

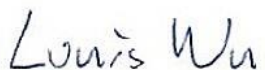


FCC RADIO TEST REPORT

FCC ID : IHDT56AA6
Equipment : Wearable Cellular Device
Brand Name : Motorola
Model Name : XT2209-1
Applicant : Motorola Mobility, LLC
222 W Merchandise Mart Plaza, Suite 1800,
Chicago, IL 60654, United States
Manufacturer : Motorola Mobility, LLC
222 W Merchandise Mart Plaza, Suite 1800,
Chicago, IL 60654, United States
Standard : FCC Part 15 Subpart E §15.407

The product was received on Oct. 19, 2021 and testing was performed from Oct. 21, 2021 to Dec. 03, 2021. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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



Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan



Table of Contents

History of this test report.....	3
Summary of Test Result.....	4
1 General Description	5
1.1 Product Feature of Equipment Under Test.....	5
1.2 Product Specification of Equipment Under Test.....	6
1.3 Modification of EUT	7
1.4 Testing Location	7
1.5 Applicable Standards.....	8
2 Test Configuration of Equipment Under Test	9
2.1 Carrier Frequency and Channel	9
2.2 Test Mode.....	10
2.3 Connection Diagram of Test System.....	12
2.4 Support Unit used in test configuration and system	13
2.5 EUT Operation Test Setup	13
2.6 Measurement Results Explanation Example.....	13
3 Test Result	14
3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement	14
3.2 Maximum Conducted Output Power Measurement	22
3.3 Power Spectral Density Measurement	24
3.4 Unwanted Emissions Measurement	28
3.5 AC Conducted Emission Measurement.....	34
3.6 Antenna Requirements.....	36
4 List of Measuring Equipment.....	38
5 Uncertainty of Evaluation	40
Appendix A. Conducted Test Results	
Appendix B. AC Conducted Emission Test Result	
Appendix C. Radiated Spurious Emission	
Appendix D. Radiated Spurious Emission Plots	
Appendix E. Duty Cycle Plots	



History of this test report

Report No.	Version	Description	Issue Date
FR1O2008E	01	Initial issue of report	Dec. 06, 2021
FR1O2008E	02	1. Revise Appendix A and Appendix C. 2. Revise Maximum Output Power to Antenna in Section 1.2 3. Revise description in section 2.2 4. Revise title of Test Result of Power Spectral Density 5. Revise List of Measuring Equipment	Dec. 08, 2021

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	10.21 dB under the limit at 41.640 MHz
3.5	15.207	AC Conducted Emission	Pass	19.19 dB under the limit at 0.969 MHz
3.6	15.203 15.407(a)	Antenna Requirement	Pass	-

Declaration of Conformity:

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

Comments and Explanations:

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

Reviewed by: Keven Cheng

Report Producer: Lucy Wu



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Wearable Cellular Device
Brand Name	Motorola
Model Name	XT2209-1
FCC ID	IHDT56AA6
IMEI Code	Conducted : 356636550004361 Conduction : 356636550004478 Radiation : 356636550004429
EUT supports Radios application	LTE/5G NR/GNSS WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80/VHT160 WLAN 11ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE
HW Version	EVT1
EUT Stage	Identical Prototype

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

Accessory List		
Battery	Brand Name :	Motorola
	Model Name :	NR70

1.2 Product Specification of Equipment Under Test

Product Specification is subject to this standard	
Tx/Rx Frequency Range	5745 MHz ~ 5825 MHz
Maximum Output Power to Antenna <CDD Modes>	<5745 MHz ~ 5825 MHz> MIMO <Ant. 4 + 5> 802.11a: 21.54 dBm / 0.1426 W 802.11n HT20: 21.87 dBm / 0.1538 W 802.11n HT40: 21.43 dBm / 0.1390 W 802.11ac VHT20: 21.77 dBm / 0.1503 W 802.11ac VHT40: 21.33 dBm / 0.1358 W 802.11ac VHT80: 19.94 dBm / 0.0986 W 802.11ax HE20: 21.97 dBm / 0.1574 W 802.11ax HE40: 21.53 dBm / 0.1422 W 802.11ax HE80: 19.48 dBm / 0.0887 W
Maximum Output Power to Antenna <TXBF Modes>	<MIMO <Ant. 4 + 5> 802.11ac VHT20: 19.51 dBm / 0.0893 W 802.11ac VHT40: 19.43 dBm / 0.0877 W 802.11ac VHT80: 19.60 dBm / 0.0912 W 802.11ax HE20: 19.61 dBm / 0.0914 W 802.11ax HE40: 19.53 dBm / 0.0897 W 802.11ax HE80: 19.50 dBm / 0.0891 W
99% Occupied Bandwidth <CDD Modes>	MIMO <Ant. 4> 802.11a: 16.58 MHz 802.11ac VHT80: 75.52 MHz 802.11ax HE20: 19.08 MHz 802.11ax HE40: 38.16 MHz MIMO <Ant. 5> 802.11a: 16.43 MHz 802.11ac VHT80: 75.52 MHz 802.11ax HE20: 18.93 MHz 802.11ax HE40: 37.96 MHz
99% Occupied Bandwidth <TXBF Modes>	MIMO <Ant. 4> 802.11ac VHT80: 76.72 MHz 802.11ax HE20: 19.23 MHz 802.11ax HE40: 38.76 MHz MIMO <Ant. 5> 802.11ac VHT80: 76.48 MHz 802.11ax HE20: 19.13 MHz 802.11ax HE40: 38.56 MHz
Type of Modulation	802.11a/n: OFDM (BPSK/QPSK/16QAM/64QAM) 802.11ac: OFDM (BPSK/QPSK/16QAM/64QAM/256QAM) 802.11ax: OFDMA (BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM)

Product Specification is subject to this standard			
Antenna Type / Gain	<Ant. 4> : Printed ILA Antenna Type with gain -0.6 dBi <Ant. 5> : Printed ILA Antenna Type with gain -2.5 dBi		
Antenna Function Description		Ant. 4	Ant. 5
	802.11 a/n/ac/ax MIMO	V	V
	802.11 ac/ax TXBF	V	V

Note:

1. MIMO Ant. 4+5 is a calculated result from sum of the power MIMO Ant. 4 and MIMO Ant. 5
2. The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

1.3 Modification of EUT

No modifications made to the EUT during the testing.

1.4 Testing Location

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

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

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. TH05-HY, 03CH15-HY

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

FCC designation No.: TW1190 and TW3786



1.5 Applicable Standards

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

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

Remark:

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

2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find X plane as worst plane.
- 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 and 802.11ac VHT40 and 802.11ax HE40.
2. The above Frequency and Channel with "[#]" are 802.11ac VHT80 and 802.11ax HE80.

2.2 Test Mode

The final test modes consider the modulation and the worst data rates as shown in the table below.

MIMO Mode

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20 (Covered by HE20)	MCS0
802.11n HT40 (Covered by HE40)	MCS0
802.11ac VHT20 (Covered by HE20)	MCS0
802.11ac VHT40 (Covered by HE40)	MCS0
802.11ac VHT80	MCS0
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80 (Covered by VHT80)	MCS0

TXBF Mode

Modulation	Data Rate
802.11ac VHT20 (Covered by HE20)	MCS0
802.11ac VHT40 (Covered by HE40)	MCS0
802.11ac VHT80	MCS0
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80 (Covered by VHT80)	MCS0

Note:

1. Since the verify power, the smaller power can be covered by the higher power. The SISO Mode are covered by MIMO Mode.
2. The TXBF mode of device only support WLAN 5GHz band 4 in 802.11ac and ax mode.
3. For 802.11ax Since the verify power& PSD , the smaller power can be covered by the higher power. The Partial RU are covered by Full RU

Test Cases	
AC Conducted Emission	Mode 1 : LTE Band 2 Link + Bluetooth Link + WLAN (5GHz) Link + Bottom USB Port (Charging from Adapter)

<CDD Mode>

Ch. #		Band IV : 5725-5850 MHz			
		802.11a	802.11ax HE20	802.11ax HE40	802.11ac VHT80
L	Low	149	149	151	-
M	Middle	157	157	-	155
H	High	165	165	159	-

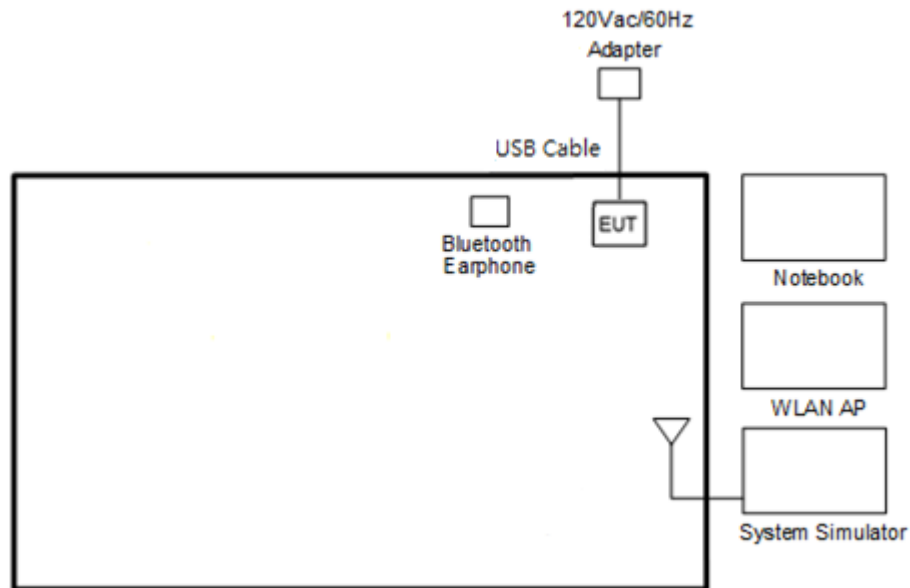
<TXBF Mode>

Ch. #		Band IV : 5725-5850 MHz		
		802.11ax HE20	802.11ax HE40	802.11ac VHT80
L	Low	149	151	-
M	Middle	157	-	155
H	High	165	159	-

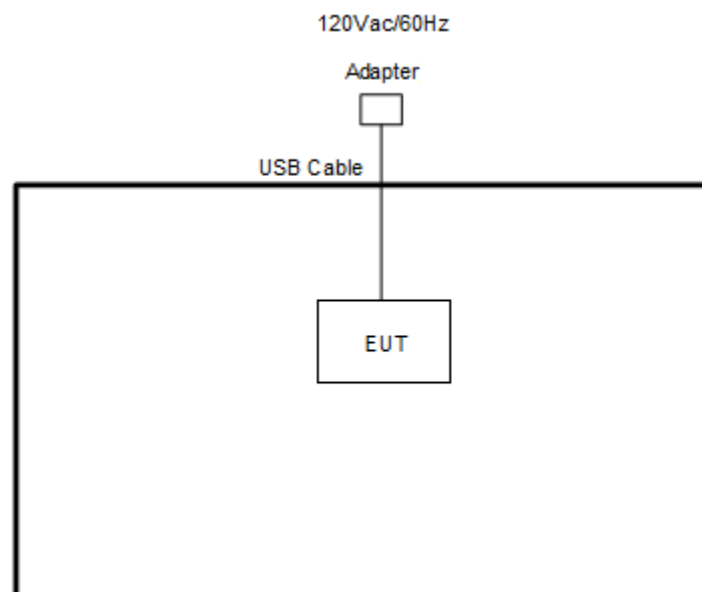
Remark: For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.

2.3 Connection Diagram of Test System

<AC Conducted Emission Mode>



<WLAN Tx Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
3.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
4.	Notebook	DELL	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	USB Cable	Samsung	N/A	N/A	Shielded,1.3m	N/A
6.	USB Cable	N/A	N/A	N/A	N/A	N/A
7.	Adapter	DVE	DSA-5PFM-05 FUS	FCC DoC	N/A	N/A
8.	Adapter	Samsung	GT-N7000	NA	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “QRCT 4.0.00193.0” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

For TXBF mode, the modulation modes and data rates manipulated by the command lines in the engineering program made the EUT link to another EUT by power under the normal operation. The “Vysor-win-3.1.4” software tool was used to enable the EUT to transmit signals continuously.

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

Offset = RF cable loss + attenuator factor.

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

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

3 Test Result

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

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

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

26dB and 99% Occupied bandwidth are reporting only.

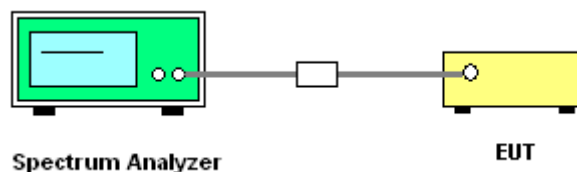
3.1.2 Measuring Instruments

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 $\geq 3 \times$ 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

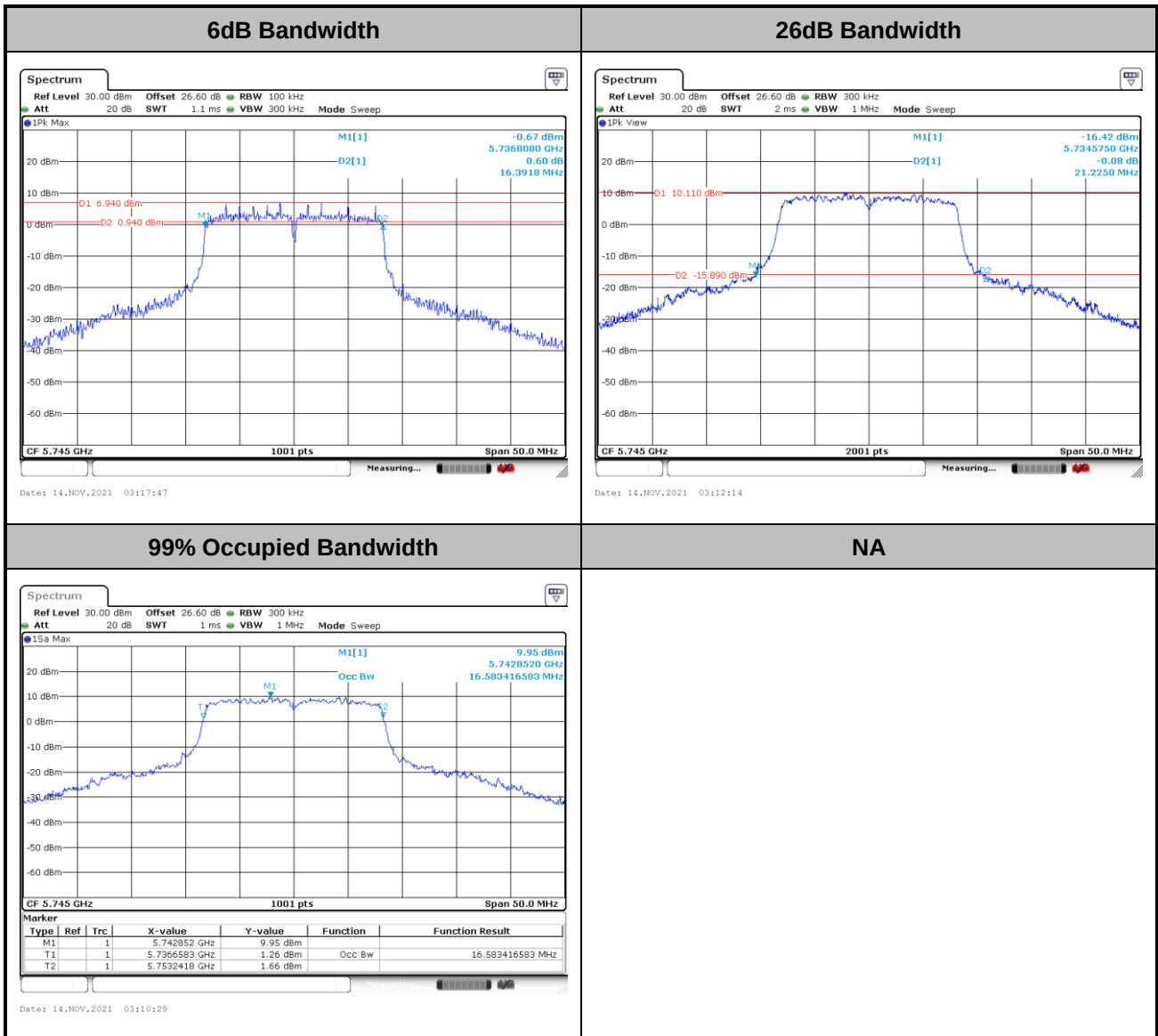


3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

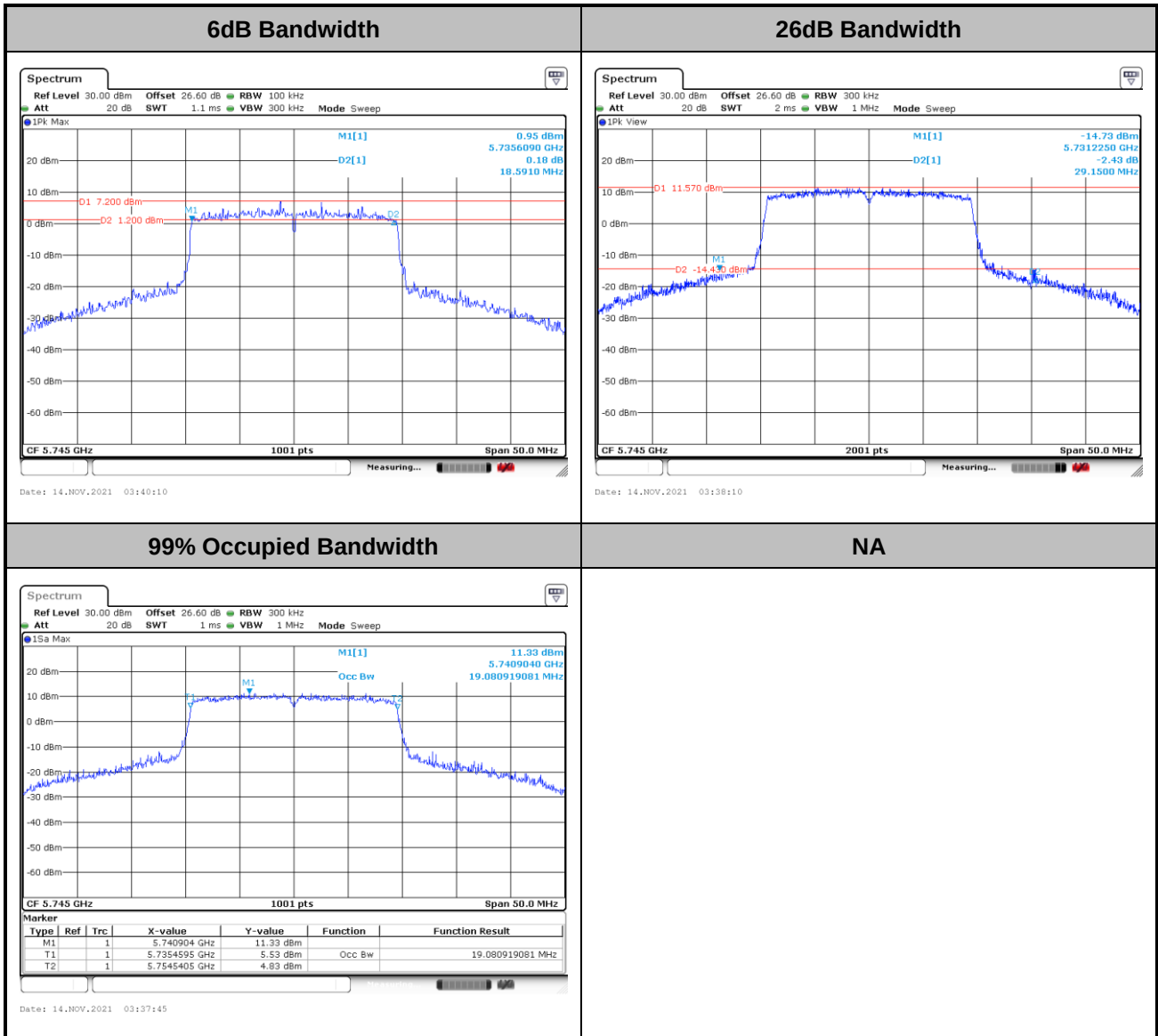
Please refer to Appendix A.

