FCC RADIO TEST REPORT

FCC ID	:	**S9GR670**
Equipment	:	**R670 Access Point**
Brand Name	:	**RUCKUS**
Model Name	:	**R670**
Applicant	:	**Ruckus Wireless LLC** **350 W. Java Dr., Sunnyvale CA 94089 USA**
Manufacturer	:	**Ruckus Wireless LLC** **350 W. Java Dr., Sunnyvale CA 94089 USA**
Standard	:	**FCC Part 15 Subpart E §15.407**

The product was received on Nov. 03, 2023 and testing was performed from Nov. 20, 2023 to Jul. 06, 2024. We, Sporton International (USA) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Neil Kao

Approved by: Neil Kao

Sporton International (USA) Inc.

1175 Montague Expressway, Milpitas, CA 95035

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History of this test report

Report No.	Version	Description	Issue Date
FR240104006E	01	Initial issue of report	Jul. 08, 2024

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403(i)	6dB & 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	2.58 dB under the limit at 5641.20 MHz
3.5	15.207	AC Conducted Emission	Pass	7.54 dB under the limit at 0.39 MHz
3.6	15.203	Antenna Requirement	Pass	-

Conformity Assessment Condition:

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

Disclaimer:

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

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature
General Specs Bluetooth - LE, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax/be, Wi-Fi 5GHz 802.11a/n/ac/ax/be, Wi-Fi 6GHz 802.11a/be, and ZigBee. **Antenna Type** Bluetooth – LE: Omni-Directional Antenna WLAN: **<Ant. 1>**: Omni-Directional Antenna **<Ant. 2>**: Omni-Directional Antenna **<Ant. 3>**: Omni-Directional Antenna **<Ant. 4>**: Omni-Directional Antenna ZigBee: Omni-Directional Antenna

Antenna information			
5745 MHz ~ 5825 MHz	Peak Gain (dBi)	Horizontal	**<Ant. 2>:** 1.7 **<Ant. 3>:** 3.3
		Vertical	**<Ant. 1>:** 2.9 **<Ant. 4>:** 2.7

Remark:

1. The device is a special case of MIMO system with two outputs driving a cross-polarized pair of linearly polarized antennas which are vertically/horizontally mounted on the main board as indicated in equipment photo exhibits.
2. For 2x2 MIMO mode, only ANT1+ANT3 is supported.
3. Channel puncturing is not implemented.
4. The above EUT's information was declared by manufacturer. Please refer to Disclaimer in report summary.

1.1.1 Antenna Gain

Follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)c)i)
Cross-polarized antennas. For a system in which the antennas have fixed orientations relative to one another that ensure that the antennas are cross-polarized regardless of any user actions, the directional gain is computed as follows.

(i) Cross-polarized antennas with NANT = 2. In the case of a transmitter with only two outputs driving a pair of antennas that are cross-polarized (e.g., vertical and horizontal or left-circular and right-circular), directional gain is the gain of an individual antenna. If the two antennas have different gains, the larger gain applies.

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

	Vertical Ant 1 (dBi)	Horizontal Ant 3 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band IV	2.90	3.30	3.30	3.30	0.00	0.00

Calculation example:
If a device has two cross-polarized antenna, G_{ANT1}= 2.90dBi; G_{ANT3}=3.30dBi
Directional gain of power measurement = max(2.90, 3.30) = 3.30 dBi
Directional gain of PSD measurement = max(2.90, 3.30) = 3.30 dBi
Power and PSD limit reduction = Directional gain – 6dBi, (min = 0)

Follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)c)i)
Cross-polarized antennas. For a system in which the antennas have fixed orientations relative to one another that ensure that the antennas are cross-polarized regardless of any user actions, the directional gain is computed as follows.

(i) Cross-polarized antennas with NANT = 4. In the case of a transmitter with only four outputs driving a pair of antennas that are cross-polarized (e.g., vertical and horizontal or left-circular and right-circular), directional gain is the gain of an individual antenna. If the two antennas have different gains, the larger gain applies.

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

	Vertical Ant 1 (dBi)	Horizontal Ant 3 (dBi)	Vertical Ant 4 (dBi)	Horizontal Ant 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band IV	2.90	3.30	2.70	1.70	3.30	5.81	0.00	0.00

Calculation example:
If a device has four cross-polarized antenna,
G_{ANT1}= 2.90dBi; G_{ANT3}= 3.30dBi; G_{ANT4}=2.70dBi, G_{ANT2}=1.70dBi,
Directional gain of power measurement = max(2.90, 3.30, 2.70, 1.70) = 3.30 dBi
Directional gain of PSD measurement = max(Vertical DG(2.90, 3.30), Horizontal DG(2.70, 1.70))
=5.81 dBi
Power and PSD limit reduction = Directional 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 (USA) Inc.
Test Site Location	1175 Montague Expressway, Milpitas, CA 95035 TEL : 408 9043300
Test Site No.	**Sporton Site No.**
	TH01-CA, CO01-CA 03CH02-CA

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

FCC Designation No.: US1250

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: All the test items were validated and recorded in accordance with the standards without any modification during the testing.

2 Test Configuration of Equipment Under Test

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

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

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5725-5850 MHz Band 4 (U-NII-3)	149	5745	157	5785
	151*	5755	159*	5795
	153	5765	161	5805
	155#	5775	165	5825

Note:

1. The above Frequency and Channel with "*" are 802.11n HT40, 802.11ac VHT40 and 802.11ax HE40 and 802.11be EHT40.
2. The above Frequency and Channel with "#" are 802.11ac VHT80, 802.11ax HE80 and 802.11be EHT80.

2.2 Test 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 EHT20)	MCS0
802.11n HT40 (Covered by EHT40)	MCS0
802.11ac VHT20 (Covered by EHT20)	MCS0
802.11ac VHT40 (Covered by EHT40)	MCS0
802.11ac VHT80 (Covered by EHT80)	MCS0
802.11ax HE20 (Covered by EHT20)	MCS0
802.11ax HE40 (Covered by EHT40)	MCS0
802.11ax HE80 (Covered by EHT80)	MCS0
802.11be EHT20	MCS0
802.11be EHT40	MCS0
802.11be EHT80	MCS0

Remark:

1 Based on the manufacturer's declaration, 802.11be covers the 802.11n, 11ac and 11ax due to the same modulation family scheme. For 802.11be, only full resource unit assignment mode is tested since the EUT does not support partial resource unit assignment mode.

2 Based on the manufacturer's declaration, RF power on each chain in MIMO mode is parameterized to be greater than the power in SISO mode, giving the condition that the SISO Mode is covered by MIMO Mode which is deemed the worst case selected for testing.

3 The EUT information mentioned or listed above is declared by the manufacturer.

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

MIMO <Ant. 1+3>

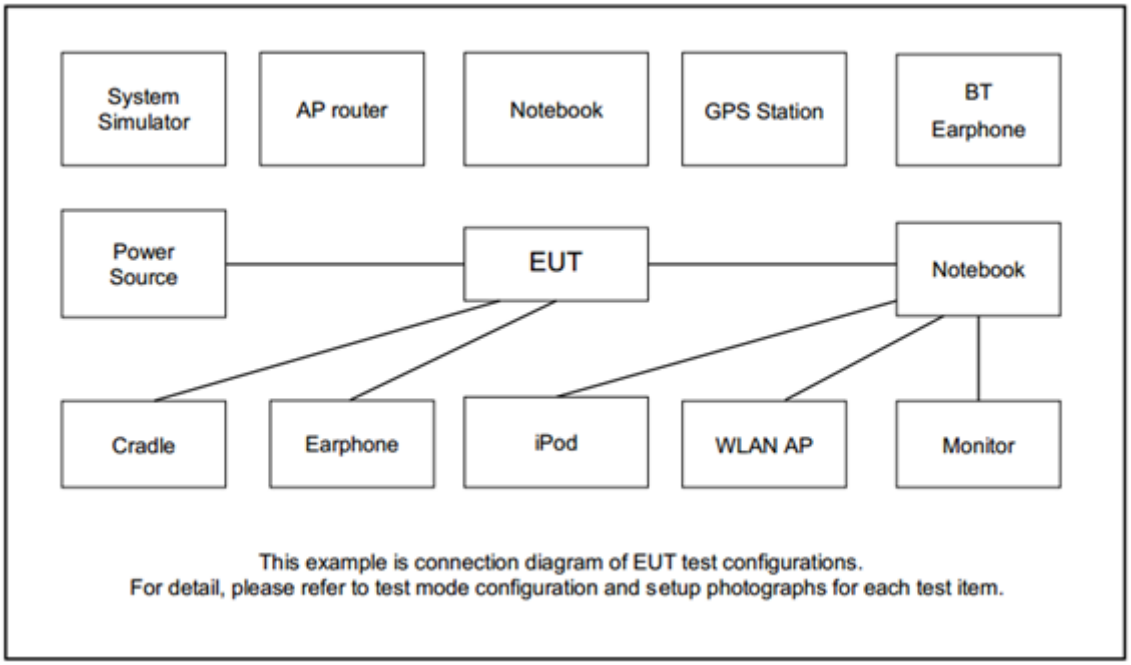
Ch. #		Band IV：5725-5850 MHz			
		802.11a	802.11be EHT20	802.11be EHT40	802.11be EHT80
L	Low	149	149	151	-
M	Middle	157	157	-	155
H	High	165	165	159	-

MIMO <Ant. 1+3+4+2>

Ch. #		Band IV：5725-5850 MHz			
		802.11a	802.11be EHT20	802.11be EHT40	802.11be EHT80
L	Low	149	149	151	-
M	Middle	157	157	-	155
H	High	165	165	159	-

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

2.3 Connection Diagram of Test System



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 5440	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
2.	Notebook	Acer	N18Q13	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Notebook	DELL	Latitue E7470	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Adapter	Ruckus	740-64277-001	N/A	N/A	N/A
5.	PoE Adapter	RUCKUS	740-64310-001	N/A	N/A	N/A
6.	PoE Adapter	RUCKUS	GRT-480125A	N/A	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “QSPR Version 5.14.00227.1”, “Tera Term 4.106”, “QUTS Version 1.8.2.51” and “PuTTY Release 0.77” were installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

Offset = RF cable loss + attenuator factor.

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

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

= 4.2 + 10 = 14.2 (dB)

3 Test Result

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

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

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

26dB and 99% Occupied bandwidth are reporting only.

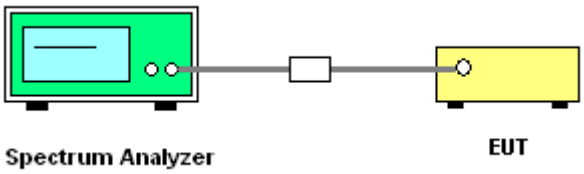
3.1.2 Measuring Instruments

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 for the band 5.725-5.85 GHz
2. Set RBW = 100 kHz.
3. Set the VBW ≥ 3 x RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.
7. Measure and record the results in the test report.

3.1.4 Test Setup

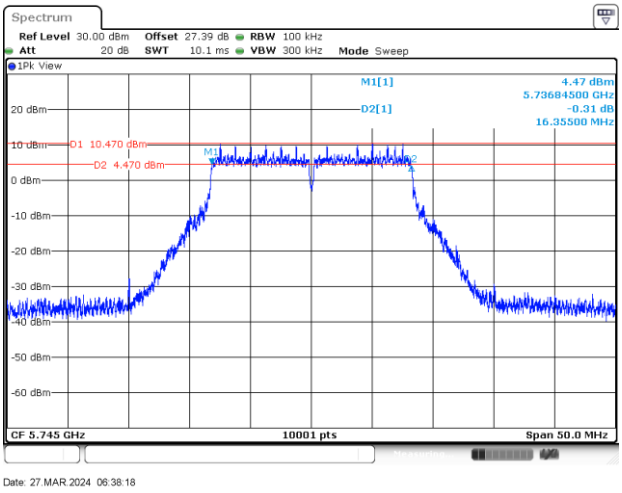
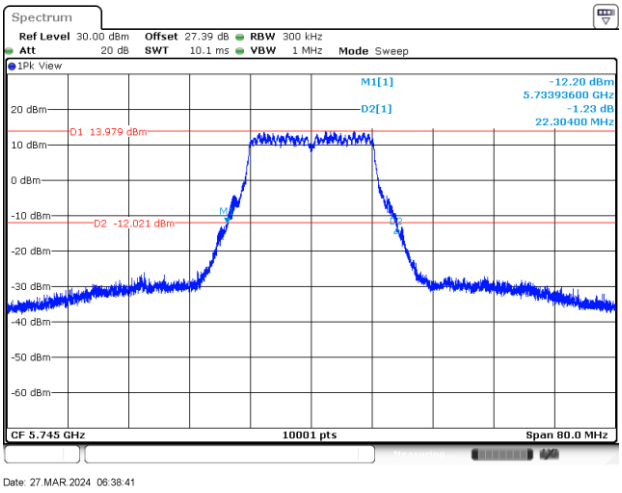
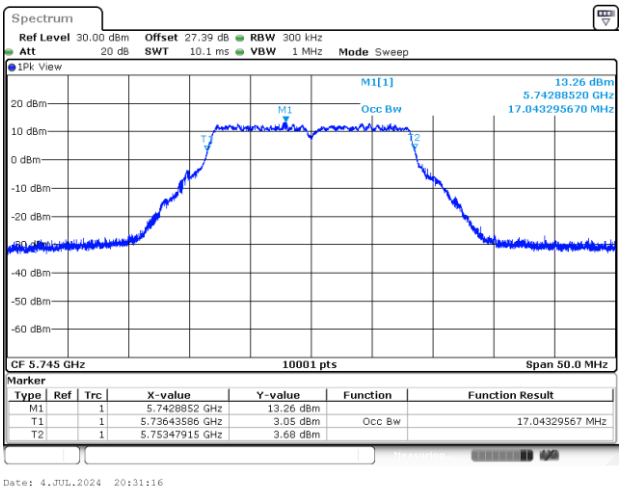


3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.

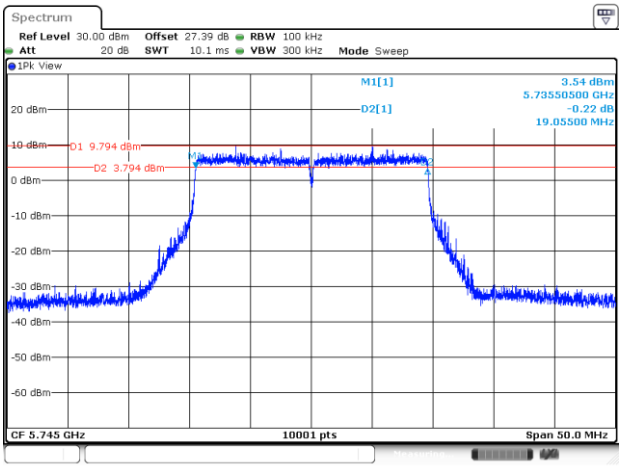
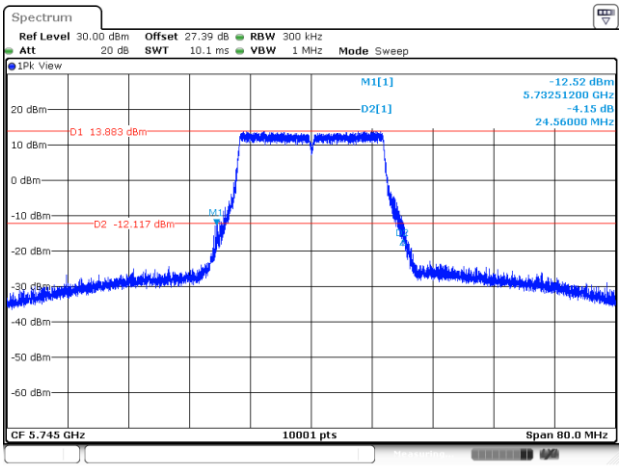
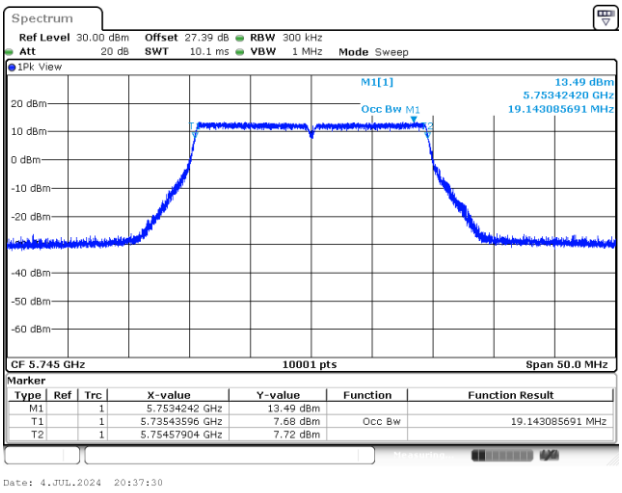
MIMO <Ant. 1 + Ant. 3>

<802.11a>

6dB Bandwidth	26dB Bandwidth
	
99% Occupied Bandwidth	**NA**
	

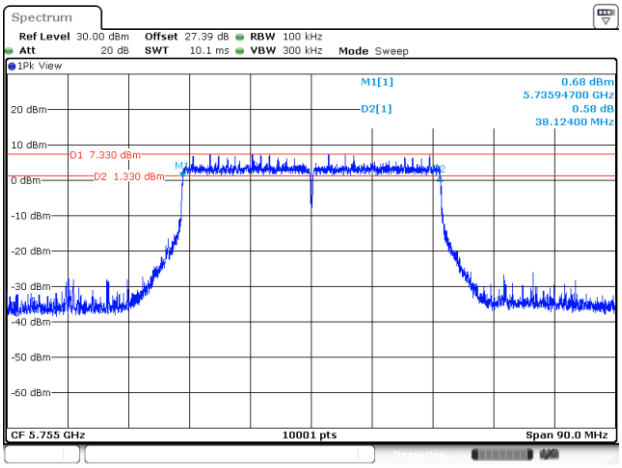
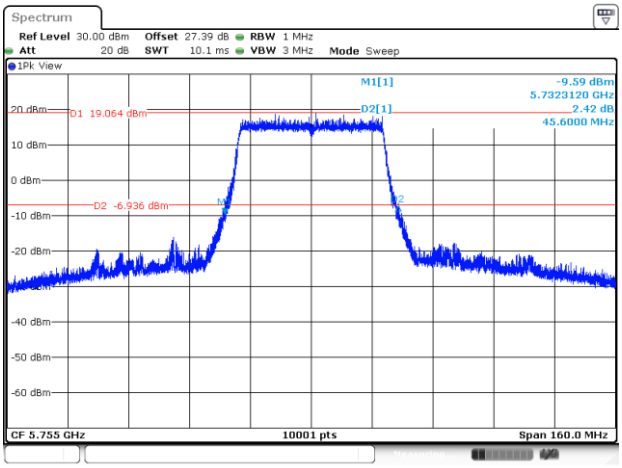
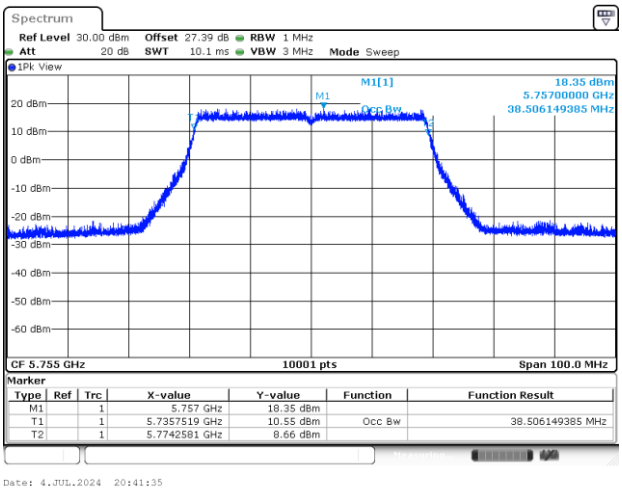
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11be EHT20>

6dB Bandwidth	26dB Bandwidth
	
99% Occupied Bandwidth	**NA**
	

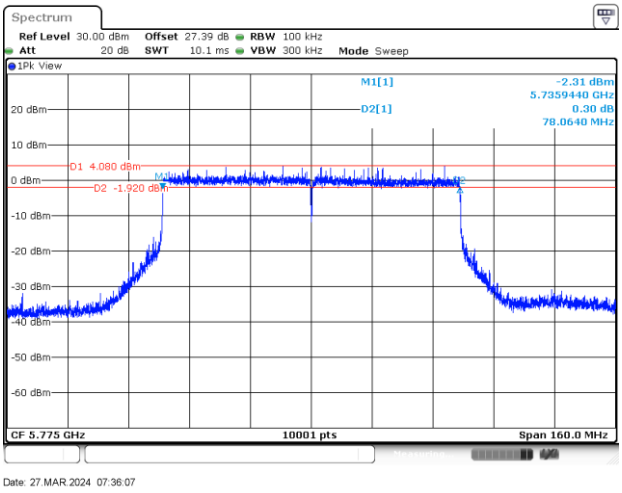
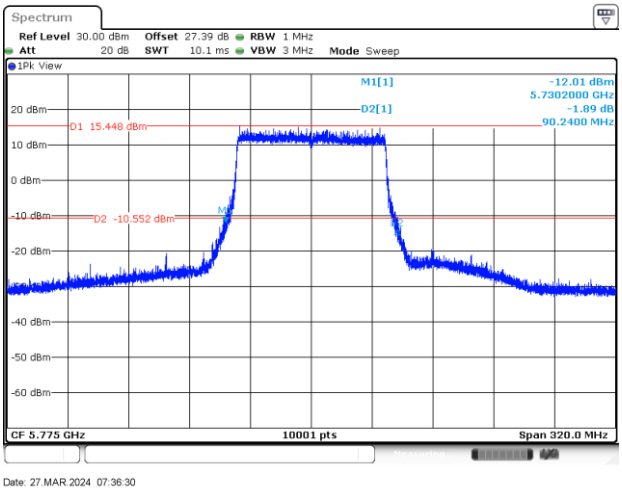
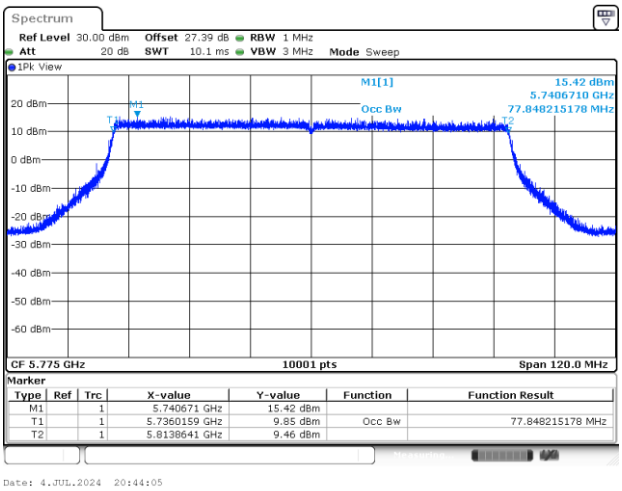
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

802.11be EHT40

6dB Bandwidth	26dB Bandwidth
	
99% Occupied Bandwidth	**NA**
	

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

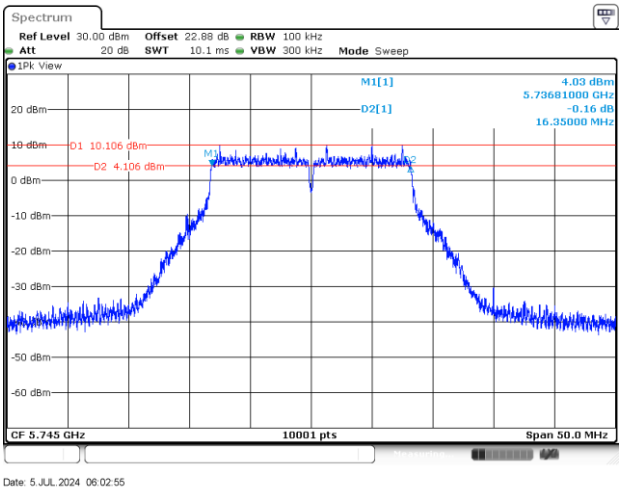
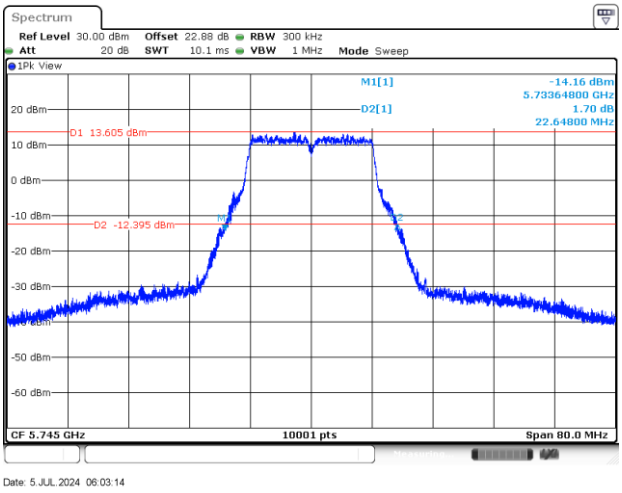
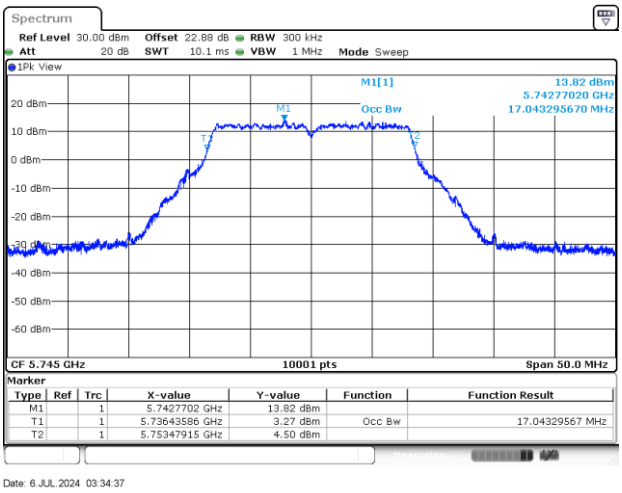
<802.11be EHT80>

