



FCC RADIO TEST REPORT

FCC ID : U8G-P1AX203

Equipment : Peplink Pepwave Wireless Product

Brand Name :



Model Name : MAX BR2 Pro
MAX-BR2-PRO-5GH-T-PRM

Applicant : PISMO LABS TECHNOLOGY LIMITED
A8, 5/F, HK Spinners Industrial Building, Phase 6, 481 Castle Peak Road, Cheung Sha Wan, Hong Kong

Manufacturer : PISMO LABS TECHNOLOGY LIMITED
A8, 5/F, HK Spinners Industrial Building, Phase 6, 481 Castle Peak Road, Cheung Sha Wan, Hong Kong

Standard : FCC Part 15 Subpart E §15.407

The product was received on Jun. 07, 2022 and testing was performed from Jul. 06, 2022 to Dec. 07, 2022. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory

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



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History of this test report

Report No.	Version	Description	Issue Date
FR260702B	01	Initial issue of report	Dec. 15, 2022
FR260702B	02	Separate Setup Photographs	Dec. 19, 2022

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	1.59 dB under the limit at 5150.000 MHz
3.5	15.207	AC Conducted Emission	Pass	14.92 dB under the limit at 0.155 MHz
3.6	15.203	Antenna Requirement	Pass	-

Declaration of Conformity:

- The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
- The measurement uncertainty please refer to report "Uncertainty of Evaluation".

Comments and Explanations:

- The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.
- The purpose of different model name is for marketing segmentation.

Reviewed by: Lewis Ho

Report Producer: Rachel Hsieh



1 General Description

1.1 Product Feature of Equipment Under Test

LTE/5G NR, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, and GPS

Product Feature		
Integrated WWAN Module	Brand Name: Sierra Model Name: EM9191 FCC ID: N7NEM91	
Antenna Type	WWAN: Omni-directional Antenna WLAN: <Ant. 1>: Omni-directional Antenna <Ant. 2>: Omni-directional Antenna GPS: Directional Antenna	
Antenna information		
5150 MHz ~ 5250 MHz	Peak Gain (dBi)	Ant. 1: 4.1 Ant. 2: 4.1

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

1.1.1 Antenna Gain

<For CDD Mode>

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

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

For power measurements on IEEE 802.11 devices,

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

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

For PSD measurements, the directional gain calculation.

Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

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

			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant 1 (dBi)	Ant 2 (dBi)				
Band I	4.10	4.10	4.10	7.11	0.00	1.11

Calculation example:

If a device has two antenna, $G_{ANT1} = 4.10\text{dBi}$; $G_{ANT2} = 4.10\text{dBi}$

Directional gain of power measurement = $\max(4.10, 4.10) + 0 = 4.10$ dBi

Directional gain of PSD derived from formula which is

$$10 \times \log \left\{ \left[10^{(4.10 \text{ dBi} / 20)} + 10^{(4.10 \text{ dBi} / 20)} \right]^2 \right\} / 2 \}$$

$$= 7.11 \text{ dBi}$$

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

PSD limit reduction = Composite gain + PSD Array 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 item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory

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

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. TH05-HY, 03CH16-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 two antenna polarization (Degree 0 and Degree 90), 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

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

The power for 802.11n/ac 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 + LAN Link + WAN Link + RS232 Load + USB Flash Device + Other LAN port with RJ45 Load + Adapter

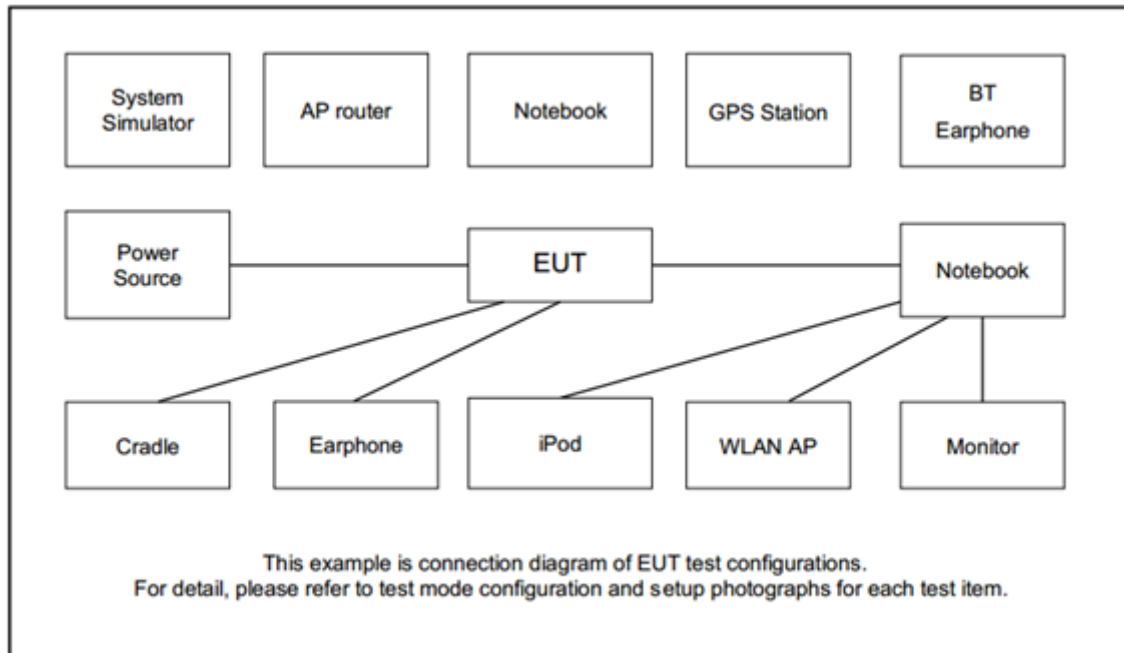
Ch. #		Band I : 5150-5250 MHz	
		802.11a	802.11ax HE20
L	Low	36	36
M	Middle	44	44
H	High	48	48

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

Remark:

1. For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.
2. Since the product supports Client and Indoor AP, the test is evaluated to meet the Client and Indoor AP Limit respectively. Unwanted Emissions uses the Indoor AP Limit test.

2.3 Connection Diagram of Test System



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 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
2.	USB Flash Device	Kingston	DTSE9 16GB	N/A	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility "QSPR Version 5.0-00199" was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

Offset = RF cable loss + attenuator factor.

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

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

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

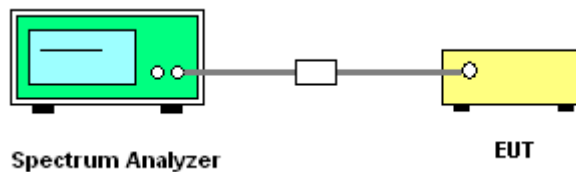
3.1.2 Measuring Instruments

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) $\geq 3 * RBW$.
8. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

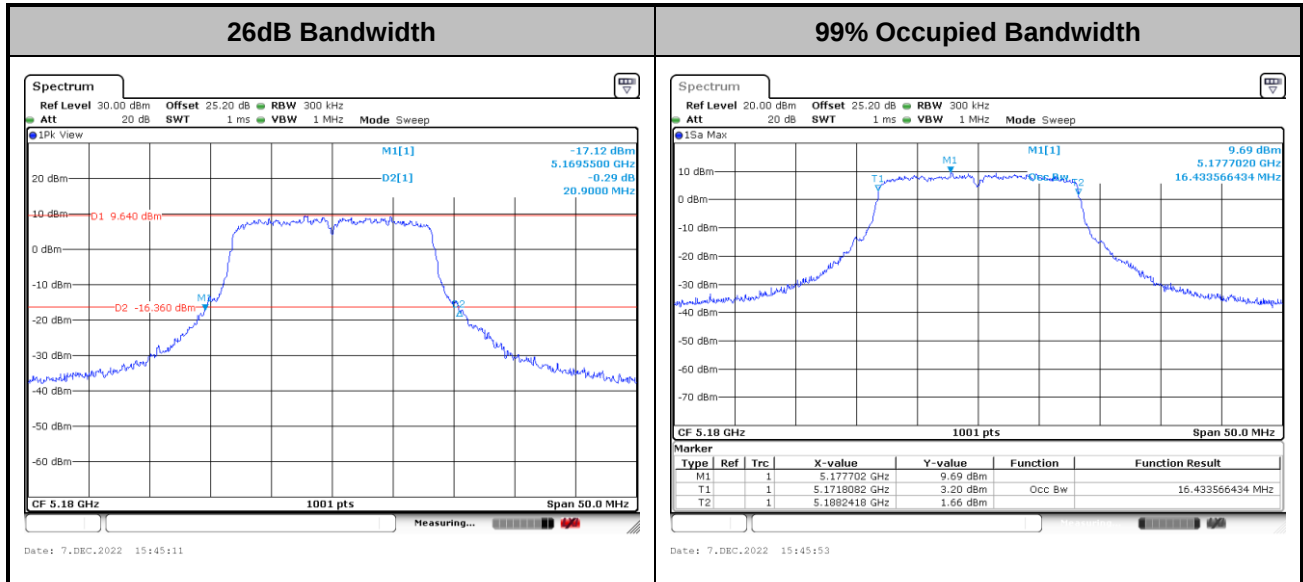
Please refer to Appendix A.



MIMO <Ant. 1+2>

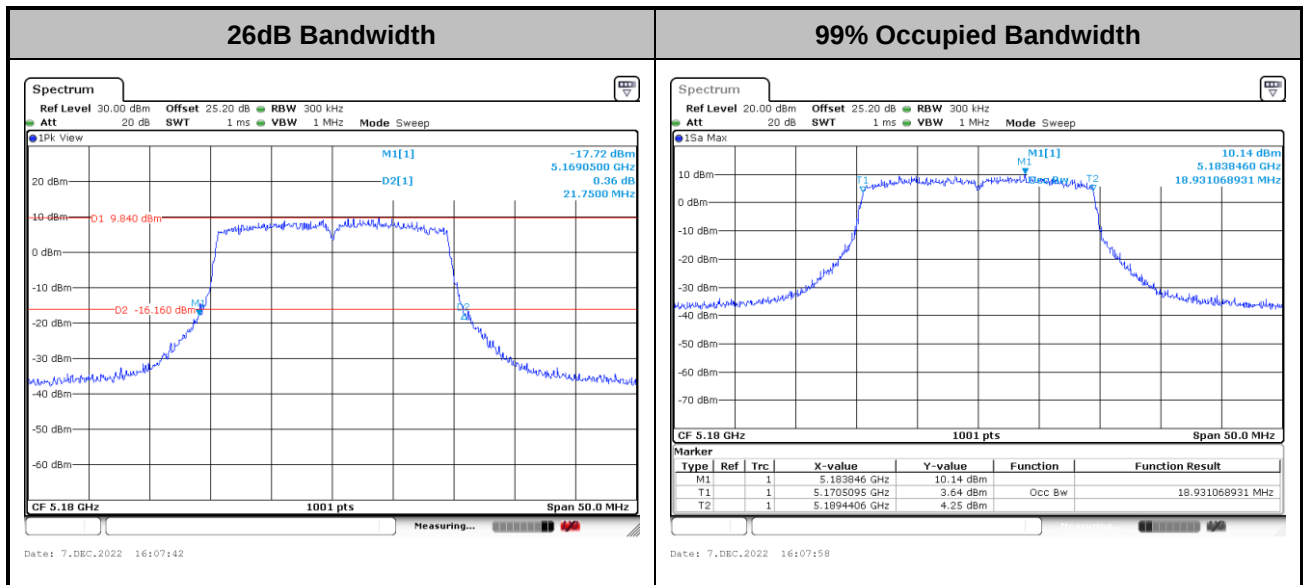
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<802.11a>



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

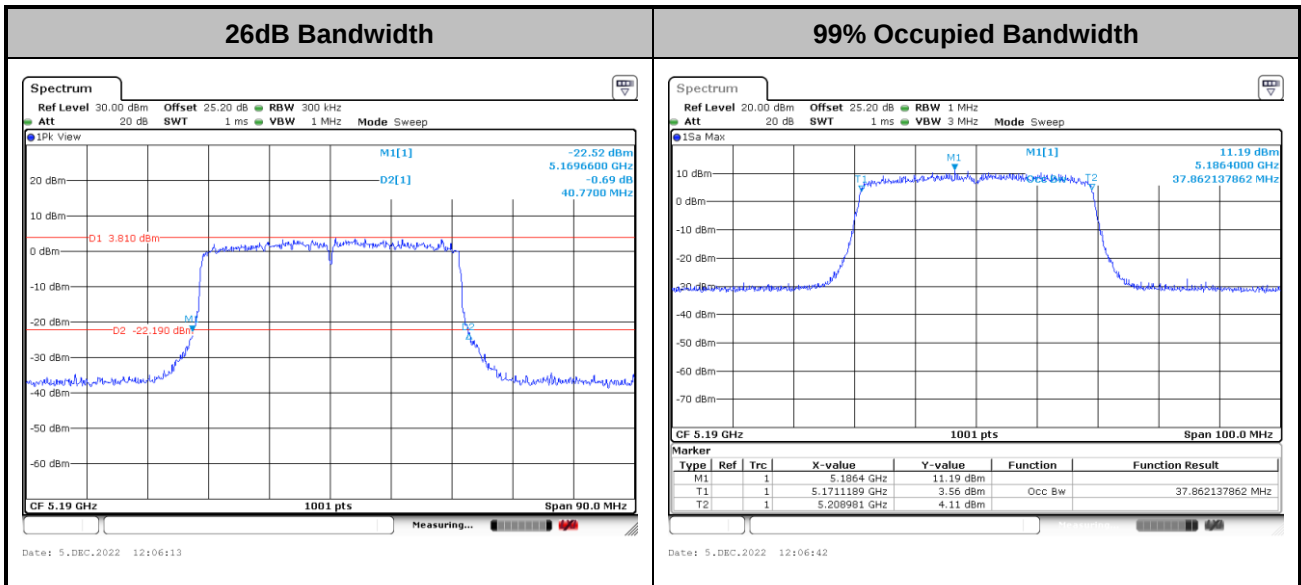
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Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

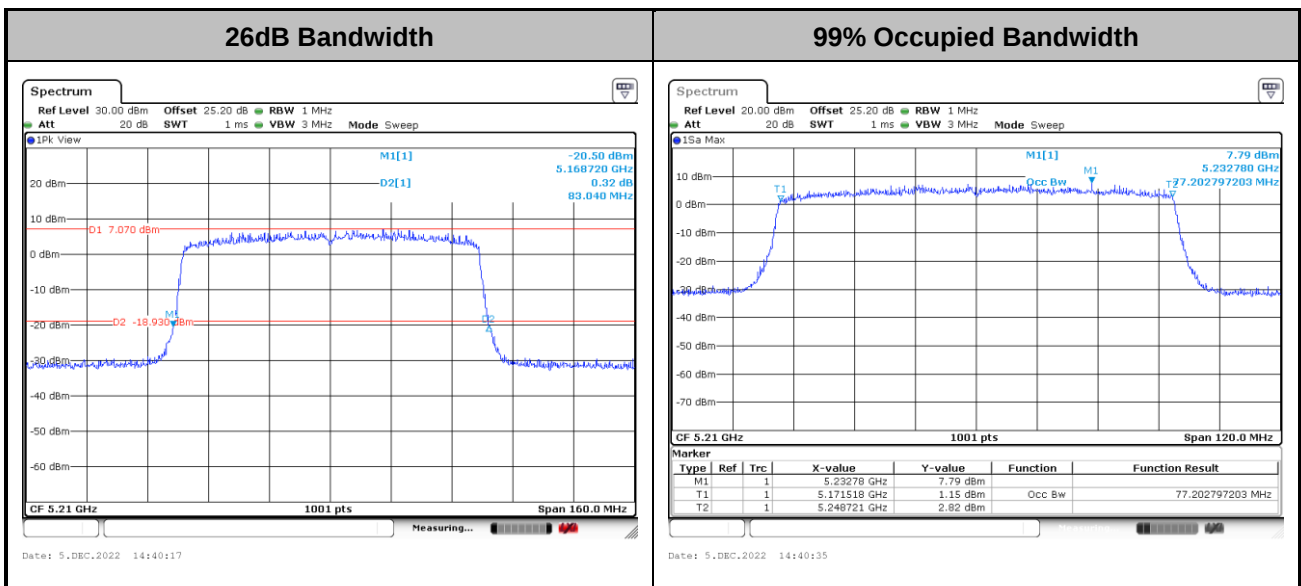


<802.11ax HE40>



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

<802.11ax HE80>

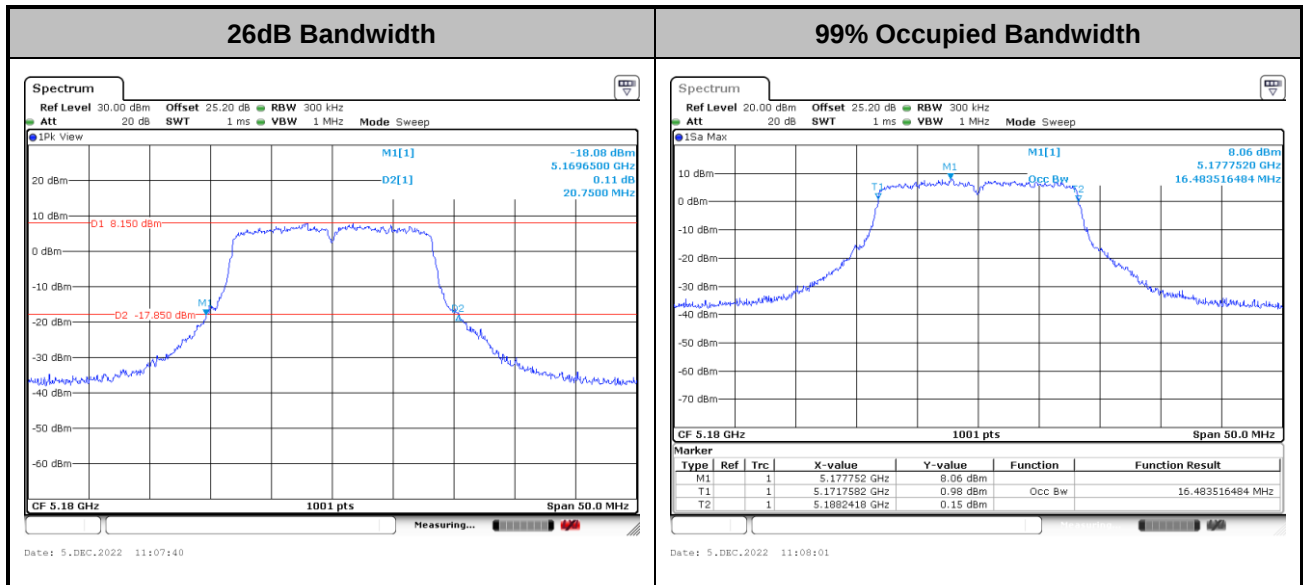


Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.