<CDD Mode>

<802.11a Mode>



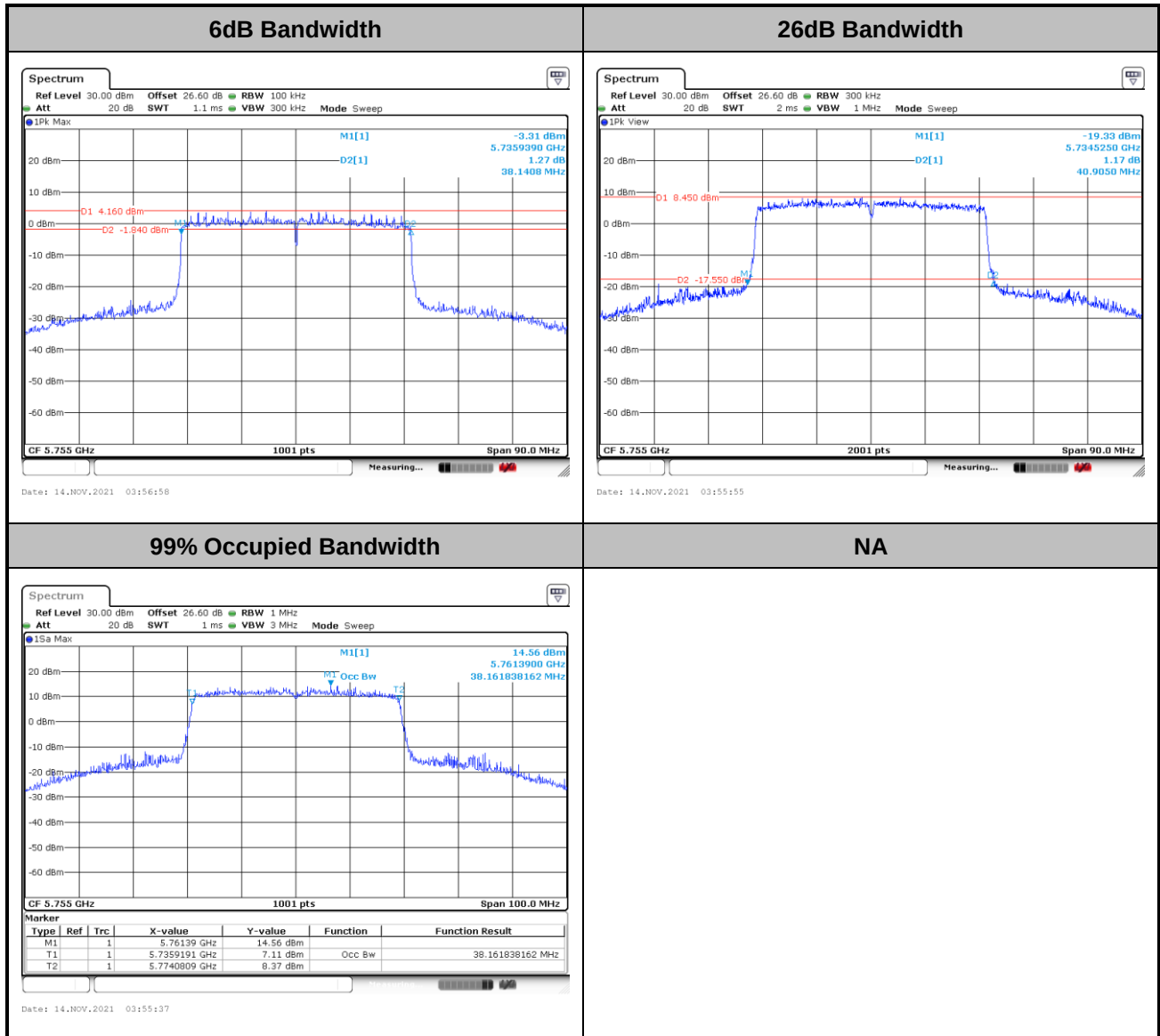
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

**<802.11ax HE20 Mode>**

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



<802.11ax HE40 Mode>

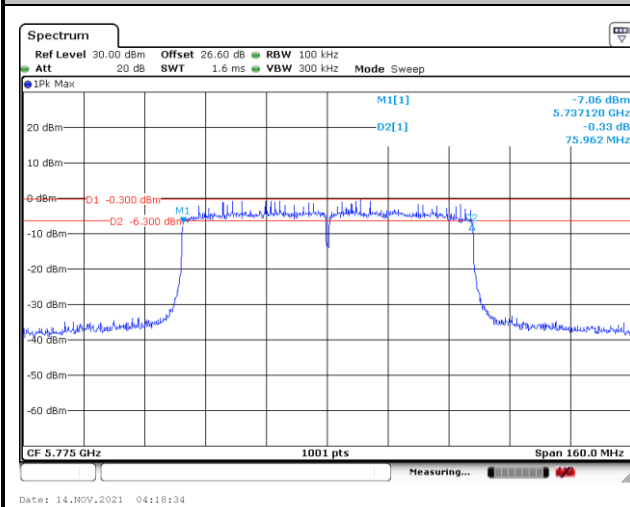


Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

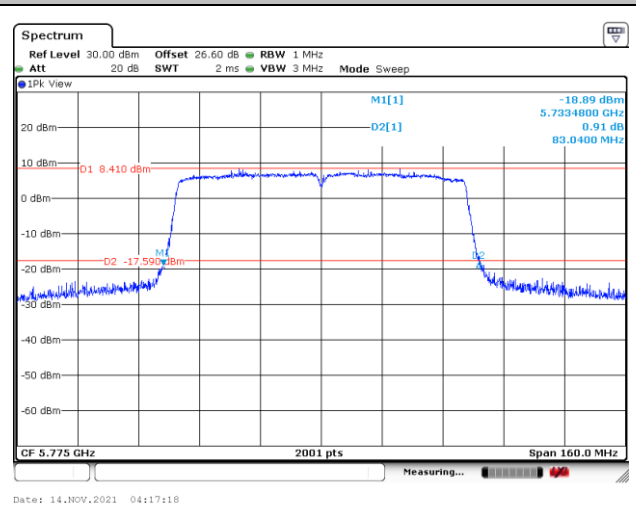


<802.11ac VHT80 Mode>

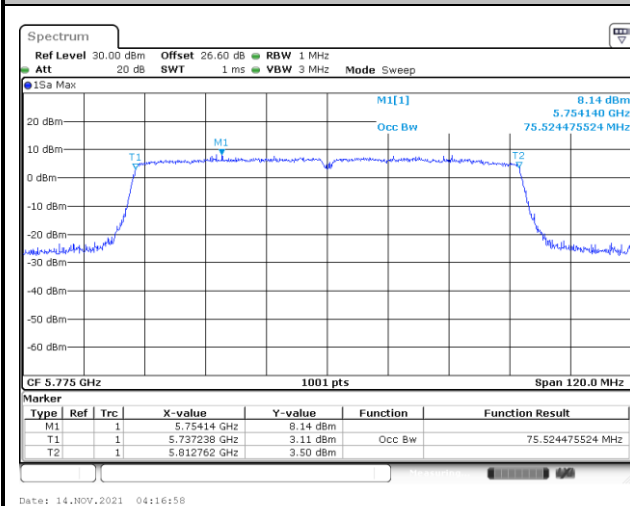
6dB Bandwidth



26dB Bandwidth



99% Occupied Bandwidth



NA

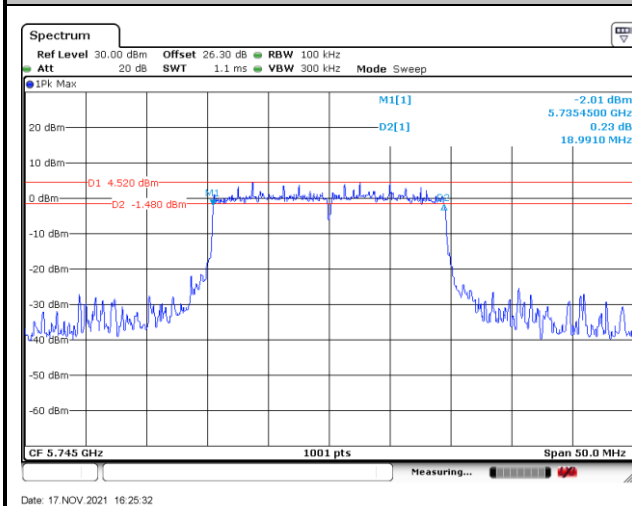
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.



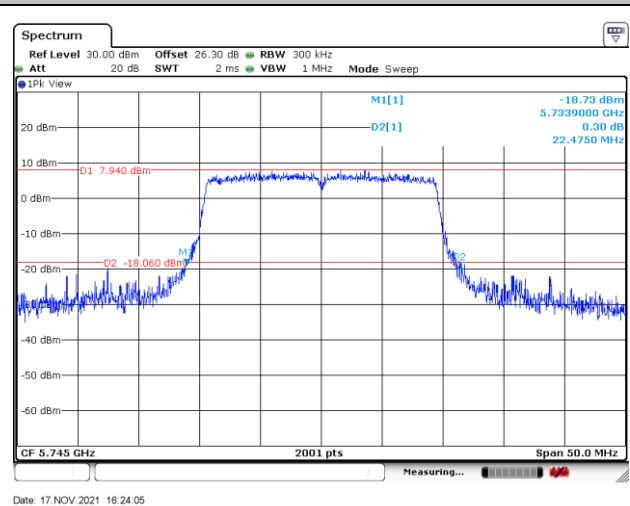
<TXBF Modes>

<802.11ax HE20 Mode>

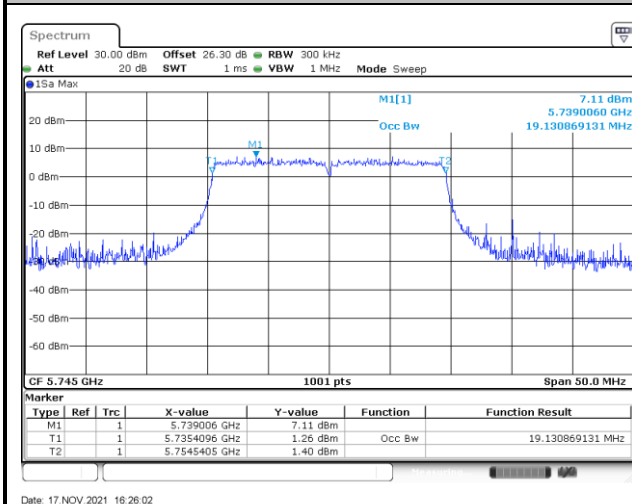
6dB Bandwidth



26dB Bandwidth



99% Occupied Bandwidth

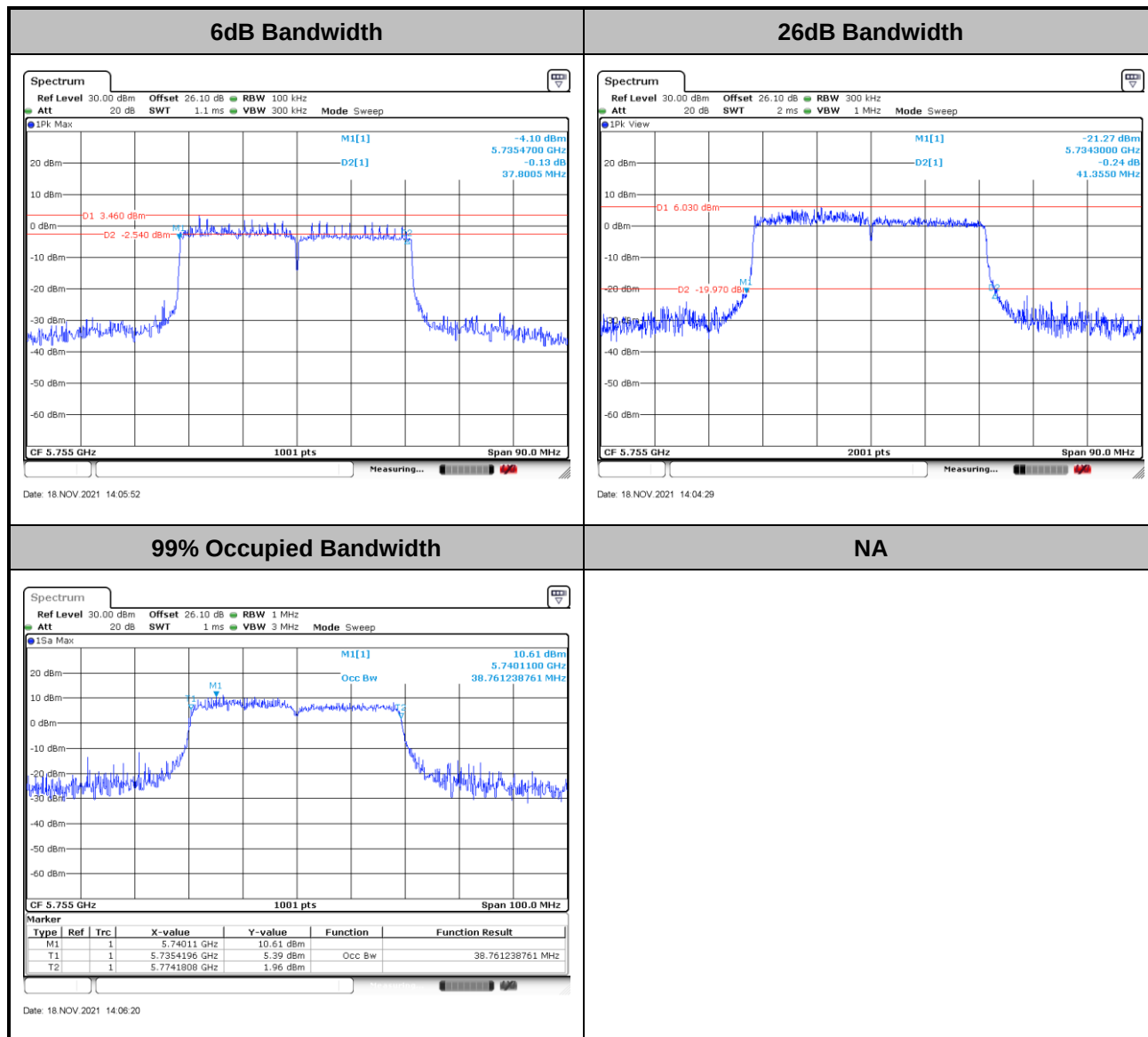


NA

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



<802.11ax HE40 Mode>

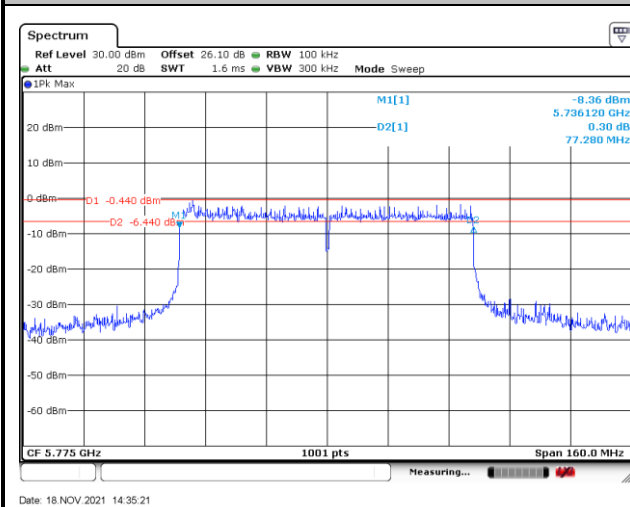


Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

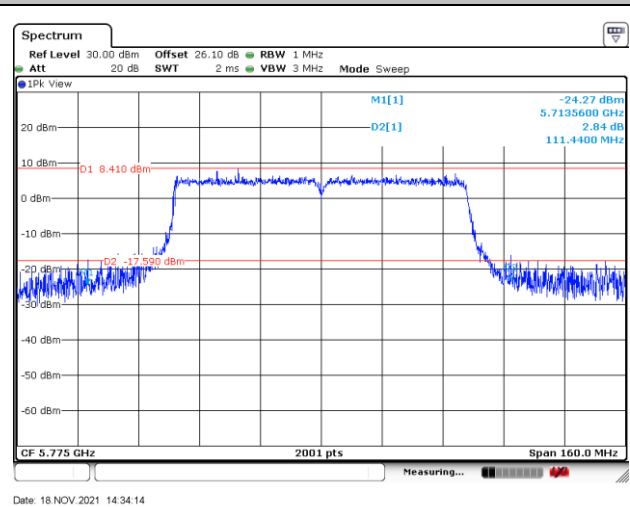


<802.11ac VHT80 Mode>

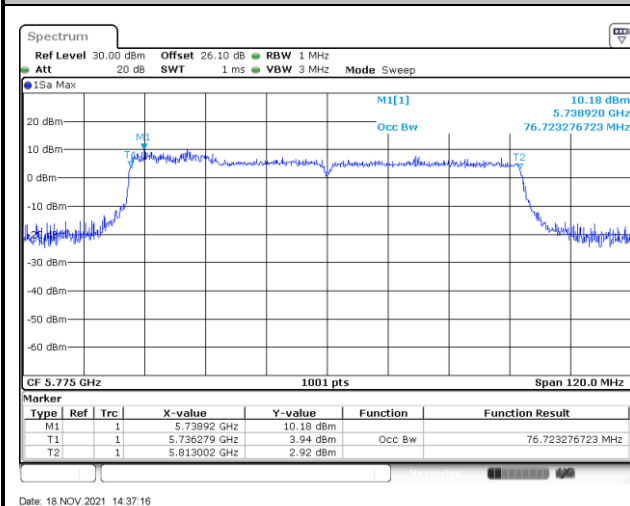
6dB Bandwidth



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

<CDD Modes>

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

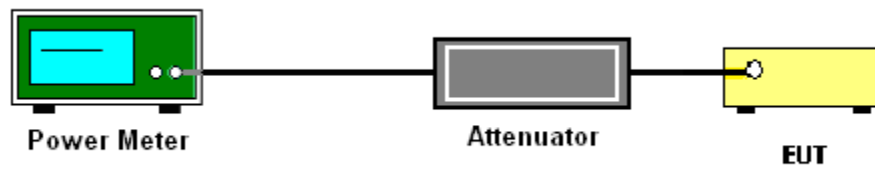
<TXBF Modes>

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

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.

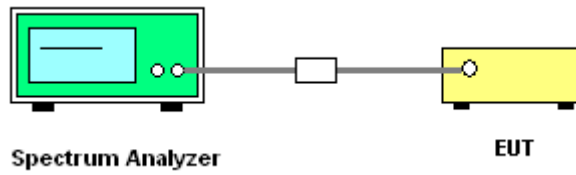
<CDD Modes>

Method SA-3

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

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 300 kHz.
 - Set VBW $\geq$ 1 MHz.
 - Number of points in sweep $\geq$ 2 Span / RBW.
 - Add $10 \log(500 \text{ kHz/RBW})$ to the measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement
 - Sweep time $\leq$ (number of points in sweep) $\times$ T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Detector = power averaging (rms).
 - Trace mode = max hold.
 - Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
1. The RF output of EUT is connected to the spectrum analyzer by a low loss cable.
 2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
 3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
Method (c): Measure and add $10 \log(N_{\text{ANT}})$ 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 $10 \log(N_{\text{ANT}})$ dB is added to each spectrum value before comparing to the emission limit. The addition of $10 \log(N_{\text{ANT}})$ dB serves to apportion the emission limit among the N_{ANT} outputs so that each output is permitted to contribute no more than $1/N_{\text{ANT}}^{\text{th}}$ of the PSD limit.

