FCC RADIO TEST REPORT

FCC ID	:	**2A4DH-3967**
Equipment	:	**Digital Media Receiver**
Model Name	:	**GA5Z9L**
Applicant	:	**Amazon.com Services LLC** **410 Terry Avenue N, Seattle, WA 98109-5210 United States**
Standard	:	**FCC Part 15 Subpart E §15.407**

The product was received on Apr. 26, 2022 and testing was performed from Jun. 08, 2022 to Jul. 15, 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.

Louis Wu

Approved by: Louis Wu

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

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History of this test report

Report No.	Version	Description	Issue Date
FR211819-01E	01	Initial issue of report	Jul. 15, 2022

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)
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
3.5	15.207	AC Conducted Emission	Pass
3.6	15.407(c)	Automatically Discontinue Transmission	Pass
3.7	15.203 15.407(a)	Antenna Requirement	Pass

Declaration of Conformity:
1. 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. 2. 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: Alan Liu

Report Producer: Rachel Hsieh

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Digital Media Receiver
Model Name	GA5Z9L
FCC ID	2A4DH-3967
EUT supports Radios application	WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 WLAN 11ax HE20/HE40/HE80 Bluetooth BR/EDR/LE

1.2 Product Specification of Equipment Under Test

Product Specification is subject to this standard	
Tx/Rx Channel Frequency Range	5745 MHz ~ 5825 MHz
Maximum Output Power to antenna	**MIMO <Ant. 0+1>** 802.11a: 19.52 dBm / 0.0895 W 802.11n HT20: 19.48 dBm / 0.0888 W 802.11n HT40: 19.58 dBm / 0.0909 W 802.11ac VHT20: 19.48 dBm / 0.0888 W 802.11ac VHT40: 19.58 dBm / 0.0909 W 802.11ac VHT80: 19.31 dBm / 0.0853 W 802.11ax HE20: 19.58 dBm / 0.0909 W 802.11ax HE40: 19.68 dBm / 0.0930 W 802.11ax HE80: 19.41 dBm / 0.0873 W
99% Occupied Bandwidth	**MIMO <Ant. 0>** 802.11a: 17.63 MHz 802.11ax HE20: 19.08 MHz 802.11ax HE40: 37.66 MHz 802.11ax HE80: 75.52 MHz **MIMO <Ant. 1>** 802.11a: 17.13 MHz 802.11ax HE20: 19.13 MHz 802.11ax HE40: 37.66 MHz 802.11ax HE80: 76.84 MHz
Antenna Function Description	<table><tr><td></td><td>Ant. 0</td><td>Ant. 1</td></tr><tr><td>802.11 a/n/ac/ax MIMO</td><td>V</td><td>V</td></tr></table>

Product Specification is subject to this standard	
Antenna Type / Gain	**<Ant. 0> :** PCB Inv F Antenna with gain 5.72 dBi **<Ant. 1> :** PCB Inv F Antenna with gain 5.62 dBi
Type of Modulation	802.11a/n : OFDM (BPSK/QPSK/16QAM/64QAM) 802.11ac : OFDM (BPSK/QPSK/16QAM/64QAM/256QAM) 802.11ax : OFDMA (BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM)

Remark:

1. MIMO Ant. 0+1 Directional Gain is a calculated result from MIMO Ant. 0 and MIMO Ant. 1. The formula used in calculation is documented in section 3.7.
2. Power of MIMO Ant. 0 + Ant. 1 is a calculated result from sum of the power MIMO Ant. 0 and MIMO Ant. 1.

1.3 Modification of EUT

No modifications made to the EUT during the testing.

1.4 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	**Sporton Site No.**
	DF02-HY, CO05-HY (TAF Code: 1190)
Remark	The Conducted Emission and Automatically Discontinue Transmission 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, 03CH13-HY

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

FCC designation No.: TW1190 and TW3786

1.5 Applicable Standards

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

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

Remark:

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

2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

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

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

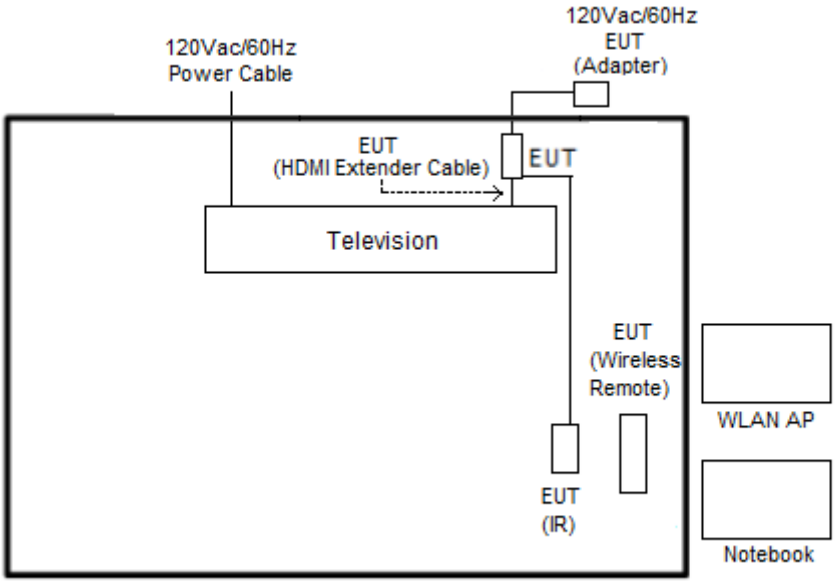
Test Cases	
AC Conducted Emission	Mode 1 :WLAN (5GHz) Link + Bluetooth Link + TV (connected to EUT via HDMI Out) + LED ON + IR ON + 1080p 12 bit Resolution Video Play from EUT's local Memory on TV
Remark: For Radiated Test Cases, the tests were performed with AP19 CR Adapter.	

Ch. #		Band IV：5725-5850 MHz			
		802.11a	802.11ax HE20	802.11ax HE40	802.11ax HE80
L	Low	149	149	151	-
M	Middle	157	157	-	155
H	High	165	165	159	-

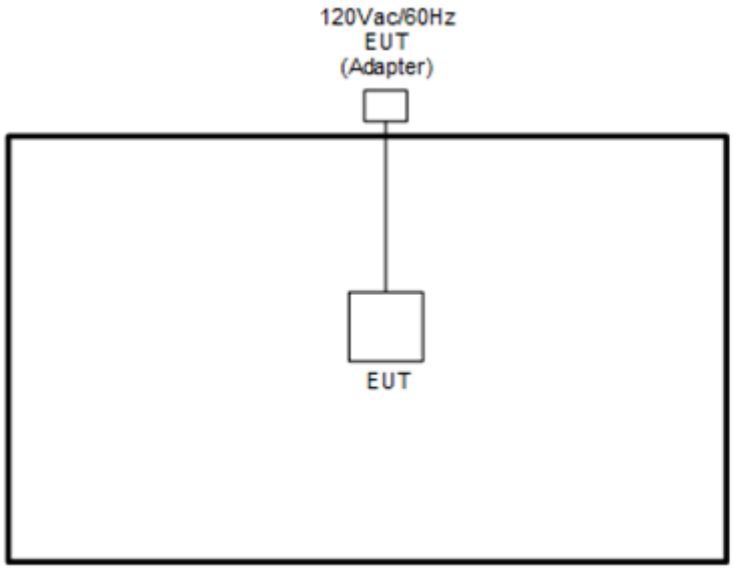
Remark: For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.

2.3 Connection Diagram of Test System

<AC Conducted Emission>



<WLAN Tx Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Television	Sharp	50UA6800T	FCC DoC	Shielded, 1.6m	Unshielded, 1.8m

2.5 EUT Operation Test Setup

The RF test items, utility “Compliance 1.0.1.13” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

Offset = RF cable loss + attenuator factor.

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

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

= 4.2 + 10 = 14.2 (dB)

3 Test Result

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

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

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

26dB and 99% Occupied bandwidth are reporting only.

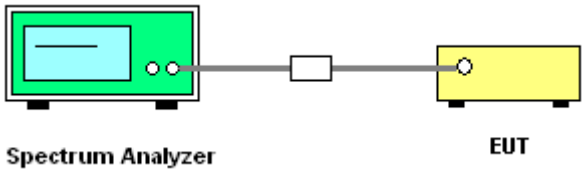
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth for the band 5.725-5.85 GHz
2. Set RBW = 100 kHz.
3. Set the VBW ≥ 3 x RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.
7. Measure and record the results in the test report.

3.1.4 Test Setup

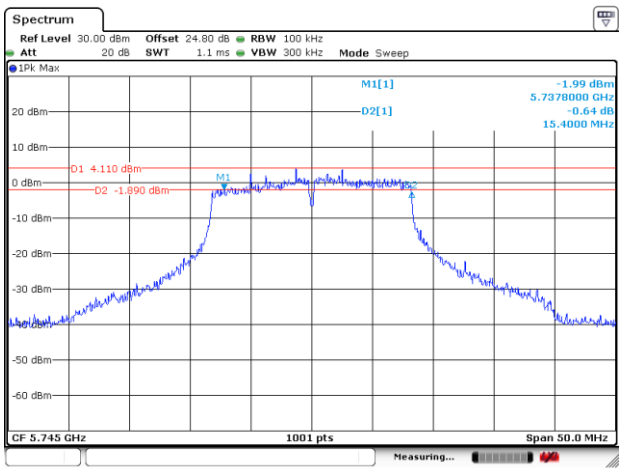
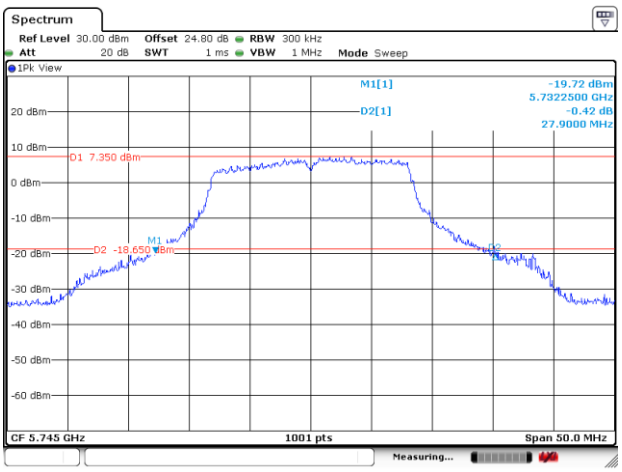
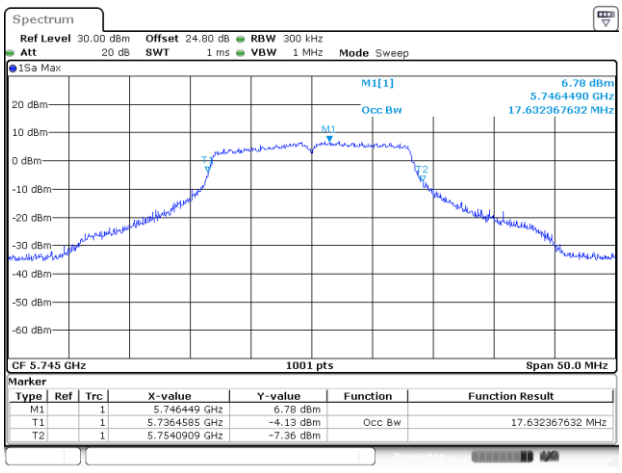


3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.

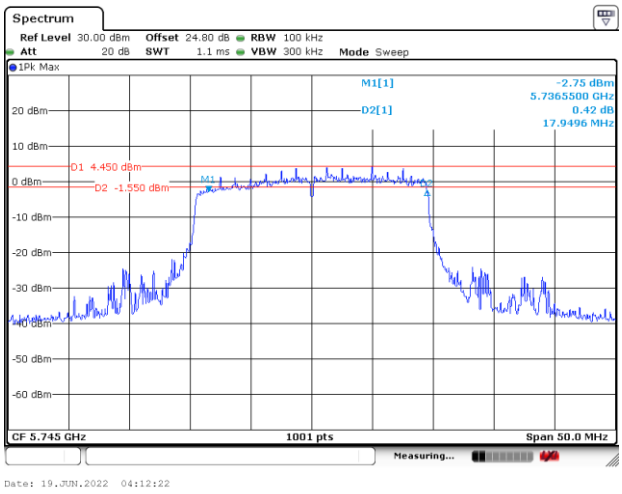
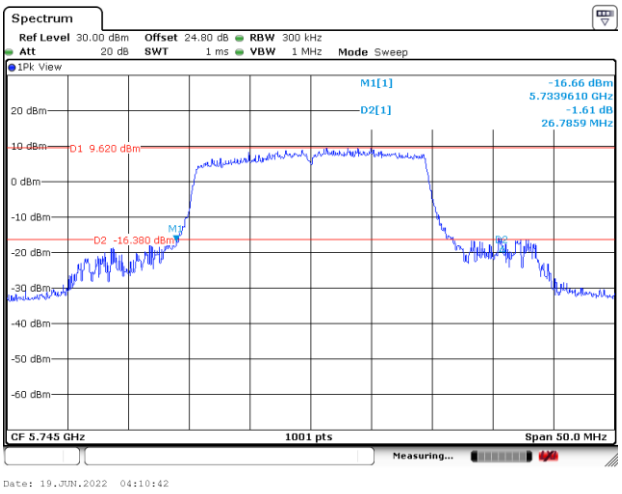
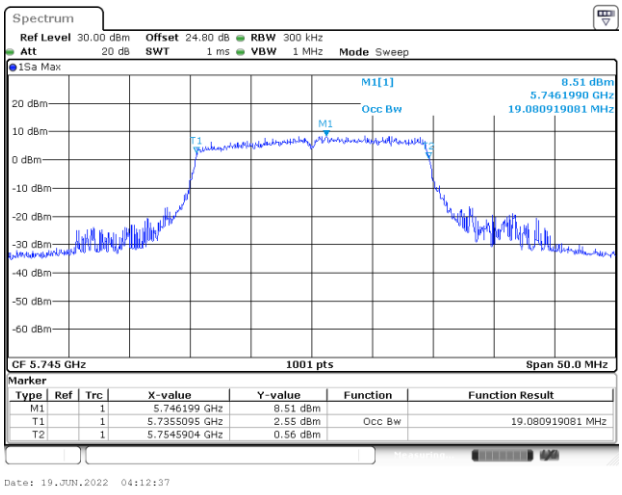
MIMO <Ant. 0+1>

<802.11a>

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

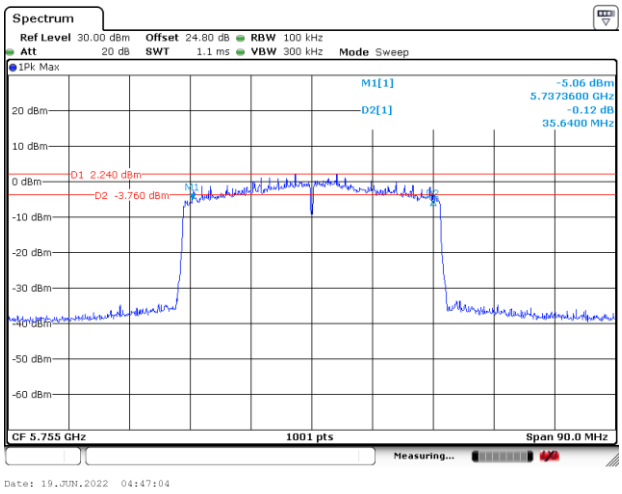
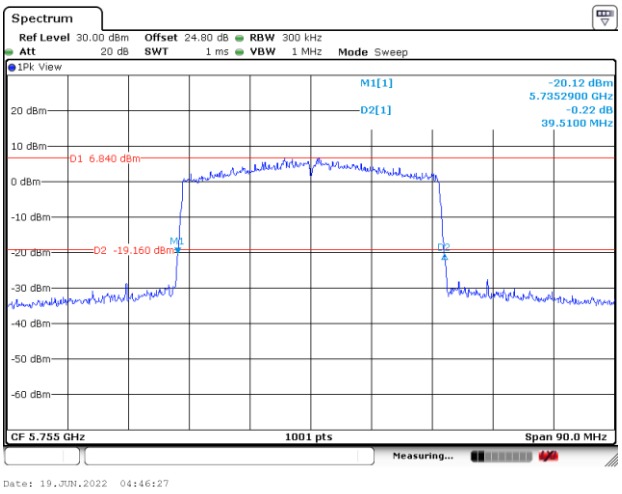
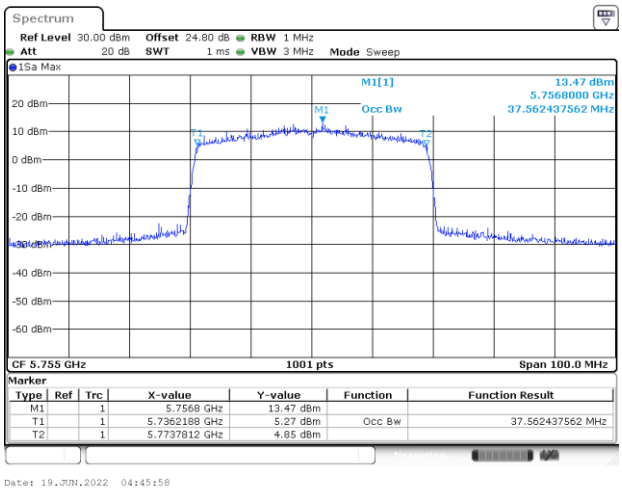
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ax HE20>

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

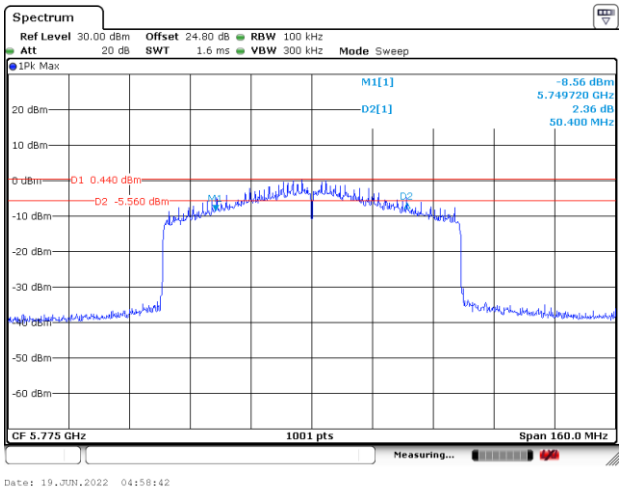
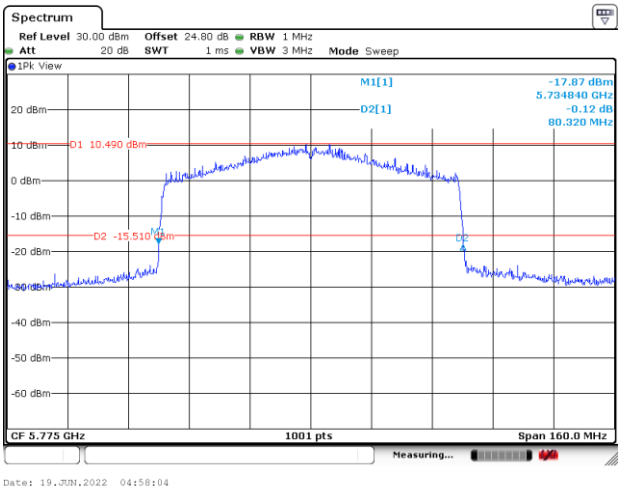
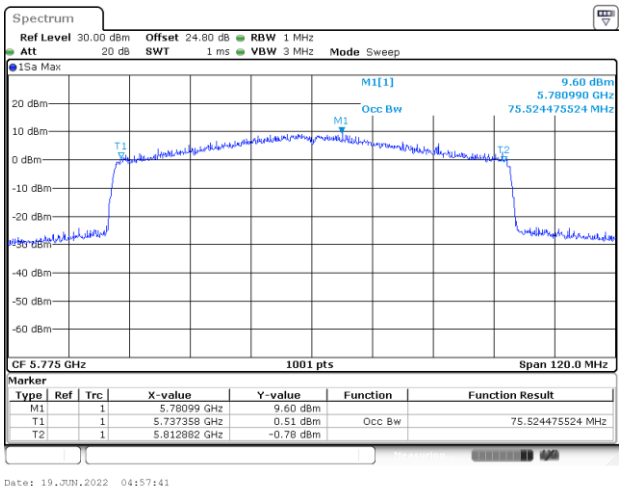
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ax HE40>

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

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

<802.11ax HE80>

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

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

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

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

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

3.2.2 Measuring Instruments

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

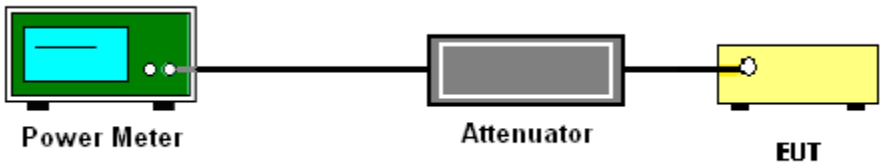
3.2.3 Test Procedures

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

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

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

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Section F) Maximum power spectral density.

