



FCC RADIO TEST REPORT

FCC ID : A4RG9FPL
Equipment : Phone
Model Name : G9FPL, G0B96
Applicant : Google LLC
1600 Amphitheatre Parkway,
Mountain View, California, 94043 USA
Standard : FCC Part 15 Subpart E §15.407

The product was received on Nov. 18, 2022 and testing was performed from Nov. 24, 2022 to Jan. 06, 2023. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)



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Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.407(e)	6dB & 26dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.407(a)	Maximum E.I.R.P Output Power	Pass	-
3.3	15.407(a)	Power Spectral Density	Pass	-
3.4	15.407(b)	Unwanted Emissions	Pass	2.16 dB under the limit at 5660.180 MHz
3.5	15.207	AC Conducted Emission	Pass	15.85 dB under the limit at 1.500 MHz
3.6	15.203	Antenna Requirement	Pass	-

Declaration of Conformity:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
2. The measurement uncertainty please refer to this report "Uncertainty of Evaluation".
Comments and Explanations:
1. The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.
2. The G9FPL and G0B96 are 100% identical in Hardware / Software to each other, and only have different model names for separate marketing purposes. The test samples are all model G9FPL.

Reviewed by: William Chen
Report Producer: Ruby Zou



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Phone
Model Name	G9FPL, G0B96
FCC ID	A4RG9FPL
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/5G NR/NFC/GNSS/ UWB/WPT Client WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80/VHT160 WLAN 11ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE

Remark: The above EUT's information was declared by manufacturer.

EUT Information List	
S/N	Performed Test Item
2A311FDHS00011	RF Conducted Measurement
2B021FDHS0003T	Radiated Spurious Emission
2B021FDHS0002Y	Conducted Emission



1.2 Product Specification of Equipment Under Test

Product Specification is subject to this standard								
Tx/Rx Frequency Range	5850 MHz ~ 5895 MHz							
Maximum Output Power	MIMO <Ant. 3+4> 802.11a: 19.56 dBm / 0.0904 W 802.11n HT20: 20.01 dBm / 0.1002 W 802.11n HT40: 21.36 dBm / 0.1368 W 802.11ac VHT20: 20.06 dBm / 0.1014 W 802.11ac VHT40: 21.41 dBm / 0.1384 W 802.11ac VHT80: 22.56 dBm / 0.1803 W 802.11ac VH160: 22.61 dBm / 0.1824 W 802.11ax HE20: 20.11 dBm / 0.1026 W 802.11ax HE40: 21.46 dBm / 0.1400 W 802.11ax HE80: 22.66 dBm / 0.1845 W 802.11ax HE160: 22.71 dBm / 0.1866 W							
99% Occupied Bandwidth	MIMO <Ant. 3> 802.11a: 17.18 MHz 802.11ax HE20: 19.18 MHz 802.11ax HE40: 38.16 MHz 802.11ax HE80: 77.56 MHz 802.11ax HE160: 157.76 MHz MIMO <Ant. 4> 802.11a: 16.98 MHz 802.11ax HE20: 19.18 MHz 802.11ax HE40: 38.16 MHz 802.11ax HE80: 77.80 MHz 802.11ax HE160: 158.00 MHz							
Antenna Type / Gain	<Open Mode> <Ant. 3>: Coupling feed Antenna with gain -1.7 dBi <Ant. 4>: IFA Antenna with gain -3.9 dBi <Closed Mode> <Ant. 3>: Coupling feed Antenna with gain -3.9 dBi <Ant. 4>: IFA Antenna with gain -4.1 dBi							
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) 802.11ax : OFDMA (BPSK / QPSK / 16QAM / 64QAM / 256QAM / 1024QAM)							
Antenna Function Description	<table border="1"> <thead> <tr> <th></th> <th>Ant. 3</th> <th>Ant. 4</th> </tr> </thead> <tbody> <tr> <td>802.11a/n/ac/ax MIMO</td> <td>V</td> <td>V</td> </tr> </tbody> </table>			Ant. 3	Ant. 4	802.11a/n/ac/ax MIMO	V	V
	Ant. 3	Ant. 4						
802.11a/n/ac/ax MIMO	V	V						

Remark:

1. MIMO Ant. 3+4 Directional Gain is a calculated result from MIMO Ant. 3 and MIMO Ant. 4. The formula used in calculation is documented in section 1.2.1.
2. Power of MIMO Ant. 3 + Ant. 4 is a calculated result from sum of the power MIMO Ant. 3 and MIMO Ant. 4.
3. The EUT's information above is declared by manufacturer. Please refer to Comments and Explanations in report summary.



1.2.1 Antenna Directional Gain

Follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01 F2)f)ii)

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows:

For power measurements on IEEE 802.11 devices,

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

G_{ANT} is set equal to the gain of the antenna having the highest gain.

For PSD measurements, the directional gain calculation.

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k / 20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not; G_k is the gain in dBi of the kth antenna.

As minimum N_{SS}=1 is supported by EUT, the formula can be simplified as:

$$Directional\ gain = 10 \cdot \log \left[\frac{(10^{G_1 / 20} + 10^{G_2 / 20} + \dots + 10^{G_N / 20})^2}{N_{ANT}} \right] \text{ dBi}$$

Where G₁, G₂...G_N denote single antenna gain.

The directional gain "DG" is calculated as following table.

UNII-4			DG	DG
			for	for
	Ant 3	Ant 4	Power	PSD
	(dBi)	(dBi)	(dBi)	(dBi)
	-1.70	-3.90	-1.70	0.28

Calculation example:

If a device has two antenna, G_{ANT1}= -1.70 dBi; G_{ANT2}=-3.90 dBi

Directional gain of power measurement = max(-1.70, -3.90) + 0 = -1.70 dBi

Directional gain of PSD derived from formula which is

$$10 \times \log \left\{ \left[10^{(-1.70 \text{ dBi} / 20)} + 10^{(-3.90 \text{ dBi} / 20)} \right]^2 / 2 \right\} = 0.28 \text{ dBi}$$

Note: The antenna gain is from both open mode and close mode with highest number.



1.3 Modification of EUT

No modifications are made to the EUT during all test items.

1.4 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. CO05-HY (TAF Code: 1190)
Remark	The Conducted Emission test item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory.

Note: The test site complies with ANSI C63.4 2014 requirement.

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. TH05-HY, 03CH13-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW1190 and TW3786

1.5 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ FCC KDB 291074 D02 EMC Measurement v01 (Draft)
- ♦ ANSI C63.10-2013

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT (open and close) and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape) and accessory (Adapter or Earphone), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and only the worst case emissions were reported in this report.

- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Bandwidth	Channel	Frequency (MHz)	Note
5850-5895 MHz (U-NII-4)	20 MHz	169	5845	Straddle
		173	5865	
		177	5885	
	40 MHz	167	5835	Straddle
		175	5875	
	80 MHz	171	5855	Straddle
160 MHz	163	5815	Straddle	

Note: The channel noted with “straddle” spans 5.725-5.850 GHz and 5.850-5.895 GHz.



2.2 Test Mode

This device support 26/52/106/242/484/996-tone RU but does not support 2x996-tone RU on 160MHz channel.

The PSD of partial RU is reduced to be smaller than full RU according to TCB workshop interim guidance Oct. 2018.

The 802.11ax mode is investigated among different tones, full resource units (RU), partial resource units. The partial RU has no higher power than full RU's, thus the full RU is chosen as main test configuration.

The 242-tone RU is covered by 20MHz channel, 484-tone RU is covered by 40MHz channel and 996-tone RU is covered by 80MHz channel.

The SISO mode conducted power is covered by MIMO mode per chain, so only the MIMO mode is tested.

The power for 802.11n and 802.11ac mode is smaller than 802.11ax mode, so all other conducted and radiated test is covered by 802.11ax mode.

The final test modes include the worst data rates for each modulation shown in the table below.

Specification	MCS index /Data Rate
802.11a	6 Mbps
802.11n HT20 (Covered by HE20)	MCS0
802.11n HT40 (Covered by HE40)	MCS0
802.11ac VHT20 (Covered by HE20)	MCS0
802.11ac VHT40 (Covered by HE40)	MCS0
802.11ac VHT80 (Covered by HE80)	MCS0
802.11ac VHT160 (Covered by HE160)	MCS0
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0
802.11ax HE160	MCS0

Remark: The conducted power level of each chain in MIMO mode is equal or higher than SISO mode.



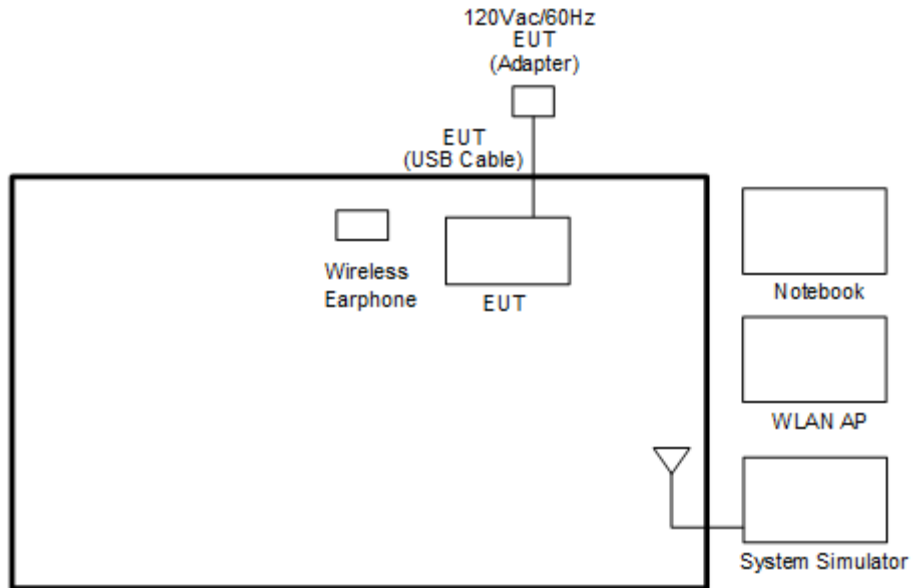
Test Cases	
AC Conducted Emission	Mode 1 : GSM850 Idle + WLAN (5GHz) Link + Bluetooth Link + USB cable Type C (Charging from AC Adapter 1)
Remark: 1. For Radiated Test Cases, the tests were performed with Adapter 2 and USB Cable 2. 2. During the preliminary test, both charging modes (Adapter mode and WPT client mode) were verified. It is determined that the adaptor mode is the worst case for official test.	

Ch. #		RF test channel of UNII-4 and UNII-3 &-4 span channels				
		802.11a	802.11ax HE20	802.11ax HE40	802.11ax HE80	802.11ax HE160
L	Low	169	169	167	-	-
M	Middle	173	173	-	171	163
H	High	177	177	175	-	-

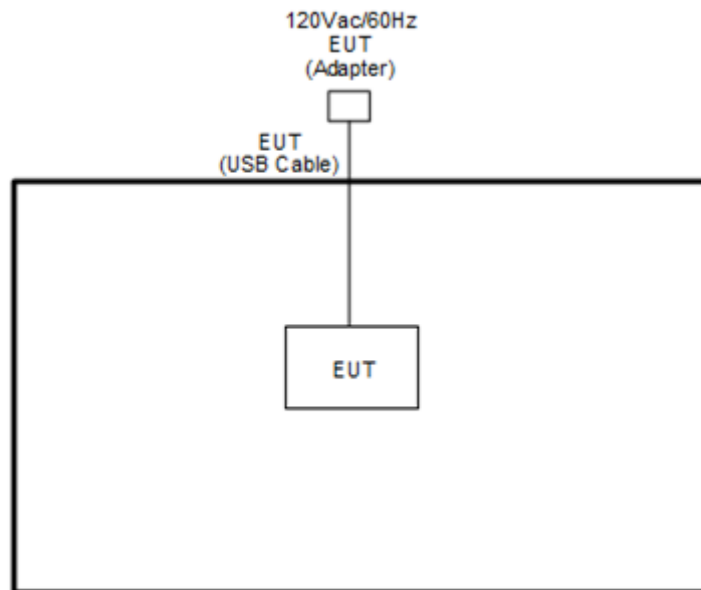
Remark: For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.

2.3 Connection Diagram of Test System

<AC Conducted Emission Mode>



<WLAN Tx Mode>





2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	Wireless Earphone	Google	G1007/G1008	A4RG1007/ A4RG1008	N/A	N/A
3.	WLAN AP	D-Link	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
4.	Notebook	DELL	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

2.5 EUT Operation Test Setup

The RF test items, utility “Cmd Version 1.0.39” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10 dB attenuator.

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

3 Test Result

3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement

3.1.1 Description of 6dB and 26dB and 99% Occupied Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

26dB and 99% Occupied bandwidth are reporting only.

3.1.2 Measuring Instruments

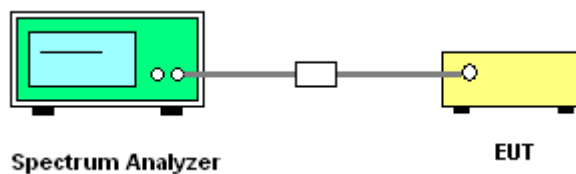
See list of measuring equipment of this test report.

3.1.3 Test Procedures

The testing follows FCC KDB 291074 D02 EMC Measurement v01 (Draft) Section 2.11 Minimum Emission bandwidth

1. Set RBW = 100 kHz.
2. Set the VBW $\geq 3 \times$ RBW.
3. Detector = Peak.
4. Trace mode = max hold
5. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.
6. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.

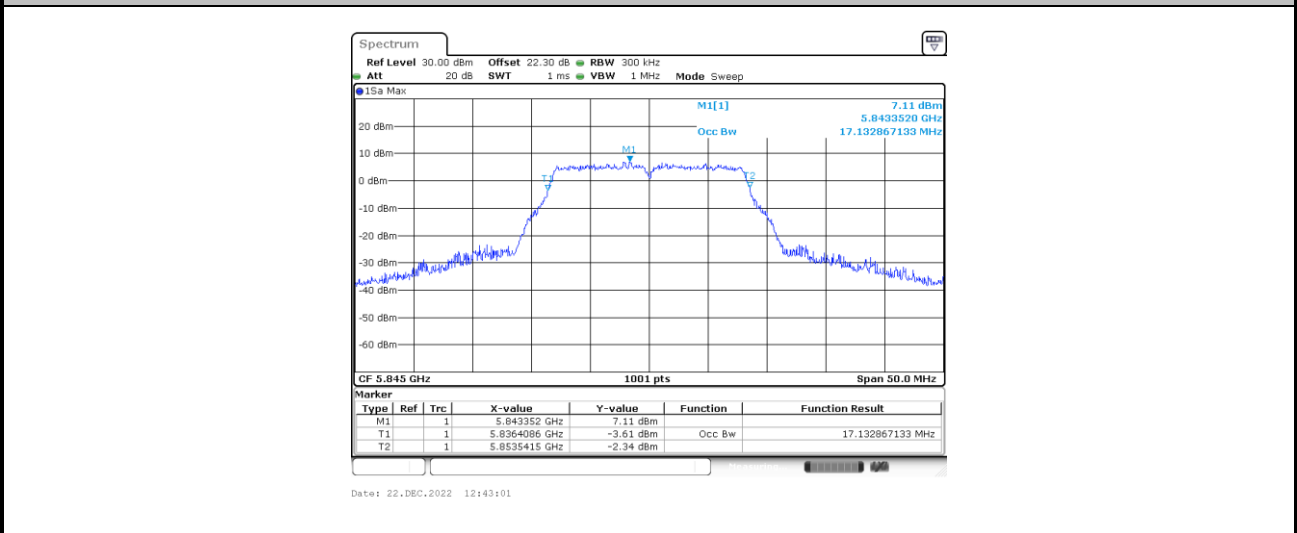


MIMO <Ant. 3+4>

<802.11a>



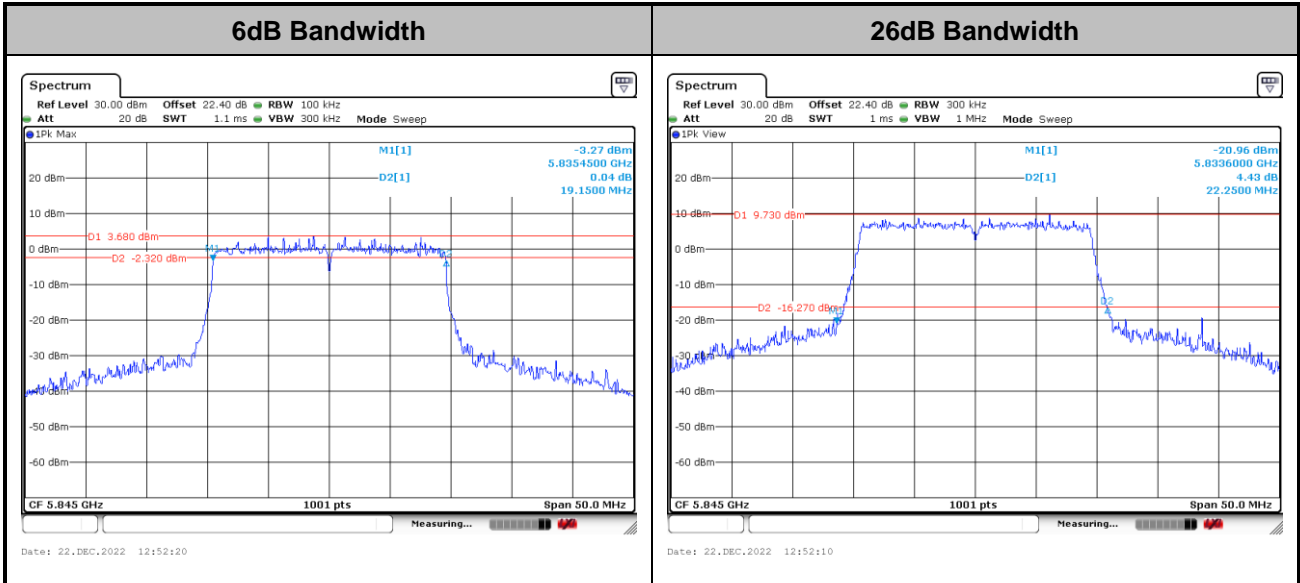
Occupied Bandwidth



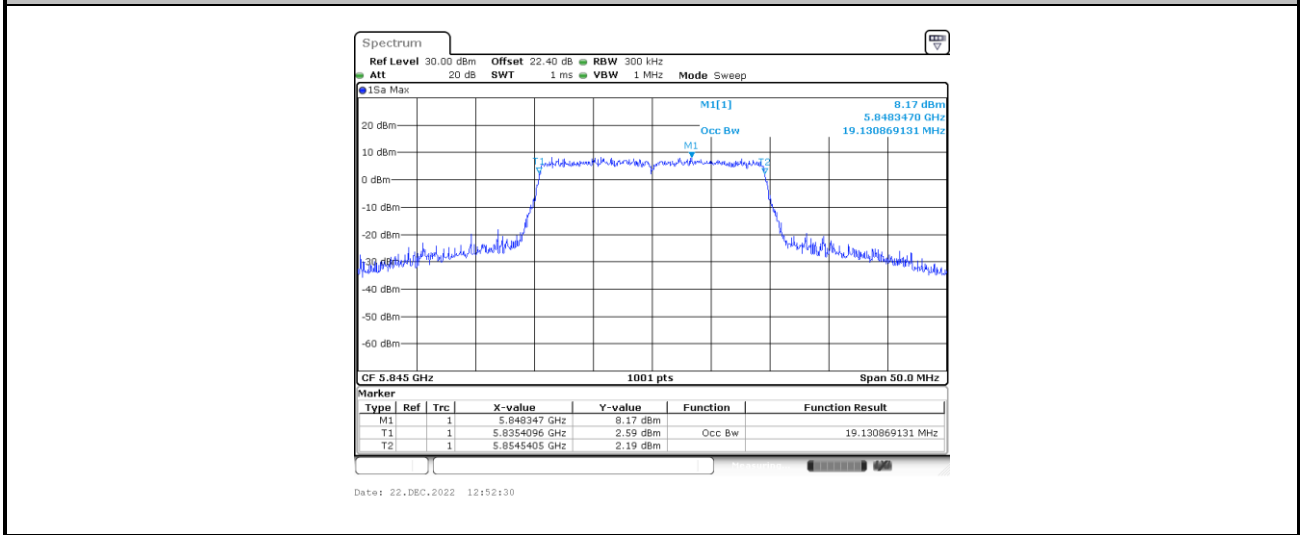
Note: The occupied channel bandwidth is maintained within the band of operation.



<802.11ax HE20>



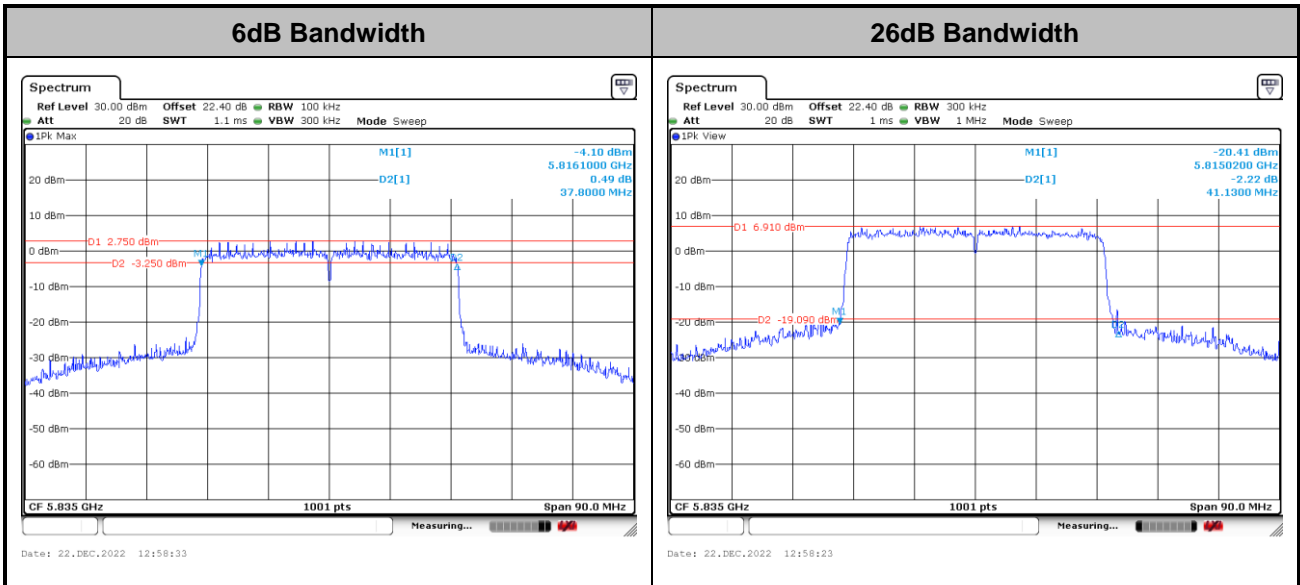
Occupied Bandwidth



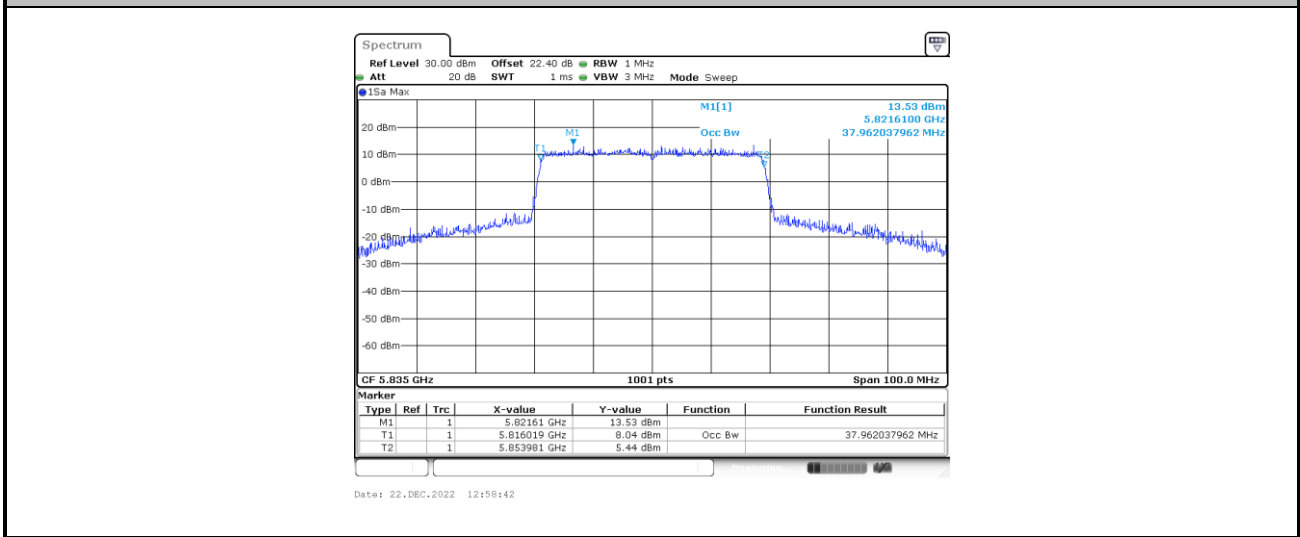
Note: The occupied channel bandwidth is maintained within the band of operation.



