

TEST REPORT

Reference No..... : WTX22X08156486W005
FCC ID : YHLBLUF92E
Applicant : BLU Products, Inc.
Address..... : 10814 NW 33rd St # 100 Doral, FL 33172,USA
Manufacturer : The same as Applicant
Address..... : The same as Applicant
Product Name : Smart Phone
Model No..... : F92e 5G
Standards : FCC Part 15.407
Date of Receipt sample : 2022-08-01
Date of Test..... : 2022-08-01 to 2022-10-19
Date of Issue : 2022-10-19
Test Report Form No. : WTX_Part 15_407W
Test Result..... : **Pass**

Remarks:

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

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Report version

Version No.	Date of issue	Description
Rev.00	2022-10-19	Original
/	/	/

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT	
Product Name:	Smart Phone
Trade Name:	BLU
Model No.:	F92e 5G
Adding Model(s):	/
Rated Voltage:	DC3.87V
Battery Capacity:	4900mAh(C886550500P)
Power Adapter:	US-CR-2000 INPUT:AC100-240V 50/60Hz 0.3A Output:DC5V2000mA
<i>Note: The test data is gathered from a production sample, provided by the manufacturer.</i>	

Technical Characteristics of EUT	
Support Standards:	802.11a, 802.11n(HT20), 802.11n-HT40, 802.11ac-VHT80
Frequency Range:	5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz
RF Output Power:	15.43dBm (Conducted)
Type of Modulation:	QPSK, 16QAM, 64QAM
Type of Antenna:	Integral Antenna
Antenna Gain:	-1.2dBi
<i>Note: The Antenna Gain is provided by the customer and can affect the validity of results.</i>	

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 “*#*#3646633#*#*” 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 6Mbps	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
802.11n-HT20 MCS0	16	16	16	16	16	16	16	16	16	16	16	16	16
Mode	NCB: 40MHz												
	5190	5230	5270	5310	5510	5550	5670	5710	5755	5795			
802.11n-HT40 MCS0	16	16	16	16	16	16	16	16	16	16	16		
Mode	NCB: 80MHz												
	5210		5290		5530		5610		5690		5775		
802.11ac-VH80 MCS0/Nss2	16		16		16		16		16		16		

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 maintained 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.

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: All test modes (different data rate and different modulation) are performed, but only the worst case is recorded in this report.

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
USB Cable	1.0	Shielded	Without Ferrite
Headset 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
Notebook	ASUS	FA5061C	M8NRCX057996349

1.8 Measurement Uncertainty

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

1.9 Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due. Date
SEMT-1075	Communication Tester	Rohde & Schwarz	CMW500	148650	2022-03-22	2023-03-21
SEMT-1063	GSM Tester	Rohde & Schwarz	CMU200	114403	2022-03-22	2023-03-21
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2022-03-25	2023-03-24
SEMT-1079	Spectrum Analyzer	Agilent	N9020A	US47140102	2022-03-22	2023-03-21
SMET-1313	Spectrum Analyzer	Agilent	N9020A	MY54320548	2022-03-22	2023-03-21
SEMT-1080	Signal Generator	Agilent	83752A	3610A01453	2022-03-22	2023-03-21
SEMT-1081	Vector Signal Generator	Agilent	N5182A	MY47070202	2022-03-22	2023-03-21
SEMT-1028	Power Divider	Weinschel	1506A	PM204	2022-03-22	2023-03-21
SEMT-C001	Cable	Zheng DI	LL142-07-07-10M(A)	/	/	/
SEMT-C002	Cable	Zheng DI	ZT40-2.92J-2.92J-6M	/	/	/
SEMT-C003	Cable	Zheng DI	ZT40-2.92J-2.92J-2.5M	/	/	/
SEMT-C004	Cable	Zheng DI	2M0RFC	/	/	/
SEMT-C005	Cable	Zheng DI	1M0RFC	/	/	/
SEMT-C006	Cable	Zheng DI	1M0RFC	/	/	/
<input checked="" type="checkbox"/> Chamber A: Below 1GHz						
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2022-03-22	2023-03-21
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2022-03-22	2023-03-21
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2022-01-07	2023-01-06
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2021-03-20	2023-03-19
SEMT-1068	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2021-03-20	2023-03-19
<input checked="" type="checkbox"/> Chamber A: Above 1GHz						
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2022-03-22	2023-03-21
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2022-03-22	2023-03-21

SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2022-03-22	2023-03-21
SEMT-1042	Horn Antenna	ETS	3117	00086197	2021-03-19	2023-03-18
SEMT-1121	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA917 0582	2021-04-27	2023-04-26
SEMT-1216	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2022-03-25	2023-03-24
SEMT-1163	Spectrum Analyzer	Rohde & Schwarz	FSP40	100612	2022-03-22	2023-03-21
<input type="checkbox"/> Chamber B: Below 1GHz						
SEMT-1068	Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-635	2021-04-09	2023-04-08
SEMT-1067	Amplifier	Agilent	8447D	2944A101 79	2022-03-22	2023-03-21
SEMT-1066	EMI Test Receiver	Rohde & Schwarz	ESPI	101391	2022-03-22	2023-03-21
<input type="checkbox"/> Chamber C: Below 1GHz						
SEMT-1319	EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2022-01-07	2023-01-06
SEMT-1343	Trilog Broadband Antenna	Schwarz beck	VULB 9168	1194	2021-05-28	2023-05-27
SEMT-1333	Amplifier	HP	8447F	2944A038 69	2022-03-22	2023-03-21
<input checked="" type="checkbox"/> Conducted Room 1#						
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2022-03-21	2023-03-20
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2022-03-25	2023-03-24
SEMT-1003	AC LISN	Schwarz beck	NSLK8126	8126-224	2022-03-22	2023-03-21
<input type="checkbox"/> Conducted Room 2#						
SEMT-1334	EMI Test Receiver	Rohde & Schwarz	ESPI	101259	2022-03-22	2023-03-21
SEMT-1336	LISN	Rohde & Schwarz	ENV 216	100097	2022-03-22	2023-03-21

Software List			
Description	Manufacturer	Model	Version
EMI Test Software (Radiated Emission)*	Farad	EZ-EMC	RA-03A1
EMI Test Software (Conducted Emission)*	Farad	EZ-EMC	RA-03A1

*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 integral 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 $11 \text{ dBm} + 10 \log B$, 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 $RBW \geq 1/T$, where T is defined in section II.B.I.a).
- b) Set $VBW \geq 3 RBW$.
- c) If measurement bandwidth of Maximum PSD is specified in 500kHz, add $10\log(500\text{kHz}/RBW)$ to the measured result, whereas $RBW (< 500\text{kHz})$ 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 $10\log(1\text{MHz}/RBW)$ to the measured result, whereas $RBW (< 1\text{MHz})$ 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 $RBW=100\text{kHz}$ 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 $11\text{dBm} + 10 \log B$, 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.

(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) $\geq 3 \times$ RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 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 $\geq 3 \times$ 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.

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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 $11\text{dBm} + 10 \log B$, 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.

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 \geq 3MHz.
- (iv) Number of points in sweep \geq 2 Span / RBW. (This ensures that bin-to-bin spacing is \leq 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 \geq 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.

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

$$\text{EIRP} = ((E*d)^2) / 30$$

where:

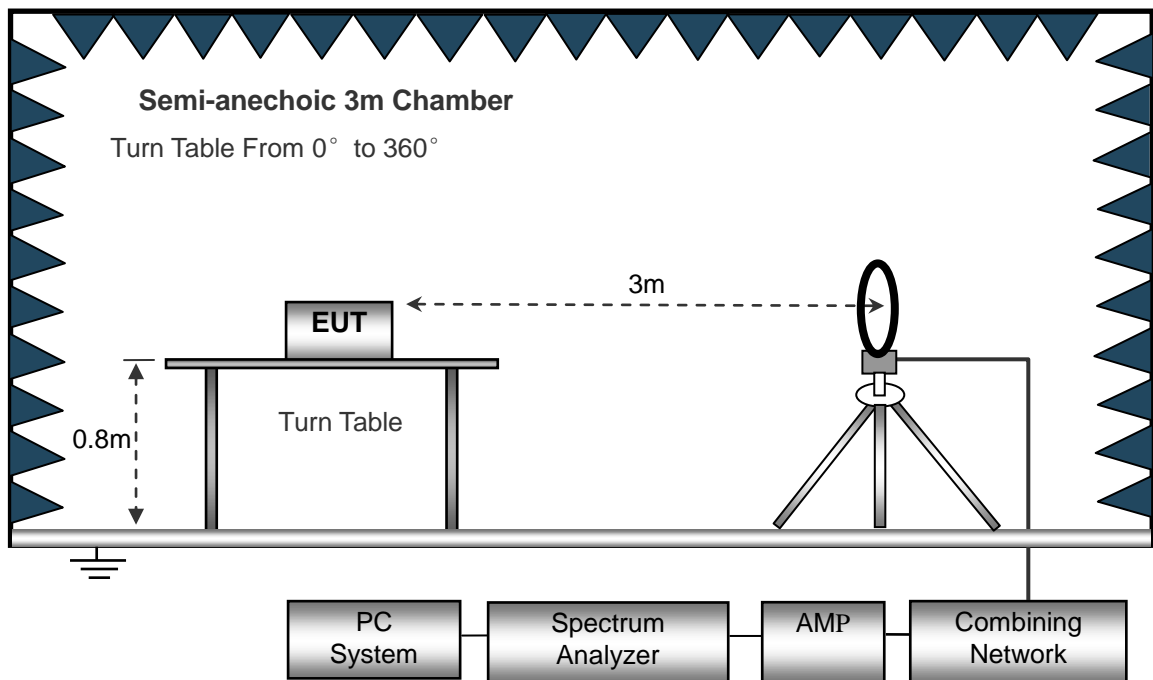
- E is the field strength in V/m;
- d is the measurement distance in meters;
- EIRP is the equivalent isotropically radiated power in watts.

8.2 Test Procedure

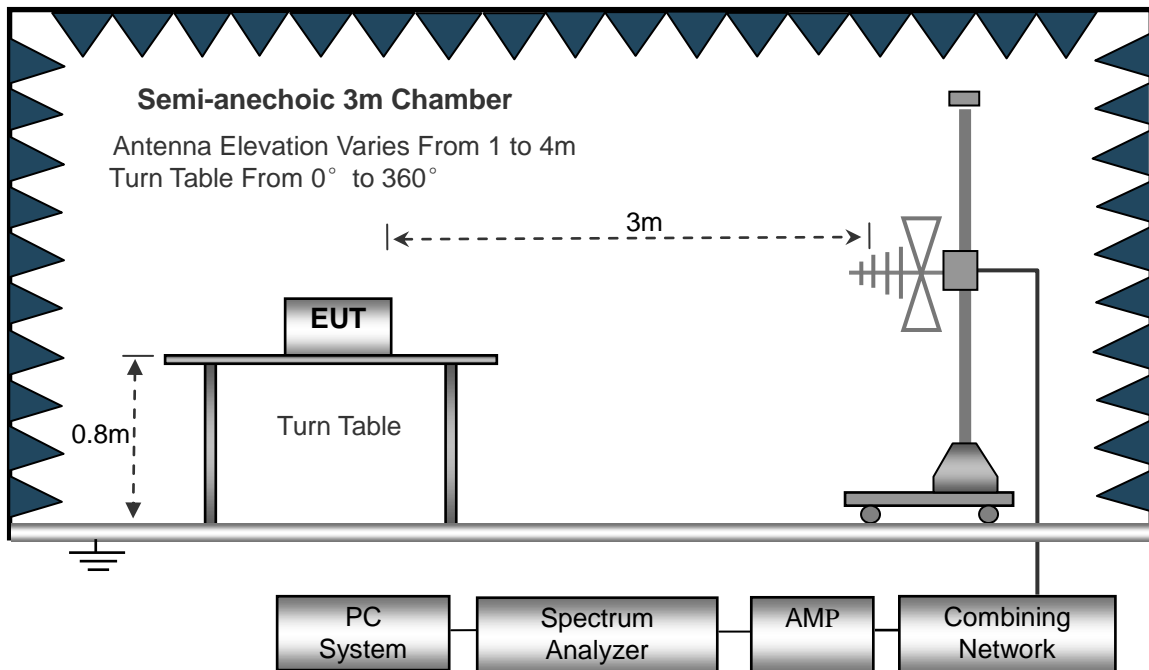
The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.205 15.407(b)(6) and FCC Part 15.209 Limit..

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.

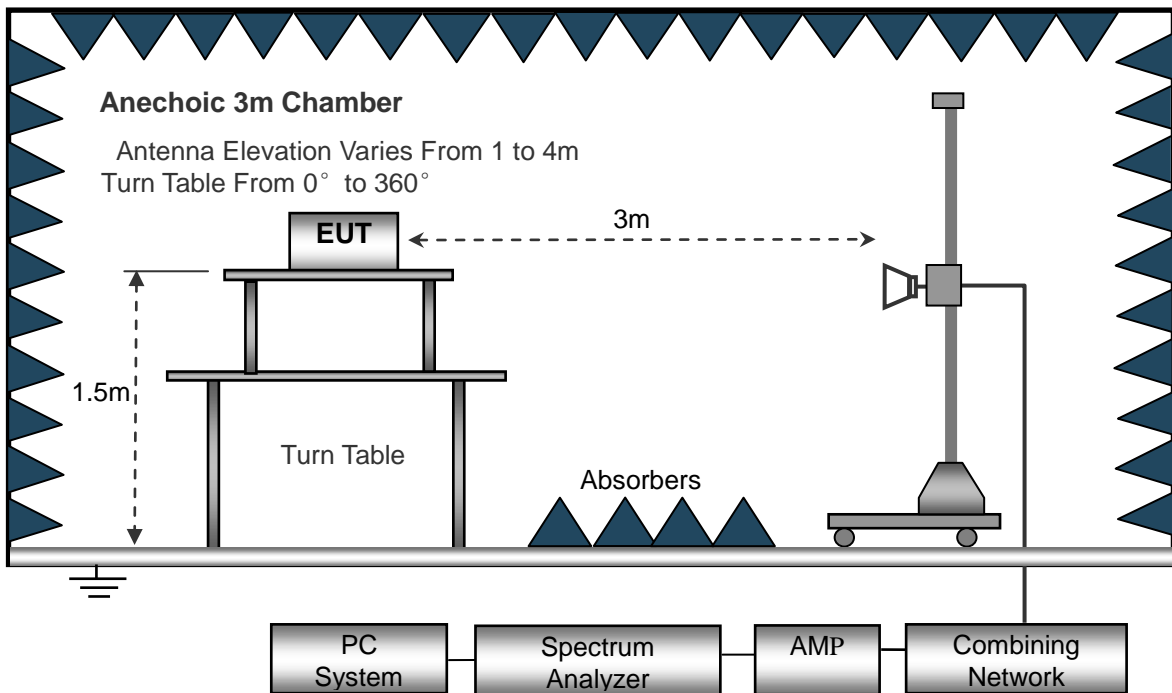
The test setup for emission measurement below 30MHz.



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:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Ant. Factor} + \text{Cable Loss} - \text{Ampl. Gain}$$

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

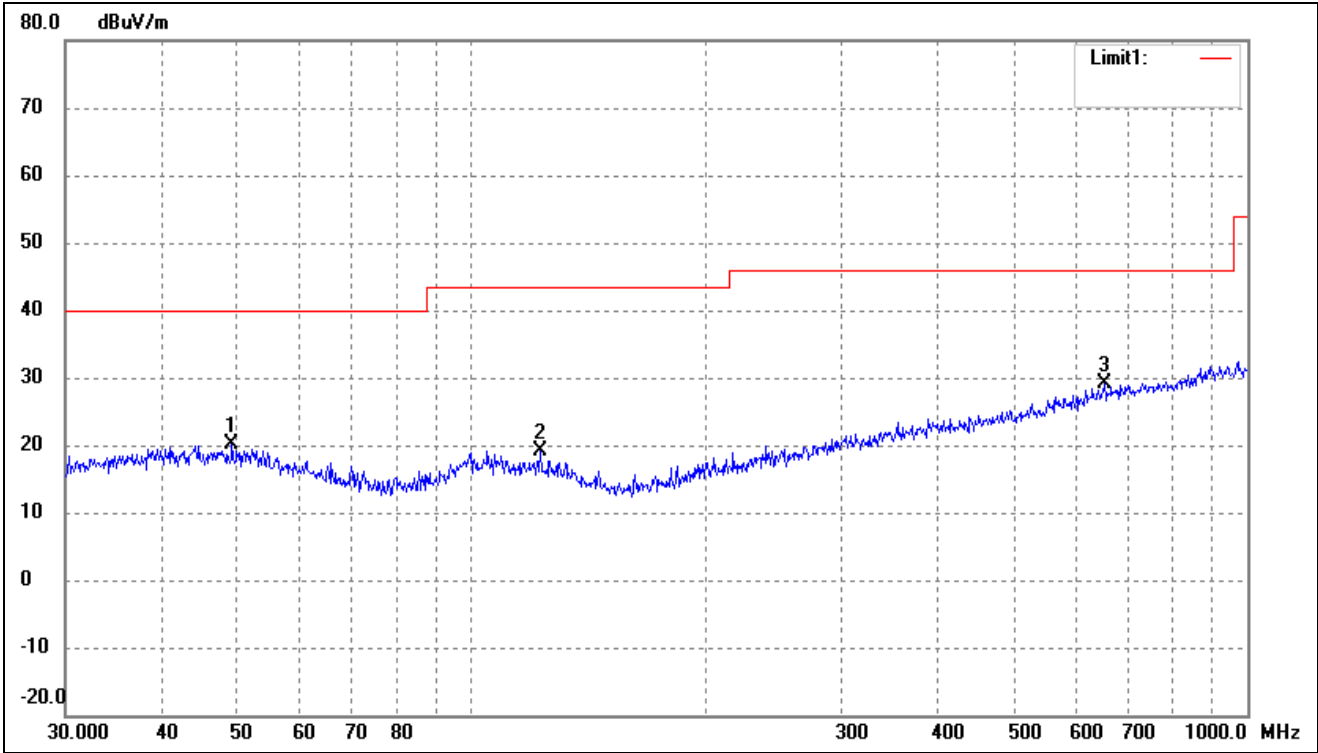
$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15 Limit}$$

8.5 Summary of Test Results/Plots

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

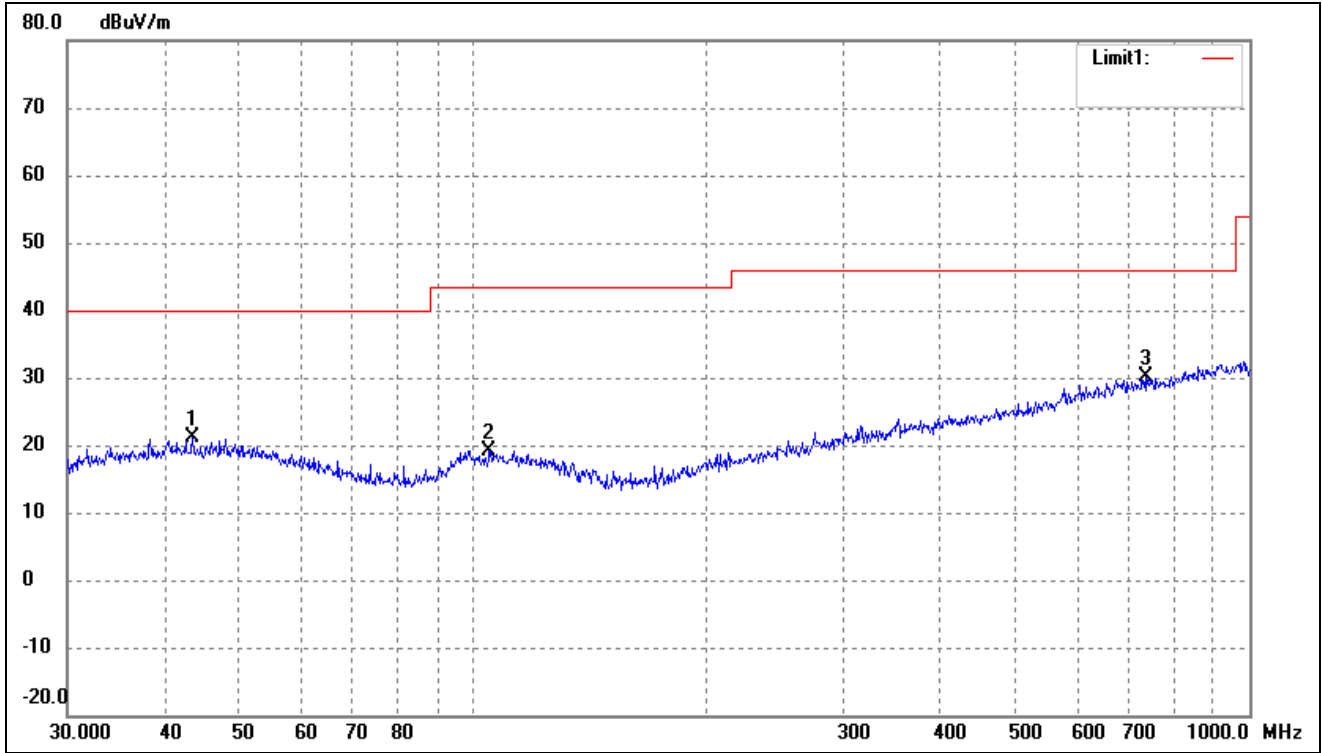
- Spurious Emission From 30MHz to 1GHz
- 5150-5250MHz

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



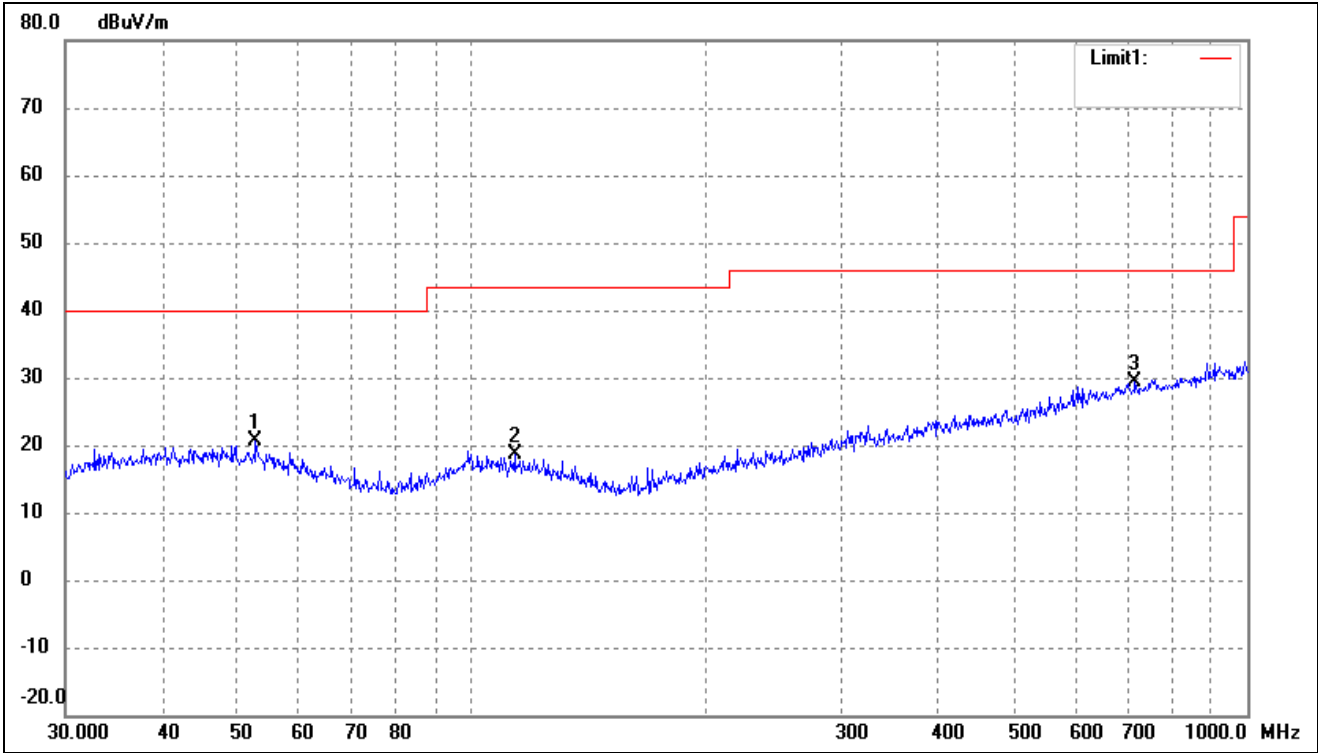
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	49.1866	27.34	-7.31	20.03	40.00	-19.97	-	-	peak
2	122.8340	28.49	-9.33	19.16	43.50	-24.34	-	-	peak
3	654.2318	28.47	0.64	29.11	46.00	-16.89	-	-	peak

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



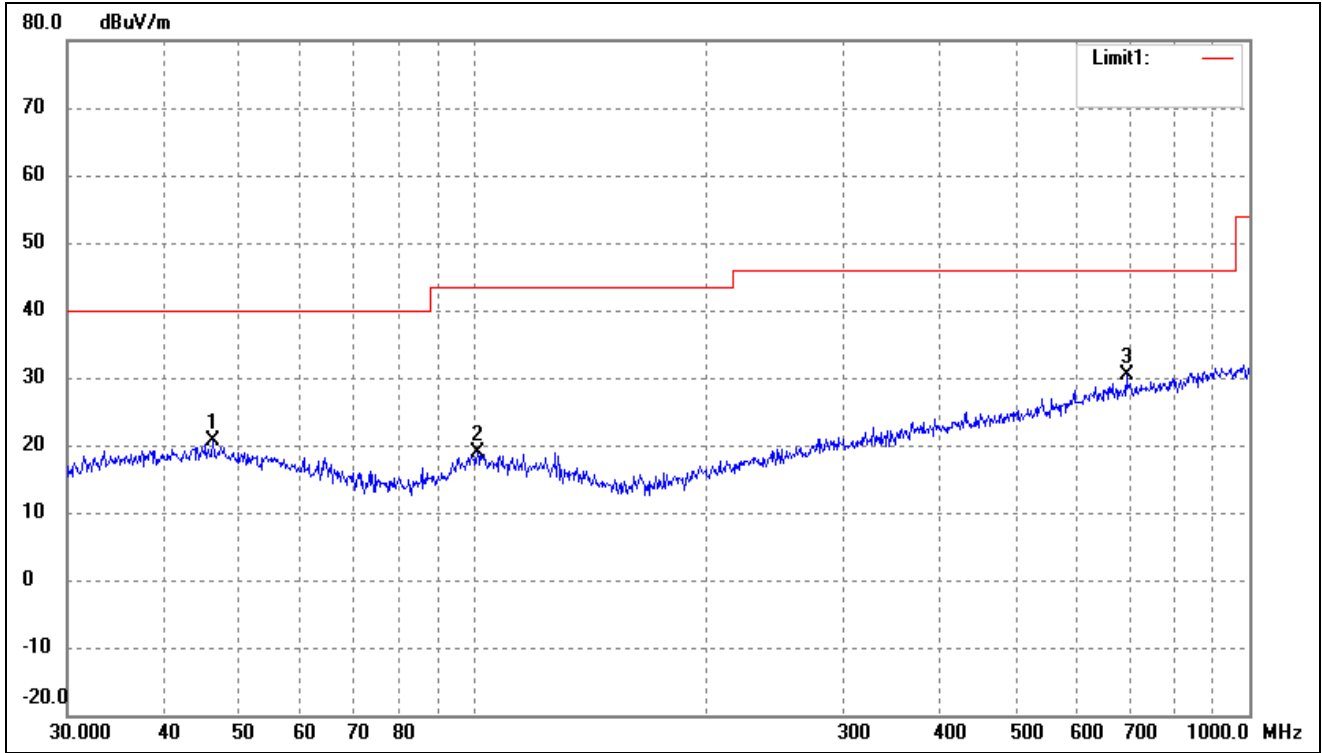
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	43.5057	28.30	-7.19	21.11	40.00	-18.89	-	-	peak
2	104.9033	27.34	-8.11	19.23	43.50	-24.27	-	-	peak
3	734.4913	28.58	1.67	30.25	46.00	-15.75	-	-	peak

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



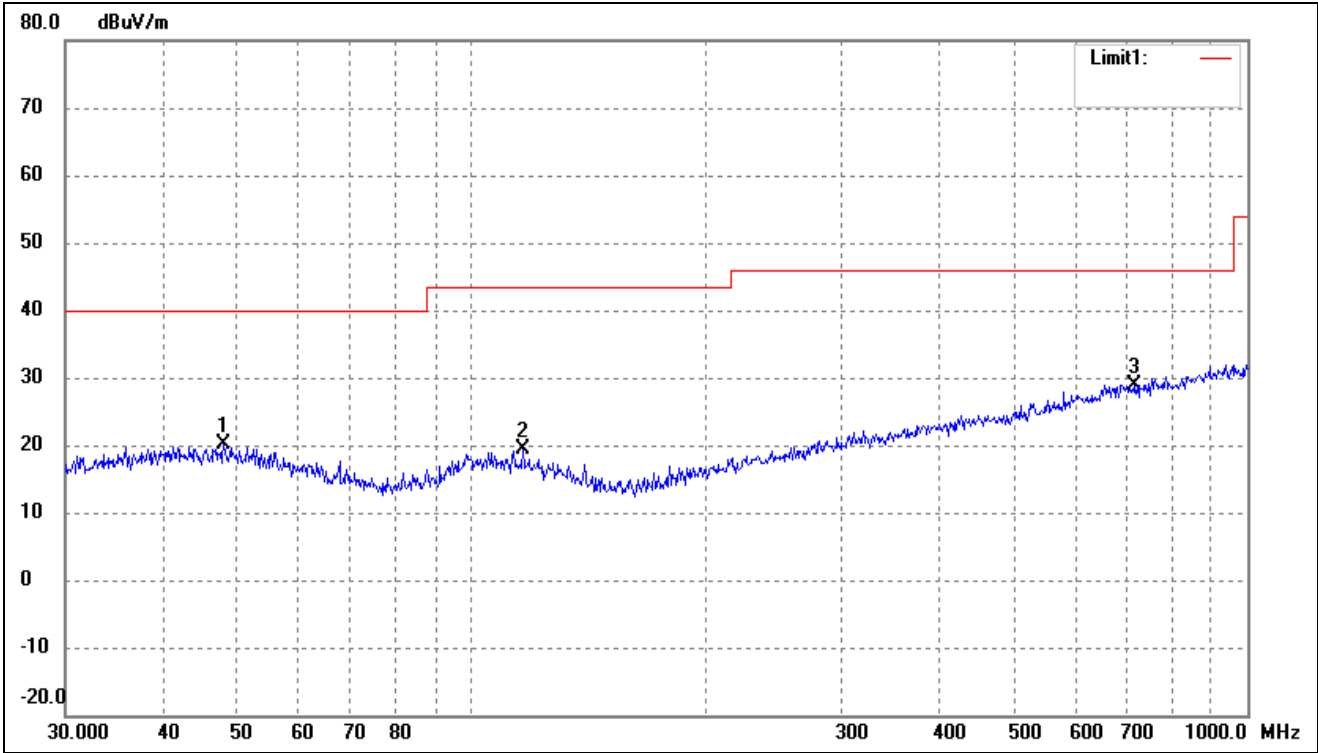
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	52.7600	28.55	-7.80	20.75	40.00	-19.25	-	-	peak
2	113.7143	27.08	-8.39	18.69	43.50	-24.81	-	-	peak
3	716.6820	27.95	1.52	29.47	46.00	-16.53	-	-	peak

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



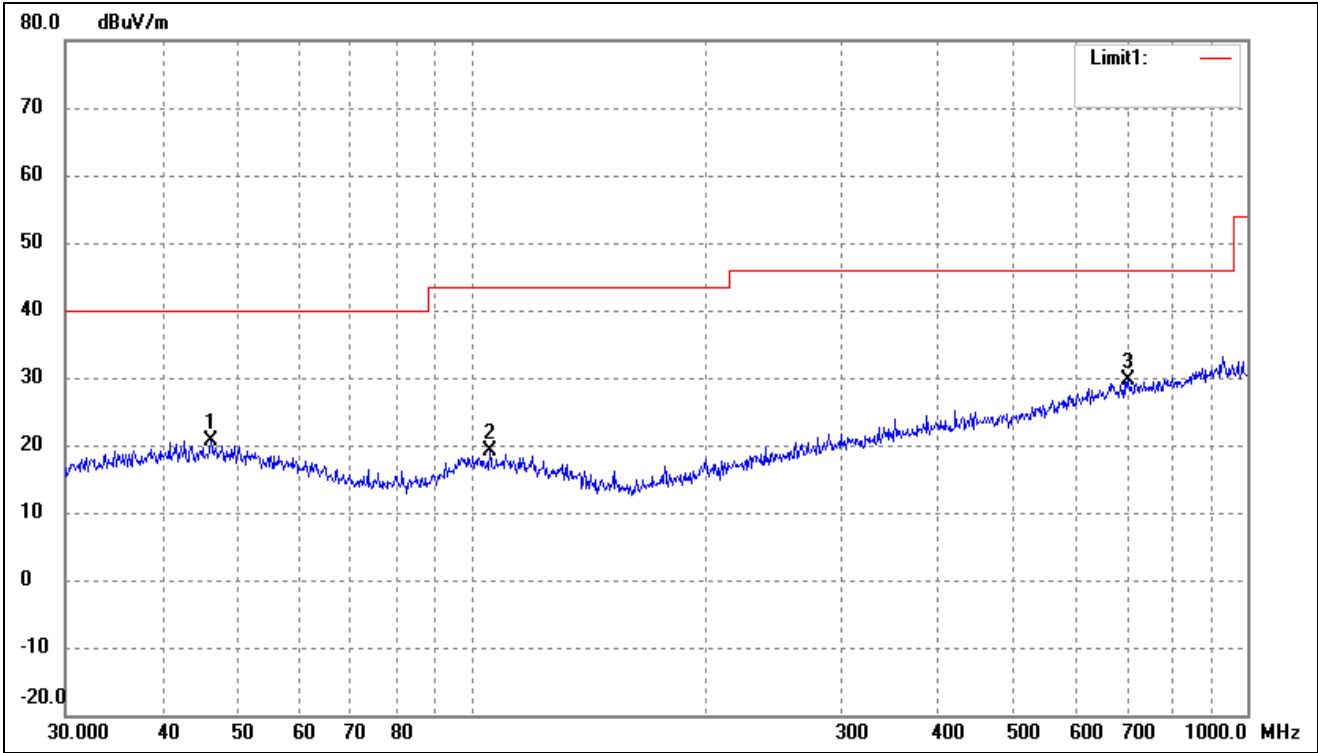
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	46.1780	27.83	-7.25	20.58	40.00	-19.42	-	-	peak
2	101.2885	26.97	-8.07	18.90	43.50	-24.60	-	-	peak
3	694.4174	29.17	1.28	30.45	46.00	-15.55	-	-	peak

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



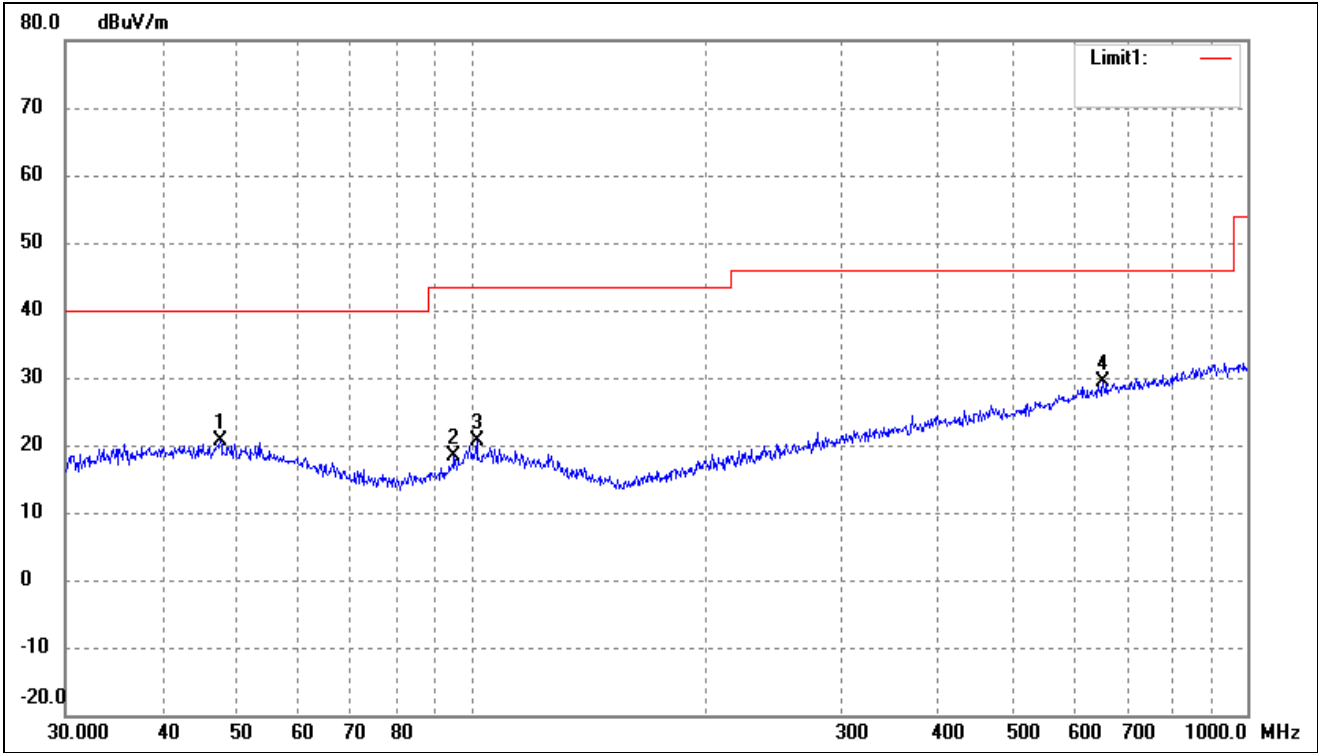
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	47.9940	27.34	-7.27	20.07	40.00	-19.93	-	-	peak
2	116.5401	27.94	-8.58	19.36	43.50	-24.14	-	-	peak
3	714.1734	27.43	1.50	28.93	46.00	-17.07	-	-	peak

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



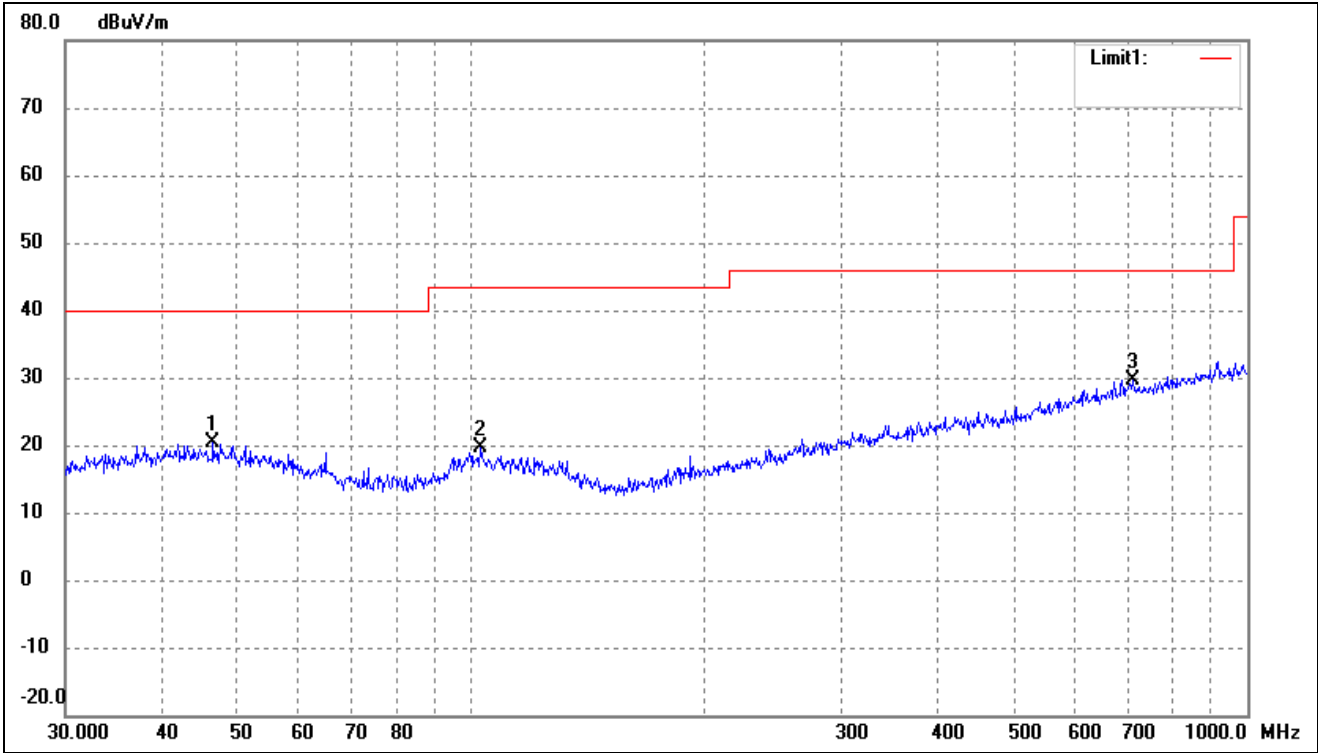
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	46.1780	27.98	-7.25	20.73	40.00	-19.27	-	-	peak
2	105.6415	27.23	-8.10	19.13	43.50	-24.37	-	-	peak
3	701.7610	28.24	1.38	29.62	46.00	-16.38	-	-	peak

802.11ac-HT80			
Test Channel	5210MHz(worst case)	Polarity:	Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	47.4918	27.97	-7.26	20.71	40.00	-19.29	-	-	peak
2	95.0930	27.69	-9.43	18.26	43.50	-25.24	-	-	peak
3	101.6443	28.61	-8.07	20.54	43.50	-22.96	-	-	peak
4	651.9417	28.90	0.60	29.50	46.00	-16.50	-	-	peak