6dB Bandwidth	26dB Bandwidth
	
99% Occupied Bandwidth	**NA**
	

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

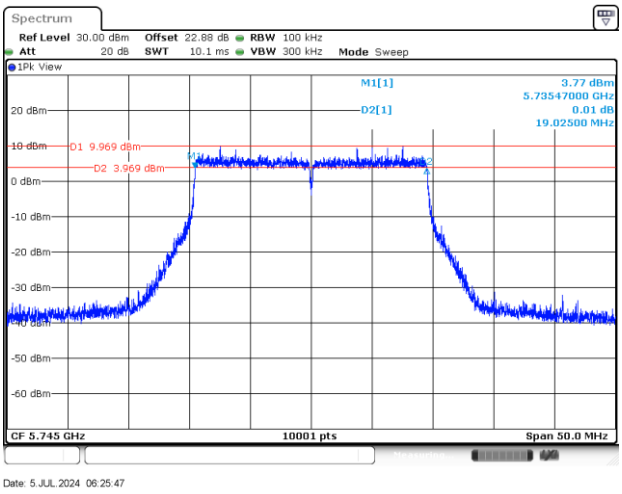
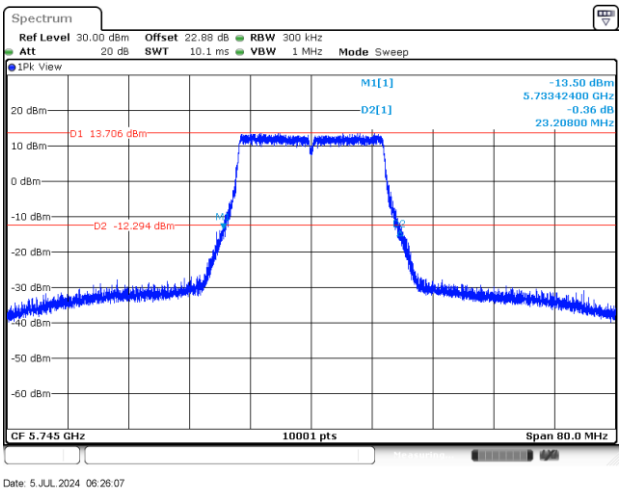
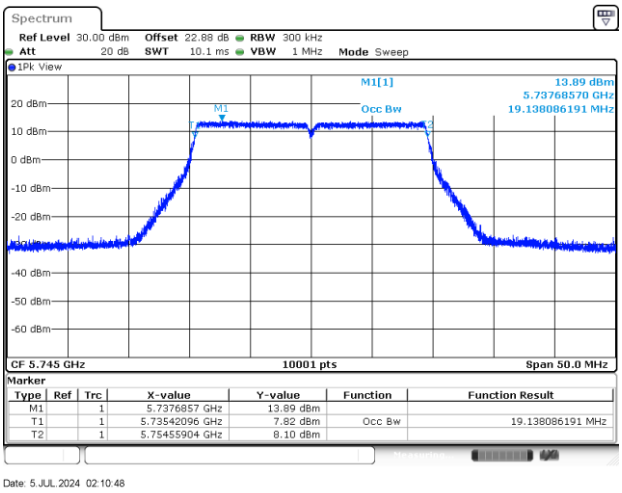
MIMO <Ant. 1+3+4+2>

<802.11a>

6dB Bandwidth	26dB Bandwidth
	
99% Occupied Bandwidth	**NA**
	

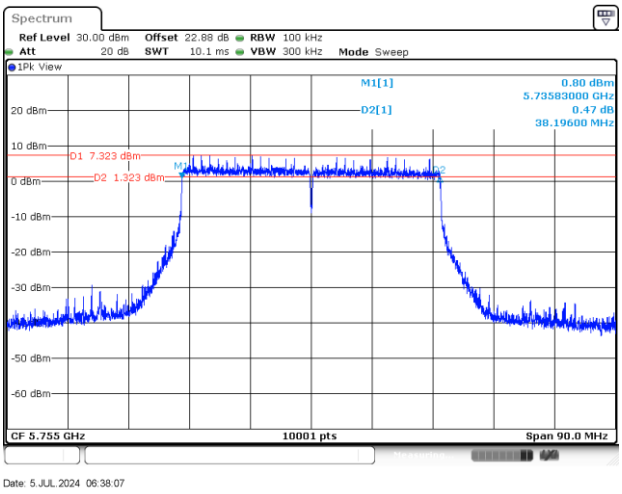
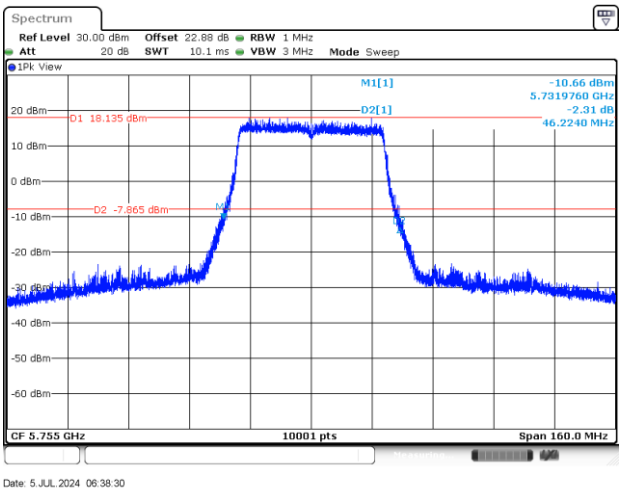
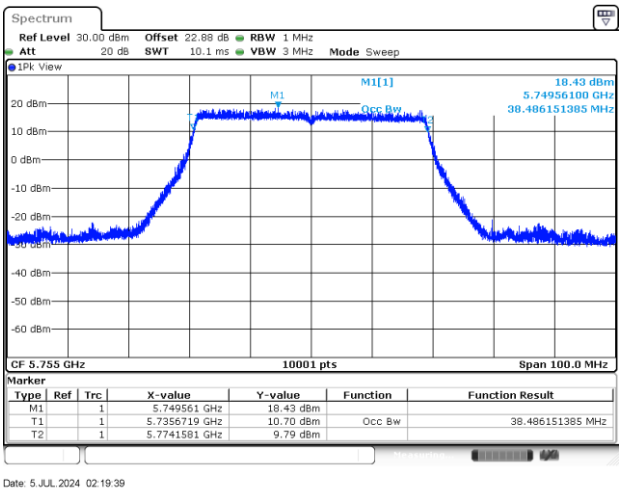
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11be EHT20>

6dB Bandwidth	26dB Bandwidth
	
99% Occupied Bandwidth	**NA**
	

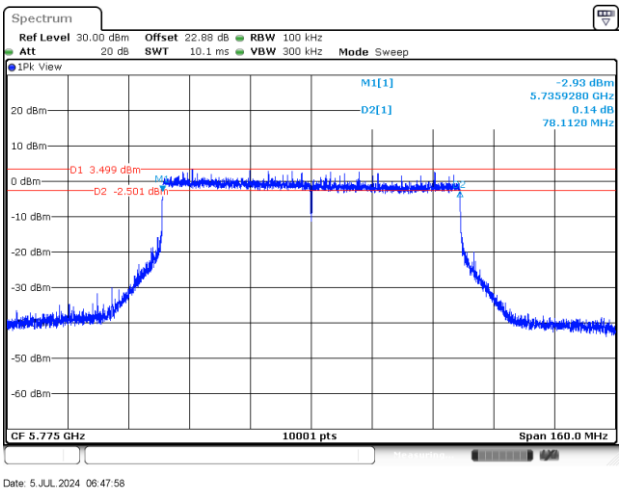
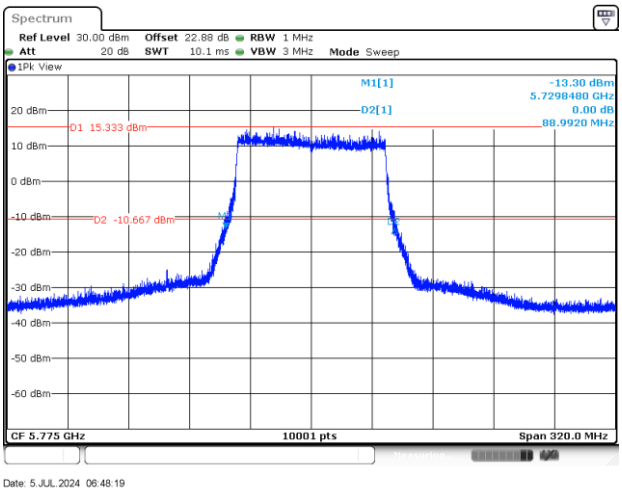
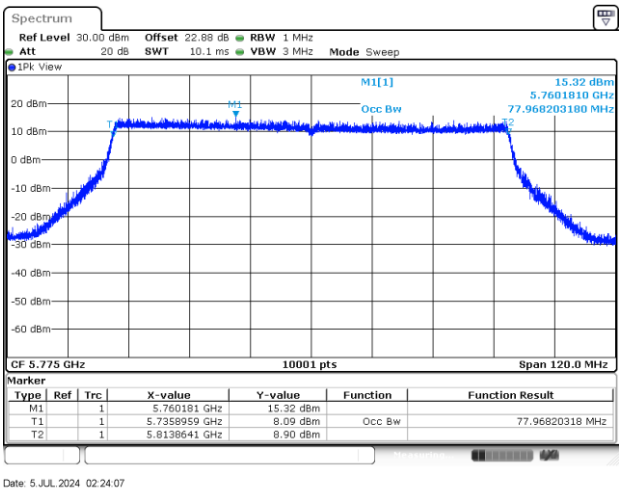
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11be EHT40>

6dB Bandwidth	26dB Bandwidth
	
99% Occupied Bandwidth	**NA**
	

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

<802.11be EHT80>

6dB Bandwidth	26dB Bandwidth
	
99% Occupied Bandwidth	**NA**
	

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

For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

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

3.2.2 Measuring Instruments

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

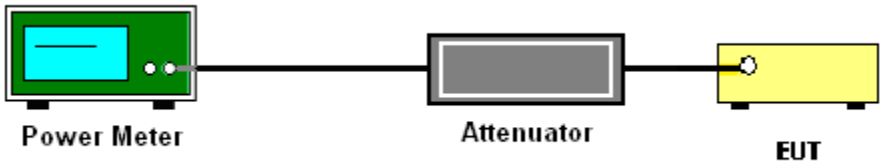
3.2.3 Test Procedures

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

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

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

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

For the band 5.725–5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz 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-2 #

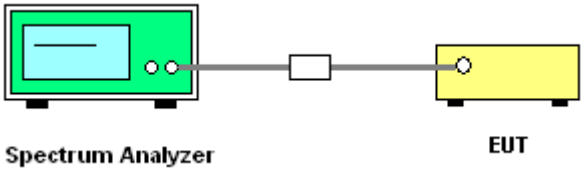
(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300kHz.
- Set VBW ≥ 1 MHz.
- Add 10 log (500 kHz/RBW) to the measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.

1. The RF output of EUT is connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
   Method (c): Measure and add 10 log(N_{ANT}) dB.
   With this technique, spectrum measurements are performed at each output of the device, but rather than summing the spectra or the spectral peaks across the outputs, the quantity 10 log(N_{ANT}) dB is added to each spectrum value before comparing to the emission limit. The addition of 10 log(N_{ANT}) dB serves to apportion the emission limit among the N_{ANT} outputs so that each output is permitted to contribute no more than $1/N_{ANT}$ th of the PSD limit.

3.3.4 Test Setup

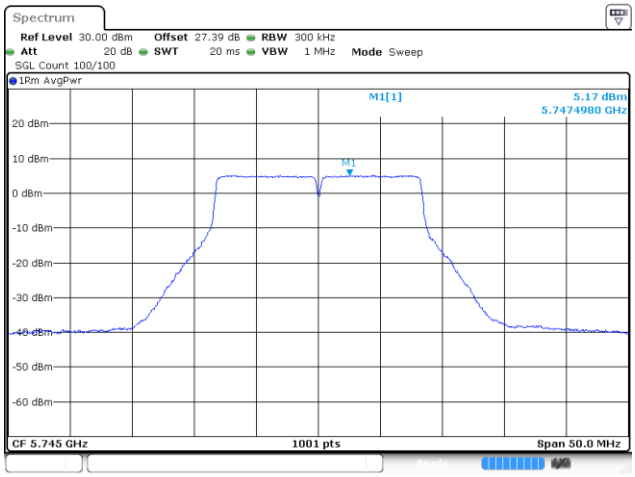
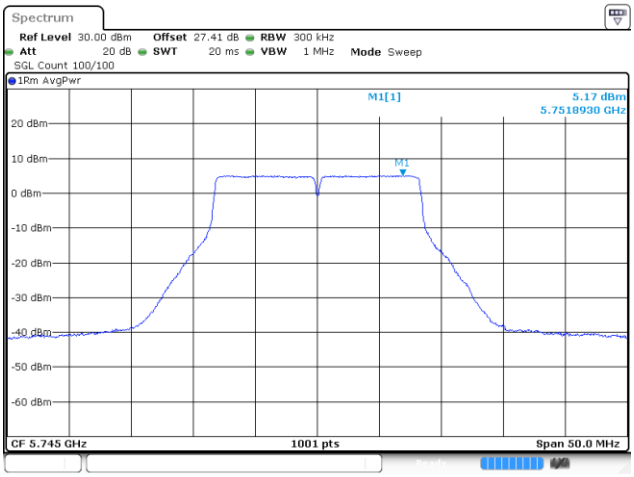


3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

MIMO <Ant. 1+3>

<802.11a >

Maximum Power Density Plot (dBm/300kHz)	
MIMO Ant. 1	**MIMO Ant. 3**
	

<802.11be EHT20>

Maximum Power Density Plot (dBm/3kHz)	
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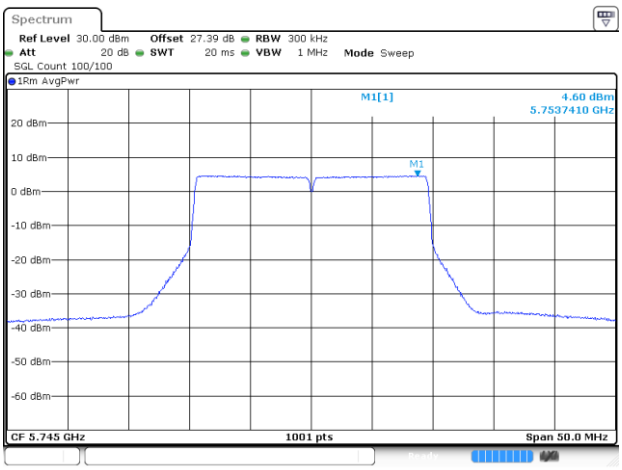	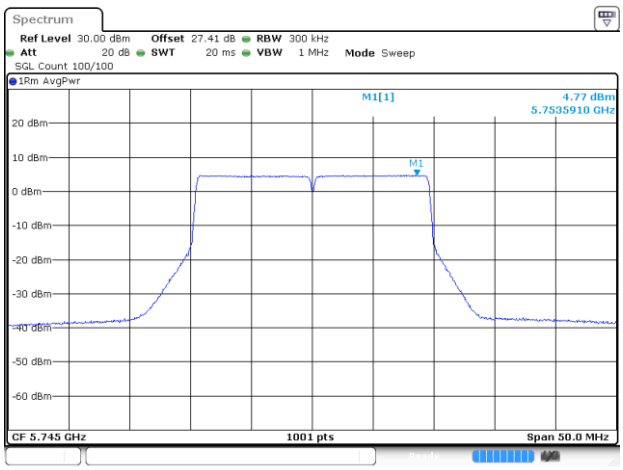

<802.11be EHT40>

Maximum Power Density Plot (dBm/300kHz)	
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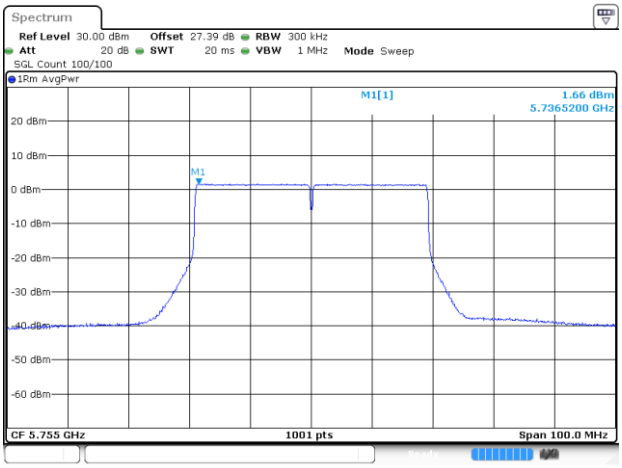	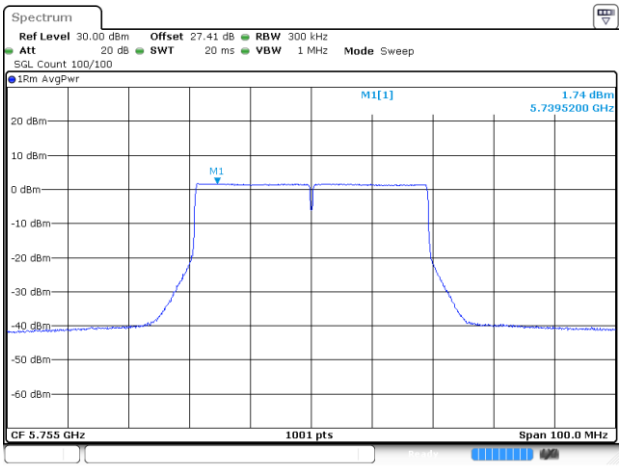

<802.11be EHT80 >

Maximum Power Density Plot (dBm/300kHz)	
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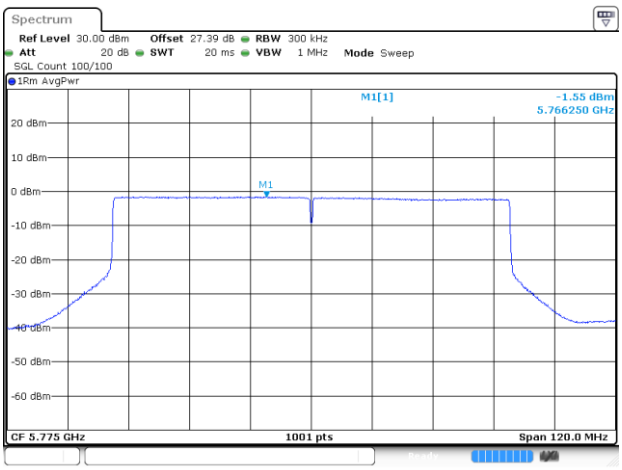
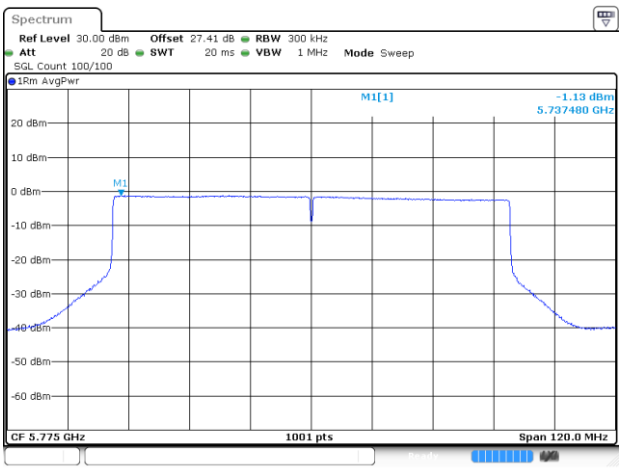
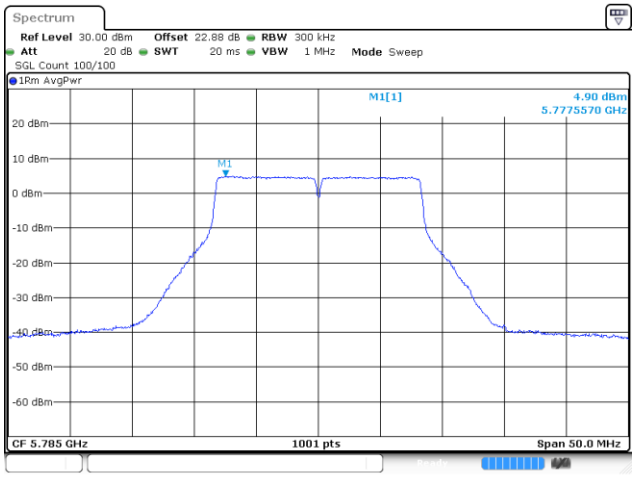
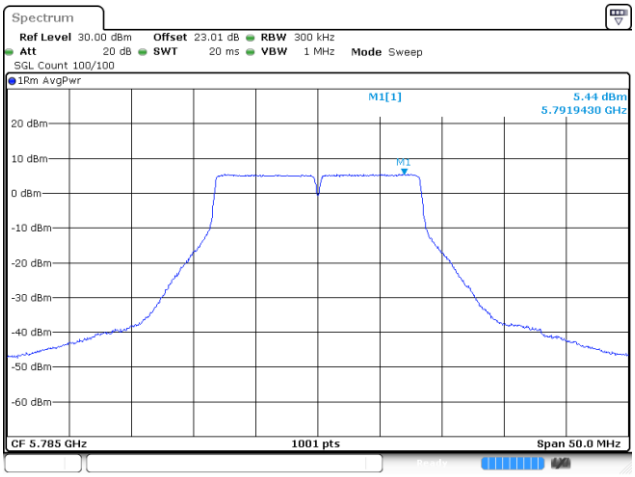
	

MIMO <Ant. 1+3+4+2>

<802.11a >

Maximum Power Density Plot (dBm/300kHz)	
MIMO Ant. 1	**MIMO Ant. 2**
	

Maximum Power Density Plot (dBm/300kHz)	
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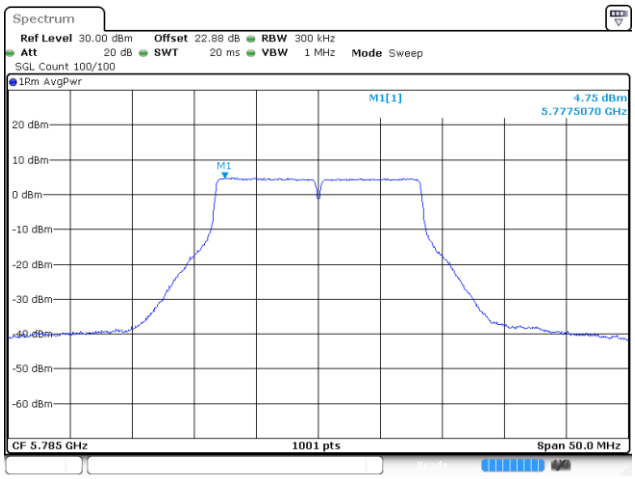	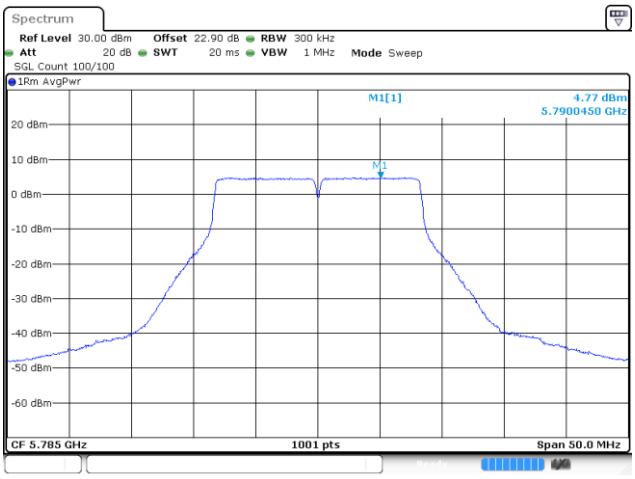

<802.11be EHT20>

Maximum Power Density Plot (dBm/300kHz)	
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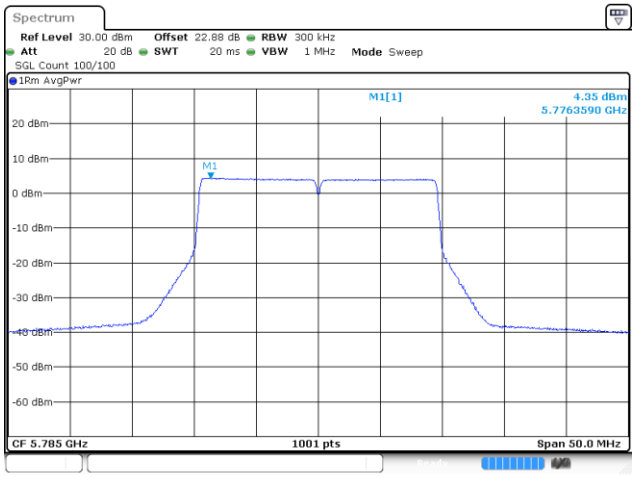
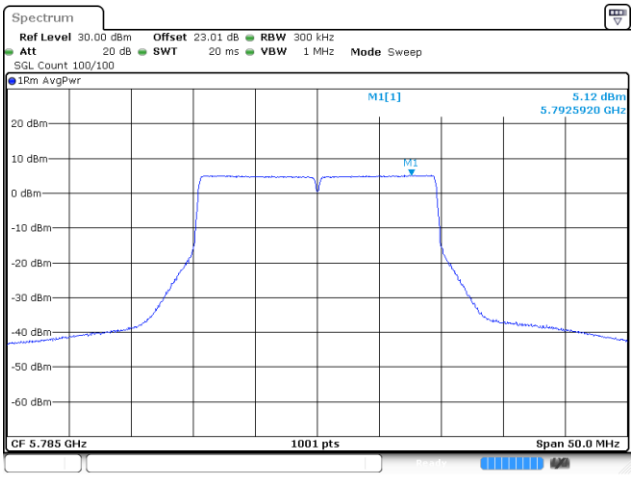
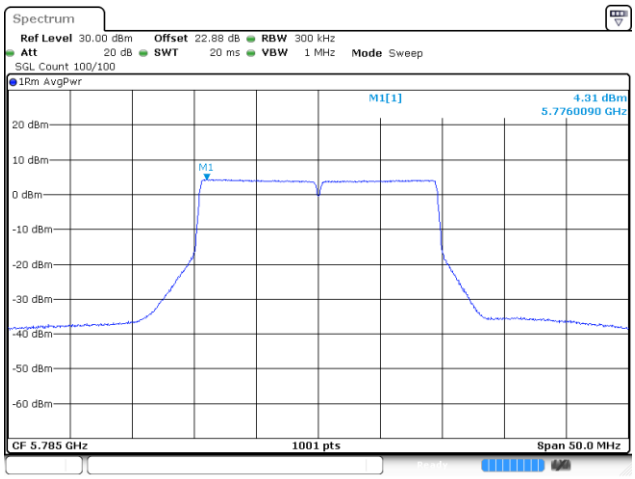
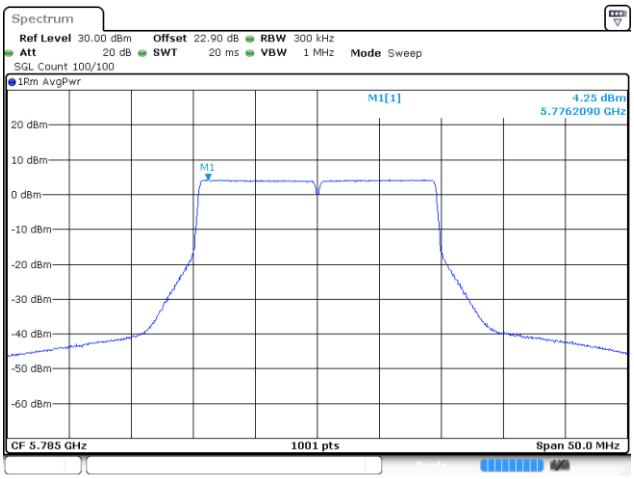
	