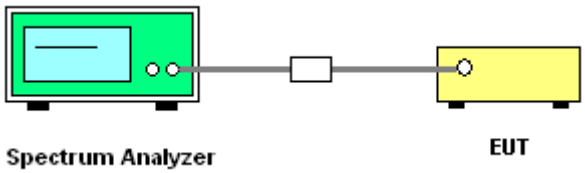
 # Method SA-3 #

(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 ≥ 1 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Add 10 log (500 kHz/RBW) to the measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement
- Sweep time ≤ (number of points in sweep) × T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
  Detector = power averaging (rms).
- Trace mode = max hold.
- Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

1. The RF output of EUT is connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
   Method (c): Measure and add 10 log(N_{ANT}) dB.
   With this technique, spectrum measurements are performed at each output of the device, but rather than summing the spectra or the spectral peaks across the outputs, the quantity 10 log(N_{ANT}) dB is added to each spectrum value before comparing to the emission limit. The addition of 10 log(N_{ANT}) dB serves to apportion the emission limit among the N_{ANT} outputs so that each output is permitted to contribute no more than 1/N_{ANT} th of the PSD limit.

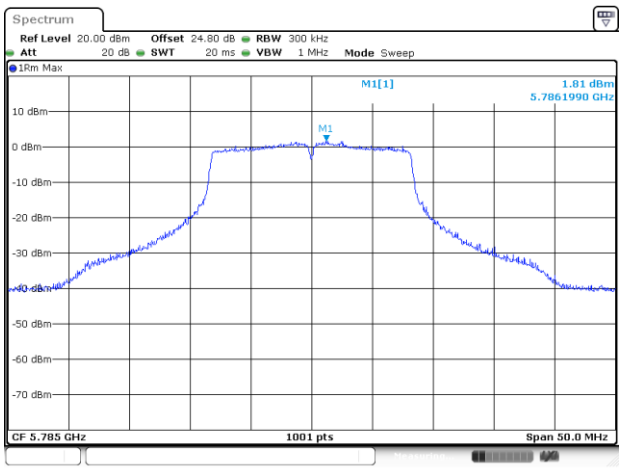
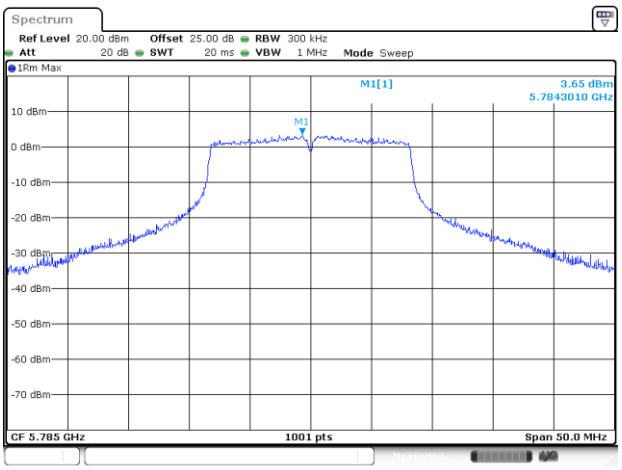
3.3.4 Test Setup



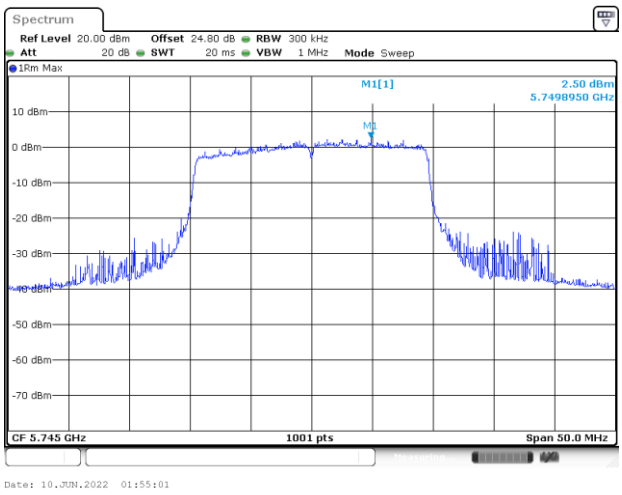
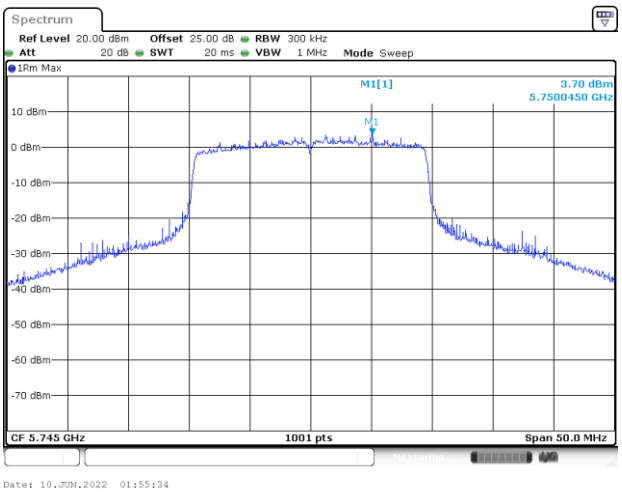
3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

<802.11a>

Maximum Power Density Plot (dBm/MHz)	
MIMO Ant. 0	**MIMO Ant. 1**
	

<802.11ax HE20>

Maximum Power Density Plot (dBm/MHz)	
MIMO Ant. 0	**MIMO Ant. 1**
	

3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

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

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

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

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

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

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

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

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

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

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

3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

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

   (1) Procedure for Unwanted Emissions Measurements Below 1000 MHz

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

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

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

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

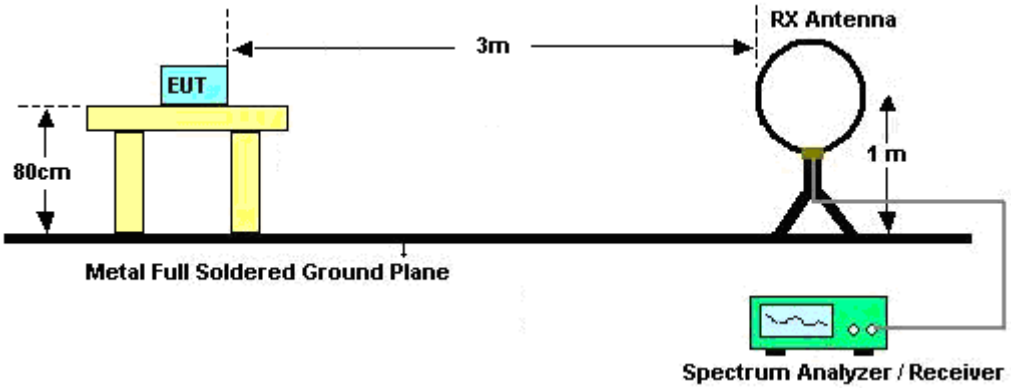
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

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

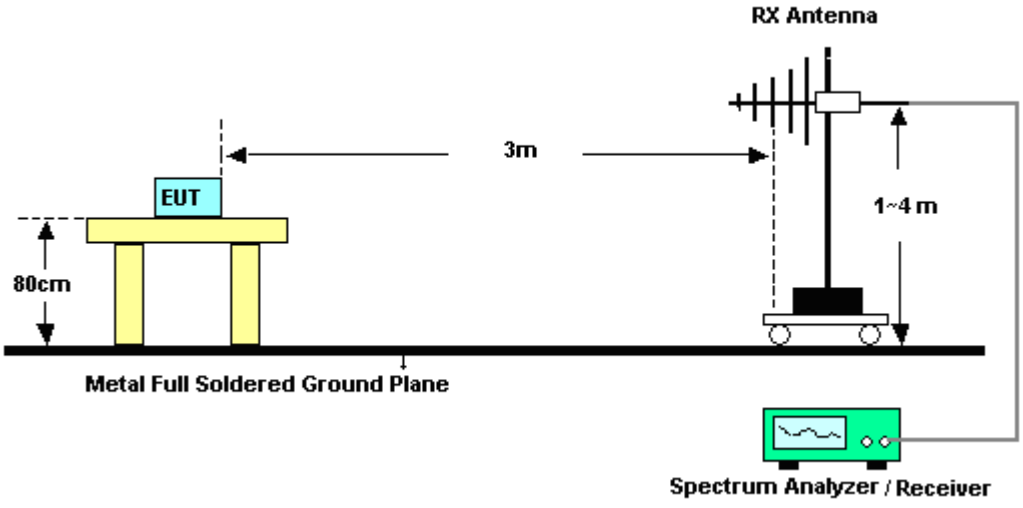
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit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

3.4.4 Test Setup

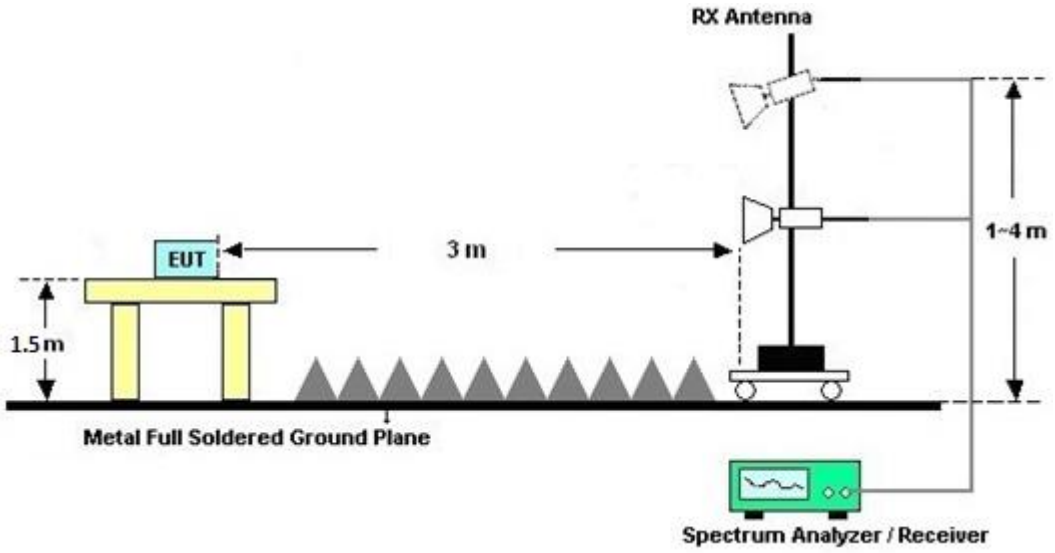
For radiated emissions below 30MHz



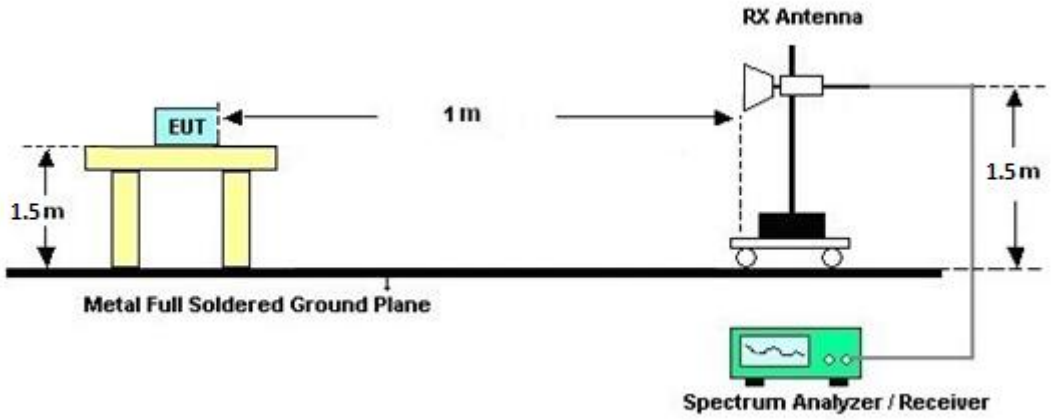
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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

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

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

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix C and D.

3.4.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

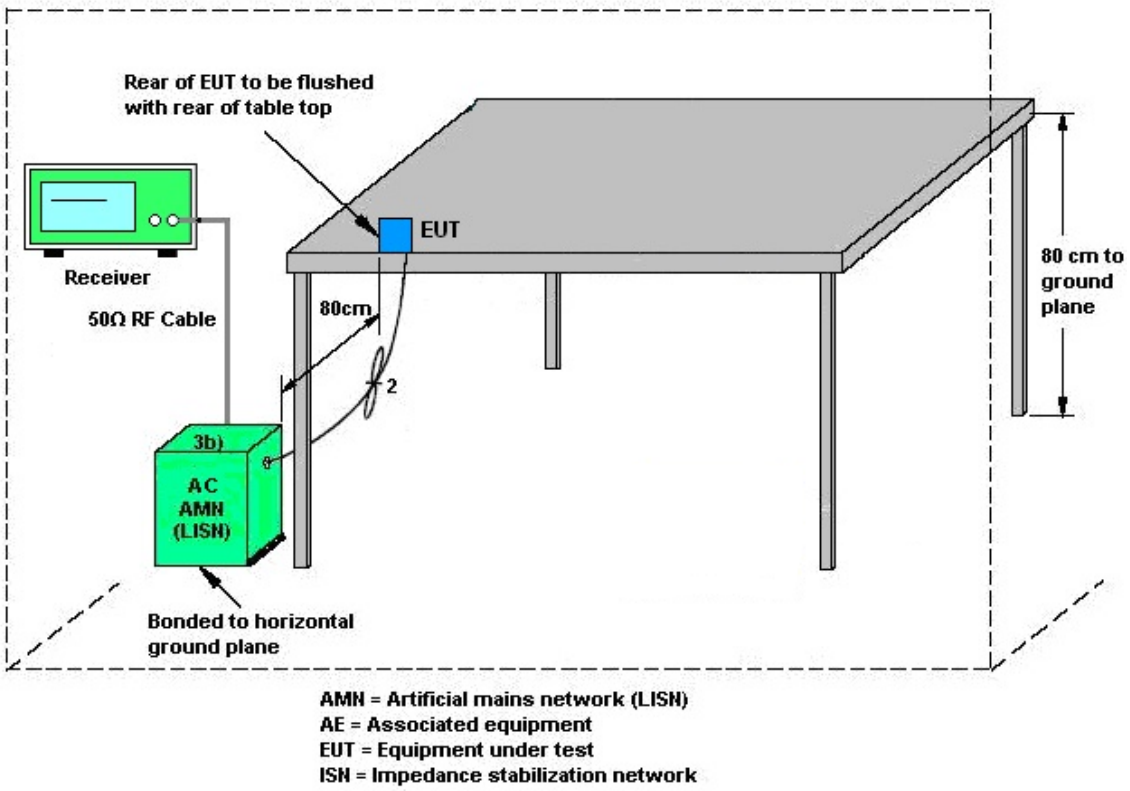
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Automatically Discontinue Transmission

3.6.1 Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Result of Automatically Discontinue Transmission

EUT is verified this characteristic during the function check of normal sample associated with an access point:

A. Information start: make EUT supply information to the access point.

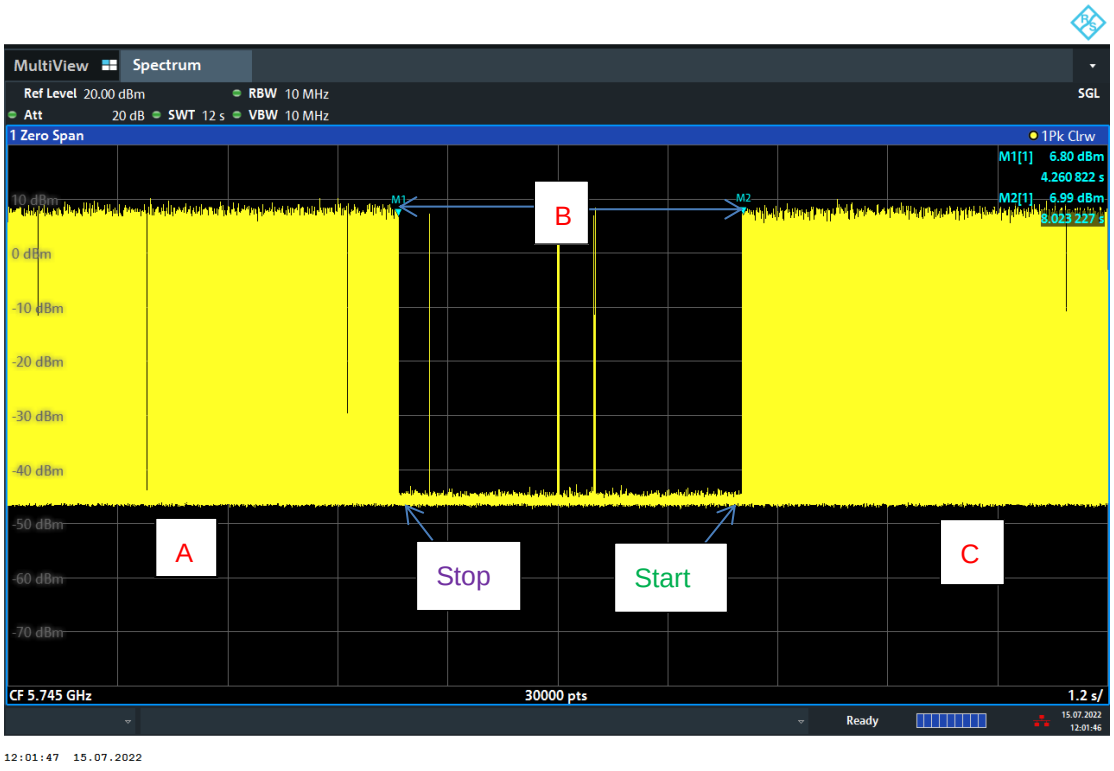
B. Information stop: stop supplying information to the access point.

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving.

C. Information start: make EUT supply information to the access point again.

The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

5745MHz



Note: The control / signalling information during the period B is precluded.

3.7 Antenna Requirements

3.7.1 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.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For power measurements on IEEE 802.11 devices,

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

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

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

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

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

where

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

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

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k/20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not;

G_k is the gain in dBi of the kth antenna.

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

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

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

For example: If a device has two antenna, G_{ANT1}= 3.6dBi; G_{ANT2}=4.2dBi

Directional gain of power measurement = max(3.6, 4.2) + 0 = 4.2 dBi

Directional gain of PSD measurement = 10 * log[$(10^{3.6/20} + 10^{4.2/20})^2$ / 2] = 6.92 dBi

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

<CDD Modes>						
	Ant. 0 (dBi)	Ant. 1 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band IV	5.72	5.62	5.72	8.68	0.00	2.68

Power Limit Reduction = DG(Power) – 6dBi, (min = 0)
PSD Limit Reduction = DG(PSD) – 6dBi, (min = 0)

Calculation example:
The DG for PSD is derived from formula is
10 x log { { [10^ (5.72 dBi / 20) + 10^ (5.62 dBi / 20)] ^ 2 } / 2 }
= 8.68 dBi

