



FCC RADIO TEST REPORT

FCC ID : 2AEM4-71213573
Equipment : Wireless router/access point
Brand Name : eero
Model Name : S010001
Applicant : eero LLC
660 3rd Street, 4th Floor, San Francisco, CA 94107
Manufacturer : eero LLC
660 3rd Street, 4th Floor, San Francisco, CA 94107
Standard : FCC Part 15 Subpart E §15.407

The product was received on Aug. 10, 2021 and testing was started from Aug. 11, 2021 and completed on Oct. 18, 2021. We, Sporton International (USA) Inc., 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 of Sporton International (USA) Inc., the test report shall not be reproduced except in full.

Approved by: Neil Kao

Sporton International (USA) Inc.
1175 Montague Expressway, Milpitas, CA 95035



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History of this test report

Report No.	Version	Description	Issued Date
FR210727001D	01	Initial issue of report	Nov. 26, 2021
FR210727001D	02	1. Revise typo 2. Add description in section 2 3. Revise description in section 3.6.3	Dec. 02, 2021
FR210727001D	03	1. Revise test data 2. Revise some content of descriptions	Dec. 20, 2021

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403(i)	26dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.407(a)	Maximum Conducted Output Power	Pass	-
3.3	15.407(a)	Power Spectral Density	Pass	-
3.4	15.407(b)	Unwanted Emissions	Pass	Under limit 0.17 dB at 5150.000 MHz
3.5	15.207	AC Conducted Emission	Pass	Under limit 9.88 dB at 0.492 MHz
3.6	15.203 15.407(a)	Antenna Requirement	Pass	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.

1 General Description

1.1 Product Feature of Equipment Under Test

The EUT is an indoor AP with radios including Bluetooth - LE, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac/ax, 802.15.4 (Zigbee), equipped with integrated antennas configured below:

Antenna configuration		
Antenna Type	WLAN 2.4GHz	
	<Ant. 6>: Flexible PCB Antenna	
	<Ant. 3>: Flexible PCB Antenna	
	WLAN 5GHz	
	<Ant. 4>: Flexible PCB Antenna	
	<Ant. 5>: Flexible PCB Antenna	
	Bluetooth: Flexible PCB Antenna	
	Zigbee: Flexible PCB Antenna	
Antenna information		
5150 MHz ~ 5250 MHz	Peak Gain (dBi)	<Ant. 4>: 5.71 <Ant. 5>: 4.78

Remark: The above EUT's information is declared by the manufacturer. Please refer to Comments and Explanations in report summary.

Specification of Accessories				
Adapter 1	Brand Name	eero	Model Name	C210001
Adapter 2	Brand Name	eero	Model Name	C210003
Adapter 3	Brand Name	eero	Model Name	C210004
Adapter 4	Brand Name	eero	Model Name	C210005

Remark: The manufacturer declares that all the power supplies listed are electrically identical from one another, the only difference between all the models are the plugs designed for use in different countries. All the test is performed with only one power supply, model C210001 as shown in this report.

1.2 Modification of EUT

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



1.3 Testing Location

Test Site	Sporton International (USA) Inc.
Test Site Location	1175 Montague Expressway Milpitas, CA 95035 TEL: 408-904-3300
Test Site No.	Sporton Site No. TH01-CA, CO01-CA, 03CH02-CA

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

1.4 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.
- ♦ ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. 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).
Radiated measurements are performed in one orientation which is plane X according to the prescribed placement of the device in normal operation declared by the manufacturer.
- b. In order to find out the worst scenario, radiated measurements are performed using the maximum power settings which are configurable in EUT's test mode requested by the manufacturer, the settings used for testing are either larger or equal to the power settings configured in bulk production to ensure compliance.
- c. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

BW 20M	Channel	36	40	44	48
	Freq. (MHz)	5180	5200	5220	5240
BW 40M	Channel	38		46	
	Freq. (MHz)	5190		5230	
BW 80M	Channel	42			
	Freq. (MHz)	5210			

2.2 Test Mode

All modulation schemes/data rate are verified by conducted power test case, and the modulation schemes with highest power is used for all test cases. The final test items are considering the modulation schemes and worse data rates as the table below.

The manufacturer declares that this product would only operate in 2Tx CDD mode, hence all the test cases are performed as instructed.

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
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0

Note: The 802.11ax covers the 802.11n and 11ac due to same modulation family scheme. For 802.11ax, only full resource unit assignment mode is tested since EUT doesn't support partial resource unit assignment mode.

AC Conducted Emission Test Cases is listed in the following table:

AC Conducted Emission Test Cases
Mode 1: :WLAN (5GHz) Link + Zigbee Link + LAN 1 Link + LAN 2 Link + Charging from Adapter

RF test channels are listed in the following table:

Ch. #		RF test channel of UNII-1
		802.11a
L	Low	36
M	Middle	44
H	High	48
Straddle		-

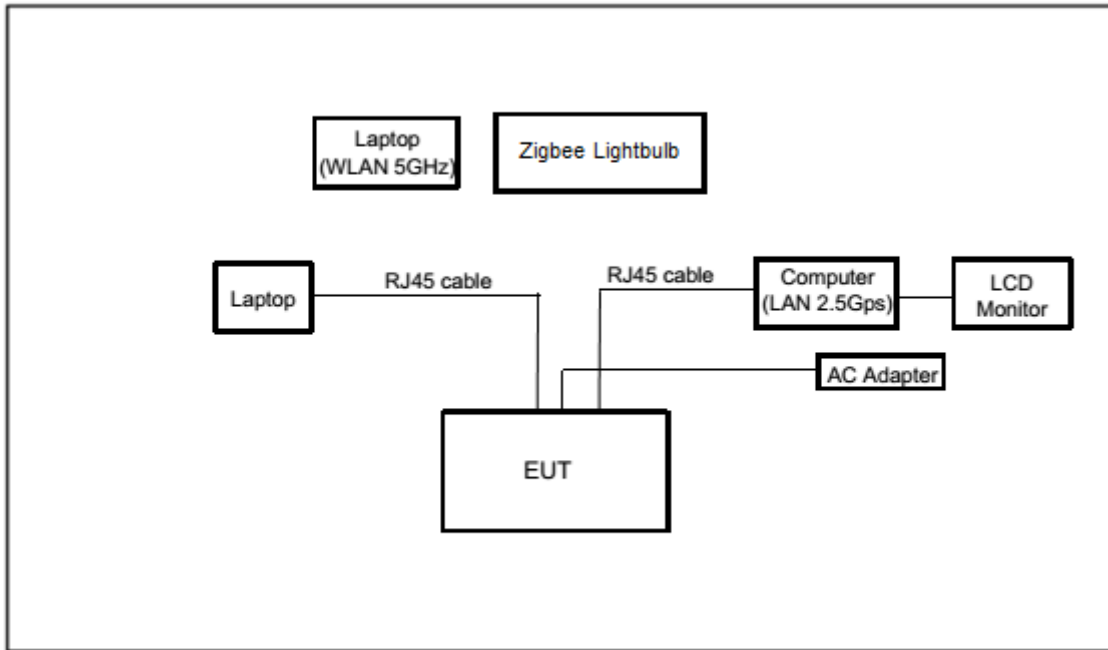
Ch. #		RF test channel of UNII-1
		802.11ax HE20
L	Low	36
M	Middle	44
H	High	48
Straddle		-

Ch. #		RF test channel of UNII-1
		802.11ax HE40
L	Low	38
M	Middle	-
H	High	46
Straddle		-

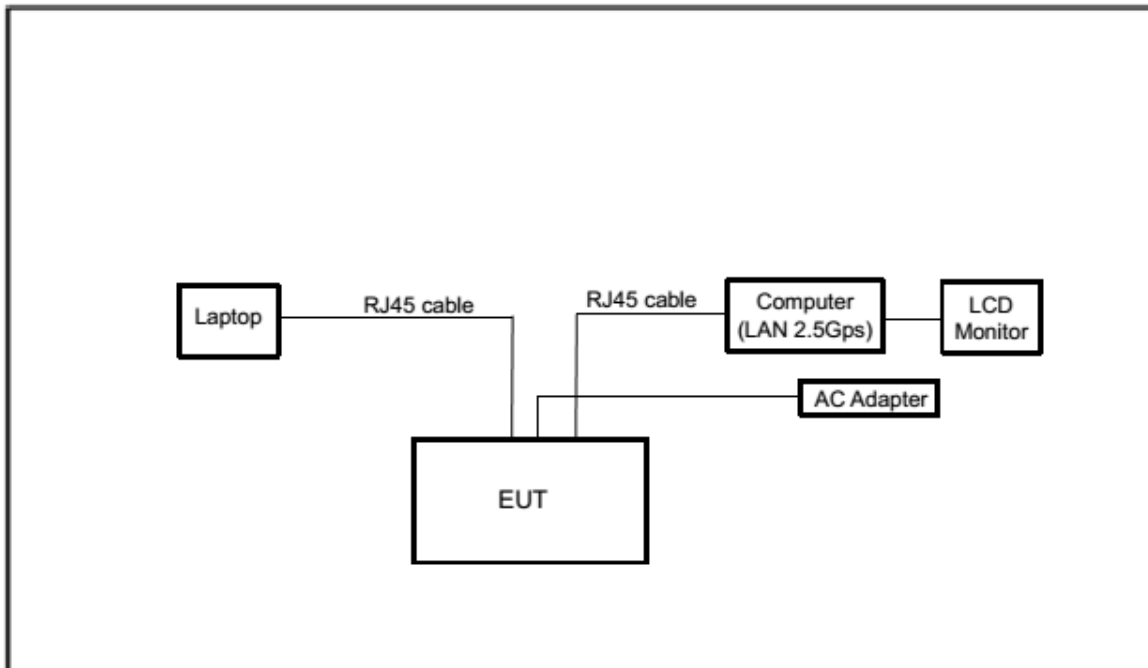
Ch. #		RF test channel of UNII-1
		802.11ax HE80
L	Low	-
M	Middle	42
H	High	-
Straddle		-

2.3 Connection Diagram of Test System

<AC Conducted Emission Mode>



<Radiated Emission Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	Acer	PS548 G1	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
2.	Notebook	HP	14-dq1043cl	TX2-RTL8822CE	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Notebook	ThinkPad	ThinkPad X1 Carbon Gen 8	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Computer	Fractal	FD-C-DEF7A-01 (NETINTX550TR Intel X550T2BLK)	FCC DoC	N/A	Unshielded, 1.2m
5.	LCD Monitor	Samsung	LS27E310HZG/ZA	FCC DoC	N/A	Unshielded, 1.2m
6.	LightBulb for Zigbee	Philips	Hue	N/A	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “QRCT4:4.0.00189.0” 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 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

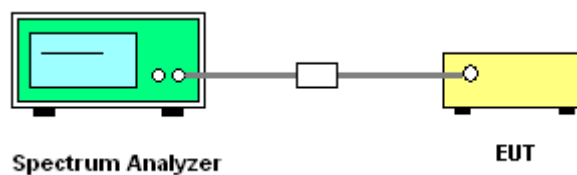
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) $\geq 3 * RBW$.
8. Measure and record the results in the test report.

3.1.4 Test Setup

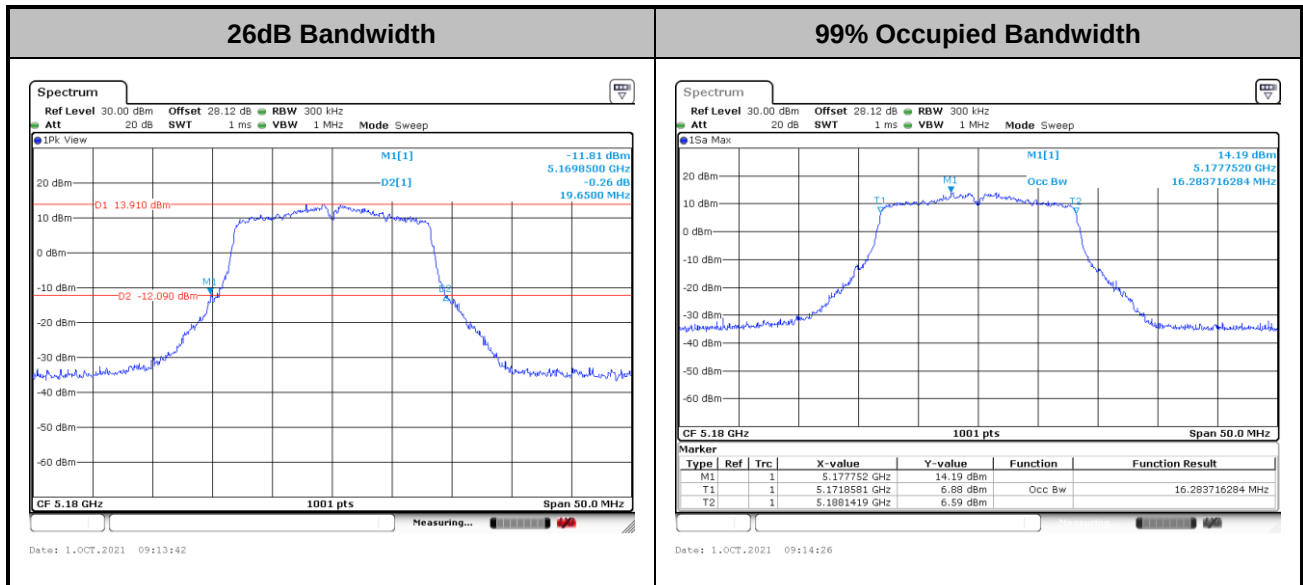


3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

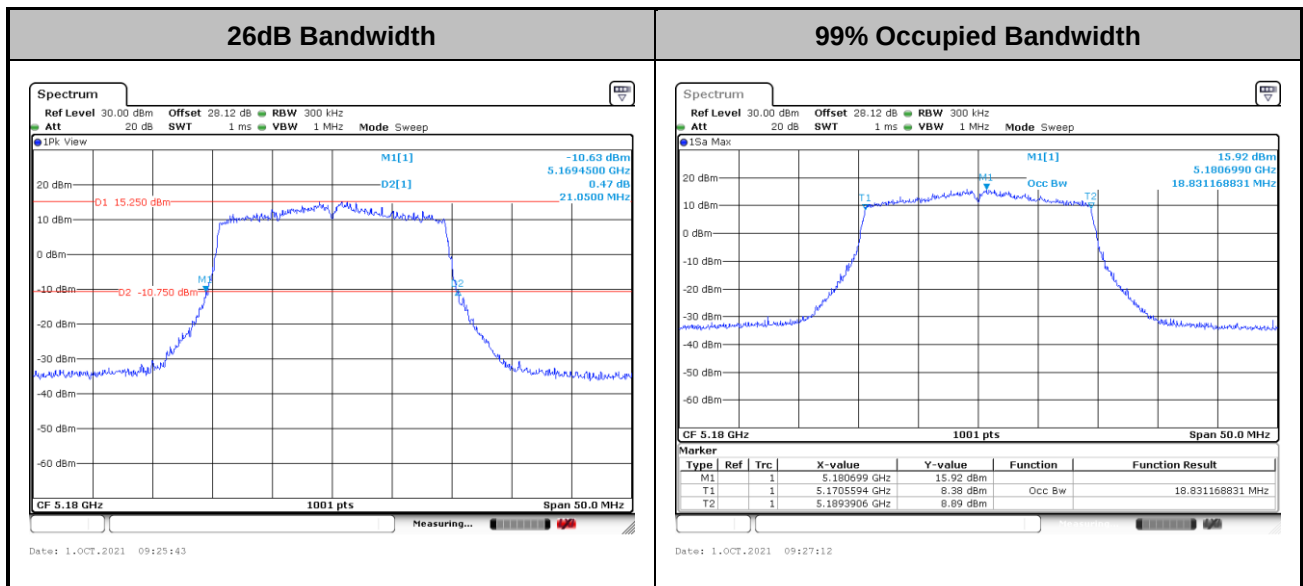
Please refer to Appendix A.