<802.11ax HE40>



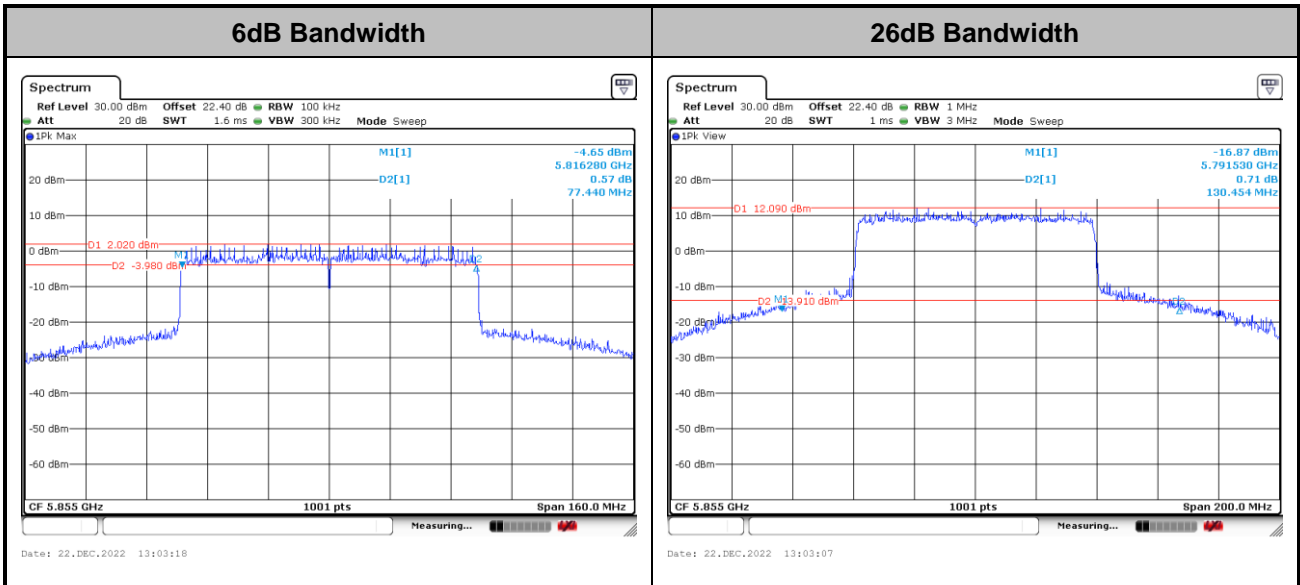
Occupied Bandwidth



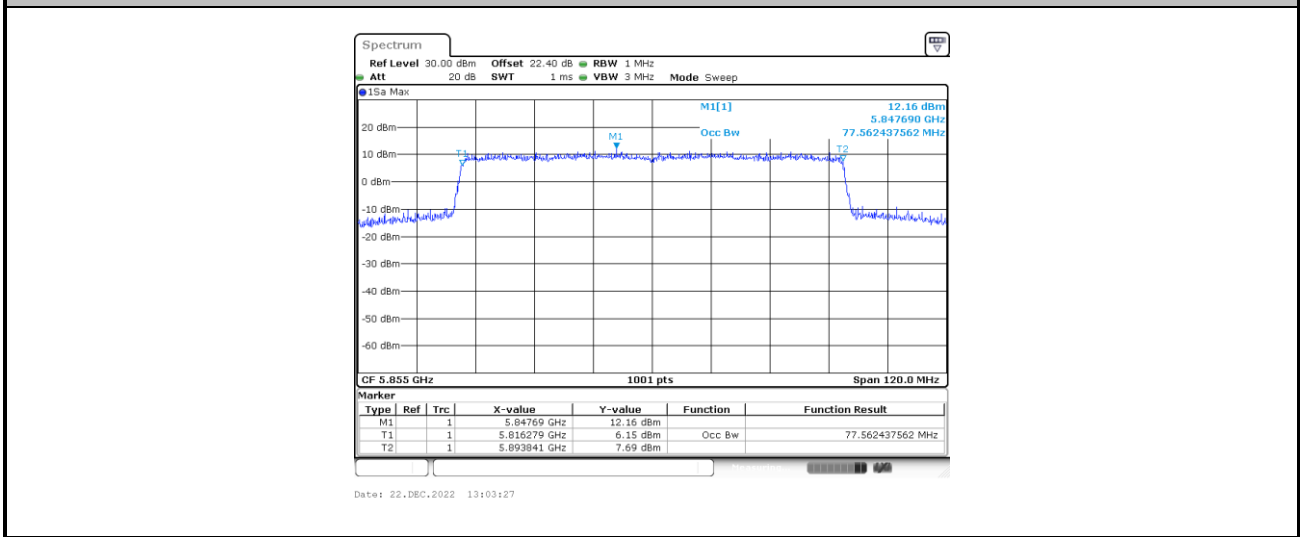
Note: The occupied channel bandwidth is maintained within the band of operation.



<802.11ax HE80>



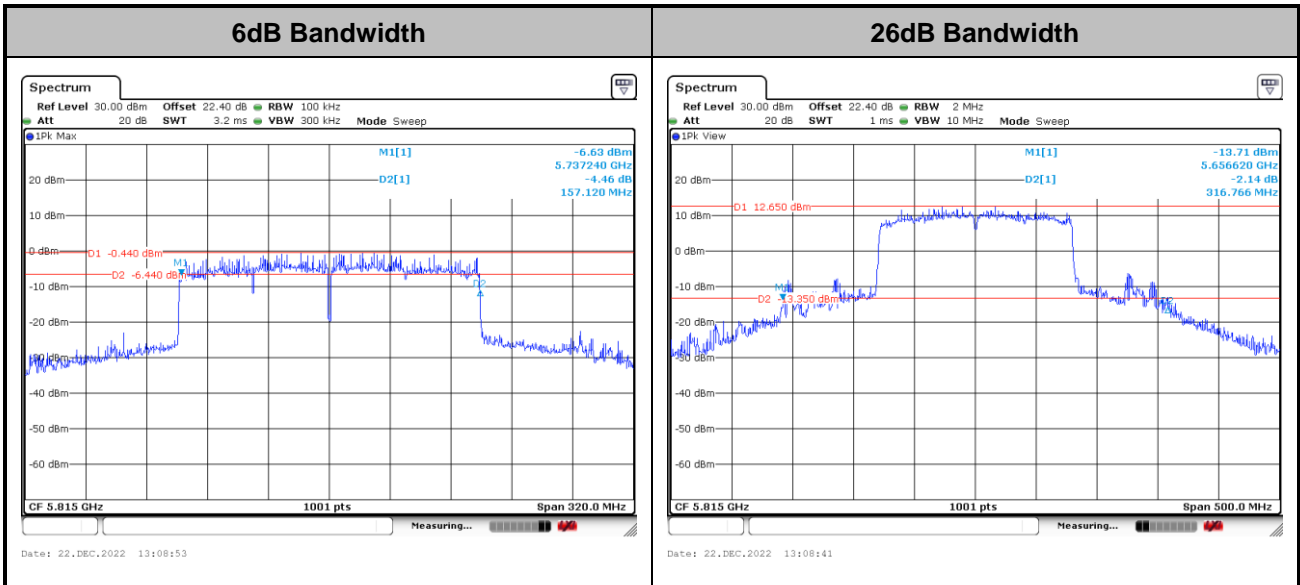
Occupied Bandwidth



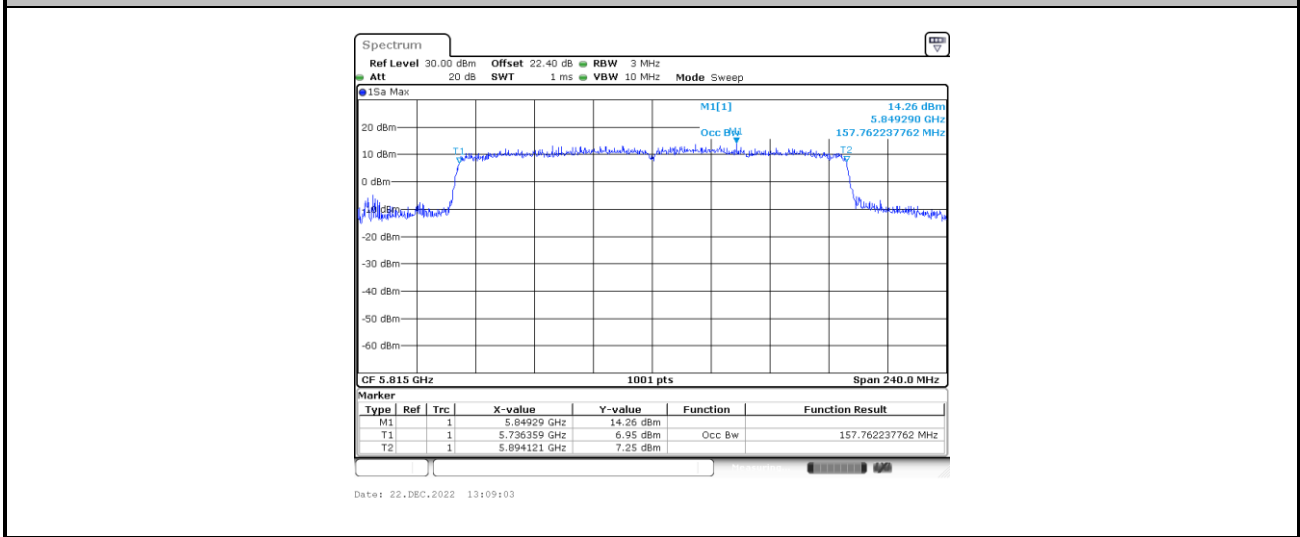
Note: The occupied channel bandwidth is maintained within the band of operation.



<802.11ax HE160>



Occupied Bandwidth



Note: The occupied channel bandwidth is maintained within the band of operation.

3.2 Maximum E.I.R.P Output Power Measurement

3.2.1 Limit of Maximum E.I.R.P Output Power

For client devices operating under the control of an indoor access point in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 14 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm. Client devices operating on a channel that spans the 5.725-5.850 GHz and 5.850-5.895 GHz bands must not exceed an e.i.r.p. of 30 dBm.

3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

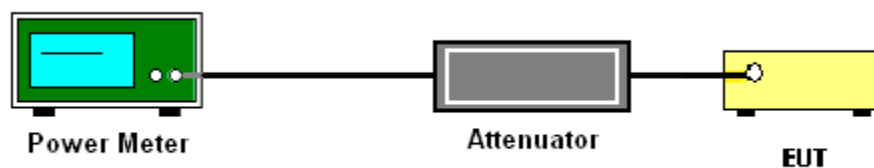
3.2.3 Test Procedures

The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM-G (Measurement using a gated RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter.
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

1. For client devices operating under the control of an indoor access point in the 5.850-5.895 GHz band, the maximum power spectral density must not exceed 14 dBm e.i.r.p. in any 1-megahertz band
2. For client devices operating on a channel that spans the 5.725-5.850 GHz and 5.850-5.895 GHz bands shall meet both 15.407(a)(3)(i) 30dBm/500kHz and 15.407(a)(3)(iii) 14dBm/MHz limit, where the stringent limit 14dBm/MHz is applied.

3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section F) Maximum power spectral density.

Method SA-2

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

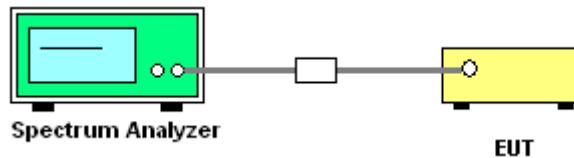
- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW \geq 3 MHz.
- Number of points in sweep \geq 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add $10 \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add $10 \log(1/0.25) = 6$ dB if the duty cycle is 25 percent.

1. The RF output of EUT is connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

Method (a): Measure and sum the spectra across the outputs.

The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points; the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

3.3.4 Test Setup

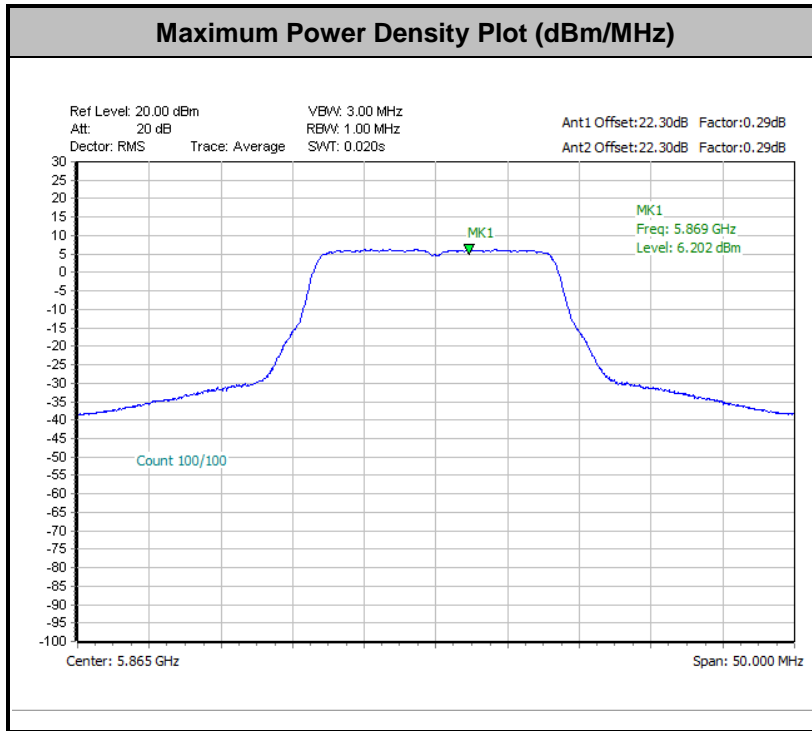


3.3.5 Test Result of Power Spectral Density

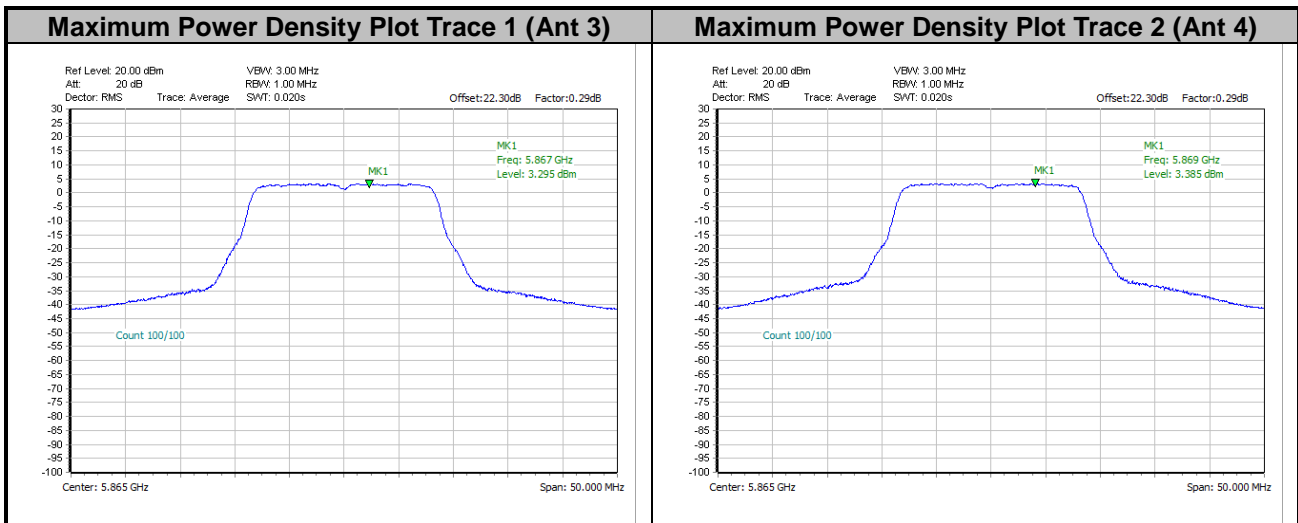
Please refer to Appendix A.