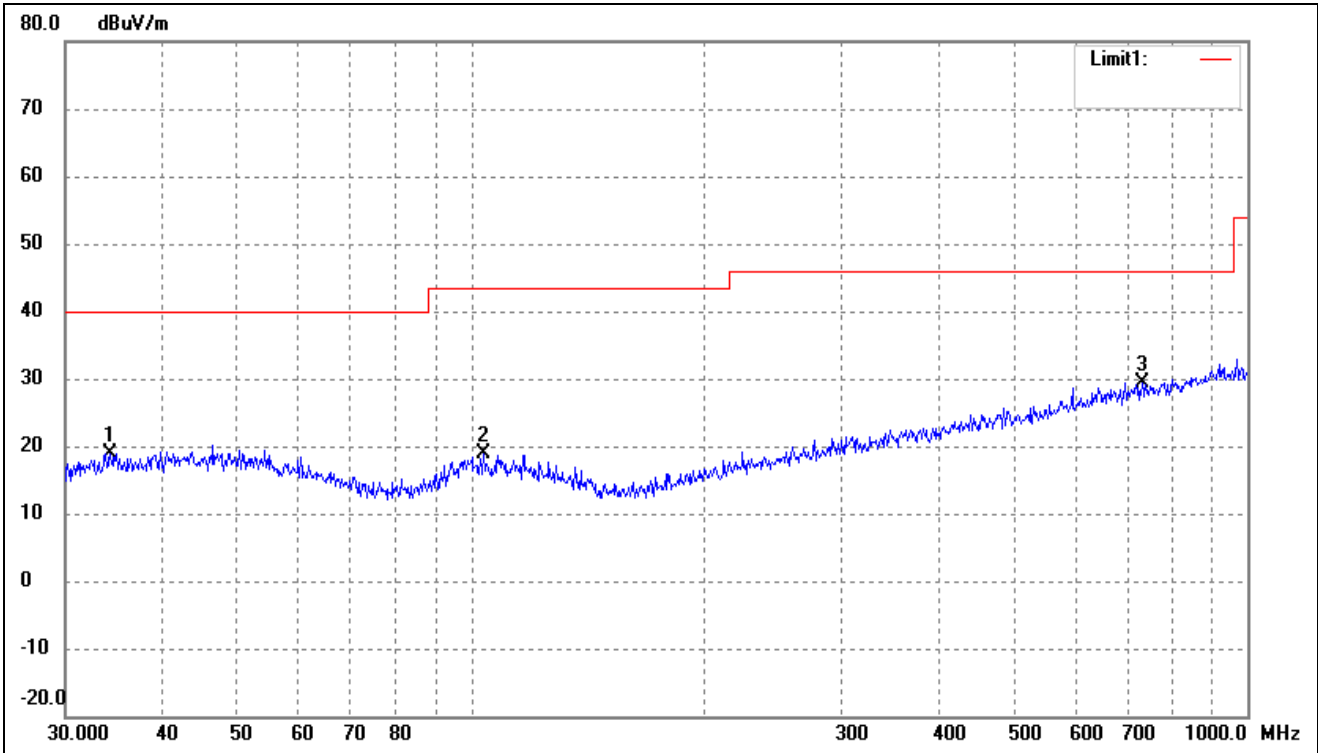
802.11ac-HT80			
Test Channel	5210MHz(worst case)	Polarity:	Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	46.5030	27.65	-7.25	20.40	40.00	-19.60	-	-	peak
2	102.7192	27.75	-8.08	19.67	43.50	-23.83	-	-	peak
3	711.6734	28.22	1.47	29.69	46.00	-16.31	-	-	peak

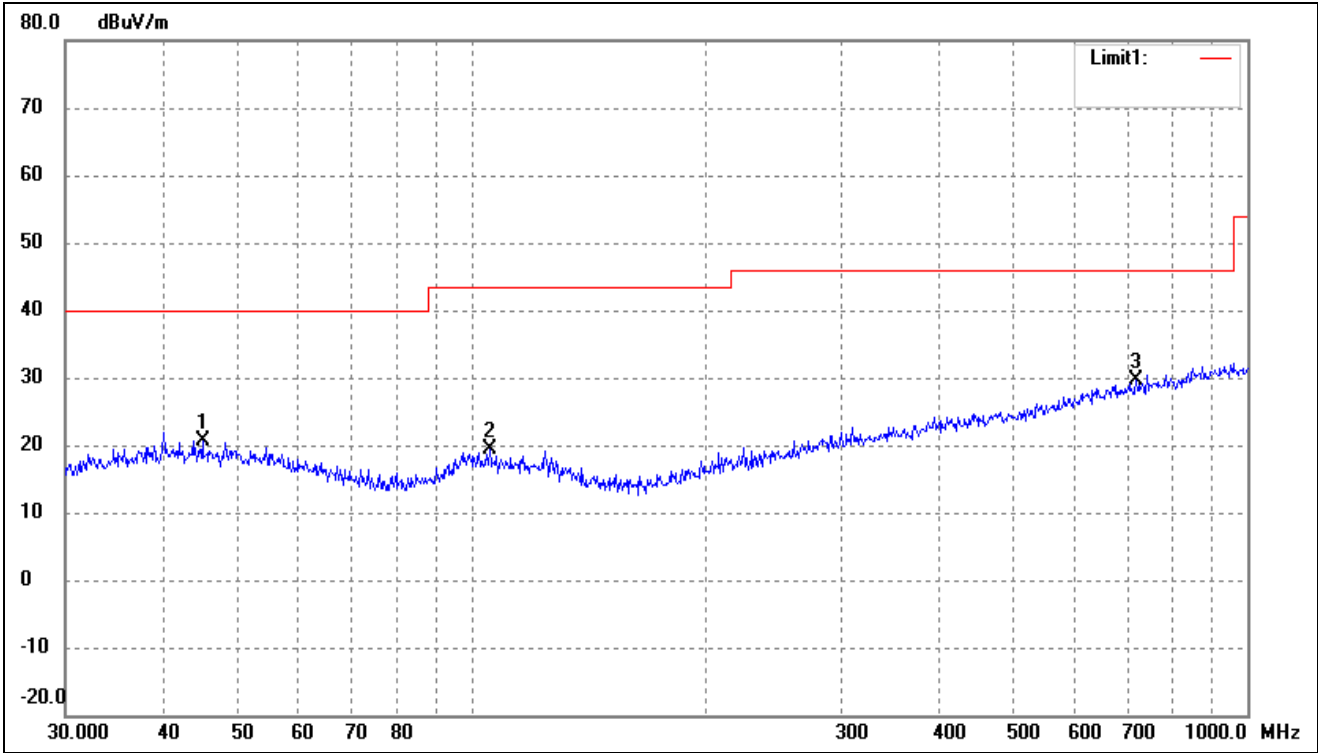
➤ 5250-5350MHz

802.11a			
Test Channel	5260MHz	Polarity:	Horizontal



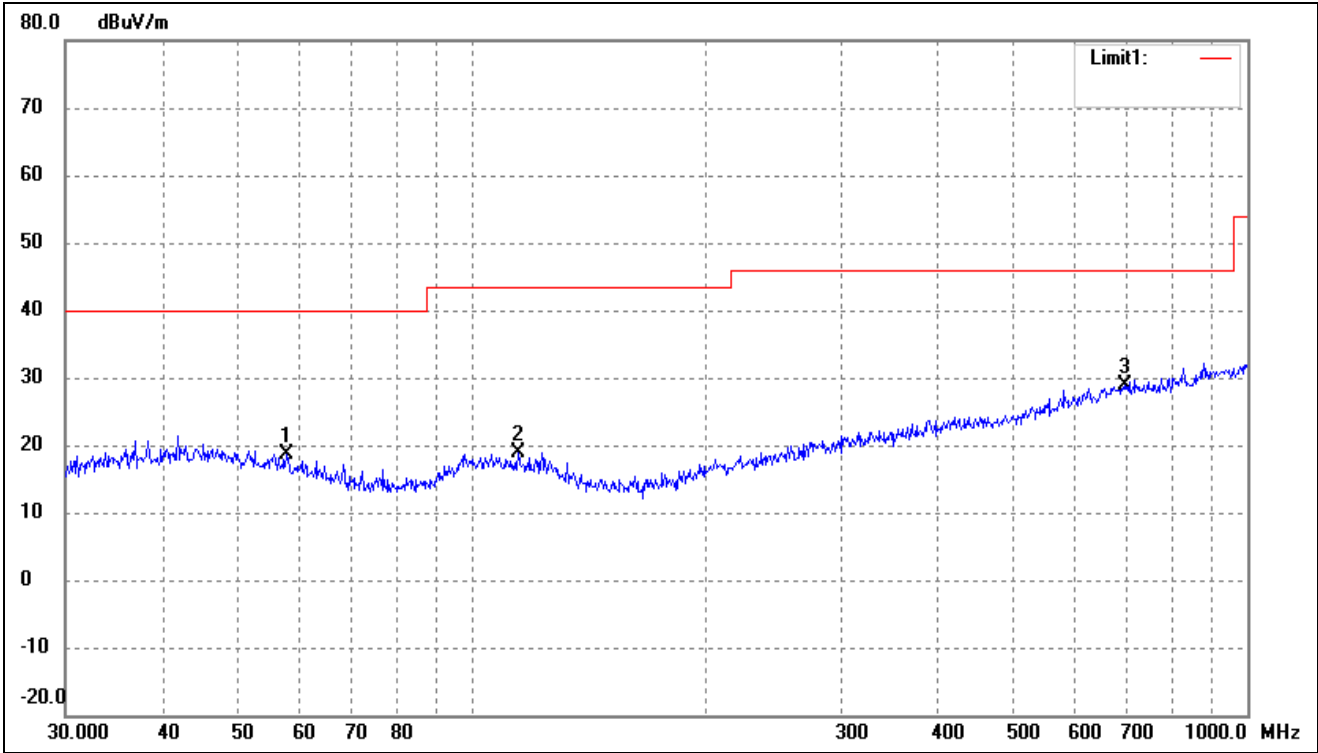
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	34.2760	27.37	-8.37	19.00	40.00	-21.00	-	-	peak
2	103.8055	27.02	-8.09	18.93	43.50	-24.57	-	-	peak
3	731.9203	27.74	1.65	29.39	46.00	-16.61	-	-	peak

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



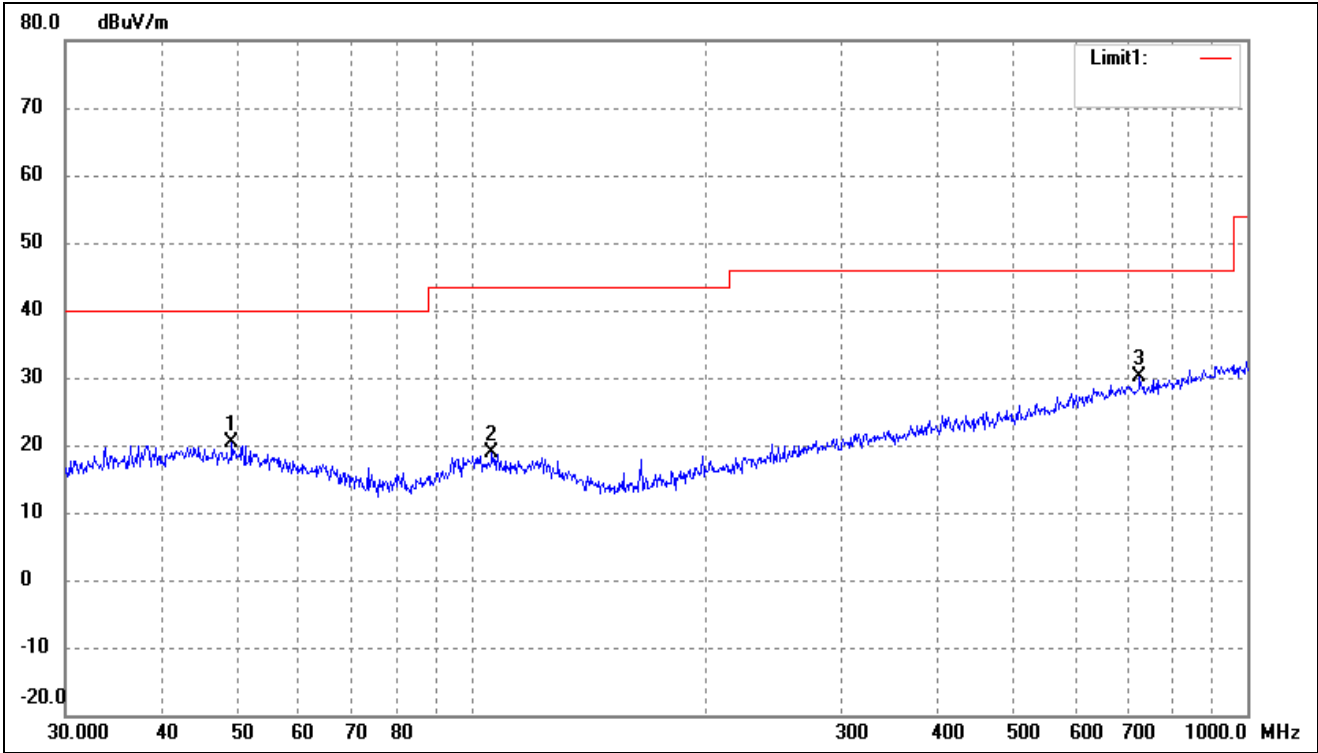
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	45.0583	27.76	-7.22	20.54	40.00	-19.46	-	-	peak
2	105.6415	27.54	-8.10	19.44	43.50	-24.06	-	-	peak
3	719.1995	28.00	1.53	29.53	46.00	-16.47	-	-	peak

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



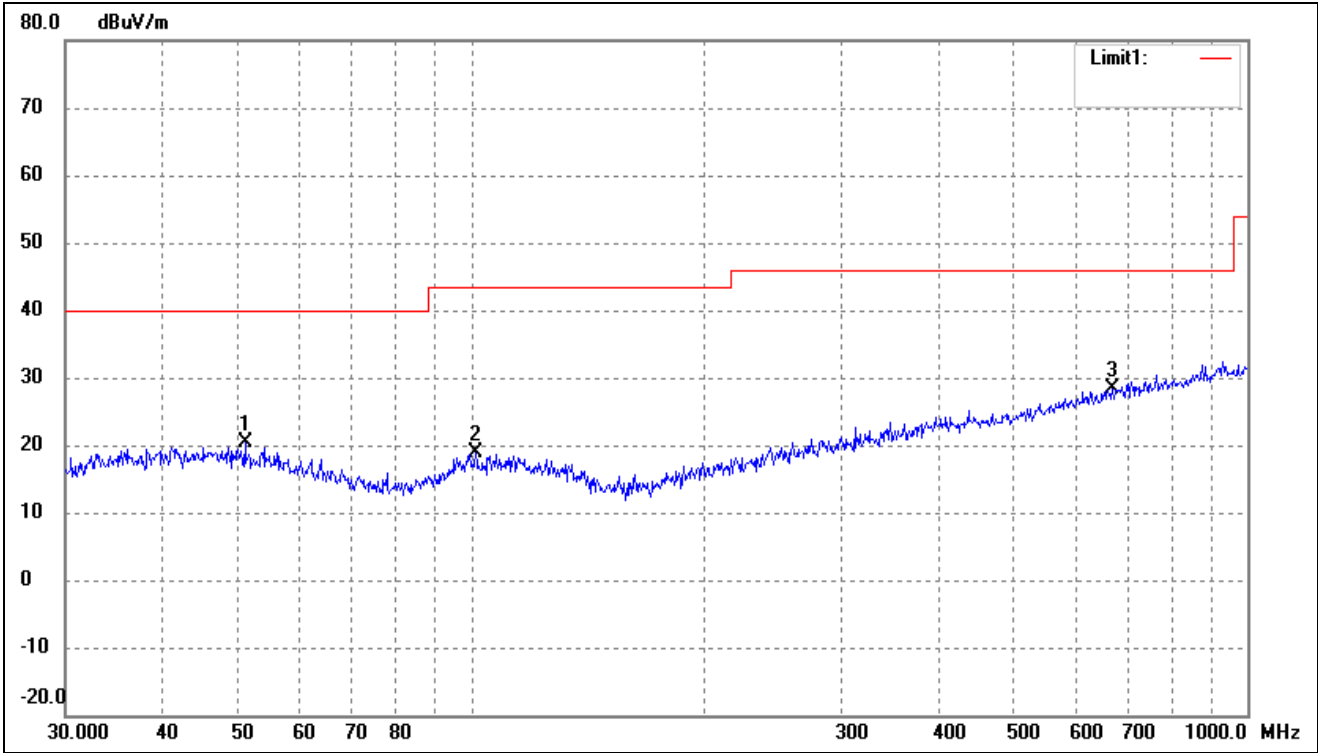
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	57.7962	27.38	-8.67	18.71	40.00	-21.29	-	-	peak
2	114.9169	27.35	-8.48	18.87	43.50	-24.63	-	-	peak
3	694.4174	27.55	1.28	28.83	46.00	-17.17	-	-	peak

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



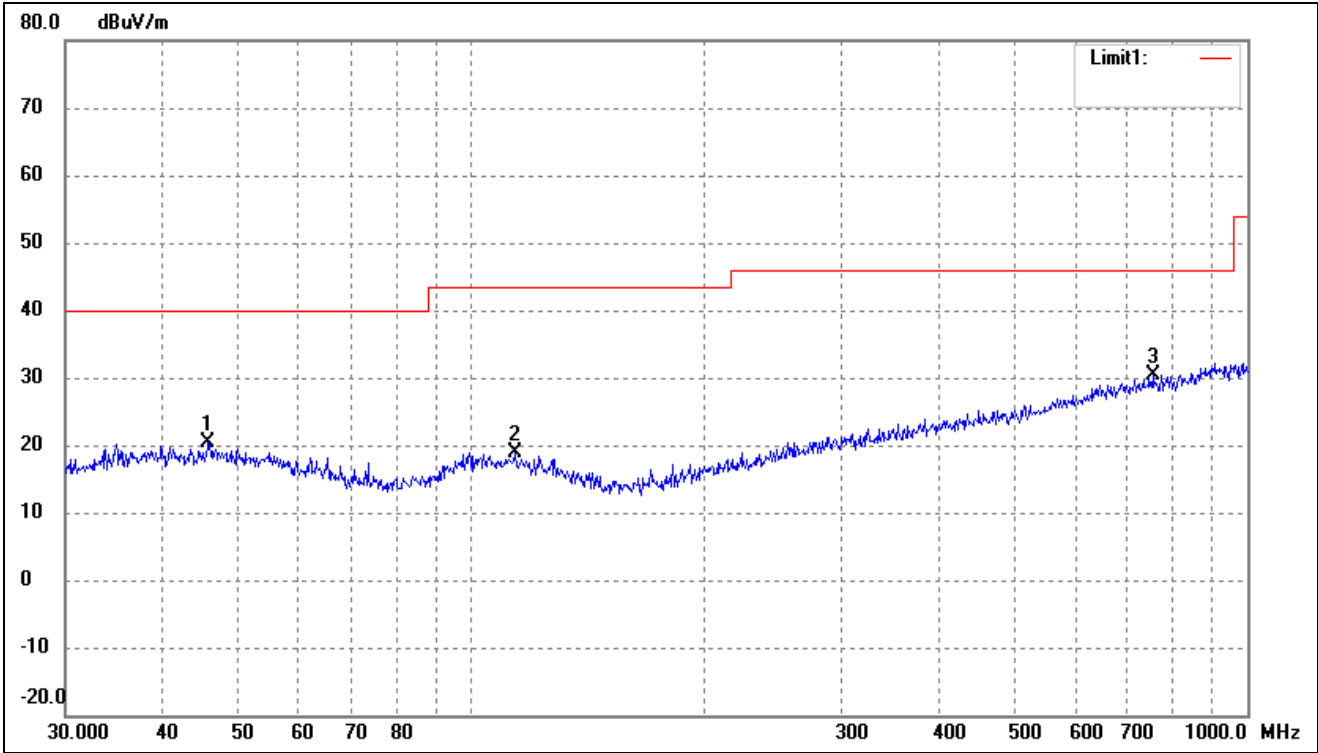
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	49.1866	27.76	-7.31	20.45	40.00	-19.55	-	-	peak
2	106.3850	27.01	-8.12	18.89	43.50	-24.61	-	-	peak
3	726.8052	28.44	1.61	30.05	46.00	-15.95	-	-	peak

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



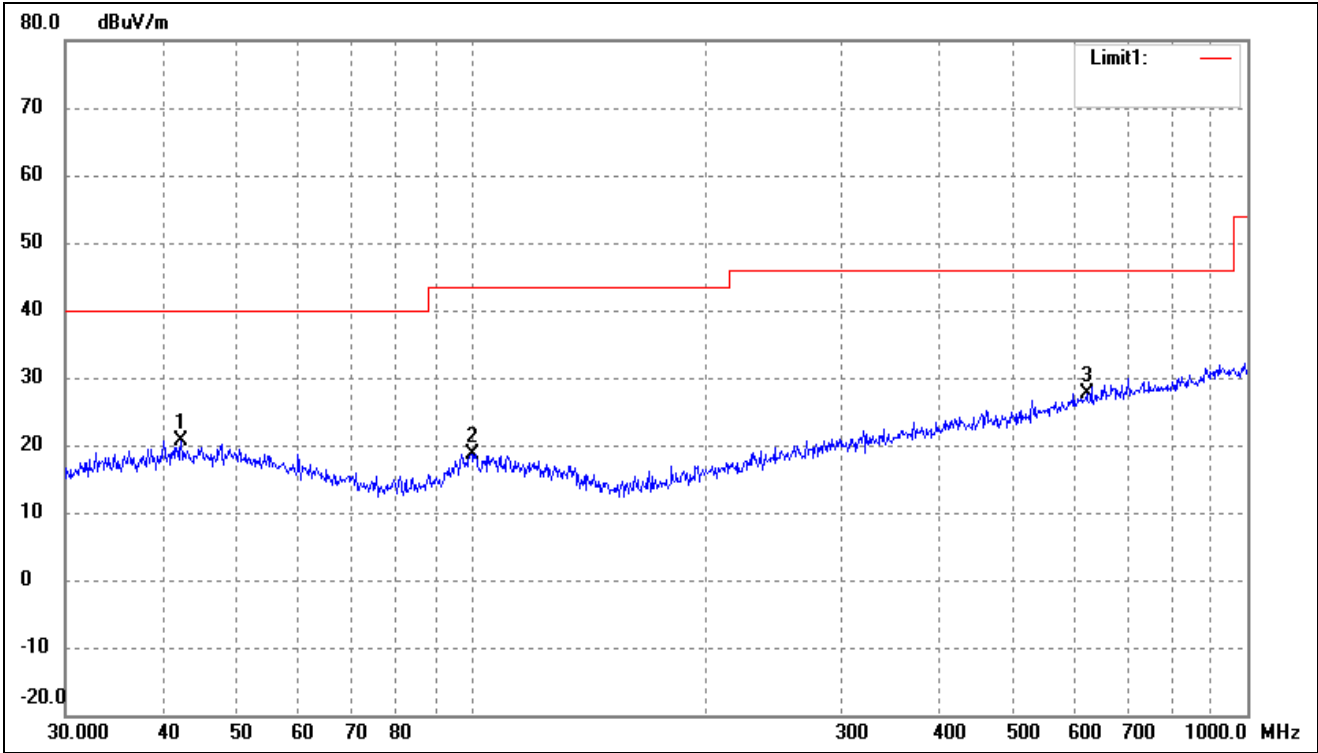
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	51.1209	27.99	-7.51	20.48	40.00	-19.52	-	-	peak
2	101.2885	27.00	-8.07	18.93	43.50	-24.57	-	-	peak
3	670.4893	27.49	0.90	28.39	46.00	-17.61	-	-	peak

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



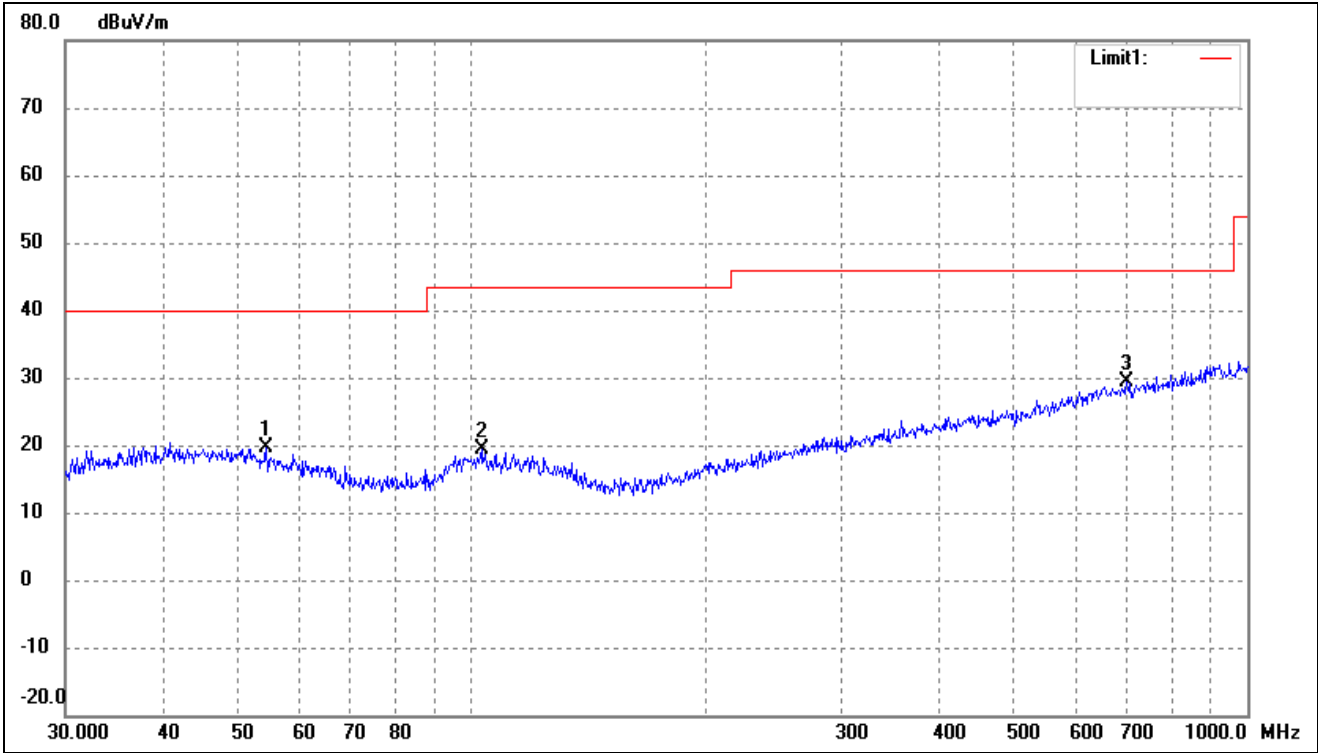
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	45.8553	27.64	-7.24	20.40	40.00	-19.60	-	-	peak
2	113.7143	27.25	-8.39	18.86	43.50	-24.64	-	-	peak
3	755.3873	28.42	1.87	30.29	46.00	-15.71	-	-	peak

802.11ac-HT80			
Test Channel	5290MHz(worst case)	Polarity:	Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	42.3022	27.85	-7.16	20.69	40.00	-19.31	-	-	peak
2	100.2286	26.80	-8.06	18.74	43.50	-24.76	-	-	peak
3	620.7096	27.54	0.16	27.70	46.00	-18.30	-	-	peak

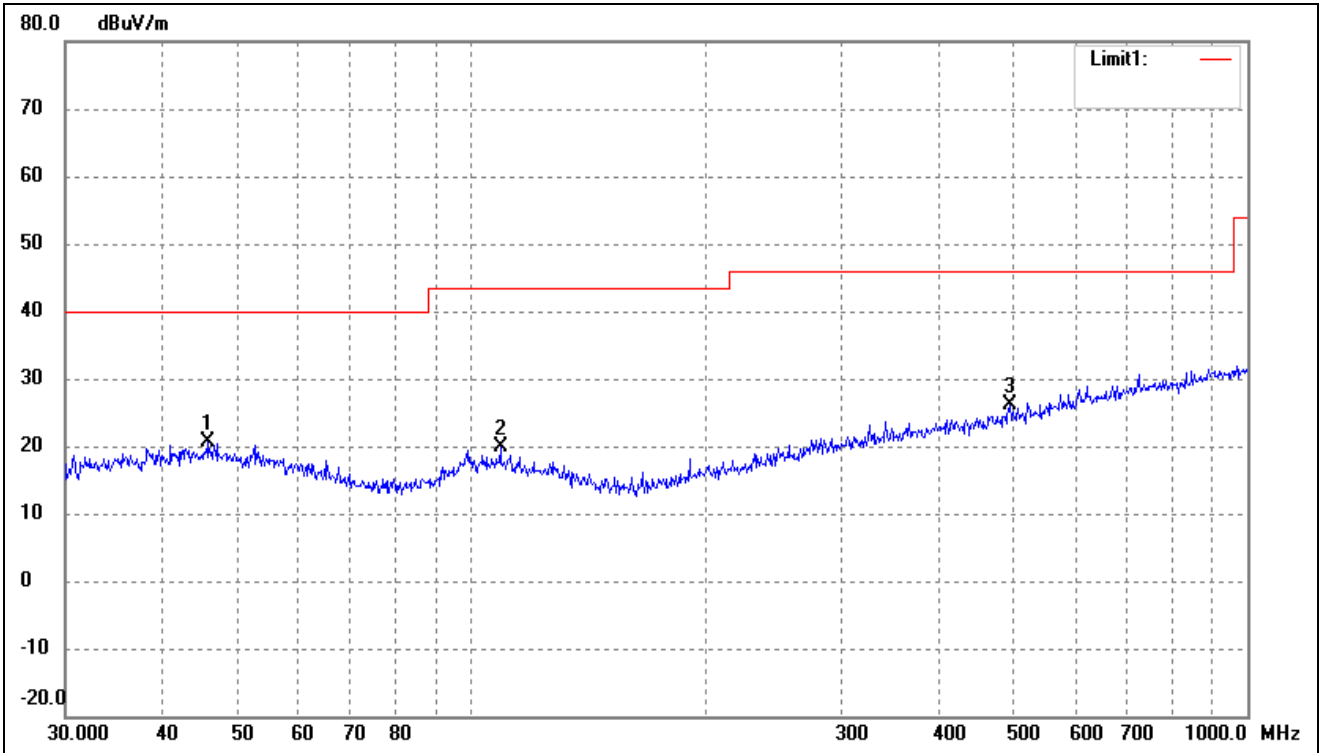
802.11ac-HT80			
Test Channel	5290MHz(worst case)	Polarity:	Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	54.4516	27.84	-8.09	19.75	40.00	-20.25	-	-	peak
2	103.0800	27.36	-8.08	19.28	43.50	-24.22	-	-	peak
3	699.3046	28.01	1.36	29.37	46.00	-16.63	-	-	peak

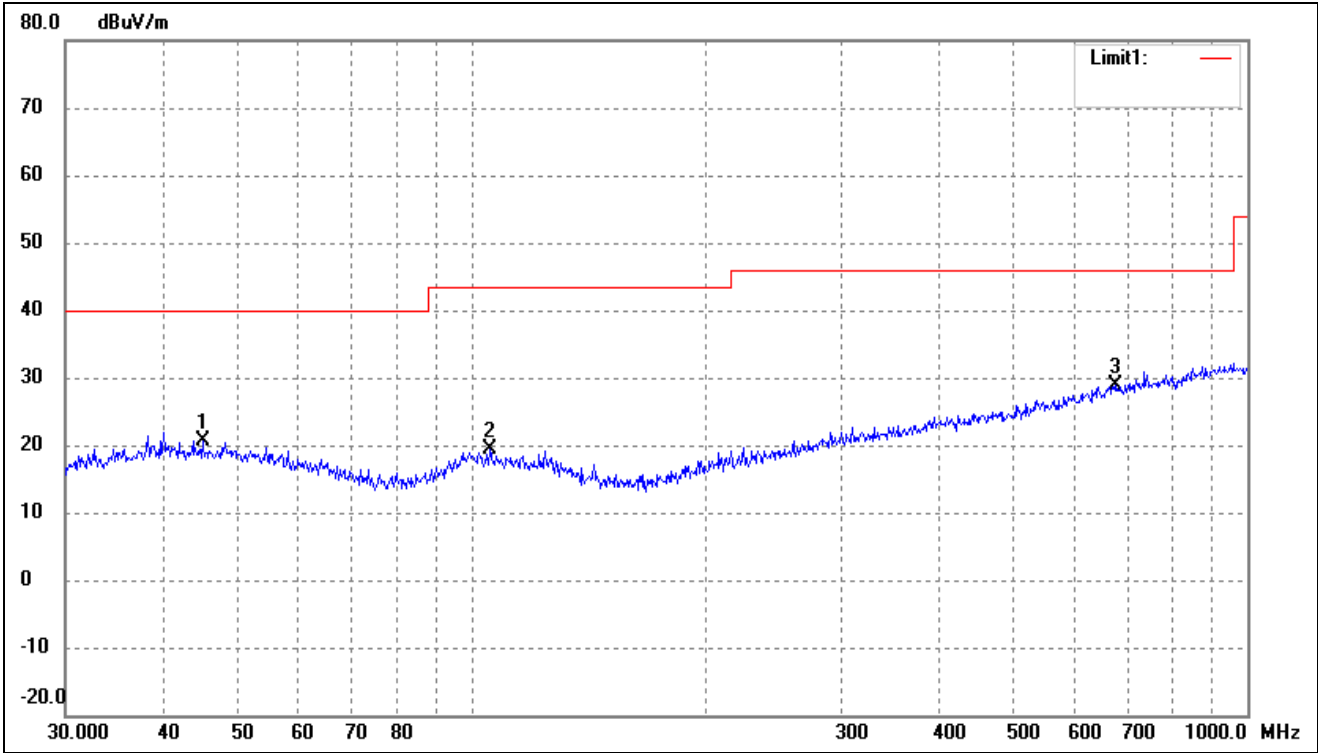
➤ 5470-5725MHz

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



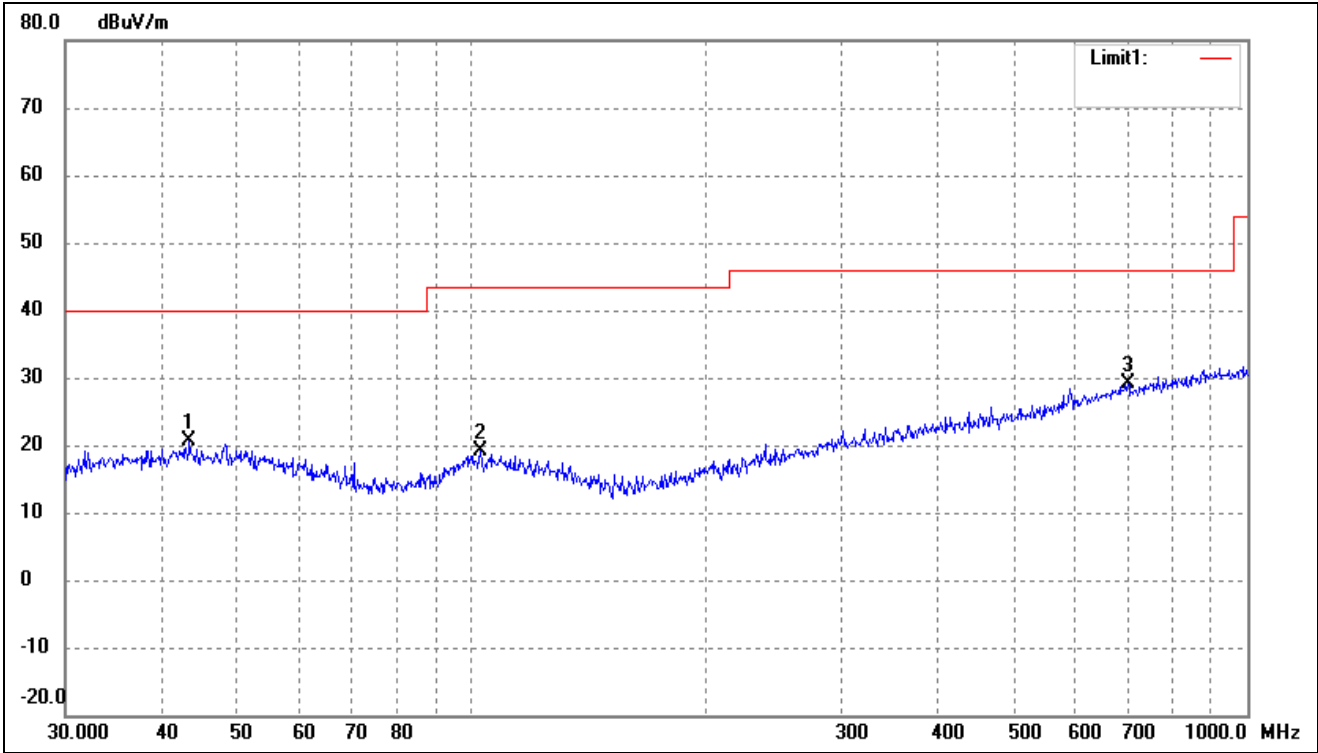
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	45.8553	27.95	-7.24	20.71	40.00	-19.29	-	-	peak
2	109.0286	28.01	-8.13	19.88	43.50	-23.62	-	-	peak
3	494.1984	28.40	-2.26	26.14	46.00	-19.86	-	-	peak

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



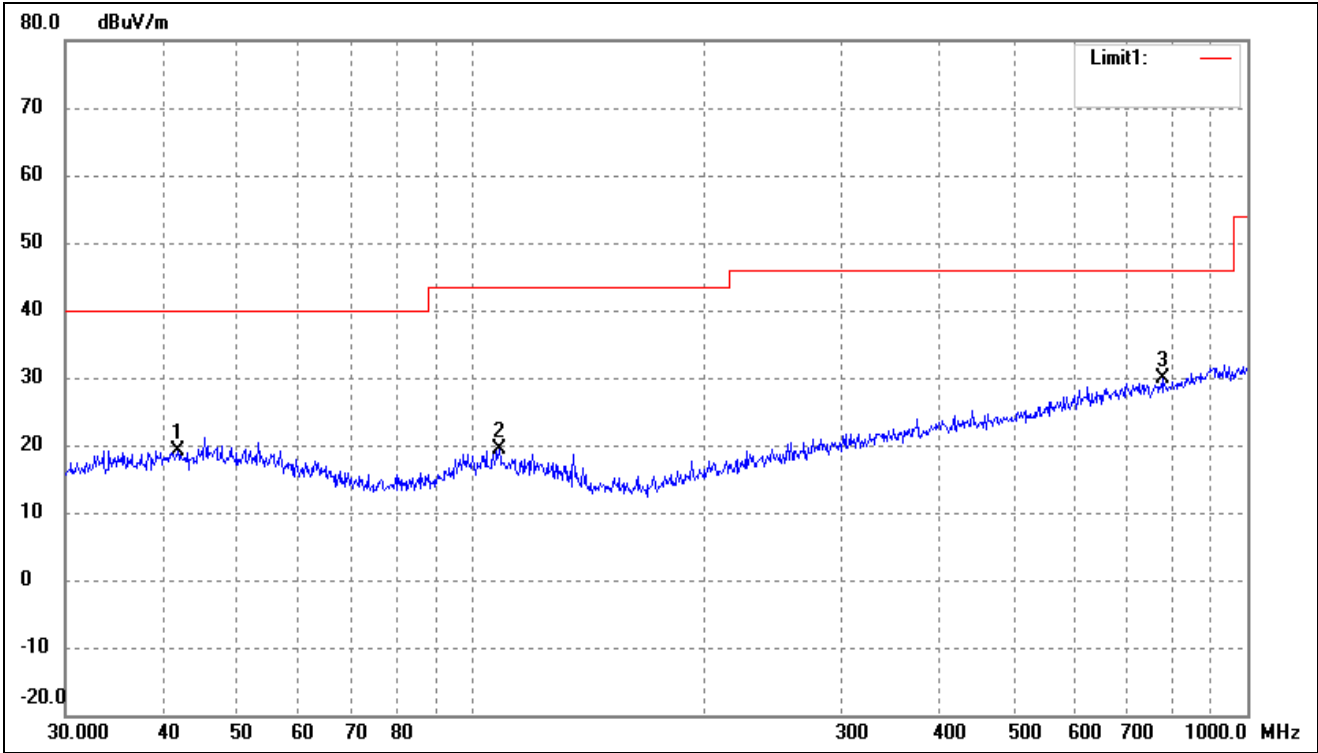
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	45.0583	27.76	-7.22	20.54	40.00	-19.46	-	-	peak
2	105.6415	27.54	-8.10	19.44	43.50	-24.06	-	-	peak
3	677.5798	27.79	1.01	28.80	46.00	-17.20	-	-	peak

