
15720	39.87	7.69	47.56	54	-6.44	H	AV
10480	45.53	7.69	53.22	74	-20.78	V	PK
15720	39.91	7.69	47.60	54	-6.40	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	45.39	7.96	53.35	74	-20.65	H	PK
15780	38.89	7.96	46.85	54	-7.15	H	AV
10520	45.79	7.96	53.75	74	-20.25	V	PK
15780	38.66	7.96	46.62	54	-7.38	V	AV
Middle Channel (5280MHz)							
10560	45.82	8.02	53.84	74	-20.16	H	PK
15840	38.59	8.02	46.61	54	-7.39	H	AV
10560	44.45	8.02	52.47	74	-21.53	V	PK
15840	38.10	8.02	46.12	54	-7.88	V	AV
High Channel (5320MHz)							
10640	44.54	8.35	52.89	74	-21.11	H	PK
15960	39.44	8.35	47.79	54	-6.21	H	AV
10640	45.48	8.35	53.83	74	-20.17	V	PK
15960	39.23	8.35	47.58	54	-6.42	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	44.99	8.82	53.81	74	-20.19	H	PK
16500	38.38	8.82	47.20	54	-6.80	H	AV
11000	44.11	8.82	52.93	74	-21.07	V	PK
16500	39.06	8.82	47.88	54	-6.12	V	AV
Middle Channel (5600MHz)							
11200	45.69	8.92	54.61	74	-19.39	H	PK
16800	38.75	8.92	47.67	54	-6.33	H	AV
11200	44.59	8.92	53.51	74	-20.49	V	PK
16800	38.84	8.92	47.76	54	-6.24	V	AV
High Channel (5700MHz)							
11400	45.46	9.36	54.82	74	-19.18	H	PK
17100	39.52	9.36	48.88	54	-5.12	H	AV
11400	45.49	9.36	54.85	74	-19.15	V	PK
17100	38.23	9.36	47.59	54	-6.41	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	43.31	9.45	52.76	74	-21.24	H	PK
17235	37.58	9.45	47.03	54	-6.97	H	AV
11490	44.18	9.45	53.63	74	-20.37	V	PK
17235	37.27	9.45	46.72	54	-7.28	V	AV
Middle Channel (5785MHz)							
11570	43.66	9.62	53.28	74	-20.72	H	PK
17355	37.98	9.62	47.60	54	-6.40	H	AV
11570	44.91	9.62	54.53	74	-19.47	V	PK
17355	37.69	9.62	47.31	54	-6.69	V	AV
High Channel (5825MHz)							
11650	44.45	9.84	54.29	74	-19.71	H	PK
17475	37.89	9.84	47.73	54	-6.27	H	AV
11650	43.45	9.84	53.29	74	-20.71	V	PK
17475	38.00	9.84	47.84	54	-6.16	V	AV

- Out of Band edge for 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-42.61	-27
Highest	Above 5350	-39.98	-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	-41.86	-27
Highest	Above 5350	-42.81	-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	-40.53	-27
Highest	Above 5725	-41.22	-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 5650	-46.20	-27
	5650 to 5700	-34.81	-27 to -17
	5700 to 5720	-26.66	-17 to 15.6
	5720 to 5725	-17.58	15.6 to 27
Highest	5850 to 5855	-15.68	27 to 15.6
	5855 to 5875	-26.82	15.6 to -17
	5875 to 5925	-35.76	-17 to -27
	Above 5925	-40.35	-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 (802.11n 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	43.18	7.11	50.29	74	-23.71	H	PK
10360	37.77	7.11	44.88	54	-9.12	H	AV
10360	44.19	7.11	51.30	74	-22.70	V	PK
10360	37.97	7.11	45.08	54	-8.92	V	AV
Middle Channel (5200MHz)							
10400	44.91	7.22	52.13	74	-21.87	H	PK
10400	37.92	7.22	45.14	54	-8.86	H	AV
10400	43.50	7.22	50.72	74	-23.28	V	PK
10400	38.66	7.22	45.88	54	-8.12	V	AV
High Channel (5240MHz)							
10480	44.95	7.69	52.64	74	-21.36	H	PK
10480	38.47	7.69	46.16	54	-7.84	H	AV
10480	44.10	7.69	51.79	74	-22.21	V	PK
10480	38.48	7.69	46.17	54	-7.83	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	44.26	7.96	52.22	74	-21.78	H	PK
10520	38.80	7.96	46.76	54	-7.24	H	AV
10520	44.07	7.96	52.03	74	-21.97	V	PK
10520	37.09	7.96	45.05	54	-8.95	V	AV
Middle Channel (5280MHz)							
10560	44.22	8.02	52.24	74	-21.76	H	PK
10560	38.56	8.02	46.58	54	-7.42	H	AV
10560	43.26	8.02	51.28	74	-22.72	V	PK
10560	38.13	8.02	46.15	54	-7.85	V	AV
High Channel (5320MHz)							
10640	43.81	8.35	52.16	74	-21.84	H	PK
10640	37.10	8.35	45.45	54	-8.55	H	AV
10640	44.05	8.35	52.40	74	-21.60	V	PK
10640	38.83	8.35	47.18	54	-6.82	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	44.04	8.82	52.86	74	-21.14	H	PK
11000	38.88	8.82	47.70	54	-6.30	H	AV
11000	43.35	8.82	52.17	74	-21.83	V	PK
11000	38.11	8.82	46.93	54	-7.07	V	AV
Middle Channel (5600MHz)							
11200	44.38	8.92	53.30	74	-20.70	H	PK
11200	38.74	8.92	47.66	54	-6.34	H	AV
11200	44.23	8.92	53.15	74	-20.85	V	PK
11200	38.42	8.92	47.34	54	-6.66	V	AV
High Channel (5700MHz)							
11400	44.88	9.84	54.72	74	-19.28	H	PK
11400	37.41	9.84	47.25	54	-6.75	H	AV
11400	44.57	9.84	54.41	74	-19.59	V	PK
11400	38.93	9.84	48.77	54	-5.23	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	44.96	9.45	54.41	74	-19.59	H	PK
11490	38.33	9.45	47.78	54	-6.22	H	AV
11490	43.23	9.45	52.68	74	-21.32	V	PK
11490	37.52	9.45	46.97	54	-7.03	V	AV
Middle Channel (5785MHz)							
11570	43.43	9.62	53.05	74	-20.95	H	PK
11570	37.95	9.62	47.57	54	-6.43	H	AV
11570	45.00	9.62	54.62	74	-19.38	V	PK
11570	37.19	9.62	46.81	54	-7.19	V	AV
High Channel (5825MHz)							
11650	43.21	9.84	53.05	74	-20.95	H	PK
11650	37.28	9.84	47.12	54	-6.88	H	AV
11650	44.16	9.84	54.00	74	-20.00	V	PK
11650	37.45	9.84	47.29	54	-6.71	V	AV

- Out of Band edge 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-40.40	-27
Highest	Above 5350	-40.63	-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	-42.57	-27
Highest	Above 5350	-40.21	-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	-36.25	-27
Highest	Above 5725	-38.73	-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 5650	-47.09	-27
	5650 to 5700	-34.94	-27 to -17
	5700 to 5720	-24.83	-17 to 15.6
	5720 to 5725	-17.45	15.6 to 27
Highest	5850 to 5855	-13.60	27 to 15.6
	5855 to 5875	-27.51	15.6 to -17
	5875 to 5925	-36.93	-17 to -27
	Above 5925	-38.69	-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	44.65	7.89	52.54	74	-21.46	H	PK
10380	37.63	7.89	45.52	54	-8.48	H	AV
10380	44.90	7.89	52.79	74	-21.21	V	PK
10380	38.92	7.89	46.81	54	-7.19	V	AV
High Channel (5230MHz)							
10460	43.66	7.97	51.63	74	-22.37	H	PK
10460	38.70	7.97	46.67	54	-7.33	H	AV
10460	44.76	7.97	52.73	74	-21.27	V	PK
10460	37.82	7.97	45.79	54	-8.21	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	43.67	8.16	51.83	74	-22.17	H	PK
10540	37.57	8.16	45.73	54	-8.27	H	AV
10540	43.18	8.16	51.34	74	-22.66	V	PK
10540	37.45	8.16	45.61	54	-8.39	V	AV
High Channel (5310MHz)							
10620	43.80	8.57	52.37	74	-21.63	H	PK
10620	37.16	8.57	45.73	54	-8.27	H	AV
10620	44.46	8.57	53.03	74	-20.97	V	PK
10620	37.43	8.57	46.00	54	-8.00	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	44.05	9.16	53.21	74	-20.79	H	PK
11020	38.61	9.16	47.77	54	-6.23	H	AV
11020	44.76	9.16	53.92	74	-20.08	V	PK
11020	37.57	9.16	46.73	54	-7.27	V	AV
Middle Channel (5590MHz)							
11180	44.59	9.29	53.88	74	-20.12	H	PK
11180	38.16	9.29	47.45	54	-6.55	H	AV
11180	44.67	9.29	53.96	74	-20.04	V	PK
11180	38.35	9.29	47.64	54	-6.36	V	AV
High Channel (5670MHz)							
11340	43.75	9.43	53.18	74	-20.82	H	PK
11340	38.34	9.43	47.77	54	-6.23	H	AV
11340	43.90	9.43	53.33	74	-20.67	V	PK
11340	38.30	9.43	47.73	54	-6.27	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	43.72	9.27	52.99	74	-21.01	H	PK
11510	37.86	9.27	47.13	54	-6.87	H	AV
11510	44.89	9.27	54.16	74	-19.84	V	PK
11510	38.69	9.27	47.96	54	-6.04	V	AV
High Channel (5795MHz)							
11590	44.18	9.45	53.63	74	-20.37	H	PK
11590	37.93	9.45	47.38	54	-6.62	H	AV
11590	44.38	9.45	53.83	74	-20.17	V	PK
11590	37.55	9.45	47.00	54	-7.00	V	AV

- Out of Band edge for 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-41.88	-27
Highest	Above 5350	-39.67	-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	-40.14	-27
Highest	Above 5350	-40.06	-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	-40.50	-27
Highest	Above 5725	-37.99	-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 5650	-46.49	-27
	5650 to 5700	-36.32	-27 to -17
	5700 to 5720	-27.05	-17 to 15.6
	5720 to 5725	-16.27	15.6 to 27
Highest	5850 to 5855	-14.37	27 to 15.6
	5855 to 5875	-27.08	15.6 to -17
	5875 to 5925	-35.27	-17 to -27
	Above 5925	-38.57	-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 VH80)
- 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	44.61	7.53	52.14	74	-21.86	H	PK
10420	38.79	7.53	46.32	54	-7.68	H	AV
10420	43.79	7.53	51.32	74	-22.68	H	PK
10420	37.26	7.53	44.79	54	-9.21	H	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
5290MHz							
10580	44.08	7.95	52.03	74	-21.97	H	PK
10580	37.74	7.95	45.69	54	-8.31	H	AV
10580	44.89	7.95	52.84	74	-21.16	V	PK
10580	38.35	7.95	46.30	54	-7.70	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	44.92	9.42	54.34	74	-19.66	H	PK
11060	38.09	9.42	47.51	54	-6.49	H	AV
11060	43.73	9.42	53.15	74	-20.85	V	PK
11060	37.16	9.42	46.58	54	-7.42	V	AV
High Channel (5610MHz)							
11220	44.26	9.69	53.95	74	-20.05	H	PK
11220	38.80	9.69	48.49	54	-5.51	H	AV
11220	43.10	9.69	52.79	74	-21.21	V	PK
11220	37.64	9.69	47.33	54	-6.67	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
5775MHz							
11550	43.19	9.93	53.12	74	-20.88	H	PK
11550	38.02	9.93	47.95	54	-6.05	H	AV
11550	44.38	9.93	54.31	74	-19.69	V	PK
11550	37.84	9.93	47.77	54	-6.23	V	AV

- Out of Band edge for 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-42.14	-27
Highest	Above 5350	-37.65	-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	-41.30	-27
Highest	Above 5350	-40.89	-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	-39.42	-27
Highest	Above 5725	-38.67	-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 5650	-45.08	-27
	5650 to 5700	-35.86	-27 to -17
	5700 to 5720	-27.33	-17 to 15.6
	5720 to 5725	-17.83	15.6 to 27
Highest	5850 to 5855	-13.56	27 to 15.6
	5855 to 5875	-27.64	15.6 to -17
	5875 to 5925	-34.40	-17 to -27
	Above 5925	-38.11	-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

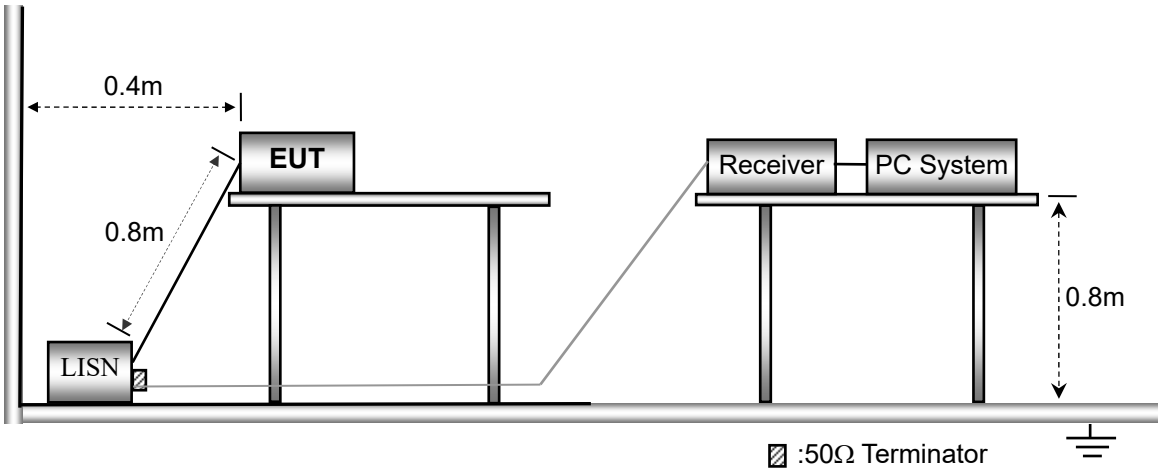
Please refer to Appendix D

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



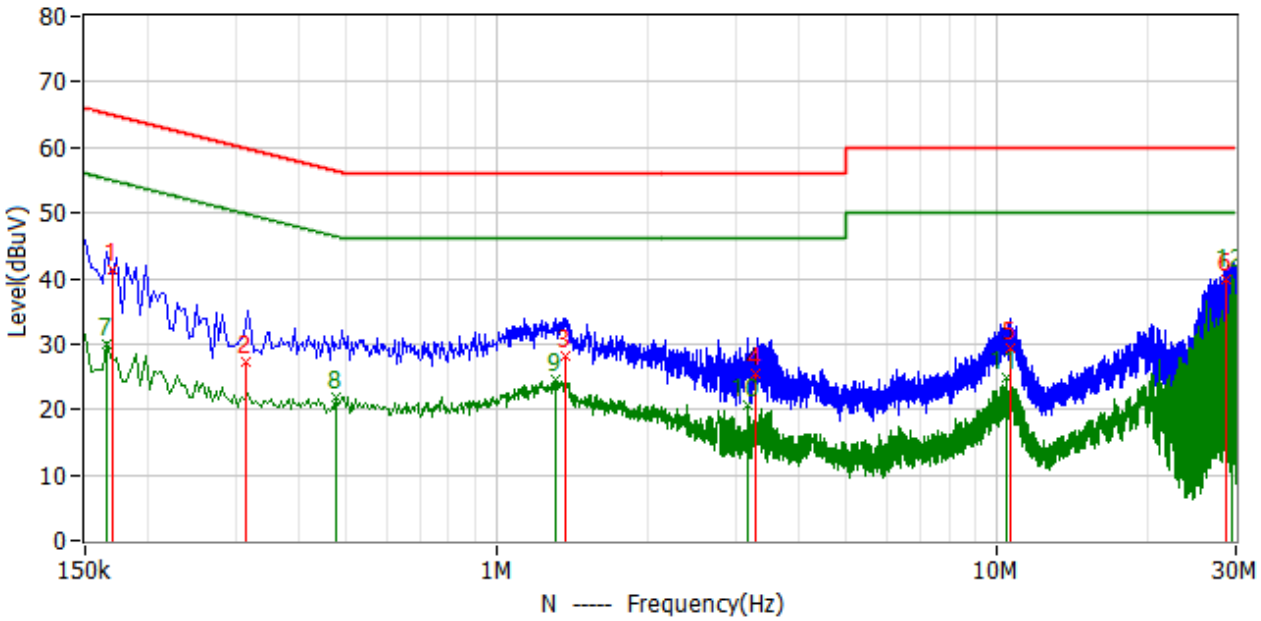
10.3 Test Receiver Setup

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

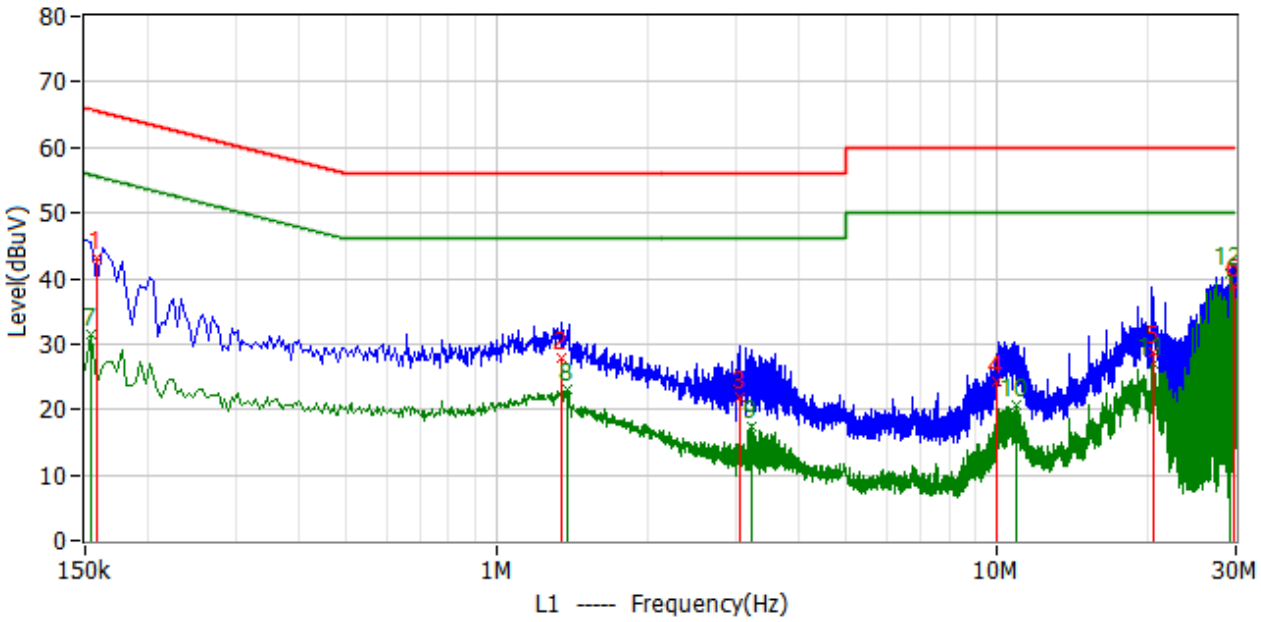
10.4 Summary of Test Results/Plots

Test Mode	Communication	AC120V 60Hz	Polarity:	Neutral



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Delta dB	Detector
1	170.000kHz	20.5	20.8	41.3	65.0	-23.6	QP
2	314.000kHz	7.0	20.3	27.3	59.9	-32.6	QP
3	1.366MHz	7.3	20.8	28.1	56.0	-27.9	QP
4	3.294MHz	4.7	20.9	25.6	56.0	-30.4	QP
5	10.614MHz	8.5	20.8	29.3	60.0	-30.7	QP
6	28.722MHz	19.2	20.6	39.8	60.0	-20.2	QP
7*	166.000kHz	9.3	20.8	30.1	55.2	-25.0	AV
8*	478.000kHz	1.2	20.7	21.9	46.4	-24.5	AV
9*	1.306MHz	3.8	20.8	24.6	46.0	-21.4	AV
10*	3.182MHz	-0.2	20.9	20.7	46.0	-25.3	AV
11*	10.426MHz	4.2	20.8	25.0	50.0	-25.0	AV
12*	29.582MHz	19.7	20.7	40.4	50.0	-9.6	AV