802.11a CH36

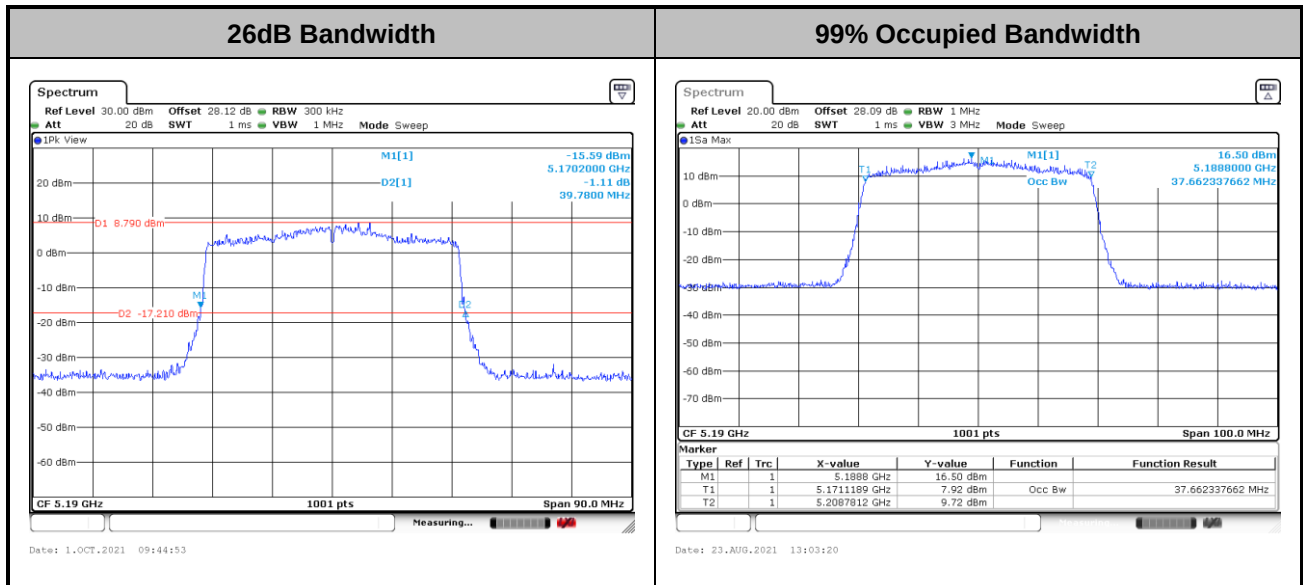


802.11ax HE20 CH36

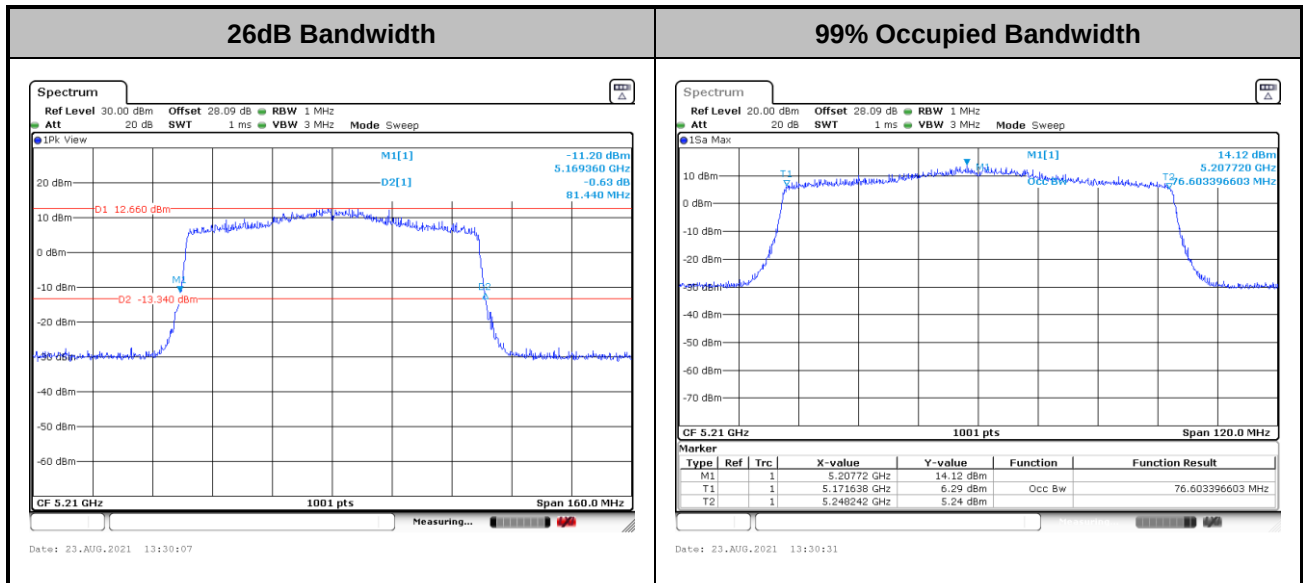




802.11ax HE40 CH38



802.11ax HE80 CH42



3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

For the 5.15–5.25 GHz bands:

■ For mobile and portable client devices in the 5.15 – 5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

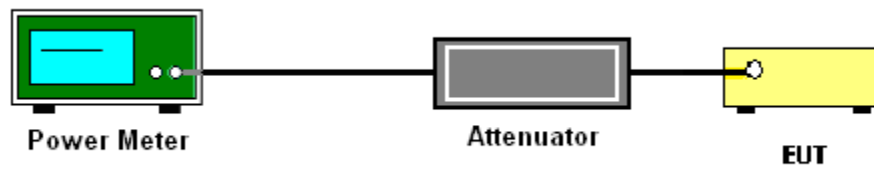
3.2.3 Test Procedures

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

<FCC 14-30 CFR 15.407>

For the 5.15–5.25 GHz bands:

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1.0 MHz band. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1.0 MHz band.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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-3

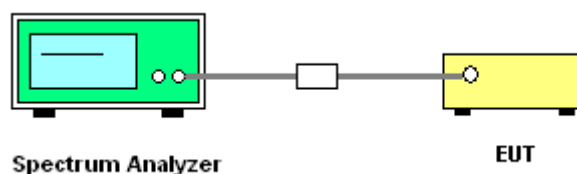
(power averaging (rms) detection with max hold):

- 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 $\leq$ (number of points in sweep) $\times$ 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.
Detector = power averaging (rms).
 - Trace mode = max hold.
 - Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
1. The RF output of EUT was 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

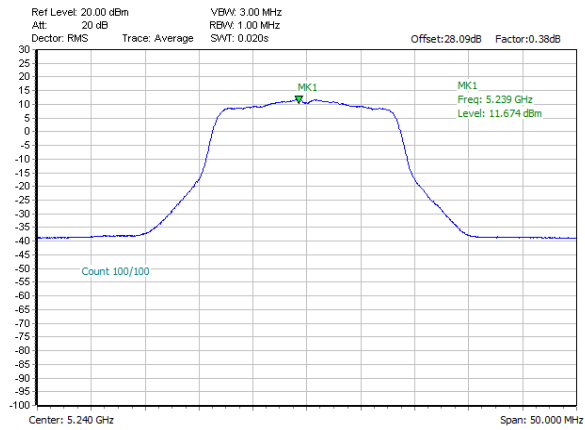
Please refer to Appendix A.



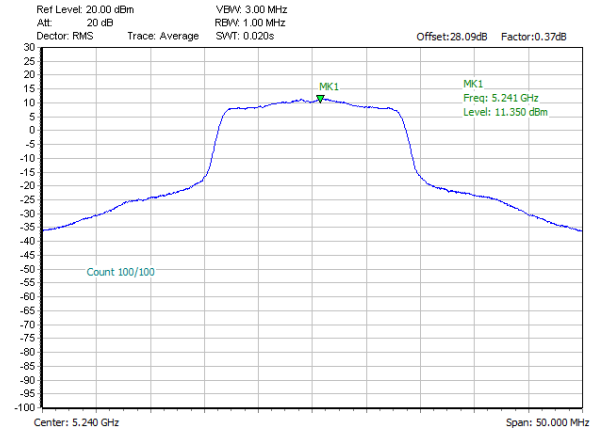
Worst Case Power Density

802.11a CH48

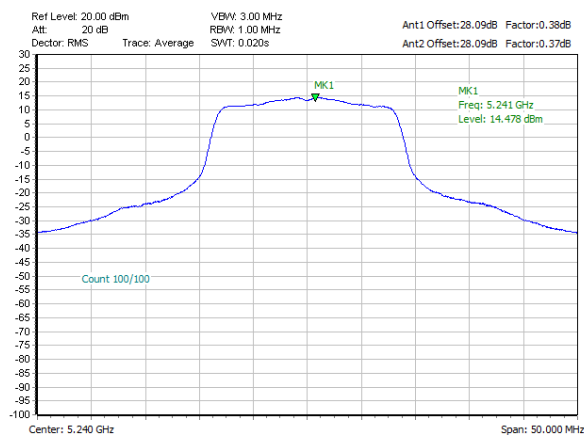
MIMO Ant. 4



MIMO Ant. 5



MIMO Ant. 4+5

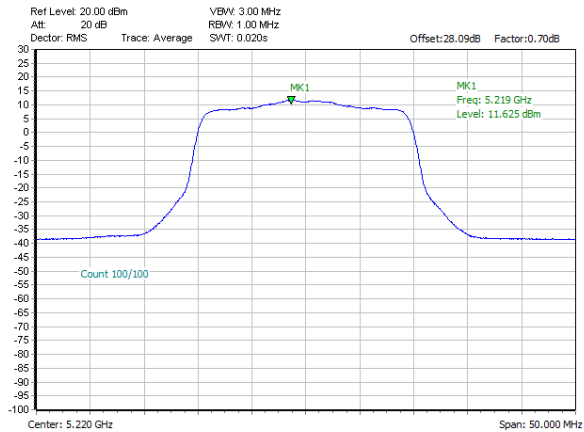




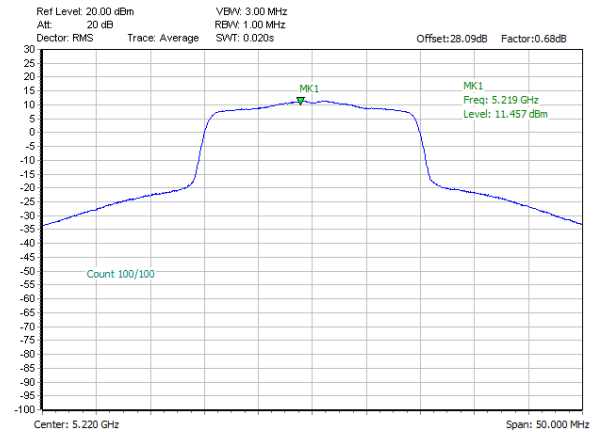
Worst Case Power Density

802.11ax HE20 CH44

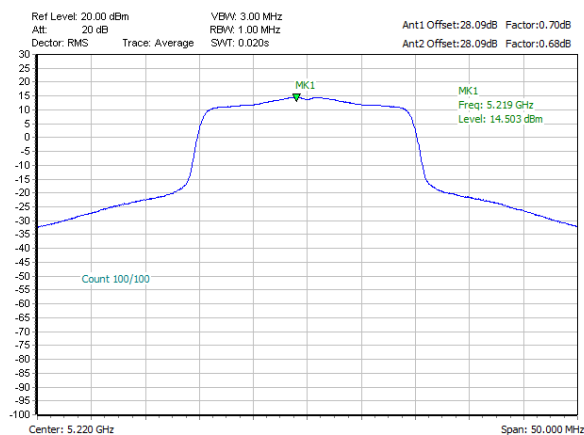
MIMO Ant. 4



MIMO Ant. 5



MIMO Ant. 4+5



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) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27dBm/MHz.
- (2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as 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.

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

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.2

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

(i) Sections 15.407(b)(1-3) specifies the unwanted emissions limit for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz..

3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Section G) Unwanted emissions measurement.

(1) Procedure for Unwanted Emissions Measurements Below 1000 MHz

- RBW = 120 kHz
- VBW = 300 kHz
- Detector = Peak
- Trace mode = max hold

(2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

- RBW = 1 MHz
- VBW ≥ 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

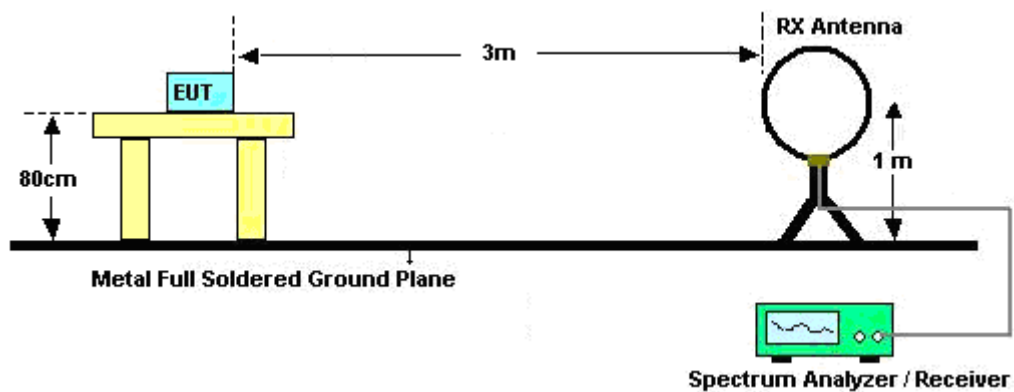
(3) Procedures for Average Unwanted Emissions Measurements Above 1000 MHz

- 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.

