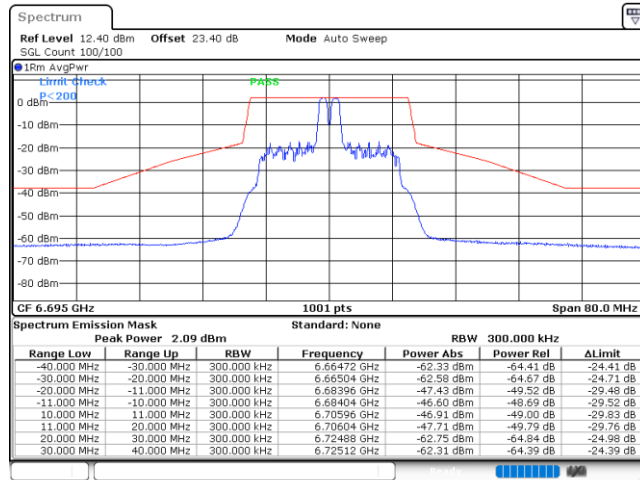
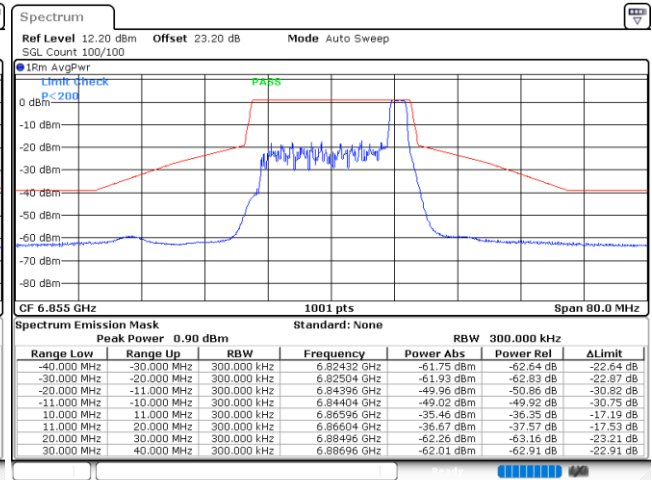