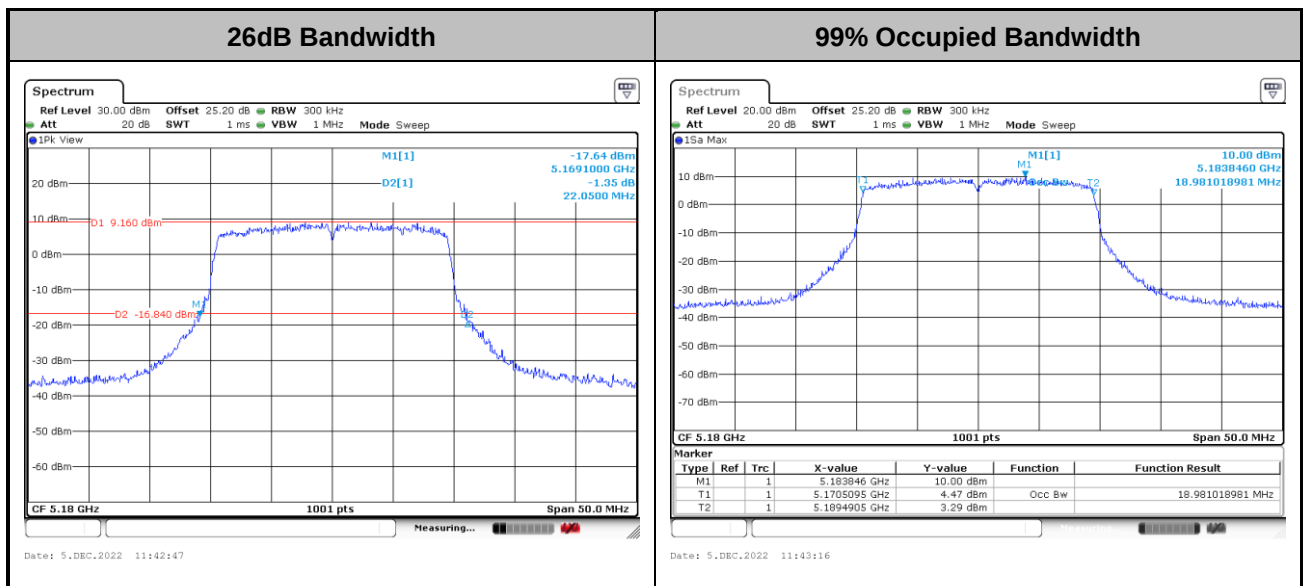
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<802.11a>



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

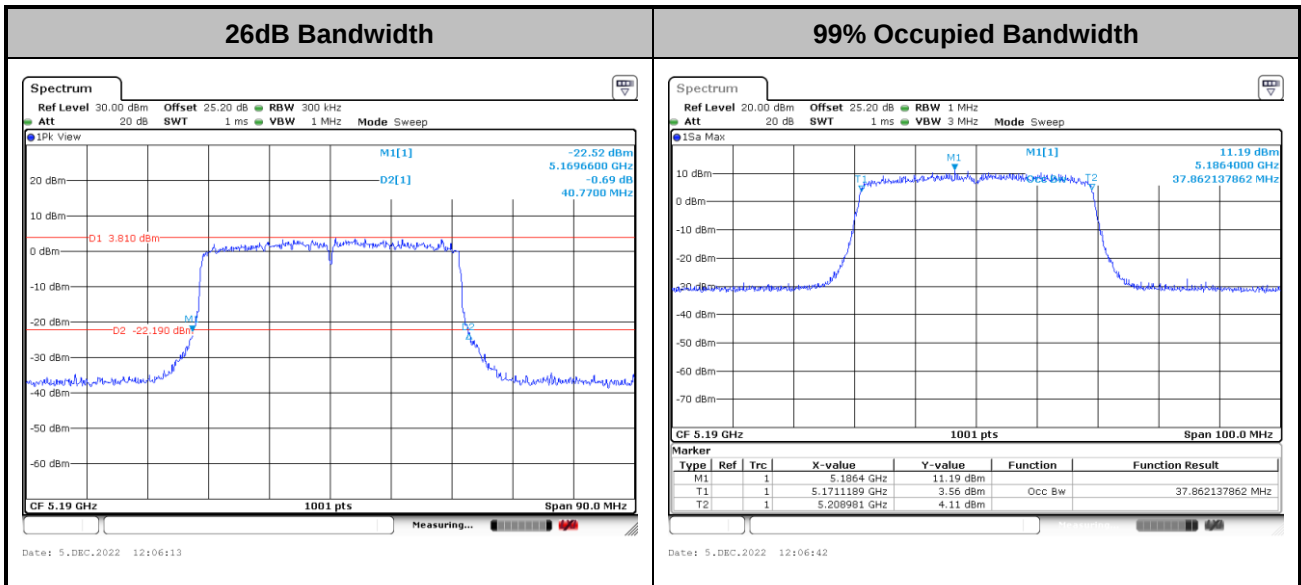
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Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

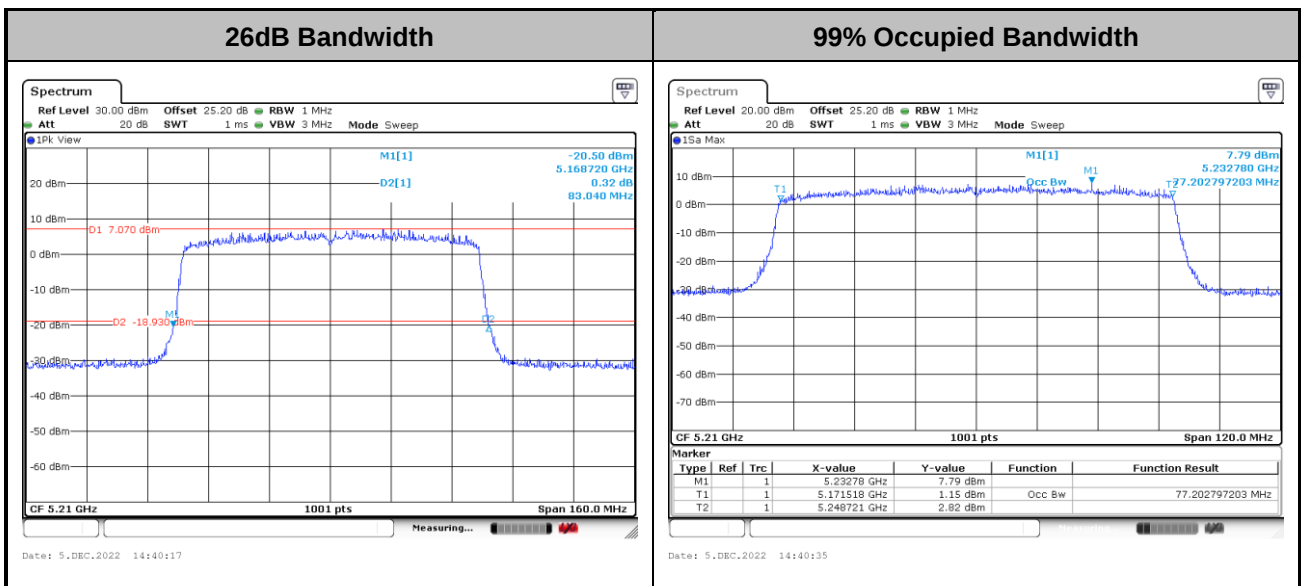


<802.11ax HE40>



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

<802.11ax HE80>



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.

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

3.2.2 Measuring Instruments

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

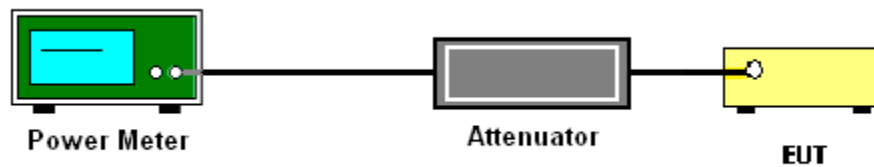
3.2.3 Test Procedures

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

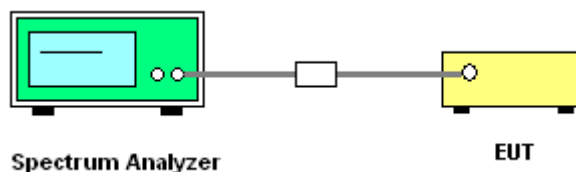
(power averaging (rms) detection with max hold):

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 1 MHz.
 - Set VBW $\geq$ 3 MHz.
 - Number of points in sweep $\geq$ 2 Span / RBW.
 - Sweep time $\leq$ (number of points in sweep) $\times$ T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Detector = power averaging (rms).
 - Trace mode = max hold.
 - Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
1. The RF output of EUT is connected to the spectrum analyzer by a low loss cable.
 2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
 3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

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

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

3.3.4 Test Setup



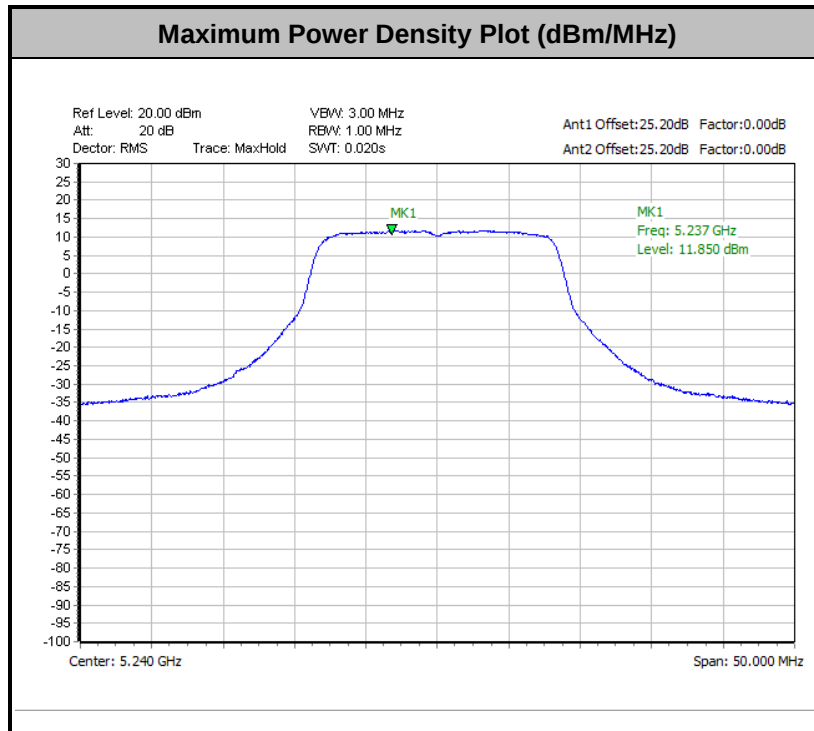
3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

