FCC RADIO TEST REPORT

FCC ID	:	**PKRISGFX31001**
Equipment	:	**Indoor Router**
Brand Name	:	**Inseego**
Model Name	:	**FX3100-1**
Marketing Name	:	**FX3100**
Applicant	:	**Inseego Corp.** **9710 Scranton Road Suite 200, San Diego, CA 92121**
Manufacturer	:	**Inseego Corp.** **9710 Scranton Road Suite 200, San Diego, CA 92121**
Standard	:	**FCC Part 15 Subpart E §15.407**

The product was received on Mar. 03, 2023 and testing was performed from Mar. 08, 2023 to Apr. 01, 2023. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Louis Wu

Approved by: Louis Wu

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

Table of Contents

History of this test report

Report No.	Version	Description	Issue Date
FR290606B	01	Initial issue of report	Apr. 14, 2023
FR290606B	02	Add section 1.1.1 Antenna Directional Gain This report is an updated version, replacing the report issued on Apr. 14, 2023.	Apr. 21, 2023

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	0.89 dB under the limit at 5149.500 MHz
3.5	15.207	AC Conducted Emission	Pass	14.89 dB under the limit at 0.152 MHz
3.6	15.203	Antenna Requirement	Pass	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Uncertainty of Evaluation”.

Disclaimer:

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

Reviewed by: Lewis Ho

Report Producer: Rachel Hsieh

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature
General Specs 4G-LTE, 5G-FR1, Wi-Fi 2.4GHz 802.11 b/g/n/ax, Wi-Fi 5GHz 802.11 a/n/ac/ax, and GNSS. **Antenna Type** WWAN: Fixed Internal Antenna WLAN: Fixed Internal Antenna GPS / Glonass / BDS / Galileo: Fixed Internal Antenna

Antenna information		
5150 MHz ~ 5250 MHz	Peak Gain (dBi)	Ant. 0: 3.2 Ant. 1: 6.2

Remark: The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

1.1.1 Antenna Directional Gain

<For CDD Mode>

Follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)f)ii)

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

For power measurements on IEEE 802.11 devices,

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

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

For PSD measurements, the directional gain calculation.

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

where

Each antenna is driven by no more than one spatial stream;
N_{SS} = the number of independent spatial streams of data;
N_{ANT} = the total number of antennas
$g_{j,k} = 10^{G_k / 20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not;
G_k is the gain in dBi of the kth antenna.

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

Directional gain = $10*\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}]$ dBi

Where G1, G2….GN denote single antenna gain.

The directional gain “DG” is calculated as following table.

	Ant 0 (dBi)	Ant 1 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band I	3.20	6.20	6.20	7.84	0.20	1.84

Calculation example:

If a device has two antenna, G_{ANT1}= 3.2dBi; G_{ANT2}=6.2dBi

Directional gain of power measurement = max(3.2, 6.2) + 0 = 6.2 dBi

Directional gain of PSD derived from formula which is

10 x log { { [10^ (3.2 dBi / 20) + 10^ (6.2 dBi / 20)] ^ 2 } / 2 }

= 7.84 dBi

Power and PSD limit reduction = Composite gain – 6dBi, (min = 0)

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

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

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	TH05-HY, 03CH11-HY

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

FCC designation No.: TW1190 and TW3786

1.4 Applicable Standards

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

2 Test Configuration of Equipment Under Test

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

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

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210		

Note:

1. The above Frequency and Channel with "*" are 802.11n HT40 and 802.11ac VHT40 and 802.11ax HE40.
2. The above Frequency and Channel with "#" are 802.11ac VHT80 and 802.11ax HE80.

2.2 Test Mode

This device support 26/52/106/242/484/996-tone RU.

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

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

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

MIMO Mode

Modulation	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

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

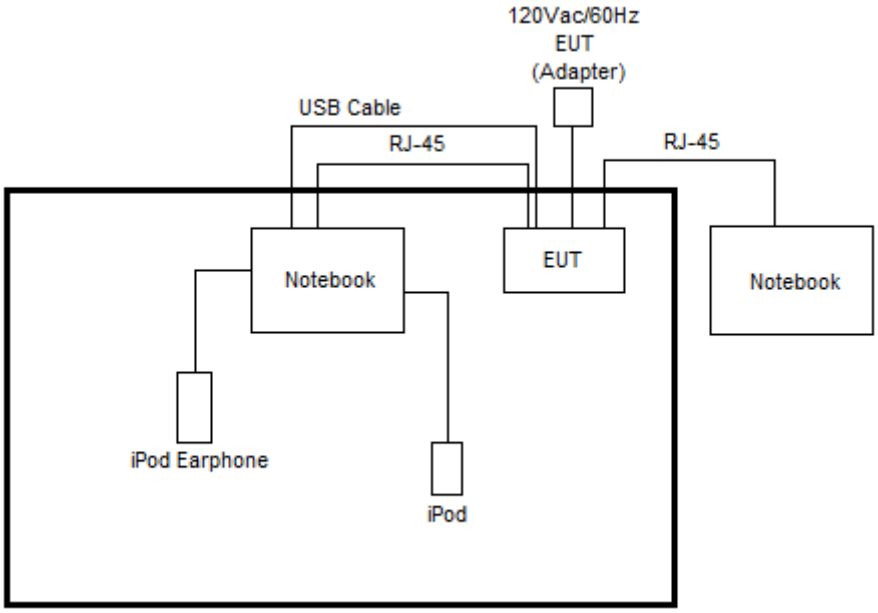
Test Cases	
AC Conducted Emission	Mode 1 : WLAN (5GHz) Link + LAN1 Link + LAN2 Link + USB Link + Adapter

Ch. #			Band I：5150-5250 MHz		
		802.11a	802.11ax HE20	802.11ax HE40	802.11ax HE80
L	Low	36	36	38	-
M	Middle	44	44	-	42
H	High	48	48	46	-

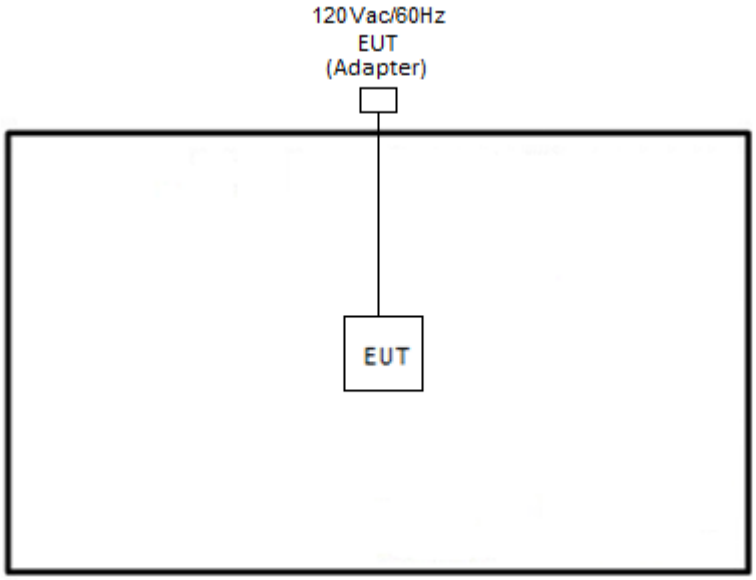
Remark: For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.

2.3 Connection Diagram of Test System

<AC Conducted Emission Mode>



<WLAN Tx Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	DELL	Latitude E3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
2.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
3.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A
4.	USB Cable	Awesome Smart Link	INSGUSB3.0	N/A	Shielded, 1.0 m	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “QRCT 4.0.00206.0” 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.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).
= 4.2 + 10 = 14.2 (dB)

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.

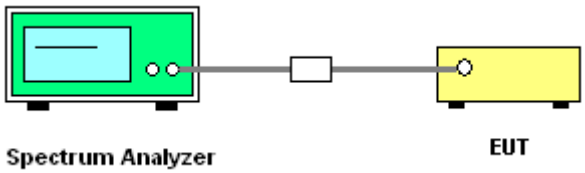
3.1.2 Measuring Instruments

Please refer to the measuring equipment list in 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) ≥ 3 * RBW.
8. Measure and record the results in the test report.

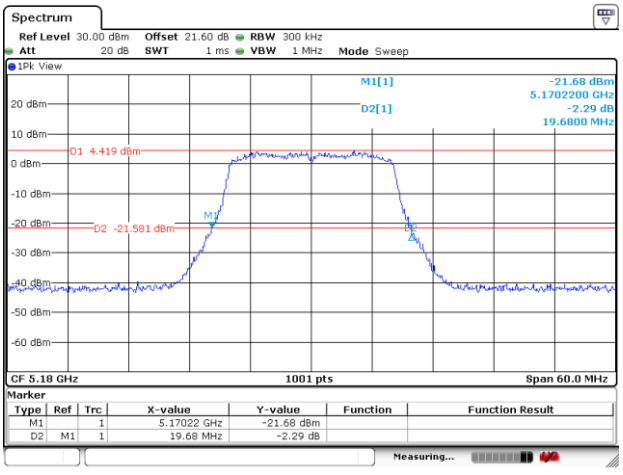
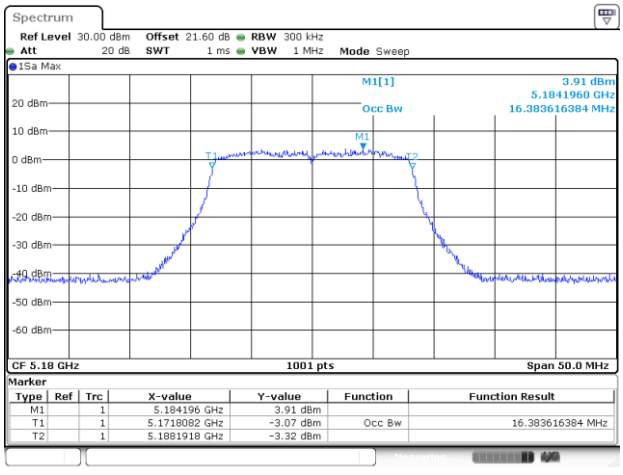
3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

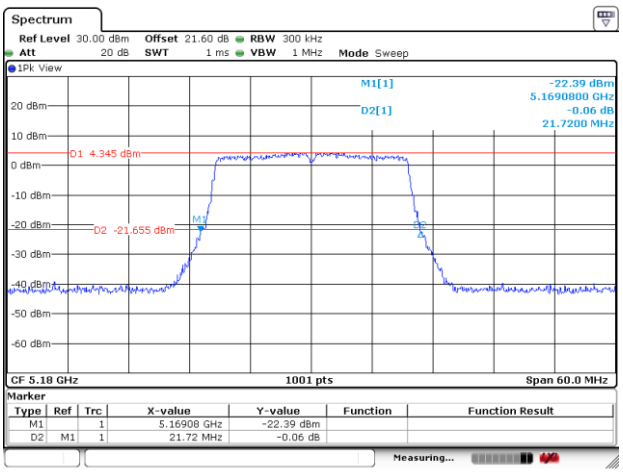
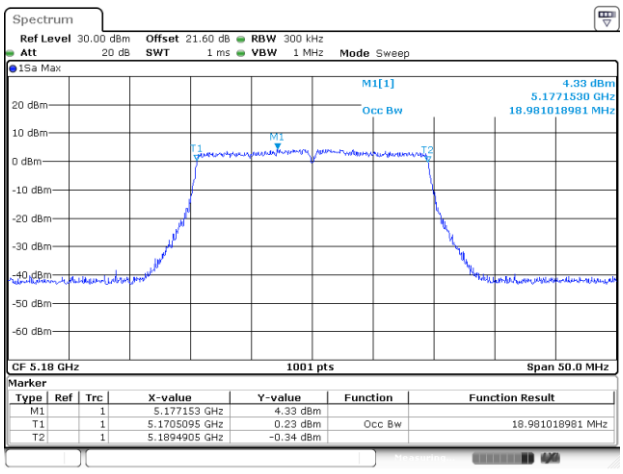
MIMO <Ant. 0+1>

<802.11a>

26dB Bandwidth	99% Occupied Bandwidth
	

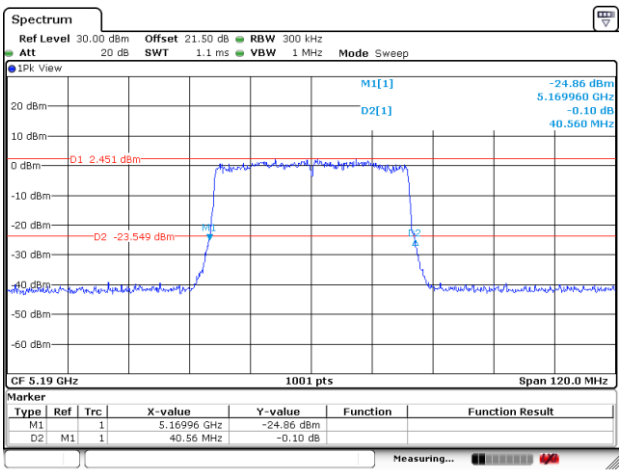
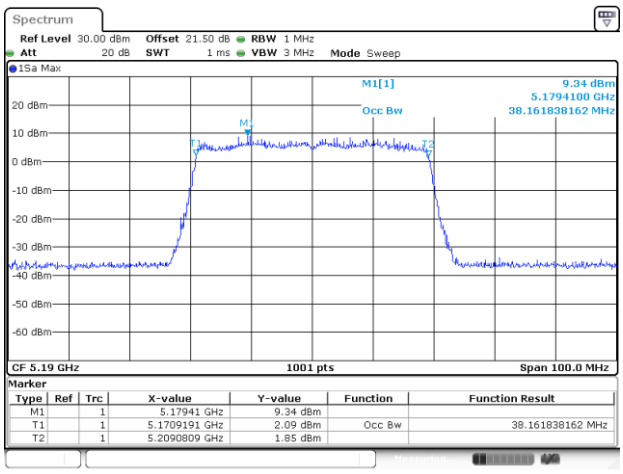
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ax HE20>

26dB Bandwidth	99% Occupied Bandwidth
	

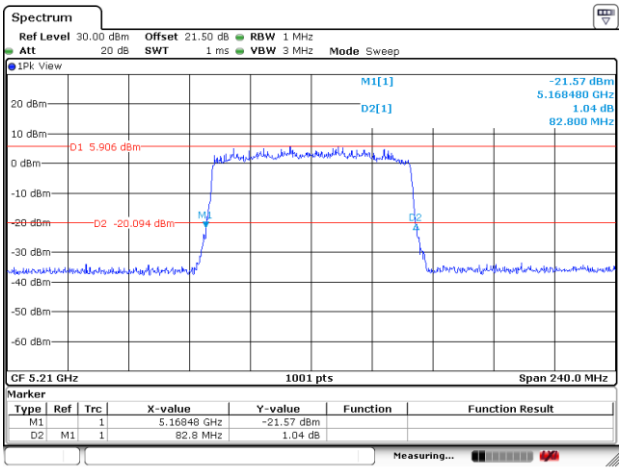
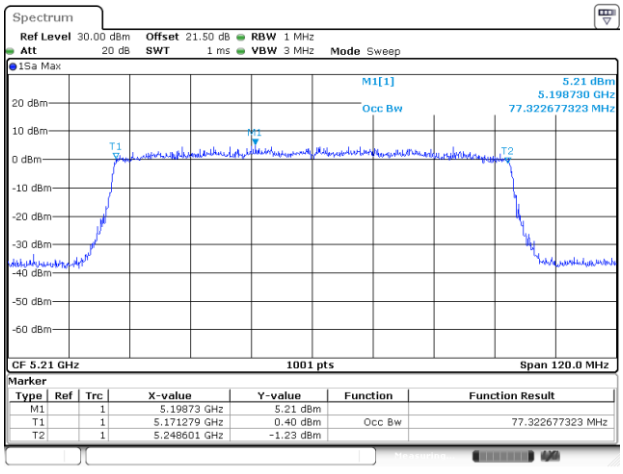
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ax HE40>

26dB Bandwidth	99% Occupied Bandwidth
	

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

<802.11ax HE80>

26dB Bandwidth	99% Occupied Bandwidth
	

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

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

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

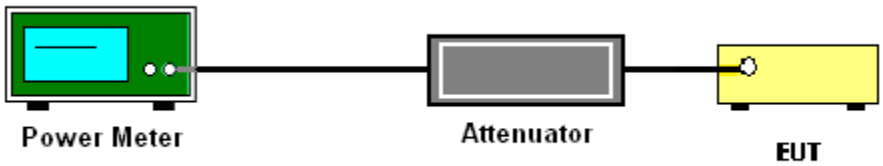
3.2.3 Test Procedures

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

Please refer to the measuring equipment list in 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):

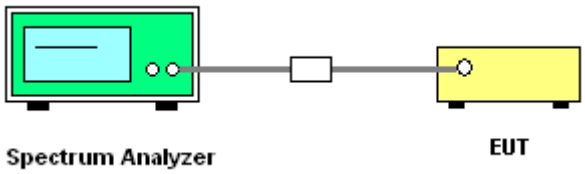
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW ≥ 3 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time ≤ (number of points in sweep) × T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which 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 is connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

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

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

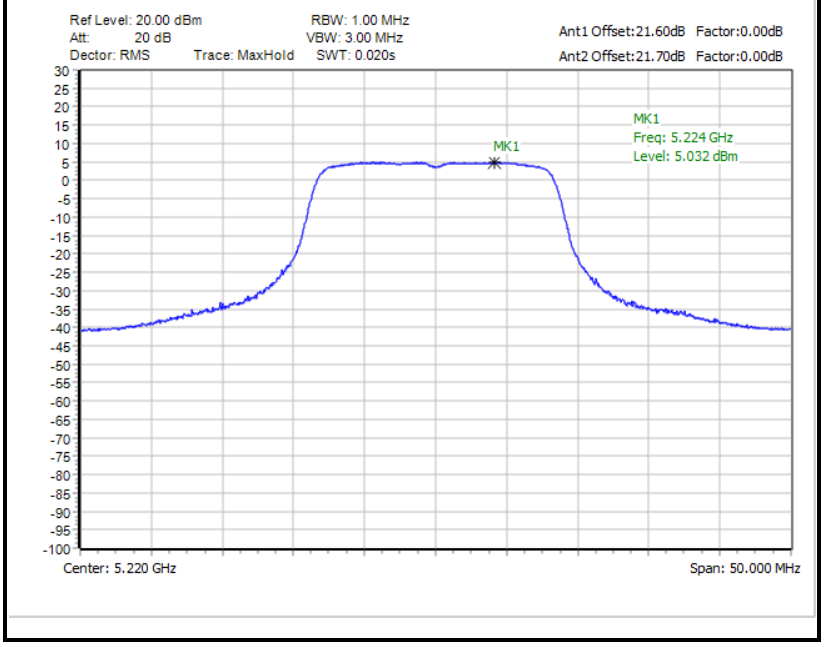
3.3.4 Test Setup



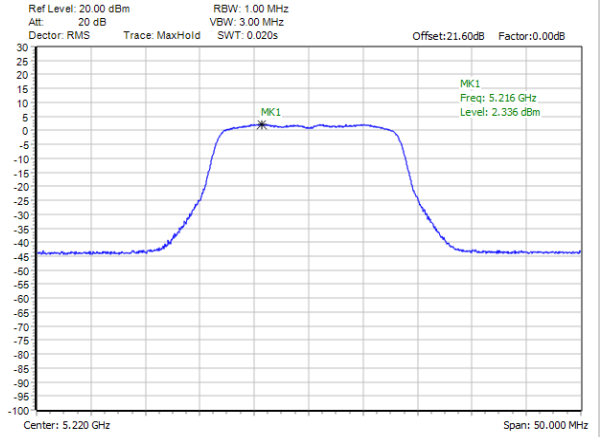
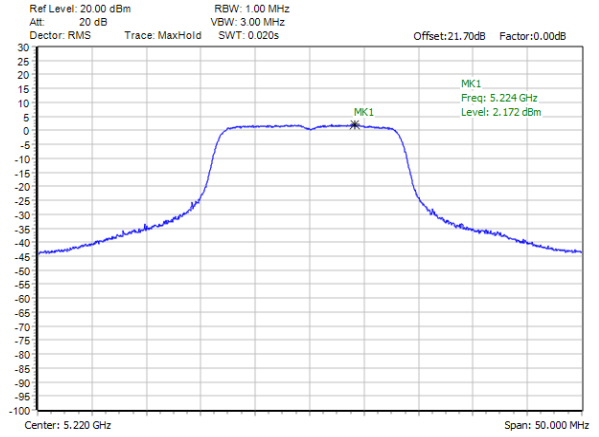
3.3.5 Test Result of Power Spectral Density

<802.11a>

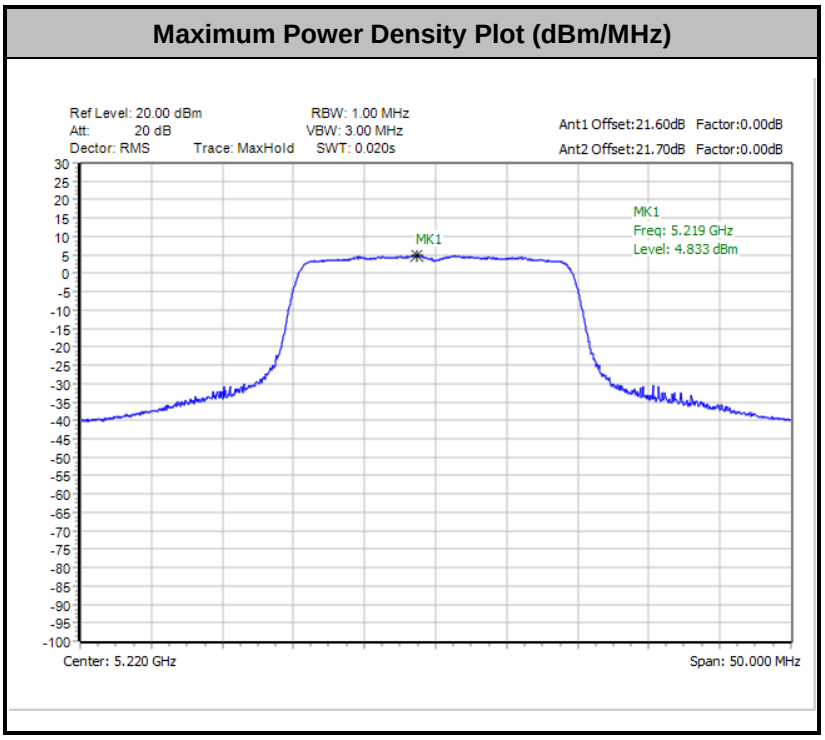
Maximum Power Density Plot (dBm/MHz)



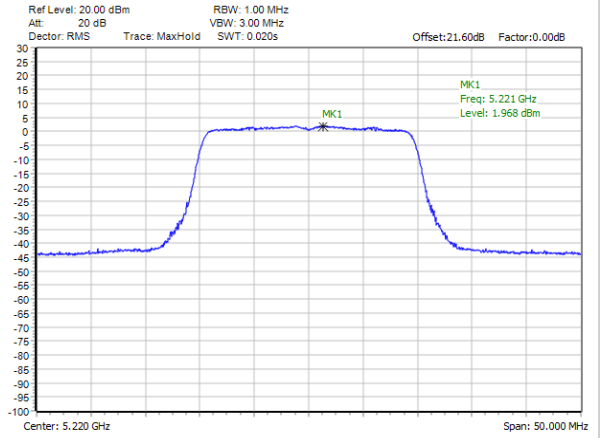
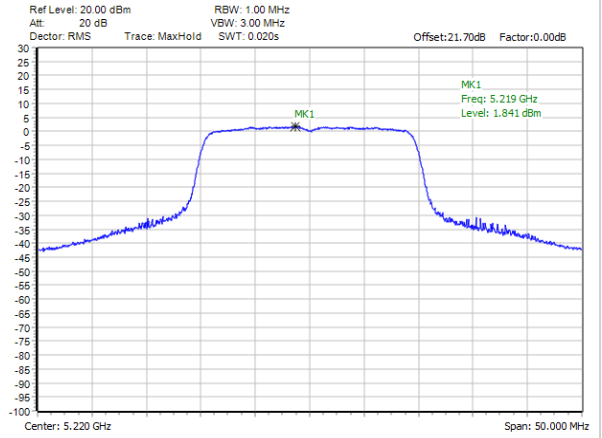
Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