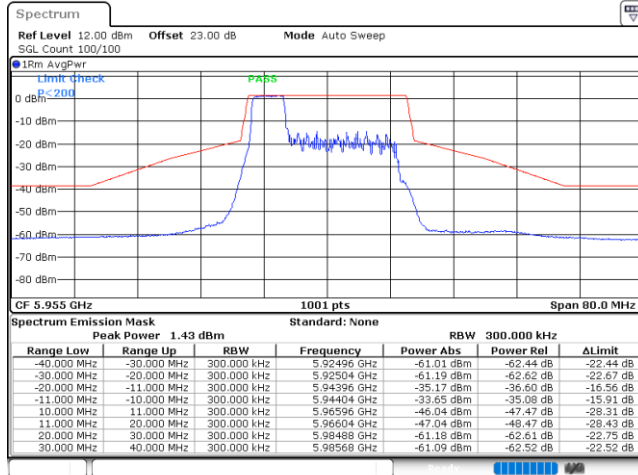


Plot on Channel 6695MHz

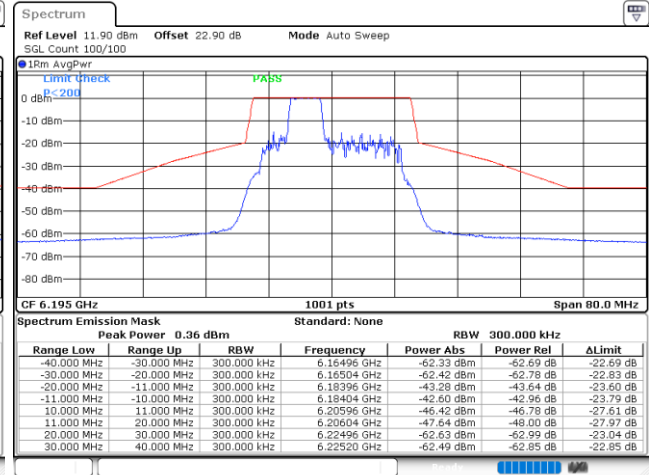


Plot on Channel 6855MHz

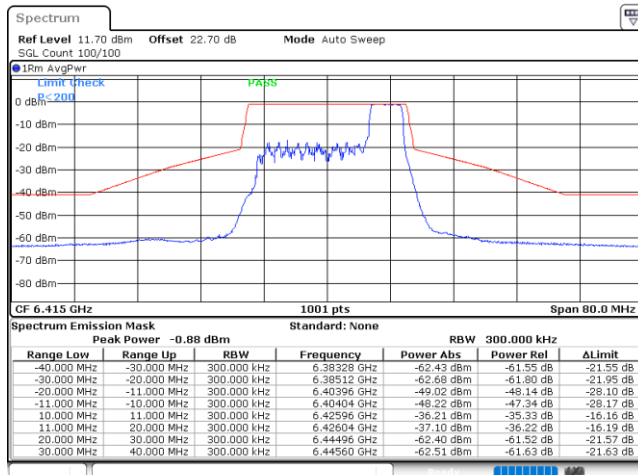


**EUT Mode :** 802.11ax HE20 52RU**Plot on Channel 5955MHz**

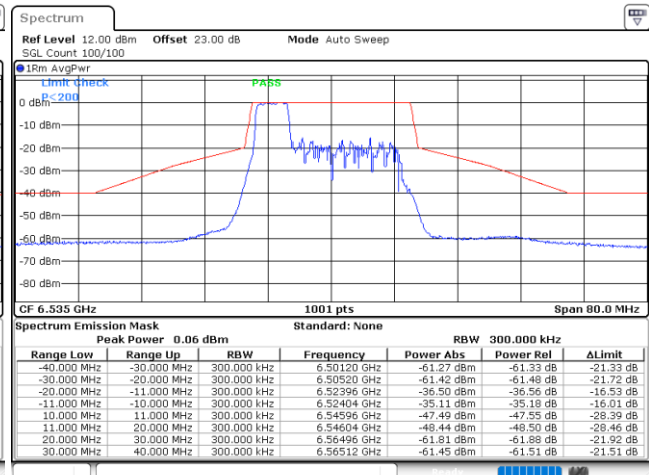
Date: 20.DEC.2022 04:41:11

Plot on Channel 6195MHz

Date: 20.DEC.2022 04:50:47

Plot on Channel 6415MHz

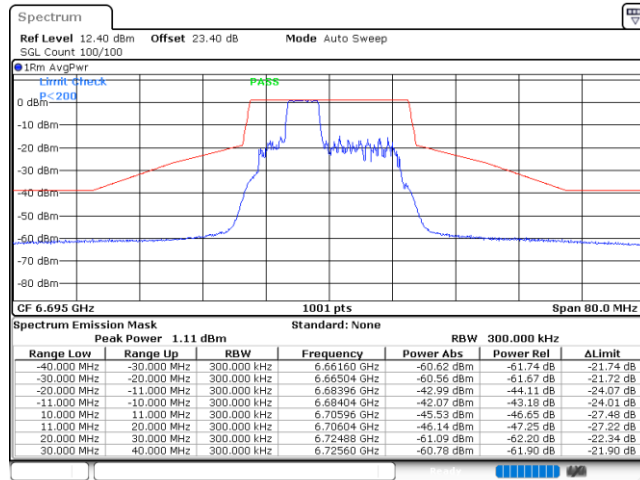
Date: 20.DEC.2022 05:07:06

Plot on Channel 6535MHz

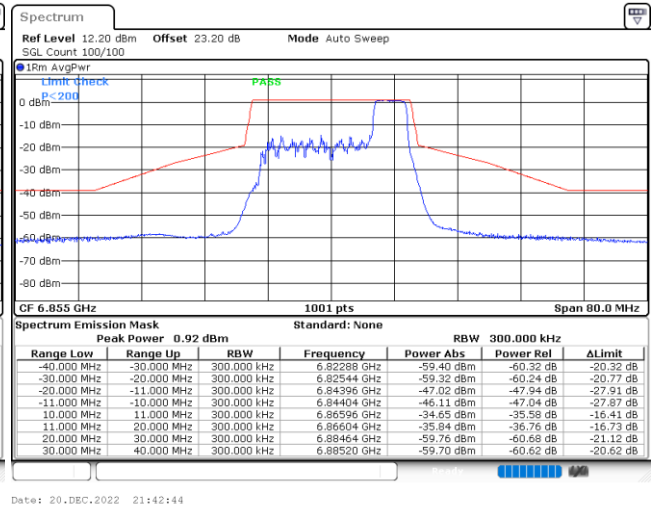
Date: 20.DEC.2022 05:24:59



Plot on Channel 6695MHz



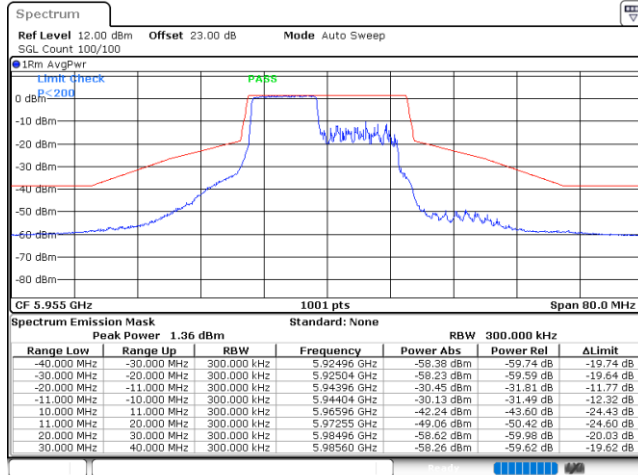
Plot on Channel 6855MHz





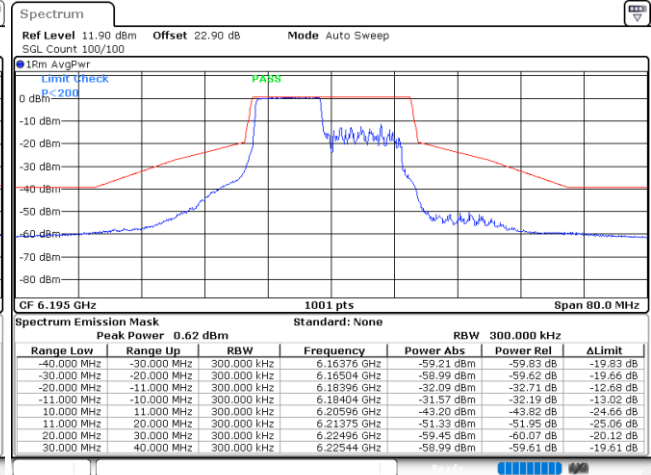
EUT Mode : 802.11ax HE20 106RU

Plot on Channel 5955MHz



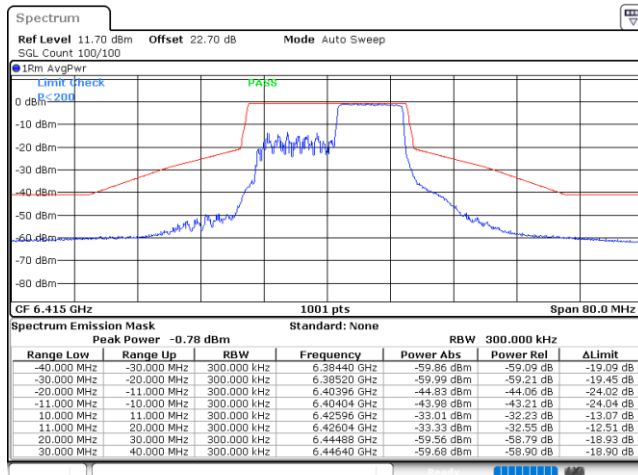
Date: 20.DEC.2022 04:45:35

Plot on Channel 6195MHz



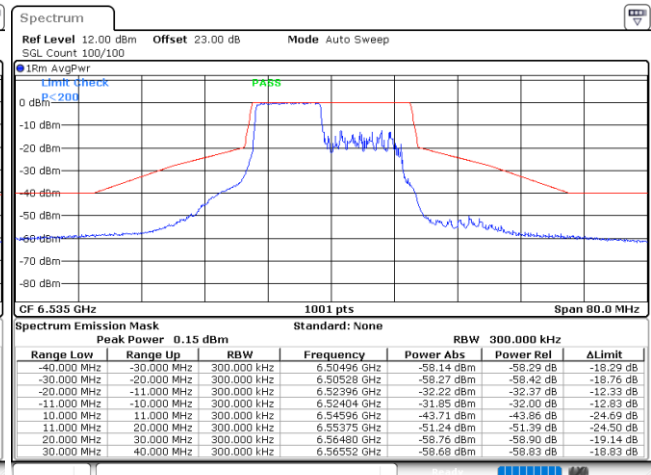
Date: 21.DEC.2022 05:22:34

Plot on Channel 6415MHz



Date: 20.DEC.2022 05:11:49

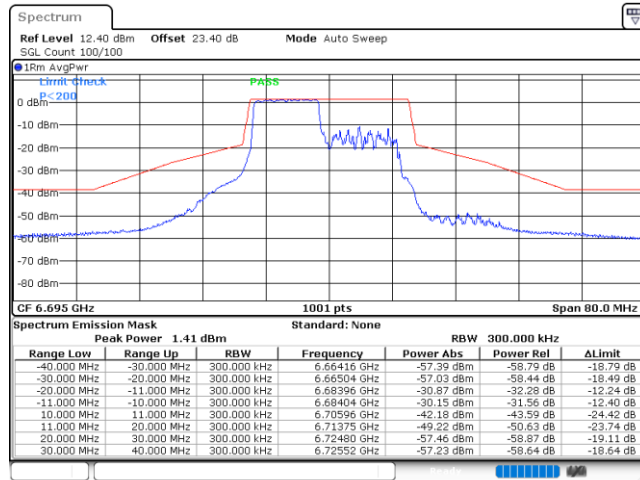
Plot on Channel 6535MHz



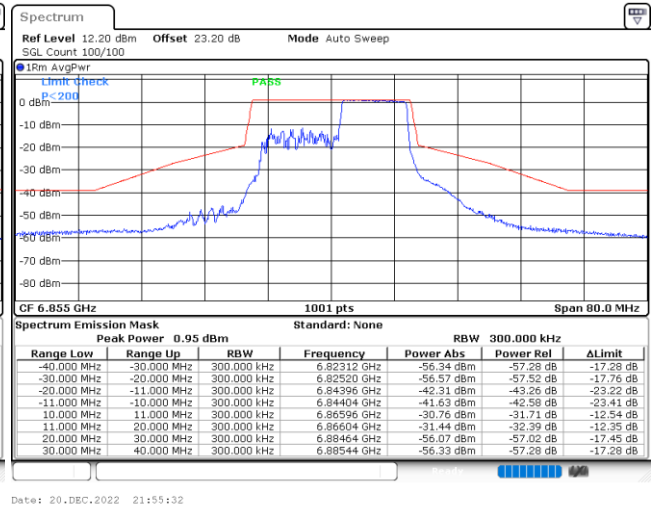
Date: 20.DEC.2022 05:30:07



Plot on Channel 6695MHz



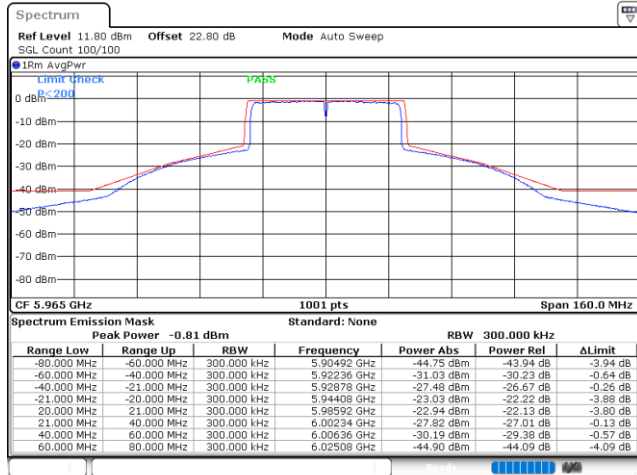
Plot on Channel 6855MHz





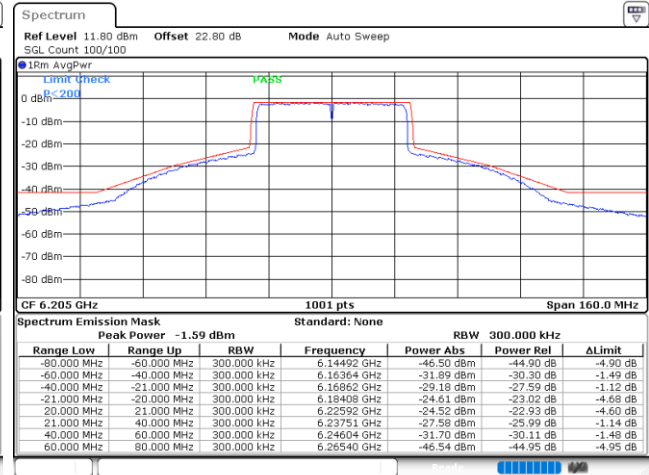
EUT Mode : 802.11ax HE40

Plot on Channel 5965MHz



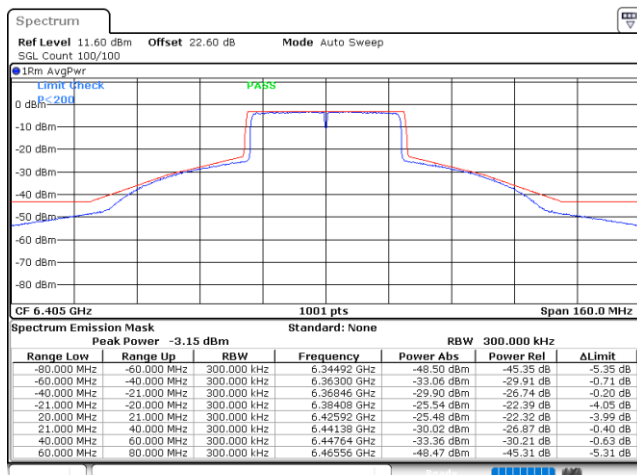
Date: 9.DEC.2022 09:45:49

Plot on Channel 6205MHz



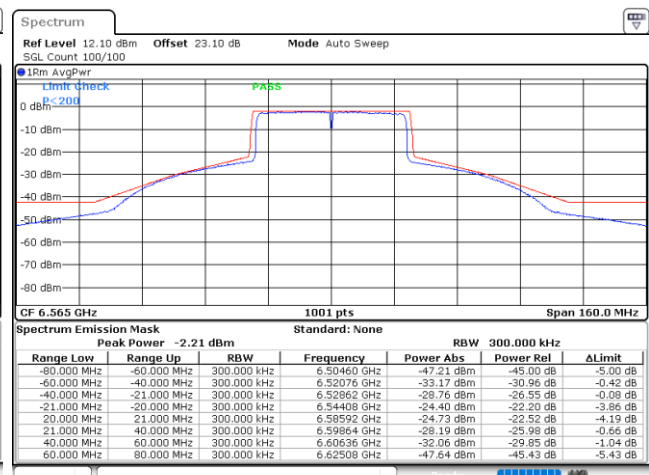
Date: 9.DEC.2022 09:54:13

Plot on Channel 6405MHz



Date: 9.DEC.2022 10:04:34

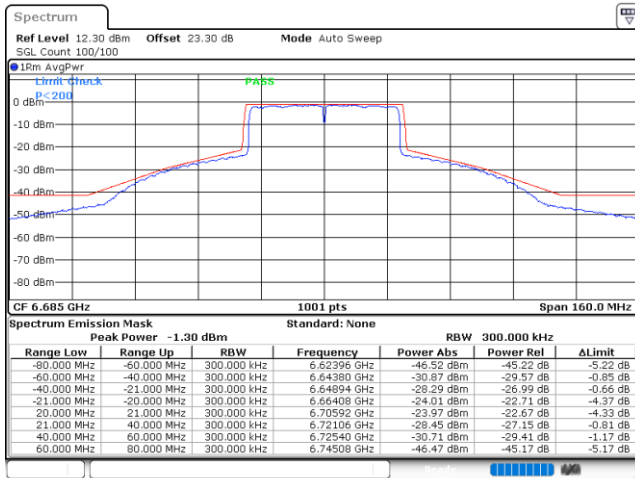
Plot on Channel 6565MHz



Date: 9.DEC.2022 10:07:09

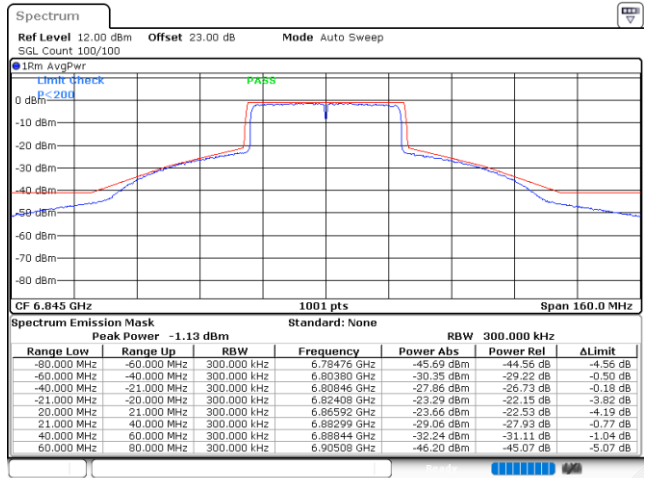


Plot on Channel 6685MHz



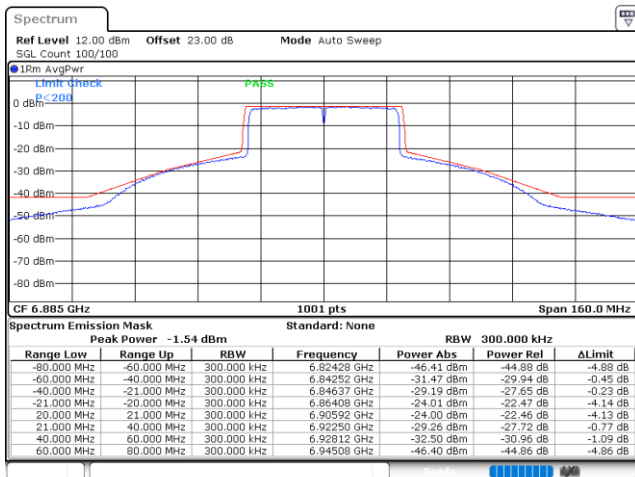
Date: 9.DEC.2022 10:13:11

Plot on Channel 6845MHz



Date: 9.DEC.2022 10:17:09

Plot on Channel 6885MHz

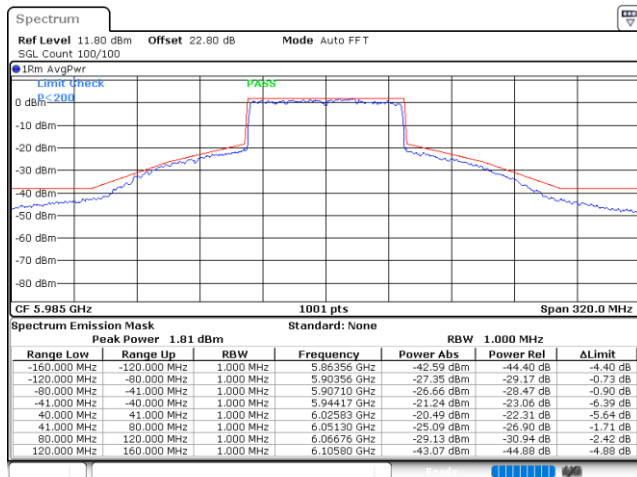


Date: 9.DEC.2022 10:24:26



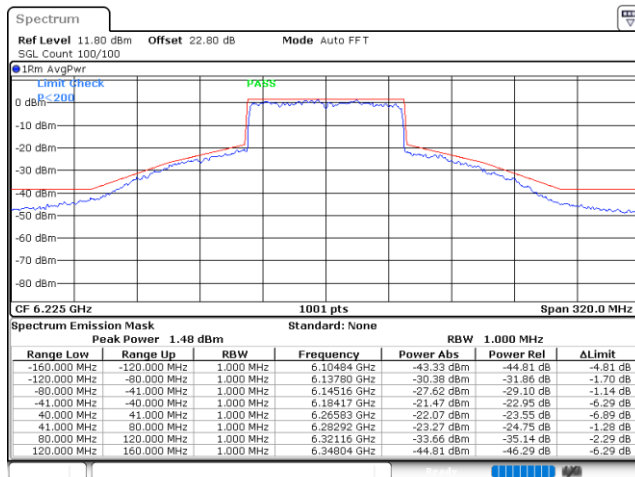
EUT Mode : 802.11ax HE80

Plot on Channel 5985MHz



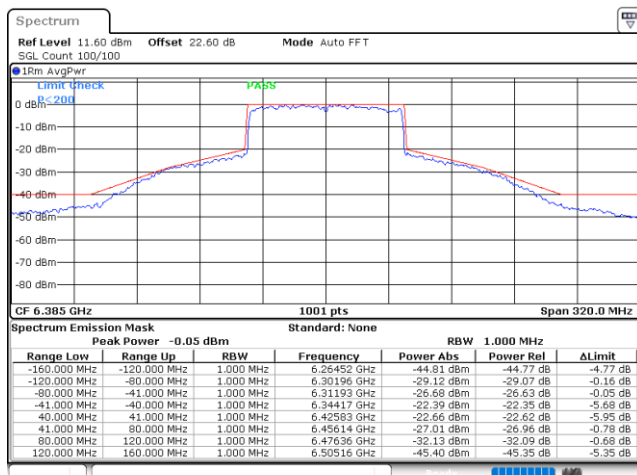
Date: 9.DEC.2022 10:13:29

Plot on Channel 6225MHz



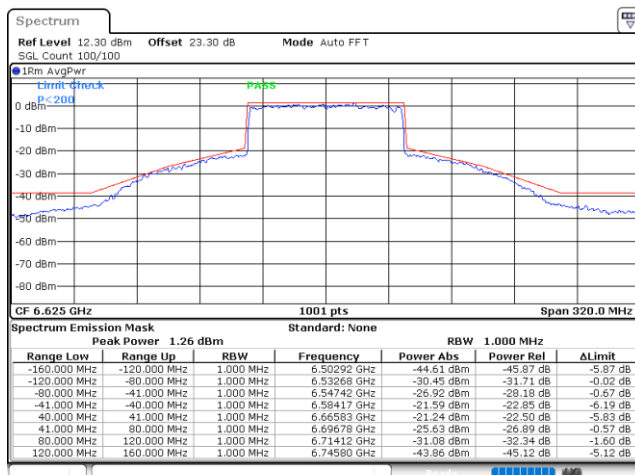
Date: 9.DEC.2022 10:45:00

Plot on Channel 6385MHz



Date: 9.DEC.2022 10:51:33

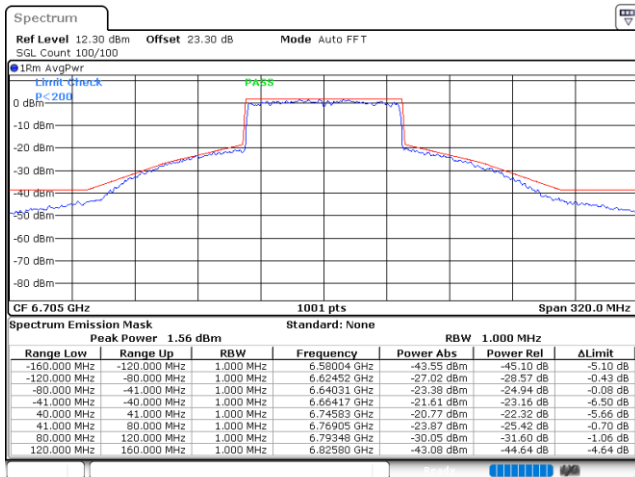
Plot on Channel 6625MHz



Date: 9.DEC.2022 10:59:33

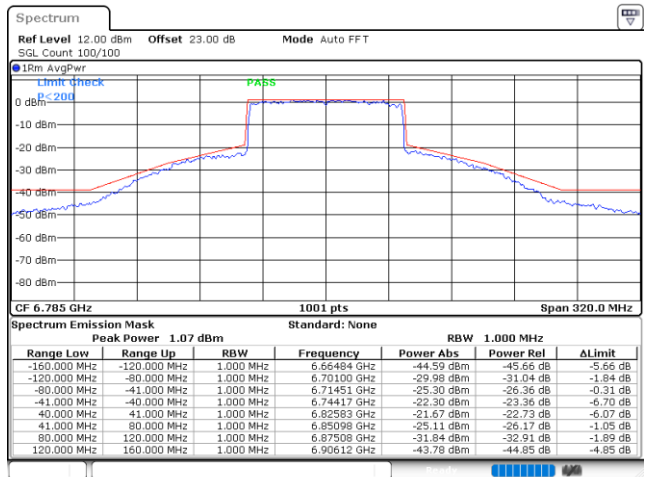


Plot on Channel 6705MHz



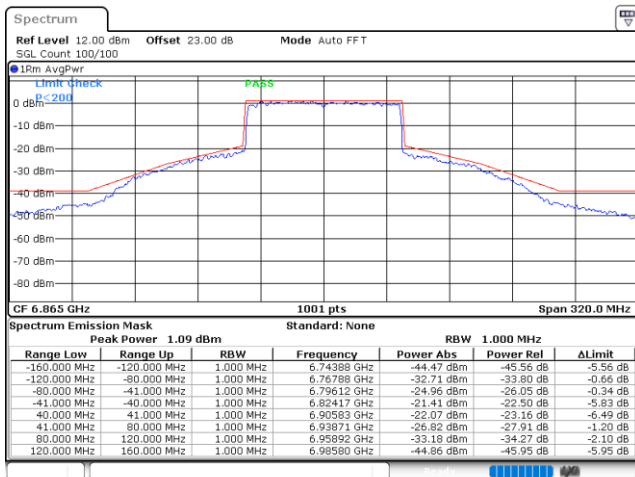
Date: 9.DEC.2022 11:02:17

Plot on Channel 6785MHz



Date: 9.DEC.2022 11:24:12

Plot on Channel 6865MHz

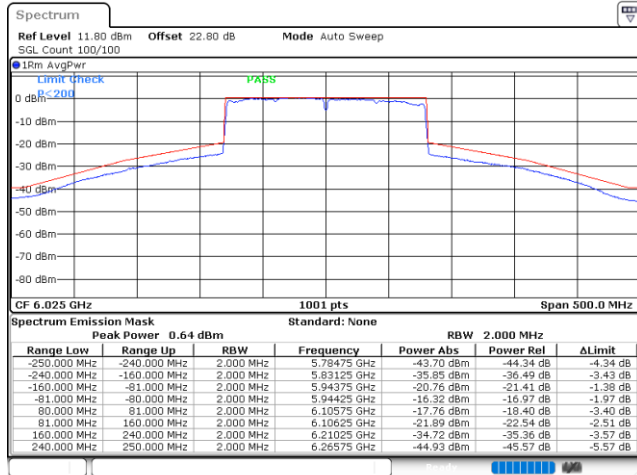


Date: 9.DEC.2022 11:28:47



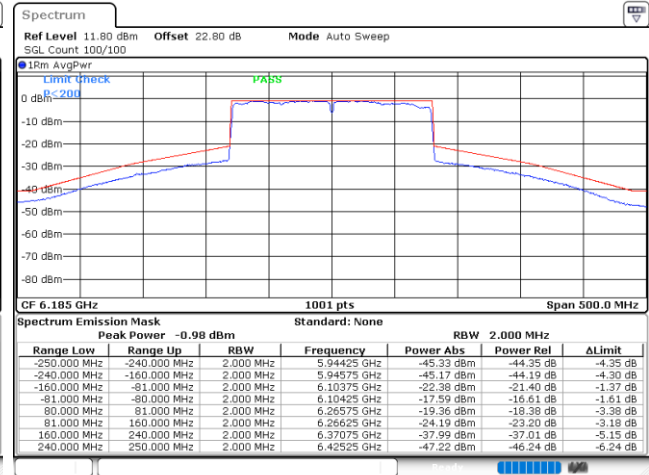
EUT Mode : 802.11ax HE160

Plot on Channel 6025MHz



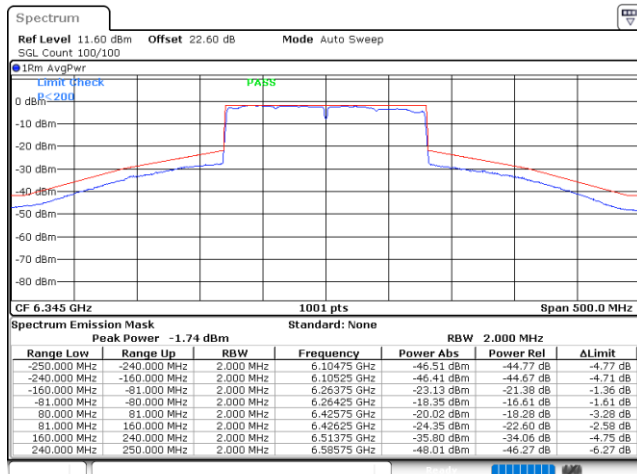