Test Mode	Communication	AC120V 60Hz	Polarity:	Line



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Delta dB	Detector
1	158.000kHz	22.3	20.9	43.2	65.6	-22.3	QP
2	1.346MHz	7.0	20.8	27.8	56.0	-28.2	QP
3	3.066MHz	1.0	20.9	21.9	56.0	-34.1	QP
4	10.006MHz	3.5	20.8	24.3	60.0	-35.7	QP
5	20.498MHz	8.9	20.0	28.9	60.0	-31.1	QP
6	29.698MHz	18.4	20.7	39.1	60.0	-20.9	QP
7*	154.000kHz	10.6	20.9	31.5	55.8	-24.3	AV
8*	1.382MHz	2.4	20.8	23.2	46.0	-22.8	AV
9*	3.242MHz	-3.4	20.9	17.5	46.0	-28.5	AV
10*	10.886MHz	0.0	20.8	20.8	50.0	-29.2	AV
11*	20.446MHz	7.0	20.0	27.0	50.0	-23.0	AV
12*	29.242MHz	20.1	20.6	40.7	50.0	-9.3	AV

APPENDIX SUMMARY

Project No.	WTX23X10233365W	Test Engineer	Timi Huang
Start date	2023/11/23	Finish date	2023/11/24
Temperature	23℃	Humidity	46%
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

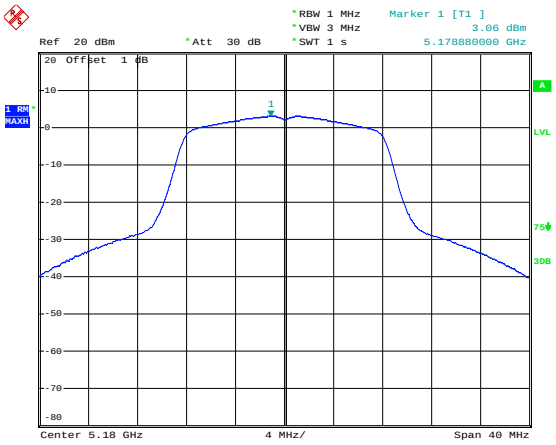
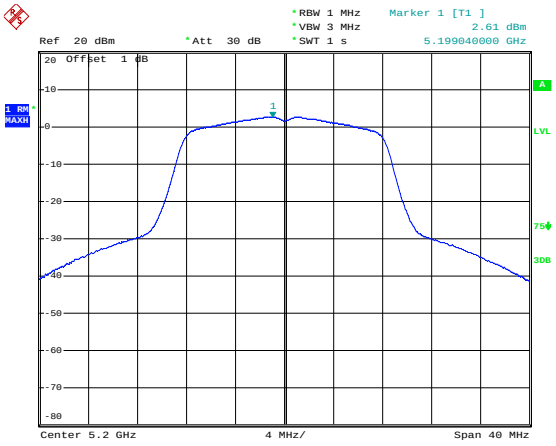
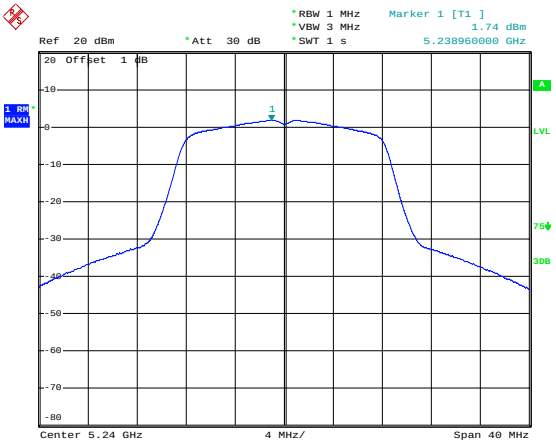
Power Spectral Density			
U-NII-1:5150-5250MHz			
Operating mode	Test Channel	Power Spectral Density dBm/MHz	Limit (dBm/MHz)
802.11a	5180	3.06	11
	5200	2.61	11
	5240	1.74	11
802.11n-HT20	5180	2.51	11
	5200	2.14	11
	5240	1.31	11
802.11n-HT40	5190	-0.08	11
	5230	0.81	11
802.11ac-VHT80	5210	-4.39	11

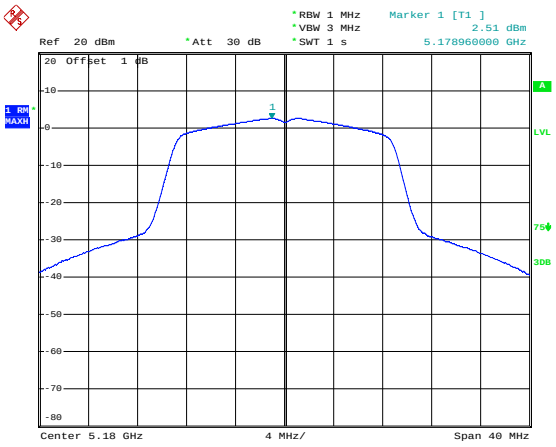
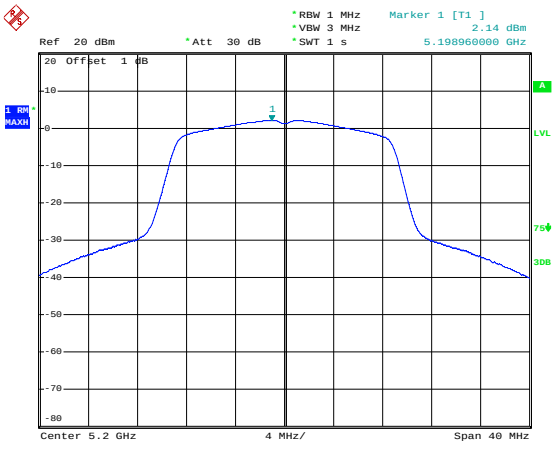
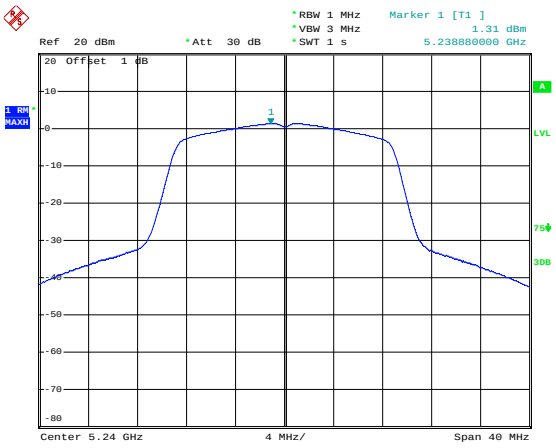
U-NII-2A: 5250-5350MHz			
Operating mode	Test Channel	Power Spectral Density dBm/MHz	Limit (dBm/MHz)
802.11a	5260	0.94	11
	5280	0.82	11
	5320	0.32	11
802.11n-HT20	5260	0.63	11
	5280	2.01	11
	5320	-0.21	11
802.11n-HT40	5270	-0.50	11
	5310	-0.17	11
802.11ac-VHT80	5290	-6.02	11

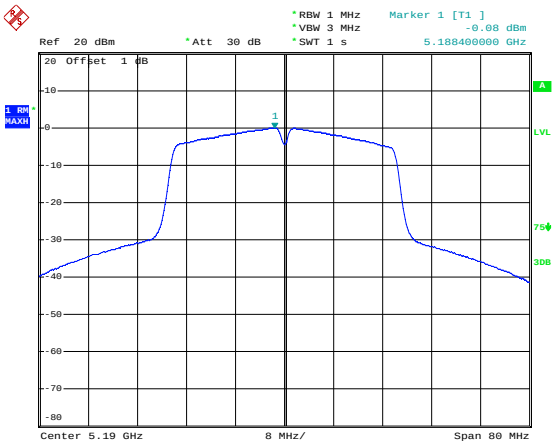
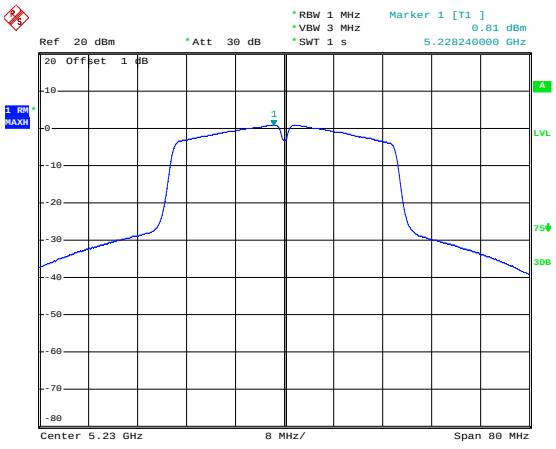
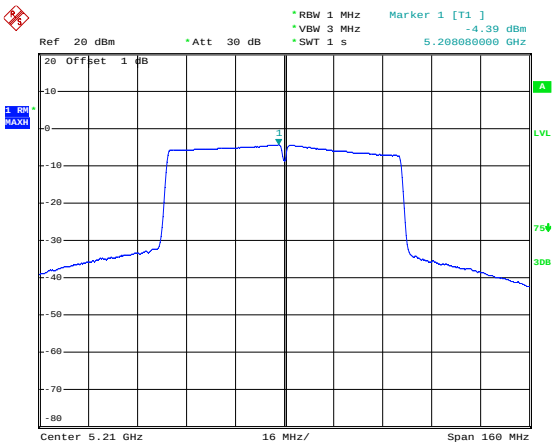
U-NII-2C: 5470-5725MHz			
Operating mode	Test Channel	Power Spectral Density dBm/MHz	Limit (dBm/MHz)
802.11a	5500	2.77	11
	5600	0.73	11
	5700	0.22	11
802.11n-HT20	5500	-1.11	11
	5600	0.29	11
	5700	-0.21	11
802.11n-HT40	5510	-1.31	11
	5590	0.76	11
	5670	0.15	11
802.11ac-VHT80	5530	-7.71	11
	5610	-5.79	11

U-NII-3: 5725-5850MHz					
Operating mode	Test Channel	Power Spectral Density dBm/300kHz	Factor	Power Spectral Density* dBm/500kHz	Limit dBm/500kHz
802.11a	5745	2.52	2.22	4.74	30
	5785	-1.41	2.22	0.81	30
	5825	-1.76	2.22	0.46	30
802.11n-HT20	5745	-1.26	2.22	0.96	30
	5785	-1.83	2.22	0.39	30
	5825	2.46	2.22	4.68	30
802.11n HT40	5755	-1.39	2.22	0.83	30
	5795	-1.94	2.22	0.28	30
802.11ac VH80	5775	-8.04	2.22	-5.82	30
*Note: Maximum PSD=PSD(dBm/300kHz)+10log(500kHz/300kHz)=2.22					

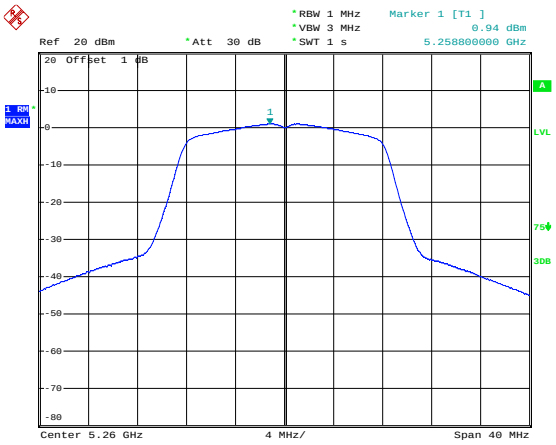
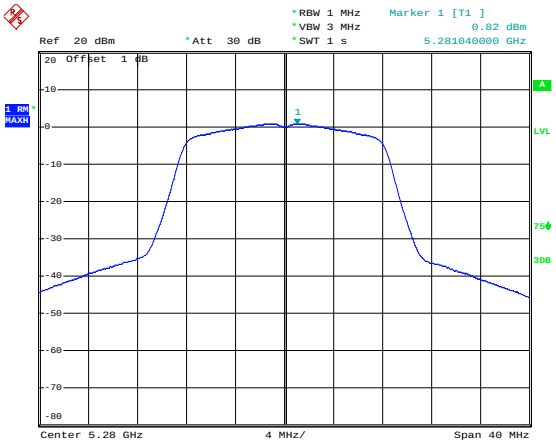
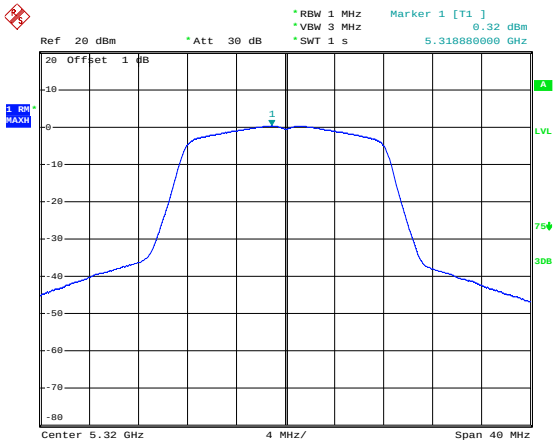
5150-5250MHz

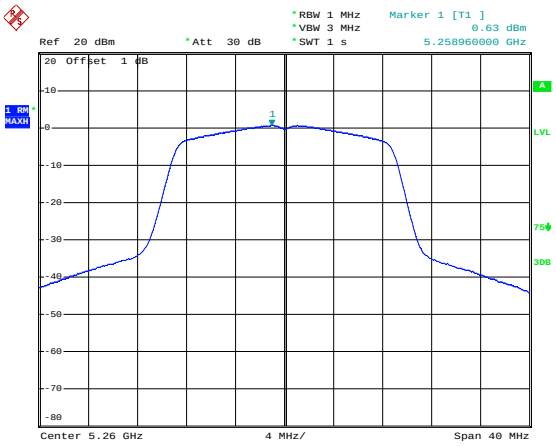
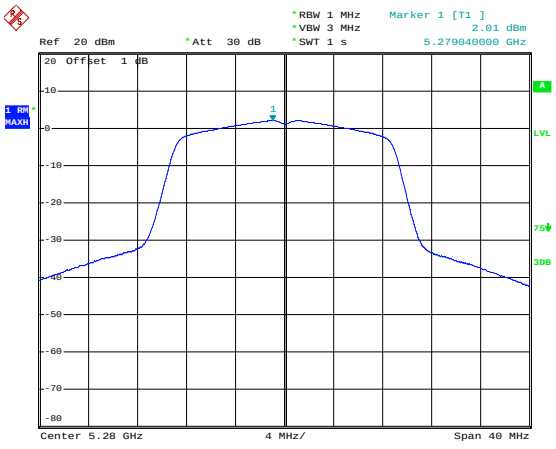
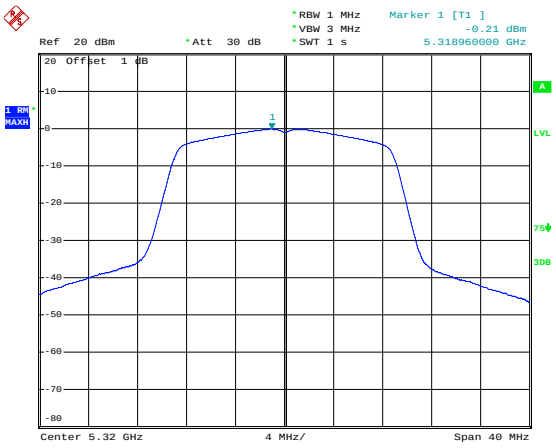
802.11a-Low	 Date: 24.NOV.2023 10:27:15
802.11a-Middle	 Date: 24.NOV.2023 10:26:56
802.11a-High	 Date: 24.NOV.2023 10:26:23

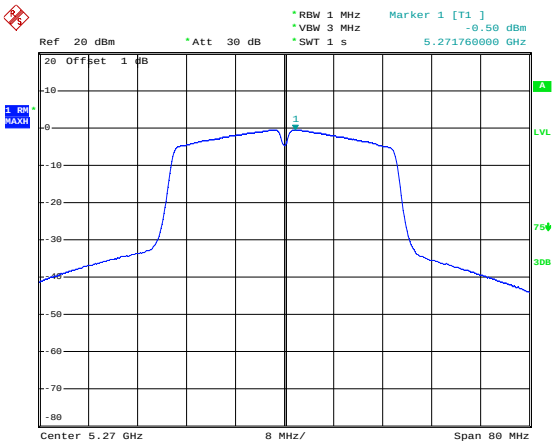
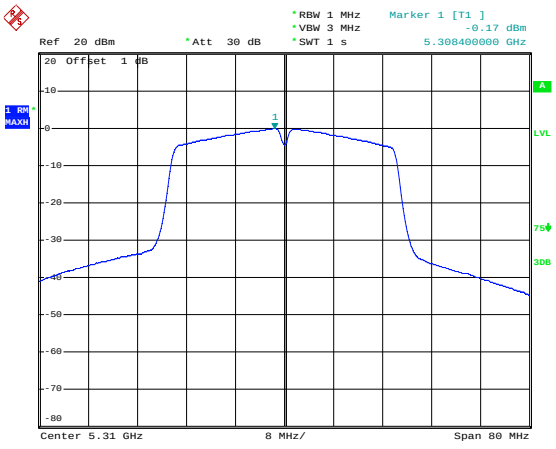
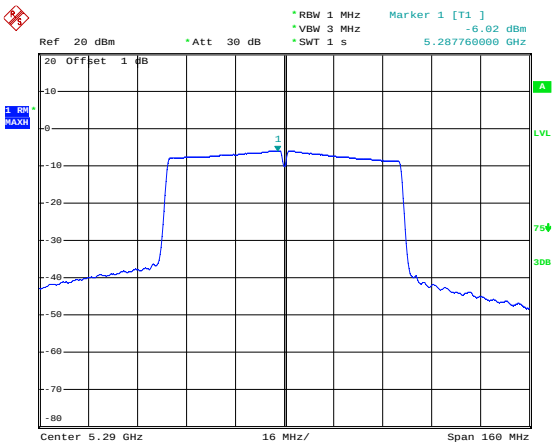
802.11n-HT20-Low	
802.11n-HT20-Middle	
802.11n-HT20-High	