Maximum Power Density Plot Trace 1 (Ant 0)	Maximum Power Density Plot Trace 2 (Ant 1)
	

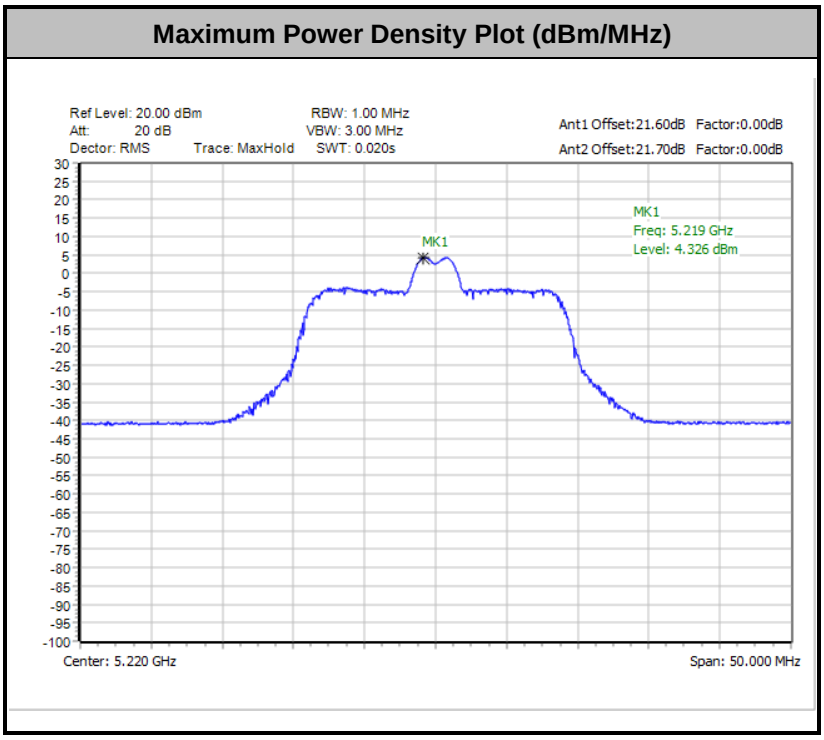
<802.11ax HE20>

Maximum Power Density Plot (dBm/MHz)


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

Maximum Power Density Plot Trace 1 (Ant 0)	Maximum Power Density Plot Trace 2 (Ant 1)
	

<802.11ax HE20 26RU>

Maximum Power Density Plot (dBm/MHz)


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

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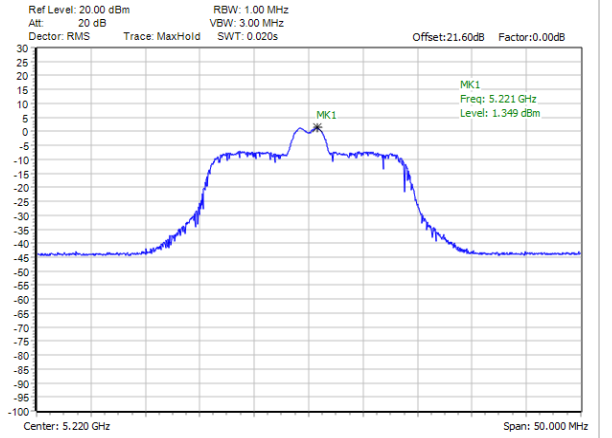
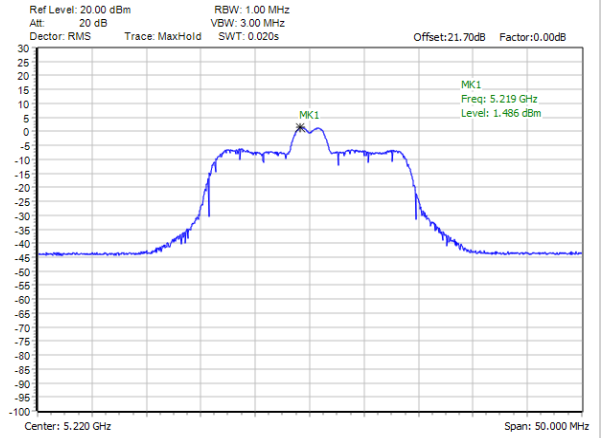
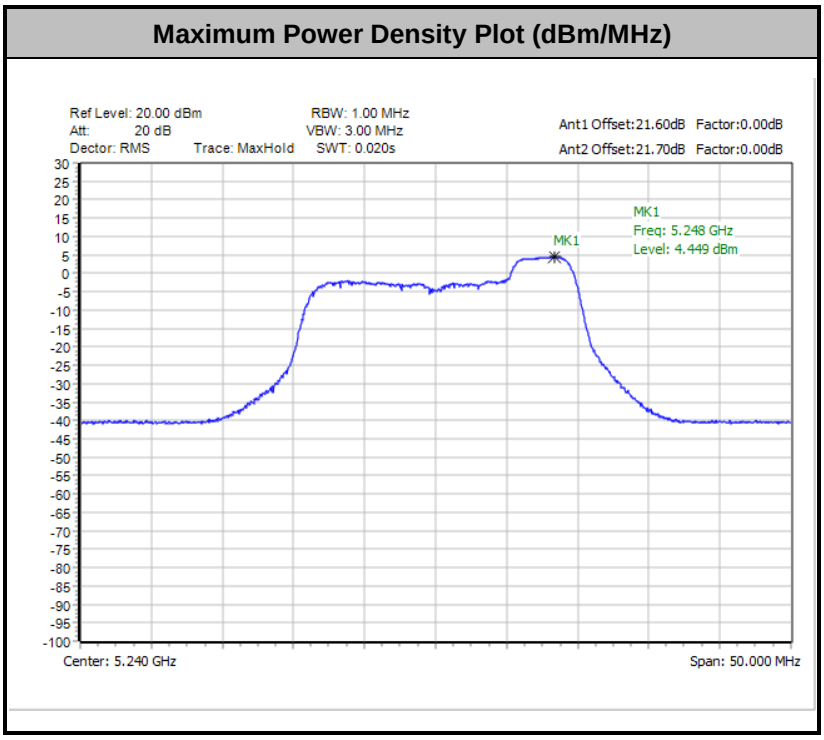
	

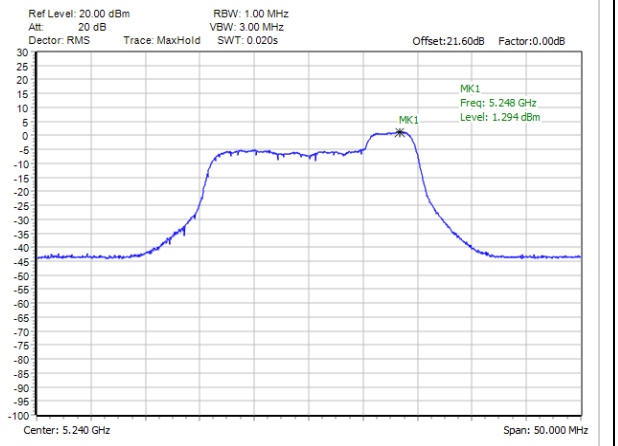
<802.11ax HE20 52RU>

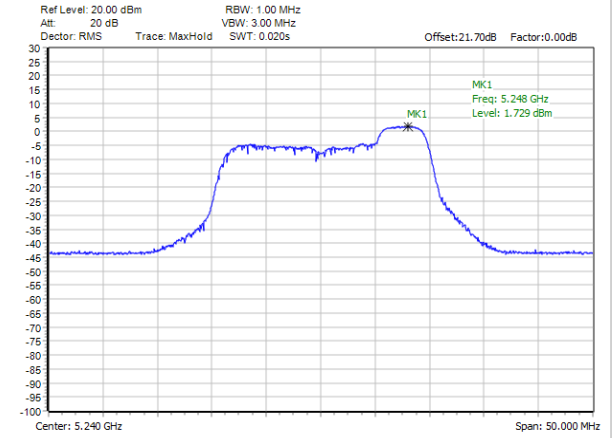
Maximum Power Density Plot (dBm/MHz)



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

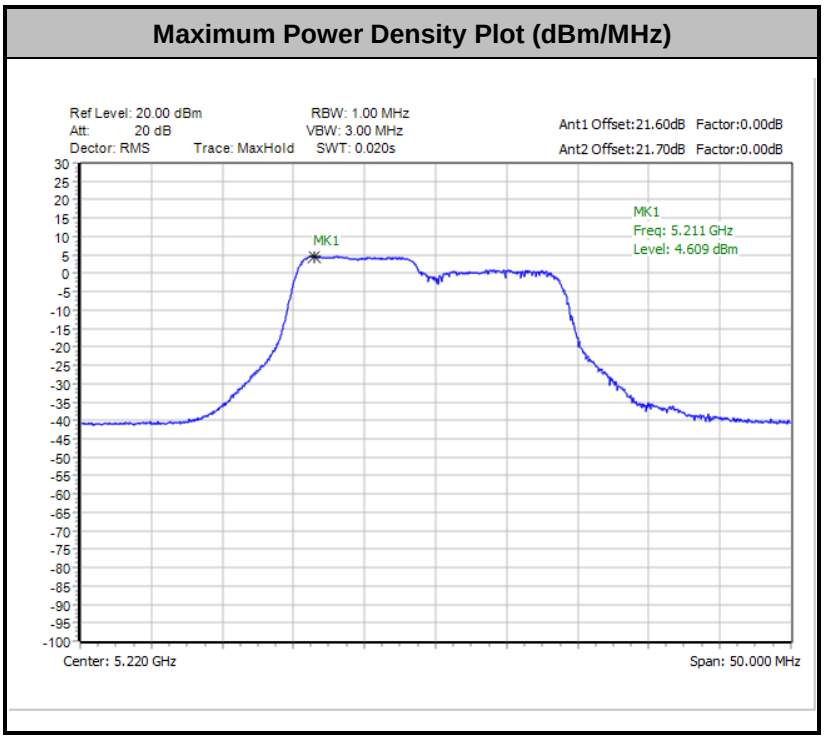
Maximum Power Density Plot Trace 1 (Ant 0)	Maximum Power Density Plot Trace 2 (Ant 1)





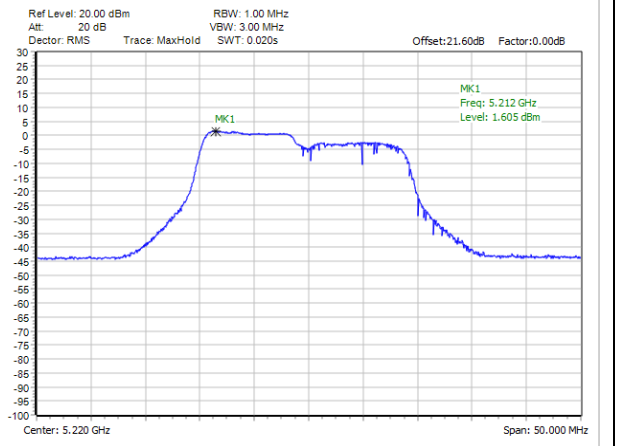
<802.11ax HE20 106RU>

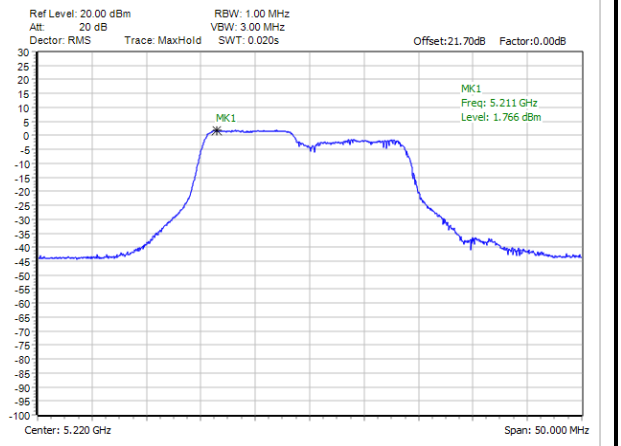
Maximum Power Density Plot (dBm/MHz)



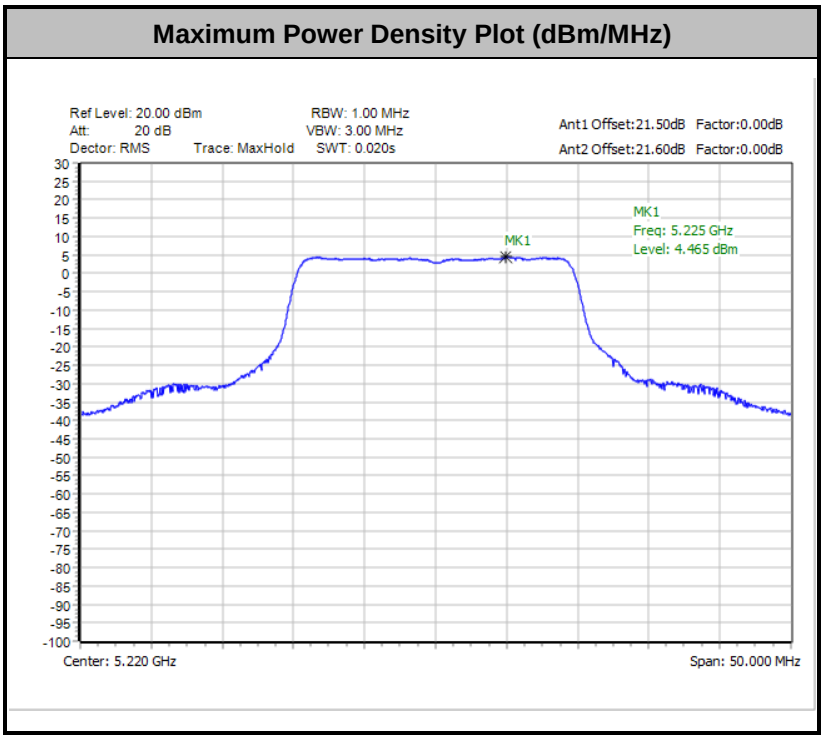
Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

Maximum Power Density Plot Trace 1 (Ant 0)	Maximum Power Density Plot Trace 2 (Ant 1)

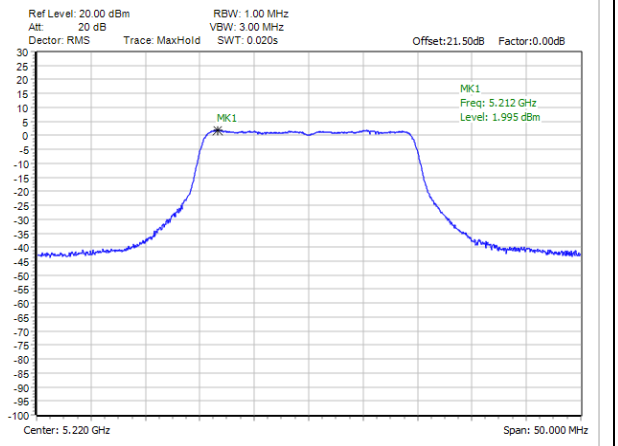
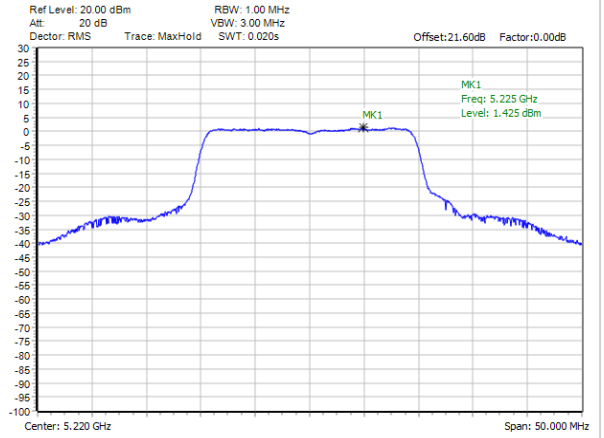




<802.11ax HE20 242RU>

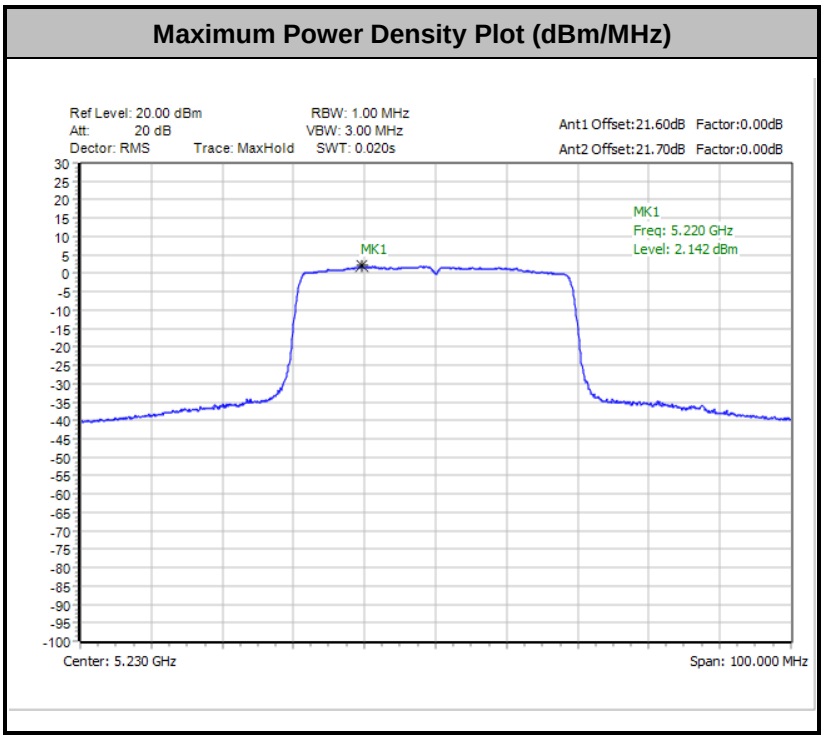
Maximum Power Density Plot (dBm/MHz)


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

Maximum Power Density Plot Trace 1 (Ant 0)	Maximum Power Density Plot Trace 2 (Ant 1)
	

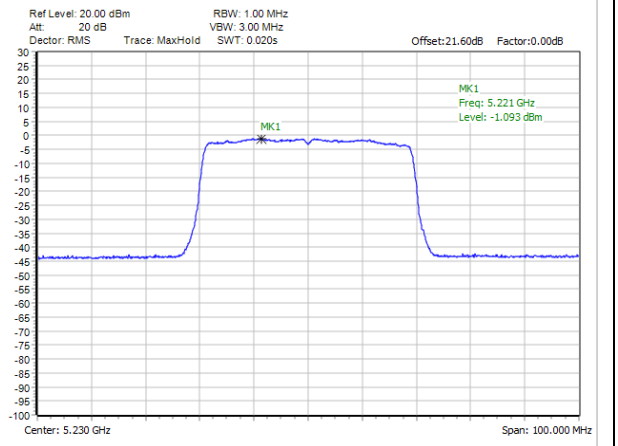
<802.11ax HE40>

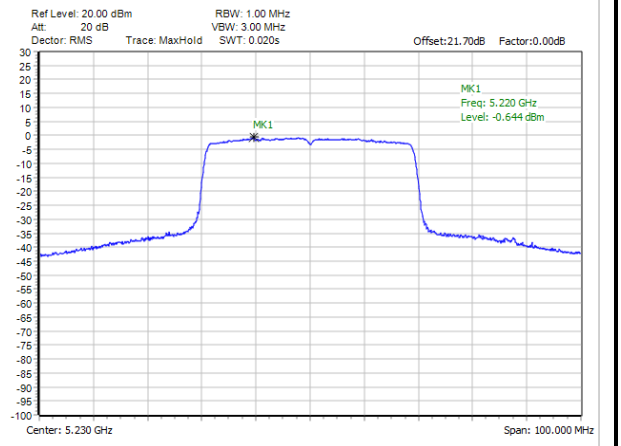
Maximum Power Density Plot (dBm/MHz)



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

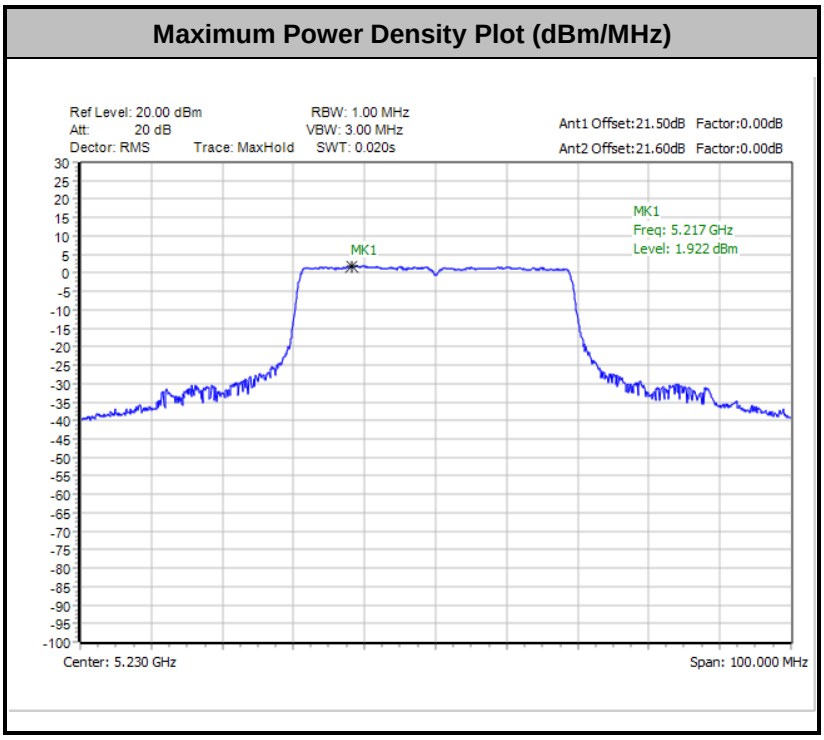
Maximum Power Density Plot Trace 1 (Ant 0)	Maximum Power Density Plot Trace 2 (Ant 1)





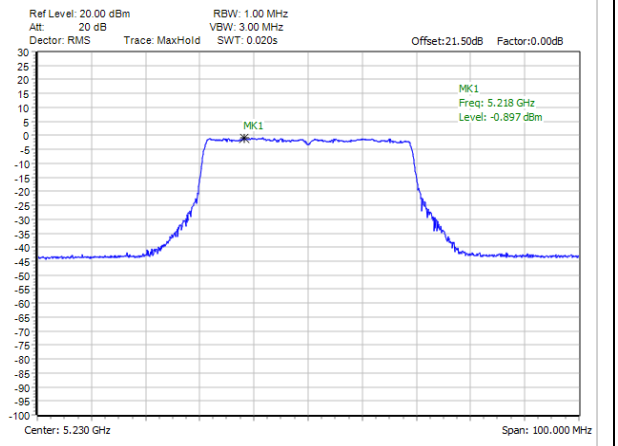
<802.11ax HE40 484RU>

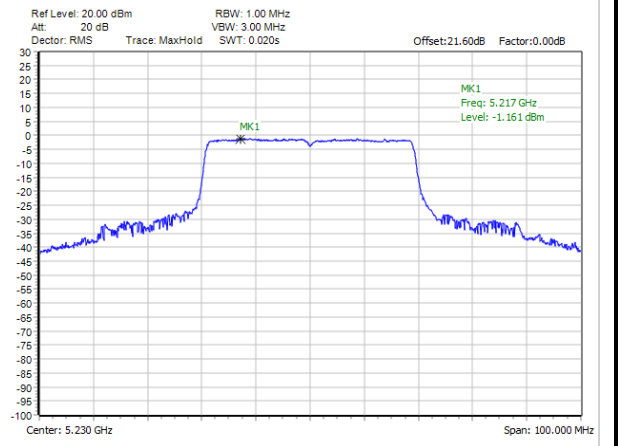
Maximum Power Density Plot (dBm/MHz)