Date: 9.DEC.2022 11:50:08

Plot on Channel 6185MHz



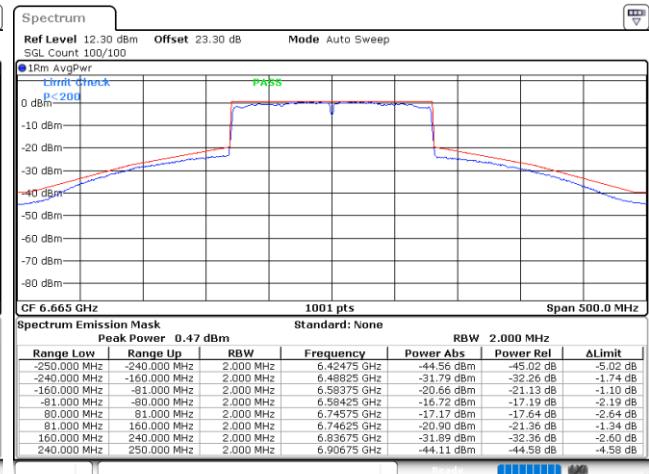
Date: 9.DEC.2022 12:03:05

Plot on Channel 6345MHz



Date: 9.DEC.2022 12:08:44

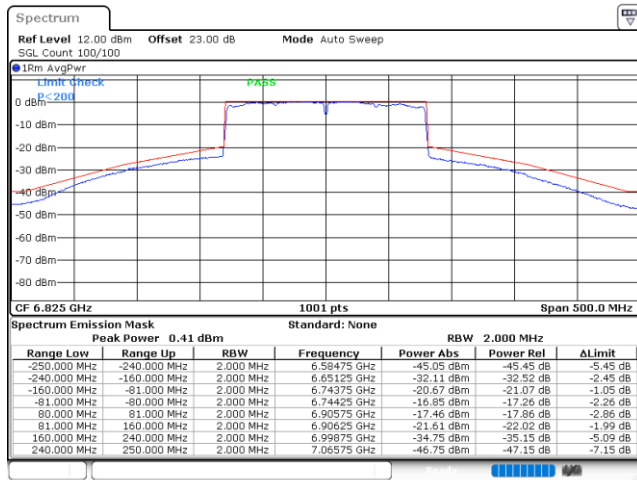
Plot on Channel 6665MHz



Date: 9.DEC.2022 12:18:53



Plot on Channel 6825MHz



3.5 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

3.5.1 Limit of Unwanted Emissions

- (1) For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27 (RMS)	68.3
- 7 (Peak)	88.3

According 987594 D02 U-NII 6GHz EMC Measurement v01 section G:

Unwanted emissions outside of restricted bands are measured with a RMS detector.

In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit

- (2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

Note: The following formula is used to convert the EIRP to field strength.

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts)}$$

3.5.2 Measuring Instruments

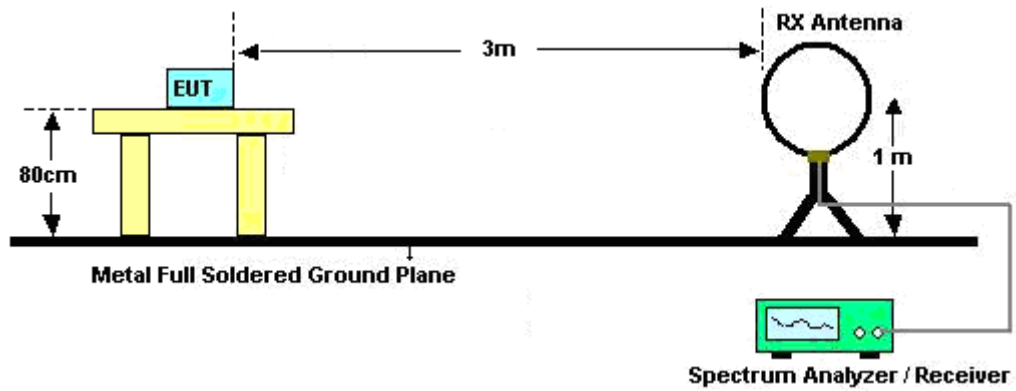
Please refer to the measuring equipment list in this test report.

3.5.3 Test Procedures

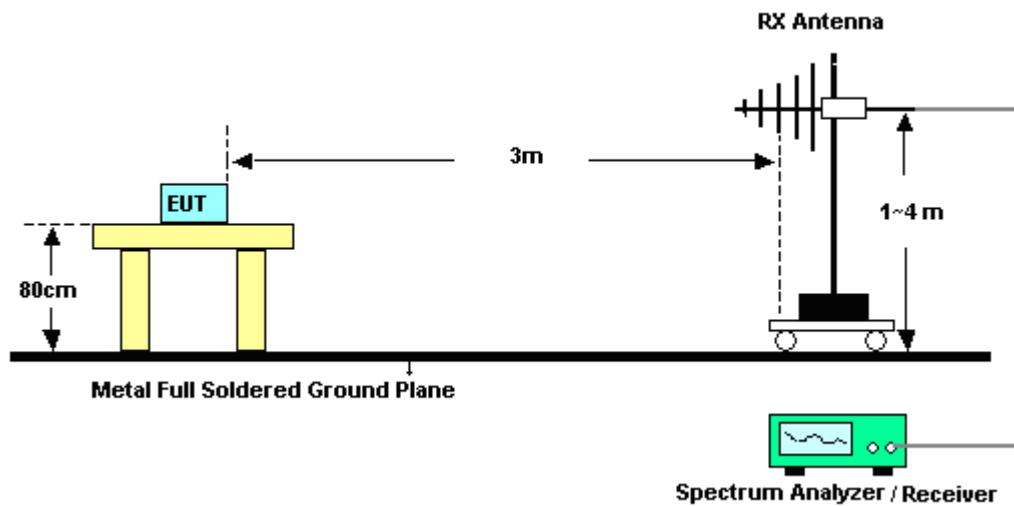
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW $\geq$ 3 MHz
 - Detector = Peak
 - Sweep time = auto
 - Trace mode = max hold
 - (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
 - RBW = 1 MHz
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq$ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the receiving antenna which is mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT is arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as “-”.
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as “-”.

3.5.4 Test Setup

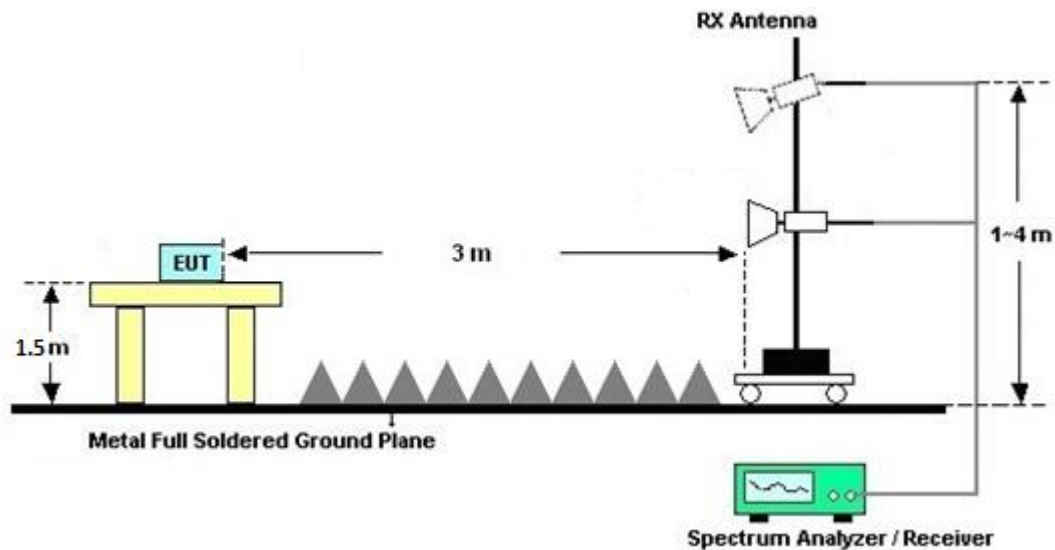
For radiated emissions below 30MHz



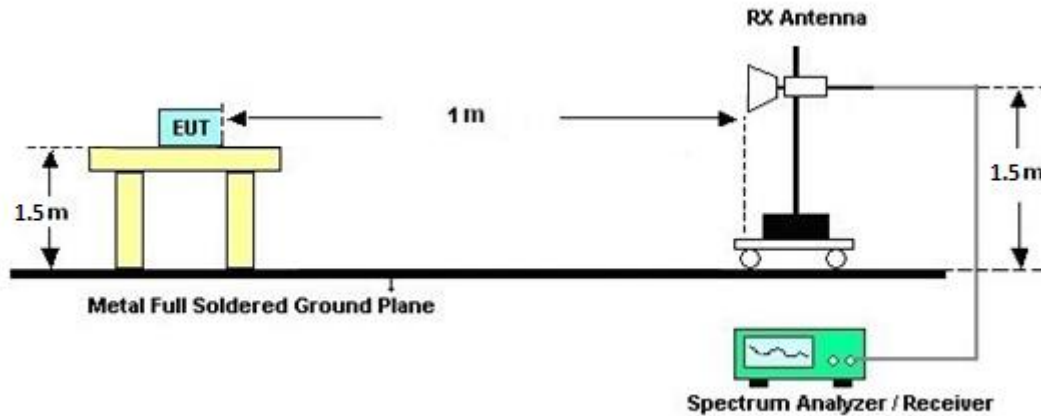
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



3.5.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which starts from 9 kHz to 30 MHz, is pre-scanned and the result which is 20 dB lower than the limit line is not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.5.7 Duty Cycle

Please refer to Appendix E.

3.5.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

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

*Decreases with the logarithm of the frequency.

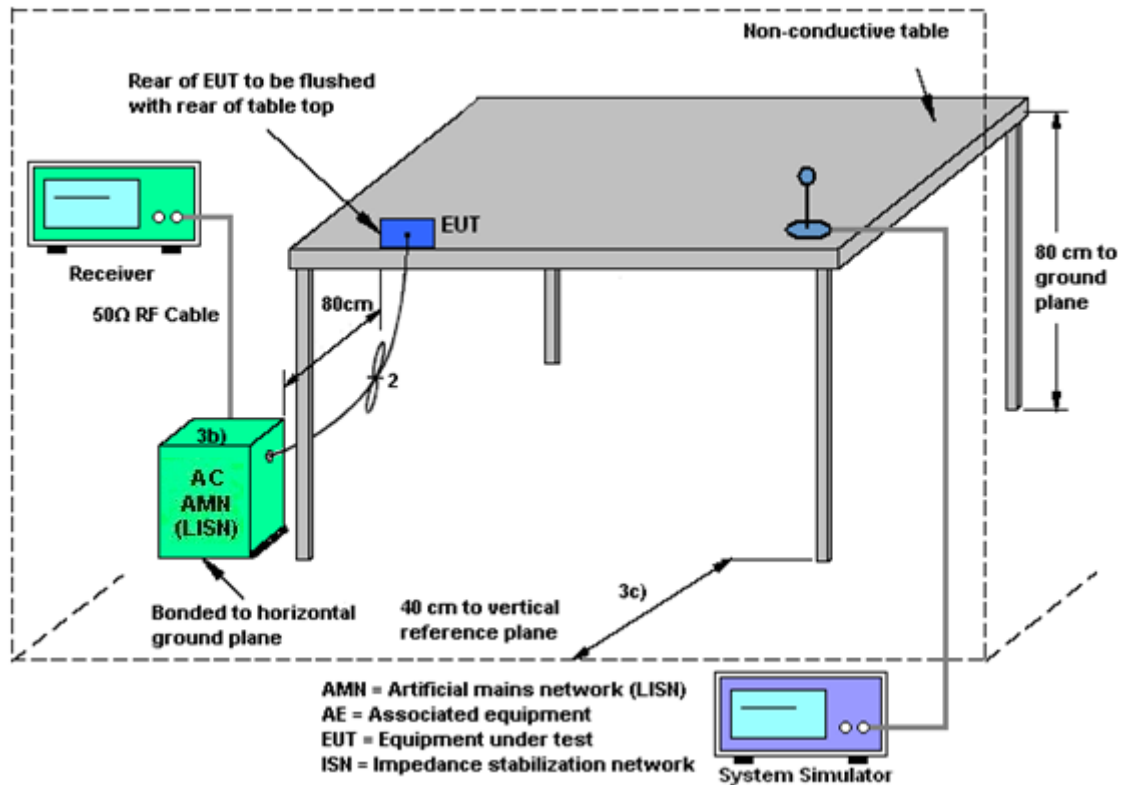
3.6.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.6.3 Test Procedures

1. The EUT is placed 0.4 meter away from the conducting wall of the shielding room, and is kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both Line and Neutral shall be tested in order to find out the maximum conducted emission.
7. The frequency range from 150 kHz to 30 MHz is scanned.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.7 Antenna Requirements

