



FCC RADIO TEST REPORT

FCC ID : U8G-P1AX11
Equipment : PEPWAVE / peplink Wireless Product
Brand Name : PEPWAVE / peplink
Model Name : MAX Transit Pro
MAX Transit Pro LTEA
MAX-TST-PRO-DUO-LTEA-US-T-PRM
MAX-TST-PRO-DUO-LTEA-R-T-PRM
Applicant : PISMO LABS TECHNOLOGY LIMITED
A8, 5/F, HK Spinners Industrial
Building, Phase 6, 481 Castle Peak
Road, Cheung Sha Wan, Hong Kong
Manufacturer : PISMO LABS TECHNOLOGY LIMITED
A8, 5/F, HK Spinners Industrial
Building, Phase 6, 481 Castle Peak
Road, Cheung Sha Wan, Hong Kong
Standard : FCC Part 15 Subpart E §15.407

The product was received on Jan. 18, 2022 and testing was performed from Feb. 19, 2022 to Jun. 10, 2022. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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



Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory

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



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 Modification of EUT	5
1.3 Testing Location	6
1.4 Applicable Standards.....	6
2 Test Configuration of Equipment Under Test	7
2.1 Carrier Frequency and Channel	7
2.2 Test Mode.....	8
2.3 Connection Diagram of Test System.....	9
2.4 Support Unit used in test configuration and system	10
2.5 EUT Operation Test Setup	10
2.6 Measurement Results Explanation Example.....	10
3 Test Result	11
3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement	11
3.2 Maximum Conducted Output Power Measurement	16
3.3 Power Spectral Density Measurement	18
3.4 Unwanted Emissions Measurement.....	21
3.5 AC Conducted Emission Measurement.....	26
3.6 Antenna Requirements.....	28
4 List of Measuring Equipment.....	29
5 Uncertainty of Evaluation	31
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	
Appendix F. Setup Photographs	



History of this test report

Report No.	Version	Description	Issue Date
FR211326C	01	Initial issue of report	Jun. 24, 2022

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	1.24 dB under the limit at 5390.000 MHz
3.5	15.207	AC Conducted Emission	Pass	13.92 dB under the limit at 0.661 MHz
3.6	15.203 15.407(a)	Antenna Requirement	Pass	-

Declaration of Conformity:

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

Comments and Explanations:

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

Reviewed by: Lewis Ho

Report Producer: Vivian Hsu

1 General Description

1.1 Product Feature of Equipment Under Test

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

Product Feature		
Integrated WWAN Module 1	Brand Name: Sierra Model Name: EM7411 FCC ID: N7NEM74B	
Integrated WWAN Module 2	Brand Name: Sierra Model Name: EM7511 FCC ID: N7NEM75S	
Sample 1	MAX-TST-PRO-DUO-LTEA-US-T-PRM with WWAN Module 1 (EM7411)	
Sample 2	MAX-TST-PRO-DUO-LTEA-R-T-PRM with WWAN Module 2 (EM7511)	
Antenna Type	WWAN <For EM7511>: Omni-directional Antenna <For EM7411>: Omni-directional Antenna WLAN <Ant. 1>: Omni-directional Antenna <Ant. 2>: Omni-directional Antenna GPS: Directional Antenna	
Antenna information		
5725 MHz ~ 5850 MHz	Peak Gain (dBi)	Ant. 1: 4.73 Ant. 2: 4.73

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

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

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

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

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

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

FCC designation No.: TW1190 and TW3786

1.4 Applicable Standards

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

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

Remark:

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



2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in two config (Ant. Degree 0 and Ant. Degree 90), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find Ant. Degree 90 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 802.11ax mode is investigated among different tones, full resource units (RU), partial resource units. The partial RU has no higher power than full RU's, thus the full RU is chosen as main test configuration.

The CDD mode is chosen as worst case configuration for all test cases due to higher power than SISO mode.

The 802.11n/ac mode has no higher power and PSD than 802.11ax mode, thus the 802.11ax mode is chosen as main test configuration, and the 802.11n/ac mode is verified the power.

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 (Covered by HE80)	MCS0
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : WLAN (5GHz) Link + LAN Link + WAN Link + Type C (Port 1) Cable with Adapter for Sample 1 Mode 2 : WLAN (5GHz) Link + LAN Link + WAN Link + Type C (Port 1) Cable with Adapter for Sample 2
Remark: The worst case of Conducted Emission is mode 2; only the test data of it was reported.	

<Sample 1>

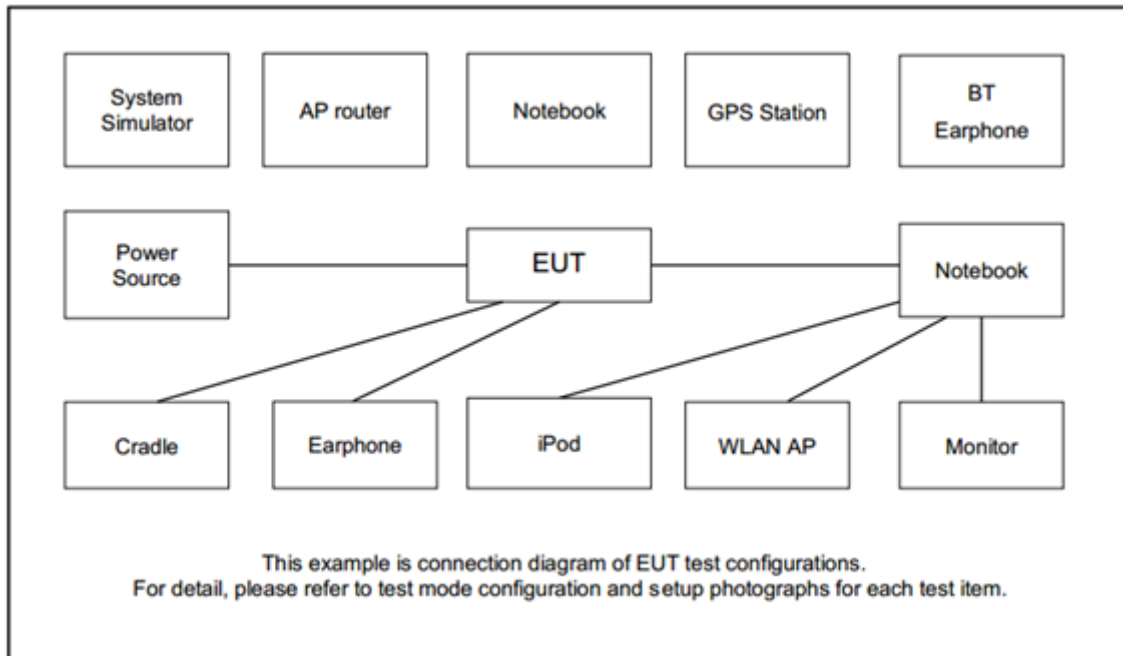
Ch. #		Band IV : 5725-5850 MHz			
		802.11a	802.11ax HE20	802.11ax HE40	802.11ac VHT80
L	Low	149	149	151	-
M	Middle	157	157	-	155
H	High	165	165	159	-

<Sample 2>

Ch. #		Band IV : 5725-5850 MHz			
		802.11ax HE20			
L	Low	149			
M	Middle	-			
H	High	-			

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

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	Dell	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
2.	USB 3.1 Cable	Pismo	E119932-Y	N/A	N/A	N/A
3.	Adapter	BILLION	DCTPD65WZZ-B1	FCC DoC	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility "QSPR Version 5.0-00202 was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

Offset = RF cable loss + attenuator factor.

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

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

3 Test Result

3.1 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

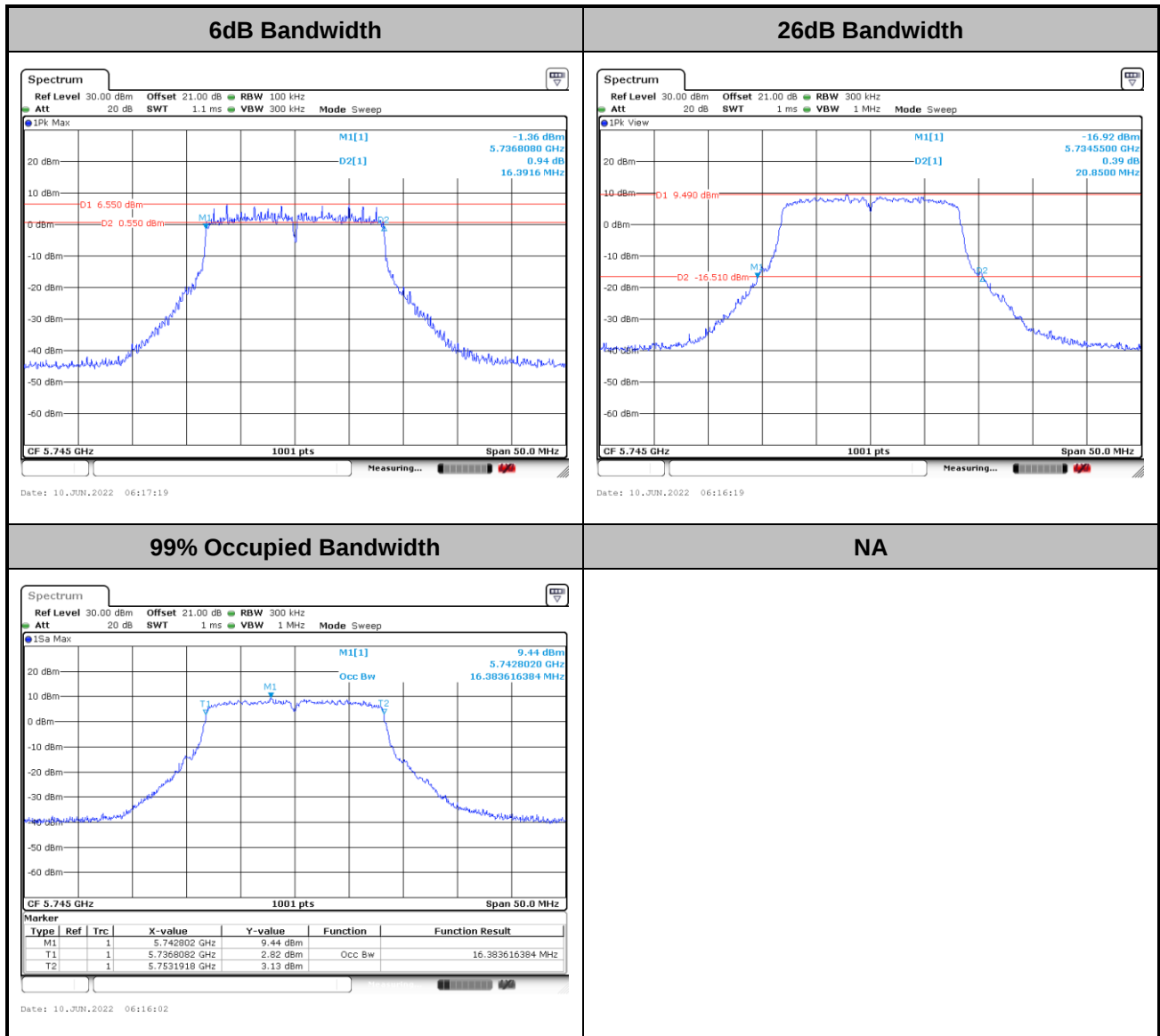


3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.