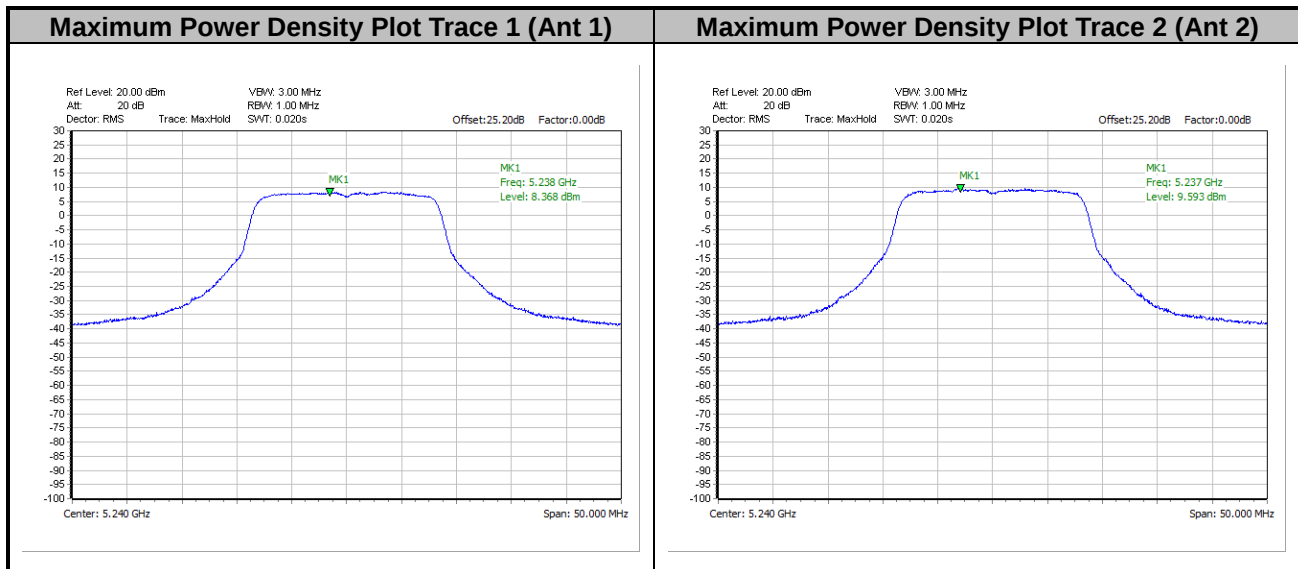


<AP Mode>

<802.11a>

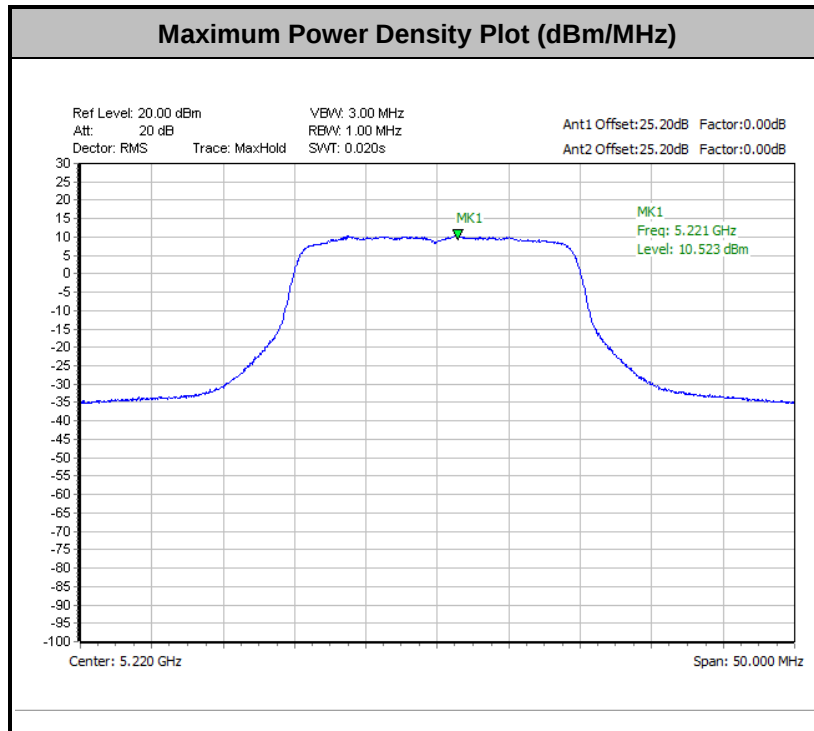


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

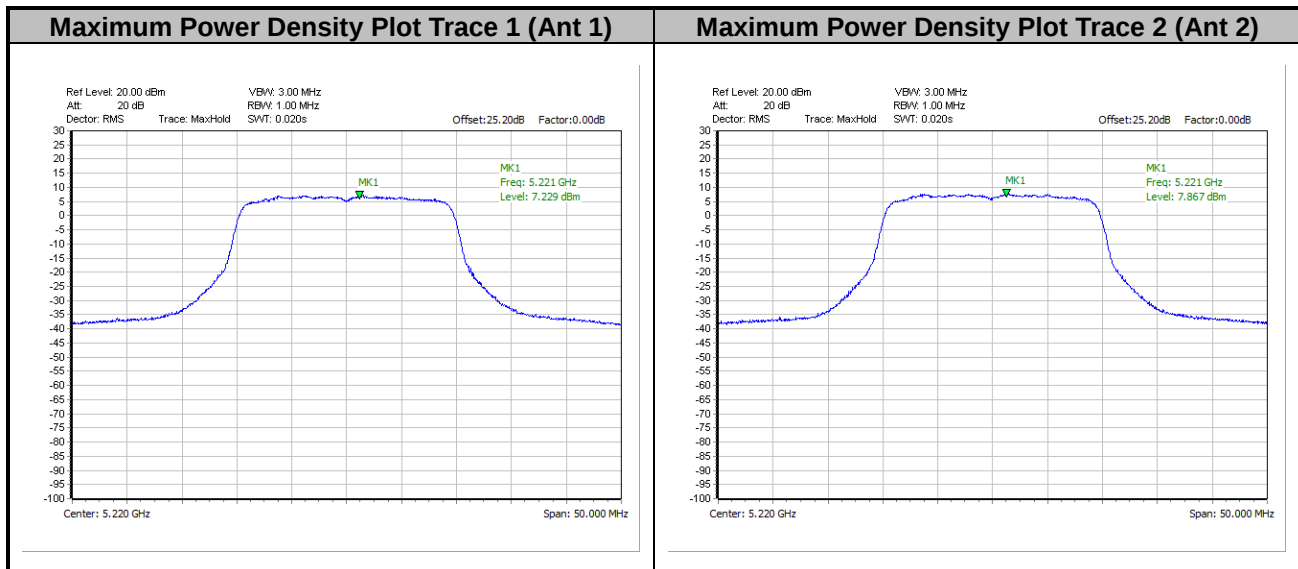




<802.11ax HE20>

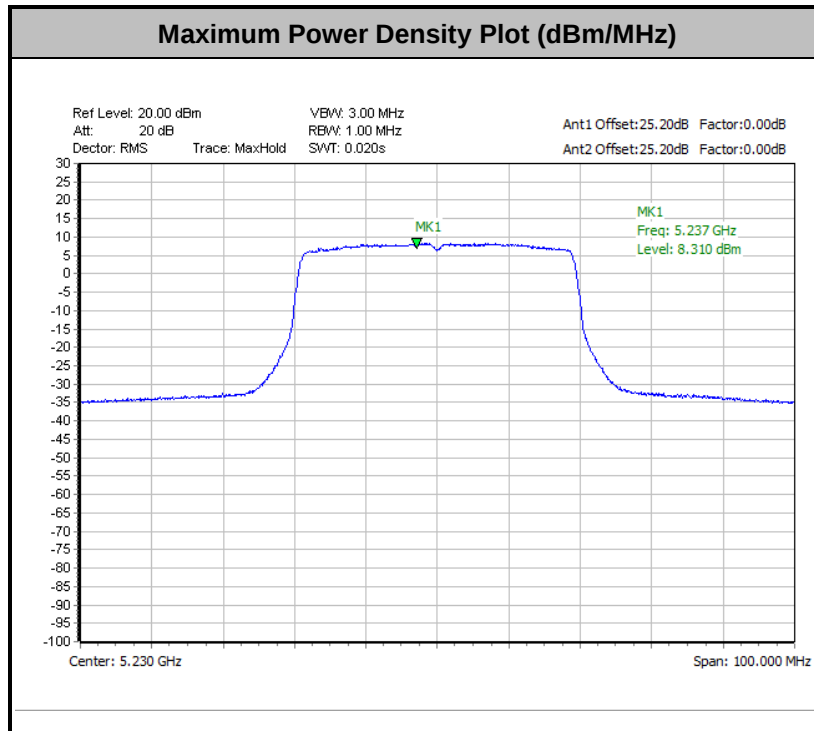


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

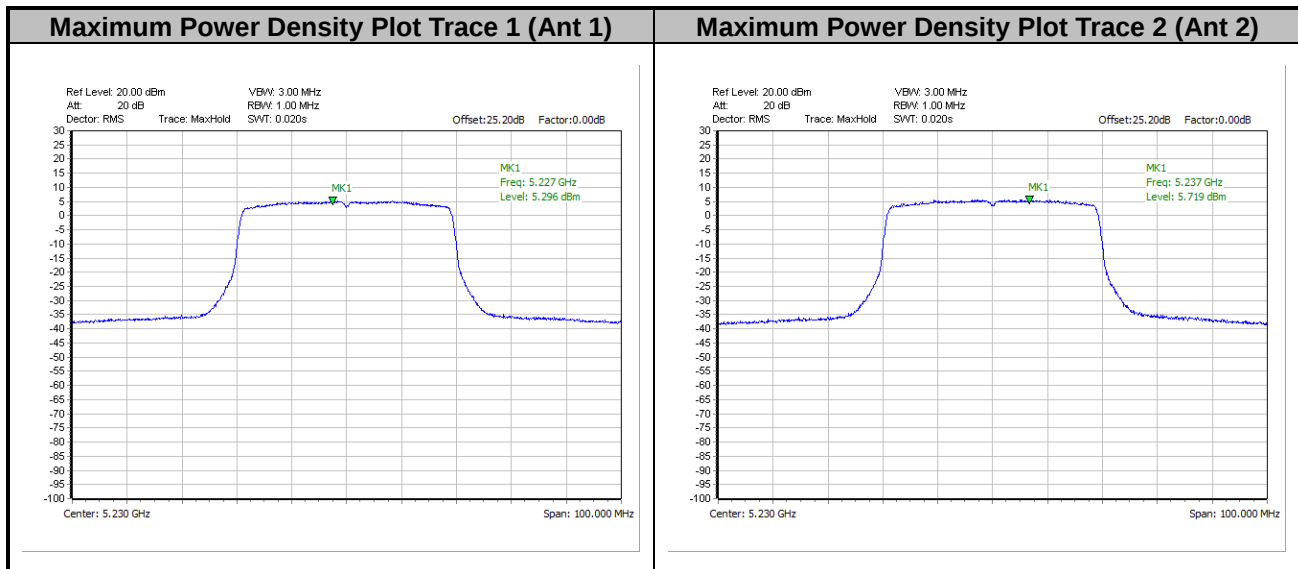




<802.11ax HE40>

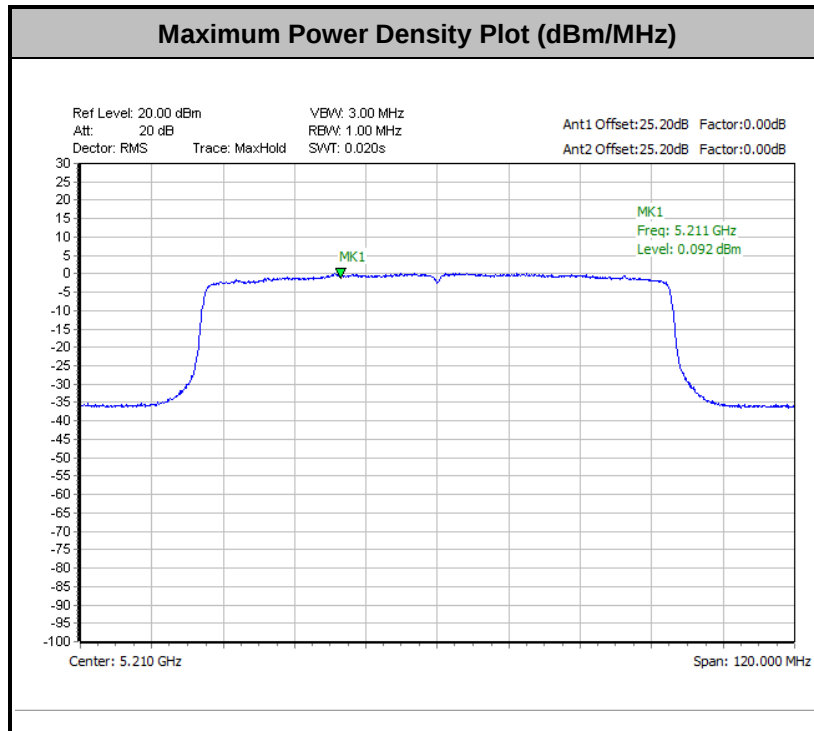


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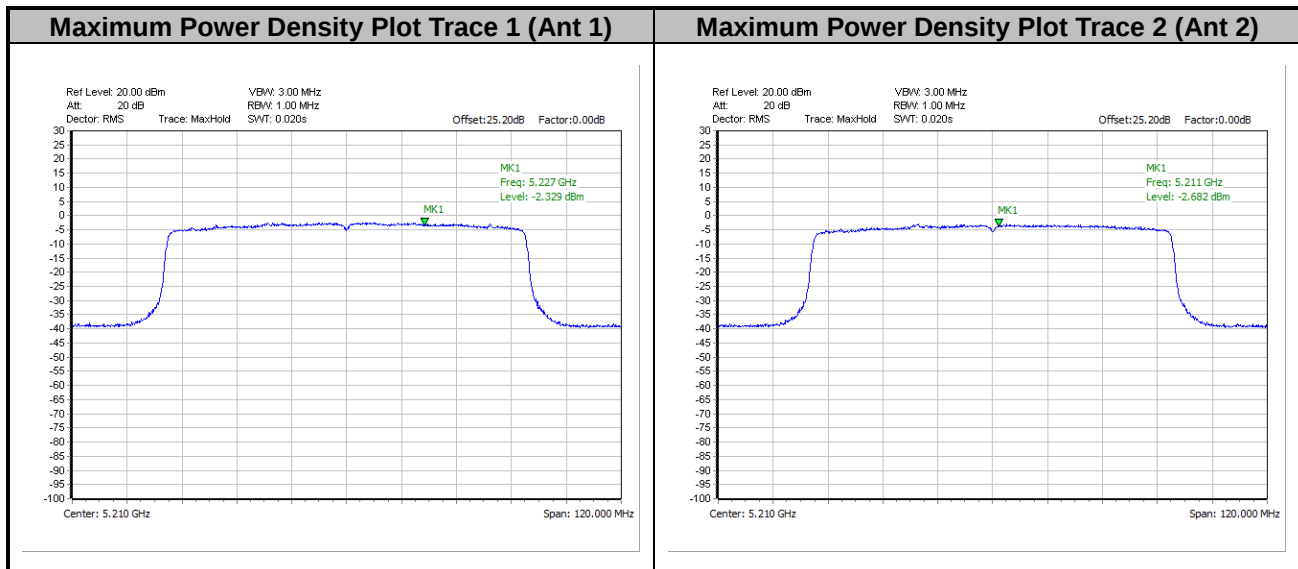




<802.11ax HE80>



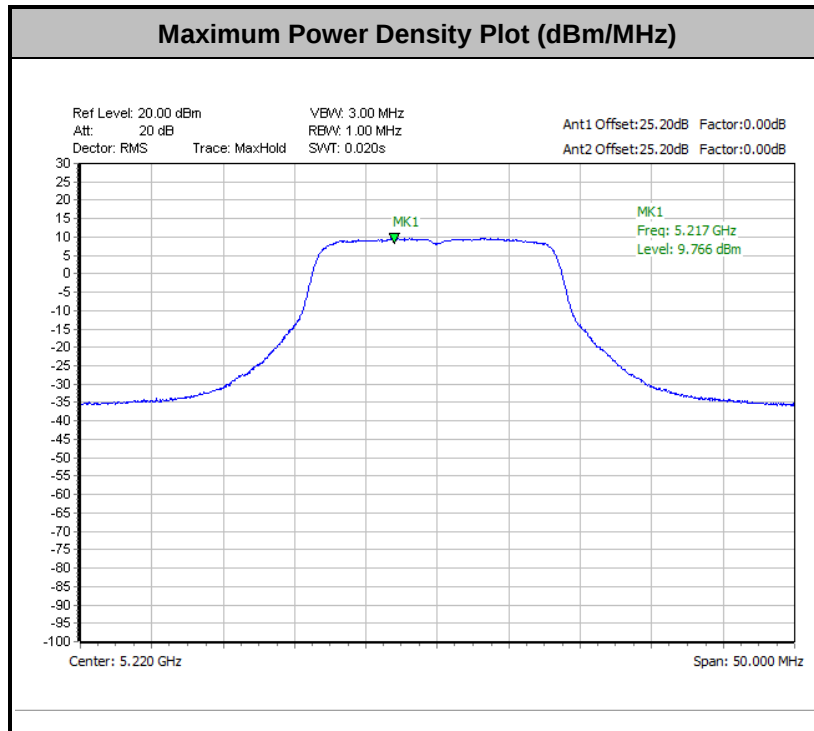
Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.