802.11n-HT40-Low	 Date: 24.NOV.2023 10:23:41
802.11n-HT40-High	 Date: 24.NOV.2023 10:22:13
802.11ac-HT80-Low	 Date: 24.NOV.2023 10:27:48

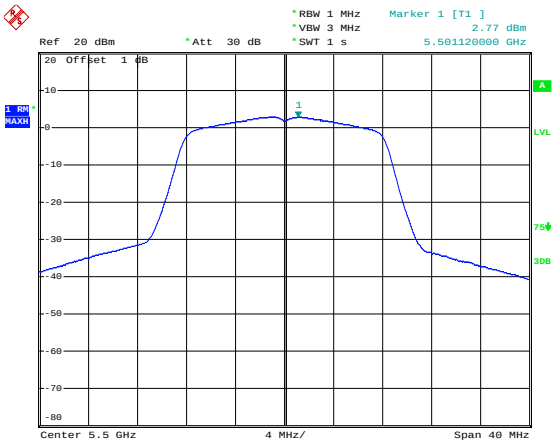
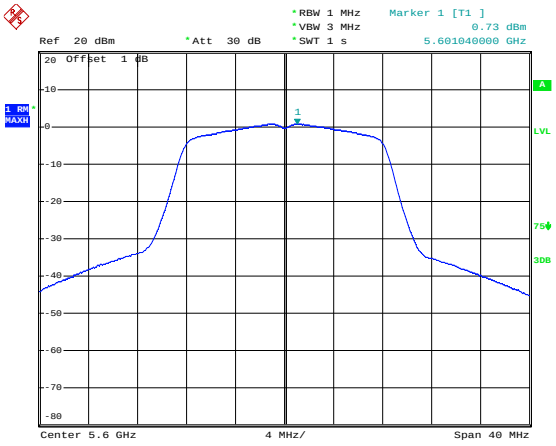
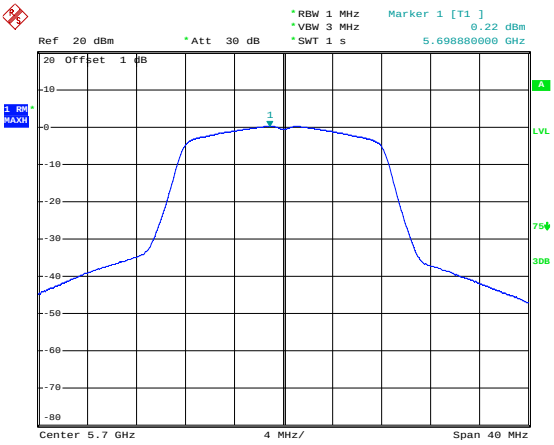
5250-5350MHz

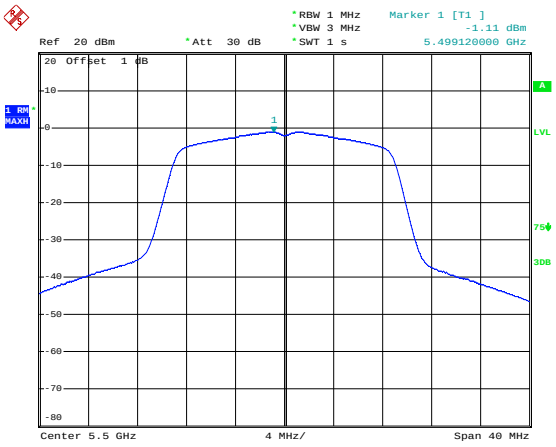
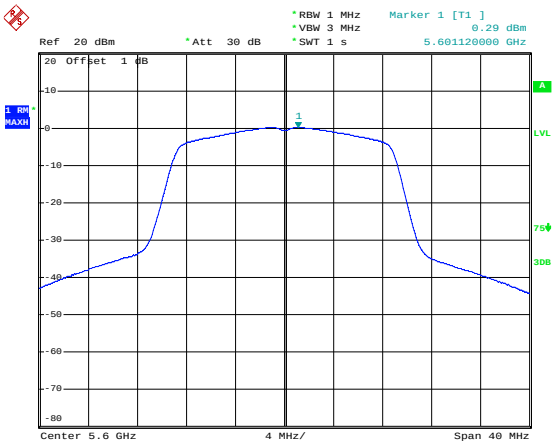
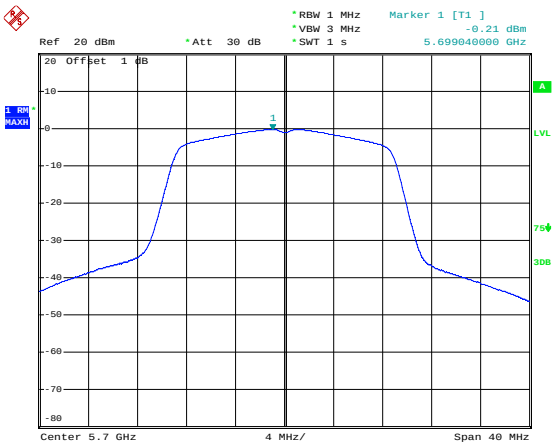
802.11a-Low	 Date: 24.NOV.2023 14:07:08
802.11a-Middle	 Date: 24.NOV.2023 14:06:45
802.11a-High	 Date: 24.NOV.2023 14:06:14

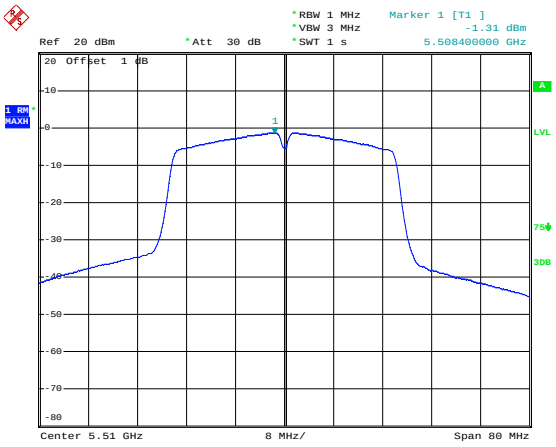
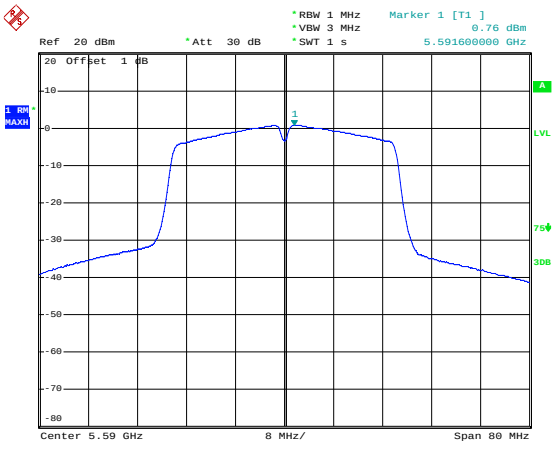
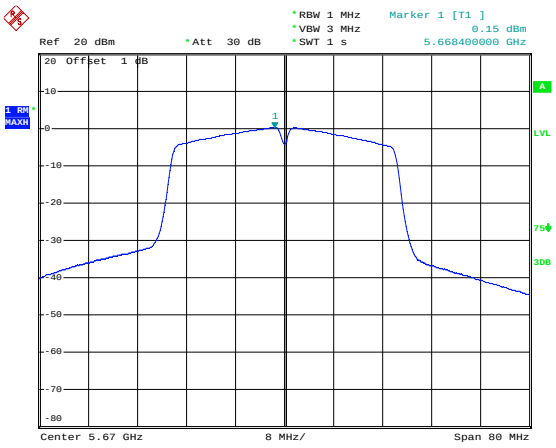
802.11n-HT20-Low	 Date: 24.NOV.2023 14:05:39
802.11n-HT20-Middle	 Date: 24.NOV.2023 14:05:04
802.11n-HT20-High	 Date: 24.NOV.2023 14:04:33

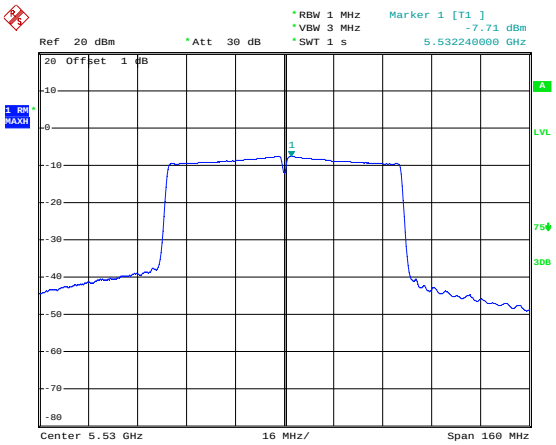
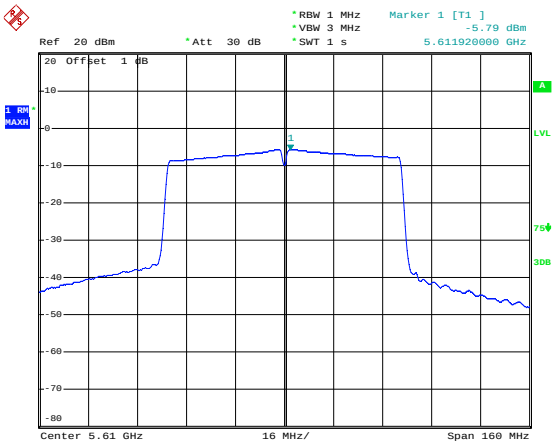
802.11n-HT40-Low	 Date: 24.NOV.2023 14:00:02
802.11n-HT40-High	 Date: 24.NOV.2023 13:48:45
802.11ac-HT80-Low	 Date: 24.NOV.2023 14:07:46

5470-5725MHz

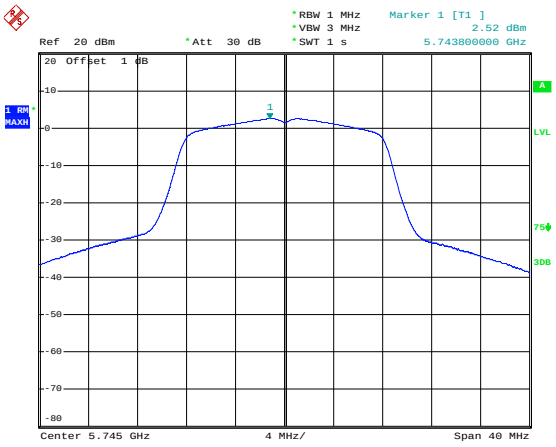
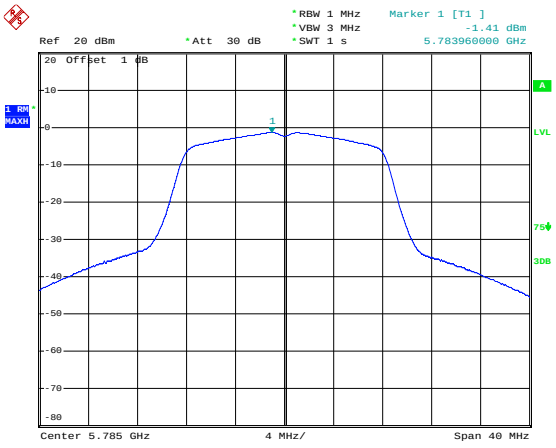
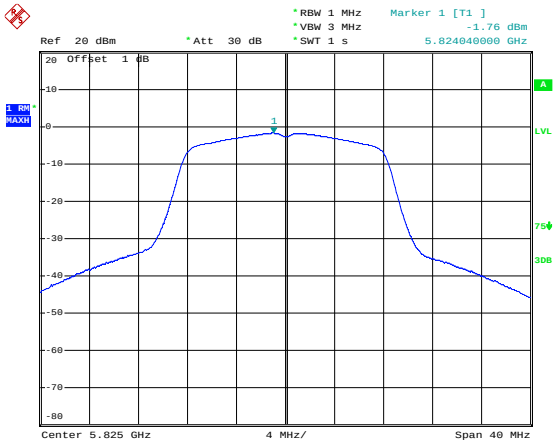
802.11a-Low	
802.11a-Middle	
802.11a-High	

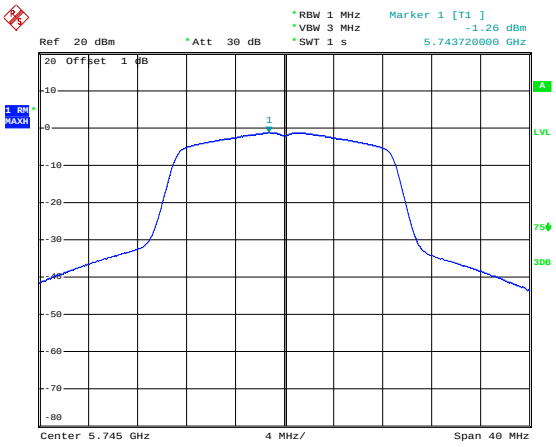
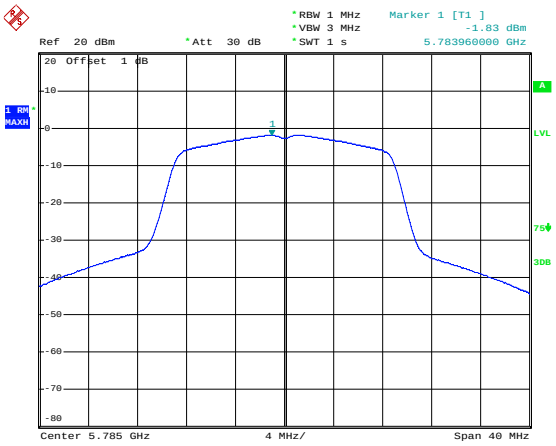
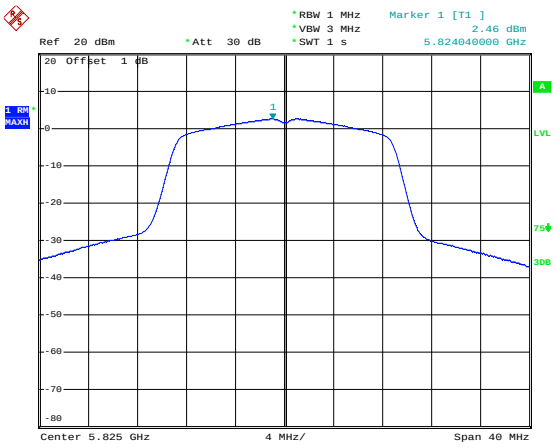
802.11n-HT20-Low	 Date: 24.NOV.2023 14:43:27
802.11n-HT20-Middle	 Date: 24.NOV.2023 14:42:57
802.11n-HT20-High	 Date: 24.NOV.2023 14:42:18

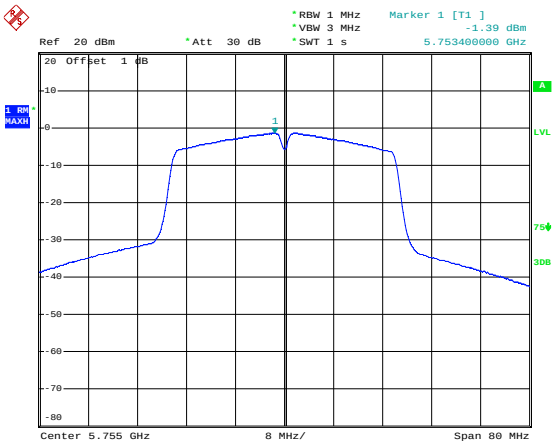
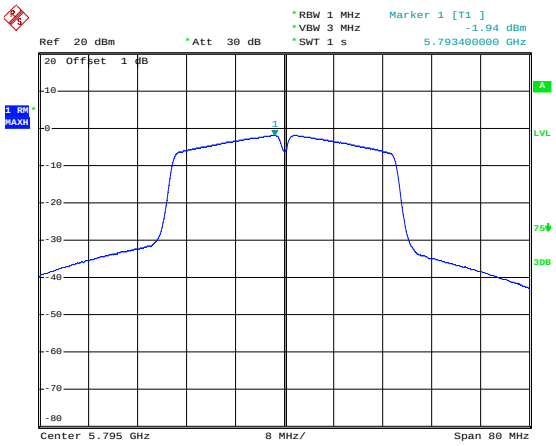
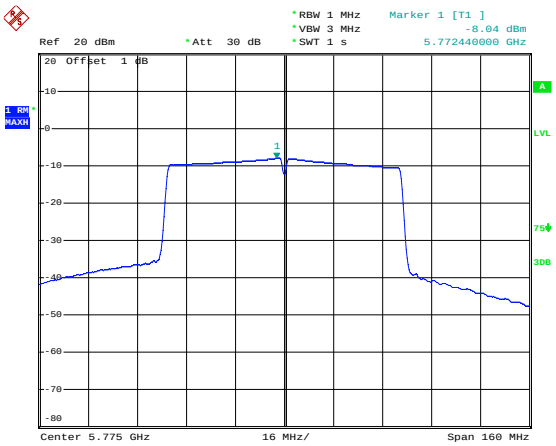
802.11n-HT40-Low	 Date: 24.NOV.2023 14:41:27
802.11n-HT40- Middle	 Date: 24.NOV.2023 14:40:55
802.11n-HT40-High	 Date: 24.NOV.2023 14:40:17

802.11ac-HT80-Low	 Date: 24.NOV.2023 14:46:01
802.11ac-HT80-High	 Date: 24.NOV.2023 14:46:30

5725-5850MHz

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

802.11n-HT20-Low	 Date: 24.NOV.2023 15:58:48
802.11n-HT20-Middle	 Date: 24.NOV.2023 15:58:24
802.11n-HT20-High	 Date: 24.NOV.2023 15:57:58

