



FCC RADIO TEST REPORT

FCC ID : 2AEM4-71213573
Equipment : Wireless router/access point
Brand Name : eero
Model Name : S010001
Applicant : eero LLC
660 3rd Street, 4th Floor, San Francisco, CA 94107
Manufacturer : eero LLC
660 3rd Street, 4th Floor, San Francisco, CA 94107
Standard : FCC Part 15 Subpart E §15.407

The product was received on Aug. 10, 2021 and testing was started from Aug. 11, 2021 and completed on Nov. 02, 2021. We, Sporton International (USA) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Approved by: Neil Kao

Sporton International (USA) Inc.
1175 Montague Expressway, Milpitas, CA 95035



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History of this test report

Report No.	Version	Description	Issue Date
FR210727001E	01	Initial issue of report	Nov. 25, 2021
FR210727001E	02	Revise some content of descriptions	Dec. 16, 2021

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403(i)	6dB & 26dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.407(a)	Maximum Conducted Output Power	Pass	-
3.3	15.407(a)	Power Spectral Density	Pass	-
3.4	15.407(b)	Unwanted Emissions	Pass	Under limit 0.63 dB at 17385.000 MHz
3.5	15.207	AC Conducted Emission	Pass	Under limit 9.88 dB at 0.492 MHz
3.6	15.203 15.407(a)	Antenna Requirement	Pass	-

Declaration of Conformity:

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

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Product Feature of Equipment Under Test

The EUT is an indoor AP with radios including Bluetooth - LE, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac/ax, 802.15.4 (Zigbee), equipped with integrated antennas configured below:

Product Specification subjective to this standard		
Antenna Type	WLAN 2.4GHz	
	<Ant. 6>: Flexible PCB Antenna	
	<Ant. 3>: Flexible PCB Antenna	
	WLAN 5GHz	
	<Ant. 4>: Flexible PCB Antenna	
	<Ant. 5>: Flexible PCB Antenna	
	Bluetooth: Flexible PCB Antenna	
	Zigbee: Flexible PCB Antenna	
Antenna information		
5725 MHz ~ 5850 MHz	Peak Gain (dBi)	<Ant. 4>: 5.71 <Ant. 5>: 4.78

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

Specification of Accessories				
Adapter 1	Brand Name	eero	Model Name	C210001
Adapter 2	Brand Name	eero	Model Name	C210003
Adapter 3	Brand Name	eero	Model Name	C210004
Adapter 4	Brand Name	eero	Model Name	C210005

Remark: The manufacturer declares that all the power supplies listed are electrically identical from one another, the only difference between all the models are the plugs designed for use in different countries. All the test is performed with only one power supply, model C210001 as shown in this report.

1.2 Modification of EUT

No modifications are made to the EUT during all test items.



1.3 Testing Location

Test Site	Sporton International (USA) Inc.
Test Site Location	1175 Montague Expressway, Milpitas, CA 95035 TEL : 408 9043300
Test Site No.	Sporton Site No. TH01-CA, CO01-CA, 03CH02-CA

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

1.4 Applicable Standards

According to the specifications of 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 test items were verified and recorded according to the standards without any deviation during the test.
2. This EUT has also been tested and shown compliance 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).
- Radiated measurements are performed in one orientation which is plane X according to the prescribed placement of the device in normal operation declared by the manufacturer.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Bandwidth	Channel	Frequency (MHz)
5725-5850 MHz (U-NII-3)	20 MHz	149	5745
		153	5765
		157	5785
		161	5805
		165	5825
	40 MHz	151	5755
		159	5795
	80 MHz	155	5775

2.2 Test Mode

All modulation schemes/data rate are verified by conducted power test case, and the modulation schemes with highest power is used for all test cases. The final test items are considering the modulation schemes and the worst data rates as the table below.

The manufacturer declares that this product would only operate in 2Tx CDD mode, hence all the test cases are performed as instructed.

Specification	MCS index /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

Note: The 802.11ax covers the 802.11n and 11ac due to same modulation family scheme. For 802.11ax, only full resource unit assignment mode is tested since EUT doesn't support partial resource unit assignment mode.