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	9kHz~30MHz	Sep. 07, 2021	Jun 15, 2022 ~ Jun 16, 2022	Sep. 06, 2022	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	40103 & 07	30MHz~1GHz	Apr. 24, 2022	Jun 15, 2022 ~ Jun 16, 2022	Apr. 23, 2023	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1241	1GHz~18GHz	Jul. 13, 2021	Jun 15, 2022 ~ Jun 16, 2022	Jul. 12, 2022	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	00994	18GHz~40GHz	Nov. 04, 2021	Jun 15, 2022 ~ Jun 16, 2022	Nov. 03, 2022	Radiation (03CH13-HY)
Amplifier	Sonoma-Instrument	310 N	187282	9kHz~1GHz	Dec. 15, 2021	Jun 15, 2022 ~ Jun 16, 2022	Dec. 14, 2022	Radiation (03CH13-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590074	1GHz~18GHz	May 17, 2022	Jun 15, 2022 ~ Jun 16, 2022	May 16, 2023	Radiation (03CH13-HY)
Preamplifier	Keysight	83017A	MY53270147	1GHz~26.5GHz	Oct. 26, 2021	Jun 15, 2022 ~ Jun 16, 2022	Oct. 25, 2022	Radiation (03CH13-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 24, 2021	Jun 15, 2022 ~ Jun 16, 2022	Dec. 23, 2022	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY55370526	10Hz~44GHz	Mar. 18, 2022	Jun 15, 2022 ~ Jun 16, 2022	Mar. 17, 2023	Radiation (03CH13-HY)
Hygrometer	TECPEL	DTM-303B	TP200889	N/A	Sep. 30, 2021	Jun 15, 2022 ~ Jun 16, 2022	Sep. 29, 2022	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Jun 15, 2022 ~ Jun 16, 2022	N/A	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Jun 15, 2022 ~ Jun 16, 2022	N/A	Radiation (03CH13-HY)
Software	Audix	E3 6.2009-8-24	RK-000992	N/A	N/A	Jun 15, 2022 ~ Jun 16, 2022	N/A	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0030/126E	30MHz~18GHz	Feb. 09, 2022	Jun 15, 2022 ~ Jun 16, 2022	Feb. 08, 2023	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	804793/4	30MHz~18GHz	Feb. 09, 2022	Jun 15, 2022 ~ Jun 16, 2022	Feb. 08, 2023	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24961/4	30MHz~18GHz	Feb. 09, 2022	Jun 15, 2022 ~ Jun 16, 2022	Feb. 08, 2023	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804011/2, 804012/2	18GHz~40GHz	Jan. 04, 2022	Jun 15, 2022 ~ Jun 16, 2022	Jan. 03, 2023	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 10, 2022	Jun 15, 2022 ~ Jun 16, 2022	Mar. 09, 2023	Radiation (03CH13-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN12	1.53GHz Low Pass Filter	Sep. 14, 2021	Jun 15, 2022 ~ Jun 16, 2022	Sep. 13, 2022	Radiation (03CH13-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40ST	SN5	6.75GHz High Pass Filter	Mar. 10, 2022	Jun 15, 2022 ~ Jun 16, 2022	Mar. 09, 2023	Radiation (03CH13-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60SS	SN2	3GHz High Pass Filter	Jul. 12, 2021	Jun 15, 2022 ~ Jun 16, 2022	Jul. 11, 2022	Radiation (03CH13-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 16, 2021	Jun. 08, 2022~ Jun. 20, 2022	Nov. 15, 2022	Conducted (TH05-HY)
Power Meter	DARE	RPR3006W	16I00054SNO 12 (NO:113)	10MHz~6GHz	Dec. 16, 2021	Jun. 08, 2022~ Jun. 20, 2022	Dec. 15, 2022	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Aug. 30, 2021	Jun. 08, 2022~ Jun. 20, 2022	Aug. 29, 2022	Conducted (TH05-HY)
Switch Control Mainframe	E-IUSTRUMENT	ETF-1405-0	EC1900067 (BOX7)	N/A	Aug. 12, 2021	Jun. 08, 2022~ Jun. 20, 2022	Aug. 11, 2022	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jun. 17, 2022	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Dec. 01, 2021	Jun. 17, 2022	Nov. 30, 2022	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 17, 2021	Jun. 17, 2022	Nov. 16, 2022	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 03, 2021	Jun. 17, 2022	Dec. 02, 2022	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 16, 2021	Jun. 17, 2022	Nov. 15, 2022	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	Jun. 17, 2022	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	00691	N/A	Jul. 28, 2021	Jun. 17, 2022	Jul. 27, 2022	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 30, 2021	Jun. 17, 2022	Dec. 29, 2022	Conduction (CO05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV3044	101048	10Hz~44GHz	Feb. 17,2022	Jul. 15, 2022	Feb. 16,2023	DFS (DF02-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))	**6.0 dB**

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.9 dB**

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Junyu Jhou	Temperature:	21~25	°C
Test Date:	2022/6/8~2022/6/20	Relative Humidity:	51~54	%

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

U-NII-3 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant 0	Ant 1	Ant 0	Ant 1	Ant 0	Ant 1		
11a	6Mbps	2	149	5745	17.63	17.08	27.90	25.65	15.40	16.45	0.5	Pass
11a	6Mbps	2	157	5785	17.53	17.13	26.80	24.95	15.15	16.40	0.5	Pass
11a	6Mbps	2	165	5825	17.58	17.03	27.15	24.35	16.05	16.40	0.5	Pass

TEST RESULTS DATA
Average Power Table

U-NII-3 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 0	Ant 1	SUM	Ant 0	Ant 1	Ant 0	Ant 1	
11a	6Mbps	2	149	5745	16.20	16.80	19.52	30.00		5.72		Pass
11a	6Mbps	2	157	5785	15.50	17.30	19.50	30.00		5.72		Pass
11a	6Mbps	2	165	5825	15.50	16.60	19.10	30.00		5.72		Pass
HT20	MCS0	2	149	5745	16.00	16.90	19.48	30.00		5.72		Pass
HT20	MCS0	2	157	5785	15.60	17.20	19.48	30.00		5.72		Pass
HT20	MCS0	2	165	5825	15.50	16.50	19.04	30.00		5.72		Pass
HT40	MCS0	2	151	5755	16.10	17.00	19.58	30.00		5.72		Pass
HT40	MCS0	2	159	5795	15.40	17.00	19.28	30.00		5.72		Pass
VHT20	MCS0	2	149	5745	16.00	16.90	19.48	30.00		5.72		Pass
VHT20	MCS0	2	157	5785	15.60	17.20	19.48	30.00		5.72		Pass
VHT20	MCS0	2	165	5825	15.50	16.50	19.04	30.00		5.72		Pass
VHT40	MCS0	2	151	5755	16.10	17.00	19.58	30.00		5.72		Pass
VHT40	MCS0	2	159	5795	15.40	17.00	19.28	30.00		5.72		Pass
VHT80	MCS0	2	155	5775	15.60	16.90	19.31	30.00		5.72		Pass

TEST RESULTS DATA
Power Spectral Density

U-NII-3 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 0	Ant 1	Ant 0	Ant 1	SUM	Ant 0	Ant 1	Ant 0	Ant 1	
11a	6Mbps	2	149	5745	2.22		4.53	5.62	8.63	27.32		8.68		Pass
11a	6Mbps	2	157	5785	2.22		4.03	5.87	8.88	27.32		8.68		Pass
11a	6Mbps	2	165	5825	2.22		4.26	5.71	8.72	27.32		8.68		Pass

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

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

U-NII-3 MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
						Ant 0	Ant 1	Ant 0	Ant 1	Ant 0	Ant 1		
HE20	MCS0	2	149	5745	Full	19.08	19.13	26.79	24.20	17.95	19.05	0.5	Pass
HE20	MCS0	2	157	5785	Full	19.03	19.03	24.60	24.65	18.45	19.00	0.5	Pass
HE20	MCS0	2	165	5825	Full	19.08	18.98	27.84	25.55	18.00	18.80	0.5	Pass
HE40	MCS0	2	151	5755	Full	37.56	37.26	39.51	39.51	35.64	35.19	0.5	Pass
HE40	MCS0	2	159	5795	Full	37.66	37.66	39.60	39.60	32.94	35.19	0.5	Pass
HE80	MCS0	2	155	5775	Full	75.52	76.84	80.32	80.64	50.40	75.52	0.5	Pass

TEST RESULTS DATA
Average Power Table

U-NII-3 MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
						Ant 0	Ant 1	SUM	Ant 0	Ant 1	Ant 0	Ant 1	
HE20	MCS0	2	149	5745	Full	16.10	17.00	19.58	30.00		5.72		Pass
HE20	MCS0	2	149	5745	26/0	9.30	9.70	12.51	30.00		5.72		Pass
HE20	MCS0	2	149	5745	52/37	12.20	12.60	15.41	30.00		5.72		Pass
HE20	MCS0	2	149	5745	106/53	14.70	15.50	18.13	30.00		5.72		Pass
HE20	MCS0	2	157	5785	Full	15.70	17.30	19.58	30.00		5.72		Pass
HE20	MCS0	2	157	5785	26/4	8.50	9.30	11.93	30.00		5.72		Pass
HE20	MCS0	2	157	5785	52/38	11.70	12.40	15.07	30.00		5.72		Pass
HE20	MCS0	2	157	5785	106/53	14.70	15.20	17.97	30.00		5.72		Pass
HE20	MCS0	2	165	5825	Full	15.60	16.60	19.14	30.00		5.72		Pass
HE20	MCS0	2	165	5825	26/8	7.80	8.70	11.28	30.00		5.72		Pass
HE20	MCS0	2	165	5825	52/40	10.60	11.50	14.08	30.00		5.72		Pass
HE20	MCS0	2	165	5825	106/54	13.70	14.90	17.35	30.00		5.72		Pass
HE40	MCS0	2	151	5755	Full	16.20	17.10	19.68	30.00		5.72		Pass
HE40	MCS0	2	151	5755	242/61	12.40	14.00	16.28	30.00		5.72		Pass
HE40	MCS0	2	159	5795	Full	15.50	17.10	19.38	30.00		5.72		Pass
HE40	MCS0	2	159	5795	242/62	13.20	15.20	17.32	30.00		5.72		Pass
HE80	MCS0	2	155	5775	Full	15.70	17.00	19.41	30.00		5.72		Pass
HE80	MCS0	2	155	5775	484/65	13.10	14.40	16.81	30.00		5.72		Pass
HE80	MCS0	2	155	5775	484/66	11.60	13.20	15.48	30.00		5.72		Pass

TEST RESULTS DATA
Power Spectral Density

U-NII-3 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 0	Ant 1	Ant 0	Ant 1	SUM	Ant 0	Ant 1	Ant 0	Ant 1	
HE20	MCS0	2	149	5745	Full	2.22		4.72	5.92	8.93	27.32		8.68		Pass
HE20	MCS0	2	149	5745	26/0	2.22		5.48	5.77	8.78	27.32		8.68		Pass
HE20	MCS0	2	149	5745	52/37	2.22		5.09	5.88	8.89	27.32		8.68		Pass
HE20	MCS0	2	149	5745	106/53	2.22		4.62	5.67	8.68	27.32		8.68		Pass
HE20	MCS0	2	157	5785	Full	2.22		4.03	5.82	8.83	27.32		8.68		Pass
HE20	MCS0	2	157	5785	26/4	2.22		3.99	5.64	8.65	27.32		8.68		Pass
HE20	MCS0	2	157	5785	52/38	2.22		4.63	5.48	8.49	27.32		8.68		Pass
HE20	MCS0	2	157	5785	106/53	2.22		4.89	5.43	8.44	27.32		8.68		Pass
HE20	MCS0	2	165	5825	Full	2.22		3.67	5.18	8.19	27.32		8.68		Pass
HE20	MCS0	2	165	5825	26/8	2.22		4.02	4.99	8.00	27.32		8.68		Pass
HE20	MCS0	2	165	5825	52/40	2.22		3.70	4.79	7.80	27.32		8.68		Pass
HE20	MCS0	2	165	5825	106/54	2.22		3.51	5.04	8.05	27.32		8.68		Pass
HE40	MCS0	2	151	5755	Full	2.22		2.33	3.42	6.43	27.32		8.68		Pass
HE40	MCS0	2	151	5755	242/61	2.22		0.75	3.00	6.01	27.32		8.68		Pass
HE40	MCS0	2	159	5795	Full	2.22		1.08	3.57	6.58	27.32		8.68		Pass
HE40	MCS0	2	159	5795	242/62	2.22		1.38	3.40	6.41	27.32		8.68		Pass
HE80	MCS0	2	155	5775	Full	2.22		-0.87	0.43	3.44	27.32		8.68		Pass
HE80	MCS0	2	155	5775	484/65	2.22		-2.06	0.12	3.13	27.32		8.68		Pass
HE80	MCS0	2	155	5775	484/66	2.22		-2.87	0.15	3.16	27.32		8.68		Pass

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

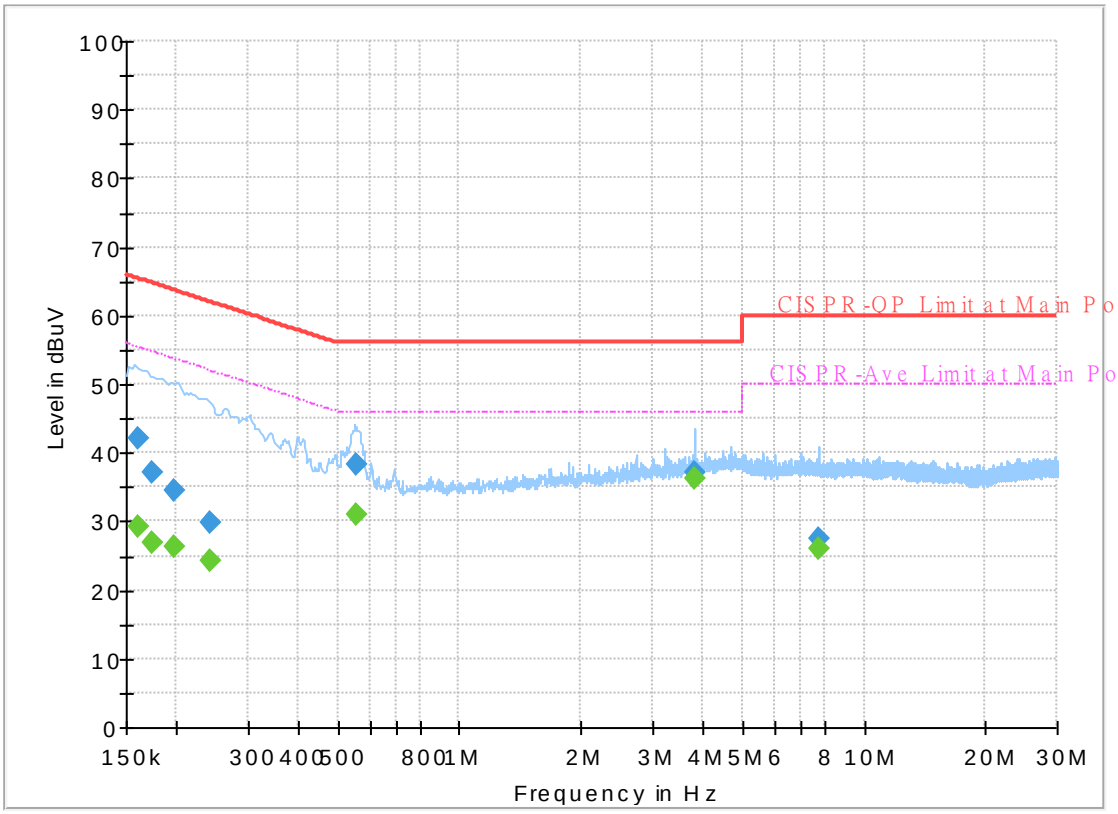
Appendix B. AC Conducted Emission Test Results

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

EUT Information

Report NO :	211819-01
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

Full Spectrum



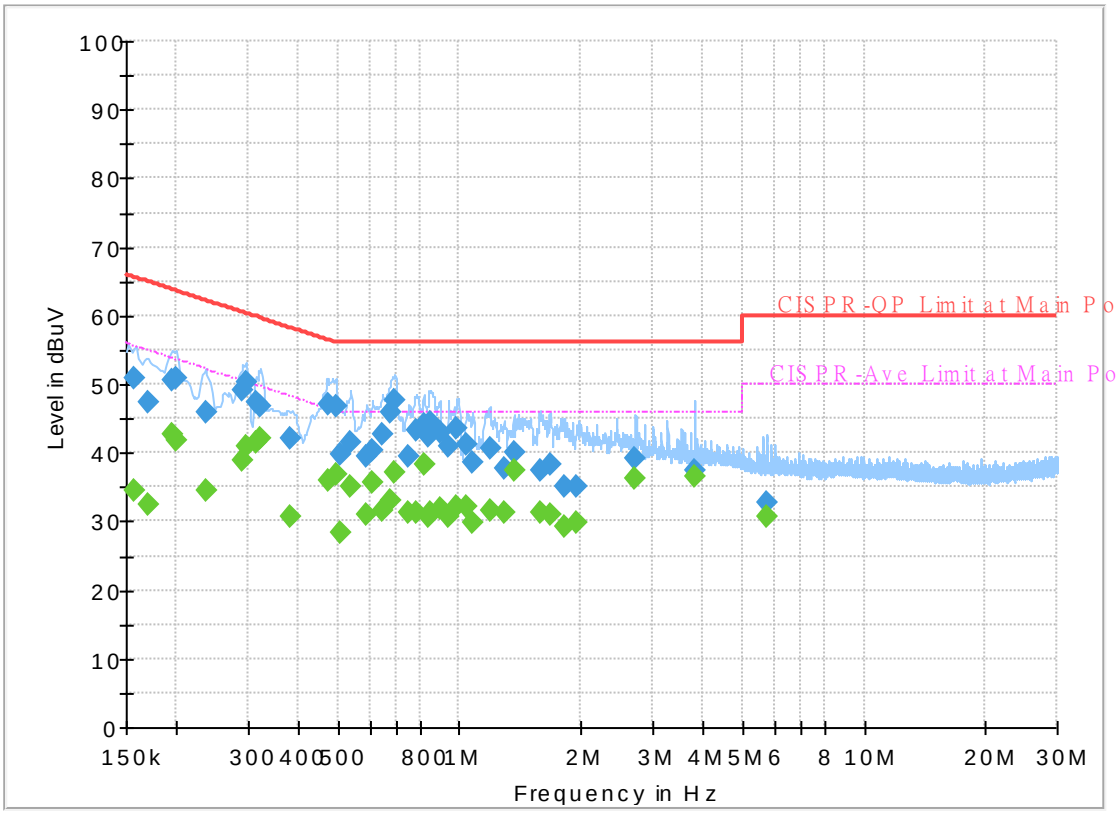
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.161250	---	29.28	55.40	26.12	L1	OFF	19.6
0.161250	42.17	---	65.40	23.23	L1	OFF	19.6
0.174750	---	26.96	54.73	27.77	L1	OFF	19.6
0.174750	37.23	---	64.73	27.50	L1	OFF	19.6
0.197250	---	26.35	53.73	27.38	L1	OFF	19.6
0.197250	34.48	---	63.73	29.25	L1	OFF	19.6
0.242250	---	24.35	52.02	27.67	L1	OFF	19.6
0.242250	29.71	---	62.02	32.31	L1	OFF	19.6
0.555000	---	30.95	46.00	15.05	L1	OFF	19.6
0.555000	38.33	---	56.00	17.67	L1	OFF	19.6
3.813000	---	36.17	46.00	9.83	L1	OFF	19.8
3.813000	37.22	---	56.00	18.78	L1	OFF	19.8
7.721250	---	25.89	50.00	24.11	L1	OFF	20.0
7.721250	27.63	---	60.00	32.37	L1	OFF	20.0

EUT Information

Report NO :	211819-01
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.156750	---	34.39	55.63	21.24	N	OFF	19.6
0.156750	50.79	---	65.63	14.84	N	OFF	19.6
0.170250	---	32.49	54.95	22.46	N	OFF	19.6
0.170250	47.33	---	64.95	17.62	N	OFF	19.6
0.195000	---	42.62	53.82	11.20	N	OFF	19.6
0.195000	50.57	---	63.82	13.25	N	OFF	19.6
0.199500	---	41.94	53.63	11.69	N	OFF	19.6
0.199500	50.78	---	63.63	12.85	N	OFF	19.6
0.237750	---	34.37	52.17	17.80	N	OFF	19.6
0.237750	46.04	---	62.17	16.13	N	OFF	19.6
0.291750	---	38.85	50.47	11.62	N	OFF	19.6
0.291750	49.20	---	60.47	11.27	N	OFF	19.6
0.296250	---	40.89	50.35	9.46	N	OFF	19.6
0.296250	50.36	---	60.35	9.99	N	OFF	19.6
0.314250	---	41.47	49.86	8.39	N	OFF	19.6
0.314250	47.22	---	59.86	12.64	N	OFF	19.6
0.323250	---	42.13	49.62	7.49	N	OFF	19.6
0.323250	46.83	---	59.62	12.79	N	OFF	19.6
0.381750	---	30.58	48.24	17.66	N	OFF	19.6
0.381750	42.05	---	58.24	16.19	N	OFF	19.6
0.471750	---	35.92	46.48	10.56	N	OFF	19.6

0.471750	46.99	---	56.48	9.49	N	OFF	19.6
0.494250	---	36.89	46.10	9.21	N	OFF	19.6
0.494250	46.75	---	56.10	9.35	N	OFF	19.6
0.507750	---	28.49	46.00	17.51	N	OFF	19.6
0.507750	39.87	---	56.00	16.13	N	OFF	19.6
0.537000	---	35.09	46.00	10.91	N	OFF	19.6
0.537000	41.51	---	56.00	14.49	N	OFF	19.6
0.586500	---	31.04	46.00	14.96	N	OFF	19.6
0.586500	39.56	---	56.00	16.44	N	OFF	19.6
0.609000	---	35.73	46.00	10.27	N	OFF	19.6
0.609000	40.24	---	56.00	15.76	N	OFF	19.6
0.645000	---	31.59	46.00	14.41	N	OFF	19.6
0.645000	42.82	---	56.00	13.18	N	OFF	19.6
0.678750	---	33.01	46.00	12.99	N	OFF	19.6
0.678750	45.93	---	56.00	10.07	N	OFF	19.6
0.692250	---	37.19	46.00	8.81	N	OFF	19.6
0.692250	47.63	---	56.00	8.37	N	OFF	19.6
0.750750	---	31.30	46.00	14.70	N	OFF	19.6
0.750750	39.60	---	56.00	16.40	N	OFF	19.6
0.782250	---	31.30	46.00	14.70	N	OFF	19.6
0.782250	43.17	---	56.00	12.83	N	OFF	19.6
0.816000	---	38.33	46.00	7.67	N	OFF	19.6
0.816000	44.13	---	56.00	11.87	N	OFF	19.6
0.840750	---	30.61	46.00	15.39	N	OFF	19.6
0.840750	42.32	---	56.00	13.68	N	OFF	19.6
0.852000	---	31.33	46.00	14.67	N	OFF	19.6
0.852000	44.41	---	56.00	11.59	N	OFF	19.6
0.894750	---	31.80	46.00	14.20	N	OFF	19.6
0.894750	43.13	---	56.00	12.87	N	OFF	19.6
0.939750	---	30.60	46.00	15.40	N	OFF	19.6
0.939750	41.02	---	56.00	14.98	N	OFF	19.6
0.987000	---	32.23	46.00	13.77	N	OFF	19.6
0.987000	43.57	---	56.00	12.43	N	OFF	19.6
1.043250	---	32.19	46.00	13.81	N	OFF	19.6
1.043250	41.12	---	56.00	14.88	N	OFF	19.6
1.081500	---	29.89	46.00	16.11	N	OFF	19.6
1.081500	38.62	---	56.00	17.38	N	OFF	19.6
1.187250	---	31.51	46.00	14.49	N	OFF	19.6
1.187250	40.64	---	56.00	15.36	N	OFF	19.6
1.288500	---	31.26	46.00	14.74	N	OFF	19.7
1.288500	37.58	---	56.00	18.42	N	OFF	19.7
1.362750	---	37.55	46.00	8.45	N	OFF	19.7
1.362750	40.06	---	56.00	15.94	N	OFF	19.7
1.578750	---	31.38	46.00	14.62	N	OFF	19.7
1.578750	37.30	---	56.00	18.70	N	OFF	19.7
1.677750	---	31.07	46.00	14.93	N	OFF	19.7
1.677750	38.42	---	56.00	17.58	N	OFF	19.7
1.821750	---	29.13	46.00	16.87	N	OFF	19.7
1.821750	35.21	---	56.00	20.79	N	OFF	19.7
1.954500	---	29.77	46.00	16.23	N	OFF	19.7
1.954500	35.17	---	56.00	20.83	N	OFF	19.7
2.724000	---	36.28	46.00	9.72	N	OFF	19.7
2.724000	39.24	---	56.00	16.76	N	OFF	19.7
3.813450	---	36.57	46.00	9.43	N	OFF	19.8
3.813450	37.53	---	56.00	18.47	N	OFF	19.8
5.741250	---	30.83	50.00	19.17	N	OFF	19.9
5.741250	32.65	---	60.00	27.35	N	OFF	19.9