3.7.1 Standard Applicable

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 rule.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	TESEQ	HLA 6120	31244	9 kHz~30 MHz	Mar. 18, 2022	Dec. 01, 2022~ Dec. 20, 2022	Mar. 17, 2023	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	41912 & 05	30MHz~1GHz	Feb. 06, 2022	Dec. 01, 2022~ Dec. 20, 2022	Feb. 05, 2023	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 27, 2021	Dec. 01, 2022~ Dec. 20, 2022	Dec. 26, 2022	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-02294	1GHz~18GHz	Jun. 23, 2022	Dec. 01, 2022~ Dec. 20, 2022	Jun. 22, 2023	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	00993	18GHz~40GHz	Nov. 24, 2022	Dec. 01, 2022~ Dec. 20, 2022	Nov. 23, 2023	Radiation (03CH15-HY)
Amplifier	EMEC	EM1G18G	060838	1GHz~18GHz	Sep. 01, 2022	Dec. 01, 2022~ Dec. 20, 2022	Aug. 31, 2023	Radiation (03CH15-HY)
Preamplifier	EM Electronics	EM01G18G	060801	18GHz~40GHz	Jun. 28, 2022	Dec. 01, 2022~ Dec. 20, 2022	Jun. 27, 2023	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060802	1GHz-18GHz	Mar. 08, 2022	Dec. 01, 2022~ Dec. 20, 2022	Mar. 07, 2023	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20MHz~8.4GHz	Oct. 18, 2022	Dec. 01, 2022~ Dec. 20, 2022	Oct. 17, 2023	Radiation (03CH15-HY)
Spectrum Analyzer	Keysight	N9010	MY54200485	10Hz~44GHz	May. 07, 2022	Dec. 01, 2022~ Dec. 20, 2022	May. 06, 2023	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Dec. 01, 2022~ Dec. 20, 2022	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Dec. 01, 2022~ Dec. 20, 2022	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24 (k5)	RK-000451	N/A	N/A	Dec. 01, 2022~ Dec. 20, 2022	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY582185/4, MY9838/4PE, 519228/2	30MHz~18G	Jun. 21, 2022	Dec. 01, 2022~ Dec. 20, 2022	Jun. 20, 2023	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804011/2,804 012/2	30MHz-40GHz	Jan. 04, 2022	Dec. 01, 2022~ Dec. 20, 2022	Jan. 03, 2023	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 10, 2022	Dec. 01, 2022~ Dec. 20, 2022	Mar. 09, 2023	Radiation (03CH15-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 17, 2022	Nov. 25, 2022~ Dec. 21, 2022	Nov. 16, 2023	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W #010	RPR6W-2101 002(NO:123)	10MHz~8GHz	Jan. 13, 2022	Nov. 25, 2022~ Dec. 21, 2022	Jan. 12, 2023	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101905	10Hz - 40GHz(amp)	Aug. 03, 2022	Nov. 25, 2022~ Dec. 21, 2022	Aug. 02, 2023	Conducted (TH05-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Dec. 07, 2022	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Dec. 01, 2022	Dec. 07, 2022	Nov. 30, 2023	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 17, 2022	Dec. 07, 2022	Nov. 16, 2023	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 17, 2022	Dec. 07, 2022	Nov. 16, 2023	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	Dec. 07, 2022	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-FN	00691	N/A	Aug. 01, 2022	Dec. 07, 2022	Jul. 31, 2023	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 30, 2021	Dec. 07, 2022	Dec. 29, 2022	Conduction (CO05-HY)

5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.50 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.30 dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.20 dB
---	---------

Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.40 dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.20 dB
---	---------

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Hank Hsu	Temperature:	21~25	°C
Test Date:	2022/11/25~2022/12/21	Relative Humidity:	51~54	%

TEST RESULTS DATA
26dB and 99% OBW

U-NII-5 MIMO										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		Emission Bandwidth Limit (MHz)	Pass /Fail
					Ant 3	Ant 4	Ant 3	Ant 4		
11a	6Mbps	2	001	5955	19.53	20.23	36.45	38.05	320.00	Pass
11a	6Mbps	2	049	6195	19.58	20.93	37.00	39.40	320.00	Pass
11a	6Mbps	2	093	6415	19.38	22.03	35.95	39.15	320.00	Pass

TEST RESULTS DATA
EIRP Power Table

U-NII-5 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
					Ant 3	Ant 4	SUM	Ant 3	Ant 4			
11a	6Mbps	2	001	5955	19.60	19.90	22.76	1.20		23.96	30.00	Pass
11a	6Mbps	2	049	6195	18.00	20.00	22.12	1.20		23.32	30.00	Pass
11a	6Mbps	2	093	6415	18.30	18.30	21.31	1.20		22.51	30.00	Pass

TEST RESULTS DATA
EIRP Power Spectral Density

U-NII-5 MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Conducted Power Density (dBm/MHz)			DG (dBi)		EIRP Power Density (dBm/MHz)	EIRP Power Density Limit (dBm/MHz)	Pass /Fail
					Ant 3	Ant 4	Ant 3	Ant 4	SUM	Ant 3	Ant 4	SUM		
11a	6Mbps	2	001	5955	0.29	0.29			10.94	2.29		13.22	17.00	Pass
11a	6Mbps	2	049	6195	0.29	0.29			10.00	2.29		12.29	17.00	Pass
11a	6Mbps	2	093	6415	0.29	0.29			9.45	2.29		11.73	17.00	Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-7 MIMO										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		Emission Bandwidth Limit (MHz)	Pass /Fail
					Ant 3	Ant 4	Ant 3	Ant 4		
11a	6Mbps	2	117	6535	18.78	21.73	34.35	38.55	320.00	Pass
11a	6Mbps	2	149	6695	19.18	22.38	34.40	39.20	320.00	Pass
11a	6Mbps	2	181	6855	18.28	21.53	34.10	38.30	320.00	Pass

TEST RESULTS DATA
EIRP Power Table

U-NII-7 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
					Ant 3	Ant 4	SUM	Ant 3	Ant 4			
11a	6Mbps	2	117	6535	18.80	19.10	21.96	1.40		23.36	30.00	Pass
11a	6Mbps	2	149	6695	19.10	20.00	22.58	1.40		23.98	30.00	Pass
11a	6Mbps	2	181	6855	18.00	20.20	22.25	1.40		23.65	30.00	Pass

TEST RESULTS DATA
EIRP Power Spectral Density

U-NII-7 MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Conducted Power Density (dBm/MHz)			DG (dBi)		EIRP Power Density (dBm/MHz)	EIRP Power Density Limit (dBm/MHz)	Pass /Fail
					Ant 3	Ant 4	Ant 3	Ant 4	SUM	Ant 3	Ant 4	SUM		
11a	6Mbps	2	117	6535	0.29	0.29			10.30	1.57		11.87	17.00	Pass
11a	6Mbps	2	149	6695	0.29	0.29			10.87	1.57		12.43	17.00	Pass
11a	6Mbps	2	181	6855	0.29	0.29			10.09	1.57		11.66	17.00	Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-5 MIMO											
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		Emission Bandwidth Limit (MHz)	Pass /Fail
						Ant 3	Ant 4	Ant 3	Ant 4		
HE20	MCS0	2	001	5955	Full	19.58	19.73	39.15	35.05	320.00	Pass
HE20	MCS0	2	049	6195	Full	19.48	19.68	39.85	42.20	320.00	Pass
HE20	MCS0	2	093	6415	Full	19.38	19.68	32.55	39.60	320.00	Pass
HE40	MCS0	2	003	5965	Full	38.56	38.76	71.91	70.65	320.00	Pass
HE40	MCS0	2	051	6205	Full	38.36	38.56	61.56	72.72	320.00	Pass
HE40	MCS0	2	091	6405	Full	38.36	38.76	57.78	70.74	320.00	Pass
HE80	MCS0	2	007	5985	Full	77.80	77.44	145.45	145.61	320.00	Pass
HE80	MCS0	2	055	6225	Full	77.32	77.56	125.46	155.77	320.00	Pass
HE80	MCS0	2	087	6385	Full	77.32	77.68	125.62	154.41	320.00	Pass
HE160	MCS0	2	015	6025	Full	158.24	157.28	317.59	315.63	320.00	Pass
HE160	MCS0	2	047	6185	Full	157.76	157.04	315.63	308.01	320.00	Pass
HE160	MCS0	2	079	6345	Full	157.52	157.76	314.99	307.19	320.00	Pass

TEST RESULTS DATA
EIRP Power Table

U-NII-5 MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
						Ant 3	Ant 4	SUM	Ant 3	Ant 4	SUM		
HE20	MCS0	2	001	5955	Full	19.10	19.40	22.26	1.20		23.46	30.00	Pass
HE20	MCS0	2	001	5955	26/0	10.90	10.80	13.86	1.20		15.06	30.00	Pass
HE20	MCS0	2	001	5955	52/37	13.30	14.10	16.73	1.20		17.93	30.00	Pass
HE20	MCS0	2	001	5955	106/53	16.30	17.30	19.84	1.20		21.04	30.00	Pass
HE20	MCS0	2	049	6195	Full	17.30	19.30	21.42	1.20		22.62	30.00	Pass
HE20	MCS0	2	049	6195	26/4	9.80	11.70	13.86	1.20		15.06	30.00	Pass
HE20	MCS0	2	049	6195	52/38	11.40	13.50	15.59	1.20		16.79	30.00	Pass
HE20	MCS0	2	049	6195	106/53	14.50	16.70	18.75	1.20		19.95	30.00	Pass
HE20	MCS0	2	093	6415	Full	17.40	17.40	20.41	1.20		21.61	30.00	Pass
HE20	MCS0	2	093	6415	26/8	9.10	9.10	12.11	1.20		13.31	30.00	Pass
HE20	MCS0	2	093	6415	52/40	11.80	11.90	14.86	1.20		16.06	30.00	Pass
HE20	MCS0	2	093	6415	106/54	14.30	14.40	17.36	1.20		18.56	30.00	Pass
HE40	MCS0	2	003	5965	Full	19.20	19.80	22.52	1.20		23.72	30.00	Pass
HE40	MCS0	2	051	6205	Full	16.80	18.90	20.99	1.20		22.19	30.00	Pass
HE40	MCS0	2	091	6405	Full	17.10	17.40	20.26	1.20		21.46	30.00	Pass
HE80	MCS0	2	007	5985	Full	19.00	19.70	22.37	1.20		23.57	30.00	Pass
HE80	MCS0	2	055	6225	Full	16.80	19.20	21.17	1.20		22.37	30.00	Pass
HE80	MCS0	2	087	6385	Full	17.30	17.80	20.57	1.20		21.77	30.00	Pass
HE160	MCS0	2	015	6025	Full	18.50	18.80	21.66	1.20		22.86	30.00	Pass
HE160	MCS0	2	047	6185	Full	16.90	17.80	20.38	1.20		21.58	30.00	Pass
HE160	MCS0	2	079	6345	Full	17.00	16.80	19.91	1.20		21.11	30.00	Pass

TEST RESULTS DATA
EIRP Power Spectral Density

U-NII-5 MIMO															
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power Density (dBm/MHz)			DG (dBi)		EIRP Power Density (dBm/MHz)	EIRP Power Density Limit (dBm/MHz)	Pass /Fail
						Ant 3	Ant 4	Ant 3	Ant 4	SUM	Ant 3	Ant 4	SUM		
HE20	MCS0	2	001	5955	Full	0.18	0.18		9.72	2.29		12.00	17.00	Pass	
HE20	MCS0	2	001	5955	26/0	0.48	0.48		9.64	2.29		11.92	17.00	Pass	
HE20	MCS0	2	001	5955	52/37	0.52	0.52		9.64	2.29		11.93	17.00	Pass	
HE20	MCS0	2	001	5955	106/53	0.58	0.58		9.37	2.29		11.65	17.00	Pass	
HE20	MCS0	2	049	6195	Full	0.18	0.18		8.67	2.29		10.96	17.00	Pass	
HE20	MCS0	2	049	6195	26/4	0.48	0.48		8.66	2.29		10.94	17.00	Pass	
HE20	MCS0	2	049	6195	52/38	0.52	0.52		8.45	2.29		10.74	17.00	Pass	
HE20	MCS0	2	049	6195	106/53	0.58	0.58		8.41	2.29		10.69	17.00	Pass	
HE20	MCS0	2	093	6415	Full	0.18	0.18		7.80	2.29		10.08	17.00	Pass	
HE20	MCS0	2	093	6415	26/8	0.48	0.48		7.66	2.29		9.95	17.00	Pass	
HE20	MCS0	2	093	6415	52/40	0.52	0.52		7.67	2.29		9.96	17.00	Pass	
HE20	MCS0	2	093	6415	106/54	0.58	0.58		7.38	2.29		9.67	17.00	Pass	
HE40	MCS0	2	003	5965	Full	0.34	0.34		7.22	2.29		9.51	17.00	Pass	
HE40	MCS0	2	051	6205	Full	0.34	0.34		5.76	2.29		8.05	17.00	Pass	
HE40	MCS0	2	091	6405	Full	0.34	0.34		5.03	2.29		7.32	17.00	Pass	
HE80	MCS0	2	007	5985	Full	0.35	0.35		4.36	2.29		6.64	17.00	Pass	
HE80	MCS0	2	055	6225	Full	0.35	0.35	3.02	2.29		5.31	17.00	Pass		
HE80	MCS0	2	087	6385	Full	0.35	0.35	2.42	2.29		4.70	17.00	Pass		
HE160	MCS0	2	015	6025	Full	0.43	0.43	0.77	2.29		3.06	17.00	Pass		
HE160	MCS0	2	047	6185	Full	0.43	0.43	-0.67	2.29		1.62	17.00	Pass		
HE160	MCS0	2	079	6345	Full	0.43	0.43	-1.18	2.29		1.11	17.00	Pass		

TEST RESULTS DATA
26dB and 99% OBW

U-NII-7 MIMO											
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		Emission Bandwidth Limit (MHz)	Pass /Fail
						Ant 3	Ant 4	Ant 3	Ant 4		
HE20	MCS0	2	117	6535	Full	19.33	19.53	35.65	35.15	320.00	Pass
HE20	MCS0	2	149	6695	Full	19.38	19.68	32.20	35.50	320.00	Pass
HE20	MCS0	2	181	6855	Full	19.33	19.73	31.20	38.50	320.00	Pass
HE40	MCS0	2	123	6565	Full	38.36	38.86	60.03	75.51	320.00	Pass
HE40	MCS0	2	147	6685	Full	38.16	38.66	50.49	71.46	320.00	Pass
HE40	MCS0	2	179	6845	Full	38.26	38.86	50.40	77.22	320.00	Pass
HE80	MCS0	2	135	6625	Full	77.56	77.56	121.82	147.65	320.00	Pass
HE80	MCS0	2	151	6705	Full	77.32	77.44	117.14	152.45	320.00	Pass
HE80	MCS0	2	167	6785	Full	77.32	77.44	93.90	138.81	320.00	Pass
HE160	MCS0	2	143	6665	Full	157.28	157.76	306.87	316.45	320.00	Pass

U-NII-7 straddle channel MIMO											
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		Emission Bandwidth Limit (MHz)	Pass /Fail
						Ant 3	Ant 4	Ant 3	Ant 4		
HE40	MCS0	2	187	6885	Full	38.26	38.86	54.18	79.74	320.00	Pass
HE80	MCS0	2	183	6865	Full	77.32	77.44	99.94	142.29	320.00	Pass
HE160	MCS0	2	175	6825	Full	157.04	157.52	305.73	307.19	320.00	Pass

TEST RESULTS DATA
EIRP Power Table

U-NII-7 MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
						Ant 3	Ant 4	SUM	Ant 3	Ant 4			
HE20	MCS0	2	117	6535	Full	17.60	18.30	20.97	1.40		22.37	30.00	Pass
HE20	MCS0	2	117	6535	26/0	8.80	9.80	12.34	1.40		13.74	30.00	Pass
HE20	MCS0	2	117	6535	52/37	11.60	12.80	15.25	1.40		16.65	30.00	Pass
HE20	MCS0	2	117	6535	106/53	14.80	15.90	18.40	1.40		19.80	30.00	Pass
HE20	MCS0	2	149	6695	Full	18.20	19.50	21.91	1.40		23.31	30.00	Pass
HE20	MCS0	2	149	6695	26/4	10.30	11.70	14.07	1.40		15.47	30.00	Pass
HE20	MCS0	2	149	6695	52/38	12.30	13.80	16.12	1.40		17.52	30.00	Pass
HE20	MCS0	2	149	6695	106/53	15.20	17.20	19.32	1.40		20.72	30.00	Pass
HE20	MCS0	2	181	6855	Full	17.60	19.70	21.79	1.40		23.19	30.00	Pass
HE20	MCS0	2	181	6855	26/8	8.60	10.90	12.91	1.40		14.31	30.00	Pass
HE20	MCS0	2	181	6855	52/40	11.40	13.90	15.84	1.40		17.24	30.00	Pass
HE20	MCS0	2	181	6855	106/54	14.60	17.20	19.10	1.40		20.50	30.00	Pass
HE40	MCS0	2	123	6565	Full	18.10	18.40	21.26	1.40		22.66	30.00	Pass
HE40	MCS0	2	147	6685	Full	18.40	19.40	21.94	1.40		23.34	30.00	Pass
HE40	MCS0	2	179	6845	Full	17.50	19.60	21.69	1.40		23.09	30.00	Pass
HE80	MCS0	2	135	6625	Full	18.30	18.80	21.57	1.40		22.97	30.00	Pass
HE80	MCS0	2	151	6705	Full	18.40	19.60	22.05	1.40		23.45	30.00	Pass
HE80	MCS0	2	167	6785	Full	17.80	19.40	21.68	1.40		23.08	30.00	Pass
HE160	MCS0	2	143	6665	Full	18.20	18.70	21.47	1.40		22.87	30.00	Pass