RF test channels are listed in the following table:

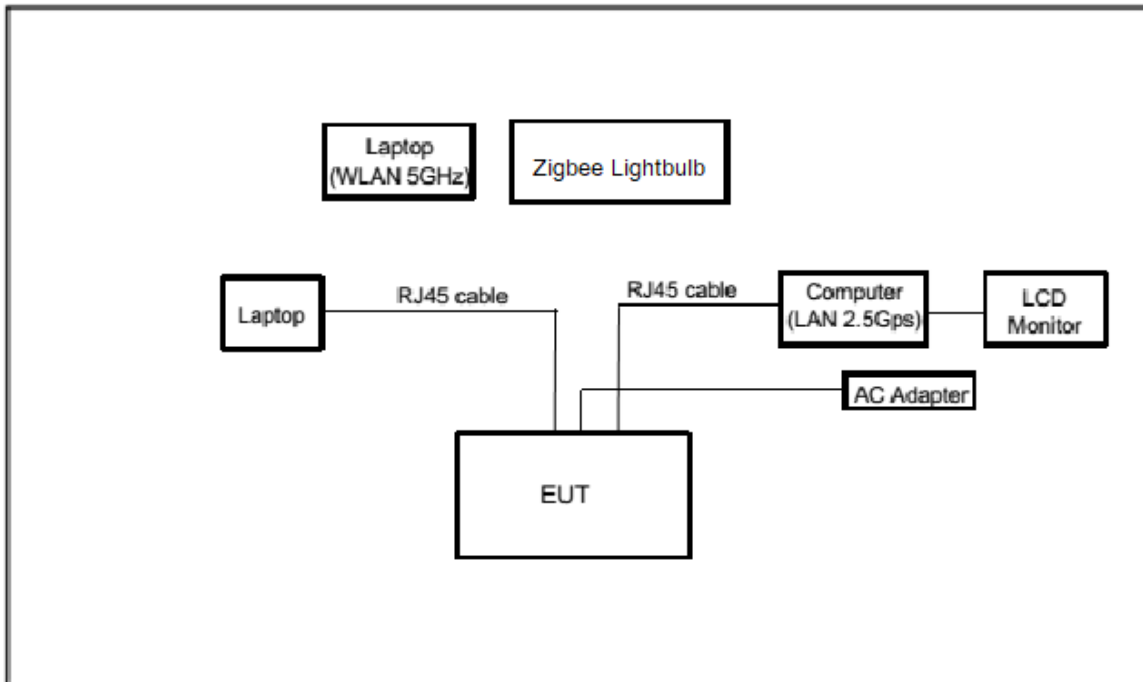
Ch. #		RF test channel of UNII-3			
		802.11a	802.11ax HE20	802.11ax HE40	802.11ax HE80
L	Low	149	149	151	-
M	Middle	157	157	-	155
		-	161	-	-
H	High	165	165	159	-

AC Conducted Emission Test Cases is listed in the following table:

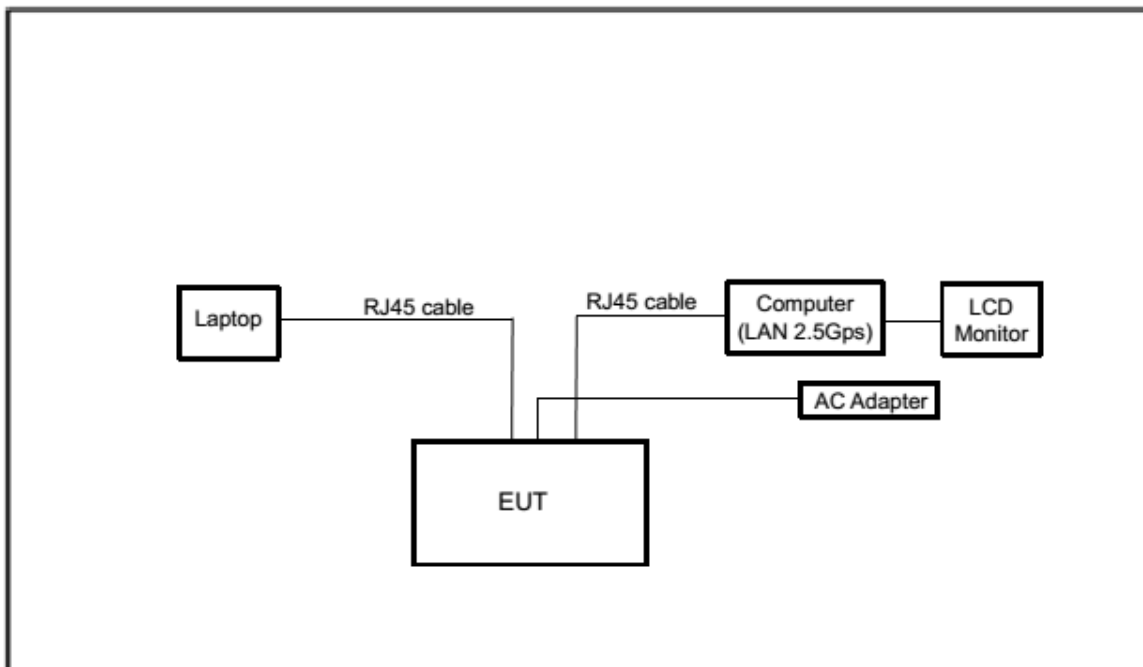
AC Conducted Emission Test Cases
Mode 1: WLAN (5GHz) Link + Zigbee Link + LAN 1 Link + LAN 2 Link + Charging from Adapter