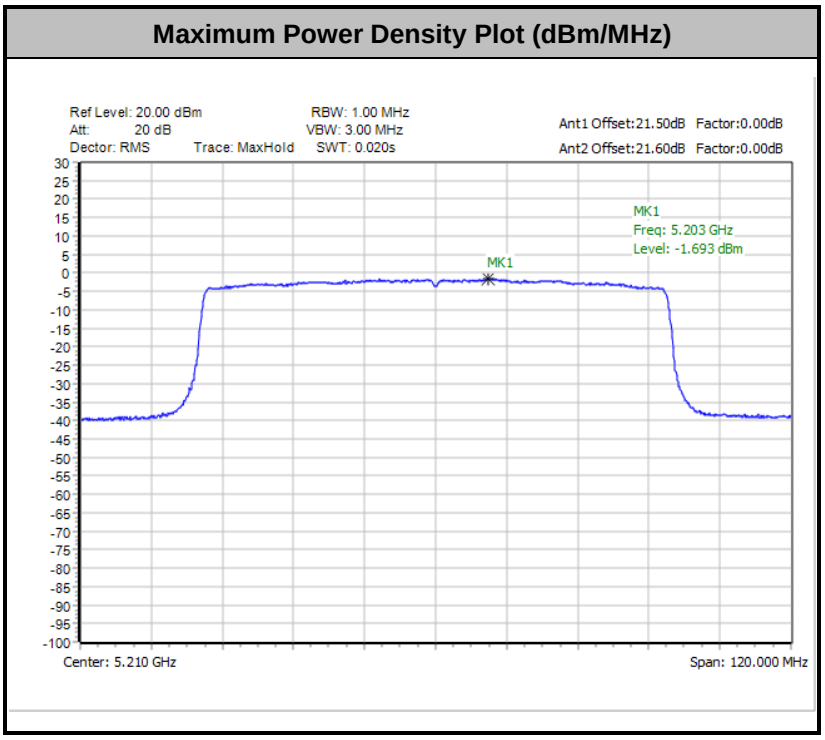
Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

Maximum Power Density Plot Trace 1 (Ant 0)	Maximum Power Density Plot Trace 2 (Ant 1)

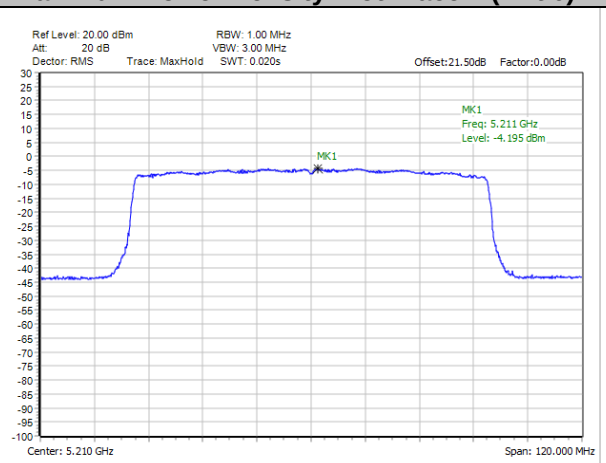
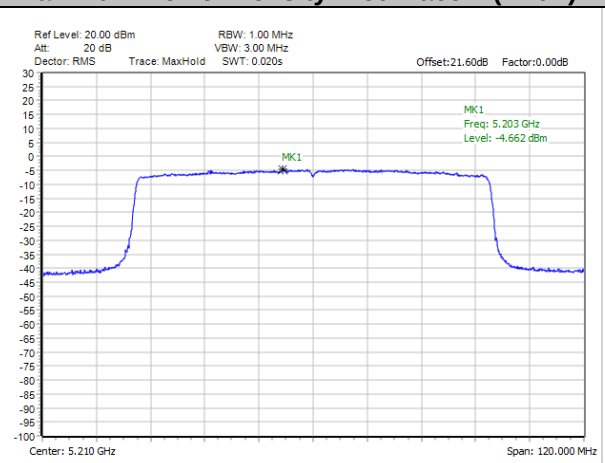




<802.11ax HE80>

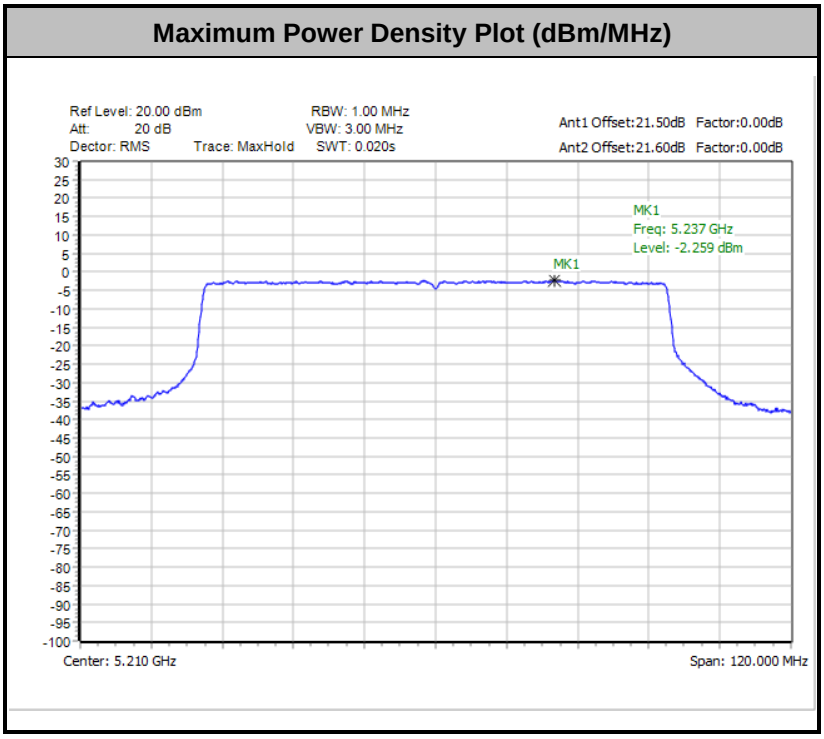
Maximum Power Density Plot (dBm/MHz)


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

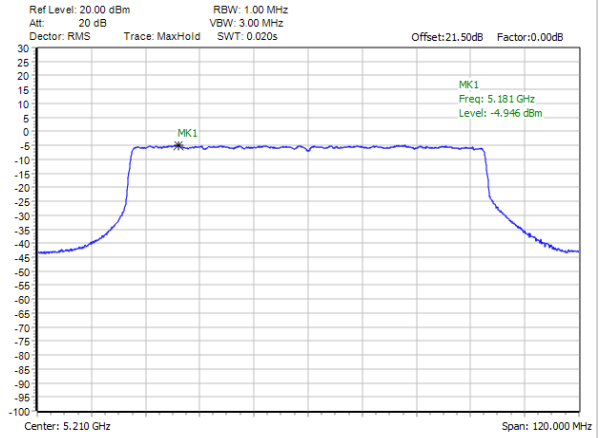
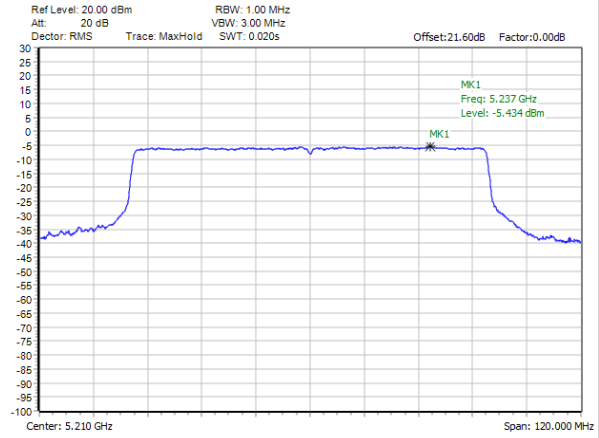
Maximum Power Density Plot Trace 1 (Ant 0)	Maximum Power Density Plot Trace 2 (Ant 1)
	

<802.11ax HE80 966RU>

Maximum Power Density Plot (dBm/MHz)



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

Maximum Power Density Plot Trace 1 (Ant 0)	Maximum Power Density Plot Trace 2 (Ant 1)
	

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 falls in restricted bands shall comply with the general field strength limits as below table:

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

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

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

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.3

(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.
(ii) Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are based on the use of a peak detector.

3.4.2 Measuring Instruments

Please refer to the measuring equipment list in 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

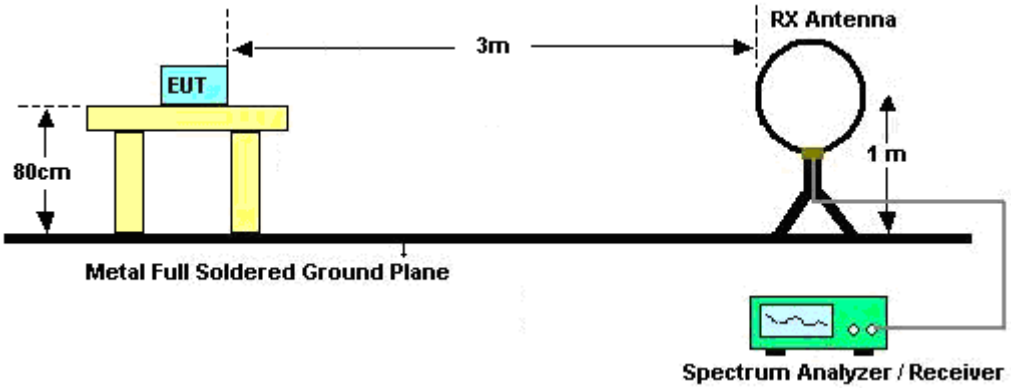
(3) Procedures for Average Unwanted Emissions Measurements Above 1000 MHz

- RBW = 1 MHz
- VBW = 10 Hz, when duty cycle is no less than 98 percent.
- VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

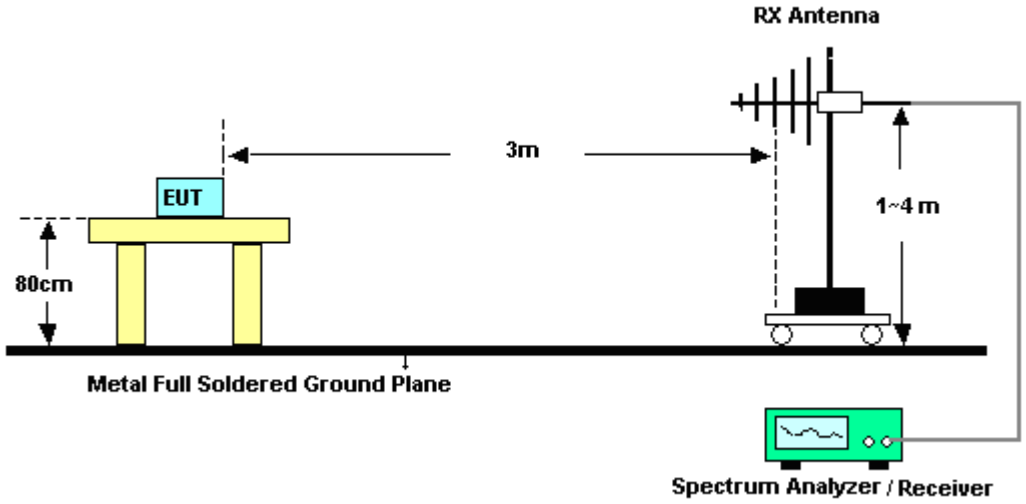
2. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the receiving antenna which is mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT is arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as "-".
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as "-".

3.4.4 Test Setup

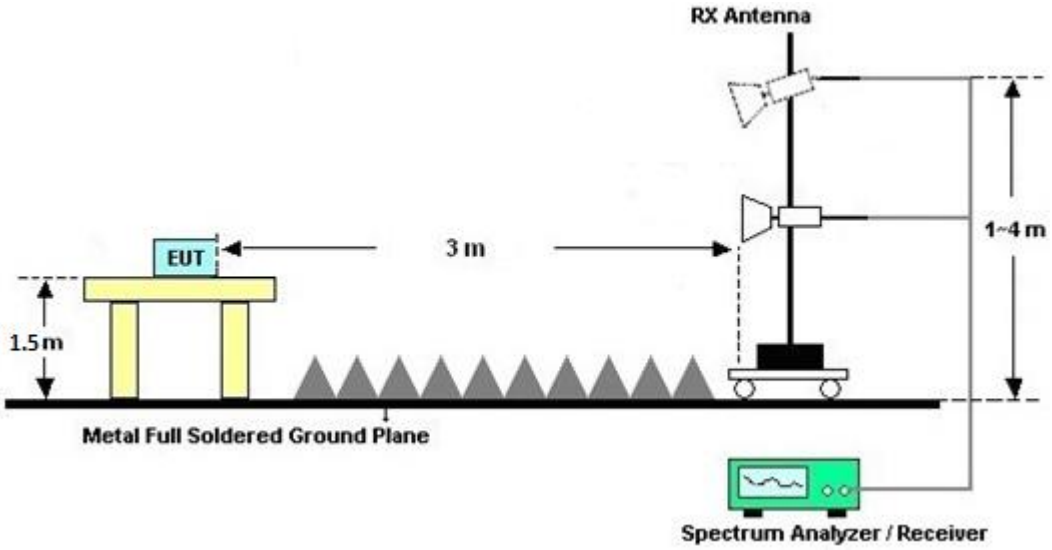
For radiated emissions below 30MHz



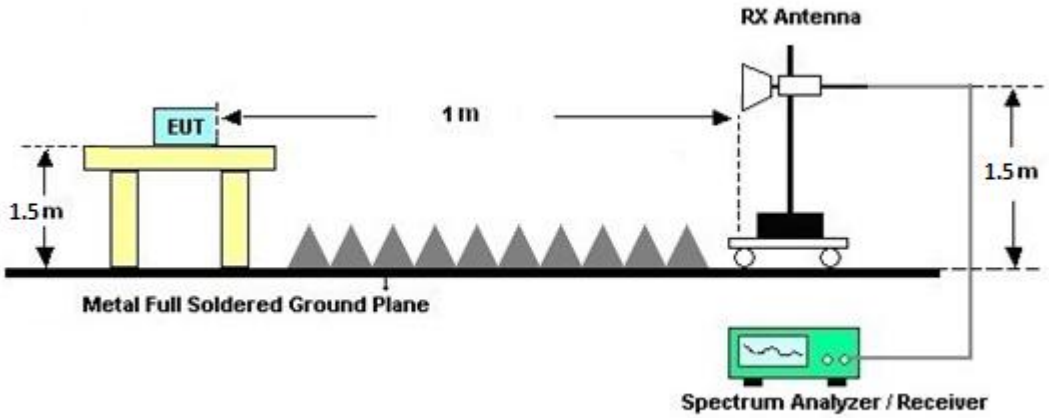
For radiated emissions from 30MHz to 1GHz



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

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

3.4.6 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 (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

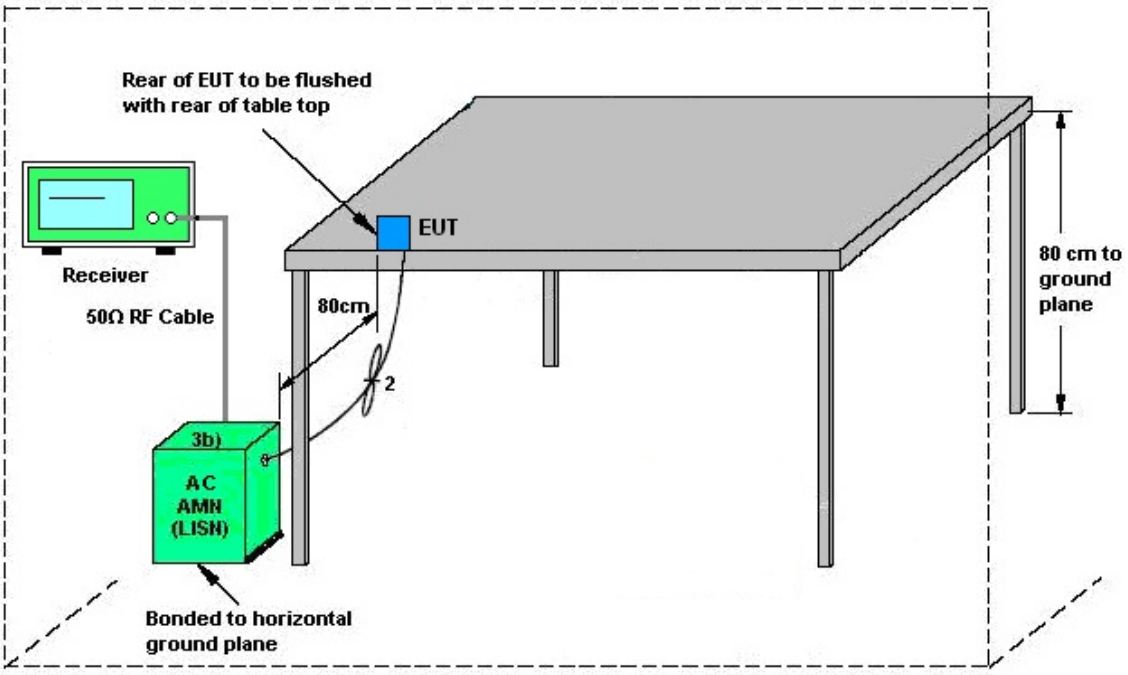
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Antenna Requirements

3.6.1 Standard Applicable

The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	CBL 6111D & N-6-06	35414 & AT-N0602	30MHz~1GHz	Oct. 08, 2022	Mar. 23, 2023~ Apr. 01, 2023	Oct. 07, 2023	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-01620	1GHz~18GHz	Aug. 24, 2022	Mar. 23, 2023~ Apr. 01, 2023	Aug. 23, 2023	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	00993	18GHz~40GHz	Nov. 24, 2022	Mar. 23, 2023~ Apr. 01, 2023	Nov. 23, 2023	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 09, 2022	Mar. 23, 2023~ Apr. 01, 2023	Dec. 08, 2023	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 09, 2022	Mar. 23, 2023~ Apr. 01, 2023	Nov. 08, 2023	Radiation (03CH11-HY)
Preamplifier	Jet-Power	JPA0118-55-303	17100018000 55007	1GHz~18GHz	Jun. 15, 2022	Mar. 23, 2023~ Apr. 01, 2023	Jun. 14, 2023	Radiation (03CH11-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 28, 2022	Mar. 23, 2023~ Apr. 01, 2023	Jun. 27, 2023	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 07, 2022	Mar. 23, 2023~ Apr. 01, 2023	Oct. 06, 2023	Radiation (03CH11-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20MHz~8.4GHz	Oct. 18, 2022	Mar. 23, 2023~ Apr. 01, 2023	Oct. 17, 2023	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Mar. 23, 2023~ Apr. 01, 2023	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Mar. 23, 2023~ Apr. 01, 2023	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Mar. 23, 2023~ Apr. 01, 2023	N/A	Radiation (03CH11-HY)
Software	Audix	E3 6.2009-8-24	RK-001053	N/A	N/A	Mar. 23, 2023~ Apr. 01, 2023	N/A	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30MHz~40GHz	Mar. 07, 2023	Mar. 23, 2023~ Apr. 01, 2023	Mar. 06, 2024	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	801595/2	30MHz~40GHz	Mar. 07, 2023	Mar. 23, 2023~ Apr. 01, 2023	Mar. 06, 2024	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9K~30M	Mar. 07, 2023	Mar. 23, 2023~ Apr. 01, 2023	Mar. 06, 2024	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	30M~40G	Mar. 07, 2023	Mar. 23, 2023~ Apr. 01, 2023	Mar. 06, 2024	Radiation (03CH11-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN11	1.53G Low Pass	Sep. 12, 2022	Mar. 23, 2023~ Apr. 01, 2023	Sep. 11, 2023	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60SS	SN3	3GHz High Pass Filter	Sep. 12, 2022	Mar. 23, 2023~ Apr. 01, 2023	Sep. 11, 2023	Radiation (03CH11-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40SS	SN3	6.75GHz High Pass Filter	Sep. 12, 2022	Mar. 23, 2023~ Apr. 01, 2023	Sep. 11, 2023	Radiation (03CH11-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Mar. 15, 2023	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Dec. 01, 2022	Mar. 15, 2023	Nov. 30, 2023	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 17, 2022	Mar. 15, 2023	Nov. 16, 2023	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 01, 2022	Mar. 15, 2023	Nov. 30, 2023	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 17, 2022	Mar. 15, 2023	Nov. 16, 2023	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	Mar. 15, 2023	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	00691	N/A	Aug. 01, 2022	Mar. 15, 2023	Jul. 31, 2023	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 29, 2022	Mar. 15, 2023	Dec. 28, 2023	Conduction (CO05-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 17, 2022	Mar. 08, 2023~ Mar. 30, 2023	Nov. 16, 2023	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO12 (NO:113)	10MHz~6GHz	Dec. 13, 2022	Mar. 08, 2023~ Mar. 30, 2023	Dec. 12, 2023	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101905	10Hz - 40GHz	Aug. 03, 2022	Mar. 08, 2023~ Mar. 30, 2023	Aug. 02, 2023	Conducted (TH05-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.5 dB**

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**6.3 dB**

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.4 dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.8 dB**

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.3 dB**

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Mina Liu	Temperature:	21~25	°C
Test Date:	2023/3/8~2023/3/30	Relative Humidity:	51~54	%

Report Number : FR290606B

TEST RESULTS DATA
26dB and 99% OBW

U-NII-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 0	Ant 1	Ant 0	Ant 1	Ant 0	Ant 1	Ant 0	Ant 1		
11a	6Mbps	2	36	5180	16.38	16.43	19.68	20.16	-		22.14			
11a	6Mbps	2	44	5220	16.38	16.43	19.80	19.86	-		22.14		-	
11a	6Mbps	2	48	5240	16.43	16.43	19.80	20.04	-		22.16			

TEST RESULTS DATA
Average Power Table

FCC U-NII-1 MIMO													
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 0	Ant 1	SUM	Ant 0	Ant 1	Ant 0	Ant 1		
11a	6Mbps	2	36	5180	13.00	12.40	15.72	29.80		6.20		-	Pass
11a	6Mbps	2	44	5220	13.00	12.50	15.77	29.80		6.20			Pass
11a	6Mbps	2	48	5240	12.90	12.50	15.71	29.80		6.20			Pass
HT20	MCS0	2	36	5180	12.90	12.20	15.57	29.80		6.20			Pass
HT20	MCS0	2	44	5220	12.90	12.70	15.81	29.80		6.20			Pass
HT20	MCS0	2	48	5240	12.80	12.50	15.66	29.80		6.20			Pass
HT40	MCS0	2	38	5190	12.50	11.80	15.17	29.80		6.20			Pass
HT40	MCS0	2	46	5230	12.90	12.70	15.81	29.80		6.20			Pass
VHT20	MCS0	2	36	5180	12.90	12.20	15.57	29.80		6.20			Pass
VHT20	MCS0	2	44	5220	12.90	12.70	15.81	29.80		6.20			Pass
VHT20	MCS0	2	48	5240	12.80	12.50	15.66	29.80		6.20			Pass
VHT40	MCS0	2	38	5190	12.50	11.80	15.17	29.80		6.20			Pass
VHT40	MCS0	2	46	5230	12.90	12.70	15.81	29.80		6.20			Pass
VHT80	MCS0	2	42	5210	12.00	11.70	14.86	29.80		6.20			Pass