Maximum Power Density Plot (dBm/300kHz)	
MIMO Ant. 3	MIMO Ant. 4
	

<802.11be EHT40>

Maximum Power Density Plot (dBm/300kHz)	
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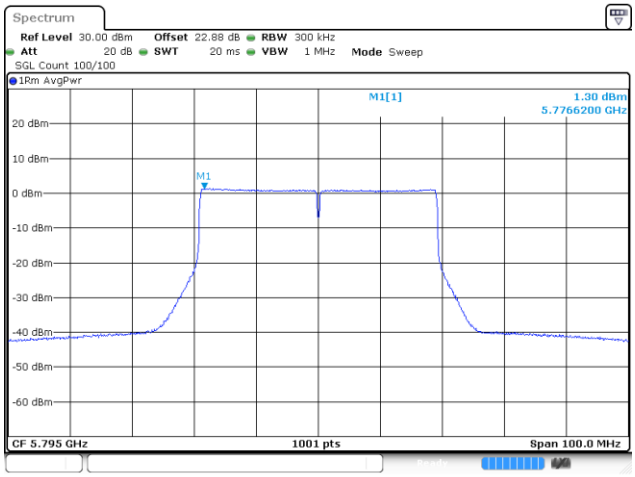	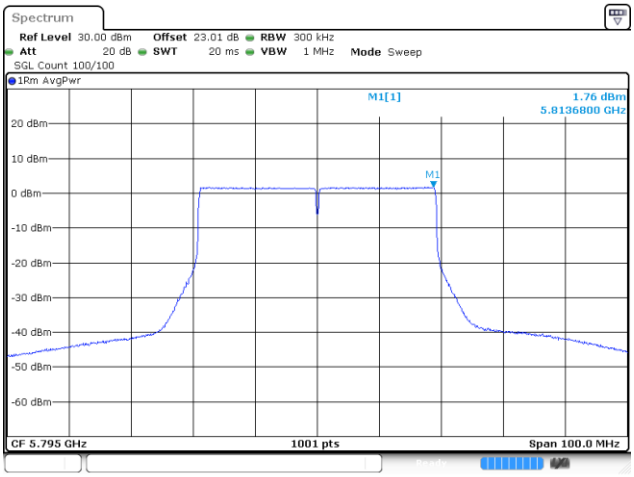

Maximum Power Density Plot (dBm/300kHz)	
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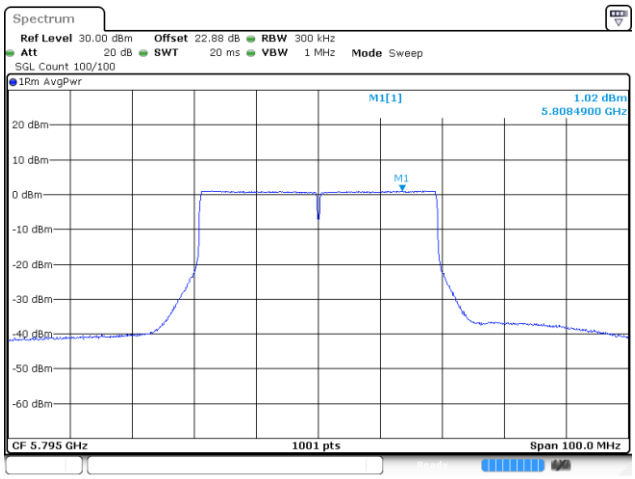	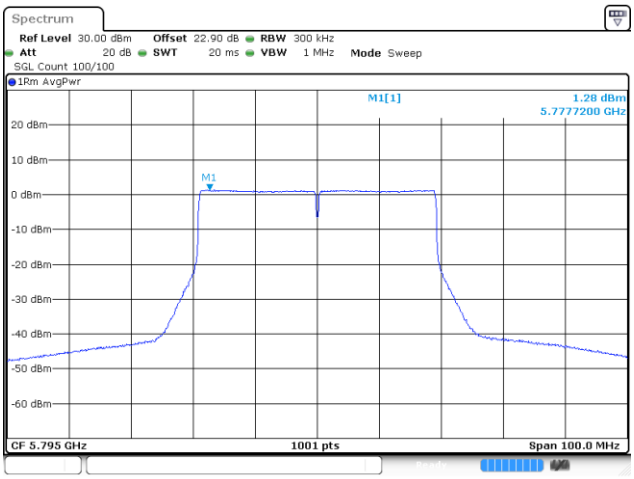

<802.11be EHT80 >

Maximum Power Density Plot (dBm/300kHz)	
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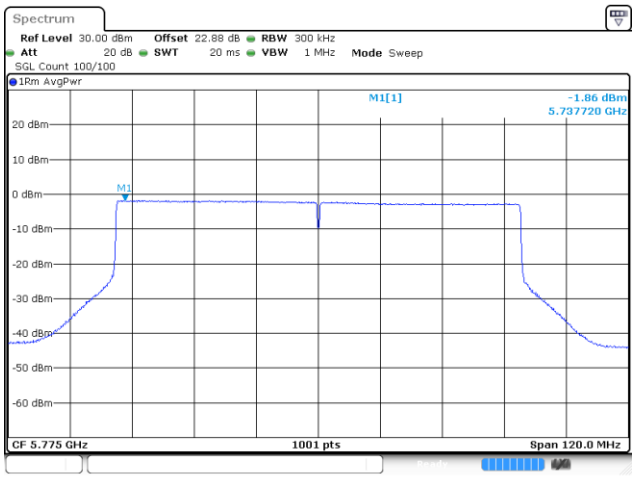
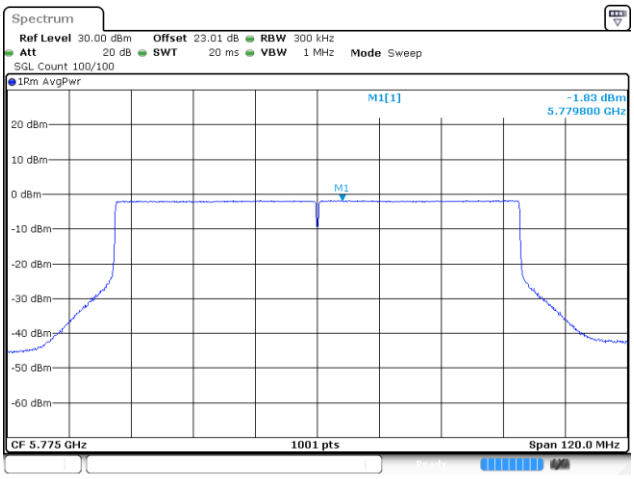
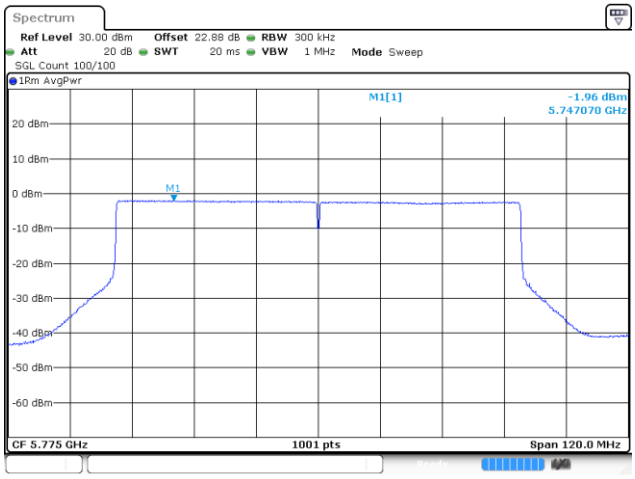
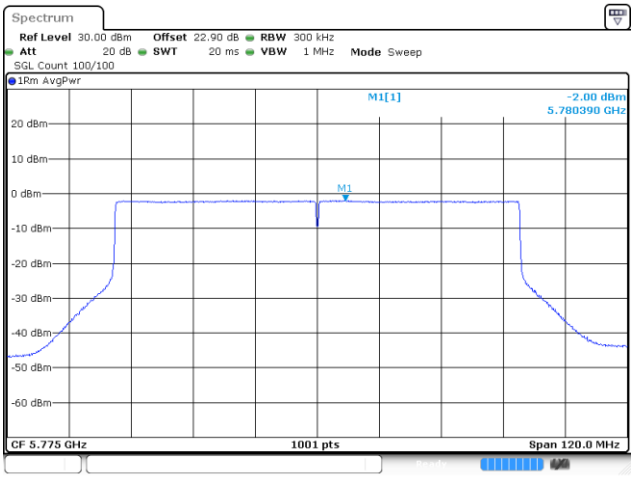
	

Maximum Power Density Plot (dBm/300kHz)	
MIMO Ant. 3	**MIMO Ant. 4**
	

3.4 Unwanted Emissions Measurement

3.4.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5.725-5.85 GHz band:

15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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

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

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

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

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

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

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

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

3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000 MHz

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

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

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

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

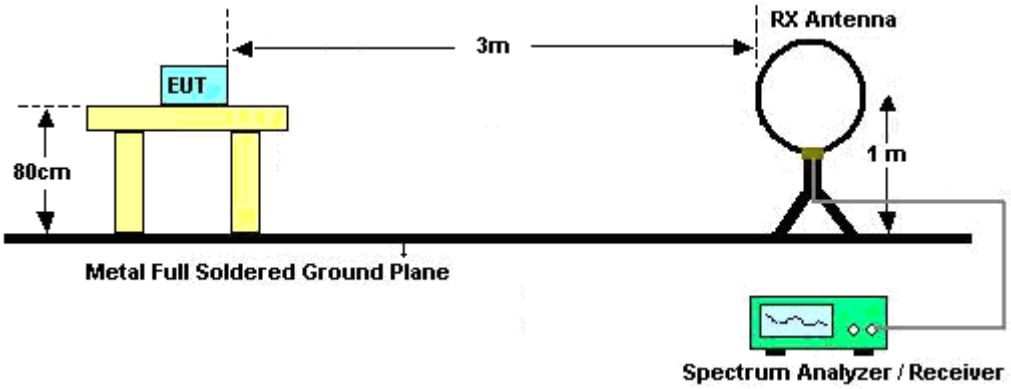
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

2. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the receiving antenna which is mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT is arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.

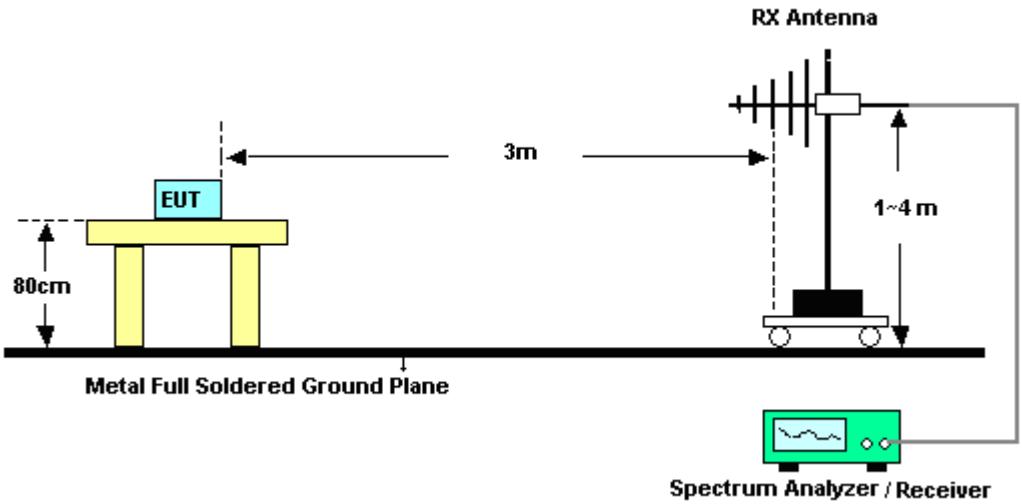
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as "-"..
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies.
   When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as "-".

3.4.4 Test Setup

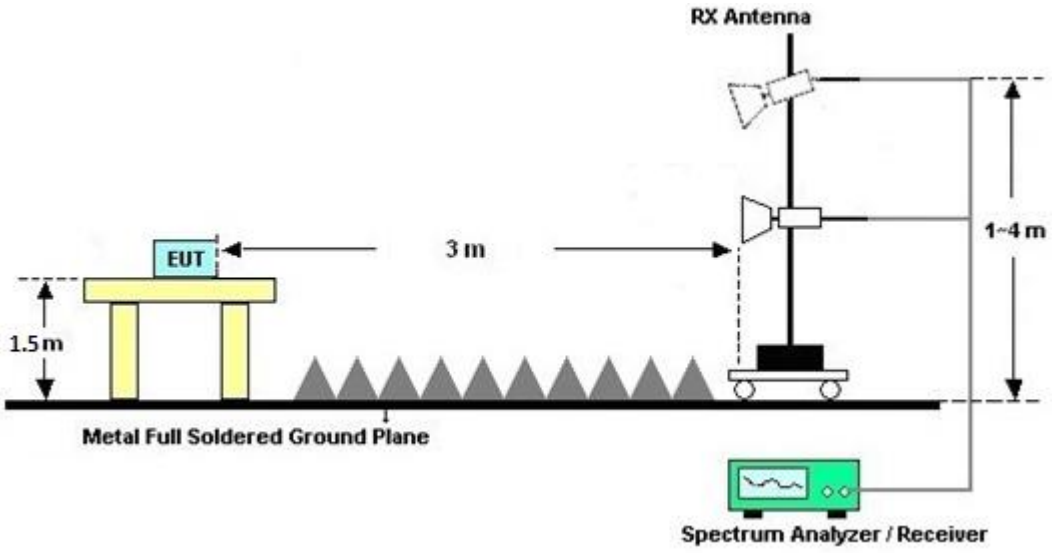
For radiated emissions below 30MHz



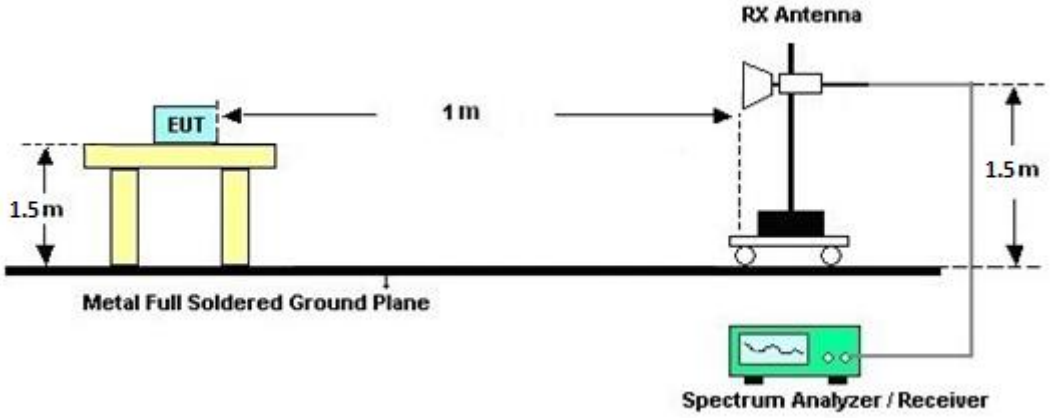
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



3.4.5 Test Results of Radiated 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 Band Edges

Please refer to Appendix C and D.

3.4.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

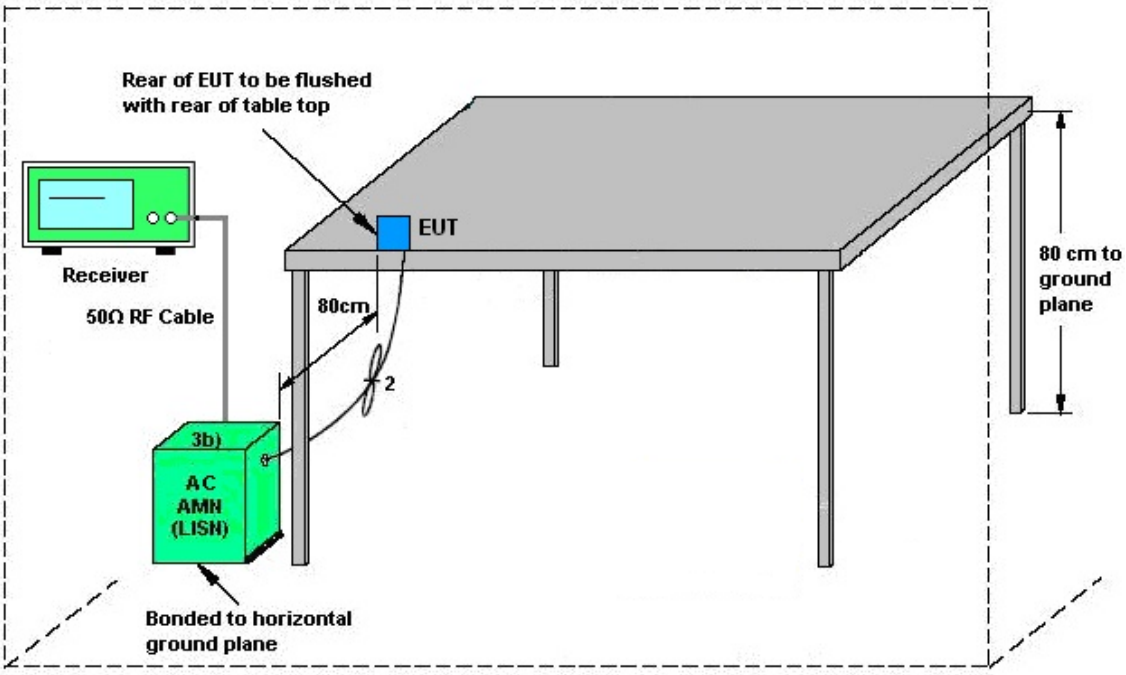
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup



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

3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Antenna Requirements

3.6.1 Standard Applicable

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

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	R&S	HFH2-Z2E	100840	9kHz~30MHz	Jun. 29, 2023	Nov. 20, 2023~ Apr. 05, 2024	Jun. 28, 2024	Radiation (03CH02-CA)
Bilog Antenna	TESEQ	6111D	50392	30MHz~1GHz	Sep. 05, 2023	Nov. 20, 2023~ Apr. 05, 2024	Sep. 04, 2024	Radiation (03CH02-CA)
Horn Antenna	SCHWARZBECK	BBHA 9120D	02140	1GHz~18GHz	Jan. 09, 2023	Nov. 20, 2023~ Jan. 07, 2024	Jan. 08, 2024	Radiation (03CH02-CA)
Horn Antenna	SCHWARZBECK	BBHA 9120D	02140	1GHz~18GHz	Jan. 29, 2024	Feb. 23, 2024~ Apr. 05, 2024	Jan. 28, 2025	Radiation (03CH02-CA)
Horn Antenna	SCHWARZBECK	BBHA 9120D	02113	1GHz~18GHz	Jun. 07, 2023	Nov. 20, 2023~ Apr. 05, 2024	Jun. 06, 2024	Radiation (03CH02-CA)
Horn Antenna	SCHWARZBECK	BBHA9170	00842	18GHz~40GHz	Aug. 22, 2023	Nov. 20, 2023~ Apr. 05, 2024	Aug. 21, 2024	Radiation (03CH02-CA)
Amplifier	SONOMA	310N	372240	N/A	May 03, 2023	Nov. 20, 2023~ Apr. 05, 2024	May 02, 2024	Radiation (03CH02-CA)
Preamplifier	Keysight	83017A	MY53270323	1GHz~26.5GHz	May 04, 2023	Nov. 20, 2023~ Apr. 05, 2024	May 03, 2024	Radiation (03CH02-CA)
Preamplifier	E-instrument	ERA-100M-18G-56-01-A70	EC1900252	1GHz~18GHz	May 23, 2023	Nov. 20, 2023~ Apr. 05, 2024	May 22, 2024	Radiation (03CH02-CA)
Preamplifier	EMEC	EMC18G40G	060725	18GHz~40GHz	May 04, 2023	Nov. 20, 2023~ Apr. 05, 2024	May 03, 2024	Radiation (03CH02-CA)
RF Cable	HUBER+SUHNER	SUCOFLEX 102	804209/2, 802406/2, 802875/2, 802952/2	N/A	Oct. 13, 2023	Nov. 20, 2023~ Apr. 05, 2024	Oct. 12, 2024	Radiation (03CH02-CA)
High Pass Filter	WOKEN	WFIL-H6500-26500F	WR67BWC4B1	6.5G-26.5G	Jun. 05, 2023	Nov. 20, 2023~ Apr. 05, 2024	Jun. 04, 2024	Radiation (03CH02-CA)
Filter	Wainwright	WLK12-1200-1272-11000-40SS	SN2	1.2GHz Low Pass Filter	Jun. 05, 2023	Nov. 20, 2023~ Apr. 05, 2024	Jun. 04, 2024	Radiation (03CH02-CA)
Hygrometer	TESEO	608-H1	45142602	N/A	Aug. 30, 2023	Nov. 20, 2023~ Apr. 05, 2024	Aug. 29, 2024	Radiation (03CH02-CA)
Controller	ChainTek	EM-1000	060876	NA	N/A	Nov. 20, 2023~ Apr. 05, 2024	N/A	Radiation (03CH02-CA)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Nov. 20, 2023~ Apr. 05, 2024	N/A	Radiation (03CH02-CA)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Nov. 20, 2023~ Apr. 05, 2024	N/A	Radiation (03CH02-CA)
Software	Audix	E3	N/A	N/A	N/A	Nov. 20, 2023~ Apr. 05, 2024	N/A	Radiation (03CH02-CA)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H1	45141354	N/A	Jul. 26, 2023	Mar. 27, 2024~ Jul. 06, 2024	Jul. 25, 2024	Conducted (TH01-CA)
Power Sensor	Raditeq	RPR3006W#10	RPR6W-2101003	10MHz-8GHz	May 04, 2023	Mar. 27, 2024~ Apr. 24, 2024	May 03, 2024	Conducted (TH01-CA)
Power Sensor	Raditeq	RPR3006W	RPR6W-1901024	10MHz-8GHz	Apr. 25, 2024	Apr. 26, 2024~ Jul. 06, 2024	Apr. 24, 2025	Conducted (TH01-CA)
Switch Box	EM Electronics	EMSW26	1070902	N/A	Oct. 09, 2023	Mar. 27, 2024~ Jul. 06, 2024	Oct. 08, 2024	Conducted (TH01-CA)
Spectrum Analyzer	R&S	FSV40	101089	10Hz~40GHz	May 22, 2023	Mar. 27, 2024~ Apr. 23, 2024	May 21, 2024	Conducted (TH01-CA)
Spectrum Analyzer	R&S	FSV40	101089	10Hz~40GHz	Apr. 24, 2024	Apr. 24, 2024~ Jul. 06, 2024	Apr. 23, 2025	Conducted (TH01-CA)
Hygrometer	Testo	608-H1	45141354	N/A	Jul. 26, 2023	Mar. 27, 2024~ Jul. 06, 2024	Jul. 25, 2024	Conducted (TH01-CA)
LISN	TESEQ	NNB51	47415	N/A	Aug. 04, 2023	Feb. 13, 2024	Aug. 03, 2024	Conduction (CO01-CA)
EMI Test Receiver	R&S	ESR7	102177	9kHz~7GHz	May 23, 2023	Feb. 13, 2024	May 22, 2024	Conduction (CO01-CA)
Pulse limiter with 10dB attenuation	R&S	VTSD 9561-F N	9561-F-N00412	N/A	Jun. 05, 2023	Feb. 13, 2024	Jun. 04, 2024	Conduction (CO01-CA)
Test Software	R&S	EMC32 V10.30.0	N/A	N/A	N/A	Feb. 13, 2024	N/A	Conduction (CO01-CA)

5 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.7 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.8 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.5 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.9 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.2 dB

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Ju Chang	Temperature:	19.4~22.2	°C
Test Date:	2024/03/27~2024/07/06	Relative Humidity:	38.1~67.1	%

<2x2 Mode>

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

U-NII-3 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant 1	Ant 3	Ant 1	Ant 3	Ant 1	Ant 3		
11a	6Mbps	2	149	5745	17.04	16.97	22.30	22.63	16.36	16.36	0.5	Pass
11a	6Mbps	2	157	5785	17.06	16.99	22.41	22.66	16.37	16.36	0.5	Pass
11a	6Mbps	2	165	5825	17.04	16.98	22.41	22.57	16.36	16.36	0.5	Pass

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TEST RESULTS DATA
Average Power Table