U-NII-7 straddle channel MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
						Ant 3	Ant 4	SUM	Ant 3	Ant 4			
HE40	MCS0	2	187	6885	Full	17.40	19.80	21.77	1.40		23.17	30.00	Pass
HE80	MCS0	2	183	6865	Full	17.00	19.50	21.44	1.40		22.84	30.00	Pass
HE160	MCS0	2	175	6825	Full	17.20	19.00	21.20	1.40		22.60	30.00	Pass

TEST RESULTS DATA
EIRP Power Spectral Density

U-NII-7 MIMO															
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power Density (dBm/MHz)			DG (dBi)		EIRP Power Density (dBm/MHz)	EIRP Power Density Limit (dBm/MHz)	Pass /Fail
						Ant 3	Ant 4	Ant 3	Ant 4	SUM	Ant 3	Ant 4	SUM		
HE20	MCS0	2	117	6535	Full	0.18	0.18			8.42	1.57	9.99	17.00	Pass	
HE20	MCS0	2	117	6535	26/0	0.48	0.48			8.15	1.57	9.71	17.00	Pass	
HE20	MCS0	2	117	6535	52/37	0.52	0.52			8.05	1.57	9.62	17.00	Pass	
HE20	MCS0	2	117	6535	106/53	0.58	0.58			8.28	1.57	9.85	17.00	Pass	
HE20	MCS0	2	149	6695	Full	0.18	0.18			9.31	1.57	10.87	17.00	Pass	
HE20	MCS0	2	149	6695	26/4	0.48	0.48			9.29	1.57	10.86	17.00	Pass	
HE20	MCS0	2	149	6695	52/38	0.52	0.52			8.98	1.57	10.54	17.00	Pass	
HE20	MCS0	2	149	6695	106/53	0.58	0.58			9.29	1.57	10.85	17.00	Pass	
HE20	MCS0	2	181	6855	Full	0.18	0.18			8.86	1.57	10.43	17.00	Pass	
HE20	MCS0	2	181	6855	26/8	0.48	0.48			8.74	1.57	10.31	17.00	Pass	
HE20	MCS0	2	181	6855	52/40	0.52	0.52			8.73	1.57	10.30	17.00	Pass	
HE20	MCS0	2	181	6855	106/54	0.58	0.58			8.83	1.57	10.39	17.00	Pass	
HE40	MCS0	2	123	6565	Full	0.34	0.34			6.23	1.57	7.79	17.00	Pass	
HE40	MCS0	2	147	6685	Full	0.34	0.34			6.53	1.57	8.09	17.00	Pass	
HE40	MCS0	2	179	6845	Full	0.34	0.34			6.25	1.57	7.82	17.00	Pass	
HE80	MCS0	2	135	6625	Full	0.35	0.35			3.70	1.57	5.26	17.00	Pass	
HE80	MCS0	2	151	6705	Full	0.35	0.35		3.83	1.57	5.40	17.00	Pass		
HE80	MCS0	2	167	6785	Full	0.35	0.35		3.25	1.57	4.82	17.00	Pass		
HE160	MCS0	2	143	6665	Full	0.43	0.43		0.50	1.57	2.07	17.00	Pass		

U-NII-7 straddle channel MIMO															
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power Density (dBm/MHz)		DG (dBi)		EIRP Power Density (dBm/MHz)	EIRP Power Density Limit (dBm/MHz)	Pass /Fail	
						Ant 3	Ant 4	Ant 3	Ant 4	SUM	Ant 3	Ant 4			SUM
HE40	MCS0	2	187	6885	Full	0.34	0.34			6.01	1.57	7.58	17.00	Pass	
HE80	MCS0	2	183	6865	Full	0.35	0.35			2.98	1.57	4.55	17.00	Pass	
HE160	MCS0	2	175	6825	Full	0.43	0.43			0.22	1.57	1.79	17.00	Pass	



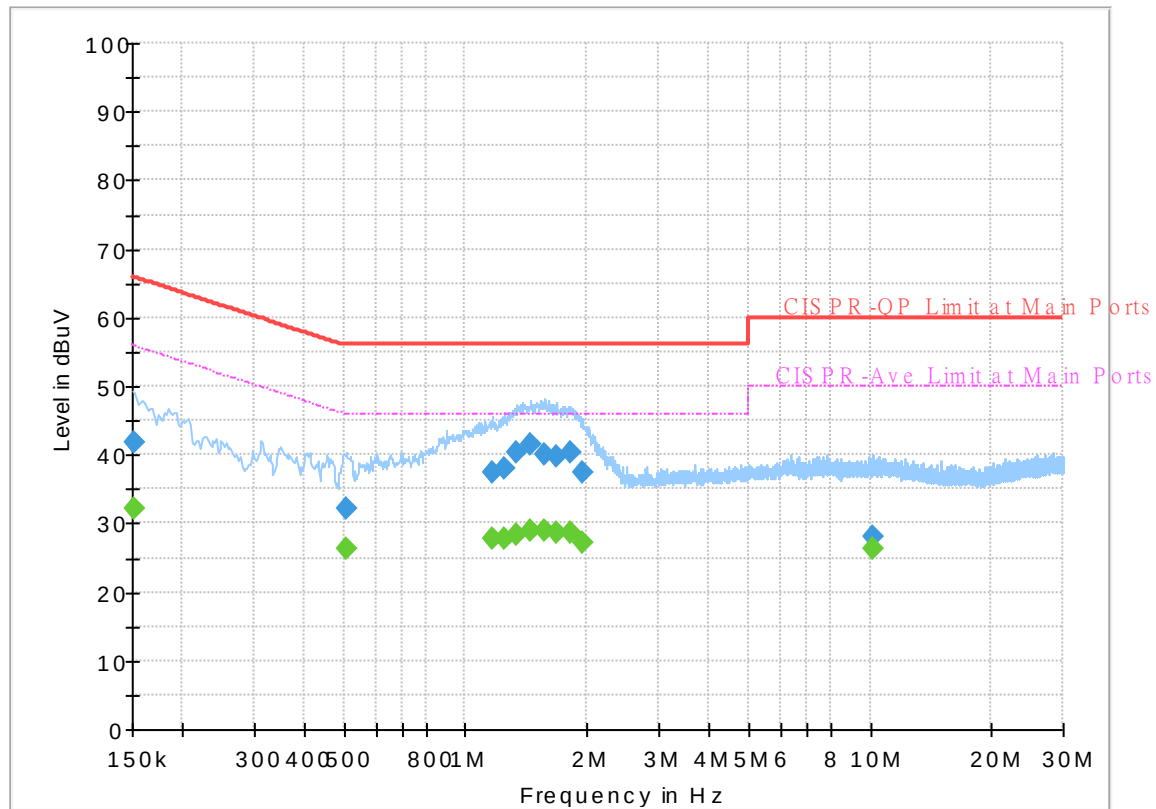
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Tom Lee	Temperature :	23~26℃
		Relative Humidity :	45~55%

EUT Information

Report NO : 262403-04
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



Final Result

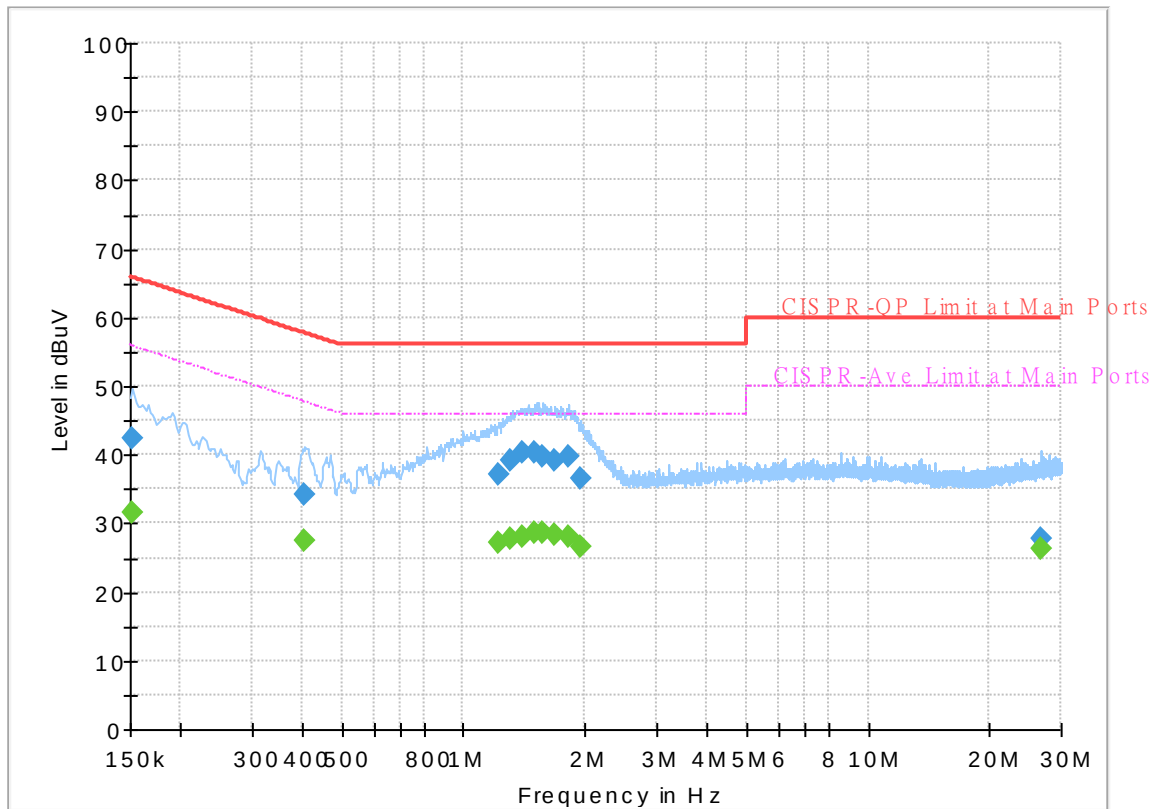
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	32.04	55.88	23.84	L1	OFF	19.8
0.152250	41.92	---	65.88	23.96	L1	OFF	19.8
0.507750	---	26.44	46.00	19.56	L1	OFF	19.8
0.507750	32.02	---	56.00	23.98	L1	OFF	19.8
1.169250	---	27.65	46.00	18.35	L1	OFF	19.8
1.169250	37.38	---	56.00	18.62	L1	OFF	19.8
1.250250	---	27.92	46.00	18.08	L1	OFF	19.8
1.250250	38.08	---	56.00	17.92	L1	OFF	19.8
1.342500	---	28.36	46.00	17.64	L1	OFF	19.8
1.342500	40.25	---	56.00	15.75	L1	OFF	19.8
1.443750	---	28.83	46.00	17.17	L1	OFF	19.9
1.443750	41.38	---	56.00	14.62	L1	OFF	19.9
1.576500	---	28.84	46.00	17.16	L1	OFF	19.9
1.576500	40.07	---	56.00	15.93	L1	OFF	19.9
1.682250	---	28.75	46.00	17.25	L1	OFF	19.9
1.682250	39.65	---	56.00	16.35	L1	OFF	19.9
1.810500	---	28.55	46.00	17.45	L1	OFF	19.9
1.810500	40.38	---	56.00	15.62	L1	OFF	19.9
1.945500	---	27.12	46.00	18.88	L1	OFF	19.9
1.945500	37.33	---	56.00	18.67	L1	OFF	19.9
10.189500	---	26.36	50.00	23.64	L1	OFF	20.2

10.189500	28.06	---	60.00	31.94	L1	OFF	20.2
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EUT Information

Report NO : 262403-04
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Neutral

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	31.68	55.88	24.20	N	OFF	19.8
0.152250	42.27	---	65.88	23.61	N	OFF	19.8
0.406500	---	27.45	47.72	20.27	N	OFF	19.8
0.406500	34.29	---	57.72	23.43	N	OFF	19.8
1.218750	---	27.12	46.00	18.88	N	OFF	19.8
1.218750	37.04	---	56.00	18.96	N	OFF	19.8
1.311000	---	27.91	46.00	18.09	N	OFF	19.8
1.311000	39.17	---	56.00	16.83	N	OFF	19.8
1.394250	---	27.99	46.00	18.01	N	OFF	19.8
1.394250	40.34	---	56.00	15.66	N	OFF	19.8
1.497750	---	28.56	46.00	17.44	N	OFF	19.8
1.497750	40.34	---	56.00	15.66	N	OFF	19.8
1.576500	---	28.57	46.00	17.43	N	OFF	19.8
1.576500	39.86	---	56.00	16.14	N	OFF	19.8
1.684500	---	28.41	46.00	17.59	N	OFF	19.8
1.684500	39.20	---	56.00	16.80	N	OFF	19.8
1.821750	---	27.93	46.00	18.07	N	OFF	19.8
1.821750	39.79	---	56.00	16.21	N	OFF	19.8
1.947750	---	26.57	46.00	19.43	N	OFF	19.8
1.947750	36.47	---	56.00	19.53	N	OFF	19.8
26.754000	---	26.19	50.00	23.81	N	OFF	20.8

26.754000	27.67	---	60.00	32.33	N	OFF	20.8
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Appendix C. Radiated Spurious Emission

Test Engineer :	Bigshow Wang, Quentin Liu and Eric Xiao	Temperature :	21~26°C
		Relative Humidity :	45~60%

<Open Mode>

Band 5 - 5925~6425MHz

WIFI 802.11ax HE20 Full (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant. 3+4		(MHz)	(dBμV/m)	(dB)	Line (dBμV/m)	Level (dBμV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
802.11ax HE20 Full CH 01 5955MHz		5925	51.43	-36.77	88.2	44.16	34.2	9.78	36.71	100	49	P	H
		5925	40.61	-27.59	68.2	33.34	34.2	9.78	36.71	100	49	A	H
	*	5955	101.24	-	-	94.03	34.1	9.82	36.71	100	49	P	H
	*	5955	92.15	-	-	84.94	34.1	9.82	36.71	100	49	A	H
													H
													H
		5921.3	58.84	-29.36	88.2	51.57	34.21	9.77	36.71	400	189	P	V
		5924.15	45.47	-22.73	68.2	38.2	34.2	9.78	36.71	400	189	A	V
	*	5955	104.59	-	-	97.38	34.1	9.82	36.71	400	189	P	V
	*	5955	95.67	-	-	88.46	34.1	9.82	36.71	400	189	A	V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												



Band 5 5925~6425MHz

WIFI 802.11ax HE40 Full (Band Edge @ 3m)

WIFI Ant. 3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 03 5965MHz		5923.09	57.36	-30.84	88.2	50.08	34.21	9.78	36.71	100	50	P	H
		5924.5	44.25	-23.95	68.2	36.98	34.2	9.78	36.71	100	50	A	H
	*	5965	98.38	-	-	91.16	34.1	9.83	36.71	100	50	P	H
	*	5965	88.83	-	-	81.61	34.1	9.83	36.71	100	50	A	H
													H
													H
		5921.39	67.25	-20.95	88.2	59.98	34.21	9.77	36.71	400	188	P	V
		5924.9	50.24	-17.96	68.2	42.97	34.2	9.78	36.71	400	188	A	V
	*	5965	101.42	-	-	94.2	34.1	9.83	36.71	400	188	P	V
	*	5965	92.44	-	-	85.22	34.1	9.83	36.71	400	188	A	V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 5 5925~6425MHz

WIFI 802.11ax HE80 Full (Band Edge @ 3m)