<802.11a>

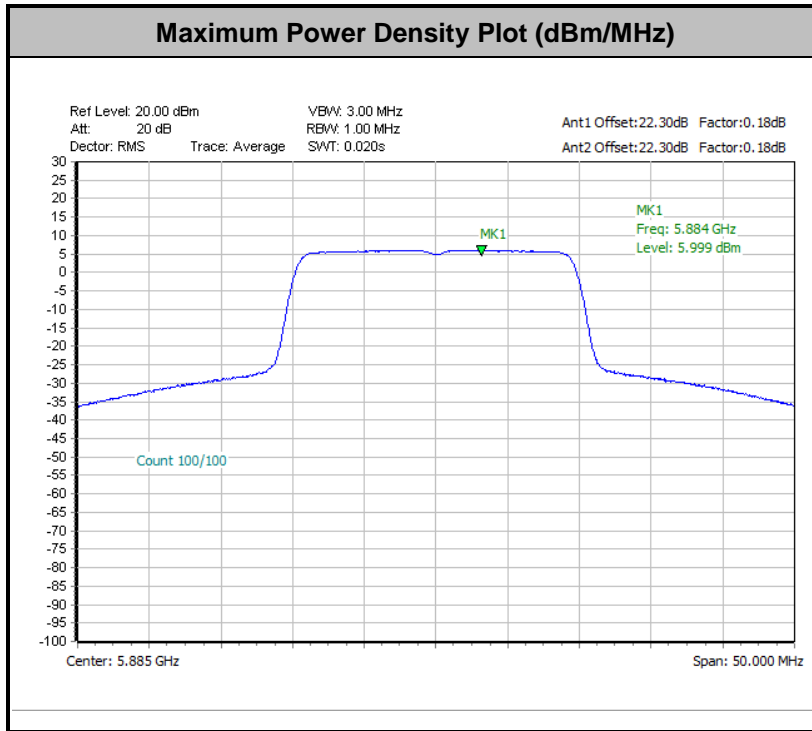


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

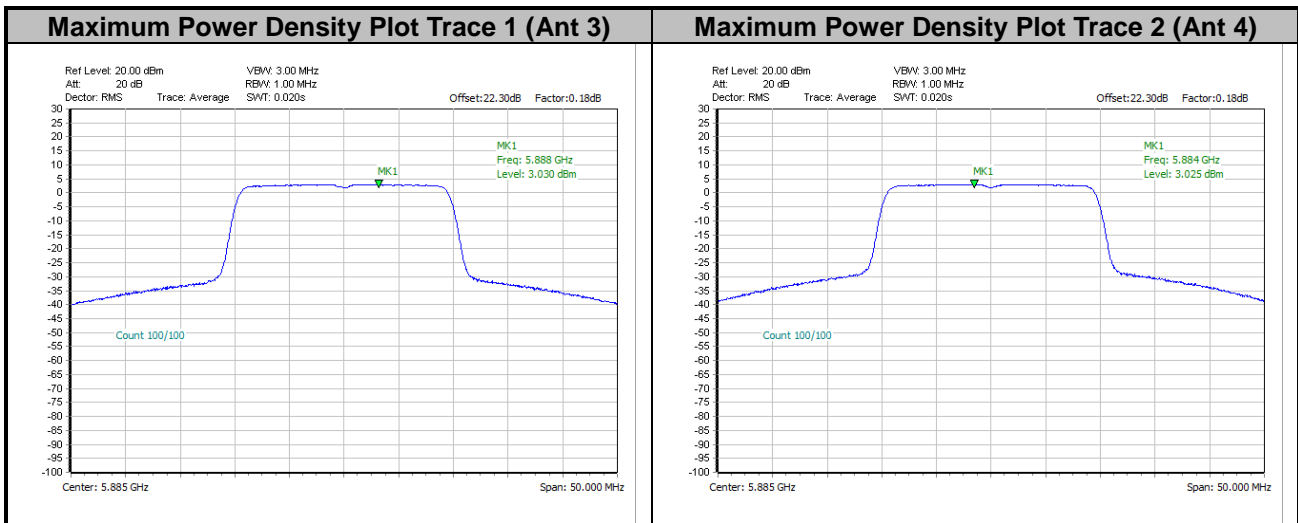




<802.11ax HE20>

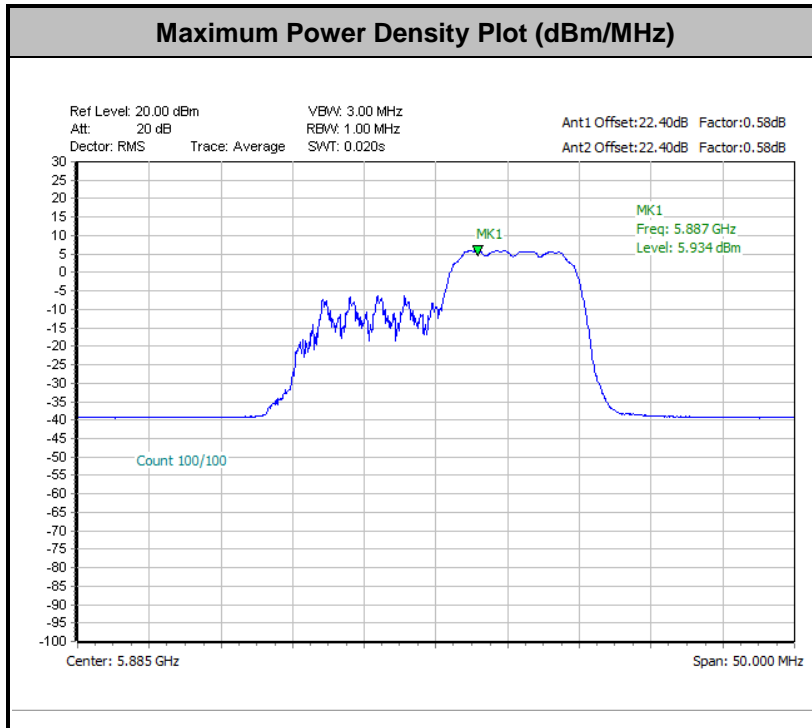


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

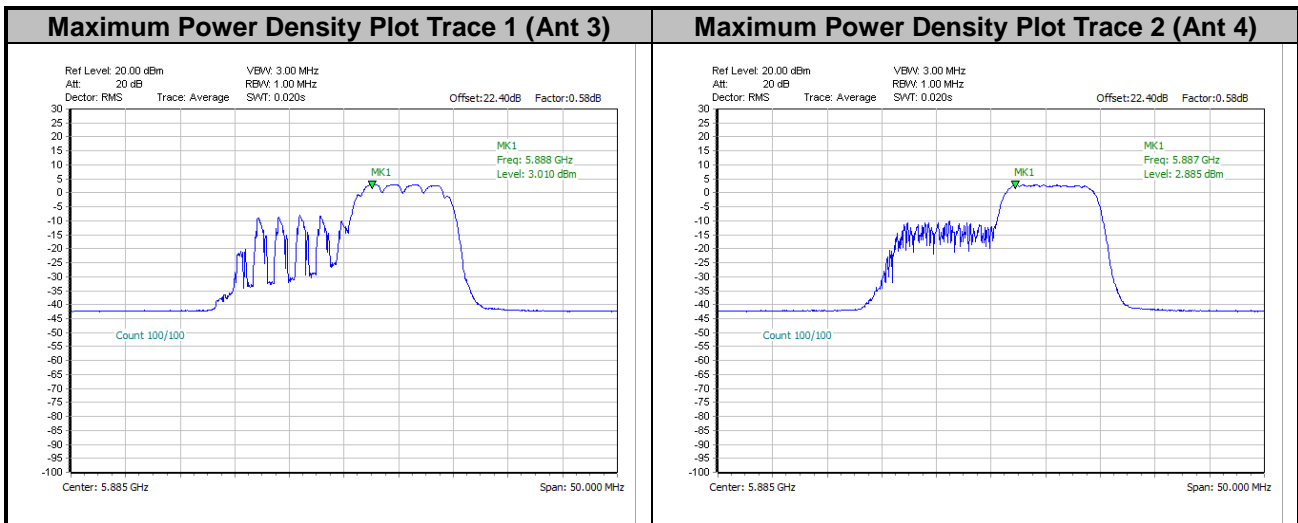




<802.11ax HE20 106RU>

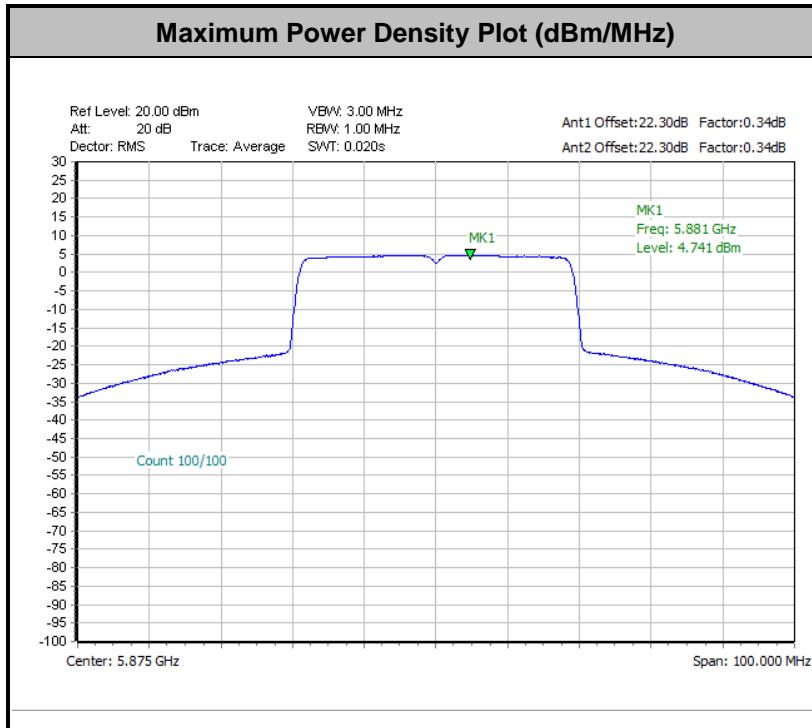


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

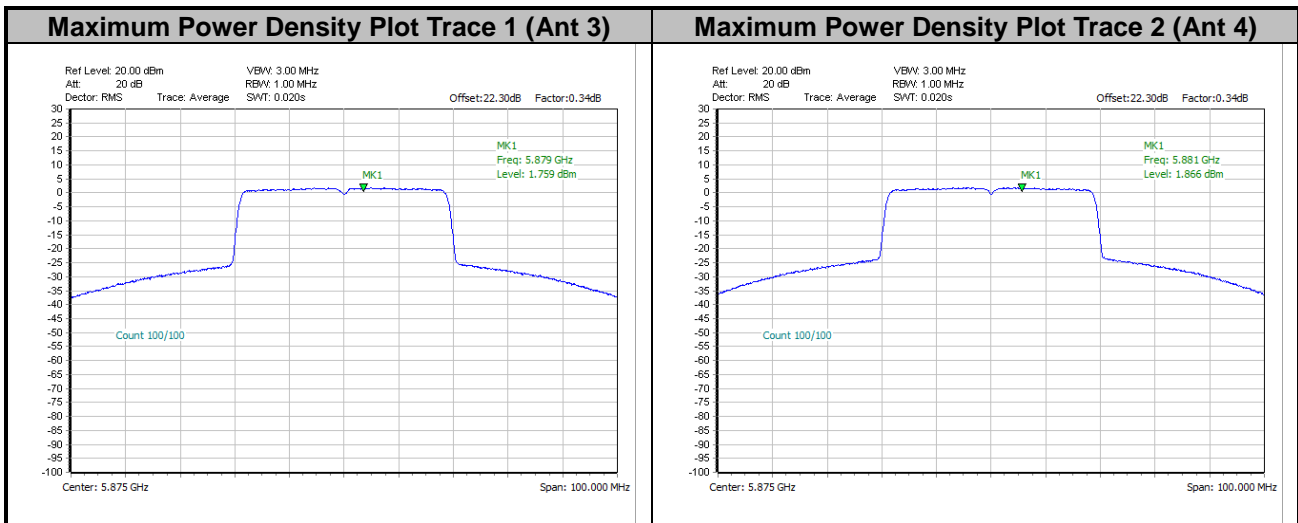




<802.11ax HE40>

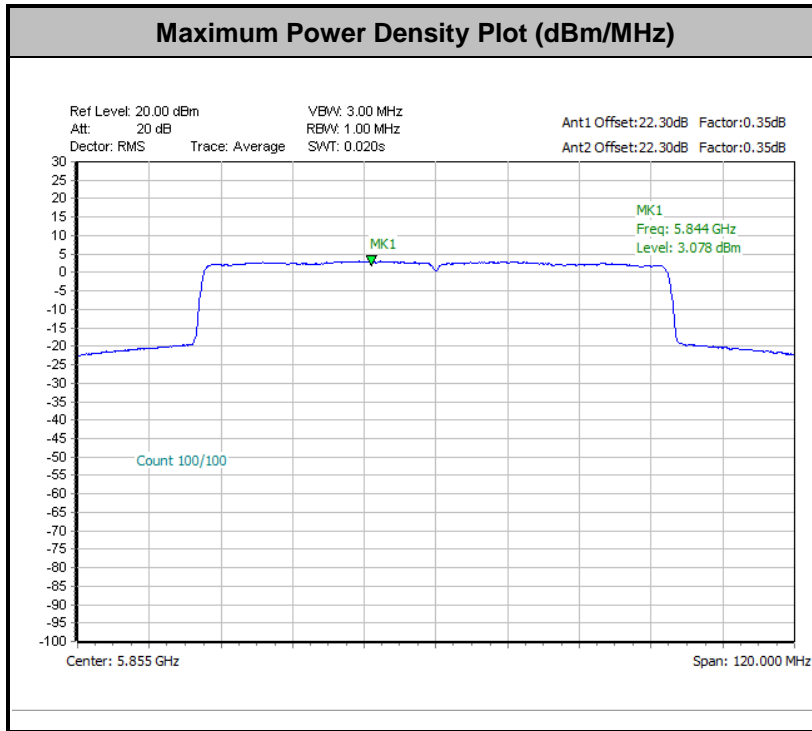


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

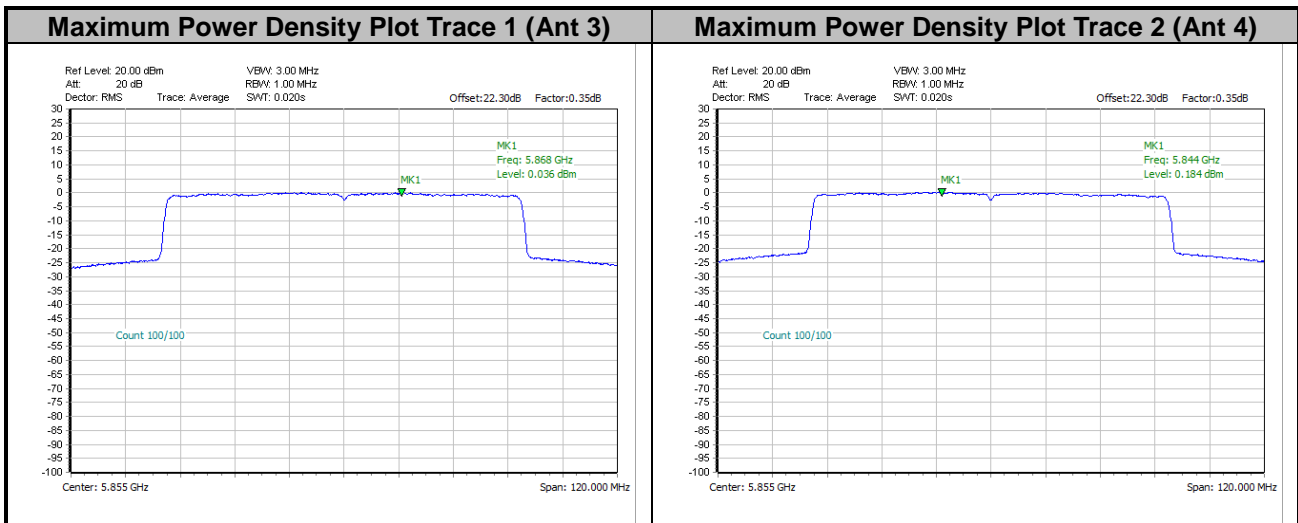




<802.11ax HE80>

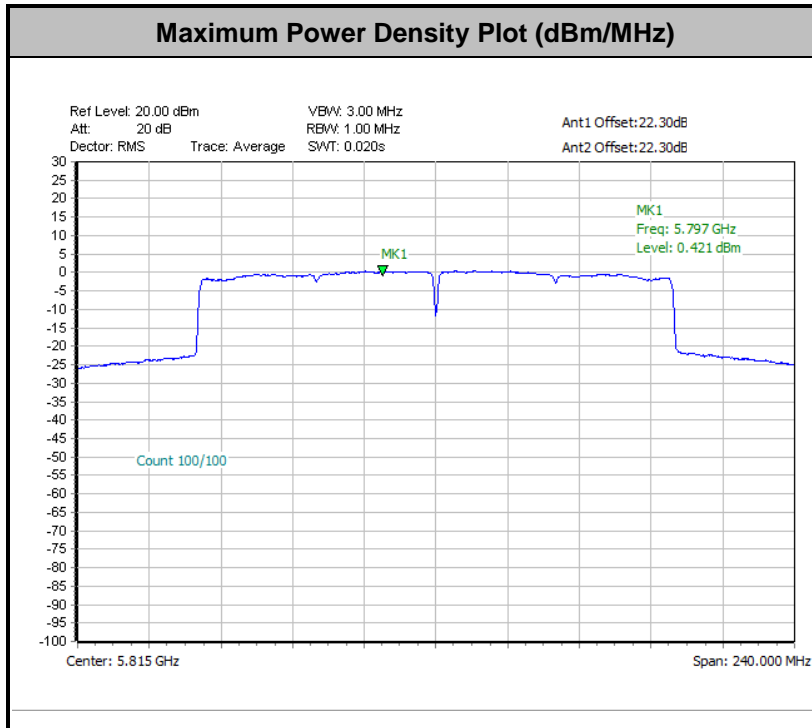


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

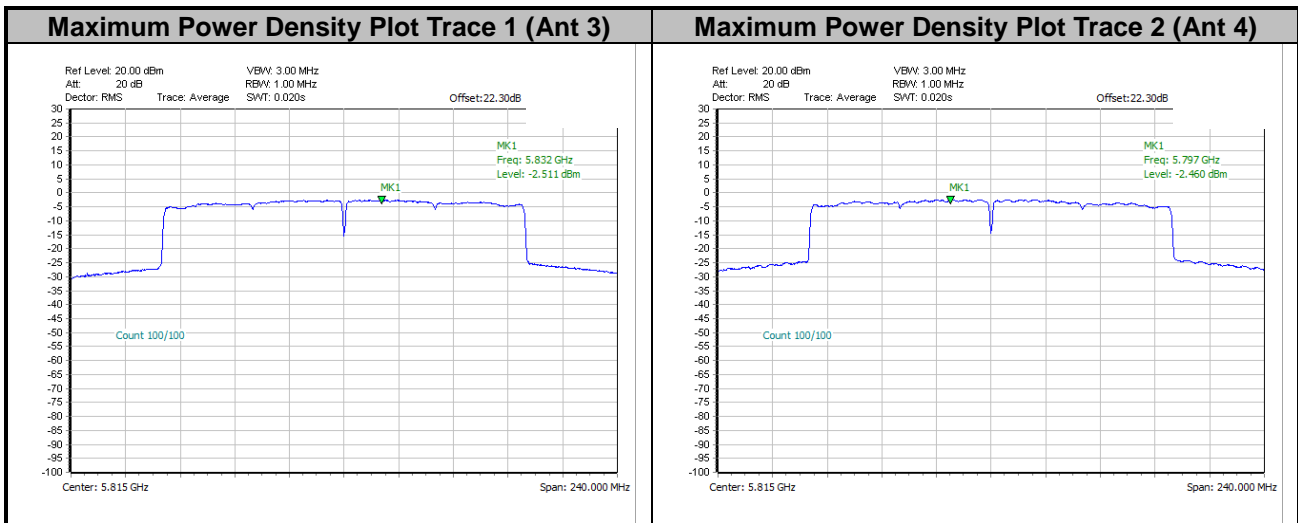




<802.11ax HE160>



Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.





3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

(1) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as the following 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.

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

(2) For transmitters operating solely in the 5.850-5.895 GHz band or operating on a channel that spans across 5.725-5.895 GHz:

15.407(b)(5)(i), all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of 15 dBm/MHz and shall decrease linearly to an e.i.r.p. of -7 dBm/MHz at or above 5.925 GHz.

All emissions below 5.725 GHz shall not exceed an e.i.r.p. of -27 dBm/MHz at 5.65 GHz increasing linearly to 10 dBm/MHz at 5.7 GHz, and from 5.7 GHz increasing linearly to a level of 15.6 dBm/MHz at 5.72 GHz, and from 5.72 GHz increasing linearly to a level of 27 dBm/MHz at 5.725 GHz.

(3) KDB789033 D02 v02r01 G)2)c)

Use guidance in KDB Publication 789033 for all measurements. Unwanted emissions outside of restricted bands are measured with an 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.

Unwanted band-edge emissions may be measured using the integration method as described in KDB Publication 789033 3. d) (ii). Emissions below 5725 MHz should be measured using peak-detection while emission above 5895 MHz should be measured using average.



Frequency(GHz)	EIRP (dBm)	Field Strength @3m distance (dBuV/m)	Note
Below 5.65	-27dBm/MHz	68.2	Peak
5.7	10dBm/MHz	105.2	Peak
5.72	15.6dBm/MHz	110.8	Peak
5.725	27dBm/MHz	122.2	Peak
5.895	-5dBm/MHz	90.2	Average
5.895	15dBm/MHz	110.2	Peak
Above 5.925	-27dBm/MHz	68.2	Average
Above 5.925	-7dBm/MHz	88.2	Peak

Note: Field strength at 3 m distance is converted to EIRP as the following equation:
 $EIRP[dBm] = E[dBuV/m] - 95.2$

3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

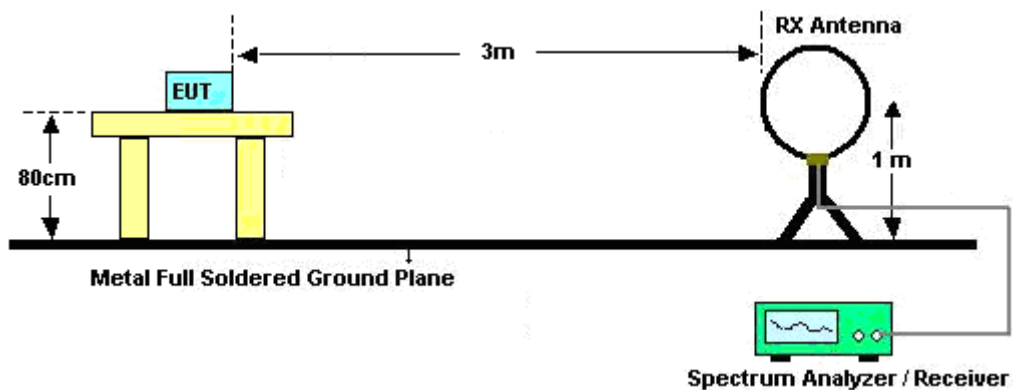
3.4.3 Test Procedures

- The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.
 - Procedure for Unwanted Emissions Measurements Below 1000 MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - 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
 - Procedures for Average Unwanted Emissions Measurements Above 1000 MHz
 - 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.

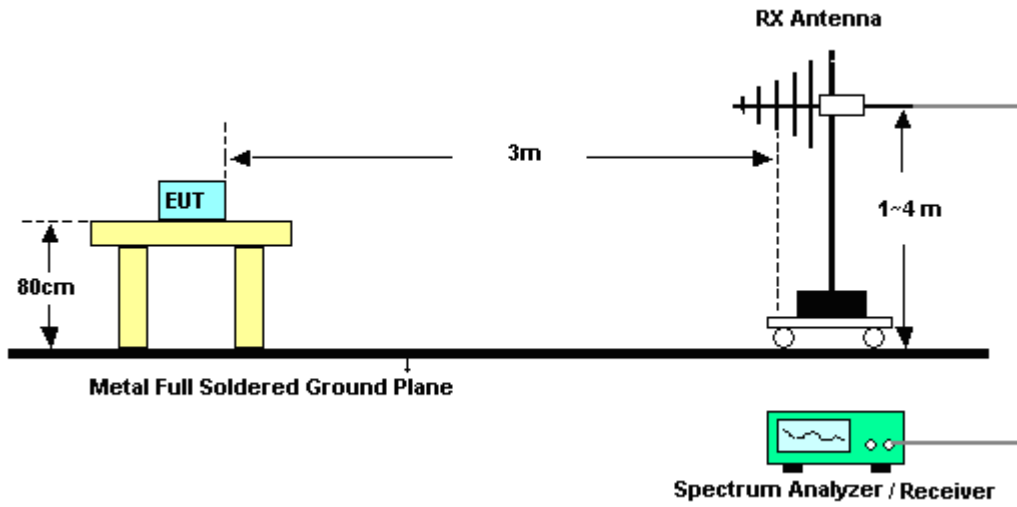
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT was placed at distance 3 meter from measurement antenna which was mounted on the top of a variable height antenna tower.
4. The measurement antenna 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.
5. For each suspected emission, the EUT was 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 1GHz was performed by adjusting the antenna tower from 1m to 4m and by rotating the turn table from 0 degree to 360 degree to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6dB margin against QP limit line, the position is marked as “-“.
7. Radiated testing above 1GHz was performed by adjusting the antenna tower from 1m to 4m and by rotating the turn table from 0 degree to 360 degree 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 6dB margin against average limit line, the position is marked as “-“.

3.4.4 Test Setup

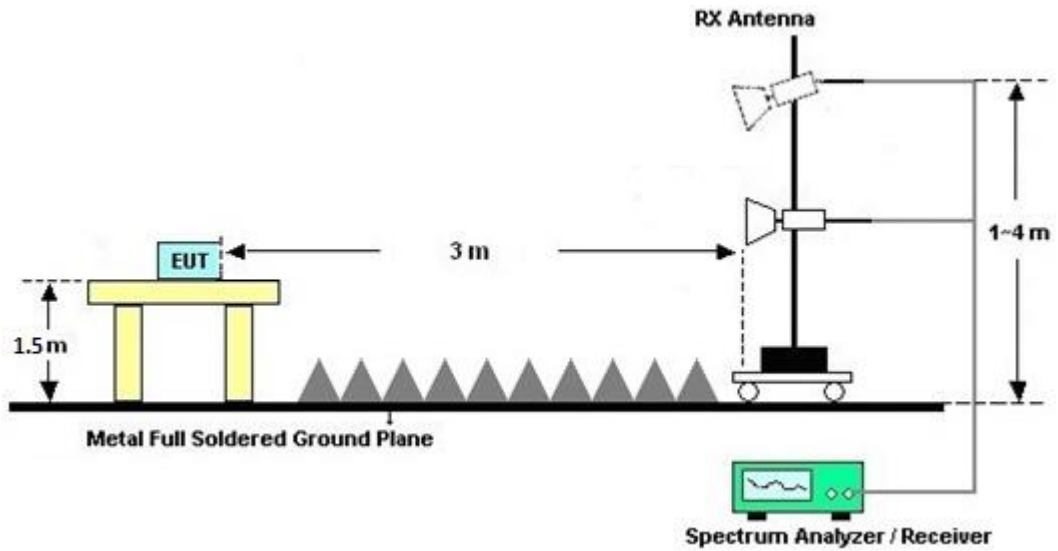
For radiated emissions below 30MHz



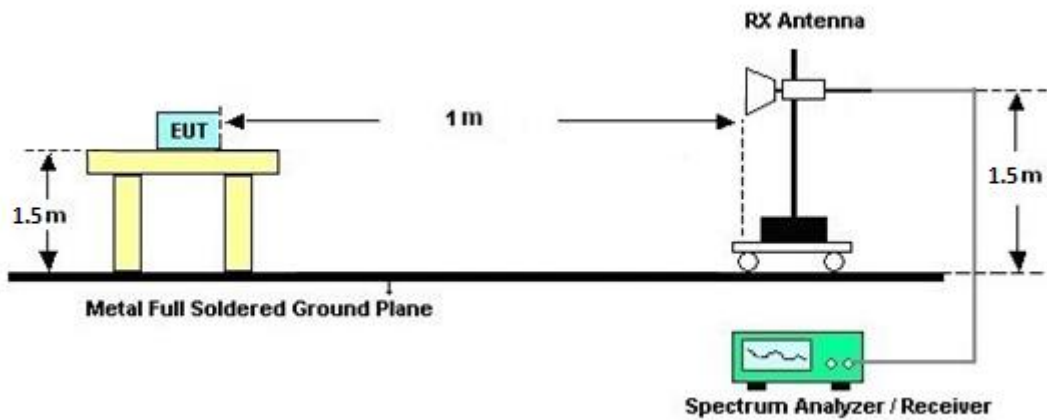
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was 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.

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix C and D.

3.4.7 Duty Cycle

Please refer to Appendix E.

3.4.8 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.



3.5 AC Conducted Emission Measurement

3.5.1 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 (dBµV)	
	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.

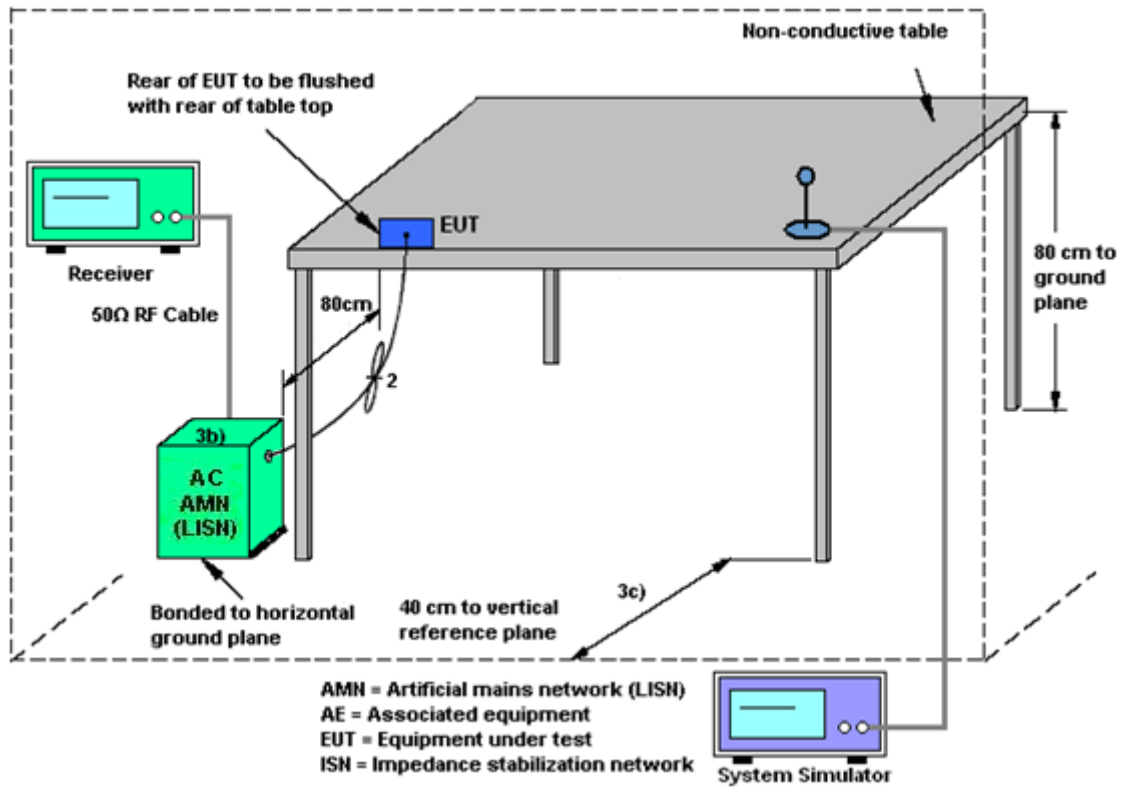
3.5.2 Measuring Instruments

See list of measuring equipment of this test report.

3.5.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was 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 shall be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.6 Antenna Requirements

3.6.1 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.