U-NII-3 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 1	Ant 3	SUM	Ant 1	Ant 3	Ant 1	Ant 3	
11a	6Mbps	2	149	5745	22.10	22.10	25.11	30.00		3.30		Pass
11a	6Mbps	2	157	5785	21.70	21.70	24.71	30.00		3.30		Pass
11a	6Mbps	2	165	5825	21.30	21.30	24.31	30.00		3.30		Pass
HT20	MCS0	2	149	5745	22.00	22.10	25.06	30.00		3.30		Pass
HT20	MCS0	2	157	5785	21.60	21.80	24.71	30.00		3.30		Pass
HT20	MCS0	2	165	5825	21.20	21.20	24.21	30.00		3.30		Pass
HT40	MCS0	2	151	5755	22.20	22.10	25.16	30.00		3.30		Pass
HT40	MCS0	2	159	5795	21.50	21.50	24.51	30.00		3.30		Pass
VHT20	MCS0	2	149	5745	22.00	22.00	25.01	30.00		3.30		Pass
VHT20	MCS0	2	157	5785	21.60	21.70	24.66	30.00		3.30		Pass
VHT20	MCS0	2	165	5825	21.20	21.10	24.16	30.00		3.30		Pass
VHT40	MCS0	2	151	5755	22.10	22.10	25.11	30.00		3.30		Pass
VHT40	MCS0	2	159	5795	21.50	21.40	24.46	30.00		3.30		Pass
VHT80	MCS0	2	155	5775	21.80	21.90	24.86	30.00		3.30		Pass

Report Number : FR240104006E

TEST RESULTS DATA
Power Spectral Density

U-NII-3 MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		10log (500kHz /RBW) Factor (dB)		Average Power Density with Duty Factor (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
					Ant 1	Ant 3	Ant 1	Ant 3	Ant 1	Ant 3	SUM	Ant 1	Ant 3	Ant 1	Ant 3	
11a	6Mbps	2	149	5745	0.03	0.00	2.22		7.42	7.39	10.43	30.00		3.30		Pass
11a	6Mbps	2	157	5785	0.03	0.00	2.22		7.18	7.14	10.19	30.00		3.30		Pass
11a	6Mbps	2	165	5825	0.03	0.00	2.22		6.70	6.62	9.71	30.00		3.30		Pass

Note: PSD Sum = Max PSD(Ant. 1, Ant. 3) + 10 log (n)

TEST RESULTS DATA
Average Power Table

U-NII-3 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 3	SUM	Ant 1	Ant 3	Ant 1	Ant 3	
HE20	MCS0	2	149	5745	Full	22.00	21.90	24.96	30.00		3.30		Pass
HE20	MCS0	2	157	5785	Full	21.60	21.60	24.61	30.00		3.30		Pass
HE20	MCS0	2	165	5825	Full	21.10	21.10	24.11	30.00		3.30		Pass
HE40	MCS0	2	151	5755	Full	22.00	22.10	25.06	30.00		3.30		Pass
HE40	MCS0	2	159	5795	Full	21.40	21.40	24.41	30.00		3.30		Pass
HE80	MCS0	2	155	5775	Full	21.80	21.80	24.81	30.00		3.30		Pass

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

U-NII-3 MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
						Ant 1	Ant 3	Ant 1	Ant 3	Ant 1	Ant 3		
EHT20	MCS0	2	149	5745	Full	19.14	19.15	24.56	23.06	19.06	19.05	0.5	Pass
EHT20	MCS0	2	157	5785	Full	19.14	19.17	23.98	23.56	19.04	19.06	0.5	Pass
EHT20	MCS0	2	165	5825	Full	19.15	19.17	24.42	23.13	19.05	19.07	0.5	Pass
EHT40	MCS0	2	151	5755	Full	38.51	38.51	45.60	46.13	38.12	38.11	0.5	Pass
EHT40	MCS0	2	159	5795	Full	38.55	38.57	45.68	46.34	38.32	38.14	0.5	Pass
EHT80	MCS0	2	155	5775	Full	77.85	77.85	90.24	90.78	78.06	78.05	0.5	Pass

TEST RESULTS DATA
Average Power Table

U-NII-3 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 3	SUM	Ant 1	Ant 3	Ant 1	Ant 3	
EHT20	MCS0	2	149	5745	Full	22.10	22.20	25.16	30.00		3.30		Pass
EHT20	MCS0	2	157	5785	Full	21.70	21.90	24.81	30.00		3.30		Pass
EHT20	MCS0	2	165	5825	Full	21.30	21.30	24.31	30.00		3.30		Pass
EHT40	MCS0	2	151	5755	Full	22.30	22.20	25.26	30.00		3.30		Pass
EHT40	MCS0	2	159	5795	Full	21.60	21.60	24.61	30.00		3.30		Pass
EHT80	MCS0	2	155	5775	Full	21.90	22.00	24.96	30.00		3.30		Pass

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TEST RESULTS DATA
Power Spectral Density

U-NII-3 MIMO																		
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		10log (500kHz /RBW) Factor (dB)		Average Power Density with Duty Factor (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
						Ant 1	Ant 3	Ant 1	Ant 3	Ant 1	Ant 3	SUM	Ant 1	Ant 3	Ant 1	Ant 3	
EHT20	MCS0	2	149	5745	Full	0.00	0.00	2.22		6.82	6.99	10.00	30.00		3.30		Pass
EHT20	MCS0	2	157	5785	Full	0.00	0.00	2.22		6.58	6.77	9.78	30.00		3.30		Pass
EHT20	MCS0	2	165	5825	Full	0.00	0.00	2.22		6.06	5.93	9.07	30.00		3.30		Pass
EHT40	MCS0	2	151	5755	Full	0.00	0.00	2.22		3.88	3.96	6.97	30.00		3.30		Pass
EHT40	MCS0	2	159	5795	Full	0.00	0.00	2.22		3.60	3.83	6.84	30.00		3.30		Pass
EHT80	MCS0	2	155	5775	Full	0.00	0.00	2.22		0.67	1.09	4.10	30.00		3.30		Pass

Note: PSD Sum = Max PSD(Ant. 1, Ant. 3) + 10 log (n)

<4x4 Mode>

TEST RESULTS DATA
6dB and 99% OBW

Band IV MIMO 4Tx Mode Ant 1 + 3 + 4 + 2																		
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	26dB Bandwidth (MHz)				6 dB Bandwidth (MHz)				99% Bandwidth (MHz)				6 dB Min. Limit (MHz)	Pass /Fail
					Ant 1	Ant 3	Ant 4	Ant 2	Ant 1	Ant 3	Ant 4	Ant 2	Ant 1	Ant 3	Ant 4	Ant 2		
11a	6Mbps	4	149	5745	22.65	22.52	22.93	22.44	16.35	16.35	16.38	16.36	17.04	17.02	17.01	17.00	0.5	Pass
11a	6Mbps	4	157	5785	22.62	22.59	22.86	22.49	16.34	16.36	16.36	16.37	17.07	17.05	17.02	17.00	0.5	Pass
11a	6Mbps	4	165	5825	23.32	22.71	22.89	22.39	16.35	16.35	16.36	16.37	17.13	17.54	17.00	17.00	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 1 + 3 + 4 + 2												
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Average Conducted Power (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/ Fail
					Ant 1	Ant 3	Ant 4	Ant 2	SUM	Ant 1 + 3 + 4 + 2	Ant 1 + 3 + 4 + 2	
11a	6Mbps	4	149	5745	22.50	22.50	22.34	22.65	28.52	30.00	3.30	Pass
11a	6Mbps	4	157	5785	22.16	22.12	22.34	22.67	28.35	30.00	3.30	Pass
11a	6Mbps	4	165	5825	21.88	21.94	22.18	22.62	28.19	30.00	3.30	Pass
HT20	MCS0	4	149	5745	22.47	22.59	22.38	22.44	28.49	30.00	3.30	Pass
HT20	MCS0	4	157	5785	22.20	22.25	22.29	22.66	28.37	30.00	3.30	Pass
HT20	MCS0	4	165	5825	21.78	21.95	22.19	22.46	28.12	30.00	3.30	Pass
HT40	MCS0	4	151	5755	22.09	21.98	22.02	22.14	28.08	30.00	3.30	Pass
HT40	MCS0	4	159	5795	21.56	21.61	21.94	22.05	27.82	30.00	3.30	Pass
VHT20	MCS0	4	149	5745	22.45	22.58	22.3	22.40	28.45	30.00	3.30	Pass
VHT20	MCS0	4	157	5785	22.10	22.18	22.37	22.63	28.35	30.00	3.30	Pass
VHT20	MCS0	4	165	5825	21.89	21.97	22.19	22.37	28.13	30.00	3.30	Pass
VHT40	MCS0	4	151	5755	21.99	21.98	22.02	22.06	28.03	30.00	3.30	Pass
VHT40	MCS0	4	159	5795	21.55	21.59	21.94	22.07	27.81	30.00	3.30	Pass
VHT80	MCS0	4	155	5775	21.59	21.63	21.54	21.78	27.66	30.00	3.30	Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO 4Tx Mode Ant 1 + 3 + 4 + 2																		
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Duty Factor (dB)				10log (500kHz /RBW) Factor (dB)	Average Power Density with Duty Factor (dBm/500kHz)					Average PSD Limit (dBm/500kHz)	DG (dBi)	Pass /Fail
					Ant 1	Ant 3	Ant 4	Ant 2		Ant 1	Ant 3	Ant 4	Ant 2	SUM	Ant 1 + 3 + 4 + 2	Ant 1 + 3 + 4 + 2	
11a	6Mbps	4	149	5745	0.03	0.03	0.03	0.03	2.22	7.41	7.56	7.36	7.67	13.69	30.00	5.81	Pass
11a	6Mbps	4	157	5785	0.03	0.03	0.03	0.03	2.22	7.15	7.00	7.02	7.69	13.71	30.00	5.81	Pass
11a	6Mbps	4	165	5825	0.03	0.03	0.03	0.03	2.22	6.78	6.95	7.44	7.65	13.67	30.00	5.81	Pass

Note: PSD Sum = Max PSD(Ant. 1, Ant. 3, Ant. 4, Ant. 2) + 10 log (4)

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 1 + 3 + 4 + 2													
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 3	Ant 4	Ant 2	SUM	Ant 1 + 3 + 4 + 2	Ant 1 + 3 + 4 + 2	
HE20	MCS0	4	149	5745	Full	22.49	22.67	22.38	22.57	28.55	30.00	3.30	Pass
HE20	MCS0	4	157	5785	Full	22.26	22.24	22.38	22.67	28.41	30.00	3.30	Pass
HE20	MCS0	4	165	5825	Full	21.84	22.04	22.31	22.58	28.22	30.00	3.30	Pass
HE40	MCS0	4	151	5755	Full	21.94	21.97	21.99	22.04	28.01	30.00	3.30	Pass
HE40	MCS0	4	159	5795	Full	21.53	21.52	21.87	21.97	27.75	30.00	3.30	Pass
HE80	MCS0	4	155	5775	Full	21.67	21.57	21.59	21.74	27.66	30.00	3.30	Pass

TEST RESULTS DATA
6dB and 99% OBW

Band IV MIMO 4Tx Mode Ant 1 + 3 + 4 + 2																			
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	26dB Bandwidth (MHz)				6 dB Bandwidth (MHz)				99% Bandwidth (MHz)				6 dB Min. Limit (MHz)	Pass /Fail
						Ant 1	Ant 3	Ant 4	Ant 2	Ant 1	Ant 3	Ant 4	Ant 2	Ant 1	Ant 3	Ant 4	Ant 2		
EHT20	MCS0	4	149	5745	Full	23.21	23.41	23.76	23.29	19.03	19.02	19.07	19.01	19.14	19.15	19.15	19.17	0.5	Pass
EHT20	MCS0	4	157	5785	Full	23.06	23.38	23.57	23.60	19.04	19.06	19.06	19.07	19.17	19.16	19.14	19.15	0.5	Pass
EHT20	MCS0	4	165	5825	Full	23.74	23.22	23.57	23.90	19.06	19.06	19.02	19.08	19.21	19.21	19.15	19.14	0.5	Pass
EHT40	MCS0	4	151	5755	Full	46.22	45.87	45.65	45.36	38.20	38.19	38.12	38.13	38.49	38.51	38.53	38.52	0.5	Pass
EHT40	MCS0	4	159	5795	Full	46.21	45.68	45.92	45.25	38.21	38.24	38.13	38.21	38.64	38.57	38.55	38.52	0.5	Pass
EHT80	MCS0	4	155	5775	Full	88.99	88.10	88.38	91.04	78.11	77.86	78.16	78.14	77.97	77.82	77.86	77.87	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 1 + 3 + 4 + 2													
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 3	Ant 4	Ant 2	SUM	Ant 1 + 3 + 4 + 2	Ant 1 + 3 + 4 + 2	
EHT20	MCS0	4	149	5745	Full	22.51	22.64	22.38	22.79	28.60	30.00	3.30	Pass
EHT20	MCS0	4	157	5785	Full	22.27	22.25	22.47	22.83	28.48	30.00	3.30	Pass
EHT20	MCS0	4	165	5825	Full	21.84	21.97	22.26	22.70	28.23	30.00	3.30	Pass
EHT40	MCS0	4	151	5755	Full	22.39	22.42	22.31	22.49	28.42	30.00	3.30	Pass
EHT40	MCS0	4	159	5795	Full	21.85	21.97	22.21	22.47	28.15	30.00	3.30	Pass
EHT80	MCS0	4	155	5775	Full	21.69	21.61	21.62	21.83	27.71	30.00	3.30	Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO 4Tx Mode Ant 1 + 3 + 4 + 2																		
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)				10log (500kHz /RBW) Factor (dB)	Average Power Density with Duty Factor (dBm/500kHz)					Average PSD Limit (dBm/500kHz)	DG (dBi)	Pass /Fail
						Ant 1	Ant 3	Ant 4	Ant 2		Ant 1	Ant 3	Ant 4	Ant 2	SUM	Ant 1 + 3 + 4 + 2	Ant 1 + 3 + 4 + 2	
EHT20	MCS0	4	149	5745	Full	0.00	0.00	0.00	0.00	2.22	7.02	7.03	6.80	7.03	13.05	30.00	5.81	Pass
EHT20	MCS0	4	157	5785	Full	0.00	0.00	0.00	0.00	2.22	6.57	6.53	6.47	7.34	13.36	30.00	5.81	Pass
EHT20	MCS0	4	165	5825	Full	0.00	0.00	0.00	0.00	2.22	6.29	6.38	6.98	7.13	13.15	30.00	5.81	Pass
EHT40	MCS0	4	151	5755	Full	0.00	0.00	0.00	0.00	2.22	3.89	3.80	3.73	3.91	9.93	30.00	5.81	Pass
EHT40	MCS0	4	159	5795	Full	0.00	0.00	0.00	0.00	2.22	3.52	3.24	3.50	3.98	10.00	30.00	5.81	Pass
EHT80	MCS0	4	155	5775	Full	0.00	0.00	0.00	0.00	2.22	0.36	0.26	0.22	0.39	6.41	30.00	5.81	Pass

Note: PSD Sum = Max PSD(Ant. 1, Ant. 3, Ant. 4, Ant. 2) + 10 log (4)

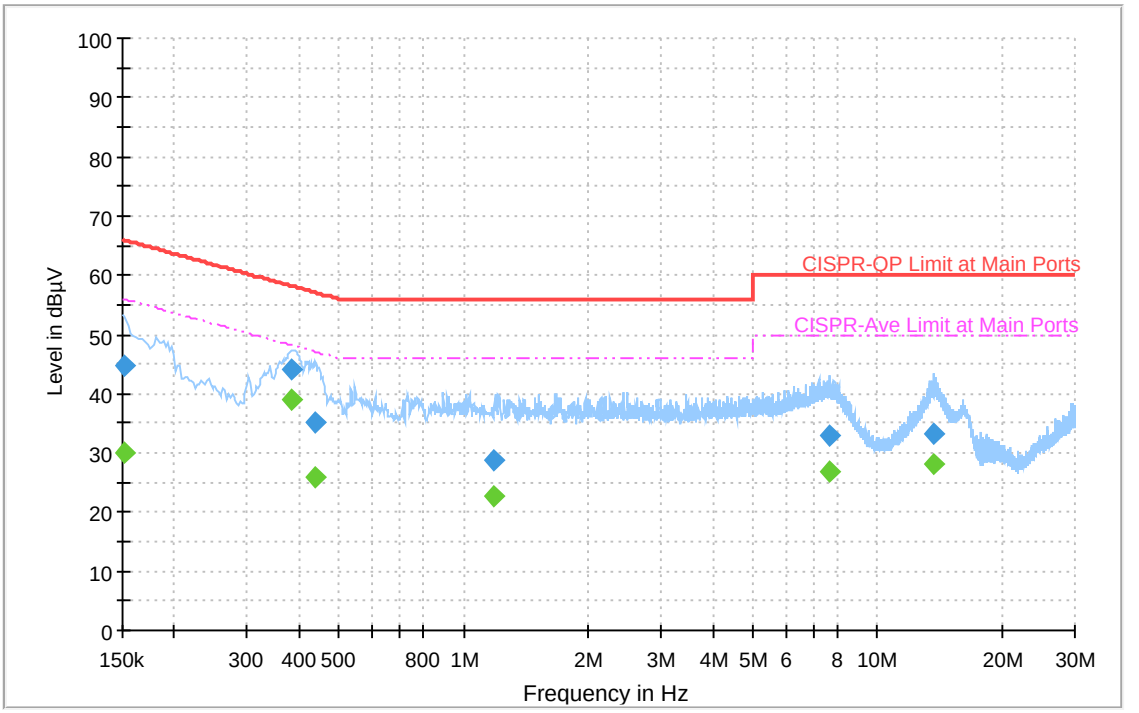
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Jin Peng	**Temperature :**	19.2~21.4℃
		Relative Humidity :	44.5~48.3%

EUT Information

Test Site Location :	CO01-CA
Project	240104006
Power:	120Vac/60Hz

Full Spectrum



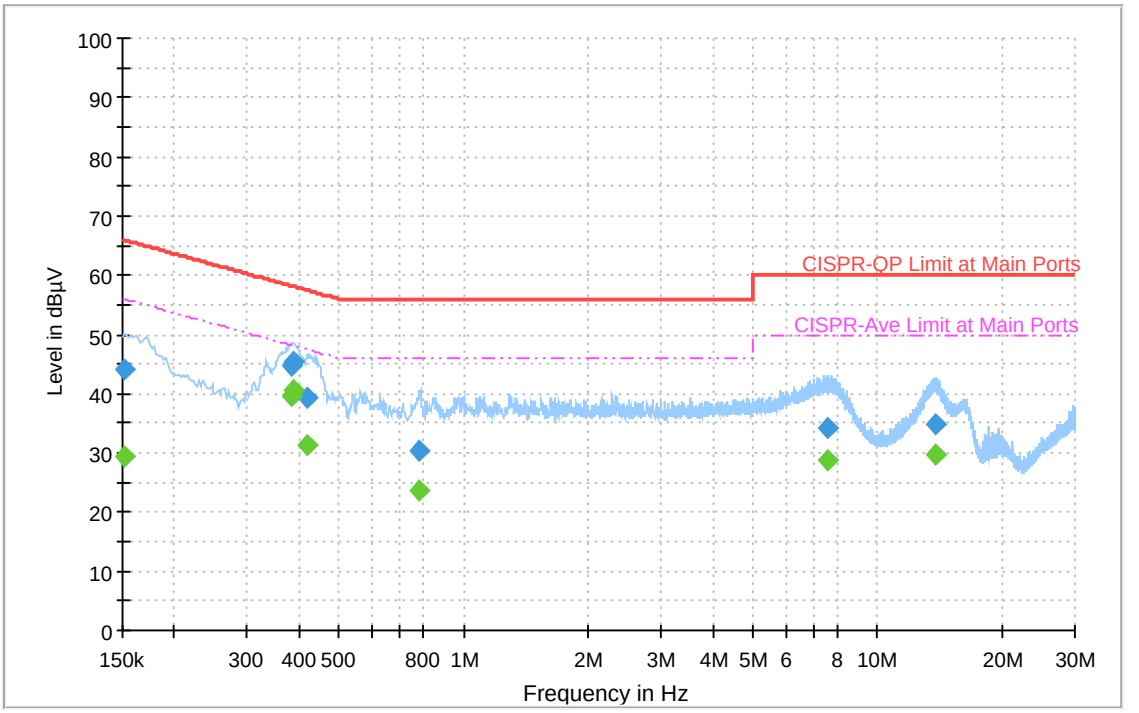
Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.151924	---	29.92	55.89	25.97	L1	OFF	20.2
0.151924	44.81	---	65.89	21.08	L1	OFF	20.2
0.385269	---	39.00	48.17	9.17	L1	OFF	20.3
0.385269	44.14	---	58.17	14.03	L1	OFF	20.3
0.436029	---	25.84	47.14	21.30	L1	OFF	20.3
0.436029	35.01	---	57.14	22.13	L1	OFF	20.3
1.187331	---	22.70	46.00	23.30	L1	OFF	20.3
1.187331	28.61	---	56.00	27.39	L1	OFF	20.3
7.638846	---	26.99	50.00	23.01	L1	OFF	20.5
7.638846	32.76	---	60.00	27.24	L1	OFF	20.5
13.638876	---	28.20	50.00	21.80	L1	OFF	20.8
13.638876	33.38	---	60.00	26.62	L1	OFF	20.8

EUT Information

Test Site Location :	CO01-CA
Project	240104006
Power:	120Vac/60Hz

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	29.51	55.88	26.37	N	OFF	20.2
0.152250	44.09	---	65.88	21.79	N	OFF	20.2
0.381750	---	39.62	48.24	8.62	N	OFF	20.2
0.381750	44.86	---	58.24	13.38	N	OFF	20.2
0.388500	---	40.56	48.10	7.54	N	OFF	20.2
0.388500	45.52	---	58.10	12.58	N	OFF	20.2
0.420000	---	31.40	47.45	16.05	N	OFF	20.2
0.420000	39.24	---	57.45	18.21	N	OFF	20.2
0.782250	---	23.62	46.00	22.38	N	OFF	20.3
0.782250	30.34	---	56.00	25.66	N	OFF	20.3
7.577250	---	28.60	50.00	21.40	N	OFF	20.5
7.577250	34.28	---	60.00	25.72	N	OFF	20.5
13.814250	---	29.60	50.00	20.40	N	OFF	20.8
13.814250	34.79	---	60.00	25.21	N	OFF	20.8

Appendix C. Radiated Spurious Emission

Test Engineer :	Jesse Fan and Minh Nguyen	Temperature :	15.5~23.5°C
		Relative Humidity :	31.8~64.1%

<2x2 MIMO>

Band 4 - 5725~5850MHz

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+3		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5634.4	57.77	-10.43	68.2	41.51	33.1	12.88	29.72	305	42	P	H
		5699.8	62.52	-42.53	105.05	45.84	33.44	12.94	29.7	305	42	P	H
		5720	79.57	-31.23	110.8	62.73	33.58	12.96	29.7	305	42	P	H
		5724	83.82	-36.1	119.92	66.95	33.6	12.97	29.7	305	42	P	H
	*	5745	119.64	-	-	102.59	33.75	12.99	29.69	305	42	P	H
	*	5745	112.77	-	-	95.72	33.75	12.99	29.69	305	42	A	H
													H
													H
		5639.8	57.68	-10.52	68.2	41.4	33.11	12.89	29.72	185	309	P	V
		5700	60.81	-44.39	105.2	44.13	33.44	12.94	29.7	185	309	P	V
		5720	76.83	-33.97	110.8	59.99	33.58	12.96	29.7	185	309	P	V
		5724.2	80.01	-40.37	120.38	63.14	33.6	12.97	29.7	185	309	P	V
	*	5745	120.37	-	-	103.32	33.75	12.99	29.69	185	309	P	V
	*	5745	113.28	-	-	96.23	33.75	12.99	29.69	185	309	A	V
													V
													V

WIFI Ant. 1+3	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 157 5785MHz		5620.8	56.54	-11.66	68.2	40.2	33.2	12.87	29.73	400	59	P	H
		5650.6	56.02	-12.63	68.65	39.55	33.29	12.9	29.72	400	59	P	H
		5701	55.72	-49.76	105.48	38.93	33.54	12.95	29.7	400	59	P	H
		5721	56.22	-56.86	113.08	39.3	33.66	12.96	29.7	400	59	P	H
	*	5785	117.1	-	-	99.76	34	13.03	29.69	400	59	P	H
	*	5785	110.77	-	-	93.43	34	13.03	29.69	400	59	A	H
		5854.4	57.58	-54.59	112.17	39.92	34.25	13.1	29.69	400	59	P	H
		5875.2	57.02	-48.03	105.05	39.3	34.3	13.12	29.7	400	59	P	H
		5924.2	56.15	-12.64	68.79	38.37	34.35	13.17	29.74	400	59	P	H
		5930.2	57.11	-11.09	68.2	39.32	34.35	13.18	29.74	400	59	P	H
													H
													H
		5649.6	56.99	-11.21	68.2	40.53	33.28	12.9	29.72	200	320	P	V
		5652.4	55.92	-14.06	69.98	39.45	33.29	12.9	29.72	200	320	P	V
		5702.8	55.93	-50.06	105.99	39.13	33.55	12.95	29.7	200	320	P	V
		5720	58.19	-52.61	110.8	41.28	33.65	12.96	29.7	200	320	P	V
	*	5785	118.12	-	-	100.8	33.98	13.03	29.69	200	320	P	V
	*	5785	111.37	-	-	94.05	33.98	13.03	29.69	200	320	A	V
		5853.8	58.63	-54.91	113.54	40.93	34.29	13.1	29.69	200	320	P	V
		5873.4	56.55	-49.1	105.65	38.81	34.32	13.12	29.7	200	320	P	V
		5922.8	57.39	-12.43	69.82	39.62	34.34	13.17	29.74	200	320	P	V
		5932	58.2	-10	68.2	40.43	34.33	13.18	29.74	200	320	P	V
													V
													V

WIFI Ant. 1+3	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 165 5825MHz	*	5825	117.39	-	-	99.86	34.15	13.07	29.69	298	49	P	H
	*	5825	110.12	-	-	92.59	34.15	13.07	29.69	298	49	A	H
		5853.8	74.15	-39.39	113.54	56.49	34.25	13.1	29.69	298	49	P	H
		5855.4	74.79	-35.9	110.69	57.13	34.25	13.1	29.69	298	49	P	H
		5924.8	55.84	-12.51	68.35	38.06	34.35	13.17	29.74	298	49	P	H
		5935.2	58.41	-9.79	68.2	40.62	34.35	13.18	29.74	298	49	P	H
	*	5825	115.48	-	-	97.95	34.15	13.07	29.69	400	316	P	H
	*	5825	108.59	-	-	91.06	34.15	13.07	29.69	400	316	A	H
		5946.8	56.96	-11.24	68.2	39.17	34.35	13.19	29.75	400	316	P	H
		5857.8	75.66	-34.35	110.01	57.99	34.26	13.1	29.69	400	316	P	H
		5924.4	55.87	-12.77	68.64	38.09	34.35	13.17	29.74	400	316	P	H
		5946.8	56.96	-11.24	68.2	39.17	34.35	13.19	29.75	400	316	P	H
													V
													V
													V
													V
													V