Report Number : FR290606B

TEST RESULTS DATA
Power Spectral Density

FCC U-NII-1 MIMO													
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 0	Ant 1	SUM	Ant 0	Ant 1	Ant 0	Ant 1		
11a	6Mbps	2	36	5180	-		4.95	15.16		7.84		-	Pass
11a	6Mbps	2	44	5220			5.03	15.16		7.84			Pass
11a	6Mbps	2	48	5240			4.84	15.16		7.84			Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-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 0	Ant 1	Ant 0	Ant 1	Ant 0	Ant 1	Ant 0	Ant 1		
HE20	MCS0	2	36	5180	Full	18.98	18.98	21.72	21.90	-		22.78		-	-
HE20	MCS0	2	44	5220	Full	18.98	18.98	21.66	21.60	-		22.78			
HE20	MCS0	2	48	5240	Full	18.98	18.93	21.78	22.38	-		22.77			
HE40	MCS0	2	38	5190	Full	38.16	38.06	40.56	40.68	-		23.01			
HE40	MCS0	2	46	5230	Full	37.96	37.96	40.68	41.04	-		23.01			
HE80	MCS0	2	42	5210	Full	77.32	77.20	82.80	82.32	-		23.01			

Report Number : FR290606B

TEST RESULTS DATA
Average Power Table

FCC U-NII-1 MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
						Ant 0	Ant 1	SUM	Ant 0	Ant 1	Ant 0	Ant 1		
HE20	MCS0	2	36	5180	Full	13.00	12.30	15.67	29.80		6.20			Pass
HE20	MCS0	2	36	5180	26/0	3.80	3.30	6.57	29.80		6.20			Pass
HE20	MCS0	2	36	5180	52/37	6.40	5.90	9.17	29.80		6.20			Pass
HE20	MCS0	2	36	5180	106/53	9.10	9.30	12.21	29.80		6.20			Pass
HE20	MCS0	2	36	5180	242/61	13.30	10.90	15.27	29.80		6.20			Pass
HE20	MCS0	2	44	5220	Full	13.00	12.80	15.91	29.80		6.20			Pass
HE20	MCS0	2	44	5220	26/4	4.40	4.40	7.41	29.80		6.20			Pass
HE20	MCS0	2	44	5220	52/38	5.90	6.50	9.22	29.80		6.20			Pass
HE20	MCS0	2	44	5220	106/53	9.10	8.70	11.91	29.80		6.20			Pass
HE20	MCS0	2	44	5220	242/61	12.40	11.10	14.81	29.80		6.20			Pass
HE20	MCS0	2	48	5240	Full	12.90	12.60	15.76	29.80		6.20		-	Pass
HE20	MCS0	2	48	5240	26/8	2.90	3.40	6.17	29.80		6.20			Pass
HE20	MCS0	2	48	5240	52/40	6.20	6.80	9.52	29.80		6.20			Pass
HE20	MCS0	2	48	5240	106/54	9.30	9.80	12.57	29.80		6.20			Pass
HE20	MCS0	2	48	5240	242/61	12.40	11.50	14.98	29.80		6.20			Pass
HE40	MCS0	2	38	5190	Full	12.60	11.90	15.27	29.80		6.20			Pass
HE40	MCS0	2	38	5190	484/65	12.40	11.50	14.98	29.80		6.20			Pass
HE40	MCS0	2	46	5230	Full	13.00	12.80	15.91	29.80		6.20			Pass
HE40	MCS0	2	46	5230	484/65	12.90	12.80	15.86	29.80		6.20			Pass
HE80	MCS0	2	42	5210	Full	12.10	11.80	14.96	29.80		6.20			Pass
HE80	MCS0	2	42	5210	996/67	12.00	11.50	14.77	29.80		6.20			Pass

TEST RESULTS DATA
Power Spectral Density

FCC U-NII-1 MIMO														
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
						Ant 0	Ant 1	SUM	Ant 0	Ant 1	Ant 0	Ant 1		
HE20	MCS0	2	36	5180	Full			4.57	15.16		7.84			Pass
HE20	MCS0	2	36	5180	26/0			4.31	15.16		7.84			Pass
HE20	MCS0	2	36	5180	52/37			4.08	15.16		7.84			Pass
HE20	MCS0	2	36	5180	106/53			4.16	15.16		7.84			Pass
HE20	MCS0	2	36	5180	242/61			4.45	15.16		7.84			Pass
HE20	MCS0	2	44	5220	Full			4.83	15.16		7.84			Pass
HE20	MCS0	2	44	5220	26/4			4.33	15.16		7.84			Pass
HE20	MCS0	2	44	5220	52/38			4.26	15.16		7.84			Pass
HE20	MCS0	2	44	5220	106/53			4.61	15.16		7.84			Pass
HE20	MCS0	2	44	5220	242/61			4.47	15.16		7.84			Pass
HE20	MCS0	2	48	5240	Full	-		4.63	15.16		7.84		-	Pass
HE20	MCS0	2	48	5240	26/8			4.11	15.16		7.84			Pass
HE20	MCS0	2	48	5240	52/40			4.45	15.16		7.84			Pass
HE20	MCS0	2	48	5240	106/54			4.32	15.16		7.84			Pass
HE20	MCS0	2	48	5240	242/61			4.11	15.16		7.84			Pass
HE40	MCS0	2	38	5190	Full			1.53	15.16		7.84			Pass
HE40	MCS0	2	38	5190	484/65			1.38	15.16		7.84			Pass
HE40	MCS0	2	46	5230	Full			2.14	15.16		7.84			Pass
HE40	MCS0	2	46	5230	484/65			1.92	15.16		7.84			Pass
HE80	MCS0	2	42	5210	Full			-1.69	15.16		7.84			Pass
HE80	MCS0	2	42	5210	996/67			-2.26	15.16		7.84			Pass

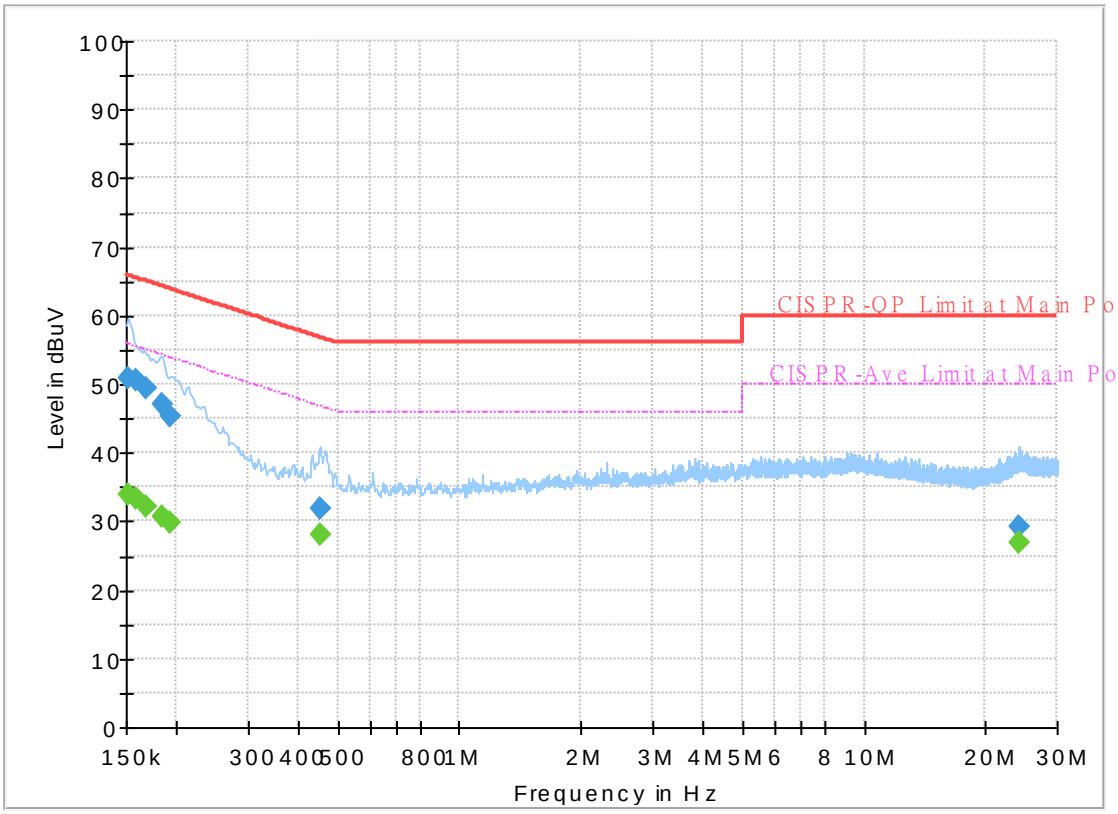
Appendix B. AC Conducted Emission Test Results

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

EUT Information

Report NO :	290606
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

Full Spectrum



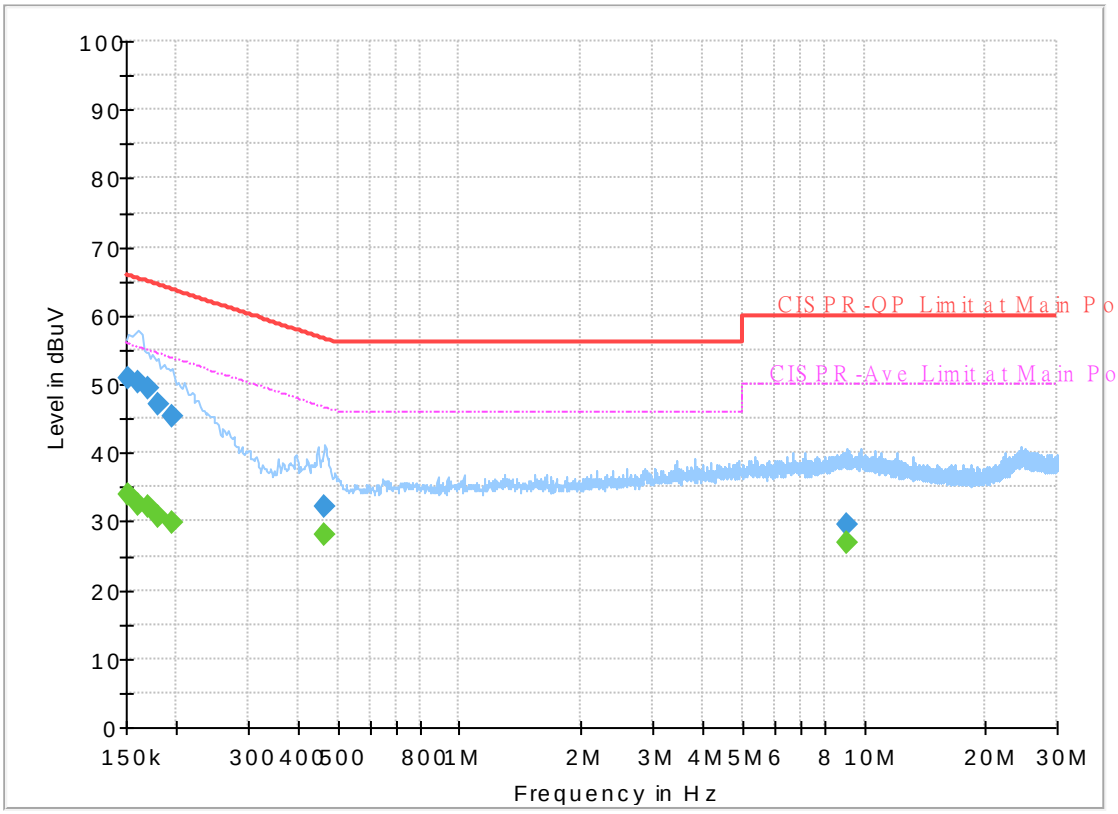
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	33.88	55.88	22.00	L1	OFF	19.9
0.152250	50.99	---	65.88	14.89	L1	OFF	19.9
0.159000	---	33.40	55.52	22.12	L1	OFF	19.9
0.159000	50.47	---	65.52	15.05	L1	OFF	19.9
0.168000	---	32.04	55.06	23.02	L1	OFF	19.9
0.168000	49.41	---	65.06	15.65	L1	OFF	19.9
0.183750	---	30.65	54.31	23.66	L1	OFF	19.9
0.183750	46.96	---	64.31	17.35	L1	OFF	19.9
0.192750	---	29.69	53.92	24.23	L1	OFF	19.9
0.192750	45.24	---	63.92	18.68	L1	OFF	19.9
0.451500	---	28.10	46.85	18.75	L1	OFF	19.9
0.451500	32.01	---	56.85	24.84	L1	OFF	19.9
24.033750	---	26.98	50.00	23.02	L1	OFF	20.6
24.033750	29.14	---	60.00	30.86	L1	OFF	20.6

EUT Information

Report NO :	290606
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	33.99	55.88	21.89	N	OFF	19.9
0.152250	50.94	---	65.88	14.94	N	OFF	19.9
0.161250	---	32.52	55.40	22.88	N	OFF	19.9
0.161250	50.23	---	65.40	15.17	N	OFF	19.9
0.170250	---	32.20	54.95	22.75	N	OFF	19.9
0.170250	49.52	---	64.95	15.43	N	OFF	19.9
0.179250	---	30.58	54.52	23.94	N	OFF	19.9
0.179250	47.03	---	64.52	17.49	N	OFF	19.9
0.195000	---	29.86	53.82	23.96	N	OFF	19.9
0.195000	45.30	---	63.82	18.52	N	OFF	19.9
0.465000	---	27.96	46.60	18.64	N	OFF	19.9
0.465000	32.25	---	56.60	24.35	N	OFF	19.9
9.082500	---	26.86	50.00	23.14	N	OFF	20.2
9.082500	29.40	---	60.00	30.60	N	OFF	20.2

Appendix C. Radiated Spurious Emission

Test Engineer :	Yuan Lee, Bank Lin and Troye Hsieh	Temperature :	20.2~25.1°C
		Relative Humidity :	50.8~66.5%

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5149.24	55.89	-18.11	74	45.76	33.2	10.57	33.64	100	10	P	H
		5150	46.08	-7.92	54	35.95	33.2	10.57	33.64	100	10	A	H
	*	5180	110.02	-	-	99.94	33.14	10.58	33.64	100	10	P	H
	*	5180	101.73	-	-	91.65	33.14	10.58	33.64	100	10	A	H
													H
		5148.98	52.49	-21.51	74	42.36	33.2	10.57	33.64	300	60	P	V
		5150	43.35	-10.65	54	33.22	33.2	10.57	33.64	300	60	A	V
	*	5180	107.9	-	-	97.82	33.14	10.58	33.64	300	60	P	V
	*	5180	99.98	-	-	89.9	33.14	10.58	33.64	300	60	A	V
													V
802.11a CH 44 5220MHz		5094.9	53.99	-20.01	74	43.96	33.12	10.55	33.64	113	12	P	H
		5080.08	42.35	-11.65	54	32.28	33.18	10.54	33.65	113	12	A	H
	*	5220	109.36	-	-	99.26	33.1	10.64	33.64	113	12	P	H
	*	5220	101.09	-	-	90.99	33.1	10.64	33.64	113	12	A	H
		5436	50.7	-23.3	74	40.22	33	11.1	33.62	113	12	P	H
		5457.12	40.54	-13.46	54	30.04	33.01	11.11	33.62	113	12	A	H
		5122.98	52.32	-21.68	74	42.25	33.15	10.56	33.64	301	51	P	V
		5000	42.06	-11.94	54	31.9	33.3	10.51	33.65	301	51	A	V
	*	5220	108.87	-	-	98.77	33.1	10.64	33.64	301	51	P	V
	*	5220	100.01	-	-	89.91	33.1	10.64	33.64	301	51	A	V
		5460	51.04	-22.96	74	40.53	33.02	11.11	33.62	301	51	P	V
		5455.92	40.65	-13.35	54	30.15	33.01	11.11	33.62	301	51	A	V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 48 5240MHz		5136.76	52.46	-21.54	74	42.37	33.17	10.56	33.64	102	12	P	H
		5090.22	42.28	-11.72	54	32.23	33.14	10.55	33.64	102	12	A	H
	*	5240	109.75	-	-	99.6	33.1	10.69	33.64	102	12	P	H
	*	5240	101.24	-	-	91.09	33.1	10.69	33.64	102	12	A	H
		5436.48	50.71	-23.29	74	40.23	33	11.1	33.62	102	12	P	H
		5456.64	40.51	-13.49	54	30.01	33.01	11.11	33.62	102	12	A	H
		5128.44	52.69	-21.31	74	42.61	33.16	10.56	33.64	298	50	P	V
		5000	42.01	-11.99	54	31.85	33.3	10.51	33.65	298	50	A	V
	*	5240	108.26	-	-	98.11	33.1	10.69	33.64	298	50	P	V
	*	5240	99.82	-	-	89.67	33.1	10.69	33.64	298	50	A	V
		5381.04	51.43	-22.57	74	41.07	32.96	11.03	33.63	298	50	P	V
		5459.52	40.6	-13.4	54	30.09	33.02	11.11	33.62	298	50	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		10360	46.1	-22.1	68.2	50.02	38.86	17.53	60.31	-	-	P	H
		15540	46.63	-27.37	74	48.58	38.18	21.87	62	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		10360	46.46	-21.74	68.2	50.38	38.86	17.53	60.31	-	-	P	V
		15540	46.48	-27.52	74	48.43	38.18	21.87	62	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		10440	46.89	-21.31	68.2	50.84	38.9	17.6	60.45	-	-	P	H
		15660	46.19	-27.81	74	48.11	37.88	21.94	61.74	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
802.11a CH 44 5220MHz													H
		10440	47.01	-21.19	68.2	50.96	38.9	17.6	60.45	-	-	P	V
		15660	46.57	-27.43	74	48.49	37.88	21.94	61.74	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		10480	45.91	-22.29	68.2	49.89	38.9	17.64	60.52	-	-	P	H
		15720	46.84	-27.16	74	48.67	37.8	21.98	61.61	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
802.11a CH 48 5240MHz													H
		10480	46	-22.2	68.2	49.98	38.9	17.64	60.52	-	-	P	V
		15720	45.87	-28.13	74	47.7	37.8	21.98	61.61	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.

Band 1 5150~5250MHz

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

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5145.34	58.43	-15.57	74	48.31	33.19	10.57	33.64	104	10	P	H
		5150	48.47	-5.53	54	38.34	33.2	10.57	33.64	104	10	A	H
	*	5180	110.35	-	-	100.27	33.14	10.58	33.64	104	10	P	H
	*	5180	101.77	-	-	91.69	33.14	10.58	33.64	104	10	A	H
802.11ax													H
HE20 Full													H
CH 36		5148.72	56.16	-17.84	74	46.03	33.2	10.57	33.64	302	51	P	V
5180MHz		5150	45.48	-8.52	54	35.35	33.2	10.57	33.64	302	51	A	V
	*	5180	108.13	-	-	98.05	33.14	10.58	33.64	302	51	P	V
	*	5180	100.04	-	-	89.96	33.14	10.58	33.64	302	51	A	V
													V
													V
		5102.7	52.67	-21.33	74	42.65	33.11	10.55	33.64	117	9	P	H
		5065	42.39	-11.61	54	32.26	33.24	10.54	33.65	117	9	A	H
	*	5220	110.05	-	-	99.95	33.1	10.64	33.64	117	9	P	H
	*	5220	100.89	-	-	90.79	33.1	10.64	33.64	117	9	A	H
802.11ax		5443.44	50.7	-23.3	74	40.22	33	11.1	33.62	117	9	P	H
HE20 Full		5454.72	40.45	-13.55	54	29.95	33.01	11.11	33.62	117	9	A	H
CH 44		5069.68	52.27	-21.73	74	42.16	33.22	10.54	33.65	297	59	P	V
5220MHz		5060.58	42.13	-11.87	54	31.99	33.26	10.53	33.65	297	59	A	V
	*	5220	109.34	-	-	99.24	33.1	10.64	33.64	297	59	P	V
	*	5220	100.23	-	-	90.13	33.1	10.64	33.64	297	59	A	V
		5355.12	50.5	-23.5	74	40.25	32.91	10.97	33.63	297	59	P	V
		5455.68	40.53	-13.47	54	30.03	33.01	11.11	33.62	297	59	A	V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5110.24	52.16	-21.84	74	42.13	33.12	10.55	33.64	100	10	P	H
		5093.6	42.34	-11.66	54	32.3	33.13	10.55	33.64	100	10	A	H
	*	5240	110.1	-	-	99.95	33.1	10.69	33.64	100	10	P	H
	*	5240	100.67	-	-	90.52	33.1	10.69	33.64	100	10	A	H
802.11ax		5456.16	50.58	-23.42	74	40.08	33.01	11.11	33.62	100	10	P	H
HE20 Full		5459.04	40.49	-13.51	54	29.98	33.02	11.11	33.62	100	10	A	H
CH 48		5061.36	51.99	-22.01	74	41.86	33.25	10.53	33.65	300	54	P	V
5240MHz		5000	42	-12	54	31.84	33.3	10.51	33.65	300	54	A	V
	*	5240	109.35	-	-	99.2	33.1	10.69	33.64	300	54	P	V
	*	5240	99.9	-	-	89.75	33.1	10.69	33.64	300	54	A	V
		5404.32	50.91	-23.09	74	40.46	33	11.08	33.63	300	54	P	V
		5385.6	40.57	-13.43	54	30.19	32.97	11.04	33.63	300	54	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ax HE20 Full (Harmonic @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		10360	47.4	-20.8	68.2	51.32	38.86	17.53	60.31	-	-	P	H
		15540	46.27	-27.73	74	48.22	38.18	21.87	62	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
802.11ax													H
HE20 Full													H
CH 36		10360	46.29	-21.91	68.2	50.21	38.86	17.53	60.31	-	-	P	V
5180MHz		15540	45.87	-28.13	74	47.82	38.18	21.87	62	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		10440	45.52	-22.68	68.2	49.47	38.9	17.6	60.45	-	-	P	H
		15660	45.58	-28.42	74	47.5	37.88	21.94	61.74	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
802.11ax													H
HE20 Full													H
CH 44		10440	46.53	-21.67	68.2	50.48	38.9	17.6	60.45	-	-	P	V
5220MHz		15660	45.32	-28.68	74	47.24	37.88	21.94	61.74	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		10480	45.39	-22.81	68.2	49.37	38.9	17.64	60.52	-	-	P	H
		15720	46.71	-27.29	74	48.54	37.8	21.98	61.61	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
802.11ax													H
HE20 Full													H
CH 48		10480	45.36	-22.84	68.2	49.34	38.9	17.64	60.52	-	-	P	V
5240MHz		15720	46.03	-27.97	74	47.86	37.8	21.98	61.61	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.