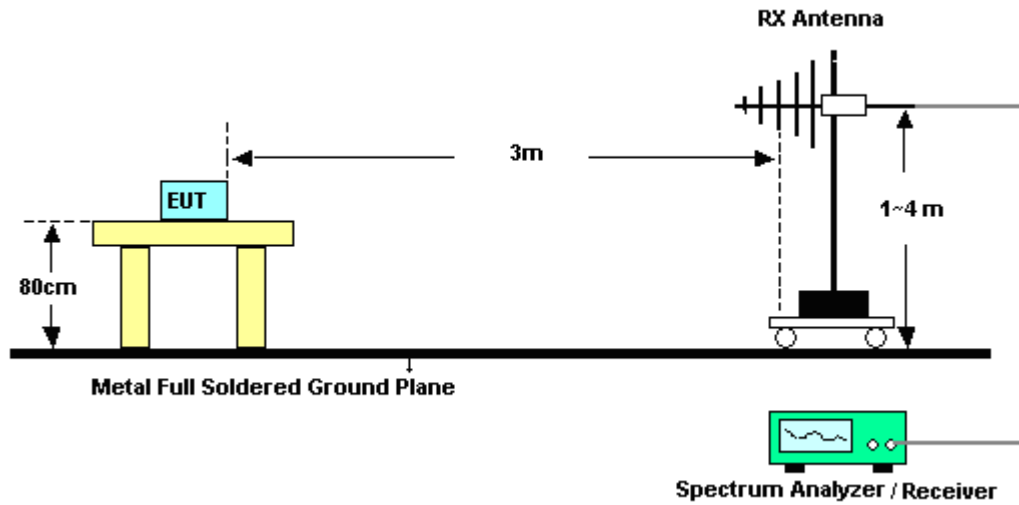
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT was placed at distance 3 meter from measurement antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband 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 0degree 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 0degree 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

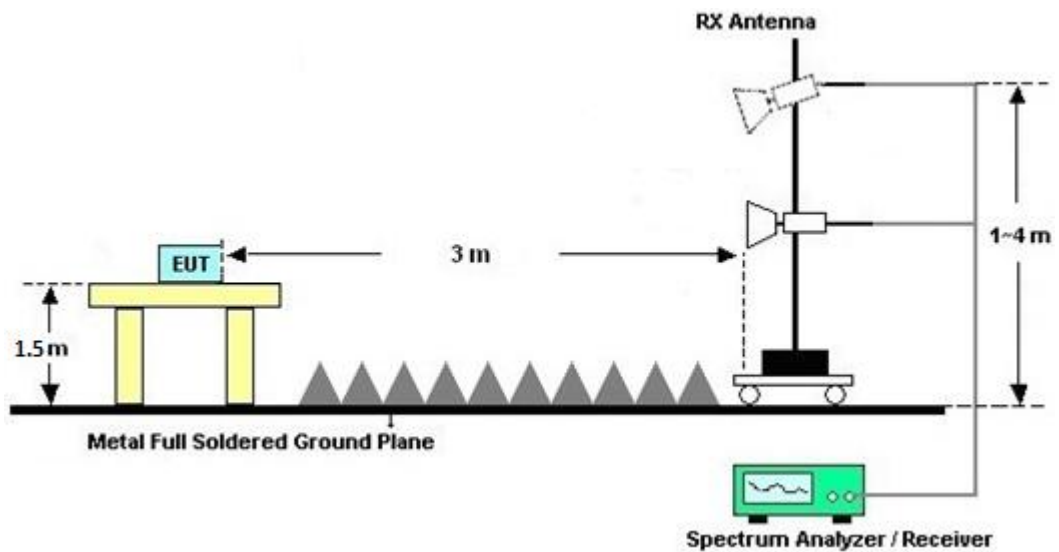
For radiated emissions below 30MHz



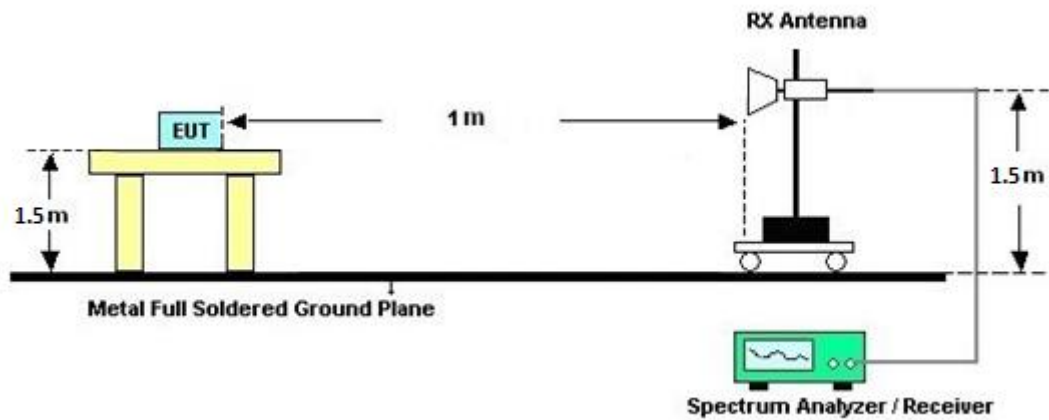
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



3.4.5 Test Results of Radiated Spurious 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 Spurious at 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 Radiated Spurious Emissions (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 (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

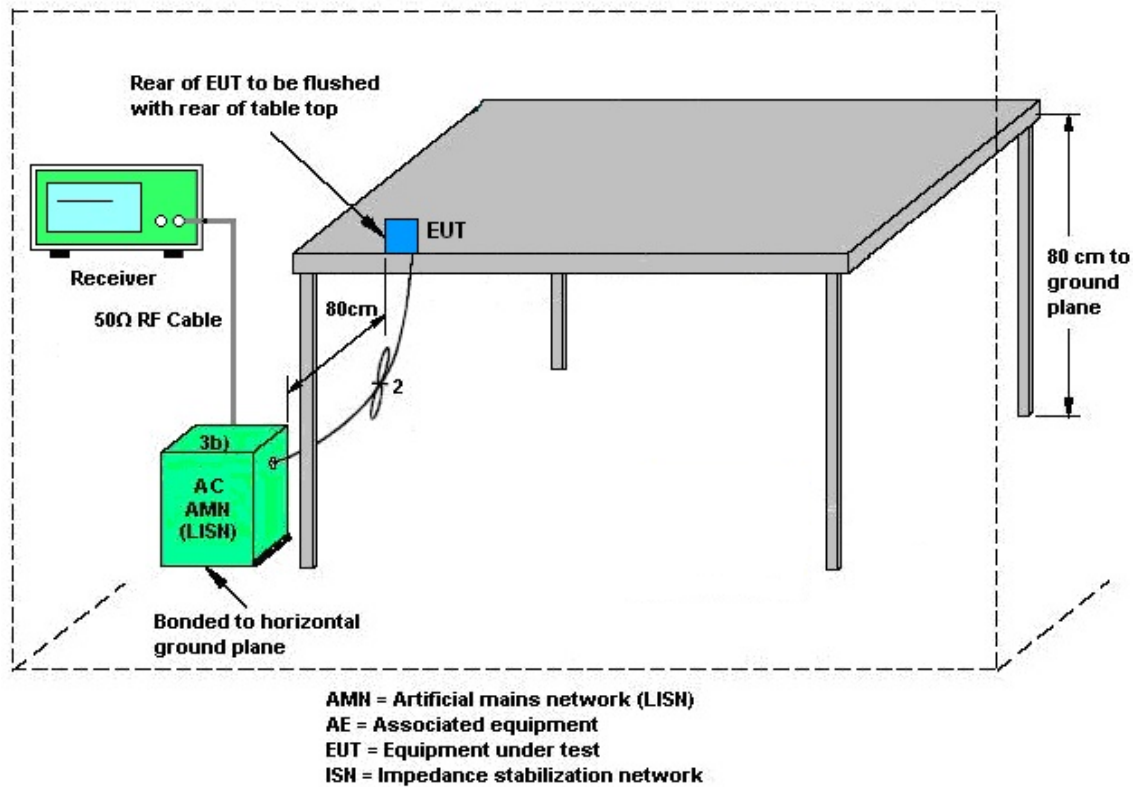
3.5.2 Measuring Instruments

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

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.6.3 Antenna Gain

Refer to FCC KDB 662911 D01 Multiple Transmitter Output v02r01

<CDD Modes >

For power measurements on IEEE 802.11 devices,

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

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

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

For PSD measurements, the directional gain calculation follows F2)f)ii) of KDB 662911 D01 v02r01.

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

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 k th antenna is being fed by spatial stream j , or zero if it is not;
 G_k is the gain in dBi of the k th antenna.

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

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

Where $G_1, G_2, \dots, G_N$ denote single antenna gain.

For example: If a device has two antenna, $G_{ANT1} = 3.6$ dBi; $G_{ANT2} = 4.2$ dBi

Directional gain of power measurement = $\max(3.6, 4.2) + 0 = 4.2$ dBi

Directional gain of PSD measurement = $10 \cdot \log[(10^{3.6/20} + 10^{4.2/20})^2 / 2] = 6.92$ dBi

The directional gain of EUT is listed in the following table.

<CDD Modes>						
			DG	DG	Power	PSD
			for	for	Limit	Limit
	Ant. 4	Ant. 5	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
Band I	5.71	4.78	5.71	8.27	0.00	2.27

Calculation example:

Directional gain of PSD measurement =

$$10 \times \log \{ [10^{(5.71\text{dBi}/20)} + 10^{(4.78\text{dBi}/20)}]^2 / 2 \} = 8.07 \text{ dBi}$$



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	R&S	HFH2-Z2E	100840	9kHz~30MHz	Jun. 21, 2021	Aug. 11, 2021~ Oct. 18, 2021	Jun. 20, 2022	Radiation (03CH02-CA)
Bilog Antenna	TESEQ	6111D	50392	30MHz~1GHz	Aug. 10, 2021	Aug. 11, 2021~ Oct. 18, 2021	Aug. 09, 2022	Radiation (03CH02-CA)
Horn Antenna	SCHWARZBECK	BBHA 9120D	02113	1GHz~18GHz	Jul. 08, 2021	Aug. 11, 2021~ Oct. 18, 2021	Jul. 07, 2022	Radiation (03CH02-CA)
Horn Antenna	SCHWARZBECK	BBHA 9170D	00842	18GHz~40GHz	Jul. 20, 2021	Aug. 11, 2021~ Oct. 18, 2021	Jul. 19, 2022	Radiation (03CH02-CA)
Amplifier	SONOMA	310N	372240	N/A	Aug. 09, 2021	Aug. 11, 2021~ Oct. 18, 2021	Aug. 08, 2022	Radiation (03CH02-CA)
Preamplifier	Keysight	83017A	MY53270323	1GHz~26.5GHz	Jul. 27, 2021	Aug. 11, 2021~ Oct. 18, 2021	Jul. 26, 2022	Radiation (03CH02-CA)
Preamplifier	E-instrument	ERA-100M-18 G-56-01-A70	EC1900251	1GHz~18GHz	Mar. 30, 2021	Aug. 11, 2021~ Oct. 18, 2021	Mar. 29, 2022	Radiation (03CH02-CA)
Preamplifier	Jet-Power	JPA0118-55-30 3	17100018000 55004	1GHz~18GHz	Jul. 21, 2021	Aug. 11, 2021~ Oct. 18, 2021	Jul. 20, 2022	Radiation (03CH02-CA)
Preamplifier	EMEC	EMC18G40G	60725	18GHz~40GHz	Jul. 21, 2021	Aug. 11, 2021~ Oct. 18, 2021	Jul. 20, 2022	Radiation (03CH02-CA)
Spectrum Analyzer	Keysight	N9010A	MY54200485	10Hz~44GHz	Mar. 05, 2021	Aug. 11, 2021~ Oct. 18, 2021	Mar. 04, 2022	Radiation (03CH02-CA)
Filter	Wainwright	WHKX8-5872. 5-6750-18000- 40ST	SN08	6.75GHz High Pass Filter	Jul. 23, 2021	Aug. 11, 2021~ Oct. 18, 2021	Jul. 22, 2022	Radiation (03CH02-CA)
Filter	Wainwright	WHKX12-2700 -3000-18000-6 0ST	SN10	3 GHz High Pass Filter	Jul. 23, 2021	Aug. 11, 2021~ Oct. 18, 2021	Jul. 22, 2022	Radiation (03CH02-CA)
Filter	Wainwright	WLK12-1200-1 272-11000-40 SS	SN1	1.2G Low Pass	Jul. 23, 2021	Aug. 11, 2021~ Oct. 18, 2021	Jul. 22, 2022	Radiation (03CH02-CA)
Hygrometer	TESEO	608-H1	45142602	N/A	Aug. 04, 2021	Aug. 11, 2021~ Oct. 18, 2021	Aug. 03, 2022	Radiation (03CH02-CA)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Aug. 11, 2021~ Oct. 18, 2021	N/A	Radiation (03CH02-CA)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Aug. 11, 2021~ Oct. 18, 2021	N/A	Radiation (03CH02-CA)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Aug. 11, 2021~ Oct. 18, 2021	N/A	Radiation (03CH02-CA)
Software	Audix	E3	N/A	N/A	N/A	Aug. 11, 2021~ Oct. 18, 2021	N/A	Radiation (03CH02-CA)
Hygrometer	Testo	608-H1	45141354	N/A	Jul. 30, 2021	Aug. 19, 2021~ Nov. 18, 2021	Jul. 29, 2022	Conducted (TH01-CA)
Power Sensor	DARE!!	RPR3006W	RPR6W-1901 024	10MHz~6GHz	Jul. 13, 2021	Aug. 19, 2021~ Nov. 18, 2021	Jul. 12, 2022	Conducted (TH01-CA)
Switch	EM Electronics	EMSW18	SW1070902	N/A	Aug. 03, 2021	Aug. 19, 2021~ Nov. 18, 2021	Aug. 02, 2022	Conducted (TH01-CA)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101545	10Hz~40GHz	Jun. 01, 2021	Aug. 19, 2021~ Nov. 18, 2021	May 31, 2022	Conducted (TH01-CA)
LISN	TESEQ	NNB51	47407	N/A	Jul. 21, 2021	Aug. 16, 2021~ Aug. 17, 2021	Jul. 20, 2022	Conduction (CO01-CA)
LISN	TESEQ	NNB51	47415	N/A	Jun. 30, 2021	Aug. 16, 2021~ Aug. 17, 2021	Jun. 29, 2022	Conduction (CO01-CA)
EMI Test Receiver	R&S	ESR7	102177	9KHz~7GHz	Jun. 02, 2021	Aug. 16, 2021~ Aug. 17, 2021	Jun. 01, 2022	Conduction (CO01-CA)
Pulse limiter with 10dB attenuation	R&S	VTSD 9561-F N	9561-F- N00412	N/A	Jul. 07, 2021	Aug. 16, 2021~ Aug. 17, 2021	Jul. 06, 2022	Conduction (CO01-CA)
Test Software	R&S	EMC32 V10.30.0	N/A	N/A	N/A	Aug. 16, 2021~ Aug. 17, 2021	N/A	Conduction (CO01-CA)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.0 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.7 dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.2 dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.4 dB
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Steve Chen	Temperature:	18.6~23.3	°C
Test Date:	2021/8/19~2021/11/18	Relative Humidity:	34.1~53.8	%

TEST RESULTS DATA
26dB and 99% OBW

UNII-1 MIMO													
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		Note
					Ant 4	Ant 5	Ant 4	Ant 5	Ant 4	Ant 5	Ant 4	Ant 5	
11a	6Mbps	2	36	5180	16.28	16.28	19.65	18.80	-		22.12		
11a	6Mbps	2	44	5220	16.28	16.28	19.55	18.70	-		22.12		
11a	6Mbps	2	48	5240	16.33	16.28	19.05	18.90	-		22.12		

TEST RESULTS DATA
Average Power Table

FCC UNII-1 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 4	Ant 5	SUM	Ant 4	Ant 5	Ant 4	Ant 5	
11a	6Mbps	2	36	5180	22.09	22.19	25.15	30.00		5.71		Pass
11a	6Mbps	2	44	5220	22.09	21.69	24.90	30.00		5.71		Pass
11a	6Mbps	2	48	5240	22.39	21.99	25.20	30.00		5.71		Pass
HT20	MCS0	2	36	5180	21.59	21.69	24.65	30.00		5.71		Pass
HT20	MCS0	2	44	5220	22.09	21.79	24.95	30.00		5.71		Pass
HT20	MCS0	2	48	5240	21.99	21.69	24.85	30.00		5.71		Pass
HT40	MCS0	2	38	5190	17.69	17.29	20.50	30.00		5.71		Pass
HT40	MCS0	2	46	5230	23.99	23.99	27.00	30.00		5.71		Pass
VHT20	MCS0	2	36	5180	21.59	21.69	24.65	30.00		5.71		Pass
VHT20	MCS0	2	44	5220	22.09	21.89	25.00	30.00		5.71		Pass
VHT20	MCS0	2	48	5240	21.99	21.59	24.80	30.00		5.71		Pass
VHT40	MCS0	2	38	5190	17.59	17.19	20.40	30.00		5.71		Pass
VHT40	MCS0	2	46	5230	24.39	24.29	27.35	30.00		5.71		Pass
VHT80	MCS0	2	42	5210	17.59	16.99	20.31	30.00		5.71		Pass