Remark

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

Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1+3	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 149 5745MHz		11490	55.19	-18.81	74	64.34	39.06	18.49	66.7	300	309	P	H
		11490	45.26	-8.74	54	54.41	39.06	18.49	66.7	300	309	A	H
		17235	52.44	-15.76	68.2	59.18	37.65	23.04	67.43	200	299	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		11490	52.89	-21.11	74	62.02	39.08	18.49	66.7	200	342	P	V
		11490	43.86	-10.14	54	52.99	39.08	18.49	66.7	200	342	A	V
		17235	50.96	-17.24	68.2	57.66	37.69	23.04	67.43	240	0	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+3	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 157 5785MHz		11570	53.1	-20.9	74	62.35	38.87	18.55	66.67	200	60	P	H
		11570	44.06	-9.94	54	53.31	38.87	18.55	66.67	200	60	A	H
		17355	49.55	-18.65	68.2	55.43	38.81	23.15	67.84	269	199	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		11570	52.68	-21.32	74	61.93	38.87	18.55	66.67	308	348	P	V
		11570	43.81	-10.19	54	53.06	38.87	18.55	66.67	308	348	A	V
		17355	49.95	-18.25	68.2	55.83	38.81	23.15	67.84	312	177	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+3	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 165 5825MHz		11650	51.63	-22.37	74	61.12	38.67	18.61	66.77	200	308	P	H
		11650	42.13	-11.87	54	51.62	38.67	18.61	66.77	200	308	A	H
		17475	53.92	-14.28	68.2	60.83	38.42	23.26	68.59	300	329	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		11650	53.01	-20.99	74	62.42	38.75	18.61	66.77	400	357	P	V
		11650	42.45	-11.55	54	51.86	38.75	18.61	66.77	400	357	A	V
		17475	51.87	-16.33	68.2	58.79	38.41	23.26	68.59	400	347	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

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

Band 4 5725~5850MHz

WIFI 802.11be EHT20_Full (Band Edge @ 3m)

WIFI Ant. 1+3	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)
		5606	57.21	-10.99	68.2	41.06	33.02	12.86	29.73	304	40	P	H
		5697.4	63.29	-39.99	103.28	46.63	33.42	12.94	29.7	304	40	P	H
		5719.8	81.75	-28.99	110.74	64.92	33.57	12.96	29.7	304	40	P	H
		5723.8	87.49	-31.97	119.46	70.62	33.6	12.97	29.7	304	40	P	H
	*	5745	121.39	-	-	104.34	33.75	12.99	29.69	304	40	P	H
	*	5745	112.61	-	-	95.56	33.75	12.99	29.69	304	40	A	H
802.11be													H
EHT20 Full													H
CH 149		5609.4	57.25	-10.95	68.2	41.09	33.03	12.86	29.73	265	309	P	V
5745MHz		5700	62.12	-43.08	105.2	45.44	33.44	12.94	29.7	265	309	P	V
		5720	78.67	-32.13	110.8	61.83	33.58	12.96	29.7	265	309	P	V
		5724.8	84.34	-37.4	121.74	67.46	33.61	12.97	29.7	265	309	P	V
	*	5745	119.99	-	-	102.94	33.75	12.99	29.69	265	309	P	V
	*	5745	112.99	-	-	95.94	33.75	12.99	29.69	265	309	A	V
													V
													V

WIFI Ant. 1+3	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)
		5610.6	57.2	-11	68.2	40.9	33.17	12.86	29.73	300	43	P	H
		5650.1	56.81	-11.46	68.27	40.34	33.29	12.9	29.72	300	43	P	H
		5701	56.54	-48.94	105.48	39.75	33.54	12.95	29.7	300	43	P	H
		5721	62.9	-50.18	113.08	45.98	33.66	12.96	29.7	300	43	P	H
	*	5785	117.52	-	-	100.18	34	13.03	29.69	300	43	P	H
	*	5785	109.69	-	-	92.35	34	13.03	29.69	300	43	A	H
		5852.6	60.54	-55.73	116.27	42.89	34.24	13.1	29.69	300	43	P	H
		5873.8	56.35	-49.19	105.54	38.64	34.29	13.12	29.7	300	43	P	H
		5923.8	56.28	-12.8	69.08	38.5	34.35	13.17	29.74	300	43	P	H
		5943.4	57.13	-11.07	68.2	39.34	34.35	13.19	29.75	300	43	P	H
802.11be													H
EHT20 Full													H
CH 157		5633.2	57.64	-10.56	68.2	41.28	33.2	12.88	29.72	200	321	P	V
5785MHz		5654	57.23	-13.94	71.17	40.74	33.3	12.9	29.71	200	321	P	V
		5703	56.86	-49.18	106.04	40.05	33.56	12.95	29.7	200	321	P	V
		5721.2	57.96	-55.58	113.54	41.03	33.66	12.97	29.7	200	321	P	V
	*	5785	118.71	-	-	101.39	33.98	13.03	29.69	200	321	P	V
	*	5785	110.64	-	-	93.32	33.98	13.03	29.69	200	321	A	V
		5853.8	58.33	-55.21	113.54	40.63	34.29	13.1	29.69	200	321	P	V
		5873.6	56.97	-48.62	105.59	39.23	34.32	13.12	29.7	200	321	P	V
		5922	56.28	-14.13	70.41	38.5	34.34	13.17	29.73	200	321	P	V
		5940.6	57.9	-10.3	68.2	40.14	34.32	13.19	29.75	200	321	P	V
													V
													V

WIFI Ant. 1+3	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)
	*	5825	120.09	-	-	102.59	34.12	13.07	29.69	347	49	P	H
	*	5825	111.92	-	-	94.42	34.12	13.07	29.69	347	49	A	H
		5850	87.29	-34.91	122.2	69.67	34.22	13.09	29.69	347	49	P	H
		5858.4	79.19	-30.66	109.85	61.55	34.23	13.1	29.69	347	49	P	H
		5875.2	66.47	-38.58	105.05	48.8	34.25	13.12	29.7	347	49	P	H
		5945.2	57.55	-10.65	68.2	39.89	34.22	13.19	29.75	347	49	P	H
802.11be													H
EHT20 Full													H
CH 165	*	5825	119.53	-	-	102.03	34.12	13.07	29.69	245	312	P	V
5825MHz	*	5825	112.48	-	-	94.98	34.12	13.07	29.69	245	312	A	V
		5850	81.69	-40.51	122.2	64.07	34.22	13.09	29.69	245	312	P	V
		5859	76.95	-32.73	109.68	59.31	34.23	13.1	29.69	245	312	P	V
		5877	62.73	-40.98	103.71	45.06	34.25	13.12	29.7	245	312	P	V
		5942.4	57.17	-11.03	68.2	39.5	34.23	13.19	29.75	245	312	P	V
													V
													V

Remark

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

Band 4 5725~5850MHz

WIFI 802.11be EHT20 Full (Harmonic @ 3m)

WIFI Ant. 1+3	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)
		11490	54.91	-19.09	74	64.06	39.06	18.49	66.7	300	310	P	H
		11490	44.9	-9.1	54	54.05	39.06	18.49	66.7	300	310	A	H
		17235	52.35	-15.85	68.2	59.09	37.65	23.04	67.43	200	298	P	H
													H
													H
													H
													H
													H
													H
													H
802.11be													H
EHT20 Full													H
CH 149		11490	53.85	-20.15	74	62.98	39.08	18.49	66.7	200	344	P	V
5745MHz		11490	44.08	-9.92	54	53.21	39.08	18.49	66.7	200	344	A	V
		17235	52.39	-15.81	68.2	59.09	37.69	23.04	67.43	232	0	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+3	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)
		11570	52.72	-21.28	74	61.97	38.87	18.55	66.67	204	61	P	H
		11570	43.48	-10.52	54	52.73	38.87	18.55	66.67	204	61	A	H
		17355	49.7	-18.5	68.2	55.58	38.81	23.15	67.84	317	254	P	H
													H
													H
													H
													H
													H
													H
													H
802.11be													H
EHT20 Full													H
CH 157		11570	54.34	-19.66	74	63.59	38.87	18.55	66.67	317	347	P	V
5785MHz		11570	43.97	-10.03	54	53.22	38.87	18.55	66.67	317	347	A	V
		17355	49.17	-19.03	68.2	55.05	38.81	23.15	67.84	238	191	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+3	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)
		11650	51.26	-22.74	74	60.75	38.67	18.61	66.77	200	311	P	H
		11650	41.61	-12.39	54	51.1	38.67	18.61	66.77	200	311	A	H
		17475	53.38	-14.82	68.2	60.29	38.42	23.26	68.59	300	300	P	H
													H
													H
													H
													H
													H
													H
													H
802.11be													H
EHT20 Full													H
CH 165		11650	53.62	-20.38	74	63.03	38.75	18.61	66.77	400	358	P	V
5825MHz		11650	42.86	-11.14	54	52.27	38.75	18.61	66.77	400	358	A	V
		17475	52.09	-16.11	68.2	59.01	38.41	23.26	68.59	400	346	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11be EHT40_Full (Band Edge @ 3m)

WIFI Ant. 1+3	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)
		5627	63.08	-5.12	68.2	46.84	33.08	12.88	29.72	342	49	P	H
		5699.4	80.43	-24.33	104.76	63.75	33.44	12.94	29.7	342	49	P	H
		5719	91.53	-18.99	110.52	74.7	33.57	12.96	29.7	342	49	P	H
		5720	85.91	-24.89	110.8	69.07	33.58	12.96	29.7	342	49	P	H
	*	5755	119.13	-	-	102.02	33.8	13	29.69	342	49	P	H
	*	5755	109.83	-	-	92.72	33.8	13	29.69	342	49	A	H
		5850.4	66.75	-54.54	121.29	49.13	34.22	13.09	29.69	342	49	P	H
		5855	65.69	-45.11	110.8	48.05	34.23	13.1	29.69	342	49	P	H
		5881	65.54	-35.2	100.74	47.87	34.25	13.13	29.71	342	49	P	H
		5925.8	65.13	-3.07	68.2	47.46	34.24	13.17	29.74	342	49	P	H
802.11be													H
EHT40 Full													H
CH 151		5624.6	63.49	-4.71	68.2	47.27	33.07	12.87	29.72	249	316	P	V
5755MHz		5697.8	76.47	-27.11	103.58	59.8	33.43	12.94	29.7	249	316	P	V
		5718.6	82.07	-28.34	110.41	65.24	33.57	12.96	29.7	249	316	P	V
		5720.8	85.34	-27.28	112.62	68.5	33.58	12.96	29.7	249	316	P	V
	*	5755	117.81	-	-	100.7	33.8	13	29.69	249	316	P	V
	*	5755	109.84	-	-	92.73	33.8	13	29.69	249	316	A	V
		5854.4	65.56	-46.61	112.17	47.93	34.22	13.1	29.69	249	316	P	V
		5855.4	65.64	-45.05	110.69	48	34.23	13.1	29.69	249	316	P	V
		5921.4	65.82	-5.03	70.85	48.13	34.25	13.17	29.73	249	316	P	V
		5945.4	64.81	-3.39	68.2	47.15	34.22	13.19	29.75	249	316	P	V
													V
													V

WIFI Ant. 1+3	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)
		5607.4	63.06	-5.14	68.2	46.91	33.02	12.86	29.73	319	39	P	H
		5698	64.02	-39.71	103.73	47.35	33.43	12.94	29.7	319	39	P	H
		5718.6	72.24	-38.17	110.41	55.41	33.57	12.96	29.7	319	39	P	H
		5725	72.56	-49.64	122.2	55.68	33.61	12.97	29.7	319	39	P	H
	*	5795	117.65	-	-	100.3	34	13.04	29.69	319	39	P	H
	*	5795	109.41	-	-	92.06	34	13.04	29.69	319	39	A	H
		5850.6	78.49	-42.34	120.83	60.87	34.22	13.09	29.69	319	39	P	H
		5856.8	76.05	-34.25	110.3	58.41	34.23	13.1	29.69	319	39	P	H
		5876.2	67.91	-36.4	104.31	50.24	34.25	13.12	29.7	319	39	P	H
		5943.4	64.77	-3.43	68.2	47.1	34.23	13.19	29.75	319	39	P	H
802.11be													H
EHT40 Full													H
CH 159		5607.8	62.25	-5.95	68.2	46.1	33.02	12.86	29.73	185	308	P	V
5795MHz		5689.8	63.53	-34.15	97.68	46.91	33.38	12.94	29.7	185	308	P	V
		5718.2	70.76	-39.54	110.3	53.94	33.56	12.96	29.7	185	308	P	V
		5725	73.2	-49	122.2	56.32	33.61	12.97	29.7	185	308	P	V
	*	5795	118.56	-	-	101.21	34	13.04	29.69	185	308	P	V
	*	5795	109.72	-	-	92.37	34	13.04	29.69	185	308	A	V
		5851	78.24	-41.68	119.92	60.62	34.22	13.09	29.69	185	308	P	V
		5857.4	74.36	-35.77	110.13	56.72	34.23	13.1	29.69	185	308	P	V
		5877	67.47	-36.24	103.71	49.8	34.25	13.12	29.7	185	308	P	V
		5938.8	64.29	-3.91	68.2	46.62	34.23	13.19	29.75	185	308	P	V
													V
													V

Remark

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

Band 4 5725~5850MHz

WIFI 802.11be EHT40_Full (Harmonic @ 3m)

WIFI Ant. 1+3	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)
		11510	52.33	-21.67	74	61.56	38.93	18.5	66.66	203	60	P	H
		11510	43.04	-10.96	54	52.27	38.93	18.5	66.66	203	60	A	H
		17265	48.99	-19.21	68.2	54.89	38.47	23.07	67.44	307	145	P	H
													H
													H
													H
													H
													H
													H
													H
802.11be													H
EHT40 Full													H
CH 151		11510	51.98	-22.02	74	61.21	38.93	18.5	66.66	288	24	P	V
5755MHz		11510	42.94	-11.06	54	52.17	38.93	18.5	66.66	288	24	A	V
		17265	51	-17.2	68.2	56.9	38.47	23.07	67.44	198	237	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+3	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)
		11590	52.09	-21.91	74	61.47	38.77	18.57	66.72	200	308	P	H
		11590	41.18	-12.82	54	50.56	38.77	18.57	66.72	200	308	A	H
		17385	51.35	-16.85	68.2	58.3	38	23.18	68.13	400	346	P	H
													H
													H
													H
													H
													H
													H
													H
802.11be													H
EHT40 Full													H
CH 159		11590	50.55	-23.45	74	59.86	38.84	18.57	66.72	400	355	P	V
5795MHz		11590	40.53	-13.47	54	49.84	38.84	18.57	66.72	400	355	A	V
		17385	52.14	-16.06	68.2	59.05	38.04	23.18	68.13	300	21	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11be EHT80_Full (Band Edge @ 3m)

WIFI Ant. 1+3	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)
		5641.2	65.62	-2.58	68.2	49.33	33.12	12.89	29.72	287	41	P	H
		5697.6	70.89	-32.54	103.43	54.22	33.43	12.94	29.7	287	41	P	H
		5719.2	71.87	-38.71	110.58	55.04	33.57	12.96	29.7	287	41	P	H
		5722.8	77.46	-39.72	117.18	60.59	33.6	12.97	29.7	287	41	P	H
	*	5775	113.41	-	-	96.18	33.9	13.02	29.69	287	41	P	H
	*	5775	104.81	-	-	87.58	33.9	13.02	29.69	287	41	A	H
		5854	71.48	-41.6	113.08	53.85	34.22	13.1	29.69	287	41	P	H
		5858.8	70.41	-39.32	109.73	52.77	34.23	13.1	29.69	287	41	P	H
		5876.6	67.46	-36.55	104.01	49.79	34.25	13.12	29.7	287	41	P	H
		5944.8	64.25	-3.95	68.2	46.58	34.23	13.19	29.75	287	41	P	H
802.11be													H
EHT80 Full													H
CH 155		5624	62.98	-5.22	68.2	46.76	33.07	12.87	29.72	183	310	P	V
5775MHz		5689.8	66.56	-31.12	97.68	49.94	33.38	12.94	29.7	183	310	P	V
		5716.6	67.09	-42.76	109.85	50.28	33.55	12.96	29.7	183	310	P	V
		5724.2	75.88	-44.5	120.38	59.01	33.6	12.97	29.7	183	310	P	V
	*	5775	113.88	-	-	96.65	33.9	13.02	29.69	183	310	P	V
	*	5775	104.96	-	-	87.73	33.9	13.02	29.69	183	310	A	V
		5852.6	67.37	-48.9	116.27	49.74	34.22	13.1	29.69	183	310	P	V
		5861.2	66.76	-42.3	109.06	49.12	34.23	13.1	29.69	183	310	P	V
		5897.2	65.45	-23.28	88.73	47.76	34.27	13.14	29.72	183	310	P	V
		5935	64.29	-3.91	68.2	46.61	34.24	13.18	29.74	183	310	P	V
													V
													V

Remark

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

Band 4 5725~5850MHz

WIFI 802.11be EHT80_Full (Harmonic @ 3m)

WIFI Ant. 1+3	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)
		11550	47.26	-26.74	74	56.46	38.9	18.53	66.63	-	-	P	H
		17325	50.12	-18.08	68.2	55.94	38.71	23.12	67.65	310	223	P	H
													H
													H
													H
													H
													H
													H
													H
													H
802.11be													H
EHT80 Full													H
CH 155		11550	47.78	-26.22	74	56.98	38.9	18.53	66.63	-	-	P	V
5775MHz		17325	49.41	-18.79	68.2	55.23	38.71	23.12	67.65	249	173	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

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

Emission above 18GHz

5GHz WIFI 802.11be EHT80 Full (SHF @ 1m)

WIFI Ant. 1+3	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)
802.11be EHT80 Full SHF		39299.5	55.07	-18.93	74	38.11	43.93	25.8	52.77	167	166	P	H
		39299.5	45.4	-8.6	54	28.44	43.93	25.8	52.77	167	166	A	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		23100	44.88	-29.12	74	39.28	39.15	16.67	50.22	-	-	P	V
		27573.13	55.21	-12.99	68.2	47.54	39.45	19.39	51.17	237	0	P	V
		39733.81	55.19	-18.81	74	37.09	43.79	26.2	51.89	255	45	P	V
		39733.81	45.2	-8.8	54	27.1	43.79	26.2	51.89	255	45	A	V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												

Emission below 1GHz

5GHz WIFI 802.11be EHT80 Full (LF @ 3m)

WIFI Ant. 1+3	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)
802.11be EHT80 Full LF		31.94	25.98	-14.02	40	32.17	25.21	1.06	32.46	-	-	P	H
		147.37	20.43	-23.07	43.5	32.77	17.93	2.13	32.4	-	-	P	H
		250.19	20.74	-25.26	46	31.4	19.01	2.78	32.45	-	-	P	H
		499.48	35.31	-10.69	46	39.71	24.19	3.98	32.57	-	-	P	H
		749.74	39.71	-6.29	46	39.38	27.59	5.02	32.28	-	-	P	H
		945.68	33.69	-12.31	46	28.81	30.51	5.51	31.14	-	-	P	H
													H
													H
													H
													H
													H
													H
		30	35.93	-4.07	40	41.44	25.9	1.05	32.46	103	12	Q	V
		92.08	25.88	-17.62	43.5	41.35	15.23	1.76	32.46	-	-	P	V
		500.45	30.41	-15.59	46	34.79	24.21	3.98	32.57	-	-	P	V
		606.18	32.17	-13.83	46	34.75	25.72	4.29	32.59	-	-	P	V
		749.74	39.3	-6.7	46	38.97	27.59	5.02	32.28	-	-	P	V
		946.65	33.42	-12.58	46	28.5	30.53	5.52	31.13	-	-	P	V
													V
													V
													V
													V
													V
													V

Remark

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

<4x4 MIMO>

Band 4 - 5725~5850MHz

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+3+4		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5642.6	56.45	-11.75	68.2	40.15	33.13	12.89	29.72	100	137	P	H
		5698.4	57.76	-46.26	104.02	41.2	33.32	12.94	29.7	100	137	P	H
		5720	72.09	-38.71	110.8	55.39	33.44	12.96	29.7	100	137	P	H
		5722.8	74.63	-42.55	117.18	57.9	33.46	12.97	29.7	100	137	P	H
	*	5745	118.87	-	-	101.98	33.59	12.99	29.69	100	137	P	H
	*	5745	112.6	-	-	95.71	33.59	12.99	29.69	100	137	A	H
													H
													H
		5617.8	57.11	-11.09	68.2	40.88	33.09	12.87	29.73	287	220	P	V
		5668.8	58.11	-24.04	82.15	41.69	33.21	12.92	29.71	287	220	P	V
		5717.8	66.67	-43.51	110.18	49.98	33.43	12.96	29.7	287	220	P	V
		5722.4	72.65	-43.62	116.27	55.92	33.46	12.97	29.7	287	220	P	V
	*	5745	119.64	-	-	102.75	33.59	12.99	29.69	287	220	P	V
	*	5745	113.08	-	-	96.19	33.59	12.99	29.69	287	220	A	V
													V
													V

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 157 5785MHz		5624.2	55.84	-12.36	68.2	39.59	33.1	12.87	29.72	100	133	P	H
		5694	57.08	-43.7	100.78	40.54	33.3	12.94	29.7	100	133	P	H
		5705.2	56.99	-49.67	106.66	40.39	33.35	12.95	29.7	100	133	P	H
		5721.2	58.28	-55.26	113.54	41.56	33.45	12.97	29.7	100	133	P	H
	*	5785	120.21	52.01	68.2	103.01	33.86	13.03	29.69	100	133	P	H
	*	5785	112.51	58.51	54	95.31	33.86	13.03	29.69	100	133	A	H
		5852	57.95	-59.69	117.64	40.47	34.08	13.09	29.69	100	133	P	H
		5864	57.88	-50.4	108.28	40.37	34.1	13.11	29.7	100	133	P	H
		5876.8	57.63	-46.23	103.86	40.08	34.13	13.12	29.7	100	133	P	H
		5945.8	57.48	-10.72	68.2	39.84	34.2	13.19	29.75	100	133	P	H
													H
													H
		5643.8	56.63	-11.57	68.2	40.32	33.14	12.89	29.72	300	225	P	V
		5689.4	56.77	-40.61	97.38	40.25	33.29	12.93	29.7	300	225	P	V
		5709.6	57.42	-50.47	107.89	40.79	33.38	12.95	29.7	300	225	P	V
		5725	57.1	-65.1	122.2	40.36	33.47	12.97	29.7	300	225	P	V
	*	5785	120.28	52.08	68.2	103.08	33.86	13.03	29.69	300	225	P	V
	*	5785	113.29	59.29	54	96.09	33.86	13.03	29.69	300	225	A	V
		5851.4	57.59	-61.42	119.01	40.11	34.08	13.09	29.69	300	225	P	V
		5858.8	57.84	-51.89	109.73	40.34	34.09	13.1	29.69	300	225	P	V
		5922.6	58.21	-11.76	69.97	40.59	34.19	13.17	29.74	300	225	P	V
		5937.8	57.94	-10.26	68.2	40.3	34.2	13.18	29.74	300	225	P	V
													V
													V

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 165 5825MHz	*	5825	108.07	-	-	90.67	34.02	13.07	29.69	200	39	P	H
	*	5825	101.78	-	-	84.38	34.02	13.07	29.69	200	39	A	H
		5853.2	67.35	-47.55	114.9	49.86	34.08	13.1	29.69	200	39	P	H
		5855.4	62.41	-48.28	110.69	44.92	34.08	13.1	29.69	200	39	P	H
		5882.6	58.42	-41.14	99.56	40.86	34.14	13.13	29.71	200	39	P	H
		5939.4	56.73	-11.47	68.2	39.09	34.2	13.19	29.75	200	39	P	H
	*	5825	117.2	-	-	99.8	34.02	13.07	29.69	200	232	P	V
	*	5825	109.97	-	-	92.57	34.02	13.07	29.69	200	232	A	V
		5850	69.19	-53.01	122.2	51.72	34.07	13.09	29.69	200	232	P	V
		5859.6	64.48	-45.03	109.51	46.98	34.09	13.1	29.69	200	232	P	V
		5900.2	57.65	-28.86	86.51	40.05	34.17	13.15	29.72	200	232	P	V
		5928	56.48	-11.72	68.2	38.86	34.19	13.17	29.74	200	232	P	V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 149 5745MHz		11490	58.4	-15.6	74	67.42	39.19	18.49	66.7	200	237	P	H
		11490	47.63	-6.37	54	56.65	39.19	18.49	66.7	200	237	A	H
		17235	51.71	-16.49	68.2	57.71	38.39	23.04	67.43	200	237	P	H
		17235	40.99	-13.01	54	46.99	38.39	23.04	67.43	200	237	A	H
													H
													H
													H
													H
													H
													H
													H
													H
		11490	55.38	-18.62	74	64.4	39.19	18.49	66.7	200	159	P	V
		11490	45.17	-8.83	54	54.19	39.19	18.49	66.7	200	159	A	V
		17235	50.44	-17.76	68.2	56.44	38.39	23.04	67.43	300	220	P	V
		17235	40.38	-13.62	54	46.38	38.39	23.04	67.43	300	220	A	V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 157 5785MHz		11570	54.28	-19.72	74	63.36	39.04	18.55	66.67	400	50	P	H
		11570	43.53	-10.47	54	52.61	39.04	18.55	66.67	400	50	A	H
		17355	50.29	-17.91	68.2	56.31	38.67	23.15	67.84	202	0	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		11570	57.03	-16.97	74	66.11	39.04	18.55	66.67	275	0	P	V
		11570	46.77	-7.23	54	55.85	39.04	18.55	66.67	275	0	A	V
		17355	51	-17.2	68.2	57.02	38.67	23.15	67.84	300	300	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 165 5825MHz		11650	59.69	-14.31	74	69.03	38.82	18.61	66.77	293	209	P	H
		11650	49.34	-4.66	54	58.68	38.82	18.61	66.77	293	209	A	H
		17475	54.12	-14.08	68.2	60.28	39.17	23.26	68.59	200	235	P	H
													H
													H
													H
													H
													H
													H
													H
													H
		11650	58.28	-15.72	74	67.62	38.82	18.61	66.77	200	174	P	V
		11650	47.99	-6.01	54	57.33	38.82	18.61	66.77	200	174	A	V
		17475	50.7	-17.5	68.2	56.86	39.17	23.26	68.59	200	199	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11be EHT20_Full (Band Edge @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5646.2	56.24	-11.96	68.2	39.93	33.14	12.89	29.72	300	235	P	H
		5696.4	60.33	-42.22	102.55	43.78	33.31	12.94	29.7	300	235	P	H
		5719.8	74.69	-36.05	110.74	57.99	33.44	12.96	29.7	300	235	P	H
		5723.8	75.65	-43.81	119.46	58.92	33.46	12.97	29.7	300	235	P	H
	*	5745	119.26	-	-	102.37	33.59	12.99	29.69	300	235	P	H
	*	5745	111.59	-	-	94.7	33.59	12.99	29.69	300	235	A	H
802.11be													H
EHT20 Full													H
CH 149		5601.4	56.51	-11.69	68.2	40.32	33.07	12.85	29.73	300	223	P	V
5745MHz		5695.4	60.08	-41.73	101.81	43.53	33.31	12.94	29.7	300	223	P	V
		5704.4	72.05	-34.38	106.43	55.45	33.35	12.95	29.7	300	223	P	V
		5722.8	76.77	-40.41	117.18	60.04	33.46	12.97	29.7	300	223	P	V
	*	5745	119.23	-	-	102.34	33.59	12.99	29.69	300	223	P	V
	*	5745	112.93	-	-	96.04	33.59	12.99	29.69	300	223	A	V
													V
													V