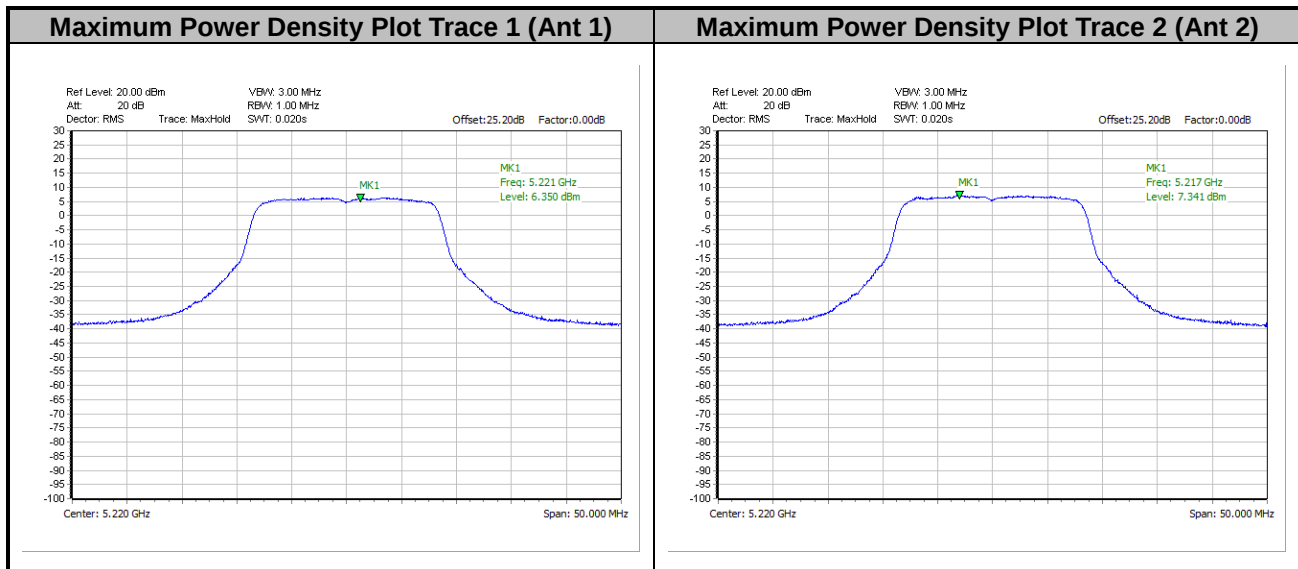


< Client Mode >

<802.11a>

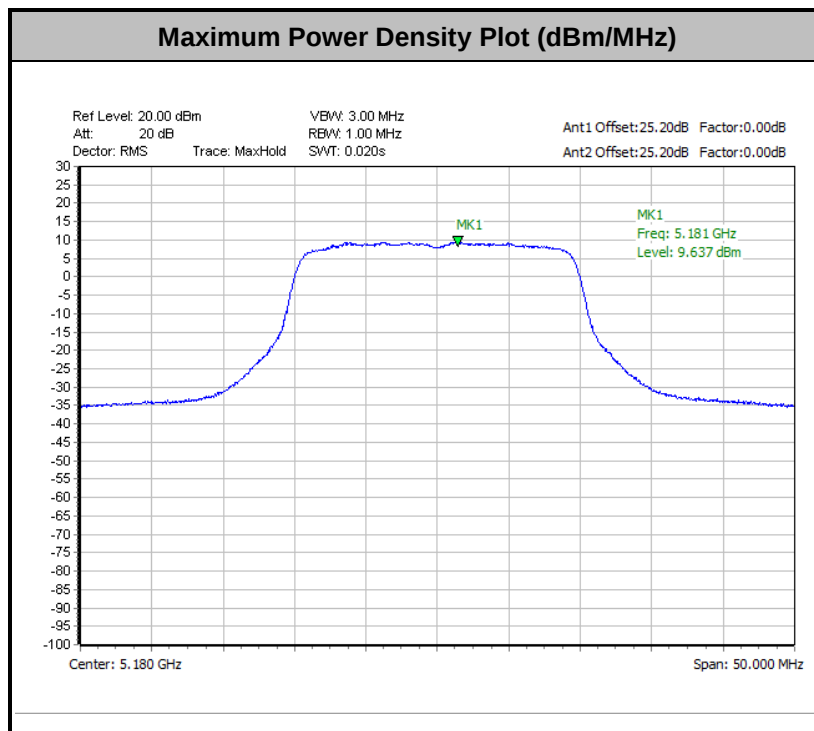


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

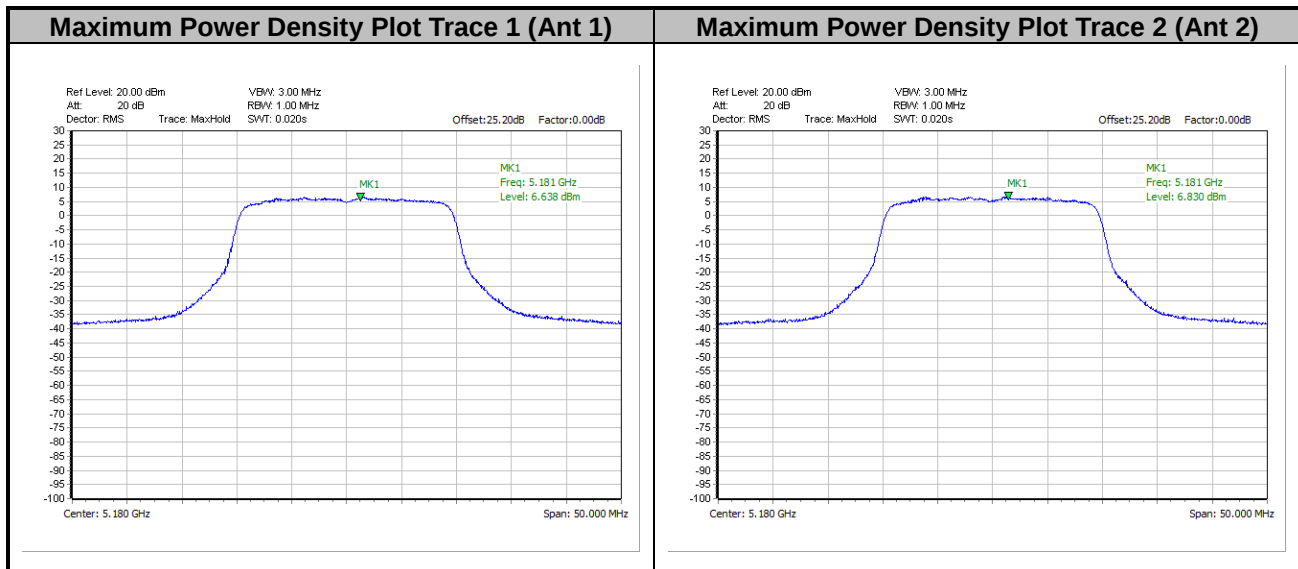




<802.11ax HE20>

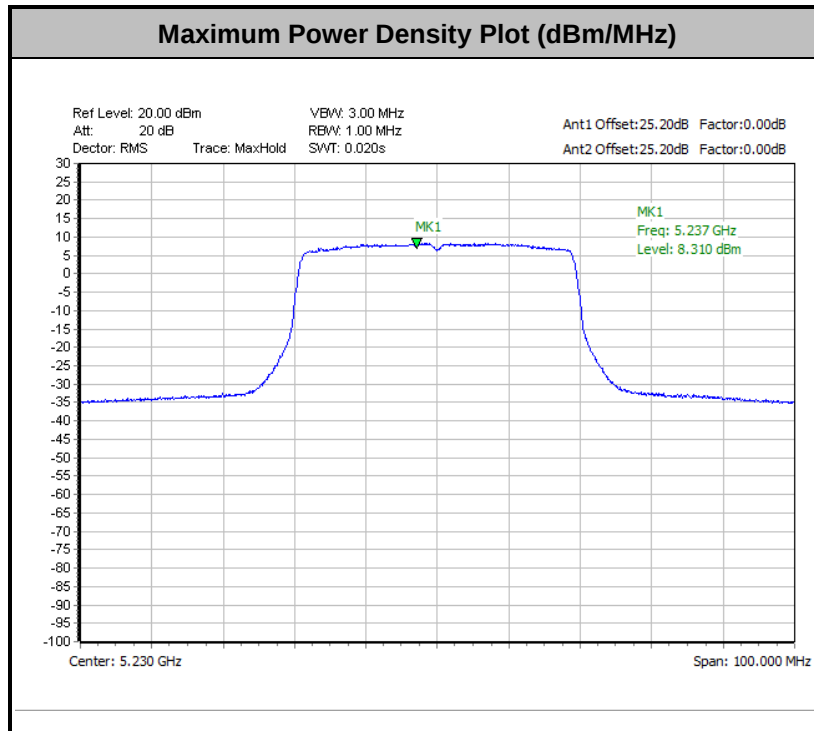


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

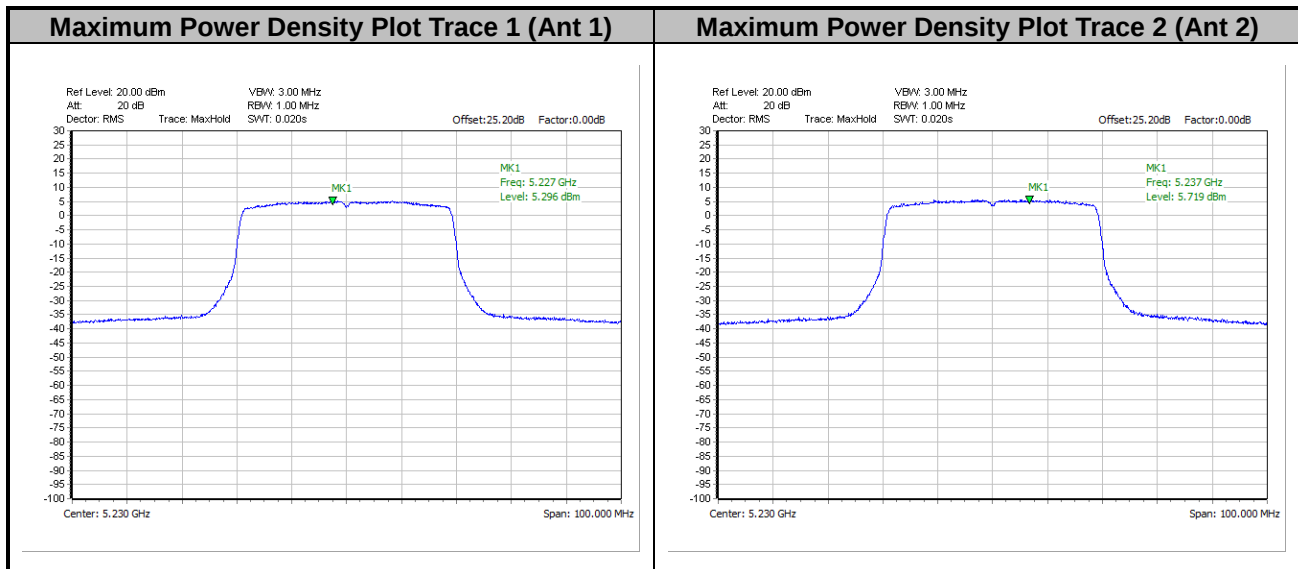




<802.11ax HE40>

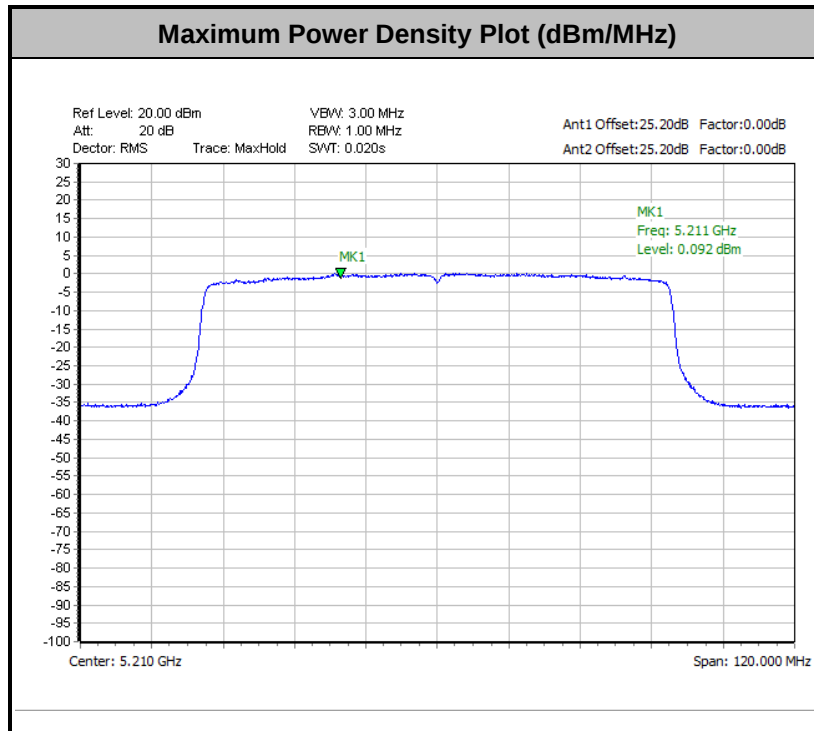


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

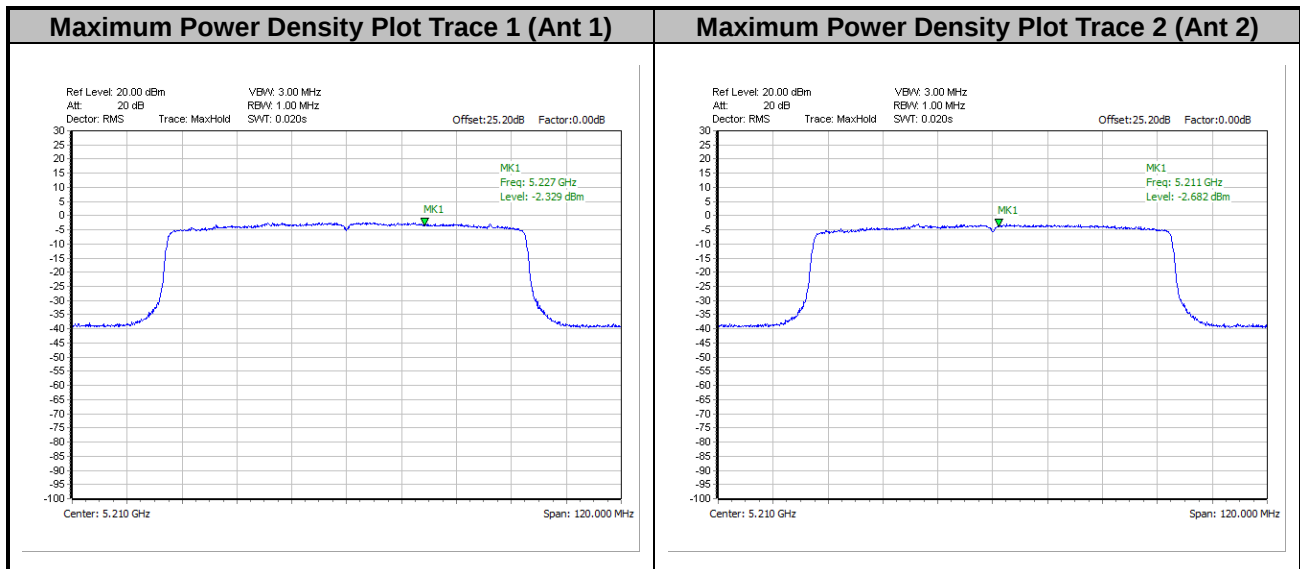




<802.11ax HE80>



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



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.

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

EIRP (dBm)	Field Strength at 3m (dB μ V/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 $\geq$ 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

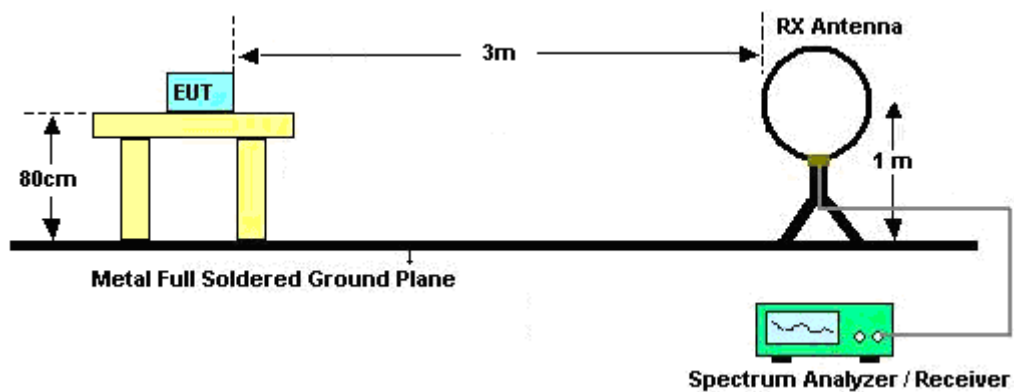
(3) Procedures for Average Unwanted Emissions Measurements Above 1000 MHz

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

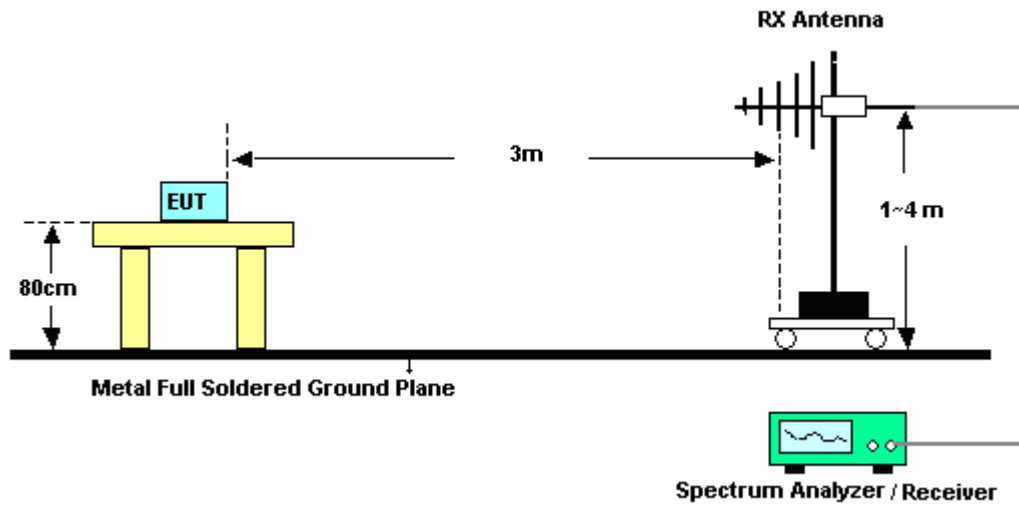
2. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the receiving antenna which is mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna 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

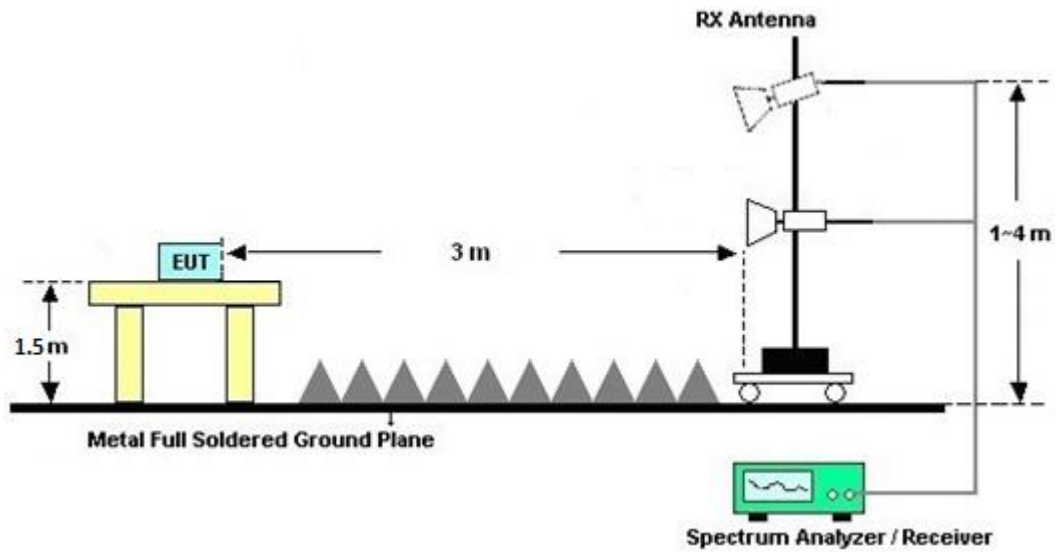
For radiated emissions below 30MHz



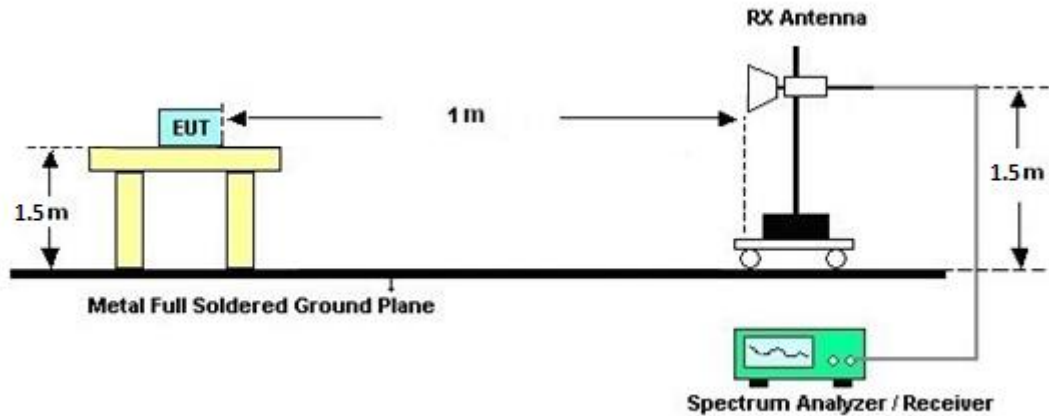
For radiated emissions from 30MHz to 1GHz



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 (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

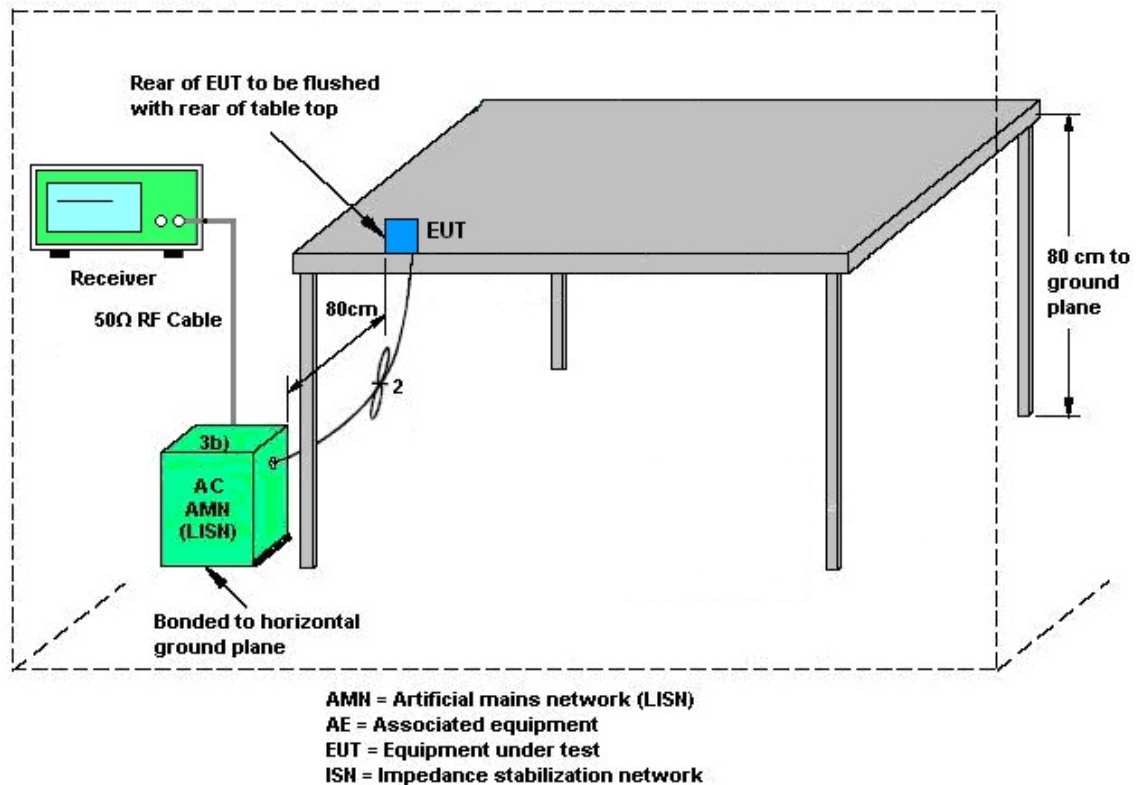
3.5.2 Measuring Instruments

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



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.6 Antenna Requirements

3.6.1 Standard Applicable

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

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 20, 2022	Nov. 15, 2022~ Nov. 29, 2022	Sep. 19, 2023	Radiation (03CH16-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00802N1D01N -06	47020 & 06	30MHz~1GHz	Oct. 08, 2022	Nov. 15, 2022~ Nov. 29, 2022	Oct. 07, 2023	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1522	1GHz~18GHz	Mar. 10, 2022	Nov. 15, 2022~ Nov. 29, 2022	Mar. 09, 2023	Radiation (03CH16-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA9170	00991	18GHz~40GHz	May 14, 2021	Nov. 15, 2022~ Nov. 29, 2022	May 13, 2023	Radiation (03CH16-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY57290111	3Hz~26.5GHz	Dec. 15, 2021	Nov. 15, 2022~ Nov. 29, 2022	Dec. 14, 2022	Radiation (03CH16-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200485	10Hz~44GHz	Mar. 07, 2022	Nov. 15, 2022~ Nov. 29, 2022	Mar. 06, 2023	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	805935/4	N/A	Aug. 09, 2022	Nov. 15, 2022~ Nov. 29, 2022	Aug. 08, 2023	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	802434/4	N/A	Aug. 09, 2022	Nov. 15, 2022~ Nov. 29, 2022	Aug. 08, 2023	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	EC-A5-300-5 757	N/A	Aug. 09, 2022	Nov. 15, 2022~ Nov. 29, 2022	Aug. 08, 2023	Radiation (03CH16-HY)
Amplifier	SONOMA	310N	371607	9kHz~1GHz	Jul. 04, 2022	Nov. 15, 2022~ Nov. 29, 2022	Jul. 03, 2023	Radiation (03CH16-HY)
Preamplifier	EMEC	EM1G18G	060812	1GHz~18GHz	Dec. 27, 2021	Nov. 15, 2022~ Nov. 29, 2022	Dec. 26, 2022	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY53270264	1GHz~26.5GHz	Dec. 09, 2021	Nov. 15, 2022~ Nov. 29, 2022	Dec. 08, 2022	Radiation (03CH16-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 28, 2022	Nov. 15, 2022~ Nov. 29, 2022	Jun. 27, 2023	Radiation (03CH16-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Nov. 15, 2022~ Nov. 29, 2022	N/A	Radiation (03CH16-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Nov. 15, 2022~ Nov. 29, 2022	N/A	Radiation (03CH16-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Nov. 15, 2022~ Nov. 29, 2022	N/A	Radiation (03CH16-HY)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	Nov. 15, 2022~ Nov. 29, 2022	N/A	Radiation (03CH16-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303A	TP200735	N/A	Mar. 04, 2022	Jul. 06, 2022~ Dec. 07, 2022	Mar. 03, 2023	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	15100041SNO 09 (NO:128)	10MHz~6GHz	Jan. 13, 2022	Jul. 06, 2022~ Dec. 07, 2022	Jan. 12, 2023	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101565	10Hz~40GHz	Dec. 29, 2021	Jul. 06, 2022~ Dec. 07, 2022	Dec. 28, 2022	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jul. 28, 2022	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Dec. 01, 2021	Jul. 28, 2022	Nov. 30, 2022	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 17, 2021	Jul. 28, 2022	Nov. 16, 2022	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 03, 2021	Jul. 28, 2022	Dec. 02, 2022	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	Jul. 28, 2022	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	00373	N/A	Oct. 29, 2021	Jul. 28, 2022	Oct. 28, 2022	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 30, 2021	Jul. 28, 2022	Dec. 29, 2022	Conduction (CO05-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.1 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.6 dB
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Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.5 dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.6 dB
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Sylvia Li	Temperature:	21~25	°C
Test Date:	2022/07/06~2022/12/07	Relative Humidity:	51~54	%