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



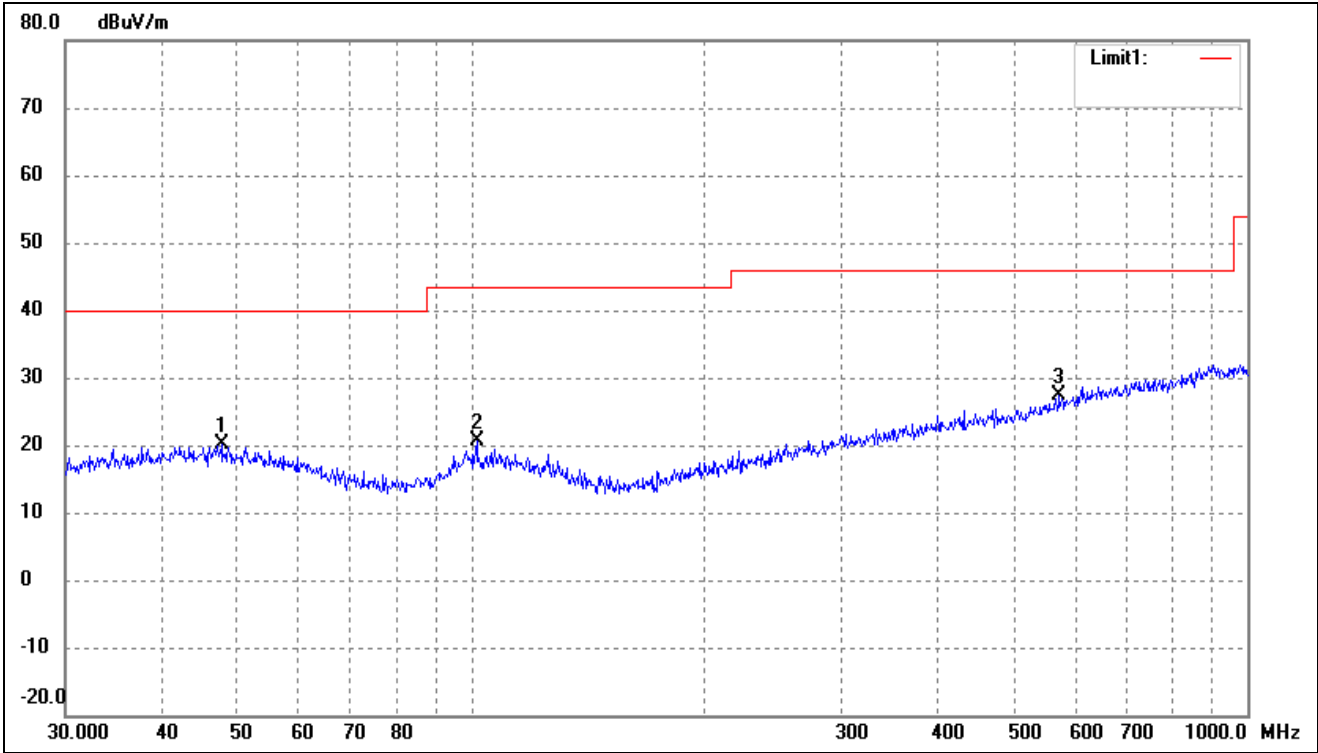
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	43.3534	27.93	-7.18	20.75	40.00	-19.25	-	-	peak
2	102.7192	27.12	-8.08	19.04	43.50	-24.46	-	-	peak
3	701.7610	27.80	1.38	29.18	46.00	-16.82	-	-	peak

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



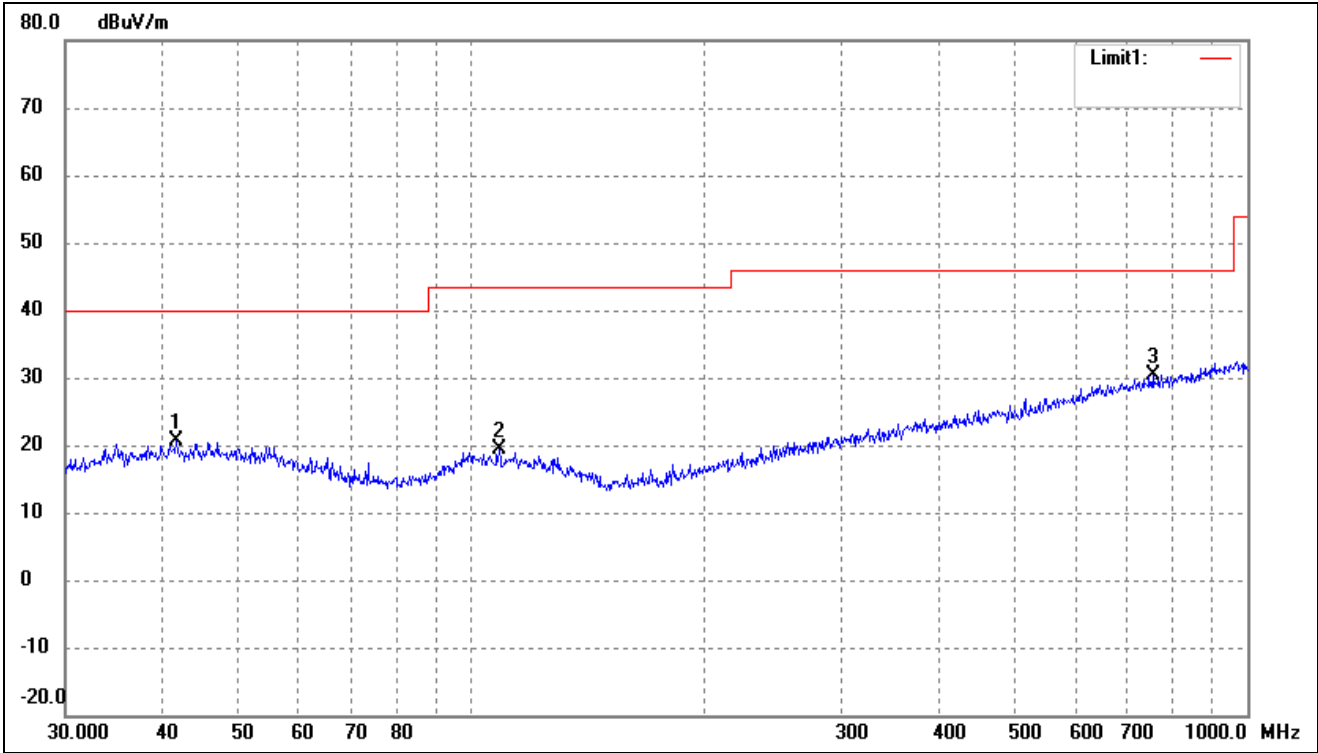
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	41.8596	26.26	-7.16	19.10	40.00	-20.90	-	-	peak
2	108.6470	27.47	-8.13	19.34	43.50	-24.16	-	-	peak
3	779.6068	27.85	2.13	29.98	46.00	-16.02	-	-	peak

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



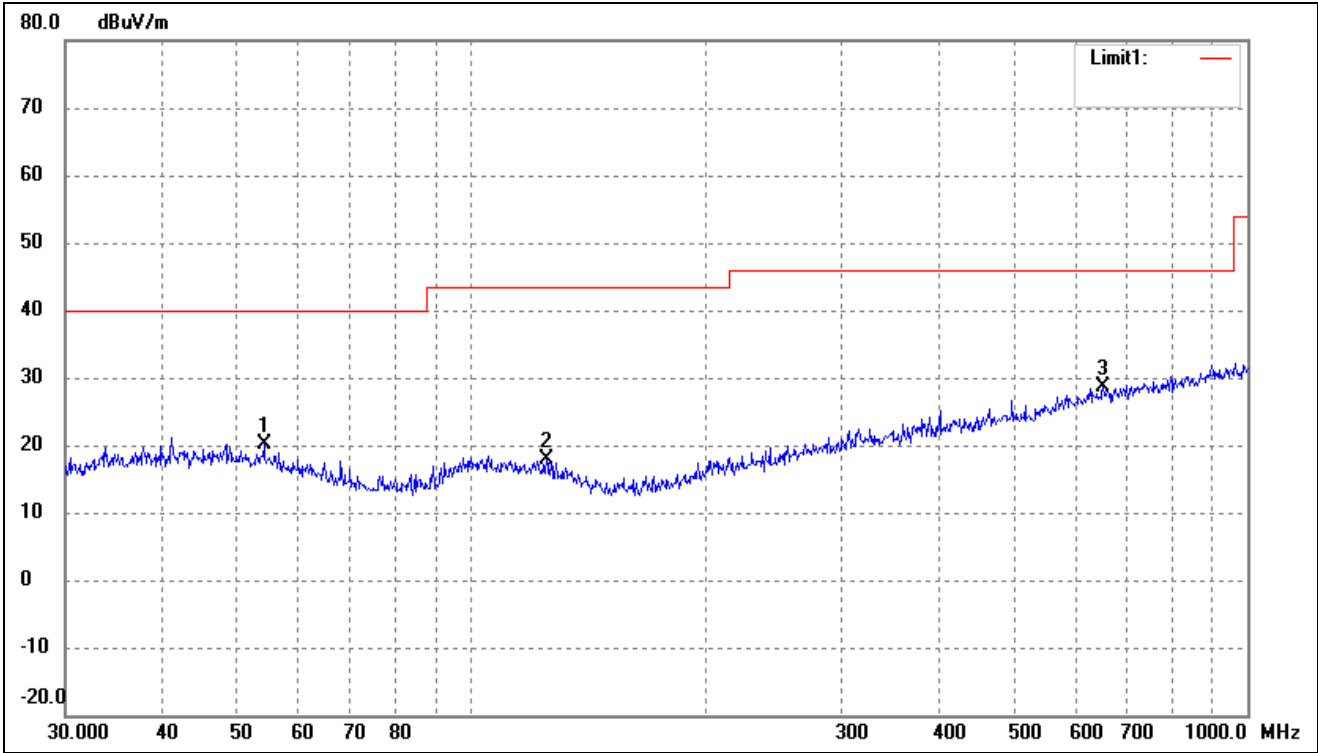
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	47.6586	27.29	-7.27	20.02	40.00	-19.98	-	-	peak
2	101.6443	28.61	-8.07	20.54	43.50	-22.96	-	-	peak
3	572.6144	27.94	-0.68	27.26	46.00	-18.74	-	-	peak

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



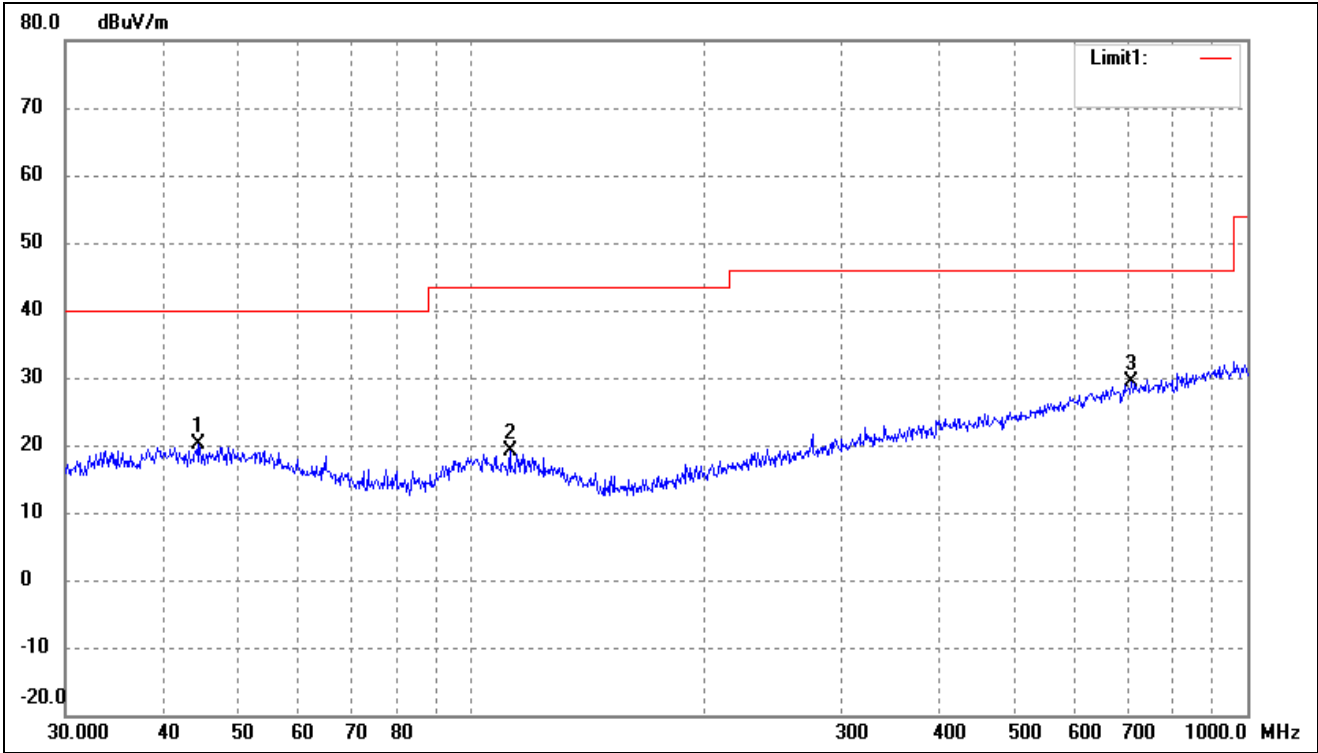
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	41.7130	27.74	-7.15	20.59	40.00	-19.41	-	-	peak
2	108.6470	27.44	-8.13	19.31	43.50	-24.19	-	-	peak
3	755.3873	28.42	1.87	30.29	46.00	-15.71	-	-	peak

802.11ac-HT80			
Test Channel	5530MHz(worst case)	Polarity:	Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	54.0711	28.23	-8.02	20.21	40.00	-19.79	-	-	peak
2	125.0066	27.57	-9.71	17.86	43.50	-25.64	-	-	peak
3	651.9417	28.02	0.60	28.62	46.00	-17.38	-	-	peak

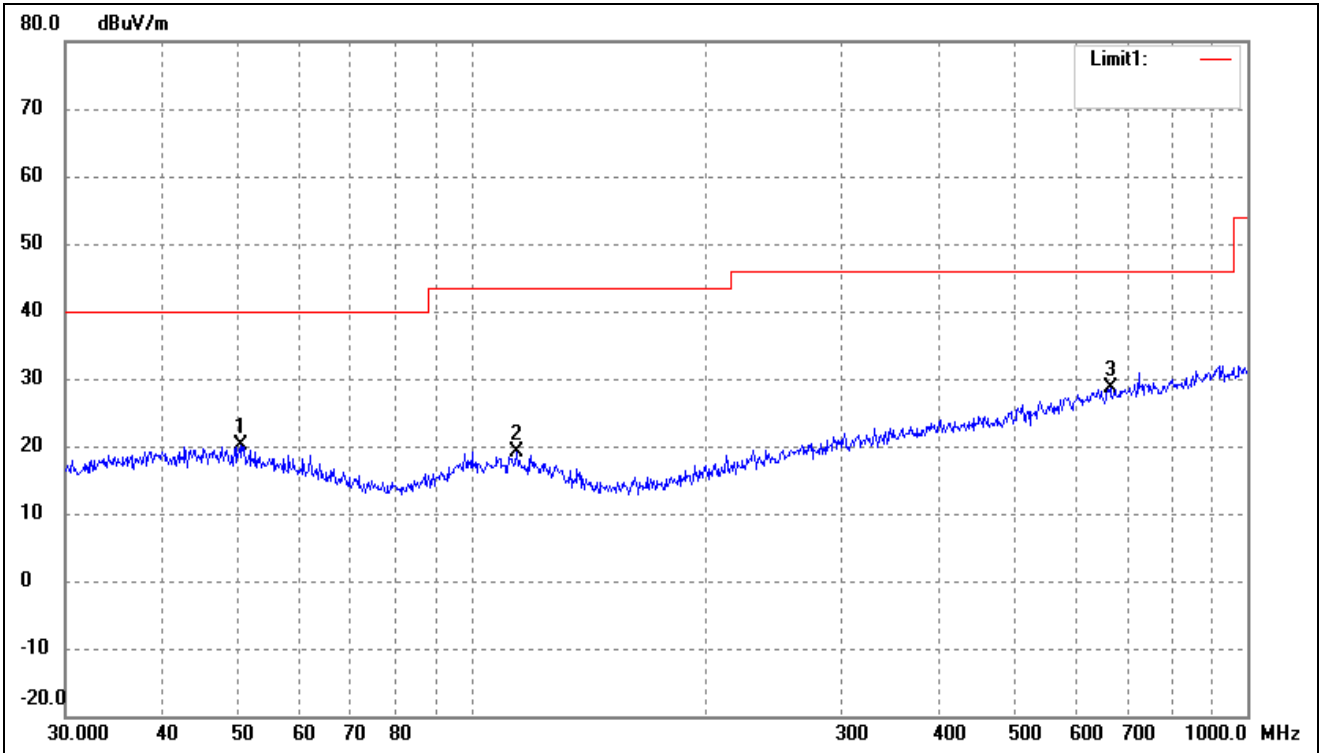
802.11ac-HT80			
Test Channel	5530MHz(worst case)	Polarity:	Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	44.5868	27.37	-7.21	20.16	40.00	-19.84	-	-	peak
2	112.1305	27.36	-8.29	19.07	43.50	-24.43	-	-	peak
3	709.1823	27.97	1.45	29.42	46.00	-16.58	-	-	peak

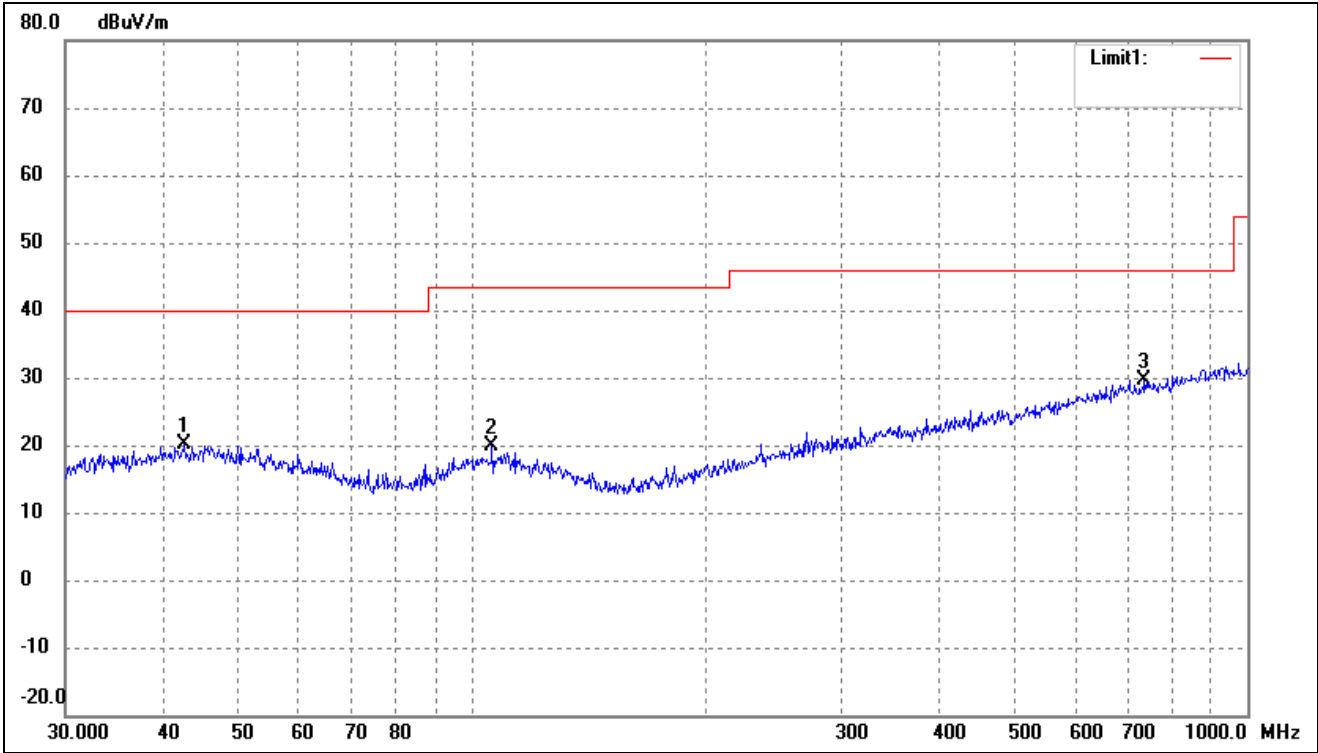
➤ 5725-5850MHz

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



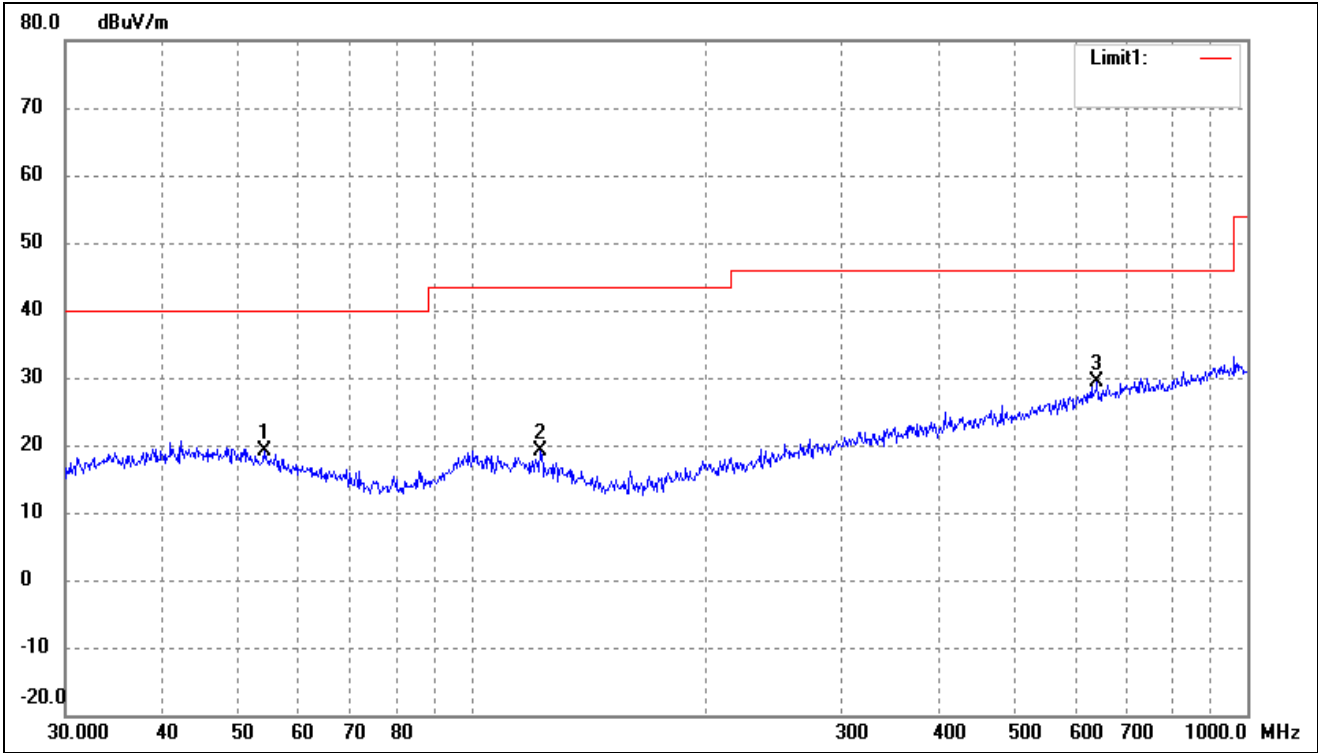
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	50.4089	27.62	-7.39	20.23	40.00	-19.77	-	-	peak
2	114.5146	27.61	-8.45	19.16	43.50	-24.34	-	-	peak
3	665.8035	27.85	0.82	28.67	46.00	-17.33	-	-	peak

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



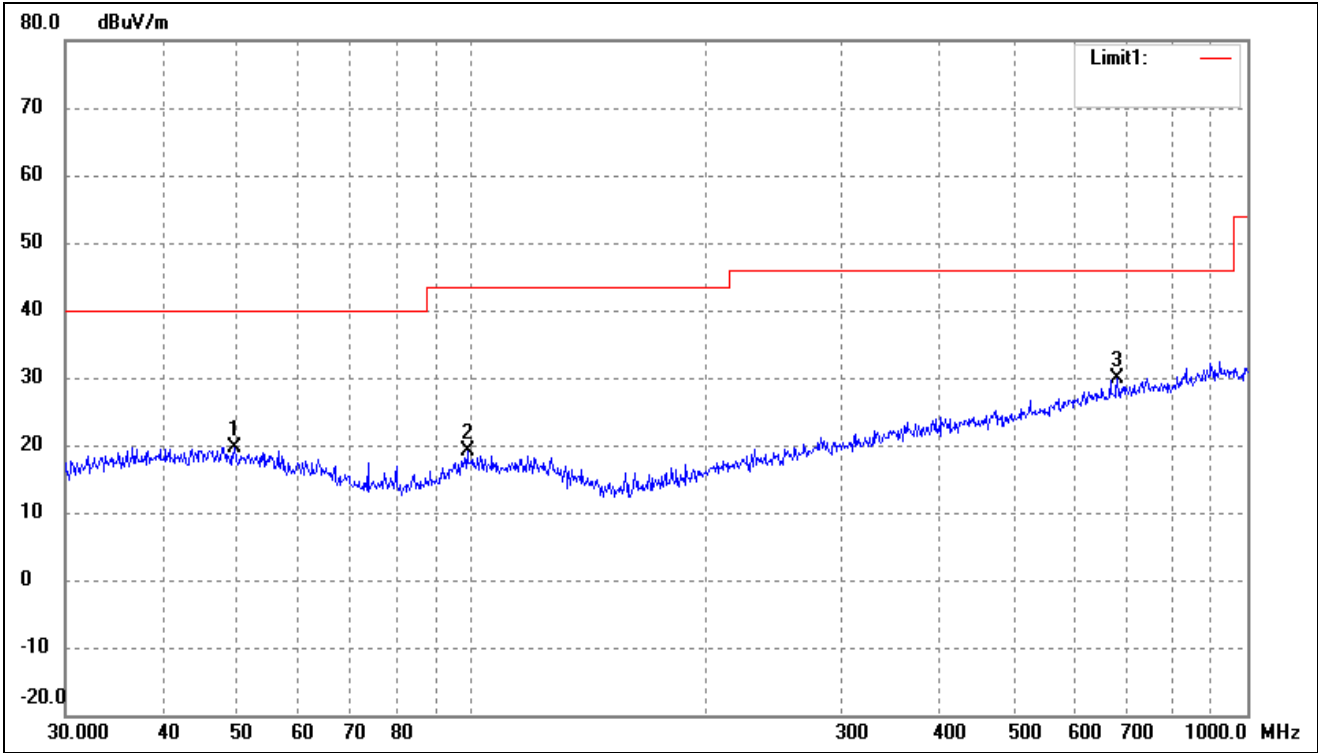
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	42.7496	27.24	-7.17	20.07	40.00	-19.93	-	-	peak
2	106.3850	27.92	-8.12	19.80	43.50	-23.70	-	-	peak
3	737.0714	27.97	1.70	29.67	46.00	-16.33	-	-	peak

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



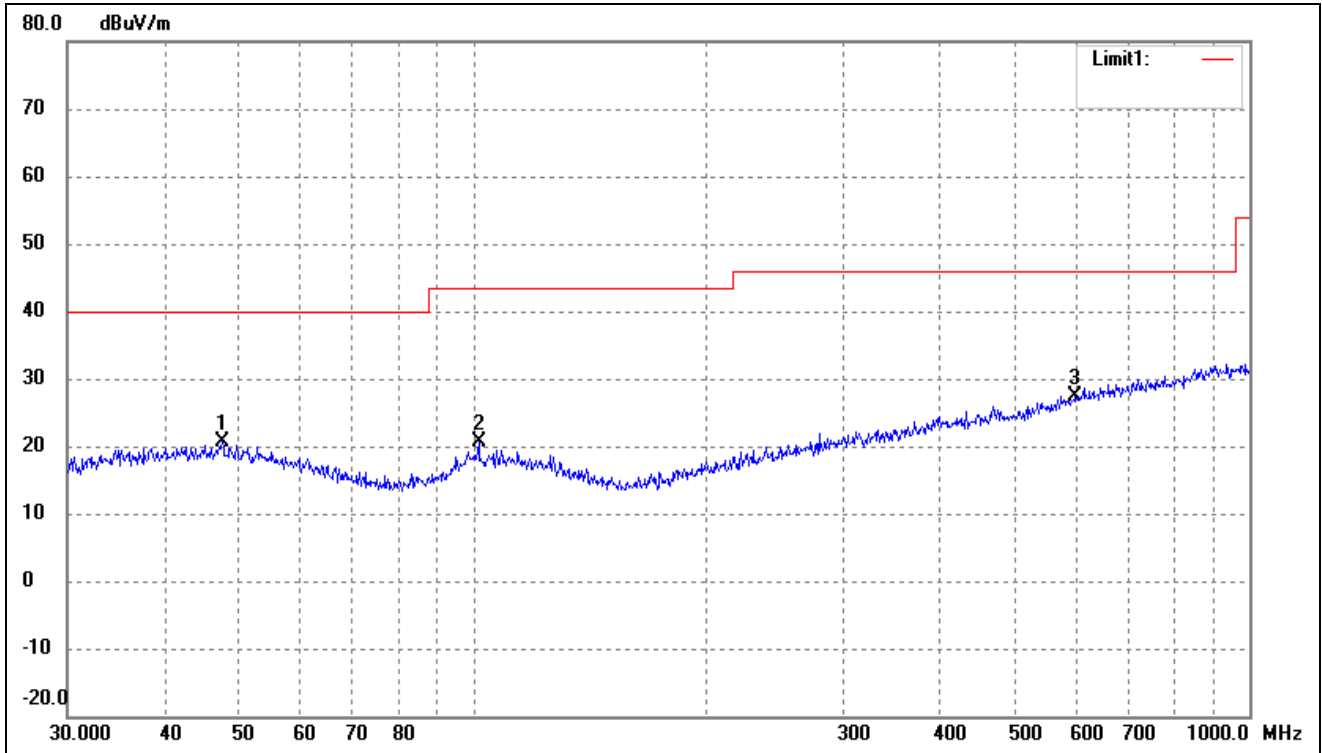
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	54.0711	27.06	-8.02	19.04	40.00	-20.96	-	-	peak
2	122.8340	28.53	-9.33	19.20	43.50	-24.30	-	-	peak
3	640.6110	28.98	0.44	29.42	46.00	-16.58	-	-	peak

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



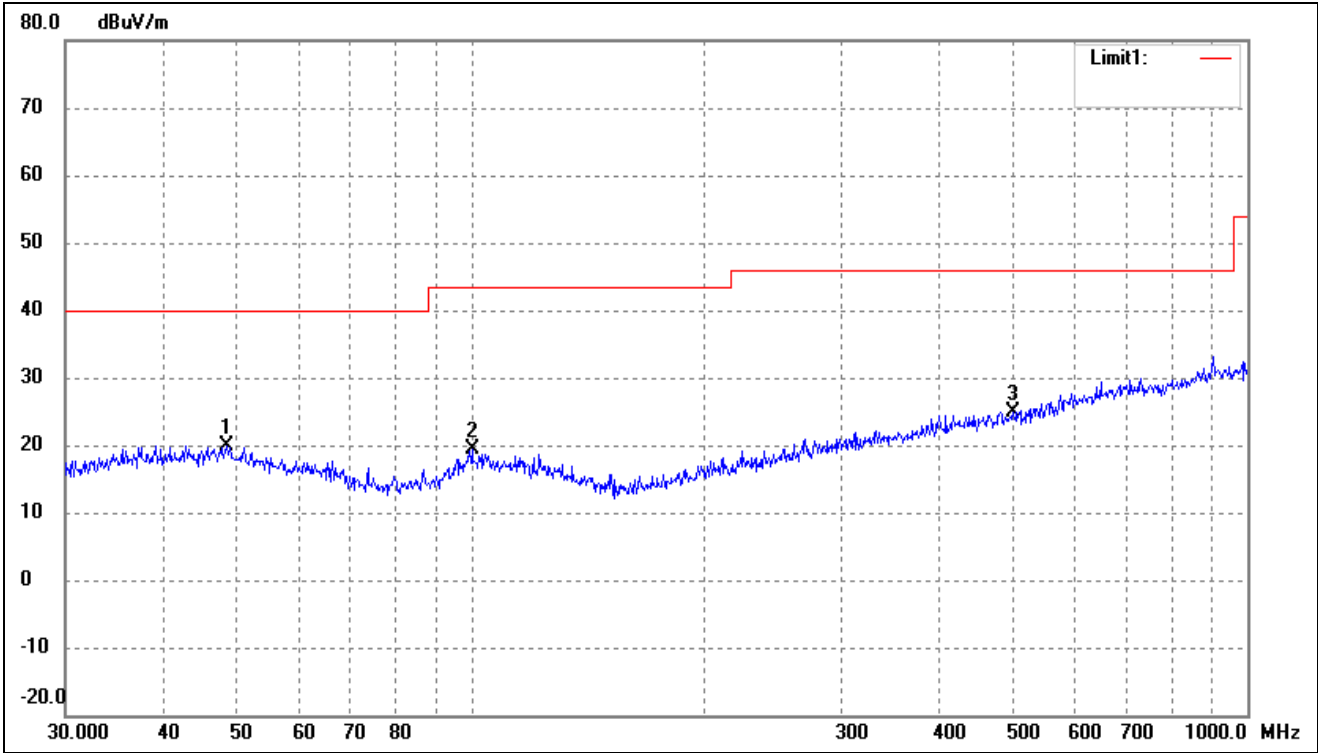
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	49.5328	26.90	-7.32	19.58	40.00	-20.42	-	-	peak
2	98.8326	27.46	-8.38	19.08	43.50	-24.42	-	-	peak
3	679.9600	28.93	1.05	29.98	46.00	-16.02	-	-	peak

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



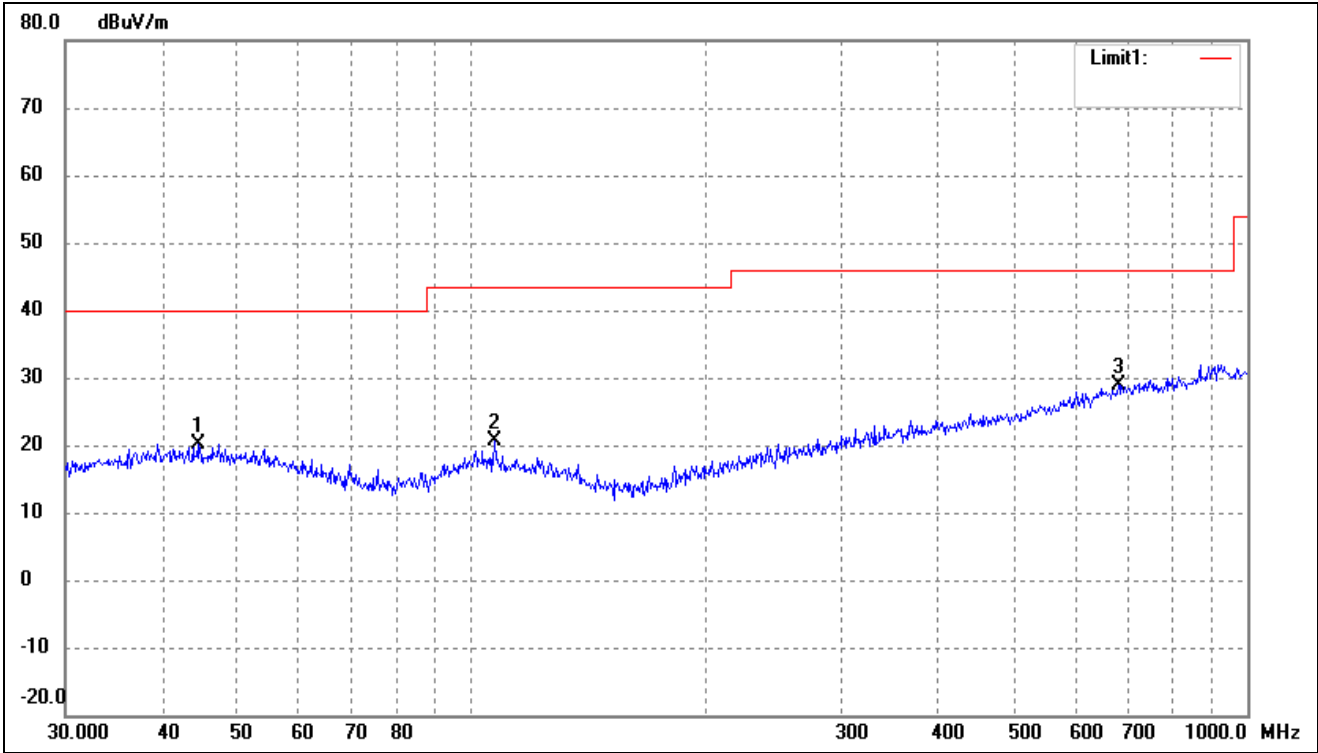
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	47.4918	27.97	-7.26	20.71	40.00	-19.29	-	-	peak
2	101.6443	28.61	-8.07	20.54	43.50	-22.96	-	-	peak
3	597.2234	27.47	-0.20	27.27	46.00	-18.73	-	-	peak

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



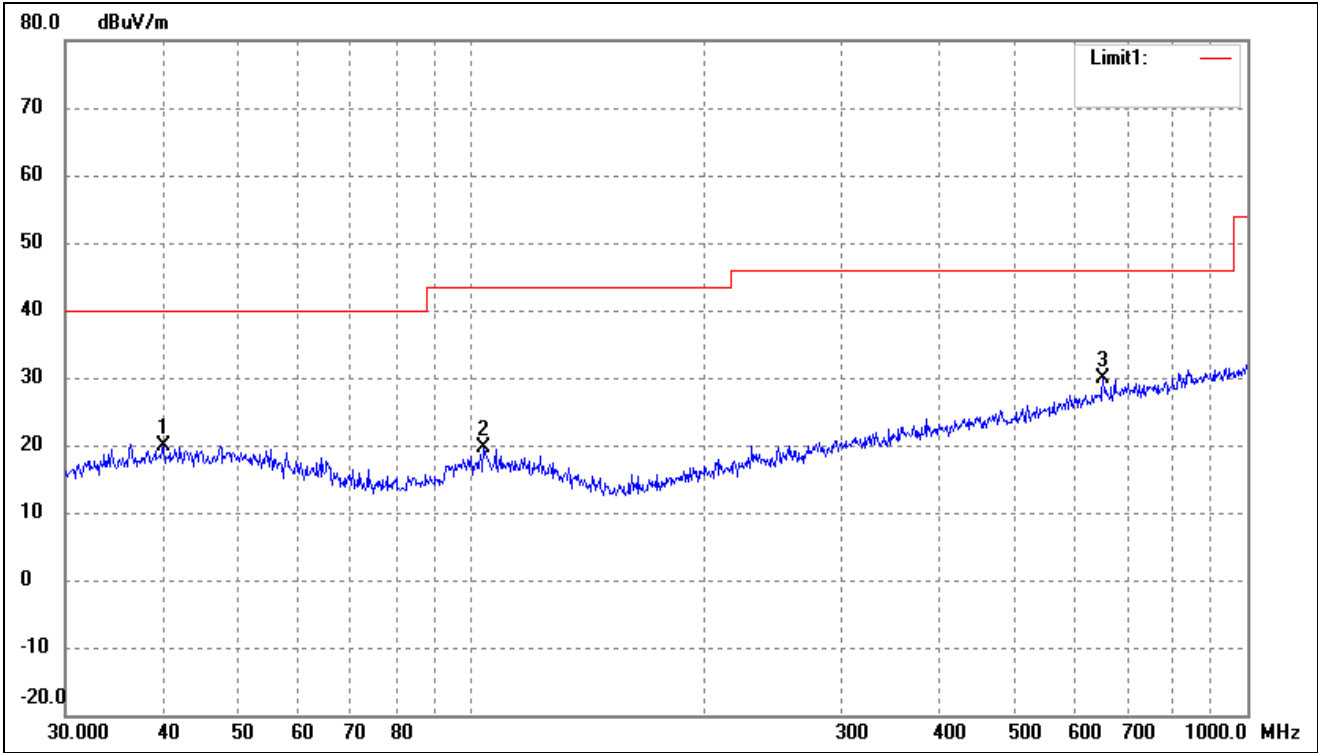
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	48.5016	27.12	-7.30	19.82	40.00	-20.18	-	-	peak
2	100.2286	27.34	-8.06	19.28	43.50	-24.22	-	-	peak
3	499.4247	27.03	-2.20	24.83	46.00	-21.17	-	-	peak

802.11ac-HT80			
Test Channel	5775MHz(worst case)	Polarity:	Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	44.4308	27.44	-7.21	20.23	40.00	-19.77	-	-	peak
2	107.1337	28.75	-8.11	20.64	43.50	-22.86	-	-	peak
3	682.3485	27.89	1.09	28.98	46.00	-17.02	-	-	peak

802.11ac-HT80			
Test Channel	5775MHz(worst case)	Polarity:	Vertical

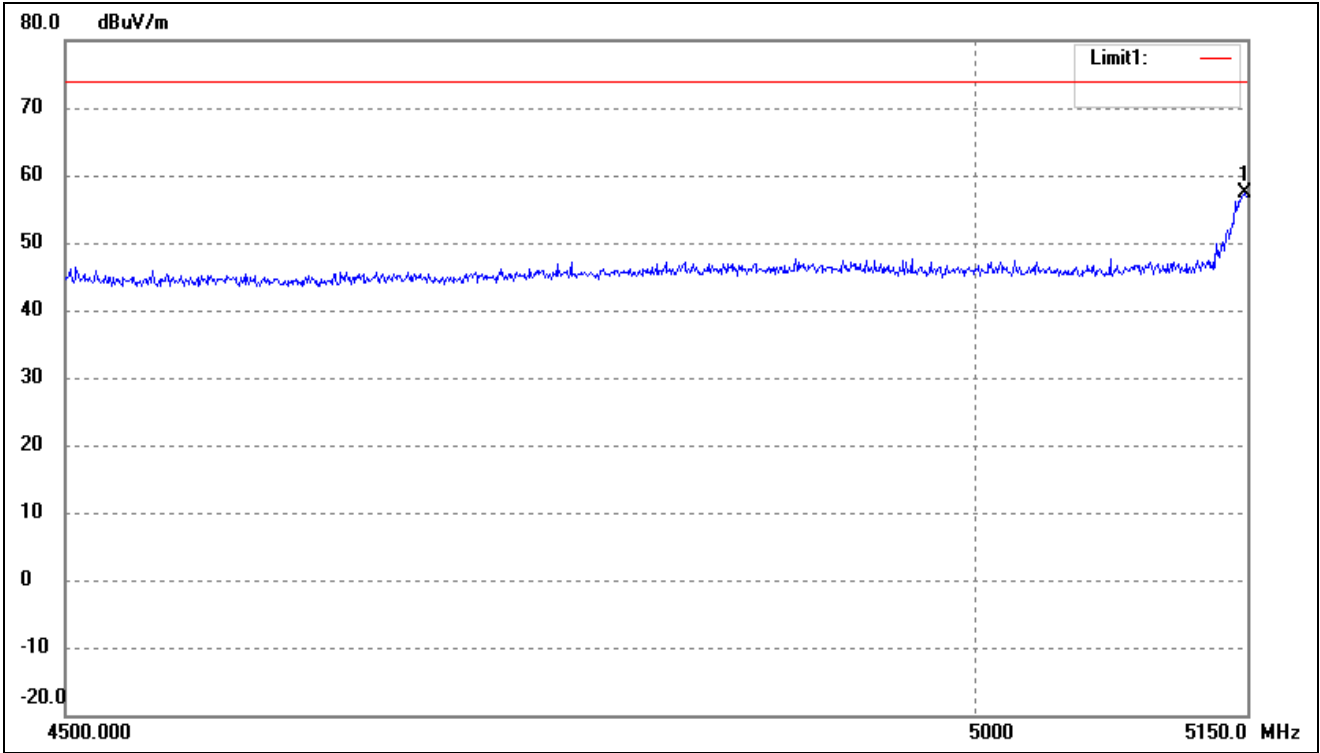


No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.1347	26.89	-7.12	19.77	40.00	-20.23	-	-	peak
2	103.8055	27.62	-8.09	19.53	43.50	-23.97	-	-	peak
3	651.9417	29.28	0.60	29.88	46.00	-16.12	-	-	peak