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5642.8	55.87	-12.33	68.2	39.57	33.13	12.89	29.72	300	132	P	H
		5693.4	56.31	-44.02	100.33	39.77	33.3	12.94	29.7	300	132	P	H
		5717.2	56.53	-53.49	110.02	39.84	33.43	12.96	29.7	300	132	P	H
		5723.8	56.2	-63.26	119.46	39.47	33.46	12.97	29.7	300	132	P	H
	*	5785	115.02	-	-	97.82	33.86	13.03	29.69	300	132	P	H
	*	5785	106.08	-	-	88.88	33.86	13.03	29.69	300	132	A	H
		5852.4	57.01	-59.72	116.73	39.52	34.08	13.1	29.69	300	132	P	H
		5856	58.55	-51.97	110.52	41.05	34.09	13.1	29.69	300	132	P	H
		5880.2	57.3	-44.04	101.34	39.76	34.13	13.12	29.71	300	132	P	H
		5945.6	58.02	-10.18	68.2	40.38	34.2	13.19	29.75	300	132	P	H
802.11be													H
EHT20 Full													H
CH 157		5636.6	57.23	-10.97	68.2	40.95	33.12	12.88	29.72	300	225	P	V
5785MHz		5680.2	56.42	-34.17	90.59	39.95	33.25	12.93	29.71	300	225	P	V
		5716.4	57.29	-52.5	109.79	40.61	33.42	12.96	29.7	300	225	P	V
		5723.2	57.9	-60.2	118.1	41.17	33.46	12.97	29.7	300	225	P	V
	*	5785	120.78	-	-	103.58	33.86	13.03	29.69	300	225	P	V
	*	5785	112.77	-	-	95.57	33.86	13.03	29.69	300	225	A	V
		5851.4	57.69	-61.32	119.01	40.21	34.08	13.09	29.69	300	225	P	V
		5868.6	57.42	-49.57	106.99	39.9	34.11	13.11	29.7	300	225	P	V
		5924.6	57.71	-10.78	68.49	40.09	34.19	13.17	29.74	300	225	P	V
		5950	57.57	-10.63	68.2	39.91	34.21	13.2	29.75	300	225	P	V
													V
													V

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
	*	5825	118.01	-	-	100.61	34.02	13.07	29.69	200	128	P	H
	*	5825	110.51	-	-	93.11	34.02	13.07	29.69	200	128	A	H
		5850.6	77.07	-43.76	120.83	59.59	34.08	13.09	29.69	200	128	P	H
		5855.6	70.65	-39.98	110.63	53.16	34.08	13.1	29.69	200	128	P	H
		5880.6	57.93	-43.11	101.04	40.39	34.13	13.12	29.71	200	128	P	H
		5943	57.28	-10.92	68.2	39.64	34.2	13.19	29.75	200	128	P	H
802.11be													H
EHT20 Full													H
CH 165	*	5825	116.89	-	-	99.49	34.02	13.07	29.69	400	128	P	V
5825MHz	*	5825	110.49	-	-	93.09	34.02	13.07	29.69	400	128	A	V
		5850.2	76.71	-45.03	121.74	59.24	34.07	13.09	29.69	400	128	P	V
		5855	73.25	-37.55	110.8	55.76	34.08	13.1	29.69	400	128	P	V
		5893.6	57.68	-33.72	91.4	40.1	34.16	13.14	29.72	400	128	P	V
		5950	57.06	-11.14	68.2	39.4	34.21	13.2	29.75	400	128	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11be EHT20 Full (Harmonic @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		11490	56.73	-17.27	74	65.75	39.19	18.49	66.7	200	235	P	H
		11490	47.24	-6.76	54	56.26	39.19	18.49	66.7	200	235	A	H
		17235	53.67	-14.53	68.2	59.67	38.39	23.04	67.43	200	237	P	H
		17235	41.82	-12.18	54	47.82	38.39	23.04	67.43	200	237	A	H
													H
													H
													H
													H
													H
													H
802.11be													H
EHT20 Full													H
CH 149		11490	54	-20	74	63.02	39.19	18.49	66.7	200	158	P	V
5745MHz		11490	44.9	-9.1	54	53.92	39.19	18.49	66.7	200	158	A	V
		17235	52.66	-15.54	68.2	58.66	38.39	23.04	67.43	300	220	P	V
		17235	40.82	-13.18	54	46.82	38.39	23.04	67.43	300	220	A	V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		11570	58.01	-15.99	74	67.09	39.04	18.55	66.67	300	227	P	H
		11570	46.78	-7.22	54	55.86	39.04	18.55	66.67	300	227	A	H
		17355	53.41	-14.79	68.2	59.43	38.67	23.15	67.84	200	234	P	H
													H
													H
													H
													H
													H
													H
													H
802.11be													H
EHT20 Full													H
CH 157		11570	54.77	-19.23	74	63.85	39.04	18.55	66.67	200	171	P	V
5785MHz		11570	44.1	-9.9	54	53.18	39.04	18.55	66.67	200	171	A	V
		17355	53.68	-14.52	68.2	59.7	38.67	23.15	67.84	300	218	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		11650	60.41	-13.59	74	69.75	38.82	18.61	66.77	300	227	P	H
		11650	50.26	-3.74	54	59.6	38.82	18.61	66.77	300	227	A	H
		17475	54.67	-13.53	68.2	60.83	39.17	23.26	68.59	200	242	P	H
													H
													H
													H
													H
													H
													H
													H
802.11be													H
EHT20 Full													H
CH 165		11650	58.28	-15.72	74	67.62	38.82	18.61	66.77	100	125	P	V
5825MHz		11650	48.01	-5.99	54	57.35	38.82	18.61	66.77	100	125	A	V
		17475	53.72	-14.48	68.2	59.88	39.17	23.26	68.59	200	228	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11be EHT40_Full (Band Edge @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5632.8	56.87	-11.33	68.2	40.59	33.12	12.88	29.72	200	107	P	H
		5698.8	71.53	-32.79	104.32	54.97	33.32	12.94	29.7	200	107	P	H
		5709.8	75.63	-32.32	107.95	59	33.38	12.95	29.7	200	107	P	H
		5720.4	71.35	-40.36	111.71	54.65	33.44	12.96	29.7	200	107	P	H
	*	5755	116.8	-	-	99.84	33.65	13	29.69	200	107	P	H
	*	5755	108.91	-	-	91.95	33.65	13	29.69	200	107	A	H
		5852.8	60.15	-55.67	115.82	42.66	34.08	13.1	29.69	200	107	P	H
		5855.8	60.25	-50.33	110.58	42.75	34.09	13.1	29.69	200	107	P	H
		5878.4	58.13	-44.54	102.67	40.59	34.13	13.12	29.71	200	107	P	H
		5935.8	57.37	-10.83	68.2	39.73	34.2	13.18	29.74	200	107	P	H
802.11be													H
EHT40 Full													H
CH 151		5612.4	58.78	-9.42	68.2	42.56	33.09	12.86	29.73	102	103	P	V
5755MHz		5698.6	75.02	-29.15	104.17	58.46	33.32	12.94	29.7	102	103	P	V
		5718.8	80.11	-30.35	110.46	63.42	33.43	12.96	29.7	102	103	P	V
		5721.4	75.68	-38.31	113.99	58.96	33.45	12.97	29.7	102	103	P	V
	*	5755	119.27	-	-	102.31	33.65	13	29.69	102	103	P	V
	*	5755	111.73	-	-	94.77	33.65	13	29.69	102	103	A	V
		5850.8	61.33	-59.05	120.38	43.85	34.08	13.09	29.69	102	103	P	V
		5874.6	59.2	-46.11	105.31	41.66	34.12	13.12	29.7	102	103	P	V
		5881	58.1	-42.64	100.74	40.55	34.13	13.13	29.71	102	103	P	V
		5932.8	57.9	-10.3	68.2	40.26	34.2	13.18	29.74	102	103	P	V
													V
													V

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5616.4	56.49	-11.71	68.2	40.26	33.09	12.87	29.73	300	180	P	H
		5689.6	56.53	-41	97.53	40	33.29	12.94	29.7	300	180	P	H
		5714.6	63.72	-45.57	109.29	47.05	33.41	12.96	29.7	300	180	P	H
		5725	62.95	-59.25	122.2	46.21	33.47	12.97	29.7	300	180	P	H
	*	5795	112.73	-	-	95.45	33.93	13.04	29.69	300	180	P	H
	*	5795	105.04	-	-	87.76	33.93	13.04	29.69	300	180	A	H
		5852.2	72.18	-45	117.18	54.7	34.08	13.09	29.69	300	180	P	H
		5870.2	64.97	-41.57	106.54	47.45	34.11	13.11	29.7	300	180	P	H
		5875.2	58.85	-46.2	105.05	41.31	34.12	13.12	29.7	300	180	P	H
		5941.2	58.2	-10	68.2	40.56	34.2	13.19	29.75	300	180	P	H
802.11be													H
EHT40 Full													H
CH 159		5629.6	57.68	-10.52	68.2	41.41	33.11	12.88	29.72	100	95	P	V
5795MHz		5698.2	58.72	-45.15	103.87	42.16	33.32	12.94	29.7	100	95	P	V
		5717.6	67.93	-42.2	110.13	51.24	33.43	12.96	29.7	100	95	P	V
		5720.6	67.23	-44.94	112.17	50.52	33.45	12.96	29.7	100	95	P	V
	*	5795	117.28	-	-	100	33.93	13.04	29.69	100	95	P	V
	*	5795	110.08	-	-	92.8	33.93	13.04	29.69	100	95	A	V
		5852.8	72.49	-43.33	115.82	55	34.08	13.1	29.69	100	95	P	V
		5855.6	71.7	-38.93	110.63	54.21	34.08	13.1	29.69	100	95	P	V
		5889.6	62.63	-31.73	94.36	45.06	34.15	13.13	29.71	100	95	P	V
		5945.2	59.62	-8.58	68.2	41.98	34.2	13.19	29.75	100	95	P	V
													V
													V

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

Band 4 5725~5850MHz

WIFI 802.11be EHT40_Full (Harmonic @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		11510	54.19	-19.81	74	63.21	39.14	18.5	66.66	100	222	P	H
		11510	43.28	-10.72	54	52.3	39.14	18.5	66.66	100	222	A	H
		17265	51.98	-16.22	68.2	57.91	38.44	23.07	67.44	200	235	P	H
													H
													H
													H
													H
													H
													H
													H
802.11be													H
EHT40 Full													H
CH 151		11510	51.75	-22.25	74	60.77	39.14	18.5	66.66	200	180	P	V
5755MHz		11510	42.09	-11.91	54	51.11	39.14	18.5	66.66	200	180	A	V
		17265	51.08	-17.12	68.2	57.01	38.44	23.07	67.44	100	273	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		11590	54.31	-19.69	74	63.47	38.99	18.57	66.72	300	227	P	H
		11590	44.63	-9.37	54	53.79	38.99	18.57	66.72	300	227	A	H
		17385	48.65	-19.55	68.2	54.82	38.78	23.18	68.13	200	243	P	H
													H
													H
													H
													H
													H
													H
													H
802.11be													H
EHT40 Full													H
CH 159		11590	53.33	-20.67	74	62.49	38.99	18.57	66.72	100	127	P	V
5795MHz		11590	43.13	-10.87	54	52.29	38.99	18.57	66.72	100	127	A	V
		17385	52.47	-15.73	68.2	58.64	38.78	23.18	68.13	400	216	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11be EHT80_Full (Band Edge @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5643.2	63	-5.2	68.2	46.7	33.13	12.89	29.72	400	142	P	H
		5662.6	66.22	-11.33	77.55	49.83	33.19	12.91	29.71	400	142	P	H
		5704.6	67.24	-39.25	106.49	50.64	33.35	12.95	29.7	400	142	P	H
		5724	73.69	-46.23	119.92	56.95	33.47	12.97	29.7	400	142	P	H
	*	5775	113	-	-	95.88	33.79	13.02	29.69	400	142	P	H
	*	5775	104.69	-	-	87.57	33.79	13.02	29.69	400	142	A	H
		5850	63.93	-58.27	122.2	46.46	34.07	13.09	29.69	400	142	P	H
		5865.6	67.96	-39.87	107.83	50.45	34.1	13.11	29.7	400	142	P	H
		5884.6	64.09	-33.98	98.07	46.53	34.14	13.13	29.71	400	142	P	H
		5947.4	57.23	-10.97	68.2	39.58	34.21	13.19	29.75	400	142	P	H
802.11be													H
EHT80 Full													H
CH 155		5648.2	63.87	-4.33	68.2	47.55	33.14	12.9	29.72	116	109	P	V
5775MHz		5650.8	66.08	-2.71	68.79	49.75	33.15	12.9	29.72	116	109	P	V
		5719	75.3	-35.22	110.52	58.6	33.44	12.96	29.7	116	109	P	V
		5724.8	73.51	-48.23	121.74	56.77	33.47	12.97	29.7	116	109	P	V
	*	5775	115.97	-	-	98.85	33.79	13.02	29.69	116	109	P	V
	*	5775	108.36	-	-	91.24	33.79	13.02	29.69	116	109	A	V
		5853	72.34	-43.02	115.36	54.85	34.08	13.1	29.69	116	109	P	V
		5855.2	70.81	-39.93	110.74	53.32	34.08	13.1	29.69	116	109	P	V
		5879.2	65.13	-36.95	102.08	47.59	34.13	13.12	29.71	116	109	P	V
		5928.8	62.22	-5.98	68.2	44.59	34.19	13.18	29.74	116	109	P	V
													V
													V

Remark

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

Band 4 5725~5850MHz

WIFI 802.11be EHT80_Full (Harmonic @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		11550	48.72	-25.28	74	57.72	39.1	18.53	66.63	200	244	P	H
		11550	41.93	-12.07	54	50.93	39.1	18.53	66.63	200	244	A	H
		17325	48.94	-19.26	68.2	54.9	38.57	23.12	67.65	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
802.11be													H
EHT80 Full													H
CH 155		11550	47.22	-26.78	74	56.22	39.1	18.53	66.63	200	154	P	V
5775MHz		11550	41.25	-12.75	54	50.25	39.1	18.53	66.63	200	154	A	V
		17325	49.73	-18.47	68.2	55.69	38.57	23.12	67.65	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												

Emission above 18GHz

5GHz WIFI 802.11be EHT80 Full (SHF @ 1m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11be EHT80 Full SHF		23100	43.55	-30.45	74	37.24	39.03	17.5	50.22	-	-	P	H
		39824	55.74	-18.26	74	36.33	43.35	27.74	51.68	-	-	P	H
		39824	39.86	-14.14	54	20.45	43.35	27.74	51.68	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
		23100	45.54	-28.46	74	39.11	39.15	17.5	50.22	-	-	P	V
		39714	57.01	-16.99	74	37.59	43.8	27.61	51.99	-	-	P	V
		39714	39.54	-14.46	54	20.12	43.8	27.61	51.99	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												

Emission below 1GHz

5GHz WIFI 802.11be EHT80 Full (LF @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11be EHT80 Full LF		83.35	27.69	-12.31	40	44.3	14.24	1.61	32.46	211	97	Q	H
		95.96	36.18	-7.32	43.5	50.73	16.08	1.84	32.47	-	-	P	H
		190.05	35.35	-8.15	43.5	49.87	15.5	2.4	32.42	-	-	P	H
		232.73	35.43	-10.57	46	47.96	17.26	2.67	32.46	-	-	P	H
		636.25	33.49	-12.51	46	35.26	26.35	4.42	32.54	-	-	P	H
		949.56	33.81	-12.19	46	28.78	30.59	5.53	31.09	-	-	P	H
													H
													H
													H
													H
													H
													H
		35.82	36.59	-3.41	40	45.19	22.78	1.07	32.45	100	45	Q	V
		89.17	36.28	-7.22	43.5	52.11	14.93	1.7	32.46	125	37	Q	V
		239.52	37.93	-8.07	46	49.74	17.94	2.72	32.47	-	-	P	V
		313.24	30.66	-15.34	46	40.1	19.93	3.12	32.49	-	-	P	V
		859.35	32.47	-13.53	46	29.73	29.19	5.3	31.75	-	-	P	V
		957.32	34.24	-11.76	46	29.22	30.45	5.57	31	-	-	P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line. 3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.												

Note symbol

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

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

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+3		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5650	55.45	-12.75	68.2	54.51	32.22	4.58	35.86	103	308	P	H

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

For Peak Limit @ 2390MHz:

1. Level(dBµV/m)

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

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

= 55.45 (dBµV/m)

2. Over Limit(dB)

= Level(dBµV/m) – Limit Line(dBµV/m)

= 55.45(dBµV/m) – 68.2(dBµV/m)

= -12.75 (dB)

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

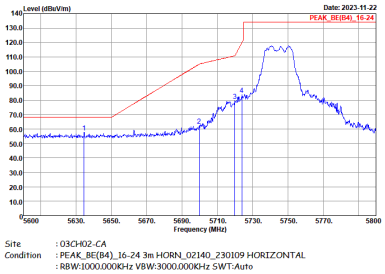
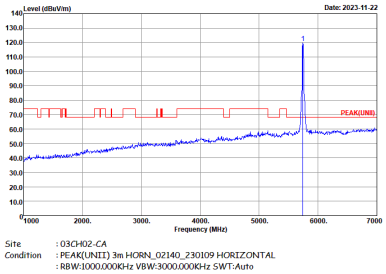
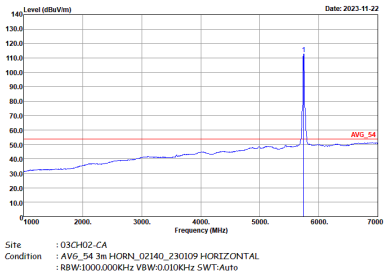
Appendix D. Radiated Spurious Emission Plots

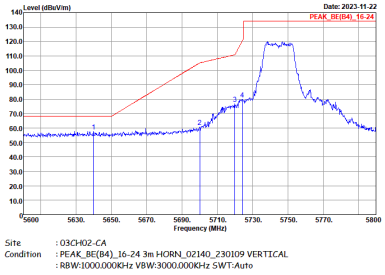
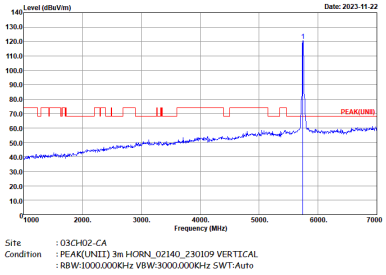
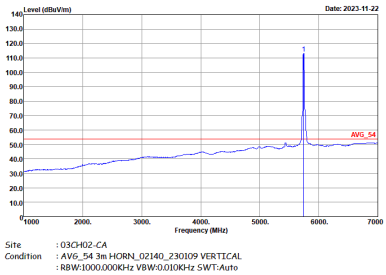
Test Engineer :	Jesse Fan and Minh Nguyen	**Temperature :**	15.5~23.5°C
		Relative Humidity :	31.8~64.1%

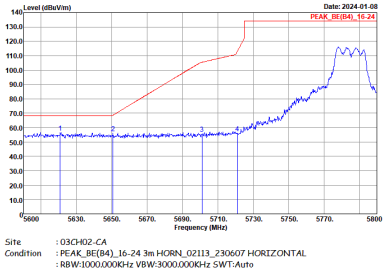
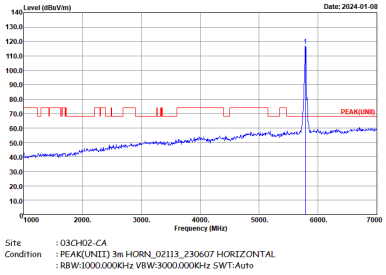
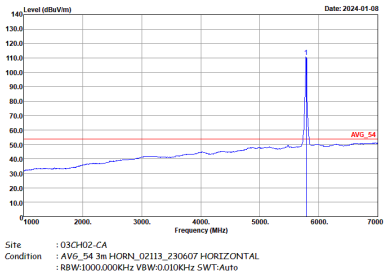
<2x2 MIMO>

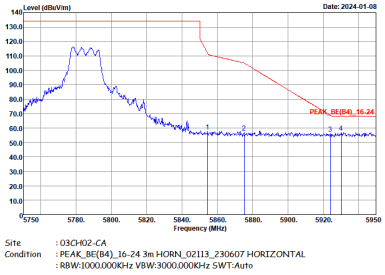
Band 4 - 5725~5850MHz

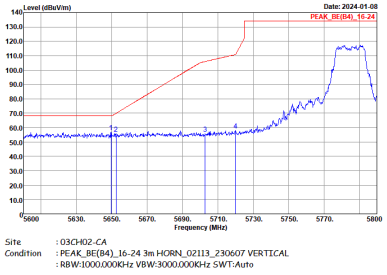
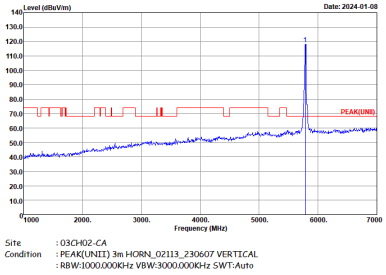
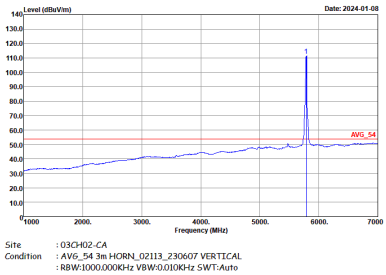
WIFI 802.11a (Band Edge @ 3m)

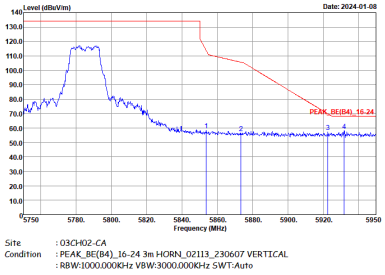
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1+3	Horizontal	Fundamental
Peak		
Avg	Left blank	

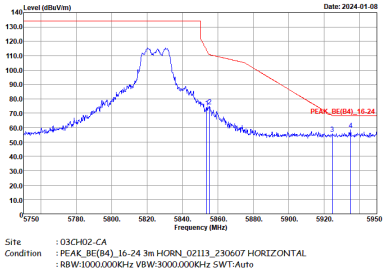
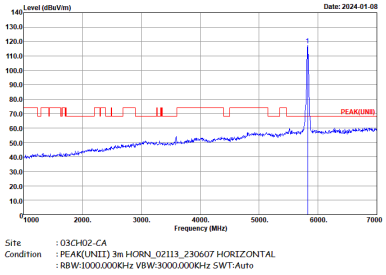
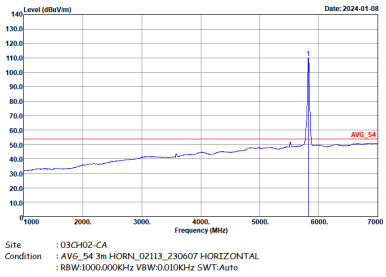
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1+3	Vertical	Fundamental
Peak		
Avg	Left blank	

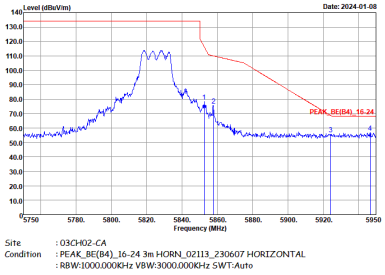
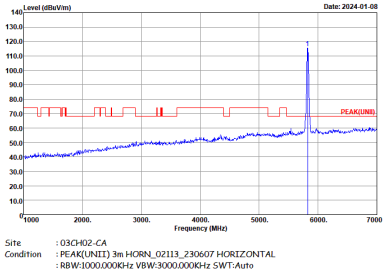
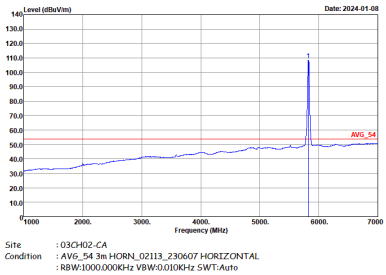
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+3	Horizontal	Fundamental
Peak		
Avg	Left blank	

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+3	Horizontal	Fundamental
Peak		Left blank