Band 1 5150~5250MHz

WIFI 802.11ax HE20 Partial 242 (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5146.9	62.48	-11.52	74	52.36	33.19	10.57	33.64	100	10	P	H
		5150	51.31	-2.69	54	41.18	33.2	10.57	33.64	100	10	A	H
	*	5180	110.24	-	-	100.16	33.14	10.58	33.64	100	10	P	H
802.11ax	*	5180	101.55	-	-	91.47	33.14	10.58	33.64	100	10	A	H
HE20													H
Partial													H
242/61		5148.98	59.36	-14.64	74	49.23	33.2	10.57	33.64	320	58	P	V
CH 36		5150	47.14	-6.86	54	37.01	33.2	10.57	33.64	320	58	A	V
5180MHz	*	5180	109.51	-	-	99.43	33.14	10.58	33.64	320	58	P	V
	*	5180	99.44	-	-	89.36	33.14	10.58	33.64	320	58	A	V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 1 5150~5250MHz

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

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5148.2	63.04	-10.96	74	52.91	33.2	10.57	33.64	103	10	P	H
		5150	52.68	-1.32	54	42.55	33.2	10.57	33.64	103	10	A	H
	*	5190	108.85	-	-	98.78	33.12	10.59	33.64	103	10	P	H
	*	5190	98.43	-	-	88.36	33.12	10.59	33.64	103	10	A	H
802.11ax		5371.24	51.4	-22.6	74	41.08	32.94	11.01	33.63	103	10	P	H
HE40 Full		5352.76	40.56	-13.44	54	30.32	32.91	10.96	33.63	103	10	A	H
CH 38		5149.24	61.88	-12.12	74	51.75	33.2	10.57	33.64	304	59	P	V
5190MHz		5150	49.89	-4.11	54	39.76	33.2	10.57	33.64	304	59	A	V
	*	5190	105.27	-	-	95.2	33.12	10.59	33.64	304	59	P	V
	*	5190	96.47	-	-	86.4	33.12	10.59	33.64	304	59	A	V
		5393.92	50.23	-23.77	74	39.8	32.99	11.07	33.63	304	59	P	V
		5459.44	40.46	-13.54	54	29.95	33.02	11.11	33.62	304	59	A	V
		5149.5	53.13	-20.87	74	43	33.2	10.57	33.64	114	11	P	H
		5150	43	-11	54	32.87	33.2	10.57	33.64	114	11	A	H
	*	5230	107.15	-	-	97.03	33.1	10.66	33.64	114	11	P	H
	*	5230	98.61	-	-	88.49	33.1	10.66	33.64	114	11	A	H
802.11ax		5448.24	50.45	-23.55	74	39.96	33	11.11	33.62	114	11	P	H
HE40 Full		5361.72	41.03	-12.97	54	30.75	32.92	10.99	33.63	114	11	A	H
CH 46		5006.76	52.61	-21.39	74	42.45	33.3	10.51	33.65	303	49	P	V
5230MHz		5086.58	42.25	-11.75	54	32.2	33.15	10.54	33.64	303	49	A	V
	*	5230	107.99	-	-	97.87	33.1	10.66	33.64	303	49	P	V
	*	5230	97.01	-	-	86.89	33.1	10.66	33.64	303	49	A	V
		5370.96	51.66	-22.34	74	41.34	32.94	11.01	33.63	303	49	P	V
		5360.32	41.08	-12.92	54	30.81	32.92	10.98	33.63	303	49	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ax HE40 Full (Harmonic @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		10380	45.82	-22.38	68.2	49.73	38.88	17.55	60.34	-	-	P	H
		15570	47.03	-26.97	74	48.99	38.09	21.89	61.94	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
802.11ax													H
HE40 Full													H
CH 38		10380	46.68	-21.52	68.2	50.59	38.88	17.55	60.34	-	-	P	V
5190MHz		15570	46.51	-27.49	74	48.47	38.09	21.89	61.94	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		10460	45.93	-22.27	68.2	49.89	38.9	17.62	60.48	-	-	P	H
		15690	47.87	-26.13	74	49.77	37.82	21.96	61.68	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
802.11ax													H
HE20 Full													H
CH 46		10460	45.59	-22.61	68.2	49.55	38.9	17.62	60.48	-	-	P	V
5230MHz		15690	46.19	-27.81	74	48.09	37.82	21.96	61.68	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.

Band 1 5150~5250MHz

WIFI 802.11ax HE40 Partial 484 (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Partial 484/65 CH 38 5190MHz		5140.92	67.83	-6.17	74	57.72	33.18	10.57	33.64	100	10	P	H
		5150	51.02	-2.98	54	40.89	33.2	10.57	33.64	100	10	A	H
	*	5190	105.8	-	-	95.73	33.12	10.59	33.64	100	10	P	H
	*	5190	97.29	-	-	87.22	33.12	10.59	33.64	100	10	A	H
		5363.96	50.75	-23.25	74	40.46	32.93	10.99	33.63	100	10	P	H
		5456.36	40.48	-13.52	54	29.98	33.01	11.11	33.62	100	10	A	H
		5143.52	65.56	-8.44	74	55.44	33.19	10.57	33.64	300	58	P	V
		5149.76	47.06	-6.94	54	36.93	33.2	10.57	33.64	300	58	A	V
	*	5190	103.86	-	-	93.79	33.12	10.59	33.64	300	58	P	V
	*	5190	95.33	-	-	85.26	33.12	10.59	33.64	300	58	A	V
		5448.52	50.93	-23.07	74	40.44	33	11.11	33.62	300	58	P	V
		5459.44	40.5	-13.5	54	29.99	33.02	11.11	33.62	300	58	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

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

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full CH 42 5210MHz		5143.26	65.98	-8.02	74	55.86	33.19	10.57	33.64	100	10	P	H
		5149.5	53.11	-0.89	54	42.98	33.2	10.57	33.64	100	10	A	H
	*	5210	104.41	-	-	94.34	33.1	10.61	33.64	100	10	P	H
	*	5210	94.5	-	-	84.43	33.1	10.61	33.64	100	10	A	H
		5361.2	51.63	-22.37	74	41.36	32.92	10.98	33.63	100	10	P	H
		5350.54	40.99	-13.01	54	30.76	32.9	10.96	33.63	100	10	A	H
		5138.58	60.24	-13.76	74	50.13	33.18	10.57	33.64	300	58	P	V
		5149.24	49.35	-4.65	54	39.22	33.2	10.57	33.64	300	58	A	V
	*	5210	102.55	-	-	92.48	33.1	10.61	33.64	300	58	P	V
	*	5210	93.01	-	-	82.94	33.1	10.61	33.64	300	58	A	V
		5374.46	52.18	-21.82	74	41.84	32.95	11.02	33.63	300	58	P	V
		5350.02	40.92	-13.08	54	30.69	32.9	10.96	33.63	300	58	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ax HE80 Full (Harmonic @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		10420	45.46	-22.74	68.2	49.39	38.9	17.58	60.41	-	-	P	H
		15630	46.23	-27.77	74	48.18	37.94	21.92	61.81	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
802.11ax													H
HE80 Full													H
CH 42		10420	46.93	-21.27	68.2	50.86	38.9	17.58	60.41	-	-	P	V
5210MHz		15630	46.28	-27.72	74	48.23	37.94	21.92	61.81	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.

Band 1 5150~5250MHz

WIFI 802.11ax HE80 Partial 996 (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Partial 996/67 CH 42 5210MHz		5148.98	56.63	-17.37	74	46.5	33.2	10.57	33.64	300	15	P	H
		5148.2	46.2	-7.8	54	36.07	33.2	10.57	33.64	300	15	A	H
	*	5210	100.67	-	-	90.6	33.1	10.61	33.64	300	15	P	H
	*	5210	92.52	-	-	82.45	33.1	10.61	33.64	300	15	A	H
		5370.56	51.7	-22.3	74	41.38	32.94	11.01	33.63	300	15	P	H
		5431.14	41.24	-12.76	54	30.76	33	11.1	33.62	300	15	A	H
		5149.5	57.85	-16.15	74	47.72	33.2	10.57	33.64	300	67	P	V
		5150	45.86	-8.14	54	35.73	33.2	10.57	33.64	300	67	A	V
	*	5210	100.81	-	-	90.74	33.1	10.61	33.64	300	67	P	V
	*	5210	92.91	-	-	82.84	33.1	10.61	33.64	300	67	A	V
		5377.06	51.83	-22.17	74	41.49	32.95	11.02	33.63	300	67	P	V
		5406.18	41.19	-12.81	54	30.74	33	11.08	33.63	300	67	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission above 18GHz

WIFI 802.11ax HE80 Full (SHF @ 1m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax HE80 Full SHF		39650	45.88	-28.12	74	58.44	44.22	-0.56	56.22	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		38152	46.27	-27.73	74	60.81	43.52	-0.71	57.35	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.

Emission below 1GHz

WIFI 802.11ax HE80 Full (LF @ 3m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax HE80 Full LF		69.15	30.1	-9.9	40	49.06	11.93	1.33	32.22	-	-	P	H
		127.74	27.96	-15.54	43.5	40.86	17.44	1.82	32.16	-	-	P	H
		148.53	28.82	-14.68	43.5	42.11	16.92	1.92	32.13	-	-	P	H
		449.1	29.46	-16.54	46	35.15	22.93	3.23	31.85	-	-	P	H
		512.1	33.76	-12.24	46	38.63	23.77	3.48	32.12	-	-	P	H
		934.9	33.71	-12.29	46	30.65	29.41	4.58	30.93	-	-	P	H
													H
													H
													H
													H
													H
													H
		54.03	36.1	-3.9	40	54.71	12.43	1.21	32.25	100	348	Q	V
		70.5	33.61	-6.39	40	52.51	11.98	1.34	32.22	118	52	Q	V
		98.31	31.58	-11.92	43.5	46.51	15.65	1.55	32.13	-	-	P	V
		447.7	29.03	-16.97	46	34.77	22.9	3.22	31.86	-	-	P	V
		520.5	32.18	-13.82	46	37.03	23.73	3.5	32.08	-	-	P	V
		951.7	34.51	-11.49	46	30.36	30.26	4.67	30.78	-	-	P	V
													V
													V
													V
													V
													V
													V

Remark

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

Note symbol

*	**Fundamental Frequency** which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is **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	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5150	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		5150	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

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

For Peak Limit @ 5150MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Margin(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 5150MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

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

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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

Appendix D. Radiated Spurious Emission Plots

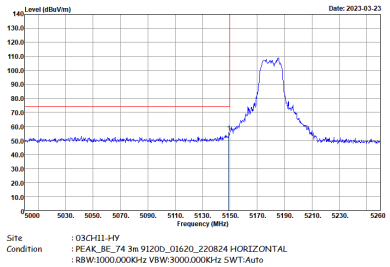
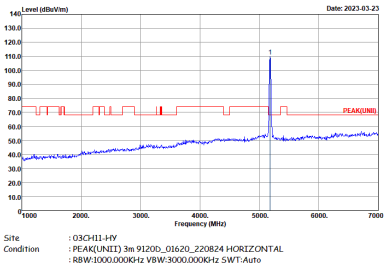
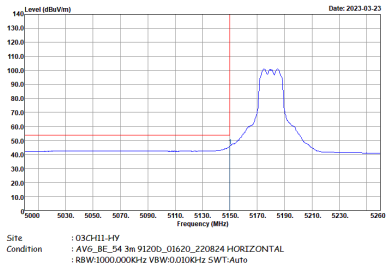
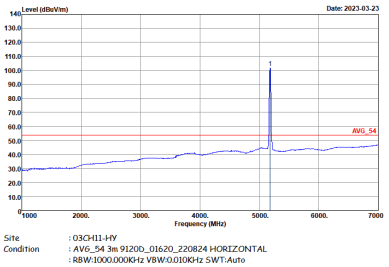
Test Engineer :	Yuan Lee, Bank Lin and Troye Hsieh	**Temperature :**	20.2~25.1°C
		Relative Humidity :	50.8~66.5%

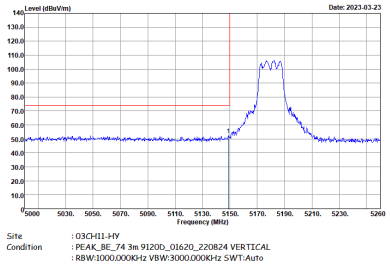
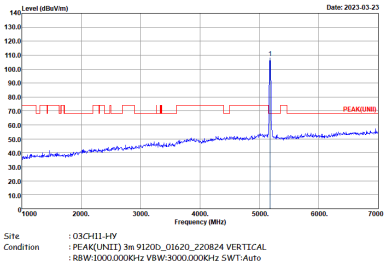
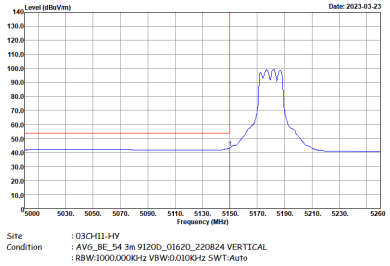
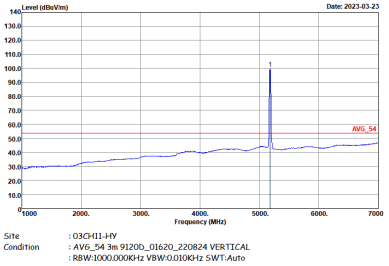
Note symbol

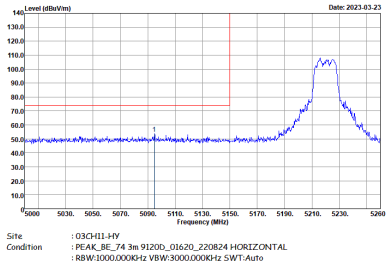
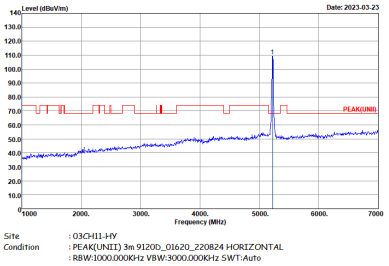
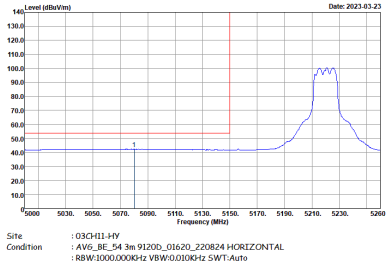
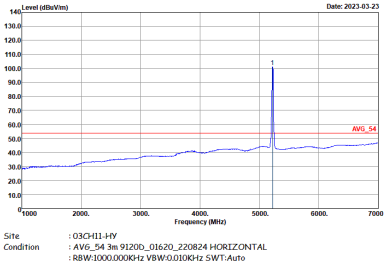
-L	**Low channel location**
-R	**High channel location**

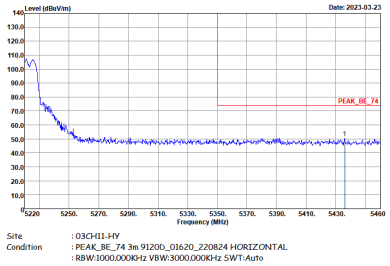
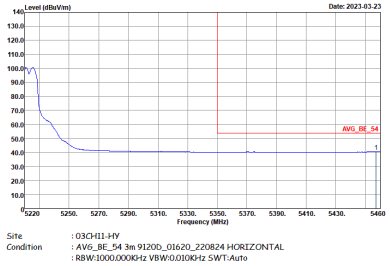
Band 1 - 5150~5250MHz

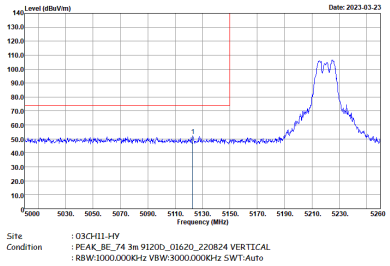
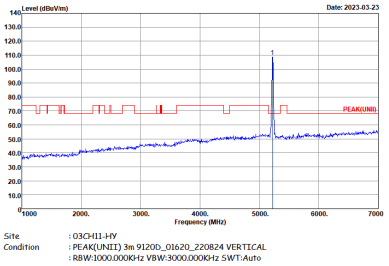
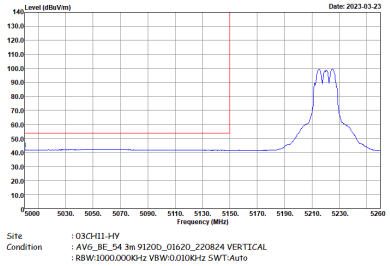
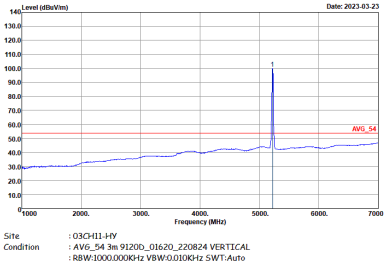
WIFI 802.11a (Band Edge @ 3m)

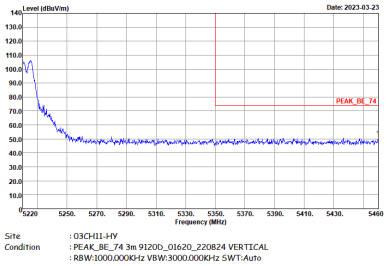
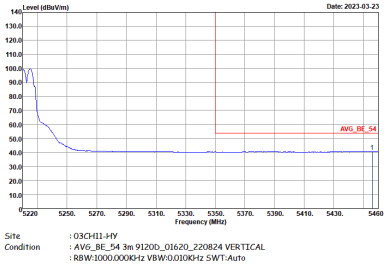
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

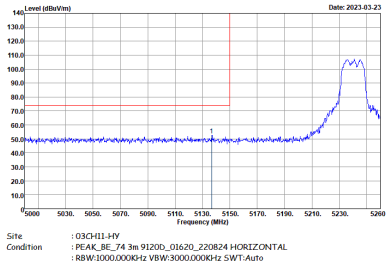
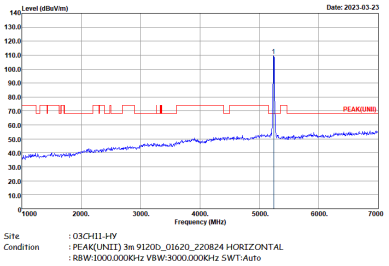
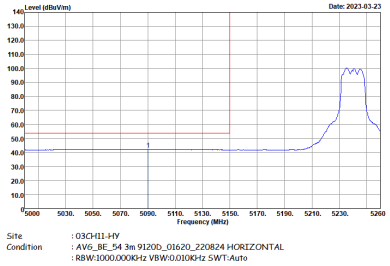
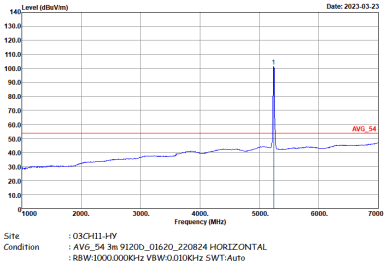
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
0+1	Vertical	Fundamental
Peak		
Avg.		

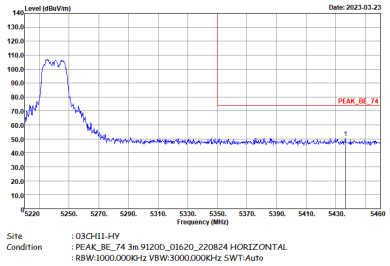
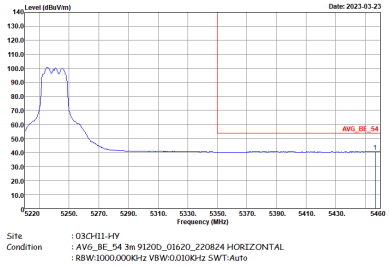
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		

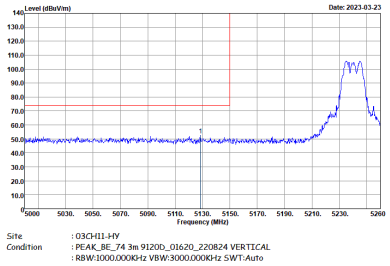
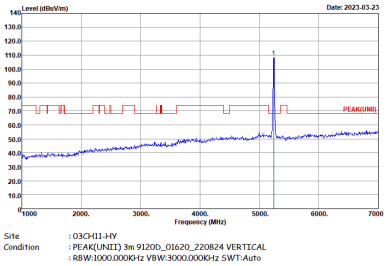
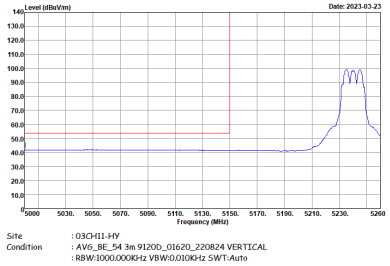
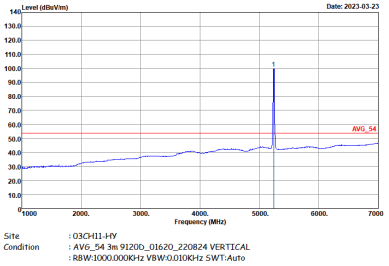
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

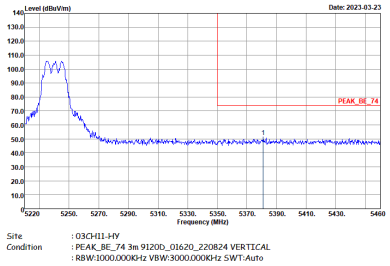
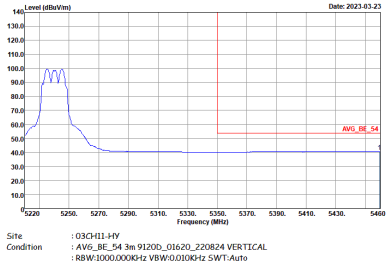
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		

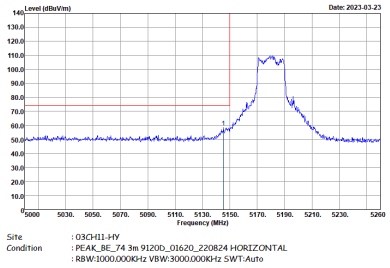
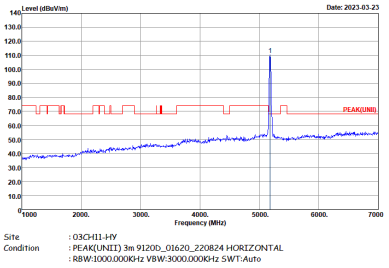
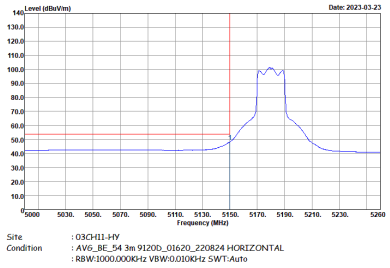
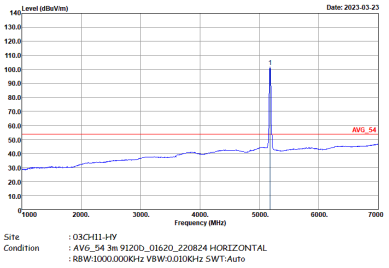
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

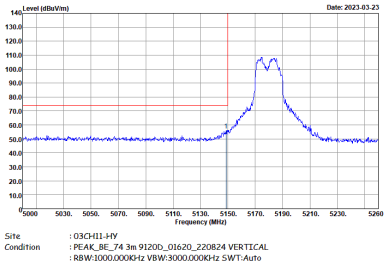
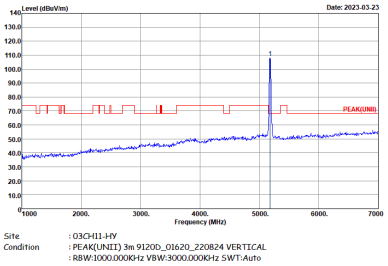
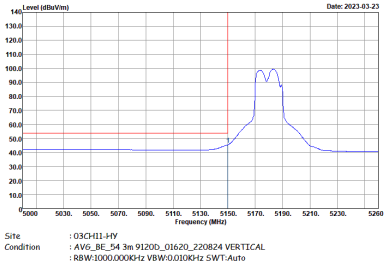
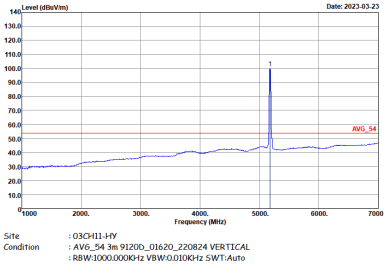
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		