802.11n-HT40-Low	 Date: 24.NOV.2023 15:57:21
802.11n-HT40-High	 Date: 24.NOV.2023 15:56:57
802.11ac-HT80-Low	 Date: 24.NOV.2023 16:00:38

APPENDIX B

Emission Bandwidth and Occupied Bandwidth

U-NII-1:5150-5250MHz				
Test Mode	**Test Channel MHz**	**26 dB Bandwidth MHz**	**99% Bandwidth MHz**	**Limit MHz**
802.11a	5180	22.5	17.2	Pass
	5200	22.1	17.0	Pass
	5240	20.6	17.0	Pass
802.11n-HT20	5180	22.5	18.0	Pass
	5200	21.2	18.0	Pass
	5240	20.9	17.8	Pass
802.11n-HT40	5190	45.0	37.4	Pass
	5230	42.4	37.2	Pass
802.11ac-VHT80	5210	96.8	76.4	Pass

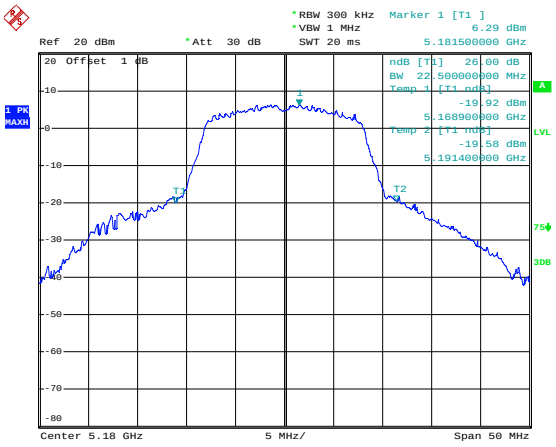
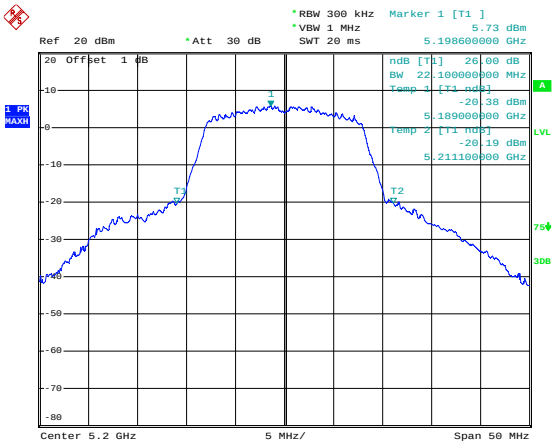
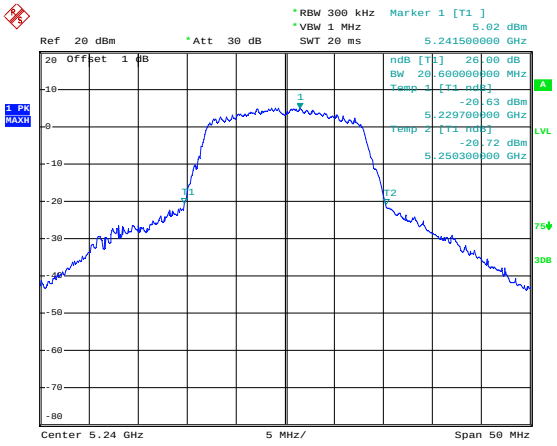
U-NII-2A: 5250-5350MHz				
Test Mode	**Test Channel MHz**	**26 dB Bandwidth MHz**	**99% Bandwidth MHz**	**Limit MHz**
802.11a	5260	20.7	17.0	Pass
	5280	20.4	16.8	Pass
	5320	20.5	16.8	Pass
802.11n-HT20	5260	20.8	17.8	Pass
	5280	20.7	17.8	Pass
	5320	20.7	17.8	Pass
802.11n-HT40	5270	40.8	37.2	Pass
	5310	40.8	36.8	Pass
802.11ac-VHT80	5290	82.4	76.4	Pass

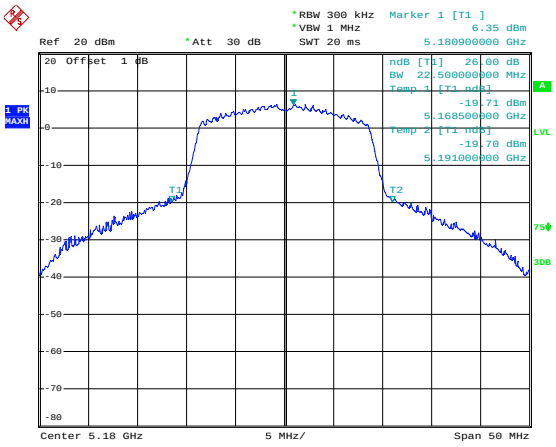
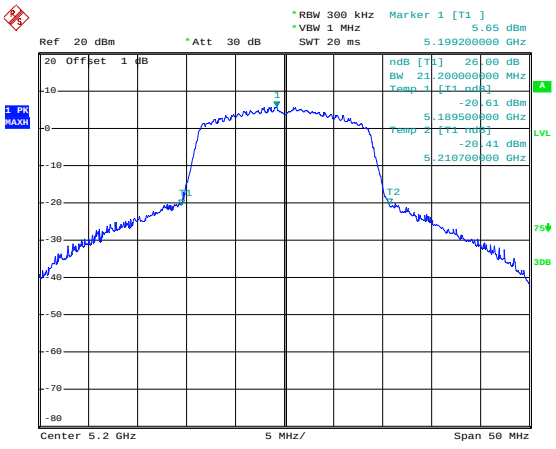
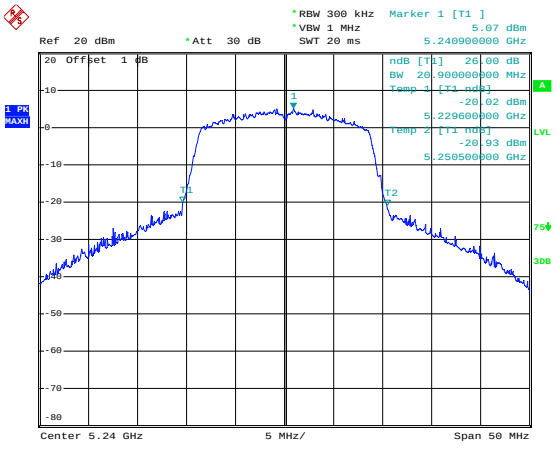
U-NII-2C: 5470-5725MHz				
Test Mode	**Test Channel MHz**	**26 dB Bandwidth MHz**	**99% Bandwidth MHz**	**Limit MHz**
802.11a	5500	20.5	16.8	Pass
	5600	20.5	17.0	Pass
	5700	20.5	16.9	Pass
802.11n-HT20	5500	20.6	17.8	Pass
	5600	20.8	17.8	Pass
	5700	20.6	17.8	Pass
802.11n-HT40	5510	40.8	36.8	Pass
	5590	40.6	36.8	Pass
	5670	40.6	36.6	Pass
802.11ac-VHT80	5530	82.8	76.0	Pass
	5610	82.4	76.4	Pass

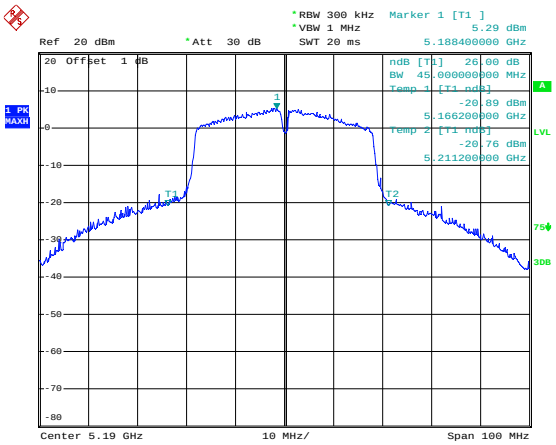
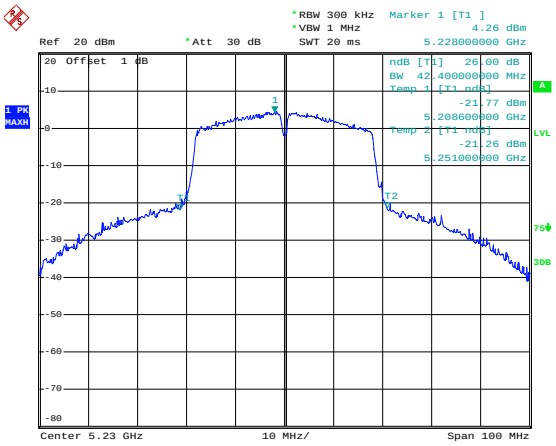
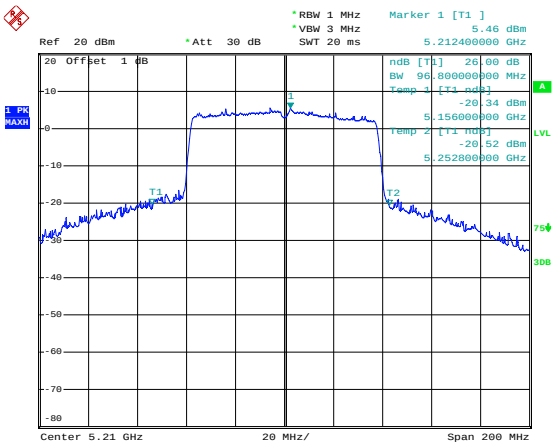
U-NII-3: 5725-5850MHz				
Test Mode	**Test Channel MHz**	**6 dB Bandwidth MHz**	**99% Bandwidth MHz**	**Limit MHz**
802.11a	5745	16.6	17.0	≥500
	5785	16.5	17.1	≥500
	5825	16.4	17.0	≥500
802.11n-HT20	5745	17.8	18.0	≥500
	5785	17.6	17.9	≥500
	5825	17.7	18.0	≥500
802.11n-HT40	5755	36.0	37.0	≥500
	5795	36.8	36.8	≥500
802.11ac VHT80	5775	77.6	76.4	≥500

26 dB Bandwidth MHz

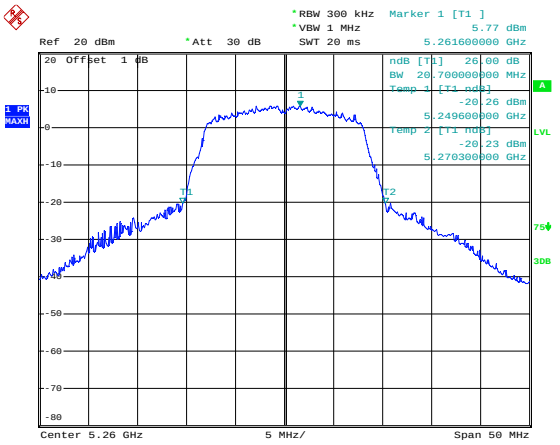
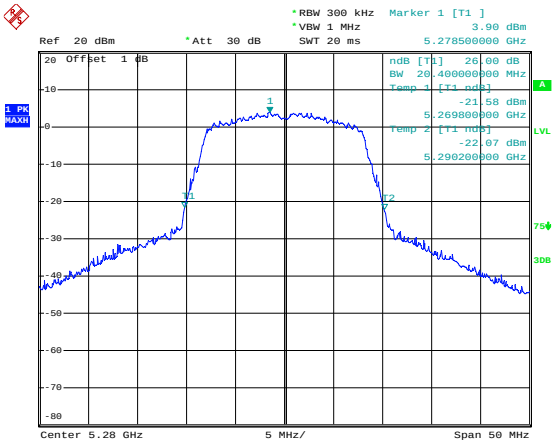
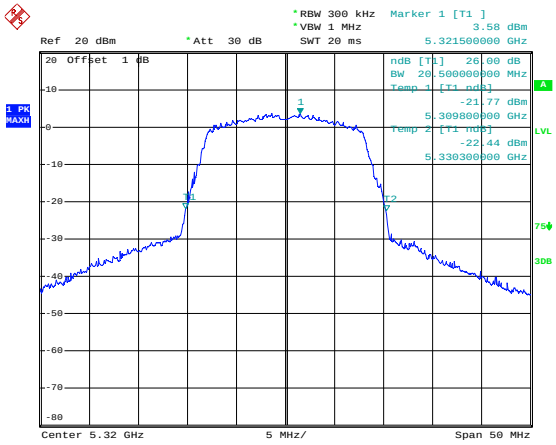
5150-5250MHz

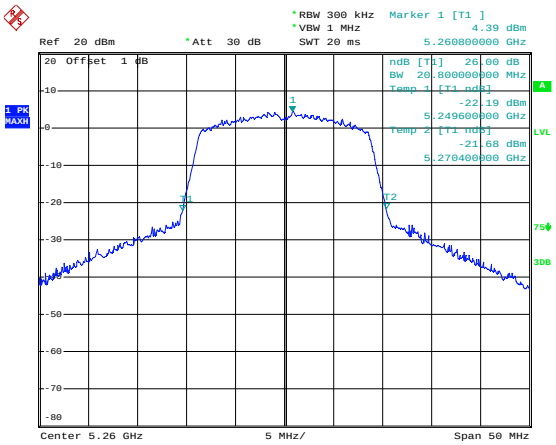
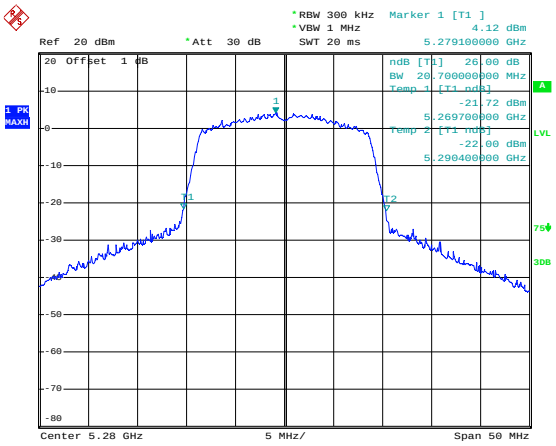
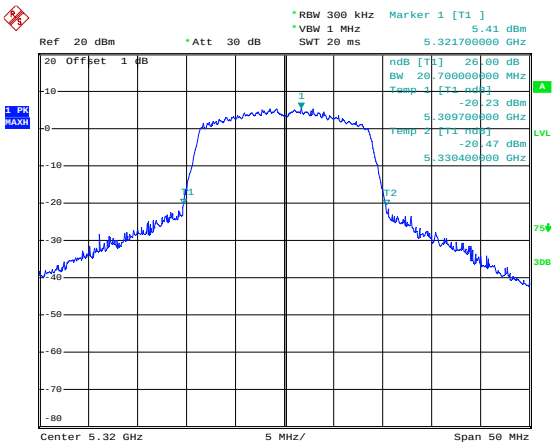
802.11a-Low	 Date: 24.NOV.2023 12:47:58
802.11a-Middle	 Date: 24.NOV.2023 12:50:34
802.11a-High	 Date: 24.NOV.2023 12:52:02

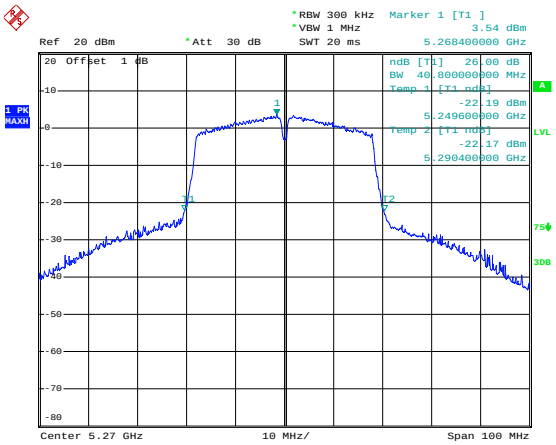
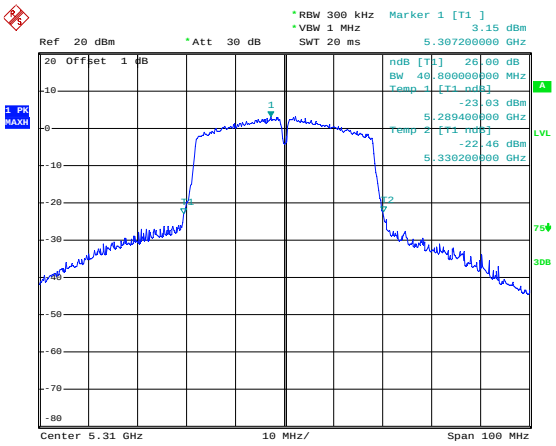
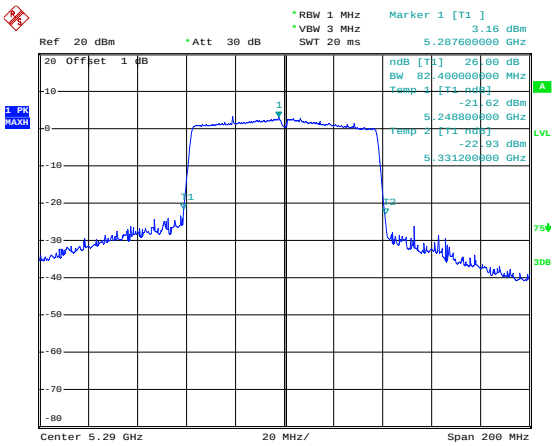
802.11n-HT20-Low	 Date: 24.NOV.2023 12:54:01
802.11n-HT20-Middle	 Date: 24.NOV.2023 12:56:02
802.11n-HT20-High	 Date: 24.NOV.2023 12:56:54

802.11n-HT40-Low	 Date: 24.NOV.2023 12:58:12
802.11n-HT40-High	 Date: 24.NOV.2023 12:59:58
802.11ac-HT80-Low	 Date: 24.NOV.2023 12:44:22