3.6.2 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	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	May 13, 2022	Nov. 24, 2022~ Jan. 06, 2023	May 12, 2023	Radiation (03CH13-HY)
Amplifier	SONOMA	310N	187282	9kHz~1GHz	Dec. 15, 2021	Nov. 24, 2022~ Dec. 13, 2022	Dec. 14, 2022	Radiation (03CH13-HY)
Amplifier	SONOMA	310N	187282	9kHz~1GHz	Dec. 14, 2022	Dec. 14, 2022~ Jan. 06, 2023	Dec. 13, 2023	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 10, 2022	Nov. 24, 2022~ Jan. 06, 2023	Mar. 09, 2023	Radiation (03CH13-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 28, 2022	Nov. 24, 2022~ Jan. 06, 2023	Jun. 27, 2023	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Feb. 21, 2022	Nov. 24, 2022~ Jan. 06, 2023	Feb. 20, 2023	Radiation (03CH13-HY)
Hygrometer	TECPEL	DTM-303B	TP140325	N/A	Aug. 15, 2022	Nov. 24, 2022~ Jan. 06, 2023	Aug. 14, 2023	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	40103 & 07	30MHz~1GHz	Apr. 24, 2022	Nov. 24, 2022~ Jan. 06, 2023	Apr. 23, 2023	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1241	1GHz~18GHz	Jul. 25, 2022	Nov. 24, 2022~ Jan. 06, 2023	Jul. 24, 2023	Radiation (03CH13-HY)
Preamplifier	MITEQ	AMF-7D-0010180 0-30-10P	1590074	1GHz~18GHz	May 17, 2022	Nov. 24, 2022~ Jan. 06, 2023	May 16, 2023	Radiation (03CH13-HY)
Preamplifier	Keysight	83017A	MY53270147	1GHz~26.5GHz	Oct. 25, 2022	Nov. 24, 2022~ Jan. 06, 2023	Oct. 24, 2023	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY55370526	10Hz~44GHz	Mar. 18, 2022	Nov. 24, 2022~ Jan. 06, 2023	Mar. 17, 2023	Radiation (03CH13-HY)
Filter	Wainwright	WHKX12-2700-30 00-18000-60SS	SN2	3GHz High Pass Filter	Jul. 11, 2022	Nov. 24, 2022~ Jan. 06, 2023	Jul. 10, 2023	Radiation (03CH13-HY)
Filter	Wainwright	WHKX8-5872.5-6 750-18000-40ST	SN5	6.75GHz High Pass Filter	Mar. 10, 2022	Nov. 24, 2022~ Jan. 06, 2023	Mar. 09, 2023	Radiation (03CH13-HY)
Filter	Wainwright	WLK4-1000-1530- 8000-40SS	SN12	1.53GHz Low Pass Filter	Sep. 13, 2022	Nov. 24, 2022~ Jan. 06, 2023	Sep. 12, 2023	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0030/126E	30MHz~18GHz	Feb. 09, 2022	Nov. 24, 2022~ Jan. 06, 2023	Feb. 08, 2023	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	804793/4	30MHz~18GHz	Feb. 09, 2022	Nov. 24, 2022~ Jan. 06, 2023	Feb. 08, 2023	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24961/4	30MHz~18GHz	Feb. 09, 2022	Nov. 24, 2022~ Jan. 06, 2023	Feb. 08, 2023	Radiation (03CH13-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Nov. 24, 2022~ Jan. 06, 2023	N/A	Radiation (03CH13-HY)
Notch Filter	ST1	ST115_9935_515 0-5850	N/A	N/A	Apr. 07, 2022	Nov. 24, 2022~ Jan. 06, 2023	Apr. 06, 2023	Radiation (03CH13-HY)
Notch Filter	Wainwright	WRCQV14-6025- 6425-7125-7525- 60SS	SN2	N/A	Jan. 07, 2022	Nov. 24, 2022~ Jan. 05, 2023	Jan. 06, 2023	Radiation (03CH13-HY)
Filter	Wainwright	WHW2-7100-100 00-18000-40CC	SN2	10GHz High Pass Filter	Nov. 14, 2022	Nov. 24, 2022~ Jan. 06, 2023	Nov. 13, 2023	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Nov. 24, 2022~ Jan. 06, 2023	N/A	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170576	18GHz~40GHz	May 14, 2022	Nov. 24, 2022~ Jan. 06, 2023	May 13, 2023	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Nov. 24, 2022~ Jan. 06, 2023	N/A	Radiation (03CH13-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-F N	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)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 17, 2022	Nov. 24, 2022~ Dec. 22, 2022	Nov. 16, 2023	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	15I00041SNO 10 (NO:248)	10MHz~6GHz	Dec. 29, 2021	Nov. 24, 2022~ Dec. 22, 2022	Dec. 28, 2022	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101905	10Hz - 40GHz(amp)	Aug. 03, 2022	Nov. 24, 2022~ Dec. 22, 2022	Aug. 02, 2023	Conducted (TH05-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.5 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.5 dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.4 dB
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Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.8 dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.3 dB
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Hank Hsu	Temperature:	21~25	°C
Test Date:	2022/11/24~2022/12/22	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 26dB EBW and 99% OBW

UNII-4 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant 3	Ant 4	Ant 3	Ant 4	Ant 3	Ant 4		
11a	6Mbps	2	169	5845	17.13	16.98	21.70	21.60	16.40	16.40	0.5	Pass
11a	6Mbps	2	173	5865	17.13	16.98	21.80	22.05	16.40	16.40	0.5	Pass
11a	6Mbps	2	177	5885	17.18	16.93	21.70	21.60	16.45	16.40	0.5	Pass

TEST RESULTS DATA
Average Power Table

UNII-4 MIMO										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			DG (dBi)	E.I.R.P Power (dBm)	E.I.R.P Limit (dBm)
					Ant 3	Ant 4	SUM			
11a	6Mbps	2	169	5845	16.50	16.50	19.51	-1.70	17.81	30
11a	6Mbps	2	173	5865	16.50	16.60	19.56	-1.70	17.86	30
11a	6Mbps	2	177	5885	15.80	16.00	18.91	-1.70	17.21	30
HT20	MCS0	2	169	5845	16.60	16.70	19.66	-1.70	17.96	30
HT20	MCS0	2	173	5865	16.80	16.80	19.81	-1.70	18.11	30
HT20	MCS0	2	177	5885	17.00	17.00	20.01	-1.70	18.31	30
HT40	MCS0	2	167	5835	18.10	18.00	21.06	-1.70	19.36	30
HT40	MCS0	2	175	5875	18.30	18.40	21.36	-1.70	19.66	30
VHT20	MCS0	2	169	5845	16.60	16.80	19.71	-1.70	18.01	30
VHT20	MCS0	2	173	5865	16.80	16.90	19.86	-1.70	18.16	30
VHT20	MCS0	2	177	5885	17.00	17.10	20.06	-1.70	18.36	30
VHT40	MCS0	2	167	5835	18.10	18.10	21.11	-1.70	19.41	30
VHT40	MCS0	2	175	5875	18.30	18.50	21.41	-1.70	19.71	30
VHT80	MCS0	2	171	5855	19.50	19.60	22.56	-1.70	20.86	30
VHT160	MCS0	2	163	5815	19.50	19.70	22.61	-1.70	20.91	30

TEST RESULTS DATA
Power Spectral Density

UNII-4 MIMO																	
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			DG (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Pass /Fail				
					Ant 3	Ant 4	Ant 3	Ant 4	SUM					Ant 3 + Ant 4	Ant 3 + Ant 4	Ant 3 + Ant 4	
11a	6Mbps	2	169	5845	0.29	0.29				0.28	6.41	14.00	Pass				
11a	6Mbps	2	173	5865	0.29	0.29								6.13	6.20	6.48	14.00
11a	6Mbps	2	177	5885	0.29	0.29								5.51	5.79	14.00	

Note: PSD Sum = Max PSD(Ant. 3, Ant. 4) + 10 log (n)

TEST RESULTS DATA
6dB and 26dB EBW and 99% OBW

UNII-4 MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
						Ant 3	Ant 4	Ant 3	Ant 4	Ant 3	Ant 4		
HE20	MCS0	2	169	5845	Full	19.13	19.18	22.25	22.10	19.15	19.00	0.5	Pass
HE20	MCS0	2	173	5865	Full	19.18	19.18	22.15	24.20	19.10	19.00	0.5	Pass
HE20	MCS0	2	177	5885	Full	19.18	19.18	21.85	22.80	19.00	19.10	0.5	Pass
HE40	MCS0	2	167	5835	Full	37.96	38.06	41.13	44.10	37.80	37.53	0.5	Pass
HE40	MCS0	2	175	5875	Full	38.16	38.16	54.90	57.24	37.44	37.80	0.5	Pass
HE80	MCS0	2	171	5855	Full	77.56	77.80	130.45	140.29	77.44	76.64	0.5	Pass
HE160	MCS0	2	163	5815	Full	157.76	158.00	316.77	315.95	157.12	156.80	0.5	Pass

TEST RESULTS DATA
Average Power Table

UNII-4 MIMO											
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			DG (dBi)	E.I.R.P Power (dBm)	E.I.R.P Limit (dBm)
						Ant 3	Ant 4	SUM			
HE20	MCS0	2	169	5845	Full	16.70	16.80	19.76	-1.70	18.06	30
HE20	MCS0	2	169	5845	26/0	7.00	6.60	9.81	-1.70	8.11	30
HE20	MCS0	2	169	5845	52/37	10.10	10.10	13.11	-1.70	11.41	30
HE20	MCS0	2	169	5845	106/53	12.50	13.00	15.77	-1.70	14.07	30
HE20	MCS0	2	173	5865	Full	16.90	16.90	19.91	-1.70	18.21	30
HE20	MCS0	2	173	5865	26/4	7.40	6.90	10.17	-1.70	8.47	30
HE20	MCS0	2	173	5865	52/38	10.30	10.00	13.16	-1.70	11.46	30
HE20	MCS0	2	173	5865	106/53	12.80	13.00	15.91	-1.70	14.21	30
HE20	MCS0	2	177	5885	Full	17.10	17.10	20.11	-1.70	18.41	30
HE20	MCS0	2	177	5885	26/8	6.80	6.60	9.71	-1.70	8.01	30
HE20	MCS0	2	177	5885	52/40	10.10	10.00	13.06	-1.70	11.36	30
HE20	MCS0	2	177	5885	106/54	12.90	13.30	16.11	-1.70	14.41	30
HE40	MCS0	2	167	5835	Full	18.20	18.10	21.16	-1.70	19.46	30
HE40	MCS0	2	175	5875	Full	18.40	18.50	21.46	-1.70	19.76	30
HE80	MCS0	2	171	5855	Full	19.60	19.70	22.66	-1.70	20.96	30
HE160	MCS0	2	163	5815	Full	19.60	19.80	22.71	-1.70	21.01	30

TEST RESULTS DATA
Power Spectral Density

UNII-4 MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			DG (dBi)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Pass /Fail
						Ant 3	Ant 4	Ant 3	Ant 4	SUM				
HE20	MCS0	2	169	5845	Full	0.18	0.18			5.60	0.28	5.88	14.00	Pass
HE20	MCS0	2	169	5845	26/0	0.48	0.48			5.28	0.28	5.56	14.00	Pass
HE20	MCS0	2	169	5845	52/37	0.52	0.52			5.30	0.28	5.58	14.00	Pass
HE20	MCS0	2	169	5845	106/53	0.58	0.58			5.39	0.28	5.67	14.00	Pass
HE20	MCS0	2	173	5865	Full	0.18	0.18			5.81	0.28	6.09	14.00	Pass
HE20	MCS0	2	173	5865	26/4	0.48	0.48			4.73	0.28	5.01	14.00	Pass
HE20	MCS0	2	173	5865	52/38	0.52	0.52			5.73	0.28	6.01	14.00	Pass
HE20	MCS0	2	173	5865	106/53	0.58	0.58			5.76	0.28	6.04	14.00	Pass
HE20	MCS0	2	177	5885	Full	0.18	0.18			6.00	0.28	6.28	14.00	Pass
HE20	MCS0	2	177	5885	26/8	0.48	0.48			5.53	0.28	5.81	14.00	Pass
HE20	MCS0	2	177	5885	52/40	0.52	0.52			5.54	0.28	5.82	14.00	Pass
HE20	MCS0	2	177	5885	106/54	0.58	0.58			5.93	0.28	6.21	14.00	Pass
HE40	MCS0	2	167	5835	Full	0.34	0.34			4.54	0.28	4.82	14.00	Pass
HE40	MCS0	2	175	5875	Full	0.34	0.34			4.74	0.28	5.02	14.00	Pass
HE80	MCS0	2	171	5855	Full	0.35	0.35			3.08	0.28	3.36	14.00	Pass
HE160	MCS0	2	163	5815	Full	0.43	0.43			0.42	0.28	0.70	14.00	Pass

Note: PSD Sum = Max PSD(Ant. 3, Ant. 4) + 10 log (n)



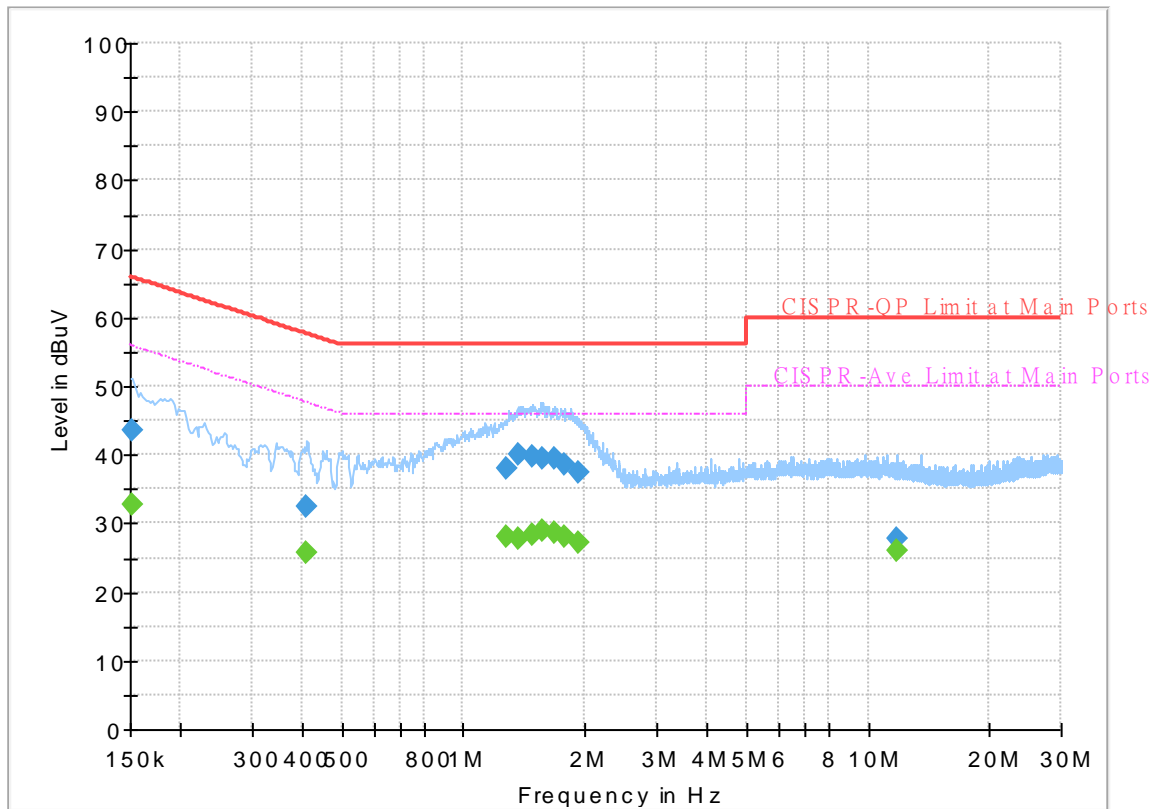
Appendix B. AC Conducted Emission Test Results

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

EUT Information

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

Full Spectrum



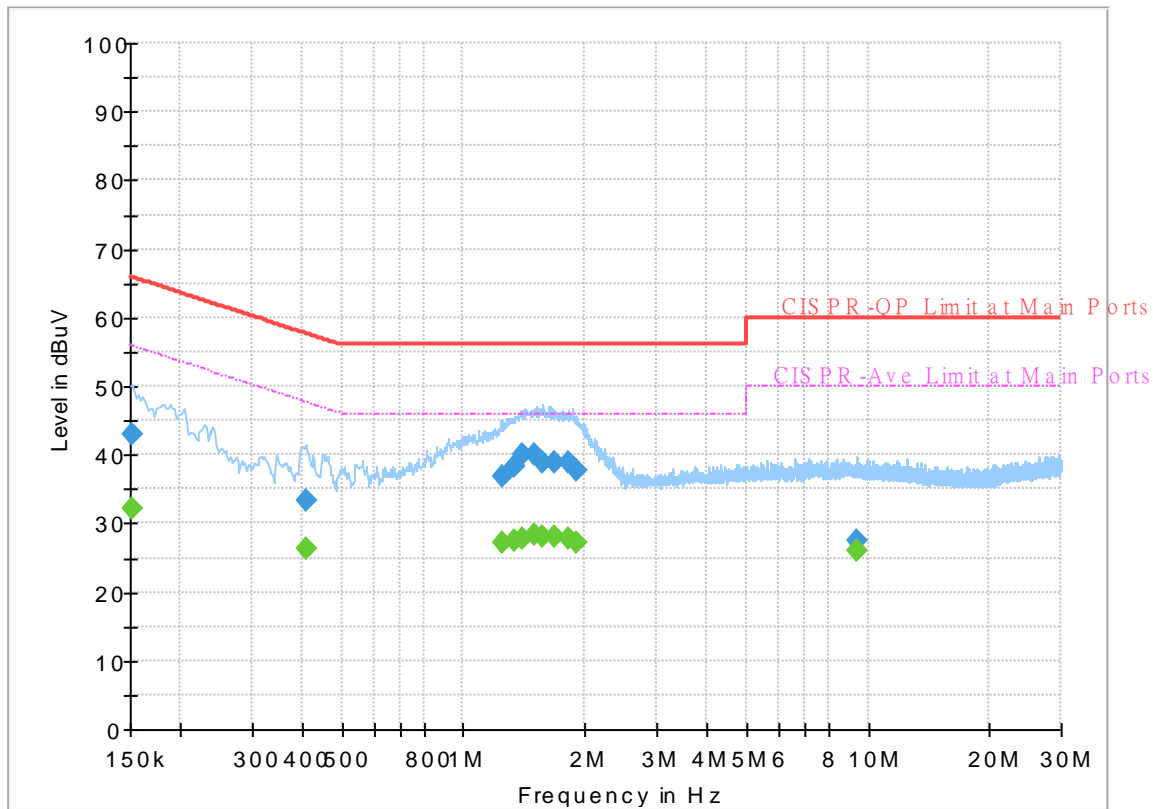
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	32.67	55.88	23.21	L1	OFF	19.8
0.152250	43.70	---	65.88	22.18	L1	OFF	19.8
0.411000	---	25.68	47.63	21.95	L1	OFF	19.8
0.411000	32.36	---	57.63	25.27	L1	OFF	19.8
1.279500	---	27.96	46.00	18.04	L1	OFF	19.8
1.279500	38.03	---	56.00	17.97	L1	OFF	19.8
1.360500	---	27.84	46.00	18.16	L1	OFF	19.8
1.360500	40.11	---	56.00	15.89	L1	OFF	19.8
1.477500	---	28.32	46.00	17.68	L1	OFF	19.9
1.477500	39.83	---	56.00	16.17	L1	OFF	19.9
1.574250	---	28.90	46.00	17.10	L1	OFF	19.9
1.574250	39.41	---	56.00	16.59	L1	OFF	19.9
1.680000	---	28.79	46.00	17.21	L1	OFF	19.9
1.680000	39.47	---	56.00	16.53	L1	OFF	19.9
1.776750	---	28.05	46.00	17.95	L1	OFF	19.9
1.776750	38.66	---	56.00	17.34	L1	OFF	19.9
1.923000	---	27.18	46.00	18.82	L1	OFF	19.9
1.923000	37.44	---	56.00	18.56	L1	OFF	19.9
11.751000	---	25.99	50.00	24.01	L1	OFF	20.3
11.751000	27.70	---	60.00	32.30	L1	OFF	20.3

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	---	32.05	55.88	23.83	N	OFF	19.8
0.152250	42.91	---	65.88	22.97	N	OFF	19.8
0.411000	---	26.24	47.63	21.39	N	OFF	19.8
0.411000	33.36	---	57.63	24.27	N	OFF	19.8
1.243500	---	27.26	46.00	18.74	N	OFF	19.8
1.243500	36.83	---	56.00	19.17	N	OFF	19.8
1.335750	---	27.47	46.00	18.53	N	OFF	19.8
1.335750	38.42	---	56.00	17.58	N	OFF	19.8
1.401000	---	27.72	46.00	18.28	N	OFF	19.8
1.401000	40.05	---	56.00	15.95	N	OFF	19.8
1.500000	---	28.42	46.00	17.58	N	OFF	19.8
1.500000	40.15	---	56.00	15.85	N	OFF	19.8
1.572000	---	28.15	46.00	17.85	N	OFF	19.8
1.572000	38.78	---	56.00	17.22	N	OFF	19.8
1.677750	---	28.17	46.00	17.83	N	OFF	19.8
1.677750	38.87	---	56.00	17.13	N	OFF	19.8
1.812750	---	27.66	46.00	18.34	N	OFF	19.8
1.812750	38.89	---	56.00	17.11	N	OFF	19.8
1.911750	---	27.11	46.00	18.89	N	OFF	19.8
1.911750	37.86	---	56.00	18.14	N	OFF	19.8
9.379500	---	25.98	50.00	24.02	N	OFF	20.2

9.379500	27.62	---	60.00	32.38	N	OFF	20.2
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Appendix C. Radiated Spurious Emission

Test Engineer :	Jacky Hong, Rain Lee and Mancy Chou	Temperature :	20~26°C
		Relative Humidity :	40~65%

<Open Mode>

UNII-4 - 5735~5895MHz

WIFI 802.11a (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)
802.11a CH 169 5845MHz		5601.77	52.48	-15.72	68.2	41.47	32	6.44	27.43	100	238	P	H
		5669.325	51.96	-30.58	82.54	40.78	32.12	6.5	27.44	100	238	P	H
		5708.265	52.39	-55.13	107.52	40.99	32.32	6.53	27.45	100	238	P	H
		5721.245	51.93	-61.71	113.64	40.51	32.34	6.54	27.46	100	238	P	H
	*	5845	105.74	-	-	94.09	32.5	6.64	27.49	100	238	P	H
	*	5845	98.16	-	-	86.51	32.5	6.64	27.49	100	238	A	H
		5906	52.45	-49.67	102.12	40.47	32.81	6.68	27.51	100	238	P	H
		5942.5	52.51	-35.69	88.2	40.44	32.89	6.7	27.52	100	238	P	H
		5900	43.68	-42.85	86.53	31.7	32.8	6.68	27.5	100	238	A	H
		5925.25	43.43	-24.77	68.2	31.4	32.85	6.69	27.51	100	238	A	H
		5616.52	51.16	-17.04	68.2	40.14	32	6.45	27.43	310	49	P	V
		5696.465	52.56	-50.03	102.59	41.21	32.28	6.52	27.45	310	49	P	V
		5711.51	52.83	-55.6	108.43	41.43	32.32	6.53	27.45	310	49	P	V
		5721.835	51.07	-63.91	114.98	39.65	32.34	6.54	27.46	310	49	P	V
	*	5845	106.75	-	-	95.1	32.5	6.64	27.49	310	49	P	V
	*	5845	99.56	-	-	87.91	32.5	6.64	27.49	310	49	A	V
		5896	55.65	-53.81	109.46	43.7	32.78	6.67	27.5	310	49	P	V
		5927.75	52.9	-35.3	88.2	40.86	32.86	6.69	27.51	310	49	P	V
		5905	43.81	-39.04	82.85	31.83	32.81	6.68	27.51	310	49	A	V
		5929.75	43.43	-24.77	68.2	31.39	32.86	6.69	27.51	310	49	A	V



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)
		5648.675	51.55	-16.65	68.2	40.51	32	6.48	27.44	100	234	P	H
		5674.34	52.12	-34.13	86.25	40.92	32.15	6.5	27.45	100	234	P	H
		5714.755	51.84	-57.49	109.33	40.43	32.33	6.54	27.46	100	234	P	H
		5721.835	50.66	-64.32	114.98	39.24	32.34	6.54	27.46	100	234	P	H
	*	5865	106.39	-	-	94.64	32.59	6.65	27.49	100	234	P	H
	*	5865	98.82	-	-	87.07	32.59	6.65	27.49	100	234	A	H
		5897.75	56.09	-52.09	108.18	44.13	32.79	6.67	27.5	100	234	P	H
		5944	53.77	-34.43	88.2	41.7	32.89	6.7	27.52	100	234	P	H
		5896.5	44.18	-44.92	89.1	32.23	32.78	6.67	27.5	100	234	A	H
		5941.75	43.47	-24.73	68.2	31.4	32.88	6.7	27.51	100	234	A	H
													H
													H
802.11a													
CH 173													
5865MHz		5639.235	52	-16.2	68.2	40.97	32	6.47	27.44	305	49	P	V
		5692.63	52.25	-47.52	99.77	40.92	32.26	6.52	27.45	305	49	P	V
		5713.575	51.94	-57.06	109	40.53	32.33	6.54	27.46	305	49	P	V
		5724.195	52.11	-68.25	120.36	40.67	32.35	6.55	27.46	305	49	P	V
	*	5865	107.04	-	-	95.29	32.59	6.65	27.49	305	49	P	V
	*	5865	99.51	-	-	87.76	32.59	6.65	27.49	305	49	A	V
		5921.75	56.69	-33.89	90.58	44.67	32.84	6.69	27.51	305	49	P	V
		5988.25	52.52	-35.68	88.2	40.42	32.9	6.73	27.53	305	49	P	V
		5896	44.44	-45.02	89.46	32.49	32.78	6.67	27.5	305	49	A	V
		5927	43.53	-24.67	68.2	31.5	32.85	6.69	27.51	305	49	A	V
													V
													V