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

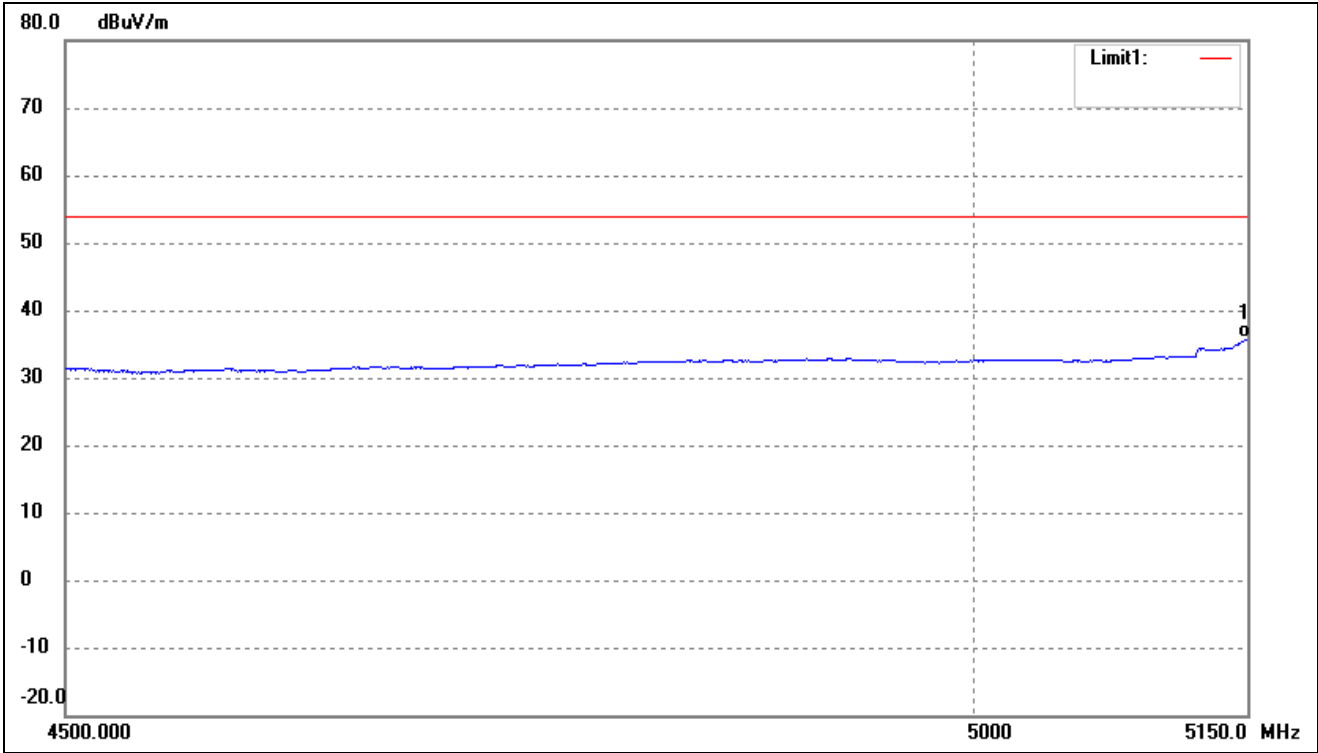
➤ Spurious Emission above 1GHz

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



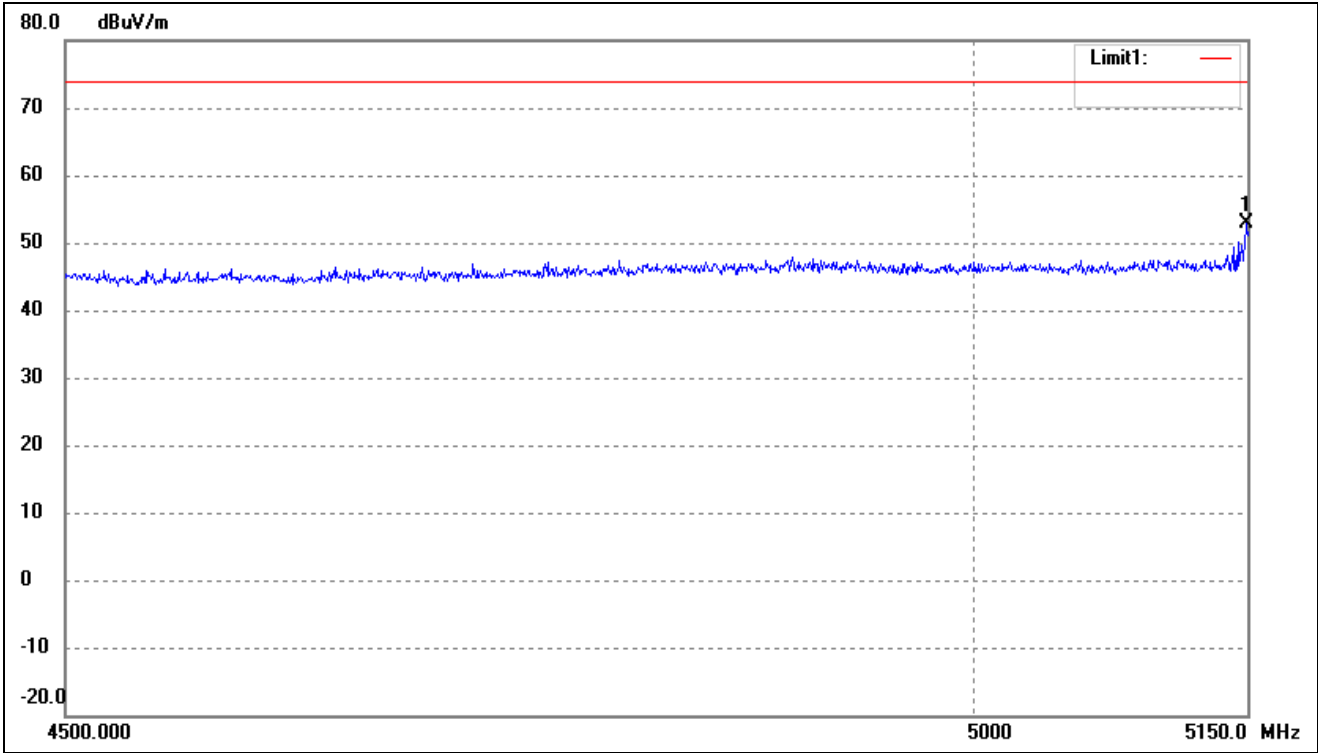
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5148.700	62.73	-5.33	57.40	74.00	-16.60	-	-	peak

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



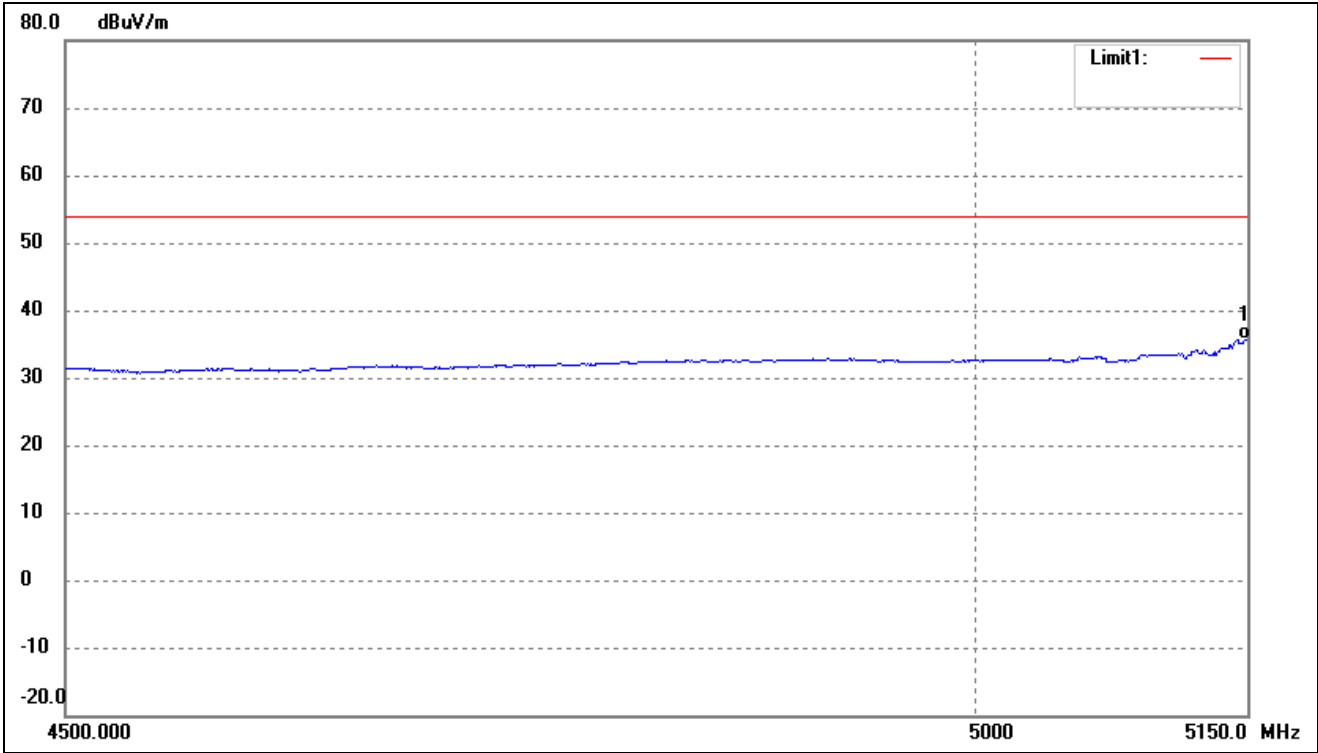
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5150.000	41.09	-5.33	35.76	54.00	-18.24	-	-	AVG

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



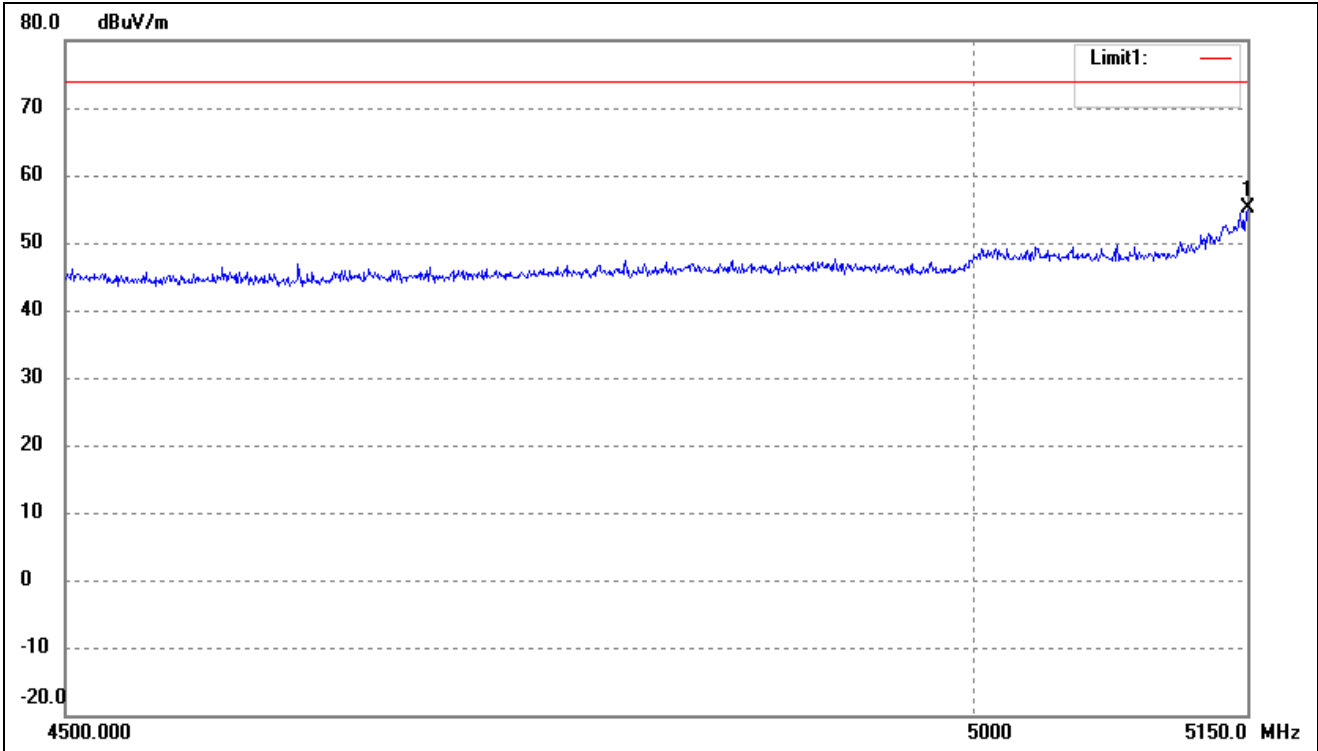
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5149.350	58.28	-5.33	52.95	74.00	-21.05	-	-	peak

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



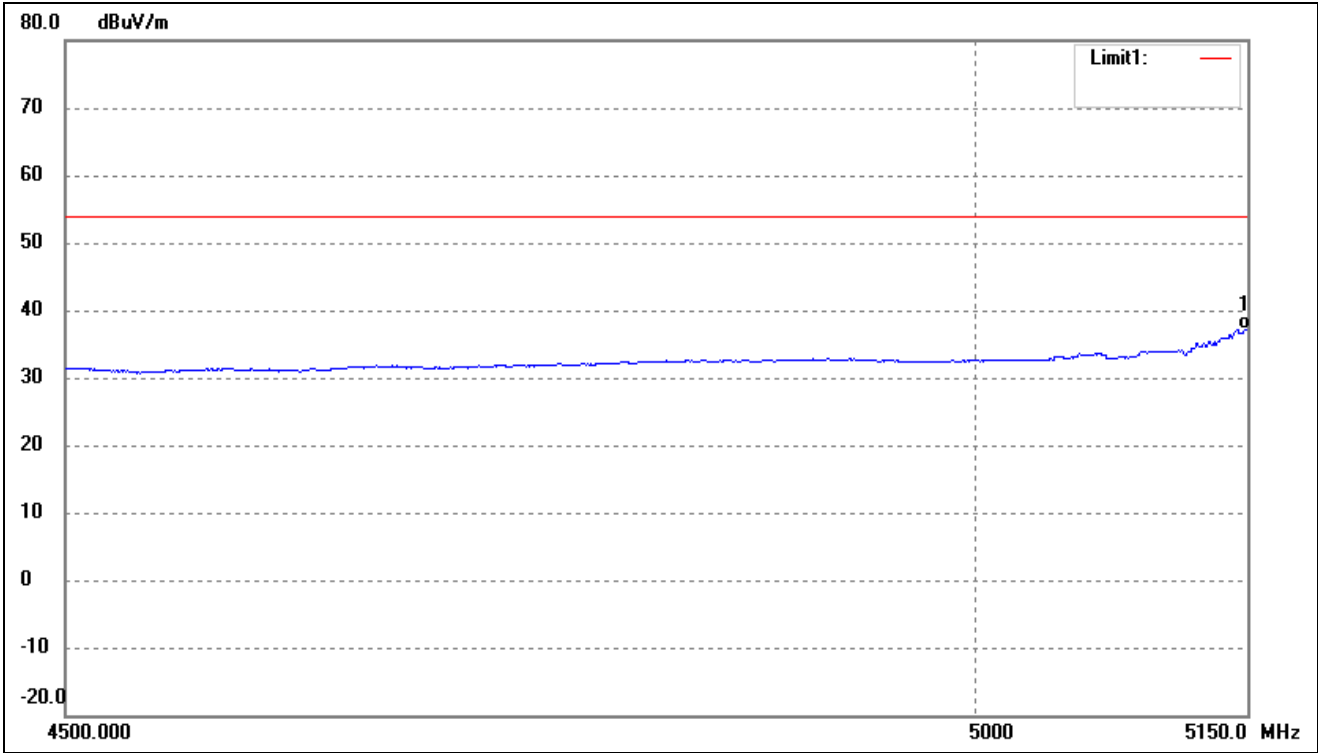
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5150.000	41.04	-5.33	35.71	54.00	-18.29	-	-	AVG

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



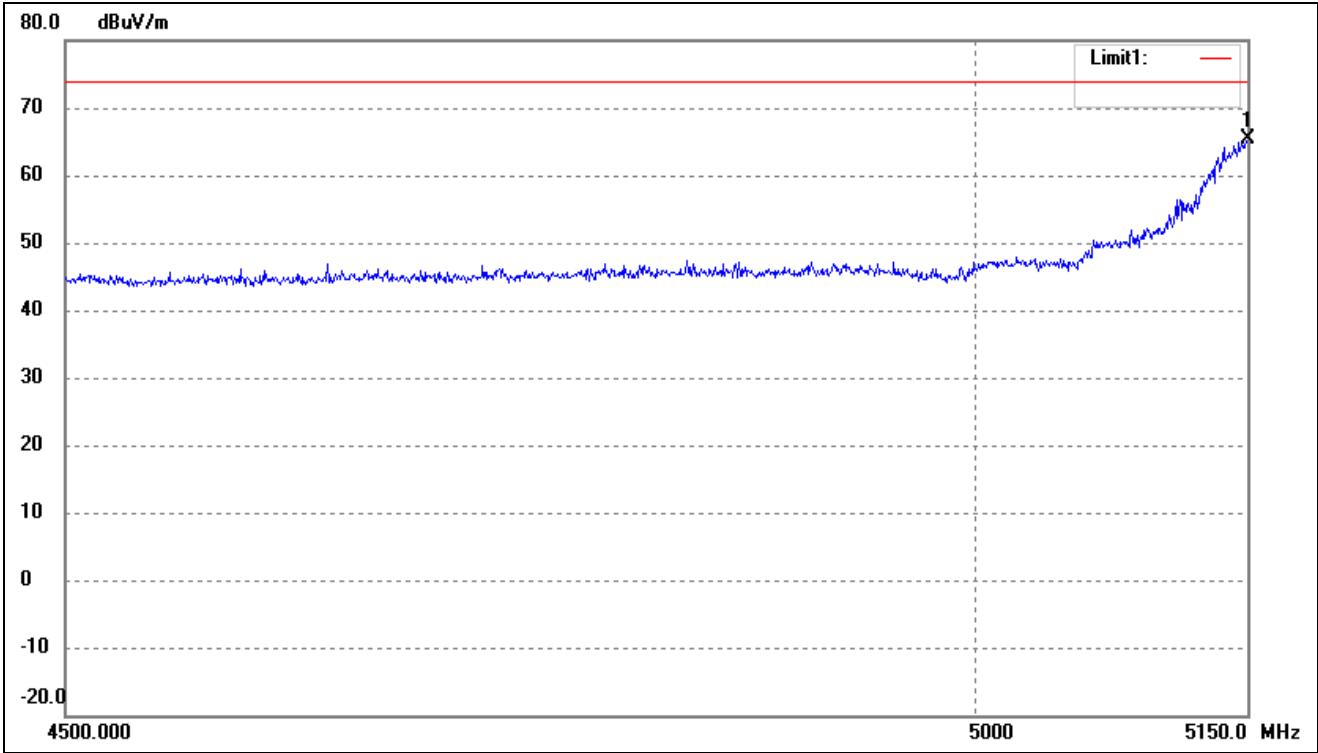
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5150.000	60.35	-5.33	55.02	74.00	-18.98	-	-	peak

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



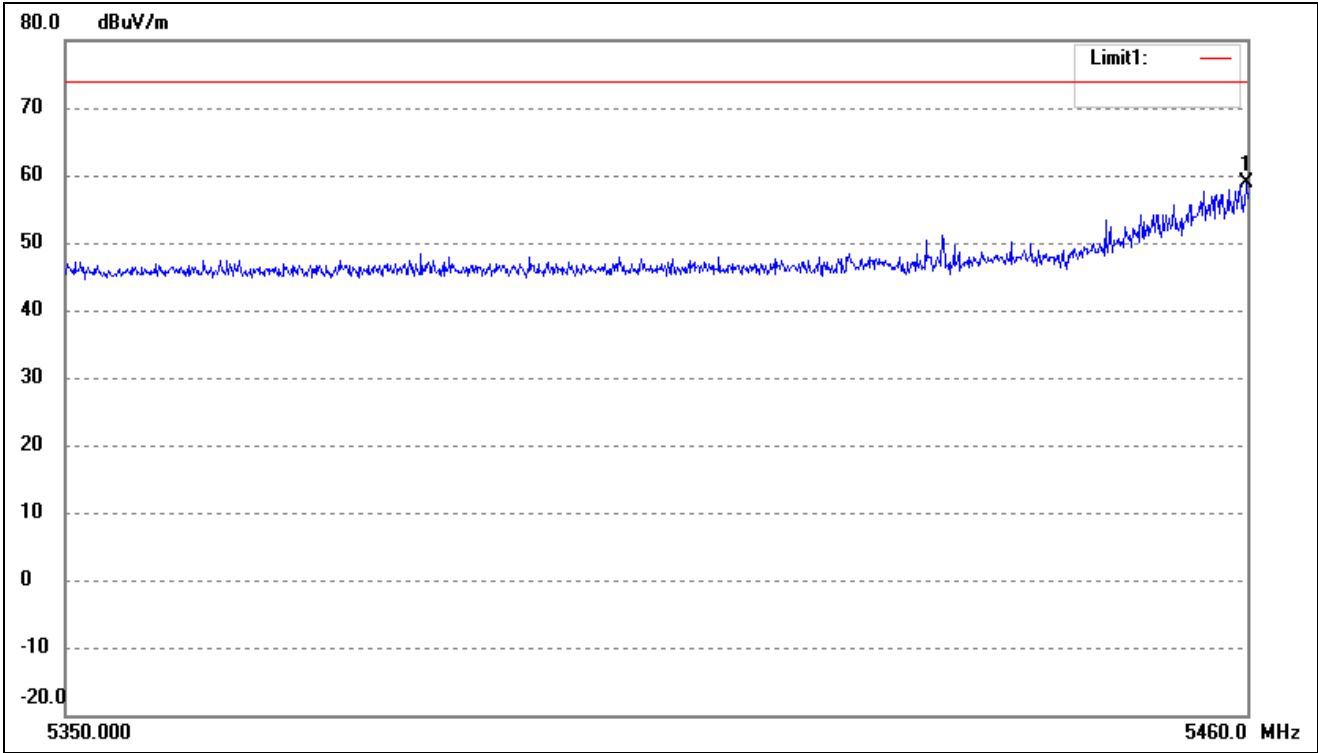
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5150.000	42.54	-5.33	37.21	54.00	-16.79	-	-	AVG

802.11ac-HT80- Restricted Bandedge			
Test Channel	band 5.15-5.25GHz	Polarity:	Vertical(worst case)



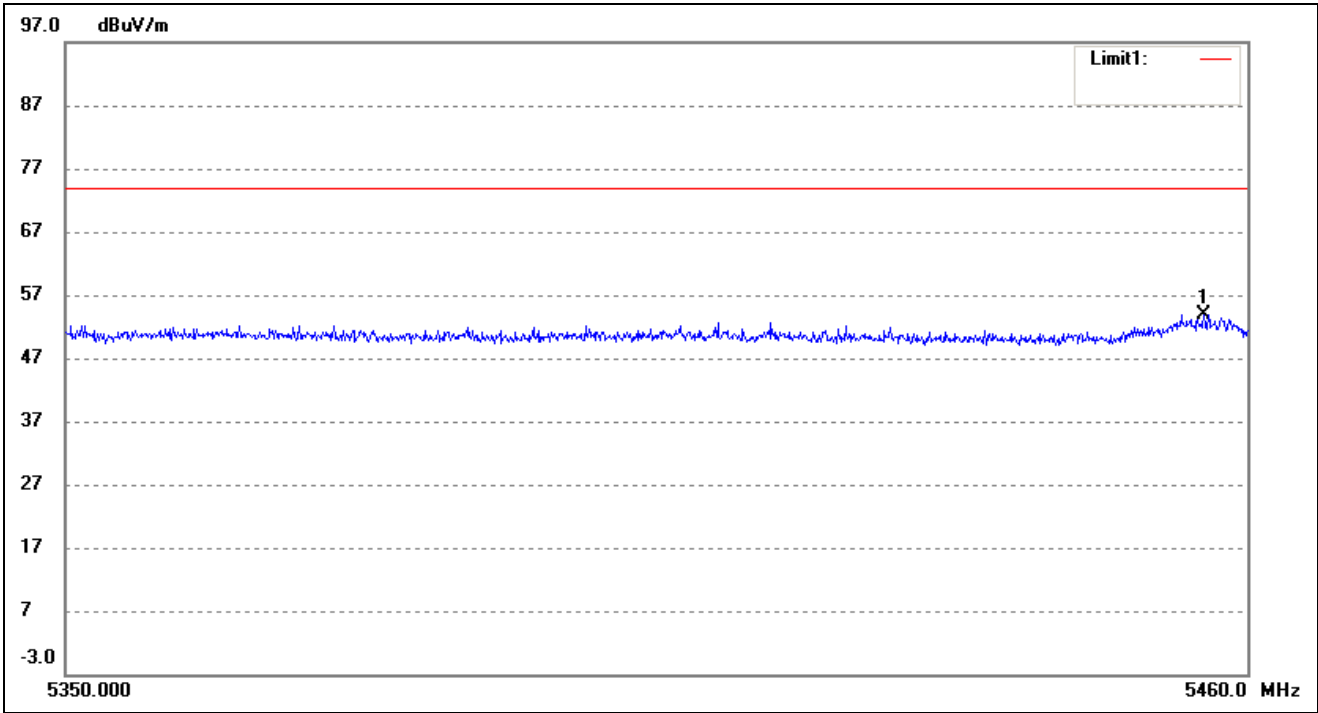
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5150.000	70.63	-5.33	65.30	74.00	-8.70	-	-	peak

802.11ac-HT80- Restricted Bandedge			
Test Channel	band 5.15-5.25GHz	Polarity:	Vertical(worst case)



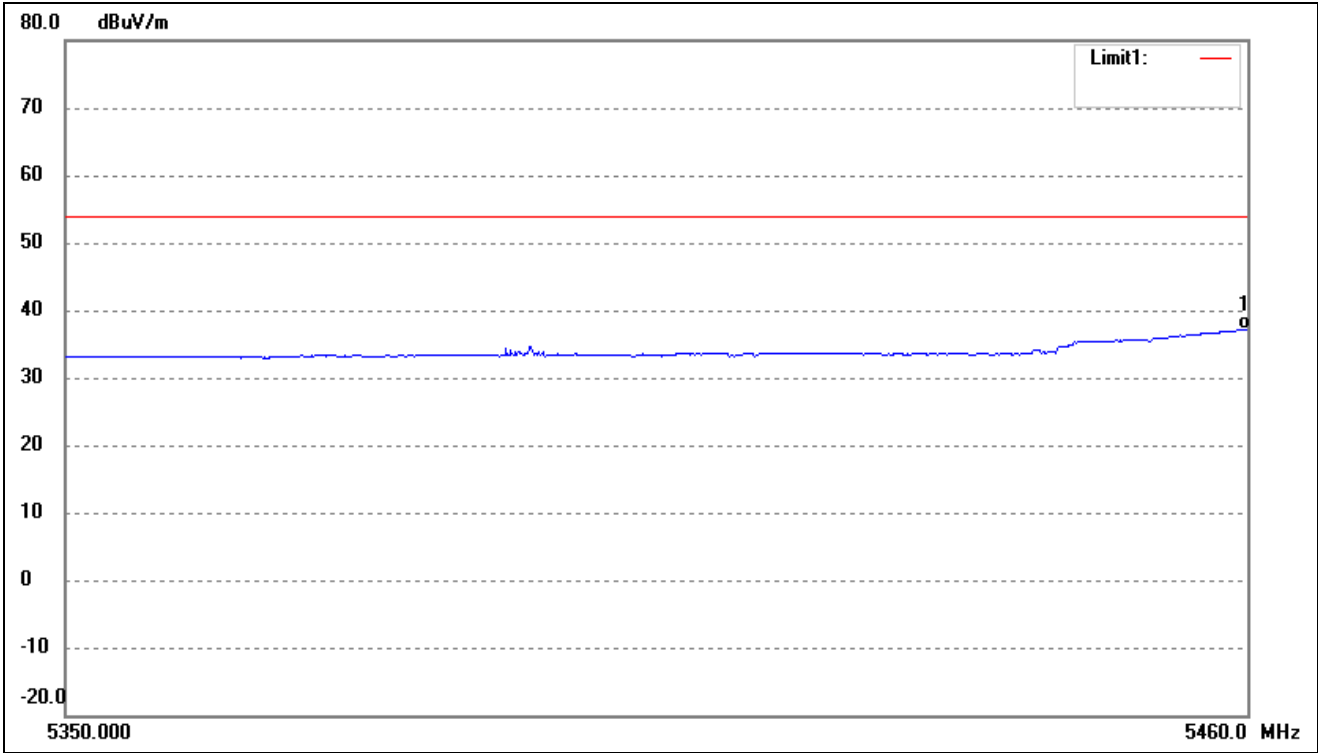
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5146.100	51.15	-5.35	45.80	54.00	-8.20	-	-	AVG

802.11a- Restricted Bandedge			
Test Channel	band 5.35-5.47GHz	Polarity:	Vertical(worst case)



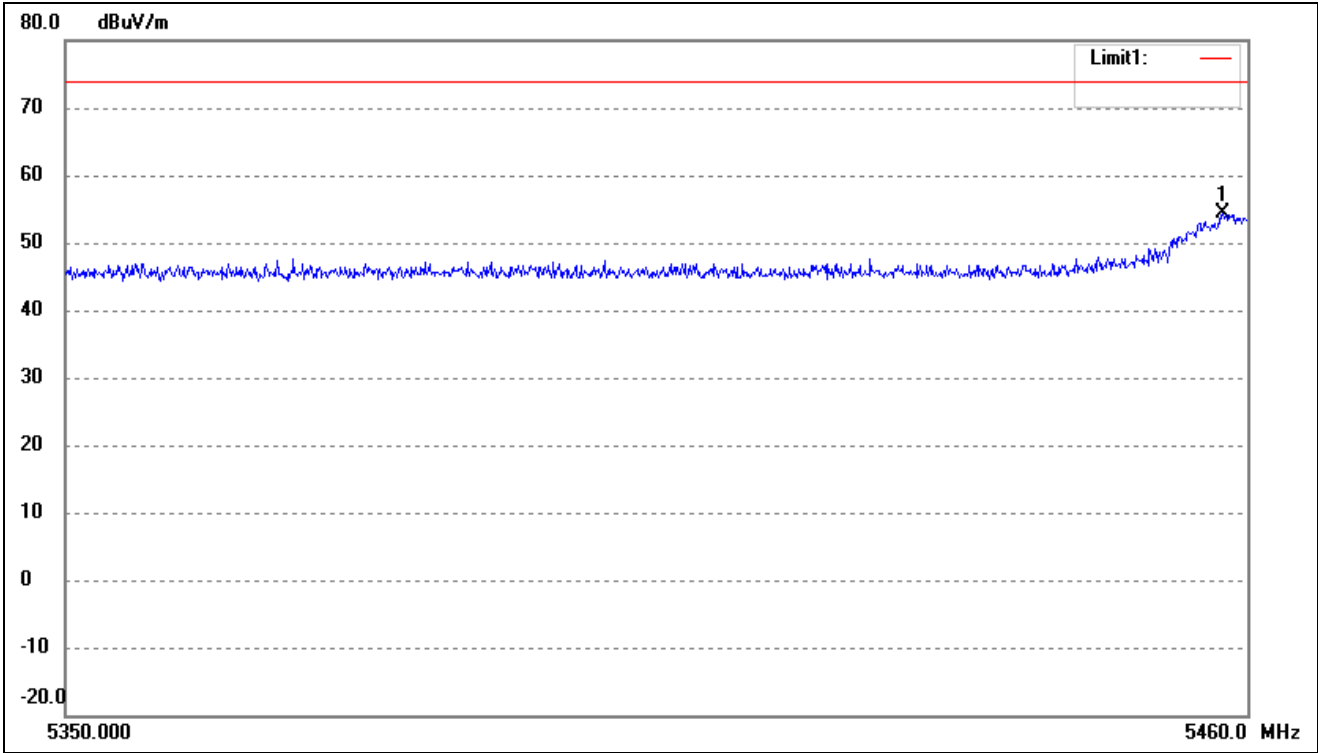
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5459.890	63.61	-4.77	58.84	74.00	-15.16	-	-	peak

802.11a- Restricted Bandedge			
Test Channel	band 5.35-5.47GHz	Polarity:	Vertical(worst case)



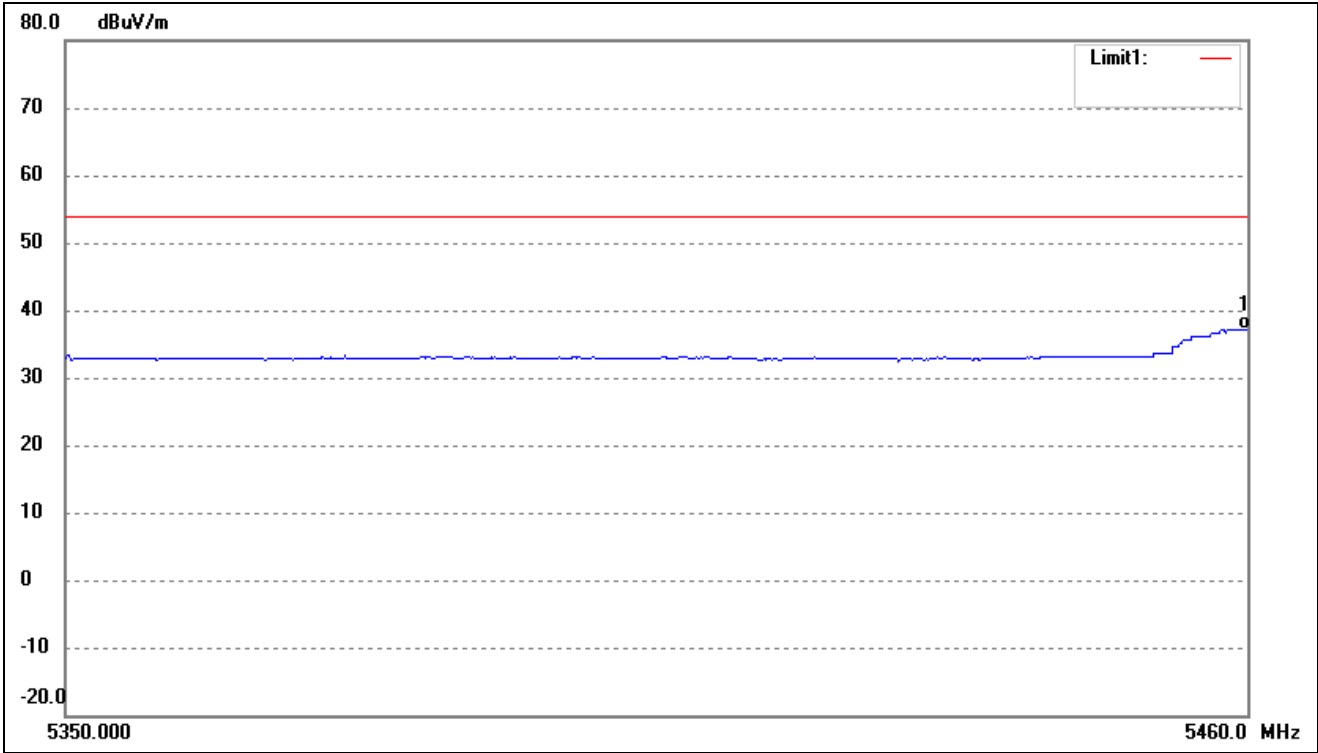
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5460.000	42.00	-4.77	37.23	54.00	-16.77	-	-	AVG

802.11n-HT20- Restricted Bandedge			
Test Channel	band 5.35-5.47GHz	Polarity:	Vertical(worst case)



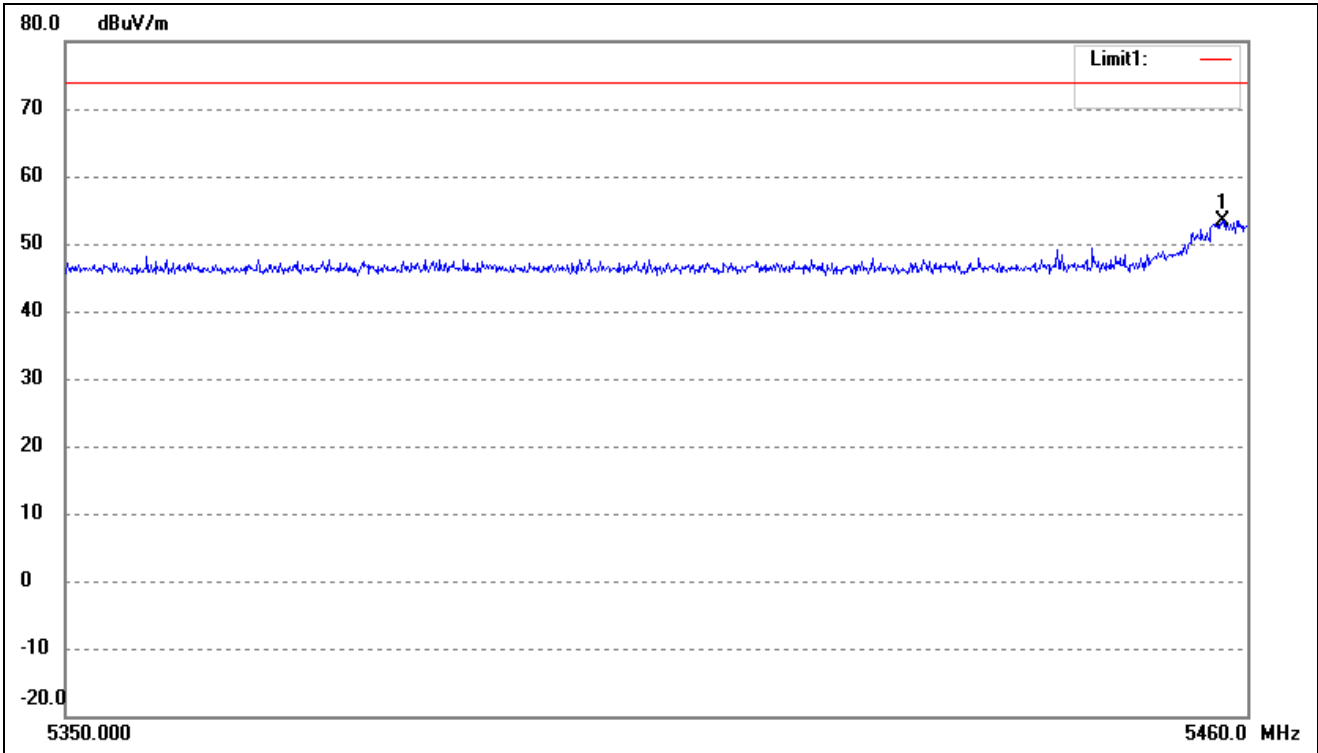
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5457.690	59.26	-4.77	54.49	74.00	-19.51	-	-	peak

802.11n-HT20- Restricted Bandedge			
Test Channel	band 5.35-5.47GHz	Polarity:	Vertical(worst case)