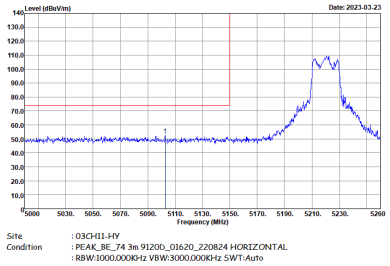
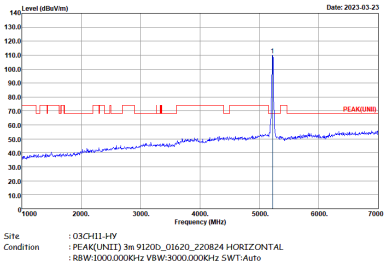
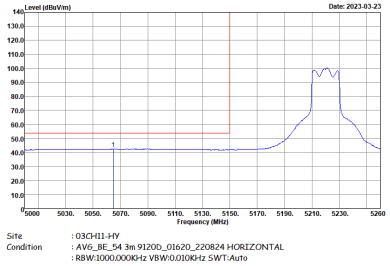
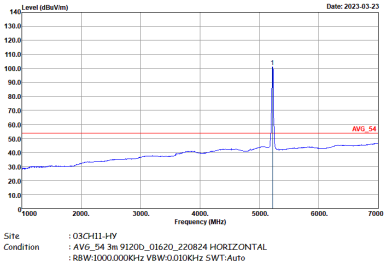
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

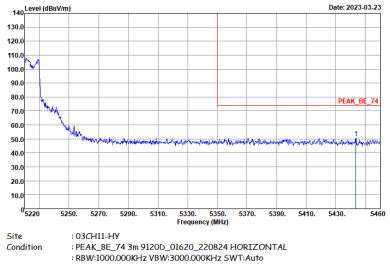
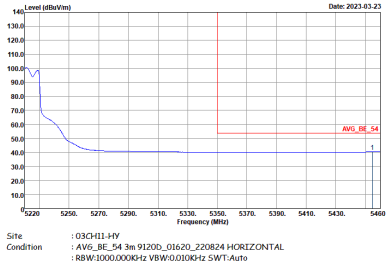
Band 1 5150~5250MHz

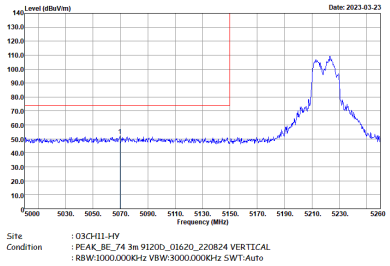
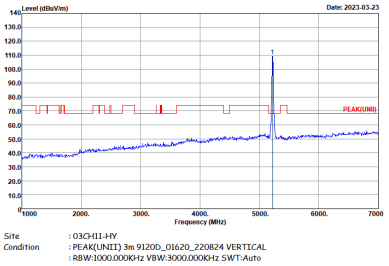
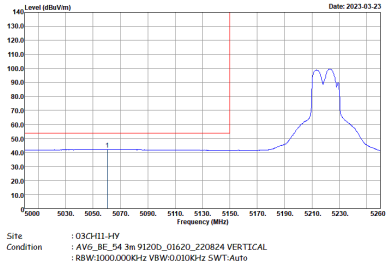
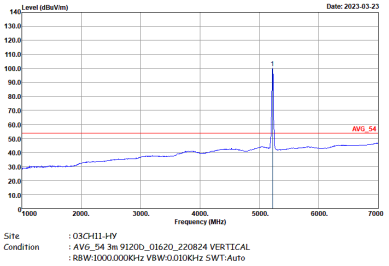
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

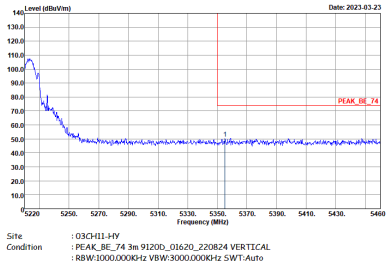
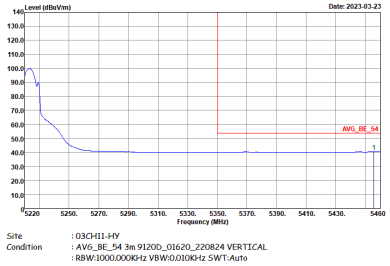
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH36 5180MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

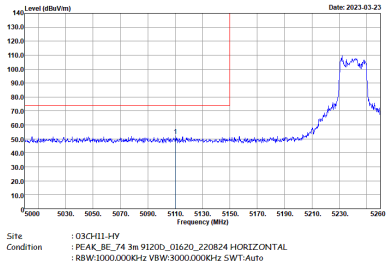
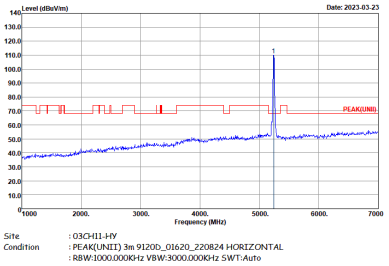
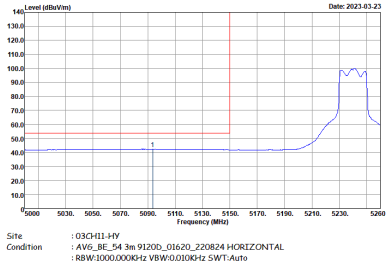
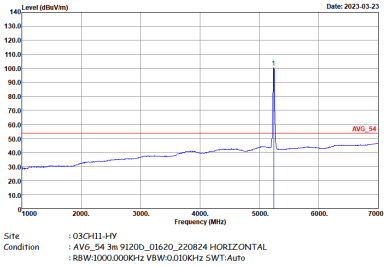
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH36 5180MHz	
0+1	Vertical	Fundamental
Peak		
Avg.		

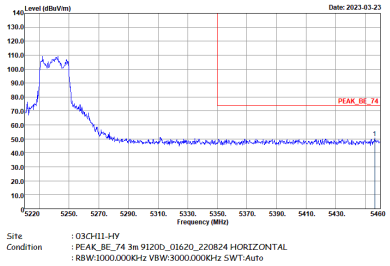
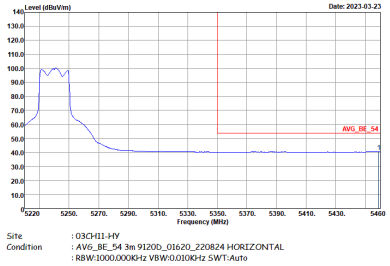
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		

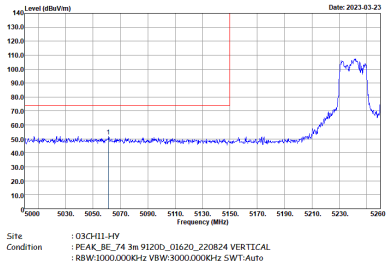
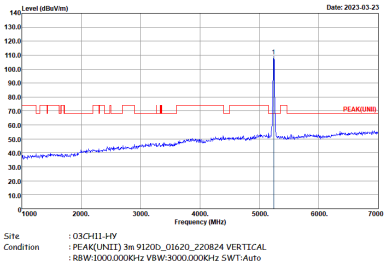
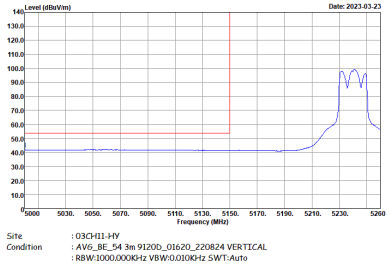
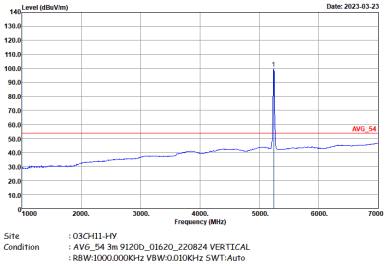
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

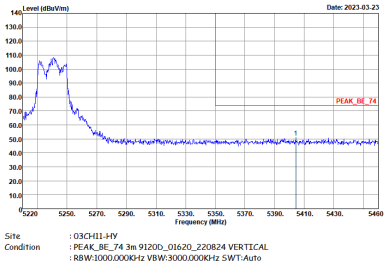
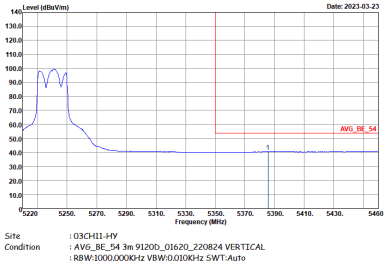
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		

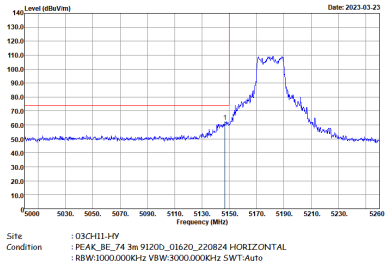
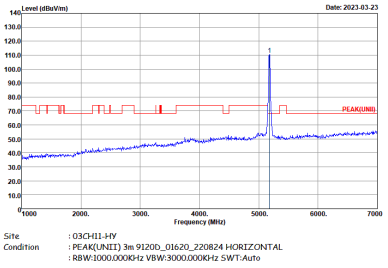
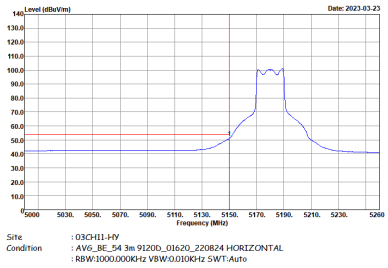
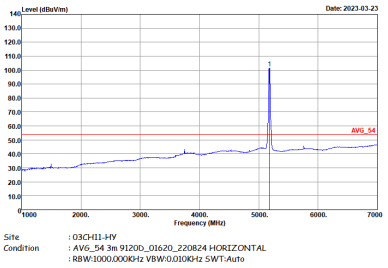
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

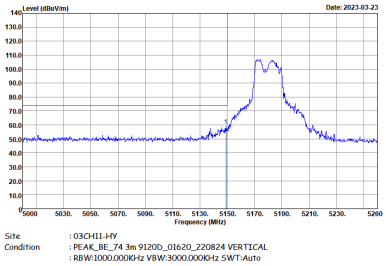
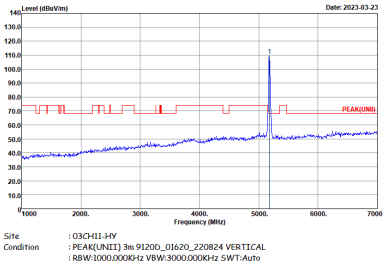
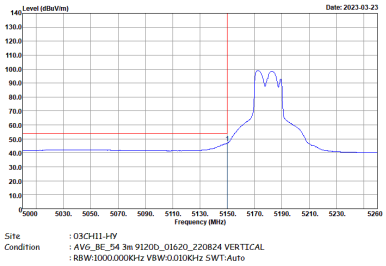
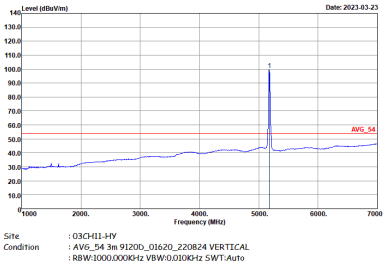
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

Band 1 5150~5250MHz

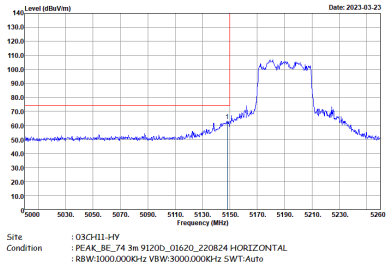
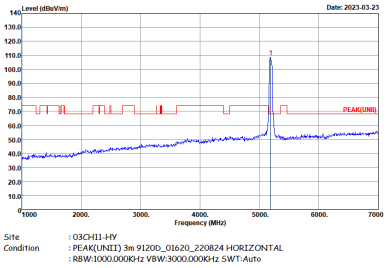
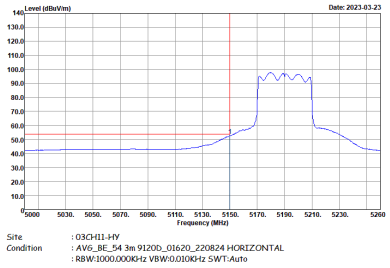
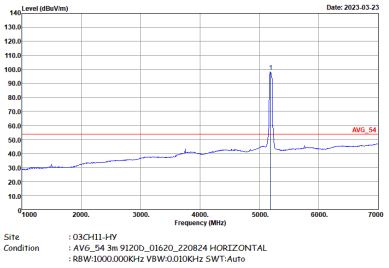
WIFI 802.11ax HE20 Partial 242 (Band Edge @ 3m)

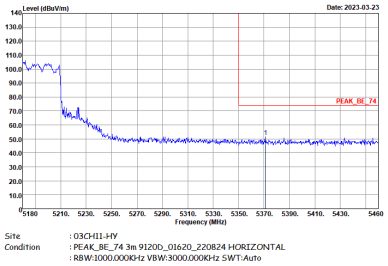
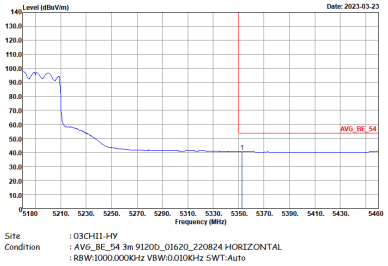
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 242/61 CH36 5180MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

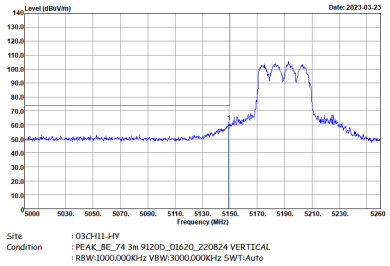
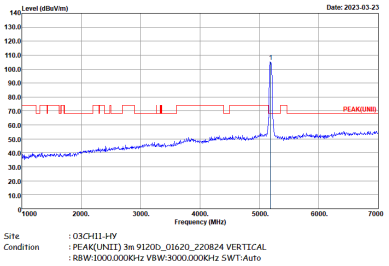
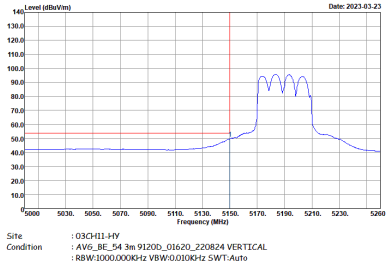
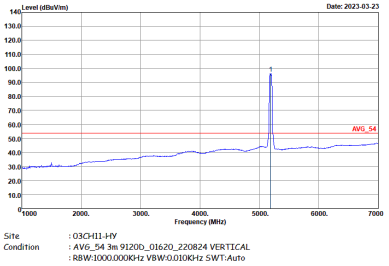
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 242/61 CH36 5180MHz	
0+1	Vertical	Fundamental
Peak		
Avg.		

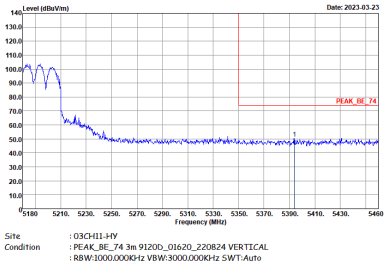
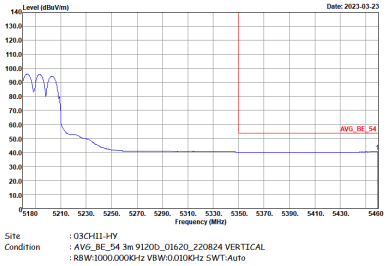
Band 1 5150~5250MHz

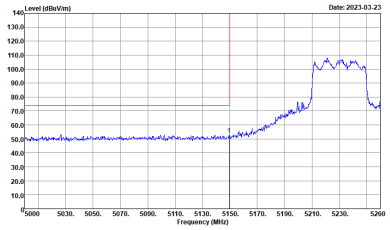
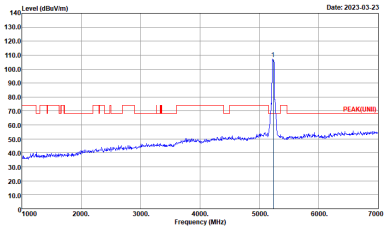
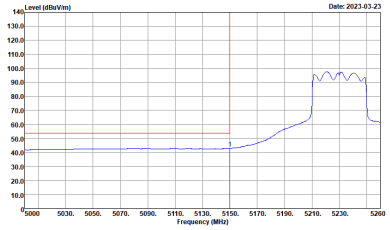
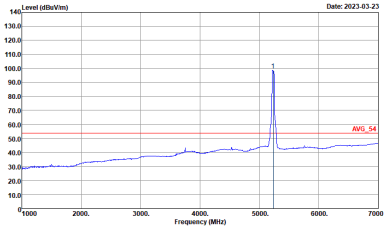
WIFI 802.11ax HE40 Full (Band Edge @ 3m)

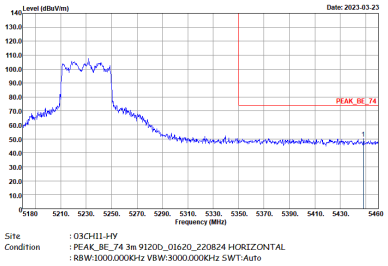
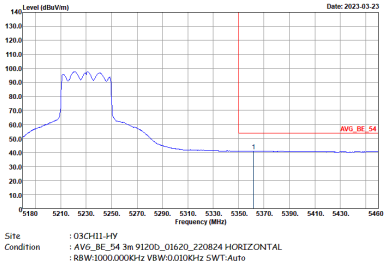
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		

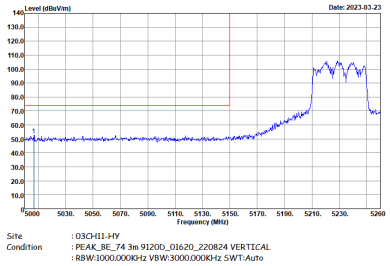
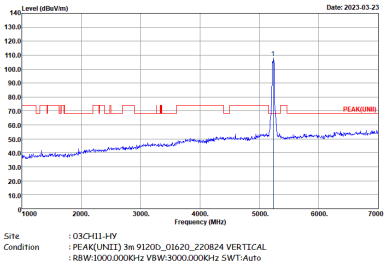
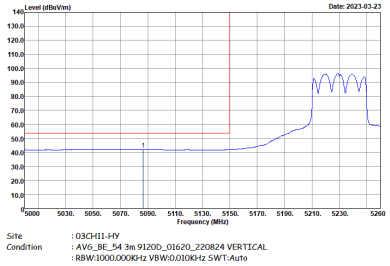
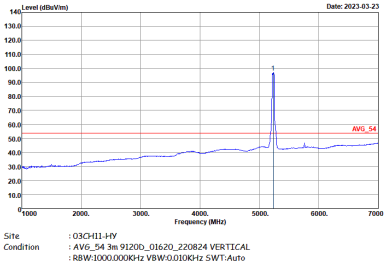
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

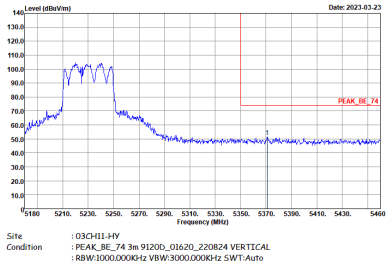
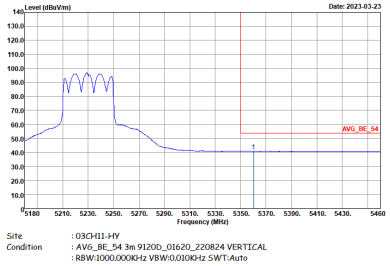
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		

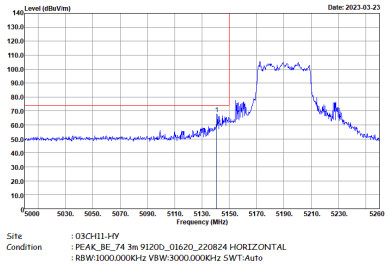
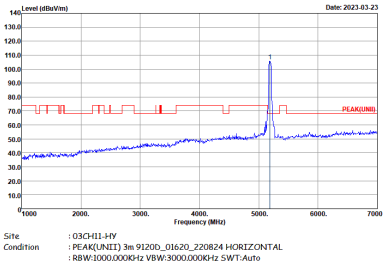
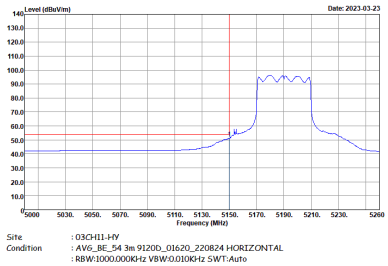
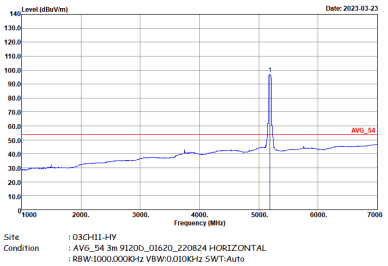
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

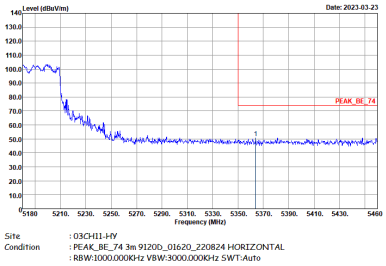
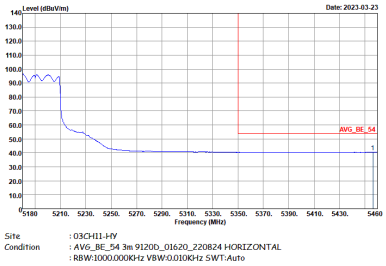
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		

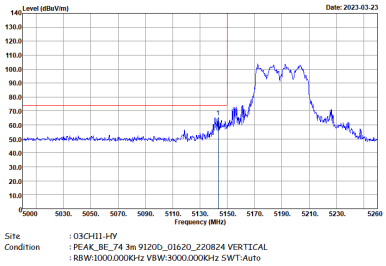
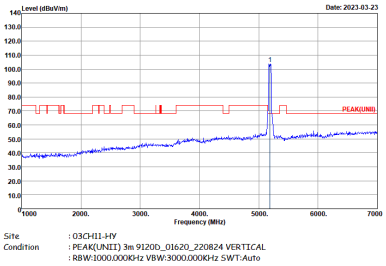
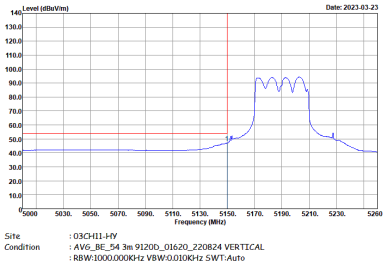
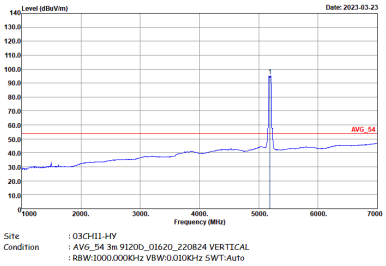
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