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)
802.11a CH 177 5885MHz		5623.305	51.7	-16.5	68.2	40.67	32	6.46	27.43	104	235	P	H
		5663.425	53.05	-25.12	78.17	41.92	32.08	6.49	27.44	104	235	P	H
		5715.05	51.81	-57.61	109.42	40.4	32.33	6.54	27.46	104	235	P	H
		5720.655	52.9	-59.39	112.29	41.48	32.34	6.54	27.46	104	235	P	H
	*	5885	105.02	-	-	93.14	32.71	6.67	27.5	104	235	P	H
	*	5885	97.3	-	-	85.42	32.71	6.67	27.5	104	235	A	H
		5895.5	83.14	-26.69	109.83	71.2	32.77	6.67	27.5	104	235	P	H
		5935.25	52.66	-35.54	88.2	40.6	32.87	6.7	27.51	104	235	P	H
		5895.5	71.83	-18	89.83	59.89	32.77	6.67	27.5	104	235	A	H
		5935.75	43.48	-24.72	68.2	31.42	32.87	6.7	27.51	104	235	A	H
		5641.005	51.75	-16.45	68.2	40.72	32	6.47	27.44	323	50	P	V
		5659.885	52.77	-22.77	75.54	41.66	32.06	6.49	27.44	323	50	P	V
		5708.265	52.03	-55.49	107.52	40.63	32.32	6.53	27.45	323	50	P	V
		5722.72	51.53	-65.47	117	40.1	32.35	6.54	27.46	323	50	P	V
	*	5885	105.92	-	-	94.04	32.71	6.67	27.5	323	50	P	V
	*	5885	98.15	-	-	86.27	32.71	6.67	27.5	323	50	A	V
		5895.5	82.09	-27.74	109.83	70.15	32.77	6.67	27.5	323	50	P	V
		5942.25	54.11	-34.09	88.2	42.04	32.88	6.7	27.51	323	50	P	V
		5895.5	71.74	-18.09	89.83	59.8	32.77	6.67	27.5	323	50	A	V
		5940	43.54	-24.66	68.2	31.47	32.88	6.7	27.51	323	50	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-4 - 5735~5895MHz
WIFI 802.11a (Harmonic @ 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)
802.11a CH 169 5845MHz		11690	47.98	-26.02	74	53.94	39.64	10.47	56.07	-	-	P	H
		17535	54.09	-14.11	68.2	56.35	41.61	13.19	57.06	-	-	P	H
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			11690	56.21	-17.79	74	62.17	39.64	10.47	56.07	100	274	P
		11690	43.25	-10.75	54	49.21	39.64	10.47	56.07	100	274	A	V
		17535	65.16	-3.04	68.2	67.42	41.61	13.19	57.06	100	254	P	V
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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)
802.11a CH 177 5885MHz		11770	47.92	-26.08	74	54.17	39.32	10.5	56.07	-	-	P	H
		17655	51.73	-16.47	68.2	53.19	42.28	13.31	57.05	-	-	P	H
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			11770	54.4	-19.6	74	60.65	39.32	10.5	56.07	100	267	P
		11770	42	-12	54	48.25	39.32	10.5	56.07	100	267	A	V
		17655	64.69	-3.51	68.2	66.15	42.28	13.31	57.05	100	255	P	V
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Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 												



UNII-4 - 5735~5895MHz
WIFI 802.11ax HE20 (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 HE20 CH 169 5845MHz		5620.945	51.93	-16.27	68.2	40.9	32	6.46	27.43	100	237	P	H
		5700.005	51.58	-53.62	105.2	40.2	32.3	6.53	27.45	100	237	P	H
		5704.725	51.75	-54.77	106.52	40.36	32.31	6.53	27.45	100	237	P	H
		5721.245	51.26	-62.38	113.64	39.84	32.34	6.54	27.46	100	237	P	H
	*	5845	104.88	-	-	93.23	32.5	6.64	27.49	100	237	P	H
	*	5845	96.28	-	-	84.63	32.5	6.64	27.49	100	237	A	H
		5896	53.5	-55.96	109.46	41.55	32.78	6.67	27.5	100	237	P	H
		5928.25	53.73	-34.47	88.2	41.69	32.86	6.69	27.51	100	237	P	H
		5914.25	43.71	-32.36	76.07	31.71	32.83	6.68	27.51	100	237	A	H
		5931	43.3	-24.9	68.2	31.25	32.86	6.7	27.51	100	237	A	H
		5616.225	51.61	-16.59	68.2	40.59	32	6.45	27.43	309	49	P	V
		5699.12	52.42	-52.13	104.55	41.06	32.29	6.52	27.45	309	49	P	V
		5714.755	52.05	-57.28	109.33	40.64	32.33	6.54	27.46	309	49	P	V
		5721.245	52.15	-61.49	113.64	40.73	32.34	6.54	27.46	309	49	P	V
	*	5845	105.6	-	-	93.95	32.5	6.64	27.49	309	49	P	V
	*	5845	96.83	-	-	85.18	32.5	6.64	27.49	309	49	A	V
		5917.75	52.64	-40.87	93.51	40.62	32.84	6.69	27.51	309	49	P	V
		5978	52.28	-35.92	88.2	40.17	32.9	6.73	27.52	309	49	P	V
		5896	43.68	-45.78	89.46	31.73	32.78	6.67	27.5	309	49	A	V
		5932.5	43.41	-24.79	68.2	31.35	32.87	6.7	27.51	309	49	A	V



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 HE20 CH 173 5865MHz		5637.465	52.56	-15.64	68.2	41.53	32	6.47	27.44	100	239	P	H
		5679.06	53.79	-35.95	89.74	42.56	32.17	6.51	27.45	100	239	P	H
		5710.92	52.43	-55.83	108.26	41.03	32.32	6.53	27.45	100	239	P	H
		5722.13	51.63	-64.03	115.66	40.21	32.34	6.54	27.46	100	239	P	H
	*	5865	106.26	-	-	94.51	32.59	6.65	27.49	100	239	P	H
	*	5865	96.42	-	-	84.67	32.59	6.65	27.49	100	239	A	H
		5901	56.6	-49.19	105.79	44.62	32.8	6.68	27.5	100	239	P	H
		5966.75	53.85	-34.35	88.2	41.75	32.9	6.72	27.52	100	239	P	H
		5895.25	44.86	-45.16	90.02	32.92	32.77	6.67	27.5	100	239	A	H
		5927.5	43.61	-24.59	68.2	31.58	32.85	6.69	27.51	100	239	A	H
		5643.66	51.51	-16.69	68.2	40.47	32	6.48	27.44	311	48	P	V
		5682.6	52.74	-39.62	92.36	41.48	32.2	6.51	27.45	311	48	P	V
		5700.005	52.46	-52.74	105.2	41.08	32.3	6.53	27.45	311	48	P	V
		5722.13	51.6	-64.06	115.66	40.18	32.34	6.54	27.46	311	48	P	V
	*	5865	107.79	-	-	96.04	32.59	6.65	27.49	311	48	P	V
	*	5865	97.02	-	-	85.27	32.59	6.65	27.49	311	48	A	V
		5896.75	58.23	-50.68	108.91	46.28	32.78	6.67	27.5	311	48	P	V
		5993	53.04	-35.16	88.2	40.93	32.9	6.74	27.53	311	48	P	V
		5895.25	45.16	-44.86	90.02	33.22	32.77	6.67	27.5	311	48	A	V
		5935.5	43.34	-24.86	68.2	31.28	32.87	6.7	27.51	311	48	A	V



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 HE20 CH 177 5885MHz		5607.965	52.64	-15.56	68.2	41.62	32	6.45	27.43	100	233	P	H
		5685.255	52.47	-41.85	94.32	41.2	32.21	6.51	27.45	100	233	P	H
		5716.525	52.37	-57.46	109.83	40.96	32.33	6.54	27.46	100	233	P	H
		5723.9	51.3	-68.39	119.69	39.86	32.35	6.55	27.46	100	233	P	H
	*	5885	105.57	-	-	93.69	32.71	6.67	27.5	100	233	P	H
	*	5885	95.72	-	-	83.84	32.71	6.67	27.5	100	233	A	H
		5895.5	91.08	-18.75	109.83	79.14	32.77	6.67	27.5	100	233	P	H
		5945.75	53.75	-34.45	88.2	41.68	32.89	6.7	27.52	100	233	P	H
		5895.5	81.18	-8.65	89.83	69.24	32.77	6.67	27.5	100	233	A	H
		5925.5	43.65	-24.55	68.2	31.62	32.85	6.69	27.51	100	233	A	H
		5624.19	51.62	-16.58	68.2	40.59	32	6.46	27.43	308	49	P	V
		5682.305	53.1	-39.04	92.14	41.85	32.19	6.51	27.45	308	49	P	V
		5707.38	51.45	-55.82	107.27	40.06	32.31	6.53	27.45	308	49	P	V
		5721.835	51.6	-63.38	114.98	40.18	32.34	6.54	27.46	308	49	P	V
	*	5885	105.5	-	-	93.62	32.71	6.67	27.5	308	49	P	V
	*	5885	96.54	-	-	84.66	32.71	6.67	27.5	308	49	A	V
		5895.5	89.83	-20	109.83	77.89	32.77	6.67	27.5	308	49	P	V
		5933.75	55.79	-32.41	88.2	43.73	32.87	6.7	27.51	308	49	P	V
	5895.5	81.74	-8.09	89.83	69.8	32.77	6.67	27.5	308	49	A	V	
	5925.25	43.63	-24.57	68.2	31.6	32.85	6.69	27.51	308	49	A		
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-4 - 5735~5895MHz

WIFI 802.11ax HE20 (Harmonic @ 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 HE20 CH 169 5845MHz		11690	54.71	-19.29	74	60.67	39.64	10.47	56.07	100	242	P	H	
		11690	43.04	-10.96	54	49	39.64	10.47	56.07	100	242	A	H	
		17535	54.14	-14.06	68.2	56.4	41.61	13.19	57.06	150	342	P	H	
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													H	
													H	
													H	
													H	
													H	
													H	
			11690	54.91	-19.09	74	60.87	39.64	10.47	56.07	100	273	P	V
			11690	44.07	-9.93	54	50.03	39.64	10.47	56.07	100	273	A	V
			17535	64.87	-3.33	68.2	67.13	41.61	13.19	57.06	125	354	P	V
														V
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														V
														V
													V	
													V	



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 HE20 CH 173 5865MHz		11730	55.25	-18.75	74	61.35	39.48	10.49	56.07	100	231	P	H	
		11730	43.51	-10.49	54	49.61	39.48	10.49	56.07	100	231	A	H	
		17595	53.27	-14.93	68.2	55.1	41.97	13.25	57.05	100	335	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			11730	55.77	-18.23	74	61.87	39.48	10.49	56.07	100	271	P	V
			11730	44.3	-9.7	54	50.4	39.48	10.49	56.07	100	271	A	V
			17595	64.57	-3.63	68.2	66.4	41.97	13.25	57.05	135	354	P	V
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														V
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														V
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													V	



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 HE20 CH 177 5885MHz		11770	53.98	-20.02	74	60.23	39.32	10.5	56.07	100	239	P	H	
		11770	43.67	-10.33	54	49.92	39.32	10.5	56.07	100	239	A	H	
		17655	54.24	-13.96	68.2	55.7	42.28	13.31	57.05	150	323	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			11770	57.63	-16.37	74	63.88	39.32	10.5	56.07	100	268	P	V
			11770	44.84	-9.16	54	51.09	39.32	10.5	56.07	100	268	A	V
			17655	64.53	-3.67	68.2	65.99	42.28	13.31	57.05	154	355	P	V
														V
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													V	
													V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



**UNII-4 - 5735~5895MHz
WIFI 802.11ax HE40 (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 CH 167 5835MHz		5644.25	52.84	-15.36	68.2	41.8	32	6.48	27.44	100	236	P	H
		5664.015	52.74	-25.86	78.6	41.61	32.08	6.49	27.44	100	236	P	H
		5712.69	52.18	-56.58	108.76	40.77	32.33	6.54	27.46	100	236	P	H
		5720.95	50.95	-62.02	112.97	39.53	32.34	6.54	27.46	100	236	P	H
	*	5835	104.72	-	-	93.08	32.5	6.63	27.49	100	236	P	H
	*	5835	95.04	-	-	83.4	32.5	6.63	27.49	100	236	A	H
		5898.5	53.71	-53.92	107.63	41.75	32.79	6.67	27.5	100	236	P	H
		5963.5	53.97	-34.23	88.2	41.87	32.9	6.72	27.52	100	236	P	H
		5896.25	45.35	-43.93	89.28	33.4	32.78	6.67	27.5	100	236	A	H
		5926.5	43.52	-24.68	68.2	31.49	32.85	6.69	27.51	100	236	A	H
		5635.4	52.44	-15.76	68.2	41.41	32	6.47	27.44	311	48	P	V
		5674.635	53.34	-33.13	86.47	42.14	32.15	6.5	27.45	311	48	P	V
		5717.41	53.56	-56.52	110.08	42.15	32.33	6.54	27.46	311	48	P	V
		5725.08	52.52	-81.68	134.2	41.08	32.35	6.55	27.46	311	48	P	V
	*	5835	105.15	-	-	93.51	32.5	6.63	27.49	311	48	P	V
	*	5835	96.05	-	-	84.41	32.5	6.63	27.49	311	48	A	V
		5900.5	55.19	-50.97	106.16	43.21	32.8	6.68	27.5	311	48	P	V
		5961.5	53.26	-34.94	88.2	41.17	32.9	6.71	27.52	311	48	P	V
		5895.75	45.8	-43.85	89.65	33.86	32.77	6.67	27.5	311	48	A	V
		5926.5	43.67	-24.53	68.2	31.64	32.85	6.69	27.51	311	48	A	V



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 CH 175 5875MHz		5615.93	53.16	-15.04	68.2	42.14	32	6.45	27.43	100	239	P	H
		5655.165	51.29	-20.75	72.04	40.21	32.03	6.49	27.44	100	239	P	H
		5716.23	51.94	-57.81	109.75	40.53	32.33	6.54	27.46	100	239	P	H
		5721.835	52.02	-62.96	114.98	40.6	32.34	6.54	27.46	100	239	P	H
	*	5875	103.28	-	-	91.47	32.65	6.66	27.5	100	239	P	H
	*	5875	95.05	-	-	83.24	32.65	6.66	27.5	100	239	A	H
		5895.5	79.78	-30.05	109.83	67.84	32.77	6.67	27.5	100	239	P	H
		5927.25	67.78	-20.42	88.2	55.75	32.85	6.69	27.51	100	239	P	H
		5895.3	67.12	-22.86	89.98	55.18	32.77	6.67	27.5	100	239	A	H
		5925	51.06	-17.14	68.2	39.03	32.85	6.69	27.51	100	239	A	H
		5633.335	52.09	-16.11	68.2	41.05	32	6.47	27.43	309	48	P	V
		5674.93	52.66	-34.03	86.69	41.46	32.15	6.5	27.45	309	48	P	V
		5710.035	52.03	-55.98	108.01	40.63	32.32	6.53	27.45	309	48	P	V
		5723.015	51.88	-65.8	117.68	40.45	32.35	6.54	27.46	309	48	P	V
	*	5875	106.52	-	-	94.71	32.65	6.66	27.5	309	48	P	V
	*	5875	95.76	-	-	83.95	32.65	6.66	27.5	309	48	A	V
		5895.3	79.54	-30.44	109.98	67.6	32.77	6.67	27.5	309	48	P	V
		5926.75	62.32	-25.88	88.2	50.29	32.85	6.69	27.51	309	48	P	V
	5895.3	67.56	-22.42	89.98	55.62	32.77	6.67	27.5	309	48	A	V	
	5925	51.46	-16.74	68.2	39.43	32.85	6.69	27.51	309	48	A	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-4 - 5735~5895MHz

WIFI 802.11ax HE40 (Harmonic @ 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 CH 167 5835MHz		11670	52.81	-21.19	74	58.7	39.72	10.46	56.07	100	238	P	H	
		11670	43.47	-10.53	54	49.36	39.72	10.46	56.07	100	238	A	H	
		17505	54.54	-13.66	68.2	57.02	41.43	13.15	57.06	150	345	P	H	
													H	
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													H	
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													H	
													H	
													H	
			11670	54.4	-19.6	74	60.29	39.72	10.46	56.07	100	269	P	V
			11670	45.38	-8.62	54	51.27	39.72	10.46	56.07	100	269	A	V
			17505	64.45	-3.75	68.2	66.93	41.43	13.15	57.06	150	355	P	V
														V
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														V
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													V	



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 CH 175 5875MHz		11750	55.93	-18.07	74	62.11	39.4	10.49	56.07	100	238	P	H	
		11750	45.36	-8.64	54	51.54	39.4	10.49	56.07	100	238	A	H	
		17625	50.19	-18.01	68.2	51.84	42.12	13.28	57.05	-	-	P	H	
													H	
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													H	
													H	
													H	
			11750	56.05	-17.95	74	62.23	39.4	10.49	56.07	100	269	P	V
			11750	46.2	-7.8	54	52.38	39.4	10.49	56.07	100	269	A	V
			17625	64.52	-3.68	68.2	66.17	42.12	13.28	57.05	151	354	P	V
														V
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														V
														V
														V
													V	
													V	
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 													



UNII-4 - 5735~5895MHz
WIFI 802.11ax HE80 (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 CH 171 5855MHz		5629.5	53.28	-14.92	68.2	42.24	32	6.47	27.43	100	235	P	H
		5699.415	53.86	-50.91	104.77	42.49	32.3	6.52	27.45	100	235	P	H
		5719.475	56.48	-54.17	110.65	45.06	32.34	6.54	27.46	100	235	P	H
		5724.785	54.82	-66.89	121.71	43.38	32.35	6.55	27.46	100	235	P	H
	*	5855	103.25	-	-	91.56	32.53	6.65	27.49	100	235	P	H
	*	5855	93.34	-	-	81.65	32.53	6.65	27.49	100	235	A	H
		5895.3	77.92	-32.06	109.98	65.98	32.77	6.67	27.5	100	235	P	H
		5926	72.17	-16.03	88.2	60.14	32.85	6.69	27.51	100	235	P	H
		5895.5	68.63	-21.2	89.83	56.69	32.77	6.67	27.5	100	235	A	H
		5925	61.77	-6.43	68.2	49.74	32.85	6.69	27.51	100	235	A	H
		5632.45	54.27	-13.93	68.2	43.23	32	6.47	27.43	312	49	P	V
		5691.745	55.39	-43.72	99.11	44.07	32.25	6.52	27.45	312	49	P	V
		5707.97	55.32	-52.11	107.43	43.92	32.32	6.53	27.45	312	49	P	V
		5724.195	56.3	-64.06	120.36	44.86	32.35	6.55	27.46	312	49	P	V
	*	5855	102.95	-	-	91.26	32.53	6.65	27.49	312	49	P	V
	*	5855	94.18	-	-	82.49	32.53	6.65	27.49	312	49	A	V
		5895.5	77.74	-32.09	109.83	65.8	32.77	6.67	27.5	312	49	P	V
		5926.5	70.56	-17.64	88.2	58.53	32.85	6.69	27.51	312	49	P	V
		5895.3	67.55	-22.43	89.98	55.61	32.77	6.67	27.5	312	49	A	V
		5925.5	61.3	-6.9	68.2	49.27	32.85	6.69	27.51	312	49	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-4 - 5735~5895MHz

WIFI 802.11ax HE80 (Harmonic @ 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 CH 171 5855MHz		11710	56.56	-17.44	74	62.59	39.56	10.48	56.07	100	242	P	H	
		11710	44.19	-9.81	54	50.22	39.56	10.48	56.07	100	242	A	H	
		17565	59.83	-8.37	68.2	61.88	41.79	13.22	57.06	134	345	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			11710	57.02	-16.98	74	63.05	39.56	10.48	56.07	100	271	P	V
			11710	45.21	-8.79	54	51.24	39.56	10.48	56.07	100	271	A	V
			17565	64.31	-3.89	68.2	66.36	41.79	13.22	57.06	100	257	P	V
														V
														V
														V
														V
														V
													V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



**UNII-4 - 5735~5895MHz
WIFI 802.11ax HE160 (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 CH 163 5815MHz		5640.71	65.34	-2.86	68.2	54.31	32	6.47	27.44	100	238	P	H
		5699.415	72.48	-32.29	104.77	61.11	32.3	6.52	27.45	100	238	P	H
		5702.07	74.63	-31.15	105.78	63.25	32.3	6.53	27.45	100	238	P	H
		5721.835	72.49	-42.49	114.98	61.07	32.34	6.54	27.46	100	238	P	H
	*	5815	98.46	-	-	86.82	32.5	6.62	27.48	100	238	P	H
	*	5815	89.3	-	-	77.66	32.5	6.62	27.48	100	238	A	H
		5895.3	73.89	-36.09	109.98	61.95	32.77	6.67	27.5	100	238	P	H
		5942	73.1	-15.1	88.2	61.03	32.88	6.7	27.51	100	238	P	H
		5895.3	63.66	-26.32	89.98	51.72	32.77	6.67	27.5	100	238	A	H
		5940.5	59.37	-8.83	68.2	47.3	32.88	6.7	27.51	100	238	A	H
		5639.825	65.82	-2.38	68.2	54.79	32	6.47	27.44	336	50	P	V
		5660.18	73.6	-2.16	75.76	62.49	32.06	6.49	27.44	336	50	P	V
		5701.775	73.44	-32.26	105.7	62.06	32.3	6.53	27.45	336	50	P	V
		5722.72	72.99	-44.01	117	61.56	32.35	6.54	27.46	336	50	P	V
	*	5815	98.33	-	-	86.69	32.5	6.62	27.48	336	50	P	V
	*	5815	89.7	-	-	78.06	32.5	6.62	27.48	336	50	A	V
		5895.5	73.9	-35.93	109.83	61.96	32.77	6.67	27.5	336	50	P	V
		5940	73.93	-14.27	88.2	61.86	32.88	6.7	27.51	336	50	P	V
		5895.5	62.97	-26.86	89.83	51.03	32.77	6.67	27.5	336	50	A	V
		5940.5	60.44	-7.76	68.2	48.37	32.88	6.7	27.51	336	50	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-4 - 5735~5895MHz
WIFI 802.11ax HE160 (Harmonic @ 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 CH 163 5815MHz		11630	46.94	-27.06	74	52.69	39.88	10.44	56.07	-	-	P	H	
		17445	57.1	-11.1	68.2	59.8	41.18	13.08	56.96	141	346	P	H	
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													H	
													H	
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													H	
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													H	
			11630	51.07	-22.93	74	56.82	39.88	10.44	56.07	100	271	P	V
			11630	40.35	-13.65	54	46.1	39.88	10.44	56.07	100	271	A	V
			17445	58.67	-9.53	68.2	61.37	41.18	13.08	56.96	100	356	P	V
														V
														V
														V
														V
														V
													V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.													



Emission above 18GHz

WIFI 802.11ax HE160 (SHF @ 1m)

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)
802.11ax HE160 SHF		19881	36.95	-37.05	74	56.6	38.15	-2.88	54.92	-	-	P	H
		31586	38.86	-35.14	74	57.11	40.28	-1.88	56.65	-	-	P	H
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			22572	36.35	-37.65	74	56.24	38.44	-3.77	54.56	-	-	P
		31404	39.61	-34.39	74	57.31	40.72	-1.94	56.48	-	-	P	V
													V
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													V
Remark	1. No other spurious found. 2. All results are PASS against limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												



Emission below 1GHz
WIFI 802.11ax HE160 (LF @ 3m)

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)	
802.11ax HE160 LF		66.86	23.62	-16.38	40	42.73	12.15	0.91	32.17	-	-	P	H	
		161.92	27.6	-15.9	43.5	42.15	16.3	1.26	32.11	-	-	P	H	
		208.48	27.01	-16.49	43.5	42.67	15.03	1.38	32.07	-	-	P	H	
		316.15	24.55	-21.45	46	35.37	19.61	1.63	32.06	-	-	P	H	
		562.53	27.22	-18.78	46	30.99	26.17	2.12	32.06	-	-	P	H	
		768.17	30.15	-15.85	46	31.63	28.08	2.36	31.92	-	-	P	H	
														H
														H
														H
														H
														H
														H
			30.97	32.84	-7.16	40	40.04	24.24	0.72	32.16	-	-	P	V
			159.98	23.31	-20.19	43.5	37.68	16.48	1.26	32.11	-	-	P	V
			285.11	20.29	-25.71	46	31.7	19.1	1.55	32.06	-	-	P	V
			444.19	23.46	-22.54	46	30.33	23.14	1.93	31.94	-	-	P	V
			636.25	28.18	-17.82	46	31.51	26.4	2.24	31.97	-	-	P	V
			852.56	31.73	-14.27	46	31.6	29.16	2.6	31.63	-	-	P	V
													V	
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													V	

Remark

- No other spurious found.
- All results are PASS against limit line.
- The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.