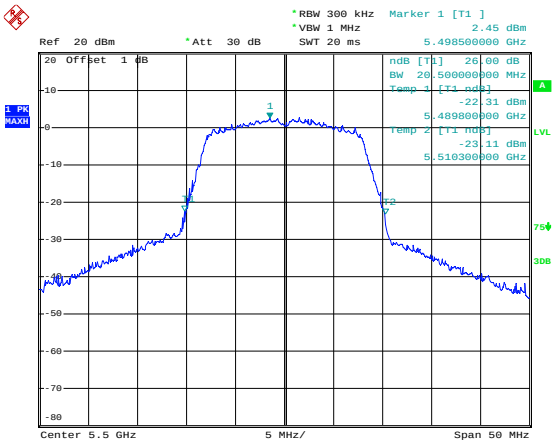
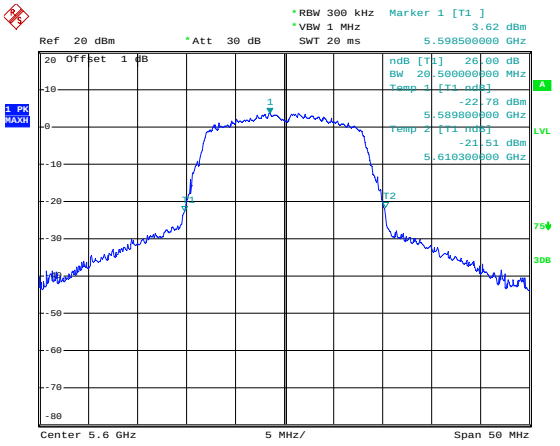
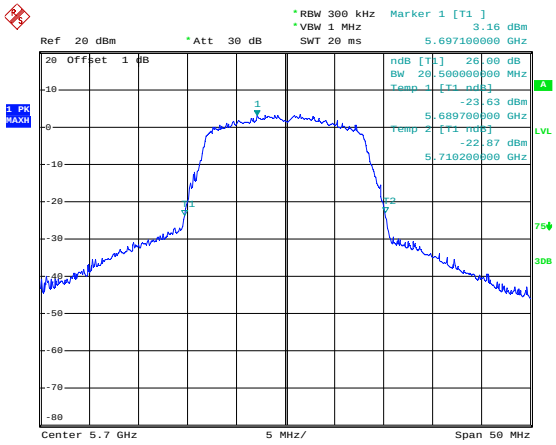
5250-5350MHz

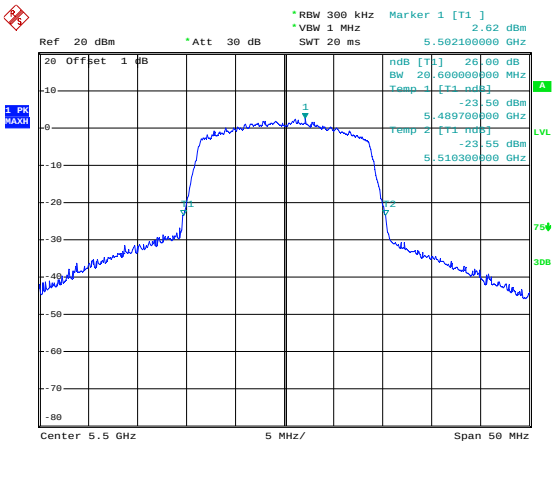
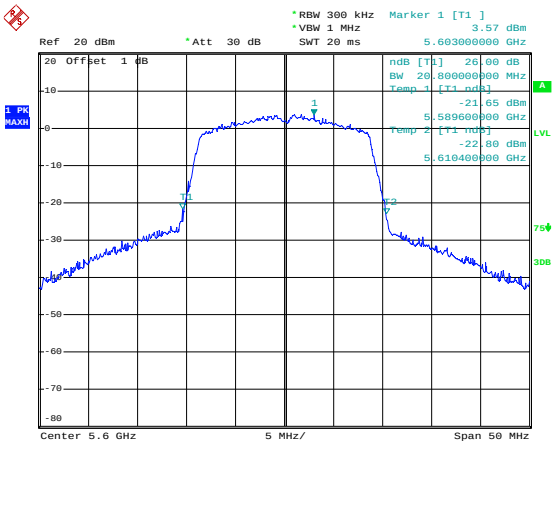
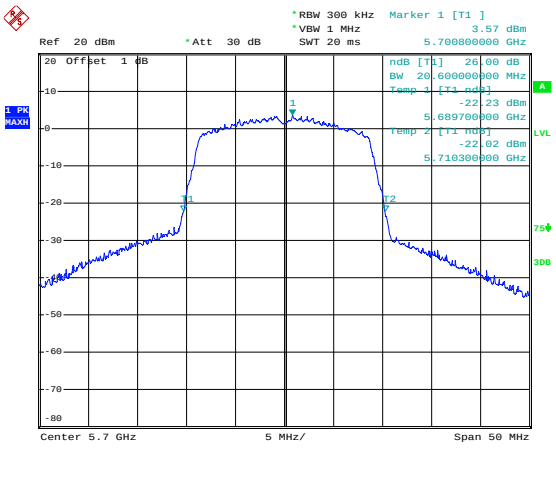
802.11a-Low	
802.11a-Middle	
802.11a-High	

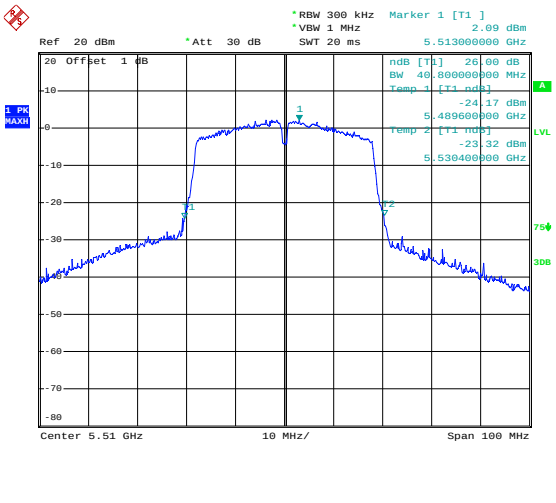
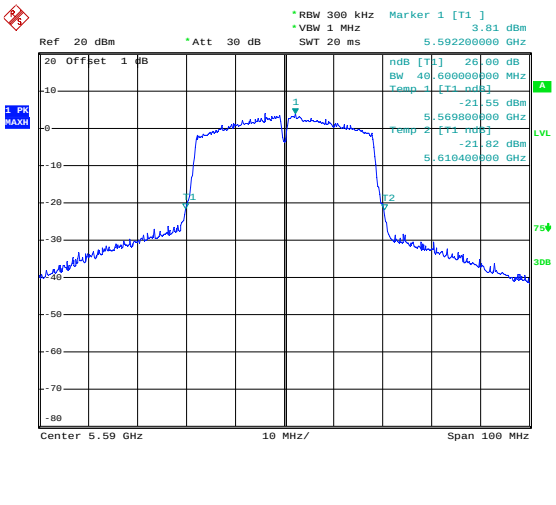
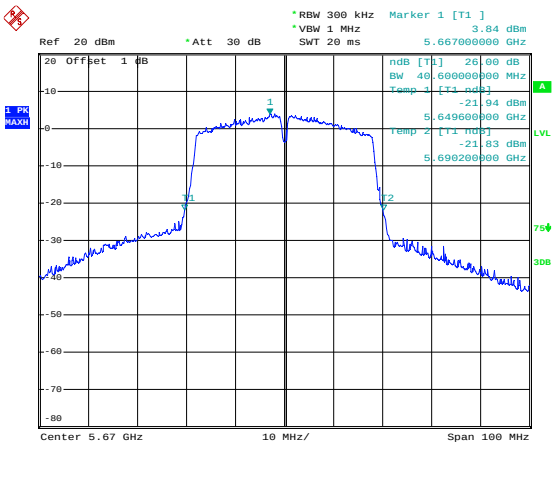
802.11n-HT20-Low	
802.11n-HT20-Middle	
802.11n-HT20-High	

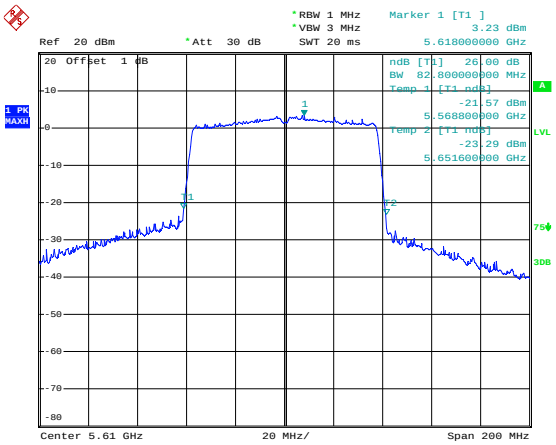
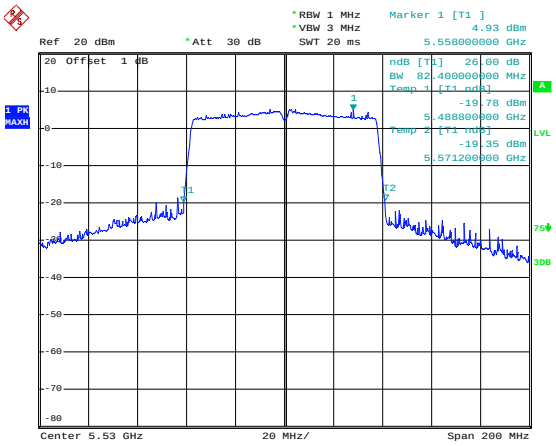
802.11n-HT40-Low	
802.11n-HT40-High	
802.11ac-HT80-Low	

5470-5725MHz

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

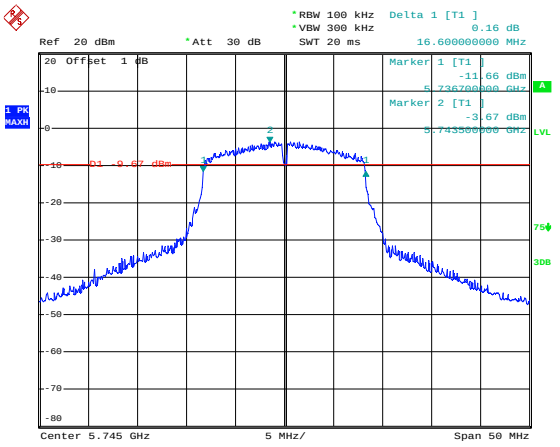
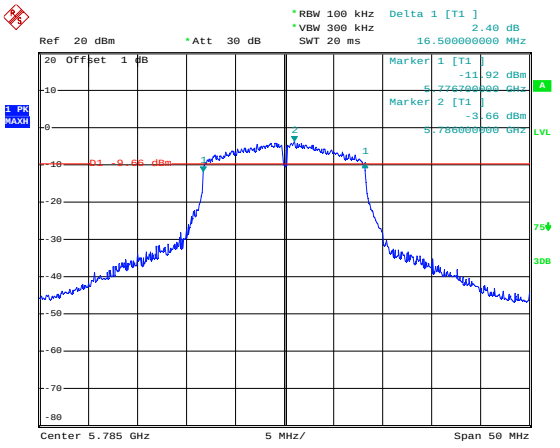
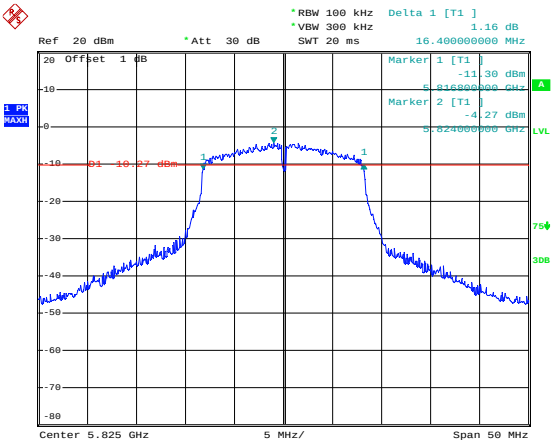
802.11n-HT20-Low	
802.11n-HT20-Middle	
802.11n-HT20-High	

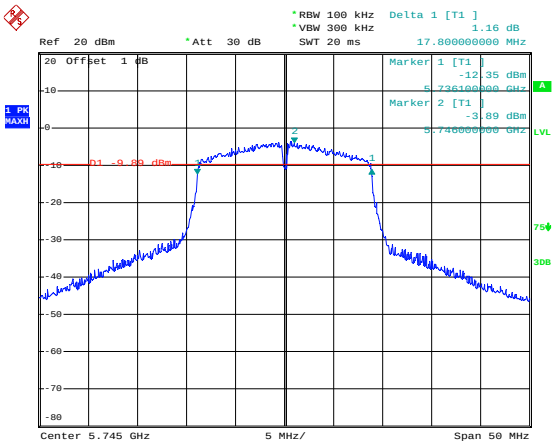
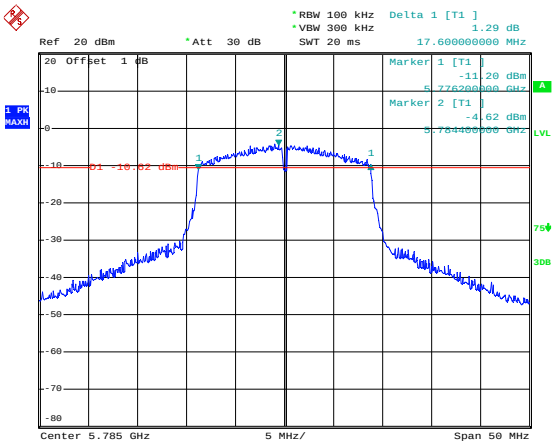
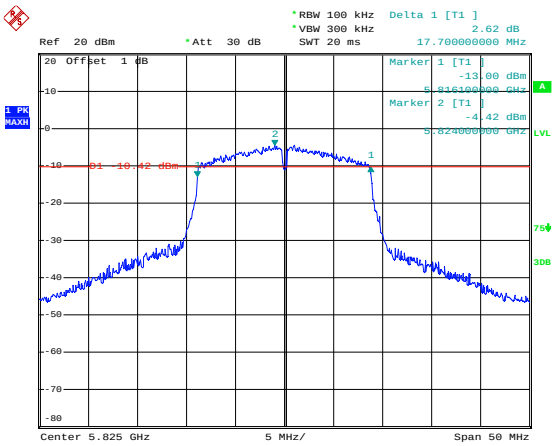
802.11n-HT40-Low	
802.11n-HT40- Middle	
802.11n-HT40-High	

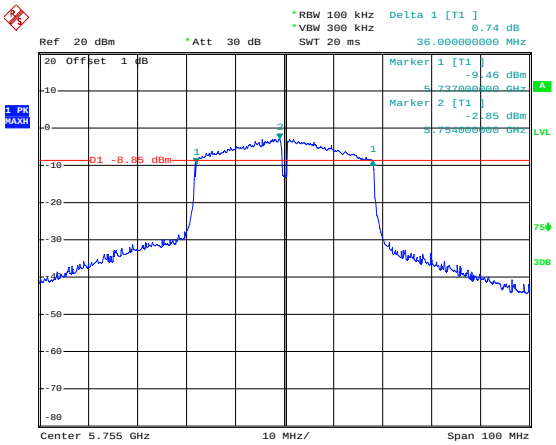
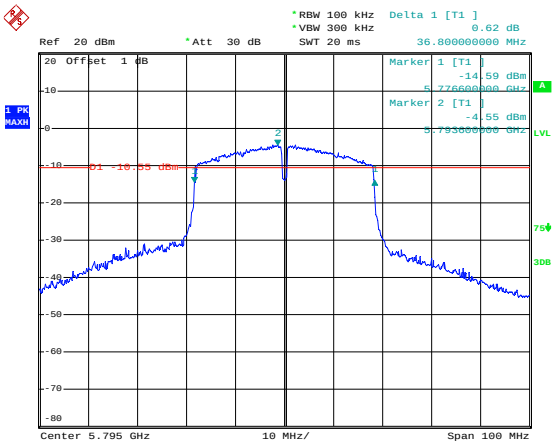
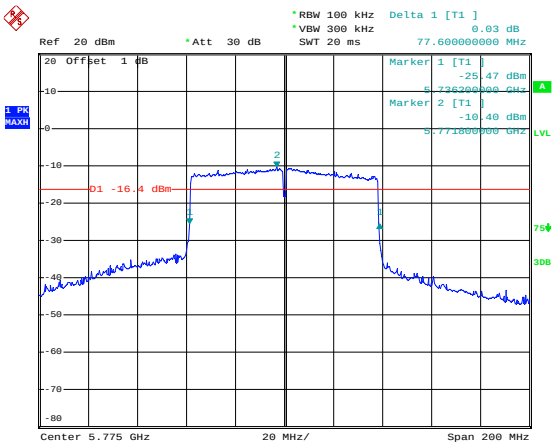
802.11ac-HT80-Low	 Date: 24.NOV.2023 14:50:01
802.11ac-VHT80-High	 Date: 24.NOV.2023 14:50:46

6 dB Bandwidth MHz

5725-5850MHz

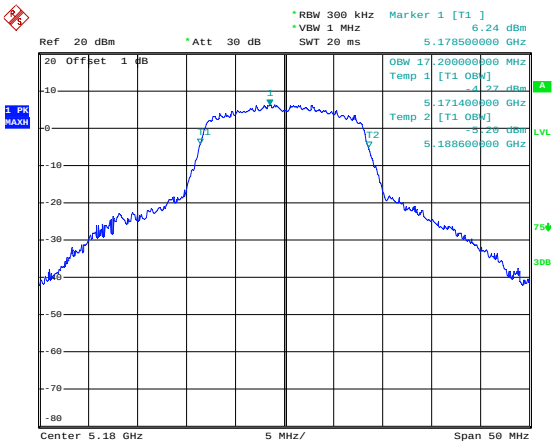
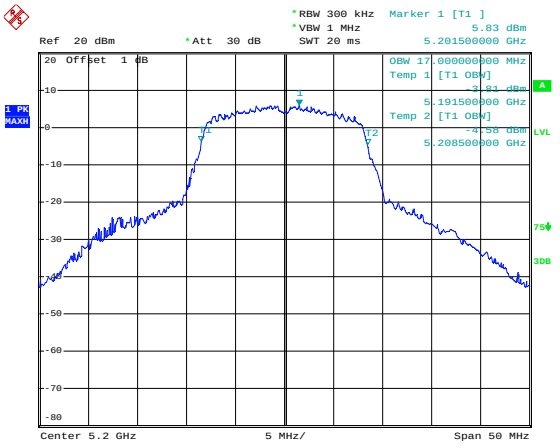
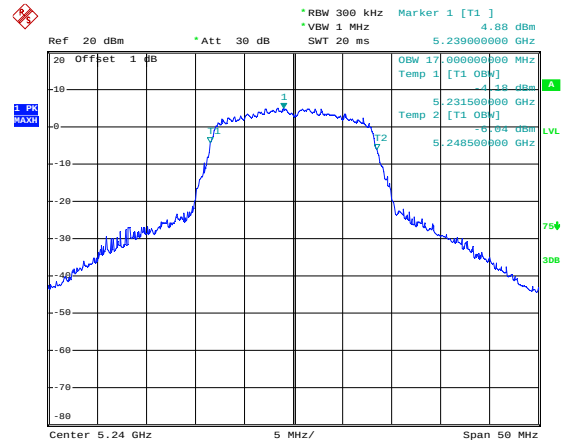
802.11a-Low	 Date: 24.NOV.2023 15:35:14
802.11a-Middle	 Date: 24.NOV.2023 15:34:25
802.11a-High	 Date: 24.NOV.2023 15:33:13