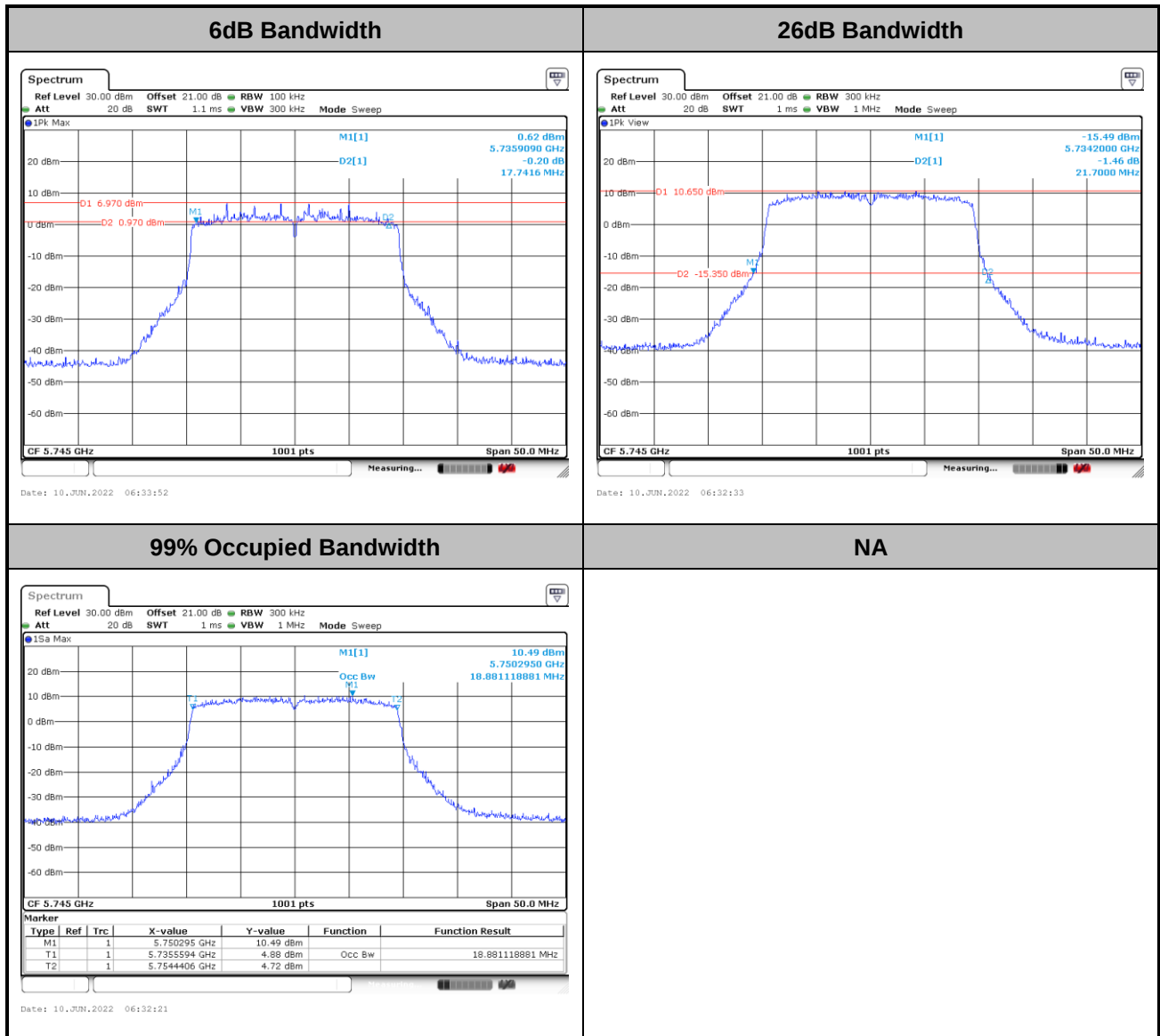


<802.11a>



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

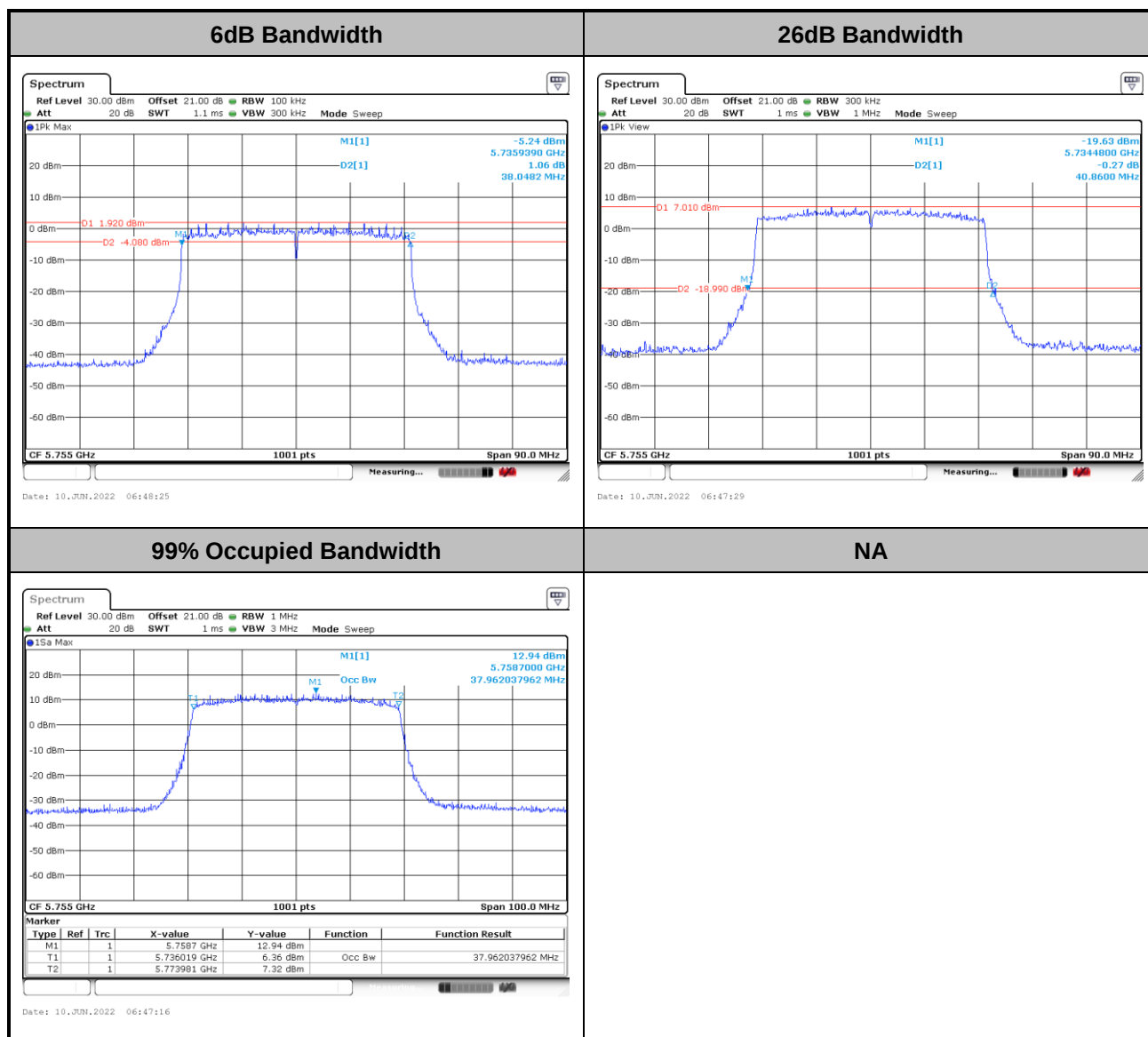
<802.11ax HE20>



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



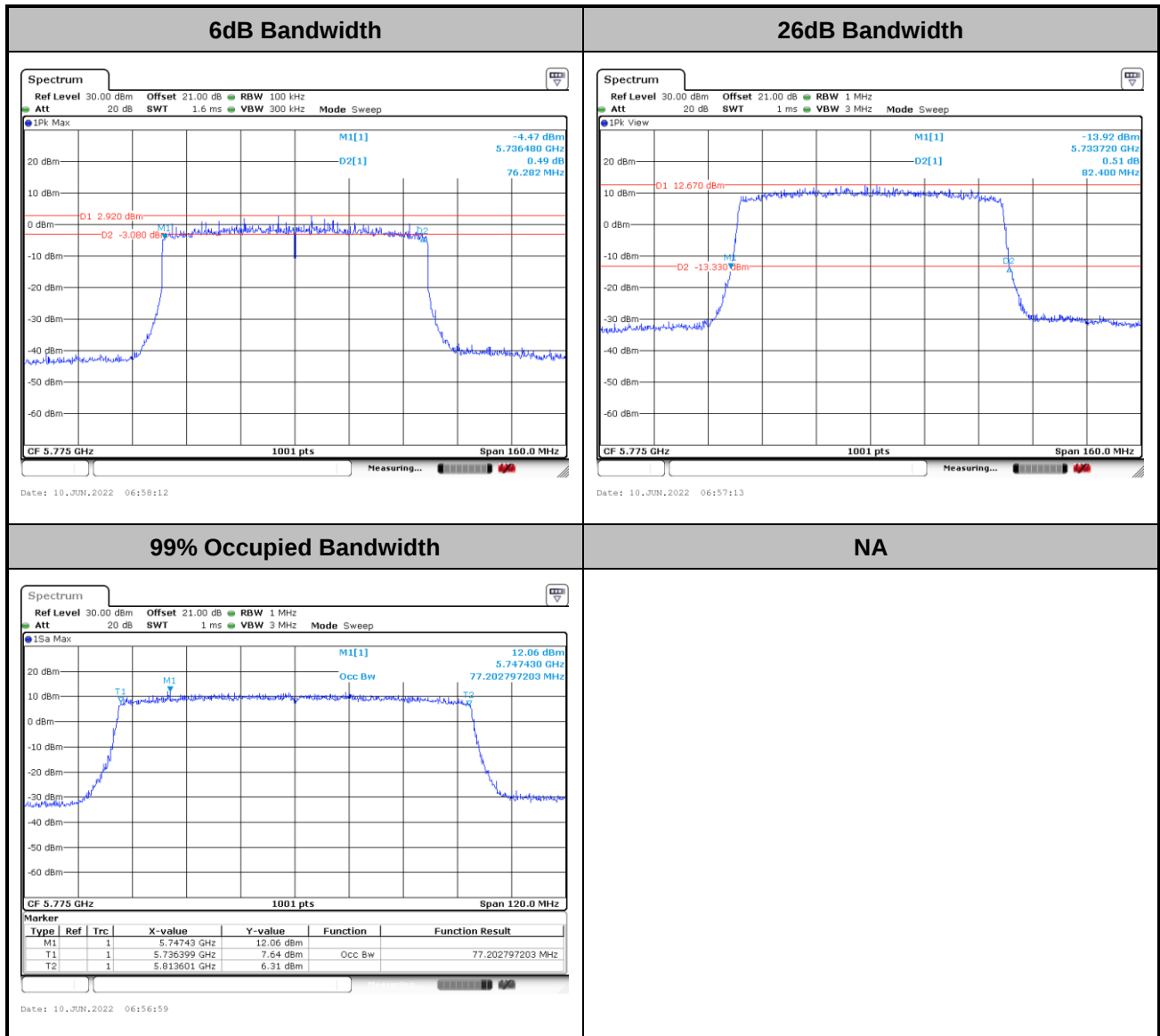
<802.11ax HE40>



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



<802.11ax HE80>



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

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

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

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

3.2.2 Measuring Instruments

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

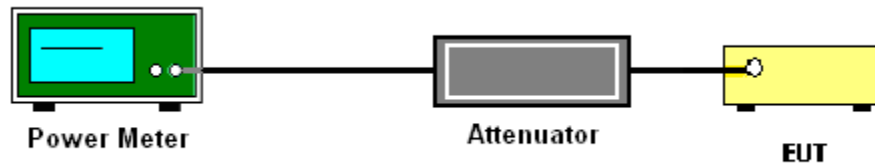
3.2.3 Test Procedures

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

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

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

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section F) Maximum power spectral density.

Method SA-3

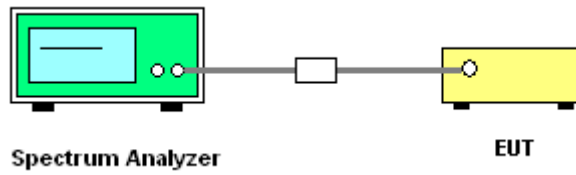
(power averaging (rms) detection with max hold):

- 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 ($<500 \text{ kHz}$) 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.

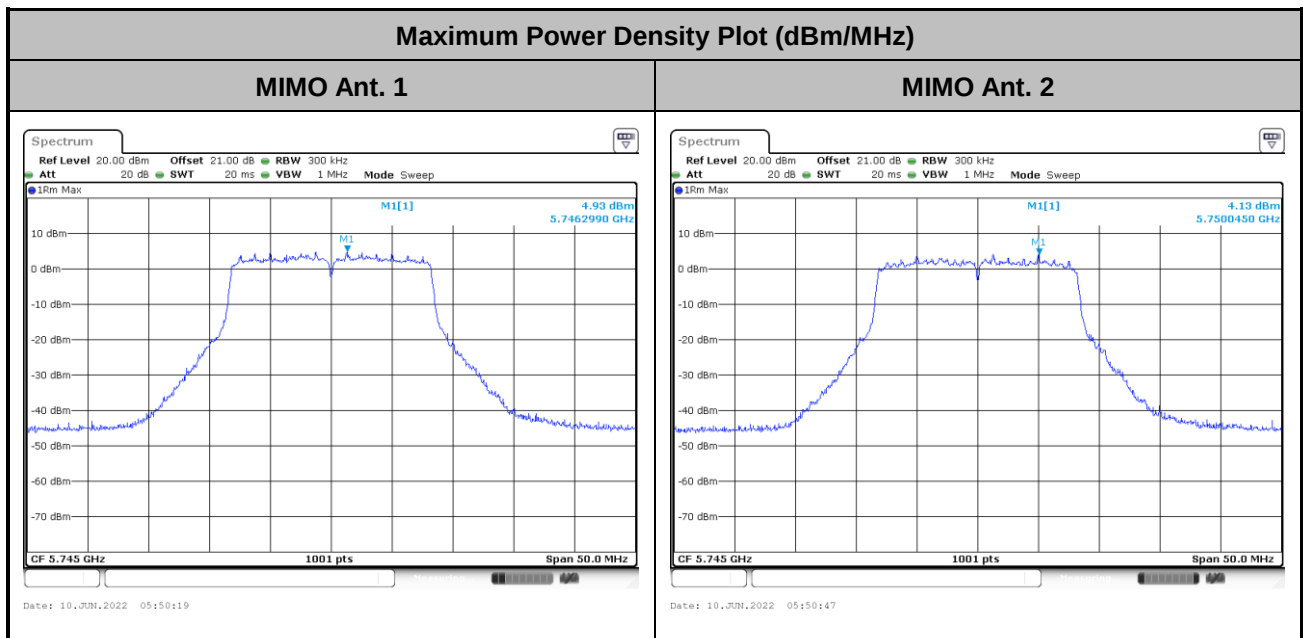
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

<802.11a>

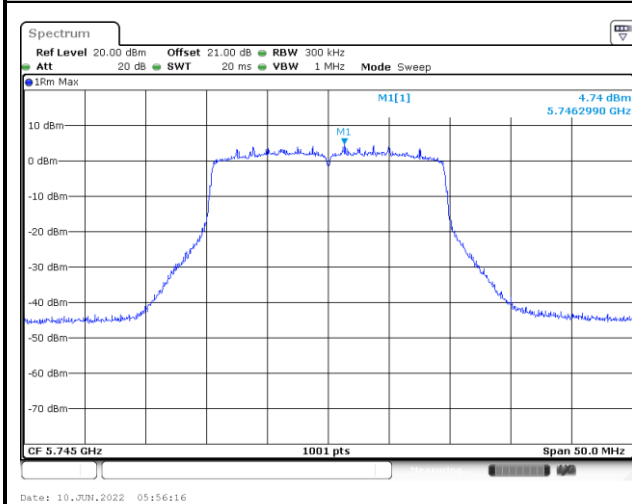




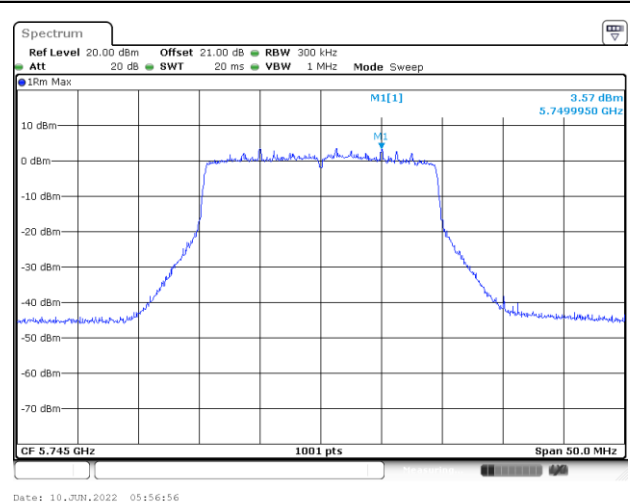
<802.11ax>

Maximum Power Density Plot (dBm/MHz)

MIMO Ant. 1



MIMO Ant. 2



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

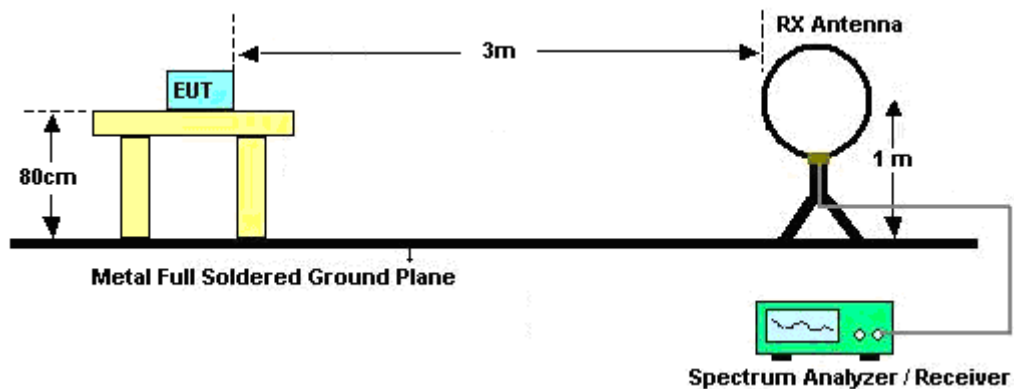
against QP limit line, the position is marked as “-“.

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.

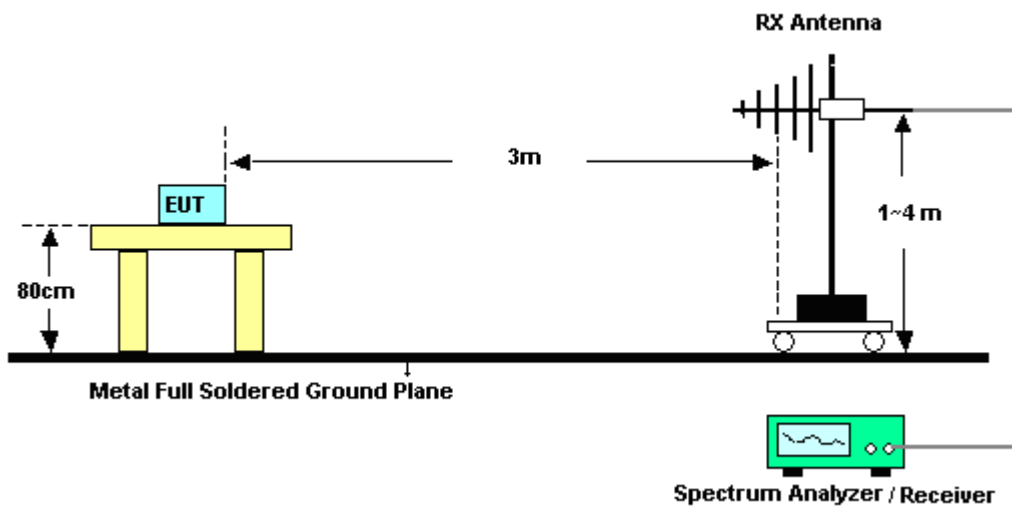
When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as “-“.