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 limit 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		11730	55.17	-18.83	74	61.27	39.48	10.49	56.07	100	281	P	V
CH 173		11730	42.89	-11.11	54	48.99	39.48	10.49	56.07	100	281	A	V
5865MHz													

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 @ 2390MHz:

1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 39.48(dB/m) + 10.49(dB) + 61.27(dBμV) – 56.07 (dB)
= 55.17 (dBμV/m)
2. Margin (dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.17(dBμV/m) – 74(dBμV/m)
= -18.83(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 39.48(dB/m) + 10.49(dB) + 48.99(dBμV) – 56.07 (dB)
= 42.89 (dBμV/m)
2. Margin (dB) = Level(dBμV/m) – Limit Line(dBμV/m)
= 42.89(dBμV/m) – 54(dBμV/m)
= -11.11(dB)

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



Appendix D. Radiated Spurious Emission Plots

Test Engineer :	Jacky Hong, Rain Lee and Mancy Chou	Temperature :	20~26°C
		Relative Humidity :	40~65%

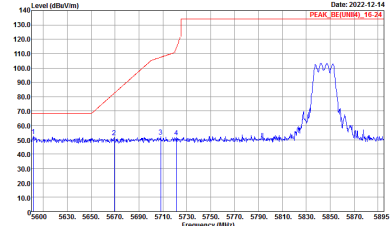
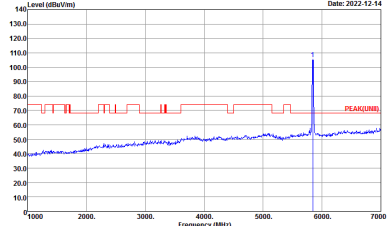
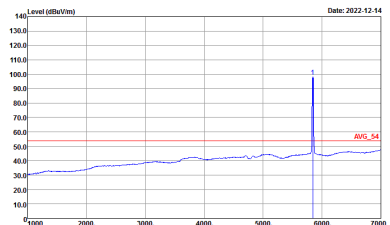
Note symbol

-L	Low channel location
-R	High channel location

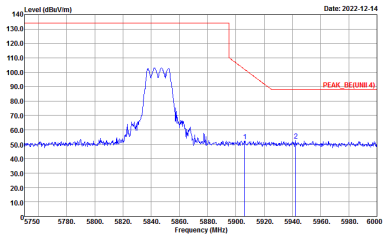
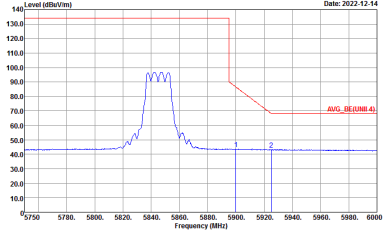


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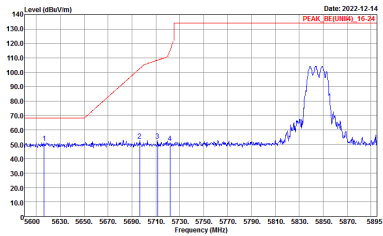
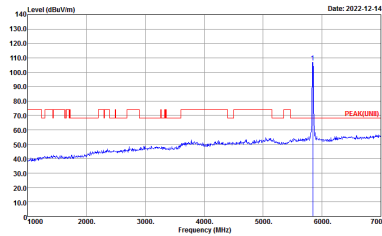
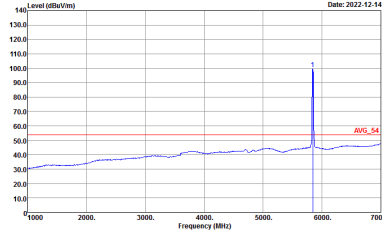
UNII-4 - 5735~5895MHz
WIFI 802.11a (Band Edge @ 3m)

WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11a CH169 5845MHz - L	
3+4	Horizontal	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII4)_16-24 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH13-HY Condition : AVG_54 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>

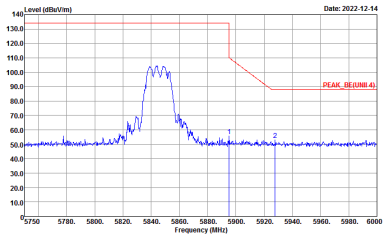
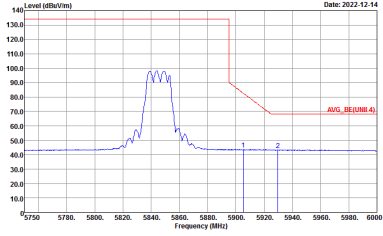


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11a CH169 5845MHz - R	
3+4	Horizontal	Fundamental
<p>Peak</p>	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.0100KHz SWT:Auto</p>	<p>Left blank</p>

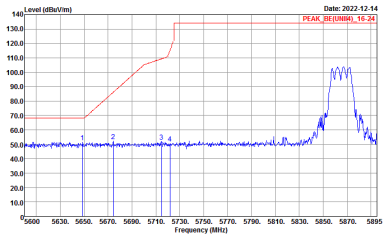
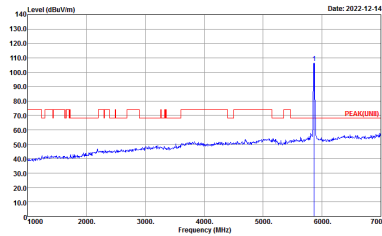
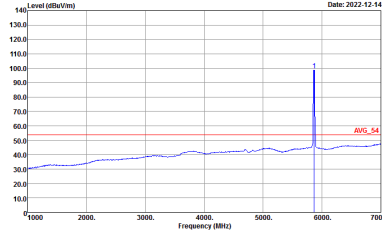


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11a CH169 5845MHz - L	
3+4	Vertical	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE[UNII4]_16-24 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH13-HY Condition : PEAK[UNII] 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	
		 <p>Site : 03CH13-HY Condition : AV6_54 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>

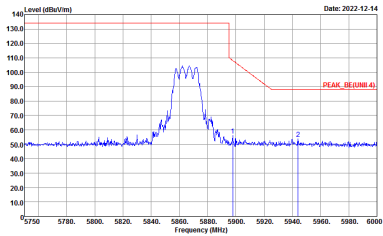
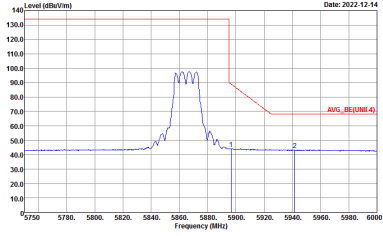


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11a CH169 5845MHz - R	
3+4	Vertical	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_91200_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank
Avg.	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_91200_1241 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	Left blank

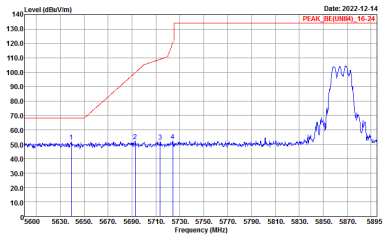
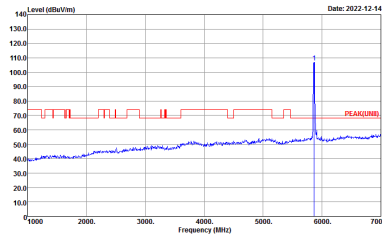
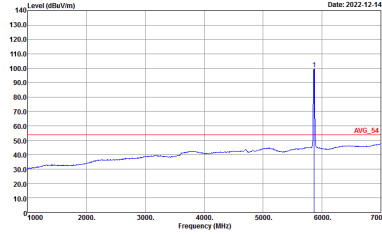


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11a CH173 5865MHz - L	
3+4	Horizontal	Fundamental
Peak	 <p>Date: 2022-12-14 PEAK_RE[UNII4]_16-24</p> <p>Site : 03CH13-HY Condition : PEAK_RE[UNII4]_16-24 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Date: 2022-12-14 PEAK_LIN[B]</p> <p>Site : 03CH13-HY Condition : PEAK[LIN[B]] 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Date: 2022-12-14 AVG_54</p> <p>Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>

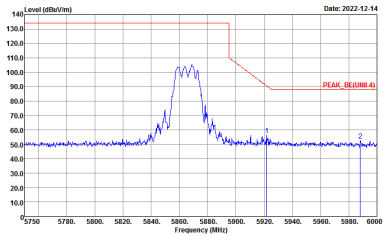
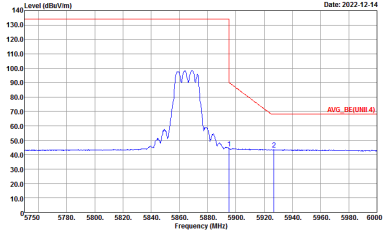


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11a CH173 5865MHz - R	
3+4	Horizontal	Fundamental
<p>Peak</p>	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	<p>Left blank</p>



WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11a CH173 5865MHz - L	
3+4	Vertical	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE[UNII4]_16-24 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH13-HY Condition : PEAK[UNII] 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	
		 <p>Site : 03CH13-HY Condition : AV6_54 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>

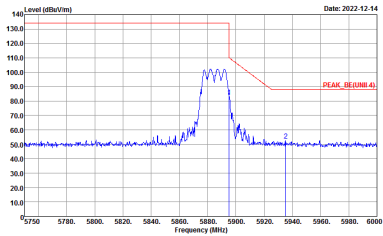
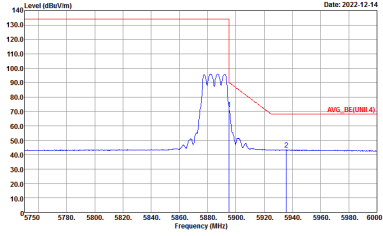


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11a CH173 5865MHz - R	
3+4	Vertical	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank
Avg.	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	Left blank

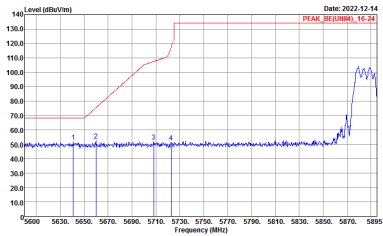
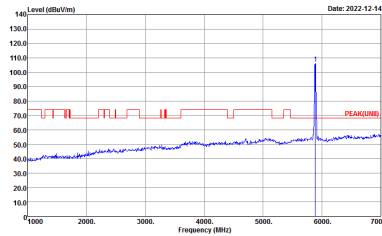
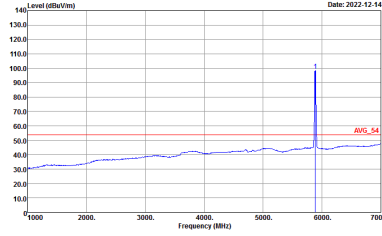


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11a CH177 5885MHz - L	
3+4	Horizontal	Fundamental
Peak	<p>Site : 03CH13-HY Condition : PEAK_BE (UNII4)_16-24 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH13-HY Condition : PEAK(LINB) 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	
		<p>Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>

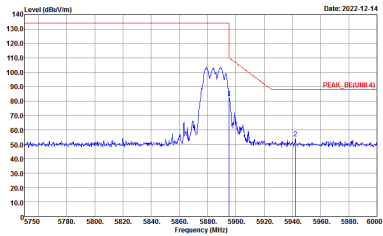
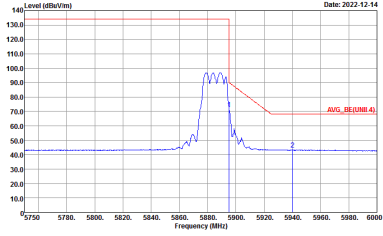


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11a CH177 5885MHz - R	
3+4	Horizontal	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank
Avg.	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	Left blank



WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11a CH177 5885MHz - L	
3+4	Vertical	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE[UNII4]_16-24 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH13-HY Condition : PEAK[UNII] 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	
		 <p>Site : 03CH13-HY Condition : AV6_54 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>



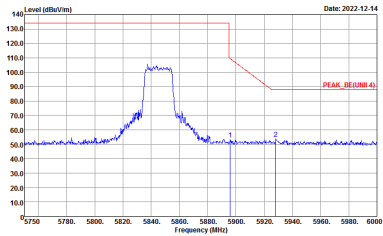
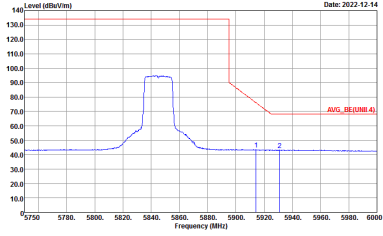
WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11a CH177 5885MHz - R	
3+4	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_91200_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_91200_1241 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	<p>Left blank</p>



UNII-4 - 5735~5895MHz
WIFI 802.11ax HE20 (Band Edge @ 3m)

WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE20 CH169 5845MHz - L	
3+4	Horizontal	Fundamental
Peak	<p>Site Condition : 03CH13-HY : PEAK_BE(UNII4)_16-24 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site Condition : 03CH13-HY : PEAK(UNII) 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	<p>Site Condition : 03CH13-HY : AVG_54 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>

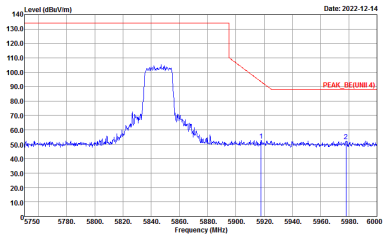
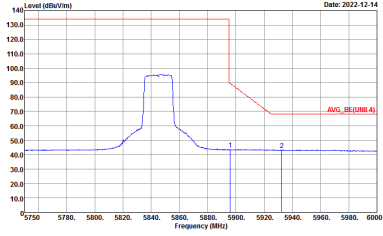


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE20 CH169 5845MHz - R	
3+4	Horizontal	Fundamental
<p>Peak</p>		<p>Left blank</p>
<p>Avg.</p>		<p>Left blank</p>

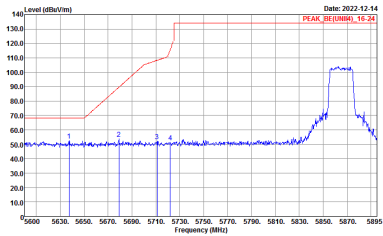
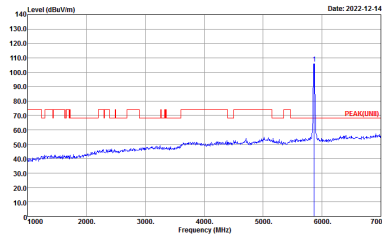
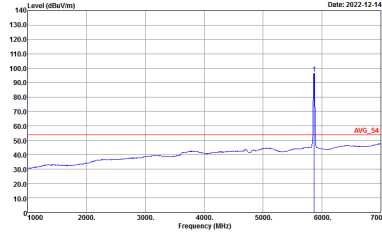


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE20 CH169 5845MHz - L	
3+4	Vertical	Fundamental
Peak	<p>Site : 03CH13-HY Condition : PEAK_5845MHz_16-24 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH13-HY Condition : PEAK(LINB) 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	
		<p>Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>

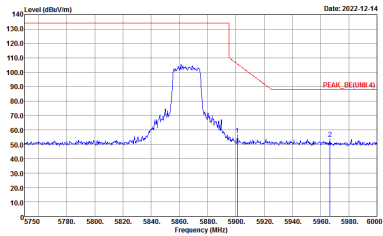
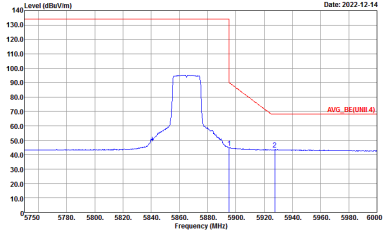


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE20 CH169 5845MHz - R	
3+4	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_91200_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_91200_1241 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	<p>Left blank</p>

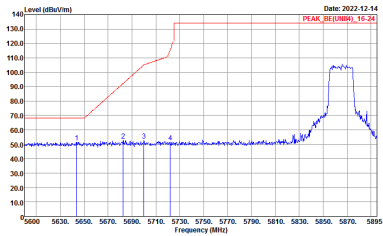
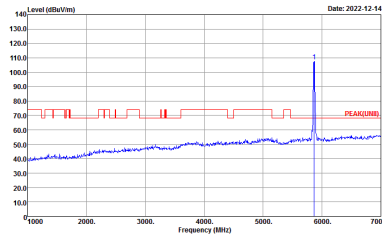
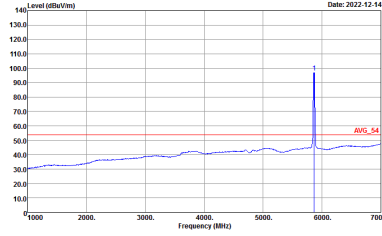


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE20 CH173 5865MHz - L	
3+4	Horizontal	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE[UNII4]_16-24 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH13-HY Condition : PEAK[UNII] 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	
		 <p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>

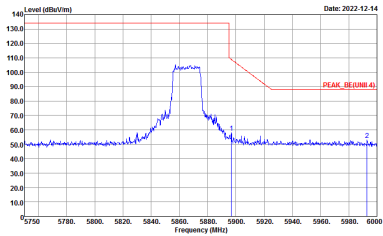
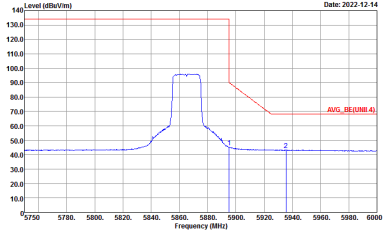


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE20 CH173 5865MHz - R	
3+4	Horizontal	Fundamental
<p>Peak</p>	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	<p>Left blank</p>

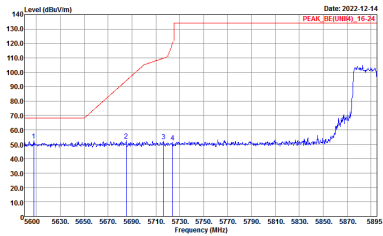
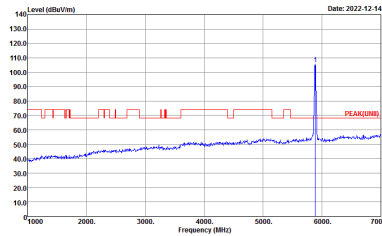
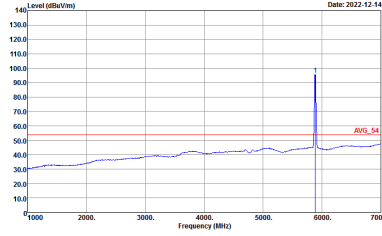


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE20 CH173 5865MHz - L	
3+4	Vertical	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE[UNII4]_16-24 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH13-HY Condition : PEAK[UNII] 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	
		 <p>Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>

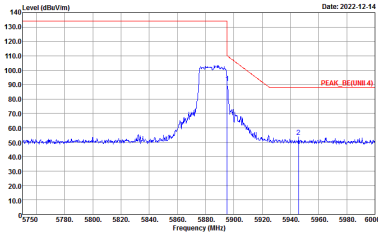
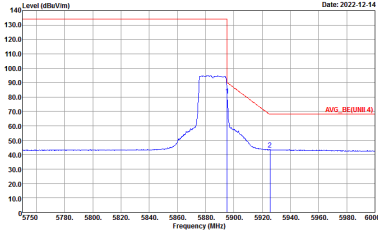


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE20 CH173 5865MHz - R	
3+4	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:0.0100KHz SWT:Auto</p>	<p>Left blank</p>

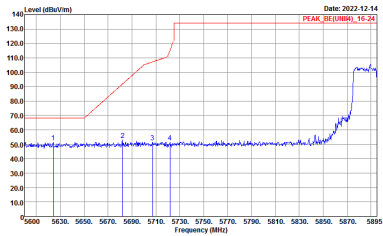
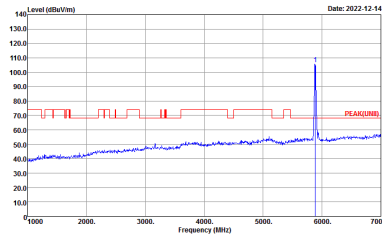
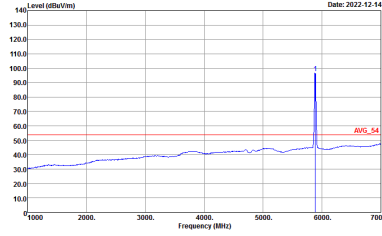


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE20 CH177 5885MHz - L	
3+4	Horizontal	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE[UNII4]_16-24 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH13-HY Condition : PEAK[UNII] 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	
		 <p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>

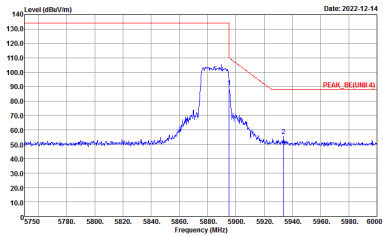
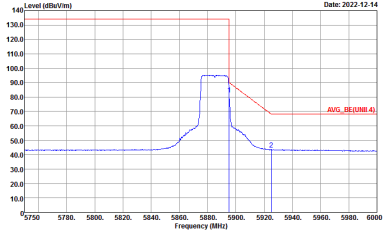


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE20 CH177 5885MHz - R	
3+4	Horizontal	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank
Avg.	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_91200_1241 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	Left blank



WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE20 CH177 5885MHz - L	
3+4	Vertical	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE[UNII4]_16-24 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH13-HY Condition : PEAK[UNII] 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	
		 <p>Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>



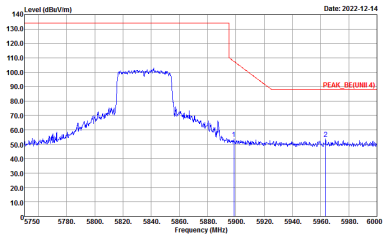
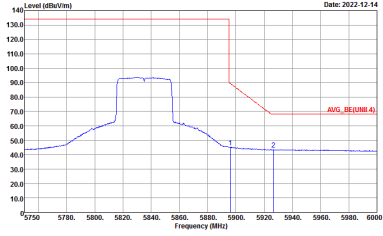
WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE20 CH177 5885MHz - R	
3+4	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_91200_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_91200_1241 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	<p>Left blank</p>



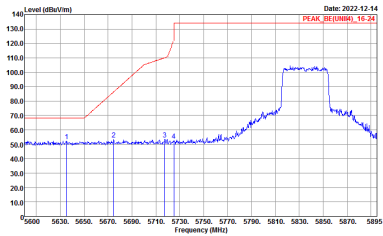
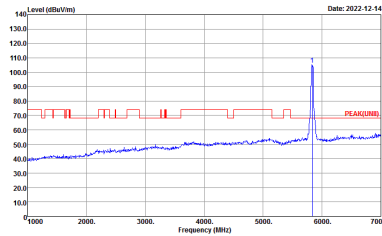
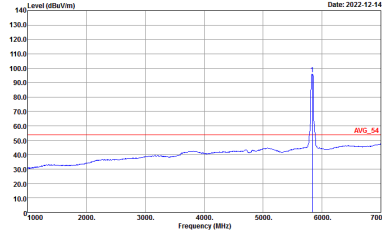
UNII-4 - 5735~5895MHz
WIFI 802.11ax HE40 (Band Edge @ 3m)

WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE40 CH167 5835MHz - L	
3+4	Horizontal	Fundamental
Peak	<p>Site : 03CH13-HY Condition : PEAK_BE(UNII4)_16-24 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	<p>Site : 03CH13-HY Condition : AVG_54 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>

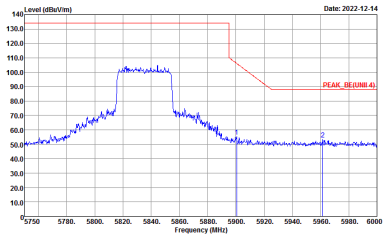
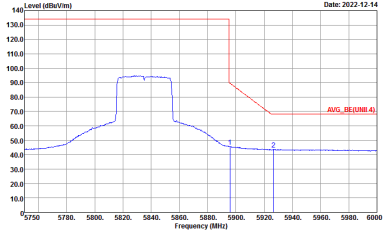


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE40 CH167 5835MHz - R	
3+4	Horizontal	Fundamental
<p>Peak</p>	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>	<p>Left blank</p>



WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE40 CH167 5835MHz - L	
3+4	Vertical	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE[UNII4]_16-24 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH13-HY Condition : PEAK[UNII] 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	
		 <p>Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>



WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE40 CH167 5835MHz - R	
3+4	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_91200_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_91200_1241 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>	<p>Left blank</p>