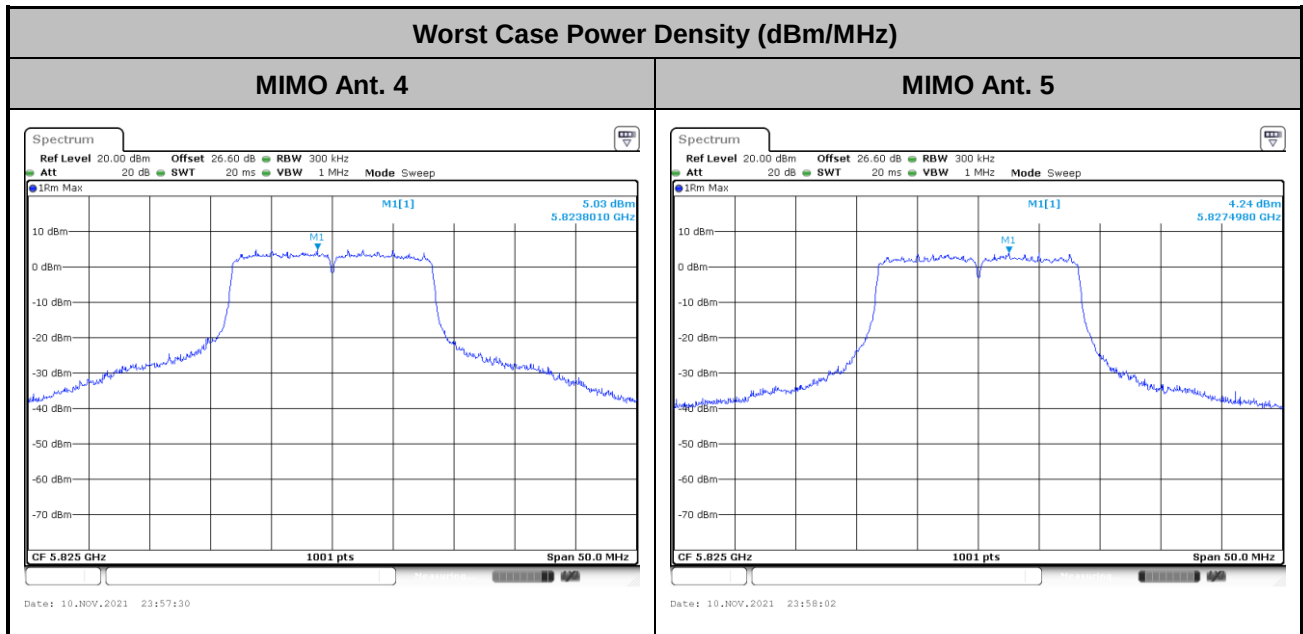
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

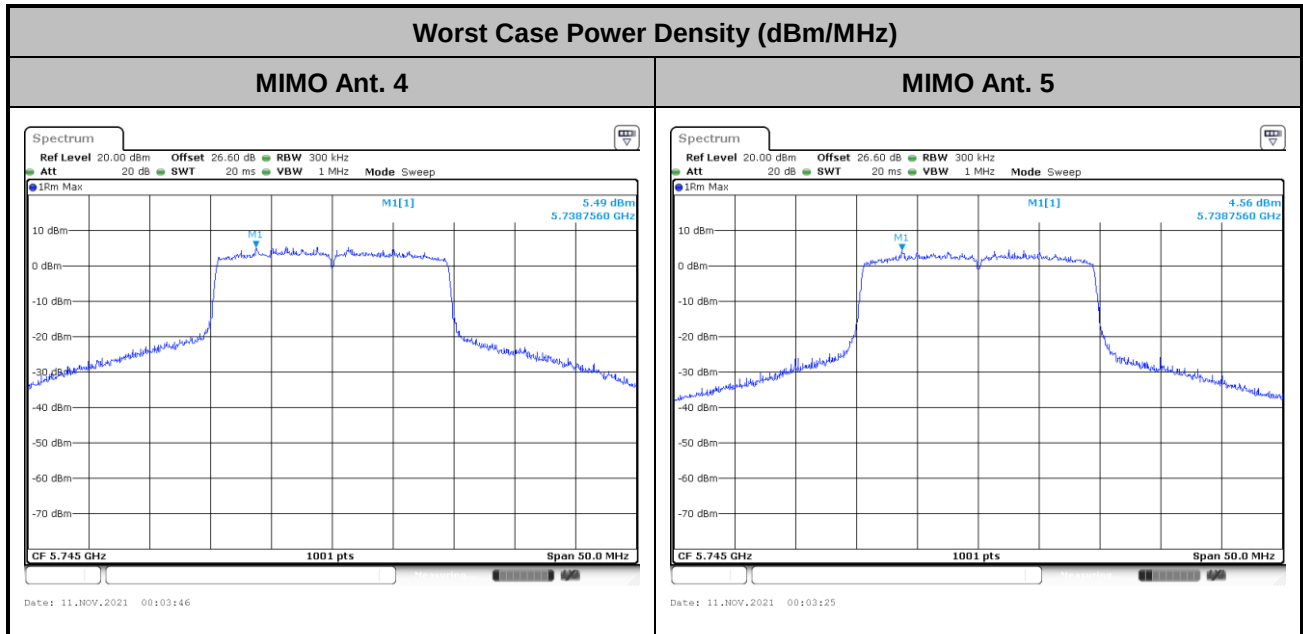
Please refer to Appendix A.

<CDD Modes>

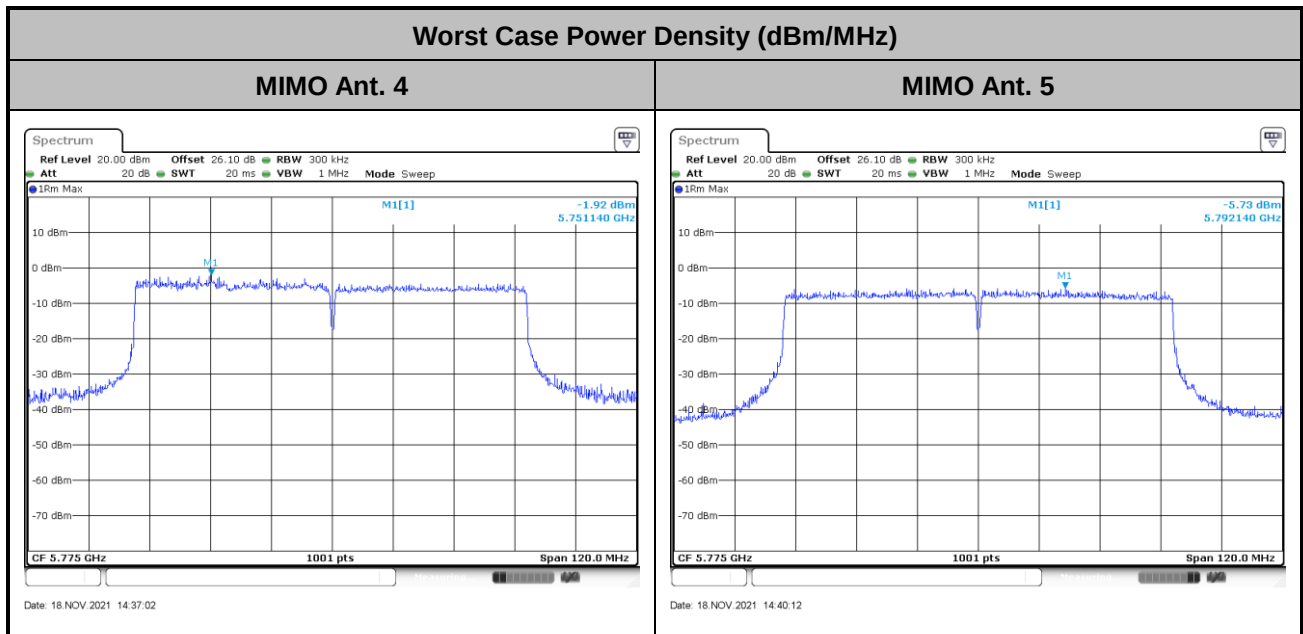




<802.11ax Modes>



<TXBF Modes>

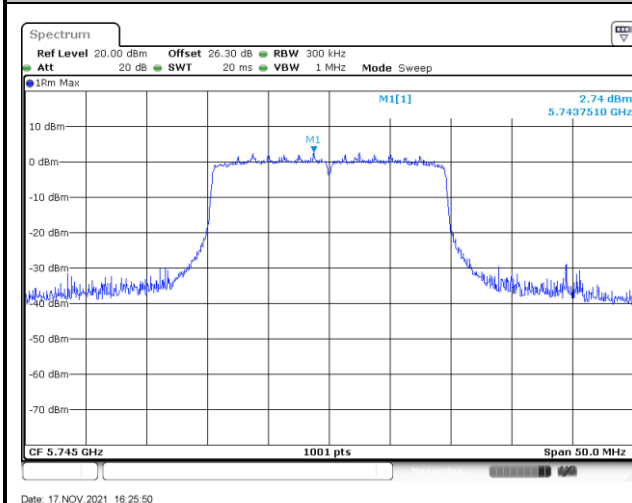




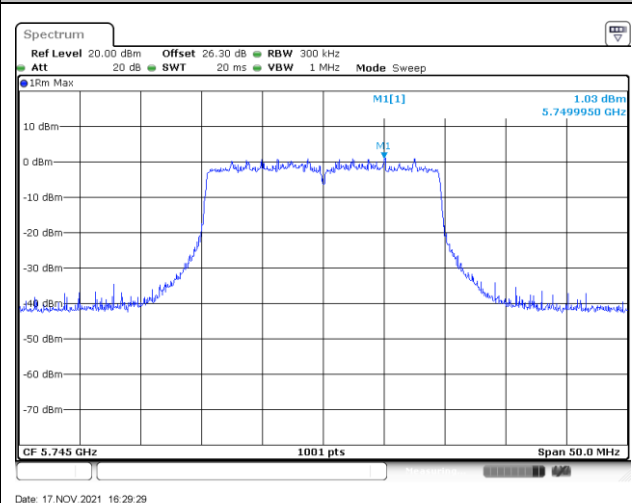
<802.11ax Modes>

Worst Case Power Density (dBm/MHz)

MIMO Ant. 4



MIMO Ant. 5



3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

- (1) For transmitters operating in the 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.

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

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.

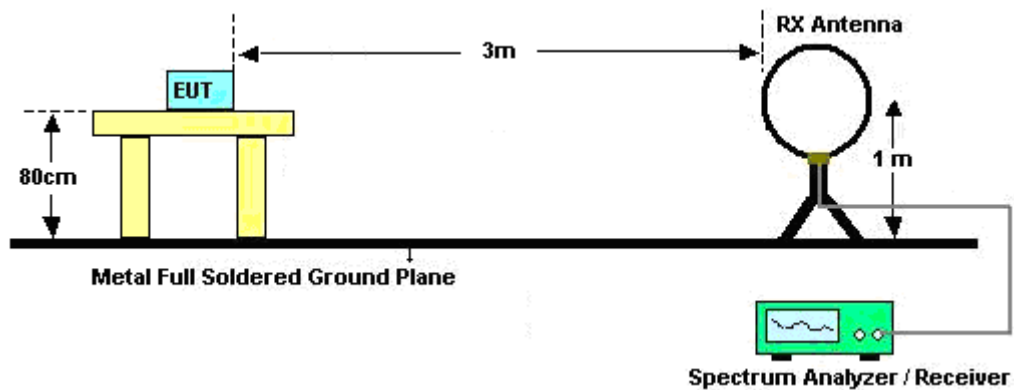
3.4.3 Test Procedures

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 $\geq$ 3 MHz
 - Detector = Peak
 - Sweep time = auto
 - Trace mode = max hold
(3) Procedures for Average Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq$ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the receiving antenna which is mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT is arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.

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

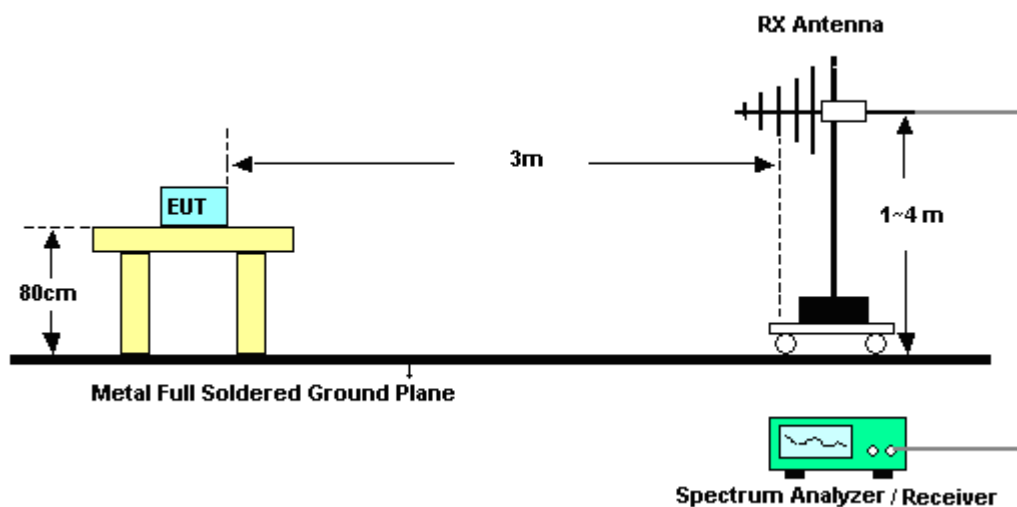
3.4.4 Test Setup

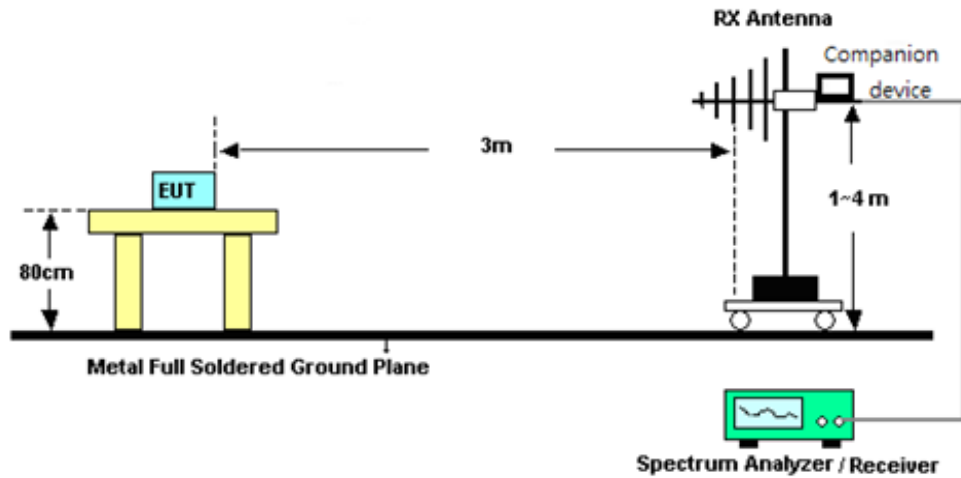
For radiated emissions below 30MHz



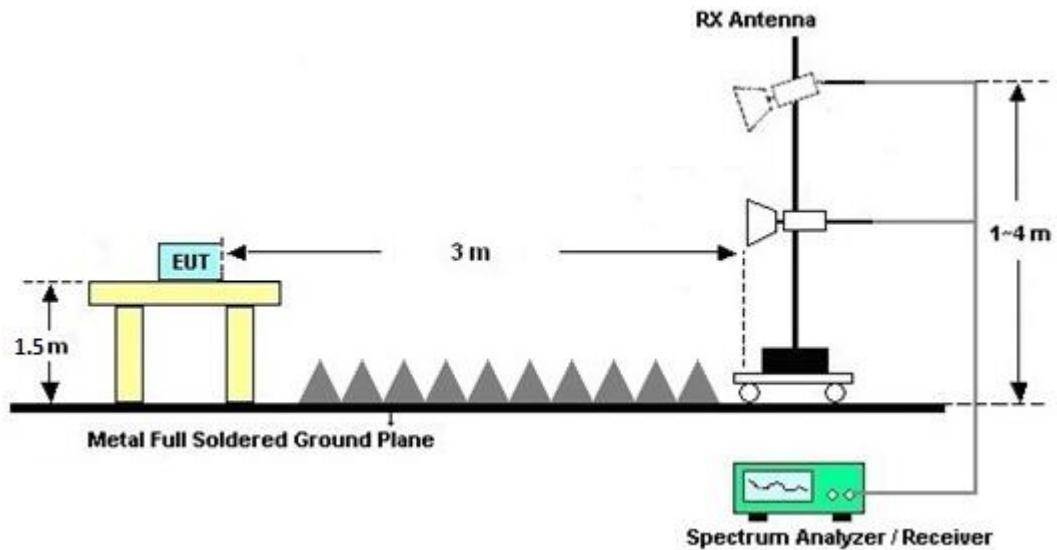
For radiated emissions from 30MHz to 1GHz

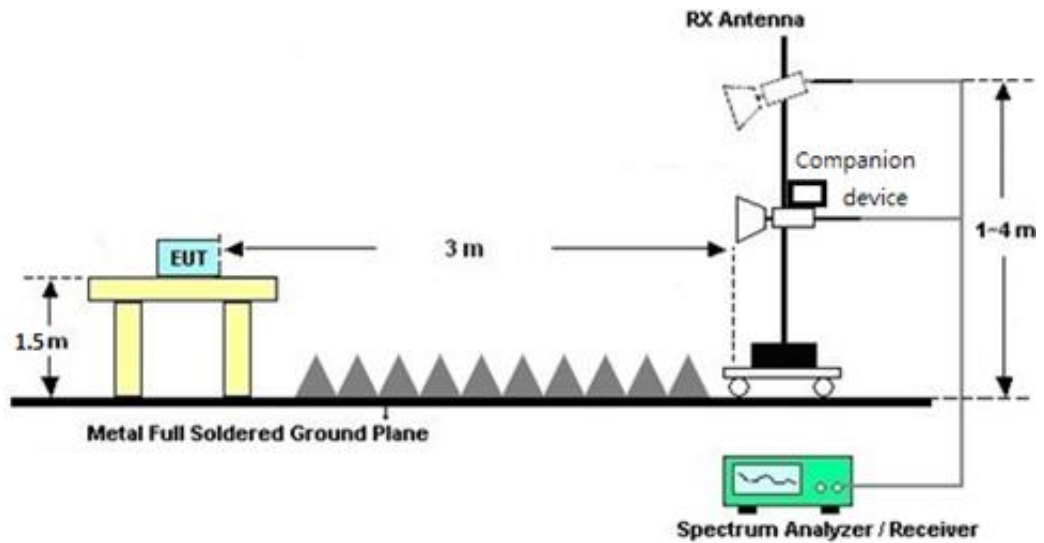
<CDD Mode>



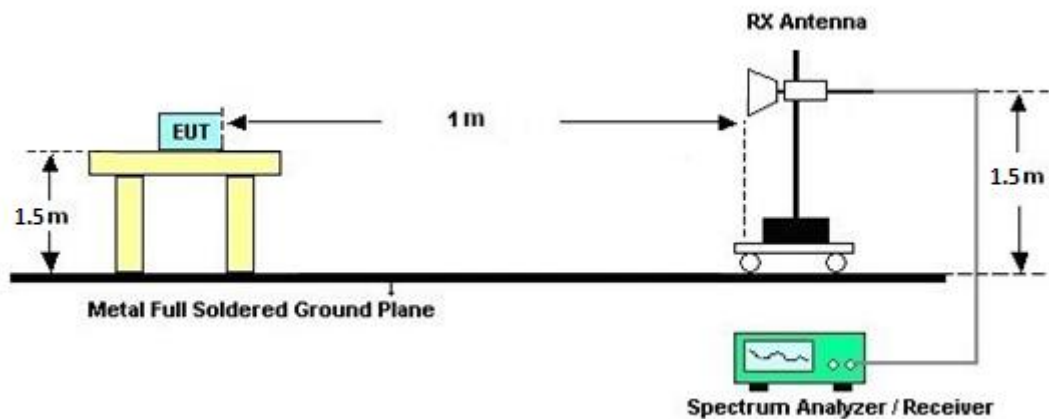
<TXBF Modes>


For radiated test from 1GHz to 18GHz

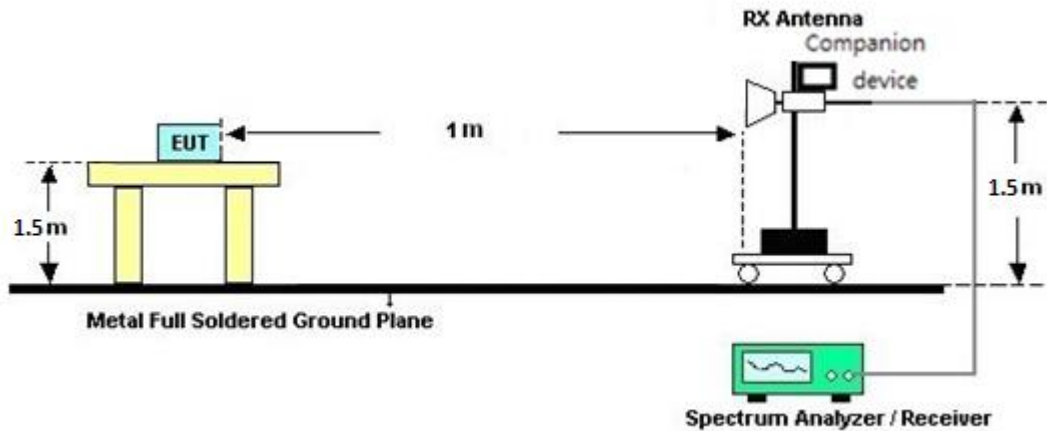
<CDD Mode>


<TXBF Modes>


For radiated test above 18GHz

<CDD Mode>


<TXBF Modes>



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

*Decreases with the logarithm of the frequency.

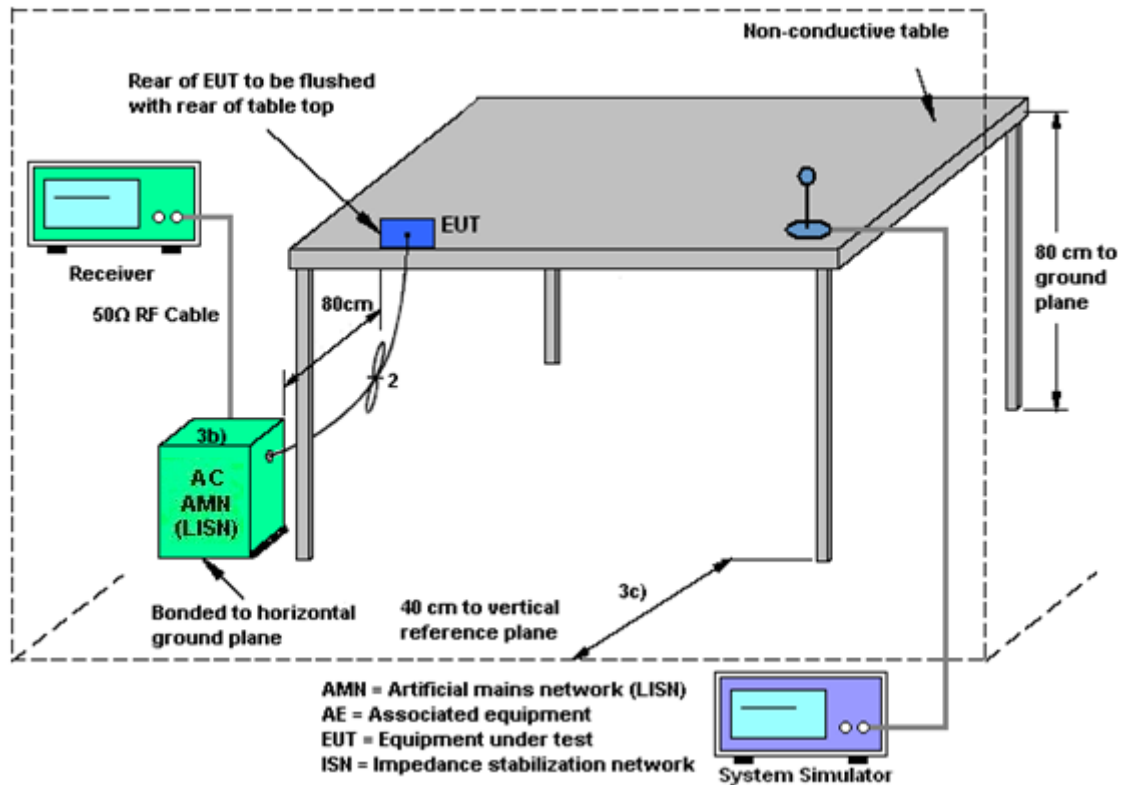
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Antenna Requirements

3.6.1 Standard Applicable

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

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.6.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

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

For power spectral density (PSD) measurements on all devices,

Array Gain = $10 \log(N_{ANT}/N_{SS}=1)$ dB.