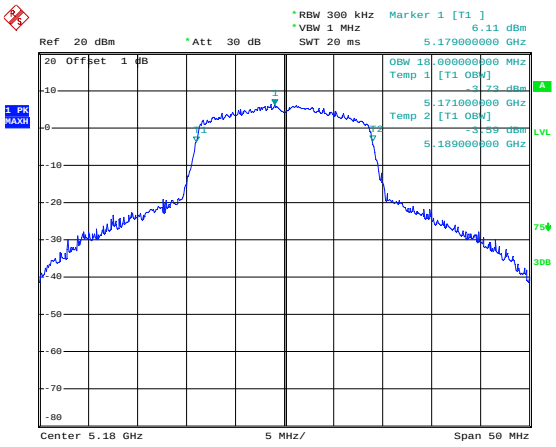
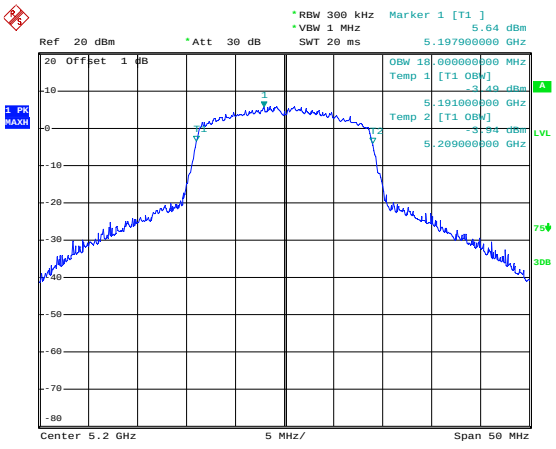
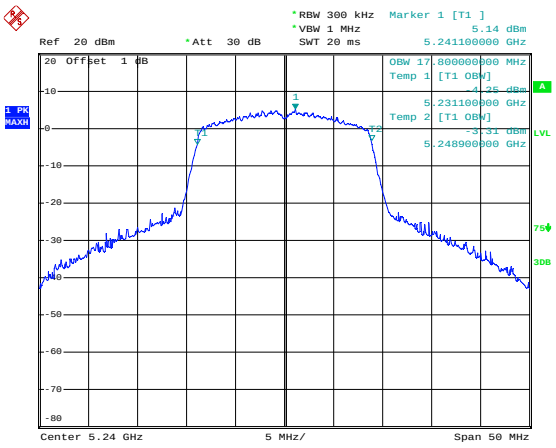
802.11n-HT20-Low	 Date: 24.NOV.2023 15:32:19
802.11n-HT20-Middle	 Date: 24.NOV.2023 15:31:20
802.11n-HT20-High	 Date: 24.NOV.2023 15:30:08

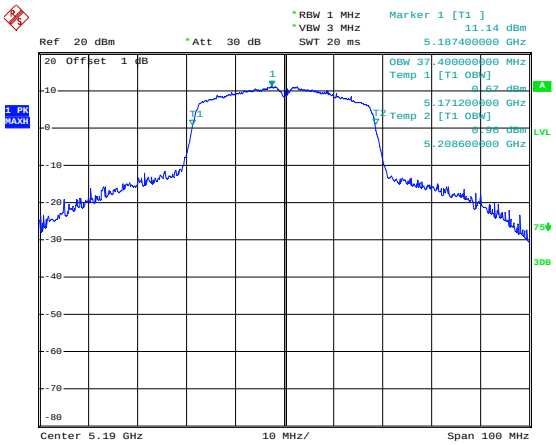
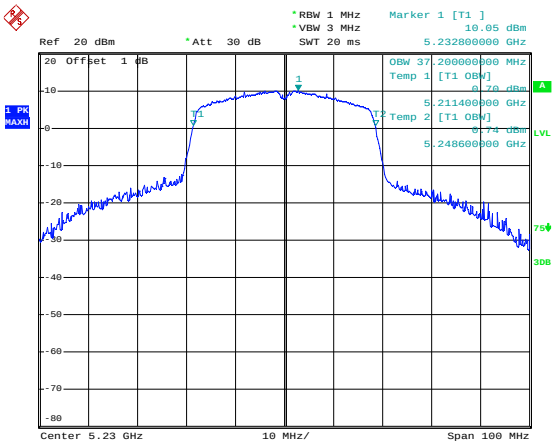
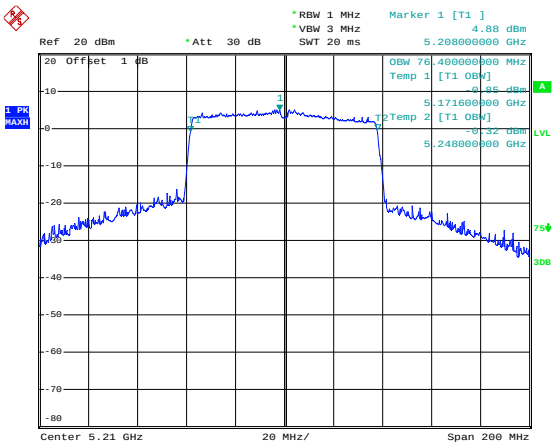
802.11n-HT40-Low	 Date: 24.NOV.2023 15:26:51
802.11n-HT40-High	 Date: 24.NOV.2023 15:24:22
802.11ac-VHT80-Low	 Date: 24.NOV.2023 15:37:48

99% Bandwidth MHz

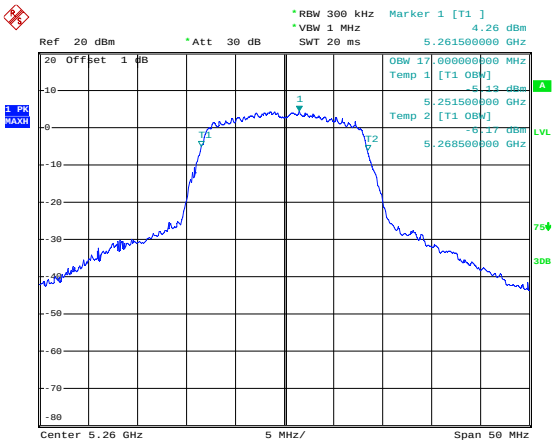
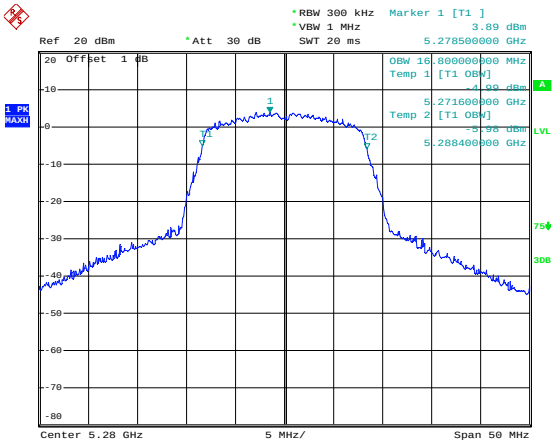
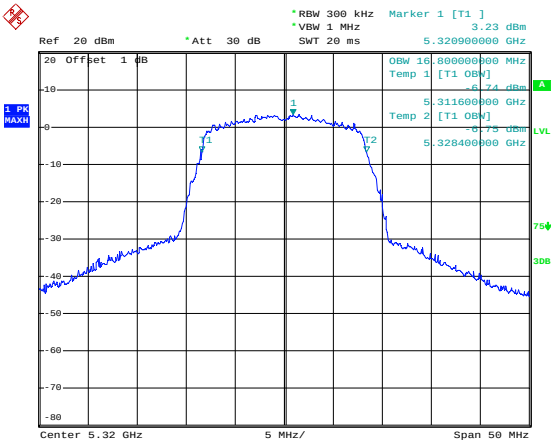
5150-5250MHz

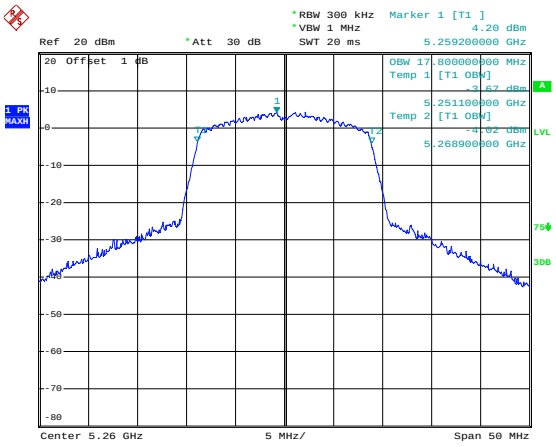
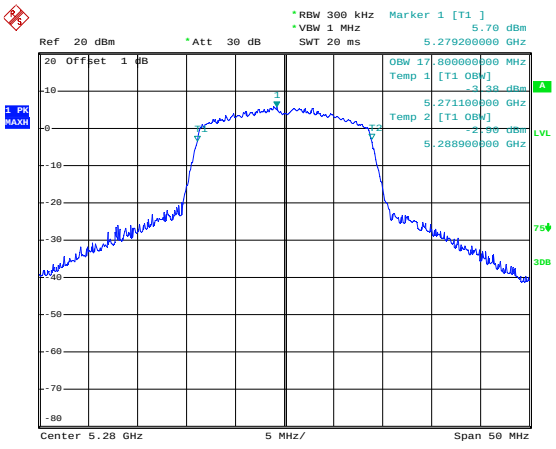
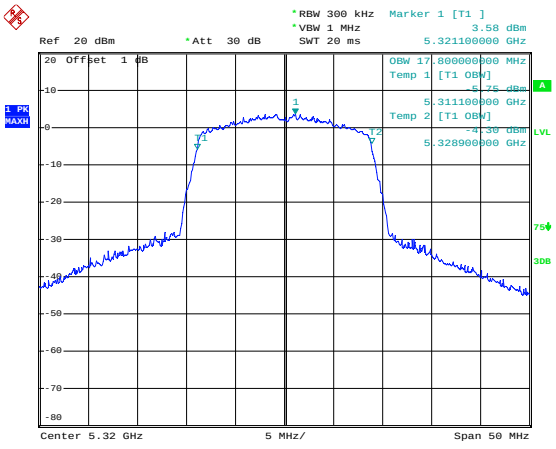
802.11a-Low	
802.11a-Middle	
802.11a-High	

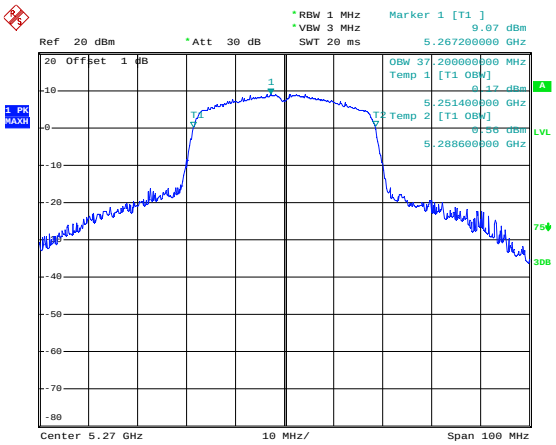
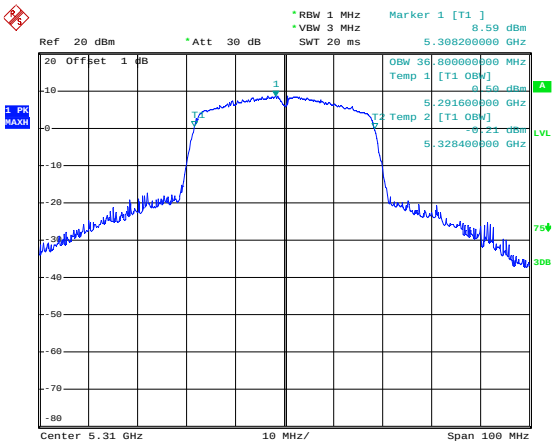
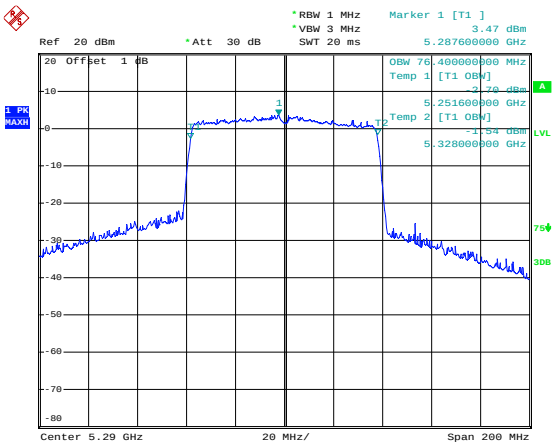
802.11n-HT20-Low	
802.11n-HT20-Middle	
802.11n-HT20-High	

802.11n-HT40-Low	 Date: 24.NOV.2023 13:17:33
802.11n-HT40-High	 Date: 24.NOV.2023 13:18:09
802.11ac-VHT80-Low	 Date: 24.NOV.2023 13:10:53

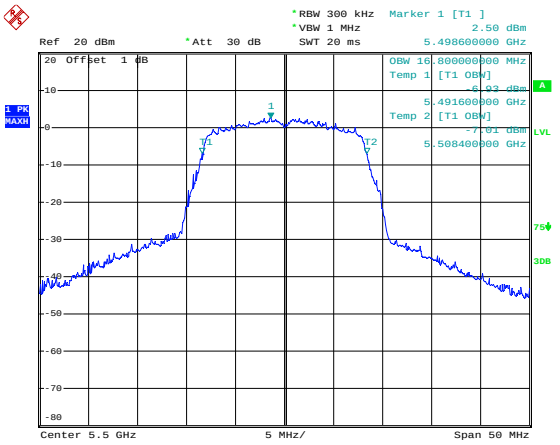
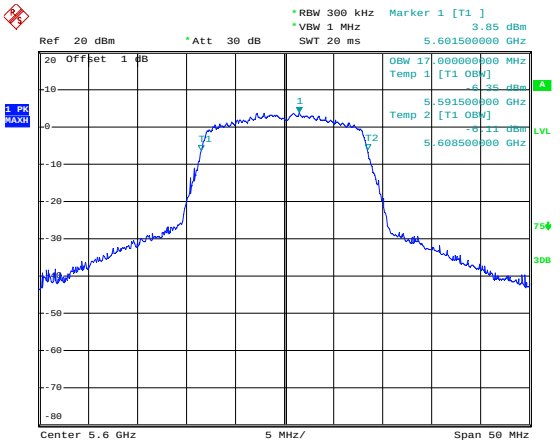
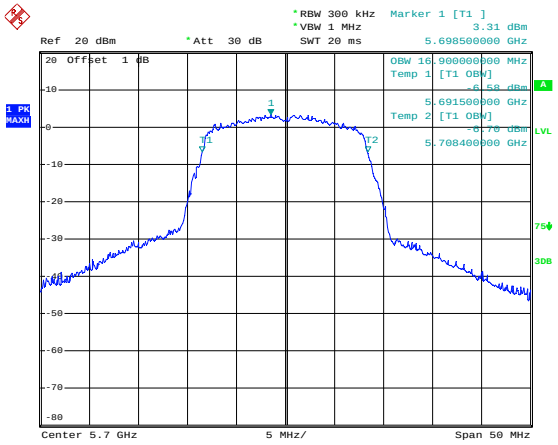
5250-5350MHz

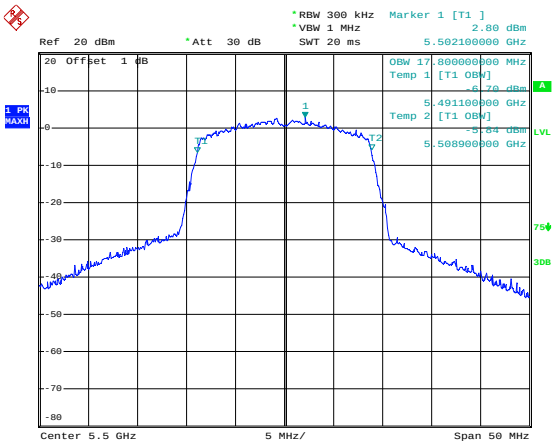
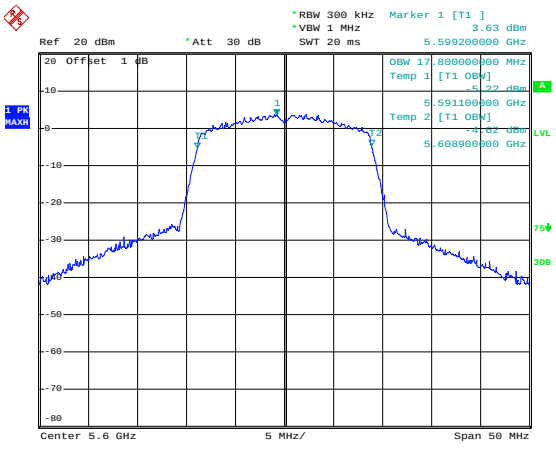
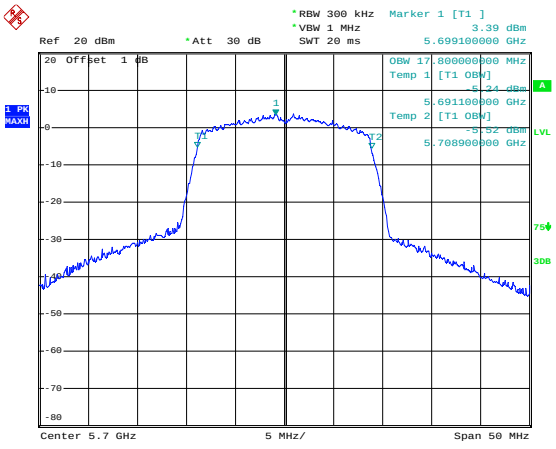
802.11a-Low	
802.11a-Middle	
802.11a-High	