WIFI Ant. 3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full CH 07 5985MHz		5915.93	57.74	-30.46	88.2	50.44	34.24	9.77	36.71	100	50	P	H
		5924.96	44.69	-23.51	68.2	37.42	34.2	9.78	36.71	100	50	A	H
	*	5985	96.35	-	-	89.1	34.1	9.86	36.71	100	50	P	H
	*	5985	86.43	-	-	79.18	34.1	9.86	36.71	100	50	A	H
													H
													H
		5918.87	62.86	-25.34	88.2	55.58	34.22	9.77	36.71	395	193	P	V
		5924.82	48.41	-19.79	68.2	41.14	34.2	9.78	36.71	395	193	A	V
	*	5985	98.8	-	-	91.55	34.1	9.86	36.71	395	193	P	V
	*	5985	90.1	-	-	82.85	34.1	9.86	36.71	395	193	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 5 5925~6425MHz

WIFI 802.11ax HE160 Full (Band Edge @ 3m)

WIFI Ant. 3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE160 Full CH 15 6025MHz		5912.05	65.39	-22.81	88.2	58.09	34.25	9.76	36.71	100	49	P	H
		5912.05	50.99	-17.21	68.2	43.69	34.25	9.76	36.71	100	49	A	H
	*	6025	92.69	-	-	85.34	34.15	9.9	36.7	100	49	P	H
	*	6025	84.26	-	-	76.91	34.15	9.9	36.7	100	49	A	H
													H
													H
		5910.4	71.52	-16.68	88.2	64.21	34.26	9.76	36.71	400	190	P	V
		5912.05	56.66	-11.54	68.2	49.36	34.25	9.76	36.71	400	190	A	V
	*	6025	96.42	-	-	89.07	34.15	9.9	36.7	400	190	P	V
	*	6025	87.96	-	-	80.61	34.15	9.9	36.7	400	190	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 5 5925~6425MHz

WIFI 802.11ax HE160 Full (Harmonic @ 3m)

[illegible]

[illegible]

[illegible]

Band 7 - 6525~6875MHz

WIFI 802.11ax HE160 Full (Harmonic @ 3m)

[illegible]

WIFI Ant. 3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE160 Full CH 175 6825MHz		13650	49.63	-38.57	88.2	49.3	40.05	14.42	54.14	-	-	P	H
		20475	35.29	-38.71	74	56.22	38.03	-4.06	54.9	-	-	P	H
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Note symbol

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is Margin line.
P/A	Peak or Average
H/V	Horizontal or Vertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
3+4		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a		5925	55.45	-32.75	88.2	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
5955MHz		5925	43.54	-24.66	68.2	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Margin(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 5925MHz:

1. Level(dBμV/m)
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
 = 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)
 = 55.45 (dBμV/m)
2. Margin(dB)
 = Level(dBμV/m) – Limit Line(dBμV/m)
 = 55.45(dBμV/m) – 74(dBμV/m)
 = -32.75(dB)

For Average Limit @ 5925MHz:

1. Level(dBμV/m)
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
 = 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)
 = 43.54 (dBμV/m)
2. Margin(dB) = Level(dBμV/m) – Limit Line(dBμV/m)
 = 43.54(dBμV/m) – 54(dBμV/m)
 = -24.66(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.



Appendix D. Radiated Spurious Emission Plots

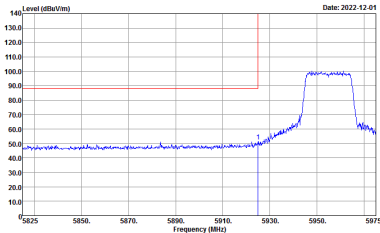
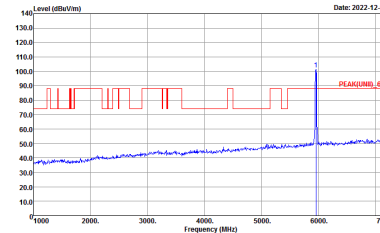
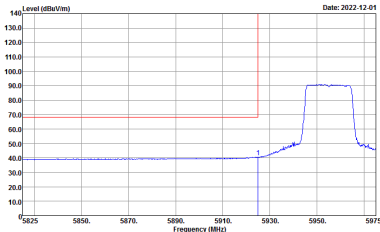
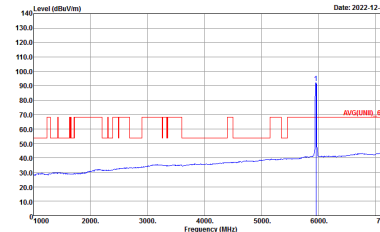
Test Engineer :	Bigshow Wang, Quentin Liu and Eric Xiao	Temperature :	21~26°C
		Relative Humidity :	45~60%



<Open Mode>

Band 5 - 5925~6425MHz

WIFI 802.11ax HE20 Full (Band Edge @ 3m)

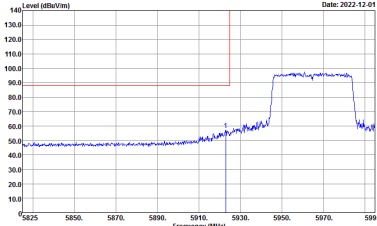
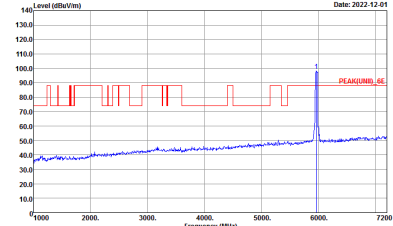
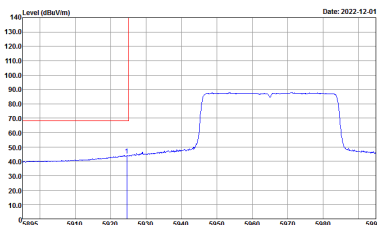
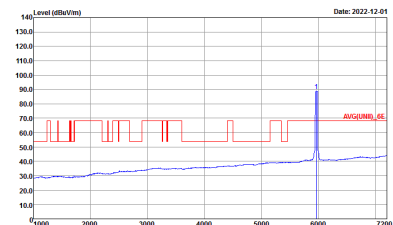
WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 5955MHz	
3+4	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(UNIT)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE(UNIT)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG(UNIT)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto



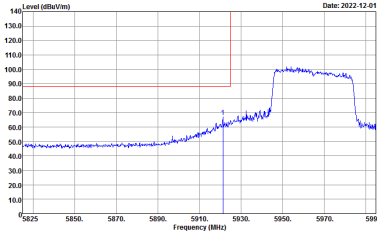
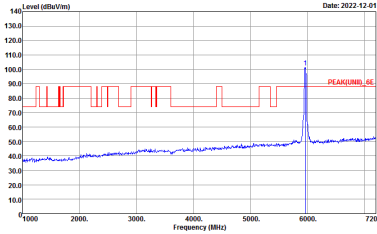
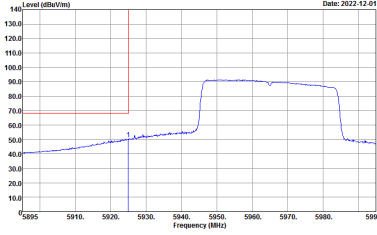
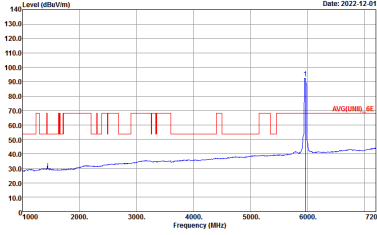
WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 5955MHz	
3+4	Vertical	Fundamental
Peak	Site : 03CH15-HY Condition : PEAK_BE(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH15-HY Condition : PEAK(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH15-HY Condition : AVG_BE(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Site : 03CH15-HY Condition : AVG(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto



Band 5 5925~6425MHz
WIFI 802.11ax HE40 Full (Band Edge @ 3m)

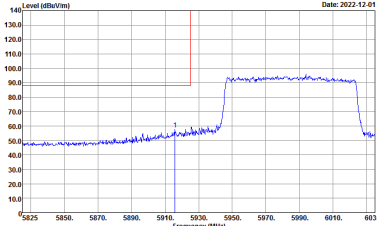
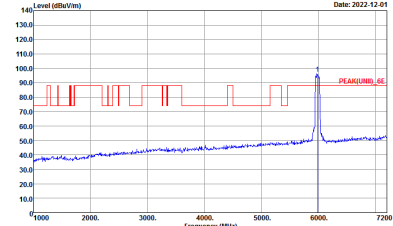
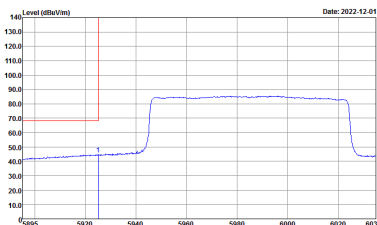
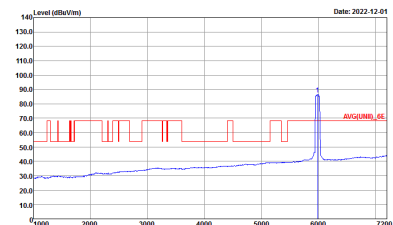
WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 5965MHz	
3+4	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(UNIT)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE(UNIT)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG(UNIT)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto



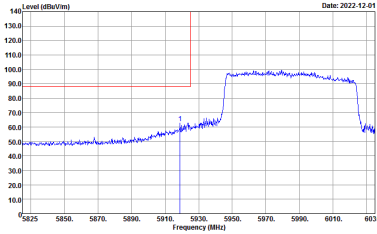
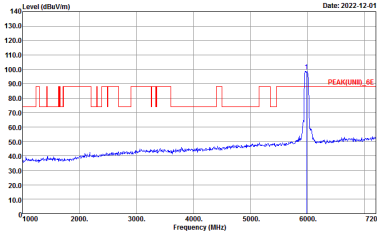
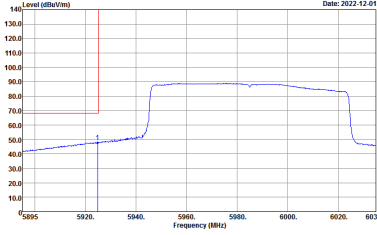
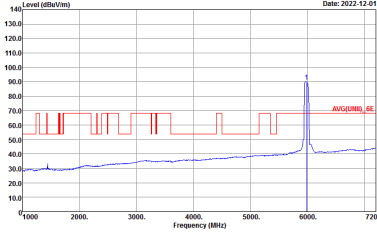
WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 5965MHz	
3+4	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto



Band 5 5925~6425MHz
WIFI 802.11ax HE80 Full (Band Edge @ 3m)

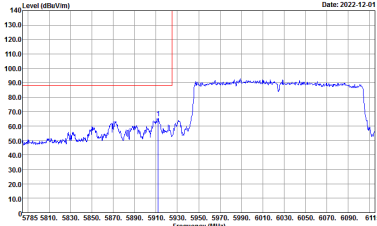
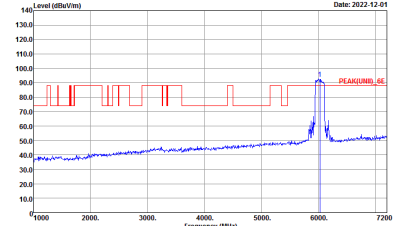
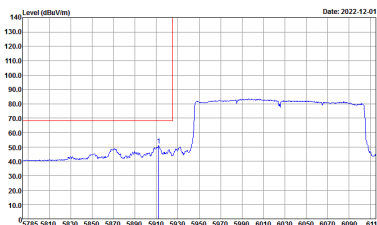
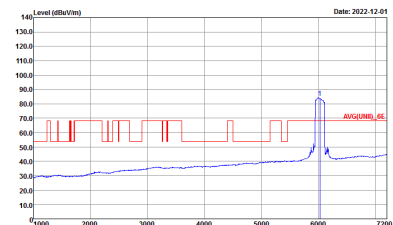
WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH07 5985MHz	
3+4	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(UNIT1)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT1)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE(UNIT1)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG(UNIT1)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto



WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH07 5985MHz	
3+4	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto



Band 5 5925~6425MHz
WIFI 802.11ax HE160 Full (Band Edge @ 3m)

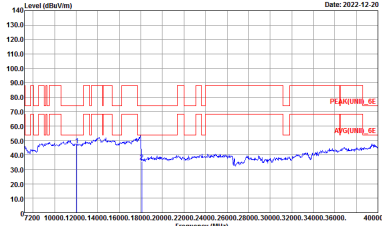
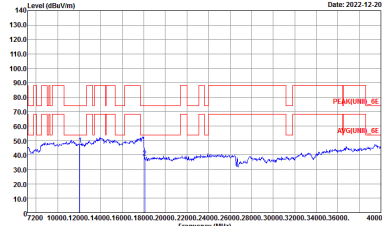
WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE160 Full CH15 6025MHz	
3+4	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(UNIT1)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT1)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE(UNIT1)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000kHz VBW:3.000kHz SWT:Auto	 Site : 03CH15-HY Condition : AVG(UNIT1)_6E 3m 91200_02294_220623 HORIZONTAL : RBW:1000.000kHz VBW:3.000kHz SWT:Auto



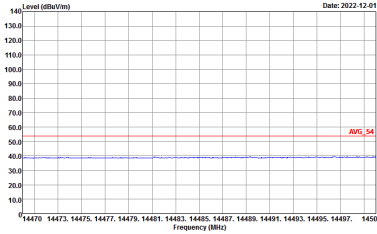
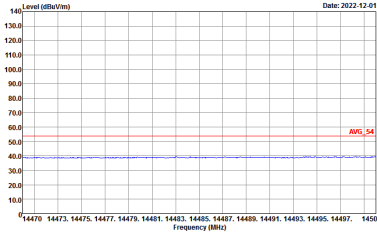
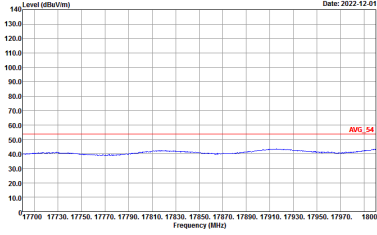
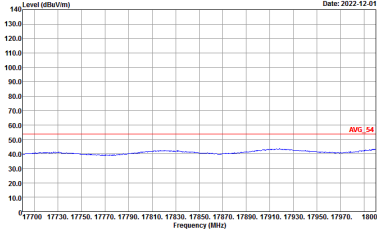
WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE160 Full CH15 6025MHz	
3+4	Vertical	Fundamental
Peak	Site : 03CH15-HY Condition : PEAK_BE(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH15-HY Condition : PEAK(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH15-HY Condition : AVG_BE(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Site : 03CH15-HY Condition : AVG(UNIT)_6E 3m 91200_02294_220623 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto



Band 5 - 5925~6425MHz
WIFI 802.11ax HE160 Full (Harmonic @ 3m)

WIFI	Band 5 5925~6425MHz Harmonic @ 3m	
ANT	802.11ax HE160 Full CH15 6025MHz	
3+4	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT)_6E 1m SHF_70576 HORIZONTAL :	 Site : 03CH15-HY Condition : PEAK(UNIT)_6E 1m SHF_70576 VERTICAL :

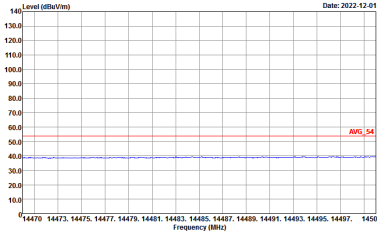
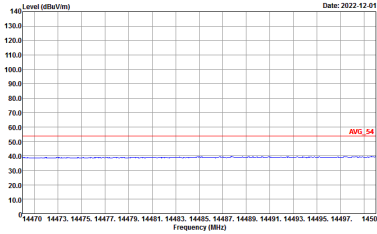
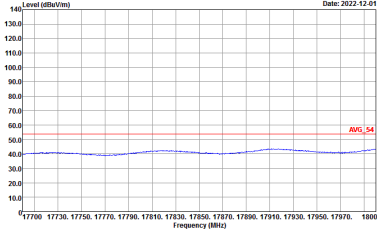
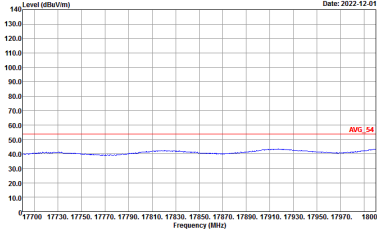