Appendix C. Radiated Spurious Emission

Test Engineer :	Rain Lee and Jacky Hong	Temperature :	20~25°C
		Relative Humidity :	50~60%

Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
0+1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5629.2	54.97	-13.23	68.2	43.18	31.94	6.46	26.61	200	267	P	H
		5688.4	60.45	-36.19	96.64	48.44	32.13	6.52	26.64	200	267	P	H
		5718.8	66.91	-43.55	110.46	54.74	32.28	6.54	26.65	200	267	P	H
		5725	74.3	-47.9	122.2	62.1	32.3	6.55	26.65	200	267	P	H
	*	5745	115.53	-	-	103.25	32.38	6.56	26.66	200	267	P	H
	*	5745	107.4	-	-	95.12	32.38	6.56	26.66	200	267	A	H
		5636.8	53.6	-14.6	68.2	41.81	31.93	6.47	26.61	363	62	P	V
		5696.8	59.36	-43.48	102.84	47.3	32.18	6.52	26.64	363	62	P	V
		5712	61.61	-46.95	108.56	49.46	32.25	6.54	26.64	363	62	P	V
		5724.4	69.07	-51.76	120.83	56.87	32.3	6.55	26.65	363	62	P	V
	*	5745	112.25	-	-	99.97	32.38	6.56	26.66	363	62	P	V
	*	5745	104.21	-	-	91.93	32.38	6.56	26.66	363	62	A	V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 157 5785MHz		5620.4	53.83	-14.37	68.2	42.02	31.96	6.46	26.61	225	268	P	H
		5687.8	55.69	-40.51	96.2	43.69	32.13	6.51	26.64	225	268	P	H
		5719	59.09	-51.43	110.52	46.92	32.28	6.54	26.65	225	268	P	H
		5721.6	58.39	-56.06	114.45	46.21	32.29	6.54	26.65	225	268	P	H
	*	5785	116.73	-	-	104.4	32.4	6.6	26.67	225	268	P	H
	*	5785	107.92	-	-	95.59	32.4	6.6	26.67	225	268	A	H
		5853	56.38	-58.98	115.36	43.93	32.51	6.64	26.7	225	268	P	H
		5860.8	57.53	-51.64	109.17	45.04	32.54	6.65	26.7	225	268	P	H
		5881.8	55.64	-44.51	100.15	43.06	32.63	6.66	26.71	225	268	P	H
		5942.8	54.14	-14.06	68.2	41.39	32.79	6.7	26.74	225	268	P	H
		5619	53.17	-15.03	68.2	41.36	31.96	6.46	26.61	352	74	P	V
		5695.8	54.67	-47.43	102.1	42.62	32.17	6.52	26.64	352	74	P	V
		5714.4	54.67	-54.56	109.23	42.52	32.26	6.54	26.65	352	74	P	V
		5722	54.42	-60.94	115.36	42.24	32.29	6.54	26.65	352	74	P	V
	*	5785	112.18	-	-	99.85	32.4	6.6	26.67	352	74	P	V
	*	5785	103.84	-	-	91.51	32.4	6.6	26.67	352	74	A	V
		5852.6	54.19	-62.08	116.27	41.74	32.51	6.64	26.7	352	74	P	V
		5859.4	54.54	-55.03	109.57	42.05	32.54	6.65	26.7	352	74	P	V
		5916.8	54.32	-19.93	74.25	41.63	32.73	6.69	26.73	352	74	P	V
		5926	54.17	-14.03	68.2	41.46	32.75	6.69	26.73	352	74	P	V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 165 5825MHz	*	5825	116.39	-	-	104	32.45	6.63	26.69	230	269	P	H
	*	5825	108.3	-	-	95.91	32.45	6.63	26.69	230	269	A	H
		5854	66.54	-46.54	113.08	54.07	32.52	6.65	26.7	230	269	P	H
		5855	65.59	-45.21	110.8	53.12	32.52	6.65	26.7	230	269	P	H
		5881.6	60.3	-40	100.3	47.72	32.63	6.66	26.71	230	269	P	H
		5928.8	56.8	-11.4	68.2	44.08	32.76	6.69	26.73	230	269	P	H
	*	5825	112.24	-	-	99.85	32.45	6.63	26.69	350	55	P	V
	*	5825	103.97	-	-	91.58	32.45	6.63	26.69	350	55	A	V
		5853	62.54	-52.82	115.36	50.09	32.51	6.64	26.7	350	55	P	V
		5855	60.51	-50.29	110.8	48.04	32.52	6.65	26.7	350	55	P	V
		5877.6	56.19	-47.08	103.27	43.63	32.61	6.66	26.71	350	55	P	V
		5945.2	54.37	-13.83	68.2	41.62	32.79	6.7	26.74	350	55	P	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. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 149 5745MHz		10773	47.96	-26.04	74	53.7	40.65	10.02	56.41	-	-	P	H
		10773	38.68	-15.32	54	44.42	40.65	10.02	56.41	-	-	A	H
		11490	54.24	-19.76	74	59.77	40.17	10.38	56.08	196	297	P	H
		11490	44.78	-9.22	54	50.31	40.17	10.38	56.08	196	297	A	H
		14480	48.92	-25.08	74	52.19	41.82	11.74	56.83	-	-	P	H
		14480	41.04	-12.96	54	44.31	41.82	11.74	56.83	-	-	A	H
		17235	49.34	-18.86	68.2	52.48	40.57	12.86	56.57	-	-	P	H
		18000	55.21	-18.79	74	50.05	48.5	13.69	57.03	-	-	P	H
		18000	47.85	-6.15	54	42.69	48.5	13.69	57.03	-	-	A	H
		10927	48.25	-25.75	74	53.69	40.85	10.12	56.41	-	-	P	V
		10927	38.92	-15.08	54	44.36	40.85	10.12	56.41	-	-	A	V
		11490	58.52	-15.48	74	64.05	40.17	10.38	56.08	100	87	P	V
		11490	48.85	-5.15	54	54.38	40.17	10.38	56.08	100	87	A	V
		14480	48.39	-25.61	74	51.66	41.82	11.74	56.83	-	-	P	V
		14480	40.79	-13.21	54	44.06	41.82	11.74	56.83	-	-	A	V
		17235	48.37	-19.83	68.2	51.51	40.57	12.86	56.57	-	-	P	V
		17967	55.25	-18.75	74	51.02	47.61	13.65	57.03	-	-	P	V
		17967	46.97	-7.03	54	42.74	47.61	13.65	57.03	-	-	A	V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 157 5785MHz		10927	48.88	-25.12	74	54.32	40.85	10.12	56.41	-	-	P	H
		10927	38.19	-15.81	54	43.63	40.85	10.12	56.41	-	-	A	H
		11570	55.63	-18.37	74	61.23	40.06	10.41	56.07	197	257	P	H
		11570	46.11	-7.89	54	51.71	40.06	10.41	56.07	197	257	A	H
		14491	48.43	-25.57	74	51.64	41.86	11.74	56.81	-	-	P	H
		14491	39.25	-14.75	54	42.46	41.86	11.74	56.81	-	-	A	H
		17355	48.04	-20.16	68.2	50.81	41.03	12.99	56.79	-	-	P	H
		18000	55.41	-18.59	74	50.25	48.5	13.69	57.03	-	-	P	H
		18000	46.56	-7.44	54	41.4	48.5	13.69	57.03	-	-	A	H
		10663	47.95	-26.05	74	54	40.39	9.96	56.4	-	-	P	V
		10663	37.18	-16.82	54	43.23	40.39	9.96	56.4	-	-	A	V
		11570	57.15	-16.85	74	62.75	40.06	10.41	56.07	182	109	P	V
		11570	47.17	-6.83	54	52.77	40.06	10.41	56.07	182	109	A	V
		14480	49	-25	74	52.27	41.82	11.74	56.83	-	-	P	V
		14480	39.24	-14.76	54	42.51	41.82	11.74	56.83	-	-	A	V
		17355	48.38	-19.82	68.2	51.15	41.03	12.99	56.79	-	-	P	V
		17978	55.44	-18.56	74	50.89	47.91	13.67	57.03	-	-	P	V
		17978	46.1	-7.9	54	41.55	47.91	13.67	57.03	-	-	A	V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 165 5825MHz		10872	47.68	-26.32	74	53.17	40.84	10.08	56.41	-	-	P	H
		10872	38.14	-15.86	54	43.63	40.84	10.08	56.41	-	-	A	H
		11650	57.26	-16.74	74	63.13	39.75	10.45	56.07	259	265	P	H
		11650	47.23	-6.77	54	53.1	39.75	10.45	56.07	259	265	A	H
		14491	48.54	-25.46	74	51.75	41.86	11.74	56.81	-	-	P	H
		14491	38.42	-15.58	54	41.63	41.86	11.74	56.81	-	-	A	H
		17475	48.65	-19.55	68.2	51.02	41.52	13.12	57.01	-	-	P	H
		17989	55.75	-18.25	74	50.9	48.2	13.68	57.03	-	-	P	H
		17989	46.11	-7.89	54	41.26	48.2	13.68	57.03	-	-	A	H
		11037	47.56	-26.44	74	53.26	40.51	10.17	56.38	-	-	P	V
		11037	37.82	-16.18	54	43.52	40.51	10.17	56.38	-	-	A	V
		11650	59.71	-14.29	74	65.58	39.75	10.45	56.07	190	145	P	V
		11650	48.81	-5.19	54	54.68	39.75	10.45	56.07	190	145	A	V
		14480	48.45	-25.55	74	51.72	41.82	11.74	56.83	-	-	P	V
		14480	37.98	-16.02	54	41.25	41.82	11.74	56.83	-	-	A	V
		17475	49.2	-19	68.2	51.57	41.52	13.12	57.01	-	-	P	V
		17978	55.5	-18.5	74	50.95	47.91	13.67	57.03	-	-	P	V
		17978	45.77	-8.23	54	41.22	47.91	13.67	57.03	-	-	A	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. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5630.2	56.07	-12.13	68.2	44.27	31.94	6.47	26.61	250	266	P	H
		5696.4	60.67	-41.88	102.55	48.61	32.18	6.52	26.64	250	266	P	H
		5720	67.14	-43.66	110.8	54.97	32.28	6.54	26.65	250	266	P	H
		5725	71.67	-50.53	122.2	59.47	32.3	6.55	26.65	250	266	P	H
802.11ax	*	5745	117.04	-	-	104.76	32.38	6.56	26.66	250	266	P	H
HE20 Full	*	5745	106.93	-	-	94.65	32.38	6.56	26.66	250	266	A	H
CH 149		5631.6	53.64	-14.56	68.2	41.84	31.94	6.47	26.61	400	61	P	V
5745MHz		5700	57.05	-48.15	105.2	44.96	32.2	6.53	26.64	400	61	P	V
		5719.8	62.56	-48.18	110.74	50.39	32.28	6.54	26.65	400	61	P	V
		5723.2	65.74	-52.36	118.1	53.56	32.29	6.54	26.65	400	61	P	V
	*	5745	112.93	-	-	100.65	32.38	6.56	26.66	400	61	P	V
	*	5745	102.77	-	-	90.49	32.38	6.56	26.66	400	61	A	V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5636	55.11	-13.09	68.2	43.32	31.93	6.47	26.61	250	268	P	H
		5697.8	57.51	-46.07	103.58	45.44	32.19	6.52	26.64	250	268	P	H
		5713	58.66	-50.18	108.84	46.52	32.25	6.54	26.65	250	268	P	H
		5720	58.52	-52.28	110.8	46.35	32.28	6.54	26.65	250	268	P	H
	*	5785	116.9	-	-	104.57	32.4	6.6	26.67	250	268	P	H
	*	5785	107.66	-	-	95.33	32.4	6.6	26.67	250	268	A	H
		5854.8	57.38	-53.88	111.26	44.91	32.52	6.65	26.7	250	268	P	H
		5856.8	57.32	-52.98	110.3	44.84	32.53	6.65	26.7	250	268	P	H
802.11ax		5887	56.24	-40.05	96.29	43.63	32.65	6.67	26.71	250	268	P	H
HE20 Full		5937.6	54.31	-13.89	68.2	41.57	32.78	6.7	26.74	250	268	P	H
CH 157		5636.2	53.08	-15.12	68.2	41.29	31.93	6.47	26.61	374	60	P	V
5785MHz		5699.2	54.13	-50.48	104.61	42.05	32.2	6.52	26.64	374	60	P	V
		5715.2	54.86	-54.6	109.46	42.71	32.26	6.54	26.65	374	60	P	V
		5720.8	54.88	-57.74	112.62	42.71	32.28	6.54	26.65	374	60	P	V
	*	5785	112.34	-	-	100.01	32.4	6.6	26.67	374	60	P	V
	*	5785	103.58	-	-	91.25	32.4	6.6	26.67	374	60	A	V
		5851.8	54.49	-63.61	118.1	42.04	32.51	6.64	26.7	374	60	P	V
		5871.2	54.76	-51.5	106.26	42.23	32.58	6.66	26.71	374	60	P	V
		5887.8	54.7	-41	95.7	42.1	32.65	6.67	26.72	374	60	P	V
		5935.8	54.12	-14.08	68.2	41.38	32.77	6.7	26.73	374	60	P	V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
	*	5825	116.57	-	-	104.18	32.45	6.63	26.69	241	267	P	H
	*	5825	107.21	-	-	94.82	32.45	6.63	26.69	241	267	A	H
		5853.2	67.48	-47.42	114.9	55.03	32.51	6.64	26.7	241	267	P	H
		5856	65.06	-45.46	110.52	52.59	32.52	6.65	26.7	241	267	P	H
802.11ax		5881	61.31	-39.43	100.74	48.74	32.62	6.66	26.71	241	267	P	H
HE20 Full		5926.6	54.59	-13.61	68.2	41.88	32.75	6.69	26.73	241	267	P	H
CH 165	*	5825	112.47	-	-	100.08	32.45	6.63	26.69	371	57	P	V
5825MHz	*	5825	102.97	-	-	90.58	32.45	6.63	26.69	371	57	A	V
		5850.2	62.39	-59.35	121.74	49.95	32.5	6.64	26.7	371	57	P	V
		5855.8	60.25	-50.33	110.58	47.78	32.52	6.65	26.7	371	57	P	V
		5877.8	56.51	-46.61	103.12	43.95	32.61	6.66	26.71	371	57	P	V
		5937.2	53.82	-14.38	68.2	41.08	32.77	6.7	26.73	371	57	P	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. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 149 5745MHz		10960	48.18	-25.82	74	53.67	40.78	10.14	56.41	-	-	P	H
		10960	37.84	-16.16	54	43.33	40.78	10.14	56.41	-	-	A	H
		11490	52.59	-21.41	74	58.12	40.17	10.38	56.08	197	300	P	H
		11490	43.53	-10.47	54	49.06	40.17	10.38	56.08	197	300	A	H
		14491	48.55	-25.45	74	51.76	41.86	11.74	56.81	-	-	P	H
		14491	39.14	-14.86	54	42.35	41.86	11.74	56.81	-	-	A	H
		17235	47.13	-21.07	68.2	50.27	40.57	12.86	56.57	-	-	P	H
		18000	55.91	-18.09	74	50.75	48.5	13.69	57.03	-	-	P	H
		18000	46.44	-7.56	54	41.28	48.5	13.69	57.03	-	-	A	H
		11213	47.87	-26.13	74	54.1	39.79	10.25	56.27	-	-	P	V
		11213	36.22	-17.78	54	42.45	39.79	10.25	56.27	-	-	A	V
		11490	58.09	-15.91	74	63.62	40.17	10.38	56.08	193	10	P	V
		11490	47.74	-6.26	54	53.27	40.17	10.38	56.08	193	10	A	V
		14491	48.59	-25.41	74	51.8	41.86	11.74	56.81	-	-	P	V
		14491	39.17	-14.83	54	42.38	41.86	11.74	56.81	-	-	A	V
		17235	48.44	-19.76	68.2	51.58	40.57	12.86	56.57	-	-	P	V
		17989	55.73	-18.27	74	50.88	48.2	13.68	57.03	-	-	P	V
		17989	46.2	-7.8	54	41.35	48.2	13.68	57.03	-	-	A	V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 157 5785MHz		10839	48.27	-25.73	74	53.84	40.78	10.06	56.41	-	-	P	H
		10839	37.63	-16.37	54	43.2	40.78	10.06	56.41	-	-	A	H
		11570	47.86	-26.14	74	53.46	40.06	10.41	56.07	-	-	P	H
		14480	48.38	-25.62	74	51.65	41.82	11.74	56.83	-	-	P	H
		14480	39.27	-14.73	54	42.54	41.82	11.74	56.83	-	-	A	H
		17355	48.21	-19.99	68.2	50.98	41.03	12.99	56.79	-	-	P	H
		17967	55.6	-18.4	74	51.37	47.61	13.65	57.03	-	-	P	H
		17967	45.9	-8.1	54	41.67	47.61	13.65	57.03	-	-	A	H
		10894	47.91	-26.09	74	53.33	40.89	10.1	56.41	-	-	P	V
		10894	37.98	-16.02	54	43.4	40.89	10.1	56.41	-	-	A	V
		11570	56.28	-17.72	74	61.88	40.06	10.41	56.07	186	104	P	V
		11570	46.38	-7.62	54	51.98	40.06	10.41	56.07	186	104	A	V
		14491	48.91	-25.09	74	52.12	41.86	11.74	56.81	-	-	P	V
		14491	39.18	-14.82	54	42.39	41.86	11.74	56.81	-	-	A	V
		17355	48.77	-19.43	68.2	51.54	41.03	12.99	56.79	-	-	P	V
		17978	55.02	-18.98	74	50.47	47.91	13.67	57.03	-	-	P	V
		17978	46.1	-7.9	54	41.55	47.91	13.67	57.03	-	-	A	V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 165 5825MHz		11026	47.74	-26.26	74	53.4	40.57	10.16	56.39	-	-	P	H
		11026	37.74	-16.26	54	43.4	40.57	10.16	56.39	-	-	A	H
		11650	55.91	-18.09	74	61.78	39.75	10.45	56.07	192	114	P	H
		11650	45.74	-8.26	54	51.61	39.75	10.45	56.07	192	114	A	H
		14480	48.44	-25.56	74	51.71	41.82	11.74	56.83	-	-	P	H
		14480	39.42	-14.58	54	42.69	41.82	11.74	56.83	-	-	A	H
		17475	48.19	-20.01	68.2	50.56	41.52	13.12	57.01	-	-	P	H
		17989	55.66	-18.34	74	50.81	48.2	13.68	57.03	-	-	P	H
		17989	46.26	-7.74	54	41.41	48.2	13.68	57.03	-	-	A	H
		11004	47.69	-26.31	74	53.27	40.68	10.15	56.41	-	-	P	V
		11004	37.79	-16.21	54	43.37	40.68	10.15	56.41	-	-	A	V
		11650	56.86	-17.14	74	62.73	39.75	10.45	56.07	195	144	P	V
		11650	47.49	-6.51	54	53.36	39.75	10.45	56.07	195	144	A	V
		14480	48.46	-25.54	74	51.73	41.82	11.74	56.83	-	-	P	V
		14480	39.42	-14.58	54	42.69	41.82	11.74	56.83	-	-	A	V
		17475	49.42	-18.78	68.2	51.79	41.52	13.12	57.01	-	-	P	V
		17978	56.53	-17.47	74	51.98	47.91	13.67	57.03	-	-	P	V
		17978	46.21	-7.79	54	41.66	47.91	13.67	57.03	-	-	A	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_Partial 26 (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 26/0 CH 149 5745MHz		5641.2	54.17	-14.03	68.2	42.39	31.92	6.48	26.62	245	273	P	H
		5684.6	58.29	-35.55	93.84	46.3	32.11	6.51	26.63	245	273	P	H
		5719.4	62.5	-48.13	110.63	50.33	32.28	6.54	26.65	245	273	P	H
		5724.8	64.5	-57.24	121.74	52.3	32.3	6.55	26.65	245	273	P	H
	*	5745	117.57	-	-	105.29	32.38	6.56	26.66	245	273	P	H
	*	5745	108.82	-	-	96.54	32.38	6.56	26.66	245	273	A	H
		5604.2	52.97	-15.23	68.2	41.14	31.99	6.44	26.6	400	62	P	V
		5689.8	53.93	-43.75	97.68	41.91	32.14	6.52	26.64	400	62	P	V
		5719.6	57.1	-53.59	110.69	44.93	32.28	6.54	26.65	400	62	P	V
		5725	70.36	-51.84	122.2	58.16	32.3	6.55	26.65	400	62	P	V
	*	5745	112.07	-	-	99.79	32.38	6.56	26.66	400	62	P	V
	*	5745	104.93	-	-	92.65	32.38	6.56	26.66	400	62	A	V
802.11ax HE20 Partial 26/8 CH 165 5825MHz	*	5825	114	-	-	101.61	32.45	6.63	26.69	247	262	P	H
	*	5825	106.55	-	-	94.16	32.45	6.63	26.69	247	262	A	H
		5850	58.83	-63.37	122.2	46.39	32.5	6.64	26.7	247	262	P	H
		5864.8	55.06	-52.99	108.05	42.56	32.56	6.65	26.71	247	262	P	H
		5887.4	55.29	-40.7	95.99	42.68	32.65	6.67	26.71	247	262	P	H
		5926	54.1	-14.1	68.2	41.39	32.75	6.69	26.73	247	262	P	H
	*	5825	110.35	-	-	97.96	32.45	6.63	26.69	400	59	P	V
	*	5825	101.96	-	-	89.57	32.45	6.63	26.69	400	59	A	V
		5850.6	56.14	-64.69	120.83	43.7	32.5	6.64	26.7	400	59	P	V
		5868.6	53.21	-53.78	106.99	40.7	32.57	6.65	26.71	400	59	P	V
		5883.4	53.04	-45.92	98.96	40.46	32.63	6.66	26.71	400	59	P	V
		5935	52.94	-15.26	68.2	40.2	32.77	6.7	26.73	400	59	P	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_Partial 52 (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5624.8	54	-14.2	68.2	42.2	31.95	6.46	26.61	245	273	P	H
		5695.2	57.07	-44.59	101.66	45.02	32.17	6.52	26.64	245	273	P	H
		5718.8	61.9	-48.56	110.46	49.73	32.28	6.54	26.65	245	273	P	H
802.11ax		5725	75.56	-46.64	122.2	63.36	32.3	6.55	26.65	245	273	P	H
HE20	*	5745	118.28	-	-	106	32.38	6.56	26.66	245	273	P	H
Partial	*	5745	108.76	-	-	96.48	32.38	6.56	26.66	245	273	A	H
52/37		5607.4	52.95	-15.25	68.2	41.11	31.99	6.45	26.6	400	59	P	V
CH 149		5684.8	54.68	-39.31	93.99	42.69	32.11	6.51	26.63	400	59	P	V
5745MHz		5718.2	59.46	-50.84	110.3	47.3	32.27	6.54	26.65	400	59	P	V
		5724.6	66.81	-54.48	121.29	54.61	32.3	6.55	26.65	400	59	P	V
	*	5745	113.29	-	-	101.01	32.38	6.56	26.66	400	59	P	V
	*	5745	105.43	-	-	93.15	32.38	6.56	26.66	400	59	A	V
	*	5825	116.18	-	-	103.79	32.45	6.63	26.69	235	261	P	H
	*	5825	107.38	-	-	94.99	32.45	6.63	26.69	235	261	A	H
		5850.4	60.16	-61.13	121.29	47.72	32.5	6.64	26.7	235	261	P	H
802.11ax		5862.2	56.28	-52.5	108.78	43.78	32.55	6.65	26.7	235	261	P	H
HE20		5885.6	56.96	-40.37	97.33	44.36	32.64	6.67	26.71	235	261	P	H
Partial		5948.4	53.76	-14.44	68.2	40.99	32.8	6.71	26.74	235	261	P	H
52/40	*	5825	112.47	-	-	100.08	32.45	6.63	26.69	386	60	P	V
CH 165	*	5825	103.93	-	-	91.54	32.45	6.63	26.69	386	60	A	V
5825MHz		5851.6	57.51	-61.04	118.55	45.06	32.51	6.64	26.7	386	60	P	V
		5860.2	53.82	-55.52	109.34	41.33	32.54	6.65	26.7	386	60	P	V
		5881.4	53.93	-46.52	100.45	41.35	32.63	6.66	26.71	386	60	P	V
		5938.6	52.67	-15.53	68.2	39.93	32.78	6.7	26.74	386	60	P	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_Partial 106 (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5608	54.39	-13.81	68.2	42.56	31.98	6.45	26.6	243	268	P	H
		5699.8	58.58	-46.47	105.05	46.5	32.2	6.52	26.64	243	268	P	H
		5717.4	64	-46.07	110.07	51.84	32.27	6.54	26.65	243	268	P	H
802.11ax		5725	78.17	-44.03	122.2	65.97	32.3	6.55	26.65	243	268	P	H
HE20	*	5745	118.03	-	-	105.75	32.38	6.56	26.66	243	268	P	H
Partial	*	5745	108.11	-	-	95.83	32.38	6.56	26.66	243	268	A	H
106/53		5609.8	52.85	-15.35	68.2	41.02	31.98	6.45	26.6	400	62	P	V
CH 149		5697.8	54.38	-49.2	103.58	42.31	32.19	6.52	26.64	400	62	P	V
5745MHz		5714.4	62.27	-46.96	109.23	50.12	32.26	6.54	26.65	400	62	P	V
		5724.6	69.67	-51.62	121.29	57.47	32.3	6.55	26.65	400	62	P	V
	*	5745	113.95	-	-	101.67	32.38	6.56	26.66	400	62	P	V
	*	5745	105.12	-	-	92.84	32.38	6.56	26.66	400	62	A	V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
	*	5825	116.24	-	-	103.85	32.45	6.63	26.69	246	262	P	H
	*	5825	107.82	-	-	95.43	32.45	6.63	26.69	246	262	A	H
		5850.2	63.64	-58.1	121.74	51.2	32.5	6.64	26.7	246	262	P	H
802.11ax		5855.4	62.1	-48.59	110.69	49.63	32.52	6.65	26.7	246	262	P	H
HE20		5877.2	56.64	-46.93	103.57	44.08	32.61	6.66	26.71	246	262	P	H
Partial		5928.8	54.72	-13.48	68.2	42	32.76	6.69	26.73	246	262	P	H
106/54	*	5825	112.28	-	-	99.89	32.45	6.63	26.69	387	60	P	V
CH 165	*	5825	104.16	-	-	91.77	32.45	6.63	26.69	387	60	A	V
5825MHz		5850.8	58.62	-61.76	120.38	46.18	32.5	6.64	26.7	387	60	P	V
		5855.2	57.96	-52.78	110.74	45.49	32.52	6.65	26.7	387	60	P	V
		5925	54.39	-13.81	68.2	41.68	32.75	6.69	26.73	387	60	P	V
		5931.6	53.9	-14.3	68.2	41.17	32.76	6.7	26.73	387	60	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11ax HE40_Full (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5648.6	55.24	-12.96	68.2	43.48	31.9	6.48	26.62	225	267	P	H
		5697.4	62.79	-40.49	103.28	50.73	32.18	6.52	26.64	225	267	P	H
		5716.8	69.48	-40.43	109.91	57.32	32.27	6.54	26.65	225	267	P	H
		5724.8	71.32	-50.42	121.74	59.12	32.3	6.55	26.65	225	267	P	H
	*	5755	115.61	-	-	103.3	32.4	6.57	26.66	225	267	P	H
	*	5755	105.61	-	-	93.3	32.4	6.57	26.66	225	267	A	H
		5851.6	56.04	-62.51	118.55	43.59	32.51	6.64	26.7	225	267	P	H
		5863.2	57.47	-51.03	108.5	44.98	32.55	6.65	26.71	225	267	P	H
802.11ax		5889.2	56.57	-38.09	94.66	43.96	32.66	6.67	26.72	225	267	P	H
HE40 Full		5930.8	54.7	-13.5	68.2	41.97	32.76	6.7	26.73	225	267	P	H
CH 151		5647.2	53.51	-14.69	68.2	41.74	31.91	6.48	26.62	400	62	P	V
5755MHz		5696.2	58.93	-43.47	102.4	46.87	32.18	6.52	26.64	400	62	P	V
		5711.8	64.6	-43.91	108.51	52.45	32.25	6.54	26.64	400	62	P	V
		5725	67.14	-55.06	122.2	54.94	32.3	6.55	26.65	400	62	P	V
	*	5755	111.42	-	-	99.11	32.4	6.57	26.66	400	62	P	V
	*	5755	101.02	-	-	88.71	32.4	6.57	26.66	400	62	A	V
		5850.6	53.9	-66.93	120.83	41.46	32.5	6.64	26.7	400	62	P	V
		5858.4	53.93	-55.92	109.85	41.45	32.53	6.65	26.7	400	62	P	V
		5919.6	54.56	-17.62	72.18	41.86	32.74	6.69	26.73	400	62	P	V
		5948.4	52.92	-15.28	68.2	40.15	32.8	6.71	26.74	400	62	P	V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 159 5795MHz		5639.2	54.88	-13.32	68.2	43.11	31.92	6.47	26.62	250	267	P	H
		5693.4	57.01	-43.32	100.33	44.97	32.16	6.52	26.64	250	267	P	H
		5718.6	59.75	-50.66	110.41	47.59	32.27	6.54	26.65	250	267	P	H
		5724.8	62.15	-59.59	121.74	49.95	32.3	6.55	26.65	250	267	P	H
	*	5795	114.45	-	-	102.12	32.4	6.61	26.68	250	267	P	H
	*	5795	105.15	-	-	92.82	32.4	6.61	26.68	250	267	A	H
		5852.6	62.73	-53.54	116.27	50.28	32.51	6.64	26.7	250	267	P	H
		5855	62.38	-48.42	110.8	49.91	32.52	6.65	26.7	250	267	P	H
		5878.6	59.82	-42.71	102.53	47.26	32.61	6.66	26.71	250	267	P	H
		5940.6	55.71	-12.49	68.2	42.97	32.78	6.7	26.74	250	267	P	H
		5633	53.05	-15.15	68.2	41.26	31.93	6.47	26.61	350	59	P	V
		5669.6	55.35	-27.39	82.74	43.46	32.02	6.5	26.63	350	59	P	V
		5719	57.13	-53.39	110.52	44.96	32.28	6.54	26.65	350	59	P	V
		5721.4	56.9	-57.09	113.99	44.72	32.29	6.54	26.65	350	59	P	V
	*	5795	111.23	-	-	98.9	32.4	6.61	26.68	350	59	P	V
	*	5795	101.11	-	-	88.78	32.4	6.61	26.68	350	59	A	V
		5850	58.68	-63.52	122.2	46.24	32.5	6.64	26.7	350	59	P	V
		5859.4	59.24	-50.33	109.57	46.75	32.54	6.65	26.7	350	59	P	V
		5877.8	57.21	-45.91	103.12	44.65	32.61	6.66	26.71	350	59	P	V
		5929.6	53.7	-14.5	68.2	40.98	32.76	6.69	26.73	350	59	P	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. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 151 5755MHz		10927	47.97	-26.03	74	53.41	40.85	10.12	56.41	-	-	P	H
		10927	44.13	-9.87	54	49.57	40.85	10.12	56.41	-	-	A	H
		11510	52.29	-21.71	74	57.8	40.18	10.38	56.07	198	300	P	H
		11510	41.85	-12.15	54	47.36	40.18	10.38	56.07	198	300	A	H
		14480	48.96	-25.04	74	52.23	41.82	11.74	56.83	-	-	P	H
		14480	39.36	-14.64	54	42.63	41.82	11.74	56.83	-	-	A	H
		17265	47.49	-20.71	68.2	50.6	40.63	12.89	56.63	-	-	P	H
		17989	55.88	-18.12	74	51.03	48.2	13.68	57.03	-	-	P	H
		17989	46.46	-7.54	54	41.61	48.2	13.68	57.03	-	-	A	H
		10784	48.44	-25.56	74	54.15	40.67	10.03	56.41	-	-	P	V
		10784	37.88	-16.12	54	43.59	40.67	10.03	56.41	-	-	A	V
		11510	55.81	-18.19	74	61.32	40.18	10.38	56.07	188	104	P	V
		11510	44.96	-9.04	54	50.47	40.18	10.38	56.07	188	104	A	V
		14480	48.42	-25.58	74	51.69	41.82	11.74	56.83	-	-	P	V
		14480	39.38	-14.62	54	42.65	41.82	11.74	56.83	-	-	A	V
		17265	47.36	-20.84	68.2	50.47	40.63	12.89	56.63	-	-	P	V
		17978	55.33	-18.67	74	50.78	47.91	13.67	57.03	-	-	P	V
		17978	46.12	-7.88	54	41.57	47.91	13.67	57.03	-	-	A	V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		10773	47.62	-26.38	74	53.36	40.65	10.02	56.41	-	-	P	H
		10773	37.67	-16.33	54	43.41	40.65	10.02	56.41	-	-	A	H
		11590	52.95	-21.05	74	58.58	40.02	10.42	56.07	184	258	P	H
		11590	43.02	-10.98	54	48.65	40.02	10.42	56.07	184	258	A	H
		14480	49.01	-24.99	74	52.28	41.82	11.74	56.83	-	-	P	H
		14480	39.41	-14.59	54	42.68	41.82	11.74	56.83	-	-	A	H
		17385	48.69	-19.51	68.2	51.31	41.21	13.02	56.85	-	-	P	H
802.11ax		18000	55.05	-18.95	74	49.89	48.5	13.69	57.03	-	-	P	H
HE40 Full		18000	46.53	-7.47	54	41.37	48.5	13.69	57.03	-	-	A	H
CH 159		11037	48.74	-25.26	74	54.44	40.51	10.17	56.38	-	-	P	V
5795MHz		11037	37.82	-16.18	54	43.52	40.51	10.17	56.38	-	-	A	V
		11590	54.71	-19.29	74	60.34	40.02	10.42	56.07	181	8	P	V
		11590	44.58	-9.42	54	50.21	40.02	10.42	56.07	181	8	A	V
		14480	49.19	-24.81	74	52.46	41.82	11.74	56.83	-	-	P	V
		14480	39.43	-14.57	54	42.7	41.82	11.74	56.83	-	-	A	V
		17385	49.16	-19.04	68.2	51.78	41.21	13.02	56.85	-	-	P	V
		17978	55.78	-18.22	74	51.23	47.91	13.67	57.03	-	-	P	V
		17978	46.28	-7.72	54	41.73	47.91	13.67	57.03	-	-	A	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 HE40_Partial 242 (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5636.4	54.03	-14.17	68.2	42.24	31.93	6.47	26.61	250	272	P	H
		5696.6	55.98	-46.71	102.69	43.92	32.18	6.52	26.64	250	272	P	H
		5718.6	61.95	-48.46	110.41	49.79	32.27	6.54	26.65	250	272	P	H
		5725	61.69	-60.51	122.2	49.49	32.3	6.55	26.65	250	272	P	H
	*	5755	112.35	-	-	100.04	32.4	6.57	26.66	250	272	P	H
	*	5755	103.58	-	-	91.27	32.4	6.57	26.66	250	272	A	H
		5854.6	53.32	-58.39	111.71	40.85	32.52	6.65	26.7	250	272	P	H
802.11ax		5859.2	54.62	-55	109.62	42.13	32.54	6.65	26.7	250	272	P	H
HE40		5901.8	55.87	-29.46	85.33	43.21	32.7	6.68	26.72	250	272	P	H
Partial		5938.6	52.9	-15.3	68.2	40.16	32.78	6.7	26.74	250	272	P	H
242/61		5644	53.57	-14.63	68.2	41.8	31.91	6.48	26.62	381	58	P	V
CH 151		5692	54.3	-45	99.3	42.27	32.15	6.52	26.64	381	58	P	V
5755MHz		5715.4	57.56	-51.95	109.51	45.41	32.26	6.54	26.65	381	58	P	V
		5724.6	57.77	-63.52	121.29	45.57	32.3	6.55	26.65	381	58	P	V
	*	5755	107.59	-	-	95.28	32.4	6.57	26.66	381	58	P	V
	*	5755	100.17	-	-	87.86	32.4	6.57	26.66	381	58	A	V
		5854.2	53.23	-59.39	112.62	40.76	32.52	6.65	26.7	381	58	P	V
		5858.4	53.78	-56.07	109.85	41.3	32.53	6.65	26.7	381	58	P	V
		5915	54.14	-21.43	75.57	41.46	32.73	6.68	26.73	381	58	P	V
		5926.6	53.16	-15.04	68.2	40.45	32.75	6.69	26.73	381	58	P	V