<AP Mode>

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 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	36	5180	16.43	16.38	20.90	20.75	-		22.14		
11a	6Mbps	2	44	5220	16.48	16.48	20.70	20.85	-		22.17		
11a	6Mbps	2	48	5240	16.48	16.48	20.80	20.85	-		22.17		

TEST RESULTS DATA
Average Power Table

FCC U-NII-1 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	36	5180	17.70	18.30	21.02	30.00		4.10		Pass
11a	6Mbps	2	44	5220	17.60	18.40	21.03	30.00		4.10		Pass
11a	6Mbps	2	48	5240	18.10	19.00	21.58	30.00		4.10		Pass
HT20	MCS0	2	36	5180	16.30	16.90	19.62	30.00		4.10		Pass
HT20	MCS0	2	44	5220	16.60	17.20	19.92	30.00		4.10		Pass
HT20	MCS0	2	48	5240	14.50	14.20	17.36	30.00		4.10		Pass
HT40	MCS0	2	38	5190	13.70	14.40	17.07	30.00		4.10		Pass
HT40	MCS0	2	46	5230	18.20	18.80	21.52	30.00		4.10		Pass
VHT20	MCS0	2	36	5180	16.40	17.00	19.72	30.00		4.10		Pass
VHT20	MCS0	2	44	5220	16.70	17.30	20.02	30.00		4.10		Pass
VHT20	MCS0	2	48	5240	14.60	14.30	17.46	30.00		4.10		Pass
VHT40	MCS0	2	38	5190	13.80	14.50	17.17	30.00		4.10		Pass
VHT40	MCS0	2	46	5230	18.30	18.90	21.62	30.00		4.10		Pass
VHT80	MCS0	2	42	5210	13.40	13.00	16.21	30.00		4.10		Pass

TEST RESULTS DATA
Power Spectral Density

FCC U-NII-1 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)		Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	36	5180			11.06	15.89		7.11		Pass
11a	6Mbps	2	44	5220			11.45	15.89		7.11		Pass
11a	6Mbps	2	48	5240			11.85	15.89		7.11		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 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
HE20	MCS0	2	36	5180	Full	18.93	18.93	21.75	21.65	-		22.77		
HE20	MCS0	2	44	5220	Full	18.98	18.93	22.10	22.50	-		22.77		
HE20	MCS0	2	48	5240	Full	18.93	18.93	21.70	21.80	-		22.77		
HE40	MCS0	2	38	5190	Full	37.86	37.86	40.77	41.40	-		23.01		
HE40	MCS0	2	46	5230	Full	37.96	37.96	41.13	40.86	-		23.01		
HE80	MCS0	2	42	5210	Full	77.20	77.20	83.04	83.04	-		23.01		

TEST RESULTS DATA
Average Power Table

FCC U-NII-1 MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	36	5180	Full	16.50	17.10	19.82	30.00		4.10			Pass
HE20	MCS0	2	44	5220	Full	16.80	17.40	20.12	30.00		4.10			Pass
HE20	MCS0	2	48	5240	Full	14.70	14.40	17.56	30.00		4.10			Pass
HE40	MCS0	2	38	5190	Full	13.90	14.60	17.27	30.00		4.10			Pass
HE40	MCS0	2	46	5230	Full	18.40	19.00	21.72	30.00		4.10			Pass
HE80	MCS0	2	42	5210	Full	13.50	13.10	16.31	30.00		4.10			Pass

TEST RESULTS DATA
Power Spectral Density

FCC U-NII-1 MIMO														
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config	Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	36	5180	Full			10.23	15.89		7.11			Pass
HE20	MCS0	2	44	5220	Full			10.52	15.89		7.11			Pass
HE20	MCS0	2	48	5240	Full			7.76	15.89		7.11			Pass
HE40	MCS0	2	38	5190	Full			4.07	15.89		7.11			Pass
HE40	MCS0	2	46	5230	Full			8.31	15.89		7.11			Pass
HE80	MCS0	2	42	5210	Full			0.09	15.89		7.11			Pass

<Client Mode>

TEST RESULTS DATA
26dB and 99% OBW

U-NII-1 MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	36	5180	16.48	16.48	20.75	20.90	-	-	22.17	-	
11a	6Mbps	2	44	5220	16.48	16.43	20.95	20.90	-	-	22.16	-	
11a	6Mbps	2	48	5240	16.48	16.48	20.90	20.85	-	-	22.17	-	

TEST RESULTS DATA
Average Power Table

FCC U-NII-1 MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	36	5180	16.40	16.70	19.56	24.00		4.10			Pass
11a	6Mbps	2	44	5220	16.50	17.20	19.87	24.00		4.10			Pass
11a	6Mbps	2	48	5240	16.60	17.00	19.81	24.00		4.10			Pass
HT20	MCS0	2	36	5180	16.30	16.50	19.41	24.00		4.10			Pass
HT20	MCS0	2	44	5220	15.80	16.60	19.23	24.00		4.10			Pass
HT20	MCS0	2	48	5240	14.50	14.20	17.36	24.00		4.10			Pass
HT40	MCS0	2	38	5190	13.70	14.40	17.07	24.00		4.10			Pass
HT40	MCS0	2	46	5230	18.20	18.80	21.52	24.00		4.10			Pass
VHT20	MCS0	2	36	5180	16.40	16.60	19.51	24.00		4.10			Pass
VHT20	MCS0	2	44	5220	15.90	16.70	19.33	24.00		4.10			Pass
VHT20	MCS0	2	48	5240	14.60	14.30	17.46	24.00		4.10			Pass
VHT40	MCS0	2	38	5190	13.80	14.50	17.17	24.00		4.10			Pass
VHT40	MCS0	2	46	5230	18.30	18.90	21.62	24.00		4.10			Pass
VHT80	MCS0	2	42	5210	13.40	13.00	16.21	24.00		4.10			Pass

TEST RESULTS DATA
Power Spectral Density

FCC U-NII-1 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)		Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	36	5180				9.61	9.89	7.11		Pass
11a	6Mbps	2	44	5220				9.77	9.89	7.11		Pass
11a	6Mbps	2	48	5240				9.67	9.89	7.11		Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-1 MIMO														
Mod.	Data Rate	Ntx	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 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
HE20	MCS0	2	36	5180	Full	18.98	18.93	22.05	21.85	-		22.77		
HE20	MCS0	2	44	5220	Full	18.88	18.93	21.60	21.65	-		22.76		
HE20	MCS0	2	48	5240	Full	18.93	18.93	21.70	21.80	-		22.77		
HE40	MCS0	2	38	5190	Full	37.86	37.86	40.77	41.40	-		23.01		
HE40	MCS0	2	46	5230	Full	37.96	37.96	41.13	40.86	-		23.01		
HE80	MCS0	2	42	5210	Full	77.20	77.20	83.04	83.04	-		23.01		

TEST RESULTS DATA
Average Power Table

FCC U-NII-1 MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	36	5180	Full	16.50	16.70	19.61	24.00		4.10			Pass
HE20	MCS0	2	44	5220	Full	16.00	16.80	19.43	24.00		4.10			Pass
HE20	MCS0	2	48	5240	Full	14.70	14.40	17.56	24.00		4.10			Pass
HE40	MCS0	2	38	5190	Full	13.90	14.60	17.27	24.00		4.10			Pass
HE40	MCS0	2	46	5230	Full	18.40	19.00	21.72	24.00		4.10			Pass
HE80	MCS0	2	42	5210	Full	13.50	13.10	16.31	24.00		4.10			Pass

TEST RESULTS DATA
Power Spectral Density

FCC U-NII-1 MIMO														
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config	Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	36	5180	Full			9.64	9.89	7.11			Pass	
HE20	MCS0	2	44	5220	Full			9.59	9.89	7.11			Pass	
HE20	MCS0	2	48	5240	Full			7.76	9.89	7.11			Pass	
HE40	MCS0	2	38	5190	Full			4.07	9.89	7.11			Pass	
HE40	MCS0	2	46	5230	Full			8.31	9.89	7.11			Pass	
HE80	MCS0	2	42	5210	Full			0.09	9.89	7.11			Pass	



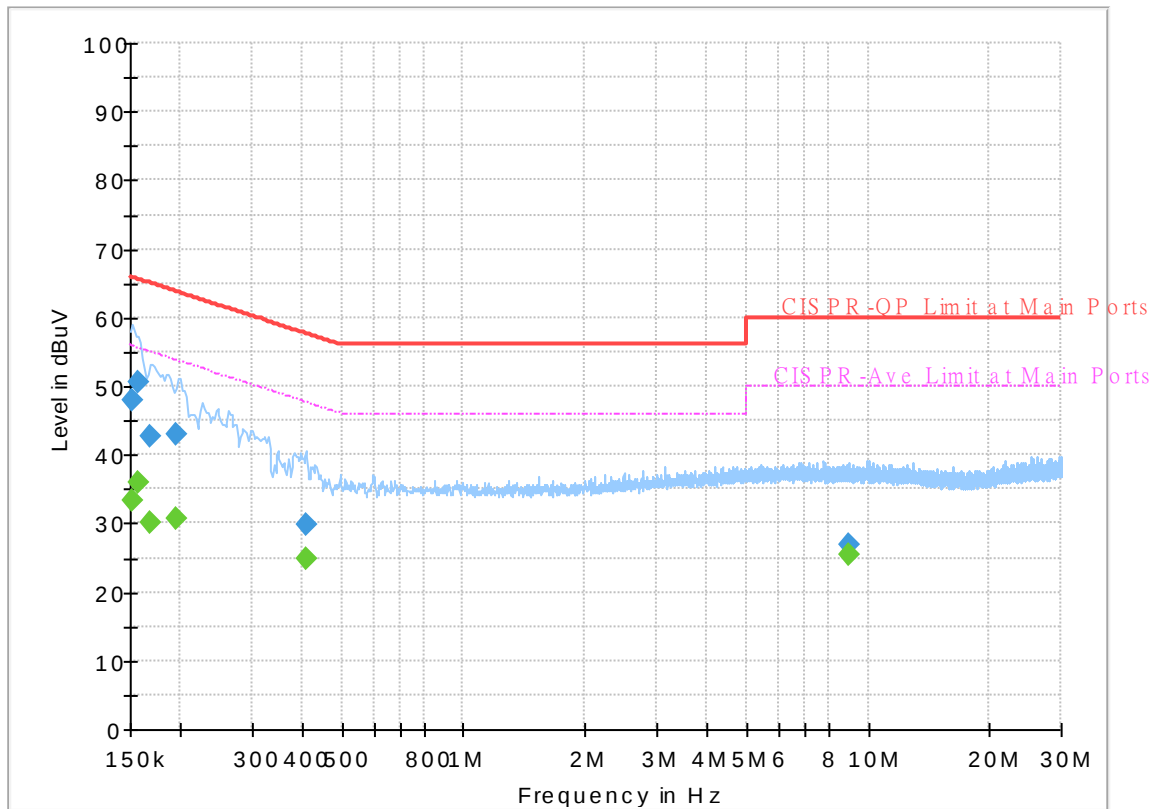
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Calvin Wang	Temperature :	23~26℃
		Relative Humidity :	45~55%

EUT Information

Report NO : 260702
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



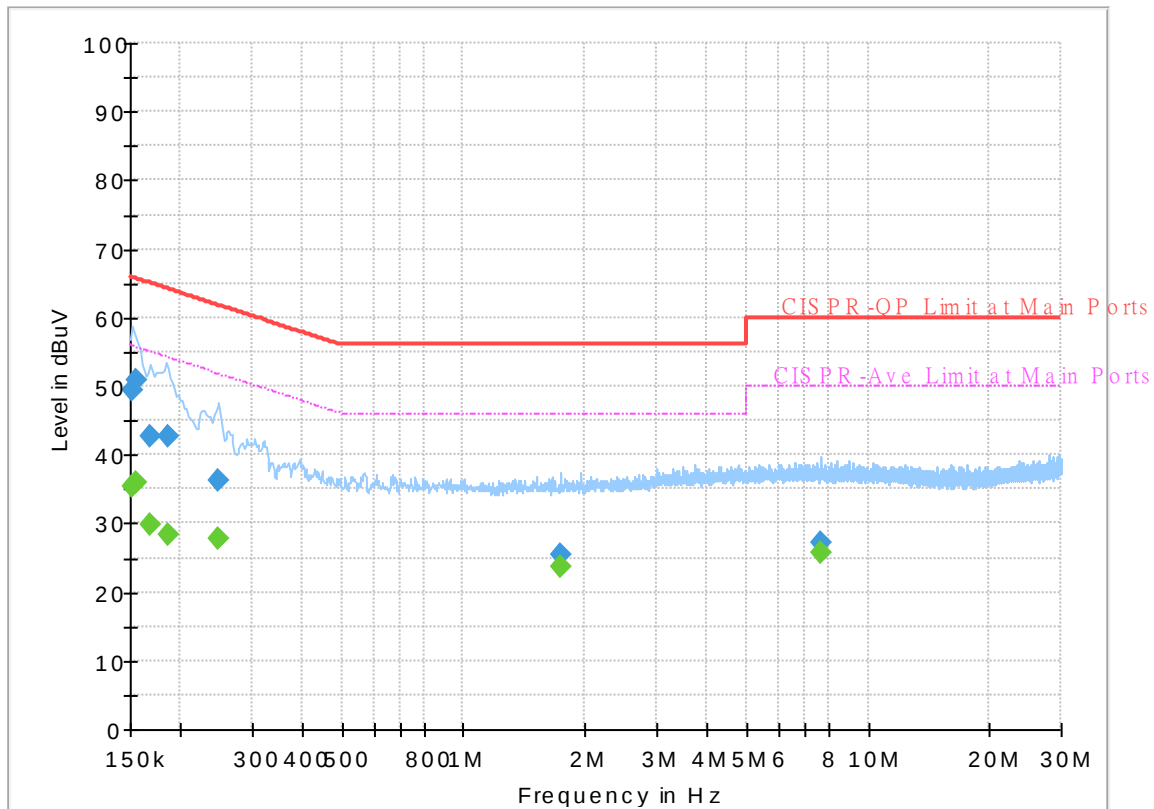
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	33.42	55.88	22.46	L1	OFF	19.7
0.152250	48.02	---	65.88	17.86	L1	OFF	19.7
0.156750	---	35.95	55.63	19.68	L1	OFF	19.7
0.156750	50.65	---	65.63	14.98	L1	OFF	19.7
0.168000	---	30.16	55.06	24.90	L1	OFF	19.7
0.168000	42.67	---	65.06	22.39	L1	OFF	19.7
0.195000	---	30.57	53.82	23.25	L1	OFF	19.7
0.195000	42.95	---	63.82	20.87	L1	OFF	19.7
0.408750	---	24.89	47.67	22.78	L1	OFF	19.7
0.408750	29.88	---	57.67	27.79	L1	OFF	19.7
8.934000	---	25.46	50.00	24.54	L1	OFF	20.1
8.934000	26.79	---	60.00	33.21	L1	OFF	20.1

EUT Information

Report NO : 260702
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	---	35.35	55.88	20.53	N	OFF	19.7
0.152250	49.36	---	65.88	16.52	N	OFF	19.7
0.154500	---	36.09	55.75	19.66	N	OFF	19.7
0.154500	50.83	---	65.75	14.92	N	OFF	19.7
0.168000	---	29.70	55.06	25.36	N	OFF	19.7
0.168000	42.82	---	65.06	22.24	N	OFF	19.7
0.186000	---	28.50	54.21	25.71	N	OFF	19.7
0.186000	42.71	---	64.21	21.50	N	OFF	19.7
0.246750	---	27.87	51.87	24.00	N	OFF	19.7
0.246750	36.23	---	61.87	25.64	N	OFF	19.7
1.736250	---	23.78	46.00	22.22	N	OFF	19.8
1.736250	25.37	---	56.00	30.63	N	OFF	19.8
7.644750	---	25.66	50.00	24.34	N	OFF	20.1
7.644750	27.21	---	60.00	32.79	N	OFF	20.1



Appendix C. Radiated Spurious Emission

Test Engineer :	Andy Yang and Karl Hou	Temperature :	20~25°C
		Relative Humidity :	50~60%