3.4.4 Test Setup

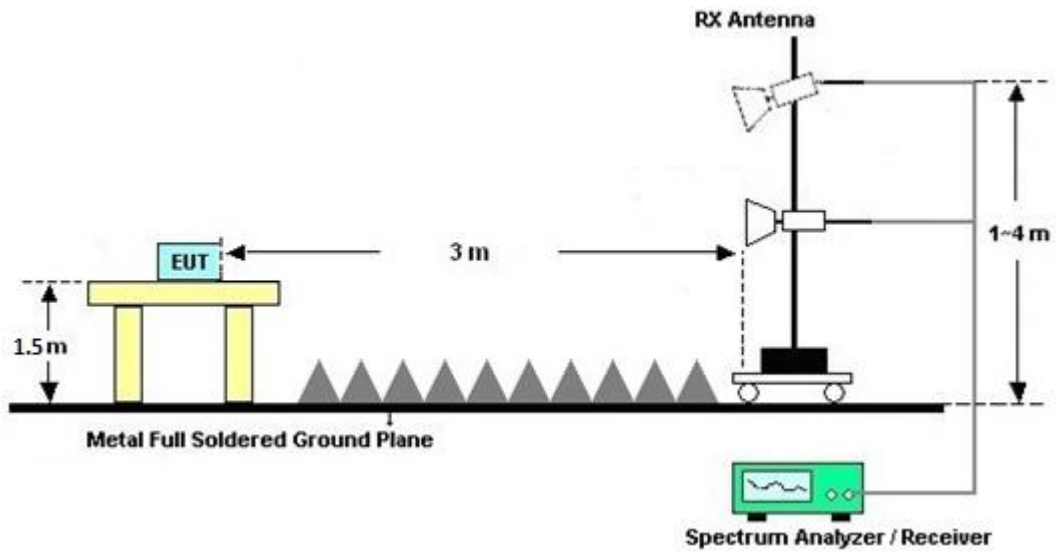
For radiated emissions below 30MHz



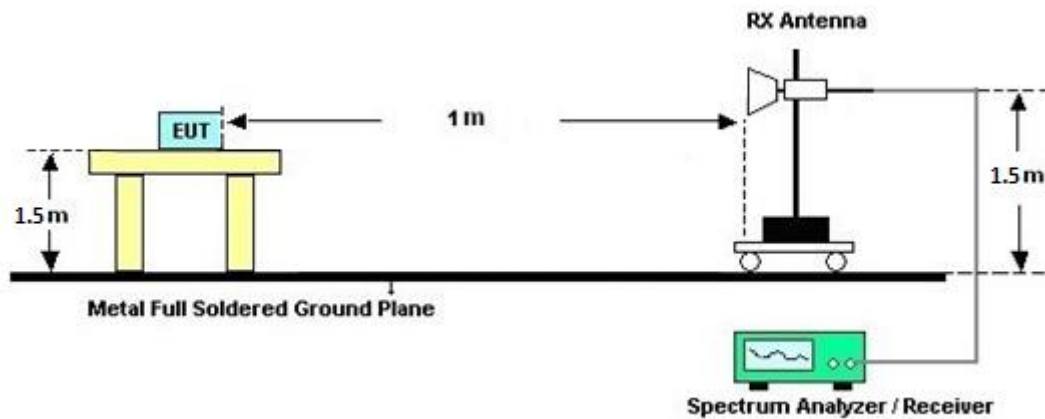
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



**3.4.5 Test Results of Radiated Emissions (9 kHz ~ 30 MHz)**

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

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

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix C and D.

3.4.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

Frequency of emission (MHz)	Conducted limit (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.

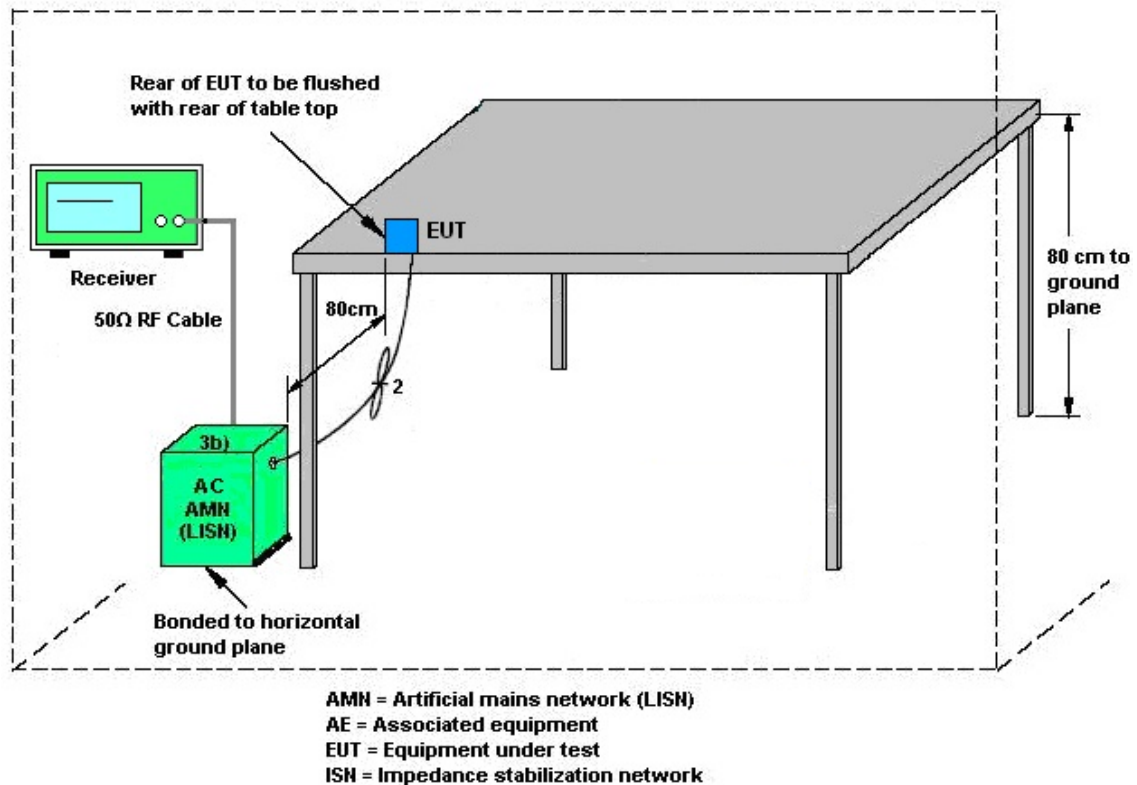
3.5.2 Measuring Instruments

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. 1	Ant. 2	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
Band IV	4.73	4.73	4.73	7.74	0.00	1.74

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

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



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 09, 2021	Apr. 30, 2022~ Jun. 10, 2022	Sep. 08, 2022	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-0 6	41912 & 05	30MHz~1GHz	Feb. 06, 2022	Apr. 30, 2022~ Jun. 10, 2022	Feb. 05, 2023	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 27, 2021	Apr. 30, 2022~ Jun. 10, 2022	Dec. 26, 2022	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-02038	1GHz~18GHz	Aug. 04, 2021	Apr. 30, 2022~ Jun. 10, 2022	Aug. 03, 2022	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA9170251	18GHz~40GHz	Nov. 30, 2021	Apr. 30, 2022~ Jun. 10, 2022	Nov. 29, 2022	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-303	171000180005 5006	1GHz~18GHz	May 06, 2021	Apr. 30, 2022~ May 04, 2022	May 05, 2022	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-303	171000180005 5006	1GHz~18GHz	May 05, 2022	May 05, 2022~ Jun. 10, 2022	May 04, 2023	Radiation (03CH15-HY)
Preamplifier	EM Electronics	EM01G18G	060803	1GHz-18GHz	Dec. 16, 2021	Apr. 30, 2022~ Jun. 10, 2022	Dec. 15, 2022	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060801	18-40GHz	Jun. 22, 2021	Apr. 30, 2022~ Jun. 10, 2022	Jun. 21, 2022	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20MHz~8.4GHz	Oct. 21, 2021	Apr. 30, 2022~ Jun. 10, 2022	Oct. 20, 2022	Radiation (03CH15-HY)
Spectrum Analyzer	Agilent	E4446A	MY50180136	3Hz~44GHz	May 07, 2021	Apr. 30, 2022~ May 05, 2022	May 06, 2022	Radiation (03CH15-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200485	10Hz~44GHz	Mar. 07, 2022	May 06, 2022~ Jun. 10, 2022	Mar. 06, 2023	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Apr. 30, 2022~ Jun. 10, 2022	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Apr. 30, 2022~ Jun. 10, 2022	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24(k5)	RK-000451	N/A	N/A	Apr. 30, 2022~ Jun. 10, 2022	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY36980/4, MY9838/4PE,5 08405/2E	30MHz~18G	Nov. 15, 2021	Apr. 30, 2022~ May 11, 2022	Nov. 14, 2022	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY9838/4PE,5 08405/2E,5821 85/4	30MHz~18G	May 12, 2022	May 12, 2022~ Jun. 10, 2022	May 11, 2023	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804011/2,8040 12/2	30MHz-40GHz	Jan. 04, 2022	Apr. 30, 2022~ Jun. 10, 2022	Jan. 03, 2023	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 10, 2022	Apr. 30, 2022~ Jun. 10, 2022	Mar. 09, 2023	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	Feb. 19, 2022	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Dec. 01, 2021	Feb. 19, 2022	Nov. 30, 2022	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 17, 2021	Feb. 19, 2022	Nov. 16, 2022	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 03, 2021	Feb. 19, 2022	Dec. 02, 2022	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	Feb. 19, 2022	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	00691	N/A	Jul. 28, 2021	Feb. 19, 2022	Jul. 27, 2022	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 30, 2021	Feb. 19, 2022	Dec. 29, 2022	Conduction (CO05-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 16, 2021	Mar. 17, 2022~ Jun. 10, 2022	Nov. 15, 2022	Conducted (TH05-HY)
USB Power Sensor	DARE	RPR3006W	16I00054SNO 12 (NO:113)	10MHz~6GHz	Dec. 16, 2021	Mar. 17, 2022~ Jun. 10, 2022	Dec. 15, 2022	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Aug. 30, 2021	Mar. 17, 2022~ Jun. 10, 2022	Aug. 29, 2022	Conducted (TH05-HY)
Switch Control Mainframe	E-IUSTRUMENT	ETF-1405-0	EC1900067 (BOX7)	N/A	Aug. 12, 2021	Mar. 17, 2022~ Jun. 10, 2022	Aug. 11, 2022	Conducted (TH05-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.1 dB
--	--------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.8 dB
--	--------

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.6 dB
--	--------

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Hank Hsu	Temperature:	21~25	°C
Test Date:	2022/3/17~2022/6/10	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 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	149	5745	16.38	16.43	20.85	20.70	16.39	16.39	0.5	Pass
11a	6Mbps	2	157	5785	16.48	16.38	20.70	20.90	16.39	16.19	0.5	Pass
11a	6Mbps	2	165	5825	16.43	16.48	20.75	20.80	16.14	16.39	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 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	149	5745	18.20	17.30	20.78	30.00		4.73		Pass
11a	6Mbps	2	157	5785	17.20	17.00	20.11	30.00		4.73		Pass
11a	6Mbps	2	165	5825	16.00	15.80	18.91	30.00		4.73		Pass
HT20	MCS0	2	149	5745	17.40	16.50	19.98	30.00		4.73		Pass
HT20	MCS0	2	157	5785	14.40	14.30	17.36	30.00		4.73		Pass
HT20	MCS0	2	165	5825	14.80	14.50	17.66	30.00		4.73		Pass
HT40	MCS0	2	151	5755	16.30	16.00	19.16	30.00		4.73		Pass
HT40	MCS0	2	159	5795	15.60	15.50	18.56	30.00		4.73		Pass
VHT20	MCS0	2	149	5745	17.50	16.60	20.08	30.00		4.73		Pass
VHT20	MCS0	2	157	5785	14.50	14.40	17.46	30.00		4.73		Pass
VHT20	MCS0	2	165	5825	14.90	14.60	17.76	30.00		4.73		Pass
VHT40	MCS0	2	151	5755	16.40	16.10	19.26	30.00		4.73		Pass
VHT40	MCS0	2	159	5795	15.70	15.60	18.66	30.00		4.73		Pass
VHT80	MCS0	2	155	5775	19.40	18.40	21.94	30.00		4.73		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 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	149	5745	2.22		7.15	6.35	10.16	28.26		7.74		Pass
11a	6Mbps	2	157	5785	2.22		6.13	6.22	9.23	28.26		7.74		Pass
11a	6Mbps	2	165	5825	2.22		5.14	5.25	8.26	28.26		7.74		Pass

Note: PSD Sum = Max PSD(Ant. 1, Ant. 2) + 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 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	149	5745	Full	18.88	18.98	21.70	21.80	17.74	18.49	0.5	Pass
HE20	MCS0	2	157	5785	Full	18.93	18.98	21.80	22.15	18.29	16.44	0.5	Pass
HE20	MCS0	2	165	5825	Full	18.93	18.93	21.60	22.00	17.84	17.64	0.5	Pass
HE40	MCS0	2	151	5755	Full	37.96	37.86	40.86	40.50	38.05	37.69	0.5	Pass
HE40	MCS0	2	159	5795	Full	37.96	37.86	40.68	40.95	38.14	37.87	0.5	Pass
HE80	MCS0	2	155	5775	Full	77.20	76.96	82.40	82.40	76.28	76.12	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 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
HE20	MCS0	2	149	5745	Full	17.60	16.70	20.18	30.00		4.73		Pass
HE20	MCS0	2	157	5785	Full	14.60	14.50	17.56	30.00		4.73		Pass
HE20	MCS0	2	165	5825	Full	15.00	14.70	17.86	30.00		4.73		Pass
HE40	MCS0	2	151	5755	Full	16.50	16.20	19.36	30.00		4.73		Pass
HE40	MCS0	2	159	5795	Full	15.80	15.70	18.76	30.00		4.73		Pass
HE80	MCS0	2	155	5775	Full	19.50	18.50	22.04	30.00		4.73		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 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
HE20	MCS0	2	149	5745	Full	2.22		6.96	5.79	9.97	28.26		7.74		Pass
HE20	MCS0	2	157	5785	Full	2.22		4.05	3.92	7.06	28.26		7.74		Pass
HE20	MCS0	2	165	5825	Full	2.22		4.45	4.30	7.46	28.26		7.74		Pass
HE40	MCS0	2	151	5755	Full	2.22		1.95	1.75	4.96	28.26		7.74		Pass
HE40	MCS0	2	159	5795	Full	2.22		1.14	1.08	4.15	28.26		7.74		Pass
HE80	MCS0	2	155	5775	Full	2.22		2.02	1.33	5.03	28.26		7.74		Pass