For power measurements on IEEE 802.11 devices,

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

Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain G_{ANT} is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

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

<CDD Modes>						
			DG	DG	Power	PSD
			for	for	Limit	Limit
	Ant. 4	Ant. 5	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
Band IV	-0.60	-2.50	-0.60	1.51	0.00	0.00

Power Limit Reduction = $DG(\text{Power}) - 6\text{dBi}$, (min = 0)

PSD Limit Reduction = $DG(\text{PSD}) - 6\text{dBi}$, (min = 0)

TXBF modes

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

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

where

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

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

N_{ANT} = the total number of antennas

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

The EUT supports beamforming for 802.11ac modes.

The directional gain calculation is following F)2)e)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

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

			DG	DG	Power	PSD
			for	for	Limit	Limit
	Ant 4	Ant 5	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
Band IV	-0.60	-2.50	1.51	1.51	0.00	0.00

$Power\ Limit\ Reduction = DG(Power) - 6dBi, (min = 0)$

$PSD\ Limit\ Reduction = DG(PSD) - 6dBi, (min = 0)$



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 01, 2021	Oct. 21, 2021~ Nov. 18, 2021	Feb. 28, 2022	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO 12	10MHz~6GHz	Dec. 16, 2020	Oct. 21, 2021~ Nov. 18, 2021	Dec. 15, 2021	Conducted (TH05-HY)
DC Power Supply	GW Instek	GPE2323	GET861546	0V~64V 0A~6A	Jun. 22, 2021	Nov. 05, 2021~ Nov. 18, 2021	Jun. 21, 2022	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101564	10Hz ~ 40GHz	Aug. 30, 2021	Oct. 21, 2021~ Nov. 18, 2021	Aug. 29, 2022	Conducted (TH05-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW200302	N/A	Mar. 17, 2021	Oct. 21, 2021~ Nov. 18, 2021	Mar. 16, 2022	Conducted (TH05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Jan. 04, 2021	Oct. 27, 2021~ Dec. 03, 2021	Jan. 03, 2022	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	41912 & 05	30MHz~1GHz	Feb. 08, 2021	Oct. 27, 2021~ Dec. 03, 2021	Feb. 07, 2022	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 28, 2020	Oct. 27, 2021~ Dec. 03, 2021	Dec. 27, 2021	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-01620	1GHz~18GHz	Oct. 25, 2021	Oct. 27, 2021~ Dec. 03, 2021	Oct. 24, 2022	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	00991	18GHz~40GHz	May 12, 2021	Oct. 27, 2021~ Dec. 03, 2021	May 11, 2022	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-30 3	17100018000 55006	1GHz~18GHz	May 06, 2021	Oct. 27, 2021~ Dec. 03, 2021	May 05, 2022	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 19, 2021	Oct. 27, 2021~ Dec. 03, 2021	Aug. 18, 2022	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060801	18-40GHz	Jun. 22, 2021	Oct. 27, 2021~ Dec. 03, 2021	Jun. 21, 2022	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY55420170	20MHz~8.4GHz	Jul. 15, 2021	Oct. 27, 2021~ Dec. 03, 2021	Jul. 14, 2022	Radiation (03CH15-HY)
Spectrum Analyzer	Agilent	E4446A	MY50180136	3Hz~44GHz	May 07, 2021	Oct. 27, 2021~ Dec. 03, 2021	May 06, 2022	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Oct. 27, 2021~ Dec. 03, 2021	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Oct. 27, 2021~ Dec. 03, 2021	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24 (k5)	RK-000451	N/A	N/A	Oct. 27, 2021~ Dec. 03, 2021	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY36980/4, MY9838/4PE, 508405/2E	30MHz~18G	Nov. 16, 2020	Oct. 27, 2021~ Nov. 14, 2021	Nov. 15, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY36980/4, MY9838/4PE, 508405/2E	30MHz~18G	Nov. 15, 2021	Nov. 15, 2021~ Dec. 03, 2021	Nov. 14, 2022	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz-40GHz	Feb. 22, 2021	Oct. 27, 2021~ Dec. 03, 2021	Feb. 21, 2022	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz-40GHz	Feb. 22, 2021	Oct. 27, 2021~ Dec. 03, 2021	Feb. 21, 2022	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 11, 2021	Oct. 27, 2021~ Dec. 03, 2021	Mar. 10, 2022	Radiation (03CH15-HY)
Filter	Wainwright	WLJ4-1000-15 30-6000-40ST	SN4	1.53GHz Low Pass Filter	Jul. 02, 2021	Oct. 27, 2021~ Dec. 03, 2021	Jul. 01, 2022	Radiation (03CH15-HY)
Filter	Wainwright	WHKX8-5872. 5-6750-18000- 40ST	SN6	6.75GHz High Pass Filter	Jun. 30, 2021	Oct. 27, 2021~ Dec. 03, 2021	Jun. 29, 2022	Radiation (03CH15-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Nov. 05, 2021	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 30, 2020	Nov. 05, 2021	Nov. 29, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 18, 2020	Nov. 05, 2021	Nov. 17, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 01, 2020	Nov. 05, 2021	Nov. 30, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 16, 2020	Nov. 05, 2021	Nov. 15, 2021	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Nov. 05, 2021	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-FN	00691	N/A	Jul. 28, 2021	Nov. 05, 2021	Jul. 27, 2022	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 31, 2020	Nov. 05, 2021	Dec. 30, 2021	Conduction (CO05-HY)

5 Uncertainty of Evaluation

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.8 dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.3 dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

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

<CDD Mode>

Test Engineer:	Shiming Liu	Temperature:	21.7~22.6	°C
Test Date:	2021/10/21~2021/11/14	Relative Humidity:	51.9~55.8	%

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

Band IV 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 4	Ant 5	Ant 4	Ant 5	Ant 4	Ant 5		
11a	6Mbps	2	149	5745	16.58	16.43	21.23	19.78	16.39	16.44	0.5	Pass
11a	6Mbps	2	157	5785	16.53	16.43	21.15	19.73	16.39	16.39	0.5	Pass
11a	6Mbps	2	165	5825	16.53	16.43	21.13	19.73	16.44	16.44	0.5	Pass
VHT80	MCS0	2	155	5775	75.52	75.52	83.04	82.80	75.96	75.80	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 4	Ant 5	SUM	Ant 4	Ant 5	Ant 4	Ant 5	
11a	6Mbps	2	149	5745	18.90	18.00	21.48	30.00		-0.60		Pass
11a	6Mbps	2	157	5785	18.70	17.80	21.28	30.00		-0.60		Pass
11a	6Mbps	2	165	5825	19.00	18.00	21.54	30.00		-0.60		Pass
HT20	MCS0	2	149	5745	19.20	18.50	21.87	30.00		-0.60		Pass
HT20	MCS0	2	157	5785	18.80	18.00	21.43	30.00		-0.60		Pass
HT20	MCS0	2	165	5825	18.70	18.00	21.37	30.00		-0.60		Pass
HT40	MCS0	2	151	5755	18.80	18.00	21.43	30.00		-0.60		Pass
HT40	MCS0	2	159	5795	17.80	17.00	20.43	30.00		-0.60		Pass
VHT20	MCS0	2	149	5745	19.10	18.40	21.77	30.00		-0.60		Pass
VHT20	MCS0	2	157	5785	18.70	17.90	21.33	30.00		-0.60		Pass
VHT20	MCS0	2	165	5825	18.60	17.90	21.27	30.00		-0.60		Pass
VHT40	MCS0	2	151	5755	18.70	17.90	21.33	30.00		-0.60		Pass
VHT40	MCS0	2	159	5795	17.70	16.90	20.33	30.00		-0.60		Pass
VHT80	MCS0	2	155	5775	17.40	16.40	19.94	30.00		-0.60		Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO														
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	10log (500kHz /RBW) Factor (dB)		Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
					Ant 4	Ant 5	Ant 4	Ant 5	SUM	Ant 4	Ant 5	Ant 4	Ant 5	
11a	6Mbps	2	149	5745	2.22		7.21	6.66	10.22	30.00		1.51		Pass
11a	6Mbps	2	157	5785	2.22		6.96	6.23	9.97	30.00		1.51		Pass
11a	6Mbps	2	165	5825	2.22		7.25	6.46	10.26	30.00		1.51		Pass
VHT80	MCS0	2	155	5775	2.22		0.17	-0.72	3.18	30.00		1.51		Pass

Note: PSD Sum = Max PSD(Ant. 4, Ant. 5) + 10 log (n)

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

Band IV 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 4	Ant 5	Ant 4	Ant 5	Ant 4	Ant 5		
HE20	MCS0	2	149	5745	Full	19.08	18.93	29.15	21.73	18.59	18.94	0.5	Pass
HE20	MCS0	2	157	5785	Full	19.08	18.93	28.70	21.38	18.84	18.89	0.5	Pass
HE20	MCS0	2	165	5825	Full	19.03	18.93	22.98	21.98	18.84	18.74	0.5	Pass
HE40	MCS0	2	151	5755	Full	38.16	37.86	40.91	40.64	38.14	38.05	0.5	Pass
HE40	MCS0	2	159	5795	Full	38.06	37.96	40.28	40.23	38.05	37.69	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
						Ant 4	Ant 5	SUM	Ant 4	Ant 5	Ant 4	Ant 5	
HE20	MCS0	2	149	5745	Full	19.30	18.60	21.97	30.00		-0.60		Pass
HE20	MCS0	2	149	5745	26/0	10.80	10.80	13.81	30.00		-0.60		Pass
HE20	MCS0	2	157	5785	Full	18.90	18.10	21.53	30.00		-0.60		Pass
HE20	MCS0	2	157	5785	26/4	10.70	10.90	13.81	30.00		-0.60		Pass
HE20	MCS0	2	165	5825	Full	18.80	18.10	21.47	30.00		-0.60		Pass
HE20	MCS0	2	165	5825	26/8	10.70	10.50	13.61	30.00		-0.60		Pass
HE40	MCS0	2	151	5755	Full	18.90	18.10	21.53	30.00		-0.60		Pass
HE40	MCS0	2	159	5795	Full	17.90	17.10	20.53	30.00		-0.60		Pass
HE80	MCS0	2	155	5775	Full	16.90	16.00	19.48	30.00		-0.60		Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO															
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	10log (500kHz /RBW) Factor (dB)		Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
						Ant 4	Ant 5	Ant 4	Ant 5	SUM	Ant 4	Ant 5	Ant 4	Ant 5	
HE20	MCS0	2	149	5745	Full	2.22	7.71	6.78	10.72	30.00		1.51		Pass	
HE20	MCS0	2	149	5745	26/0	2.22	7.44	7.01	10.45	30.00		1.51		Pass	
HE20	MCS0	2	157	5785	Full	2.22	7.40	6.33	10.41	30.00		1.51		Pass	
HE20	MCS0	2	157	5785	26/4	2.22	6.77	6.91	9.92	30.00		1.51		Pass	
HE20	MCS0	2	165	5825	Full	2.22	7.22	6.59	10.23	30.00		1.51		Pass	
HE20	MCS0	2	165	5825	26/8	2.22	6.95	6.65	9.96	30.00		1.51		Pass	
HE40	MCS0	2	151	5755	Full	2.22	3.91	3.36	6.92	30.00		1.51		Pass	
HE40	MCS0	2	159	5795	Full	2.22	3.25	2.24	6.26	30.00		1.51		Pass	

Note: PSD Sum = Max PSD(Ant. 4, Ant. 5) + 10 log (n)

<TXBF Mode>

Test Engineer:	Benny Ku	Temperature:	21~25	°C
Test Date:	2021/11/5~2021/11/18	Relative Humidity:	51~54	%

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

Band IV 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 4	Ant 5	Ant 4	Ant 5	Ant 4	Ant 5		
VHT80	MCS0	2	155	5775	76.72	76.48	111.44	88.16	77.28	77.44	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 4	Ant 5	SUM	Ant 4	Ant 5	Ant 4	Ant 5	
VHT20	MCS0	2	149	5745	17.10	15.80	19.51	30.00		1.51		Pass
VHT20	MCS0	2	157	5785	16.80	15.20	19.08	30.00		1.51		Pass
VHT20	MCS0	2	165	5825	16.30	16.20	19.26	30.00		1.51		Pass
VHT40	MCS0	2	151	5755	16.80	16.00	19.43	30.00		1.51		Pass
VHT40	MCS0	2	159	5795	17.00	15.50	19.32	30.00		1.51		Pass
VHT80	MCS0	2	155	5775	17.10	16.00	19.60	30.00		1.51		Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	10log (500kHz /RBW) Factor (dB)		Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
					Ant 4	Ant 5	Ant 4	Ant 5	SUM	Ant 4	Ant 5	Ant 4	Ant 5	
VHT80	MCS0	2	155	5775	2.22		0.28	-0.71	3.29	30.00		1.51		Pass

Note: PSD Sum = Max PSD(Ant. 4, Ant. 5) + 10 log (n)

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

Band IV 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 4	Ant 5	Ant 4	Ant 5	Ant 4	Ant 5		
HE20	MCS0	2	149	5745	Full	19.13	19.13	22.48	21.95	18.99	16.50	0.5	Pass
HE20	MCS0	2	157	5785	Full	19.18	19.08	23.35	23.25	17.80	18.90	0.5	Pass
HE20	MCS0	2	165	5825	Full	19.23	19.08	22.60	23.68	19.10	18.85	0.5	Pass
HE40	MCS0	2	151	5755	Full	38.76	38.56	41.36	41.90	37.80	38.16	0.5	Pass
HE40	MCS0	2	159	5795	Full	38.36	38.16	42.08	42.26	38.61	37.98	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
						Ant 4	Ant 5	SUM	Ant 4	Ant 5	Ant 4	Ant 5	
HE20	MCS0	2	149	5745	Full	17.20	15.90	19.61	30.00		1.51		Pass
HE20	MCS0	2	157	5785	Full	16.90	15.30	19.18	30.00		1.51		Pass
HE20	MCS0	2	165	5825	Full	16.40	16.30	19.36	30.00		1.51		Pass
HE40	MCS0	2	151	5755	Full	16.90	16.10	19.53	30.00		1.51		Pass
HE40	MCS0	2	159	5795	Full	17.10	15.60	19.42	30.00		1.51		Pass
HE80	MCS0	2	155	5775	Full	17.00	15.90	19.50	30.00		1.51		Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO															
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	10log (500kHz /RBW) Factor (dB)		Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
						Ant 4	Ant 5	Ant 4	Ant 5	SUM	Ant 4	Ant 5	Ant 4	Ant 5	
HE20	MCS0	2	149	5745	Full	2.22		8.14	8.29	11.30	30.00		1.51		Pass
HE20	MCS0	2	157	5785	Full	2.22		7.39	6.40	10.40	30.00		1.51		Pass
HE20	MCS0	2	165	5825	Full	2.22		7.37	6.56	10.38	30.00		1.51		Pass
HE40	MCS0	2	151	5755	Full	2.22		4.11	4.48	7.49	30.00		1.51		Pass
HE40	MCS0	2	159	5795	Full	2.22		3.22	2.52	6.23	30.00		1.51		Pass

Note: PSD Sum = Max PSD(Ant. 4, Ant. 5) + 10 log (n)



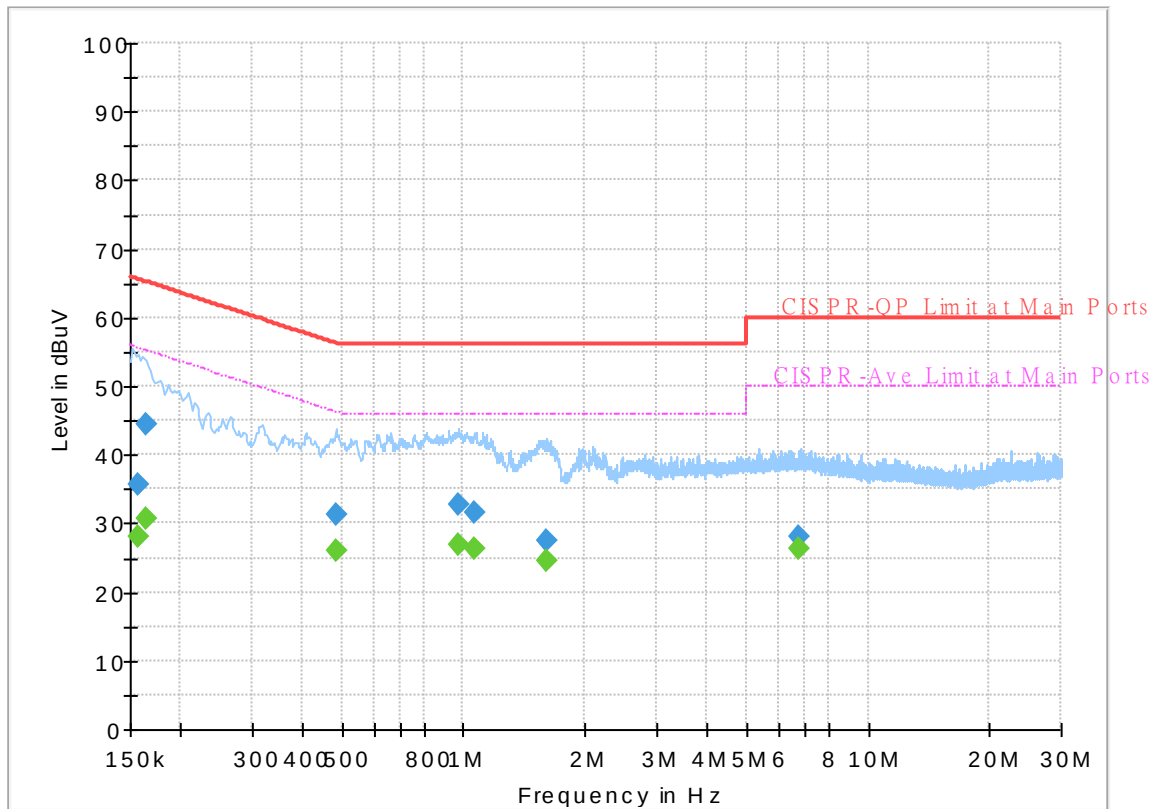
Appendix B. AC Conducted Emission Test Results