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.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5134.42	52.68	-21.32	74	38.17	33	10.96	29.45	310	45	P	H
		5072.28	42.84	-11.16	54	28.21	33.11	10.95	29.43	310	45	A	H
	*	5180	102.84	-	-	88.29	33.06	10.96	29.47	310	45	P	H
	*	5180	94.65	-	-	80.1	33.06	10.96	29.47	310	45	A	H
													H
		5149.24	60.6	-13.4	74	46.1	33	10.96	29.46	222	196	P	V
		5150	52.41	-1.59	54	37.91	33	10.96	29.46	222	196	A	V
	*	5180	120.73	-	-	106.18	33.06	10.96	29.47	222	196	P	V
	*	5180	112.83	-	-	98.28	33.06	10.96	29.47	222	196	A	V
													V
802.11a CH 44 5220MHz		5127.4	53.98	-20.02	74	39.47	33	10.96	29.45	313	43	P	H
		5030.42	42.73	-11.27	54	28	33.2	10.95	29.42	313	43	A	H
	*	5220	101.89	-	-	87.33	33.06	10.98	29.48	313	43	P	H
	*	5220	94.73	-	-	80.17	33.06	10.98	29.48	313	43	A	H
		5393.92	53.26	-20.74	74	38.77	32.89	11.14	29.54	313	43	P	H
		5357.8	42.34	-11.66	54	27.93	32.82	11.11	29.52	313	43	A	H
		5126.36	55.18	-18.82	74	40.67	33	10.96	29.45	205	191	P	V
		5087.88	45.71	-8.29	54	31.15	33.05	10.95	29.44	205	191	A	V
	*	5220	120.67	-	-	106.11	33.06	10.98	29.48	205	191	P	V
	*	5220	113.7	-	-	99.14	33.06	10.98	29.48	205	191	A	V
		5376	55.7	-18.3	74	41.25	32.85	11.13	29.53	205	191	P	V
		5376	49.28	-4.72	54	34.83	32.85	11.13	29.53	205	191	A	V



WIFI Ant. 1+2	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		5127.4	54.86	-19.14	74	39.31	33	12	29.45	397	219	P	H
		5106.86	43.69	-10.31	54	28.16	33	11.97	29.44	397	219	A	H
	*	5240	105.15	-	-	90.62	33.02	11	29.49	321	44	P	H
	*	5240	96.6	-	-	82.07	33.02	11	29.49	321	44	A	H
		5382.16	52.5	-21.5	74	38.04	32.86	11.13	29.53	321	44	P	H
		5444.6	42.43	-11.57	54	27.93	32.81	11.24	29.55	321	44	A	H
		5044.2	54.75	-19.25	74	39.1	33.2	11.87	29.42	233	172	P	V
		5087.88	44.9	-9.1	54	29.35	33.05	11.94	29.44	233	172	A	V
	*	5240	122.9	-	-	108.37	33.02	11	29.49	202	206	P	V
	*	5240	115.42	-	-	100.89	33.02	11	29.49	202	206	A	V
		5439.84	55.69	-18.31	74	41.19	32.82	11.23	29.55	202	206	P	V
		5376	49.06	-4.94	54	34.61	32.85	11.13	29.53	202	206	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. 1+2	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	48.23	-19.97	68.2	59.54	38.92	16.49	66.72	-	-	P	H
		15536	47.68	-26.32	74	55.64	37.93	20.24	66.13	-	-	P	H
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		4822	68.01	-5.99	74	54.19	32.43	10.81	29.42	211	162	P	V
		4822	50.47	-3.53	54	36.65	32.43	10.81	29.42	211	162	A	V
		10360	48.34	-19.86	68.2	59.65	38.92	16.49	66.72	109	354	P	V
		15540	47.88	-26.12	74	55.84	37.92	20.25	66.13	-	-	P	V
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WIFI Ant. 1+2	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 44 5220MHz		10440	48.48	-19.72	68.2	59.74	38.92	16.56	66.74	-	-	P	H
		15660	47.85	-26.15	74	56.4	37.44	20.29	66.28	-	-	P	H
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		4858	62.74	-11.26	74	48.69	32.63	10.84	29.42	203	188	P	V
		4858	50.59	-3.41	54	36.54	32.63	10.84	29.42	203	188	A	V
		10440	48.4	-19.8	68.2	59.66	38.92	16.56	66.74	-	-	P	V
		15660	47.7	-26.3	74	56.25	37.44	20.29	66.28	-	-	P	V
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WIFI Ant. 1+2	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		10480	49.51	-18.69	68.2	60.83	38.84	16.59	66.75	-	-	P	H
		15720	47.82	-26.18	74	56.64	37.22	20.32	66.36	-	-	P	H
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Band 1 5150~5250MHz

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 36 5180MHz		5074.36	53.53	-20.47	74	38.91	33.1	10.95	29.43	342	208	P	H
		5091	42.38	-11.62	54	27.83	33.04	10.95	29.44	342	208	A	H
	*	5180	98.37	-	-	83.82	33.06	10.96	29.47	342	208	P	H
	*	5180	87.33	-	-	72.79	33.05	10.96	29.47	342	208	A	H
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		5148.2	59.23	-14.77	74	44.73	33	10.96	29.46	203	181	P	V
		5149.76	50.38	-3.62	54	35.88	33	10.96	29.46	203	181	A	V
	*	5180	119.06	-	-	104.51	33.06	10.96	29.47	203	181	P	V
	*	5180	110.68	-	-	96.13	33.06	10.96	29.47	203	181	A	V
													V
													V
802.11ax HE20 Full CH 44 5220MHz		5124.02	53.06	-20.94	74	38.55	33	10.96	29.45	311	141	P	H
		5060.58	42.29	-11.71	54	27.61	33.16	10.95	29.43	311	141	A	H
	*	5220	99.47	-	-	84.91	33.06	10.98	29.48	311	141	P	H
	*	5220	89.39	-	-	74.83	33.06	10.98	29.48	311	141	A	H
		5456.08	52.92	-21.08	74	38.41	32.81	11.26	29.56	311	141	P	H
		5444.04	41.6	-12.4	54	27.1	32.81	11.24	29.55	311	141	A	H
		5025.48	54.27	-19.73	74	39.54	33.2	10.95	29.42	199	206	P	V
		5149.24	44.14	-9.86	54	29.64	33	10.96	29.46	199	206	A	V
	*	5220	120.08	-	-	105.52	33.06	10.98	29.48	199	206	P	V
	*	5220	110.72	-	-	96.16	33.06	10.98	29.48	199	206	A	V
		5358.92	54.51	-19.49	74	40.1	32.82	11.11	29.52	199	206	P	V
		5412.4	44.41	-9.59	54	29.9	32.88	11.17	29.54	199	206	A	V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 48 5240MHz		5053.82	53.7	-20.3	74	39	33.18	10.95	29.43	204	156	P	H
		5098.54	41.96	-12.04	54	27.44	33.01	10.95	29.44	204	156	A	H
	*	5240	104.24	-	-	89.71	33.02	11	29.49	204	156	P	H
	*	5240	94.21	-	-	79.68	33.02	11	29.49	204	156	A	H
		5364.52	53.66	-20.34	74	39.24	32.83	11.12	29.53	204	156	P	H
		5450.48	41.55	-12.45	54	27.05	32.8	11.25	29.55	204	156	A	H
		5137.02	55.33	-18.67	74	40.82	33	10.96	29.45	250	189	P	V
		5044.46	44.16	-9.84	54	29.43	33.2	10.95	29.42	250	189	A	V
	*	5240	121.34	-	-	106.81	33.02	11	29.49	250	189	P	V
	*	5240	111.03	-	-	96.5	33.02	11	29.49	250	189	A	V
		5377.68	53.98	-20.02	74	39.52	32.86	11.13	29.53	250	189	P	V
		5376	45.64	-8.36	54	31.19	32.85	11.13	29.53	250	189	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. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 36 5180MHz		10360	48.58	-19.62	68.2	59.89	38.92	16.49	66.72	-	-	P	H
		15540	47.87	-26.13	74	55.83	37.92	20.25	66.13	-	-	P	H
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													H
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		4804	64.52	-9.48	74	50.84	32.32	10.79	29.43	214	214	P	V
		4804	47.54	-6.46	54	33.76	32.4	10.8	29.42	214	214	A	V
		10360	49.65	-18.55	68.2	60.96	38.92	16.49	66.72	-	-	P	V
		15660	47.69	-26.31	74	56.24	37.44	20.29	66.28	-	-	P	V
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WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 44 5220MHz		10440	48.91	-19.29	68.2	60.17	38.92	16.56	66.74	-	-	P	H
		15660	47.86	-26.14	74	56.41	37.44	20.29	66.28	-	-	P	H
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		4858	67.87	-6.13	74	53.82	32.63	10.84	29.42	212	179	P	V
		4858	50.21	-3.79	54	36.16	32.63	10.84	29.42	212	179	A	V
		10440	49.18	-19.02	68.2	60.44	38.92	16.56	66.74	-	-	P	V
		15660	47.89	-26.11	74	56.44	37.44	20.29	66.28	-	-	P	V
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WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 48 5240MHz		10480	49.57	-18.63	68.2	60.89	38.84	16.59	66.75	-	-	P	H
		15720	47.41	-26.59	74	56.23	37.22	20.32	66.36	-	-	P	H
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		4872	63.81	-10.19	74	49.69	32.69	10.85	29.42	250	189	P	V
		4872	48.37	-5.63	54	34.25	32.69	10.85	29.42	250	189	A	V
		10480	48.95	-19.25	68.2	60.27	38.84	16.59	66.75	-	-	P	V
		15720	47.85	-26.15	74	56.67	37.22	20.32	66.36	-	-	P	V
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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 Full (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 38 5190MHz		5143.26	53.15	-20.85	74	38.65	33	10.96	29.46	195	164	P	H
		5147.16	42.26	-11.74	54	27.76	33	10.96	29.46	195	164	A	H
	*	5190	97.66	-	-	83.09	33.08	10.96	29.47	195	164	P	H
	*	5190	88.08	-	-	73.51	33.08	10.96	29.47	195	164	A	H
		5399.8	52.28	-21.72	74	37.77	32.9	11.15	29.54	195	164	P	H
		5446	41.53	-12.47	54	27.03	32.81	11.24	29.55	195	164	A	H
		5147.94	62.01	-11.99	74	47.51	33	10.96	29.46	200	167	P	V
		5149.5	52.25	-1.75	54	37.75	33	10.96	29.46	200	167	A	V
	*	5190	116.24	-	-	101.67	33.08	10.96	29.47	200	167	P	V
	*	5190	105.83	-	-	91.26	33.08	10.96	29.47	200	167	A	V
		5376.28	53.69	-20.31	74	39.24	32.85	11.13	29.53	200	167	P	V
		5376	46.45	-7.55	54	32	32.85	11.13	29.53	200	167	A	V
802.11ax HE40 Full CH 46 5230MHz		5008.06	54.63	-19.37	74	39.89	33.2	10.95	29.41	200	157	P	H
		5076.44	42.09	-11.91	54	27.48	33.09	10.95	29.43	200	157	A	H
	*	5230	102.77	-	-	88.22	33.04	10.99	29.48	200	157	P	H
	*	5230	92.74	-	-	78.19	33.04	10.99	29.48	200	157	A	H
		5403.44	54.02	-19.98	74	39.51	32.89	11.16	29.54	200	157	P	H
		5458.04	41.59	-12.41	54	27.06	32.82	11.27	29.56	200	157	A	H
		5148.2	56.58	-17.42	74	42.08	33	10.96	29.46	200	171	P	V
		5150	46.92	-7.08	54	32.42	33	10.96	29.46	200	171	A	V
	*	5230	121.12	-	-	106.57	33.04	10.99	29.48	200	171	P	V
	*	5230	110.63	-	-	96.08	33.04	10.99	29.48	200	171	A	V
		5352.76	57.22	-16.78	74	42.82	32.81	11.11	29.52	200	171	P	V
		5376	49.76	-4.24	54	35.31	32.85	11.13	29.53	200	171	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)

[illegible]

[illegible]



Band 1 5150~5250MHz

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

WIFI Ant. 1+2	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		5110.76	52.56	-21.44	74	38.05	33	10.96	29.45	219	164	P	H
		5145.86	42.19	-11.81	54	27.69	33	10.96	29.46	219	164	A	H
	*	5210	95.2	-	-	80.63	33.08	10.97	29.48	219	164	P	H
	*	5210	85.36	-	-	70.79	33.08	10.97	29.48	219	164	A	H
		5363.96	52.74	-21.26	74	38.32	32.83	11.12	29.53	219	164	P	H
		5376.28	41.62	-12.38	54	27.17	32.85	11.13	29.53	219	164	A	H
		5148.46	60.91	-13.09	74	46.41	33	10.96	29.46	211	165	P	V
		5148.72	51.77	-2.23	54	37.27	33	10.96	29.46	211	165	A	V
	*	5210	112.17	-	-	97.6	33.08	10.97	29.48	211	165	P	V
	*	5210	102.83	-	-	88.26	33.08	10.97	29.48	211	165	A	V
		5410.44	54.47	-19.53	74	39.96	32.88	11.17	29.54	211	165	P	V
		5376	46.7	-7.3	54	32.25	32.85	11.13	29.53	211	165	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)

[illegible]

Emission above 18GHz

WIFI 802.11a (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.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a SHF		22800	39.12	-34.88	74	58.29	38.58	-3.33	54.42	-	-	P	H
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Emission below 1GHz

WIFI 802.11a (LF @ 3m)

[illegible]



Note symbol

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



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

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a		5150	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 36		5150	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H
5180MHz													

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. 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 :	Andy Yang and Karl Hou	Temperature :	20~25°C
		Relative Humidity :	50~60%

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	
1+2	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : PEAK(FUND) 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

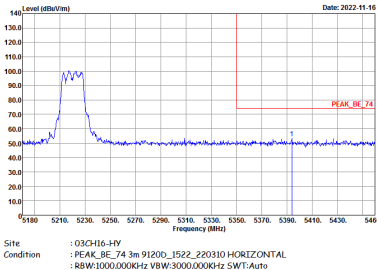
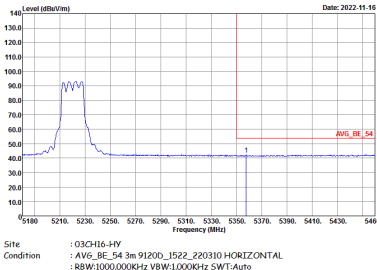


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
1+2	Vertical	Fundamental
Peak	Site : 03CH16-HY Condition : : PEAK_BE_74 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : : PEAK(FUND) 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH16-HY Condition : : AVG_BE_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Site : 03CH16-HY Condition : : AVG_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

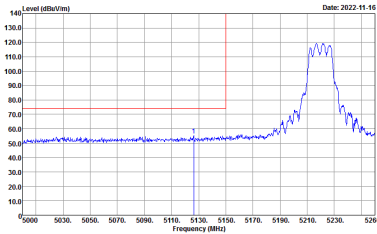
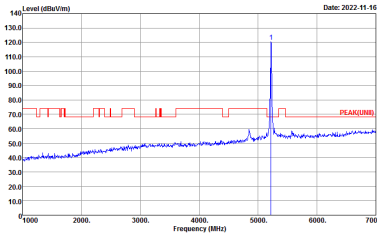
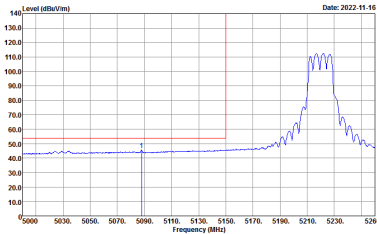
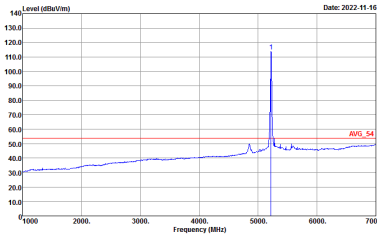


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - L	
1+2	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : : PEAK(LINE) 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH16-HY Condition : : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Site : 03CH16-HY Condition : : AVG_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

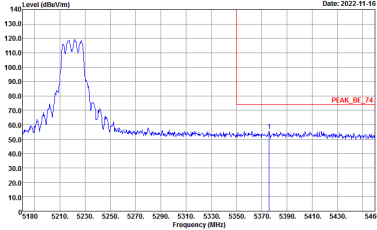
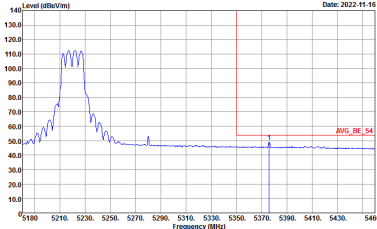


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : : PEAK_BE_74 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : : PEAK(FUND) 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : : AVG_BE_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH16-HY Condition : : AVG_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

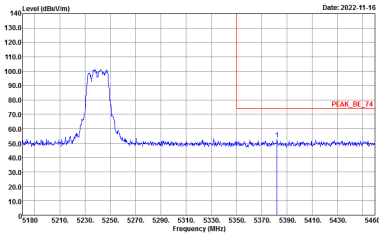
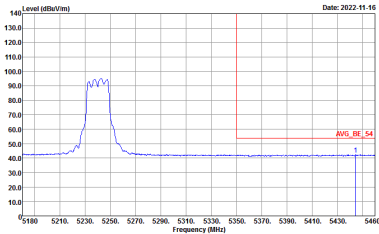


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - L	
1+2	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : : PEAK(FUND) 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH16-HY Condition : : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Site : 03CH16-HY Condition : : AVG_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

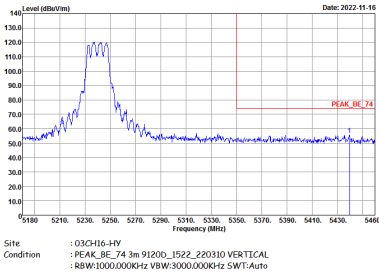
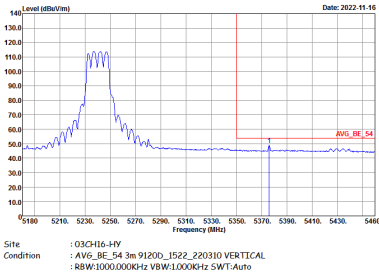


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - L	
1+2	Vertical	Fundamental
Peak	Site : 03CH16-HY Condition : : PEAK_BE_74 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : : PEAK(FUND) 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH16-HY Condition : : AVG_BE_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Site : 03CH16-HY Condition : : AVG_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto