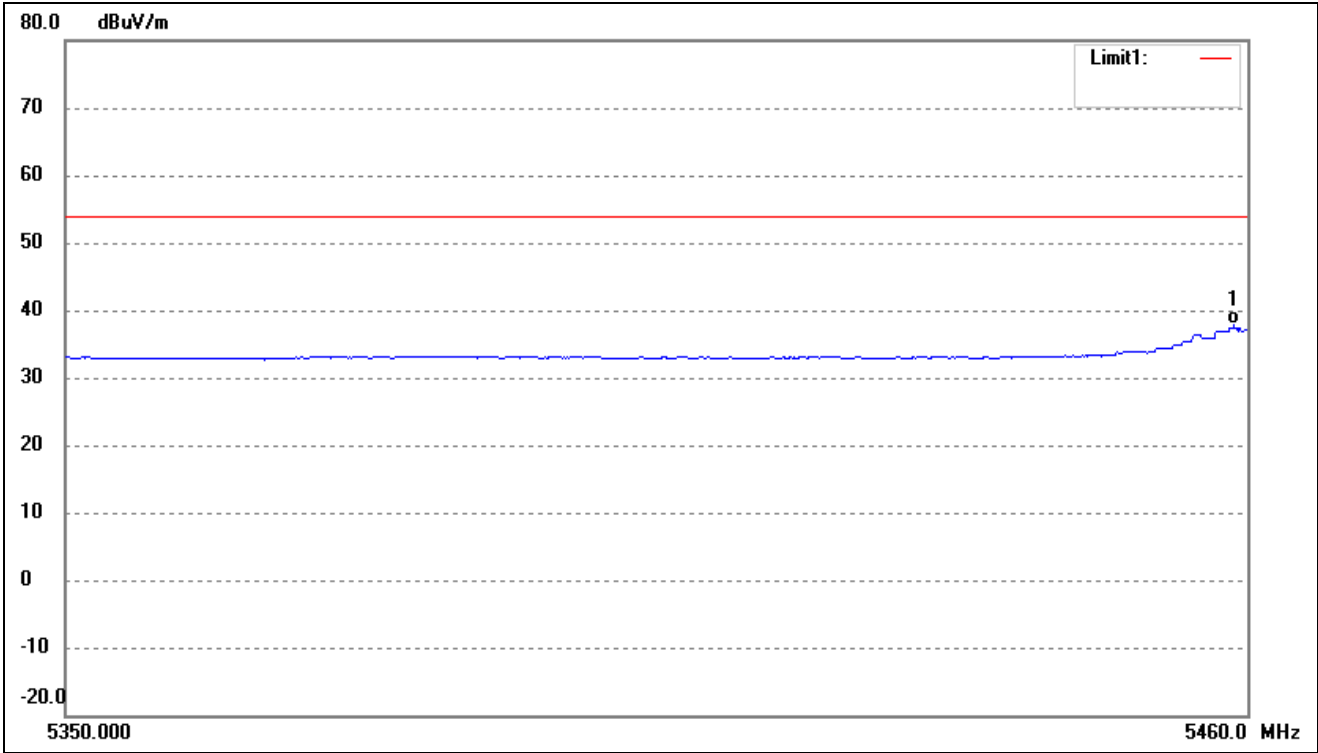
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5459.890	41.97	-4.77	37.20	54.00	-16.80	-	-	AVG

802.11n-HT40- Restricted Bandedge			
Test Channel	band 5.35-5.47GHz	Polarity:	Vertical(worst case)



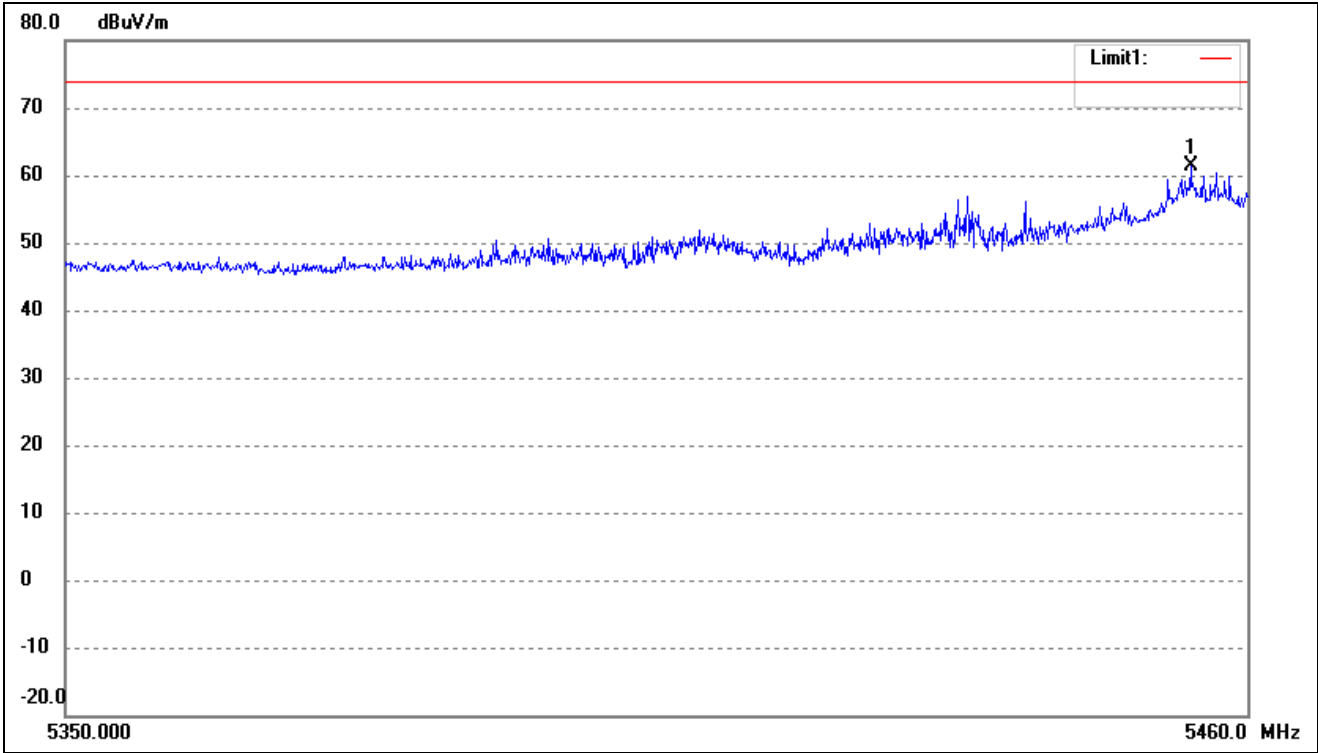
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5457.690	58.19	-4.77	53.42	74.00	-20.58	-	-	peak

802.11n-HT40- Restricted Bandedge			
Test Channel	band 5.35-5.47GHz	Polarity:	Vertical(worst case)



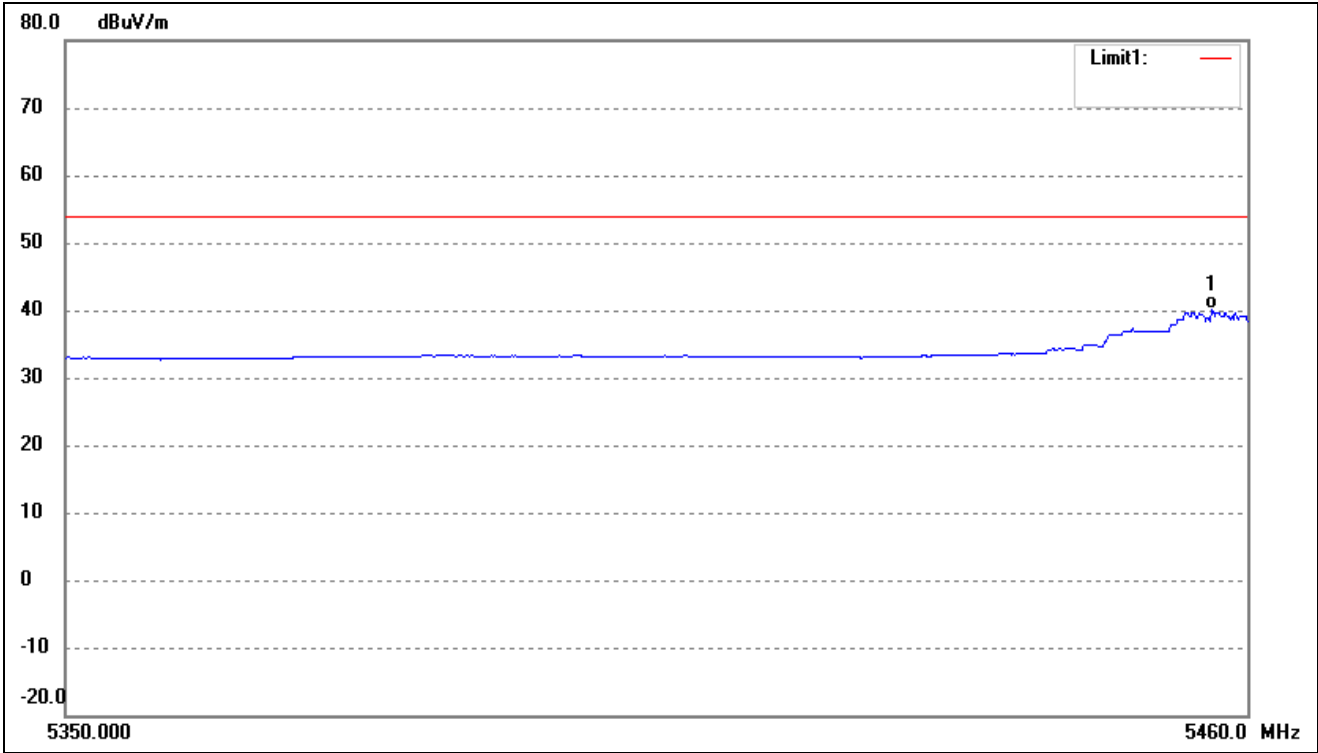
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5458.790	42.65	-4.77	37.88	54.00	-16.12	-	-	AVG

802.11ac-HT80- Restricted Bandedge			
Test Channel	band 5.35-5.47GHz	Polarity:	Vertical(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5454.720	66.03	-4.77	61.26	74.00	-12.74	-	-	peak

802.11ac-HT80- Restricted Bandedge			
Test Channel	band 5.35-5.47GHz	Polarity:	Vertical(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	5456.700	44.78	-4.77	40.01	54.00	-13.99	-	-	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	54.37	7.11	61.48	74	-12.52	H	PK
10360	39.21	7.11	46.32	54	-7.68	H	AV
10360	52.87	7.11	59.98	74	-14.02	V	PK
10360	37.25	7.11	44.36	54	-9.64	V	AV
Middle Channel (5200MHz)							
10400	53.99	7.22	61.21	74	-12.79	H	PK
10400	38.54	7.22	45.76	54	-8.24	H	AV
10400	54.56	7.22	61.78	74	-12.22	V	PK
10400	40.81	7.22	48.03	54	-5.97	V	AV
High Channel (5240MHz)							
10480	55.50	7.69	63.19	74	-10.81	H	PK
10480	38.22	7.69	45.91	54	-8.09	H	AV
10480	52.48	7.69	60.17	74	-13.83	V	PK
10480	39.98	7.69	47.67	54	-6.33	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	53.12	7.96	61.08	74	-12.92	H	PK
10520	40.49	7.96	48.45	54	-5.55	H	AV
10520	55.56	7.96	63.52	74	-10.48	V	PK
10520	37.43	7.96	45.39	54	-8.61	V	AV
Middle Channel (5280MHz)							
10560	55.44	8.02	63.46	74	-10.54	H	PK
10560	37.01	8.02	45.03	54	-8.97	H	AV
10560	54.69	8.02	62.71	74	-11.29	V	PK
10560	39.71	8.02	47.73	54	-6.27	V	AV
High Channel (5320MHz)							
10640	54.47	8.35	62.82	74	-11.18	H	PK
10640	38.64	8.35	46.99	54	-7.01	H	AV
10640	54.50	8.35	62.85	74	-11.15	V	PK
10640	37.85	8.35	46.20	54	-7.80	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	53.49	8.82	62.31	74	-11.69	H	PK
11000	38.79	8.82	47.61	54	-6.39	H	AV
11000	53.03	8.82	61.85	74	-12.15	V	PK
11000	39.06	8.82	47.88	54	-6.12	V	AV
Middle Channel (5600MHz)							
11200	54.17	8.92	63.09	74	-10.91	H	PK
11200	39.63	8.92	48.55	54	-5.45	H	AV
11200	55.45	8.92	64.37	74	-9.63	V	PK
11200	37.71	8.92	46.63	54	-7.37	V	AV
High Channel (5700MHz)							
11400	55.17	9.36	64.53	74	-9.47	H	PK
11400	38.72	9.36	48.08	54	-5.92	H	AV
11400	55.30	9.36	64.66	74	-9.34	V	PK
11400	38.05	9.36	47.41	54	-6.59	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	54.77	9.45	64.22	74	-9.78	H	PK
11490	38.85	9.45	48.30	54	-5.70	H	AV
11490	55.94	9.45	65.39	74	-8.61	V	PK
11490	39.67	9.45	49.12	54	-4.88	V	AV
Middle Channel (5785MHz)							
11570	52.97	9.62	62.59	74	-11.41	H	PK
11570	38.07	9.62	47.69	54	-6.31	H	AV
11570	55.30	9.62	64.92	74	-9.08	V	PK
11570	38.45	9.62	48.07	54	-5.93	V	AV
High Channel (5825MHz)							
11650	53.92	9.84	63.76	74	-10.24	H	PK
11650	36.32	9.84	46.16	54	-7.84	H	AV
11650	52.20	9.84	62.04	74	-11.96	V	PK
11650	37.63	9.84	47.47	54	-6.53	V	AV

➤ Out of Band edge for 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-42.25	-27
Highest	Above 5350	-41.02	-27

Note: the data just list the worst cases

➤ Out of Band edge for 5250-5350MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-43.32	-27
Highest	Above 5350	-41.87	-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	-39.62	-27
Highest	Above 5725	-37.12	-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	-47.64	-27
	5650 to 5700	-35.11	-27 to -17
	5700 to 5720	-27.69	-17 to 15.6
	5720 to 5725	-18.88	15.6 to 27
Highest	5850 to 5855	-16.11	27 to 15.6
	5855 to 5875	-25.67	15.6 to -17
	5875 to 5925	-35.44	-17 to -27
	Above 5925	-40.40	-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 (MHz)	Reading (dBuV/m)	Correct dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel (5180MHz)							
10360	52.89	7.11	60.00	74	-14.00	H	PK
10360	38.16	7.11	45.27	54	-8.73	H	AV
10360	54.60	7.11	61.71	74	-12.29	V	PK
10360	39.91	7.11	47.02	54	-6.98	V	AV
Middle Channel (5200MHz)							
10400	55.09	7.22	62.31	74	-11.69	H	PK
10400	38.49	7.22	45.71	54	-8.29	H	AV
10400	52.81	7.22	60.03	74	-13.97	V	PK
10400	37.77	7.22	44.99	54	-9.01	V	AV
High Channel (5240MHz)							
10480	54.96	7.69	62.65	74	-11.35	H	PK
10480	38.60	7.69	46.29	54	-7.71	H	AV
10480	54.33	7.69	62.02	74	-11.98	V	PK
10480	37.69	7.69	45.38	54	-8.62	V	AV

Frequency (MHz)	Reading (dBuV/m)	Correct dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel (5260MHz)							
10520	52.79	7.96	60.75	74	-13.25	H	PK
10520	39.61	7.96	47.57	54	-6.43	H	AV
10520	55.60	7.96	63.56	74	-10.44	V	PK
10520	38.61	7.96	46.57	54	-7.43	V	AV
Middle Channel (5280MHz)							
10560	53.99	8.02	62.01	74	-11.99	H	PK
10560	38.82	8.02	46.84	54	-7.16	H	AV
10560	54.94	8.02	62.96	74	-11.04	V	PK
10560	37.13	8.02	45.15	54	-8.85	V	AV
High Channel (5320MHz)							
10640	53.07	8.35	61.42	74	-12.58	H	PK
10640	40.22	8.35	48.57	54	-5.43	H	AV
10640	52.49	8.35	60.84	74	-13.16	V	PK
10640	40.66	8.35	49.01	54	-4.99	V	AV

Frequency (MHz)	Reading (dBuV/m)	Correct dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel (5500MHz)							
11000	52.56	8.82	61.38	74	-12.62	H	PK
11000	38.05	8.82	46.87	54	-7.13	H	AV
11000	52.99	8.82	61.81	74	-12.19	V	PK
11000	38.93	8.82	47.75	54	-6.25	V	AV
Middle Channel (5600MHz)							
11200	52.98	8.92	61.90	74	-12.10	H	PK
11200	38.11	8.92	47.03	54	-6.97	H	AV
11200	53.24	8.92	62.16	74	-11.84	V	PK
11200	39.19	8.92	48.11	54	-5.89	V	AV
High Channel (5700MHz)							
11400	55.35	9.84	65.19	74	-8.81	H	PK
11400	38.99	9.84	48.83	54	-5.17	H	AV
11400	55.76	9.84	65.60	74	-8.40	V	PK
11400	39.75	9.84	49.59	54	-4.41	V	AV

Frequency (MHz)	Reading (dBuV/m)	Correct dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel (5745MHz)							
11490	52.52	9.45	61.97	74	-12.03	H	PK
11490	40.73	9.45	50.18	54	-3.82	H	AV
11490	54.75	9.45	64.20	74	-9.80	V	PK
11490	38.90	9.45	48.35	54	-5.65	V	AV
Middle Channel (5785MHz)							
11570	56.35	9.62	65.97	74	-8.03	H	PK
11570	40.03	9.62	49.65	54	-4.35	H	AV
11570	52.79	9.62	62.41	74	-11.59	V	PK
11570	39.59	9.62	49.21	54	-4.79	V	AV
High Channel (5825MHz)							
11650	55.62	9.84	65.46	74	-8.54	H	PK
11650	38.17	9.84	48.01	54	-5.99	H	AV
11650	53.52	9.84	63.36	74	-10.64	V	PK
11650	35.97	9.84	45.81	54	-8.19	V	AV

➤ Out of Band edge 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-39.52	-27
Highest	Above 5350	-41.02	-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	-41.25	-27
Highest	Above 5350	-42.65	-27

Note: the data just list the worst cases

➤ Out of Band edge for 5470-5725MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5470	-37.12	-27
Highest	Above 5725	-39.31	-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	-48.51	-27
	5650 to 5700	-36.29	-27 to -17
	5700 to 5720	-28.90	-17 to 15.6
	5720 to 5725	-18.75	15.6 to 27
Highest	5850 to 5855	-16.09	27 to 15.6
	5855 to 5875	-25.16	15.6 to -17
	5875 to 5925	-35.43	-17 to -27
	Above 5925	-38.79	-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	53.05	7.89	60.94	74	-13.06	H	PK
10380	39.83	7.89	47.72	54	-6.28	H	AV
10380	53.74	7.89	61.63	74	-12.37	V	PK
10380	40.58	7.89	48.47	54	-5.53	V	AV
High Channel (5230MHz)							
10460	54.75	7.97	62.72	74	-11.28	H	PK
10460	40.44	7.97	48.41	54	-5.59	H	AV
10460	54.49	7.97	62.46	74	-11.54	V	PK
10460	37.57	7.97	45.54	54	-8.46	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	53.29	8.16	61.45	74	-12.55	H	PK
10540	38.65	8.16	46.81	54	-7.19	H	AV
10540	53.83	8.16	61.99	74	-12.01	V	PK
10540	40.20	8.16	48.36	54	-5.64	V	AV
High Channel (5310MHz)							
10620	52.99	8.57	61.56	74	-12.44	H	PK
10620	37.49	8.57	46.06	54	-7.94	H	AV
10620	55.27	8.57	63.84	74	-10.16	V	PK
10620	37.83	8.57	46.40	54	-7.60	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	54.12	9.16	63.28	74	-10.72	H	PK
11020	38.11	9.16	47.27	54	-6.73	H	AV
11020	53.96	9.16	63.12	74	-10.88	V	PK
11020	39.74	9.16	48.90	54	-5.10	V	AV
Middle Channel (5590MHz)							
11180	52.68	9.29	61.97	74	-12.03	H	PK
11180	40.41	9.29	49.70	54	-4.30	H	AV
11180	55.95	9.29	65.24	74	-8.76	V	PK
11180	37.26	9.29	46.55	54	-7.45	V	AV
High Channel (5670MHz)							
11340	54.45	9.43	63.88	74	-10.12	H	PK
11340	37.61	9.43	47.04	54	-6.96	H	AV
11340	55.26	9.43	64.69	74	-9.31	V	PK
11340	40.77	9.43	50.20	54	-3.80	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	52.80	9.45	62.25	74	-11.75	H	PK
11510	38.68	9.45	48.13	54	-5.87	H	AV
11510	53.03	9.45	62.48	74	-11.52	V	PK
11510	41.49	9.45	50.94	54	-3.06	V	AV
High Channel (5795MHz)							
11590	52.90	9.27	62.17	74	-11.83	H	PK
11590	39.10	9.27	48.37	54	-5.63	H	AV
11590	53.03	9.27	62.30	74	-11.70	V	PK
11590	36.20	9.27	45.47	54	-8.53	V	AV

➤ Out of Band edge for 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-39.52	-27
Highest	Above 5350	-37.12	-27

Note: the data just list the worst cases

➤ Out of Band edge for 5250-5350MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-36.52	-27
Highest	Above 5350	-37.34	-27

Note: the data just list the worst cases

➤ Out of Band edge for 5470-5725MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5470	-35.96	-27
Highest	Above 5725	-37.04	-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	-48.48	-27
	5650 to 5700	-36.82	-27 to -17
	5700 to 5720	-27.19	-17 to 15.6
	5720 to 5725	-18.90	15.6 to 27
Highest	5850 to 5855	-15.12	27 to 15.6
	5855 to 5875	-25.70	15.6 to -17
	5875 to 5925	-34.91	-17 to -27
	Above 5925	-39.61	-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	55.62	7.53	63.15	74	-10.85	H	PK
10420	38.56	7.53	46.09	54	-7.91	H	AV
10420	54.89	7.53	62.42	74	-11.58	H	PK
10420	37.83	7.53	45.36	54	-8.64	H	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
5290MHz							
10580	55.94	7.95	63.89	74	-10.11	H	PK
10580	39.12	7.95	47.07	54	-6.93	H	AV
10580	52.58	7.95	60.53	74	-13.47	V	PK
10580	39.03	7.95	46.98	54	-7.02	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel (5530MHz)							
11060	55.51	9.42	64.93	74	-9.07	H	PK
11060	37.81	9.42	47.23	54	-6.77	H	AV
11060	53.03	9.42	62.45	74	-11.55	V	PK
11060	38.08	9.42	47.50	54	-6.50	V	AV
High Channel (5610MHz)							
11220	52.60	9.69	62.29	74	-11.71	H	PK
11220	38.55	9.69	48.24	54	-5.76	H	AV
11220	54.86	9.69	64.55	74	-9.45	V	PK
11220	38.81	9.69	48.50	54	-5.50	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
5775MHz							
11550	55.35	9.93	65.28	74	-8.72	H	PK
11550	38.73	9.93	48.66	54	-5.34	H	AV
11550	52.24	9.93	62.17	74	-11.83	V	PK
11550	40.14	9.93	50.07	54	-3.93	V	AV

➤ Out of Band edge for 5150-5250MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-37.25	-27
Highest	Above 5350	-36.21	-27
Note: the data just list the worst cases			

➤ Out of Band edge for 5250-5350MHz

Test CH.	Test Segment	Result	Limit
	MHz	dBm/MHz	dBm/MHz
Lowest	Below 5150	-38.48	-27
Highest	Above 5350	-36.12	-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	-39.65	-27
Highest	Above 5725	-37.15	-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	-48.38	-27
	5650 to 5700	-36.56	-27 to -17
	5700 to 5720	-28.75	-17 to 15.6
	5720 to 5725	-18.26	15.6 to 27
Highest	5850 to 5855	-14.71	27 to 15.6
	5855 to 5875	-25.55	15.6 to -17
	5875 to 5925	-36.62	-17 to -27
	Above 5925	-40.40	-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

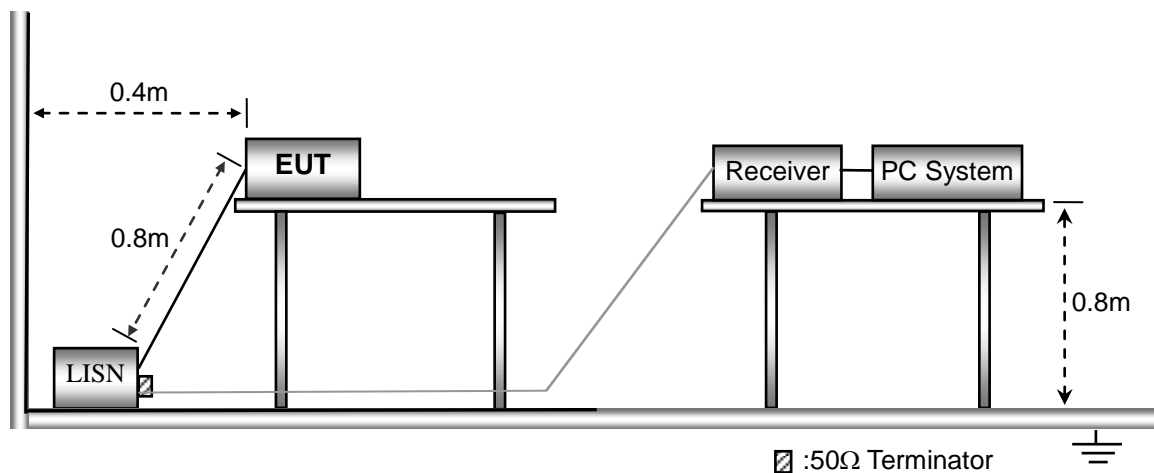
10. Conducted Emissions

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



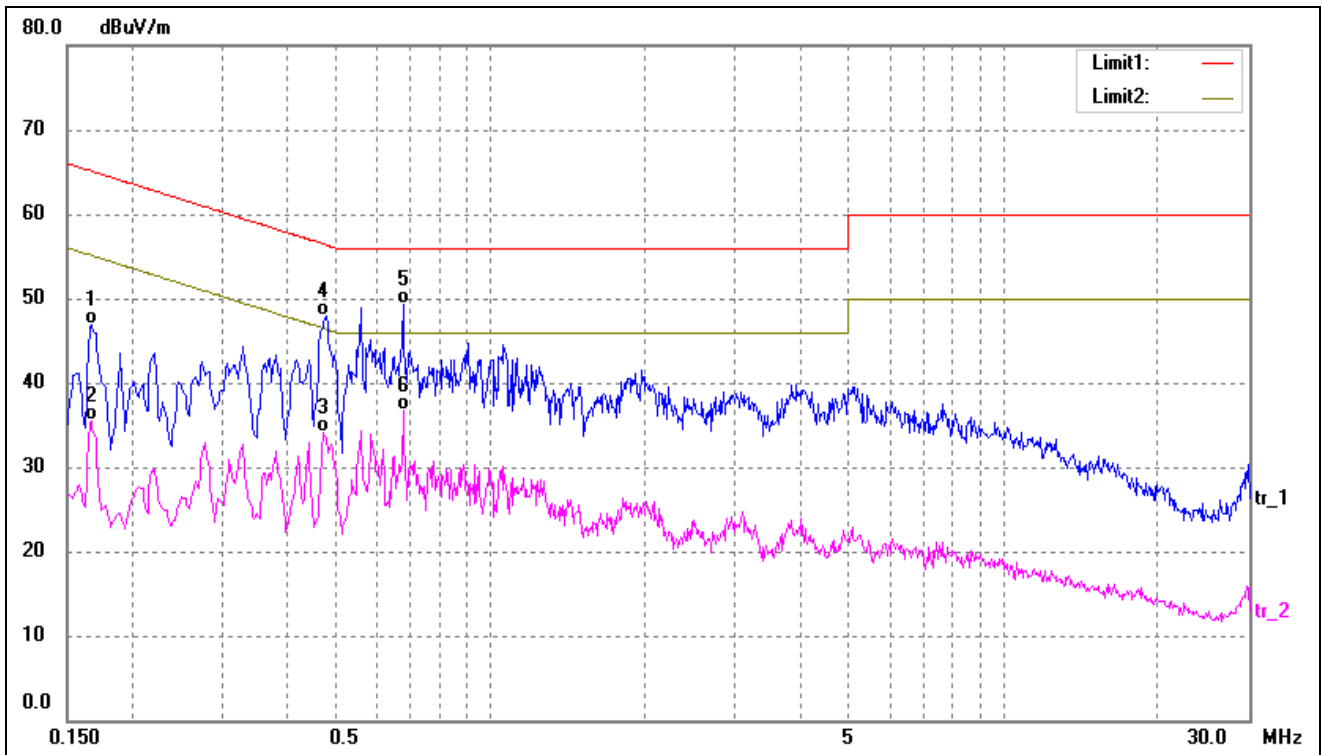
10.3 Test Receiver Setup

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

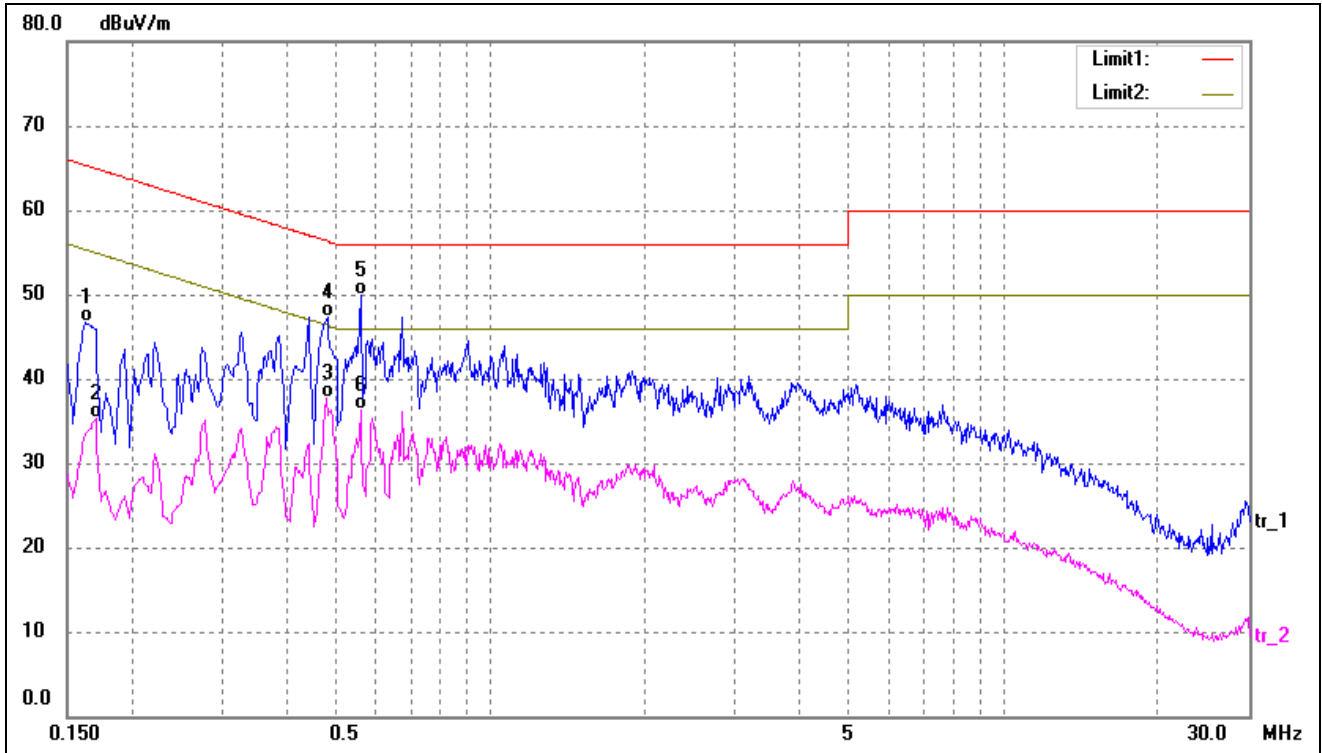
10.4 Summary of Test Results/Plots

Test Mode	Communication	AC120V 60Hz	Polarity:	Neutral
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.1660	36.50	10.31	46.81	65.15	-18.34	QP
2	0.1660	25.18	10.31	35.49	55.15	-19.66	AVG
3	0.4700	23.89	10.23	34.12	46.51	-12.39	AVG
4	0.4780	37.72	10.22	47.94	56.37	-8.43	QP
5*	0.6780	39.03	10.20	49.23	56.00	-6.77	QP
6	0.6780	26.51	10.20	36.71	46.00	-9.29	AVG

Test Mode	Communication	AC120V 60Hz	Polarity:	Line
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.1620	36.37	10.31	46.68	65.36	-18.68	QP
2	0.1700	24.91	10.31	35.22	54.96	-19.74	AVG
3	0.4780	27.42	10.22	37.64	46.37	-8.73	AVG
4	0.4820	37.02	10.22	47.24	56.30	-9.06	QP
5*	0.5580	39.76	10.21	49.97	56.00	-6.03	QP
6	0.5580	26.13	10.21	36.34	46.00	-9.66	AVG

APPENDIX SUMMARY

Project No.	WTX22X08156486W	Test Engineer	Timi Huang
Start date	2022/8/6	Finish date	2022/9/9
Temperature	23°C	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	5.78	11
	5200	5.46	11
	5240	5.99	11
802.11n-HT20	5180	4.28	11
	5200	4.45	11
	5240	4.76	11
802.11n-HT40	5190	0.74	11
	5230	0.53	11
802.11ac-HT80	5210	-3.91	11

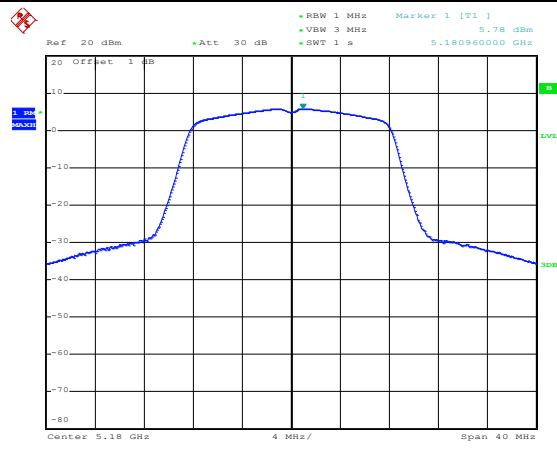
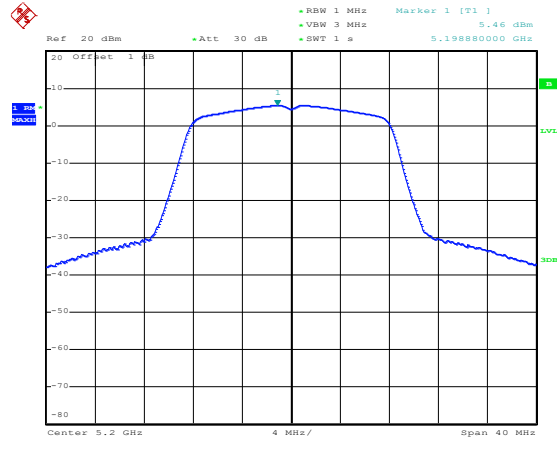
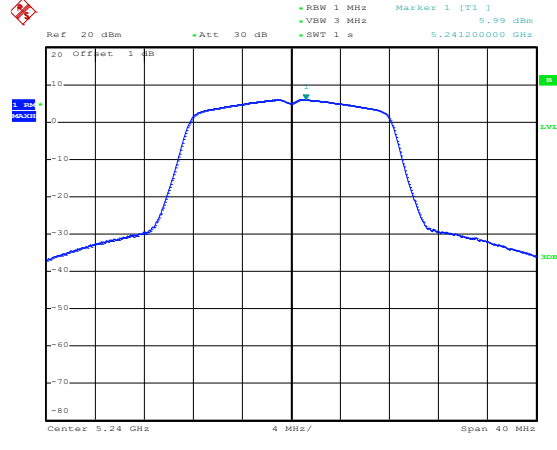
U-NII-2A: 5250-5350MHz			
Operating mode	Test Channel	Power Spectral Density dBm/MHz	Limit (dBm/MHz)
802.11a	5260	5.11	11
	5280	5.21	11
	5320	4.88	11
802.11n-HT20	5260	3.78	11
	5280	3.94	11
	5320	3.62	11
802.11n-HT40	5270	0.01	11
	5310	-0.12	11
802.11ac-HT80	5290	-4.44	11

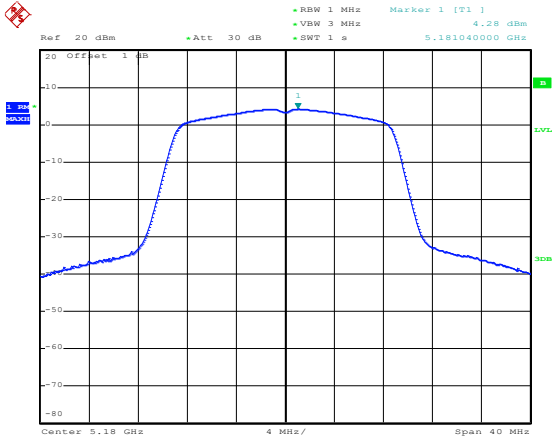
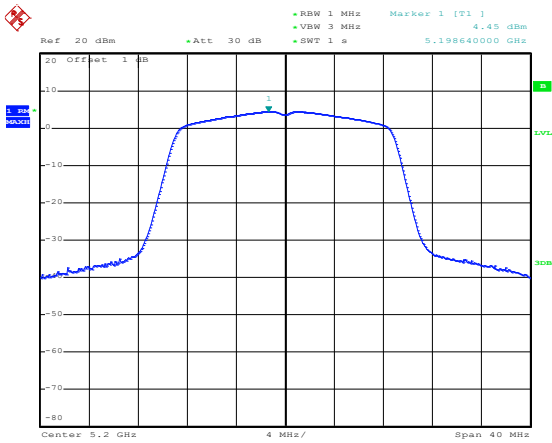
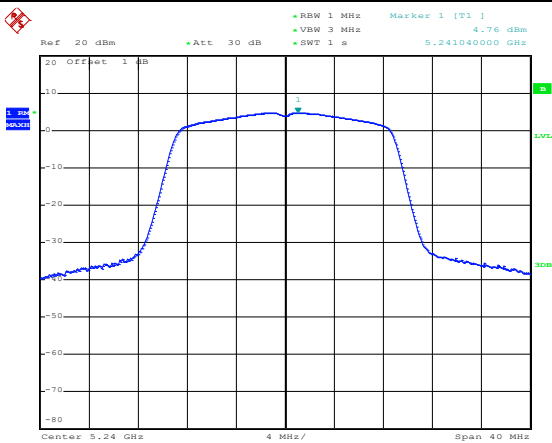
U-NII-2C: 5470-5725MHz			
Operating mode	Test Channel	Power Spectral Density dBm/MHz	Limit (dBm/MHz)
802.11a	5500	4.61	11
	5580	5.13	11
	5700	5.37	11
802.11n-HT20	5500	3.61	11
	5580	3.60	11
	5700	3.97	11
802.11n-HT40	5510	-0.39	11
	5550	-0.48	11
	5670	0.08	11
802.11ac-HT80	5530	-5.13	11
	5610	-4.62	11

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	4.08	2.22	6.30	30
	5785	4.51	2.22	6.73	30
	5825	4.64	2.22	6.86	30
802.11n-HT20	5745	3.05	2.22	5.27	30
	5785	3.17	2.22	5.39	30
	5825	3.24	2.22	5.46	30
802.11n HT40	5755	-0.78	2.22	1.44	30
	5795	-0.49	2.22	1.73	30
802.11ac VH80	5775	-5.21	2.22	-2.99	30

*Note: Maximum PSD=PSD(dBm/300kHz)+10log(500kHz/300kHz)=2.22

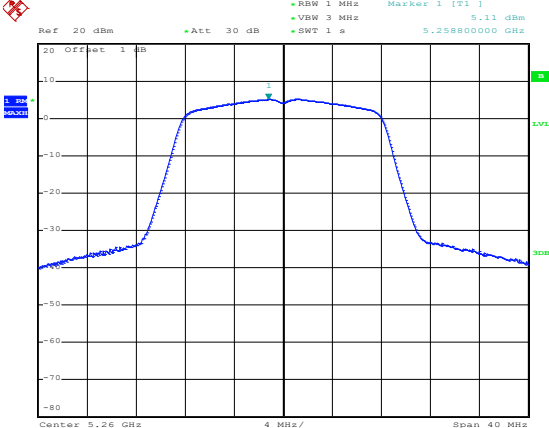
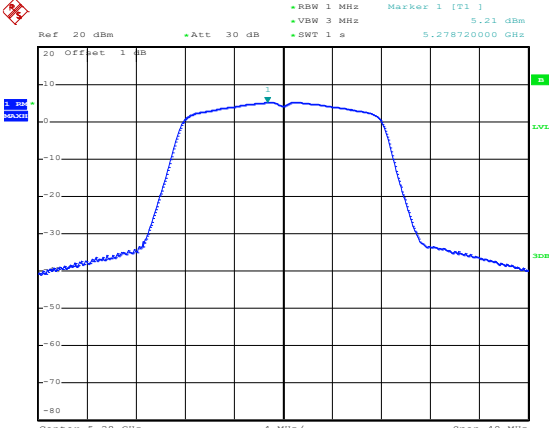
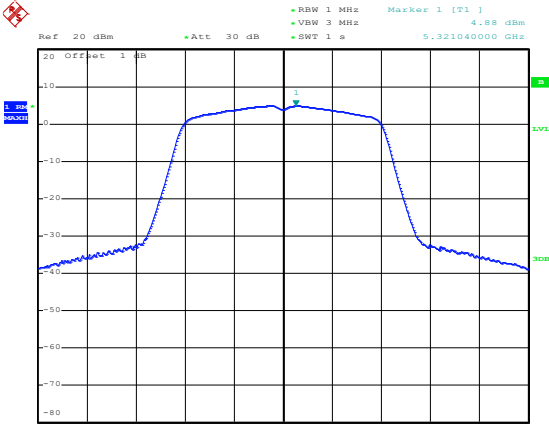
5150-5250MHz