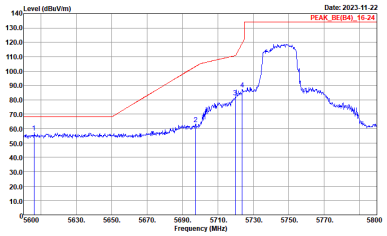
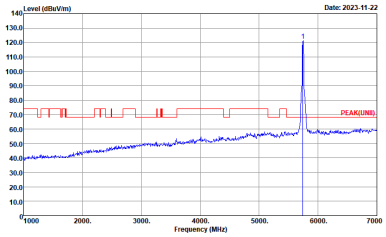
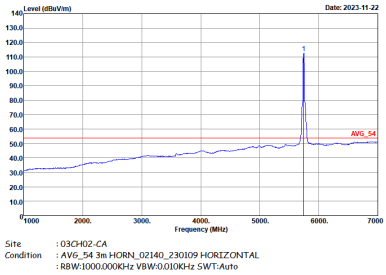
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+3	Vertical	Fundamental
Peak		
Avg	Left blank	

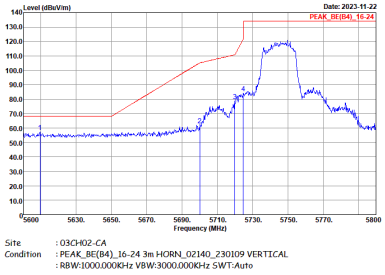
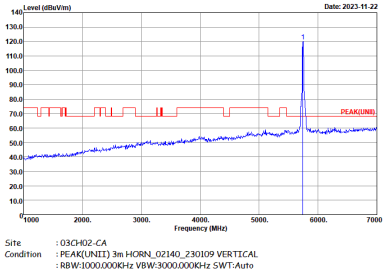
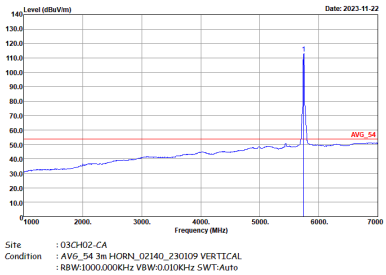
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+3	Vertical	Fundamental
Peak		Left blank

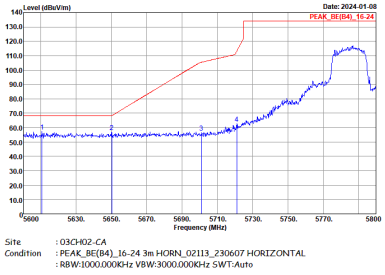
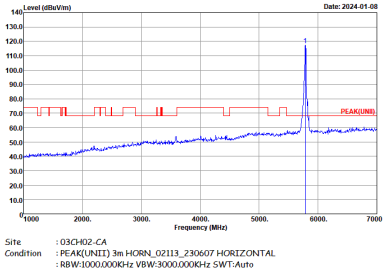
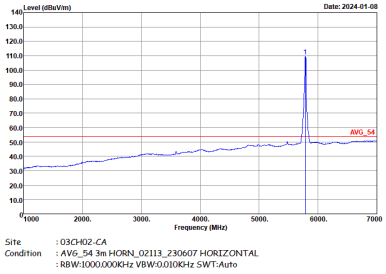
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1+3	Horizontal	Fundamental
Peak		
Avg	Left blank	

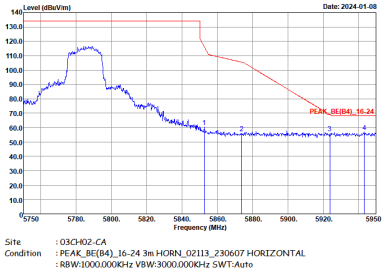
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1+3	Vertical	Fundamental
Peak		
Avg	Left blank	

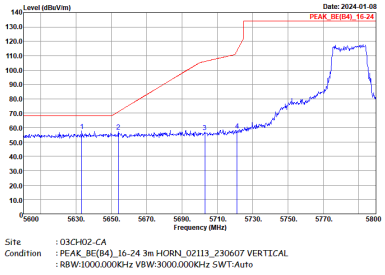
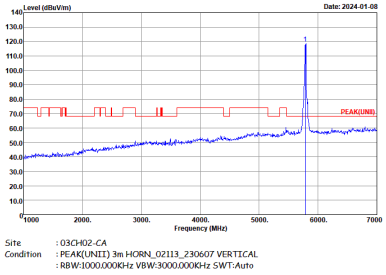
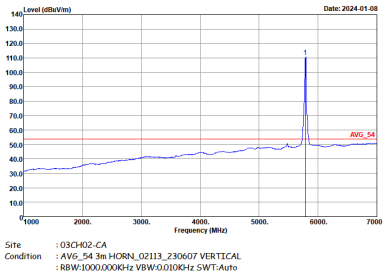
Band 4 5725~5850MHz
WIFI 802.11be EHT20 Full (Band Edge @ 3m)

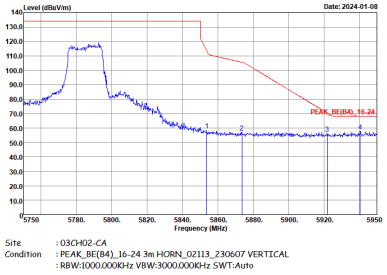
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH149 5745MHz	
1+3	Horizontal	Fundamental
Peak		
Avg	Left blank	

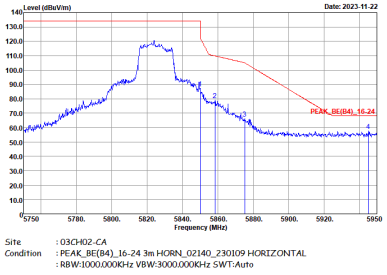
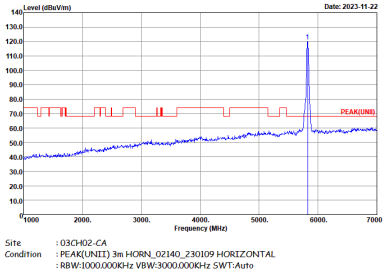
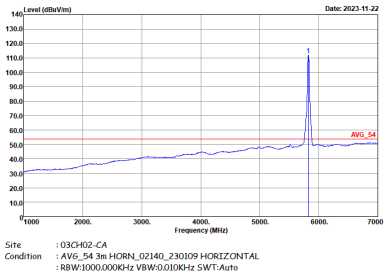
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH149 5745MHz	
1+3	Vertical	Fundamental
Peak		
Avg	Left blank	

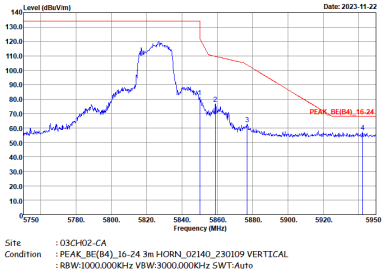
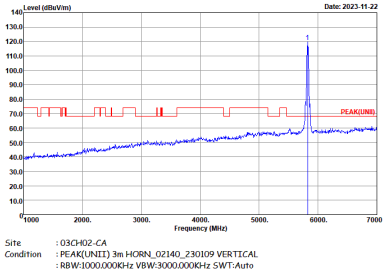
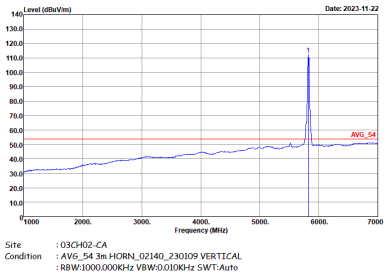
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH157 5785MHz	
1+3	Horizontal	Fundamental
Peak		
Avg	Left blank	

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH157 5785MHz	
1+3	Horizontal	Fundamental
Peak		Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH157 5785MHz	
1+3	Vertical	Fundamental
Peak		
Avg	Left blank	

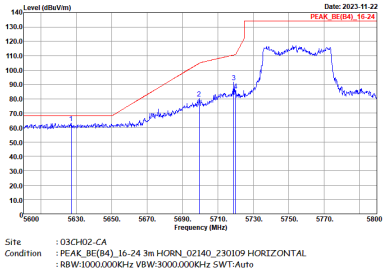
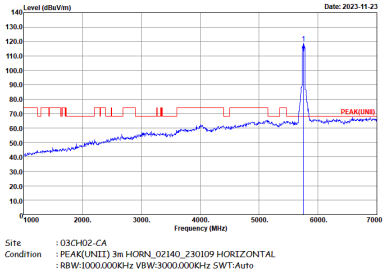
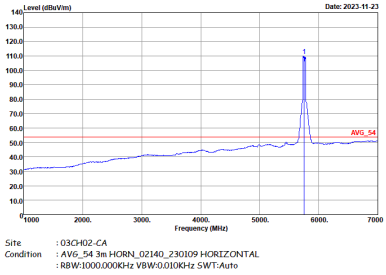
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH157 5785MHz	
1+3	Vertical	Fundamental
Peak		Left blank

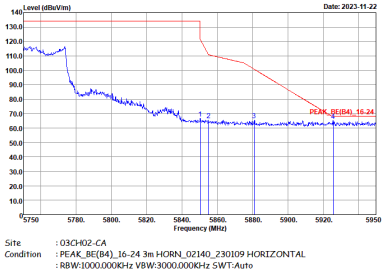
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH165 5825MHz	
1+3	Horizontal	Fundamental
Peak		
Avg	Left blank	

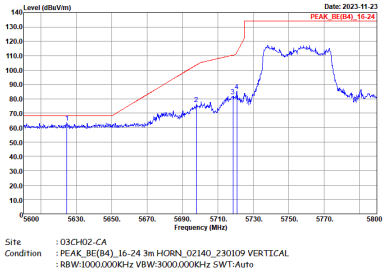
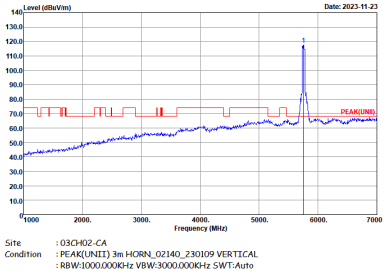
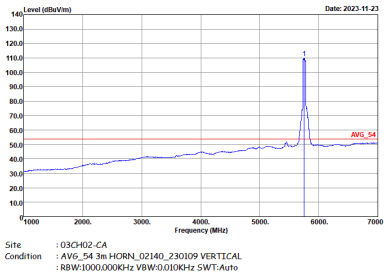
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH165 5825MHz	
1+3	Vertical	Fundamental
Peak		
Avg	Left blank	

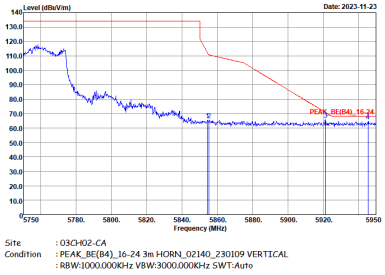
Band 4 5725~5850MHz

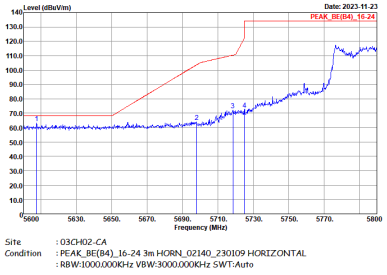
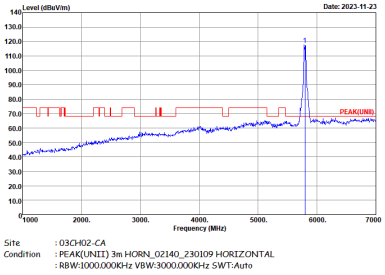
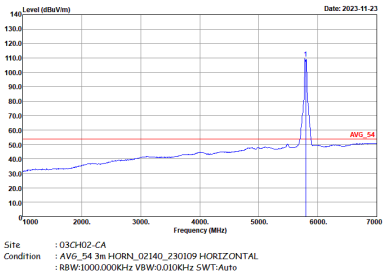
WIFI 802.11be EHT40 Full (Band Edge @ 3m)

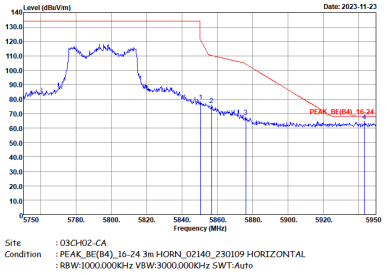
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT40 Full CH151 5755MHz	
1+3	Horizontal	Fundamental
Peak		
Avg	Left blank	

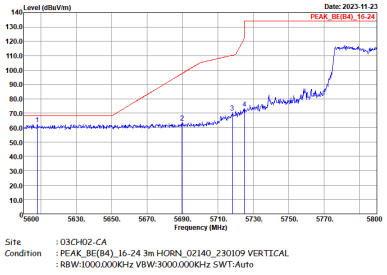
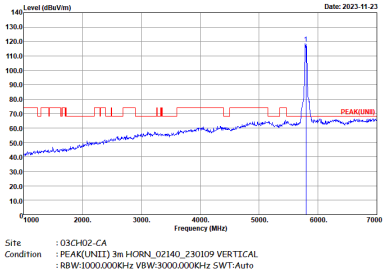
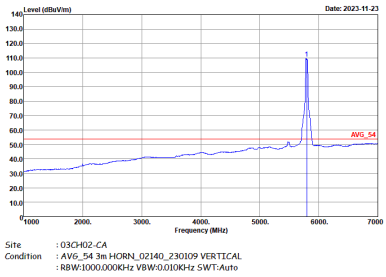
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT40 Full CH151 5755MHz	
1+3	Horizontal	Fundamental
Peak		Left blank

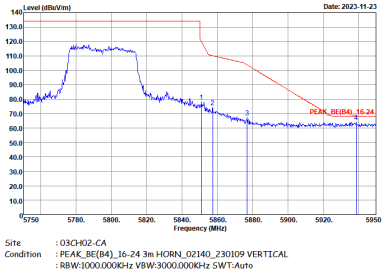
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT40 Full CH151 5755MHz	
1+3	Vertical	Fundamental
Peak		
Avg	Left blank	

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT40 Full CH151 5755MHz	
1+3	Vertical	Fundamental
Peak		Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT40 Full HT40 CH159 5795MHz	
1+3	Horizontal	Fundamental
Peak		
Avg	Left blank	

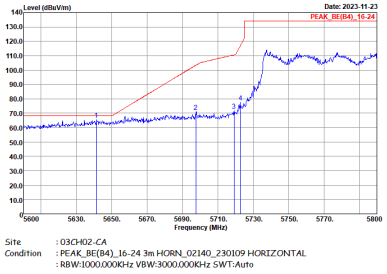
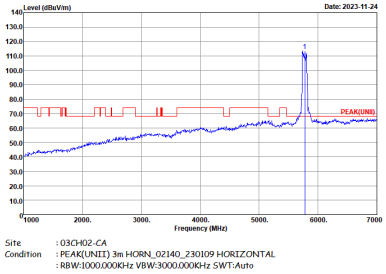
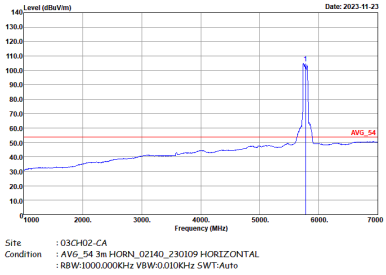
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT40 Full HT40 CH159 5795MHz	
1+3	Horizontal	Fundamental
Peak		Left blank

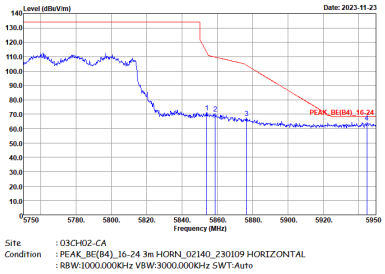
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT40 Full CH159 5795MHz	
1+3	Vertical	Fundamental
Peak		
Avg	Left blank	

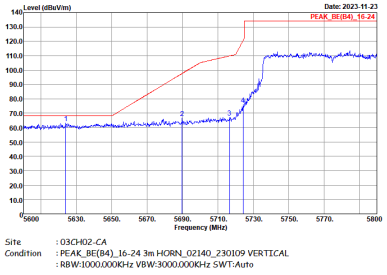
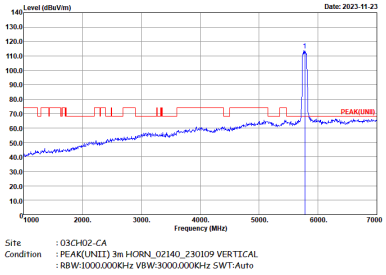
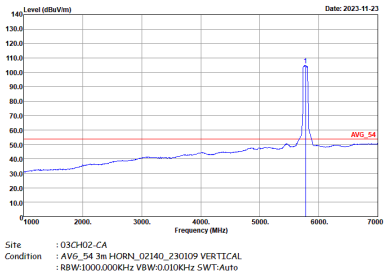
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT40 Full CH159 5795MHz	
1+3	Vertical	Fundamental
Peak		Left blank

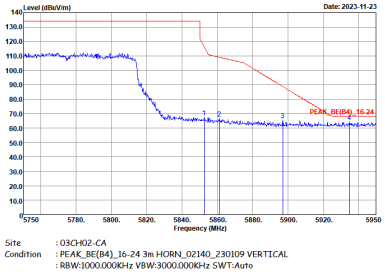
Band 4 5725~5850MHz

WIFI 802.11be EHT80 Full (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT80 Full CH155 5775MHz	
1+3	Horizontal	Fundamental
Peak		
Avg	Left blank	

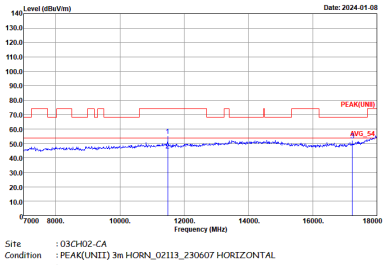
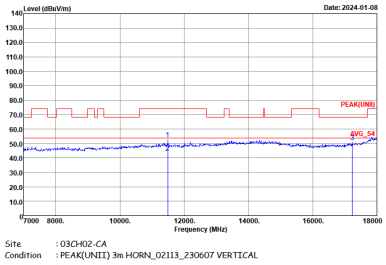
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT80 Full CH155 5775MHz	
1+3	Horizontal	Fundamental
Peak		Left blank

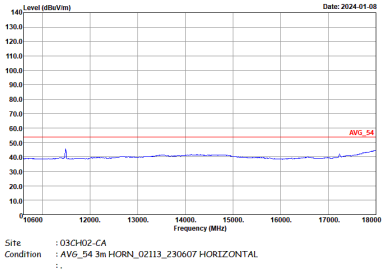
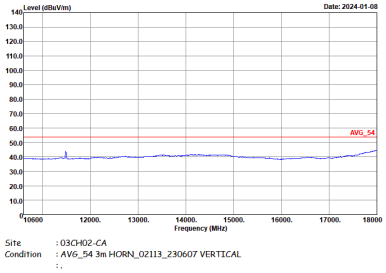
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT80 Full CH155 5775MHz	
1+3	Vertical	Fundamental
Peak		
Avg	Left blank	

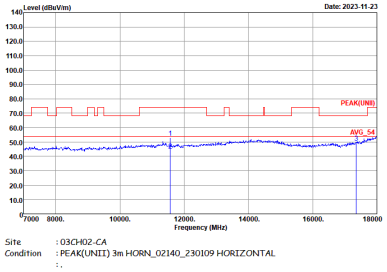
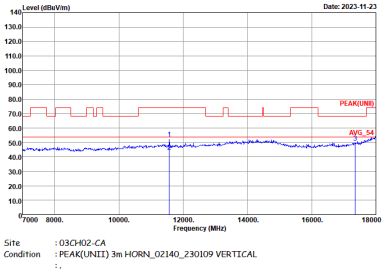
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT80 Full CH155 5775MHz	
1+3	Vertical	Fundamental
Peak		Left blank

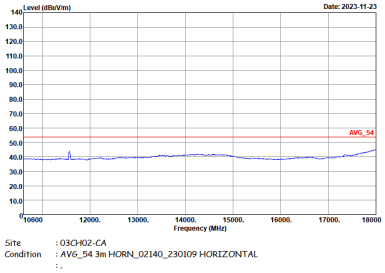
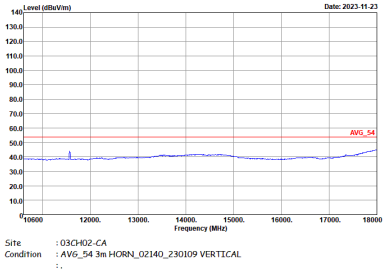
Band 4 - 5725~5850MHz

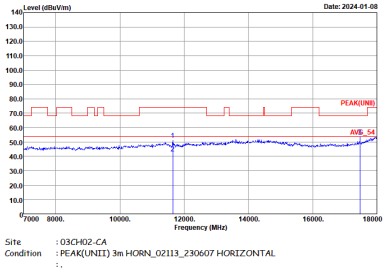
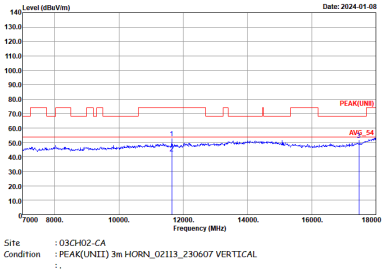
WIFI 802.11a (Harmonic @ 3m)

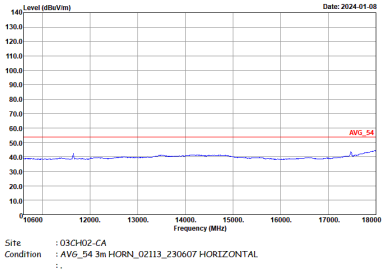
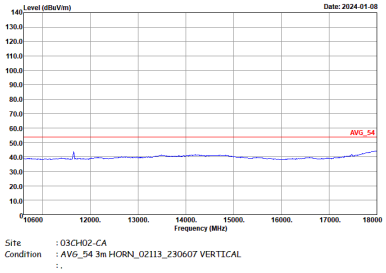
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
1+3	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
1+3	Horizontal	Vertical
10.6G ~18G Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
1+3	Horizontal	Vertical
Peak Avg.		

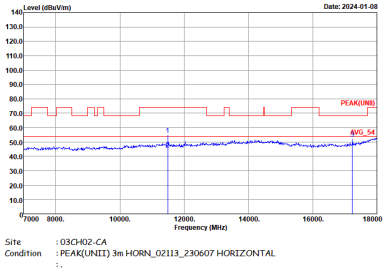
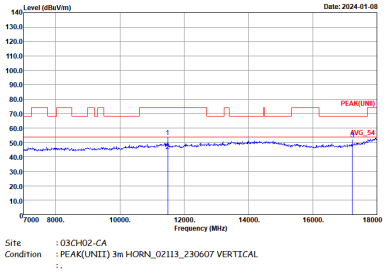
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
1+3	Horizontal	Vertical
10.6G ~18G Avg.		

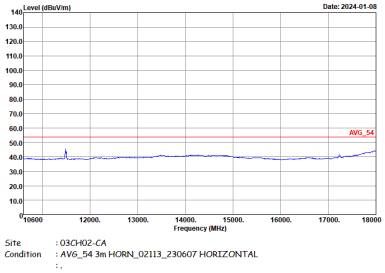
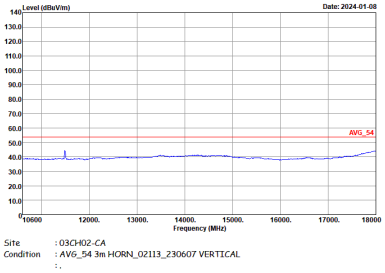
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
1+3	Horizontal	Vertical
Peak Avg.		

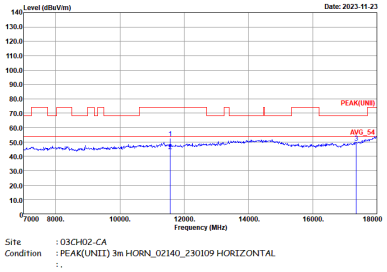
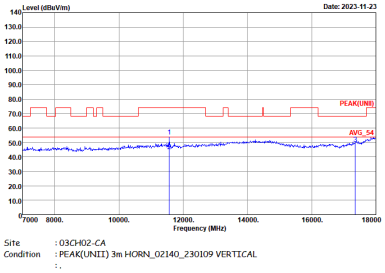
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
1+3	Horizontal	Vertical
10.6G ~18G Avg.		

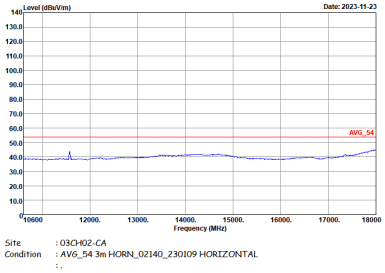
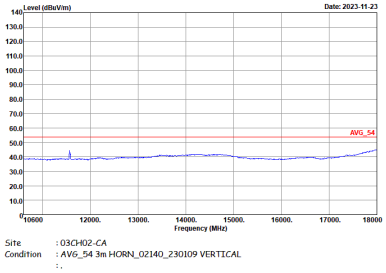
Band 4 5725~5850MHz

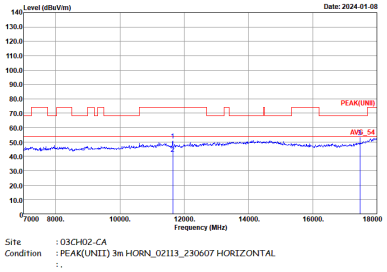
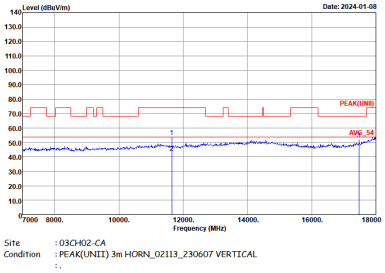
WIFI 802.11be EHT20 Full (Harmonic @ 3m)

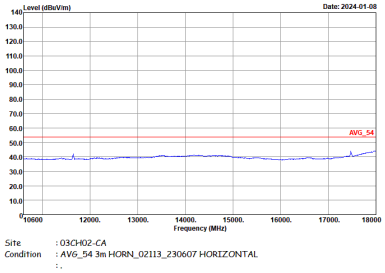
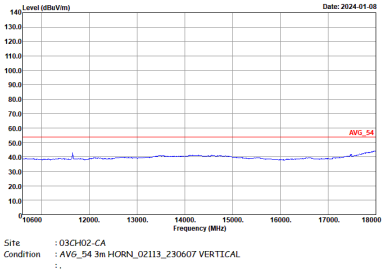
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11be EHT20 Full CH149 5745MHz	
1+3	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11be EHT20 Full CH149 5745MHz	
1+3	Horizontal	Vertical
10.6G ~18G Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11be EHT20 Full CH157 5785MHz	
1+3	Horizontal	Vertical
Peak Avg.		