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Partial 242/62 CH 159 5795MHz		5635.8	54.22	-13.98	68.2	42.43	31.93	6.47	26.61	241	270	P	H
		5700	54.39	-50.81	105.2	42.3	32.2	6.53	26.64	241	270	P	H
		5712.8	56.27	-52.52	108.79	44.13	32.25	6.54	26.65	241	270	P	H
		5725	55.47	-66.73	122.2	43.27	32.3	6.55	26.65	241	270	P	H
	*	5795	112.55	-	-	100.22	32.4	6.61	26.68	241	270	P	H
	*	5795	104.22	-	-	91.89	32.4	6.61	26.68	241	270	A	H
		5851.6	58.04	-60.51	118.55	45.59	32.51	6.64	26.7	241	270	P	H
		5859.8	58.26	-51.19	109.45	45.77	32.54	6.65	26.7	241	270	P	H
		5876.4	56.37	-47.79	104.16	43.81	32.61	6.66	26.71	241	270	P	H
		5938.6	54.21	-13.99	68.2	41.47	32.78	6.7	26.74	241	270	P	H
		5633.8	53.47	-14.73	68.2	41.68	31.93	6.47	26.61	386	63	P	V
		5699.4	53.2	-51.56	104.76	41.12	32.2	6.52	26.64	386	63	P	V
		5718.2	53.37	-56.93	110.3	41.21	32.27	6.54	26.65	386	63	P	V
		5721.6	53.15	-61.3	114.45	40.97	32.29	6.54	26.65	386	63	P	V
	*	5795	106.96	-	-	94.63	32.4	6.61	26.68	386	63	P	V
	*	5795	99.86	-	-	87.53	32.4	6.61	26.68	386	63	A	V
		5850	55.45	-66.75	122.2	43.01	32.5	6.64	26.7	386	63	P	V
		5858.2	54.42	-55.48	109.9	41.94	32.53	6.65	26.7	386	63	P	V
		5880.6	53.92	-47.12	101.04	41.35	32.62	6.66	26.71	386	63	P	V
		5926.6	53.69	-14.51	68.2	40.98	32.75	6.69	26.73	386	63	P	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 (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full CH 155 5775MHz		5647.4	57.43	-10.77	68.2	45.66	31.91	6.48	26.62	250	267	P	H
		5693.4	63.77	-36.56	100.33	51.73	32.16	6.52	26.64	250	267	P	H
		5705.2	67.57	-39.09	106.66	55.46	32.22	6.53	26.64	250	267	P	H
		5722.2	68.92	-46.9	115.82	56.74	32.29	6.54	26.65	250	267	P	H
	*	5775	111.78	-	-	99.46	32.4	6.59	26.67	250	267	P	H
	*	5775	102	-	-	89.68	32.4	6.59	26.67	250	267	A	H
		5851.4	69.01	-50	119.01	56.56	32.51	6.64	26.7	250	267	P	H
		5858.8	66.4	-43.33	109.73	53.91	32.54	6.65	26.7	250	267	P	H
		5878.8	62.63	-39.75	102.38	50.06	32.62	6.66	26.71	250	267	P	H
		5925.4	56.24	-11.96	68.2	43.53	32.75	6.69	26.73	250	267	P	H
		5645.6	55.86	-12.34	68.2	44.09	31.91	6.48	26.62	377	61	P	V
		5684.6	60.2	-33.64	93.84	48.21	32.11	6.51	26.63	377	61	P	V
		5710.8	64.5	-43.73	108.23	52.37	32.24	6.53	26.64	377	61	P	V
		5725	69.21	-52.99	122.2	57.01	32.3	6.55	26.65	377	61	P	V
	*	5775	107.92	-	-	95.6	32.4	6.59	26.67	377	61	P	V
	*	5775	98.52	-	-	86.2	32.4	6.59	26.67	377	61	A	V
		5850.4	61.94	-59.35	121.29	49.5	32.5	6.64	26.7	377	61	P	V
		5859.6	62.24	-47.27	109.51	49.75	32.54	6.65	26.7	377	61	P	V
		5875.4	58.88	-46.02	104.9	46.33	32.6	6.66	26.71	377	61	P	V
		5935	53.98	-14.22	68.2	41.24	32.77	6.7	26.73	377	61	P	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. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full CH 155 5775MHz		10938	47.82	-26.18	74	53.29	40.82	10.12	56.41	-	-	P	H
		10938	38.15	-15.85	54	43.62	40.82	10.12	56.41	-	-	A	H
		11550	46.99	-27.01	74	52.56	40.1	10.4	56.07	-	-	P	H
		14491	49.22	-24.78	74	52.43	41.86	11.74	56.81	-	-	P	H
		14491	39.45	-14.55	54	42.66	41.86	11.74	56.81	-	-	A	H
		17325	47.23	-20.97	68.2	50.17	40.85	12.95	56.74	-	-	P	H
		18000	55.1	-18.9	74	49.94	48.5	13.69	57.03	-	-	P	H
		18000	46.5	-7.5	54	41.34	48.5	13.69	57.03	-	-	A	H
		10784	48.62	-25.38	74	54.33	40.67	10.03	56.41	-	-	P	V
		10784	38.55	-15.45	54	44.26	40.67	10.03	56.41	-	-	A	V
		11550	47.78	-26.22	74	53.35	40.1	10.4	56.07	-	-	P	V
		14491	48.43	-25.57	74	51.64	41.86	11.74	56.81	-	-	P	V
		14491	38.16	-15.84	54	41.37	41.86	11.74	56.81	-	-	A	V
		17325	47.03	-21.17	68.2	49.97	40.85	12.95	56.74	-	-	P	V
		18000	55.77	-18.23	74	50.61	48.5	13.69	57.03	-	-	P	V
		18000	46.79	-7.21	54	41.63	48.5	13.69	57.03	-	-	A	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_Partial 484 (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Partial 484/65 CH 155 5775MHz		5650	54.72	-13.48	68.2	42.96	31.9	6.48	26.62	241	267	P	H
		5699	59.78	-44.68	104.46	47.71	32.19	6.52	26.64	241	267	P	H
		5719.6	62.3	-48.39	110.69	50.13	32.28	6.54	26.65	241	267	P	H
		5725	61.92	-60.28	122.2	49.72	32.3	6.55	26.65	241	267	P	H
	*	5775	109.92	-	-	97.6	32.4	6.59	26.67	241	267	P	H
	*	5775	101.97	-	-	89.65	32.4	6.59	26.67	241	267	A	H
		5851.2	58.78	-60.68	119.46	46.34	32.5	6.64	26.7	241	267	P	H
		5859.2	59.36	-50.26	109.62	46.87	32.54	6.65	26.7	241	267	P	H
		5884	55.33	-43.19	98.52	42.74	32.64	6.66	26.71	241	267	P	H
		5933.8	54.06	-14.14	68.2	41.32	32.77	6.7	26.73	241	267	P	H
		5637.4	52.85	-15.35	68.2	41.06	31.93	6.47	26.61	400	60	P	V
		5697.8	55.43	-48.15	103.58	43.36	32.19	6.52	26.64	400	60	P	V
		5718	59.83	-50.41	110.24	47.67	32.27	6.54	26.65	400	60	P	V
		5721.8	60.12	-54.78	114.9	47.94	32.29	6.54	26.65	400	60	P	V
	*	5775	105.3	-	-	92.98	32.4	6.59	26.67	400	60	P	V
	*	5775	97.7	-	-	85.38	32.4	6.59	26.67	400	60	A	V
		5852.8	55.87	-59.95	115.82	43.42	32.51	6.64	26.7	400	60	P	V
		5868.6	55.14	-51.85	106.99	42.63	32.57	6.65	26.71	400	60	P	V
		5886.8	53.63	-42.81	96.44	41.02	32.65	6.67	26.71	400	60	P	V
		5944.8	53.85	-14.35	68.2	41.1	32.79	6.7	26.74	400	60	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Partial 484/66 CH 155 5775MHz		5631.8	52.97	-15.23	68.2	41.17	31.94	6.47	26.61	240	261	P	H
		5698	59.19	-44.54	103.73	47.12	32.19	6.52	26.64	240	261	P	H
		5715	60.53	-48.87	109.4	48.38	32.26	6.54	26.65	240	261	P	H
		5722.8	60.31	-56.87	117.18	48.13	32.29	6.54	26.65	240	261	P	H
	*	5775	108.66	-	-	96.34	32.4	6.59	26.67	240	261	P	H
	*	5775	100.69	-	-	88.37	32.4	6.59	26.67	240	261	A	H
		5851	57.86	-62.06	119.92	45.42	32.5	6.64	26.7	240	261	P	H
		5865.6	58.2	-49.63	107.83	45.7	32.56	6.65	26.71	240	261	P	H
		5924.2	54.56	-14.23	68.79	41.85	32.75	6.69	26.73	240	261	P	H
		5926	53.81	-14.39	68.2	41.1	32.75	6.69	26.73	240	261	P	H
		5621.8	53.77	-14.43	68.2	41.96	31.96	6.46	26.61	375	60	P	V
		5692	55.75	-43.55	99.3	43.72	32.15	6.52	26.64	375	60	P	V
		5712	58.79	-49.77	108.56	46.64	32.25	6.54	26.64	375	60	P	V
		5720.2	59.1	-52.16	111.26	46.93	32.28	6.54	26.65	375	60	P	V
	*	5775	105.45	-	-	93.13	32.4	6.59	26.67	375	60	P	V
	*	5775	96.55	-	-	84.23	32.4	6.59	26.67	375	60	A	V
		5851.2	54.07	-65.39	119.46	41.63	32.5	6.64	26.7	375	60	P	V
		5859	54.7	-54.98	109.68	42.21	32.54	6.65	26.7	375	60	P	V
		5906	54.31	-27.91	82.22	41.64	32.71	6.68	26.72	375	60	P	V
		5944	53.5	-14.7	68.2	40.75	32.79	6.7	26.74	375	60	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission above 18GHz