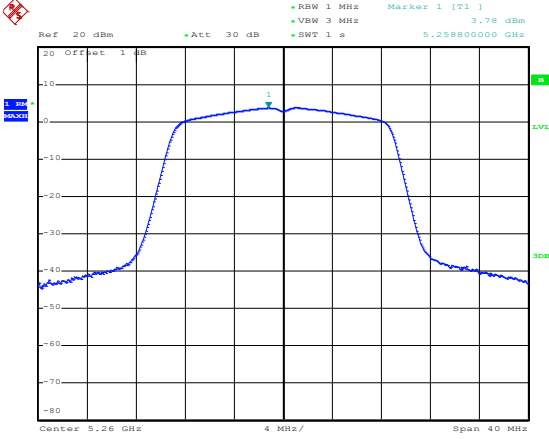
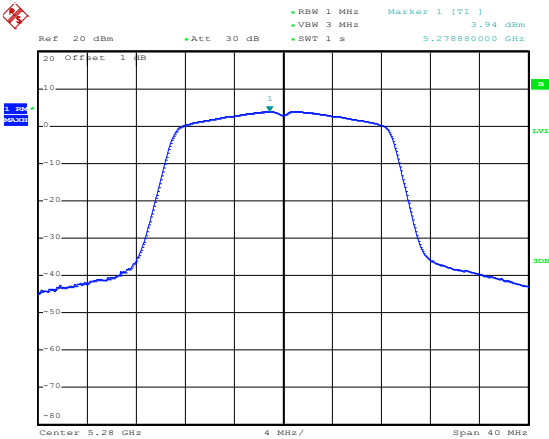
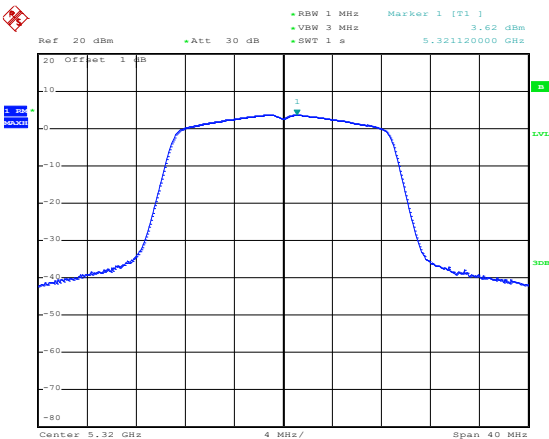
<p>802.11a-Low</p>	 <p>Date: 9.AUG.2022 12:38:49</p>
<p>802.11a-Middle</p>	 <p>Date: 9.AUG.2022 12:43:59</p>
<p>802.11a-High</p>	 <p>Date: 9.AUG.2022 12:44:49</p>

<p>802.11n-HT20-Low</p>	 <p>Ref 20 dBm +Att 30 dB +RBW 1 MHz Marker 1 [F1] 4.28 dBm +VBW 3 MHz +SWT 1 s 5.181040000 GHz</p> <p>Center 5.18 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 9.AUG.2022 12:49:18</p>
<p>802.11n-HT20-Middle</p>	 <p>Ref 20 dBm +Att 30 dB +RBW 1 MHz Marker 1 [F1] 4.45 dBm +VBW 3 MHz +SWT 1 s 5.198640000 GHz</p> <p>Center 5.2 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 9.AUG.2022 12:49:55</p>
<p>802.11n-HT20-High</p>	 <p>Ref 20 dBm +Att 30 dB +RBW 1 MHz Marker 1 [F1] 4.76 dBm +VBW 3 MHz +SWT 1 s 5.241040000 GHz</p> <p>Center 5.24 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 9.AUG.2022 12:50:19</p>

<p>802.11n-HT40-Low</p>	<p>Date: 9.AUG.2022 12:51:18</p>
<p>802.11n-HT40-High</p>	<p>Date: 9.AUG.2022 12:57:18</p>
<p>802.11ac-HT80-Low</p>	<p>Date: 9.AUG.2022 12:58:09</p>

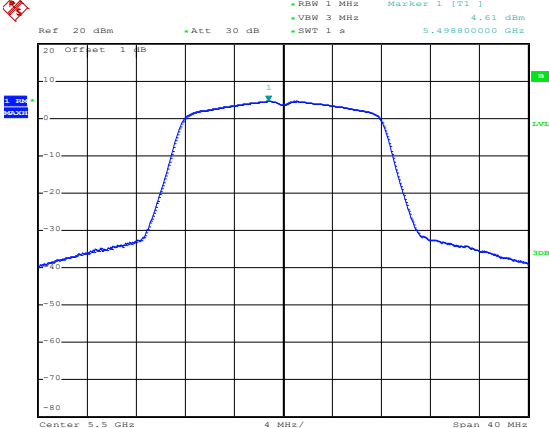
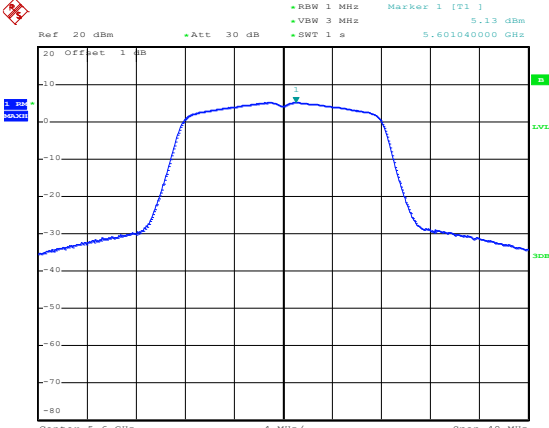
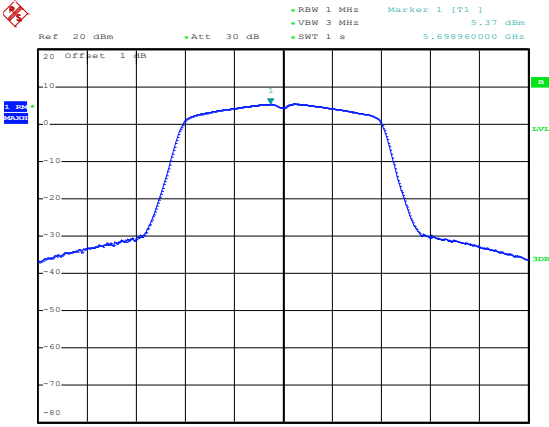
5250-5350MHz

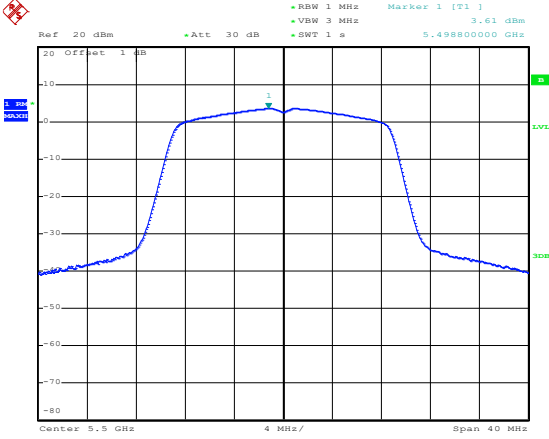
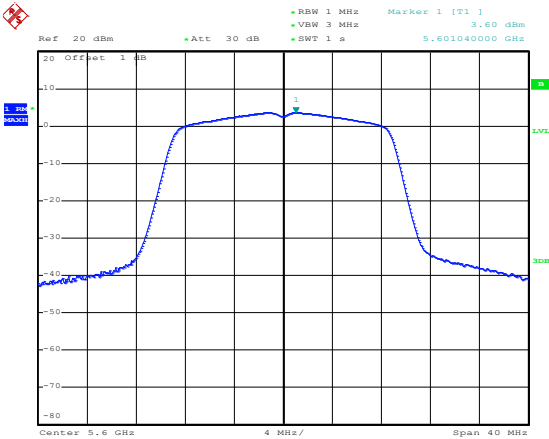
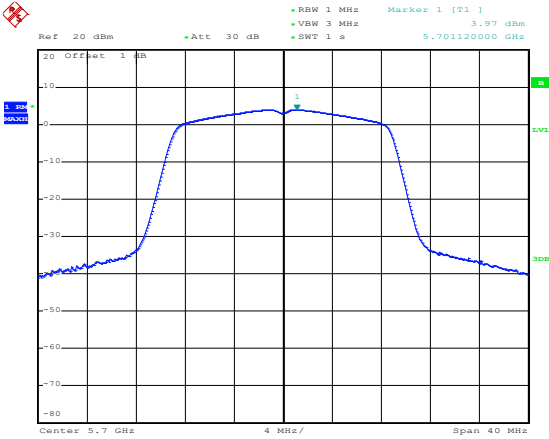
<p>802.11a-Low</p>	 <p>Ref: 20 dBm, Att: 30 dB, RBW: 1 MHz, VBW: 3 MHz, SWT: 1 s, Marker 1 [T1]: 5.11 dBm, 5.25880000 GHz</p> <p>Center: 5.26 GHz, Span: 40 MHz</p> <p>Date: 9.AUG.2022 13:01:32</p>
<p>802.11a-Middle</p>	 <p>Ref: 20 dBm, Att: 30 dB, RBW: 1 MHz, VBW: 3 MHz, SWT: 1 s, Marker 1 [T1]: 5.21 dBm, 5.278720000 GHz</p> <p>Center: 5.28 GHz, Span: 40 MHz</p> <p>Date: 9.AUG.2022 13:02:26</p>
<p>802.11a-High</p>	 <p>Ref: 20 dBm, Att: 30 dB, RBW: 1 MHz, VBW: 3 MHz, SWT: 1 s, Marker 1 [T1]: 4.88 dBm, 5.321040000 GHz</p> <p>Center: 5.32 GHz, Span: 40 MHz</p> <p>Date: 9.AUG.2022 13:03:10</p>

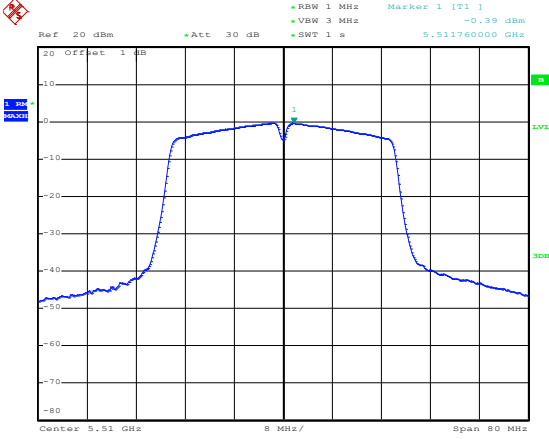
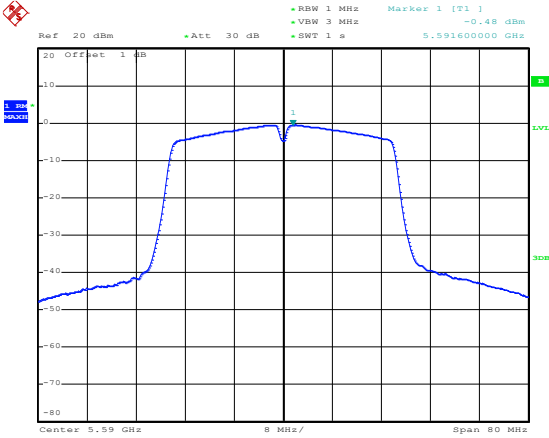
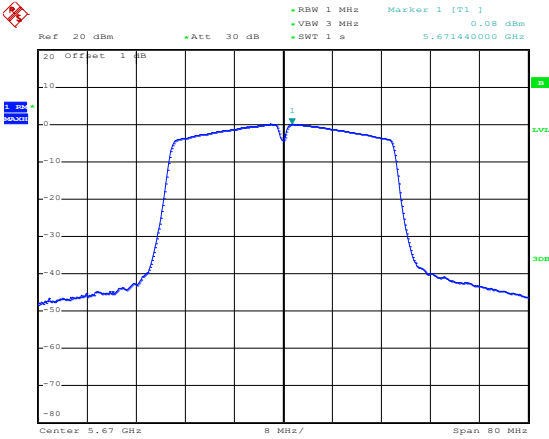
<p>802.11n-HT20-Low</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz Marker 1 [F1] 3.78 dBm VBW 3 MHz 5.25880000 GHz SWT 1 s</p> <p>20 Offset 1 dB -10 0 -10 -20 -30 -40 -50 -60 -70 -80</p> <p>Center 5.26 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 9.AUG.2022 13:03:46</p>
<p>802.11n-HT20-Middle</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz Marker 1 [F1] 3.94 dBm VBW 3 MHz 5.27880000 GHz SWT 1 s</p> <p>20 Offset 1 dB -10 0 -10 -20 -30 -40 -50 -60 -70 -80</p> <p>Center 5.28 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 9.AUG.2022 13:05:36</p>
<p>802.11n-HT20-High</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz Marker 1 [F1] 3.62 dBm VBW 3 MHz 5.32120000 GHz SWT 1 s</p> <p>20 Offset 1 dB -10 0 -10 -20 -30 -40 -50 -60 -70 -80</p> <p>Center 5.32 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 9.AUG.2022 13:06:04</p>

<p>802.11n-HT40-Low</p>	<p>Date: 9.AUG.2022 13:06:40</p>
<p>802.11n-HT40-High</p>	<p>Date: 9.AUG.2022 13:07:01</p>
<p>802.11ac-HT80-Low</p>	<p>Date: 9.AUG.2022 13:07:44</p>

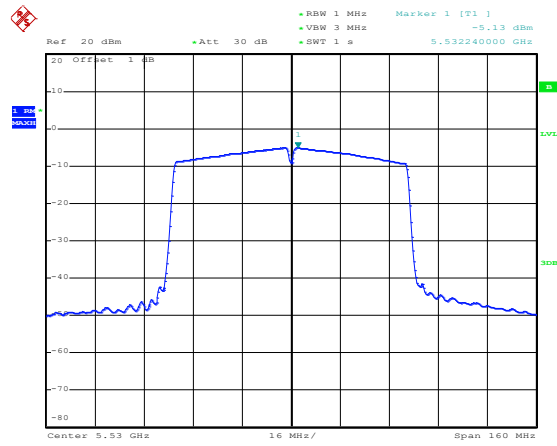
5470-5725MHz

<p>802.11a-Low</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz Marker 1 [T1] 4.61 dBm VBW 3 MHz 5.49880000 GHz SWT 1 s</p> <p>20 Offset 1 dB -10 -20 -30 -40 -50 -60 -70 -80</p> <p>Center 5.5 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 9.AUG.2022 13:10:41</p>
<p>802.11a-Middle</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz Marker 1 [T1] 5.13 dBm VBW 3 MHz 5.60104000 GHz SWT 1 s</p> <p>20 Offset 1 dB -10 -20 -30 -40 -50 -60 -70 -80</p> <p>Center 5.6 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 9.AUG.2022 13:11:05</p>
<p>802.11a-High</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz Marker 1 [T1] 5.37 dBm VBW 3 MHz 5.69896000 GHz SWT 1 s</p> <p>20 Offset 1 dB -10 -20 -30 -40 -50 -60 -70 -80</p> <p>Center 5.7 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 9.AUG.2022 13:11:30</p>

<p>802.11n-HT20-Low</p>	 <p>Date: 9.AUG.2022 13:12:39</p>
<p>802.11n-HT20-Middle</p>	 <p>Date: 9.AUG.2022 13:13:14</p>
<p>802.11n-HT20-High</p>	 <p>Date: 9.AUG.2022 13:13:43</p>

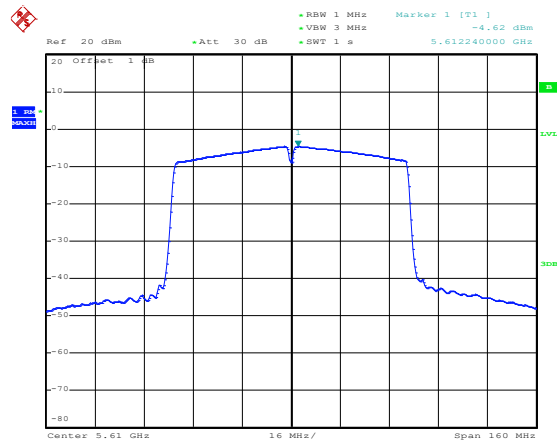
<p>802.11n-HT40-Low</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz Marker 1 [F1] -0.39 dBm VBW 3 MHz SWT 1 s 5.511760000 GHz</p> <p>20 Offset 1 dB 1 dB -10 -20 -30 -40 -50 -60 -70 -80</p> <p>Center 5.51 GHz 8 MHz/ Span 80 MHz</p> <p>Date: 9.AUG.2022 13:14:23</p>
<p>802.11n-HT40- Middle</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz Marker 1 [F1] -0.48 dBm VBW 3 MHz SWT 1 s 5.591600000 GHz</p> <p>20 Offset 1 dB 1 dB -10 -20 -30 -40 -50 -60 -70 -80</p> <p>Center 5.59 GHz 8 MHz/ Span 80 MHz</p> <p>Date: 9.AUG.2022 13:15:43</p>
<p>802.11n-HT40-High</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz Marker 1 [F1] 0.08 dBm VBW 3 MHz SWT 1 s 5.671440000 GHz</p> <p>20 Offset 1 dB 1 dB -10 -20 -30 -40 -50 -60 -70 -80</p> <p>Center 5.67 GHz 8 MHz/ Span 80 MHz</p> <p>Date: 9.AUG.2022 13:16:08</p>

802.11ac-HT80-Low



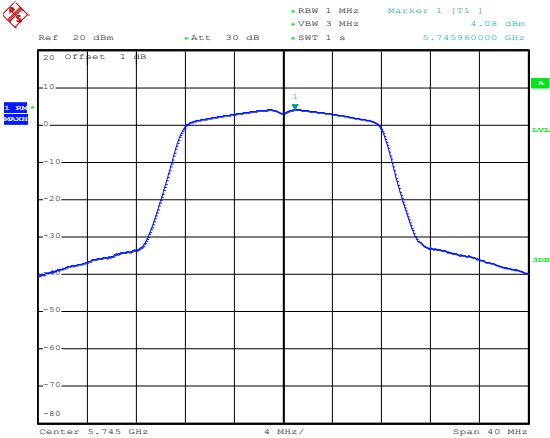
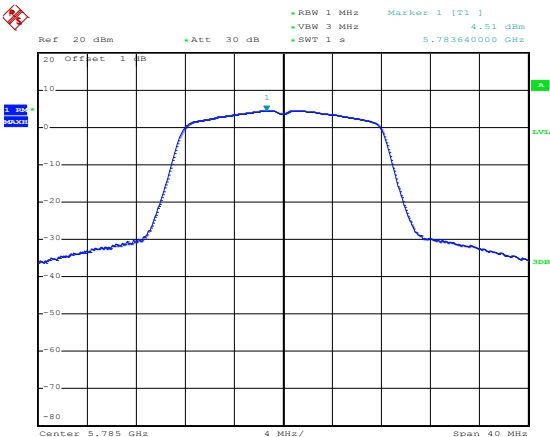
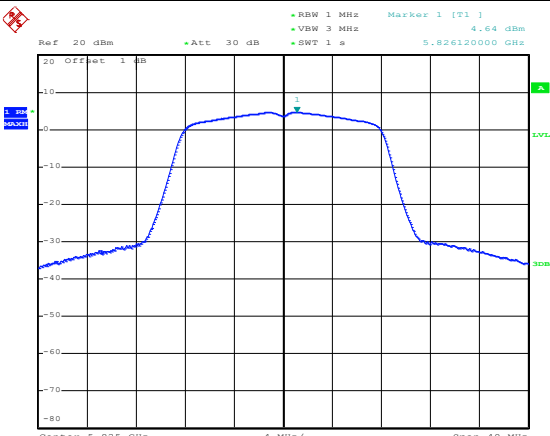
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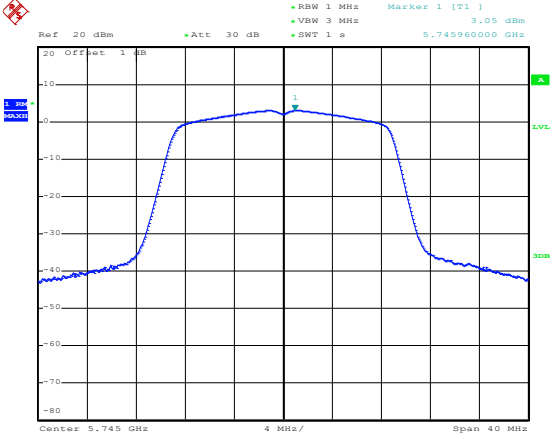
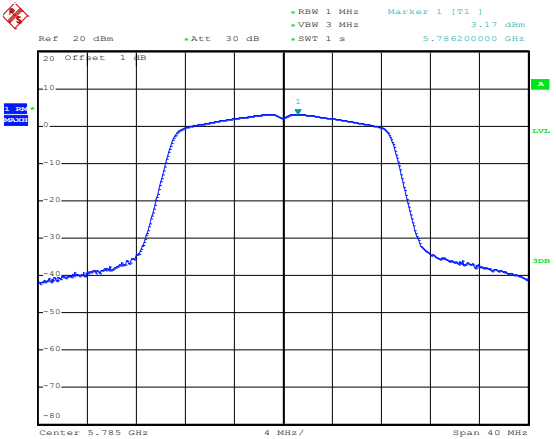
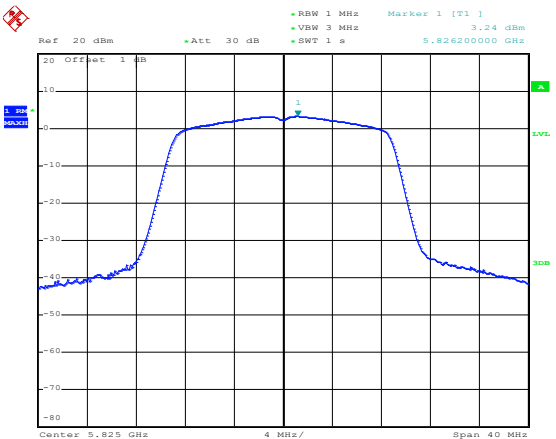
802.11ac-HT80-High

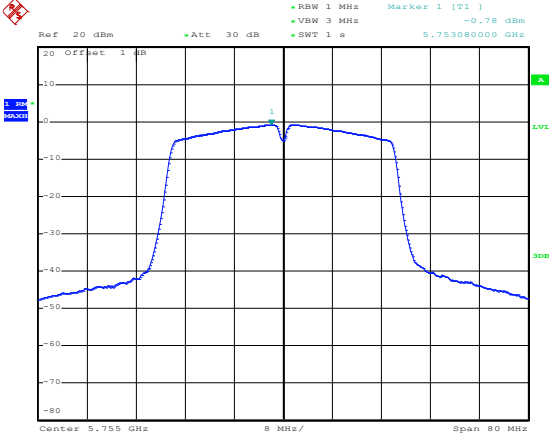
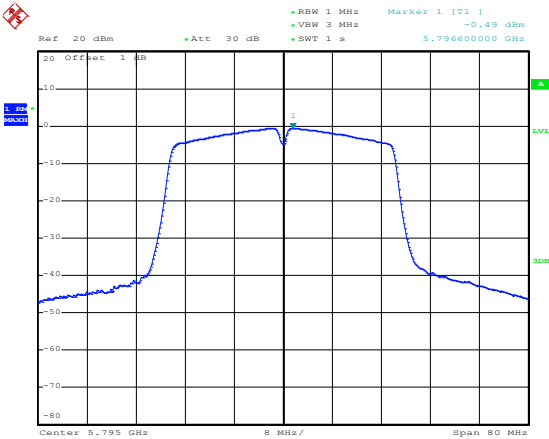
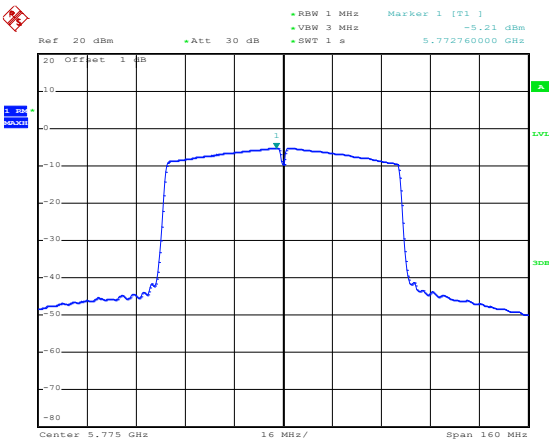


Date: 9.AUG.2022 13:17:18

5725-5850MHz

<p>802.11a-Low</p>	 <p>Ref 20 dBm +Att 30 dB +RBW 1 MHz +VBW 3 MHz +SWT 1 s Marker 1 [T1] 4.08 dBm 5.745960000 GHz</p> <p>Center 5.745 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 11.AUG.2022 10:43:04</p>
<p>802.11a-Middle</p>	 <p>Ref 20 dBm +Att 30 dB +RBW 1 MHz +VBW 3 MHz +SWT 1 s Marker 1 [T1] 4.51 dBm 5.783640000 GHz</p> <p>Center 5.785 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 11.AUG.2022 10:43:42</p>
<p>802.11a-High</p>	 <p>Ref 20 dBm +Att 30 dB +RBW 1 MHz +VBW 3 MHz +SWT 1 s Marker 1 [T1] 4.64 dBm 5.826120000 GHz</p> <p>Center 5.825 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 11.AUG.2022 10:44:18</p>

<p>802.11n-HT20-Low</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz Marker 1 [T1] 3.05 dBm VBW 3 MHz SWT 1 s 5.745960000 GHz</p> <p>Center 5.745 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 11.AUG.2022 10:45:06</p>
<p>802.11n-HT20-Middle</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz Marker 1 [T1] 3.17 dBm VBW 3 MHz SWT 1 s 5.786200000 GHz</p> <p>Center 5.785 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 11.AUG.2022 10:45:28</p>
<p>802.11n-HT20-High</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz Marker 1 [T1] 3.24 dBm VBW 3 MHz SWT 1 s 5.826200000 GHz</p> <p>Center 5.825 GHz 4 MHz/ Span 40 MHz</p> <p>Date: 11.AUG.2022 10:45:47</p>

<p>802.11n-HT40-Low</p>	 <p>Date: 11.AUG.2022 10:47:03</p>
<p>802.11n-HT40-High</p>	 <p>Date: 11.AUG.2022 10:47:26</p>
<p>802.11ac-HT80-Low</p>	 <p>Date: 11.AUG.2022 10:48:24</p>

APPENDIX B

Emission Bandwidth and Occupied Bandwidth

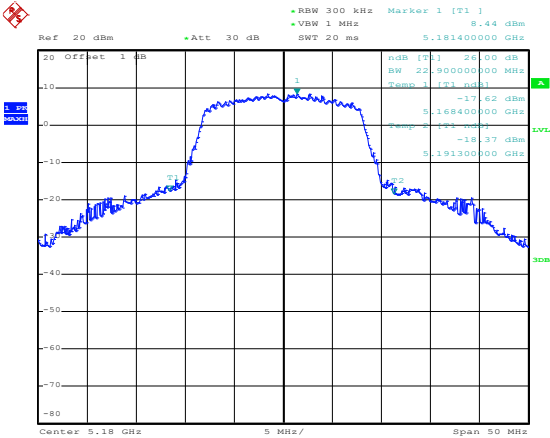
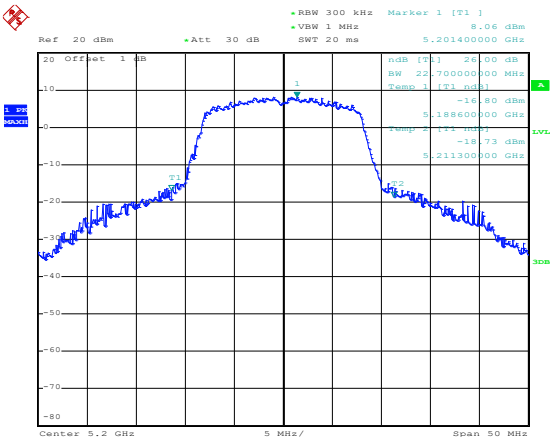
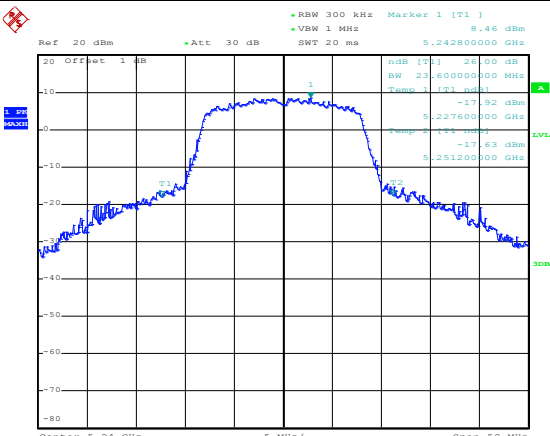
U-NII-1:5150-5250MHz				
Test Mode	Test Channel MHz	26 dB Bandwidth MHz	99% Bandwidth MHz	Limit MHz
802.11a	5180	22.9	17.1	Pass
	5200	22.7	17.1	Pass
	5240	23.6	17.1	Pass
802.11n-HT20	5180	20.8	18.1	Pass
	5200	21.0	17.9	Pass
	5240	21.0	17.9	Pass
802.11n-HT40	5190	42.4	37.0	Pass
	5230	42.6	36.8	Pass
802.11ac-HT80	5210	82.4	75.6	Pass

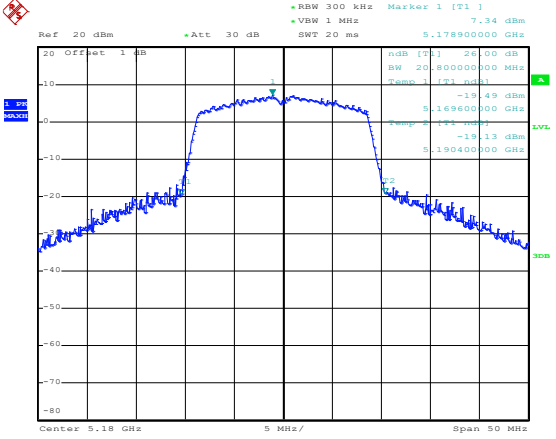
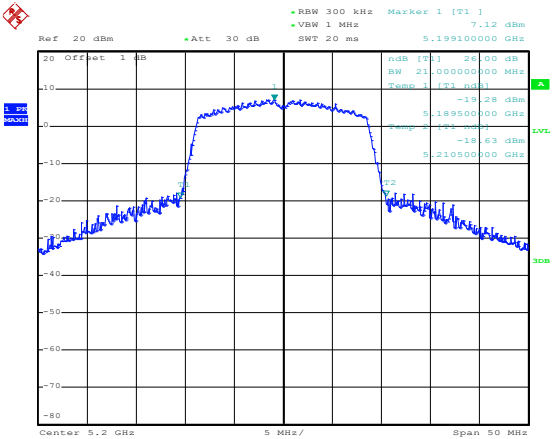
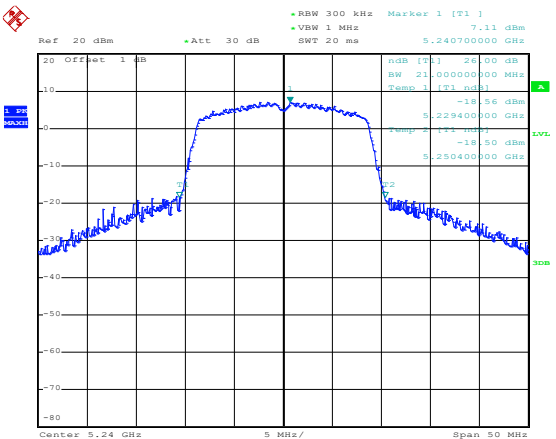
U-NII-2A: 5250-5350MHz				
Test Mode	Test Channel MHz	26 dB Bandwidth MHz	99% Bandwidth MHz	Limit MHz
802.11a	5260	20.8	17.1	Pass
	5280	20.5	17.1	Pass
	5320	20.6	17.1	Pass
802.11n-HT20	5260	20.7	17.9	Pass
	5280	20.7	17.9	Pass
	5320	20.7	17.9	Pass
802.11n-HT40	5270	42.0	36.8	Pass
	5310	42.0	36.8	Pass
802.11ac-HT80	5290	82.0	75.6	Pass

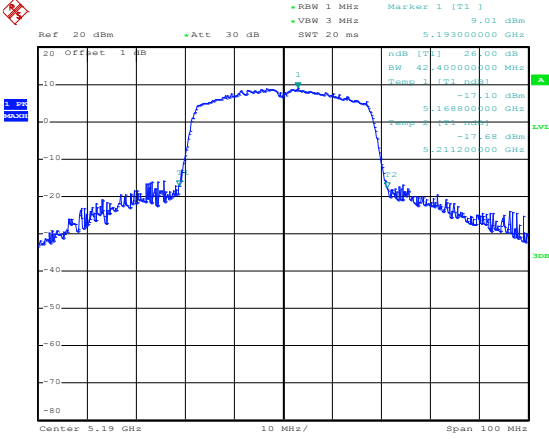
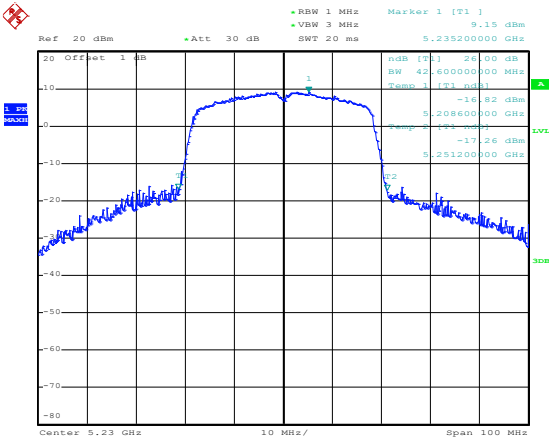
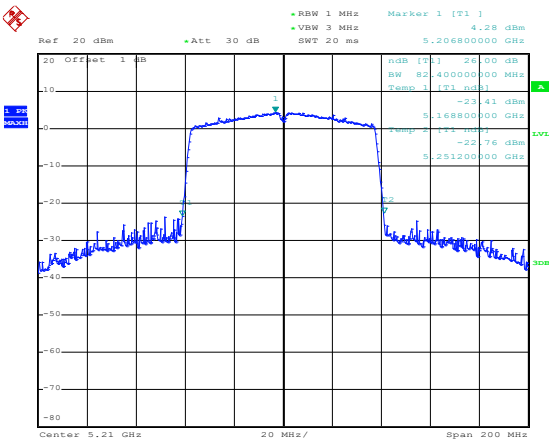
U-NII-2C: 5470-5725MHz				
Test Mode	Test Channel MHz	26 dB Bandwidth MHz	99% Bandwidth MHz	Limit MHz
802.11a	5500	20.8	17.2	Pass
	5580	21.4	17.1	Pass
	5700	21.5	17.1	Pass
802.11n-HT20	5500	21.2	17.9	Pass
	5580	20.7	17.9	Pass
	5700	20.7	17.9	Pass
802.11n-HT40	5510	42.0	36.8	Pass
	5550	42.4	36.8	Pass
	5670	42.0	37.0	Pass
802.11ac-HT80	5530	81.6	75.6	Pass
	5610	81.6	75.6	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	17.4	≥500
	5785	16.6	17.3	≥500
	5825	16.6	17.3	≥500
802.11n-HT20	5745	17.8	18.0	≥500
	5785	17.8	17.9	≥500
	5825	17.5	17.9	≥500
802.11n-HT40	5755	36.4	37.0	≥500
	5795	36.4	37.0	≥500
802.11ac VH80	5775	77.2	75.6	≥500

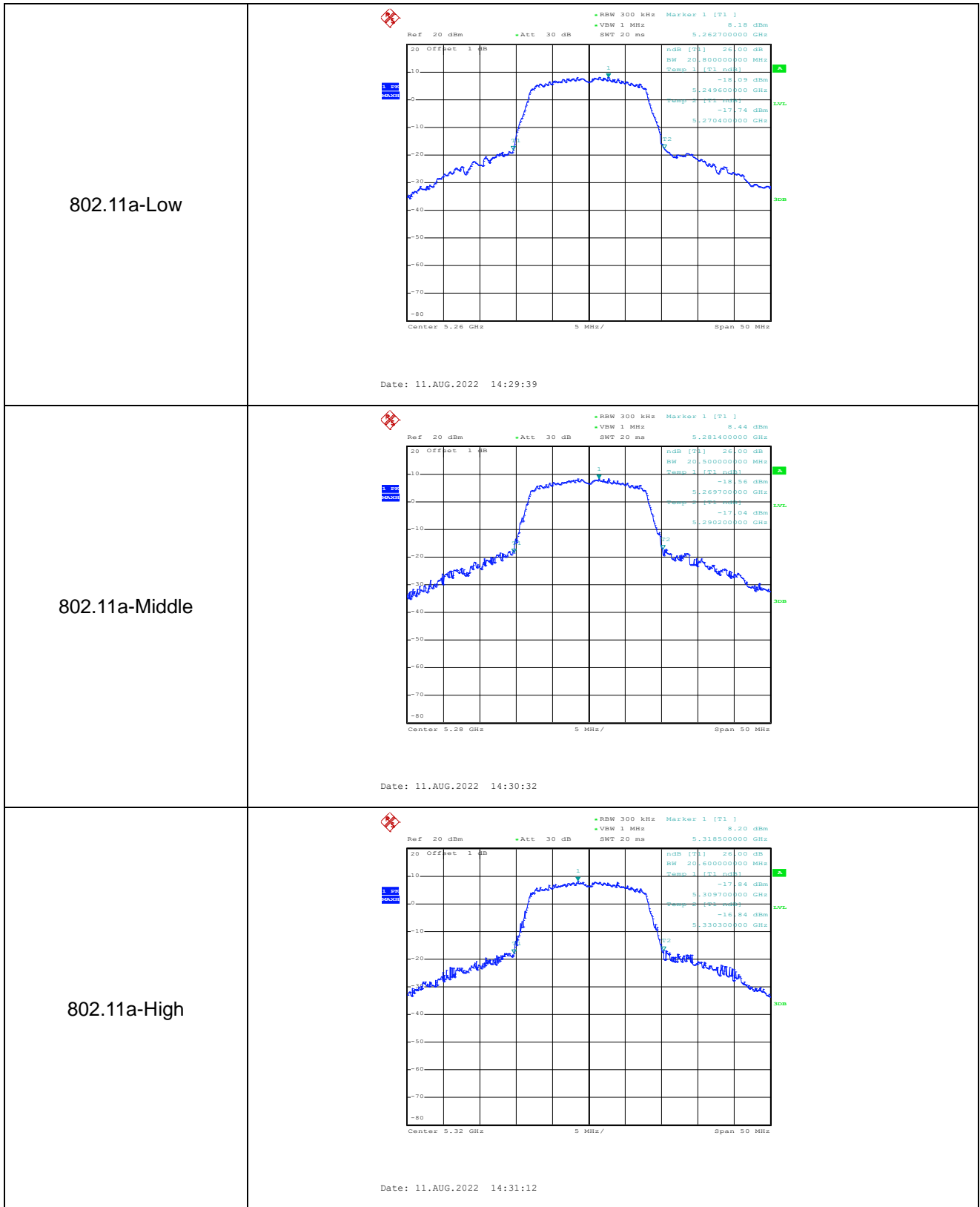
6 dB Bandwidth
5150-5250MHz

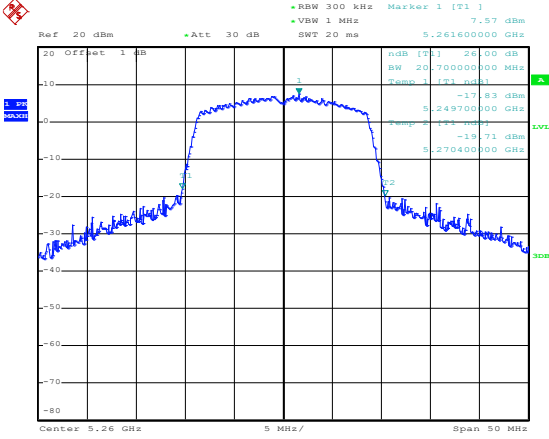
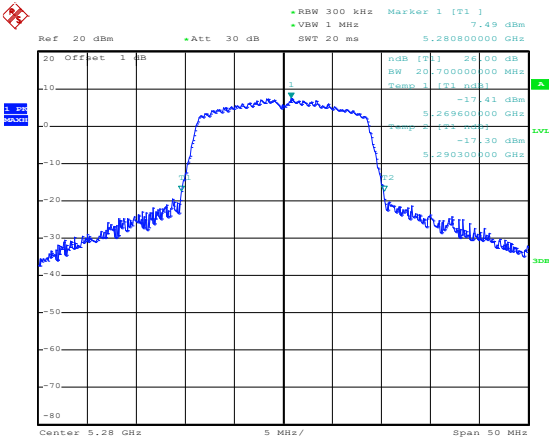
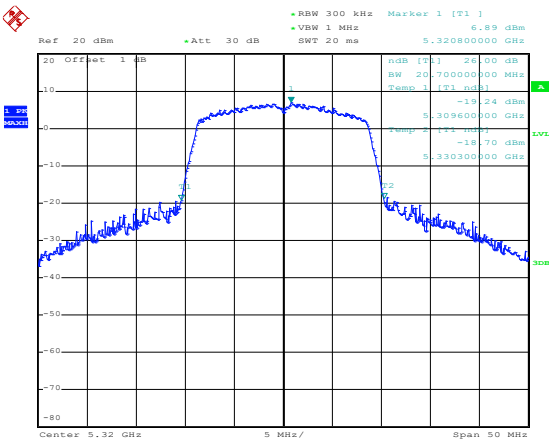
<p>802.11a-Low</p>	 <p>Ref: 20 dBm +Att: 30 dB RBW 300 kHz Marker 1 [T1] 8.44 dBm VBW 1 MHz SWT 20 ms 5.183400000 GHz Offset 1 dB dB [T1] 26.00 dB BW 23.0000000 MHz Temp 1 [T1] null -17.62 dBm 5.168400000 GHz -18.37 dBm 5.193300000 GHz Center 5.18 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 11:32:03</p>
<p>802.11a-Middle</p>	 <p>Ref: 20 dBm +Att: 30 dB RBW 300 kHz Marker 1 [T1] 8.06 dBm VBW 1 MHz SWT 20 ms 5.201400000 GHz Offset 1 dB dB [T1] 26.00 dB BW 23.7000000 MHz Temp 1 [T1] null -16.80 dBm 5.188600000 GHz -18.73 dBm 5.213000000 GHz Center 5.2 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 11:32:38</p>
<p>802.11a-High</p>	 <p>Ref: 20 dBm +Att: 30 dB RBW 300 kHz Marker 1 [T1] 8.46 dBm VBW 1 MHz SWT 20 ms 5.242800000 GHz Offset 1 dB dB [T1] 26.00 dB BW 23.6000000 MHz Temp 1 [T1] null -17.92 dBm 5.227600000 GHz -17.63 dBm 5.251200000 GHz Center 5.24 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 11:33:15</p>