TEST RESULTS DATA
Power Spectral Density

FCC UNII-1 MIMO										
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)		DG (dBi)		Pass /Fail
					SUM	Ant 4	Ant 5	Ant 4	Ant 5	
11a	6Mbps	2	36	5180	14.24	14.73		8.27		Pass
11a	6Mbps	2	44	5220	14.25	14.73		8.27		Pass
11a	6Mbps	2	48	5240	14.48	14.73		8.27		Pass

TEST RESULTS DATA
26dB and 99% OBW

UNII-1 MIMO														
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	RU Config	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		Note
						Ant 4	Ant 5	Ant 4	Ant 5	Ant 4	Ant 5	Ant 4	Ant 5	
HE20	MCS0	2	36	5180	Full	18.83	18.83	21.05	20.90	-	-	22.75	-	
HE20	MCS0	2	44	5220	Full	18.83	18.83	21.10	20.85	-	-	22.75	-	
HE20	MCS0	2	48	5240	Full	18.83	18.83	21.00	21.05	-	-	22.75	-	
HE40	MCS0	2	38	5190	Full	37.66	37.76	39.78	39.78	-	-	23.01	-	
HE40	MCS0	2	46	5230	Full	37.66	37.76	39.78	39.96	-	-	23.01	-	
HE80	MCS0	2	42	5210	Full	76.60	76.72	81.44	81.28	-	-	23.01	-	

TEST RESULTS DATA
Average Power Table

FCC UNII-1 MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
						Ant 4	Ant 5	SUM	Ant 4	Ant 5	Ant 4	Ant 5	
HE20	MCS0	2	36	5180	Full	21.79	21.99	24.90	30.00		5.71		Pass
HE20	MCS0	2	44	5220	Full	22.29	22.09	25.20	30.00		5.71		Pass
HE20	MCS0	2	48	5240	Full	22.19	21.99	25.10	30.00		5.71		Pass
HE40	MCS0	2	38	5190	Full	17.79	17.39	20.60	30.00		5.71		Pass
HE40	MCS0	2	46	5230	Full	24.89	24.59	27.75	30.00		5.71		Pass
HE80	MCS0	2	42	5210	Full	17.59	17.09	20.36	30.00		5.71		Pass

TEST RESULTS DATA
Power Spectral Density

FCC UNII-1 MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config	Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)		Pass /Fail
						Ant 4	Ant 5	SUM	Ant 4	Ant 5	Ant 4	Ant 5	
HE20	MCS0	2	36	5180	Full			14.25	14.73	8.27			Pass
HE20	MCS0	2	44	5220	Full			14.50	14.73	8.27			Pass
HE20	MCS0	2	48	5240	Full			14.36	14.73	8.27			Pass
HE40	MCS0	2	38	5190	Full			6.84	14.73	8.27			Pass
HE40	MCS0	2	46	5230	Full			14.27	14.73	8.27			Pass
HE80	MCS0	2	42	5210	Full			4.65	14.73	8.27			Pass



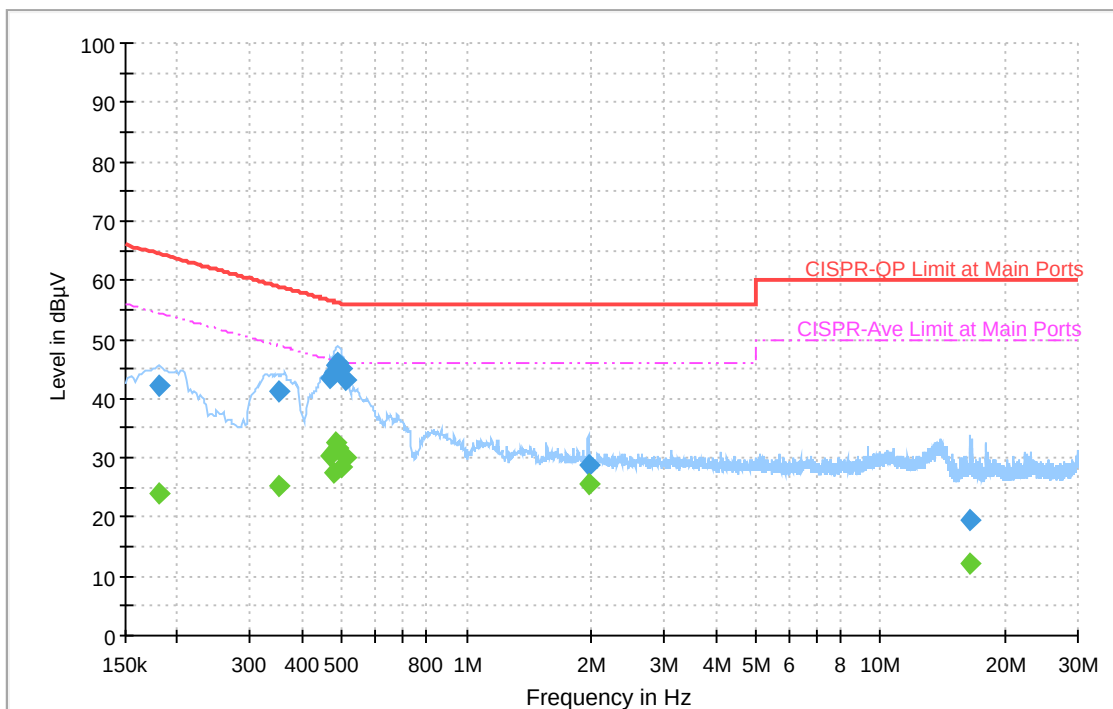
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Jordan Huang	Temperature :	24~46°C
		Relative Humidity :	43~47%

EUT Information

Site: CO01-CA
Power: 120Vac/60Hz
Mode: 1

Full Spectrum



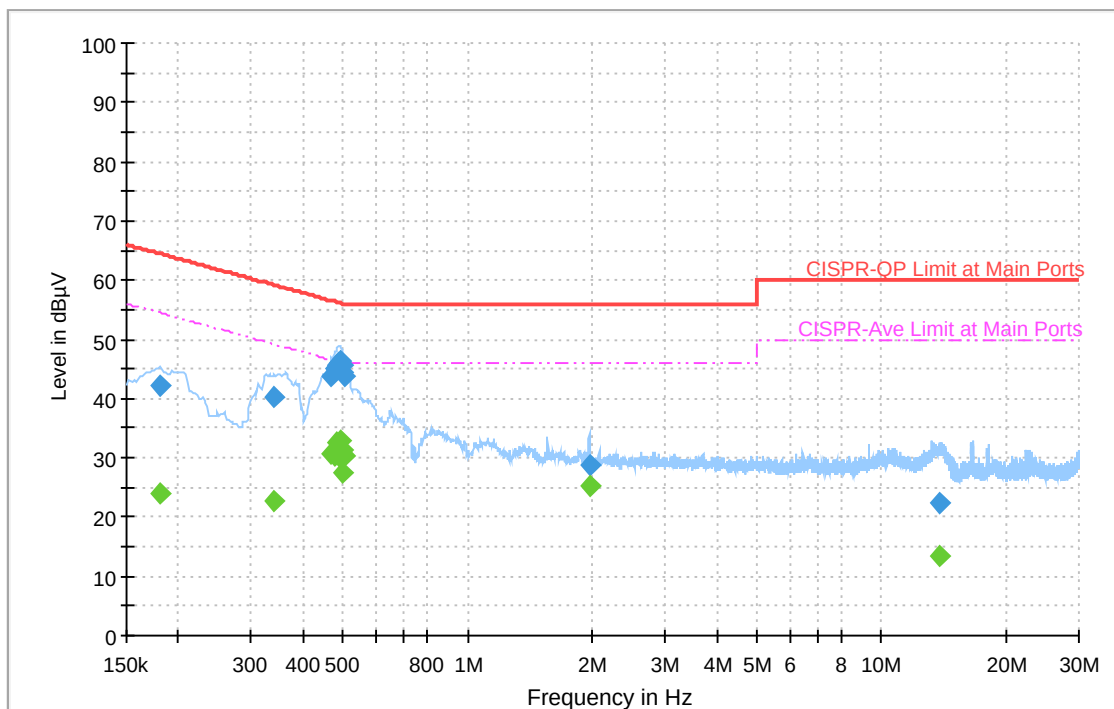
Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.181500	---	23.99	54.42	30.43	L1	OFF	20.3
0.181500	42.32	---	64.42	22.10	L1	OFF	20.3
0.350250	---	25.38	48.96	23.58	L1	OFF	20.3
0.350250	41.18	---	58.96	17.78	L1	OFF	20.3
0.469500	---	30.24	46.52	16.28	L1	OFF	20.3
0.469500	43.43	---	56.52	13.09	L1	OFF	20.3
0.476250	---	27.40	46.40	19.00	L1	OFF	20.3
0.476250	44.45	---	56.40	11.95	L1	OFF	20.3
0.483000	---	32.58	46.29	13.71	L1	OFF	20.3
0.483000	45.71	---	56.29	10.58	L1	OFF	20.3
0.489750	---	31.76	46.17	14.41	L1	OFF	20.3
0.489750	46.16	---	56.17	10.01	L1	OFF	20.3
0.498750	---	28.58	46.02	17.44	L1	OFF	20.3
0.498750	44.91	---	56.02	11.11	L1	OFF	20.3
0.507750	---	29.99	46.00	16.01	L1	OFF	20.3
0.507750	43.28	---	56.00	12.72	L1	OFF	20.3
1.965750	---	25.53	46.00	20.47	L1	OFF	20.3
1.965750	28.91	---	56.00	27.09	L1	OFF	20.3
16.417500	---	12.09	50.00	37.91	L1	OFF	20.6
16.417500	19.43	---	60.00	40.57	L1	OFF	20.6

EUT Information

Site: CO01-CA
Power: 120Vac/60Hz
Mode: 1

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.181500	42.22	---	64.42	22.20	N	OFF	20.2
0.181500	---	23.94	54.42	30.48	N	OFF	20.2
0.341250	40.41	---	59.17	18.76	N	OFF	20.3
0.341250	---	22.72	49.17	26.45	N	OFF	20.3
0.469500	43.63	---	56.52	12.89	N	OFF	20.3
0.469500	---	30.52	46.52	16.00	N	OFF	20.3
0.478500	45.16	---	56.37	11.21	N	OFF	20.3
0.478500	---	30.28	46.37	16.09	N	OFF	20.3
0.483000	45.79	---	56.29	10.50	N	OFF	20.3
0.483000	---	32.61	46.29	13.68	N	OFF	20.3
0.487500	45.94	---	56.21	10.27	N	OFF	20.3
0.487500	---	30.40	46.21	15.81	N	OFF	20.3
0.492000	46.25	---	56.13	9.88	N	OFF	20.3
0.492000	---	33.06	46.13	13.07	N	OFF	20.3
0.496500	45.54	---	56.06	10.52	N	OFF	20.3
0.496500	---	31.16	46.06	14.90	N	OFF	20.3
0.501000	44.46	---	56.00	11.54	N	OFF	20.3
0.501000	---	27.34	46.00	18.66	N	OFF	20.3
0.505500	43.80	---	56.00	12.20	N	OFF	20.3
0.505500	---	30.32	46.00	15.68	N	OFF	20.3
1.965750	28.75	---	56.00	27.25	N	OFF	20.3
1.965750	---	25.35	46.00	20.65	N	OFF	20.3

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
13.796250	22.50	---	60.00	37.50	N	OFF	20.5
13.796250	---	13.50	50.00	36.50	N	OFF	20.5



Appendix C. Radiated Spurious Emission

Test Engineer :	Michael Bui and Daniel Lee	Temperature :	20~24°C
		Relative Humidity :	42~48%

UNII-1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
4+5		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5148.2	55.58	-18.42	74	41.66	31.94	11.19	29.21	309	135	P	H
		5147.16	48.68	-5.32	54	34.75	31.95	11.19	29.21	309	135	A	H
	*	5180	117.81	-	-	104.05	31.73	11.23	29.2	309	135	P	H
	*	5180	111.84	-	-	98.08	31.73	11.23	29.2	309	135	A	H
													H
		5150	59.62	-14.38	74	45.78	31.86	11.19	29.21	205	141	P	V
		5150	52.04	-1.96	54	38.2	31.86	11.19	29.21	205	141	A	V
	*	5180	121.83	-	-	108.11	31.69	11.23	29.2	205	141	P	V
	*	5180	114.98	-	-	101.26	31.69	11.23	29.2	205	141	A	V
													V
802.11a CH 44 5220MHz		5129.48	56.1	-17.9	74	42.14	31.99	11.17	29.2	306	134	P	H
		5149.24	47.3	-6.7	54	33.38	31.94	11.19	29.21	306	134	A	H
	*	5220	121.86	-	-	108.26	31.51	11.28	29.19	306	134	P	H
	*	5220	114.79	-	-	101.19	31.51	11.28	29.19	306	134	A	H
		5453	54.41	-19.59	74	40.26	31.82	11.48	29.15	306	134	P	H
		5412.4	46.03	-7.97	54	31.99	31.76	11.44	29.16	306	134	A	H
		5148.2	56.93	-17.07	74	43.09	31.86	11.19	29.21	214	140	P	V
		5150	48.55	-5.45	54	34.71	31.86	11.19	29.21	214	140	A	V
	*	5220	123.61	-	-	109.8	31.72	11.28	29.19	214	140	P	V
	*	5220	115.26	-	-	101.45	31.72	11.28	29.19	214	140	A	V
		5404.56	56.63	-17.37	74	42.68	31.68	11.43	29.16	214	140	P	V
		5412.68	49.32	-4.68	54	35.34	31.7	11.44	29.16	214	140	A	V