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



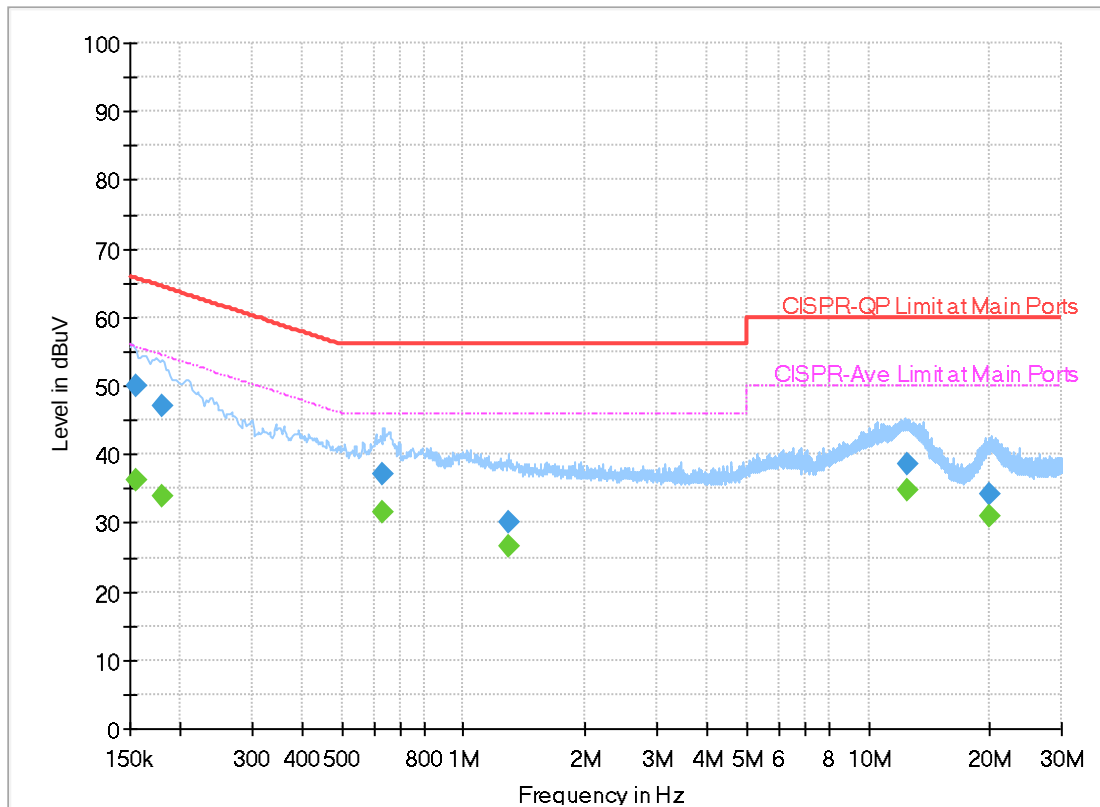
Appendix B. AC Conducted Emission Test Results

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

EUT Information

Report NO : 211326
Test Mode : Mode 2
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



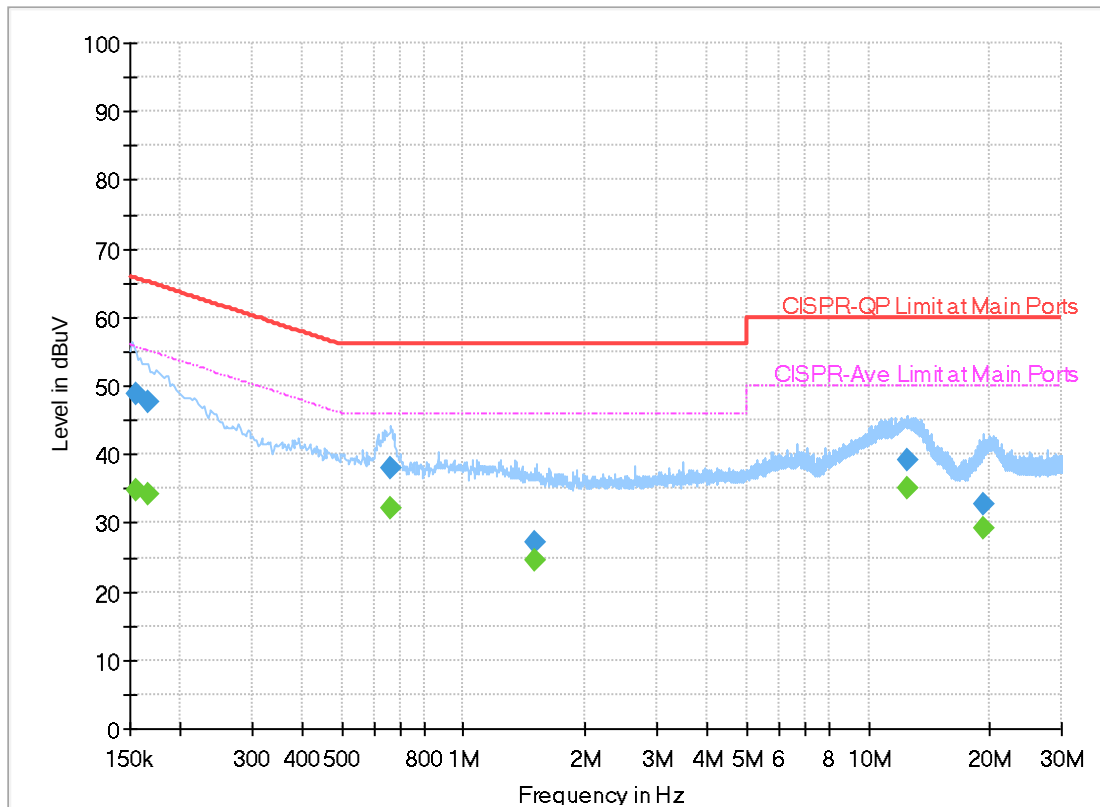
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154500	50.03	---	65.75	15.72	L1	OFF	19.6
0.154500	---	36.34	55.75	19.41	L1	OFF	19.6
0.179250	46.99	---	64.52	17.53	L1	OFF	19.6
0.179250	---	33.83	54.52	20.69	L1	OFF	19.6
0.633750	37.10	---	56.00	18.90	L1	OFF	19.6
0.633750	---	31.68	46.00	14.32	L1	OFF	19.6
1.288500	30.23	---	56.00	25.77	L1	OFF	19.6
1.288500	---	26.49	46.00	19.51	L1	OFF	19.6
12.462000	38.70	---	60.00	21.30	L1	OFF	20.1
12.462000	---	34.73	50.00	15.27	L1	OFF	20.1
19.968000	34.27	---	60.00	25.73	L1	OFF	20.4
19.968000	---	30.98	50.00	19.02	L1	OFF	20.4

EUT Information

Report NO : 211326
Test Mode : Mode 2
Test Voltage : 120Vac/60Hz
Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154500	48.87	---	65.75	16.88	N	OFF	19.6
0.154500	---	34.90	55.75	20.85	N	OFF	19.6
0.165750	47.61	---	65.17	17.56	N	OFF	19.6
0.165750	---	34.20	55.17	20.97	N	OFF	19.6
0.660750	38.09	---	56.00	17.91	N	OFF	19.6
0.660750	---	32.08	46.00	13.92	N	OFF	19.6
1.502250	27.21	---	56.00	28.79	N	OFF	19.6
1.502250	---	24.60	46.00	21.40	N	OFF	19.6
12.486750	39.16	---	60.00	20.84	N	OFF	20.1
12.486750	---	35.19	50.00	14.81	N	OFF	20.1
19.277250	32.74	---	60.00	27.26	N	OFF	20.4
19.277250	---	29.36	50.00	20.64	N	OFF	20.4



Appendix C. Radiated Spurious Emission

Test Engineer :	Bigshow Wang	Temperature :	22.1~23.1°C
		Relative Humidity :	55~60%

<Sample 1>

Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamplifier Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5616	48.1	-20.1	68.2	41.49	33	10.4	36.79	100	208	P	H
		5663.4	48.17	-29.98	78.15	41.52	33.03	10.45	36.83	100	208	P	H
		5711.2	47.88	-60.46	108.34	41.07	33.17	10.5	36.86	100	208	P	H
		5724.6	48.19	-73.1	121.29	41.29	33.25	10.52	36.87	100	208	P	H
	*	5745	104.27	-	-	97.25	33.37	10.54	36.89	100	208	P	H
	*	5745	95.93	-	-	88.91	33.37	10.54	36.89	100	208	A	H
													H
													H
		5645.6	53.3	-14.9	68.2	46.68	33	10.43	36.81	200	344	P	V
		5664.2	54.52	-24.22	78.74	47.87	33.03	10.45	36.83	200	344	P	V
		5716.8	57.34	-52.57	109.91	50.5	33.2	10.51	36.87	200	344	P	V
		5722.4	57.02	-59.25	116.27	50.15	33.23	10.51	36.87	200	344	P	V
	*	5745	117.14	-	-	110.12	33.37	10.54	36.89	200	344	P	V
	*	5745	109.95	-	-	102.93	33.37	10.54	36.89	200	344	A	V
													V
													V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 157 5785MHz		5602.4	47.59	-20.61	68.2	40.99	33	10.38	36.78	133	183	P	H
		5668.4	47.41	-34.44	81.85	40.74	33.04	10.46	36.83	133	183	P	H
		5705.4	47.07	-59.64	106.71	40.3	33.13	10.5	36.86	133	183	P	H
		5721.2	47.14	-66.4	113.54	40.27	33.23	10.51	36.87	133	183	P	H
	*	5785	104.41	-	-	97.14	33.61	10.58	36.92	133	183	P	H
	*	5785	96.9	-	-	89.63	33.61	10.58	36.92	133	183	A	H
		5850.985	47.1	-72.85	119.95	39.52	33.9	10.64	36.96	133	183	P	H
		5864.31	48.33	-59.86	108.19	40.72	33.93	10.65	36.97	133	183	P	H
		5916.38	49.06	-25.5	74.56	41.39	34	10.68	37.01	133	183	P	H
		5938.11	48.04	-20.16	68.2	40.37	34	10.7	37.03	133	183	P	H
													H
													H
		5601	51.7	-16.5	68.2	45.1	33	10.38	36.78	181	356	P	V
		5687.8	52.73	-43.47	96.2	46.02	33.08	10.48	36.85	181	356	P	V
		5718.4	50.72	-59.63	110.35	43.87	33.21	10.51	36.87	181	356	P	V
		5720.6	52.43	-59.74	112.17	45.57	33.22	10.51	36.87	181	356	P	V
	*	5785	119.35	-	-	112.08	33.61	10.58	36.92	181	356	P	V
	*	5785	110.5	-	-	103.23	33.61	10.58	36.92	181	356	A	V
		5850.575	51.17	-69.72	120.89	43.59	33.9	10.64	36.96	181	356	P	V
		5874.97	55.36	-49.85	105.21	47.74	33.95	10.65	36.98	181	356	P	V
		5885.835	56.44	-40.72	97.16	48.8	33.97	10.66	36.99	181	356	P	V
		5933.6	50.48	-17.72	68.2	42.81	34	10.69	37.02	181	356	P	V
													V
													V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 165 5825MHz	*	5825	102.96	-	-	95.48	33.8	10.62	36.94	131	183	P	H
	*	5825	95.35	-	-	87.87	33.8	10.62	36.94	131	183	A	H
		5851.6	47.81	-70.74	118.55	40.23	33.9	10.64	36.96	131	183	P	H
		5855.8	47.63	-62.95	110.58	40.05	33.91	10.64	36.97	131	183	P	H
		5886.4	48.59	-48.15	96.74	40.95	33.97	10.66	36.99	131	183	P	H
		5937.2	48.08	-20.12	68.2	40.4	34	10.7	37.02	131	183	P	H
													H
													H
	*	5825	117.5	-	-	110.02	33.8	10.62	36.94	200	344	P	V
	*	5825	109.59	-	-	102.11	33.8	10.62	36.94	200	344	A	V
		5851	51.71	-68.21	119.92	44.13	33.9	10.64	36.96	200	344	P	V
		5858	51.07	-58.89	109.96	43.48	33.92	10.64	36.97	200	344	P	V
		5923	55.19	-14.48	69.67	47.51	34	10.69	37.01	200	344	P	V
		5927.2	53.68	-14.52	68.2	46.01	34	10.69	37.02	200	344	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. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 149 5745MHz		5386	51.19	-22.81	74	45.06	32.7	10.2	36.77	200	159	P	H
		5386	46.88	-7.12	54	40.75	32.7	10.2	36.77	200	159	A	H
		11490	47.09	-26.91	74	53.9	38.83	15.12	60.76	-	-	P	H
		11950	47.66	-26.34	74	54.99	38.6	15.35	61.28	-	-	P	H
		14491	46.9	-27.1	74	53.39	40.51	16.48	63.48	-	-	P	H
		17235	47.39	-20.81	68.2	49.41	37.97	18.3	58.29	-	-	P	H
		17989	53.79	-20.21	74	49.04	43	18.93	57.18	-	-	P	H
		17989	43.85	-10.15	54	39.1	43	18.93	57.18	-	-	A	H
													H
													H
													H
													H
		5386	63.8	-10.2	74	57.67	32.7	10.2	36.77	210	40	P	V
		5386	47.6	-6.4	54	41.47	32.7	10.2	36.77	210	40	A	V
		11490	47.46	-26.54	74	54.27	38.83	15.12	60.76	-	-	P	V
		12368	47.65	-26.35	74	54.97	38.73	15.54	61.59	-	-	P	V
		14491	46.69	-27.31	74	53.18	40.51	16.48	63.48	-	-	P	V
		17235	46.81	-21.39	68.2	48.83	37.97	18.3	58.29	-	-	P	V
		17978	53.23	-20.77	74	48.6	42.9	18.93	57.2	-	-	P	V
		17978	43.69	-10.31	54	39.06	42.9	18.93	57.2	-	-	A	V
													V
													V
													V
													V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 157 5785MHz		5440	47.89	-26.11	74	41.69	32.7	10.24	36.74	100	156	P	H
		11422	47.83	-26.17	74	54.51	39.03	15.09	60.8	-	-	P	H
		11570	46.32	-27.68	74	53.33	38.66	15.16	60.83	-	-	P	H
		14491	47.13	-26.87	74	53.62	40.51	16.48	63.48	-	-	P	H
		17355	47.98	-20.22	68.2	49.4	38.26	18.4	58.08	-	-	P	H
		17879	52.19	-21.81	74	48.77	41.91	18.84	57.33	-	-	P	H
		17879	42.52	-11.48	54	39.1	41.91	18.84	57.33	-	-	A	H
													H
													H
													H
													H
													H
		5440	65.55	-8.45	74	59.35	32.7	10.24	36.74	204	309	P	V
		5440	51.85	-2.15	54	45.65	32.7	10.24	36.74	204	309	A	V
		11570	46.59	-27.41	74	53.6	38.66	15.16	60.83	-	-	P	V
		12060	48.27	-25.73	74	55.46	38.78	15.41	61.38	-	-	P	V
		12060	38.76	-15.24	54	45.95	38.78	15.41	61.38	-	-	A	V
		14480	46.68	-27.32	74	53.16	40.52	16.47	63.47	-	-	P	V
		17355	47.37	-20.83	68.2	48.79	38.26	18.4	58.08	-	-	P	V
		17978	51.93	-22.07	74	47.3	42.9	18.93	57.2	-	-	P	V
		17978	42.19	-11.81	54	37.56	42.9	18.93	57.2	-	-	A	V
													V
													V
													V

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11a CH 165 5825MHz		5475	47.31	-20.89	68.2	41.01	32.75	10.27	36.72	131	183	P	H	
		11650	46.08	-27.92	74	53.26	38.55	15.2	60.93	-	-	P	H	
		12005	48.04	-25.96	74	55.39	38.61	15.38	61.34	-	-	P	H	
		12005	37.89	-16.11	54	45.24	38.61	15.38	61.34	-	-	A	H	
		14480	47.7	-26.3	74	54.18	40.52	16.47	63.47	-	-	P	H	
		17475	47.55	-20.65	68.2	48.46	38.47	18.5	57.88	-	-	P	H	
		17901	53.37	-20.63	74	49.61	42.21	18.85	57.3	-	-	P	H	
		17901	43.68	-10.32	54	39.92	42.21	18.85	57.3	-	-	A	H	
														H
														H
														H
														H
		5475	66.13	-2.07	68.2	59.83	32.75	10.27	36.72	200	347	P	V	
		11650	45.21	-28.79	74	52.39	38.55	15.2	60.93	-	-	P	V	
		12698	48.19	-25.81	74	55.19	39	15.67	61.67	-	-	P	V	
		12698	38.31	-15.69	54	45.31	39	15.67	61.67	-	-	A	V	
		14491	48.09	-25.91	74	54.58	40.51	16.48	63.48	-	-	P	V	
		14491	38.22	-15.78	54	44.71	40.51	16.48	63.48	-	-	A	V	
		17475	47.63	-20.57	68.2	48.54	38.47	18.5	57.88	-	-	P	V	
		17989	52.64	-21.36	74	47.89	43	18.93	57.18	-	-	P	V	
		17989	42.81	-11.19	54	38.06	43	18.93	57.18	-	-	A	V	
														V
														V
														V
	Remark	1. No other spurious found.												
		2. All results are PASS against Peak and Average limit line.												
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.														
4. The emission level close to 18GHz is checked that the average emission level is noise floor only.														