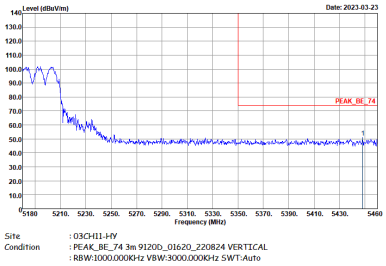
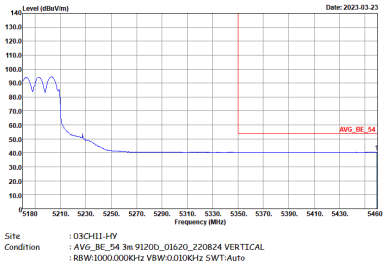
Band 1 5150~5250MHz

WIFI 802.11ax HE40 Partial 484 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Partial 484/65 CH38 5190MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		

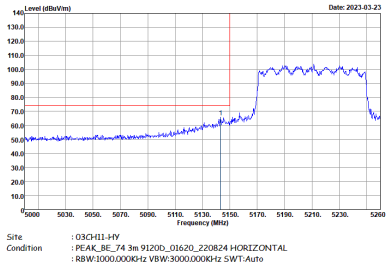
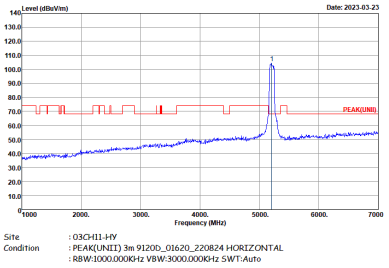
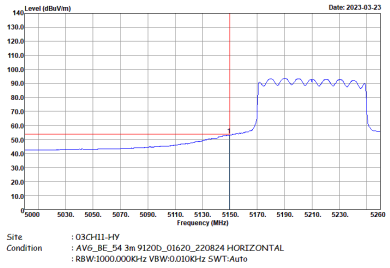
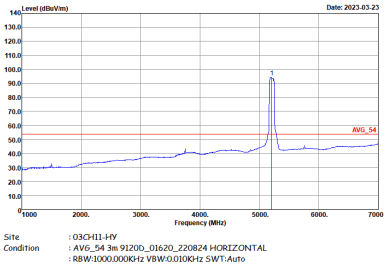
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Partial 484/65 CH38 5190MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

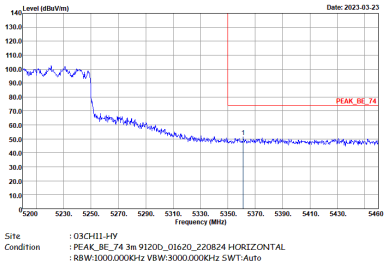
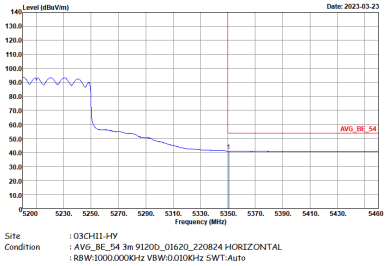
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Partial 242/61 CH38 5190MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		

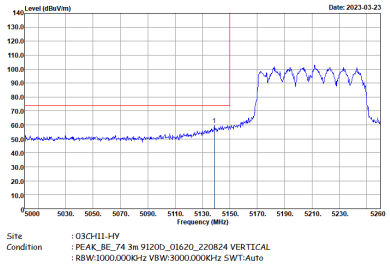
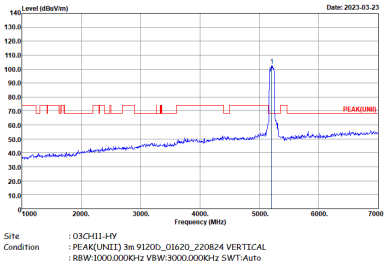
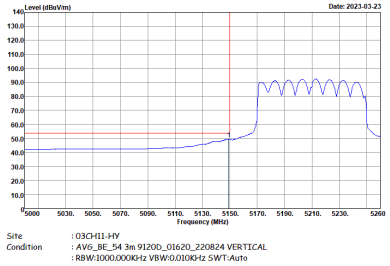
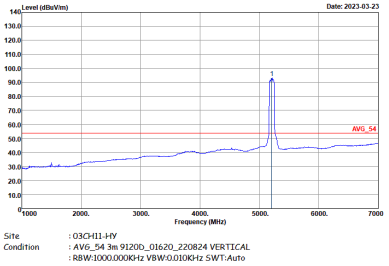
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Partial 484/65 CH38 5190MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

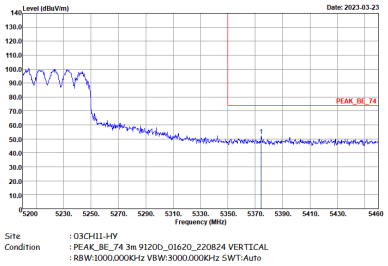
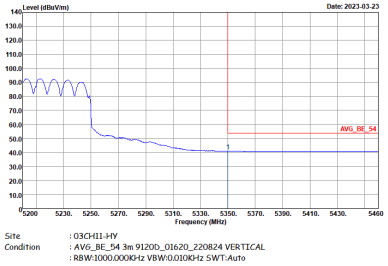
Band 1 5150~5250MHz

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

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		

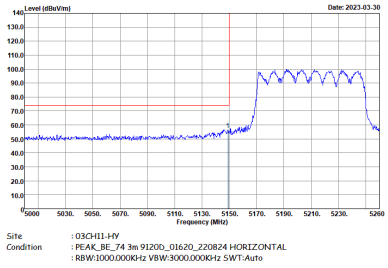
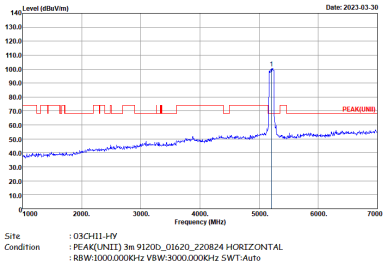
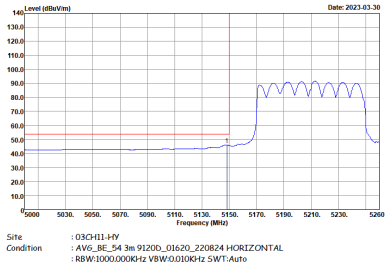
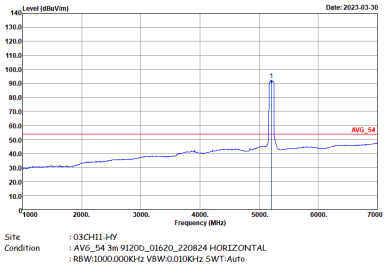
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

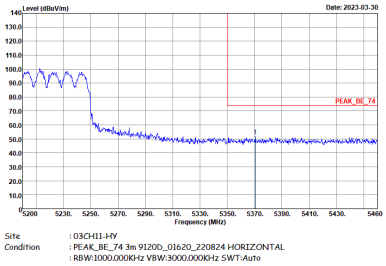
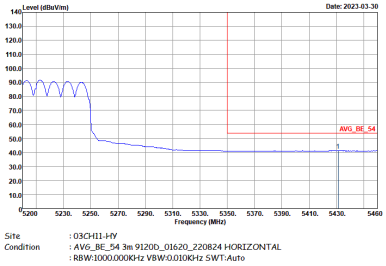
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		

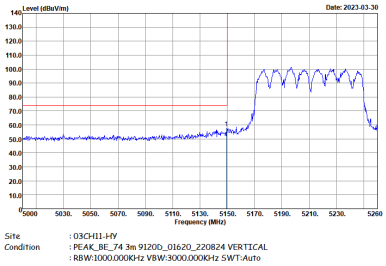
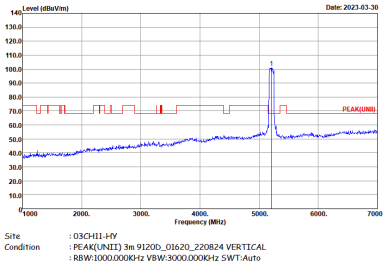
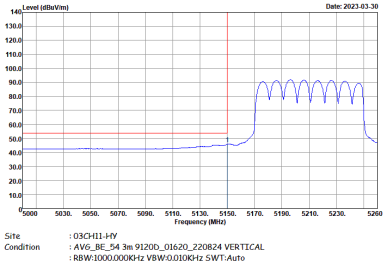
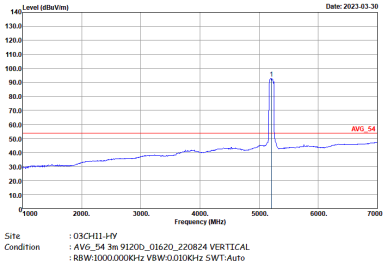
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

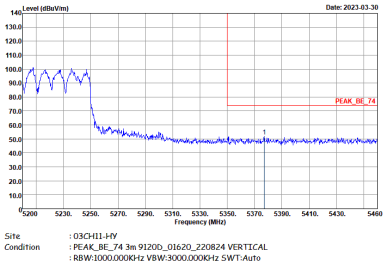
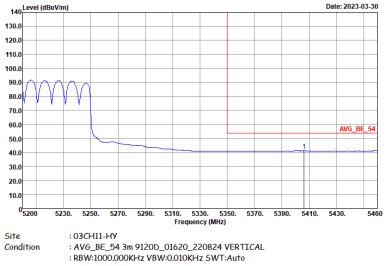
Band 1 5150~5250MHz

WIFI 802.11ax HE80 Partial 996 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Partial 996/67 CH42 5210MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		

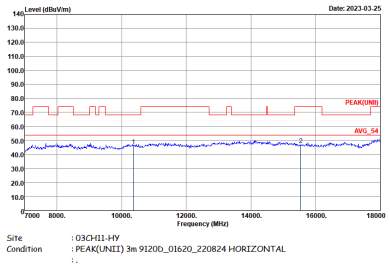
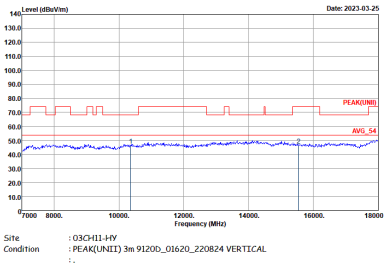
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Partial 996/67 CH42 5210MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

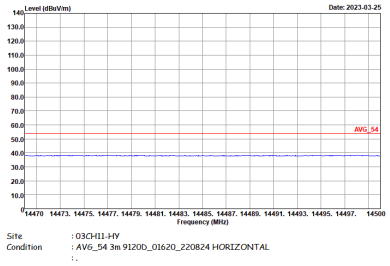
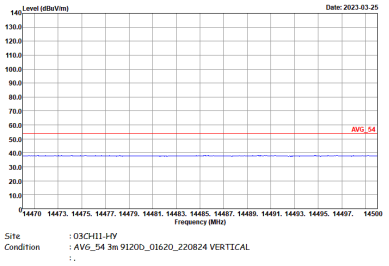
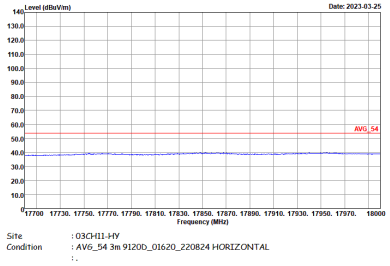
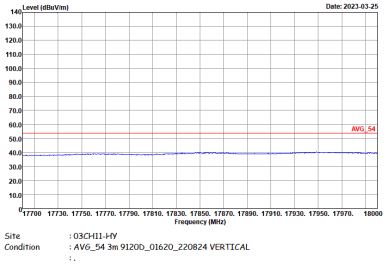
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Partial 996/67 CH42 5210MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		

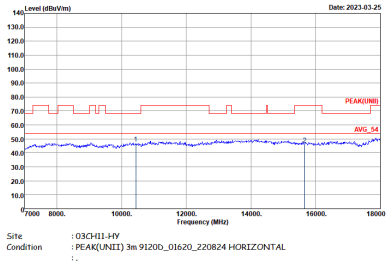
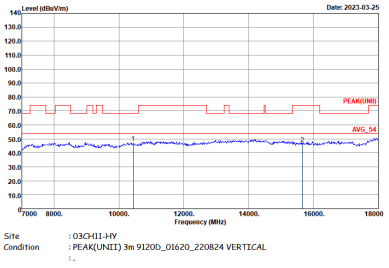
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Partial 996/67 CH42 5210MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

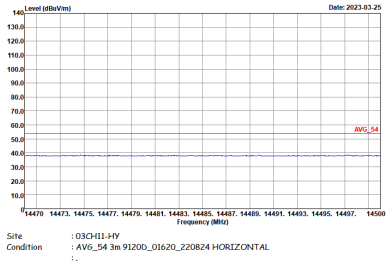
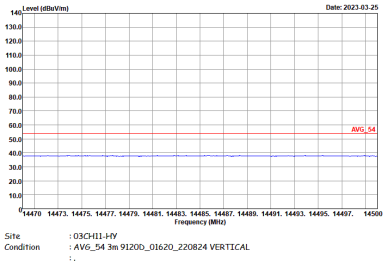
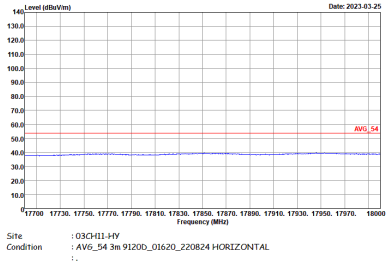
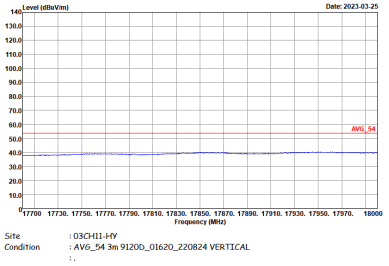
Band 1 - 5150~5250MHz

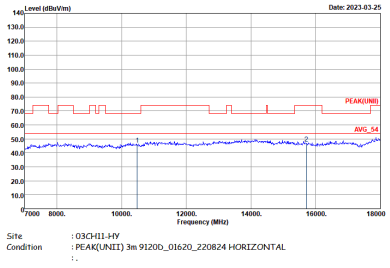
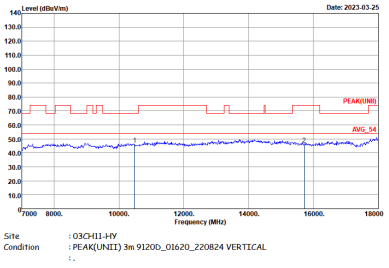
WIFI 802.11a (Harmonic @ 3m)

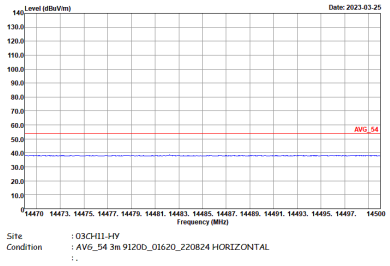
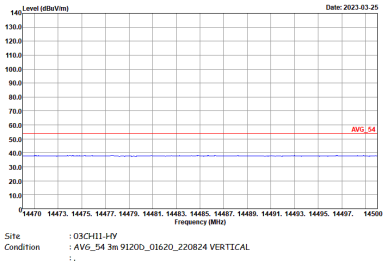
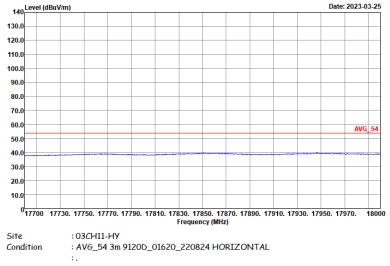
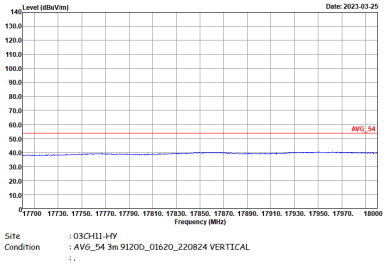
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH36 5180MHz	
0+1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH36 5180MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH44 5220MHz	
0+1	Horizontal	Vertical
Peak Avg.		

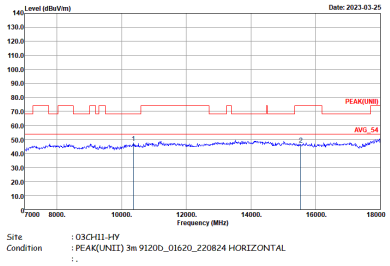
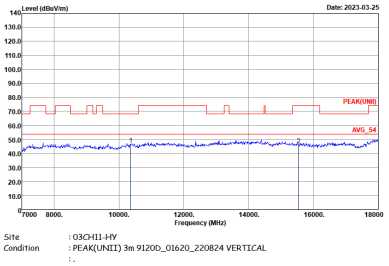
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH44 5220MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

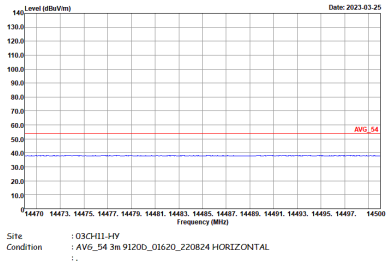
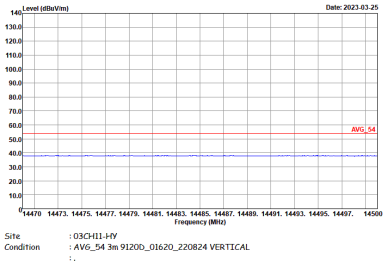
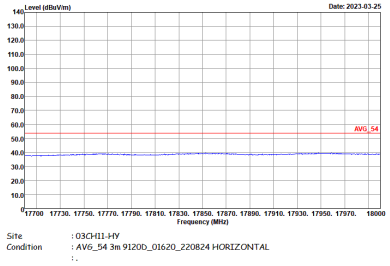
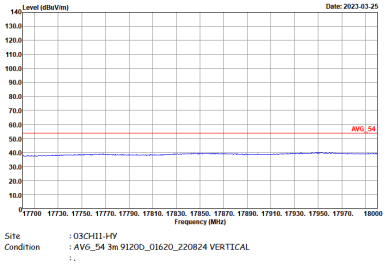
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH48 5240MHz	
0+1	Horizontal	Vertical
Peak Avg.		

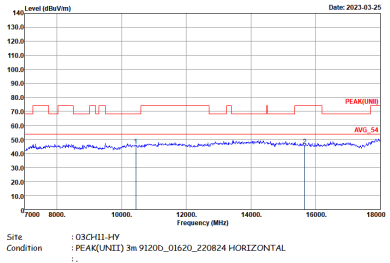
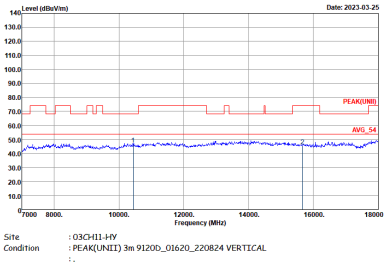
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH48 5240MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

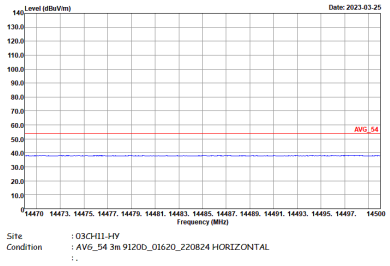
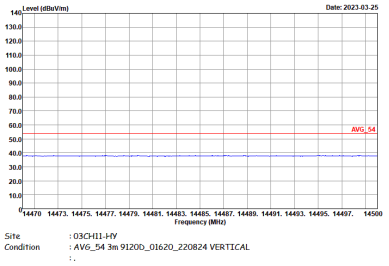
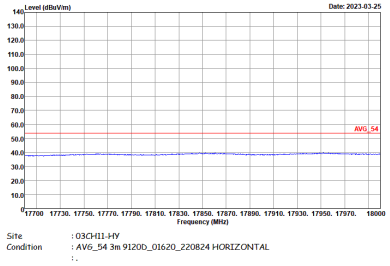
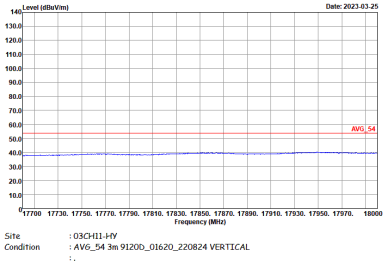
Band 1 5150~5250MHz

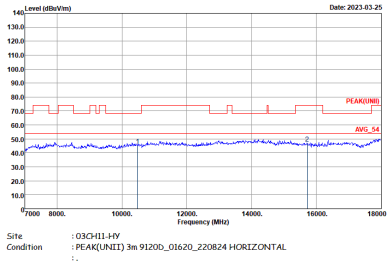
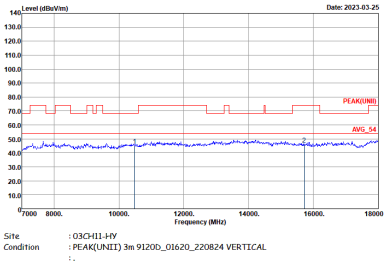
WIFI 802.11ax HE20 Full (Harmonic @ 3m)

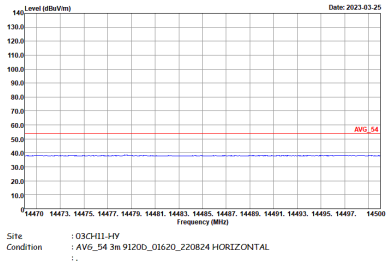
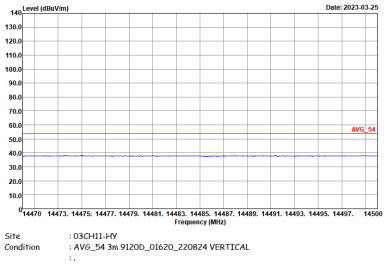
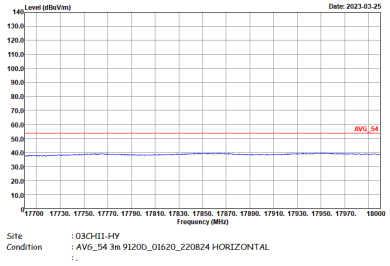
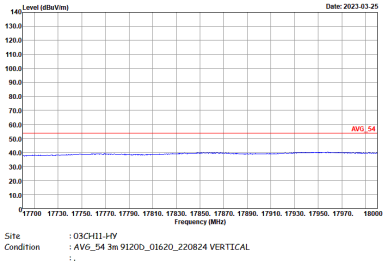
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH36 5180MHz	
0+1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH36 5180MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz	
0+1	Horizontal	Vertical
Peak Avg.		

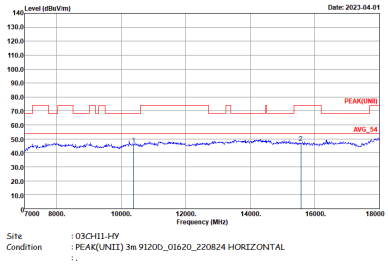
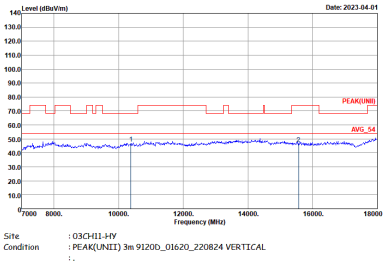
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

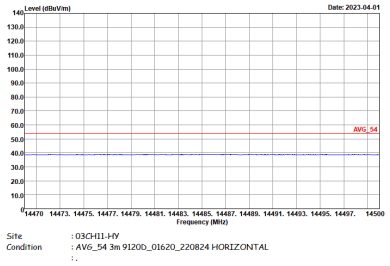
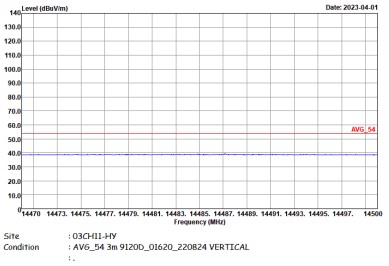
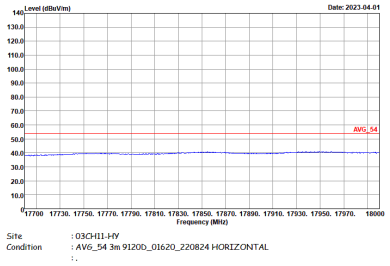
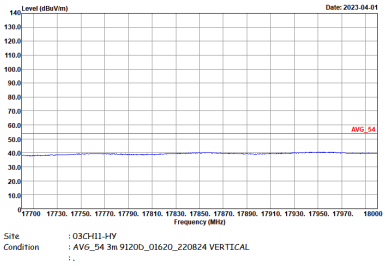
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz	
0+1	Horizontal	Vertical
Peak Avg.		