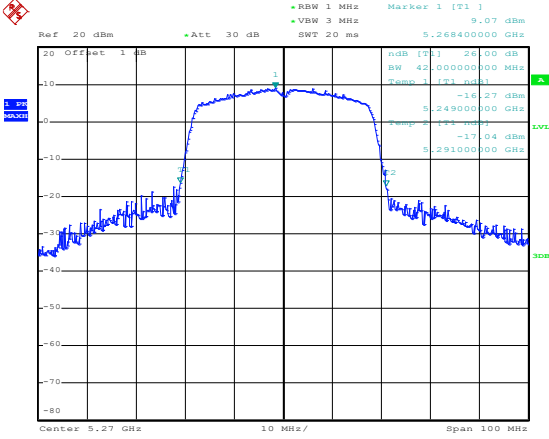
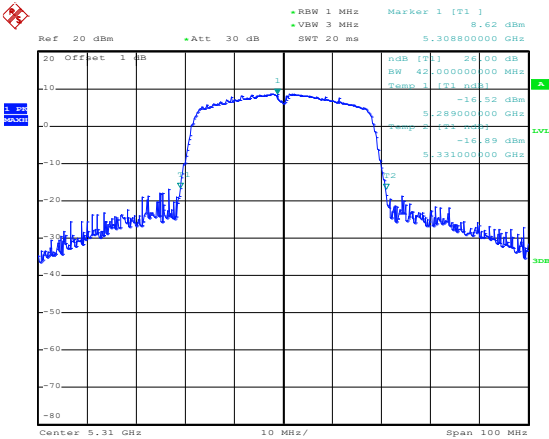
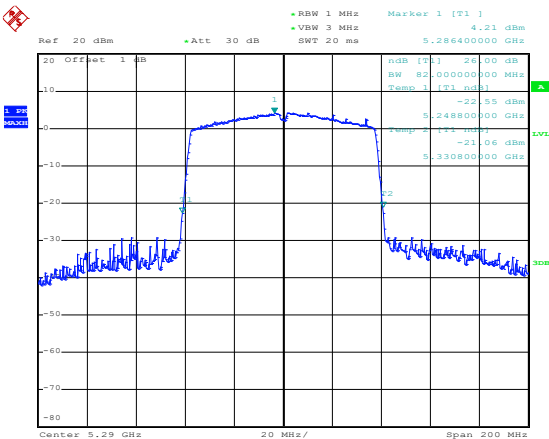
<p>802.11n-HT20-Low</p>	 <p> Date: 11.AUG.2022 11:33:55 </p>
<p>802.11n-HT20-Middle</p>	 <p> Date: 11.AUG.2022 11:34:19 </p>
<p>802.11n-HT20-High</p>	 <p> Date: 11.AUG.2022 11:34:45 </p>

<p>802.11n-HT40-Low</p>	 <p>Date: 11.AUG.2022 11:41:44</p>
<p>802.11n-HT40-High</p>	 <p>Date: 11.AUG.2022 11:42:52</p>
<p>802.11ac-HT80-Low</p>	 <p>Date: 11.AUG.2022 11:30:41</p>

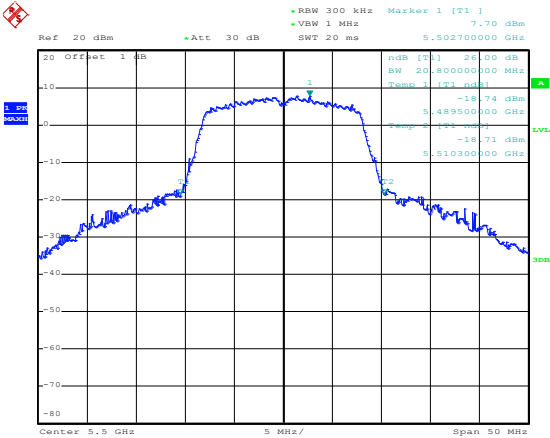
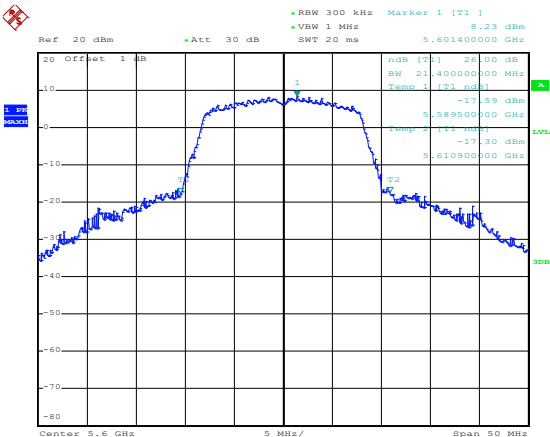
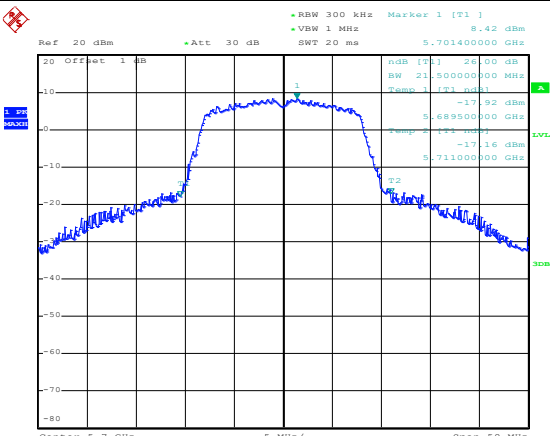
5250-5350MHz



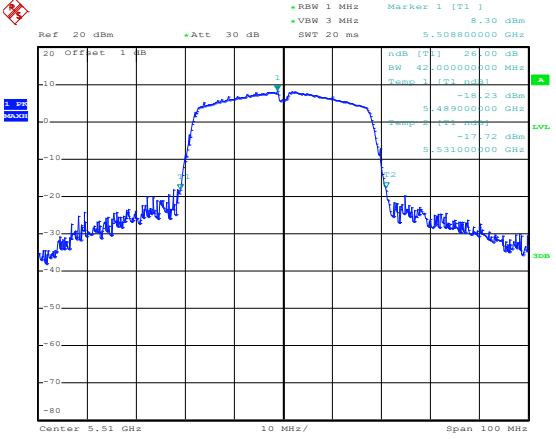
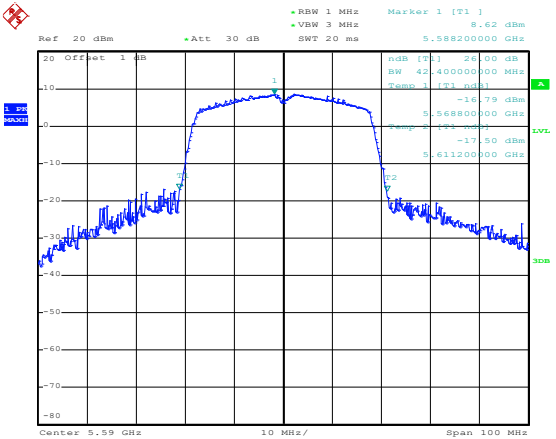
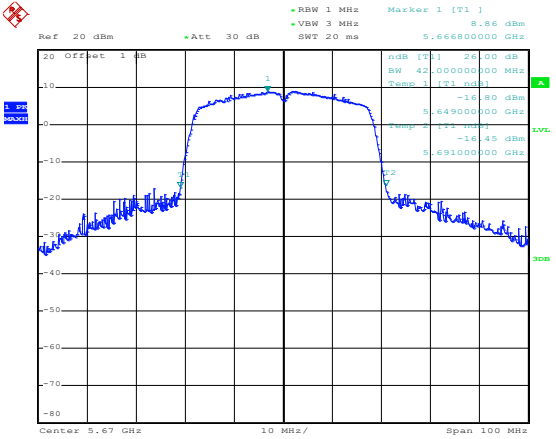
<p>802.11n-HT20-Low</p>	 <p>Date: 11.AUG.2022 14:32:02</p>
<p>802.11n-HT20-Middle</p>	 <p>Date: 11.AUG.2022 14:33:00</p>
<p>802.11n-HT20-High</p>	 <p>Date: 11.AUG.2022 14:35:12</p>

<p>802.11n-HT40-Low</p>	 <p>Ref 20 dBm +Att 30 dB</p> <p>RBW 1 MHz Marker 1 [T1] 9.07 dBm VBW 3 MHz 5.268400000 GHz SWT 20 ms</p> <p>20 Offset 1 dB</p> <p>dBm [T1] 26.00 dB BW 40.00000000 MHz Temp 1 [T1] null</p> <p>-16.27 dBm 5.249000000 GHz -17.04 dBm 5.291000000 GHz</p> <p>Center 5.27 GHz 10 MHz/ Span 100 MHz</p> <p>Date: 11.AUG.2022 14:36:47</p>
<p>802.11n-HT40-High</p>	 <p>Ref 20 dBm +Att 30 dB</p> <p>RBW 1 MHz Marker 1 [T1] 8.62 dBm VBW 3 MHz 5.308800000 GHz SWT 20 ms</p> <p>20 Offset 1 dB</p> <p>dBm [T1] 26.00 dB BW 40.00000000 MHz Temp 1 [T1] null</p> <p>-16.52 dBm 5.289000000 GHz -14.89 dBm 5.331000000 GHz</p> <p>Center 5.31 GHz 10 MHz/ Span 100 MHz</p> <p>Date: 11.AUG.2022 14:37:53</p>
<p>802.11ac-HT80-Low</p>	 <p>Ref 20 dBm +Att 30 dB</p> <p>RBW 1 MHz Marker 1 [T1] 4.21 dBm VBW 3 MHz 5.286400000 GHz SWT 20 ms</p> <p>20 Offset 1 dB</p> <p>dBm [T1] 26.00 dB BW 80.00000000 MHz Temp 1 [T1] null</p> <p>-22.55 dBm 5.248800000 GHz -21.06 dBm 5.330800000 GHz</p> <p>Center 5.29 GHz 20 MHz/ Span 200 MHz</p> <p>Date: 11.AUG.2022 14:38:47</p>

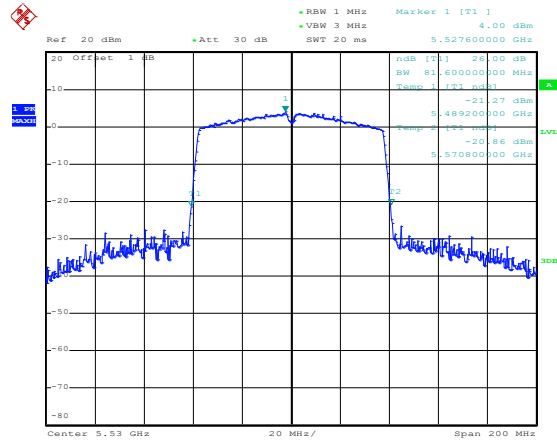
6 dB Bandwidth
5470-5725MHz

<p>802.11a-Low</p>	 <p>Ref 20 dBm +Att 30 dB RBW 300 kHz Marker 1 [T1] 17.70 dBm VBW 1 MHz SWT 20 ms 5.502700000 GHz 20 Offset 1 dB n dB [T1] 26.00 dB BW 20.80000000 MHz Temp 1 [T1] n dB -18.74 dBm 5.489500000 GHz -18.71 dBm 5.510300000 GHz Center 5.5 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 14:53:06</p>
<p>802.11a-Middle</p>	 <p>Ref 20 dBm +Att 30 dB RBW 300 kHz Marker 1 [T1] 17.59 dBm VBW 1 MHz SWT 20 ms 5.601400000 GHz 20 Offset 1 dB n dB [T1] 26.00 dB BW 21.40000000 MHz Temp 1 [T1] n dB -17.59 dBm 5.589500000 GHz -17.30 dBm 5.610900000 GHz Center 5.6 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 14:54:10</p>
<p>802.11a-High</p>	 <p>Ref 20 dBm +Att 30 dB RBW 300 kHz Marker 1 [T1] 17.92 dBm VBW 1 MHz SWT 20 ms 5.701400000 GHz 20 Offset 1 dB n dB [T1] 26.00 dB BW 21.50000000 MHz Temp 1 [T1] n dB -17.92 dBm 5.689500000 GHz -17.16 dBm 5.711000000 GHz Center 5.7 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 14:54:56</p>

<p>802.11n-HT20-Low</p>	<p>Date: 11.AUG.2022 15:05:08</p>
<p>802.11n-HT20-Middle</p>	<p>Date: 11.AUG.2022 15:05:54</p>
<p>802.11n-HT20-High</p>	<p>Date: 11.AUG.2022 15:06:46</p>

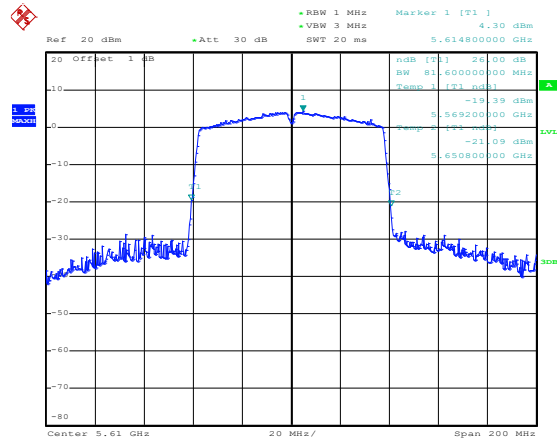
<p>802.11n-HT40-Low</p>	 <p>Ref 20 dBm +Att 30 dB</p> <p>RBW 1 MHz Marker 1 [T1] 8.30 dBm VBW 3 MHz SWT 20 ms 5.50880000 GHz</p> <p>ndB [T1] 26.00 dB BW 42.00000000 MHz Temp 1 [T1] ndB</p> <p>-18.23 dBm 5.48900000 GHz -17.72 dBm 5.53100000 GHz</p> <p>Center 5.51 GHz 10 MHz/ Span 100 MHz</p> <p>Date: 11.AUG.2022 15:09:31</p>
<p>802.11n-HT40- Middle</p>	 <p>Ref 20 dBm +Att 30 dB</p> <p>RBW 1 MHz Marker 1 [T1] 8.62 dBm VBW 3 MHz SWT 20 ms 5.58820000 GHz</p> <p>ndB [T1] 26.00 dB BW 42.40000000 MHz Temp 1 [T1] ndB</p> <p>-16.79 dBm 5.56880000 GHz -17.50 dBm 5.61120000 GHz</p> <p>Center 5.59 GHz 10 MHz/ Span 100 MHz</p> <p>Date: 11.AUG.2022 15:10:26</p>
<p>802.11n-HT40-High</p>	 <p>Ref 20 dBm +Att 30 dB</p> <p>RBW 1 MHz Marker 1 [T1] 8.86 dBm VBW 3 MHz SWT 20 ms 5.66680000 GHz</p> <p>ndB [T1] 26.00 dB BW 42.00000000 MHz Temp 1 [T1] ndB</p> <p>-16.80 dBm 5.64900000 GHz -15.45 dBm 5.69100000 GHz</p> <p>Center 5.67 GHz 10 MHz/ Span 100 MHz</p> <p>Date: 11.AUG.2022 15:11:25</p>

802.11ac-HT80-Low



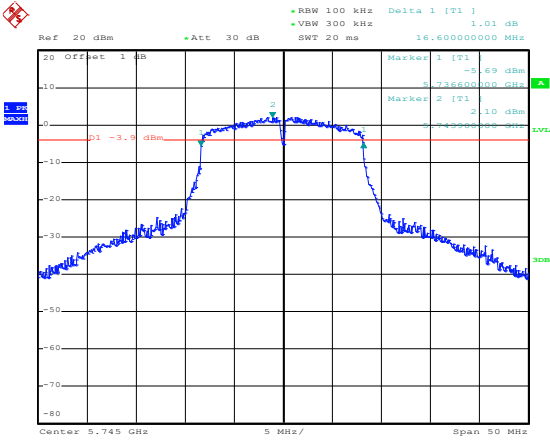
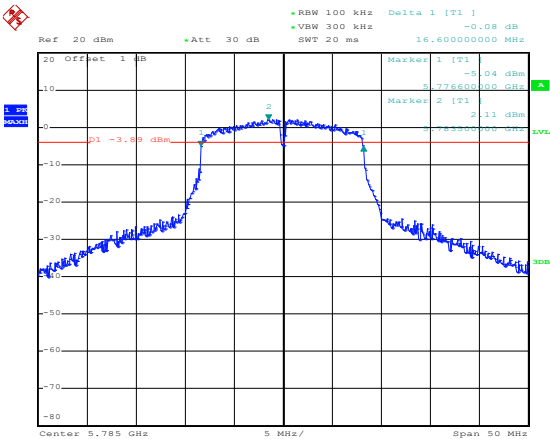
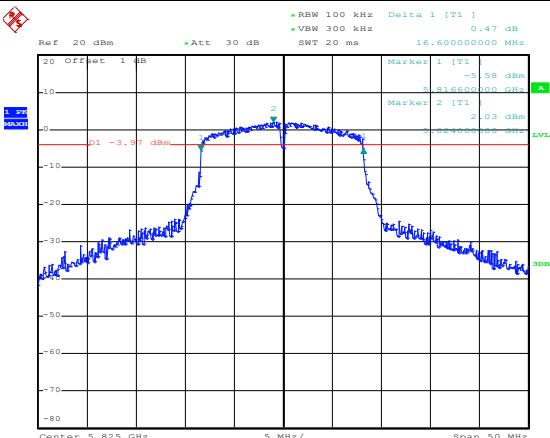
Date: 11.AUG.2022 15:12:03

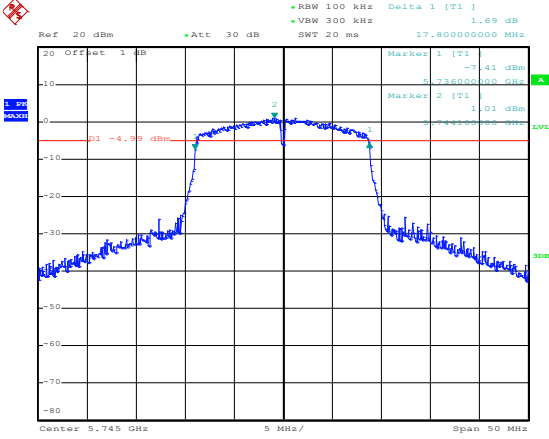
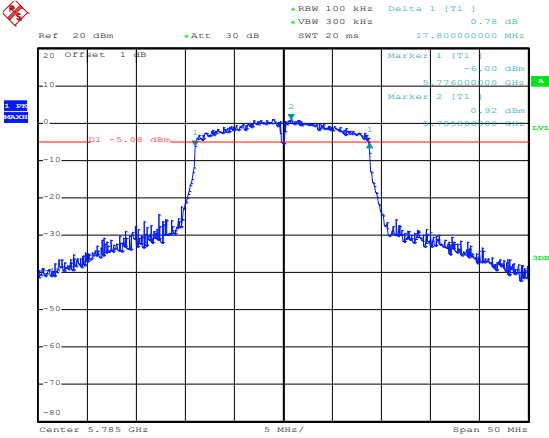
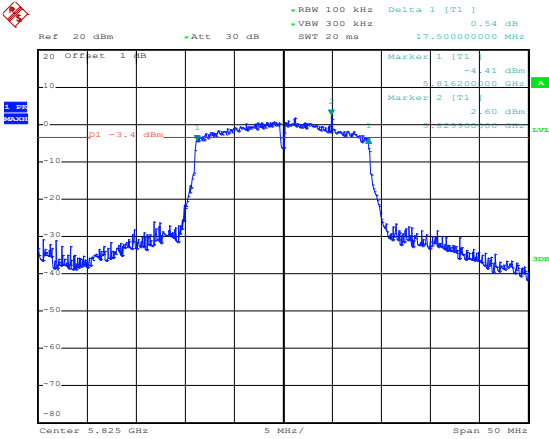
802.11ac-HT80-High

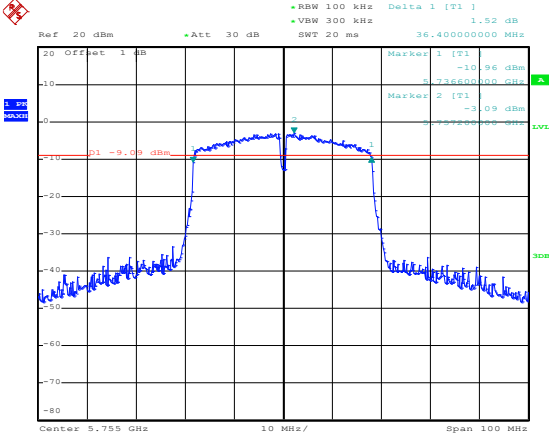
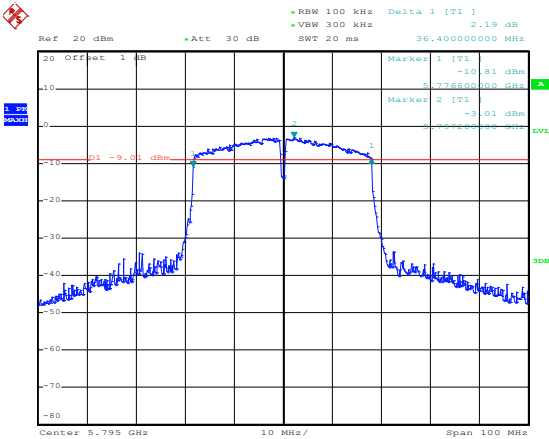
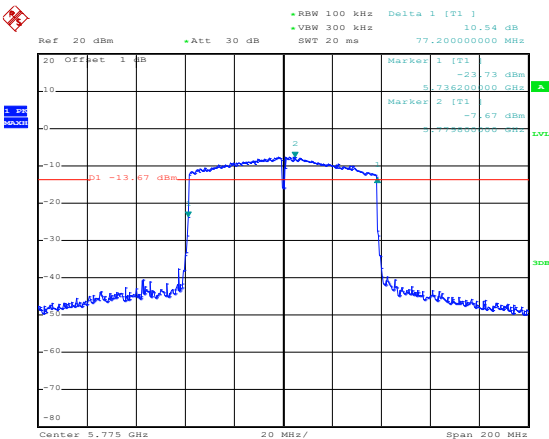


Date: 11.AUG.2022 15:12:26

6 dB Bandwidth
5725-5850MHz

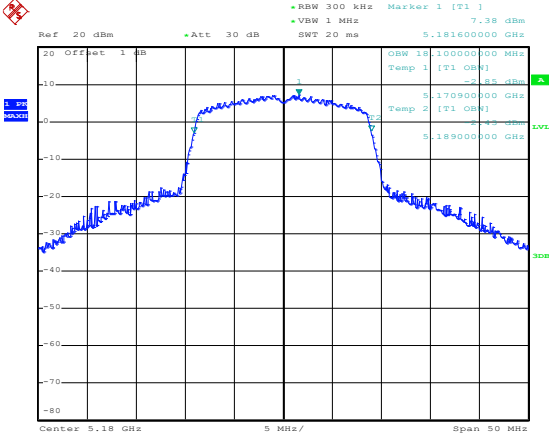
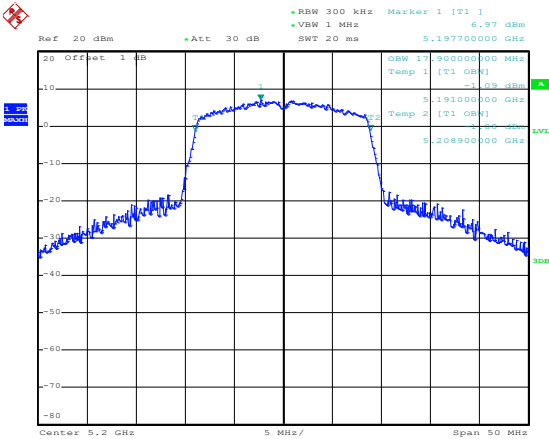
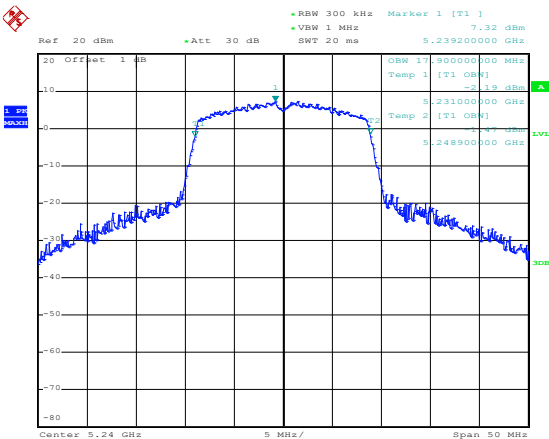
<p>802.11a-Low</p>	 <p>Ref: 20 dBm +Att: 30 dB RBW: 100 kHz Delta: 1 [T1] 1.01 dB VBW: 300 kHz SWT: 20 ms 16.60000000 MHz</p> <p>Offset: 1 dB</p> <p>Marker 1 [T1] -5.69 dBm 5.74600000 GHz</p> <p>Marker 2 [T1] -2.10 dBm 5.74600000 GHz</p> <p>D1 -3.99 dBm</p> <p>Center: 5.745 GHz 5 MHz/ Span: 50 MHz</p> <p>Date: 11.AUG.2022 15:48:31</p>
<p>802.11a-Middle</p>	 <p>Ref: 20 dBm +Att: 30 dB RBW: 100 kHz Delta: 1 [T1] -0.08 dB VBW: 300 kHz SWT: 20 ms 16.60000000 MHz</p> <p>Offset: 1 dB</p> <p>Marker 1 [T1] -5.04 dBm 5.78600000 GHz</p> <p>Marker 2 [T1] -2.11 dBm 5.78600000 GHz</p> <p>D1 -3.09 dBm</p> <p>Center: 5.785 GHz 5 MHz/ Span: 50 MHz</p> <p>Date: 11.AUG.2022 15:49:50</p>
<p>802.11a-High</p>	 <p>Ref: 20 dBm +Att: 30 dB RBW: 100 kHz Delta: 1 [T1] 0.47 dB VBW: 300 kHz SWT: 20 ms 16.60000000 MHz</p> <p>Offset: 1 dB</p> <p>Marker 1 [T1] -5.58 dBm 5.82600000 GHz</p> <p>Marker 2 [T1] -2.03 dBm 5.82600000 GHz</p> <p>D1 -3.97 dBm</p> <p>Center: 5.825 GHz 5 MHz/ Span: 50 MHz</p> <p>Date: 11.AUG.2022 15:50:39</p>

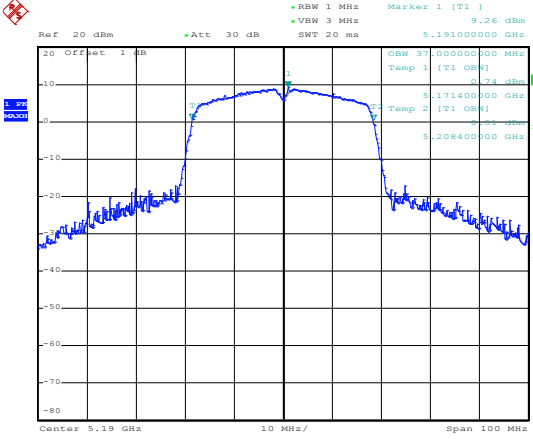
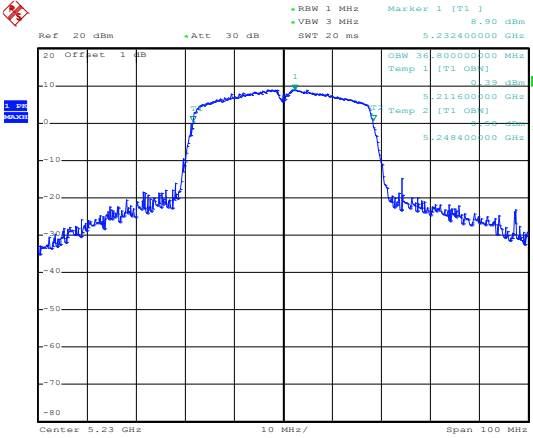
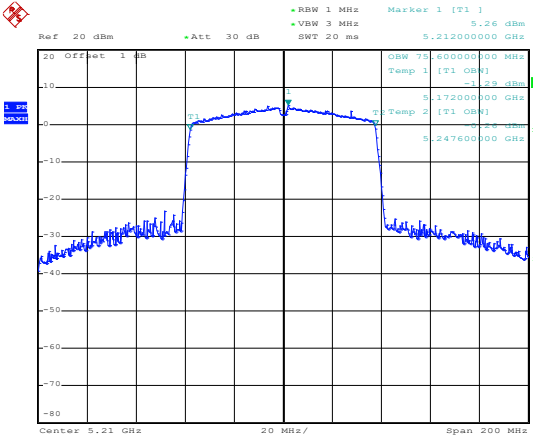
<p>802.11n-HT20-Low</p>	 <p>Ref 20 dBm +Att 30 dB RBW 100 kHz Delta 1 [T1] 1.69 dB VBW 300 kHz SWT 20 ms 17.80000000 MHz</p> <p>Marker 1 [T1] -7.41 dBm Marker 2 [T1] 1.01 dBm</p> <p>d1 -4.99 dBm</p> <p>Center 5.745 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 15:51:38</p>
<p>802.11n-HT20-Middle</p>	 <p>Ref 20 dBm +Att 30 dB RBW 100 kHz Delta 1 [T1] 0.78 dB VBW 300 kHz SWT 20 ms 17.80000000 MHz</p> <p>Marker 1 [T1] -6.00 dBm Marker 2 [T1] 0.92 dBm</p> <p>d1 -3.08 dBm</p> <p>Center 5.785 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 15:53:11</p>
<p>802.11n-HT20-High</p>	 <p>Ref 20 dBm +Att 30 dB RBW 100 kHz Delta 1 [T1] 0.54 dB VBW 300 kHz SWT 20 ms 17.50000000 MHz</p> <p>Marker 1 [T1] -4.41 dBm Marker 2 [T1] 2.60 dBm</p> <p>d1 -3.4 dBm</p> <p>Center 5.825 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 15:54:00</p>

<p>802.11n-HT40-Low</p>	 <p> *RBW 100 kHz Delta 1 [F1] 1.52 dB *VBW 300 kHz *Att 30 dB Ref 20 dBm SWT 20 ms 36.40000000 MHz 20 Offset 1 dB Marker 1 [F1] -10.96 dBm 5.77650000 GHz Marker 2 [F1] -3.09 dBm 5.78200000 GHz D1 -9.09 dBm LVL 30dB Center 5.775 GHz 10 MHz/ Span 100 MHz Date: 11.AUG.2022 15:55:03 </p>
<p>802.11n-HT40-High</p>	 <p> *RBW 100 kHz Delta 1 [F1] 2.19 dB *VBW 300 kHz *Att 30 dB Ref 20 dBm SWT 20 ms 36.40000000 MHz 20 Offset 1 dB Marker 1 [F1] -10.81 dBm 5.77650000 GHz Marker 2 [F1] -3.01 dBm 5.78200000 GHz D1 -9.01 dBm LVL 30dB Center 5.775 GHz 10 MHz/ Span 100 MHz Date: 11.AUG.2022 15:56:11 </p>
<p>802.11ac-HT80-Low</p>	 <p> *RBW 100 kHz Delta 1 [F1] 10.54 dB *VBW 300 kHz *Att 30 dB Ref 20 dBm SWT 20 ms 77.20000000 MHz 20 Offset 1 dB Marker 1 [F1] -23.73 dBm 5.73620000 GHz Marker 2 [F1] -7.67 dBm 5.74170000 GHz D1 -13.67 dBm LVL 30dB Center 5.775 GHz 20 MHz/ Span 200 MHz Date: 11.AUG.2022 15:57:22 </p>

99% BandwidthMHz
5150-5250MHz

<p>802.11a-Low</p>	<p>Ref 20 dBm +Att 30 dB RBW 300 kHz VBW 1 MHz SWT 20 ms Marker 1 [T1] 8.06 dBm Offset 1 dB OSW 17.100000000 MHz Temp 1 [T1] 0dB -2.56 dBm 5.173400000 GHz Temp 2 [T1] 0dB -2.82 dBm 5.188500000 GHz Center 5.18 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 11:17:30</p>
<p>802.11a-Middle</p>	<p>Ref 20 dBm +Att 30 dB RBW 300 kHz VBW 1 MHz SWT 20 ms Marker 1 [T1] 8.12 dBm Offset 1 dB OSW 17.100000000 MHz Temp 1 [T1] 0dB -2.82 dBm 5.191400000 GHz Temp 2 [T1] 0dB -2.82 dBm 5.208500000 GHz Center 5.2 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 11:17:52</p>
<p>802.11a-High</p>	<p>Ref 20 dBm +Att 30 dB RBW 300 kHz VBW 1 MHz SWT 20 ms Marker 1 [T1] 8.63 dBm Offset 1 dB OSW 17.100000000 MHz Temp 1 [T1] 0dB -2.83 dBm 5.231400000 GHz Temp 2 [T1] 0dB -2.84 dBm 5.248500000 GHz Center 5.24 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 11:18:16</p>

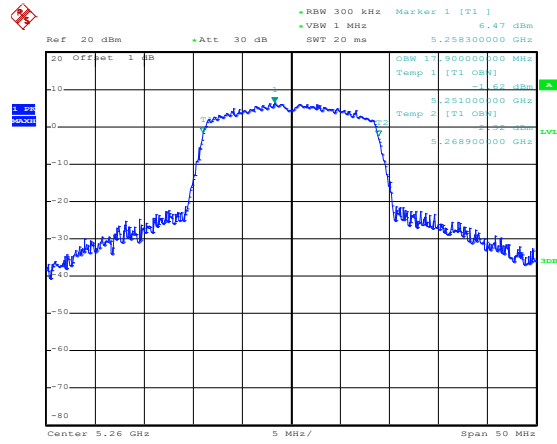
<p>802.11n-HT20-Low</p>	 <p>Ref 20 dBm +Att 30 dB RBW 300 kHz Marker 1 [T1] 7.38 dBm +VBW 1 MHz SWT 20 ms 5.181600000 GHz</p> <p>OSW 17.100000000 MHz Temp 1 [T1] 0dB -2.85 dBm 5.170900000 GHz Temp 2 [T1] 0dB -2.43 dBm 5.189000000 GHz</p> <p>Center 5.18 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 11:19:32</p>
<p>802.11n-HT20-Middle</p>	 <p>Ref 20 dBm +Att 30 dB RBW 300 kHz Marker 1 [T1] 6.97 dBm +VBW 1 MHz SWT 20 ms 5.197700000 GHz</p> <p>OSW 17.300000000 MHz Temp 1 [T1] 0dB -1.02 dBm 5.191000000 GHz Temp 2 [T1] 0dB -1.00 dBm 5.208900000 GHz</p> <p>Center 5.2 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 11:19:51</p>
<p>802.11n-HT20-High</p>	 <p>Ref 20 dBm +Att 30 dB RBW 300 kHz Marker 1 [T1] 7.32 dBm +VBW 1 MHz SWT 20 ms 5.239200000 GHz</p> <p>OSW 17.900000000 MHz Temp 1 [T1] 0dB -2.39 dBm 5.231000000 GHz Temp 2 [T1] 0dB -2.44 dBm 5.248900000 GHz</p> <p>Center 5.24 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 11:20:13</p>

<p>802.11n-HT40-Low</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz VBW 3 MHz SWT 20 ms Marker 1 [T1] 9.26 dBm 5.191000000 GHz</p> <p>20 Offset 1 dB</p> <p>OSW 37.00000000 MHz Temp 1 [T1] 0.74 dBm 5.171400000 GHz Temp 2 [T1] 0.51 dBm 5.208400000 GHz</p> <p>Center 5.19 GHz 10 MHz/ Span 100 MHz</p> <p>Date: 11.AUG.2022 11:45:39</p>
<p>802.11n-HT40-High</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz VBW 3 MHz SWT 20 ms Marker 1 [T1] 8.90 dBm 5.232400000 GHz</p> <p>20 Offset 1 dB</p> <p>OSW 30.00000000 MHz Temp 1 [T1] 0.49 dBm 5.211600000 GHz Temp 2 [T1] 0.50 dBm 5.248400000 GHz</p> <p>Center 5.23 GHz 10 MHz/ Span 100 MHz</p> <p>Date: 11.AUG.2022 11:46:08</p>
<p>802.11ac-HT80-Low</p>	 <p>Ref 20 dBm +Att 30 dB RBW 1 MHz VBW 3 MHz SWT 20 ms Marker 1 [T1] 5.26 dBm 5.212000000 GHz</p> <p>20 Offset 1 dB</p> <p>OSW 70.00000000 MHz Temp 1 [T1] -1.29 dBm 5.172000000 GHz Temp 2 [T1] 0.44 dBm 5.247600000 GHz</p> <p>Center 5.21 GHz 20 MHz/ Span 200 MHz</p> <p>Date: 11.AUG.2022 11:23:10</p>

99% BandwidthMHz
5250-5350MHz

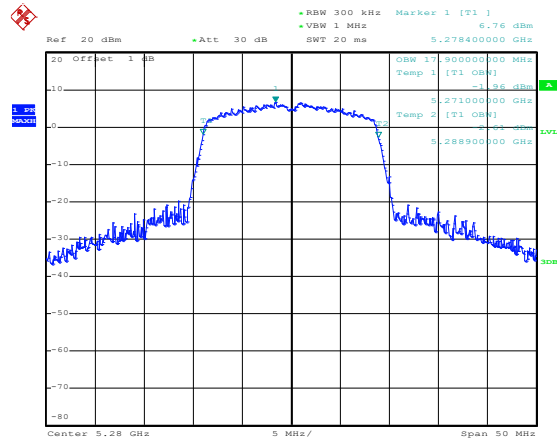
<p>802.11a-Low</p>	<p>Date: 11.AUG.2022 11:57:23</p>
<p>802.11a-Middle</p>	<p>Date: 11.AUG.2022 11:57:52</p>
<p>802.11a-High</p>	<p>Date: 11.AUG.2022 11:58:19</p>

802.11n-HT20-Low



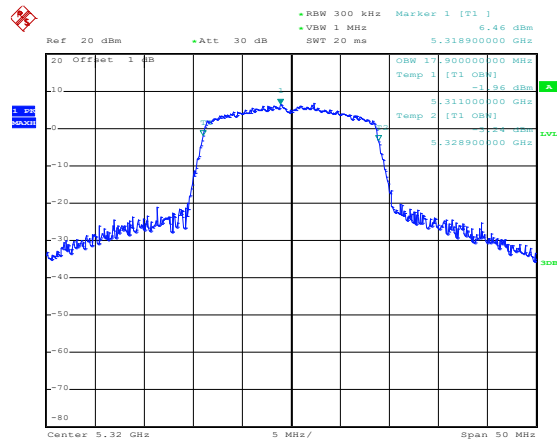
Date: 11.AUG.2022 11:59:06

802.11n-HT20-Middle



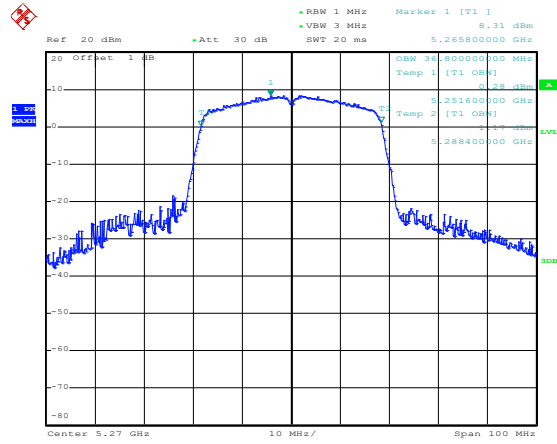
Date: 11.AUG.2022 11:59:31

802.11n-HT20-High



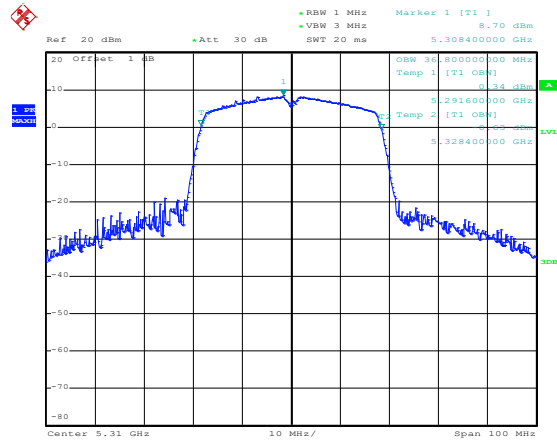
Date: 11.AUG.2022 12:00:50

802.11n-HT40-Low



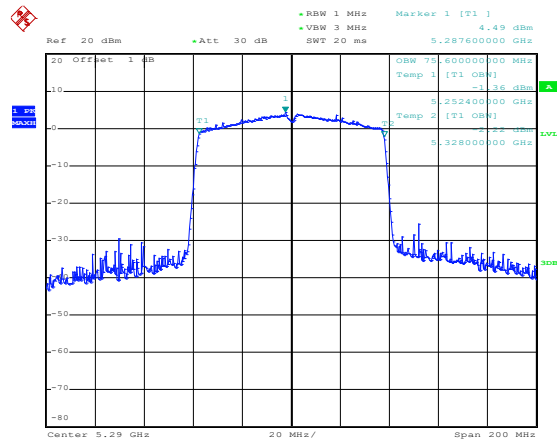
Date: 11.AUG.2022 13:51:18

802.11n-HT40-High



Date: 11.AUG.2022 13:52:04

802.11ac-HT80-Low

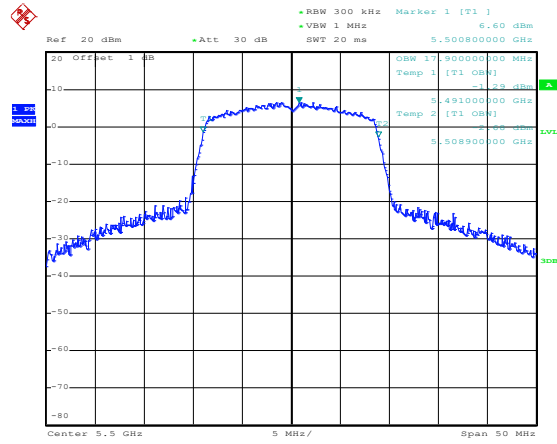


Date: 11.AUG.2022 13:53:29

99% BandwidthMHz
5470-5725MHz

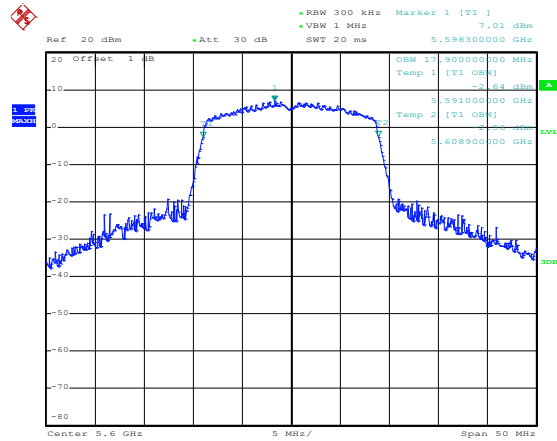
<p>802.11a-Low</p>	<p>Ref 20 dBm +Att 30 dB RBW 300 kHz Marker 1 [T1] 7.83 dBm +VBW 1 MHz SWT 20 ms 5.501400000 GHz</p> <p>OSW 17.200000000 MHz Temp 1 [T1] 0dB -23.45 dBm Temp 2 [T1] 0dB -23.45 dBm</p> <p>Center 5.5 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 14:42:15</p>
<p>802.11a-Middle</p>	<p>Ref 20 dBm +Att 30 dB RBW 300 kHz Marker 1 [T1] 7.75 dBm +VBW 1 MHz SWT 20 ms 5.601100000 GHz</p> <p>OSW 17.100000000 MHz Temp 1 [T1] 0dB -14.45 dBm Temp 2 [T1] 0dB -14.45 dBm</p> <p>Center 5.6 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 14:42:51</p>
<p>802.11a-High</p>	<p>Ref 20 dBm +Att 30 dB RBW 300 kHz Marker 1 [T1] 8.28 dBm +VBW 1 MHz SWT 20 ms 5.698900000 GHz</p> <p>OSW 17.100000000 MHz Temp 1 [T1] 0dB -14.45 dBm Temp 2 [T1] 0dB -14.45 dBm</p> <p>Center 5.7 GHz 5 MHz/ Span 50 MHz</p> <p>Date: 11.AUG.2022 14:43:15</p>