802.11a CH 48 5240MHz		5146.64	55.13	-18.87	74	41.2	31.95	11.19	29.21	276	137	P	H
		5143	46.31	-7.69	54	32.37	31.96	11.19	29.21	276	137	A	H
	*	5240	121.67	-	-	108.14	31.42	11.3	29.19	276	137	P	H
	*	5240	114.58	-	-	101.05	31.42	11.3	29.19	276	137	A	H
		5448.8	54.71	-19.29	74	40.57	31.82	11.47	29.15	276	137	P	H
		5432.56	45.61	-8.39	54	31.51	31.79	11.46	29.15	276	137	A	H
		5136.5	56.33	-17.67	74	42.47	31.88	11.18	29.2	194	141	P	V
		5143	47.42	-6.58	54	33.57	31.87	11.19	29.21	194	141	A	V
	*	5240	123.46	-	-	109.7	31.65	11.3	29.19	194	141	P	V
	*	5240	115.19	-	-	101.43	31.65	11.3	29.19	194	141	A	V
		5433.68	56.37	-17.63	74	42.32	31.74	11.46	29.15	194	141	P	V
		5432.84	48.62	-5.38	54	34.57	31.74	11.46	29.15	194	141	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-1 5150~5250MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (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 36 5180MHz		10360	48.72	-19.48	68.2	61.43	39.41	16.63	68.75	-	-	P	H
		11037	50.03	-23.97	74	60.71	40.11	17.2	67.99	-	-	P	H
		11037	39.22	-14.78	54	49.9	40.11	17.2	67.99	-	-	A	H
		14491	52.79	-21.21	74	58.55	41.94	20.04	67.74	-	-	P	H
		14491	43.85	-10.15	54	49.61	41.94	20.04	67.74	-	-	A	H
		15540	47.82	-26.18	74	57.73	38.19	20.71	68.81	-	-	P	H
		18000	59.74	-14.26	74	57.33	48.82	23.01	69.42	-	-	P	H
		18000	50.85	-3.15	54	48.44	48.82	23.01	69.42	-	-	A	H
													H
													H
													H
													H
		10360	47.94	-20.26	68.2	60.73	39.33	16.63	68.75	-	-	P	V
		11499	50.23	-23.77	74	60.12	40.09	17.61	67.59	-	-	P	V
		11499	40.18	-13.82	54	50.07	40.09	17.61	67.59	-	-	A	V
		14491	52.45	-21.55	74	58.2	41.95	20.04	67.74	-	-	P	V
		14491	43.82	-10.18	54	49.57	41.95	20.04	67.74	-	-	A	V
		15540	47.84	-26.16	74	57.65	38.29	20.71	68.81	-	-	P	V
		18000	60.19	-13.81	74	57.56	49.04	23.01	69.42	-	-	P	V
		18000	51.04	-2.96	54	48.41	49.04	23.01	69.42	-	-	A	V
													V
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													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (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 44 5220MHz		10440	48.56	-19.64	68.2	60.96	39.6	16.7	68.7	-	-	P	H
		11367	50.69	-23.31	74	60.95	39.94	17.5	67.7	-	-	P	H
		11367	39.42	-14.58	54	49.68	39.94	17.5	67.7	-	-	A	H
		14491	52.02	-21.98	74	57.78	41.94	20.04	67.74	-	-	P	H
		14491	44.3	-9.7	54	50.06	41.94	20.04	67.74	-	-	A	H
		15660	65.07	-8.93	74	75.24	37.68	20.79	68.64	212	221	P	H
		15660	53.11	-0.89	54	63.28	37.68	20.79	68.64	212	221	A	H
		18000	61.14	-12.86	74	58.73	48.82	23.01	69.42	-	-	P	H
		18000	50.97	-3.03	54	48.56	48.82	23.01	69.42	-	-	A	H
													H
													H
													H
		10440	47.63	-20.57	68.2	60.06	39.57	16.7	68.7	-	-	P	V
		11422	50.33	-23.67	74	60.46	39.98	17.55	67.66	-	-	P	V
		11422	39.7	-14.3	54	49.83	39.98	17.55	67.66	-	-	A	V
		14491	52.45	-21.55	74	58.2	41.95	20.04	67.74	-	-	P	V
		14491	43.98	-10.02	54	49.73	41.95	20.04	67.74	-	-	A	V
		15660	64.44	-9.56	74	74.53	37.76	20.79	68.64	302	355	P	V
		15660	53.17	-0.83	54	63.26	37.76	20.79	68.64	302	355	A	V
		18000	59.08	-14.92	74	56.45	49.04	23.01	69.42	-	-	P	V
		18000	51.24	-2.76	54	48.61	49.04	23.01	69.42	-	-	A	V
													V
													V
													V

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (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 48 5240MHz		10480	46.46	-21.74	68.2	58.71	39.7	16.73	68.68	-	-	P	H
		11433	48.95	-25.05	74	58.96	40.08	17.56	67.65	-	-	P	H
		11433	39.1	-14.9	54	49.11	40.08	17.56	67.65	-	-	A	H
		14491	51.46	-22.54	74	57.22	41.94	20.04	67.74	-	-	P	H
		14491	44.26	-9.74	54	50.02	41.94	20.04	67.74	-	-	A	H
		15720	64.79	-9.21	74	75.01	37.51	20.83	68.56	213	219	P	H
		15720	52.43	-1.57	54	62.65	37.51	20.83	68.56	213	219	A	H
		18000	58.95	-15.05	74	56.54	48.82	23.01	69.42	-	-	P	H
		18000	50.62	-3.38	54	48.21	48.82	23.01	69.42	-	-	A	H
													H
													H
													H
		10480	46.58	-21.62	68.2	58.89	39.64	16.73	68.68	-	-	P	V
		10861	48.49	-25.51	74	59.66	39.97	17.06	68.2	-	-	P	V
		10861	38.63	-15.37	54	49.8	39.97	17.06	68.2	-	-	A	V
		14491	51.35	-22.65	74	57.1	41.95	20.04	67.74	-	-	P	V
		14491	43.19	-10.81	54	48.94	41.95	20.04	67.74	-	-	A	V
		15720	63.42	-10.58	74	73.59	37.56	20.83	68.56	299	357	P	V
		15720	52.02	-1.98	54	62.19	37.56	20.83	68.56	299	357	A	V
		18000	59.86	-14.14	74	57.23	49.04	23.01	69.42	-	-	P	V
		18000	50.81	-3.19	54	48.18	49.04	23.01	69.42	-	-	A	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 and emission level has at least 6dB margin against limit or emission is noise floor only.												
	4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												



UNII-1 5150~5250MHz
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (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 Full CH 36 5180MHz		5150	62.55	-11.45	74	48.63	31.94	11.19	29.21	271	85	P	H
		5150	53.83	-0.17	54	39.91	31.94	11.19	29.21	271	85	A	H
	*	5180	116.02	-	-	102.11	31.88	11.23	29.2	271	85	P	H
	*	5180	108.22	-	-	94.31	31.88	11.23	29.2	271	85	A	H
													H
													H
		5145.6	55.98	-18.02	74	42.13	31.87	11.19	29.21	315	45	P	V
		5146.12	46.3	-7.7	54	32.45	31.87	11.19	29.21	315	45	A	V
	*	5180	110.97	-	-	97.25	31.69	11.23	29.2	315	45	P	V
	*	5180	102.48	-	-	88.76	31.69	11.23	29.2	315	45	A	V
													V
													V
802.11ax HE20 Full CH 44 5220MHz		5150	57.99	-16.01	74	44.07	31.94	11.19	29.21	285	94	P	H
		5150	49.3	-4.7	54	35.38	31.94	11.19	29.21	285	94	A	H
	*	5220	123.8	-	-	110.2	31.51	11.28	29.19	285	94	P	H
	*	5220	116	-	-	102.4	31.51	11.28	29.19	285	94	A	H
		5433.68	53.92	-20.08	74	39.82	31.79	11.46	29.15	285	94	P	H
		5411	44.67	-9.33	54	30.63	31.76	11.44	29.16	285	94	A	H
		5149.24	57	-17	74	43.16	31.86	11.19	29.21	300	212	P	V
		5150	49.21	-4.79	54	35.37	31.86	11.19	29.21	300	212	A	V
	*	5220	123.55	-	-	109.94	31.52	11.28	29.19	300	212	P	V
	*	5220	115.58	-	-	101.97	31.52	11.28	29.19	300	212	A	V
		5409.32	55.6	-18.4	74	41.63	31.69	11.44	29.16	300	212	P	V
		5411.28	47.42	-6.58	54	33.45	31.69	11.44	29.16	300	212	A	V



802.11ax HE20 Full CH 48 5240MHz		5144.3	54.03	-19.97	74	40.1	31.95	11.19	29.21	302	139	P	H
		5142.48	46.03	-7.97	54	32.09	31.96	11.19	29.21	302	139	A	H
	*	5240	120.87	-	-	107.34	31.42	11.3	29.19	302	139	P	H
	*	5240	113.67	-	-	100.14	31.42	11.3	29.19	302	139	A	H
		5449.92	53.67	-20.33	74	39.53	31.82	11.47	29.15	302	139	P	H
		5432.84	44.46	-9.54	54	30.36	31.79	11.46	29.15	302	139	A	H
		5147.68	54.39	-19.61	74	40.54	31.87	11.19	29.21	212	147	P	V
		5150	47.5	-6.5	54	33.66	31.86	11.19	29.21	212	147	A	V
	*	5240	124.41	-	-	110.83	31.47	11.3	29.19	212	147	P	V
	*	5240	116.6	-	-	103.02	31.47	11.3	29.19	212	147	A	V
		5439.84	55.69	-18.31	74	41.61	31.76	11.47	29.15	212	147	P	V
		5432.56	47.35	-6.65	54	33.3	31.74	11.46	29.15	212	147	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-1 5150~5250MHz
WIFI 802.11ax HE20 Full (Harmonic @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (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 Full CH 36 5180MHz		10360	47.99	-20.21	68.2	60.7	39.41	16.63	68.75	-	-	P	H
		11202	49.55	-24.45	74	60.33	39.72	17.35	67.85	-	-	P	H
		11202	39.35	-14.65	54	50.13	39.72	17.35	67.85	-	-	A	H
		14491	51.19	-22.81	74	56.95	41.94	20.04	67.74	-	-	P	H
		14491	43.87	-10.13	54	49.63	41.94	20.04	67.74	-	-	A	H
		15540	50.31	-23.69	74	60.22	38.19	20.71	68.81	206	330	P	H
		15540	38.6	-15.4	54	48.51	38.19	20.71	68.81	206	330	A	H
		18000	58.49	-15.51	74	56.08	48.82	23.01	69.42	-	-	P	H
		18000	50.56	-3.44	54	48.15	48.82	23.01	69.42	-	-	A	H
													H
													H
													H
		10360	47.51	-20.69	68.2	60.3	39.33	16.63	68.75	-	-	P	V
		10971	49.73	-24.27	74	60.53	40.11	17.15	68.06	-	-	P	V
		10971	39.41	-14.59	54	50.21	40.11	17.15	68.06	-	-	A	V
		14491	52.75	-21.25	74	58.5	41.95	20.04	67.74	-	-	P	V
		14491	43.55	-10.45	54	49.3	41.95	20.04	67.74	-	-	A	V
		15540	59.8	-14.2	74	69.84	38.06	20.71	68.81	374	356	P	V
		15540	43.88	-10.12	54	53.92	38.06	20.71	68.81	374	356	A	V
		18000	58.88	-15.12	74	56.25	49.04	23.01	69.42	-	-	P	V
		18000	50.76	-3.24	54	48.13	49.04	23.01	69.42	-	-	A	V
													V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (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 Full CH 44 5220MHz		10440	48.51	-19.69	68.2	60.8	39.71	16.7	68.7	-	-	P	H
		11752	50.27	-23.73	74	60.86	39.26	17.85	67.7	-	-	P	H
		11752	39.1	-14.9	54	49.69	39.26	17.85	67.7	-	-	A	H
		14480	51.47	-22.53	74	57.45	41.73	20.04	67.75	-	-	P	H
		14480	44.04	-9.96	54	50.02	41.73	20.04	67.75	-	-	A	H
		15660	61.9	-12.1	74	72.18	37.57	20.79	68.64	211	219	P	H
		15660	50.72	-3.28	54	61	37.57	20.79	68.64	211	219	A	H
		17989	59.84	-14.16	74	58.11	48.15	23	69.42	-	-	P	H
		17989	49.43	-4.57	54	47.7	48.15	23	69.42	-	-	A	H
													H
													H
													H
		10440	48.46	-19.74	68.2	60.73	39.73	16.7	68.7	-	-	P	V
		11334	49.85	-24.15	74	60.18	39.93	17.47	67.73	-	-	P	V
		11334	39.8	-14.2	54	50.13	39.93	17.47	67.73	-	-	A	V
		14491	51.37	-22.63	74	57.44	41.63	20.04	67.74	-	-	P	V
		14491	43.84	-10.16	54	49.91	41.63	20.04	67.74	-	-	A	V
		15660	60.46	-13.54	74	70.59	37.72	20.79	68.64	100	143	P	V
		15660	49.61	-4.39	54	59.74	37.72	20.79	68.64	100	143	A	V
		17989	60.53	-13.47	74	59.19	47.76	23	69.42	-	-	P	V
		17989	49.43	-4.57	54	48.09	47.76	23	69.42	-	-	A	V
													V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (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 Full CH 48 5240MHz		10480	48.34	-19.86	68.2	60.52	39.77	16.73	68.68	-	-	P	H
		10817	49.78	-24.22	74	60.98	40.05	17.01	68.26	-	-	P	H
		10817	39.03	-14.97	54	50.23	40.05	17.01	68.26	-	-	A	H
		14491	52.26	-21.74	74	58.2	41.76	20.04	67.74	-	-	P	H
		14491	44.68	-9.32	54	50.62	41.76	20.04	67.74	-	-	A	H
		15720	62.09	-11.91	74	72.52	37.3	20.83	68.56	170	215	P	H
		15720	51.97	-2.03	54	62.4	37.3	20.83	68.56	170	215	A	H
		17956	61.05	-12.95	74	60.21	47.3	22.96	69.42	-	-	P	H
		17956	49.45	-4.55	54	48.61	47.3	22.96	69.42	-	-	A	H
		10480	47.66	-20.54	68.2	59.79	39.82	16.73	68.68	-	-	P	V
		11180	49.94	-24.06	74	60.57	39.9	17.34	67.87	-	-	P	V
		11180	39.23	-14.77	54	49.86	39.9	17.34	67.87	-	-	A	V
		14491	51.52	-22.48	74	57.59	41.63	20.04	67.74	-	-	P	V
		14491	44.35	-9.65	54	50.42	41.63	20.04	67.74	-	-	A	V
		15720	63.09	-10.91	74	73.31	37.51	20.83	68.56	400	352	P	V
		15720	52.65	-1.35	54	62.87	37.51	20.83	68.56	400	352	A	V
		17945	60.78	-13.22	74	60.5	46.75	22.95	69.42	-	-	P	V
		17945	49.48	-4.52	54	49.2	46.75	22.95	69.42	-	-	A	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 and emission level has at least 6dB margin against limit or emission is noise floor only. 4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												