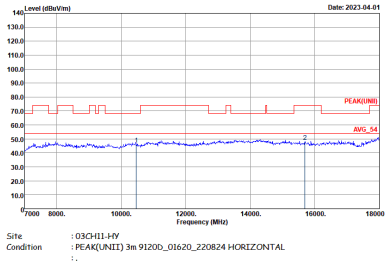
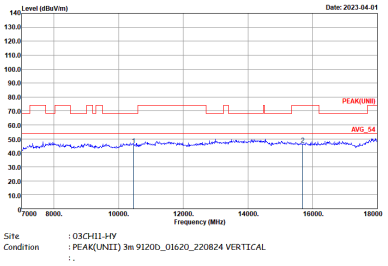
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

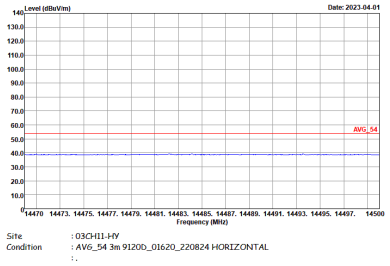
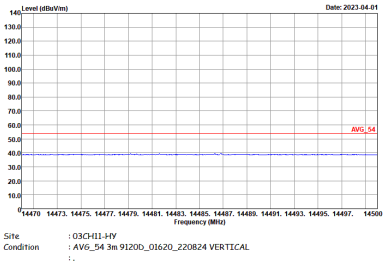
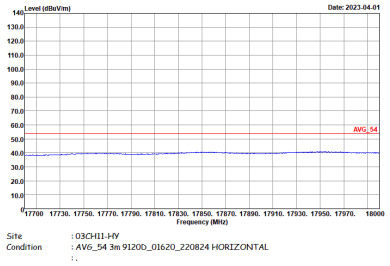
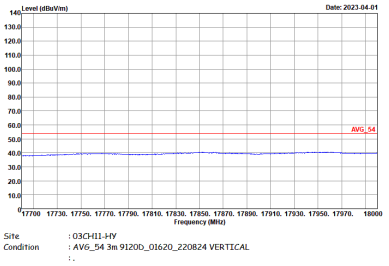
Band 1 5150~5250MHz

WIFI 802.11ax HE40 Full (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz	
0+1	Horizontal	Vertical
Peak Avg.		

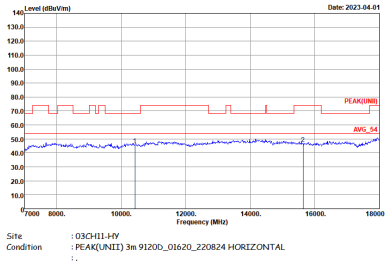
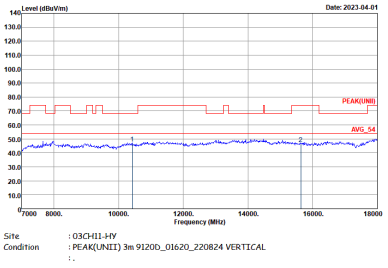
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

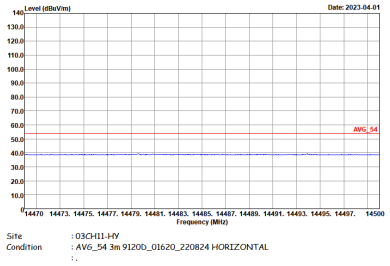
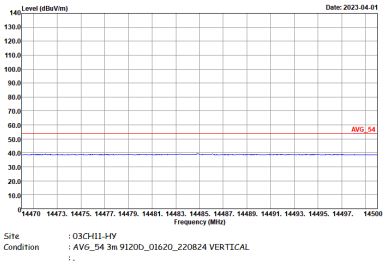
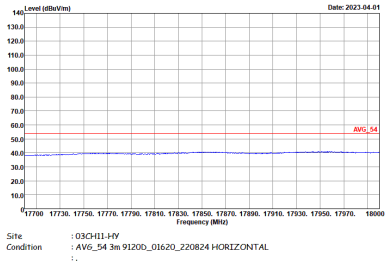
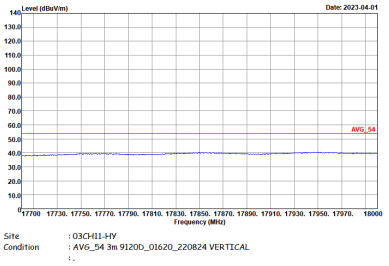
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz	
0+1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

Band 1 5150~5250MHz

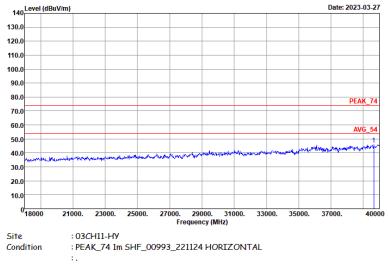
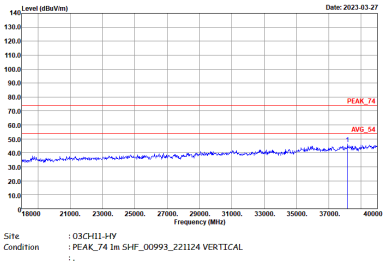
WIFI 802.11ax HE80 Full (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz	
0+1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz	
0+1	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

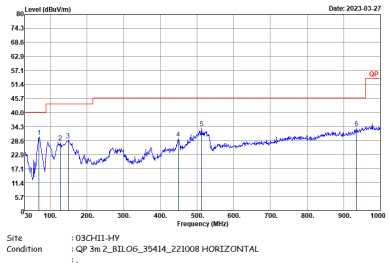
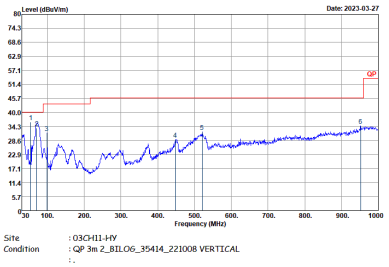
Emission above 18GHz

5GHz WIFI 802.11ax HE80 Full (SHF @ 1m)

WIFI	5GHz WIFI	
ANT	802.11ax HE80 Full SHF	
0+1	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

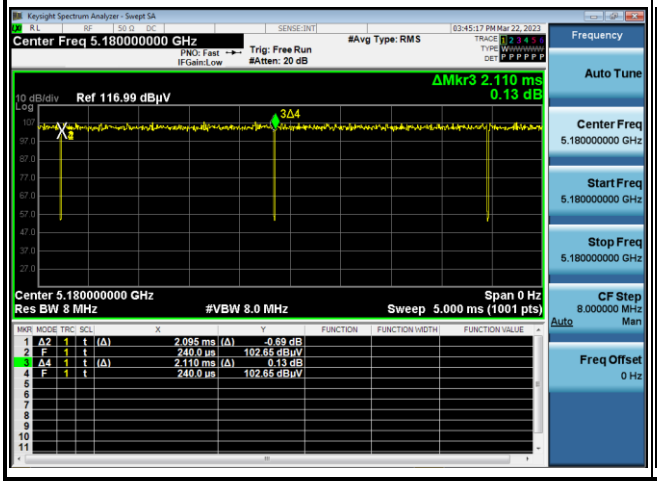
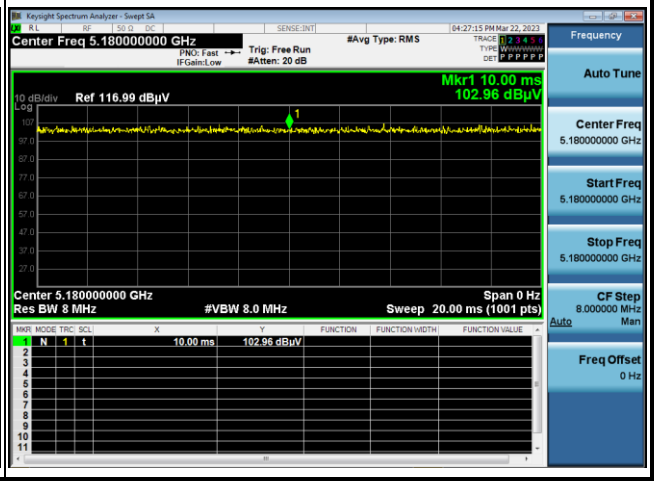
5GHz WIFI 802.11ax HE80 Full (LF)

WIFI	5GHz WIFI	
ANT	802.11ax HE80 Full LF	
0+1	Horizontal	Vertical
QP / Peak		

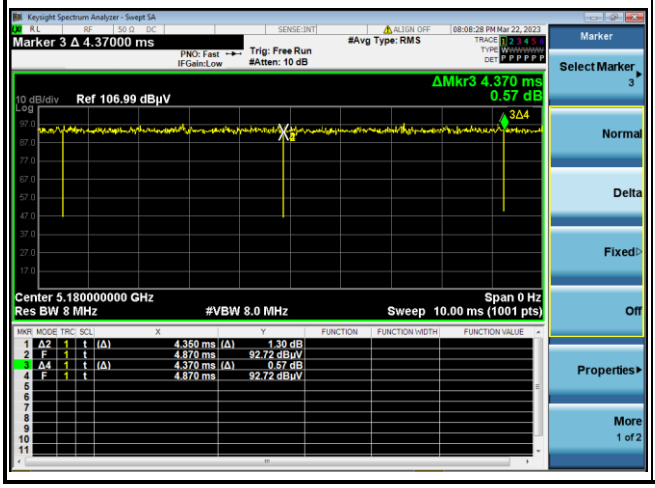
Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
0+1	802.11a	99.29	-	-	10Hz
0+1	5GHz 802.11ax HE20 Full RU	100.00	-	-	10Hz
0+1	5GHz 802.11ax HE20 242 RU	99.54	-	-	10Hz
0+1	5GHz 802.11ax HE40 Full RU	99.18	-	-	10Hz
0+1	5GHz 802.11ax HE40 484 RU	99.33	-	-	10Hz
0+1	5GHz 802.11ax HE80 Full RU	100.00	-	-	10Hz
0+1	5GHz 802.11ax HE80 996 RU	99.27	-	-	10Hz

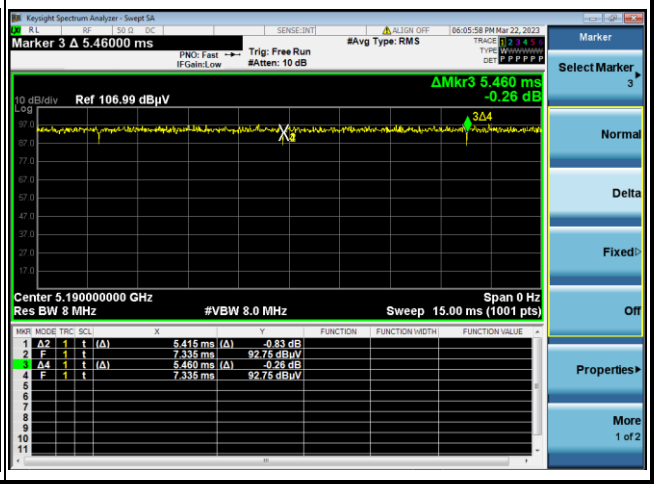
MIMO <Ant. 0+1>

802.11a	5GHz 802.11ax HE20 Full RU
	

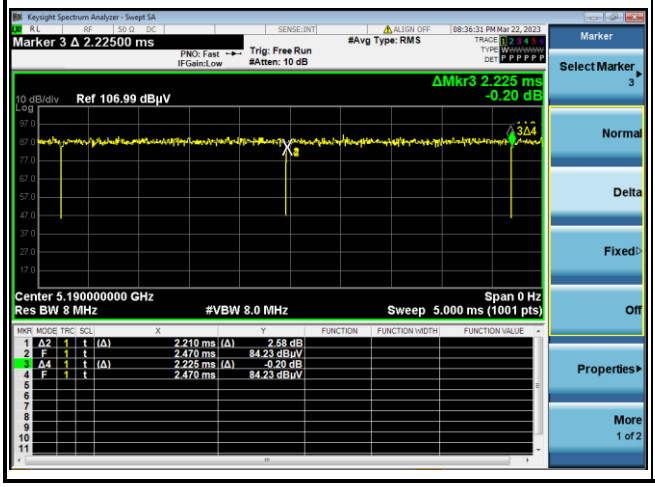
5GHz 802.11ax HE20 242 RU



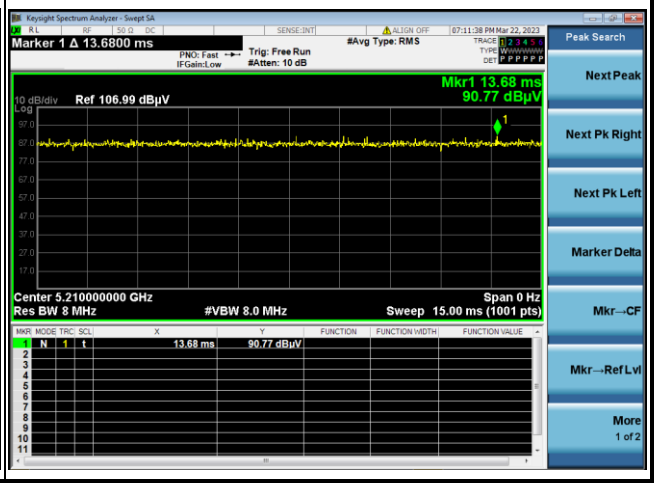
5GHz 802.11ax HE40 Full RU



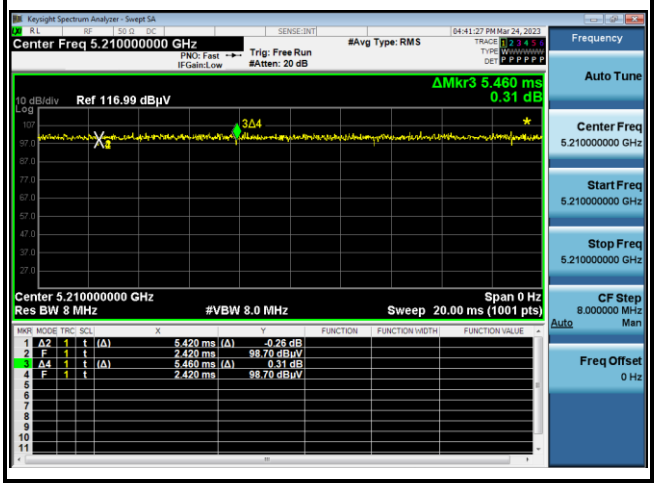
5GHz 802.11ax HE40 484 RU



5GHz 802.11ax HE80 Full RU



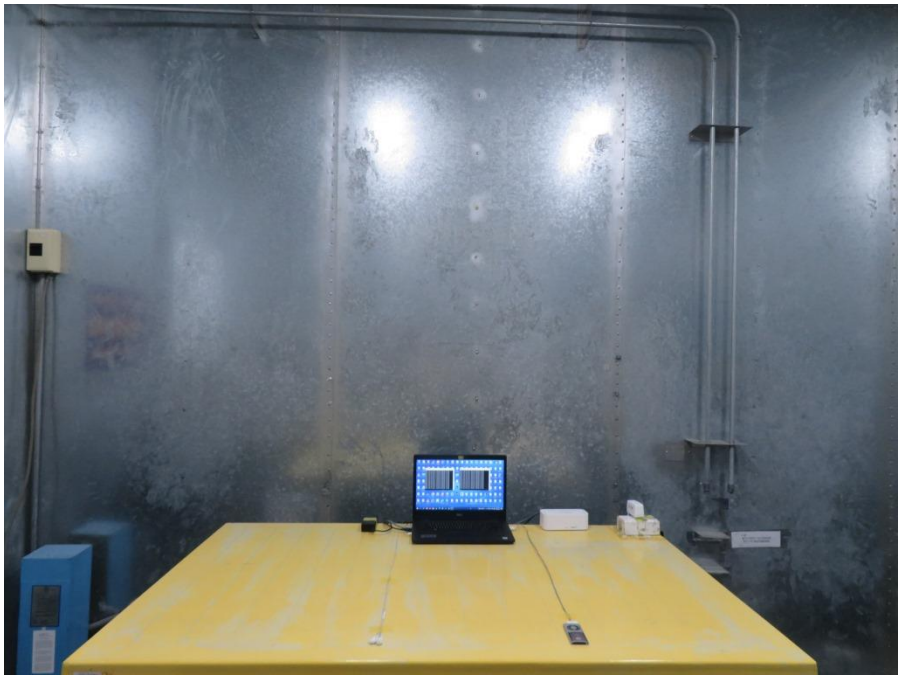
5GHz 802.11ax HE80 996 RU



Appendix F. Setup Photographs

<Conducted Emission>

Remote View

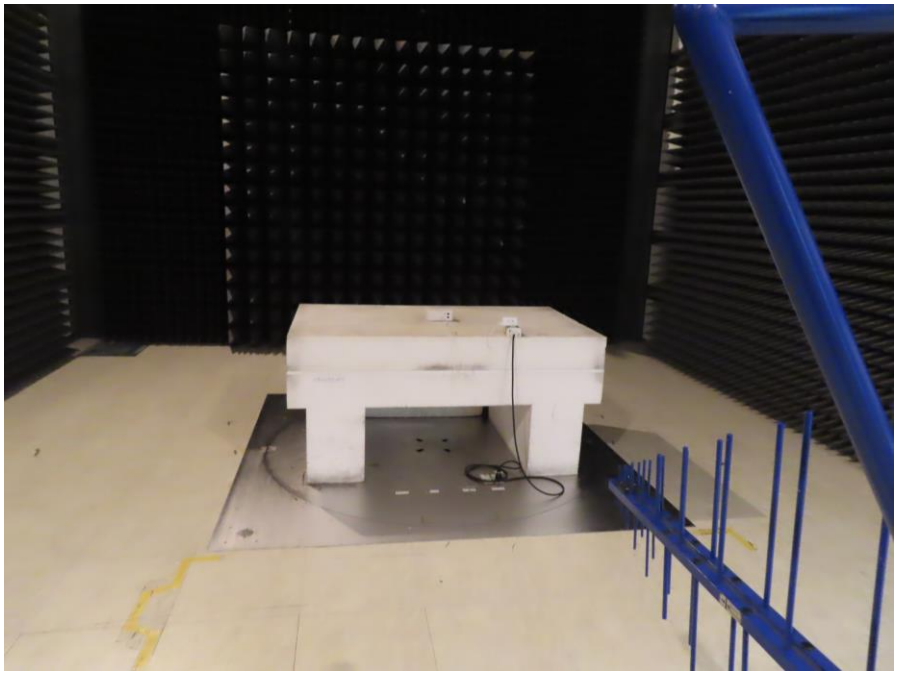


Rear View

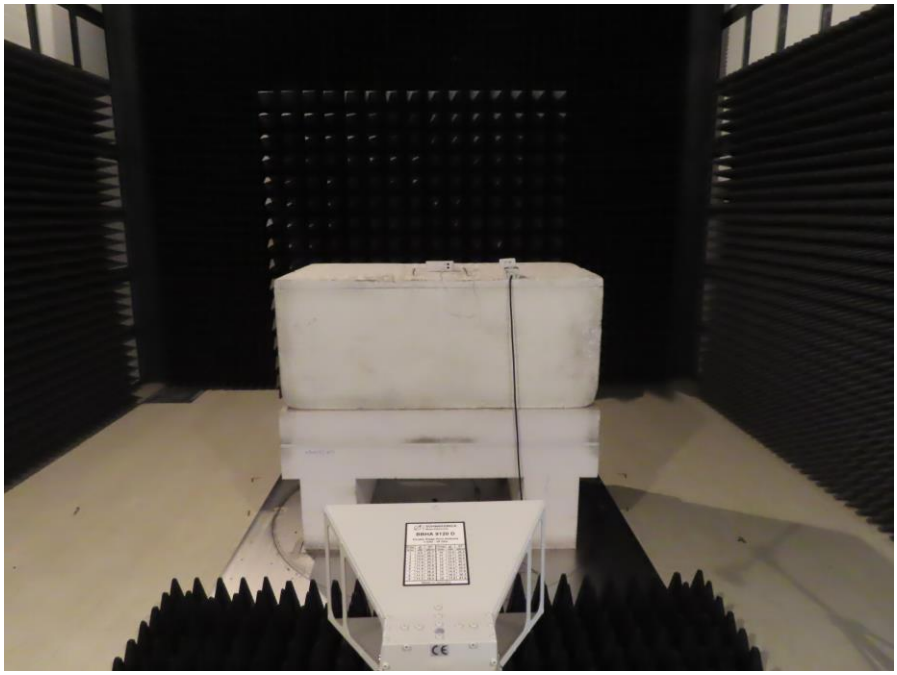
<Radiated Emission>

Y Plane

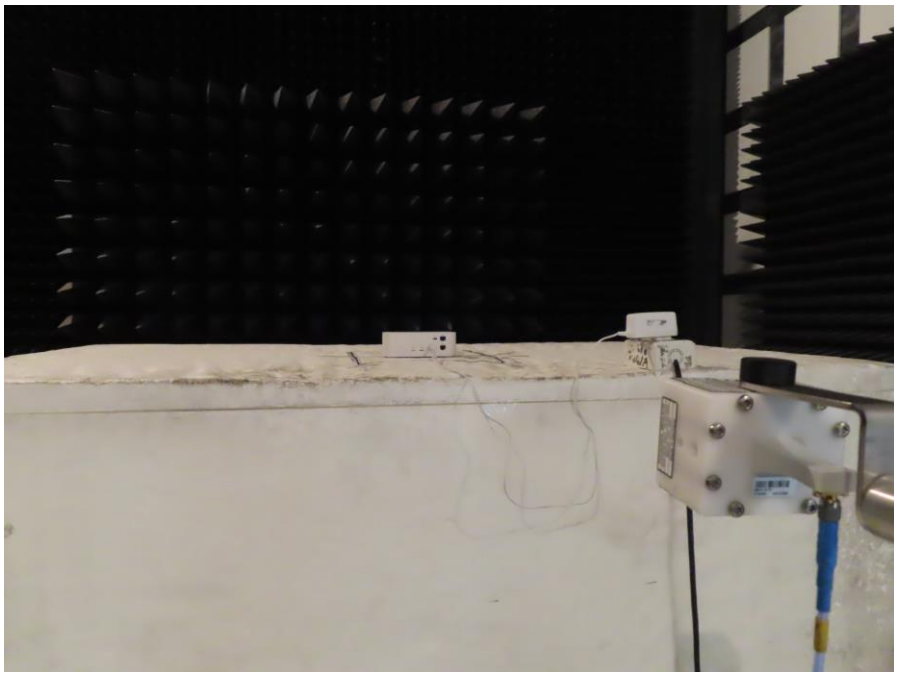
LF



HF



SHF



———THE END———