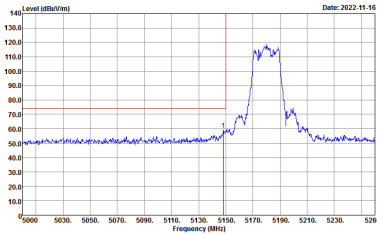
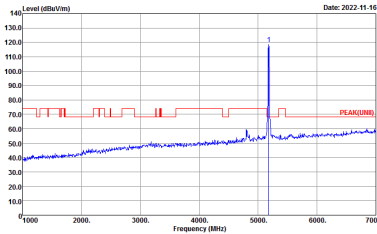
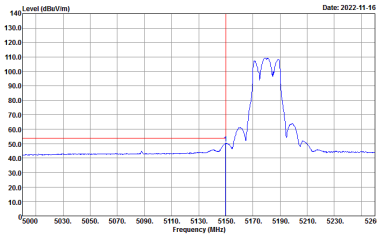
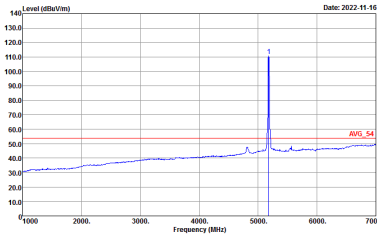
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank



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	
1+2	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

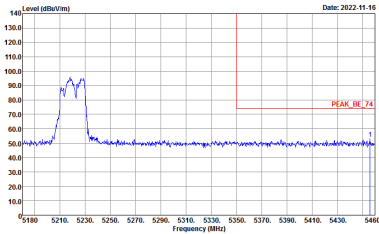
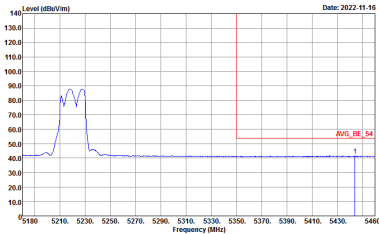


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH36 5180MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : : PEAK_BE_74 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : : PEAK(FUND) 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : : AVG_BE_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto	 Site : 03CH16-HY Condition : : AVG_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto

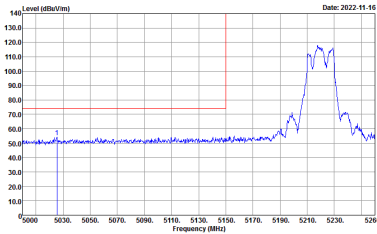
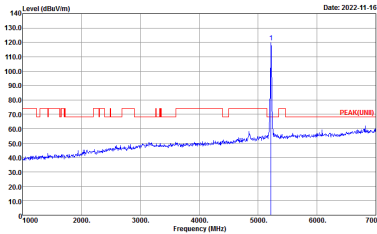
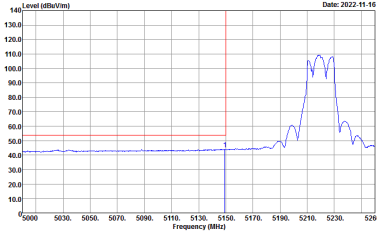
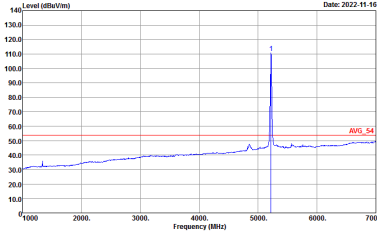


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz - L	
1+2	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : : PEAK(FUND) 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH16-HY Condition : : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto	Site : 03CH16-HY Condition : : AVG_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto

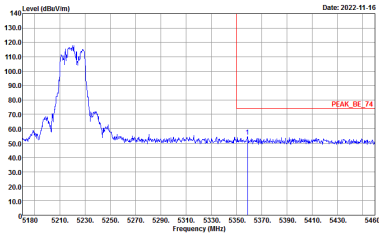
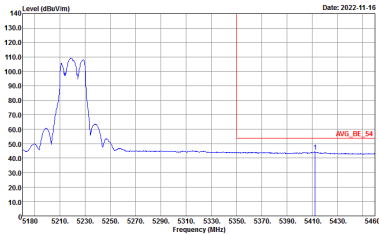


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

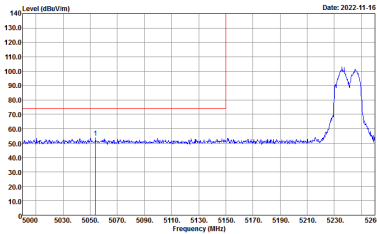
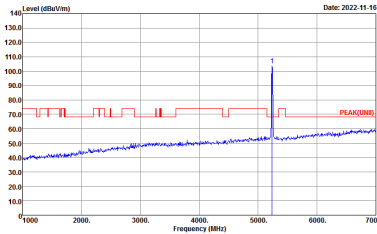
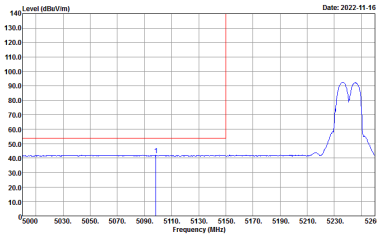
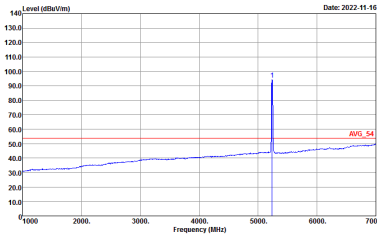


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : : PEAK_BE_74 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : : PEAK(FUND) 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : : AVG_BE_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto	 Site : 03CH16-HY Condition : : AVG_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto

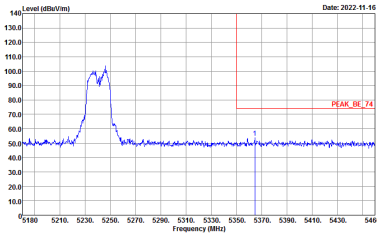
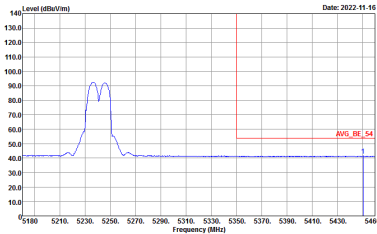


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

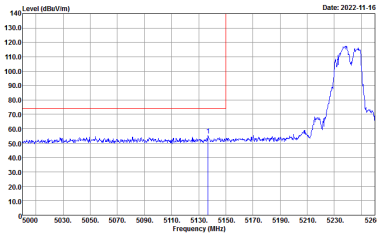
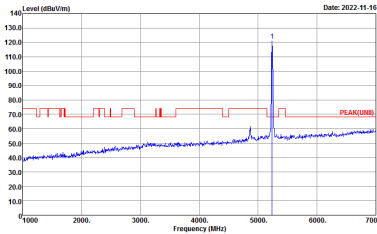
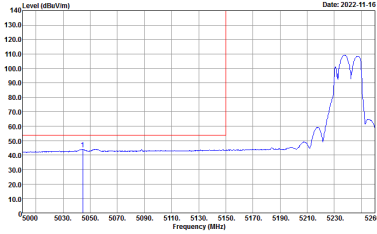
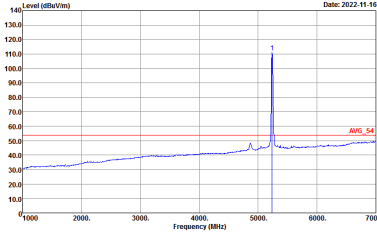


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : : PEAK(FUND) 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto	 Site : 03CH16-HY Condition : : AVG_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto

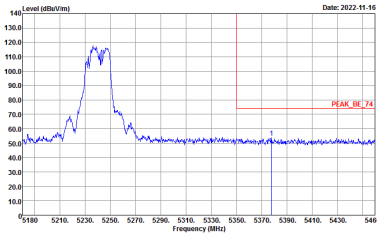
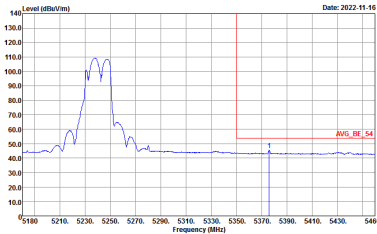


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



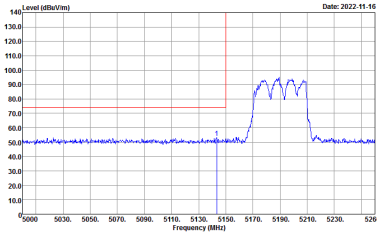
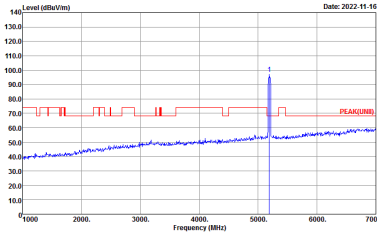
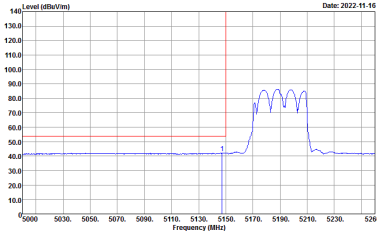
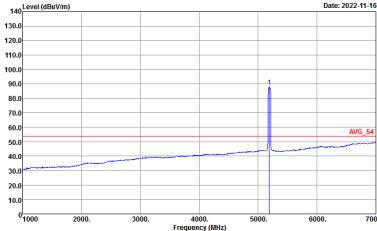
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : : PEAK_BE_74 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : : PEAK(FUND) 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : : AVG_BE_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : : AVG_F4 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



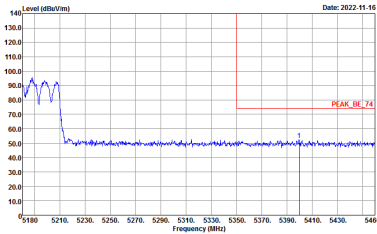
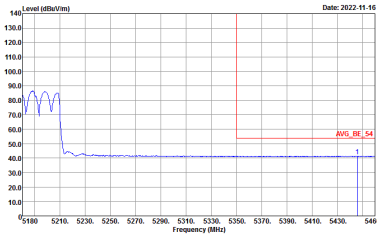
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



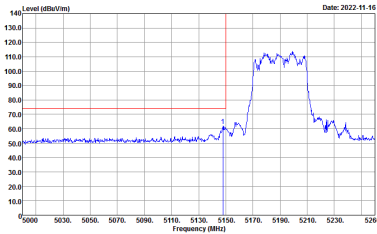
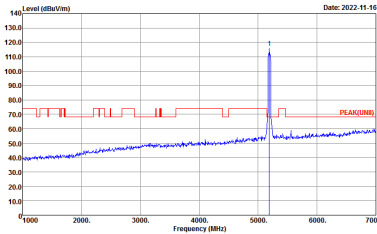
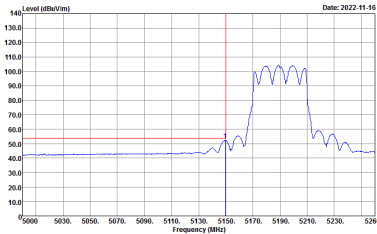
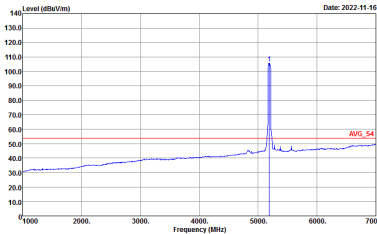
Band 1 5150~5250MHz
WIFI 802.11ax HE40 Full (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000kHz VBW:0.300kHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000kHz VBW:0.300kHz SWT:Auto

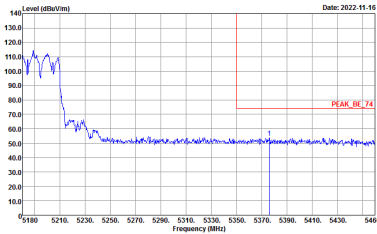
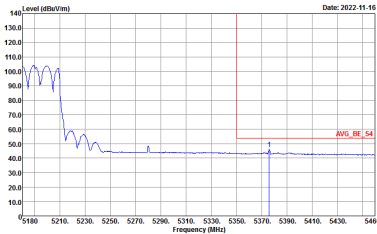


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : : PEAK_BE_74 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : : PEAK(FUND) 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : : AVG_BE_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto	 Site : 03CH16-HY Condition : : AVG_54 3m 91200_1522_220310 VERTICAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto

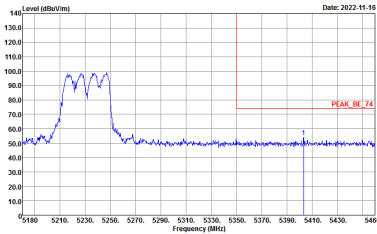
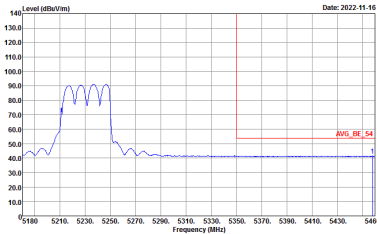


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

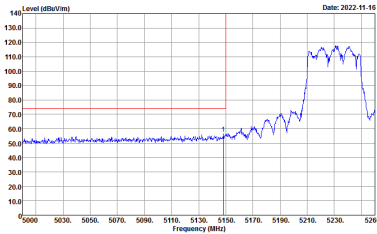
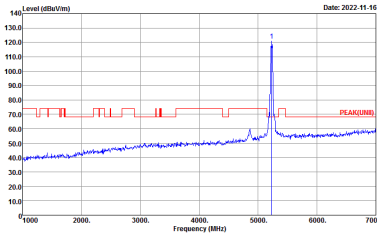
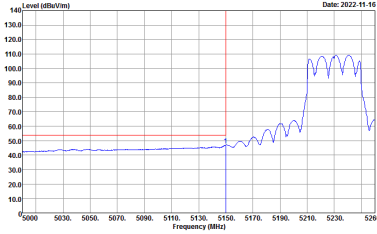
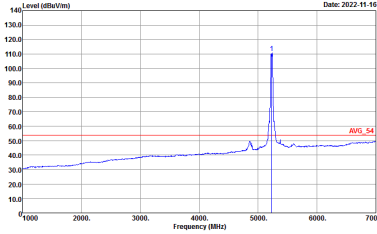


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz - L	
1+2	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : : PEAK(FUND) 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH16-HY Condition : : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto	Site : 03CH16-HY Condition : : AVG_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto

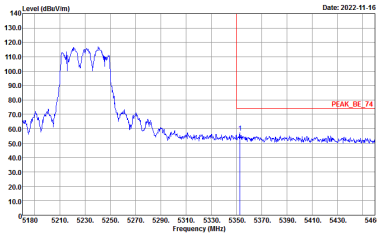
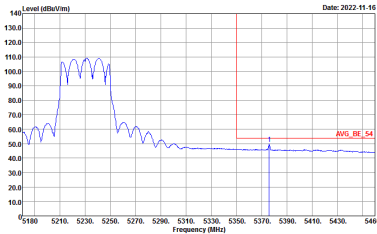


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



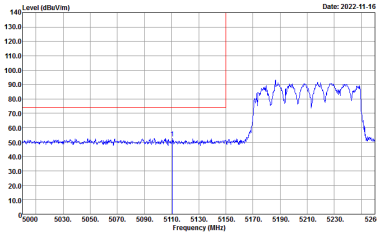
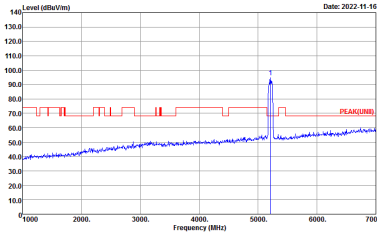
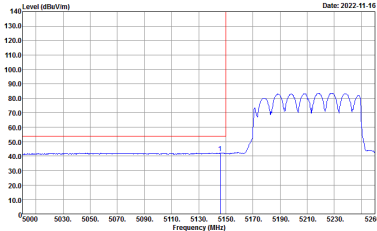
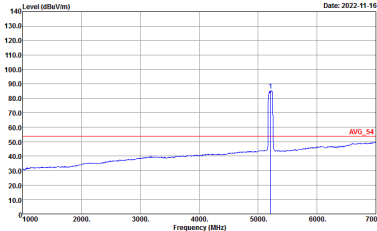
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK(FUND) 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:0.300KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:0.300KHz SWT:Auto



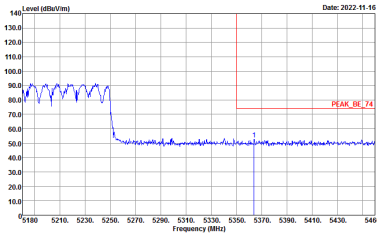
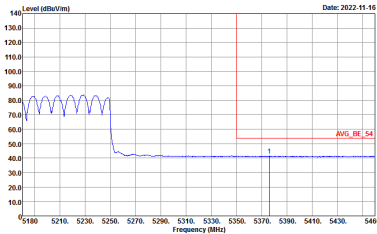
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	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	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_220310 HORIZONTAL : RBW:1000.000KHz VBW:0.300KHz SWT:Auto

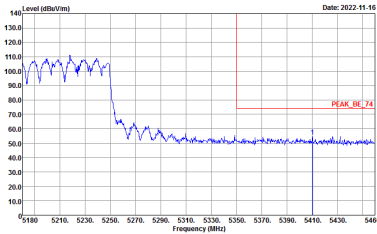
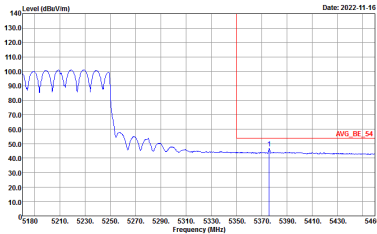


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



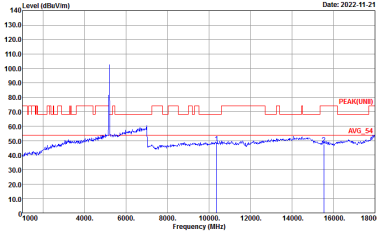
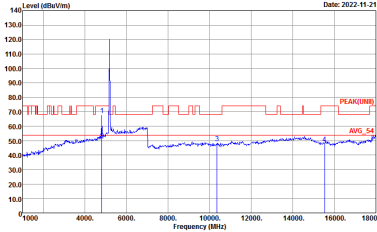
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz - L	
1+2	Vertical	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : PEAK(FUND) 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:0.300KHz SWT:Auto	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:0.300KHz SWT:Auto



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522_220310 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