WIFI	Band 5 5925~6425MHz Harmonic @ 3m	
ANT	802.11ax HE160 Full CH15 6025MHz	
3+4	Horizontal	Vertical
14.47G ~14.5G Avg.	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 HORIZONTAL :	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 VERTICAL :
	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 HORIZONTAL :	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 VERTICAL :



WIFI	Band 5 5925~6425MHz Harmonic @ 3m	
ANT	802.11ax HE160 Full CH47 6185MHz	
3+4	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2022-12-20 Frequency (MHz) Site : 03CH15-HY Condition : PEAK(UNIT)_GE 1m SHF_70576 HORIZONTAL	Level (dBuV/m) Date: 2022-12-20 Frequency (MHz) Site : 03CH15-HY Condition : PEAK(UNIT)_GE 1m SHF_70576 VERTICAL

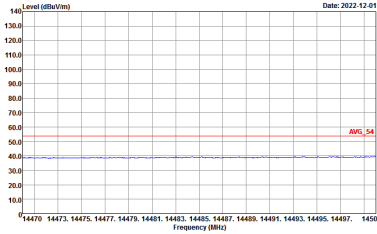
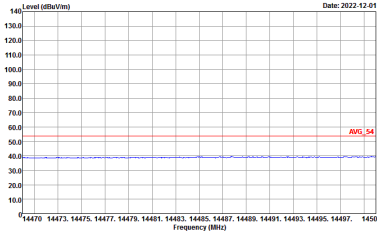
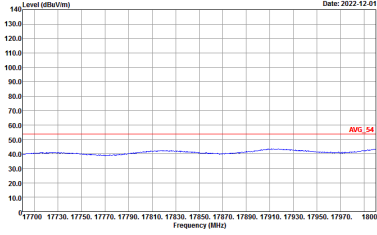
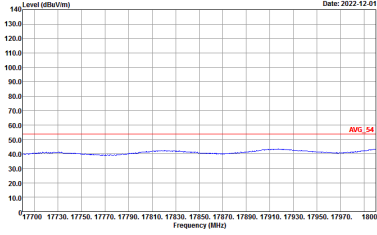


WIFI	Band 5 5925~6425MHz Harmonic @ 3m	
ANT	802.11ax HE160 Full CH47 6185MHz	
3+4	Horizontal	Vertical
14.47G ~14.5G Avg.	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 HORIZONTAL :	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 VERTICAL :
	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 HORIZONTAL :	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 VERTICAL :



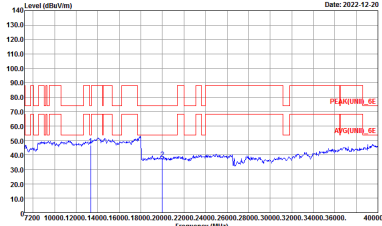
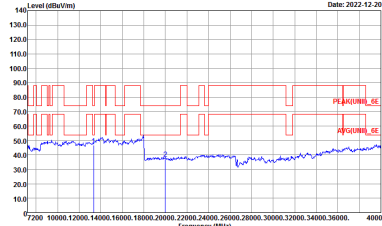
WIFI	Band 5 5925~6425MHz Harmonic @ 3m	
ANT	802.11ax HE160 Full CH79 6345MHz	
3+4	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2022-12-20 Frequency (MHz) Site : 03CH15-HY Condition : PEAK(UNIT)_0E 1m SHF_70576 HORIZONTAL	Level (dBuV/m) Date: 2022-12-20 Frequency (MHz) Site : 03CH15-HY Condition : PEAK(UNIT)_0E 1m SHF_70576 VERTICAL



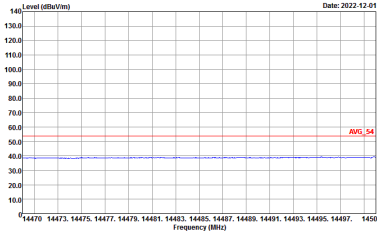
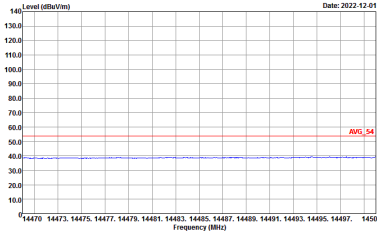
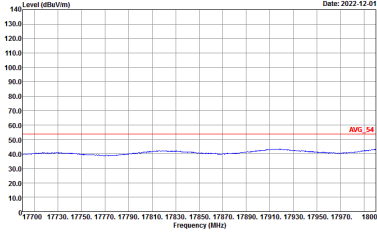
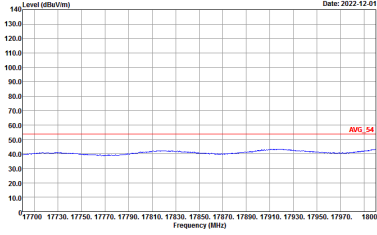
WIFI	Band 5 5925~6425MHz Harmonic @ 3m	
ANT	802.11ax HE160 Full CH79 6345MHz	
3+4	Horizontal	Vertical
14.47G ~14.5G Avg.	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 HORIZONTAL :	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 VERTICAL :
	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 HORIZONTAL :	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 VERTICAL :



Band 7 - 6525~6875MHz
WIFI 802.11ax HE160 Full (Harmonic @ 3m)

WIFI	Band 7 6525~6875MHz Harmonic @ 3m	
ANT	802.11ax HE160 Full CH143 6665MHz	
3+4	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT)_6E 1m SHF_70576 HORIZONTAL :	 Site : 03CH15-HY Condition : PEAK(UNIT)_6E 1m SHF_70576 VERTICAL :

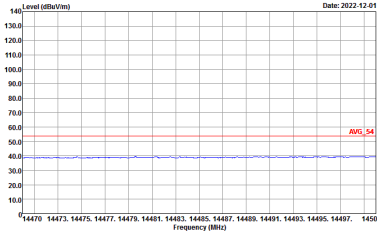
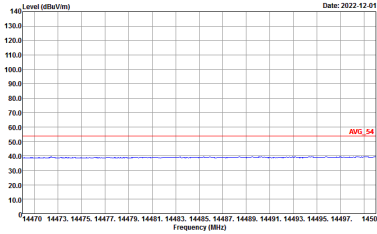
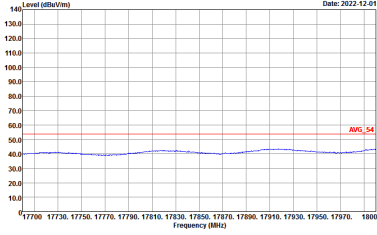
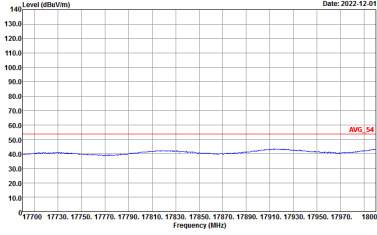


WIFI	Band 7 6525~6875MHz Harmonic @ 3m	
ANT	802.11ax HE160 Full CH143 6665MHz	
3+4	Horizontal	Vertical
14.47G ~14.5G Avg.	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 HORIZONTAL :	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 VERTICAL :
	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 HORIZONTAL :	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 VERTICAL :



WIFI	Band 7 6525~6875MHz Harmonic @ 3m	
ANT	802.11ax HE160 Full CH175 6825MHz	
3+4	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2022-12-20 Frequency (MHz) Site : 03CH15-HY Condition : PEAK(UNIT)_GE 1m SHF_70576 HORIZONTAL :	Level (dBuV/m) Date: 2022-12-20 Frequency (MHz) Site : 03CH15-HY Condition : PEAK(UNIT)_GE 1m SHF_70576 VERTICAL :



WIFI	Band 7 6525~6875MHz Harmonic @ 3m	
ANT	802.11ax HE160 Full CH175 6825MHz	
3+4	Horizontal	Vertical
14.47G ~14.5G Avg.	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 HORIZONTAL :	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 VERTICAL :
	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 HORIZONTAL :	 Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_220623 VERTICAL :



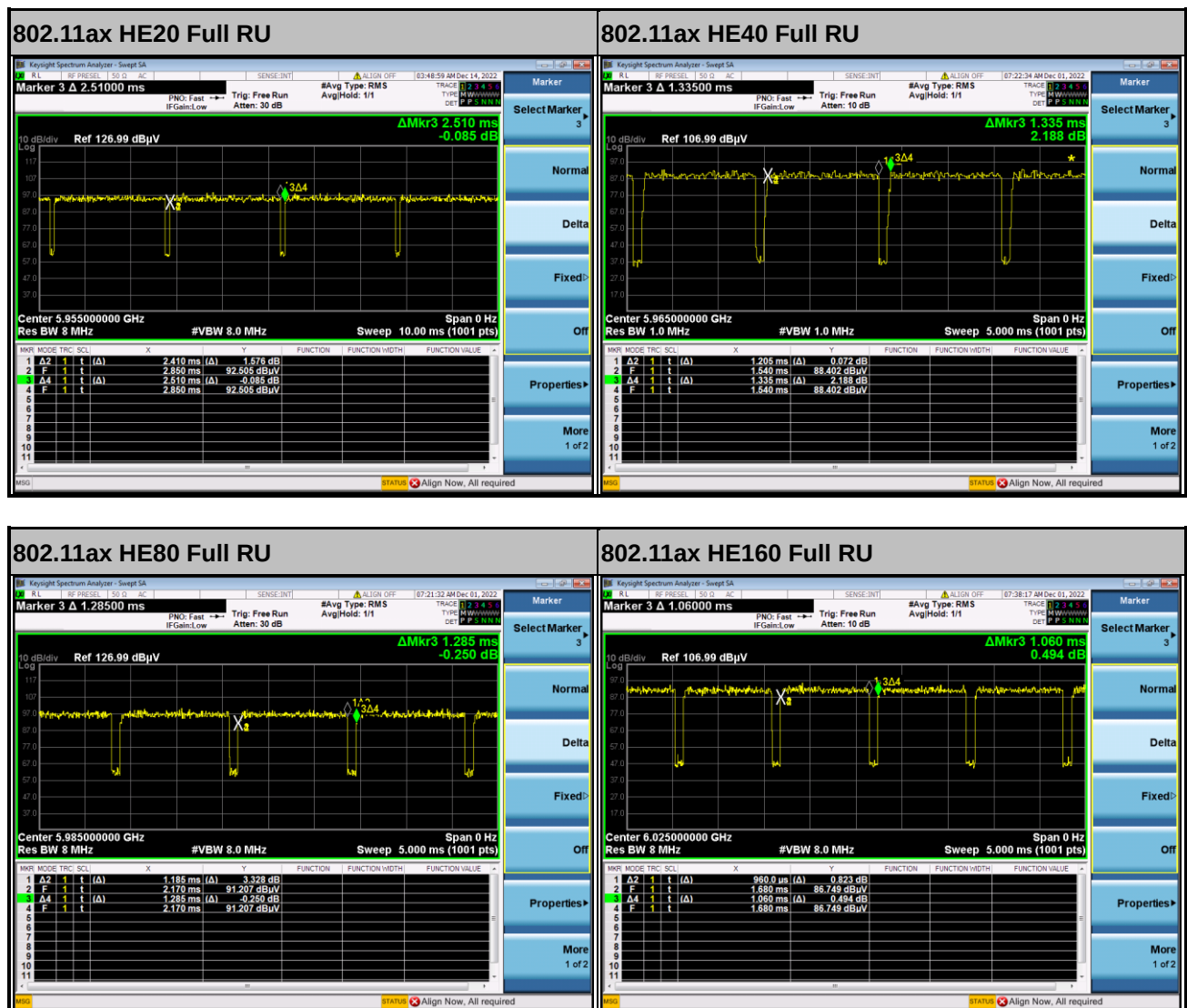
Appendix E. Duty Cycle Plots

<For Radiated Spurious Emission test>

<Open Mode>

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
3+4	6GHz 802.11ax HE20 Full RU	96.02	2410	0.41	1kHz
3+4	6GHz 802.11ax HE40 Full RU	90.26	1205	0.83	1kHz
3+4	6GHz 802.11ax HE80 Full RU	92.22	1185	0.84	1kHz
3+4	6GHz 802.11ax HE160 Full RU	90.57	960	1.04	3kHz

MIMO <Ant. 3+4>

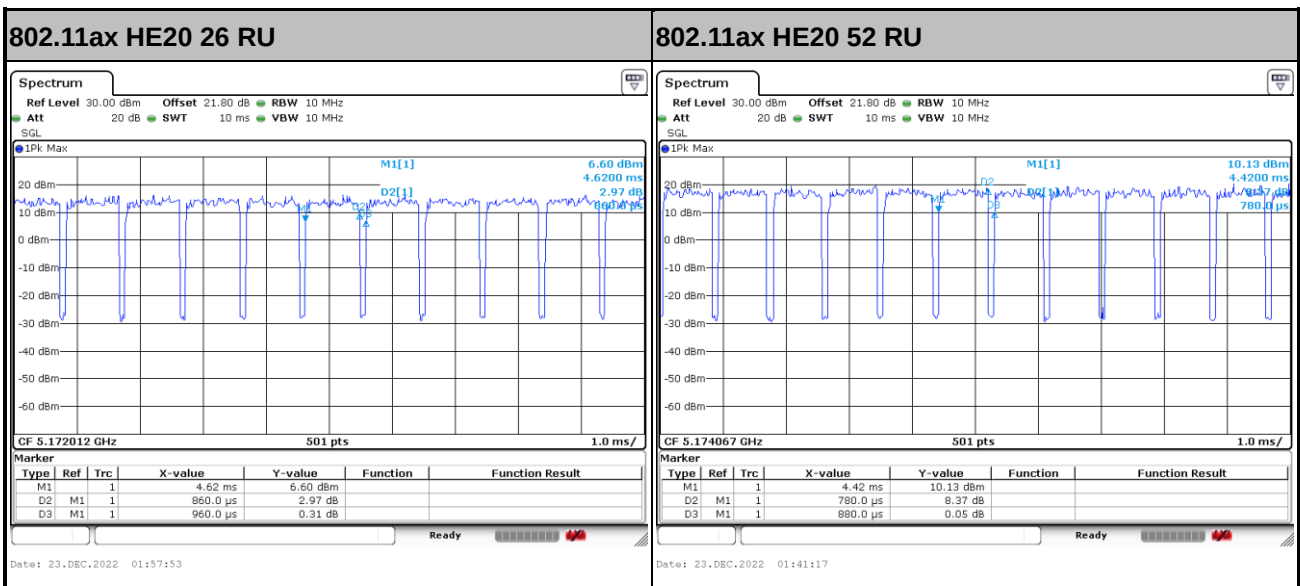
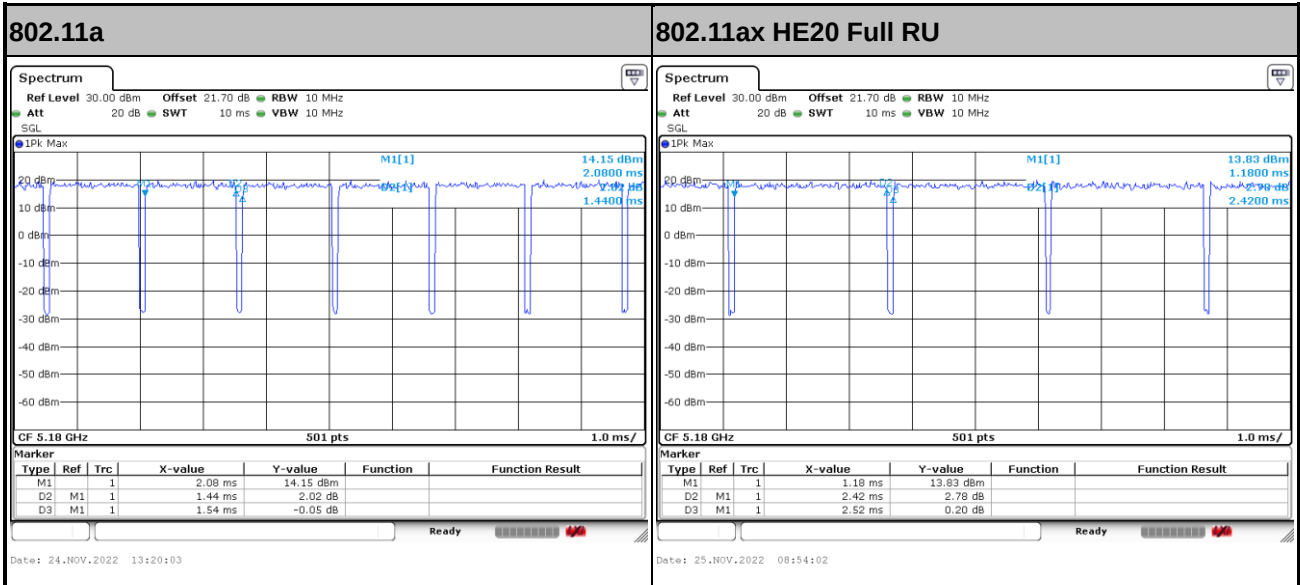