WIFI 802.11a (SHF @ 1m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a		39384	40.57	-33.43	74	53.47	43.95	-0.48	56.37	-	-	H	H
SHF		39406	39.82	-34.18	74	52.7	43.96	-0.48	56.36	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												

Emission below 1GHz

5GHz WIFI 802.11a (LF @ 3m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a LF		71.71	25.04	-14.96	40	43.85	12.58	0.92	32.31	-	-	P	H
		155.13	29.21	-14.29	43.5	43.48	16.78	1.24	32.29	-	-	P	H
		199.75	27.4	-16.1	43.5	43.31	14.99	1.36	32.26	-	-	P	H
		399.57	25.21	-20.79	46	33.53	21.97	1.9	32.19	-	-	P	H
		710.94	35.01	-10.99	46	38.23	26.61	2.34	32.17	-	-	P	H
		800.18	31.88	-14.12	46	33.51	27.95	2.43	32.01	-	-	P	H
		40.67	17.44	-22.56	40	29.75	19.35	0.74	32.4	-	-	P	V
		115.36	24.32	-19.18	43.5	38.3	17.22	1.11	32.31	-	-	P	V
		258.92	19.39	-26.61	46	30.25	19.87	1.5	32.23	-	-	P	V
		600.36	30.39	-15.61	46	34.9	25.6	2.16	32.27	-	-	P	V
		708.03	34.41	-11.59	46	37.67	26.57	2.34	32.17	-	-	P	V
		741.98	32.33	-13.67	46	34.32	27.85	2.32	32.16	-	-	P	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.	
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5150	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		5150	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

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

For Peak Limit @ 5150MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 5150MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. 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

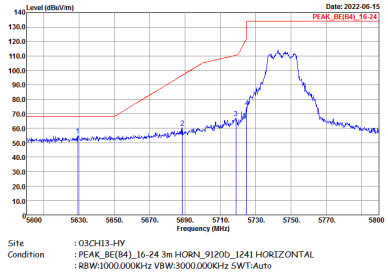
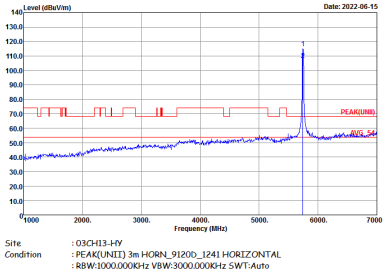
Test Engineer :	Rain Lee and Jacky Hong	**Temperature :**	20~25°C
		Relative Humidity :	50~60%

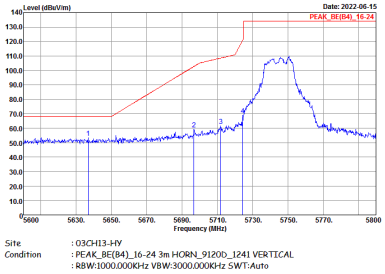
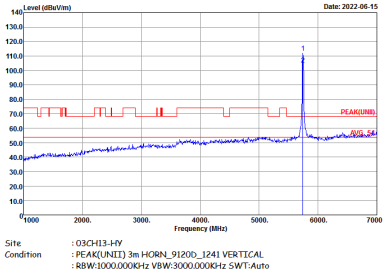
Note symbol

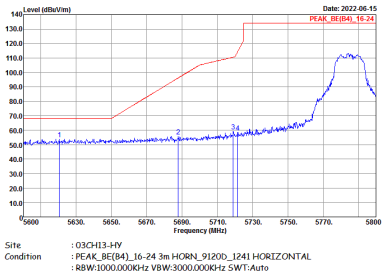
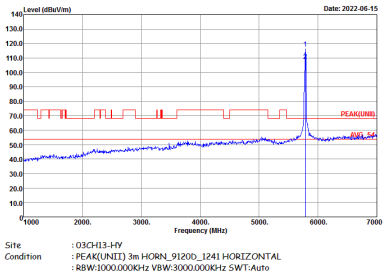
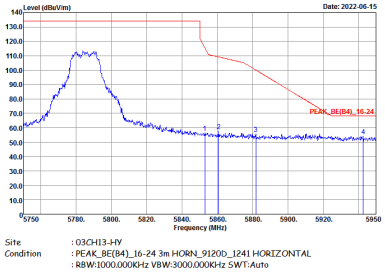
-L	**Low channel location**
-R	**High channel location**

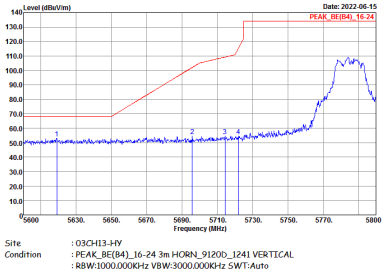
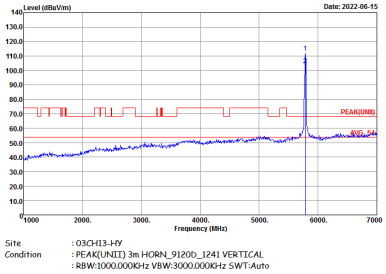
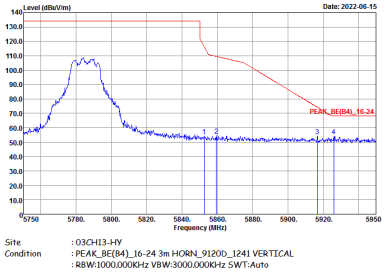
Band 4 - 5725~5850MHz

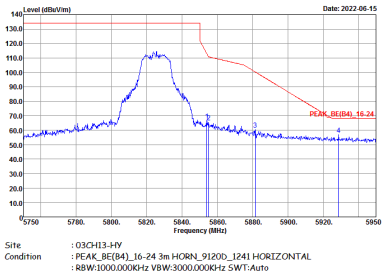
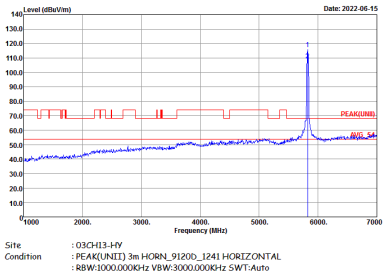
WIFI 802.11a (Band Edge @ 3m)

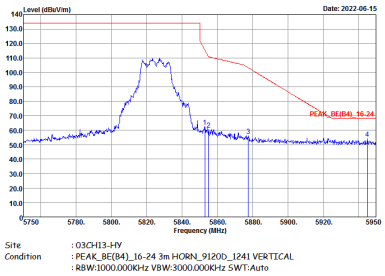
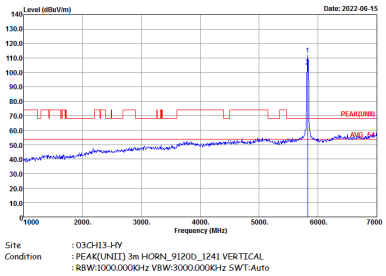
WIFI	**Band 4 5725~5850MHz Band Edge @ 3m**	
ANT	**802.11a CH149 5745MHz**	
0+1	**Horizontal**	**Fundamental**
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
0+1	Vertical	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
0+1	Horizontal	Fundamental
Peak		
Peak		Left blank

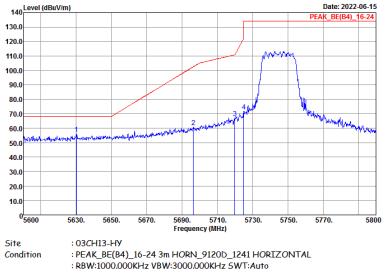
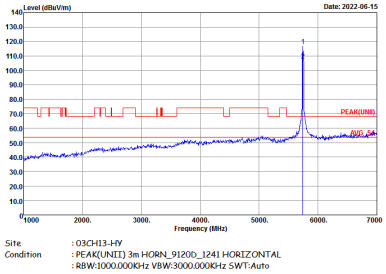
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
0+1	Vertical	Fundamental
Peak		
Peak		Left blank

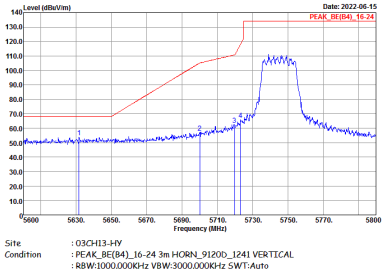
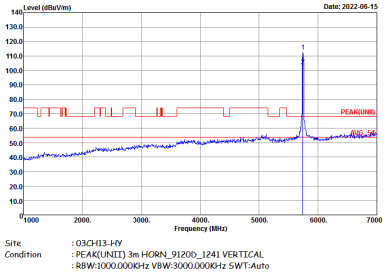
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
0+1	Horizontal	Fundamental
Peak		

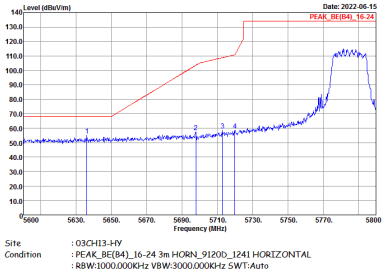
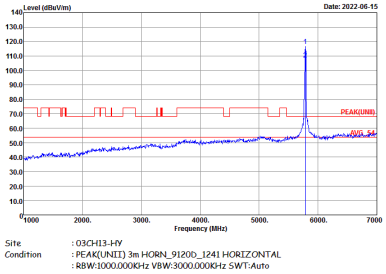
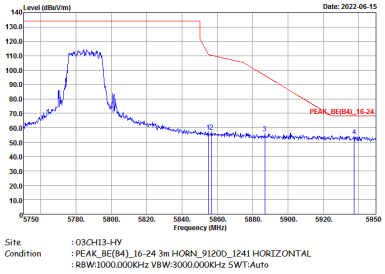
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
0+1	Vertical	Fundamental
Peak		

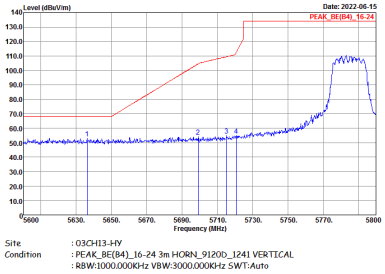
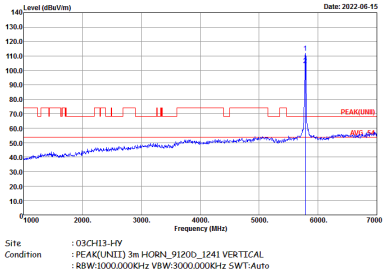
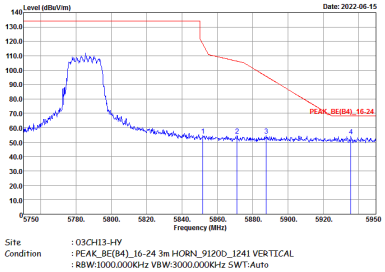
Band 4 5725~5850MHz

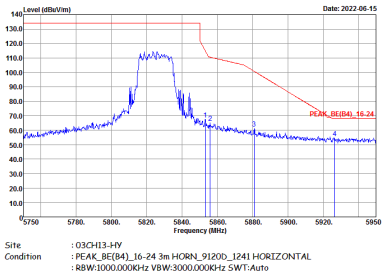
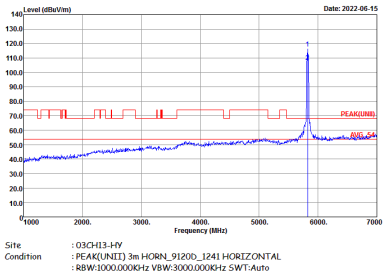
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

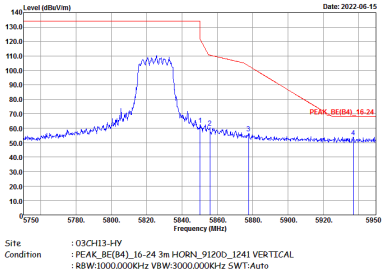
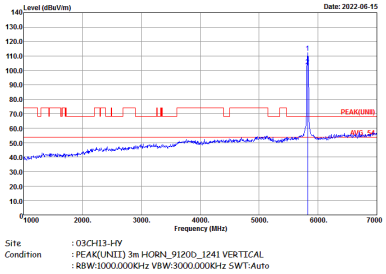
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
0+1	Horizontal	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
0+1	Vertical	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
0+1	Horizontal	Fundamental
Peak		
Peak		Left blank

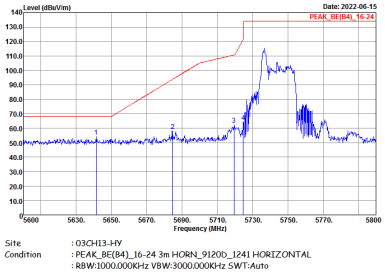
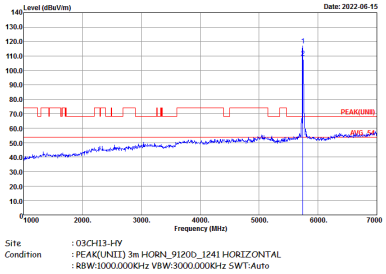
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
0+1	Vertical	Fundamental
Peak		
Peak		Left blank

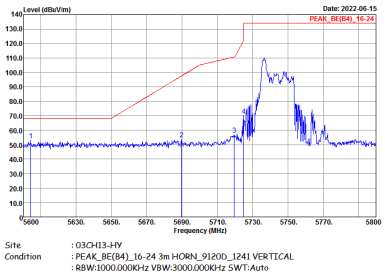
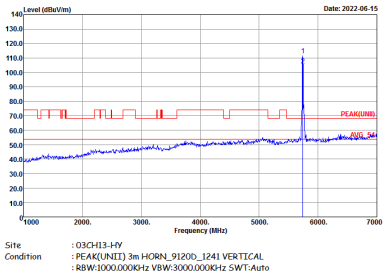
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
0+1	Horizontal	Fundamental
Peak		

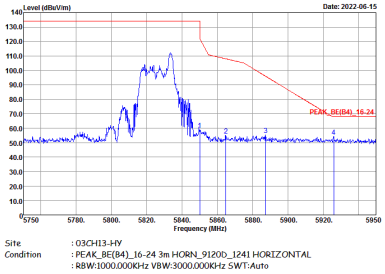
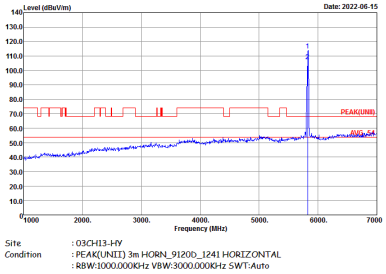
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
0+1	Vertical	Fundamental
Peak		

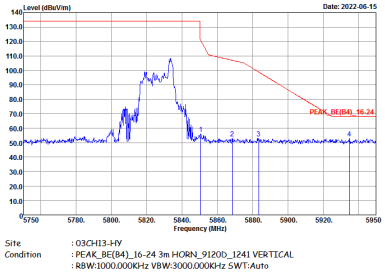
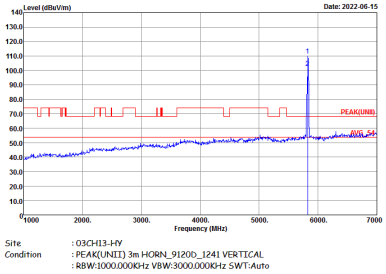
Band 4 5725~5850MHz