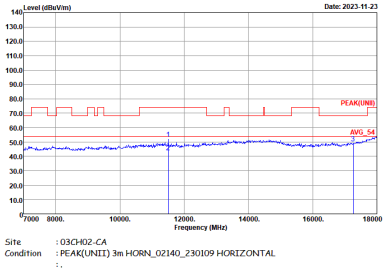
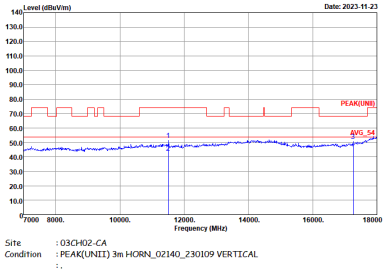
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11be EHT20 Full CH157 5785MHz	
1+3	Horizontal	Vertical
10.6G ~18G Avg.		

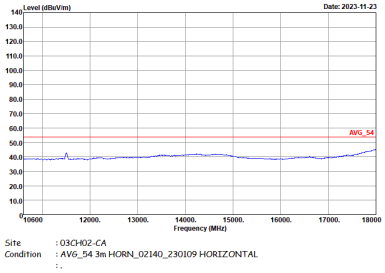
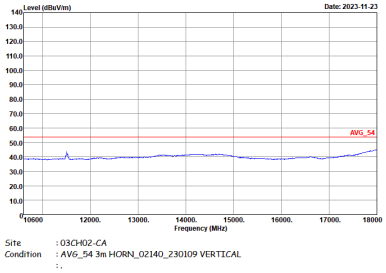
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11be EHT20 Full CH165 5825MHz	
1+3	Horizontal	Vertical
Peak Avg.		

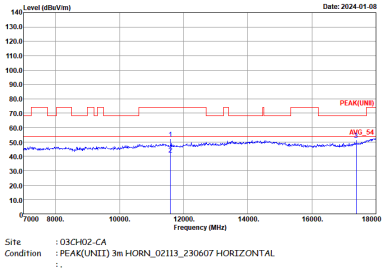
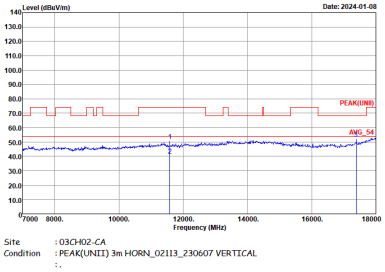
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11be EHT20 Full CH165 5825MHz	
1+3	Horizontal	Vertical
10.6G ~18G Avg.		

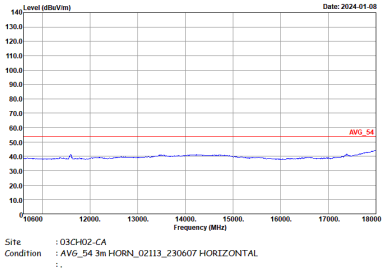
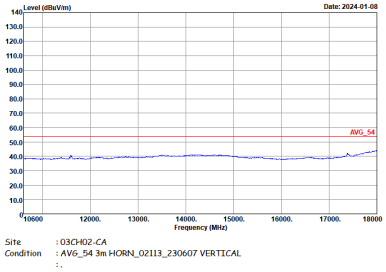
Band 4 5725~5850MHz

WIFI 802.11be EHT40 Full (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11be EHT40 Full CH151 5755MHz	
1+3	Horizontal	Vertical
Peak Avg.		

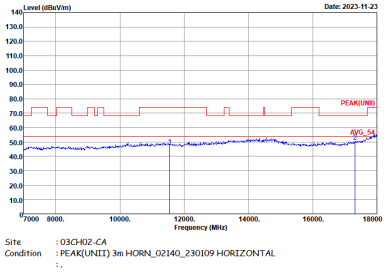
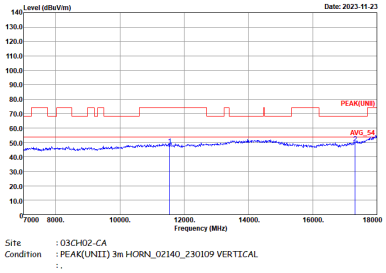
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11be EHT40 Full CH151 5755MHz	
1+3	Horizontal	Vertical
10.6G ~18G Avg.		

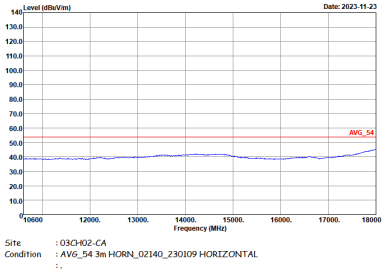
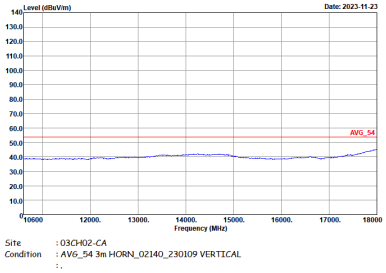
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11be EHT40 Full CH159 5795MHz	
1+3	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11be EHT40 Full CH159 5795MHz	
1+3	Horizontal	Vertical
10.6G ~18G Avg.		

Band 4 5725~5850MHz

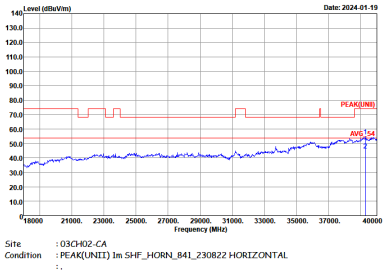
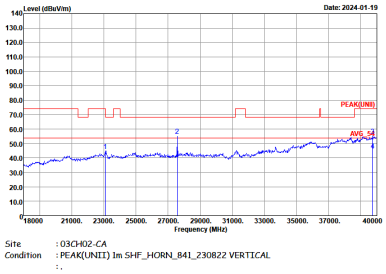
WIFI 802.11be EHT80 Full (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11be EHT80 Full CH155 5775MHz	
1+3	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11be EHT80 Full CH155 5775MHz	
1+3	Horizontal	Vertical
10.6G ~18G Avg.		

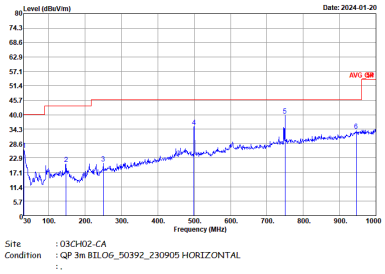
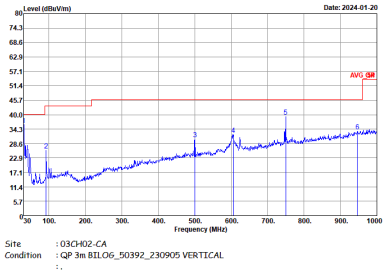
Emission above 18GHz

5GHz WIFI 802.11be EHT80 Full (SHF @ 1m)

WIFI	5GHz WIFI	
ANT	802.11be EHT80 Full SHF	
1+3	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

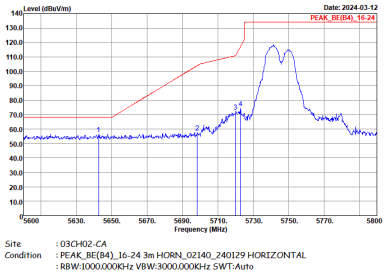
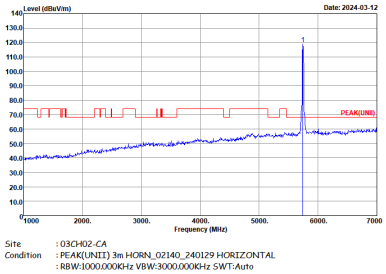
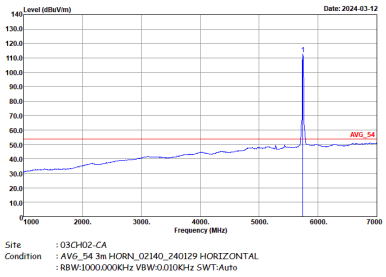
5GHz WIFI 802.11be EHT80 Full (LF @ 3m)

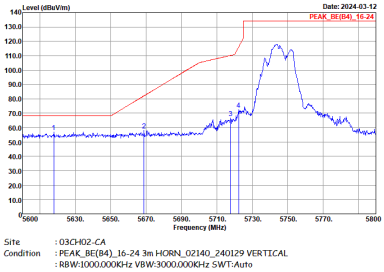
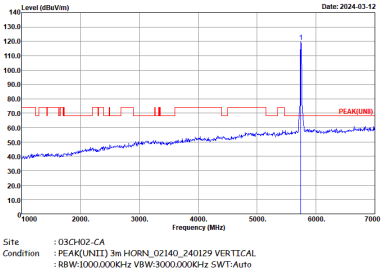
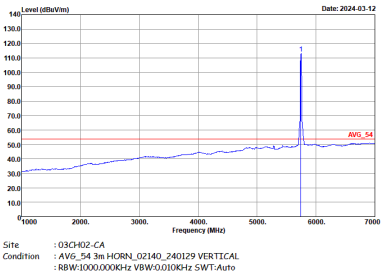
WIFI	5GHz WIFI	
ANT	802.11be EHT80 Full LF	
1+3	Horizontal	Vertical
QP / Peak		

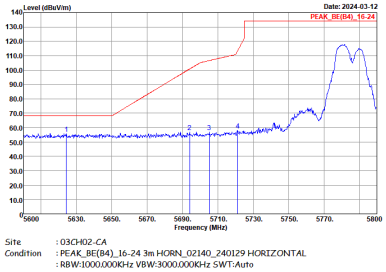
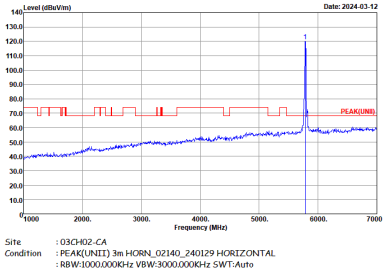
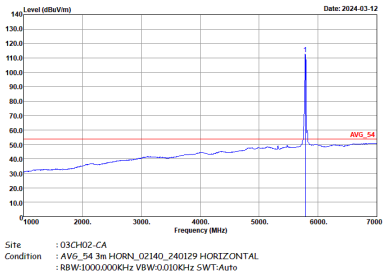
<4x4 MIMO>

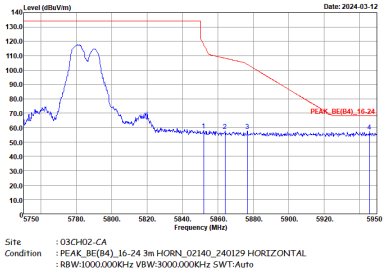
Band 4 - 5725~5850MHz

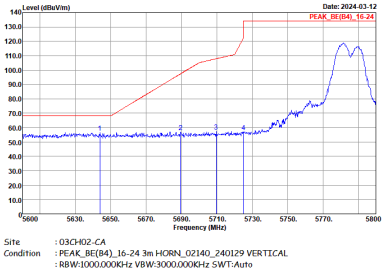
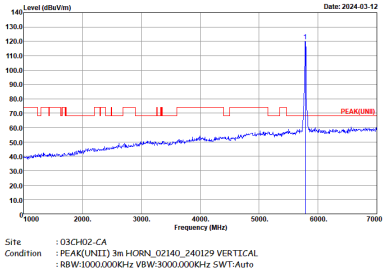
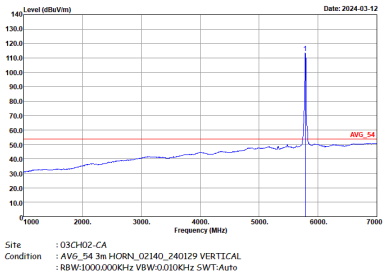
WIFI 802.11a (Band Edge @ 3m)

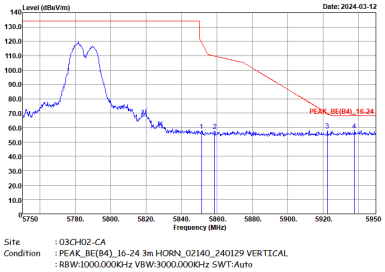
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1+2+3+4	Horizontal	Fundamental
Peak		
Avg	Left blank	

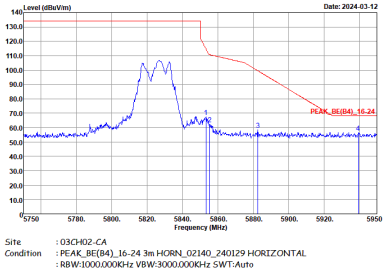
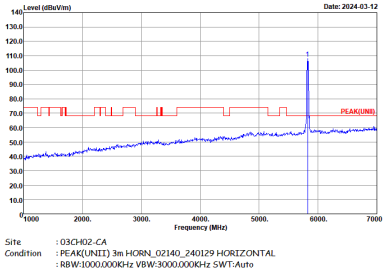
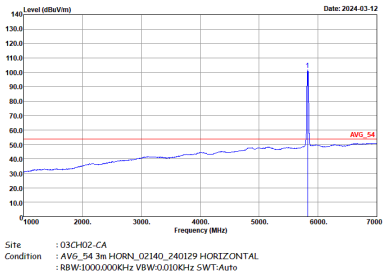
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1+2+3+4	Vertical	Fundamental
Peak		
Avg	Left blank	

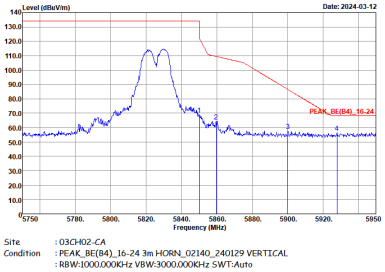
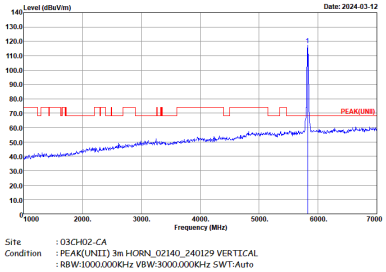
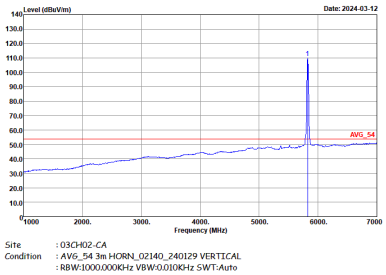
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+2+3+4	Horizontal	Fundamental
Peak		
Avg	Left blank	

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+2+3+4	Horizontal	Fundamental
Peak		Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+2+3+4	Vertical	Fundamental
Peak		
Avg	Left blank	

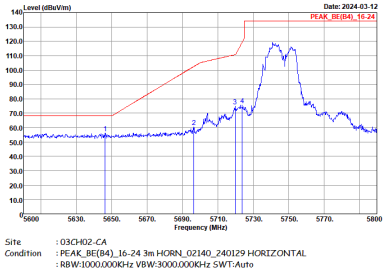
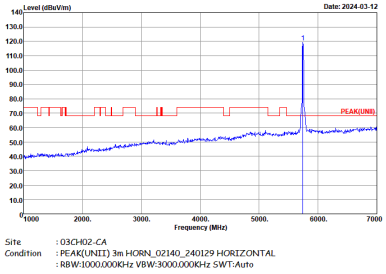
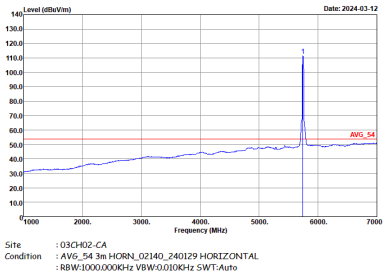
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+2+3+4	Vertical	Fundamental
Peak		Left blank

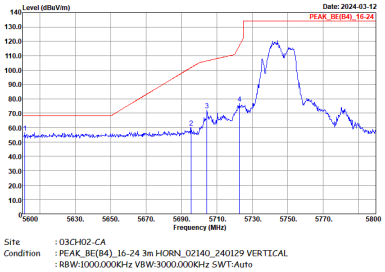
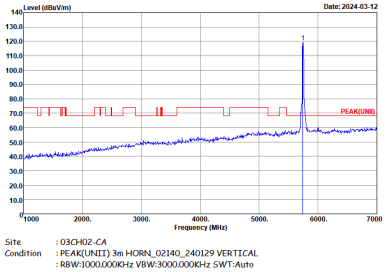
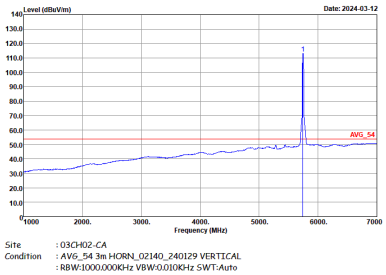
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1+2+3+4	Horizontal	Fundamental
Peak		
Avg	Left blank	

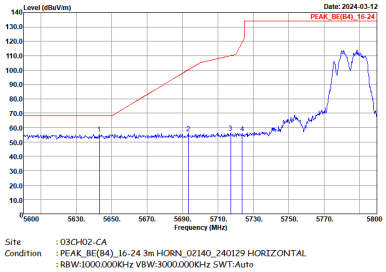
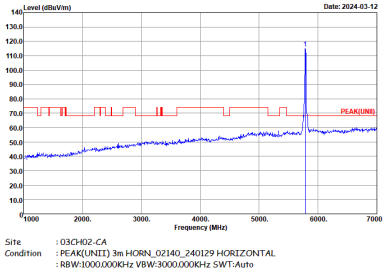
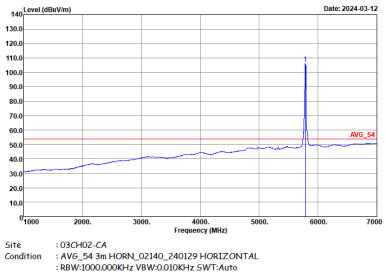
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1+2+3+4	Vertical	Fundamental
Peak		
Avg	Left blank	

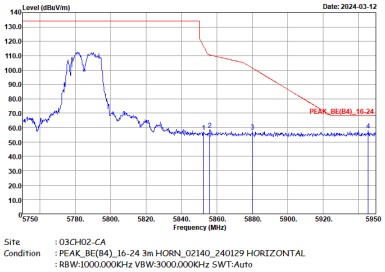
Band 4 5725~5850MHz

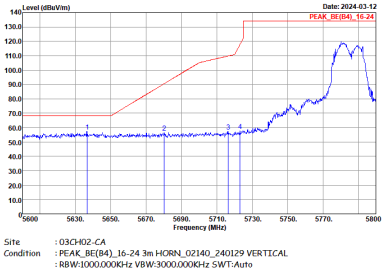
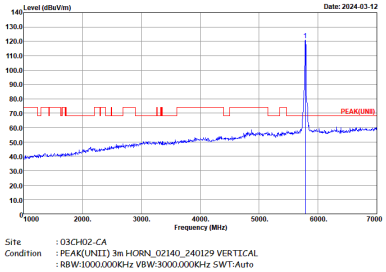
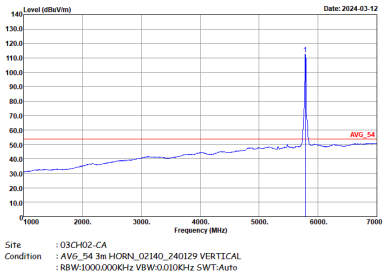
WIFI 802.11be EHT20 Full (Band Edge @ 3m)

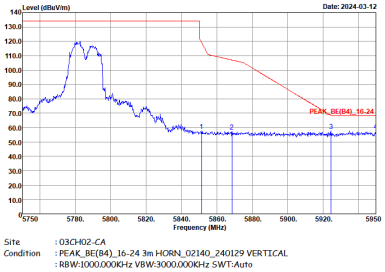
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH149 5745MHz	
1+2+3+4	Horizontal	Fundamental
Peak		
Avg	Left blank	

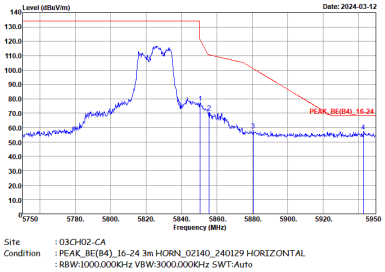
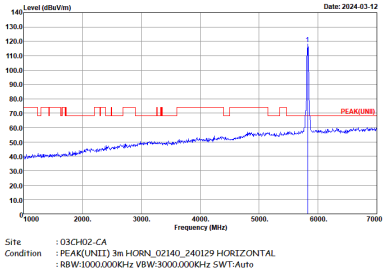
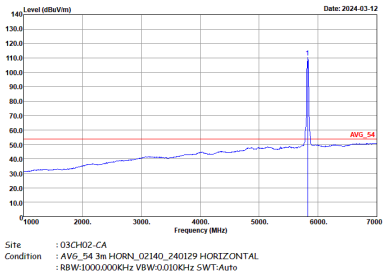
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH149 5745MHz	
1+2+3+4	Vertical	Fundamental
Peak		
Avg	Left blank	

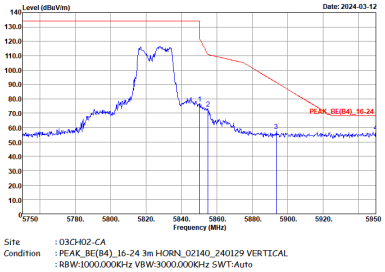
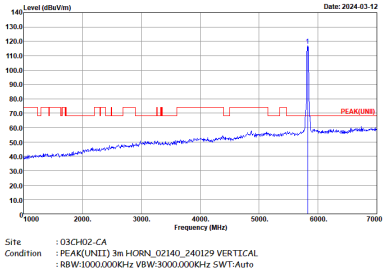
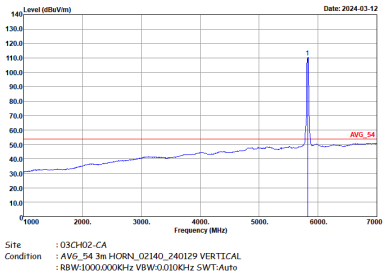
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH157 5785MHz	
1+2+3+4	Horizontal	Fundamental
Peak		
Avg	Left blank	

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH157 5785MHz	
1+2+3+4	Horizontal	Fundamental
Peak		Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH157 5785MHz	
1+2+3+4	Vertical	Fundamental
Peak		
Avg	Left blank	

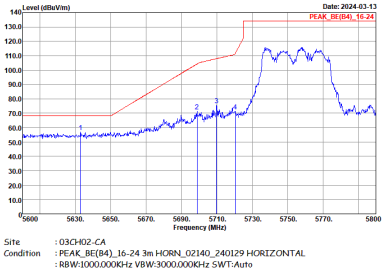
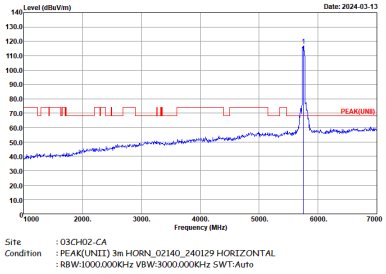
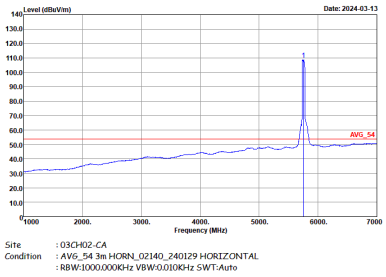
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH157 5785MHz	
1+2+3+4	Vertical	Fundamental
Peak		Left blank

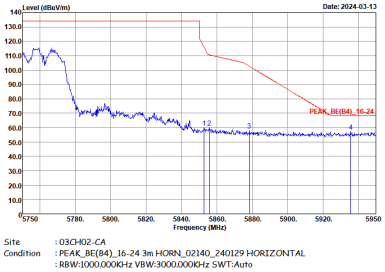
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH165 5825MHz	
1+2+3+4	Horizontal	Fundamental
Peak		
Avg	Left blank	

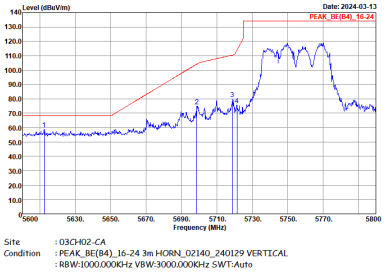
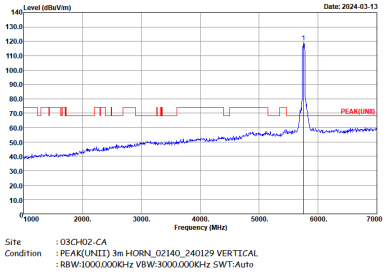
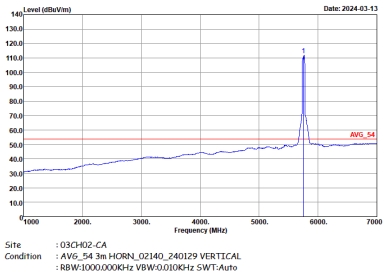
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT20 Full CH165 5825MHz	
1+2+3+4	Vertical	Fundamental
Peak		
Avg	Left blank	

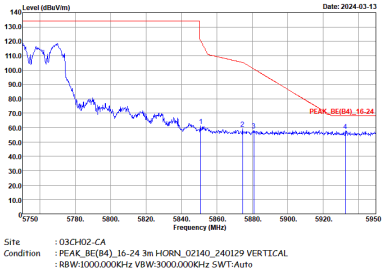
Band 4 5725~5850MHz

WIFI 802.11be EHT40 Full (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT40 Full CH151 5755MHz	
1+2+3+4	Horizontal	Fundamental
Peak		
Avg	Left blank	

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT40 Full CH151 5755MHz	
1+2+3+4	Horizontal	Fundamental
Peak		Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT40 Full CH151 5755MHz	
1+2+3+4	Vertical	Fundamental
Peak		
Avg	Left blank	

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11be EHT40 Full CH151 5755MHz	
1+2+3+4	Vertical	Fundamental
Peak		Left blank