UNII-1 5150~5250MHz
WIFI 802.11ax HE40 Full (Band Edge @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 38 5190MHz		5147.42	61.16	-12.84	74	47.23	31.95	11.19	29.21	282	89	P	H
		5149.76	51.22	-2.78	54	37.3	31.94	11.19	29.21	282	89	A	H
	*	5190	114.54	-	-	100.82	31.66	11.25	29.19	282	89	P	H
	*	5190	106.33	-	-	92.61	31.66	11.25	29.19	282	89	A	H
		5444.6	54.2	-19.8	74	40.07	31.81	11.47	29.15	282	89	P	H
		5460	44.76	-9.24	54	30.6	31.83	11.48	29.15	282	89	A	H
		5150	61	-13	74	47.16	31.86	11.19	29.21	293	41	P	V
		5150	49.11	-4.89	54	35.27	31.86	11.19	29.21	293	41	A	V
	*	5190	114.29	-	-	100.59	31.64	11.25	29.19	293	41	P	V
	*	5190	105.64	-	-	91.94	31.64	11.25	29.19	293	41	A	V
		5452.72	54.42	-19.58	74	40.3	31.79	11.48	29.15	293	41	P	V
		5460	44.7	-9.3	54	30.56	31.81	11.48	29.15	293	41	A	V
802.11ax HE40 Full CH 46 5230MHz		5147.42	61.79	-12.21	74	48.68	31.99	11.19	30.07	292	85	P	H
		5147.94	52.56	-1.44	54	39.45	31.99	11.19	30.07	292	85	A	H
	*	5230	120.32	-	-	107.6	31.49	11.29	30.06	292	85	P	H
	*	5230	112.41	-	-	99.69	31.49	11.29	30.06	292	85	A	H
		5456.36	55.08	-18.92	74	41.67	32.01	11.48	30.08	292	85	P	H
		5420.8	45.59	-8.41	54	32.34	31.87	11.45	30.07	292	85	A	H
		5144.82	61.56	-12.44	74	48.39	32.05	11.19	30.07	290	41	P	V
		5143.26	51.39	-2.61	54	38.22	32.05	11.19	30.07	290	41	A	V
	*	5230	120.62	-	-	107.72	31.67	11.29	30.06	290	41	P	V
	*	5230	112.06	-	-	99.16	31.67	11.29	30.06	290	41	A	V
		5424.44	55.18	-18.82	74	41.94	31.86	11.45	30.07	290	41	P	V
		5424.44	46	-8	54	32.76	31.86	11.45	30.07	290	41	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-1 5150~5250MHz
WIFI 802.11ax HE40 Full (Harmonic @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 38 5190MHz		10380	46.88	-21.32	68.2	59.43	39.55	16.64	68.74	-	-	P	H
		11389	50.1	-23.9	74	60.2	40.06	17.53	67.69	-	-	P	H
		11389	39.5	-14.5	54	49.6	40.06	17.53	67.69	-	-	A	H
		14491	51.56	-22.44	74	57.5	41.76	20.04	67.74	-	-	P	H
		14491	43.82	-10.18	54	49.76	41.76	20.04	67.74	-	-	A	H
		15570	46.92	-27.08	74	57.08	37.88	20.73	68.77	-	-	P	H
		17989	61.63	-12.37	74	59.9	48.15	23	69.42	-	-	P	H
		17989	49.53	-4.47	54	47.8	48.15	23	69.42	-	-	A	H
		10380	47.71	-20.49	68.2	60.26	39.55	16.64	68.74	-	-	P	V
		11334	50.09	-23.91	74	60.42	39.93	17.47	67.73	-	-	P	V
		11334	39.37	-14.63	54	49.7	39.93	17.47	67.73	-	-	A	V
		14491	51.73	-22.27	74	57.8	41.63	20.04	67.74	-	-	P	V
		14491	43.69	-10.31	54	49.76	41.63	20.04	67.74	-	-	A	V
		15570	46.64	-27.36	74	56.66	38.02	20.73	68.77	-	-	P	V
		17989	60.83	-13.17	74	59.49	47.76	23	69.42	-	-	P	V
		17989	49.53	-4.47	54	48.19	47.76	23	69.42	-	-	A	V

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.		(MHz)	(dBμV/m)	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
4+5				(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax HE40 Full CH 46 5230MHz		10460	47.56	-20.64	68.2	59.8	39.74	16.71	68.69	-	-	P	H
		11235	49.96	-24.04	74	60.57	39.83	17.38	67.82	-	-	P	H
		11235	39	-15	54	49.61	39.83	17.38	67.82	-	-	A	H
		14491	51.94	-22.06	74	57.88	41.76	20.04	67.74	-	-	P	H
		14491	43.85	-10.15	54	49.79	41.76	20.04	67.74	-	-	A	H
		15690	47.94	-26.06	74	58.32	37.41	20.81	68.6	-	-	P	H
		17989	60.93	-13.07	74	59.2	48.15	23	69.42	-	-	P	H
		17989	50.23	-3.77	54	48.5	48.15	23	69.42	-	-	A	H
		10460	48.61	-19.59	68.2	60.81	39.78	16.71	68.69	-	-	P	V
		10872	50.58	-23.42	74	61.46	40.25	17.06	68.19	-	-	P	V
		10872	39.55	-14.45	54	50.43	40.25	17.06	68.19	-	-	A	V
		14491	51.83	-22.17	74	57.9	41.63	20.04	67.74	-	-	P	V
		14491	43.22	-10.78	54	49.29	41.63	20.04	67.74	-	-	A	V
		15690	47.81	-26.19	74	57.98	37.62	20.81	68.6	-	-	P	V
		18000	60.5	-13.5	74	58.9	48.01	23.01	69.42	-	-	P	V
		18000	50.5	-3.5	54	48.9	48.01	23.01	69.42	-	-	A	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 and emission level has at least 6dB margin against limit or emission is noise floor only.												
	4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												



UNII-1 5150~5250MHz
WIFI 802.11ax HE80 Full (Band Edge @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full CH 42 5210MHz		5149.76	58.63	-15.37	74	44.71	31.94	11.19	29.21	280	92	P	H
		5147.16	50.4	-3.6	54	36.47	31.95	11.19	29.21	280	92	A	H
	*	5210	112.8	-	-	99.17	31.55	11.27	29.19	280	92	P	H
	*	5210	104.06	-	-	90.43	31.55	11.27	29.19	280	92	A	H
		5457.2	53.78	-20.22	74	39.62	31.83	11.48	29.15	280	92	P	H
		5459.44	44.82	-9.18	54	30.66	31.83	11.48	29.15	280	92	A	H
		5148.98	56.38	-17.62	74	42.54	31.86	11.19	29.21	288	41	P	V
		5149.76	48.44	-5.56	54	34.6	31.86	11.19	29.21	288	41	A	V
	*	5210	112.71	-	-	99.08	31.55	11.27	29.19	288	41	P	V
	*	5210	103.1	-	-	89.47	31.55	11.27	29.19	288	41	A	V
		5448.8	54.49	-19.51	74	40.39	31.78	11.47	29.15	288	41	P	V
		5447.12	44.79	-9.21	54	30.7	31.77	11.47	29.15	288	41	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-1 5150~5250MHz
WIFI 802.11ax HE80 Full (Harmonic @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full CH 42 5210MHz		10420	47.62	-20.58	68.2	59.97	39.67	16.69	68.71	-	-	P	H
		11345	50.03	-23.97	74	60.36	39.91	17.48	67.72	-	-	P	H
		11345	38.37	-15.63	54	48.7	39.91	17.48	67.72	-	-	A	H
		14491	51.92	-22.08	74	57.86	41.76	20.04	67.74	-	-	P	H
		14491	43.72	-10.28	54	49.66	41.76	20.04	67.74	-	-	A	H
		15630	46.86	-27.14	74	57.09	37.69	20.77	68.69	-	-	P	H
		17967	61.44	-12.56	74	60.3	47.59	22.97	69.42	-	-	P	H
		17967	49.64	-4.36	54	48.5	47.59	22.97	69.42	-	-	A	H
		10420	47.34	-20.86	68.2	59.68	39.68	16.69	68.71	-	-	P	V
		11400	49.87	-24.13	74	59.95	40.07	17.53	67.68	-	-	P	V
		11400	39.94	-14.06	54	50.02	40.07	17.53	67.68	-	-	A	V
		14491	52.15	-21.85	74	58.22	41.63	20.04	67.74	-	-	P	V
		14491	43.61	-10.39	54	49.68	41.63	20.04	67.74	-	-	A	V
		15630	47.16	-26.84	74	57.28	37.8	20.77	68.69	-	-	P	V
		18000	61.2	-12.8	74	59.6	48.01	23.01	69.42	-	-	P	V
		18000	50.3	-3.7	54	48.7	48.01	23.01	69.42	-	-	A	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 and emission level has at least 6dB margin against limit or emission is noise floor only. 4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												

Emission above 18GHz

WIFI 802.11ax HE20 Full (SHF @ 1m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
4+5		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax CH36 5180MHz HE20 Full SHF		36480	48.59	-25.41	74	38.92	42.54	21.91	54.78	150	220	P	H
		36480	40	-14	54	30.33	42.54	21.91	54.78	150	220	A	H
		39956	53.03	-20.97	74	37.72	44.92	24.56	54.17	150	351	P	H
		39956	44.87	-9.13	54	29.56	44.92	24.56	54.17	150	351	A	H
													H
													H
													H
													H
													H
													H
													H
													H
		36480	48.13	-25.87	74	38.41	42.59	21.91	54.78	150	187	P	V
		36480	39.95	-14.05	54	30.23	42.59	21.91	54.78	150	187	A	V
		39846	52.54	-21.46	74	37.07	44.64	24.49	53.66	150	62	P	V
		39846	44.92	-9.08	54	29.45	44.64	24.49	53.66	150	62	A	V
													V
													V
													V
													V
													V
													V
												V	
												V	
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Emission below 1GHz

WIFI 802.11ax HE20 Full (LF @ 3m)

[illegible]

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 over limit line.
P/A	P eak or A verage
H/V	H orizontal or V ertical



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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
4+5		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a		5150	58.84	-15.16	74	45.00	31.86	11.19	29.21	141	240	P	H
CH 36		5150	52.04	-1.96	54	35.00	31.86	11.19	29.21	214	78	A	H
5180MHz													

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. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 5150MHz:

1. Level(dBμV/m)
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
 = 31.86(dB/m) + 11.19(dB) + 45.00(dBμV) – 29.21 (dB)
 = 58.84 (dBμV/m)
2. Over Limit(dB)
 = Level(dBμV/m) – Limit Line(dBμV/m)
 = 58.84(dBμV/m) – 74(dBμV/m)
 = -15.16(dB)

For Average Limit @ 5150MHz:

1. Level(dBμV/m)
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
 = 31.86(dB/m) + 11.19(dB) + 35.00(dBμV) – 29.21 (dB)
 = 48.84 (dBμV/m)
2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)
 = 48.84(dBμV/m) – 54(dBμV/m)
 = -5.16(dB)

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



Appendix D. Radiated Spurious Emission Plots

Test Engineer :	Michael Bui and Daniel Lee	Temperature :	20~24°C
		Relative Humidity :	42~48%

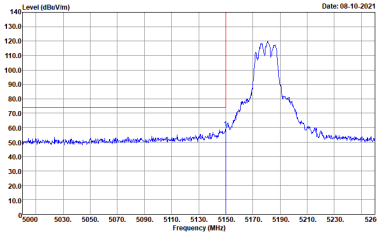
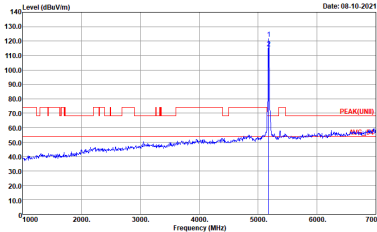
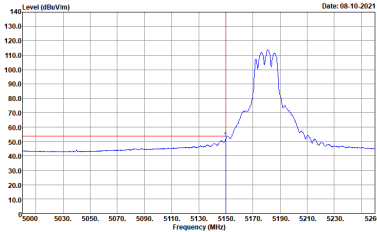
Note symbol

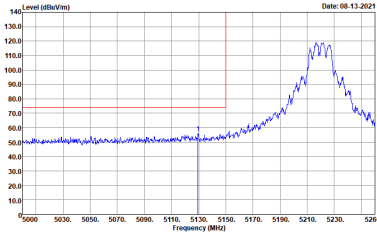
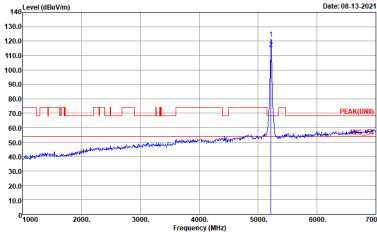
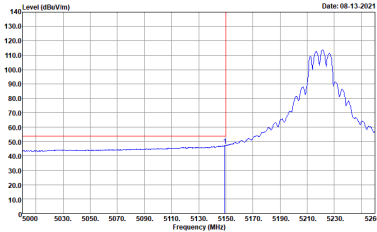
-L	Low channel location
-R	High channel location



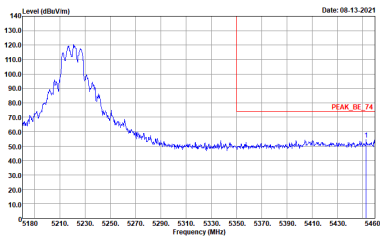
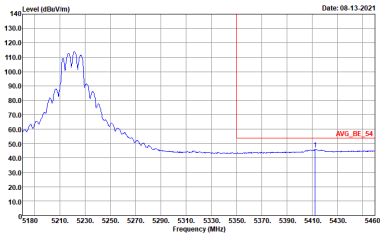
UNII-1 - 5150~5250MHz
WIFI 802.11a (Band Edge @ 3m)

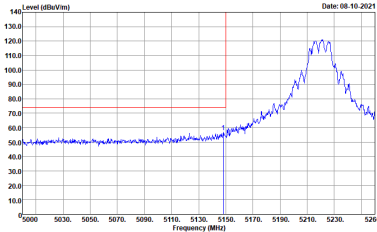
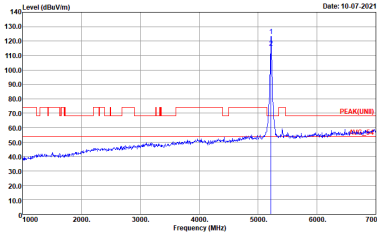
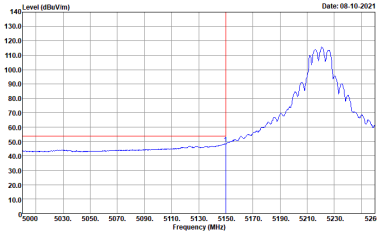
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
4+5	Horizontal	Fundamental
Peak	Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH02-CA Condition : PEAK(LINE) 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left blank

WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(FUND) 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

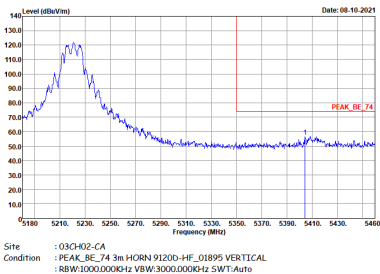
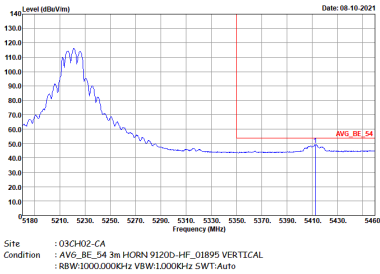
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - L	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left blank

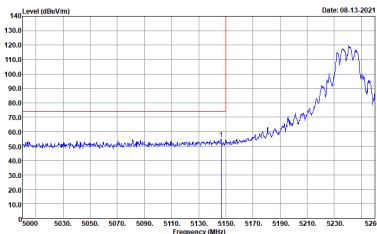
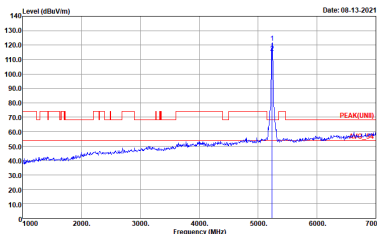
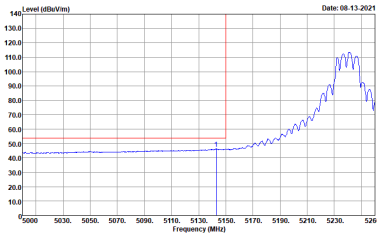


WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - R	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left blank

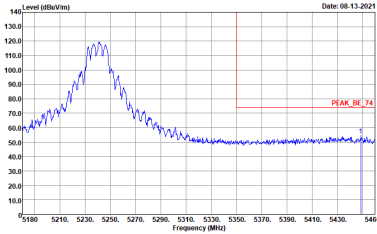
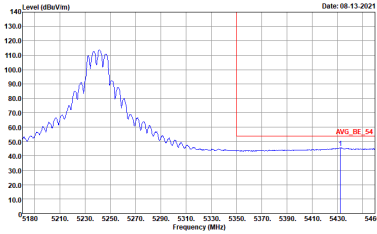
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - L	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(FUND) 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000kHz VBW:1.000kHz SWT:Auto	Left blank