WIFI 802.11ax HE20 Partial 26 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH149 5745MHz	
0+1	Horizontal	Fundamental
Peak		

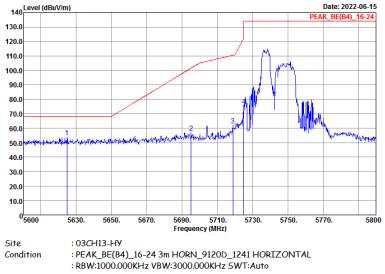
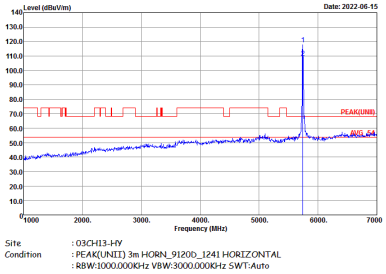
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH149 5745MHz	
0+1	Vertical	Fundamental
Peak		

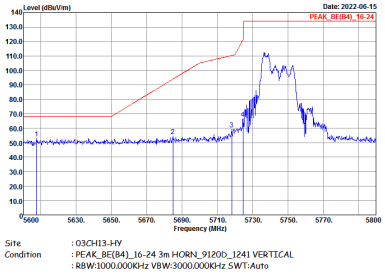
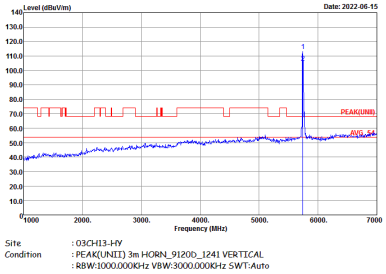
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH165 5825MHz	
0+1	Horizontal	Fundamental
Peak		

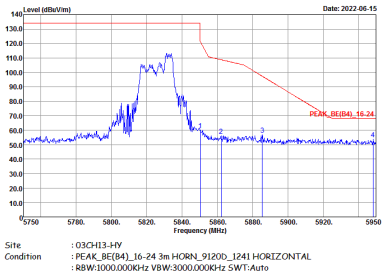
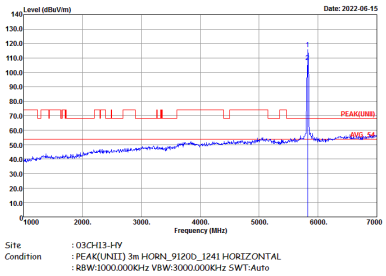
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH165 5825MHz	
0+1	Vertical	Fundamental
Peak		

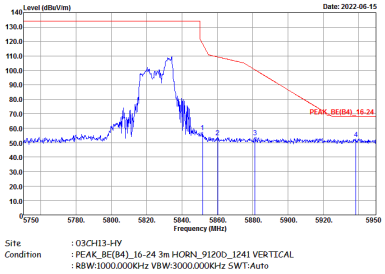
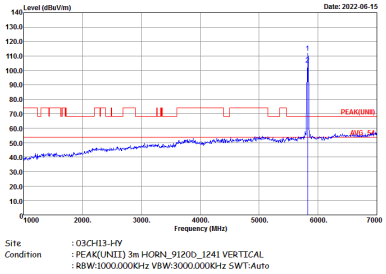
Band 4 5725~5850MHz

WIFI 802.11ax HE20 Partial 52 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/37 CH149 5745MHz	
0+1	Horizontal	Fundamental
Peak		

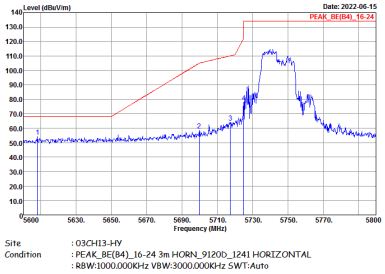
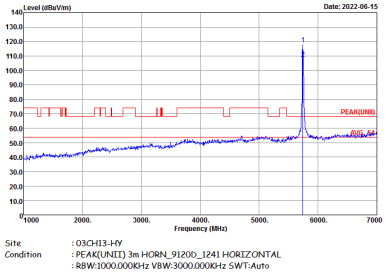
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/37 CH149 5745MHz	
0+1	Vertical	Fundamental
Peak		

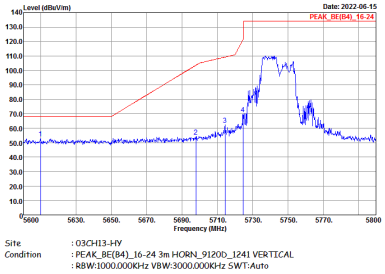
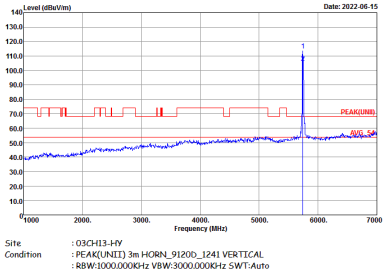
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/40 CH165 5825MHz	
0+1	Horizontal	Fundamental
Peak		

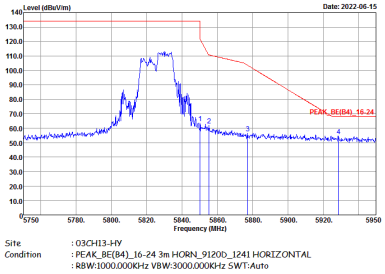
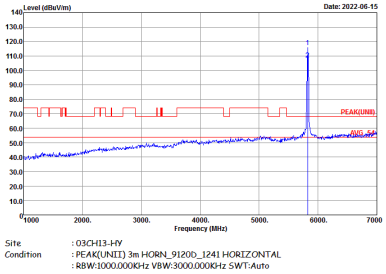
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/40 CH165 5825MHz	
0+1	Vertical	Fundamental
Peak		

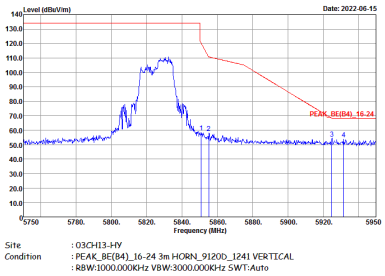
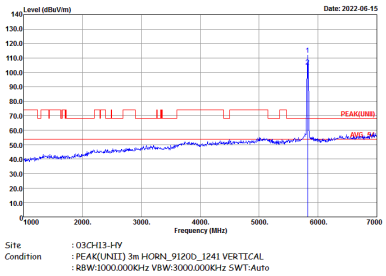
Band 4 5725~5850MHz

WIFI 802.11ax HE20 Partial 106 (Band Edge @ 3m)

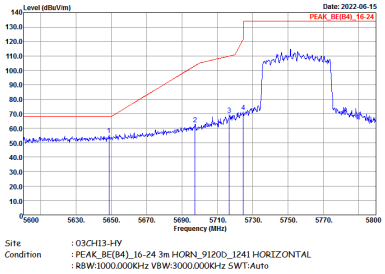
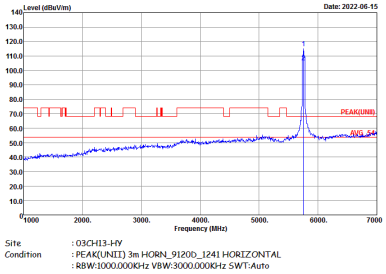
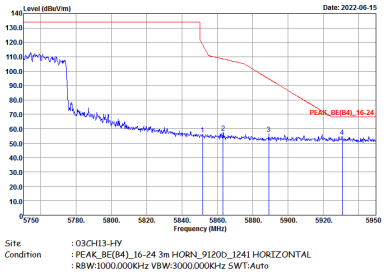
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/53 CH149 5745MHz	
0+1	Horizontal	Fundamental
Peak		

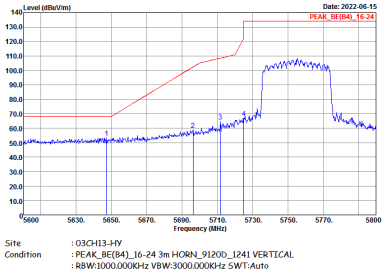
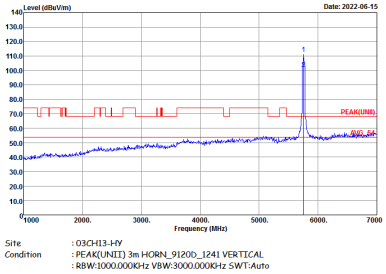
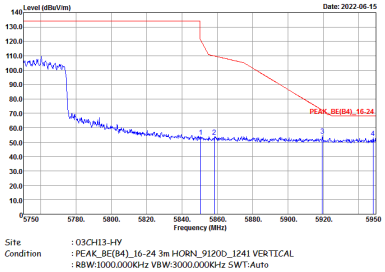
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/53 CH149 5745MHz	
0+1	Vertical	Fundamental
Peak		

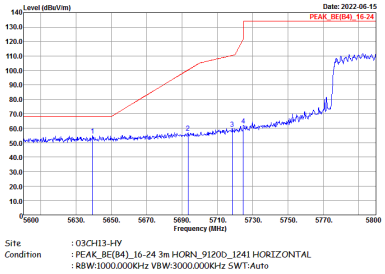
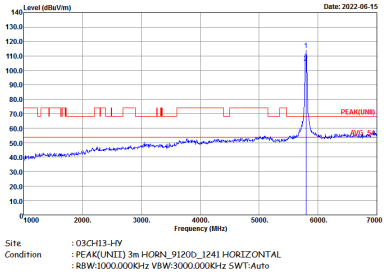
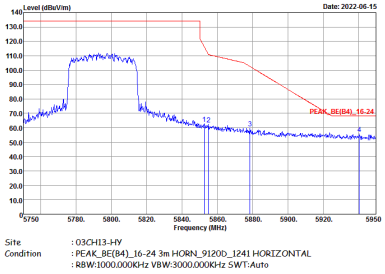
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/54 CH165 5825MHz	
0+1	Horizontal	Fundamental
Peak		

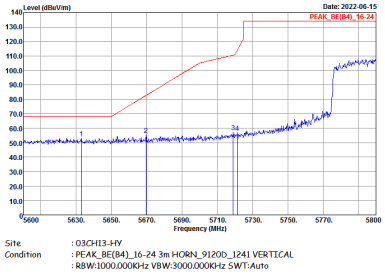
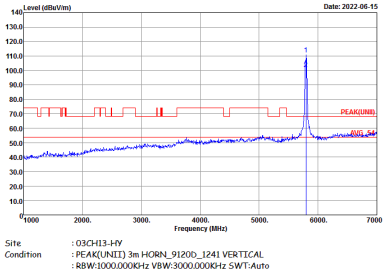
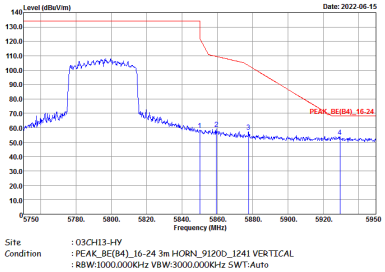
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/54 CH165 5825MHz	
0+1	Vertical	Fundamental
Peak		

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	
0+1	Horizontal	Fundamental
Peak		
Peak		Left blank

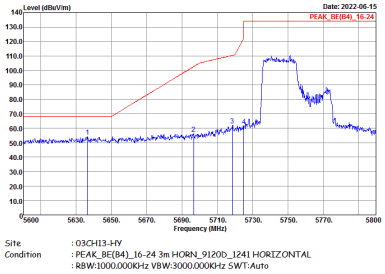
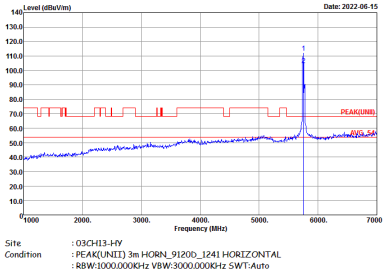
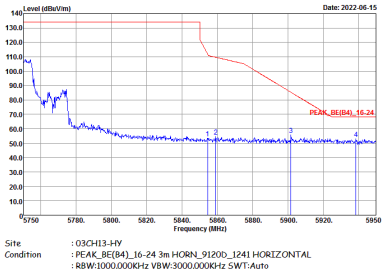
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
0+1	Vertical	Fundamental
Peak		
Peak		Left blank

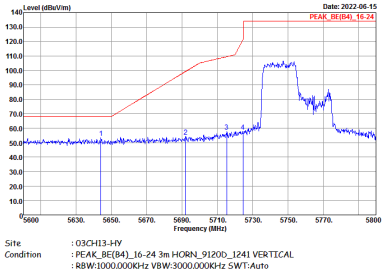
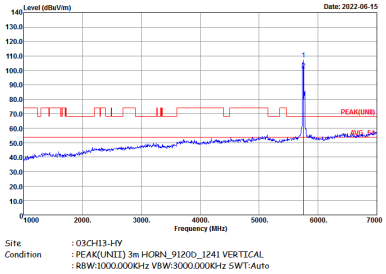
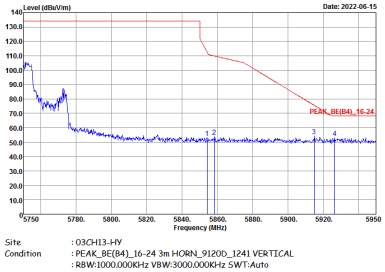
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full HT40 CH159 5795MHz	
0+1	Horizontal	Fundamental
Peak		
Peak		Left blank

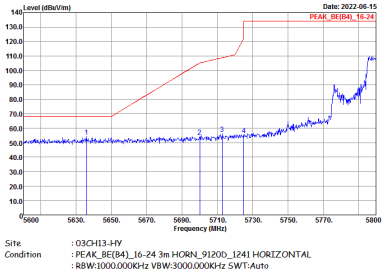
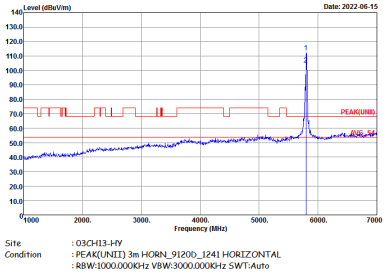
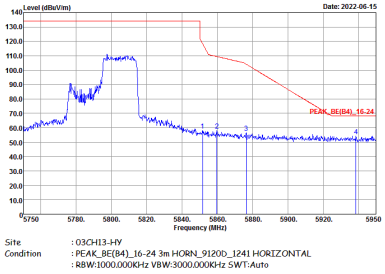
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
0+1	Vertical	Fundamental
Peak		
Peak		Left blank

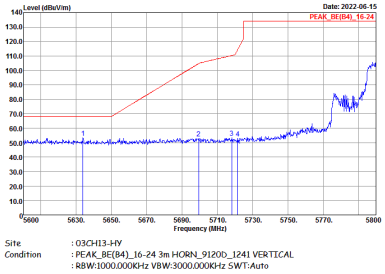
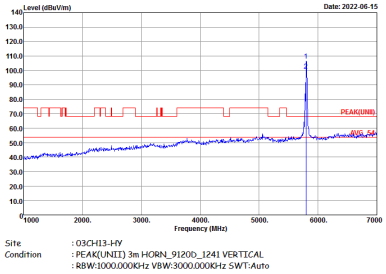
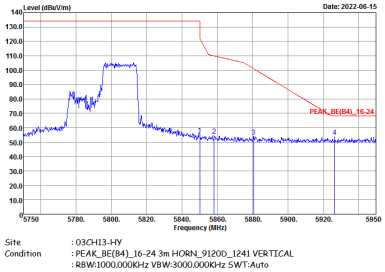
Band 4 5725~5850MHz

WIFI 802.11ax HE40 Partial 242 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Partial 242/61 CH151 5755MHz	
0+1	Horizontal	Fundamental
Peak		
Peak		Left blank

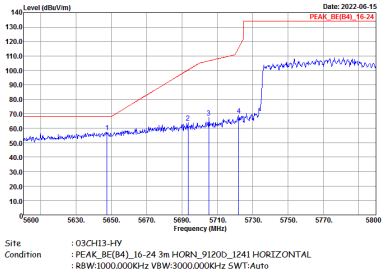
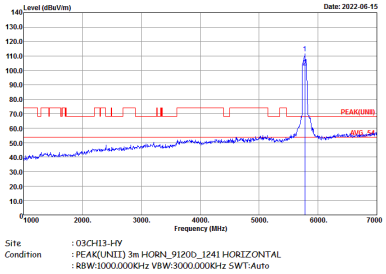
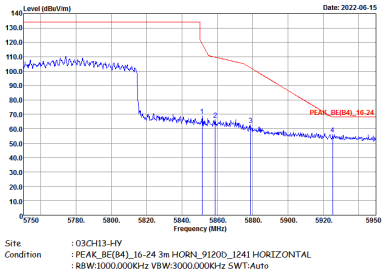
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Partial 242/61 CH151 5755MHz	
0+1	Vertical	Fundamental
Peak		
Peak		Left blank

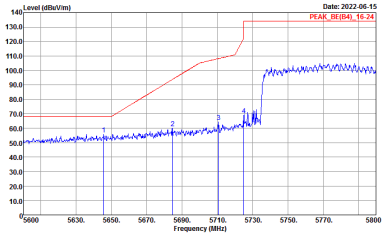
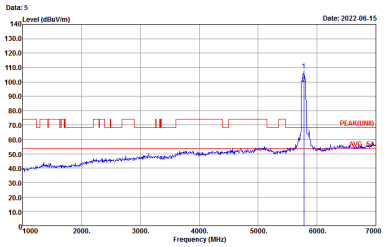
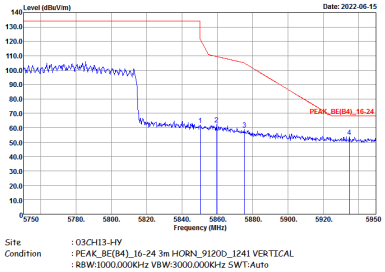
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Partial 242/62 CH159 5795MHz	
0+1	Horizontal	Fundamental
Peak		
Peak		Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Partial 242/62 CH159 5795MHz	
0+1	Vertical	Fundamental
Peak		
Peak		Left blank

Band 4 5725~5850MHz

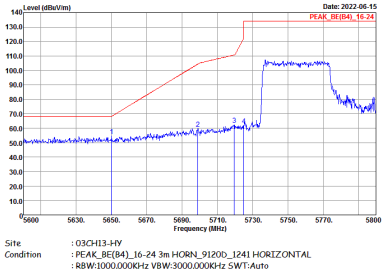
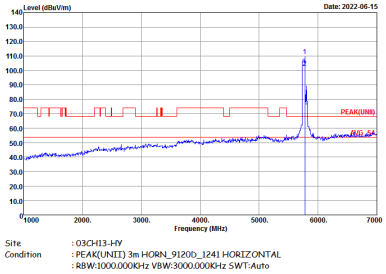
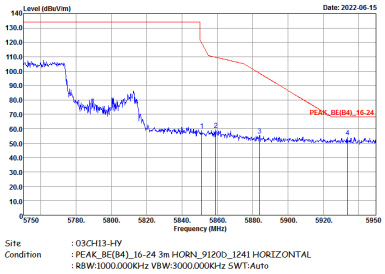
WIFI 802.11ax HE80 Full (Band Edge @ 3m)

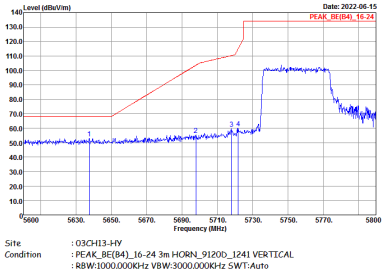
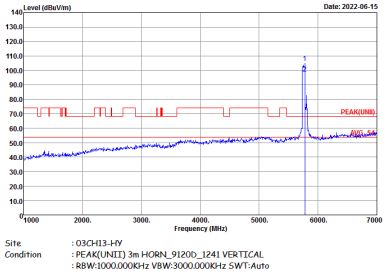
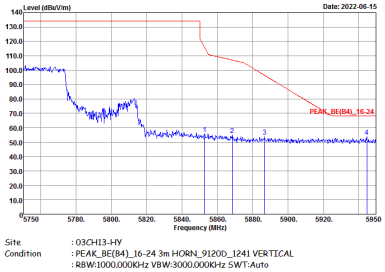
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
0+1	Horizontal	Fundamental
Peak		
Peak		Left blank

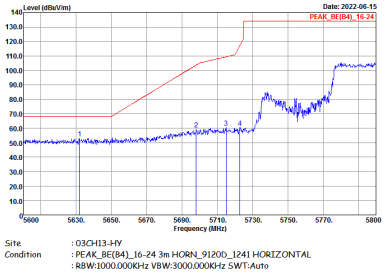
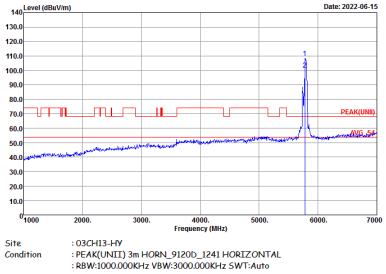
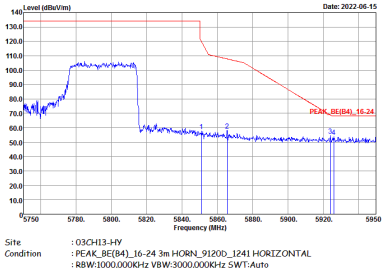
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
0+1	Vertical	Fundamental
Peak		s 
Peak		Left blank