Band 4 5725~5850MHz

WIFI 802.11ax HE20_Full (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 149 5745MHz		5601.6	47.41	-20.79	68.2	40.81	33	10.38	36.78	157	182	P	H
		5673	47.38	-37.88	85.26	40.7	33.05	10.46	36.83	157	182	P	H
		5718.2	47.65	-62.65	110.3	40.8	33.21	10.51	36.87	157	182	P	H
		5724.4	49.58	-71.25	120.83	42.68	33.25	10.52	36.87	157	182	P	H
	*	5745	106.11	-	-	99.09	33.37	10.54	36.89	157	182	P	H
	*	5745	95.92	-	-	88.9	33.37	10.54	36.89	157	182	A	H
													H
													H
		5646.8	53.62	-14.58	68.2	47.01	33	10.43	36.82	200	345	P	V
		5680	54.5	-35.94	90.44	47.81	33.06	10.47	36.84	200	345	P	V
		5714.8	56.29	-53.06	109.35	49.45	33.19	10.51	36.86	200	345	P	V
		5724	61.42	-58.5	119.92	54.53	33.24	10.52	36.87	200	345	P	V
	*	5745	121.32	-	-	114.3	33.37	10.54	36.89	200	345	P	V
	*	5745	109.79	-	-	102.77	33.37	10.54	36.89	200	345	A	V
													V
													V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 157 5785MHz		5609.2	47.84	-20.36	68.2	41.24	33	10.39	36.79	165	182	P	H
		5684.4	47.61	-46.08	93.69	40.91	33.07	10.47	36.84	165	182	P	H
		5700	47.05	-58.15	105.2	40.31	33.1	10.49	36.85	165	182	P	H
		5723.6	46.73	-72.28	119.01	39.84	33.24	10.52	36.87	165	182	P	H
	*	5785	104.54	-	-	97.27	33.61	10.58	36.92	165	182	P	H
	*	5785	94.26	-	-	86.99	33.61	10.58	36.92	165	182	A	H
		5851.395	49.24	-69.78	119.02	41.66	33.9	10.64	36.96	165	182	P	H
		5862.67	47.97	-60.68	108.65	40.37	33.93	10.64	36.97	165	182	P	H
		5923.555	48.49	-20.77	69.26	40.81	34	10.69	37.01	165	182	P	H
		5945.9	47.89	-20.31	68.2	40.22	34	10.7	37.03	165	182	P	H
													H
													H
		5601.2	52.73	-15.47	68.2	46.13	33	10.38	36.78	188	357	P	V
		5696.6	51.48	-51.21	102.69	44.75	33.09	10.49	36.85	188	357	P	V
		5711.6	50.45	-58	108.45	43.64	33.17	10.5	36.86	188	357	P	V
		5721.4	51.43	-62.56	113.99	44.56	33.23	10.51	36.87	188	357	P	V
	*	5785	119.51	-	-	112.24	33.61	10.58	36.92	188	357	P	V
	*	5785	108.53	-	-	101.26	33.61	10.58	36.92	188	357	A	V
		5851.395	50.11	-68.91	119.02	42.53	33.9	10.64	36.96	188	357	P	V
		5874.56	54.12	-51.2	105.32	46.5	33.95	10.65	36.98	188	357	P	V
		5882.555	54.47	-45.12	99.59	46.83	33.97	10.66	36.99	188	357	P	V
		5943.44	49.72	-18.48	68.2	42.05	34	10.7	37.03	188	357	P	V
													V
													V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 165 5825MHz	*	5825	104.76	-	-	97.28	33.8	10.62	36.94	106	183	P	H
	*	5825	93.87	-	-	86.39	33.8	10.62	36.94	106	183	A	H
		5851.6	48.56	-69.99	118.55	40.98	33.9	10.64	36.96	106	183	P	H
		5863.2	48.96	-59.54	108.5	41.36	33.93	10.64	36.97	106	183	P	H
		5900.4	48.58	-37.78	86.36	40.91	34	10.67	37	106	183	P	H
		5939.6	48.96	-19.24	68.2	41.29	34	10.7	37.03	106	183	P	H
													H
													H
	*	5825	119.77	-	-	112.29	33.8	10.62	36.94	192	357	P	V
	*	5825	108.72	-	-	101.24	33.8	10.62	36.94	192	357	A	V
		5850	55.71	-66.49	122.2	48.13	33.9	10.64	36.96	192	357	P	V
		5857.2	51.69	-58.49	110.18	44.11	33.91	10.64	36.97	192	357	P	V
		5916.2	54.34	-20.35	74.69	46.67	34	10.68	37.01	192	357	P	V
		5925.8	55.71	-12.49	68.2	48.04	34	10.69	37.02	192	357	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. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 149 5745MHz		5390	47.24	-26.76	74	41.1	32.7	10.2	36.76	157	182	P	H
		10795	47.98	-26.02	74	55.13	38.99	14.77	60.91	-	-	P	H
		11490	47.45	-26.55	74	54.26	38.83	15.12	60.76	-	-	P	H
		14491	46.46	-27.54	74	52.95	40.51	16.48	63.48	-	-	P	H
		17235	47.12	-21.08	68.2	49.14	37.97	18.3	58.29	-	-	P	H
		17978	52.92	-21.08	74	48.29	42.9	18.93	57.2	-	-	P	H
		17978	42.46	-11.54	54	37.83	42.9	18.93	57.2	-	-	A	H
													H
													H
													H
													H
													H
													H
		5390	69.95	-4.05	74	63.81	32.7	10.2	36.76	200	347	P	V
		5390	52.76	-1.24	54	46.62	32.7	10.2	36.76	200	347	A	V
		11279	48.15	-25.85	74	55.13	38.88	15.02	60.88	-	-	P	V
		11279	37.87	-16.13	54	44.85	38.88	15.02	60.88	-	-	A	V
		11490	46.96	-27.04	74	53.77	38.83	15.12	60.76	-	-	P	V
		14491	47.3	-26.7	74	53.79	40.51	16.48	63.48	-	-	P	V
		17235	46.97	-21.23	68.2	48.99	37.97	18.3	58.29	-	-	P	V
		17912	52.46	-21.54	74	48.58	42.31	18.86	57.29	-	-	P	V
		17912	42.19	-11.81	54	38.31	42.31	18.86	57.29	-	-	A	V
													V
													V
													V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 157 5785MHz		5440	47.57	-26.43	74	41.37	32.7	10.24	36.74	165	182	P	H
		11570	46.86	-27.14	74	53.87	38.66	15.16	60.83	-	-	P	H
		12687	47.98	-26.02	74	55.01	38.97	15.67	61.67	-	-	P	H
		14491	46.47	-27.53	74	52.96	40.51	16.48	63.48	-	-	P	H
		17355	47.53	-20.67	68.2	48.95	38.26	18.4	58.08	-	-	P	H
		18000	53.1	-20.9	74	48.23	43.1	18.94	57.17	-	-	P	H
		18000	43.56	-10.44	54	38.69	43.1	18.94	57.17	-	-	A	H
													H
													H
													H
													H
													H
		5440	64.28	-9.72	74	58.08	32.7	10.24	36.74	200	345	P	V
		5440	52.16	-1.84	54	45.96	32.7	10.24	36.74	200	345	A	V
		10817	47.68	-26.32	74	54.88	38.95	14.78	60.93	-	-	P	V
		11570	46.2	-27.8	74	53.21	38.66	15.16	60.83	-	-	P	V
		14480	46.61	-27.39	74	53.09	40.52	16.47	63.47	-	-	P	V
		17355	48.11	-20.09	68.2	49.53	38.26	18.4	58.08	-	-	P	V
		17901	52.49	-21.51	74	48.73	42.21	18.85	57.3	-	-	P	V
		17901	42.74	-11.26	54	38.98	42.21	18.85	57.3	-	-	A	V
													V
													V
													V
													V

[illegible]



Band 4 5725~5850MHz

WIFI 802.11ax HE40_Full (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 151 5755MHz		5601.8	47.06	-21.14	68.2	40.46	33	10.38	36.78	100	206	P	H
		5692.2	48.17	-51.28	99.45	41.46	33.08	10.48	36.85	100	206	P	H
		5719.8	49.91	-60.83	110.74	43.05	33.22	10.51	36.87	100	206	P	H
		5722.8	49.85	-67.33	117.18	42.96	33.24	10.52	36.87	100	206	P	H
	*	5755	101.08	-	-	93.99	33.43	10.55	36.89	100	206	P	H
	*	5755	91.13	-	-	84.04	33.43	10.55	36.89	100	206	A	H
		5852.01	47.06	-70.56	117.62	39.48	33.9	10.64	36.96	100	206	P	H
		5867.795	48.77	-58.45	107.22	41.15	33.94	10.65	36.97	100	206	P	H
		5891.37	49.37	-43.68	93.05	41.72	33.98	10.66	36.99	100	206	P	H
		5946.105	48.86	-19.34	68.2	41.19	34	10.7	37.03	100	206	P	H
													H
													H
		5611.2	52.28	-15.92	68.2	45.68	33	10.39	36.79	199	352	P	V
		5662.2	53.95	-23.31	77.26	47.31	33.02	10.45	36.83	199	352	P	V
		5719.4	63.82	-46.81	110.63	56.96	33.22	10.51	36.87	199	352	P	V
		5720.6	64.75	-47.42	112.17	57.89	33.22	10.51	36.87	199	352	P	V
	*	5755	118.52	-	-	111.43	33.43	10.55	36.89	199	352	P	V
	*	5755	108.25	-	-	101.16	33.43	10.55	36.89	199	352	A	V
		5854.675	55.13	-56.41	111.54	47.55	33.91	10.64	36.97	199	352	P	V
		5855.7	55.4	-55.2	110.6	47.82	33.91	10.64	36.97	199	352	P	V
		5900.39	51.96	-34.41	86.37	44.29	34	10.67	37	199	352	P	V
		5929.705	50.71	-17.49	68.2	43.04	34	10.69	37.02	199	352	P	V
													V
													V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 159 5795MHz		5620	48.76	-19.44	68.2	42.16	33	10.4	36.8	104	206	P	H
		5689.8	48.54	-49.14	97.68	41.83	33.08	10.48	36.85	104	206	P	H
		5700.2	47.34	-57.92	105.26	40.6	33.1	10.49	36.85	104	206	P	H
		5725	47.03	-75.17	122.2	40.13	33.25	10.52	36.87	104	206	P	H
	*	5795	99.38	-	-	92.04	33.67	10.59	36.92	104	206	P	H
	*	5795	90.39	-	-	83.05	33.67	10.59	36.92	104	206	A	H
		5852.42	48.68	-68	116.68	41.1	33.9	10.64	36.96	104	206	P	H
		5857.545	48.45	-61.64	110.09	40.86	33.92	10.64	36.97	104	206	P	H
		5888.91	49.4	-45.47	94.87	41.75	33.98	10.66	36.99	104	206	P	H
		5941.39	48.03	-20.17	68.2	40.36	34	10.7	37.03	104	206	P	H
													H
													H
		5606	53.43	-14.77	68.2	46.83	33	10.39	36.79	189	354	P	V
		5688.4	52.58	-44.06	96.64	45.87	33.08	10.48	36.85	189	354	P	V
		5706.8	52.11	-55	107.11	45.33	33.14	10.5	36.86	189	354	P	V
		5721.8	52.44	-62.46	114.9	45.57	33.23	10.51	36.87	189	354	P	V
	*	5795	117.86	-	-	110.52	33.67	10.59	36.92	189	354	P	V
	*	5795	107.83	-	-	100.49	33.67	10.59	36.92	189	354	A	V
		5851.19	52.29	-67.2	119.49	44.71	33.9	10.64	36.96	189	354	P	V
		5874.56	53	-52.32	105.32	45.38	33.95	10.65	36.98	189	354	P	V
		5885.835	54.97	-42.19	97.16	47.33	33.97	10.66	36.99	189	354	P	V
		5932.165	51.42	-16.78	68.2	43.75	34	10.69	37.02	189	354	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. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 151 5755MHz		5410	50.88	-23.12	74	44.71	32.7	10.22	36.75	300	184	P	H
		5410	39.81	-14.19	54	33.64	32.7	10.22	36.75	300	184	A	H
		11422	48.12	-25.88	74	54.8	39.03	15.09	60.8	-	-	P	H
		11422	38.32	-15.68	54	45	39.03	15.09	60.8	-	-	A	H
		11510	47.24	-26.76	74	54.09	38.78	15.13	60.76	-	-	P	H
		14480	46.75	-27.25	74	53.23	40.52	16.47	63.47	-	-	P	H
		14480	37.95	-16.05	54	44.43	40.52	16.47	63.47	-	-	A	H
		17265	47.76	-20.44	68.2	49.64	38.03	18.32	58.23	-	-	P	H
		17989	53.54	-20.46	74	48.79	43	18.93	57.18	-	-	P	H
		17989	44.74	-9.26	54	39.99	43	18.93	57.18	-	-	A	H
													H
													H
		5410	61.21	-12.79	74	55.04	32.7	10.22	36.75	196	13	P	V
		5410	47.56	-6.44	54	41.39	32.7	10.22	36.75	196	13	A	V
		11510	46.59	-27.41	74	53.44	38.78	15.13	60.76	-	-	P	V
		12335	48.18	-25.82	74	55.47	38.76	15.52	61.57	-	-	P	V
		12335	38.38	-15.62	54	45.67	38.76	15.52	61.57	-	-	A	V
		14491	46.86	-27.14	74	53.35	40.51	16.48	63.48	-	-	P	V
		14491	38.06	-15.94	54	44.55	40.51	16.48	63.48	-	-	A	V
		17265	47.39	-20.81	68.2	49.27	38.03	18.32	58.23	-	-	P	V
		17989	53.67	-20.33	74	48.92	43	18.93	57.18	-	-	P	V
		17989	44.97	-9.03	54	40.22	43	18.93	57.18	-	-	A	V
													V
													V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 159 5795MHz		5440	50.98	-23.02	74	44.78	32.7	10.24	36.74	300	184	P	H
		5440	39.69	-14.31	54	33.49	32.7	10.24	36.74	300	184	A	H
		11590	45.96	-28.04	74	53.03	38.62	15.17	60.86	-	-	P	H
		12313	48.67	-25.33	74	55.92	38.79	15.51	61.55	-	-	P	H
		12313	38.88	-15.12	54	46.13	38.79	15.51	61.55	-	-	A	H
		14491	47.64	-26.36	74	54.13	40.51	16.48	63.48	-	-	P	H
		14491	36.74	-17.26	54	43.23	40.51	16.48	63.48	-	-	A	H
		17385	47.39	-20.81	68.2	48.65	38.35	18.42	58.03	-	-	P	H
		17989	54.01	-19.99	74	49.26	43	18.93	57.18	-	-	P	H
		17989	45.11	-8.89	54	40.36	43	18.93	57.18	-	-	A	H
													H
													H
		5440	69.94	-4.06	74	63.74	32.7	10.24	36.74	198	13	P	V
		5440	47.4	-6.6	54	41.2	32.7	10.24	36.74	198	13	A	V
		11499	48.82	-25.18	74	55.64	38.8	15.13	60.75	-	-	P	V
		11499	39.04	-14.96	54	45.86	38.8	15.13	60.75	-	-	A	V
		11590	46.77	-27.23	74	53.84	38.62	15.17	60.86	-	-	P	V
		14480	48.69	-25.31	74	55.17	40.52	16.47	63.47	-	-	P	V
		14480	39.89	-14.11	54	46.37	40.52	16.47	63.47	-	-	A	V
		17385	47.93	-20.27	68.2	49.19	38.35	18.42	58.03	-	-	P	V
		17989	54.29	-19.71	74	49.54	43	18.93	57.18	-	-	P	V
		17989	45.59	-8.41	54	40.84	43	18.93	57.18	-	-	A	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. 4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												