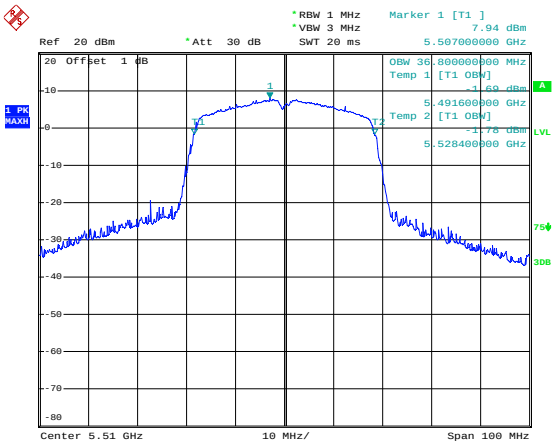
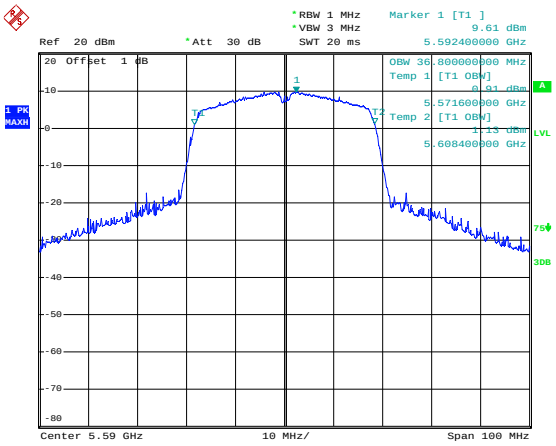
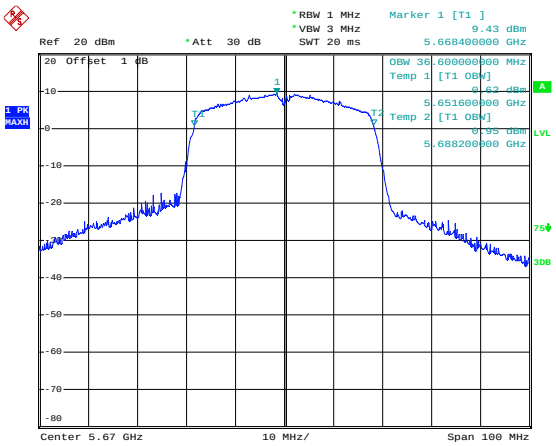
802.11n-HT20-Low	 Date: 24.NOV.2023 13:27:48
802.11n-HT20-Middle	 Date: 24.NOV.2023 13:24:23
802.11n-HT20-High	 Date: 24.NOV.2023 13:23:28

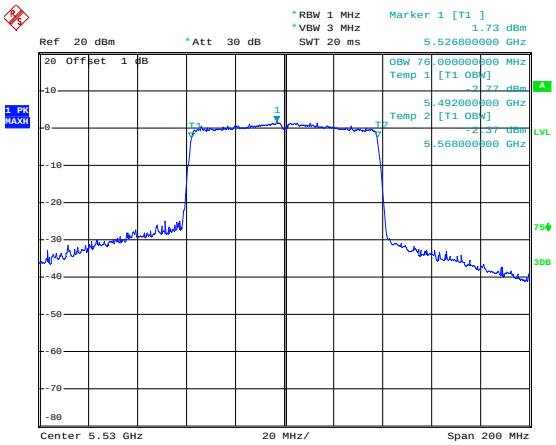
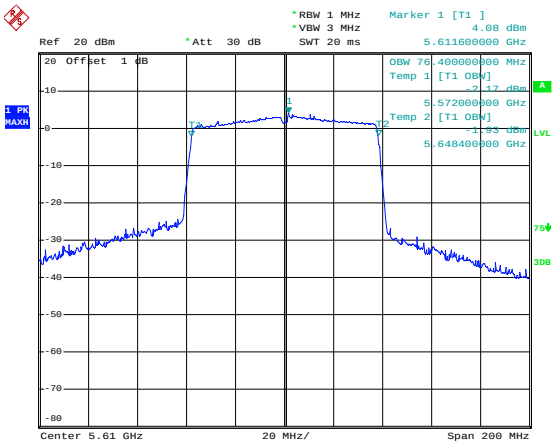
802.11n-HT40-Low	 Date: 24.NOV.2023 13:22:19
802.11n-HT40-High	 Date: 24.NOV.2023 13:20:54
802.11ac-VHT80-Low	 Date: 24.NOV.2023 13:33:48

5470-5725MHz

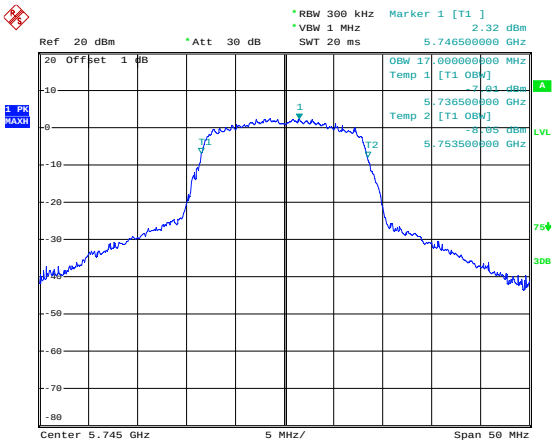
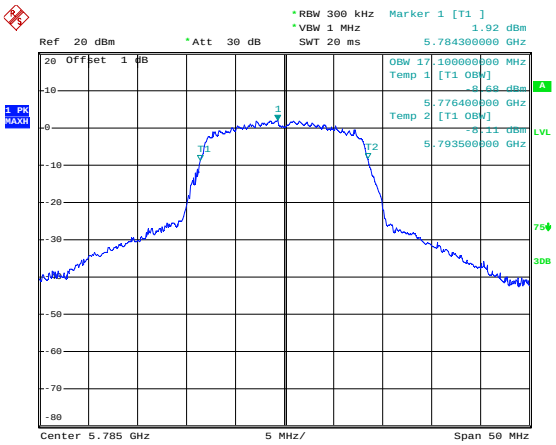
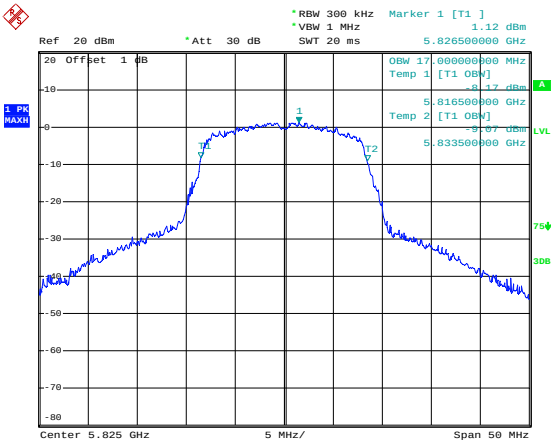
802.11a-Low	 Date: 24.NOV.2023 15:05:22
802.11a-Middle	 Date: 24.NOV.2023 15:04:53
802.11a-High	 Date: 24.NOV.2023 15:04:24

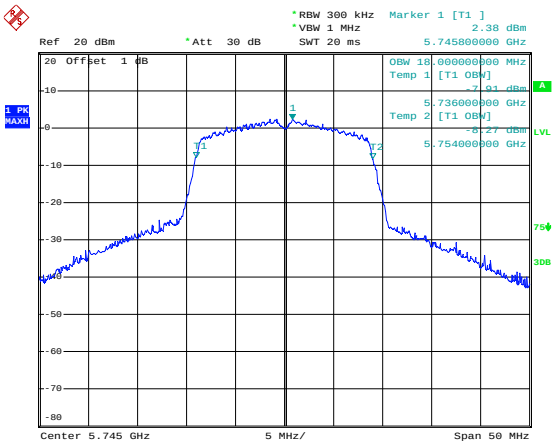
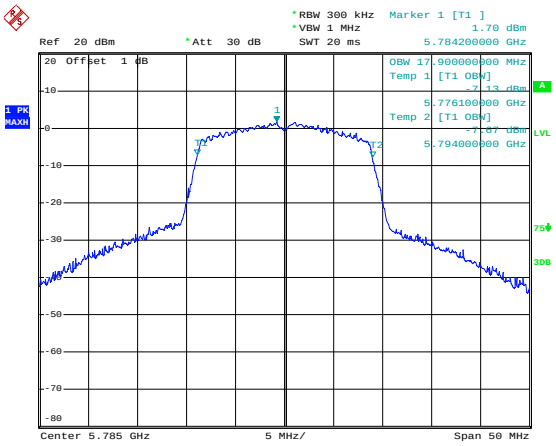
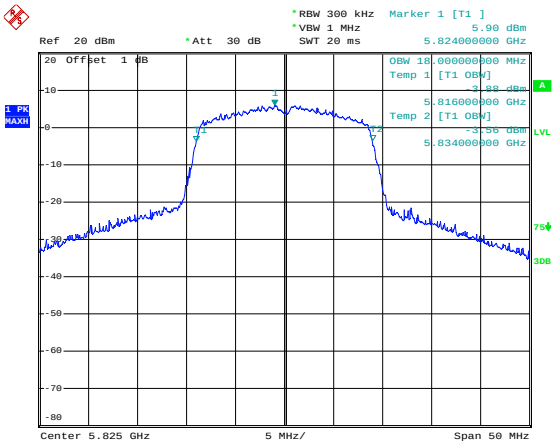
802.11n-HT20-Low	 Date: 24.NOV.2023 15:03:43
802.11n-HT20-Middle	 Date: 24.NOV.2023 15:03:12
802.11n-HT20-High	 Date: 24.NOV.2023 15:02:28

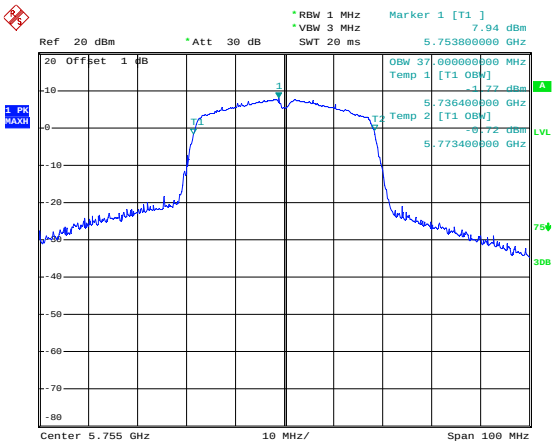
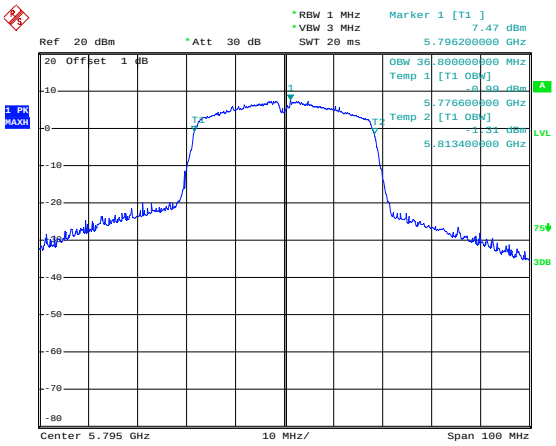
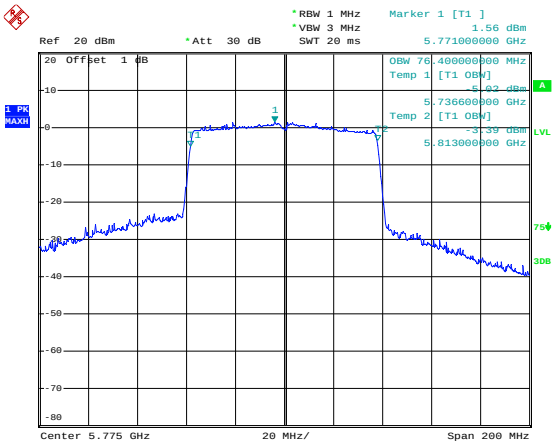
802.11n-HT40-Low	 Date: 24.NOV.2023 15:01:17
802.11n-HT40- Middle	 Date: 24.NOV.2023 15:00:50
802.11n-HT40-High	 Date: 24.NOV.2023 15:00:08

802.11ac-VHT80-Low	 Date: 24.NOV.2023 15:06:35
802.11ac-VHT80-High	 Date: 24.NOV.2023 15:07:23

5725-5850MHz

802.11a-Low	 Date: 24.NOV.2023 15:12:26
802.11a-Middle	 Date: 24.NOV.2023 15:14:08
802.11a-High	 Date: 24.NOV.2023 15:15:27

802.11n-HT20-Low	 Date: 24.NOV.2023 15:16:19
802.11n-HT20-Middle	 Date: 24.NOV.2023 15:17:01
802.11n-HT20-High	 Date: 24.NOV.2023 15:17:37

802.11n-HT40-Low	 Date: 24.NOV.2023 15:18:52
802.11n-HT40-High	 Date: 24.NOV.2023 15:19:28
802.11ac-VHT80-Low	 Date: 24.NOV.2023 15:10:54

APPENDIX C

Maximum Conducted Output Power

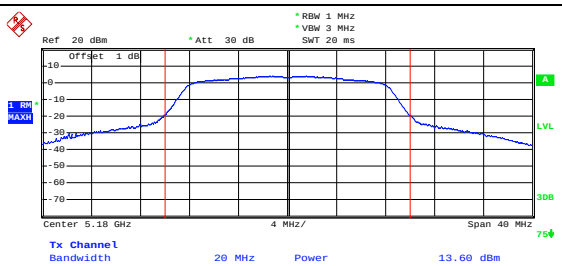
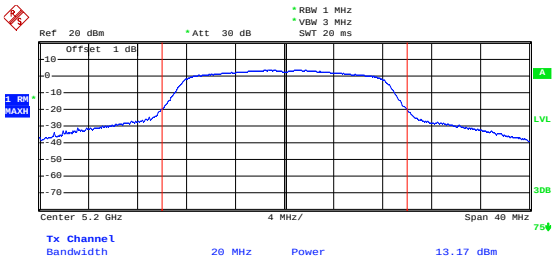
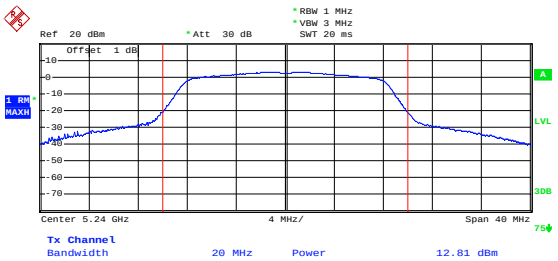
U-NII-1:5150-5250MHz			
Test mode	Frequency MHz	Output Power dBm	Limit dBm
802.11a	5180	13.60	23.98
	5200	13.17	23.98
	5240	12.81	23.98
802.11n-HT20	5180	13.54	23.98
	5200	13.04	23.98
	5240	12.30	23.98
802.11n-HT40	5190	15.51	23.98
	5230	14.73	23.98
802.11ac-VH80	5210	13.16	23.98

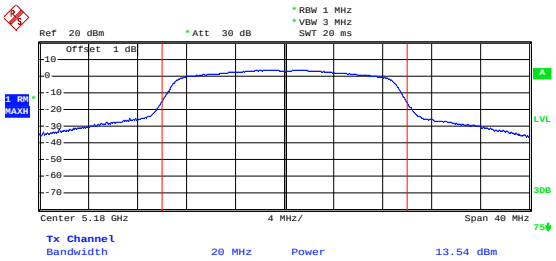
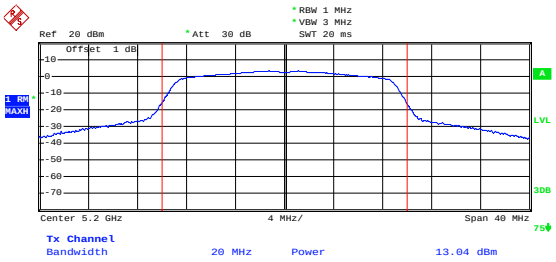
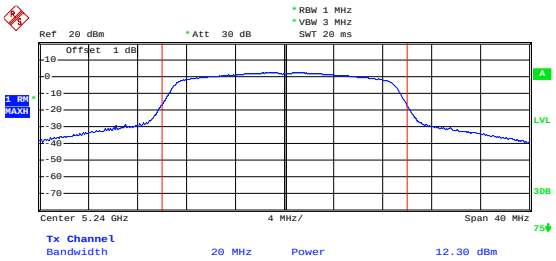
U-NII-2A: 5250-5350MHz			
Test mode	Frequency MHz	Output Power dBm	Limit dBm
802.11a	5260	13.13	23.98
	5280	11.22	23.98
	5320	10.77	23.98
802.11n-HT20	5260	11.35	23.98
	5280	11.16	23.98
	5320	13.06	23.98
802.11n-HT40	5270	13.65	23.98
	5310	13.28	23.98
802.11ac-VH80	5290	11.13	23.98

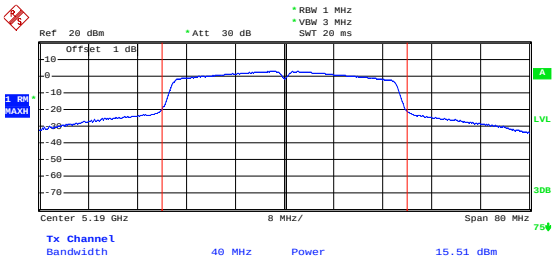
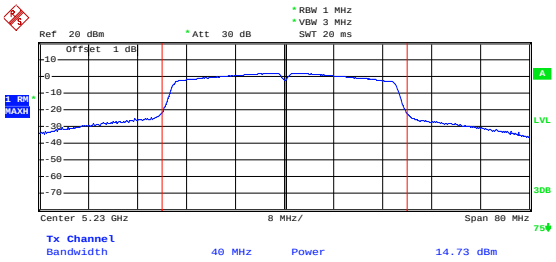
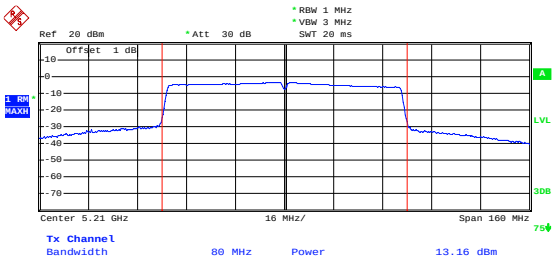
U-NII-2C: 5470-5725MHz			
Test mode	Frequency MHz	Output Power dBm	Limit dBm
802.11a	5500	9.67	23.98
	5600	11.08	23.98
	5700	13.93	23.98
802.11n-HT20	5500	9.47	23.98
	5600	10.88	23.98
	5700	10.40	23.98
802.11n-HT40	5510	12.15	23.98
	5590	13.61	23.98
	5670	13.70	23.98
802.11ac-VH80	5530	9.73	23.98
	5610	11.37	23.98

U-NII-3: 5725-5850MHz			
Test mode	Frequency MHz	Output Power dBm	Limit dBm
802.11a	5745	13.47	30.00
	5785	12.75	30.00
	5825	8.70	30.00
802.11n-HT20	5745	9.40	30.00
	5785	8.87	30.00
	5825	8.57	30.00
802.11n-HT40	5755	12.51	30.00
	5795	11.71	30.00
802.11ac-VH80	5775	9.30	30.00