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

EUT Information

Report NO : 1O2008
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



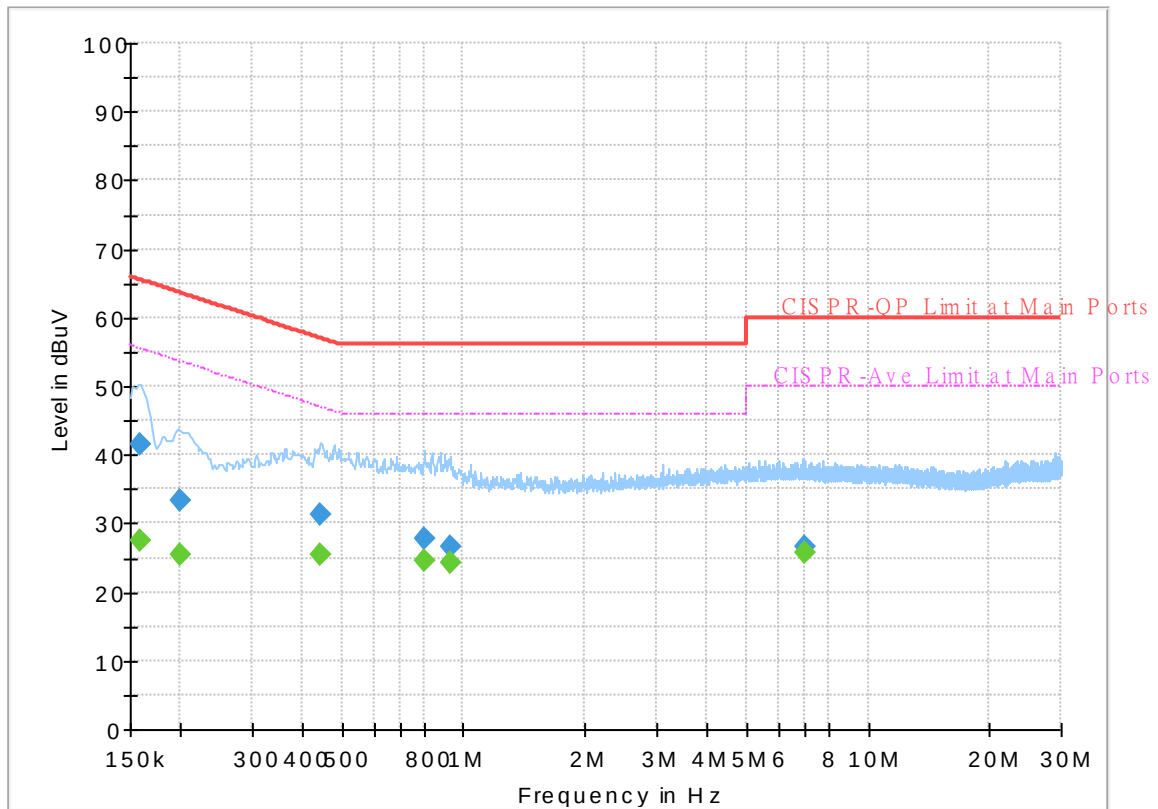
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.156750	35.55	---	65.63	30.08	L1	OFF	19.7
0.156750	---	28.16	55.63	27.47	L1	OFF	19.7
0.163500	44.44	---	65.28	20.84	L1	OFF	19.7
0.163500	---	30.56	55.28	24.72	L1	OFF	19.7
0.483000	31.21	---	56.29	25.08	L1	OFF	19.8
0.483000	---	25.92	46.29	20.37	L1	OFF	19.8
0.969000	32.76	---	56.00	23.24	L1	OFF	20.2
0.969000	---	26.81	46.00	19.19	L1	OFF	20.2
1.059000	31.71	---	56.00	24.29	L1	OFF	20.2
1.059000	---	26.33	46.00	19.67	L1	OFF	20.2
1.612500	27.38	---	56.00	28.62	L1	OFF	20.2
1.612500	---	24.70	46.00	21.30	L1	OFF	20.2
6.738000	28.07	---	60.00	31.93	L1	OFF	20.1
6.738000	---	26.32	50.00	23.68	L1	OFF	20.1

EUT Information

Report NO : 1O2008
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Neutral

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.159000	---	27.53	55.52	27.99	N	OFF	19.7
0.159000	41.62	---	65.52	23.90	N	OFF	19.7
0.199500	---	25.46	53.63	28.17	N	OFF	19.7
0.199500	33.25	---	63.63	30.38	N	OFF	19.7
0.442500	---	25.52	47.02	21.50	N	OFF	19.7
0.442500	31.20	---	57.02	25.82	N	OFF	19.7
0.800250	---	24.58	46.00	21.42	N	OFF	20.1
0.800250	27.78	---	56.00	28.22	N	OFF	20.1
0.928500	---	24.17	46.00	21.83	N	OFF	20.2
0.928500	26.58	---	56.00	29.42	N	OFF	20.2
6.976500	---	25.79	50.00	24.21	N	OFF	20.1
6.976500	26.72	---	60.00	33.28	N	OFF	20.1



Appendix C. Radiated Spurious Emission

Test Engineer :	Leo Lee, Mancy Chou and Bigshow Wang	Temperature :	22.1~23.5°C
		Relative Humidity :	55~65%

<CDD Mode>

Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
4+5		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5610	44.94	-23.26	68.2	40.55	31.98	10.39	37.98	324	256	P	H
		5692	47.48	-51.82	99.3	43.11	31.9	10.48	38.01	324	256	P	H
		5719.6	62.41	-48.28	110.69	57.93	31.98	10.51	38.01	324	256	P	H
		5725	72.68	-49.52	122.2	68.18	32	10.52	38.02	324	256	P	H
	*	5745	110.53	-	-	105.93	32.08	10.54	38.02	324	256	P	H
	*	5745	103.1	-	-	98.5	32.08	10.54	38.02	324	256	A	H
													H
													H
		5607.8	44.37	-23.83	68.2	39.98	31.98	10.39	37.98	393	166	P	V
		5658.4	44.22	-30.22	74.44	39.87	31.9	10.44	37.99	393	166	P	V
		5716.8	55.89	-54.02	109.91	51.42	31.97	10.51	38.01	393	166	P	V
		5724.6	66.64	-54.65	121.29	62.14	32	10.52	38.02	393	166	P	V
	*	5745	108.46	-	-	103.86	32.08	10.54	38.02	393	166	P	V
	*	5745	100.72	-	-	96.12	32.08	10.54	38.02	393	166	A	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 157 5785MHz		5644.2	44.8	-23.4	68.2	40.45	31.91	10.43	37.99	306	257	P	H
		5696.8	44.8	-58.04	102.84	40.42	31.9	10.49	38.01	306	257	P	H
		5718.8	46.3	-64.16	110.46	41.82	31.98	10.51	38.01	306	257	P	H
		5720.8	45.43	-67.19	112.62	40.96	31.98	10.51	38.02	306	257	P	H
	*	5785	110	-	-	105.36	32.1	10.58	38.04	306	257	P	H
	*	5785	102.66	-	-	98.02	32.1	10.58	38.04	306	257	A	H
		5850.575	45.07	-75.82	120.89	40.29	32.2	10.64	38.06	306	257	P	H
		5862.67	45.83	-62.82	108.65	41.02	32.23	10.64	38.06	306	257	P	H
		5876.61	45.25	-58.75	104	40.42	32.25	10.65	38.07	306	257	P	H
		5943.44	45.94	-22.26	68.2	40.94	32.39	10.7	38.09	306	257	P	H
													H
													H
		5602.2	44.21	-23.99	68.2	39.8	32	10.38	37.97	390	173	P	V
		5650.4	44.78	-23.72	68.5	40.43	31.9	10.44	37.99	390	173	P	V
		5707.2	44.31	-62.91	107.22	39.89	31.93	10.5	38.01	390	173	P	V
		5724.6	44.18	-77.11	121.29	39.68	32	10.52	38.02	390	173	P	V
	*	5785	107.32	-	-	102.68	32.1	10.58	38.04	390	173	P	V
	*	5785	99.93	-	-	95.29	32.1	10.58	38.04	390	173	A	V
		5849.96	44.12	-90.08	134.2	39.35	32.2	10.63	38.06	390	173	P	V
		5855.905	45.23	-65.32	110.55	40.44	32.21	10.64	38.06	390	173	P	V
		5918.02	44.86	-28.49	73.35	39.92	32.34	10.68	38.08	390	173	P	V
		5929.91	44.44	-23.76	68.2	39.48	32.36	10.69	38.09	390	173	P	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 165 5825MHz	*	5825	110.3	-	-	105.58	32.15	10.62	38.05	290	257	P	H
	*	5825	102.96	-	-	98.24	32.15	10.62	38.05	290	257	A	H
		5851.2	65.14	-54.32	119.46	60.36	32.2	10.64	38.06	290	257	P	H
		5855	61.32	-49.48	110.8	56.53	32.21	10.64	38.06	290	257	P	H
		5875.2	47.61	-57.44	105.05	42.78	32.25	10.65	38.07	290	257	P	H
		5933.6	45.39	-22.81	68.2	40.42	32.37	10.69	38.09	290	257	P	H
													H
													H
	*	5825	107.86	-	-	103.14	32.15	10.62	38.05	400	184	P	V
	*	5825	100.61	-	-	95.89	32.15	10.62	38.05	400	184	A	V
		5852.8	57.4	-58.42	115.82	52.61	32.21	10.64	38.06	400	184	P	V
		5857.6	54.18	-55.89	110.07	49.38	32.22	10.64	38.06	400	184	P	V
		5915.4	45.36	-29.92	75.28	40.43	32.33	10.68	38.08	400	184	P	V
		5937.2	45.16	-23.04	68.2	40.18	32.37	10.7	38.09	400	184	P	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. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 149 5745MHz		11490	48.77	-25.23	74	54.23	40.29	15.12	60.87	-	-	P	H
		17235	50.96	-17.24	68.2	50.37	40.84	18.3	58.55	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		11490	48.24	-25.76	74	53.7	40.29	15.12	60.87	-	-	P	V
		17235	49.68	-18.52	68.2	49.09	40.84	18.3	58.55	-	-	P	V
													V
													V
													V
													V
													V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 157 5785MHz		11570	49.13	-24.87	74	54.75	40.16	15.16	60.94	-	-	P	H
		17355	51.56	-16.64	68.2	50.04	41.6	18.4	58.48	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		11570	49.14	-24.86	74	54.76	40.16	15.16	60.94	-	-	P	V
		17355	51.95	-16.25	68.2	50.43	41.6	18.4	58.48	-	-	P	V
													V
													V
													V
													V
													V
													V
													V

[illegible]



Band 4 5725~5850MHz

WIFI 802.11ax HE20_Full (Band Edge @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 149 5745MHz		5618	45.05	-23.15	68.2	40.67	31.96	10.4	37.98	324	256	P	H
		5699	48.77	-55.69	104.46	44.39	31.9	10.49	38.01	324	256	P	H
		5719.4	74.6	-36.03	110.63	70.12	31.98	10.51	38.01	324	256	P	H
		5725	76.73	-45.47	122.2	72.23	32	10.52	38.02	324	256	P	H
	*	5745	113.22	-	-	108.62	32.08	10.54	38.02	324	256	P	H
	*	5745	102.88	-	-	98.28	32.08	10.54	38.02	324	256	A	H
													H
													H
		5618.4	44.72	-23.48	68.2	40.34	31.96	10.4	37.98	398	164	P	V
		5699.4	45.27	-59.49	104.76	40.89	31.9	10.49	38.01	398	164	P	V
		5720	65.35	-45.45	110.8	60.87	31.98	10.51	38.01	398	164	P	V
		5724.6	73.35	-47.94	121.29	68.85	32	10.52	38.02	398	164	P	V
	*	5745	110.71	-	-	106.11	32.08	10.54	38.02	398	164	P	V
	*	5745	100.77	-	-	96.17	32.08	10.54	38.02	398	164	A	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 157 5785MHz		5622	44.84	-23.36	68.2	40.46	31.96	10.4	37.98	249	248	P	H
		5696	45.08	-57.17	102.25	40.7	31.9	10.49	38.01	249	248	P	H
		5716	45.51	-64.17	109.68	41.05	31.96	10.51	38.01	249	248	P	H
		5720.4	45.91	-65.8	111.71	41.43	31.98	10.51	38.01	249	248	P	H
	*	5785	112.75	-	-	108.11	32.1	10.58	38.04	249	248	P	H
	*	5785	102.57	-	-	97.93	32.1	10.58	38.04	249	248	A	H
		5851.805	46.13	-71.95	118.08	41.35	32.2	10.64	38.06	249	248	P	H
		5859.185	45.6	-64.03	109.63	40.8	32.22	10.64	38.06	249	248	P	H
		5888.705	46.75	-48.28	95.03	41.88	32.28	10.66	38.07	249	248	P	H
		5938.93	45.51	-22.69	68.2	40.52	32.38	10.7	38.09	249	248	P	H
													H
													H
		5639	44.87	-23.33	68.2	40.52	31.92	10.42	37.99	389	170	P	V
		5695.8	44.53	-57.57	102.1	40.15	31.9	10.49	38.01	389	170	P	V
		5719.6	45.31	-65.38	110.69	40.83	31.98	10.51	38.01	389	170	P	V
		5720.4	44.38	-67.33	111.71	39.9	31.98	10.51	38.01	389	170	P	V
	*	5785	110.73	-	-	106.09	32.1	10.58	38.04	389	170	P	V
	*	5785	100.12	-	-	95.48	32.1	10.58	38.04	389	170	A	V
		5849.96	44	-90.2	134.2	39.23	32.2	10.63	38.06	389	170	P	V
		5862.465	45.01	-63.7	108.71	40.21	32.22	10.64	38.06	389	170	P	V
		5898.545	45.32	-42.42	87.74	40.43	32.3	10.67	38.08	389	170	P	V
		5940.98	45.22	-22.98	68.2	40.23	32.38	10.7	38.09	389	170	P	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 165 5825MHz	*	5825	112.81	-	-	108.09	32.15	10.62	38.05	264	251	P	H
	*	5825	102.39	-	-	97.67	32.15	10.62	38.05	264	251	A	H
		5851.8	72.75	-45.35	118.1	67.97	32.2	10.64	38.06	264	251	P	H
		5855.2	66.85	-43.89	110.74	62.06	32.21	10.64	38.06	264	251	P	H
		5876.4	51.17	-52.99	104.16	46.34	32.25	10.65	38.07	264	251	P	H
		5937	45.79	-22.41	68.2	40.81	32.37	10.7	38.09	264	251	P	H
													H
													H
	*	5825	103.89	-	-	99.17	32.15	10.62	38.05	400	251	P	V
	*	5825	93.31	-	-	88.59	32.15	10.62	38.05	400	251	A	V
		5850	55.46	-66.74	122.2	50.68	32.2	10.64	38.06	400	251	P	V
		5856.2	52.33	-58.13	110.46	47.54	32.21	10.64	38.06	400	251	P	V
		5878	45.53	-57.44	102.97	40.69	32.26	10.65	38.07	400	251	P	V
		5946.2	44.96	-23.24	68.2	39.96	32.39	10.7	38.09	400	251	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 802.11ax HE20 Full (Harmonic @ 3m)

[illegible]

[illegible]

[illegible]



Band 4 5725~5850MHz

WIFI 802.11ax HE20_Partial 26 (Band Edge @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 26/0 CH 149 5745MHz		5602	45.19	-23.01	68.2	40.78	32	10.38	37.97	250	250	P	H
		5685.8	45.9	-48.82	94.72	41.53	31.9	10.47	38	250	250	P	H
		5718.4	49.7	-60.65	110.35	45.23	31.97	10.51	38.01	250	250	P	H
		5724.2	53.72	-66.66	120.38	49.22	32	10.52	38.02	250	250	P	H
	*	5745	114.08	-	-	109.48	32.08	10.54	38.02	250	250	P	H
	*	5745	105.31	-	-	100.71	32.08	10.54	38.02	250	250	A	H
													H
													H
		5648	45.51	-22.69	68.2	41.17	31.9	10.43	37.99	301	282	P	V
		5678.8	44.68	-44.87	89.55	40.31	31.9	10.47	38	301	282	P	V
		5711.4	45.99	-62.4	108.39	41.55	31.95	10.5	38.01	301	282	P	V
		5721.2	44.85	-68.69	113.54	40.38	31.98	10.51	38.02	301	282	P	V
	*	5745	108.52	-	-	103.92	32.08	10.54	38.02	301	282	P	V
	*	5745	96.97	-	-	92.37	32.08	10.54	38.02	301	282	A	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 26/8 CH 165 5825MHz	*	5825	112.77	-	-	108.05	32.15	10.62	38.05	271	259	P	H
	*	5825	104.66	-	-	99.94	32.15	10.62	38.05	271	259	A	H
		5850.4	52.33	-68.96	121.29	47.55	32.2	10.64	38.06	271	259	P	H
		5858	49.2	-60.76	109.96	44.4	32.22	10.64	38.06	271	259	P	H
		5892.4	47.09	-45.2	92.29	42.22	32.28	10.66	38.07	271	259	P	H
		5948.6	46.94	-21.26	68.2	41.93	32.4	10.7	38.09	271	259	P	H
													H
													H
	*	5825	108.51	-	-	103.79	32.15	10.62	38.05	300	199	P	V
	*	5825	99.14	-	-	94.42	32.15	10.62	38.05	300	199	A	V
		5853	44.92	-70.44	115.36	40.13	32.21	10.64	38.06	300	199	P	V
		5867	46.83	-60.61	107.44	42.01	32.23	10.65	38.06	300	199	P	V
		5883	45.81	-53.45	99.26	40.95	32.27	10.66	38.07	300	199	P	V
		5934.4	46	-22.2	68.2	41.03	32.37	10.69	38.09	300	199	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 802.11ax HE40_Full (Band Edge @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 151 5755MHz		5645.6	46.45	-21.75	68.2	42.1	31.91	10.43	37.99	259	247	P	H
		5700	57.1	-48.1	105.2	52.72	31.9	10.49	38.01	259	247	P	H
		5716.6	74.65	-35.2	109.85	70.18	31.97	10.51	38.01	259	247	P	H
		5725	76.04	-46.16	122.2	71.54	32	10.52	38.02	259	247	P	H
	*	5755	110.08	-	-	105.46	32.1	10.55	38.03	259	247	P	H
	*	5755	100.12	-	-	95.5	32.1	10.55	38.03	259	247	A	H
		5854.265	45.95	-66.52	112.47	41.16	32.21	10.64	38.06	259	247	P	H
		5858.365	47.31	-62.55	109.86	42.51	32.22	10.64	38.06	259	247	P	H
		5877.84	46.05	-57.04	103.09	41.21	32.26	10.65	38.07	259	247	P	H
		5927.86	45.3	-22.9	68.2	40.34	32.36	10.69	38.09	259	247	P	H
													H
													H
		5621.8	45.24	-22.96	68.2	40.86	31.96	10.4	37.98	396	164	P	V
		5699.6	52.19	-52.72	104.91	47.81	31.9	10.49	38.01	396	164	P	V
		5717.8	73.96	-36.22	110.18	69.49	31.97	10.51	38.01	396	164	P	V
		5724.2	73.93	-46.45	120.38	69.43	32	10.52	38.02	396	164	P	V
	*	5755	108	-	-	103.38	32.1	10.55	38.03	396	164	P	V
	*	5755	97.83	-	-	93.21	32.1	10.55	38.03	396	164	A	V
		5850.78	45.41	-75.01	120.42	40.63	32.2	10.64	38.06	396	164	P	V
		5872.1	45.68	-60.33	106.01	40.86	32.24	10.65	38.07	396	164	P	V
		5885.835	45.56	-51.6	97.16	40.7	32.27	10.66	38.07	396	164	P	V
		5934.215	44.9	-23.3	68.2	39.93	32.37	10.69	38.09	396	164	P	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 159 5795MHz		5642.8	45.54	-22.66	68.2	41.19	31.91	10.43	37.99	258	249	P	H
		5697.8	46.83	-56.75	103.58	42.45	31.9	10.49	38.01	258	249	P	H
		5718.2	48.9	-61.4	110.3	44.43	31.97	10.51	38.01	258	249	P	H
		5724	50.17	-69.75	119.92	45.67	32	10.52	38.02	258	249	P	H
	*	5795	110.07	-	-	105.42	32.1	10.59	38.04	258	249	P	H
	*	5795	99.14	-	-	94.49	32.1	10.59	38.04	258	249	A	H
		5852.83	56.33	-59.42	115.75	51.54	32.21	10.64	38.06	258	249	P	H
		5855.29	54.68	-56.04	110.72	49.89	32.21	10.64	38.06	258	249	P	H
		5878.66	48.68	-53.8	102.48	43.83	32.26	10.66	38.07	258	249	P	H
		5931.345	47.21	-20.99	68.2	42.25	32.36	10.69	38.09	258	249	P	H
													H
													H
		5600	45.62	-22.58	68.2	41.21	32	10.38	37.97	400	171	P	V
		5681.2	44.71	-46.62	91.33	40.34	31.9	10.47	38	400	171	P	V
		5719.6	45.73	-64.96	110.69	41.25	31.98	10.51	38.01	400	171	P	V
		5720.2	45.82	-65.44	111.26	41.34	31.98	10.51	38.01	400	171	P	V
	*	5795	107.14	-	-	102.49	32.1	10.59	38.04	400	171	P	V
	*	5795	96.57	-	-	91.92	32.1	10.59	38.04	400	171	A	V
		5852.01	51.63	-65.99	117.62	46.85	32.2	10.64	38.06	400	171	P	V
		5858.98	49.7	-59.98	109.68	44.9	32.22	10.64	38.06	400	171	P	V
		5880.915	46.43	-54.38	100.81	41.58	32.26	10.66	38.07	400	171	P	V
		5936.06	46.1	-22.1	68.2	41.12	32.37	10.7	38.09	400	171	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 802.11ax HE40_Full (Harmonic @ 3m)**

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 151 5755MHz		11510	49.4	-24.6	74	54.87	40.28	15.13	60.88	-	-	P	H
		17265	50.27	-17.93	68.2	49.53	40.96	18.32	58.54	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		11510	48.62	-25.38	74	54.09	40.28	15.13	60.88	-	-	P	V
		17265	50.29	-17.91	68.2	49.55	40.96	18.32	58.54	-	-	P	V
													V
													V
													V
													V
													V
													V
													V

[illegible]



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 155 5775MHz		5626	49.15	-19.05	68.2	44.77	31.95	10.41	37.98	291	247	P	H
		5699.8	67.3	-37.75	105.05	62.92	31.9	10.49	38.01	291	247	P	H
		5716.4	71.48	-38.31	109.79	67.01	31.97	10.51	38.01	291	247	P	H
		5722	70.88	-44.48	115.36	66.4	31.99	10.51	38.02	291	247	P	H
	*	5775	106.23	-	-	101.59	32.1	10.57	38.03	291	247	P	H
	*	5775	96.05	-	-	91.41	32.1	10.57	38.03	291	247	A	H
		5850.78	69.17	-51.25	120.42	64.39	32.2	10.64	38.06	291	247	P	H
		5858.775	68.57	-41.17	109.74	63.77	32.22	10.64	38.06	291	247	P	H
		5878.045	61.48	-41.46	102.94	56.64	32.26	10.65	38.07	291	247	P	H
		5933.19	47.44	-20.76	68.2	42.47	32.37	10.69	38.09	291	247	P	H
													H
													H
		5648.4	46.07	-22.13	68.2	41.73	31.9	10.43	37.99	392	171	P	V
		5697.4	56.33	-46.95	103.28	51.95	31.9	10.49	38.01	392	171	P	V
		5717	62.56	-47.4	109.96	58.09	31.97	10.51	38.01	392	171	P	V
		5721.2	62.89	-50.65	113.54	58.42	31.98	10.51	38.02	392	171	P	V
	*	5775	103.49	-	-	98.85	32.1	10.57	38.03	392	171	P	V
	*	5775	93.12	-	-	88.48	32.1	10.57	38.03	392	171	A	V
		5849.96	61.06	-73.14	134.2	56.29	32.2	10.63	38.06	392	171	P	V
		5860.005	61.13	-48.27	109.4	56.33	32.22	10.64	38.06	392	171	P	V
		5878.25	53.35	-49.44	102.79	48.51	32.26	10.65	38.07	392	171	P	V
		5932.37	46.77	-21.43	68.2	41.81	32.36	10.69	38.09	392	171	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 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 155 5775MHz		11550	49.14	-24.86	74	54.71	40.2	15.15	60.92	-	-	P	H
		17325	50.97	-17.23	68.2	49.78	41.32	18.37	58.5			P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		11550	49.35	-24.65	74	54.92	40.2	15.15	60.92	-	-	P	V
		17325	50.99	-17.21	68.2	49.8	41.32	18.37	58.5	-	-	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 below 1GHz

5GHz WIFI 802.11ac VHT80 Full (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
4+5		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 LF		30	23.7	-16.3	40	30.99	24.59	0.61	32.49	-	-	P	H
		124.09	32.06	-11.44	43.5	45.59	17.49	1.52	32.54	-	-	P	H
		164.83	23.82	-19.68	43.5	38.48	16.02	1.82	32.5	-	-	P	H
		254.07	22.62	-23.38	46	33.82	18.96	2.25	32.41	-	-	P	H
		479.11	24.84	-21.16	46	30.81	23.61	2.93	32.51	-	-	P	H
		571.26	26.68	-19.32	46	30.1	25.88	3.26	32.56	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
		41.64	29.79	-10.21	40	42.99	18.59	0.78	32.57	-	-	P	V
		111.48	23.35	-20.15	43.5	37.53	16.95	1.4	32.53	-	-	P	V
		214.3	21.73	-21.77	43.5	37.17	14.97	2.02	32.43	-	-	P	V
		388.9	21.32	-24.68	46	29.57	21.55	2.64	32.44	-	-	P	V
		563.5	26.99	-19.01	46	30.21	26.13	3.24	32.59	-	-	P	V
		859.35	31.01	-14.99	46	29.78	29.05	4.01	31.83	-	-	P	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.												