Band 4 5725~5850MHz

WIFI 802.11ax HE80_Full (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full CH 155 5775MHz		5610.6	48.29	-19.91	68.2	41.69	33	10.39	36.79	100	207	P	H
		5674	48.85	-37.15	86	42.18	33.05	10.46	36.84	100	207	P	H
		5714.4	48.87	-60.36	109.23	42.03	33.19	10.51	36.86	100	207	P	H
		5722.2	49.94	-65.88	115.82	43.07	33.23	10.51	36.87	100	207	P	H
	*	5775	101.13	-	-	93.92	33.55	10.57	36.91	100	207	P	H
	*	5775	90.79	-	-	83.58	33.55	10.57	36.91	100	207	A	H
		5854.06	53.06	-59.88	112.94	45.47	33.91	10.64	36.96	100	207	P	H
		5863.285	51.64	-56.84	108.48	44.04	33.93	10.64	36.97	100	207	P	H
		5877.43	49.54	-53.85	103.39	41.92	33.95	10.65	36.98	100	207	P	H
		5945.08	48.75	-19.45	68.2	41.08	34	10.7	37.03	100	207	P	H
													H
													H
		5623.6	56.5	-11.7	68.2	49.89	33	10.41	36.8	190	354	P	V
		5692.6	62.02	-37.72	99.74	55.3	33.09	10.48	36.85	190	354	P	V
		5714.2	66.03	-43.15	109.18	59.19	33.19	10.51	36.86	190	354	P	V
		5724.6	67.45	-53.84	121.29	60.55	33.25	10.52	36.87	190	354	P	V
	*	5775	116.12	-	-	108.91	33.55	10.57	36.91	190	354	P	V
	*	5775	106.57	-	-	99.36	33.55	10.57	36.91	190	354	A	V
		5854.47	68.74	-43.27	112.01	61.16	33.91	10.64	36.97	190	354	P	V
		5855.29	65.36	-45.36	110.72	57.78	33.91	10.64	36.97	190	354	P	V
		5894.035	62.56	-28.52	91.08	54.89	33.99	10.67	36.99	190	354	P	V
		5947.54	52.99	-15.21	68.2	45.32	34	10.7	37.03	190	354	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 HE80_Full (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full CH 155 5775MHz		5410	51.04	-22.96	74	44.87	32.7	10.22	36.75	300	185	P	H
		5410	40.29	-13.71	54	34.12	32.7	10.22	36.75	300	185	A	H
		10707	48.34	-25.66	74	55.66	38.81	14.73	60.86	-	-	P	H
		10707	38.56	-15.44	54	45.88	38.81	14.73	60.86	-	-	A	H
		11550	47.07	-26.93	74	54.03	38.7	15.15	60.81	-	-	P	H
		14480	46.75	-27.25	74	53.23	40.52	16.47	63.47	-	-	P	H
		14480	37.84	-16.16	54	44.32	40.52	16.47	63.47	-	-	A	H
		17325	47.13	-21.07	68.2	48.72	38.17	18.37	58.13	-	-	P	H
		18000	53.11	-20.89	74	48.24	43.1	18.94	57.17	-	-	P	H
		18000	43.03	-10.97	54	38.16	43.1	18.94	57.17	-	-	A	H
													H
													H
		5410	66.44	-7.56	74	60.27	32.7	10.22	36.75	196	7	P	V
		5410	50.13	-3.87	54	43.96	32.7	10.22	36.75	196	7	A	V
		10762	47.64	-26.36	74	54.86	38.92	14.75	60.89	-	-	P	V
		10762	37.86	-16.14	54	45.08	38.92	14.75	60.89	-	-	A	V
		11550	46.29	-27.71	74	53.25	38.7	15.15	60.81	-	-	P	V
		14491	46.24	-27.76	74	52.73	40.51	16.48	63.48	-	-	P	V
		14491	37.46	-16.54	54	43.95	40.51	16.48	63.48	-	-	A	V
		17325	46.05	-22.15	68.2	47.64	38.17	18.37	58.13	-	-	P	V
		17978	52.68	-21.32	74	48.05	42.9	18.93	57.2	-	-	P	V
		17978	42.9	-11.1	54	38.27	42.9	18.93	57.2	-	-	A	V
													V
													V
Remark	- No other spurious found. - All results are PASS against Peak and Average limit line. - The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. - The emission level close to 18GHz is checked that the average emission level is noise floor only.												

Emission above 18GHz

5GHz WIFI 802.11ax HE20 Full (SHF @ 3m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax HE20 Full SHF		24472	41.76	-32.24	74	58.27	39.08	-2.17	53.42	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
			</										

Emission below 1GHz

5GHz WIFI 802.11ax HE20 Full (LF @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full LF		65.89	31.05	-8.95	40	50.66	11.88	1.04	32.53	-	-	P	H
		159.01	29.32	-14.18	43.5	43.58	16.5	1.69	32.45	-	-	P	H
		250.19	29.02	-16.98	46	41.02	18.35	2.1	32.45	-	-	P	H
		402.48	32.66	-13.34	46	40.91	21.72	2.51	32.48	-	-	P	H
		731.31	31.91	-14.09	46	33.48	27.38	3.37	32.32	-	-	P	H
		940.83	32.82	-13.18	46	30.06	30.1	3.93	31.27	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
		56.19	30.16	-9.84	40	49.63	12.13	0.96	32.56	100	328	Q	V
		94.02	31.32	-12.18	43.5	47.6	14.98	1.2	32.46	-	-	P	V
		250.19	26.02	-19.98	46	38.02	18.35	2.1	32.45	-	-	P	V
		414.12	26.26	-19.74	46	34.07	22.11	2.54	32.46	-	-	P	V
		729.37	30.61	-15.39	46	32.28	27.29	3.37	32.33	-	-	P	V
		939.86	31.95	-14.05	46	29.26	30.05	3.92	31.28	-	-	P	V
													V
												V	
												V	
												V	
												V	
												V	
Remark	1. No other spurious found.												
	2. All results are PASS against limit line.												
	3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.												



<Sample 2>

Band 4 - 5725~5850MHz

WIFI 802.11ax HE20_Full (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 149 5745MHz		5604.6	49.07	-19.13	68.2	42.47	33	10.39	36.79	300	183	P	H
		5665.6	47.78	-32	79.78	41.13	33.03	10.45	36.83	300	183	P	H
		5718.8	47.31	-63.15	110.46	40.46	33.21	10.51	36.87	300	183	P	H
		5720.2	47.68	-63.58	111.26	40.82	33.22	10.51	36.87	300	183	P	H
	*	5745	104.94	-	-	97.92	33.37	10.54	36.89	300	183	P	H
	*	5745	95.07	-	-	88.05	33.37	10.54	36.89	300	183	A	H
													H
													H
		5605.6	53.36	-14.84	68.2	46.76	33	10.39	36.79	200	359	P	V
		5652	51.77	-17.92	69.69	45.15	33	10.44	36.82	200	359	P	V
		5719.6	56.4	-54.29	110.69	49.54	33.22	10.51	36.87	200	359	P	V
		5722.6	58.52	-58.21	116.73	51.64	33.24	10.51	36.87	200	359	P	V
	*	5745	121.56	-	-	114.54	33.37	10.54	36.89	200	359	P	V
	*	5745	110.94	-	-	103.92	33.37	10.54	36.89	200	359	A	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. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 149 5745MHz		5390	51.83	-22.17	74	45.69	32.7	10.2	36.76	300	192	P	H
		5390	40.11	-13.89	54	33.97	32.7	10.2	36.76	300	192	A	H
		10806	49.51	-24.49	74	56.67	38.98	14.78	60.92	-	-	P	H
		10806	39.73	-14.27	54	46.89	38.98	14.78	60.92	-	-	A	H
		11490	47.6	-26.4	74	54.41	38.83	15.12	60.76	-	-	P	H
		14491	49.57	-24.43	74	56.06	40.51	16.48	63.48	-	-	P	H
		14491	39.79	-14.21	54	46.28	40.51	16.48	63.48	-	-	A	H
		17235	48.68	-19.52	68.2	50.7	37.97	18.3	58.29	-	-	P	H
		17978	55.06	-18.94	74	50.43	42.9	18.93	57.2	-	-	P	H
		17978	45.27	-8.73	54	40.64	42.9	18.93	57.2	-	-	A	H
													H
													H
		5390	66.7	-7.3	74	60.56	32.7	10.2	36.76	200	344	P	V
		5390	49.78	-4.22	54	43.64	32.7	10.2	36.76	200	344	A	V
		10762	49.21	-24.79	74	56.43	38.92	14.75	60.89	-	-	P	V
		10762	39.43	-14.57	54	46.65	38.92	14.75	60.89	-	-	A	V
		11490	47.69	-26.31	74	54.5	38.83	15.12	60.76	-	-	P	V
		14491	48.92	-25.08	74	55.41	40.51	16.48	63.48	-	-	P	V
		14491	40.14	-13.86	54	46.63	40.51	16.48	63.48	-	-	A	V
		17235	49.32	-18.88	68.2	51.34	37.97	18.3	58.29	-	-	P	V
		18000	54.26	-19.74	74	49.39	43.1	18.94	57.17	-	-	P	V
		18000	44.48	-9.52	54	39.61	43.1	18.94	57.17	-	-	A	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.												
	4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												

Emission above 18GHz

5GHz WIFI 802.11ax HE20 Full (SHFF @ 3m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax HE20 Full SHF		23136	41.57	-32.43	74	59.67	38.9	-2.78	54.22	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
												H	
			</										

Emission below 1GHz

5GHz WIFI 802.11ax HE20 Full (LF @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full LF		62.01	32.68	-7.32	40	52.47	11.74	1.01	32.54	-	-	P	H
		159.01	30.88	-12.62	43.5	45.14	16.5	1.69	32.45	-	-	P	H
		250.19	30.22	-15.78	46	42.22	18.35	2.1	32.45	-	-	P	H
		408.3	30.32	-15.68	46	38.37	21.89	2.53	32.47	-	-	P	H
		730.34	31.2	-14.8	46	32.82	27.34	3.37	32.33	-	-	P	H
		954.41	32.64	-13.36	46	28.98	30.88	3.96	31.18	-	-	P	H
													H
													H
													H
													H
													H
													H
		57.16	32.07	-7.93	40	51.71	11.95	0.97	32.56	280	303	Q	V
		95.96	31.96	-11.54	43.5	47.9	15.31	1.21	32.46	-	-	P	V
		250.19	27.63	-18.37	46	39.63	18.35	2.1	32.45	-	-	P	V
		650.8	27.19	-18.81	46	30.3	26.16	3.21	32.48	-	-	P	V
		746.83	32.2	-13.8	46	33.27	27.83	3.39	32.29	-	-	P	V
		951.5	33.87	-12.13	46	30.43	30.7	3.95	31.21	-	-	P	V
													V
													V
												V	
												V	
												V	
												V	
Remark	1. No other spurious found.												
	2. All results are PASS against limit line.												
	3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.												



Note symbol

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



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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a		5725	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 149		5725	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H
5745MHz													

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 @ 5725MHz:

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 @ 5725MHz:

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”.

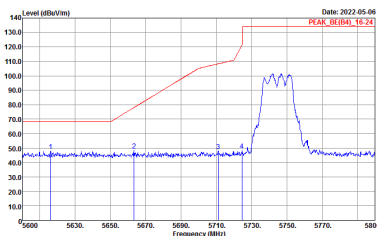
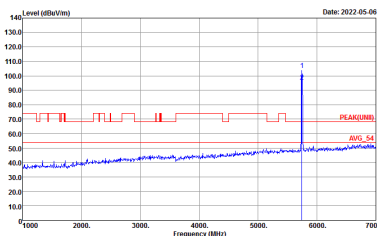


Appendix D. Radiated Spurious Emission Plots

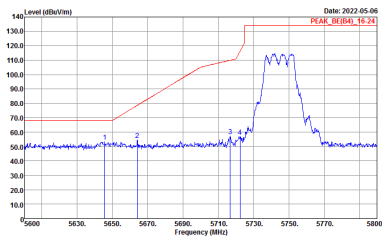
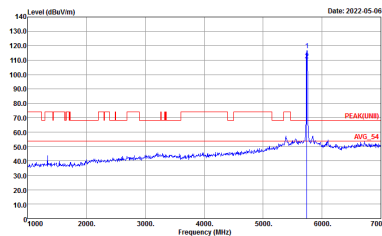
Test Engineer :	Bigshow Wang	Temperature :	22.1~23.1°C
		Relative Humidity :	55~60%

<Sample 1>

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

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_36[54]_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK[LINE] 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

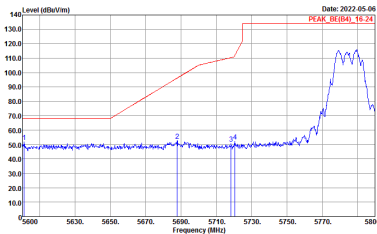
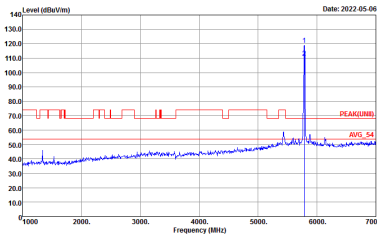
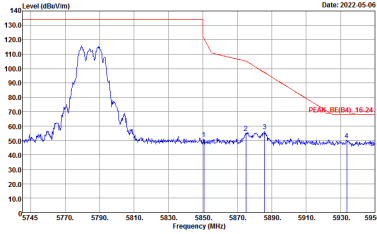


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_86[84]_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VSW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK[LINE1] 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VSW:3000.000KHz SWT:Auto