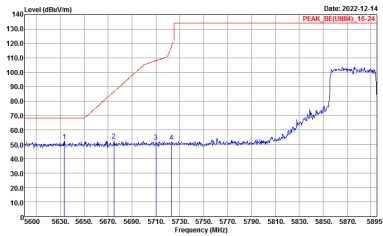
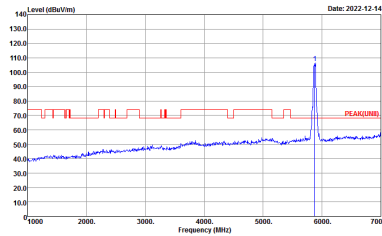
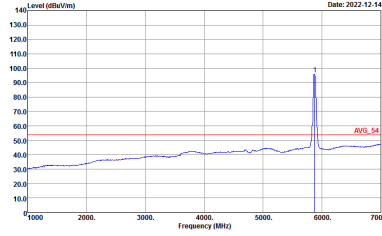


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE40 CH175 5875MHz - L	
3+4	Horizontal	Fundamental
Peak	<p>Date: 2022-12-14 PEAK_BE(UNII4)_16-24</p> <p>Site : 03CH13-HY Condition : PEAK_BE(UNII4)_16-24 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Date: 2022-12-14 PEAK(LINB)</p> <p>Site : 03CH13-HY Condition : PEAK(LINB) 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	
		<p>Date: 2022-12-14 AVG_54</p> <p>Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>

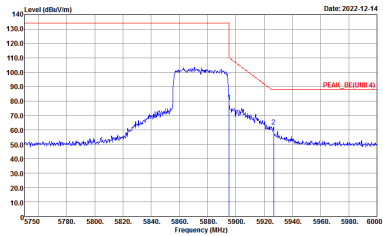
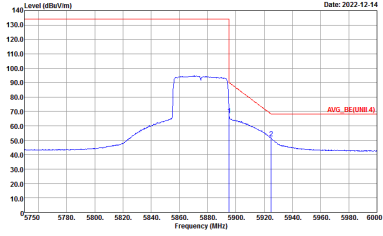


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE40 CH175 5875MHz - R	
3+4	Horizontal	Fundamental
Peak	<p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank
Avg.	<p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	Left blank



WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE40 CH175 5875MHz - L	
3+4	Vertical	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE[UNII4]_16-24 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH13-HY Condition : PEAK[UNII] 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	
		 <p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>



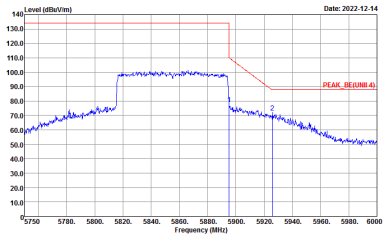
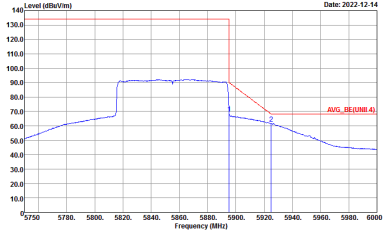
WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE40 CH175 5875MHz - R	
3+4	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_91200_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_91200_1241 VERTICAL : RBW:1000.000KHz VBW:0.0100KHz SWT:Auto</p>	<p>Left blank</p>



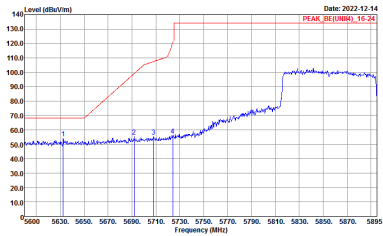
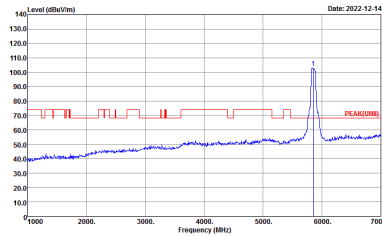
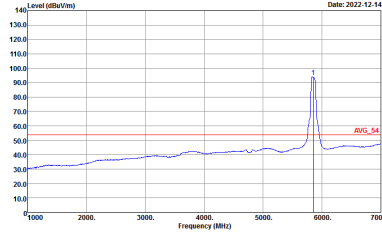
UNII-4 - 5735~5895MHz
WIFI 802.11ax HE80 (Band Edge @ 3m)

WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE80 CH171 5855MHz - L	
3+4	Horizontal	Fundamental
Peak	<p>Site Condition : 03CH13-HY : PEAK_BE(UNII4)_16-24 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site Condition : 03CH13-HY : PEAK(UNII) 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	<p>Site Condition : 03CH13-HY : AVG_54 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>



WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE80 CH171 5855MHz - R	
3+4	Horizontal	Fundamental
<p>Peak</p>	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>	<p>Left blank</p>



WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE80 CH171 5855MHz - L	
3+4	Vertical	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE[UNII4]_16-24 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH13-HY Condition : PEAK[UNII] 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	
		 <p>Site : 03CH13-HY Condition : AV6_54 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>



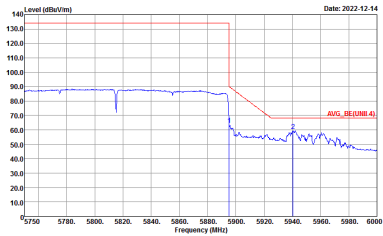
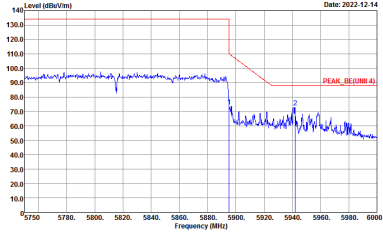
WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE80 CH171 5855MHz - R	
3+4	Vertical	Fundamental
<p>Peak</p>	<p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_9120D_1241 VERTICAL :RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Left blank</p>
<p>Avg.</p>	<p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_9120D_1241 VERTICAL :RBW:1000.000KHz VBW:1000KHz SWT:Auto</p>	<p>Left blank</p>



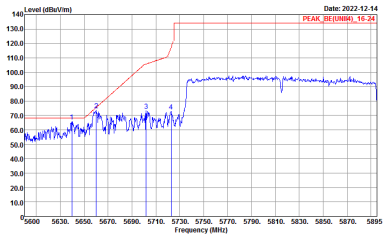
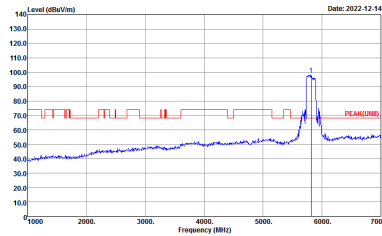
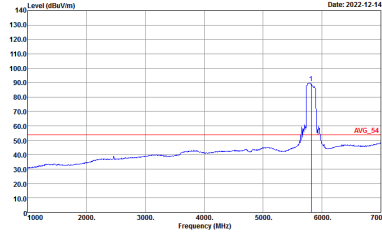
UNII-4 - 5735~5895MHz
WIFI 802.11ax HE160 (Band Edge @ 3m)

WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE160 CH163 5815MHz - L	
3+4	Horizontal	Fundamental
Peak	<p>Site Condition : 03CH13-HY : PEAK_BE(UNII4)_16-24 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site Condition : 03CH13-HY : PEAK(UNII) 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	<p>Site Condition : 03CH13-HY : AVG_54 3m HORN_91200_1241 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto</p>

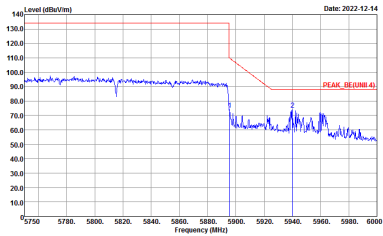
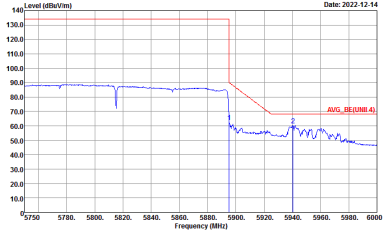


WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE160 CH163 5815MHz - R	
3+4	Horizontal	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto</p>	Left blank
Avg.	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_9120D_1241 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE160 CH163 5815MHz - L	
3+4	Vertical	Fundamental
Peak	 <p>Site : 03CH13-HY Condition : PEAK_BE[UNII4]_16-24 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH13-HY Condition : PEAK[UNII] 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	
		 <p>Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_1241 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>



WIFI	UNII-4 5735~5895MHz Band Edge @ 3m	
ANT	802.11ax HE160 CH163 5815MHz - R	
3+4	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH13-HY Condition : PEAK_BE(UNII 4) 3m HORN_91200_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_BE(UNII 4) 3m HORN_91200_1241 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto</p>	<p>Left blank</p>



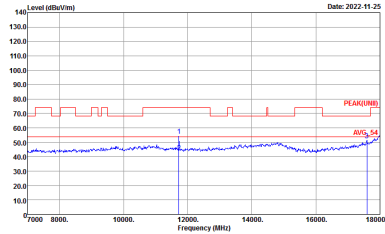
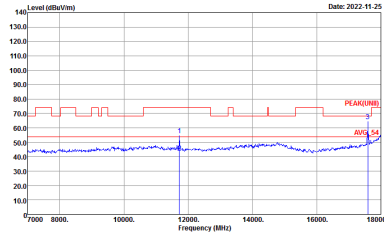
UNII-4 - 5735~5895MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11a CH169 5845MHz	
3+4	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 HORIZONTAL</p>	<p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 VERTICAL</p>



WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11a CH169 5845MHz	
3+4	Horizontal	Vertical
<p>14.47G ~14.5G Avg.</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 HORIZONTAL</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 VERTICAL</p>
<p>17.7G ~18G Avg.</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 HORIZONTAL</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 VERTICAL</p>



WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11a CH173 5865MHz	
3+4	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 HORIZONTAL</p>	 <p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 VERTICAL</p>



WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11a CH173 5865MHz	
3+4	Horizontal	Vertical
<p>14.47G ~14.5G Avg.</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 HORIZONTAL</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 VERTICAL</p>
<p>17.7G ~18G Avg.</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 HORIZONTAL</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 VERTICAL</p>



WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11a CH177 5885MHz	
3+4	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 HORIZONTAL</p>	<p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 VERTICAL</p>



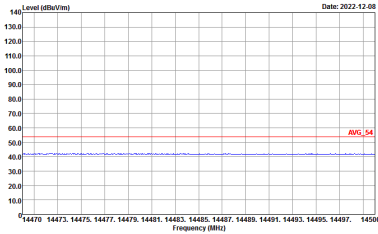
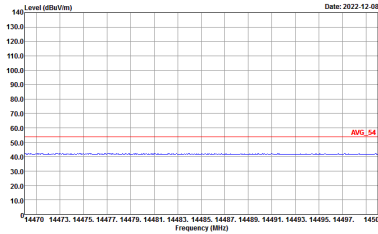
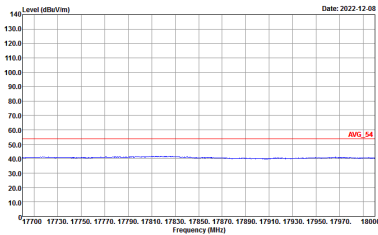
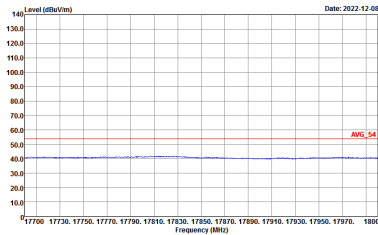
WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11a CH177 5885MHz	
3+4	Horizontal	Vertical
<p>14.47G ~14.5G Avg.</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 HORIZONTAL</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 VERTICAL</p>
<p>17.7G ~18G Avg.</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 HORIZONTAL</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 VERTICAL</p>



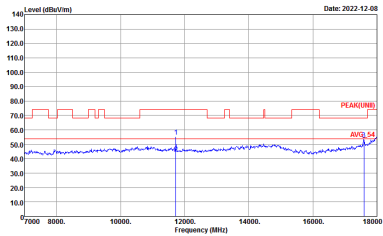
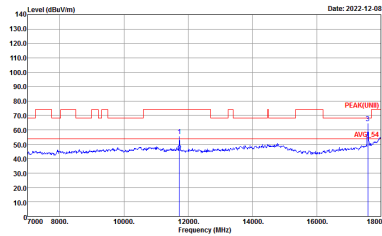
UNII-4 - 5735~5895MHz
WIFI 802.11ax HE20 (Harmonic @ 3m)

WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11ax HE20 CH169 5845MHz	
3+4	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL :</p>	<p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL :</p>

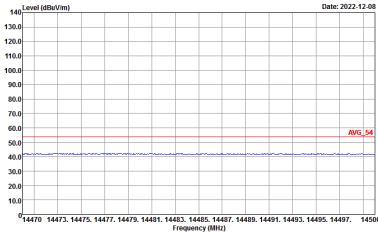
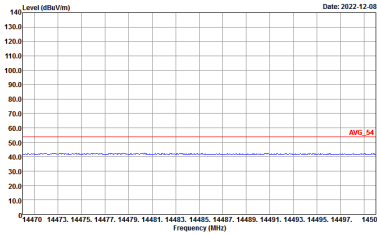
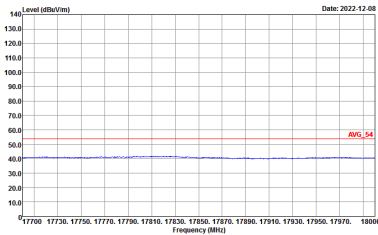
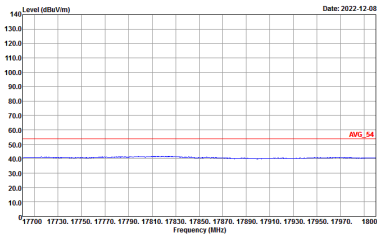


WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11ax HE20 CH169 5845MHz	
3+4	Horizontal	Vertical
<p>14.47G ~14.5G Avg.</p>	 <p>Site : 03CH13-HY Condition : AV6_54 3m HORIZONTAL</p>	 <p>Site : 03CH13-HY Condition : AV6_54 3m VERTICAL</p>
<p>17.7G ~18G Avg.</p>	 <p>Site : 03CH13-HY Condition : AV6_54 3m HORIZONTAL</p>	 <p>Site : 03CH13-HY Condition : AV6_54 3m VERTICAL</p>

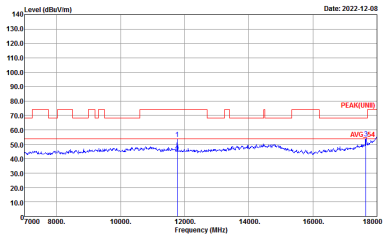
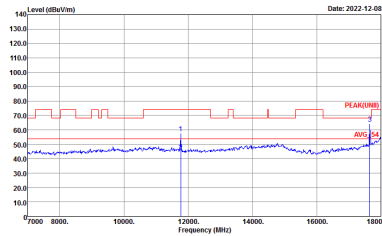


WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11ax HE20 CH173 5865MHz	
3+4	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 HORIZONTAL</p>	 <p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 VERTICAL</p>



WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11ax HE20 CH173 5865MHz	
3+4	Horizontal	Vertical
<p>14.47G ~14.5G Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_54 3m HORIZONTAL</p>	 <p>Site : 03CH13-HY Condition : AVG_54 3m VERTICAL</p>
<p>17.7G ~18G Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_54 3m HORIZONTAL</p>	 <p>Site : 03CH13-HY Condition : AVG_54 3m VERTICAL</p>



WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11ax HE20 CH177 5885MHz	
3+4	Horizontal	Vertical
<p>Peak</p> <p>Avg.</p>	 <p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 HORIZONTAL</p>	 <p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 VERTICAL</p>



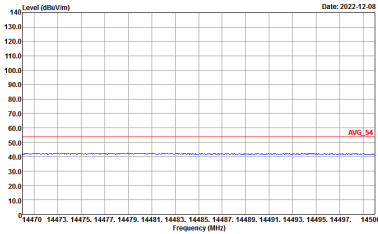
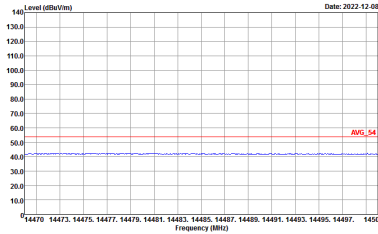
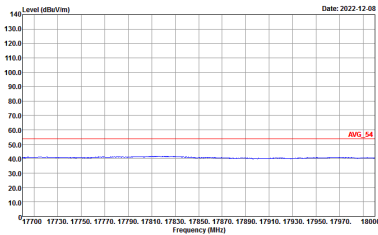
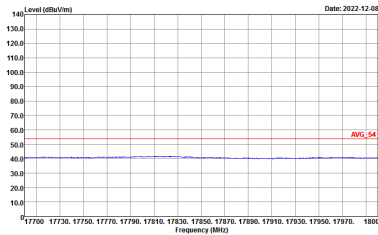
WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11ax HE20 CH177 5885MHz	
3+4	Horizontal	Vertical
<p>14.47G ~14.5G Avg.</p>	<p>Site : 03CH13-HY Condition : AVG_54 3m HORIZONTAL</p>	<p>Site : 03CH13-HY Condition : AVG_54 3m VERTICAL</p>
<p>17.7G ~18G Avg.</p>	<p>Site : 03CH13-HY Condition : AVG_54 3m HORIZONTAL</p>	<p>Site : 03CH13-HY Condition : AVG_54 3m VERTICAL</p>



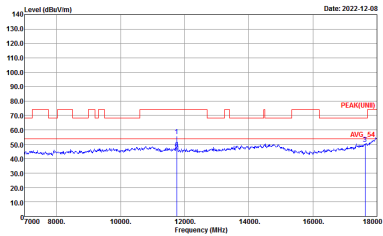
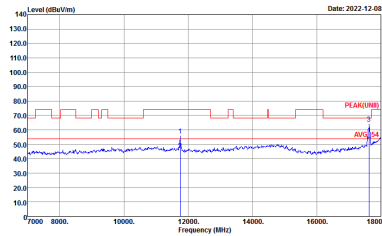
UNII-4 - 5735~5895MHz
WIFI 802.11ax HE40 (Harmonic @ 3m)

WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11ax HE40 CH167 5835MHz	
3+4	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL :</p>	<p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL :</p>

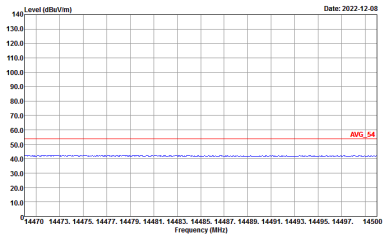
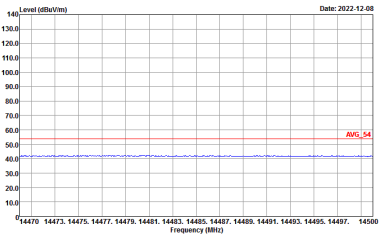
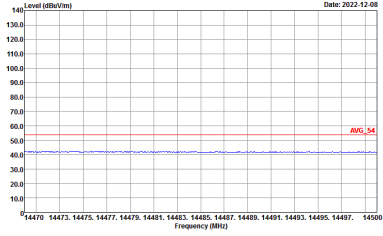
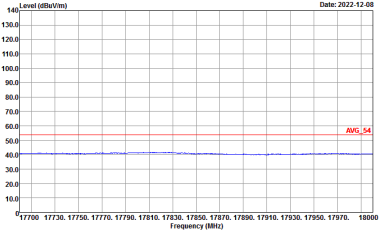


WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11ax HE40 CH167 5835MHz	
3+4	Horizontal	Vertical
<p>14.47G ~14.5G Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_54 3m HORIZONTAL</p>	 <p>Site : 03CH13-HY Condition : AVG_54 3m VERTICAL</p>
<p>17.7G ~18G Avg.</p>	 <p>Site : 03CH13-HY Condition : AVG_54 3m HORIZONTAL</p>	 <p>Site : 03CH13-HY Condition : AVG_54 3m VERTICAL</p>



WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11ax HE40 CH175 5875MHz	
3+4	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 HORIZONTAL</p>	 <p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 VERTICAL</p>



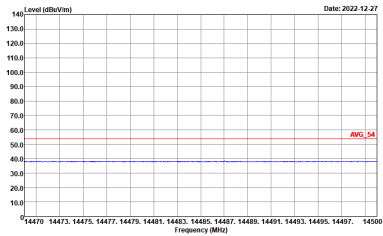
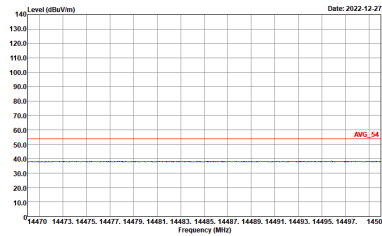
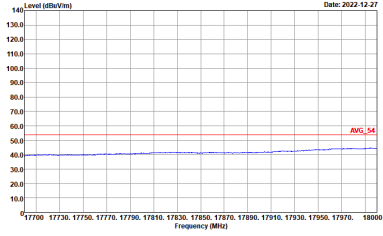
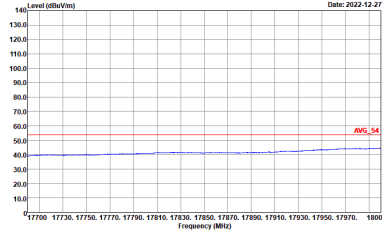
WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11ax HE40 CH175 5875MHz	
3+4	Horizontal	Vertical
<p>14.47G ~14.5G Avg.</p>	 <p>Site : 03CH13-HY Condition : AV6_54 3m HORIZONTAL</p>	 <p>Site : 03CH13-HY Condition : AV6_54 3m VERTICAL</p>
<p>17.7G ~18G Avg.</p>	 <p>Site : 03CH13-HY Condition : AV6_54 3m HORIZONTAL</p>	 <p>Site : 03CH13-HY Condition : AV6_54 3m VERTICAL</p>



UNII-4 - 5735~5895MHz
WIFI 802.11ax HE80 (Harmonic @ 3m)

WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11ax HE80 CH171 5855MHz	
3+4	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL :</p>	<p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL :</p>



WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11ax HE80 CH171 5855MHz	
3+4	Horizontal	Vertical
<p>14.47G ~14.5G Avg.</p>	 <p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 HORIZONTAL</p>	 <p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 VERTICAL</p>
<p>17.7G ~18G Avg.</p>	 <p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 HORIZONTAL</p>	 <p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 VERTICAL</p>



UNII-4 - 5735~5895MHz
WIFI 802.11ax HE160 (Harmonic @ 3m)

WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11ax HE160 CH163 5815MHz	
3+4	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 HORIZONTAL :</p>	<p>Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_91200_1241 VERTICAL :</p>



WIFI	UNII-4 5735~5895MHz Harmonic @ 3m	
ANT	802.11ax HE160 CH163 5815MHZ	
3+4	Horizontal	Vertical
<p>14.47G ~14.5G Avg.</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 HORIZONTAL</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 VERTICAL</p>
<p>17.7G ~18G Avg.</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 HORIZONTAL</p>	<p>Site : 03CH13-HY Condition : AV6_54 3m HORN_91200_1241 VERTICAL</p>



Emission above 18GHz
5GHz WIFI 802.11ax HE160 Full (SHF @ 1m)

WIFI	5GHz WIFI	
ANT	802.11ax HE160 Full SHF	
3+4	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH13-HY Condition : PEAK(UNII) 1m SHF_70576 HORIZONTAL</p>	<p>Site : 03CH13-HY Condition : PEAK(UNII) 1m SHF ANT_9170_00993 VERTICAL</p>



Emission below 1GHz
5GHz WIFI 802.11ax HE160 Full (LF @ 3m)

WIFI	5GHz WIFI	
ANT	802.11ax HE160 Full LF	
3+4	Horizontal	Vertical
QP / Peak	<p>Site : 03CH13-HY Condition : QP 3m BIL06_40103 HORIZONTAL</p>	<p>Site : 03CH13-HY Condition : QP 3m BIL06_40103 VERTICAL</p>