<TXBF Mode>

Band 4 - 5725~5850MHz

WIFI 802.11ax HE20_Full (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
4+5		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax HE20 Full CH 149 5745MHz		5644.2	47.49	-20.71	68.2	43.14	31.91	10.43	37.99	300	263	P	H
		5684	48.12	-45.28	93.4	43.75	31.9	10.47	38	300	263	P	H
		5719.4	52.92	-57.71	110.63	48.44	31.98	10.51	38.01	300	263	P	H
		5724.6	56.29	-65	121.29	51.79	32	10.52	38.02	300	263	P	H
	*	5745	105.68	-	-	101.08	32.08	10.54	38.02	300	263	P	H
	*	5745	96.09	-	-	91.49	32.08	10.54	38.02	300	263	A	H
													H
													H
		5630.2	47.37	-20.83	68.2	43	31.94	10.41	37.98	100	281	P	V
		5673.6	48.18	-37.52	85.7	43.82	31.9	10.46	38	100	281	P	V
		5715.4	48.36	-61.15	109.51	43.9	31.96	10.51	38.01	100	281	P	V
		5720.6	47.75	-64.42	112.17	43.28	31.98	10.51	38.02	100	281	P	V
	*	5745	102.31	-	-	97.71	32.08	10.54	38.02	100	281	P	V
	*	5745	92.5	-	-	87.9	32.08	10.54	38.02	100	281	A	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 157 5785MHz		5649.6	47.46	-20.74	68.2	43.12	31.9	10.43	37.99	300	249	P	H
		5694.6	47.1	-54.12	101.22	42.73	31.9	10.48	38.01	300	249	P	H
		5707.6	46.77	-60.56	107.33	42.35	31.93	10.5	38.01	300	249	P	H
		5722	48.58	-66.78	115.36	44.1	31.99	10.51	38.02	300	249	P	H
	*	5785	106.14	-	-	101.5	32.1	10.58	38.04	300	249	P	H
	*	5785	96.34	-	-	91.7	32.1	10.58	38.04	300	249	A	H
		5853.24	46.48	-68.33	114.81	41.69	32.21	10.64	38.06	300	249	P	H
		5862.67	46.75	-61.9	108.65	41.94	32.23	10.64	38.06	300	249	P	H
		5922.12	48.39	-21.93	70.32	43.44	32.34	10.69	38.08	300	249	P	H
		5940.775	47.26	-20.94	68.2	42.27	32.38	10.7	38.09	300	249	P	H
													H
													H
		5642.8	47.02	-21.18	68.2	42.67	31.91	10.43	37.99	100	280	P	V
		5665.6	47.59	-32.19	79.78	43.24	31.9	10.45	38	100	280	P	V
		5707.8	47.04	-60.35	107.39	42.62	31.93	10.5	38.01	100	280	P	V
		5723.2	47.17	-70.93	118.1	42.68	31.99	10.52	38.02	100	280	P	V
	*	5785	102.12	-	-	97.48	32.1	10.58	38.04	100	280	P	V
	*	5785	92.53	-	-	87.89	32.1	10.58	38.04	100	280	A	V
		5852.42	46.26	-70.42	116.68	41.48	32.2	10.64	38.06	100	280	P	V
		5868.205	47.35	-59.75	107.1	42.53	32.24	10.65	38.07	100	280	P	V
		5878.66	47.43	-55.05	102.48	42.58	32.26	10.66	38.07	100	280	P	V
		5936.88	47.36	-20.84	68.2	42.38	32.37	10.7	38.09	100	280	P	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 165 5825MHz	*	5825	106.47	-	-	101.75	32.15	10.62	38.05	300	250	P	H
	*	5825	96.44	-	-	91.72	32.15	10.62	38.05	300	250	A	H
		5850.6	55.34	-65.49	120.83	50.56	32.2	10.64	38.06	300	250	P	H
		5857.2	47.58	-62.6	110.18	42.79	32.21	10.64	38.06	300	250	P	H
		5881.2	48.25	-52.34	100.59	43.4	32.26	10.66	38.07	300	250	P	H
		5931.4	47.44	-20.76	68.2	42.48	32.36	10.69	38.09	300	250	P	H
													H
													H
	*	5825	101.62	-	-	96.9	32.15	10.62	38.05	100	307	P	V
	*	5825	91.96	-	-	87.24	32.15	10.62	38.05	100	307	A	V
		5850.4	46.63	-74.66	121.29	41.85	32.2	10.64	38.06	100	307	P	V
		5855.4	48.84	-61.85	110.69	44.05	32.21	10.64	38.06	100	307	P	V
		5903	47.1	-37.34	84.44	42.2	32.31	10.67	38.08	100	307	P	V
		5941.6	46.83	-21.37	68.2	41.84	32.38	10.7	38.09	100	307	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 802.11ax HE20 Full (Harmonic @ 3m)**

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 149 5745MHz		11490	47.95	-26.05	74	53.41	40.29	15.12	60.87	-	-	P	H
		17235	49.37	-18.83	68.2	48.78	40.84	18.3	58.55	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		11490	47.63	-26.37	74	53.09	40.29	15.12	60.87	-	-	P	V
		17235	49.33	-18.87	68.2	48.74	40.84	18.3	58.55	-	-	P	V
													V
													V
													V
													V
													V
													V
													V

[illegible]

[illegible]



Band 4 5725~5850MHz

WIFI 802.11ax HE40_Full (Band Edge @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 151 5755MHz		5643	48.67	-19.53	68.2	44.32	31.91	10.43	37.99	272	249	P	H
		5673	47.98	-37.28	85.26	43.62	31.9	10.46	38	272	249	P	H
		5719.6	58.59	-52.1	110.69	54.11	31.98	10.51	38.01	272	249	P	H
		5725	60	-62.2	122.2	55.5	32	10.52	38.02	272	249	P	H
	*	5755	104.72	-	-	100.1	32.1	10.55	38.03	272	249	P	H
	*	5755	94.52	-	-	89.9	32.1	10.55	38.03	272	249	A	H
		5855.085	48.71	-62.07	110.78	43.92	32.21	10.64	38.06	272	249	P	H
		5858.57	49.1	-60.7	109.8	44.3	32.22	10.64	38.06	272	249	P	H
		5880.915	47.99	-52.82	100.81	43.14	32.26	10.66	38.07	272	249	P	H
		5929.09	47.62	-20.58	68.2	42.66	32.36	10.69	38.09	272	249	P	H
													H
													H
		5616.2	47.06	-21.14	68.2	42.67	31.97	10.4	37.98	100	280	P	V
		5657.2	46.75	-26.8	73.55	42.4	31.9	10.44	37.99	100	280	P	V
		5710	47.2	-60.8	108	42.77	31.94	10.5	38.01	100	280	P	V
		5725	50.77	-71.43	122.2	46.27	32	10.52	38.02	100	280	P	V
	*	5755	99.35	-	-	94.73	32.1	10.55	38.03	100	280	P	V
	*	5755	89.28	-	-	84.66	32.1	10.55	38.03	100	280	A	V
		5851.6	46.12	-72.43	118.55	41.34	32.2	10.64	38.06	100	280	P	V
		5868.205	47.58	-59.52	107.1	42.76	32.24	10.65	38.07	100	280	P	V
		5921.915	47.04	-23.43	70.47	42.09	32.34	10.69	38.08	100	280	P	V
		5944.26	46.95	-21.25	68.2	41.95	32.39	10.7	38.09	100	280	P	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 159 5795MHz		5649.2	46.53	-21.67	68.2	42.19	31.9	10.43	37.99	287	250	P	H
		5697.8	47.59	-55.99	103.58	43.21	31.9	10.49	38.01	287	250	P	H
		5719.2	48.01	-62.57	110.58	43.53	31.98	10.51	38.01	287	250	P	H
		5725	47.39	-74.81	122.2	42.89	32	10.52	38.02	287	250	P	H
	*	5795	104.35	-	-	99.7	32.1	10.59	38.04	287	250	P	H
	*	5795	94.1	-	-	89.45	32.1	10.59	38.04	287	250	A	H
		5850.575	47.26	-73.63	120.89	42.48	32.2	10.64	38.06	287	250	P	H
		5867.385	47.41	-59.92	107.33	42.59	32.23	10.65	38.06	287	250	P	H
		5876.2	48.3	-56.01	104.31	43.47	32.25	10.65	38.07	287	250	P	H
		5927.45	48.3	-19.9	68.2	43.35	32.35	10.69	38.09	287	250	P	H
													H
													H
		5606.2	46.75	-21.45	68.2	42.35	31.99	10.39	37.98	100	311	P	V
		5697.6	46.99	-56.44	103.43	42.61	31.9	10.49	38.01	100	311	P	V
		5710.2	47.19	-60.87	108.06	42.76	31.94	10.5	38.01	100	311	P	V
		5723.2	46.21	-71.89	118.1	41.72	31.99	10.52	38.02	100	311	P	V
	*	5795	98.35	-	-	93.7	32.1	10.59	38.04	100	311	P	V
	*	5795	89.05	-	-	84.4	32.1	10.59	38.04	100	311	A	V
		5853.65	46.2	-67.68	113.88	41.41	32.21	10.64	38.06	100	311	P	V
		5860.415	47.12	-62.16	109.28	42.32	32.22	10.64	38.06	100	311	P	V
		5894.035	47.65	-43.43	91.08	42.76	32.29	10.67	38.07	100	311	P	V
		5927.245	47.09	-21.11	68.2	42.14	32.35	10.69	38.09	100	311	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 802.11ax HE40_Full (Harmonic @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 151 5755MHz		11510	47.96	-26.04	74	53.43	40.28	15.13	60.88	-	-	P	H
		17265	50	-18.2	68.2	49.26	40.96	18.32	58.54	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		11510	47.67	-26.33	74	53.14	40.28	15.13	60.88	-	-	P	V
		17265	49.86	-18.34	68.2	49.12	40.96	18.32	58.54	-	-	P	V
													V
													V
													V
													V
													V
													V
													V

[illegible]



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 155 5775MHz		5623	47.7	-20.5	68.2	43.32	31.95	10.41	37.98	276	252	P	H
		5699.4	50.61	-54.15	104.76	46.23	31.9	10.49	38.01	276	252	P	H
		5720	57.28	-53.52	110.8	52.8	31.98	10.51	38.01	276	252	P	H
		5723.6	63.61	-55.4	119.01	59.12	31.99	10.52	38.02	276	252	P	H
	*	5775	106.24	-	-	101.6	32.1	10.57	38.03	276	252	P	H
	*	5775	97.89	-	-	93.25	32.1	10.57	38.03	276	252	A	H
		5850.165	55.07	-66.75	121.82	50.29	32.2	10.64	38.06	276	252	P	H
		5872.51	54.09	-51.81	105.9	49.26	32.25	10.65	38.07	276	252	P	H
		5875.995	49.33	-55.13	104.46	44.5	32.25	10.65	38.07	276	252	P	H
		5938.11	49	-19.2	68.2	44.01	32.38	10.7	38.09	276	252	P	H
													H
													H
		5610.4	46.84	-21.36	68.2	42.45	31.98	10.39	37.98	100	310	P	V
		5698	46.76	-56.97	103.73	42.38	31.9	10.49	38.01	100	310	P	V
		5718.6	51.79	-58.62	110.41	47.32	31.97	10.51	38.01	100	310	P	V
		5724	56.83	-63.09	119.92	52.33	32	10.52	38.02	100	310	P	V
	*	5775	95.39	-	-	90.75	32.1	10.57	38.03	100	310	P	V
	*	5775	85.54	-	-	80.9	32.1	10.57	38.03	100	310	A	V
		5853.24	47.56	-67.25	114.81	42.77	32.21	10.64	38.06	100	310	P	V
		5870.46	47.82	-58.65	106.47	43	32.24	10.65	38.07	100	310	P	V
		5922.735	48.01	-21.86	69.87	43.05	32.35	10.69	38.08	100	310	P	V
		5937.29	47.18	-21.02	68.2	42.2	32.37	10.7	38.09	100	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 802.11ac VHT80 (Harmonic @ 3m)

[illegible]



Note symbol

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



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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
4+5		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over 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) – 74(dBμV/m)
 = -18.55(dB)

For Average 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) + 42.6(dBμV) – 35.86 (dB)
 = 43.54 (dBμV/m)
2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)
 = 43.54(dBμV/m) – 54(dBμV/m)
 = -10.46(dB)

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

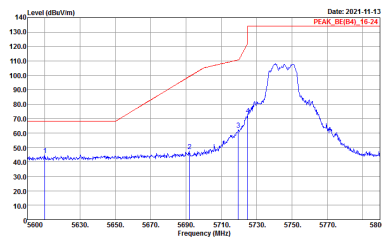
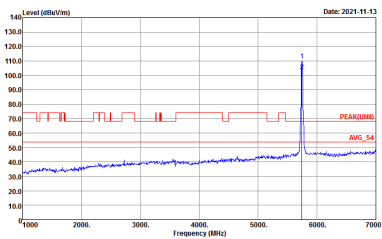


Appendix D. Radiated Spurious Emission Plots

Test Engineer :	Leo Lee, Mancy Chou and Bigshow Wang	Temperature :	22.1~23.5°C
		Relative Humidity :	55~65%

<CDD Mode>

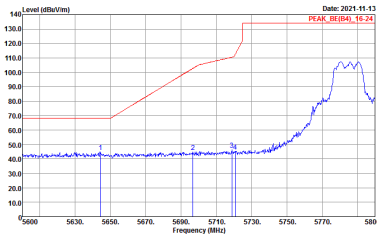
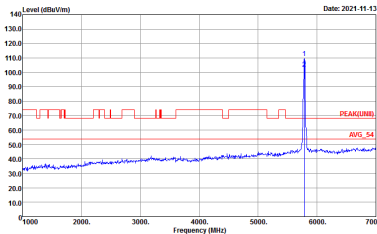
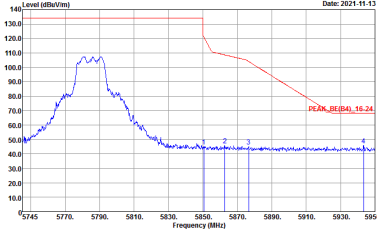
Band 4 - 5725~5850MHz
WIFI 802.11a (Band Edge @ 3m)

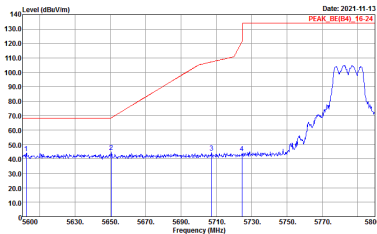
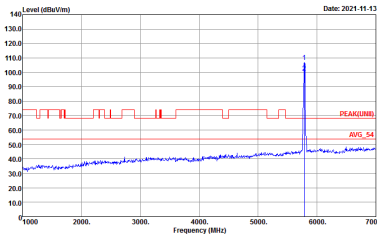
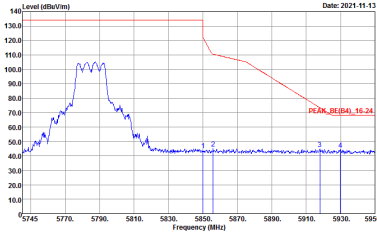
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNII) 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



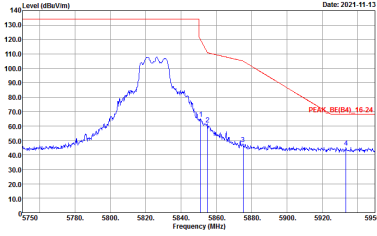
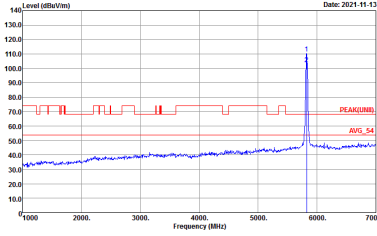
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
4+5	Vertical	Fundamental
Peak	Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH15-HY Condition : PEAK(LINE) 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



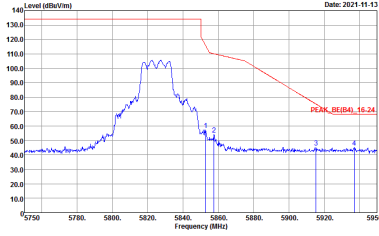
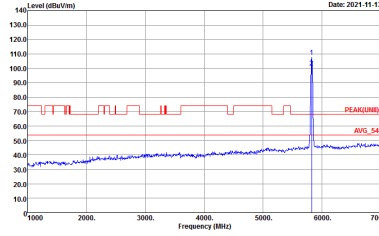
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(FUND)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE) 3m 91200_1620_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

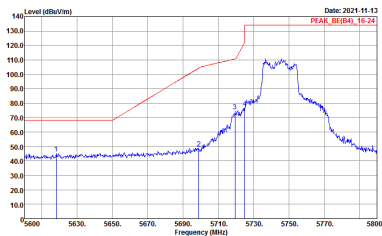
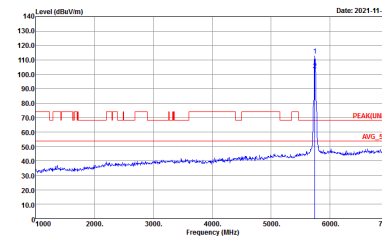


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE) 3m 91200_1620_20211025 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

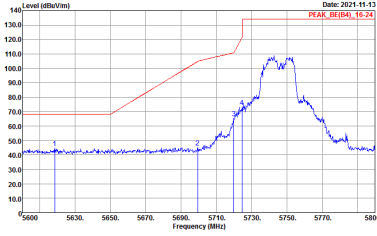
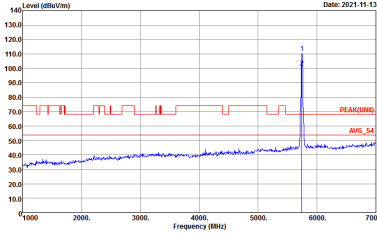


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_B4_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_B4_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