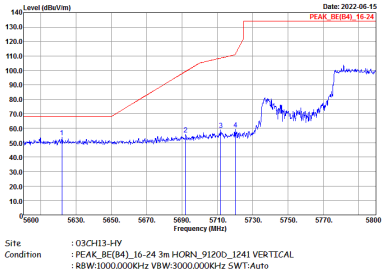
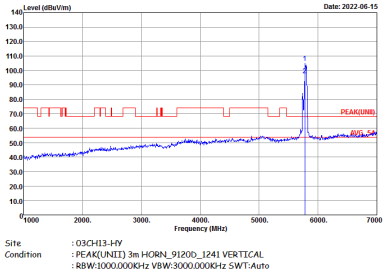
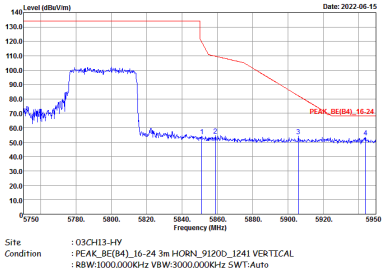
Band 4 5725~5850MHz

WIFI 802.11ax HE80 Partial 484 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Partial 484/65 CH155 5775MHz	
0+1	Horizontal	Fundamental
Peak		
Peak		Left blank

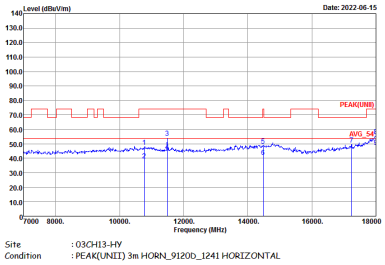
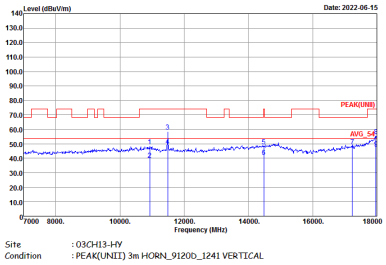
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Partial 484/65 CH155 5775MHz	
0+1	Vertical	Fundamental
Peak		
Peak		Left blank

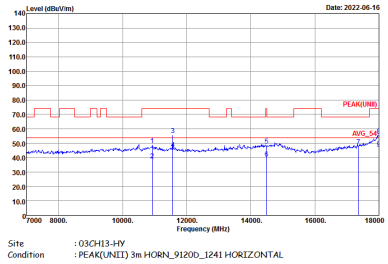
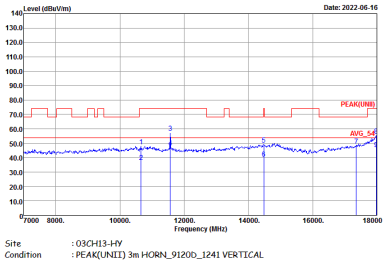
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Partial 484/66 CH155 5775MHz	
0+1	Horizontal	Fundamental
Peak		
Peak		Left blank

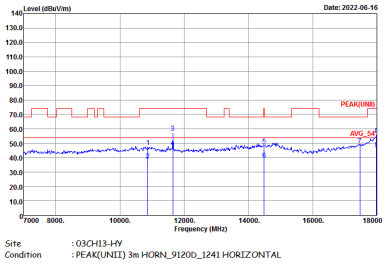
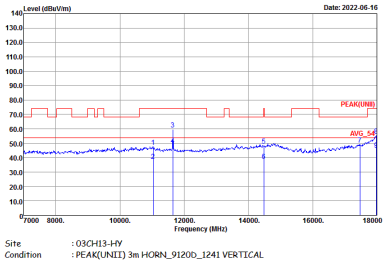
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Partial 484/66 CH155 5775MHz	
0+1	Vertical	Fundamental
Peak		
Peak		Left blank

Band 4 - 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

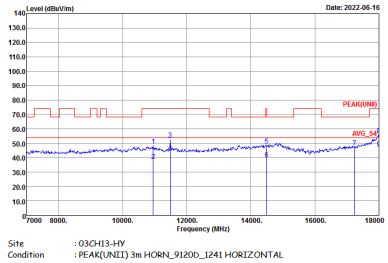
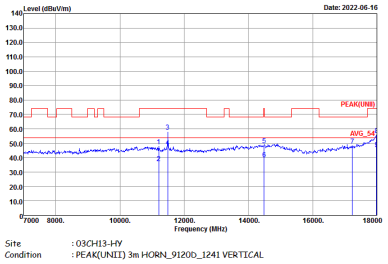
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
0+1	Horizontal	Vertical
Peak Avg.		

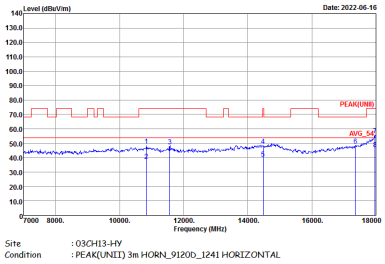
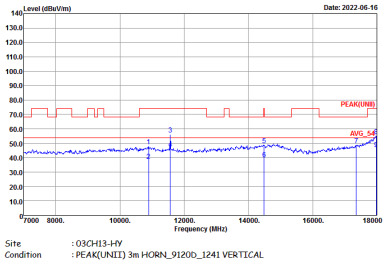
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
0+1	Horizontal	Vertical
Peak Avg.		

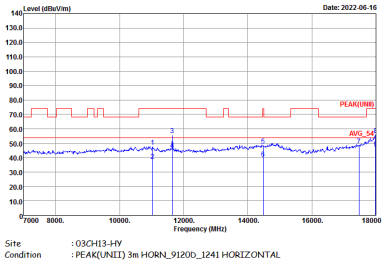
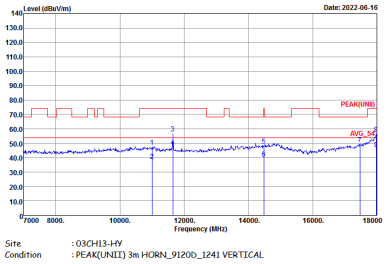
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
0+1	Horizontal	Vertical
Peak Avg.		

Band 4 5725~5850MHz

WIFI 802.11ax HE20 Full (Harmonic @ 3m)

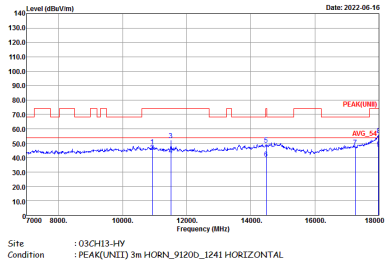
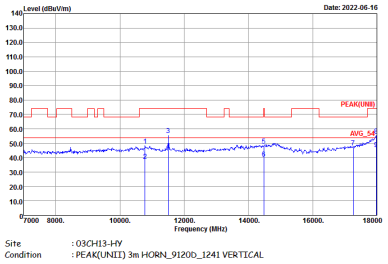
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
0+1	Horizontal	Vertical
Peak Avg.		

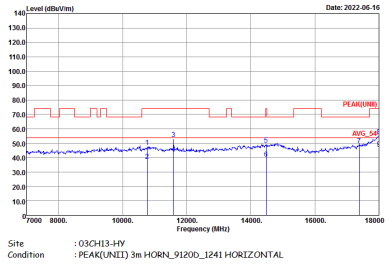
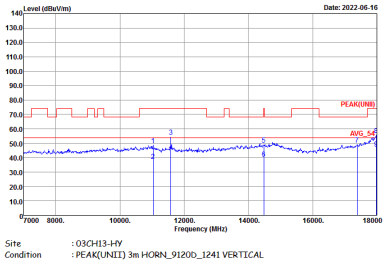
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
0+1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
0+1	Horizontal	Vertical
Peak Avg.		

Band 4 5725~5850MHz

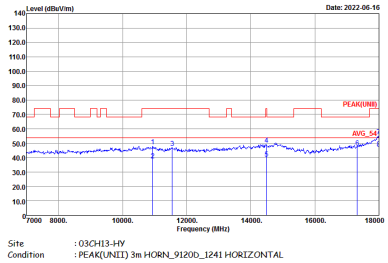
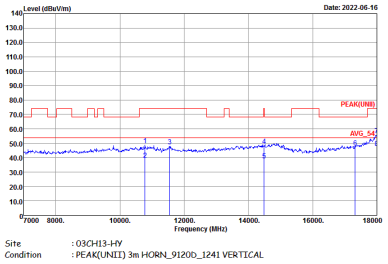
WIFI 802.11ax HE40 Full (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
0+1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
0+1	Horizontal	Vertical
Peak Avg.		

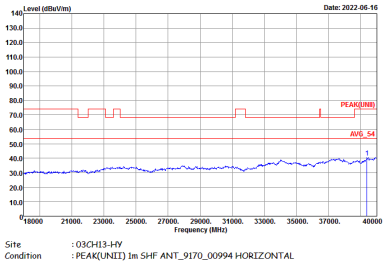
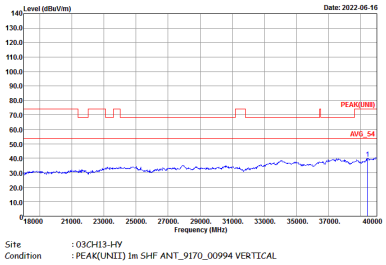
Band 4 5725~5850MHz

WIFI 802.11ax HE80 Full (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
0+1	Horizontal	Vertical
Peak Avg.		

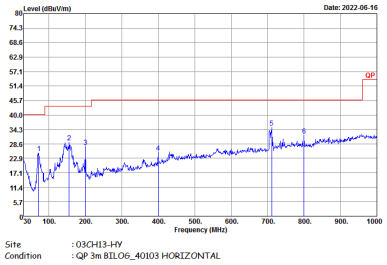
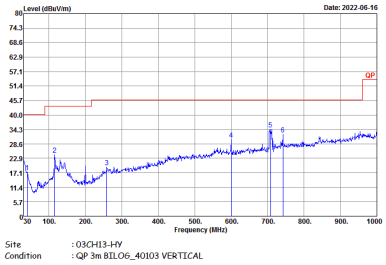
Emission above 18GHz

5GHz WIFI 802.11a (SHF @ 1m)

WIFI	5GHz WIFI	
ANT	802.11a SHF	
0+1	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

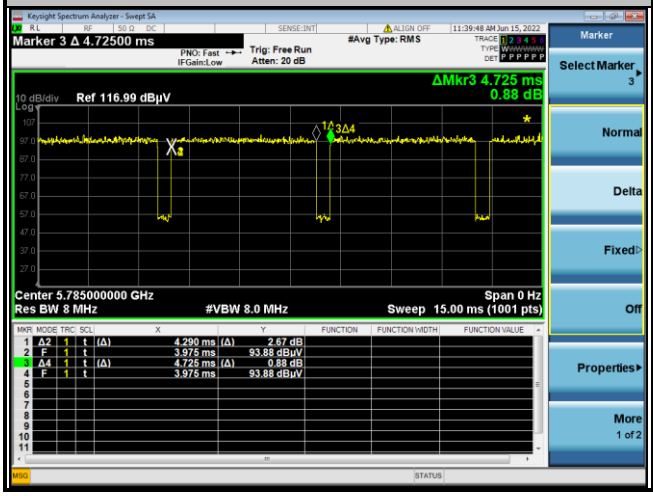
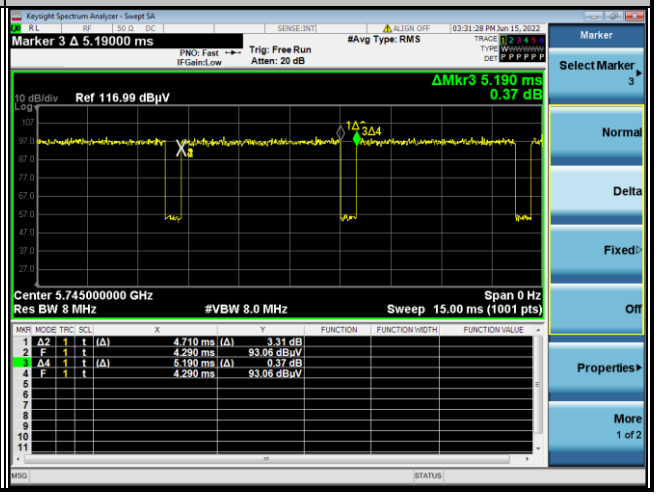
5GHz WIFI 802.11a (LF @ 3m)

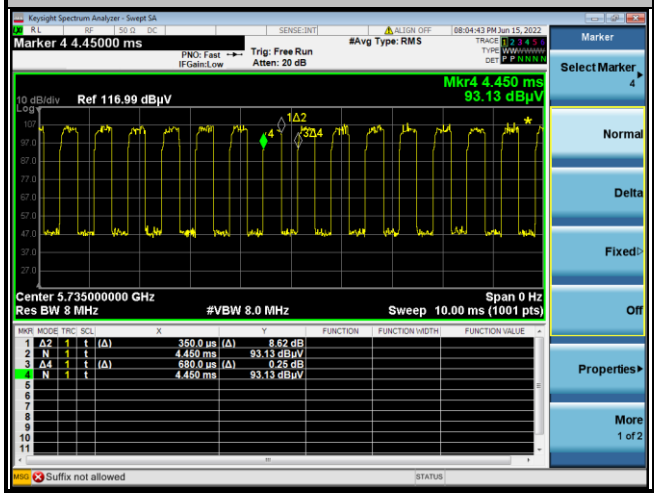
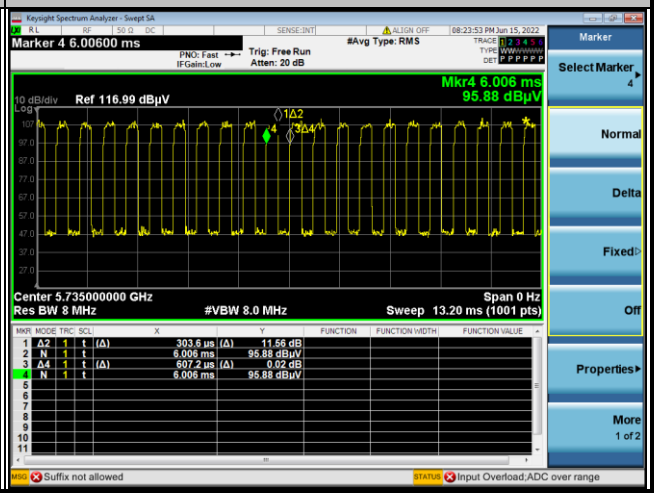
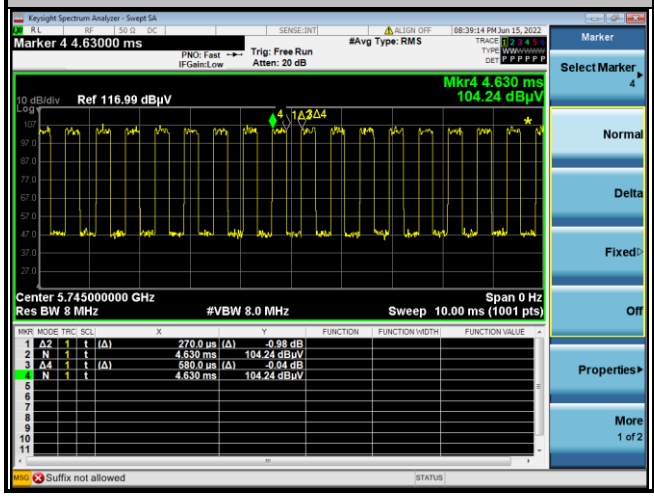
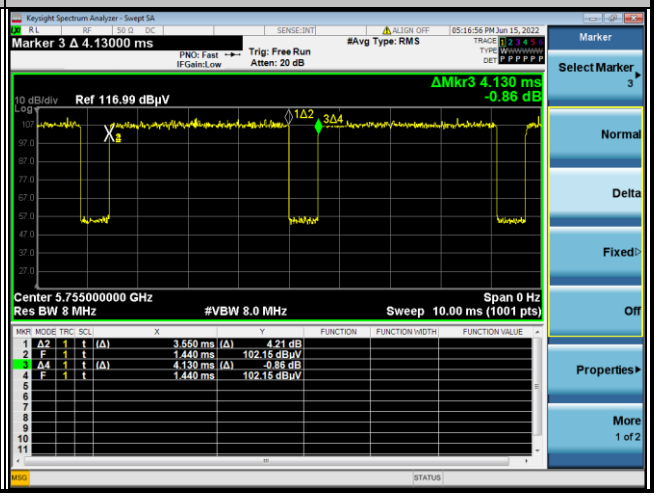
WIFI	5GHz WIFI	
ANT	802.11a LF	
0+1	Horizontal	Vertical
QP / Peak		

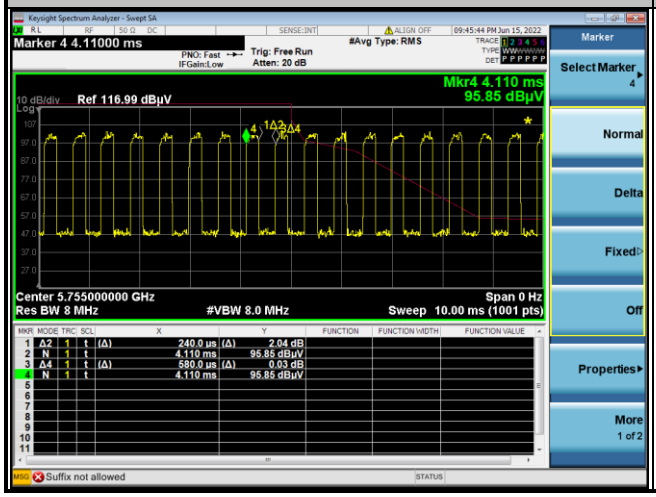
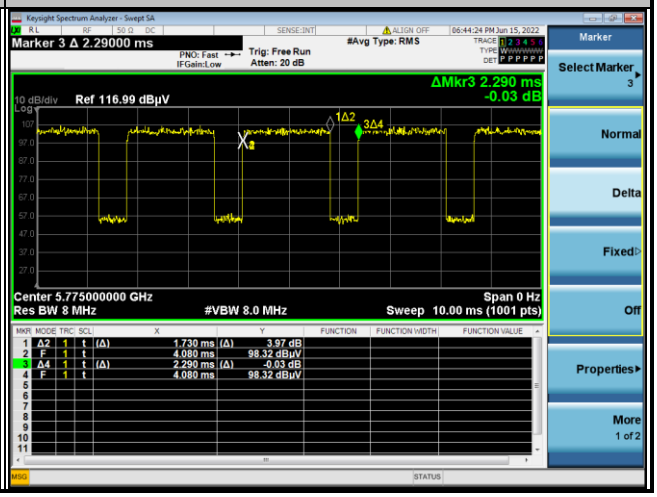
Appendix E. Duty Cycle Plots

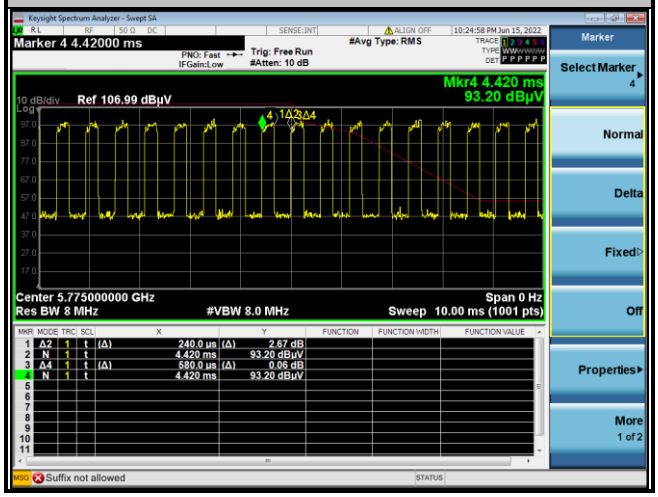
Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
0+1	802.11a	90.79	4290	0.23	300Hz
0+1	5GHz 802.11ax HE20 Full RU	90.75	4710	0.21	300Hz
0+1	5GHz 802.11ax HE20 26 RU	51.47	350	2.86	3kHz
0+1	5GHz 802.11ax HE20 52 RU	50.00	303.6	3.29	10kHz
0+1	5GHz 802.11ax HE20 106 RU	46.55	270	3.70	10kHz
0+1	5GHz 802.11ax HE40 Full RU	85.96	3550	0.28	300Hz
0+1	5GHz 802.11ax HE40 242 RU	41.38	240	4.17	10kHz
0+1	5GHz 802.11ax HE80 Full RU	75.55	1730	0.58	1kHz
0+1	5GHz 802.11ax HE80 484 RU	41.38	240	4.17	10kHz

MIMO <Ant. 0+1>

802.11a	5GHz 802.11ax HE20 Full RU
	

5GHz 802.11ax HE20 26 RU	5GHz 802.11ax HE20 52 RU
	
5GHz 802.11ax HE20 106 RU	**5GHz 802.11ax HE40 Full RU**
	

5GHz 802.11ax HE40 242 RU	5GHz 802.11ax HE80 Full RU
	

5GHz 802.11ax HE80 484 RU


———THE END———