802.11n-HT20-Low



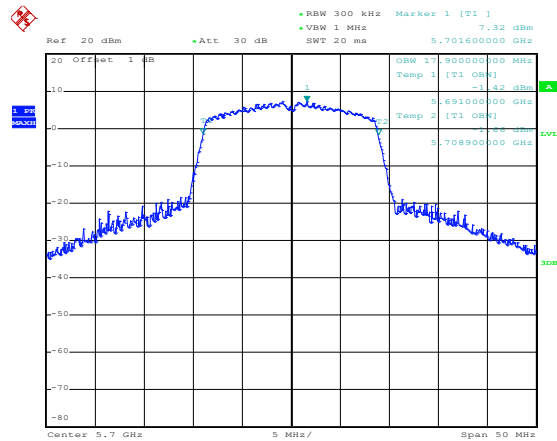
Date: 11.AUG.2022 14:44:09

802.11n-HT20-Middle



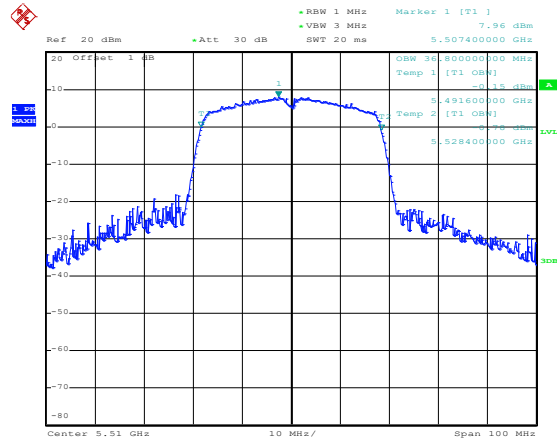
Date: 11.AUG.2022 14:44:37

802.11n-HT20-High



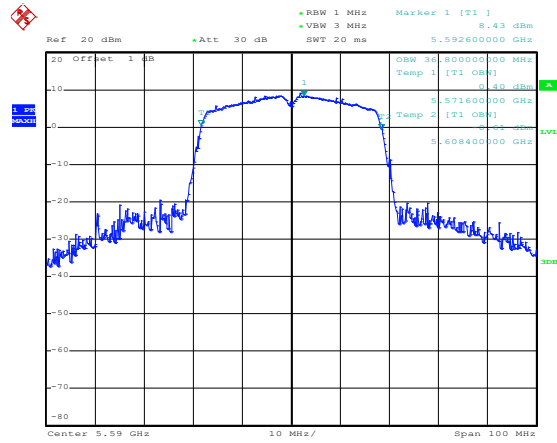
Date: 11.AUG.2022 14:45:19

802.11n-HT40-Low



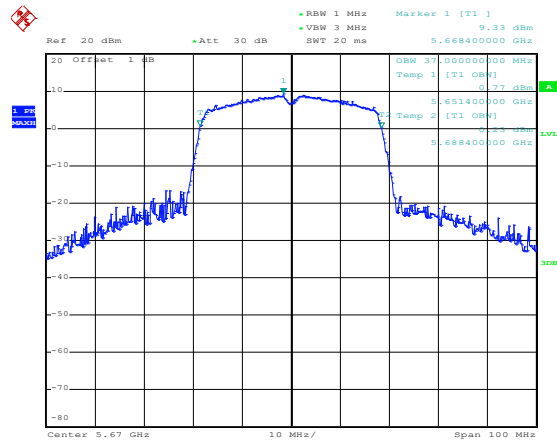
Date: 11.AUG.2022 14:46:46

802.11n-HT40- Middle



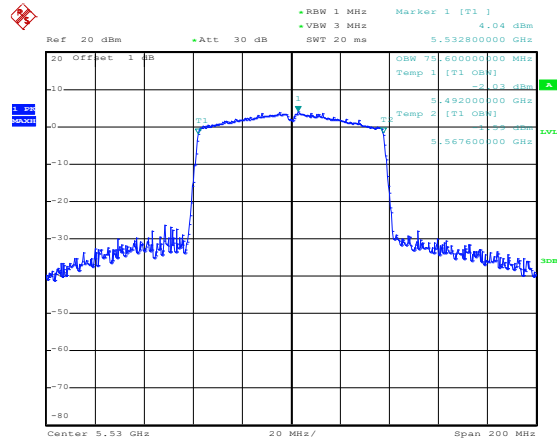
Date: 11.AUG.2022 14:47:13

802.11n-HT40-High



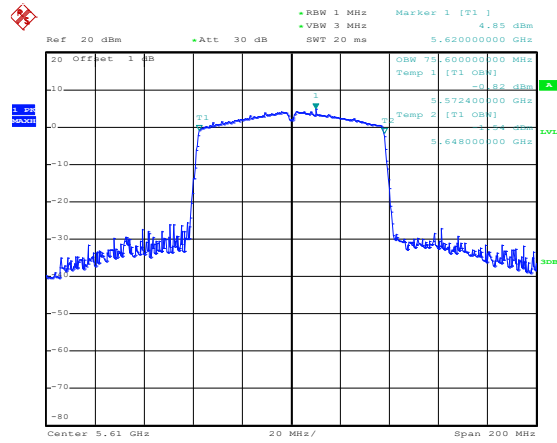
Date: 11.AUG.2022 14:47:53

802.11ac-HT80-Low



Date: 11.AUG.2022 14:48:55

802.11ac-HT80-High

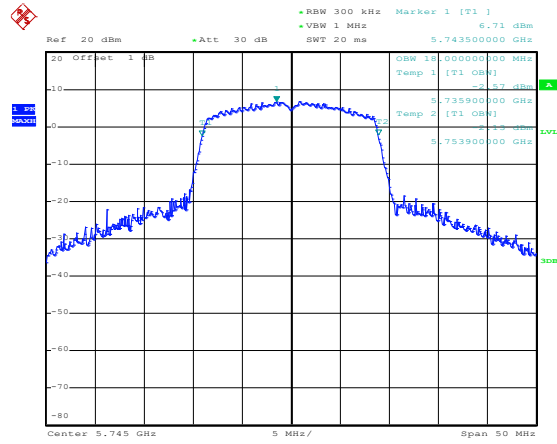


Date: 11.AUG.2022 14:49:27

99% BandwidthMHz
5725-5850MHz

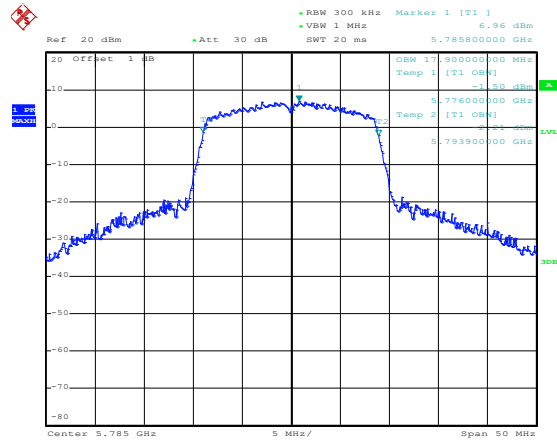
<p>802.11a-Low</p>	<p>Date: 11.AUG.2022 15:22:14</p>
<p>802.11a-Middle</p>	<p>Date: 11.AUG.2022 15:24:35</p>
<p>802.11a-High</p>	<p>Date: 11.AUG.2022 15:26:05</p>

802.11n-HT20-Low



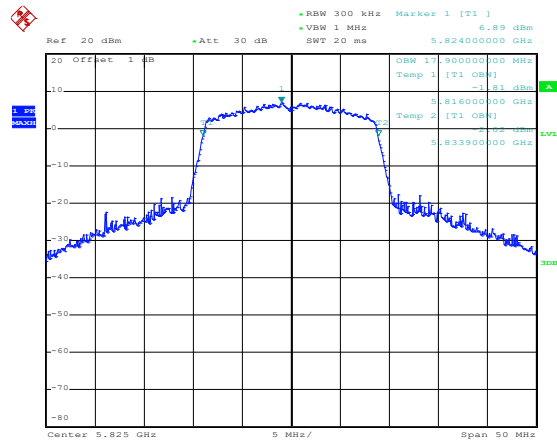
Date: 11.AUG.2022 15:27:14

802.11n-HT20-Middle



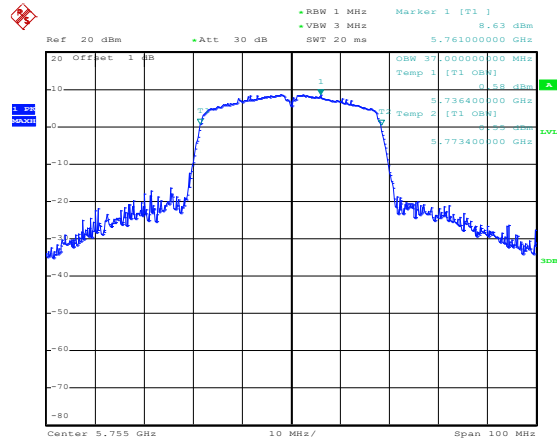
Date: 11.AUG.2022 15:27:52

802.11n-HT20-High



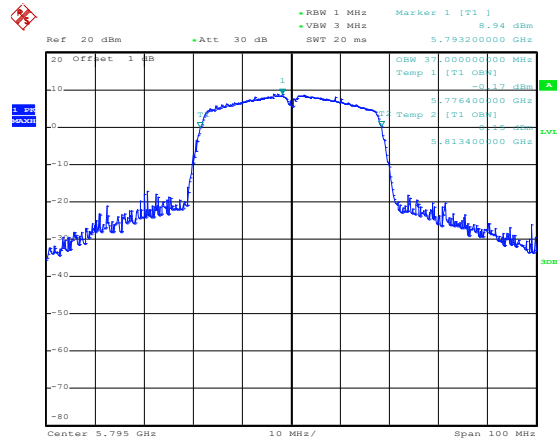
Date: 11.AUG.2022 15:28:28

802.11n-HT40-Low



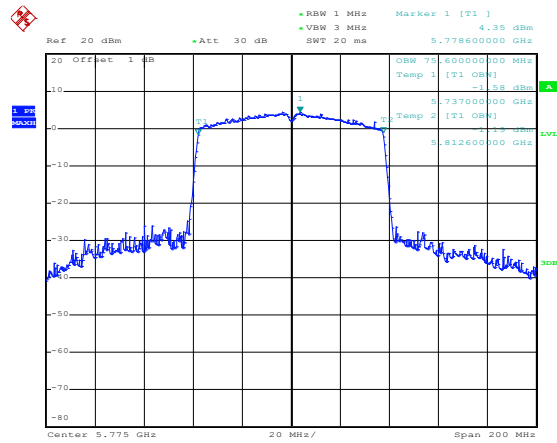
Date: 11.AUG.2022 15:30:13

802.11n-HT40-High



Date: 11.AUG.2022 15:30:46

802.11ac-HT80-Low



Date: 11.AUG.2022 15:31:27

APPENDIX C

Maximum Conducted Output Power

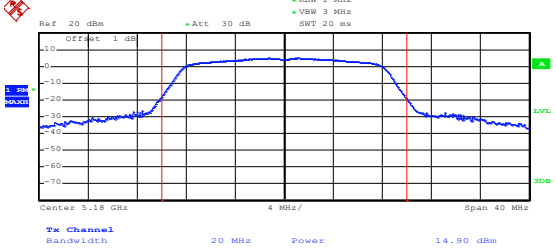
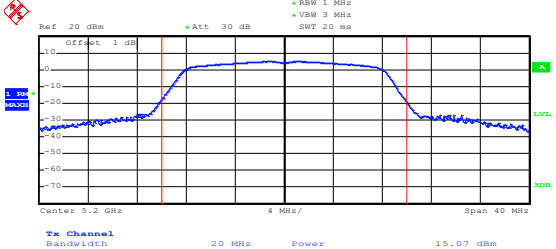
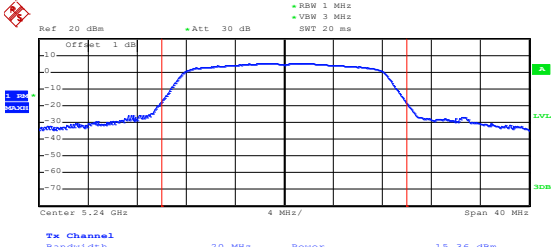
U-NII-1:5150-5250MHz			
Test mode	Frequency MHz	Output Power dBm	Limit dBm
802.11a	5180	14.90	23.98
	5200	15.07	23.98
	5240	15.36	23.98
802.11n-HT20	5180	13.21	23.98
	5200	13.37	23.98
	5240	13.57	23.98
802.11n-HT40	5190	13.06	23.98
	5230	13.38	23.98
802.11ac VH80	5210	12.75	23.98

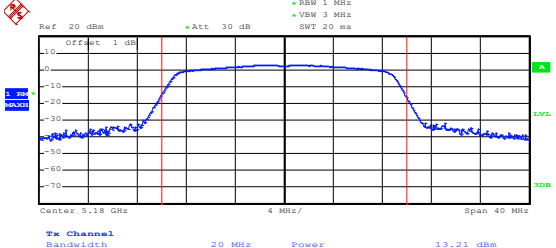
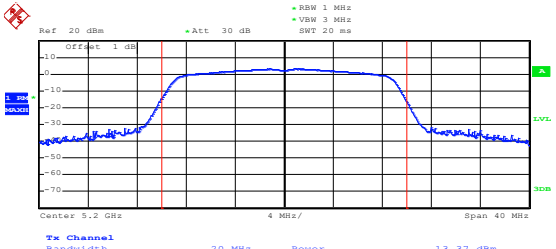
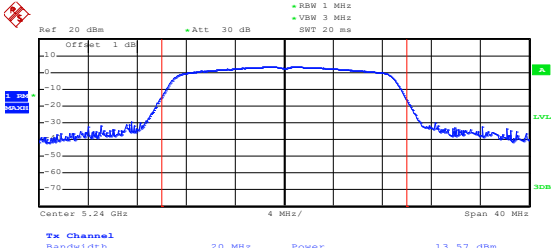
U-NII-2A: 5250-5350MHz			
Test mode	Frequency MHz	Output Power dBm	Limit dBm
802.11a	5260	14.95	23.98
	5280	15.12	23.98
	5320	14.92	23.98
802.11n-HT20	5260	13.55	23.98
	5280	13.71	23.98
	5320	13.36	23.98
802.11n-HT40	5270	13.64	23.98
	5310	13.56	23.98
802.11ac VH80	5290	13.38	23.98

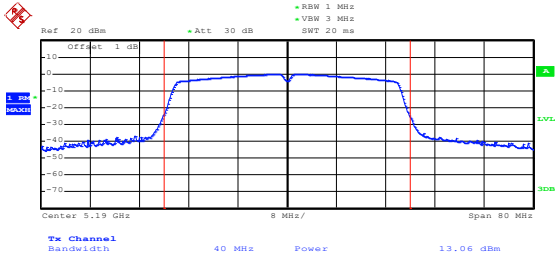
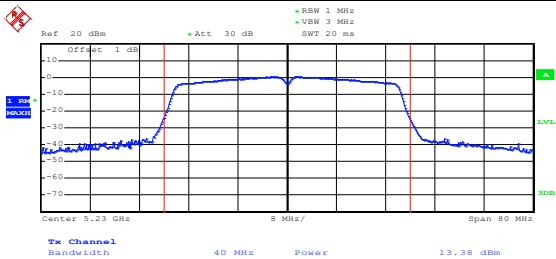
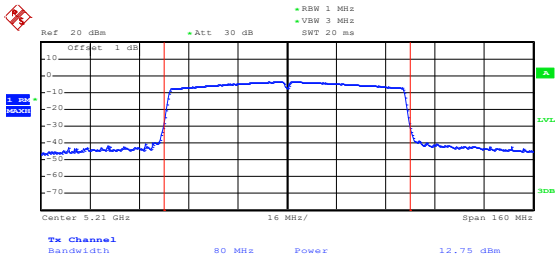
U-NII-2C: 5470-5725MHz			
Test mode	Frequency MHz	Output Power dBm	Limit dBm
802.11a	5500	14.96	23.98
	5580	15.11	23.98
	5700	15.43	23.98
802.11n-HT20	5500	13.13	23.98
	5580	13.42	23.98
	5700	13.73	23.98
802.11n-HT40	5510	13.17	23.98
	5550	13.44	23.98
	5670	13.63	23.98
802.11ac VH80	5530	12.63	23.98
	5610	13.32	23.98

U-NII-3: 5725-5850MHz			
Test mode	Frequency MHz	Output Power dBm	Limit dBm
802.11a	5745	15.26	30.00
	5785	15.20	30.00
	5825	15.19	30.00
802.11n-HT20	5745	13.51	30.00
	5785	13.30	30.00
	5825	13.56	30.00
802.11n-HT40	5755	13.68	30.00
	5795	13.57	30.00
802.11ac VH80	5775	13.33	30.00

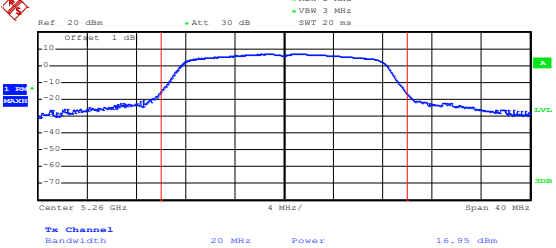
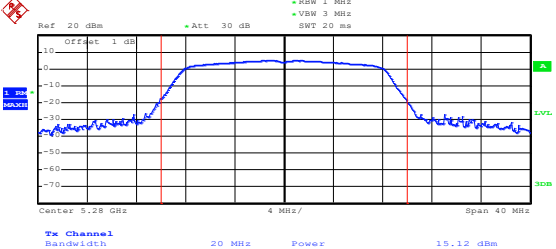
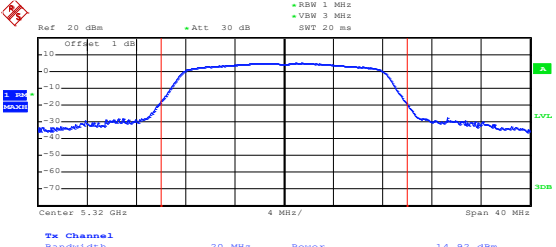
5150-5250MHz

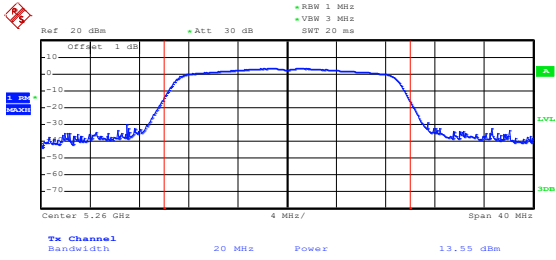
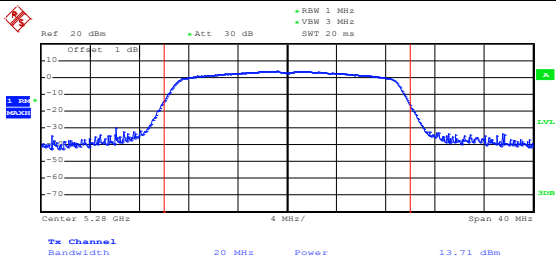
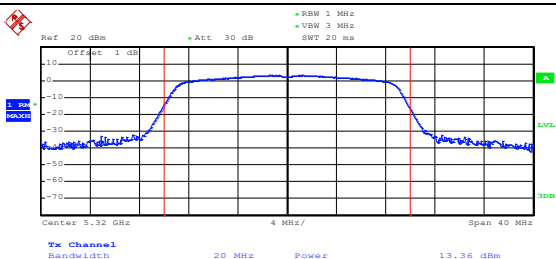
<p>802.11a-Low</p>	 <p>Date: 9.SEP.2022 10:40:42</p>
<p>802.11a-Middle</p>	 <p>Date: 9.SEP.2022 10:41:07</p>
<p>802.11a-High</p>	 <p>Date: 9.SEP.2022 10:41:57</p>

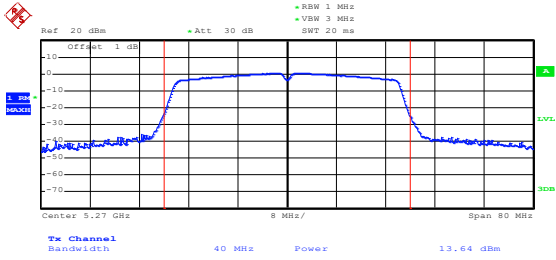
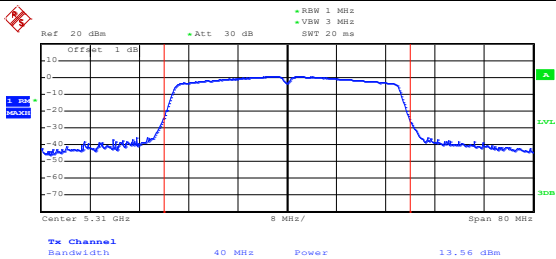
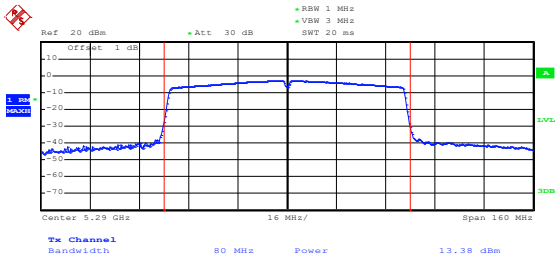
<p>802.11n-HT20-Low</p>	 <p>Date: 9.SEP.2022 10:42:46</p>
<p>802.11n-HT20-Middle</p>	 <p>Date: 9.SEP.2022 10:43:14</p>
<p>802.11n-HT20-High</p>	 <p>Date: 9.SEP.2022 10:43:43</p>

<p>802.11n-HT40-Low</p>	 <p>Ref: 20 dBm +Att: 30 dB +RBW 1 MHz -VSW 3 MHz -SWT 20 ms</p> <p>Offset: 1 dB</p> <p>Center: 5.19 GHz 8 MHz/ Span: 80 MHz</p> <p>Tx Channel Bandwidth: 40 MHz Power: 13.06 dBm</p> <p>Date: 9.SEP.2022 10:44:31</p>
<p>802.11n-HT40-High</p>	 <p>Ref: 20 dBm +Att: 30 dB +RBW 1 MHz -VSW 3 MHz -SWT 20 ms</p> <p>Offset: 1 dB</p> <p>Center: 5.23 GHz 8 MHz/ Span: 80 MHz</p> <p>Tx Channel Bandwidth: 40 MHz Power: 13.38 dBm</p> <p>Date: 9.SEP.2022 10:45:06</p>
<p>802.11ac-HT80-Low</p>	 <p>Ref: 20 dBm +Att: 30 dB +RBW 1 MHz -VSW 3 MHz -SWT 20 ms</p> <p>Offset: 1 dB</p> <p>Center: 5.21 GHz 16 MHz/ Span: 160 MHz</p> <p>Tx Channel Bandwidth: 80 MHz Power: 12.75 dBm</p> <p>Date: 9.SEP.2022 10:47:32</p>

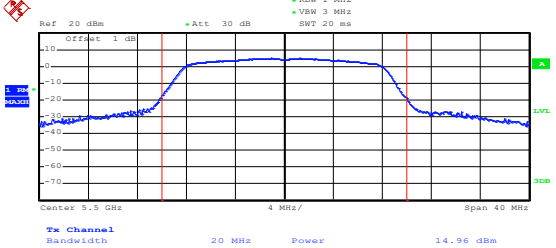
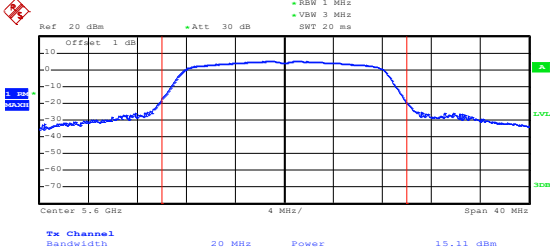
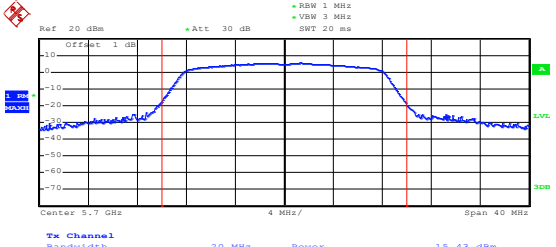
5250-5350MHz

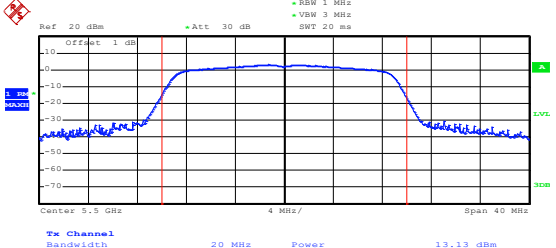
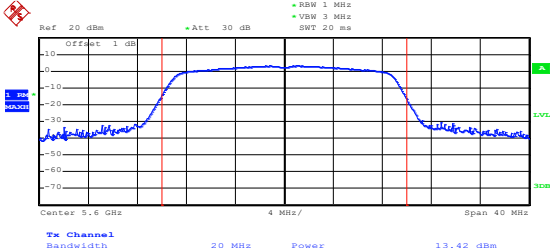
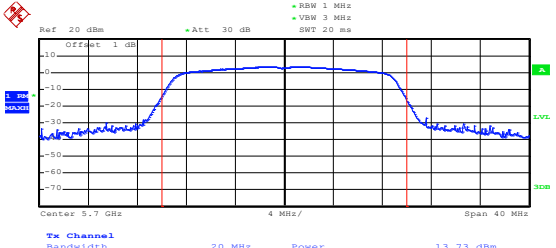
<p>802.11a-Low</p>	 <p>Ref: 20 dBm, Offset: 1 dB, Att: 30 dB, RBW: 1 MHz, VSW: 3 MHz, SWT: 20 ms</p> <p>Center: 5.26 GHz, Span: 40 MHz, Tx Channel Bandwidth: 20 MHz, Power: 16.95 dBm</p> <p>Date: 9.SEP.2022 10:52:26</p>
<p>802.11a-Middle</p>	 <p>Ref: 20 dBm, Offset: 1 dB, Att: 30 dB, RBW: 1 MHz, VSW: 3 MHz, SWT: 20 ms</p> <p>Center: 5.28 GHz, Span: 40 MHz, Tx Channel Bandwidth: 20 MHz, Power: 15.12 dBm</p> <p>Date: 9.SEP.2022 10:52:51</p>
<p>802.11a-High</p>	 <p>Ref: 20 dBm, Offset: 1 dB, Att: 30 dB, RBW: 1 MHz, VSW: 3 MHz, SWT: 20 ms</p> <p>Center: 5.32 GHz, Span: 40 MHz, Tx Channel Bandwidth: 20 MHz, Power: 14.92 dBm</p> <p>Date: 9.SEP.2022 10:53:37</p>

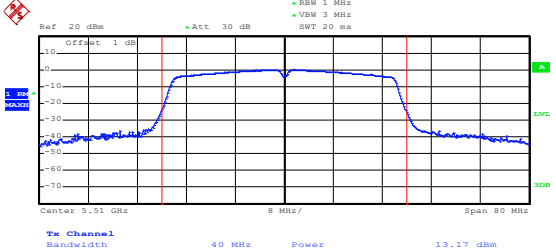
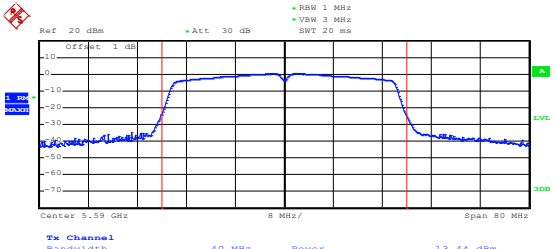
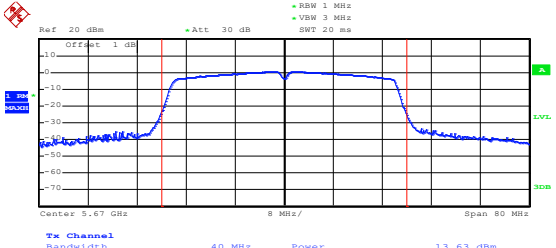
<p>802.11n-HT20-Low</p>	 <p>Date: 9.SEP.2022 10:54:20</p>
<p>802.11n-HT20-Middle</p>	 <p>Date: 9.SEP.2022 10:54:36</p>
<p>802.11n-HT20-High</p>	 <p>Date: 9.SEP.2022 10:55:01</p>

<p>802.11n-HT40-Low</p>	 <p>Date: 9.SEP.2022 10:55:38</p>
<p>802.11n-HT40-High</p>	 <p>Date: 9.SEP.2022 10:55:57</p>
<p>802.11ac-HT80-Low</p>	 <p>Date: 9.SEP.2022 10:58:13</p>

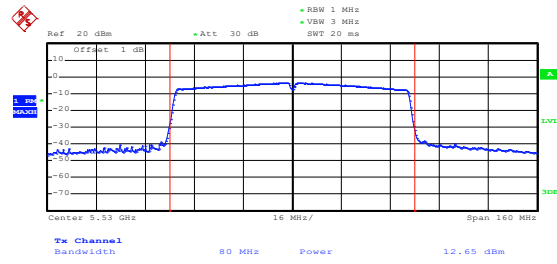
5470-5725MHz

<p>802.11a-Low</p>	 <p>Ref: 20 dBm, Offset: 1 dB, Att: 30 dB, RBW: 1 MHz, VSW: 3 MHz, SWT: 20 ms</p> <p>Center: 5.5 GHz, Span: 40 MHz, Tx Channel Bandwidth: 20 MHz, Power: 14.96 dBm</p> <p>Date: 9.SEP.2022 11:01:41</p>
<p>802.11a-Middle</p>	 <p>Ref: 20 dBm, Offset: 1 dB, Att: 30 dB, RBW: 1 MHz, VSW: 3 MHz, SWT: 20 ms</p> <p>Center: 5.6 GHz, Span: 40 MHz, Tx Channel Bandwidth: 20 MHz, Power: 15.11 dBm</p> <p>Date: 9.SEP.2022 11:02:33</p>
<p>802.11a-High</p>	 <p>Ref: 20 dBm, Offset: 1 dB, Att: 30 dB, RBW: 1 MHz, VSW: 3 MHz, SWT: 20 ms</p> <p>Center: 5.7 GHz, Span: 40 MHz, Tx Channel Bandwidth: 20 MHz, Power: 15.43 dBm</p> <p>Date: 9.SEP.2022 11:02:58</p>

<p>802.11n-HT20-Low</p>	 <p>Ref: 20 dBm +Att: 30 dB RBW: 1 MHz Offset: 1 dB VSW: 3 MHz SWT: 20 ms</p> <p>Center: 5.5 GHz Span: 40 MHz</p> <p>Tx Channel Bandwidth: 20 MHz Power: 13.13 dBm</p> <p>Date: 9.SEP.2022 11:03:27</p>
<p>802.11n-HT20-Middle</p>	 <p>Ref: 20 dBm +Att: 30 dB RBW: 1 MHz Offset: 1 dB VSW: 3 MHz SWT: 20 ms</p> <p>Center: 5.6 GHz Span: 40 MHz</p> <p>Tx Channel Bandwidth: 20 MHz Power: 13.42 dBm</p> <p>Date: 9.SEP.2022 11:04:01</p>
<p>802.11n-HT20-High</p>	 <p>Ref: 20 dBm +Att: 30 dB RBW: 1 MHz Offset: 1 dB VSW: 3 MHz SWT: 20 ms</p> <p>Center: 5.7 GHz Span: 40 MHz</p> <p>Tx Channel Bandwidth: 20 MHz Power: 13.73 dBm</p> <p>Date: 9.SEP.2022 11:04:25</p>

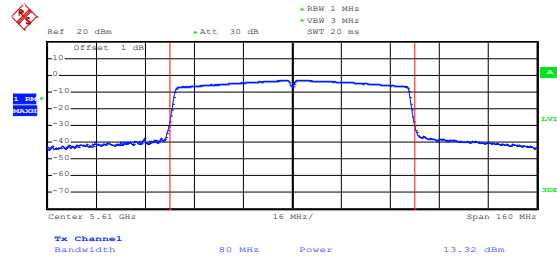
<p>802.11n-HT40-Low</p>	 <p>Date: 9.SEP.2022 11:05:16</p>
<p>802.11n-HT40- Middle</p>	 <p>Date: 9.SEP.2022 11:05:47</p>
<p>802.11n-HT40-High</p>	 <p>Date: 9.SEP.2022 11:06:20</p>

802.11ac-HT80-Low



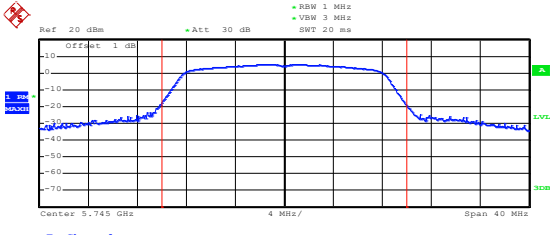
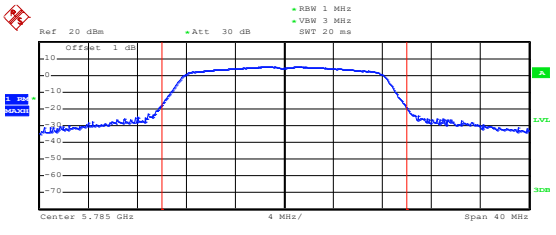
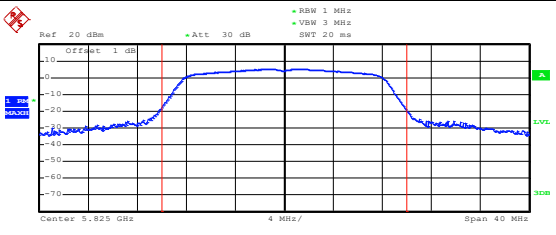
Date: 9.SEP.2022 11:07:55

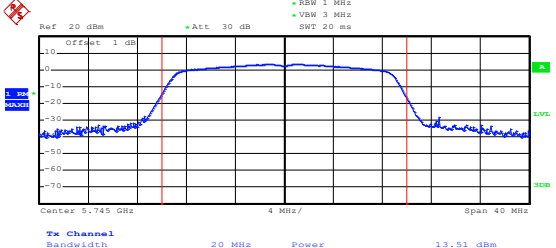
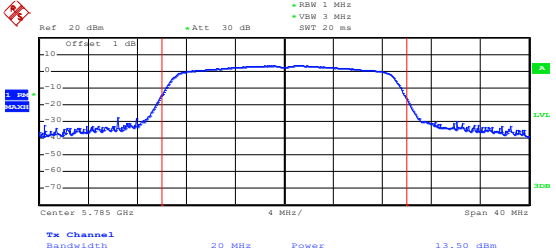
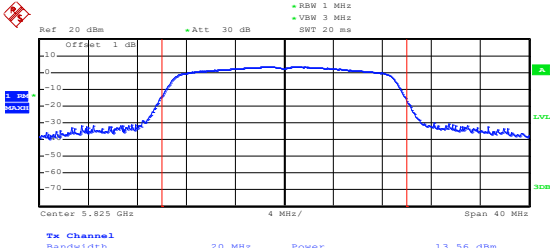
802.11ac-HT80-High

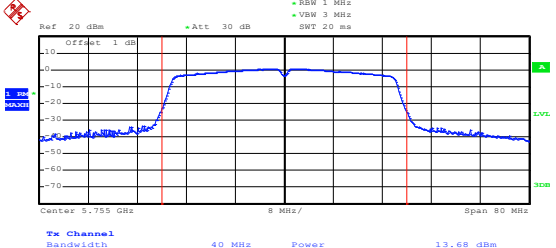
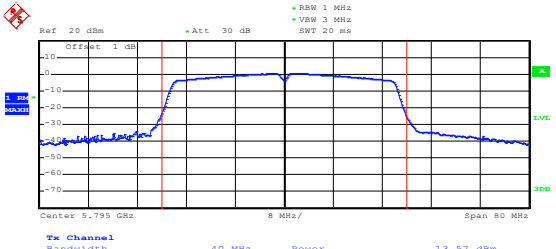
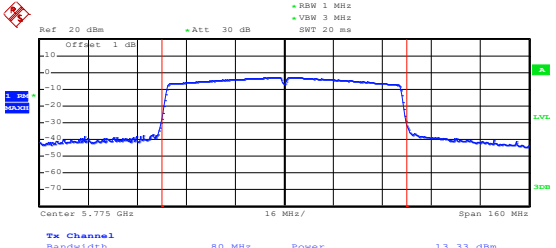


Date: 9.SEP.2022 11:08:32

5725-5850MHz

<p>802.11a-Low</p>	 <p>Date: 9.SEP.2022 11:10:44</p>
<p>802.11a-Middle</p>	 <p>Date: 9.SEP.2022 11:11:03</p>
<p>802.11a-High</p>	 <p>Date: 9.SEP.2022 11:11:25</p>

<p>802.11n-HT20-Low</p>	 <p>Date: 9.SEP.2022 11:11:49</p>
<p>802.11n-HT20-Middle</p>	 <p>Date: 9.SEP.2022 11:12:18</p>
<p>802.11n-HT20-High</p>	 <p>Date: 9.SEP.2022 11:12:39</p>

<p>802.11n-HT40-Low</p>	 <p>Date: 9.SEP.2022 11:13:28</p>
<p>802.11n-HT40-High</p>	 <p>Date: 9.SEP.2022 11:13:50</p>
<p>802.11ac-HT80-Low</p>	 <p>Date: 9.SEP.2022 11:14:34</p>

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%	3.87	-30	151	0.0237
100%		-20	177	0.0227
100%		-10	122	0.0258
100%		0	157	0.0219
100%		+10	148	0.0312
100%		+20	109	0.0287
100%		+30	143	0.0313
100%		+40	170	0.0263
100%		+50	106	0.0202
Low Battery power		4.45	+20	100
High Battery power	3.5	+20	133	0.0265

U-NII-2A: 5250-5350MHz worst case at 802.11a middle channel				
Voltage(%)	Power(VDC)	TEMP(°C)	Freq.Dev(Hz)	Deviation
100%	3.87	-30	128	0.0242
100%		-20	132	0.0249
100%		-10	107	0.0202
100%		0	134	0.0253
100%		+10	164	0.0309
100%		+20	167	0.0315
100%		+30	168	0.0317
100%		+40	105	0.0198
100%		+50	158	0.0298
Low Battery power		4.45	+20	167
High Battery power	3.5	+20	156	0.0294

U-NII-2C: 5470-5725MHz worst case at 802.11a middle channel				
Voltage(%)	Power(VDC)	TEMP(°C)	Freq.Dev(Hz)	Deviation
100%	3.87	-30	157	0.0281
100%		-20	134	0.0240
100%		-10	170	0.0305
100%		0	106	0.0190
100%		+10	125	0.0224
100%		+20	105	0.0188
100%		+30	104	0.0186
100%		+40	103	0.0185
100%		+50	112	0.0201
Low Battery power		4.45	+20	148
High Battery power	3.5	+20	166	0.0297

U-NII-3:5725-5850MHz worst case at 802.11a middle channel				
Voltage(%)	Power(VDC)	TEMP(°C)	Freq.Dev(Hz)	Deviation
100%	3.87	-30	103	0.0178
100%		-20	172	0.0297
100%		-10	157	0.0271
100%		0	164	0.0283
100%		+10	127	0.0220
100%		+20	104	0.0180
100%		+30	180	0.0311
100%		+40	176	0.0304
100%		+50	168	0.0290
Low Battery power		4.45	+20	157
High Battery power	3.5	+20	100	0.0173

APPENDIX PHOTOGRAPHS

Please refer to "ANNEX"

**** END OF REPORT ****