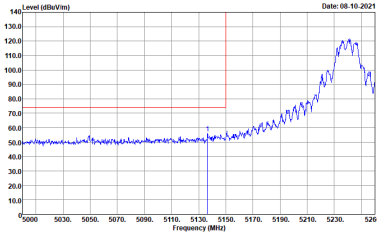
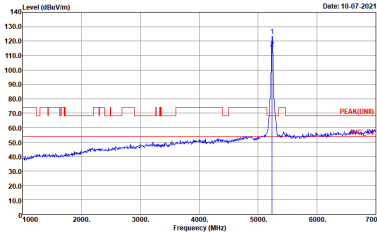
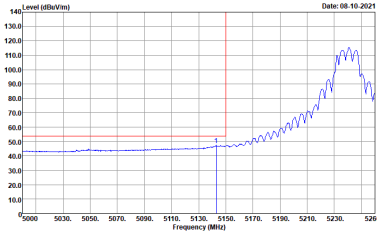


WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - R	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left blank

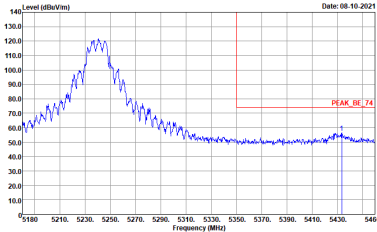
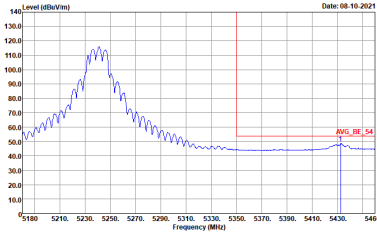
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - L	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(FUND) 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left blank



WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left blank

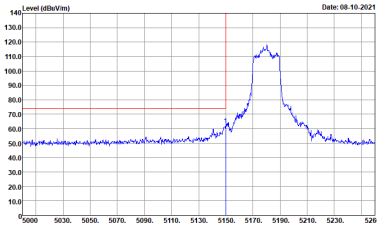
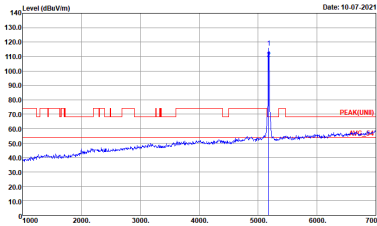
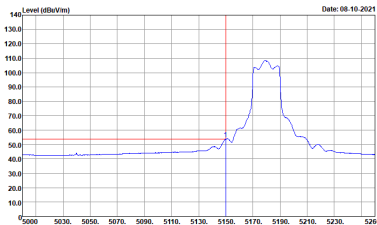
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - L	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(FUND) 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

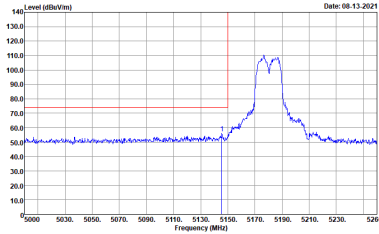
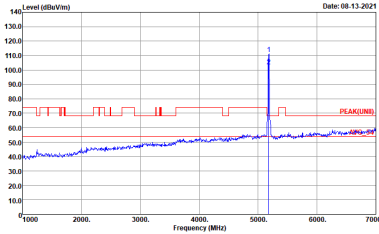
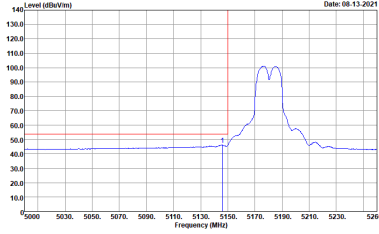


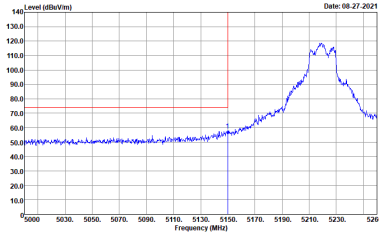
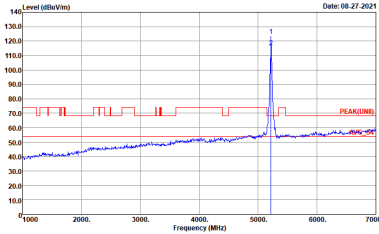
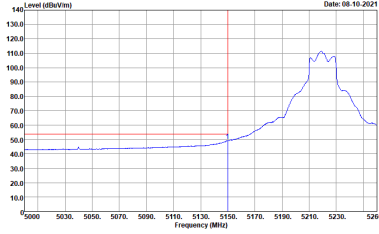
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left blank



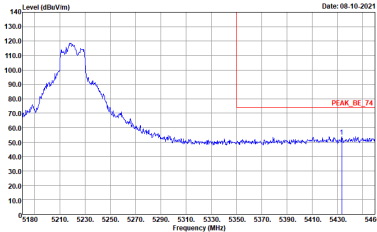
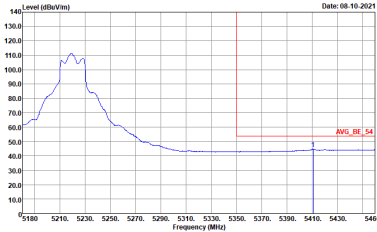
UNII-1 5150~5250MHz
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH36 5180MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto	Left blank

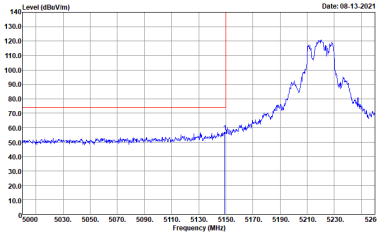
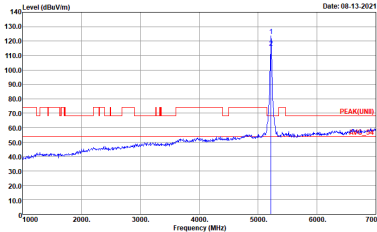
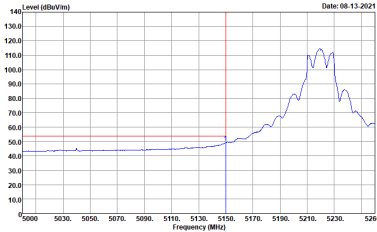
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH36 5180MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz - L	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(FUND) 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Left blank

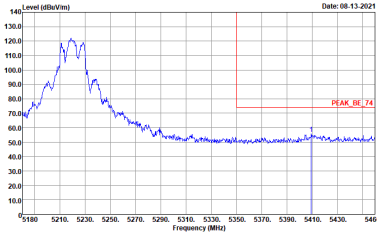
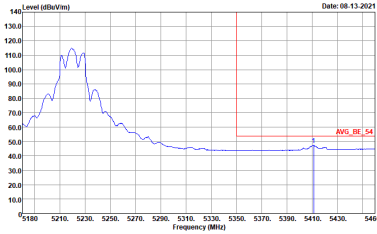


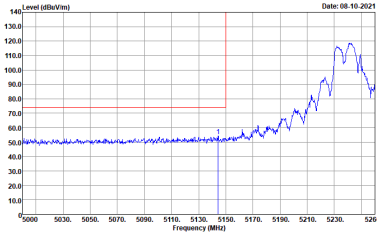
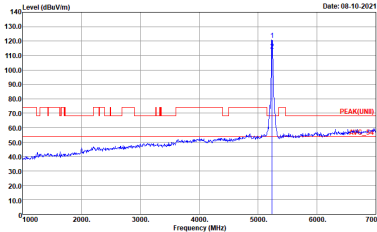
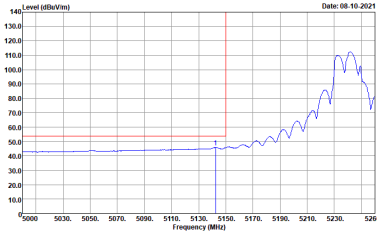
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz - R	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



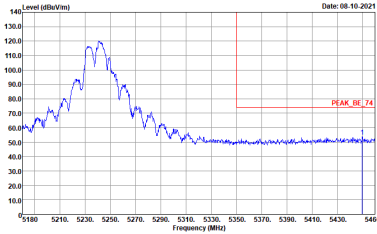
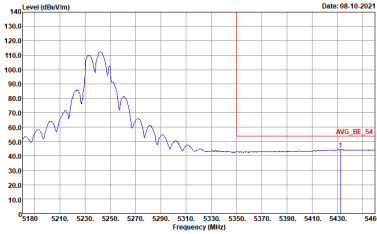
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz - L	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(FUND) 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000kHz VBW:3.000kHz SWT:Auto	Left blank

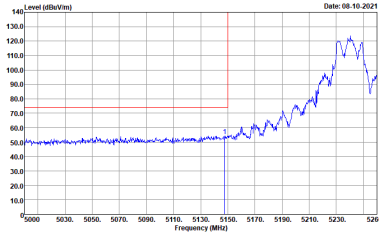
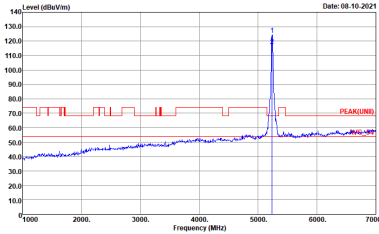
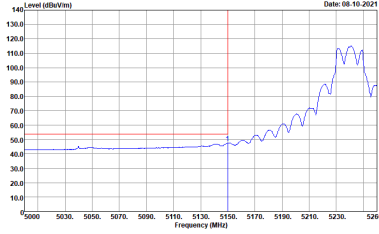


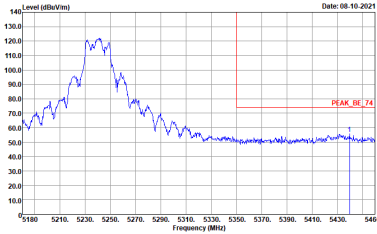
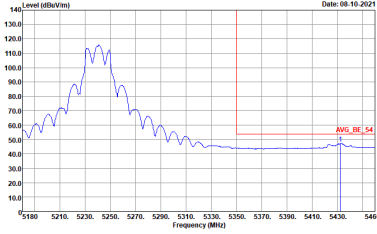
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz - R	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 VERTICAL : RBW:3000.000kHz VBW:3000.000kHz SWT:Auto	Left blank
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 VERTICAL : RBW:3000.000kHz VBW:3000.000kHz SWT:Auto	Left blank

WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz - L	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



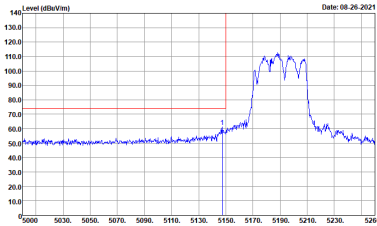
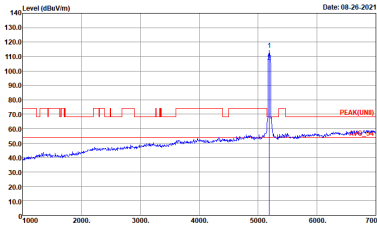
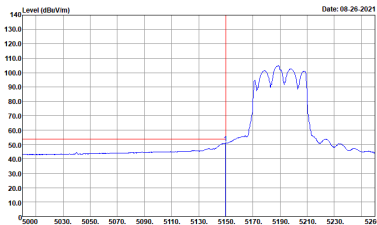
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz - R	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:3000.000kHz VBW:3000.000kHz SWT:Auto	Left blank
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:3000.000kHz VBW:3000.000kHz SWT:Auto	Left blank

WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz - L	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Left blank

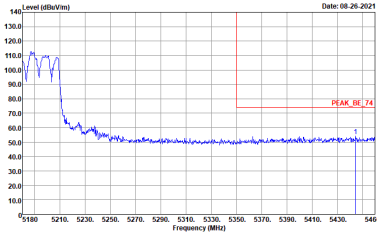
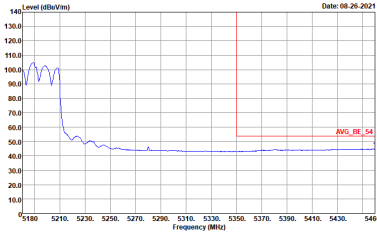
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz - R	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

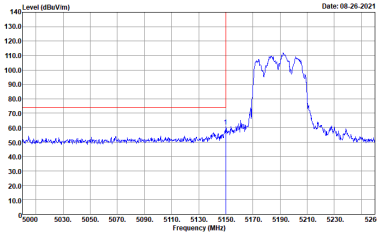
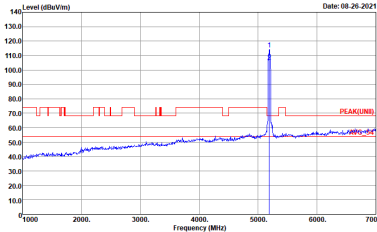
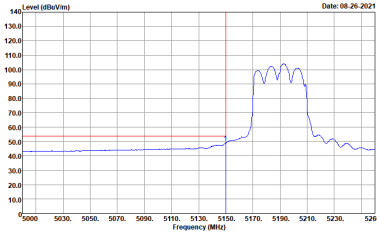


UNII-1 5150~5250MHz
WIFI 802.11ax HE40 Full (Band Edge @ 3m)

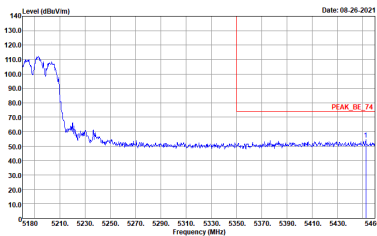
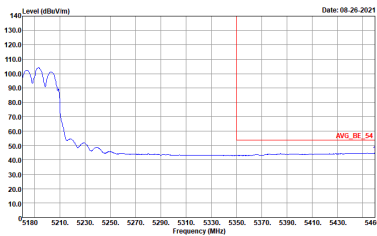
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - L	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto	Left blank

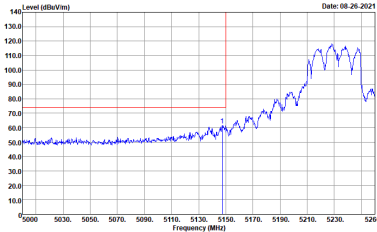
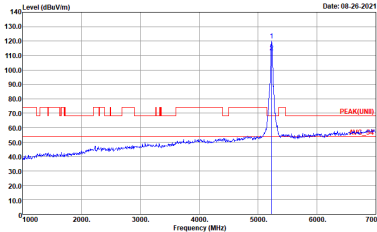
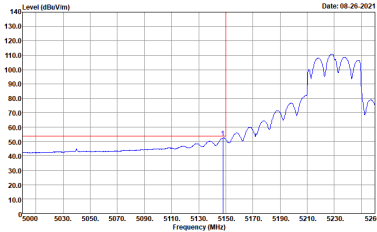


WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - R	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

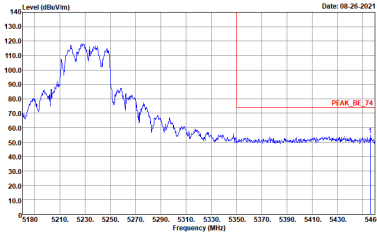
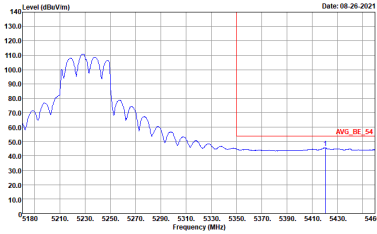
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - L	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(FUND) 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