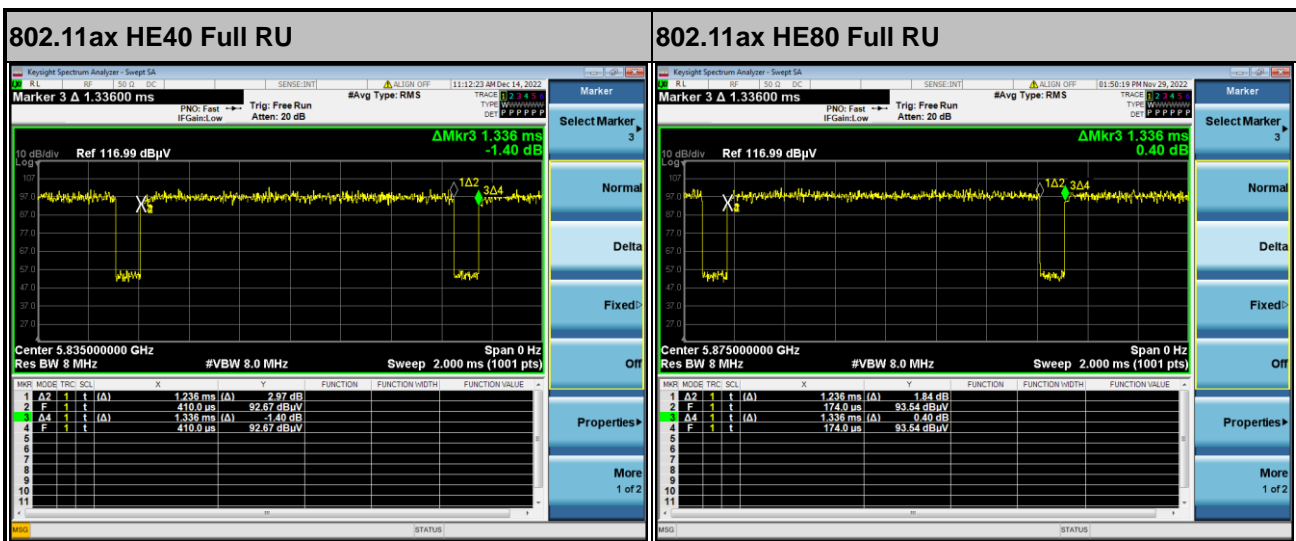
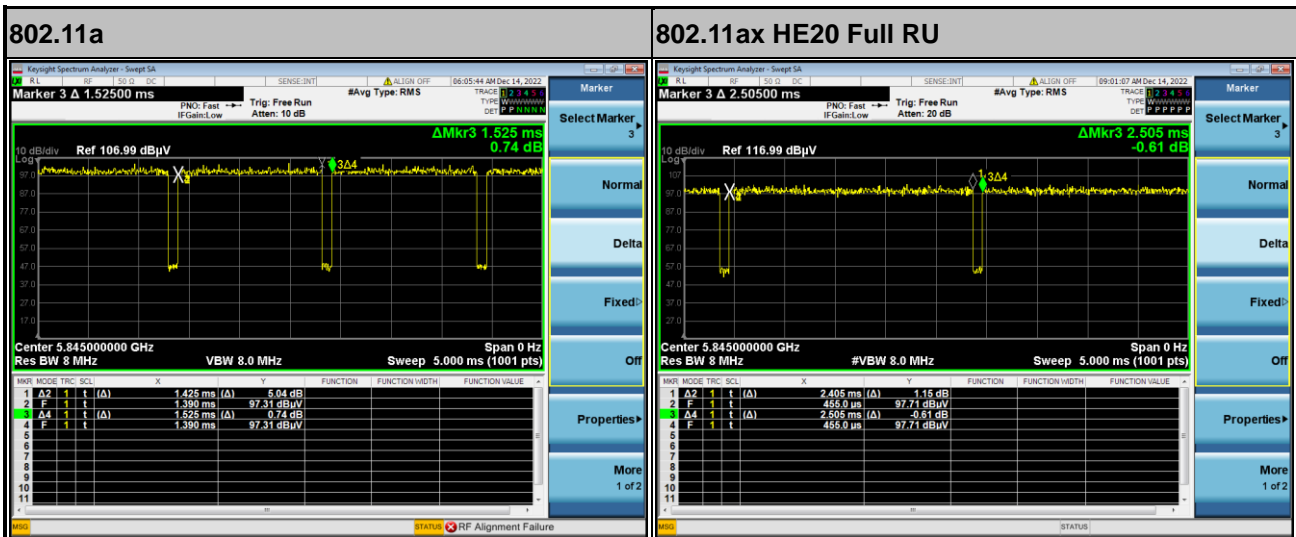
Appendix E. Duty Cycle Plots

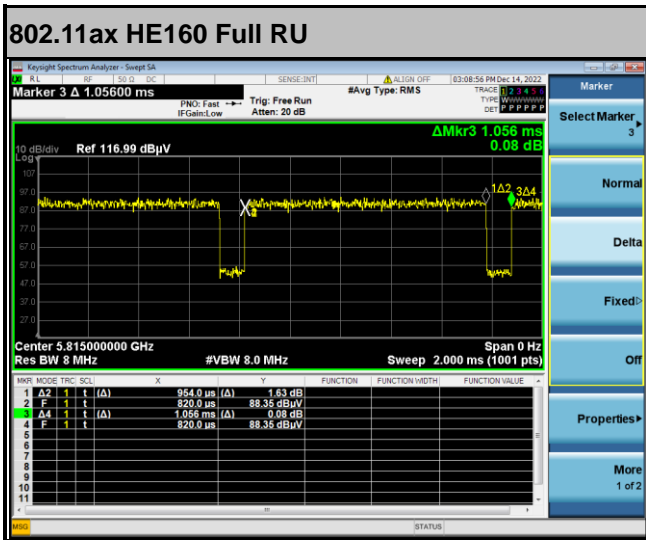
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<Open Mode>

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
3+4	5GHz 802.11a	93.44	1425	0.70	1kHz
3+4	5GHz 802.11ax HE20 Full RU	96.01	2405	0.42	1kHz
3+4	5GHz 802.11ax HE40 Full RU	92.51	1236	0.81	1kHz
3+4	5GHz 802.11ax HE80 Full RU	92.51	1236	0.81	1kHz
3+4	5GHz 802.11ax HE160 Full RU	90.34	954	1.05	3kHz

MIMO <Ant. 3+4>



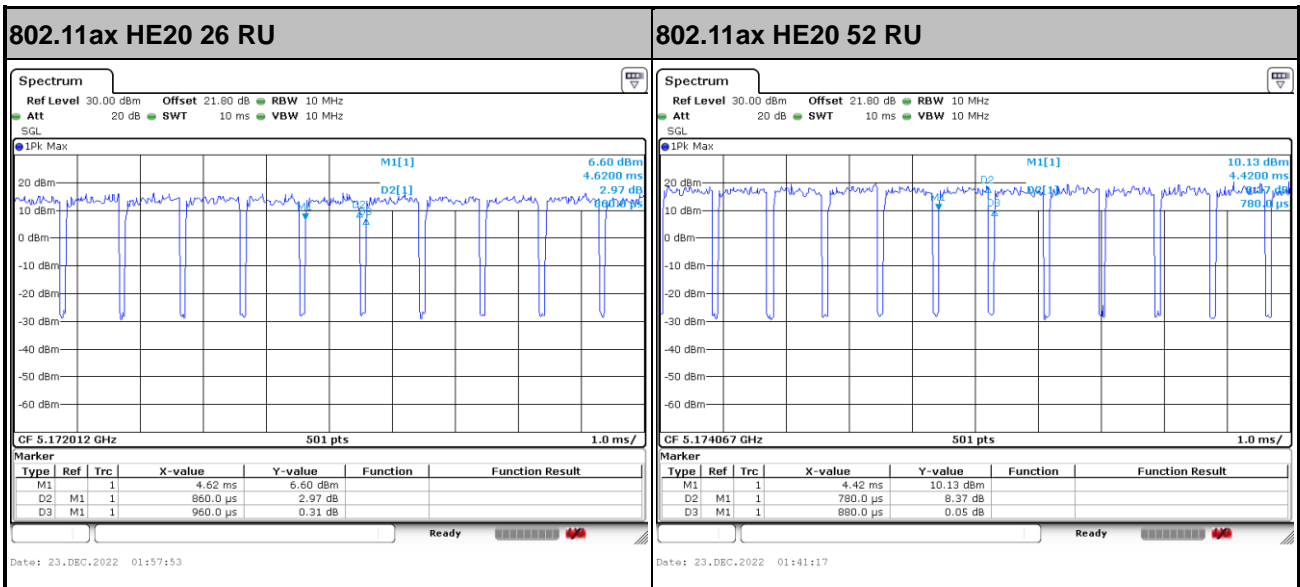
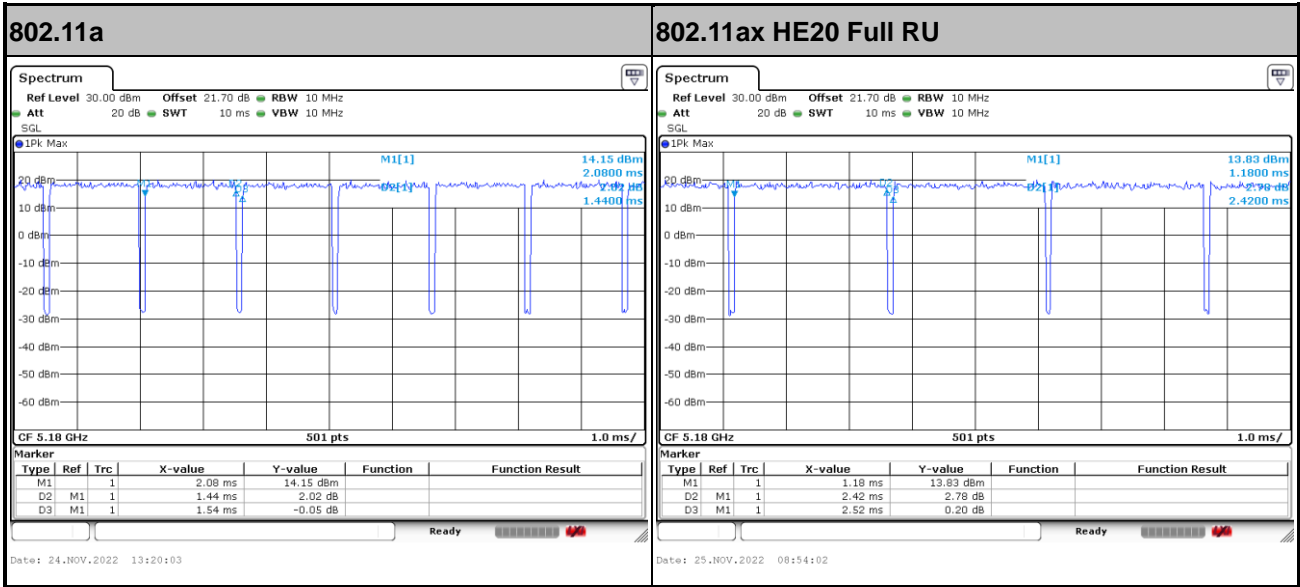


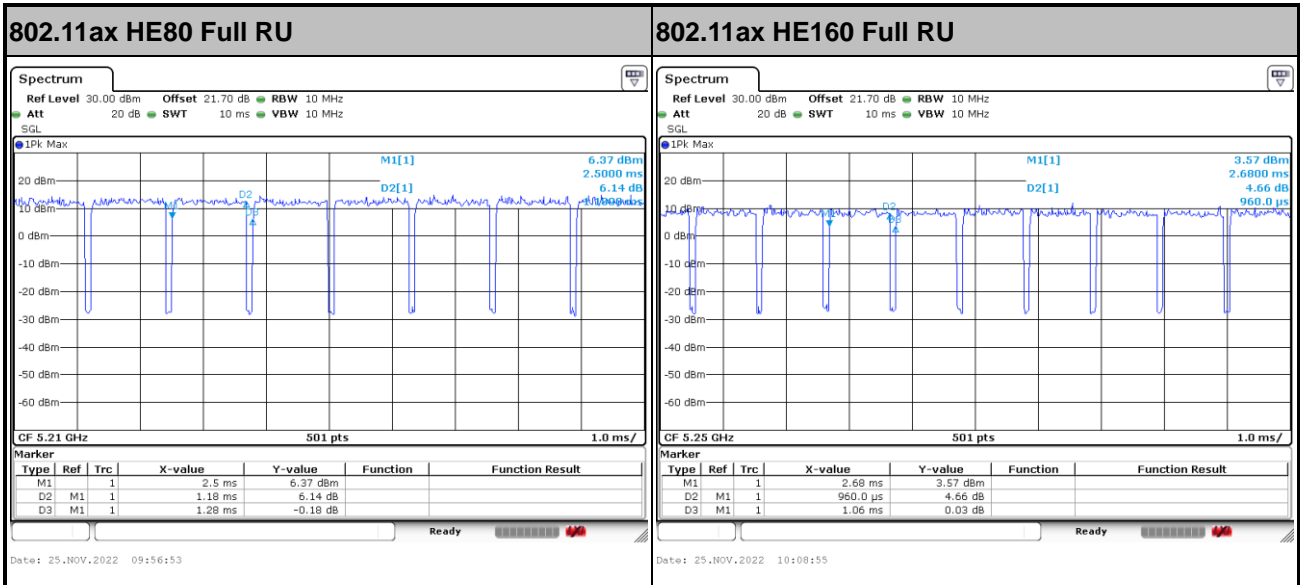
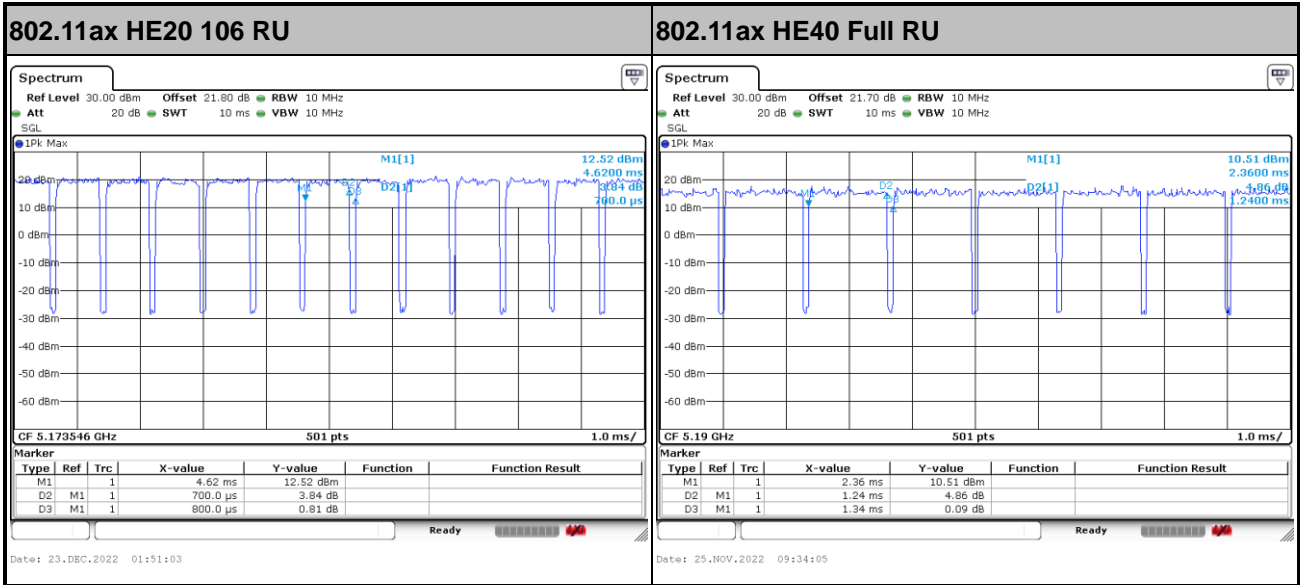
**<For Conducted test>**

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



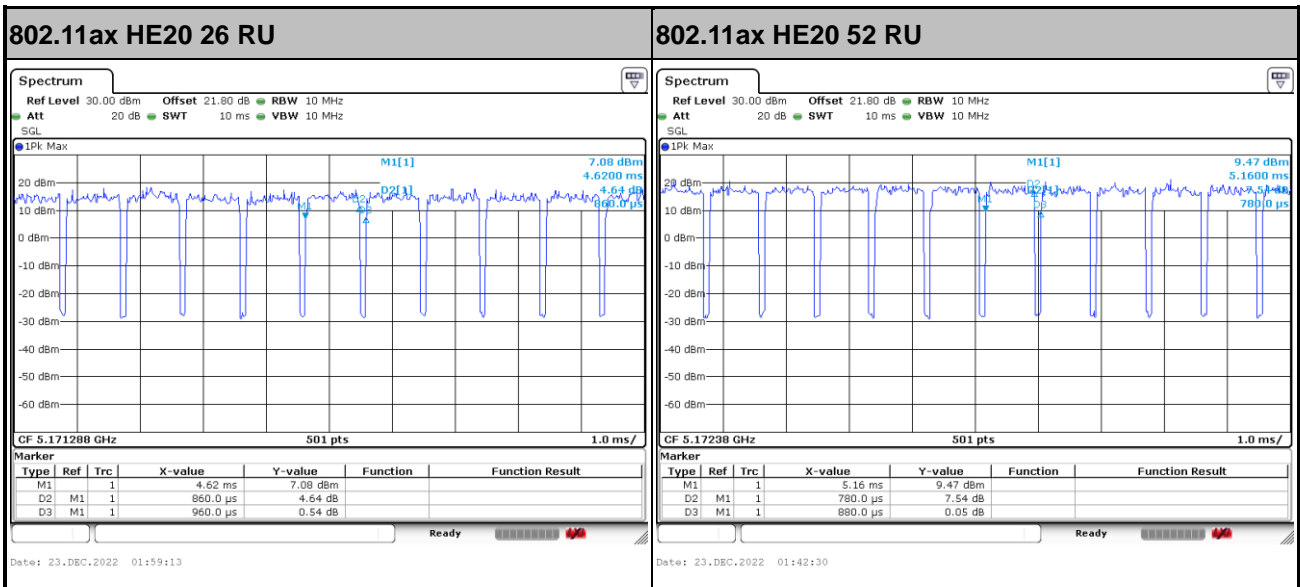
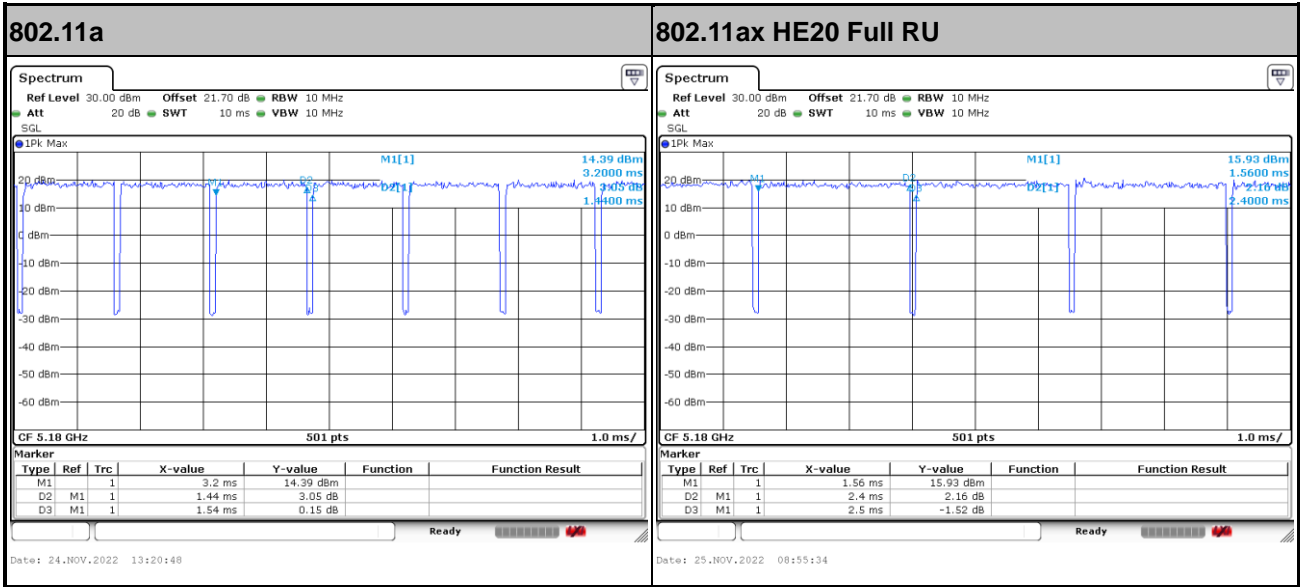
MIMO <Ant. 3>

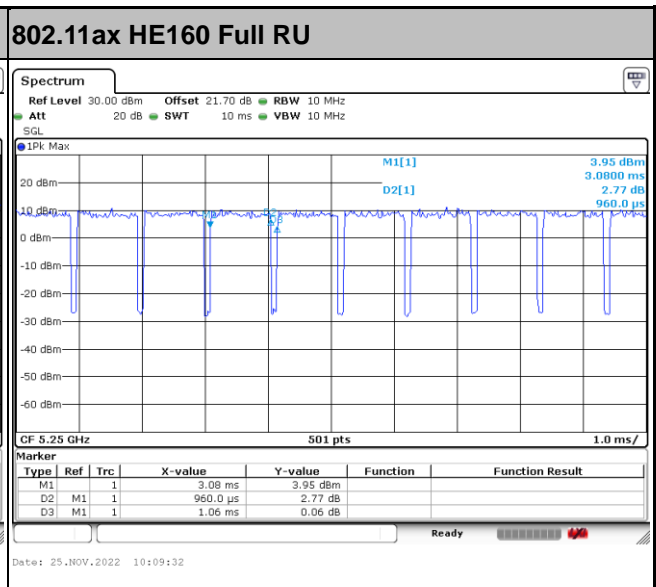
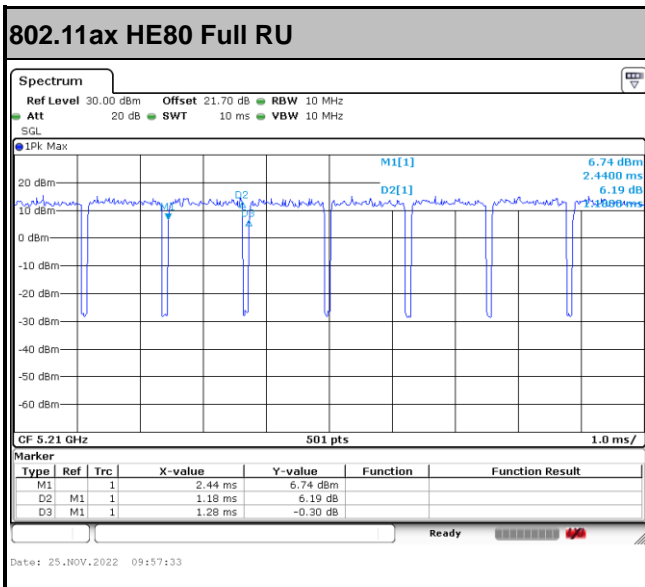
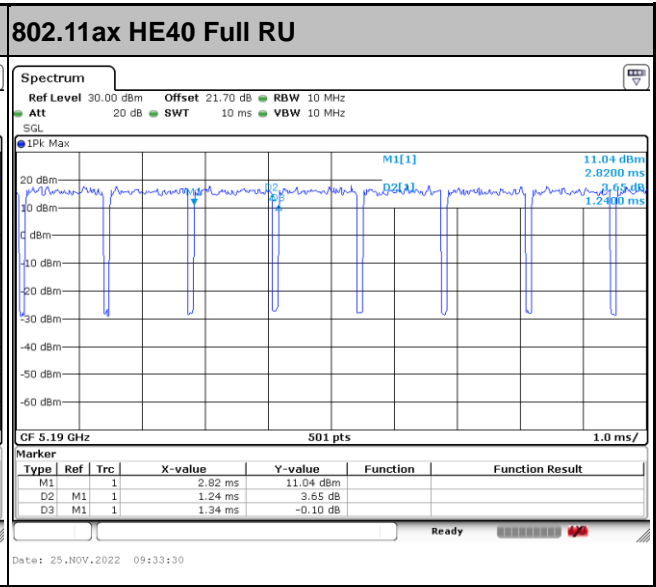
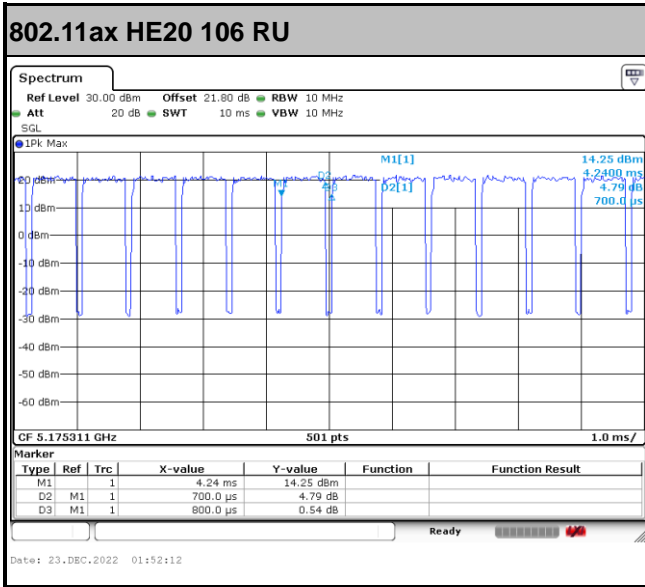






MIMO <Ant. 4>





—THE END—