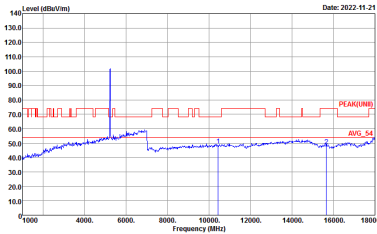
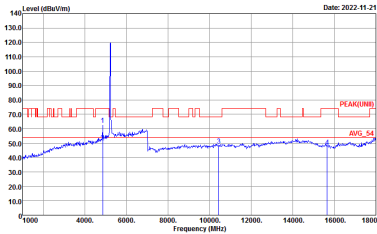
Band 1 - 5150~5250MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH36 5180MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 HORIZONTAL	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 VERTICAL



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH36 5180MHz	
1+2	Horizontal	Vertical
14.47G ~14.5G Avg.	Level (dBuV/m) vs Frequency (MHz) for 14.47G. The plot shows a flat line at approximately 40 dBuV/m across the frequency range 14470 to 14500 MHz. A red line labeled 'AVG_54' is at approximately 55 dBuV/m. The date is 2022-11-21. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL :	Level (dBuV/m) vs Frequency (MHz) for 14.47G. The plot shows a flat line at approximately 40 dBuV/m across the frequency range 14470 to 14500 MHz. A red line labeled 'AVG_54' is at approximately 55 dBuV/m. The date is 2022-11-21. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL :
	Level (dBuV/m) vs Frequency (MHz) for 17.7G. The plot shows a flat line at approximately 40 dBuV/m across the frequency range 17700 to 18000 MHz. A red line labeled 'AVG_54' is at approximately 55 dBuV/m. The date is 2022-11-21. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL :	Level (dBuV/m) vs Frequency (MHz) for 17.7G. The plot shows a flat line at approximately 40 dBuV/m across the frequency range 17700 to 18000 MHz. A red line labeled 'AVG_54' is at approximately 55 dBuV/m. The date is 2022-11-21. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL :
17.7G ~18G Avg		

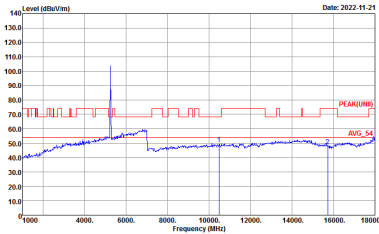
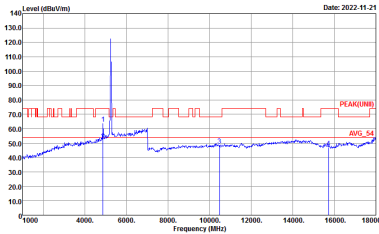


WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH44 5220MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 HORIZONTAL :	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 VERTICAL :



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH44 5220MHz	
1+2	Horizontal	Vertical
14.47G ~14.5G Avg.	Level (dBuV/m) vs Frequency (MHz) for 14.47G. The plot shows a blue line representing the signal level, which is relatively flat around 40 dBuV/m. A red line indicates the average level (AVG_54) at approximately 55 dBuV/m. The x-axis ranges from 14470 to 14500 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL	Vertical spectrum plot for 14.47G. The plot shows a blue line representing the signal level, which is relatively flat around 40 dBuV/m. A red line indicates the average level (AVG_54) at approximately 55 dBuV/m. The x-axis ranges from 14470 to 14500 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL
	Horizontal spectrum plot for 17.7G. The plot shows a blue line representing the signal level, which is relatively flat around 40 dBuV/m. A red line indicates the average level (AVG_54) at approximately 55 dBuV/m. The x-axis ranges from 17700 to 18000 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL	Vertical spectrum plot for 17.7G. The plot shows a blue line representing the signal level, which is relatively flat around 40 dBuV/m. A red line indicates the average level (AVG_54) at approximately 55 dBuV/m. The x-axis ranges from 17700 to 18000 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL



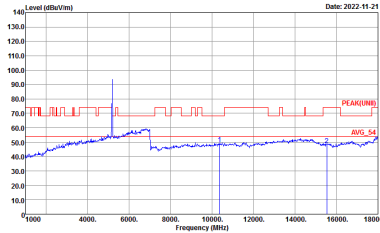
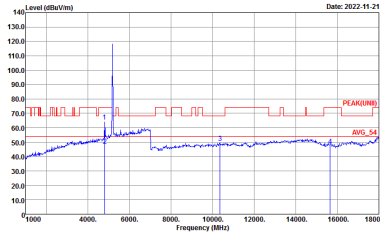
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH48 5240MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 HORIZONTAL :	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 VERTICAL :



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH48 5240MHz	
1+2	Horizontal	Vertical
14.47G ~14.5G Avg.	Level (dBuV/m) vs Frequency (MHz) plot for Horizontal polarization. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 14470 to 14500 MHz. A red line indicates the AVG_54 level at approximately 55 dBuV/m. The blue line shows the measured signal level, which is consistently below the AVG_54 line. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL	Level (dBuV/m) vs Frequency (MHz) plot for Vertical polarization. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 14470 to 14500 MHz. A red line indicates the AVG_54 level at approximately 55 dBuV/m. The blue line shows the measured signal level, which is consistently below the AVG_54 line. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL
	Level (dBuV/m) vs Frequency (MHz) plot for Horizontal polarization. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 17700 to 18000 MHz. A red line indicates the AVG_54 level at approximately 55 dBuV/m. The blue line shows the measured signal level, which is consistently below the AVG_54 line. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL	Level (dBuV/m) vs Frequency (MHz) plot for Vertical polarization. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 17700 to 18000 MHz. A red line indicates the AVG_54 level at approximately 55 dBuV/m. The blue line shows the measured signal level, which is consistently below the AVG_54 line. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL
17.7G ~18G Avg		



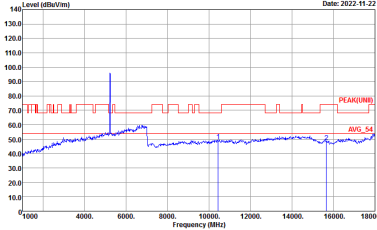
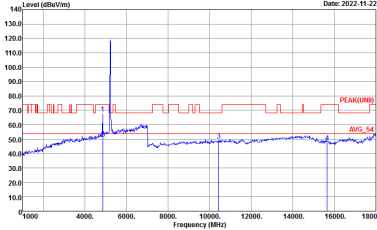
Band 1 5150~5250MHz
WIFI 802.11ax HE20 Full (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH36 5180MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 HORIZONTAL :	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 VERTICAL :

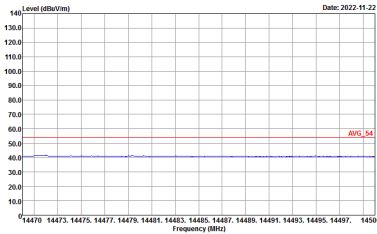
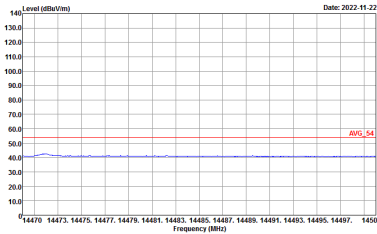
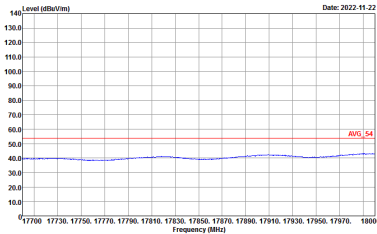
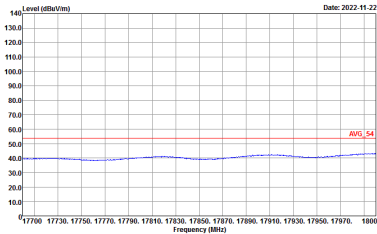


WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH36 5180MHz	
1+2	Horizontal	Vertical
14.47G ~14.5G Avg.	Level (dBuV/m) vs Frequency (MHz) for 14.47G. The plot shows a blue line representing the spectrum and a red line for the average (AVG_54). The frequency range is from 14470 to 14500 MHz. The level range is from 10.0 to 140.0 dBuV/m. The average level is approximately 54 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL	Level (dBuV/m) vs Frequency (MHz) for 14.47G. The plot shows a blue line representing the spectrum and a red line for the average (AVG_54). The frequency range is from 14470 to 14500 MHz. The level range is from 10.0 to 140.0 dBuV/m. The average level is approximately 54 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL
	Level (dBuV/m) vs Frequency (MHz) for 17.7G. The plot shows a blue line representing the spectrum and a red line for the average (AVG_54). The frequency range is from 17700 to 18000 MHz. The level range is from 10.0 to 140.0 dBuV/m. The average level is approximately 54 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL	Level (dBuV/m) vs Frequency (MHz) for 17.7G. The plot shows a blue line representing the spectrum and a red line for the average (AVG_54). The frequency range is from 17700 to 18000 MHz. The level range is from 10.0 to 140.0 dBuV/m. The average level is approximately 54 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL

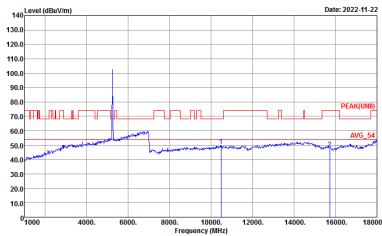
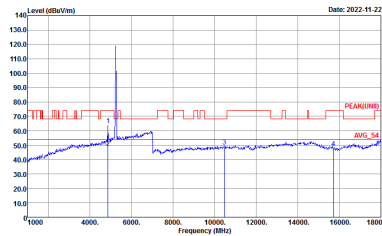


WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 HORIZONTAL Detector : Peak	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 VERTICAL Detector : Peak



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH44 5220MHz	
1+2	Horizontal	Vertical
14.47G ~14.5G Avg.	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_220310 HORIZONTAL Detector : Peak	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_220310 VERTICAL Detector : Peak
	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_220310 HORIZONTAL Detector : Peak	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_220310 VERTICAL Detector : Peak



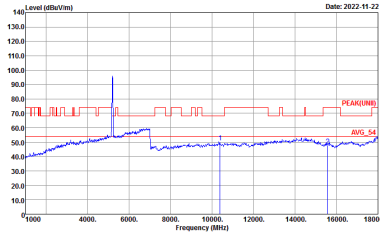
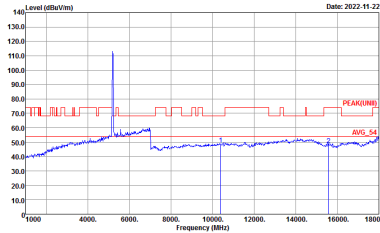
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 HORIZONTAL :	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 VERTICAL :



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH48 5240MHz	
1+2	Horizontal	Vertical
14.47G ~14.5G Avg.	Level (dBuV/m) vs Frequency (MHz) for 14.47G. The plot shows a blue line representing the signal level, which is relatively flat around 40 dBuV/m. A red line labeled 'AVG_54' is positioned at approximately 55 dBuV/m. The x-axis ranges from 14470 to 14500 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL	Vertical spectrum plot for 14.47G. The plot shows a blue line representing the signal level, which is relatively flat around 40 dBuV/m. A red line labeled 'AVG_54' is positioned at approximately 55 dBuV/m. The x-axis ranges from 14470 to 14500 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL
	Horizontal spectrum plot for 17.7G. The plot shows a blue line representing the signal level, which is relatively flat around 40 dBuV/m. A red line labeled 'AVG_54' is positioned at approximately 55 dBuV/m. The x-axis ranges from 17700 to 18000 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL	Vertical spectrum plot for 17.7G. The plot shows a blue line representing the signal level, which is relatively flat around 40 dBuV/m. A red line labeled 'AVG_54' is positioned at approximately 55 dBuV/m. The x-axis ranges from 17700 to 18000 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL
17.7G ~18G Avg		



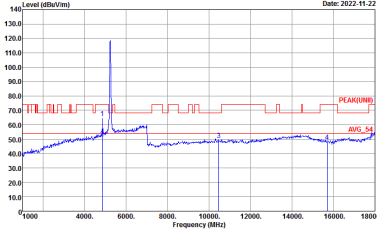
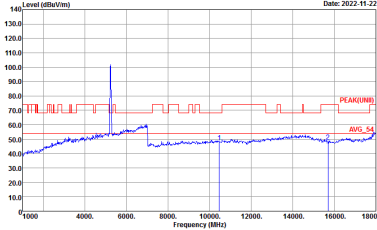
Band 1 5150~5250MHz
WIFI 802.11ax HE40 Full (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 HORIZONTAL :	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 VERTICAL :



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz	
1+2	Horizontal	Vertical
14.47G ~14.5G Avg.	Level (dBuV/m) vs Frequency (MHz) plot for 14.47G. The plot shows a blue line representing the signal level, which is relatively flat around 40 dBuV/m. A red line indicates the average level (AVG_54) at approximately 55 dBuV/m. The x-axis ranges from 14470 to 14500 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL	Vertical spectrum plot for 14.47G. The plot shows a blue line representing the signal level, which is relatively flat around 40 dBuV/m. A red line indicates the average level (AVG_54) at approximately 55 dBuV/m. The x-axis ranges from 14470 to 14500 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL
	Horizontal spectrum plot for 17.7G. The plot shows a blue line representing the signal level, which is relatively flat around 40 dBuV/m. A red line indicates the average level (AVG_54) at approximately 55 dBuV/m. The x-axis ranges from 17700 to 18000 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL	Vertical spectrum plot for 17.7G. The plot shows a blue line representing the signal level, which is relatively flat around 40 dBuV/m. A red line indicates the average level (AVG_54) at approximately 55 dBuV/m. The x-axis ranges from 17700 to 18000 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL



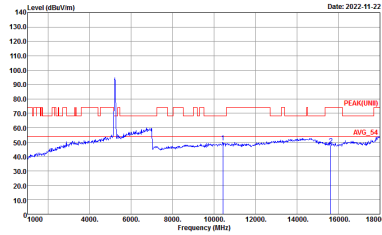
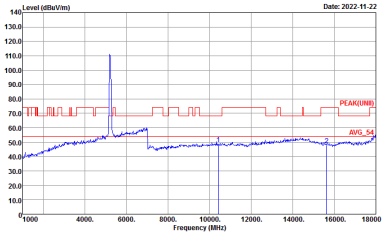
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 HORIZONTAL :	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 VERTICAL :



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH46 5230MHz	
1+2	Horizontal	Vertical
14.47G ~14.5G Avg.	Level (dBuV/m) vs Frequency (MHz) for 14.47G. The plot shows a flat line at approximately 45 dBuV/m across the frequency range 14470 to 14500 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m. The x-axis ranges from 14470 to 14500 MHz. The date is 2022-11-22. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL	Level (dBuV/m) vs Frequency (MHz) for 14.47G. The plot shows a flat line at approximately 45 dBuV/m across the frequency range 14470 to 14500 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m. The x-axis ranges from 14470 to 14500 MHz. The date is 2022-11-22. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL
	Level (dBuV/m) vs Frequency (MHz) for 17.7G. The plot shows a flat line at approximately 45 dBuV/m across the frequency range 17700 to 18000 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m. The x-axis ranges from 17700 to 18000 MHz. The date is 2022-11-22. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL	Level (dBuV/m) vs Frequency (MHz) for 17.7G. The plot shows a flat line at approximately 45 dBuV/m across the frequency range 17700 to 18000 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m. The x-axis ranges from 17700 to 18000 MHz. The date is 2022-11-22. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL



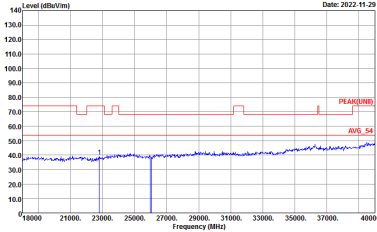
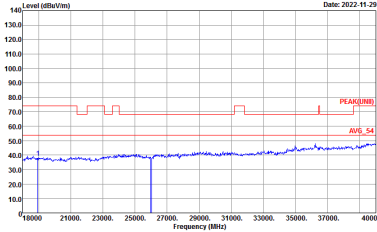
Band 1 5150~5250MHz
WIFI 802.11ax HE80 Full (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 HORIZONTAL :	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_220310 VERTICAL :



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE80 Full CH42 5210MHz	
1+2	Horizontal	Vertical
14.47G ~14.5G Avg.	Level (dBuV/m) vs Frequency (MHz) for Horizontal polarization. The plot shows a flat line at approximately 45 dBuV/m across the frequency range 14470 to 14500 MHz. A red line labeled 'AVG_54' is at approximately 55 dBuV/m. The date is 2022-11-22. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL :	Level (dBuV/m) vs Frequency (MHz) for Vertical polarization. The plot shows a flat line at approximately 45 dBuV/m across the frequency range 14470 to 14500 MHz. A red line labeled 'AVG_54' is at approximately 55 dBuV/m. The date is 2022-11-22. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL :
	Level (dBuV/m) vs Frequency (MHz) for Horizontal polarization. The plot shows a flat line at approximately 45 dBuV/m across the frequency range 17700 to 18000 MHz. A red line labeled 'AVG_54' is at approximately 55 dBuV/m. The date is 2022-11-22. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 HORIZONTAL :	Level (dBuV/m) vs Frequency (MHz) for Vertical polarization. The plot shows a flat line at approximately 45 dBuV/m across the frequency range 17700 to 18000 MHz. A red line labeled 'AVG_54' is at approximately 55 dBuV/m. The date is 2022-11-22. Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_220310 VERTICAL :

Emission above 18GHz
5GHz WIFI 802.11a (SHF @ 1m)

WIFI	5GHz WIFI	
ANT	802.11a SHF	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK[UNII] 1m SHF ANT_9170_00993 HORIZONTAL Detector : Peak	 Site : 03CH16-HY Condition : PEAK[UNII] 1m SHF ANT_9170_00993 VERTICAL Detector : Peak



Emission below 1GHz
5GHz WIFI 802.11a (LF)

WIFI	5GHz WIFI	
ANT	802.11a LF	
1+2	Horizontal	Vertical
QP / Peak	Level (dBuV/m) Date: 2022-11-28 Site : 03CH16-HY Condition : QP 3m 81LO6_47020_221008_H HORIZONTAL	Level (dBuV/m) Date: 2022-11-28 Site : 03CH16-HY Condition : QP 3m 81LO6_47020_221008_H VERTICAL



Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
1+2	802.11a	91.96	1430	0.70	1kHz
1+2	5GHz 802.11ax HE20 Full RU	87.68	5445	0.18	300Hz
1+2	5GHz 802.11ax HE40 Full RU	94.77	5440	0.18	300Hz
1+2	5GHz 802.11ax HE80 Full RU	95.12	5460	0.18	300Hz

MIMO <Ant. 1+2>



—THE END—