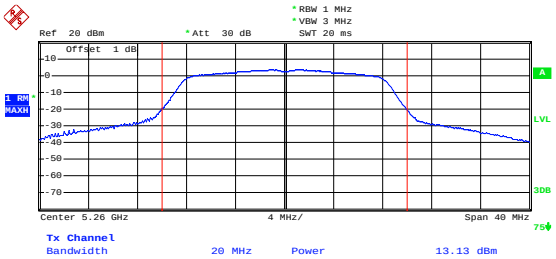
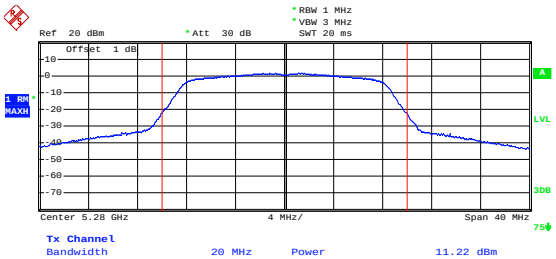
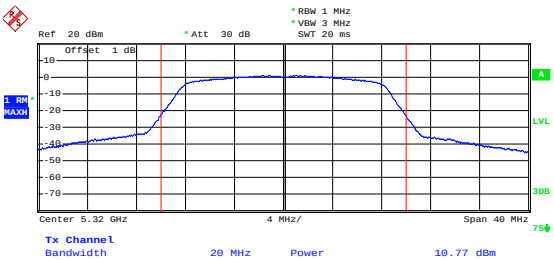
5150-5250MHz

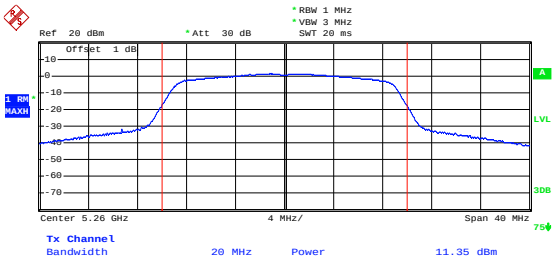
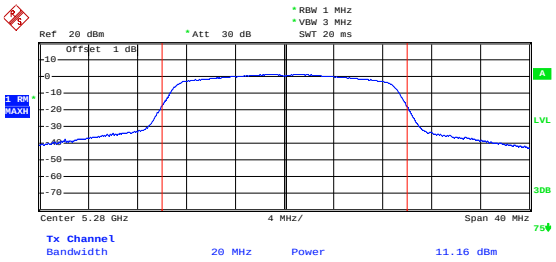
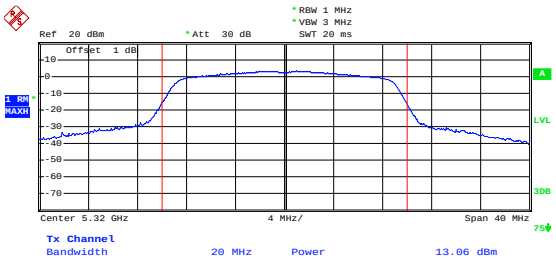
802.11a-Low	 Date: 24.NOV.2023 10:03:26
802.11a-Middle	 Date: 24.NOV.2023 10:03:53
802.11a-High	 Date: 24.NOV.2023 10:04:17

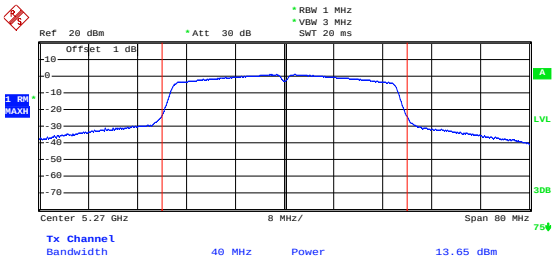
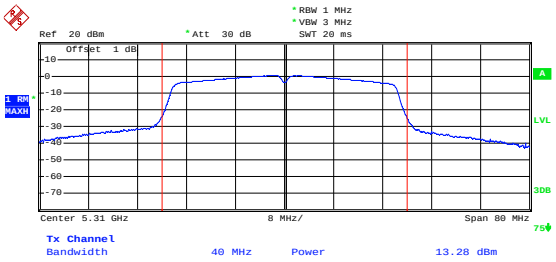
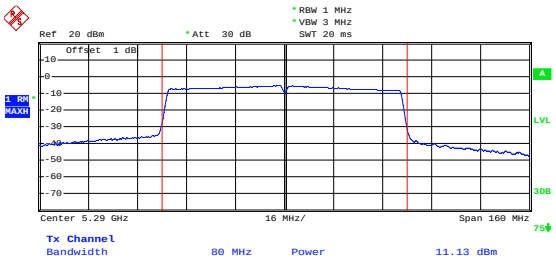
802.11n-HT20-Low	 Date: 24.NOV.2023 10:04:53
802.11n-HT20-Middle	 Date: 24.NOV.2023 10:05:24
802.11n-HT20-High	 Date: 24.NOV.2023 10:06:29

802.11n-HT40-Low	 Date: 24.NOV.2023 10:08:01
802.11n-HT40-High	 Date: 24.NOV.2023 10:08:32
802.11ac-VHT80-Low	 Date: 24.NOV.2023 10:02:20

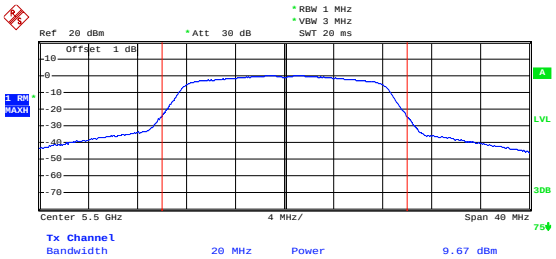
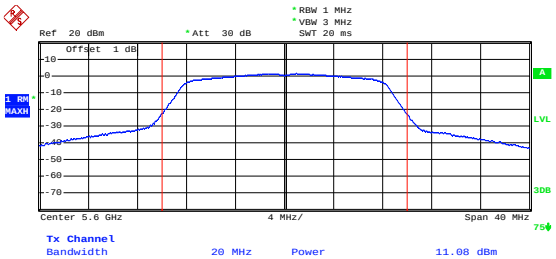
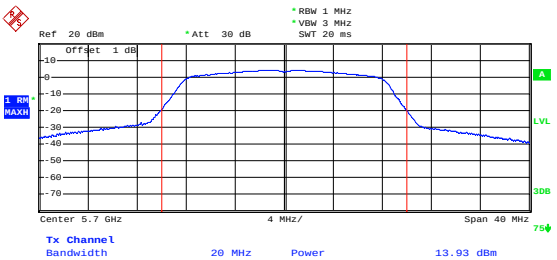
5250-5350MHz

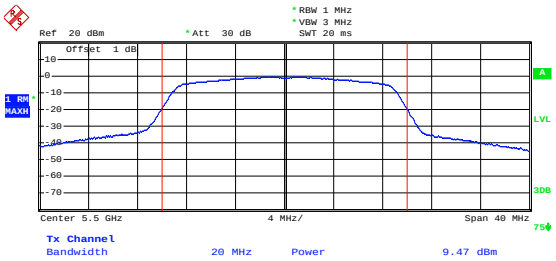
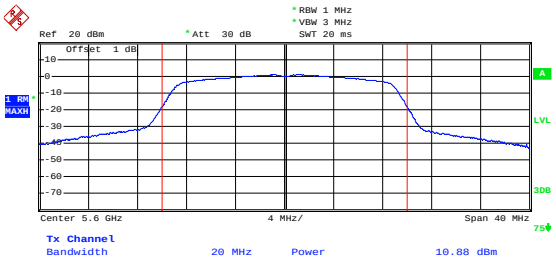
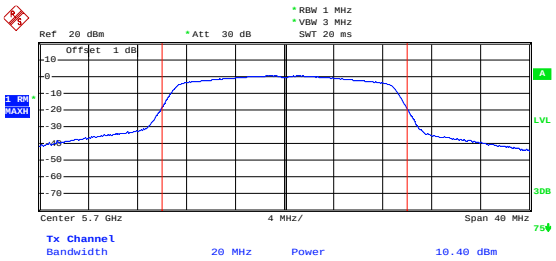
802.11a-Low	 Date: 24.NOV.2023 14:10:59
802.11a-Middle	 Date: 24.NOV.2023 14:11:32
802.11a-High	 Date: 24.NOV.2023 14:12:10

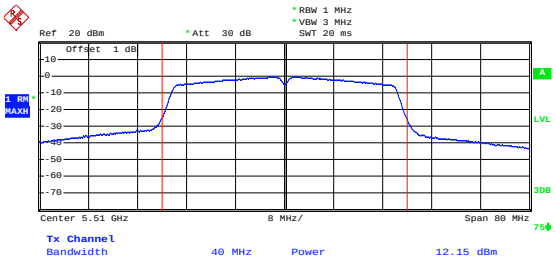
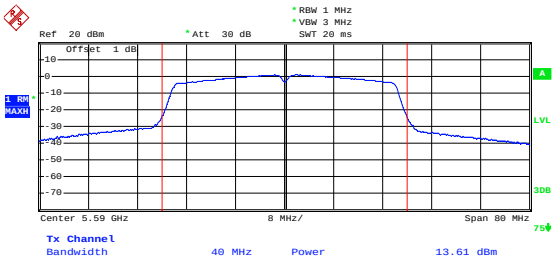
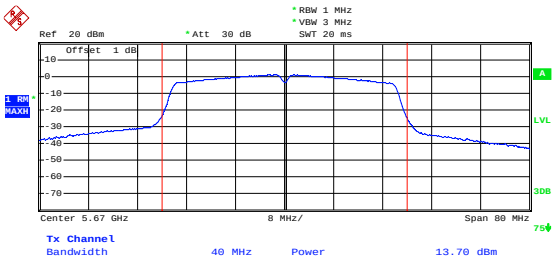
802.11n-HT20-Low	 Date: 24.NOV.2023 14:12:53
802.11n-HT20-Middle	 Date: 24.NOV.2023 14:13:24
802.11n-HT20-High	 Date: 24.NOV.2023 14:13:49

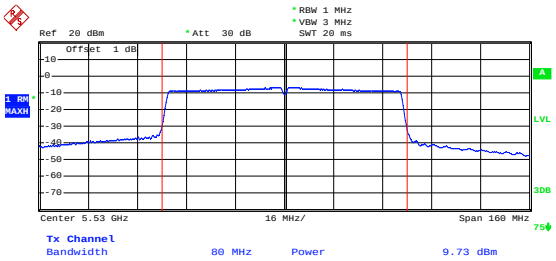
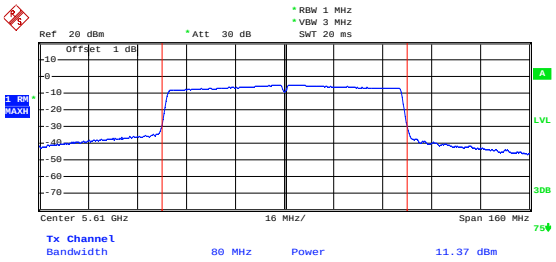
802.11n-HT40-Low	 Date: 24.NOV.2023 14:14:34
802.11n-HT40-High	 Date: 24.NOV.2023 14:15:01
802.11ac-VHT80-Low	 Date: 24.NOV.2023 14:09:47

5470-5725MHz

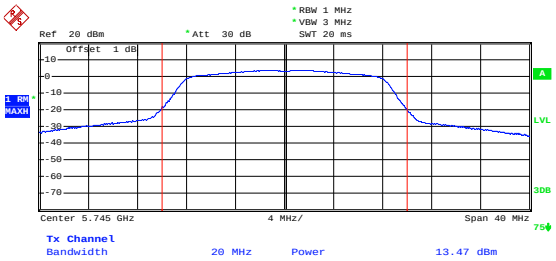
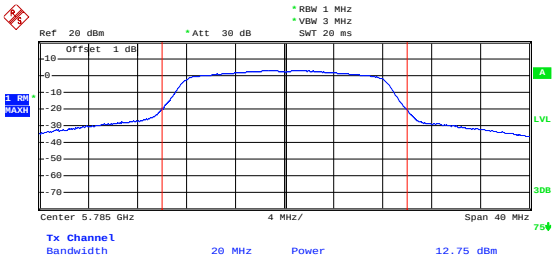
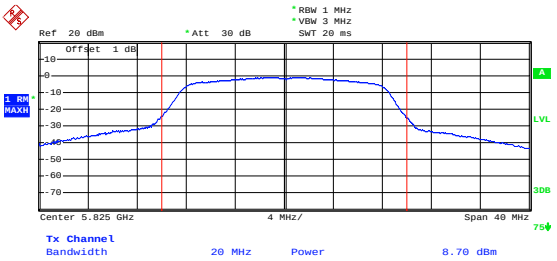
802.11a-Low	 Date: 24.NOV.2023 14:24:25
802.11a-Middle	 Date: 24.NOV.2023 14:23:38
802.11a-High	 Date: 24.NOV.2023 14:24:03

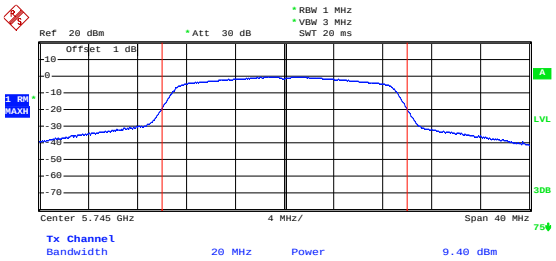
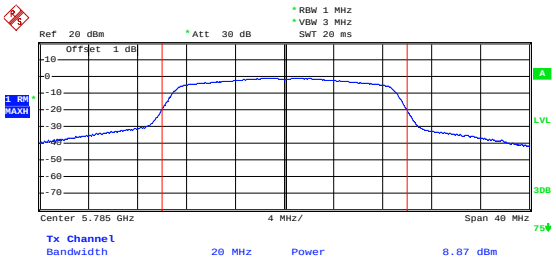
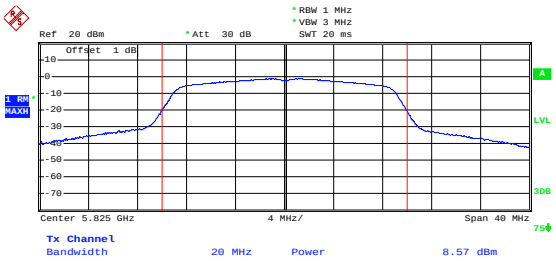
802.11n-HT20-Low	 Date: 24.NOV.2023 14:22:48
802.11n-HT20-Middle	 Date: 24.NOV.2023 14:22:25
802.11n-HT20-High	 Date: 24.NOV.2023 14:21:05

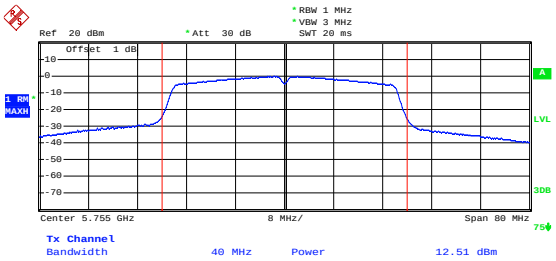
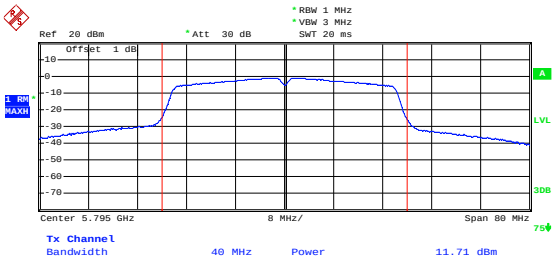
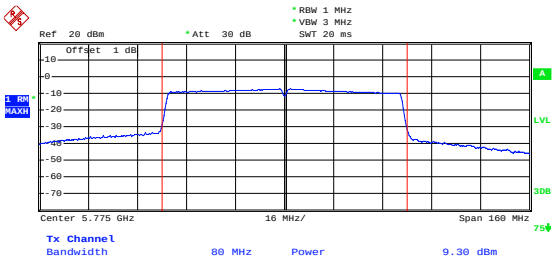
802.11n-HT40-Low	 Date: 24.NOV.2023 14:20:13
802.11n-HT40- Middle	 Date: 24.NOV.2023 14:27:23
802.11n-HT40-High	 Date: 24.NOV.2023 14:19:10

802.11ac-VHT80-Low	 Date: 24.NOV.2023 14:25:20
802.11ac-VHT80-High	 Date: 24.NOV.2023 14:25:58

5725-5850MHz

802.11a-Low	 Date: 24.NOV.2023 15:42:05
802.11a-Middle	 Date: 24.NOV.2023 15:42:45
802.11a-High	 Date: 24.NOV.2023 15:43:17

802.11n-HT20-Low	 Date: 24.NOV.2023 15:43:43
802.11n-HT20-Middle	 Date: 24.NOV.2023 15:44:02
802.11n-HT20-High	 Date: 24.NOV.2023 15:44:25

802.11n-HT40-Low	 Date: 24.NOV.2023 15:49:39
802.11n-HT40-High	 Date: 24.NOV.2023 15:49:12
802.11ac-VHT80-Low	 Date: 24.NOV.2023 15:40:43

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%	12V	-30	3601	0.6924
100%		-20	3605	0.6933
100%		-10	3605	0.6933
100%		0	3600	0.6923
100%		+10	3602	0.6926
100%		+20	3604	0.6930
100%		+30	3600	0.6923
100%		+40	3597	0.6917
100%		+50	3605	0.6933
Low power	13.2	+20	3605	0.6932
High power	10.8	+20	3601	0.6926

U-NII-1: 5250-5350MHz worst case at 802.11a middle channel				
Voltage(%)	Power(VDC)	TEMP(°C)	Freq.Dev(Hz)	Deviation
100%	12V	-30	3600	0.6818
100%		-20	3601	0.6820
100%		-10	3603	0.6824
100%		0	3606	0.6829
100%		+10	3601	0.6819
100%		+20	3606	0.6829
100%		+30	3606	0.6829
100%		+40	3599	0.6817
100%		+50	3597	0.6813
Low power	13.2	+20	3597	0.6812
High power	10.8	+20	3604	0.6827

U-NII-1: 5470-5725MHz worst case at 802.11a middle channel				
Voltage(%)	Power(VDC)	TEMP(°C)	Freq.Dev(Hz)	Deviation
100%	12V	-30	3599	0.6427
100%		-20	3604	0.6435
100%		-10	3598	0.6425
100%		0	3603	0.6434
100%		+10	3604	0.6435
100%		+20	3603	0.6434
100%		+30	3599	0.6428
100%		+40	3606	0.6439
100%		+50	3597	0.6424
Low power	13.2	+20	3600	0.6429
High power	10.8	+20	3596	0.6422

U-NII-1:5725-5850MHz worst case at 802.11a middle channel				
Voltage(%)	Power(VDC)	TEMP(°C)	Freq.Dev(Hz)	Deviation
100%	12V	-30	3599	0.6221
100%		-20	3597	0.6219
100%		-10	3599	0.6221
100%		0	3601	0.6225
100%		+10	3603	0.6229
100%		+20	3606	0.6233
100%		+30	3601	0.6225
100%		+40	3604	0.6229
100%		+50	3605	0.6232
Low power	13.2	+20	3601	0.6225
High power	10.8	+20	3596	0.6216

APPENDIX PHOTOGRAPHS

Please refer to “ANNEX”

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