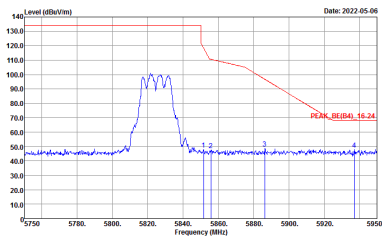
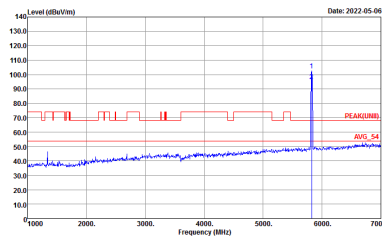


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+2	Horizontal	Fundamental
Peak	Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH15-HY Condition : PEAK(B4)_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

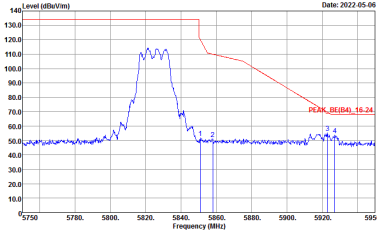
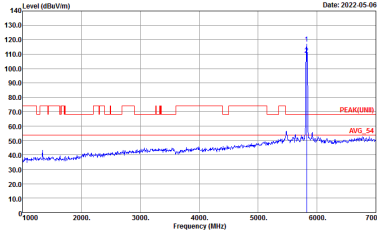


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE1) 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



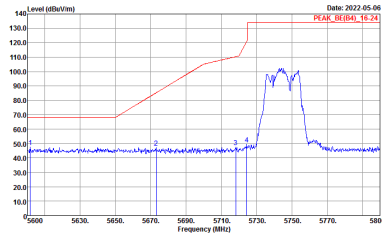
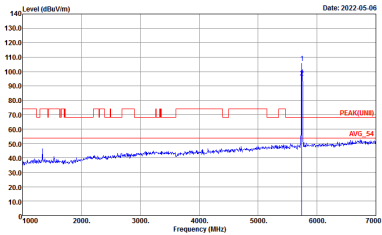
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_85[04]_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_85[04]_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



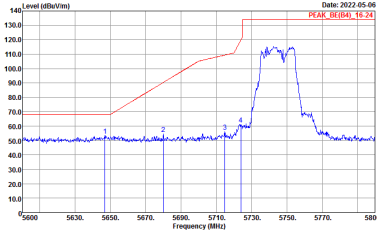
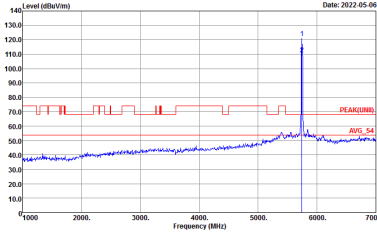
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_85[84]_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VSW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK[LINE] 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VSW:3000.000KHz SWT:Auto



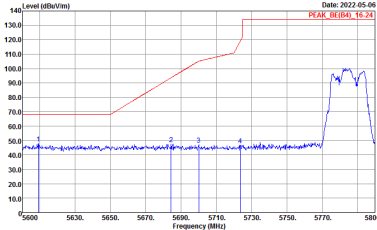
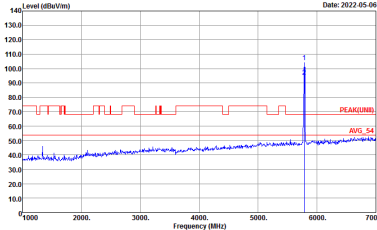
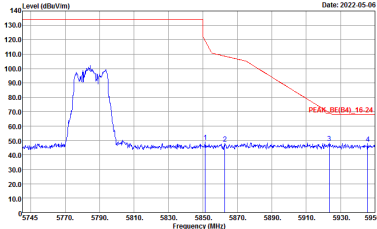
Band 4 5725~5850MHz
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNII) 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_95[94]_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VSW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK[LINE1] 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VSW:3000.000KHz SWT:Auto

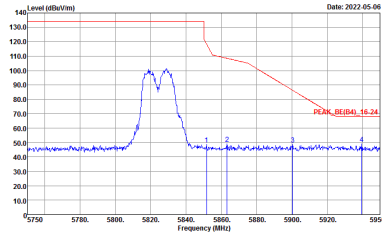
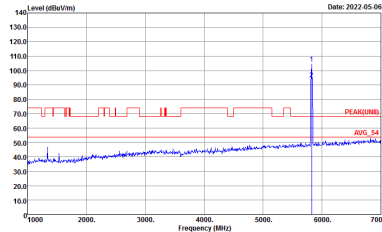


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE1) 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

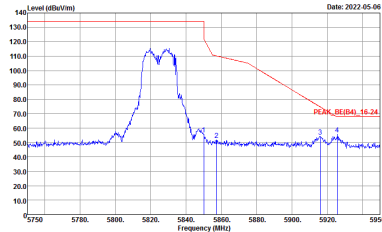
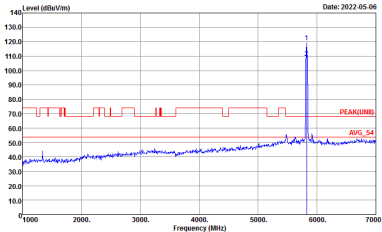


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
1+2	Vertical	Fundamental
Peak	Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH15-HY Condition : PEAK(B4)_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 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	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_85(B4)_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_85(B4)_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



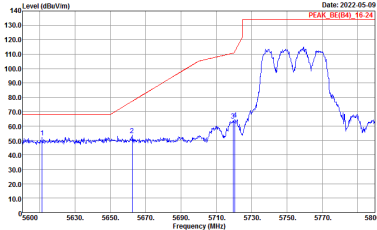
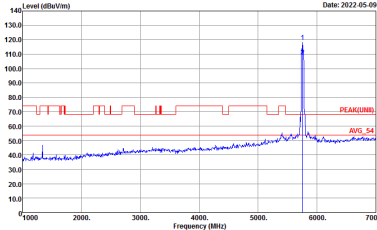
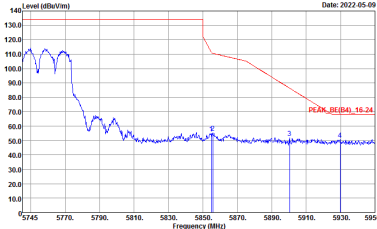
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_85[04]_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_85[04]_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



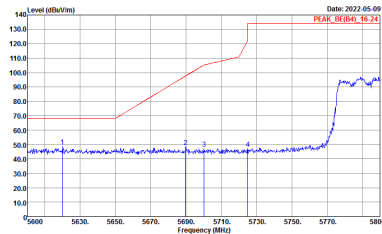
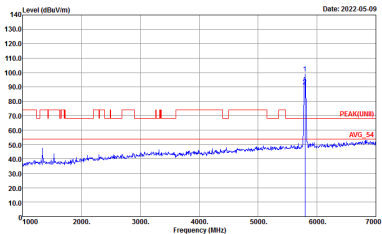
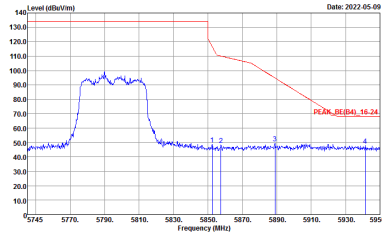
Band 4 5725~5850MHz
WIFI 802.11ax HE40 Full (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
1+2	Horizontal	Fundamental
Peak	Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH15-HY Condition : PEAK(UNIB) 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

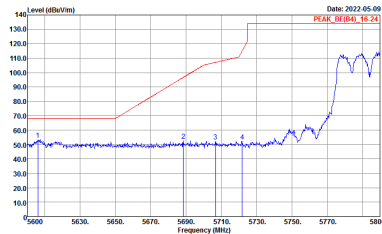
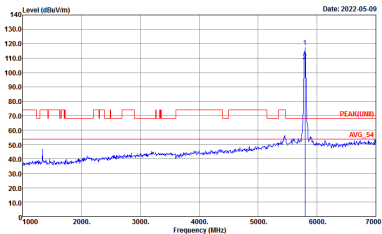
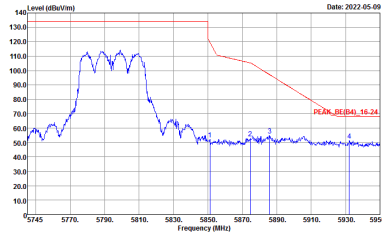


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE1) 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



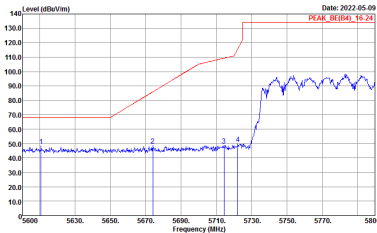
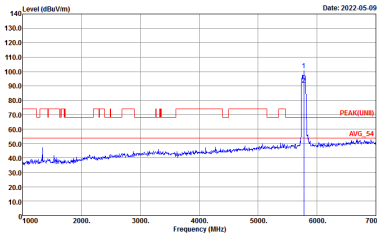
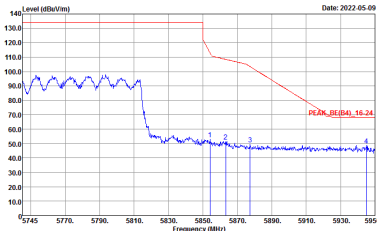
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full HT40 CH159 5795MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



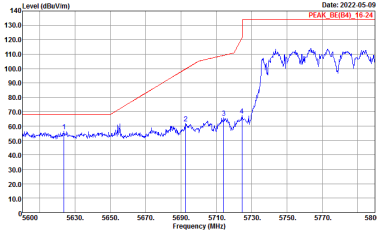
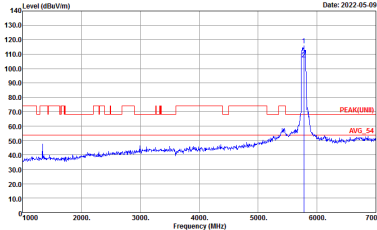
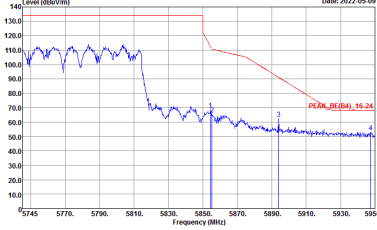
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(LINE1) 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



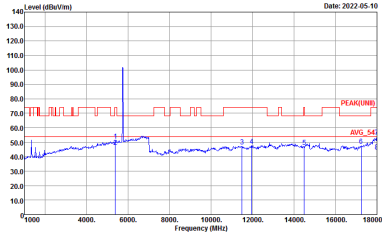
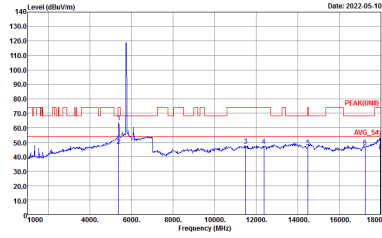
Band 4 5725~5850MHz
WIFI 802.11ax HE80 Full (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
1+2	Horizontal	Fundamental
Peak	 Site : site Condition : PEAK_BE(84)_16-24 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

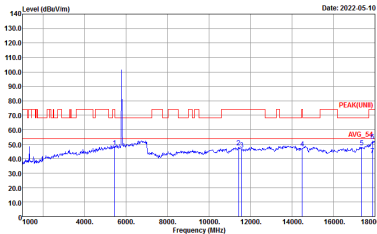
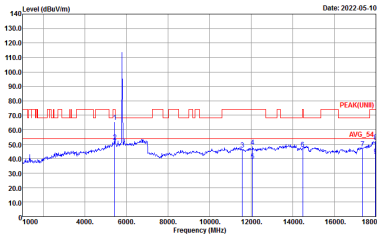


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(B4)_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

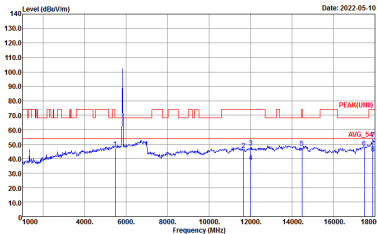
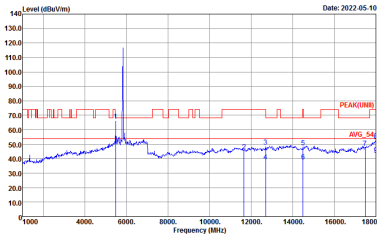
Band 4 - 5725~5850MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 VERTICAL



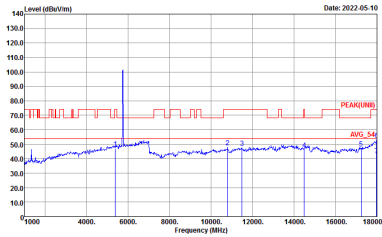
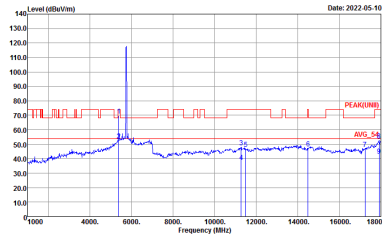
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 VERTICAL



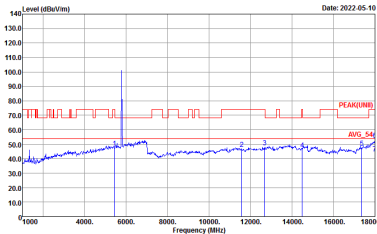
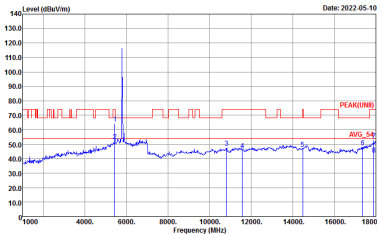
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 VERTICAL



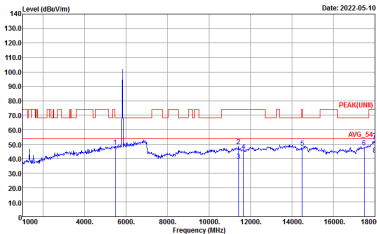
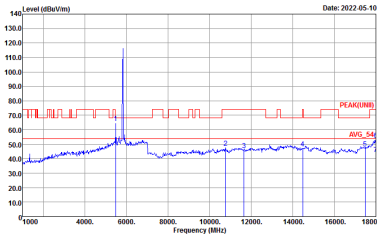
Band 4 5725~5850MHz
WIFI 802.11ax HE20 Full (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 VERTICAL

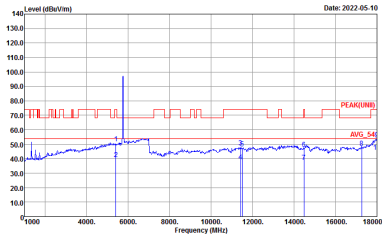
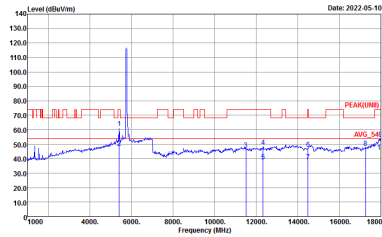


WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 VERTICAL

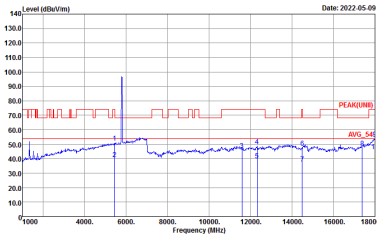
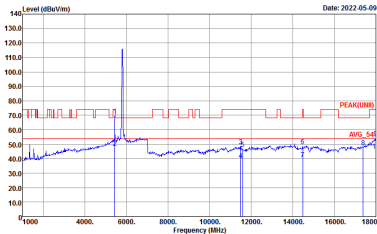


WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 VERTICAL

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

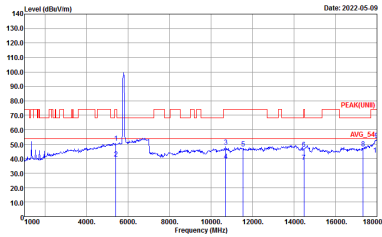
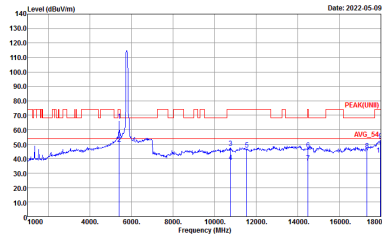
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 VERTICAL



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 VERTICAL

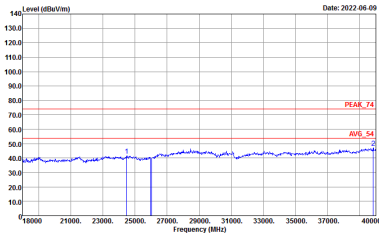
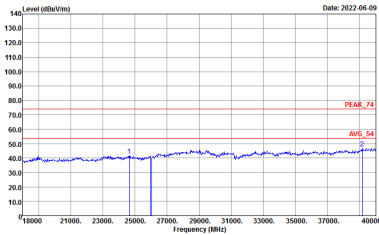


Band 4 5725~5850MHz
WIFI 802.11ax HE80 Full (Harmonic @ 3m)

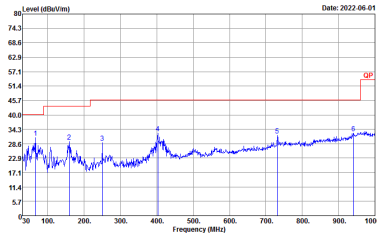
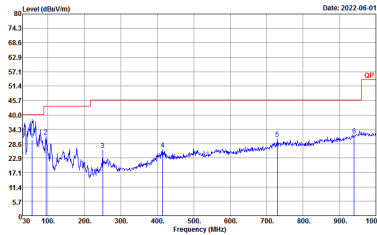
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 VERTICAL



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

WIFI	5GHz WIFI	
ANT	802.11ax HE20 Full SHF	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : PEAK_74 1m SHF ANT_9170_00993 HORIZONTAL	 Site : 03CH11-HY Condition : PEAK_74 1m SHF ANT_9170_00993 VERTICAL

Emission below 1GHz
5GHz WIFI 802.11ax HE20 Full (LF @ 3m)

WIFI	5GHz WIFI	
ANT	802.11ax HE20 Full LF	
1+2	Horizontal	Vertical
QP / Peak	 Site : 03CH15-HY Condition : QP 3m B1LOG_41912_20220206 HORIZONTAL	 Site : 03CH15-HY Condition : QP 3m B1LOG_41912_20220206 VERTICAL

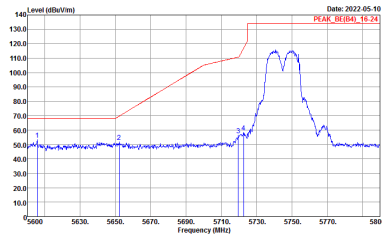
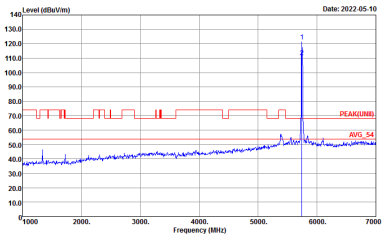


<Sample 2>

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

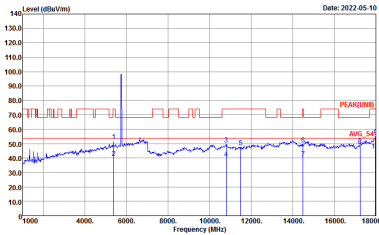
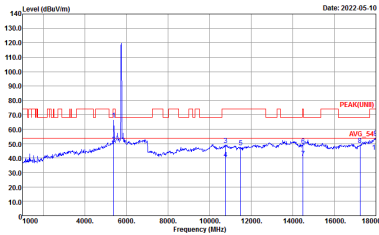
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Horizontal	Fundamental
Peak	140 Level (dBuV/m) Date: 2022-05-10 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	140 Level (dBuV/m) Date: 2022-05-10 Site : 03CH15-HY Condition : PEAK(UNII) 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_B6(B4)_16-24 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_UWB 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

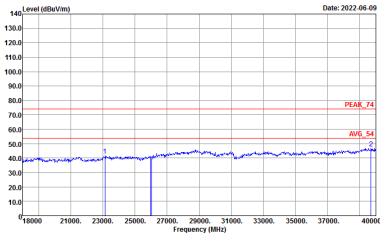
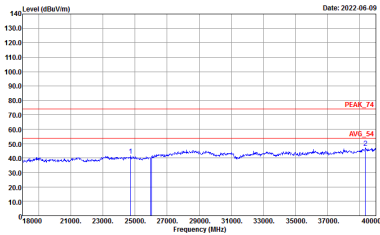


Band 4 - 5725~5850MHz
WIFI 802.11ax HE20 Full (Harmonic @ 3m)

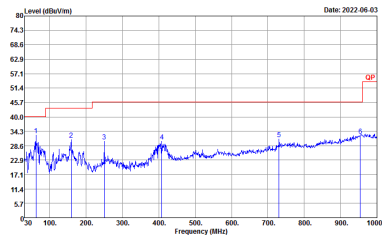
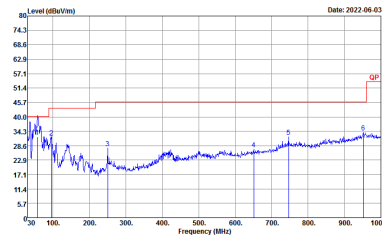
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 90120_02038_20210804 VERTICAL



Emission above 18GHz
5GHz WIFI 802.11ax HE20 Full (SHF @ 3m)

WIFI	5GHz WIFI	
ANT	802.11ax HE20 Full SHF	
1+2	Horizontal	Vertical
QP / Peak	 Site : 03CH15-HY Condition : PEAK_74 1m SHF ANT_9170_00993 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK_74 1m SHF ANT_9170_00993 VERTICAL

Emission below 1GHz
5GHz WIFI 802.11ax HE20 Full (LF @ 3m)

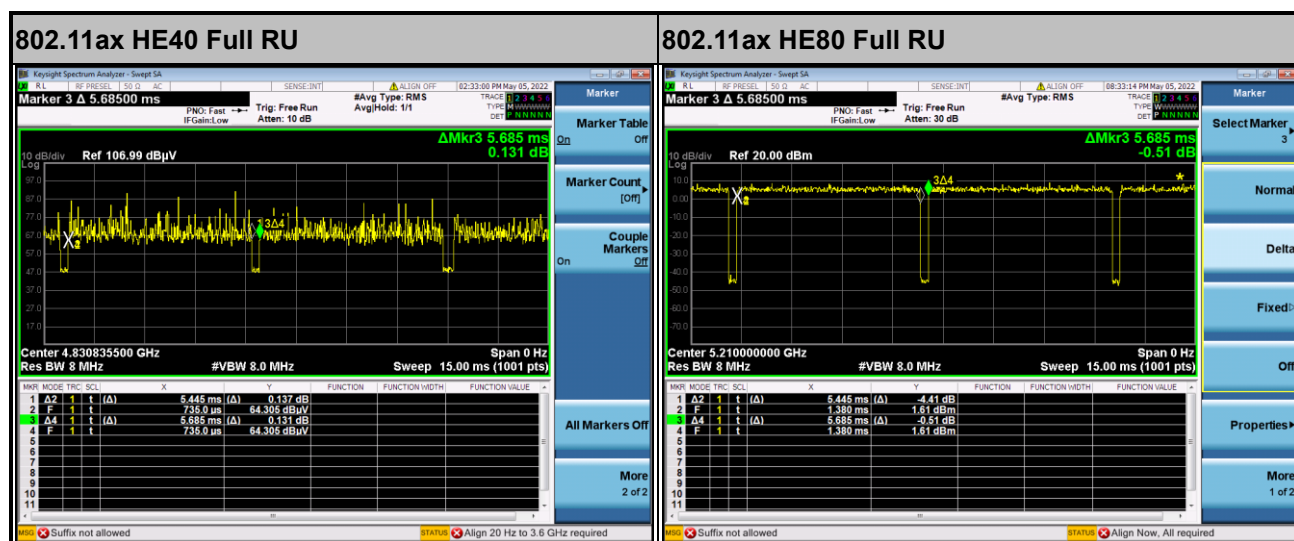
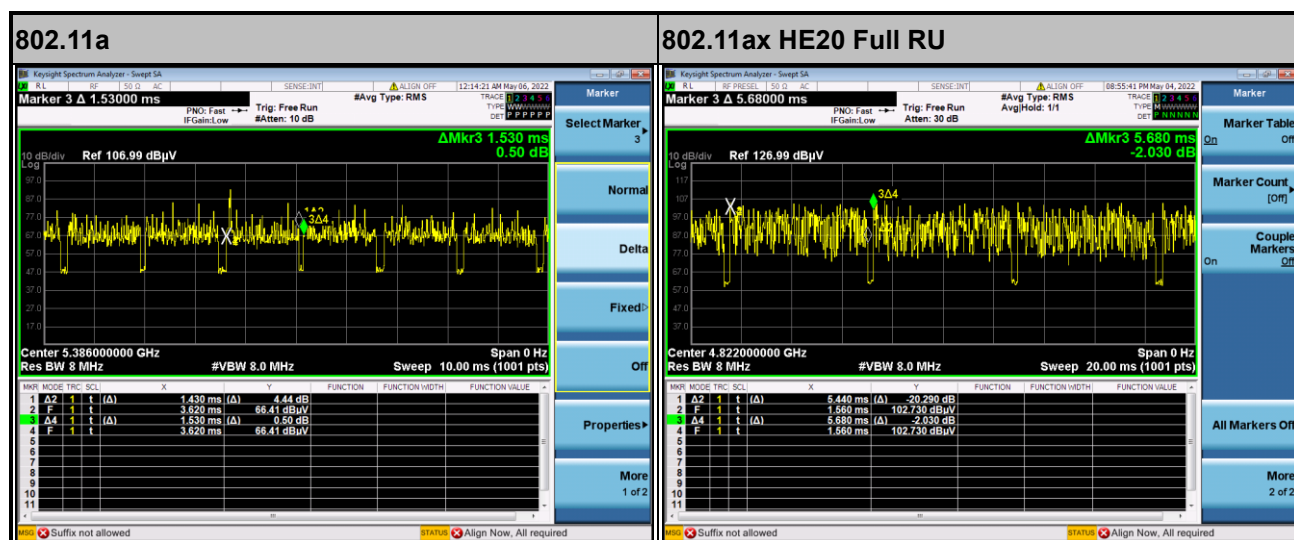
WIFI	5GHz WIFI	
ANT	802.11ax HE20 Full LF	
1+2	Horizontal	Vertical
QP / Peak	 Site : 03CH15-HY Condition : QP 3m B1LOG_41912_20220206 HORIZONTAL	 Site : 03CH15-HY Condition : QP 3m B1LOG_41912_20220206 VERTICAL



Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
1+2	802.11a	93.46	1430	0.70	1kHz
1+2	5GHz 802.11ax HE20 Full RU	95.77	5440	0.18	300Hz
1+2	5GHz 802.11ax HE40 Full RU	95.78	5445	0.18	300Hz
1+2	5GHz 802.11ax HE80 Full RU	95.78	5445	0.18	300Hz

MIMO <Ant. 1+2>



Appendix F. Setup Photographs

<Conducted Emission>

Mode 2

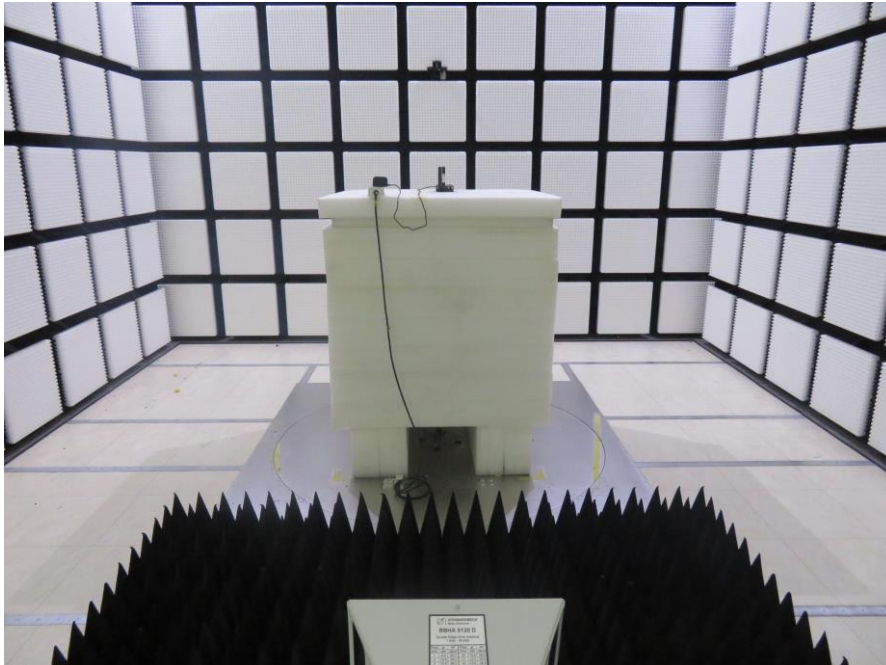
Remote View



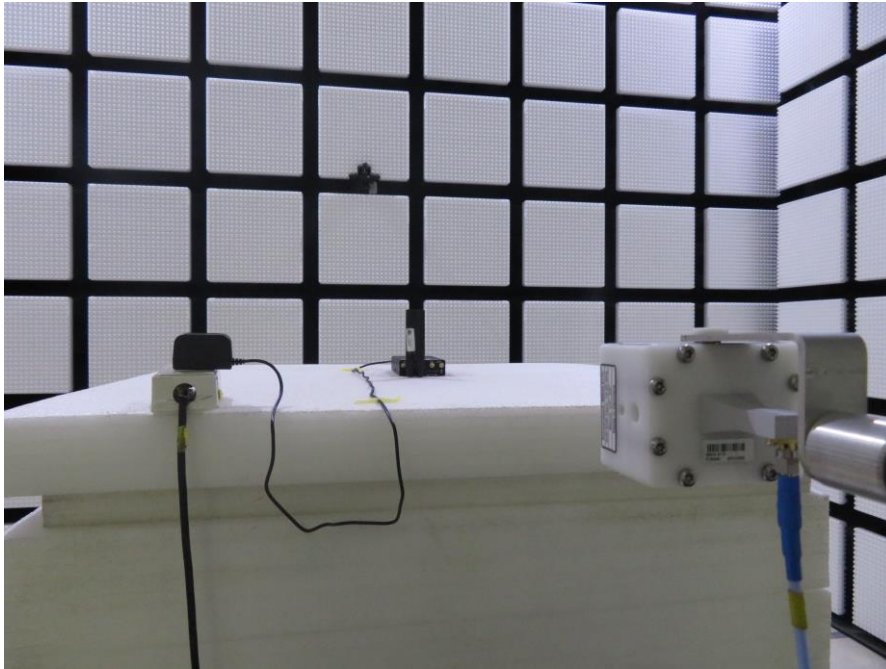


Rear View



<Radiated Emission>**Ant. Degree 90****LF****HF**

SHF



————THE END————