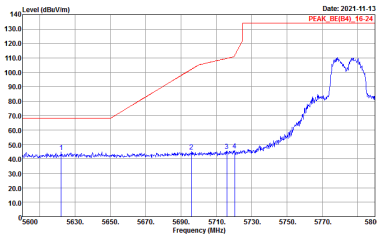
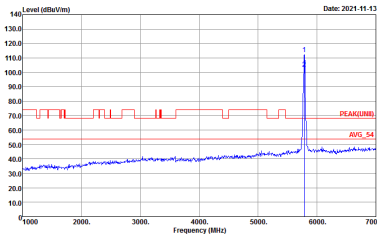
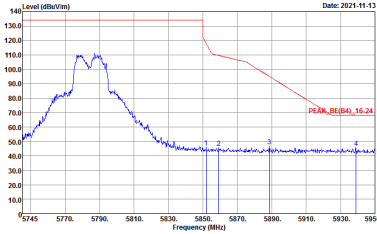
Band 4 5725~5850MHz
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

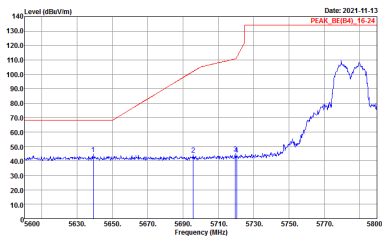
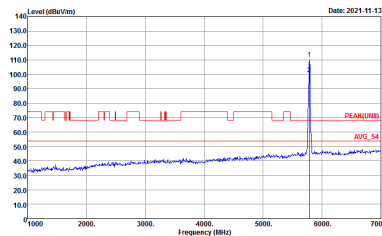
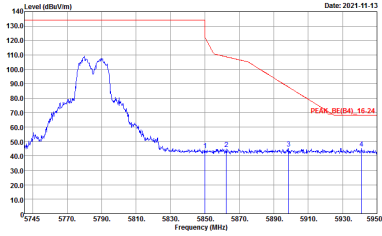
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE1) 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



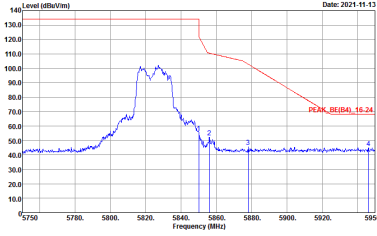
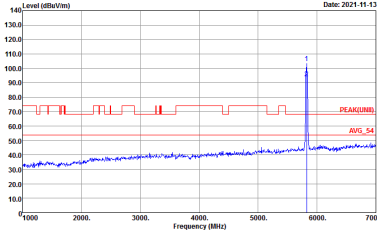
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_FUND(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE) 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



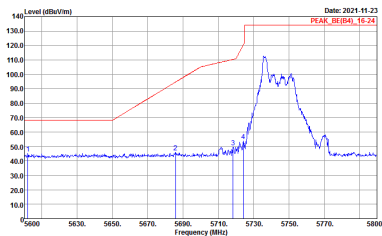
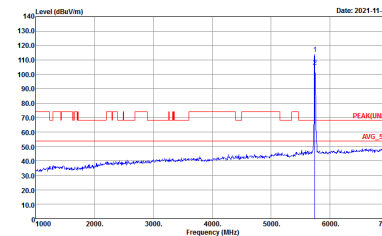
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
4+5	Horizontal	Fundamental
Peak	Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH15-HY Condition : PEAK(LINE) 3m 91200_1620_20211025 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



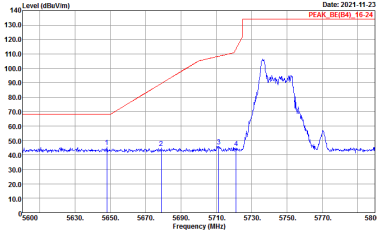
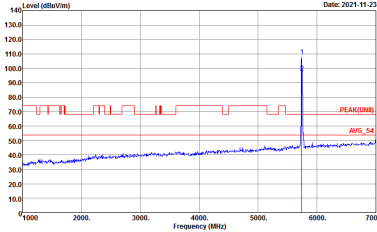
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE) 3m 91200_1620_20211025 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto



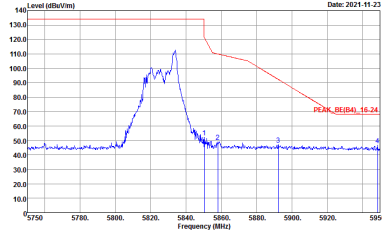
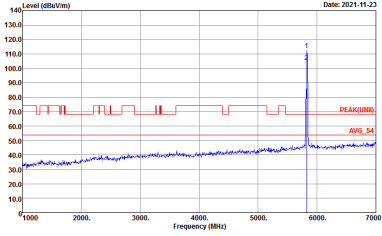
Band 4 5725~5850MHz
WIFI 802.11ax HE20 Partial 26 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH149 5745MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNII)_3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH149 5745MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE1) 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

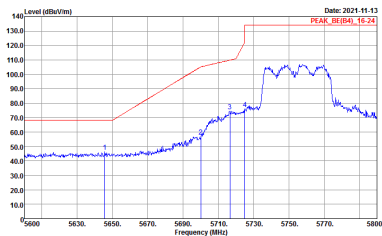
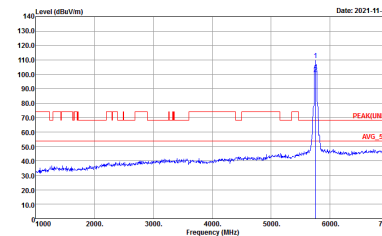
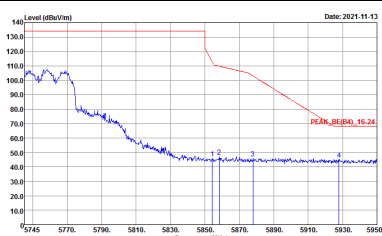


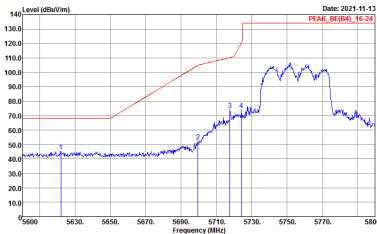
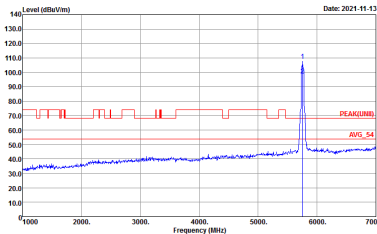
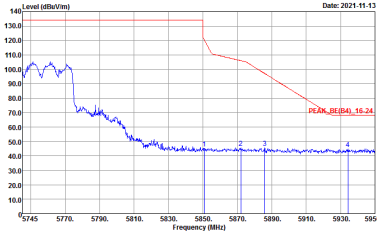
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH165 5825MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE) 3m 91200_1620_20211025 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto



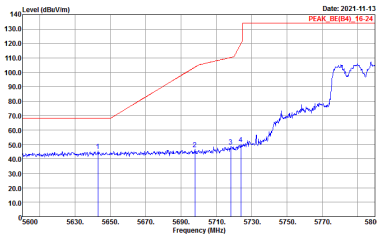
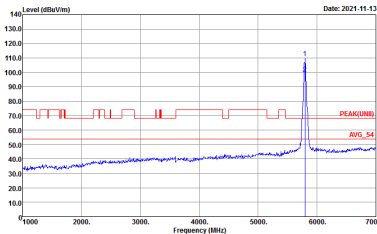
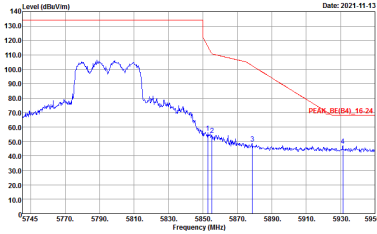
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH165 5825MHz	
4+5	Vertical	Fundamental
Peak	Level (dBuV/m) Date: 2021-11-23 Site : 03CH15-HY Condition : PEAK_B6(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Level (dBuV/m) Date: 2021-11-23 Site : 03CH15-HY Condition : PEAK(UWB) 3m 91200_1620_20211025 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

Band 4 5725~5850MHz
WIFI 802.11ax HE40 Full (Band Edge @ 3m)

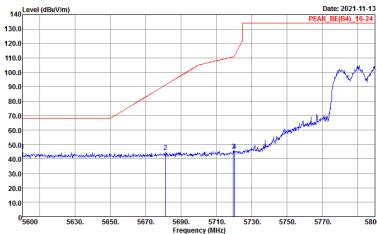
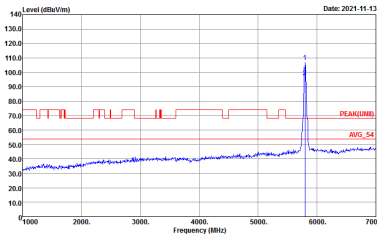
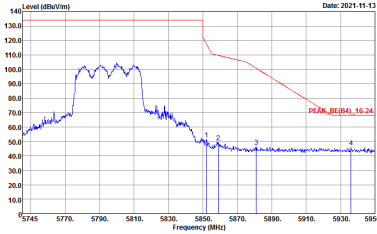
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(04)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(04)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE1) 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

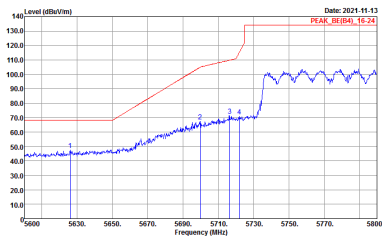
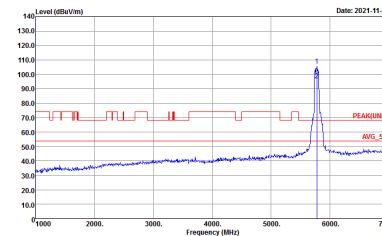
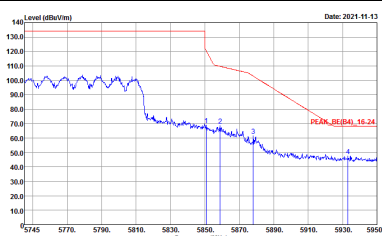


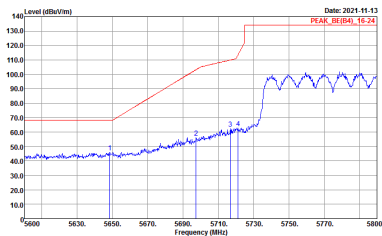
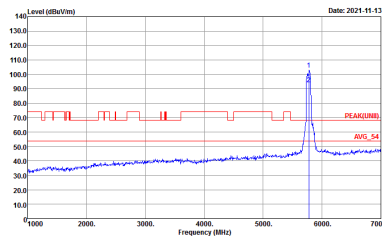
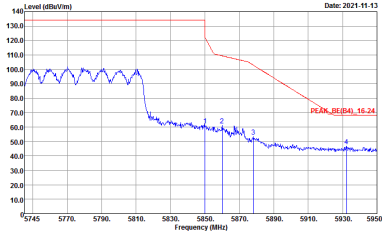
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



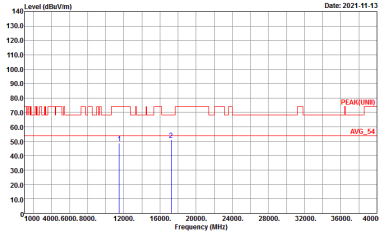
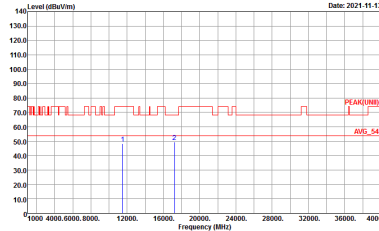
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(FUNDI) 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

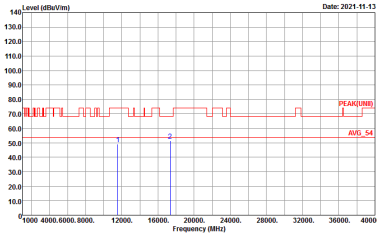
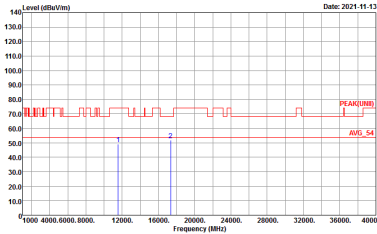
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_FUND(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

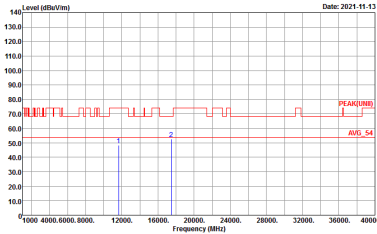
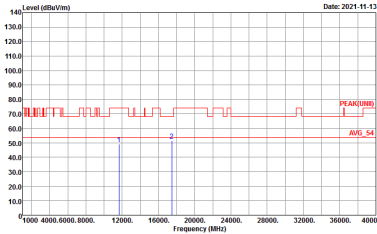
Band 4 - 5725~5850MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
4+5	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 VERTICAL



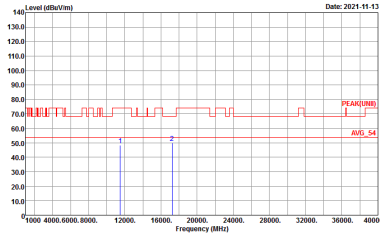
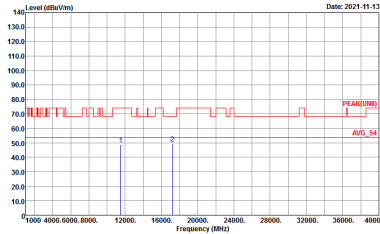
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
4+5	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 VERTICAL



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
4+5	Horizontal	Vertical
Peak Avg.	 Site : 03CHI5-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL	 Site : 03CHI5-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 VERTICAL



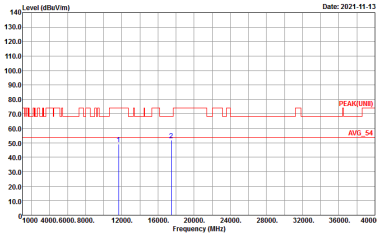
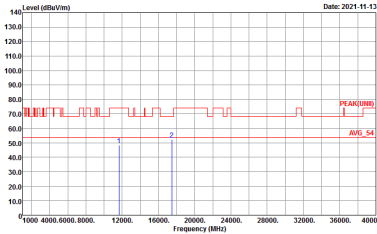
Band 4 5725~5850MHz
WIFI 802.11ax HE20 Full (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
4+5	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-14Y Condition : -PEAK(UNIT) 3m 9120D_1620_20211025 HORIZONTAL	 Site : 03CH15-14Y Condition : -PEAK(UNIT) 3m 9120D_1620_20211025 VERTICAL



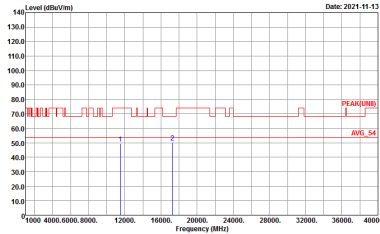
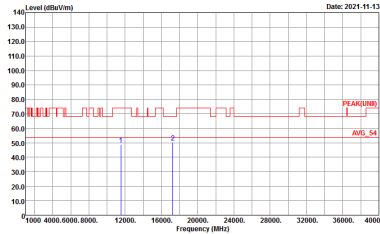
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
4+5	Horizontal	Vertical
Peak Avg.	Level (dBm/100MHz) Date: 2021-11-13 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL	Level (dBm/100MHz) Date: 2021-11-13 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 VERTICAL



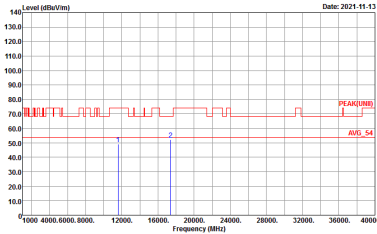
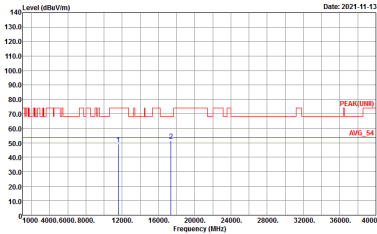
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
4+5	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 VERTICAL



Band 4 5725~5850MHz
WIFI 802.11ax HE40 Full (Harmonic @ 3m)

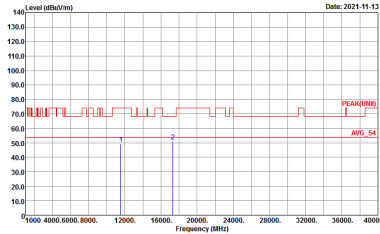
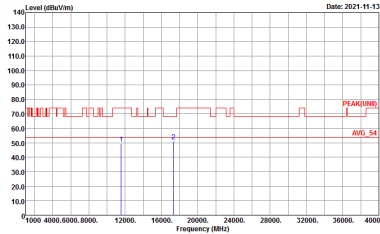
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
4+5	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-14Y Condition : -PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL	 Site : 03CH15-14Y Condition : -PEAK(UNIT) 3m 91200_1620_20211025 VERTICAL



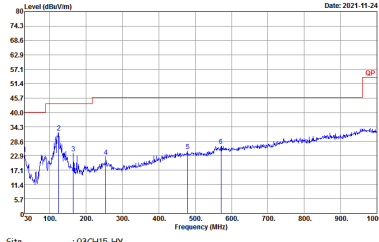
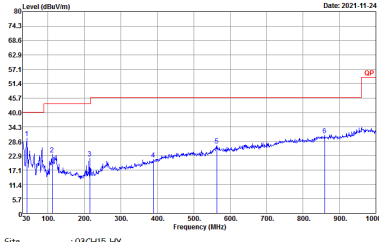
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
4+5	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 VERTICAL



Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
4+5	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-14Y Condition : -PEAK(UNIT) 3m 9120D_1620_20211025 HORIZONTAL	 Site : 03CH15-14Y Condition : -PEAK(UNIT) 3m 9120D_1620_20211025 VERTICAL

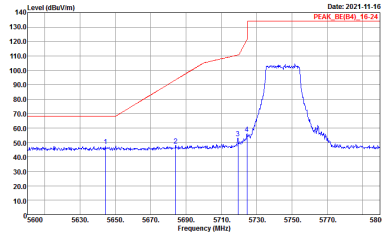
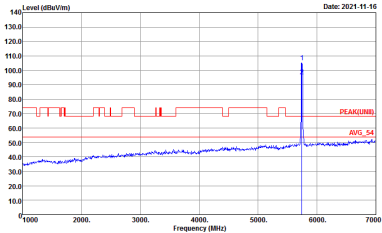
Emission below 1GHz
5GHz WIFI 802.11ac VHT80 (LF @ 3m)

WIFI	5GHz WIFI	
ANT	802.11ac VHT80 LF	
4+5	Horizontal	Vertical
QP / Peak	 Site : 03CH15-HY Condition : QP 3m BIL06_41912_20210208 HORIZONTAL	 Site : 03CH15-HY Condition : QP 3m BIL06_41912_20210208 VERTICAL

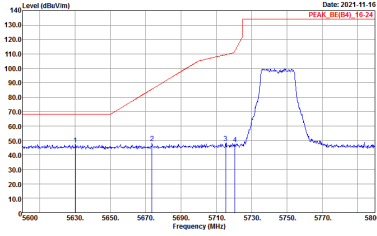
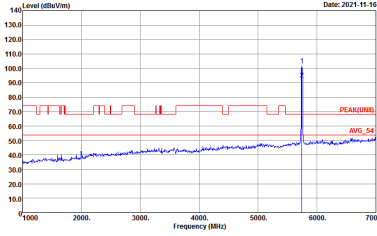


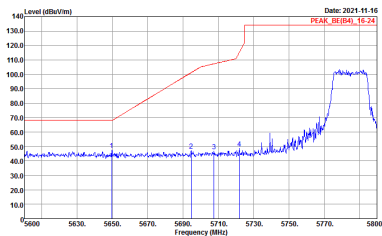
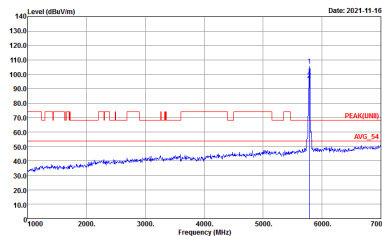
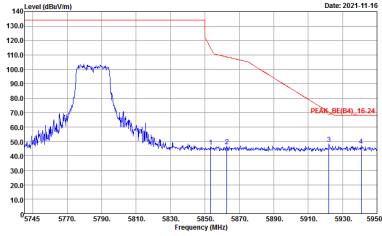
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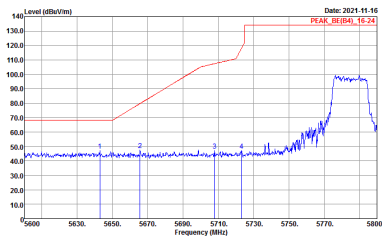
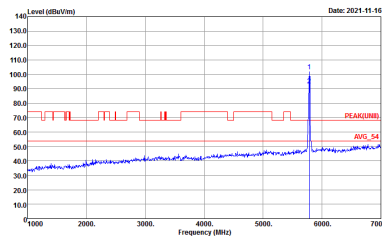
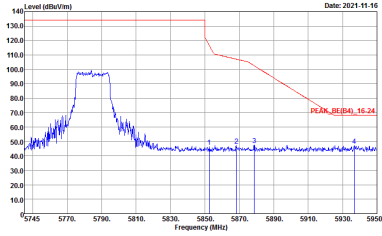
Band 4 - 5725~5850MHz
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_RE[04]_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK[UNIT] 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