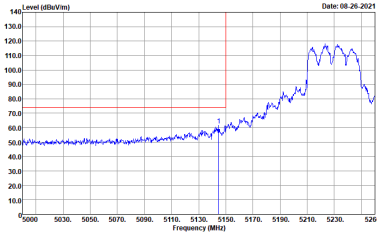
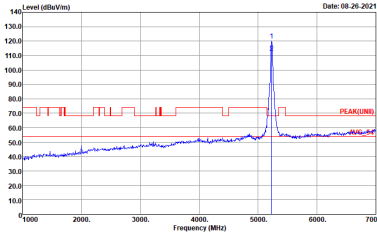
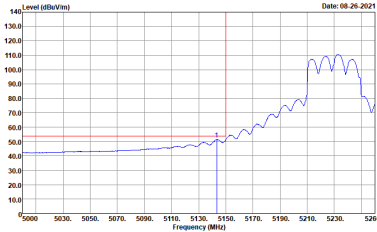


WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - R	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

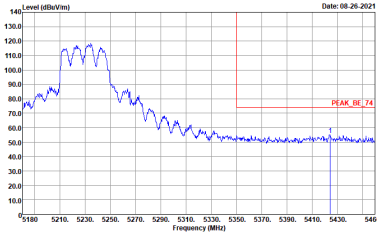
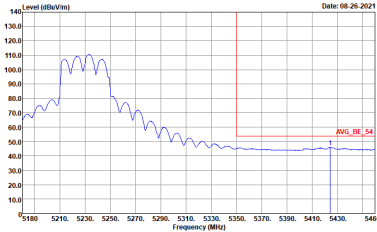
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz - L	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_02113 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(FUND) 3m HORN 9120D-HF_02113 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_02113 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



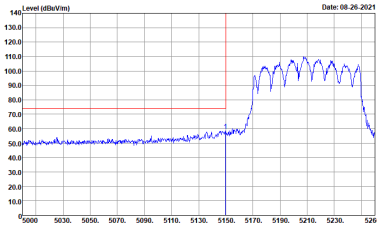
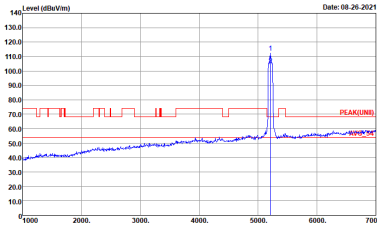
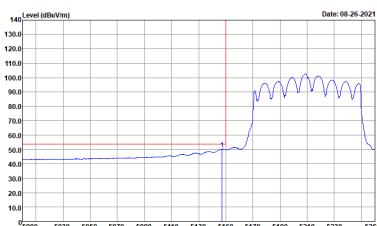
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz - R	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_02113 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_02113 HORIZONTAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz - L	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(FUND) 3m HORN 9120D-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_02113 VERTICAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

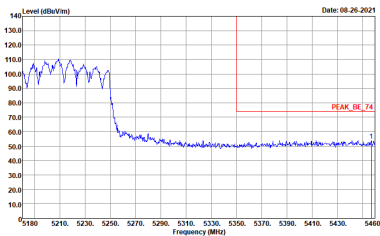
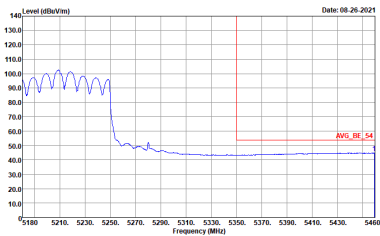


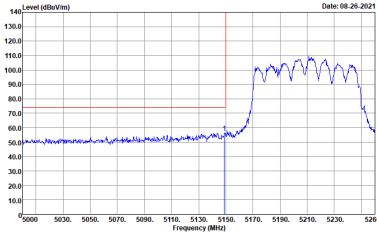
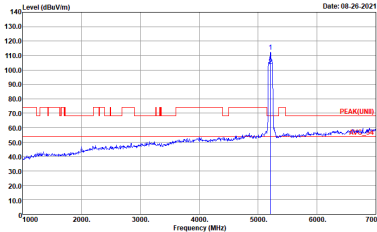
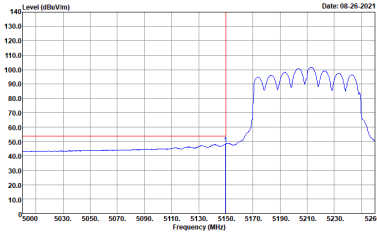
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz - R	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

UNII-1 5150~5250MHz
WIFI 802.11ax HE80 Full (Band Edge @ 3m)

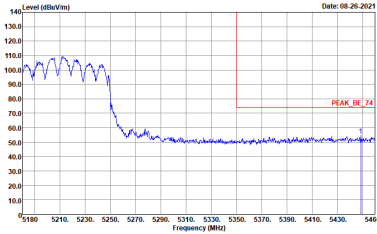
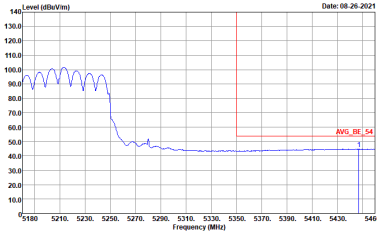
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz - L	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



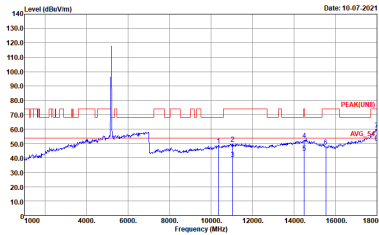
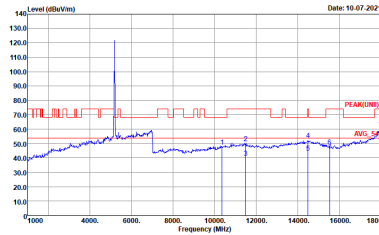
WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz - R	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz - L	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(FUND) 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

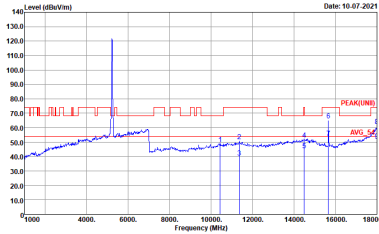
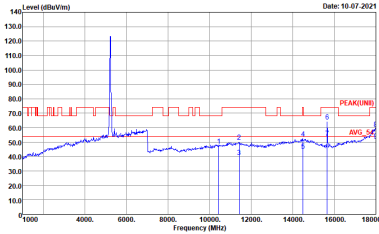


WIFI	UNII-1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz - R	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE_74 3m HORN 9120D-HF_01895 VERTICAL : RBW:3000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH02-CA Condition : AVG_BE_54 3m HORN 9120D-HF_01895 VERTICAL : RBW:3000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

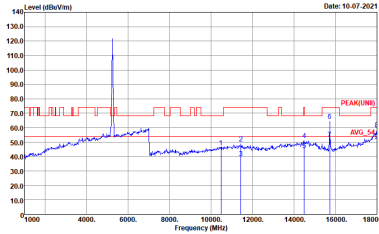
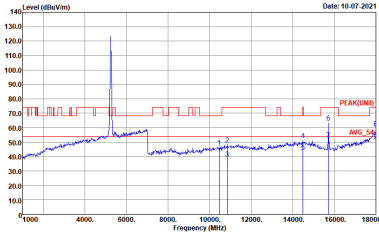
UNII-1 - 5150~5250MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI	UNII-1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH36 5180MHz	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 HORIZONTAL Detector : Peak	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 VERTICAL Detector : Peak

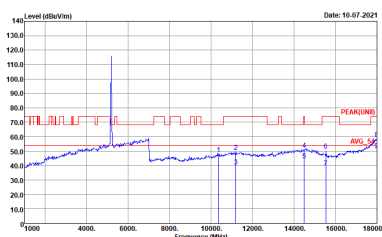
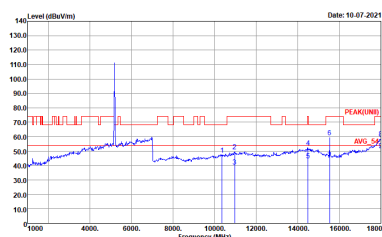


WIFI	UNII-1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH44 5220MHz	
4+5	Horizontal	Vertical
Peak	 Site : 09CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_01895 HORIZONTAL Detector : Peak	 Site : 09CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_01895 VERTICAL Detector : Peak

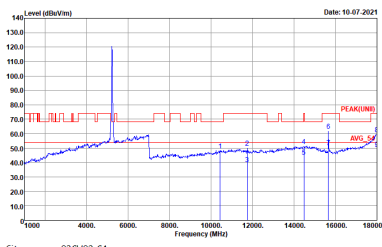
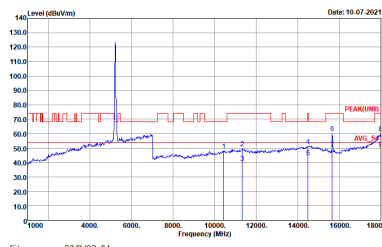


WIFI	UNII-1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH48 5240MHz	
4+5	Horizontal	Vertical
Peak	 Site : 09CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_01895 HORIZONTAL Detector : Peak	 Site : 09CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_01895 VERTICAL Detector : Peak

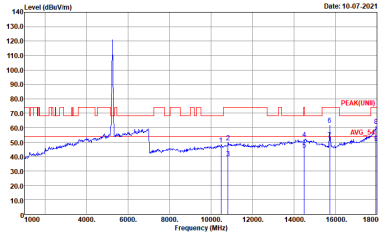
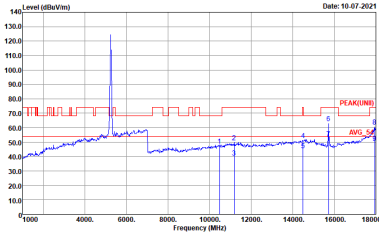
UNII-1 5150~5250MHz
WIFI 802.11ax HE20 Full (Harmonic @ 3m)

WIFI	UNII-1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH36 5180MHz	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 HORIZONTAL Detector : Peak	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 VERTICAL Detector : Peak

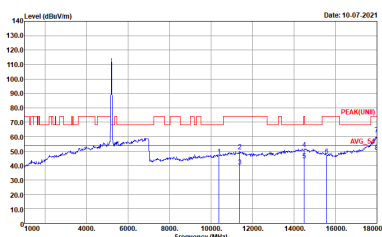
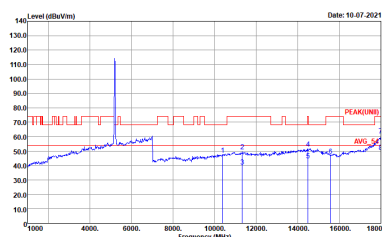


WIFI	UNII-1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz	
4+5	Horizontal	Vertical
Peak	 Site : 09CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 HORIZONTAL Detector : Peak	 Site : 09CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 VERTICAL Detector : Peak

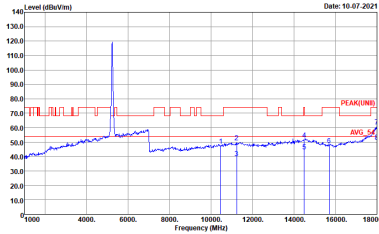
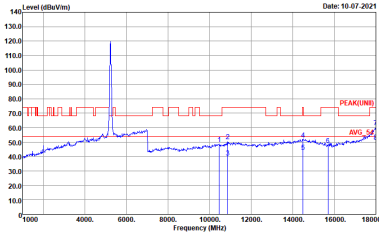


WIFI	UNII-1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz	
4+5	Horizontal	Vertical
Peak	 Site : 09CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 HORIZONTAL Detector : Peak	 Site : 09CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 VERTICAL Detector : Peak

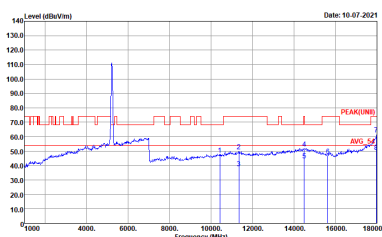
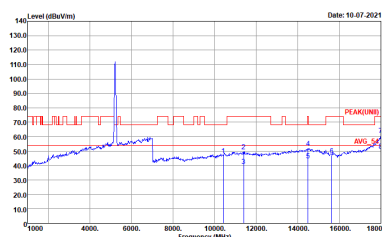
UNII-1 5150~5250MHz
WIFI 802.11ax HE40 Full (Harmonic @ 3m)

WIFI	UNII-1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_02113 HORIZONTAL Detector : Peak	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_02113 VERTICAL Detector : Peak

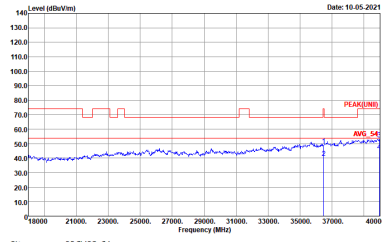
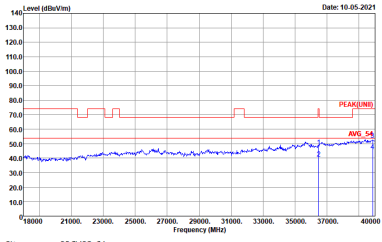


WIFI	UNII-1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz	
4+5	Horizontal	Vertical
Peak	 Site : 09CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 HORIZONTAL Detector : Peak	 Site : 09CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 VERTICAL Detector : Peak

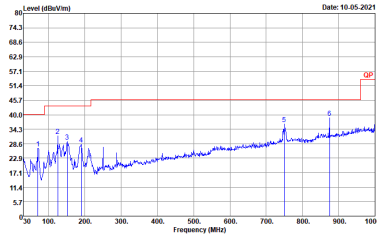
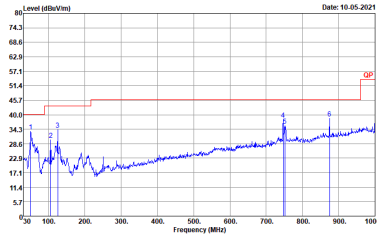
UNII-1 5150~5250MHz
WIFI 802.11ax HE80 Full (Harmonic @ 3m)

WIFI	UNII-1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_02113 HORIZONTAL Detector : Peak	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_02113 VERTICAL Detector : Peak

Emission above 18GHz
5GHz WIFI 802.11ax HE20 Full (SHF @ 1m)

WIFI	5GHz WIFI	
ANT	802.11ax HE20 CH36 5180MHz Full SHF	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEAK(UM) 1m HORN 9170-SHF_00842 HORIZONTAL Detector : Peak	 Site : 03CH02-CA Condition : PEAK(UM) 1m HORN 9170-SHF_00842 VERTICAL Detector : Peak

Emission below 1GHz
5GHz WIFI 802.11ax HE20 Full (LF)

WIFI	5GHz WIFI	
ANT	802.11ax HE20 CH36 5180MHz Full LF	
4+5	Horizontal	Vertical
QP / Peak	 Site : 03CH02-CA Condition : QP 3m 50392_2021 HORIZONTAL Detector : Peak	 Site : 03CH02-CA Condition : QP 3m 50392_2021 VERTICAL Detector : Peak



Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
4+5	802.11a	91.77	1505	0.66	1kHz
4+5	5GHz 802.11ax HE20	89.85	5435	0.18	300Hz
4+5	5GHz 802.11ax HE40	89.66	5431	0.18	300Hz
4+5	5GHz 802.11ax HE80	90.45	5434	0.18	300Hz

MIMO <Ant. 4+5>