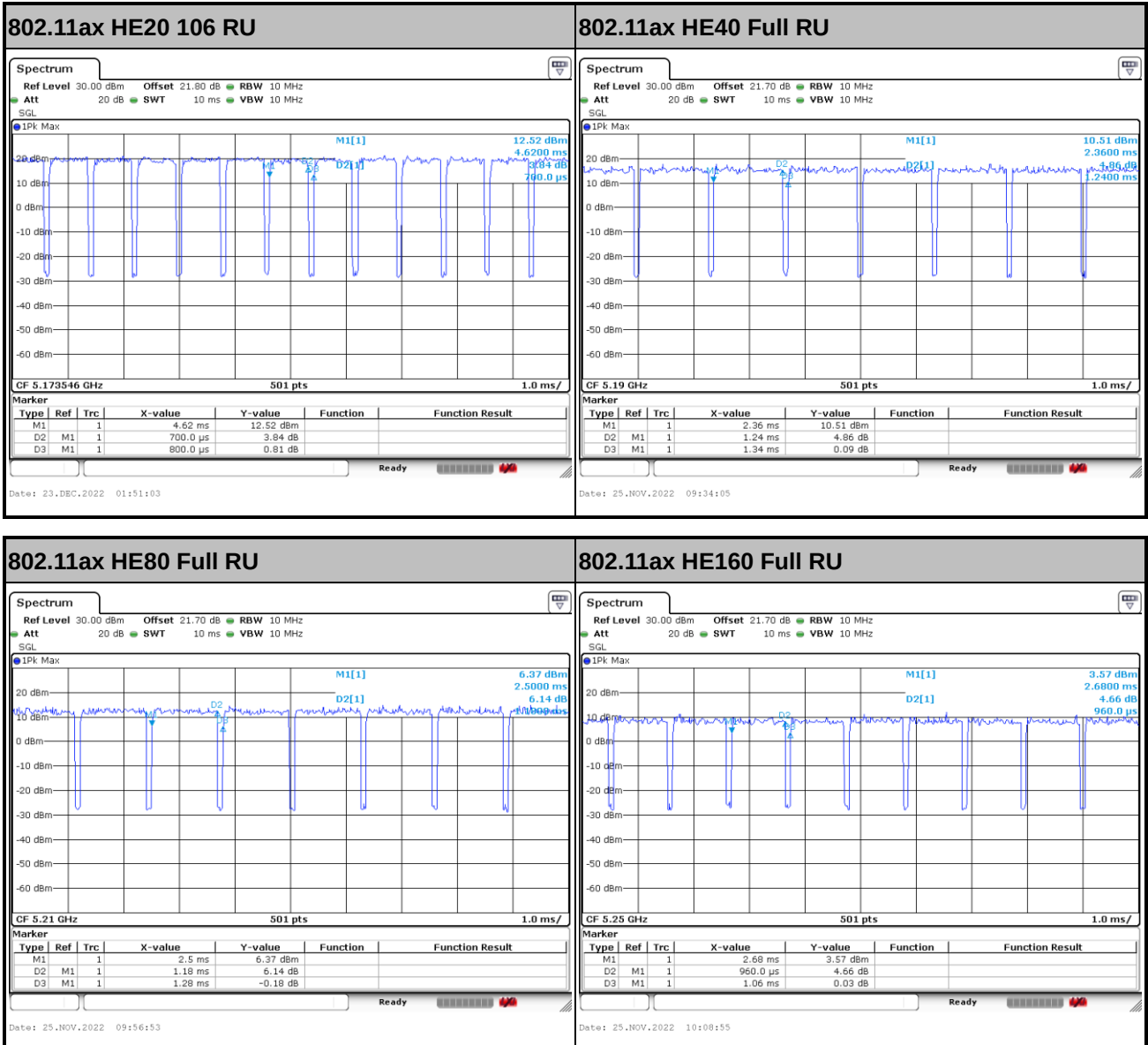
<For Conducted test>

Antenna	Band	Duty Cycle(%)	T(us)	Duty Factor(dB)
3+4	5GHz 802.11a for Ant. 3	93.51	1440	0.29
3+4	5GHz 802.11a for Ant. 4	93.51	1440	0.29
3+4	5GHz 802.11ax HE20 Full RU for Ant. 3	96.03	2420	0.18
3+4	5GHz 802.11ax HE20 Full RU for Ant. 4	96.00	2400	0.18
3+4	5GHz 802.11ax HE20 26 RU for Ant. 3	89.58	860	0.48
3+4	5GHz 802.11ax HE20 26 RU for Ant. 4	89.58	860	0.48
3+4	5GHz 802.11ax HE20 52 RU for Ant. 3	88.64	780	0.52
3+4	5GHz 802.11ax HE20 52 RU for Ant. 4	88.64	780	0.52
3+4	5GHz 802.11ax HE20 106 RU for Ant. 3	87.50	700	0.58
3+4	5GHz 802.11ax HE20 106 RU for Ant. 4	87.50	700	0.58
3+4	5GHz 802.11ax HE40 Full RU for Ant. 3	92.54	1240	0.34
3+4	5GHz 802.11ax HE40 Full RU for Ant. 4	92.54	1240	0.34
3+4	5GHz 802.11ax HE80 Full RU for Ant. 3	92.19	1180	0.35
3+4	5GHz 802.11ax HE80 Full RU for Ant. 4	92.19	1180	0.35
3+4	5GHz 802.11ax HE160 Full RU for Ant. 3	90.57	960	0.43
3+4	5GHz 802.11ax HE160 Full RU for Ant. 4	90.57	960	0.43



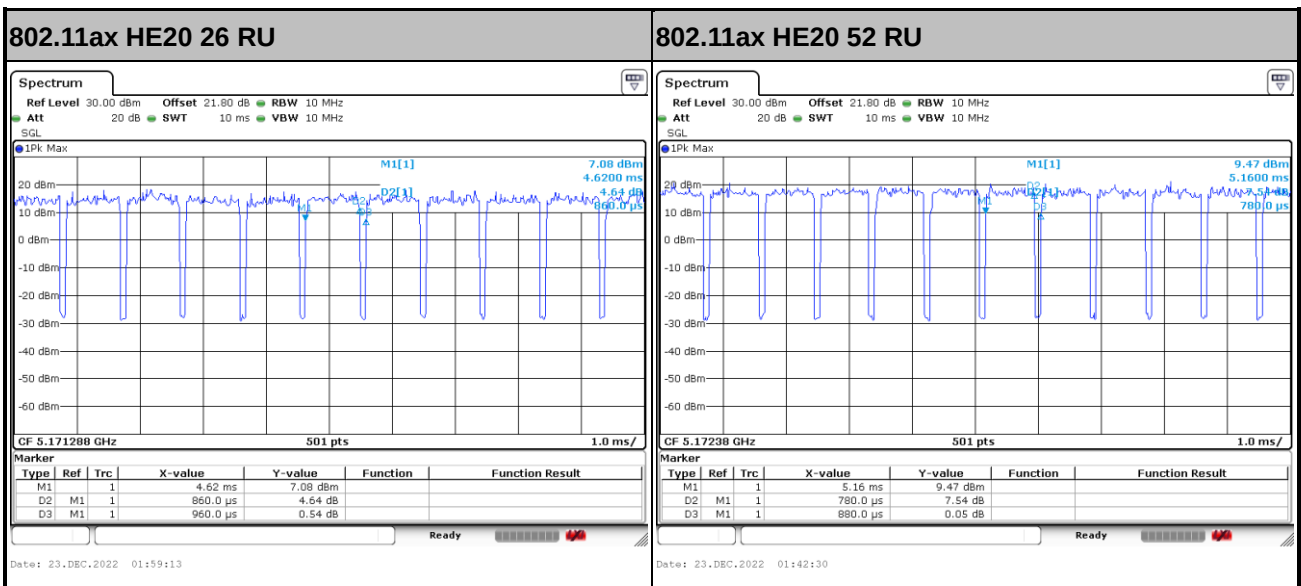
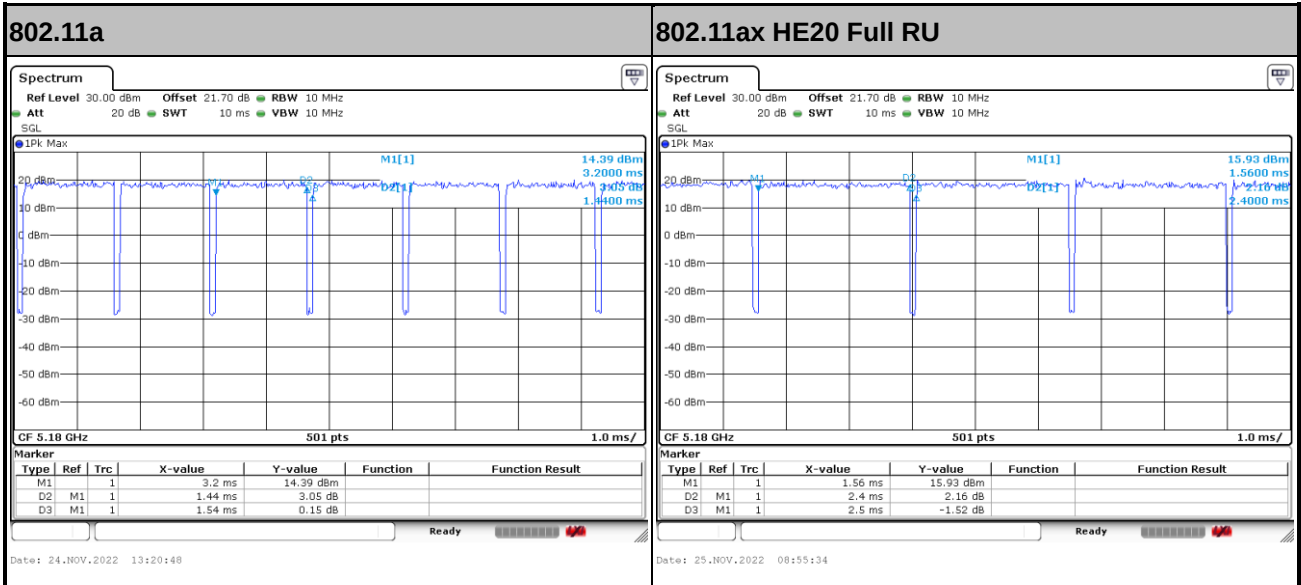
MIMO <Ant. 3>





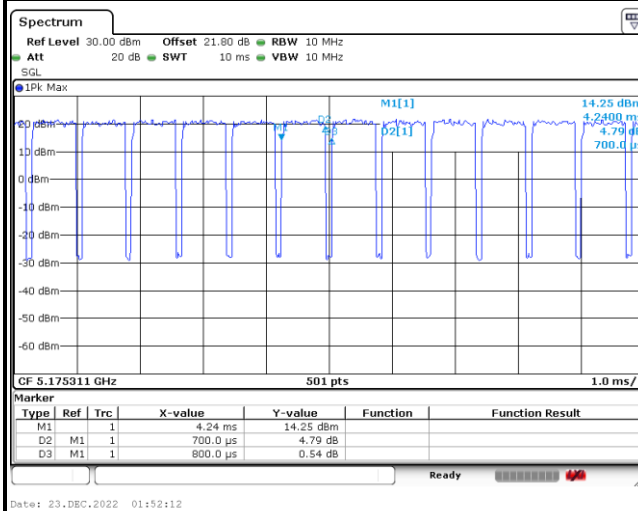


MIMO <Ant. 4>

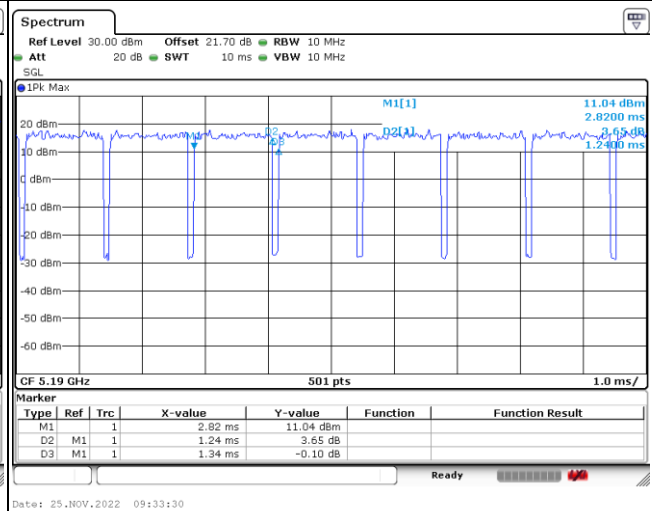




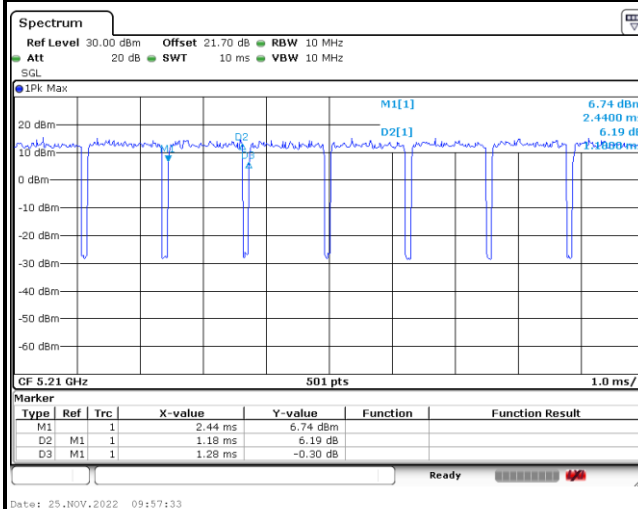
802.11ax HE20 106 RU



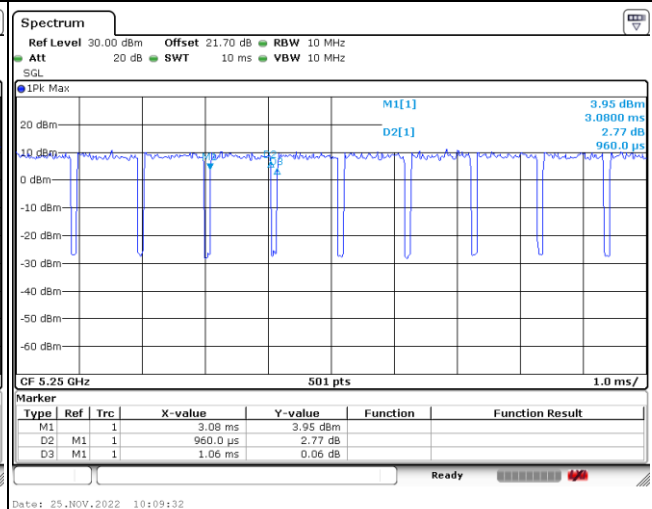
802.11ax HE40 Full RU



802.11ax HE80 Full RU



802.11ax HE160 Full RU



—THE END—