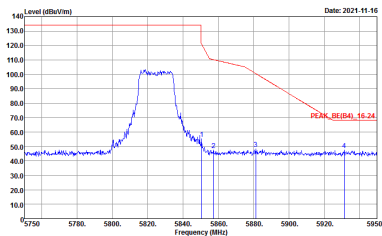
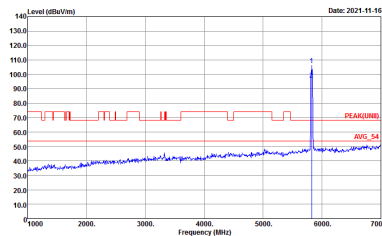


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE) 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

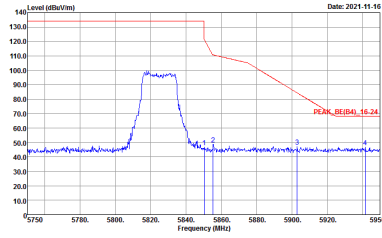
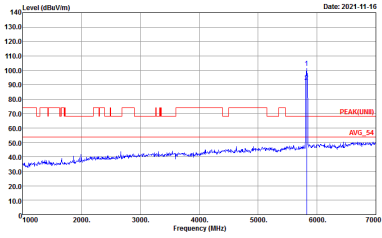
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(BE) 3m 91200_1620_20211025 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(FUND)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



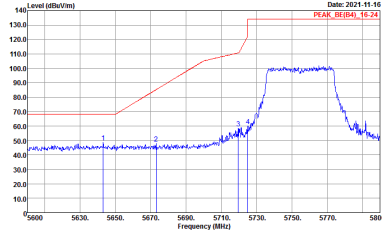
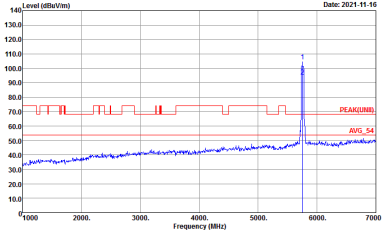
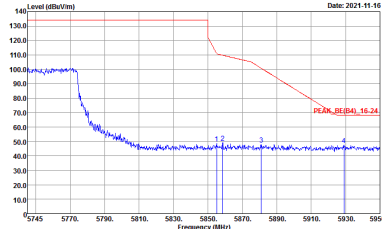
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE) 3m 91200_1620_20211025 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

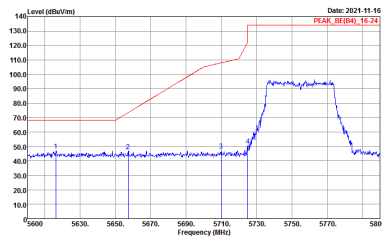
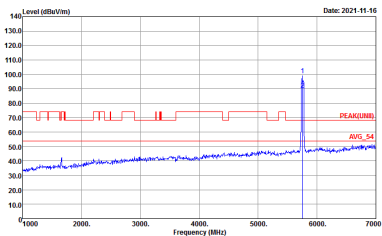
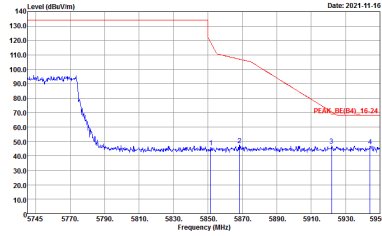


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE) 3m 91200_1620_20211025 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

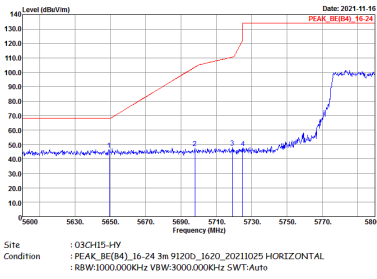
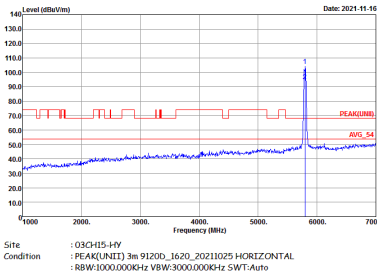
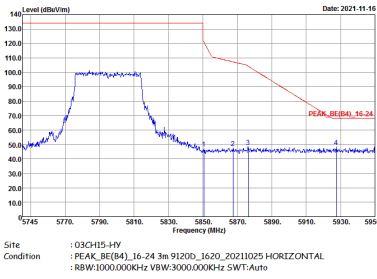


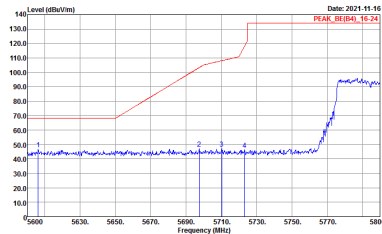
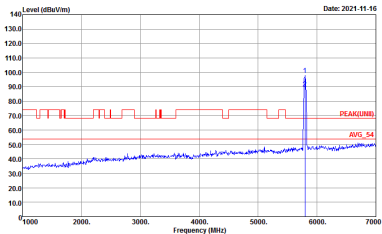
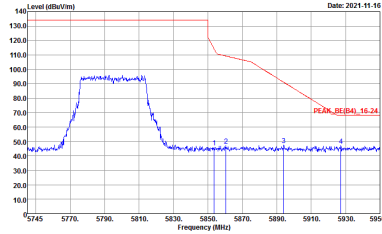
Band 4 5725~5850MHz
WIFI 802.11ax HE40 Full (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_FUND(B4)_16-24 3m 91200_1620_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

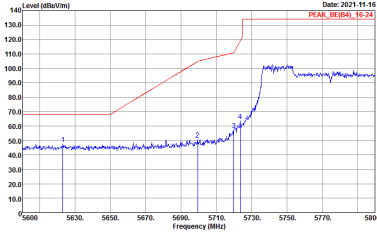
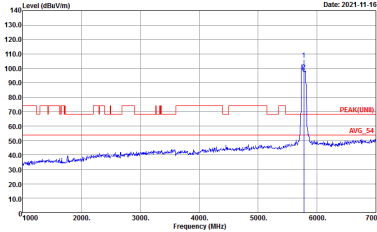
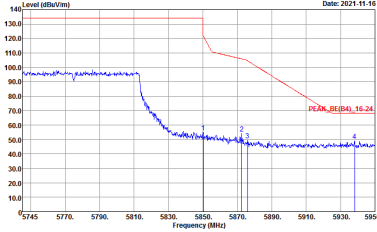


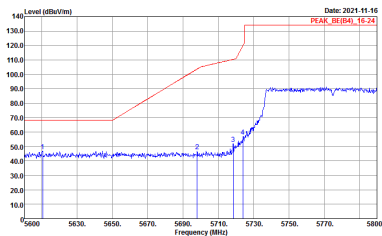
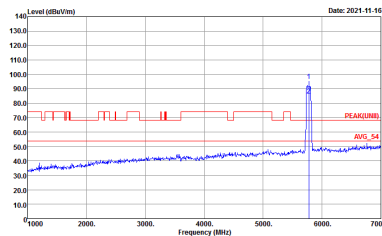
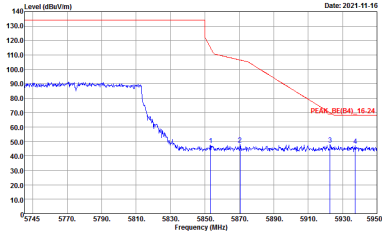
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_FUND(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(BE)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

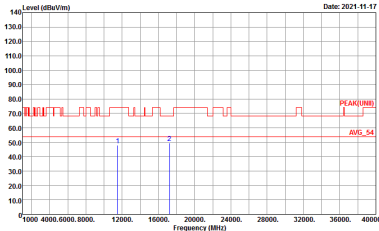
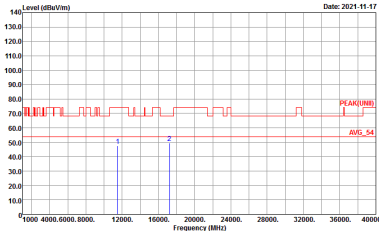
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNII)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_1620_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_FUND(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1620_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

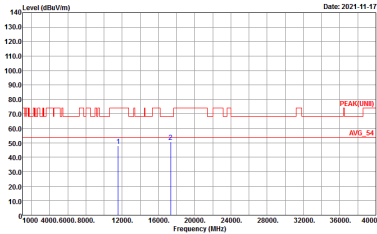
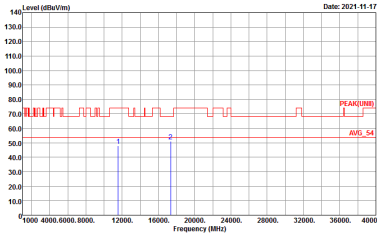


Band 4 - 5725~5850MHz

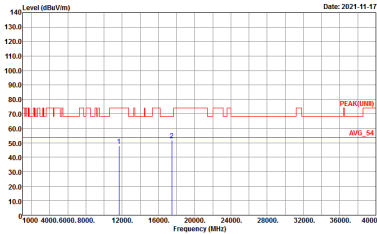
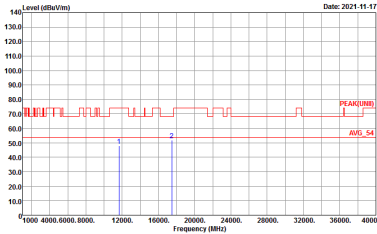
WIFI 802.11ax HE20 Full (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
4+5	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 VERTICAL

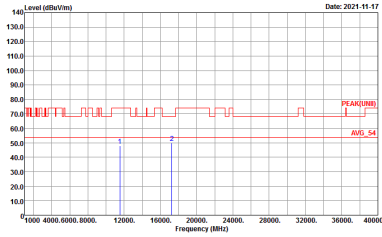
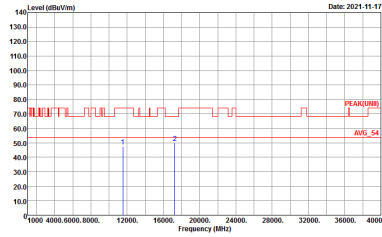


WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
4+5	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 VERTICAL

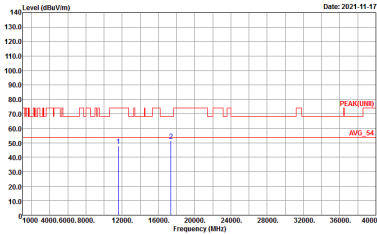
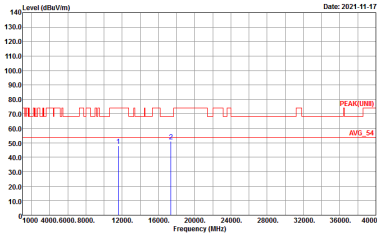


WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
4+5	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 VERTICAL

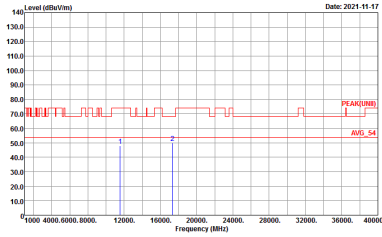
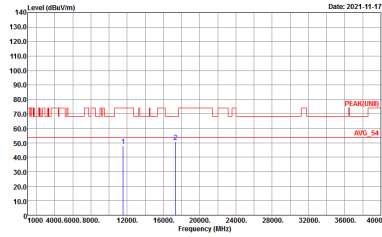
Band 4 5725~5850MHz
WIFI 802.11ax HE40 Full (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
4+5	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-14Y Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL	 Site : 03CH15-14Y Condition : PEAK(UNIT) 3m 91200_1620_20211025 VERTICAL



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
4+5	Horizontal	Vertical
Peak Avg.	Level (dBm/100MHz) Date: 2021-11-17  Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL	Level (dBm/100MHz) Date: 2021-11-17  Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_1620_20211025 VERTICAL

Band 4 - 5725~5850MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
4+5	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-14Y Condition : PEAK(UNIT) 3m 9120D_1620_20211025 HORIZONTAL	 Site : 03CH15-14Y Condition : PEAK(UNIT) 3m 9120D_1620_20211025 VERTICAL

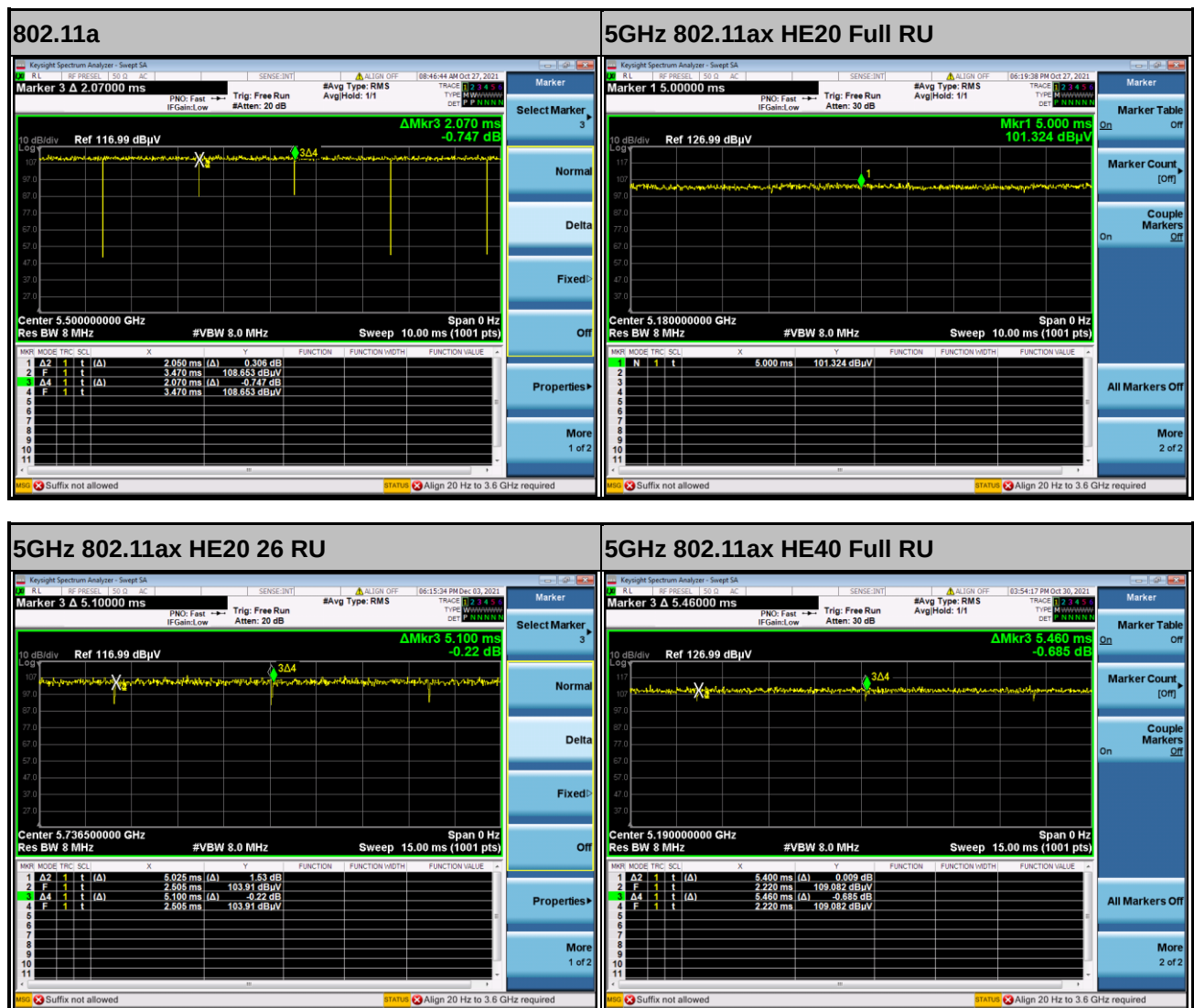


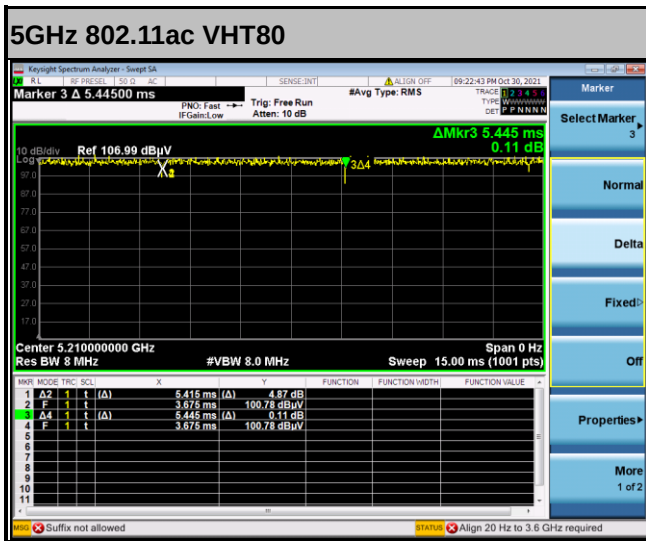
Appendix E. Duty Cycle Plots

<CDD Mode>

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
4+5	802.11a	99.03	-	-	10Hz
4+5	5GHz 802.11ax HE20 Full RU	100.00	-	-	10Hz
4+5	5GHz 802.11ax HE20 26 RU	98.53	-	-	10Hz
4+5	5GHz 802.11ax HE40 Full RU	98.90	-	-	10Hz
4+5	5GHz 802.11ac VHT80	99.45	-	-	10Hz

MIMO <Ant. 4+5>



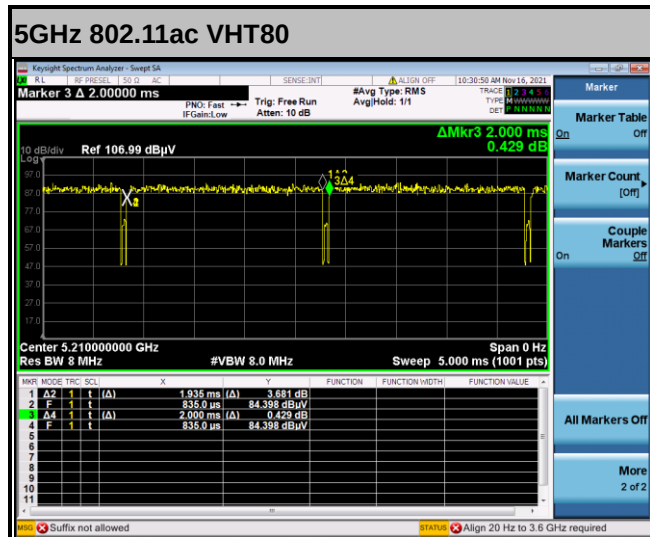
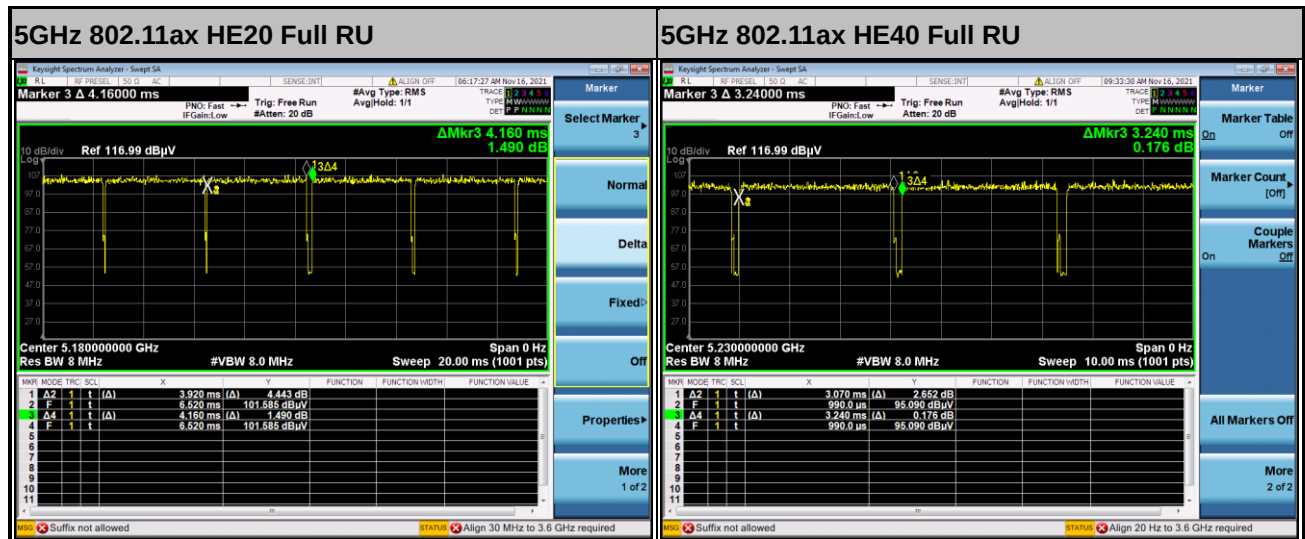




<TXBF Mode>

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
4+5	5GHz 802.11ax HE20 Full RU	94.23	3920	0.26	300Hz
4+5	5GHz 802.11ax HE40 Full RU	94.75	3070	0.33	1kHz
4+5	5GHz 802.11ac VHT80	96.75	1935	0.52	1kHz

MIMO <Ant. 4+5>



—THE END—