2.3 Connection Diagram of Test System

<AC Conducted Emission Mode>



<Radiated Emission Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	Acer	PS548 G1	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
2.	Notebook	HP	14-dq1043cl	TX2-RTL8822CE	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Notebook	ThinkPad	ThinkPad X1 Carbon Gen 8	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Computer	Fractal	FD-C-DEF7A-01 (NETINTX550TR Intel X550T2BLK)	FCC DoC	N/A	Unshielded, 1.2m
5.	LCD Monitor	Samsung	LS27E310HZG/ZA	FCC DoC	N/A	Unshielded, 1.2m
6.	LightBulb for Zigbee	Philip	Hue	N/A	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “QRCT4:4.0.00189.0” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

Offset = RF cable loss + attenuator factor.

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

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

3 Test Result

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

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

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

26dB and 99% Occupied bandwidth are reporting only.

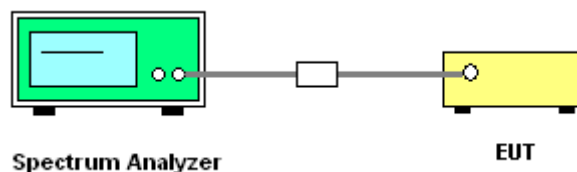
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

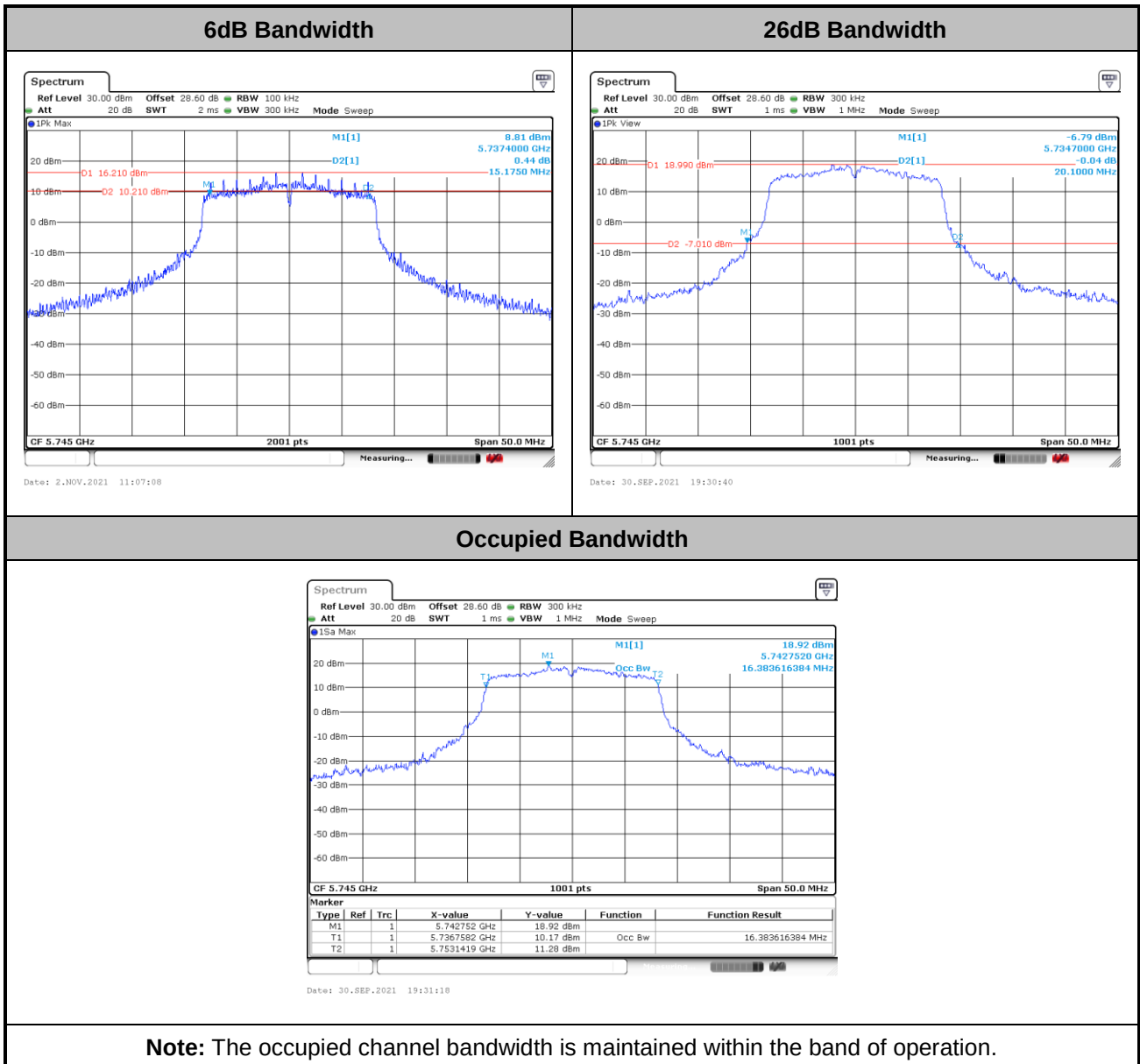


3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.



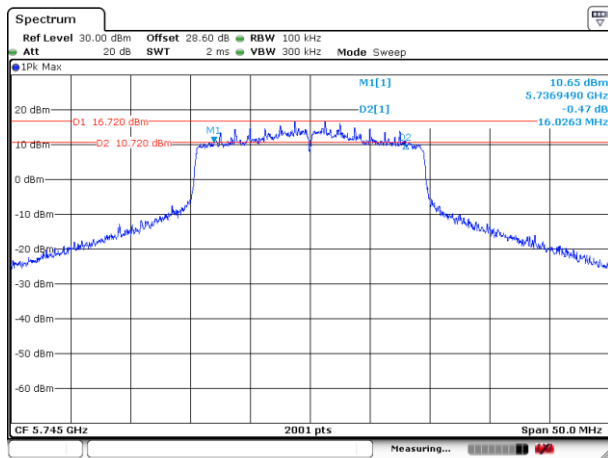
802.11a CH149



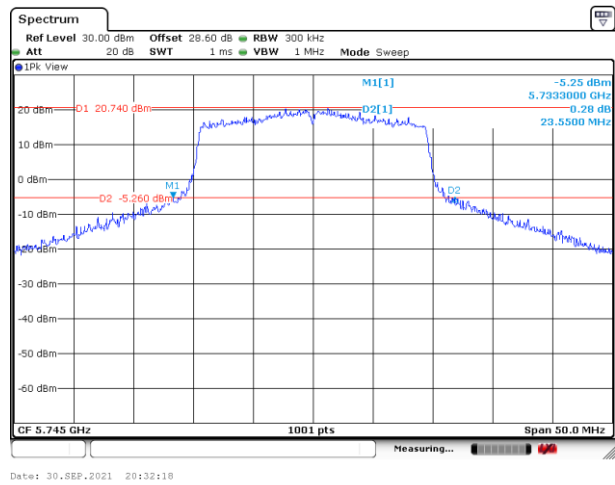


802.11ax HE20 CH149

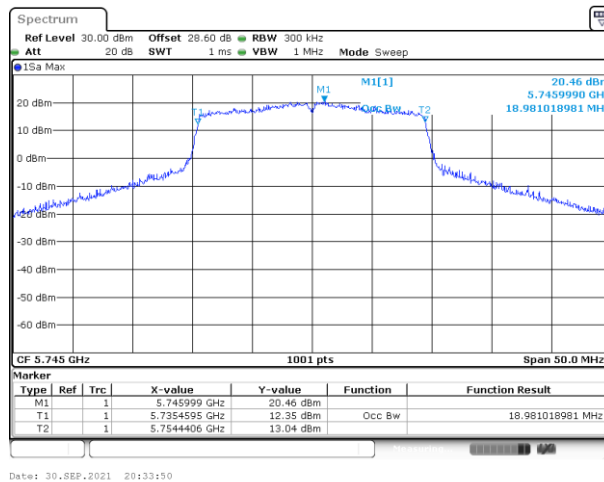
6dB Bandwidth



26dB Bandwidth



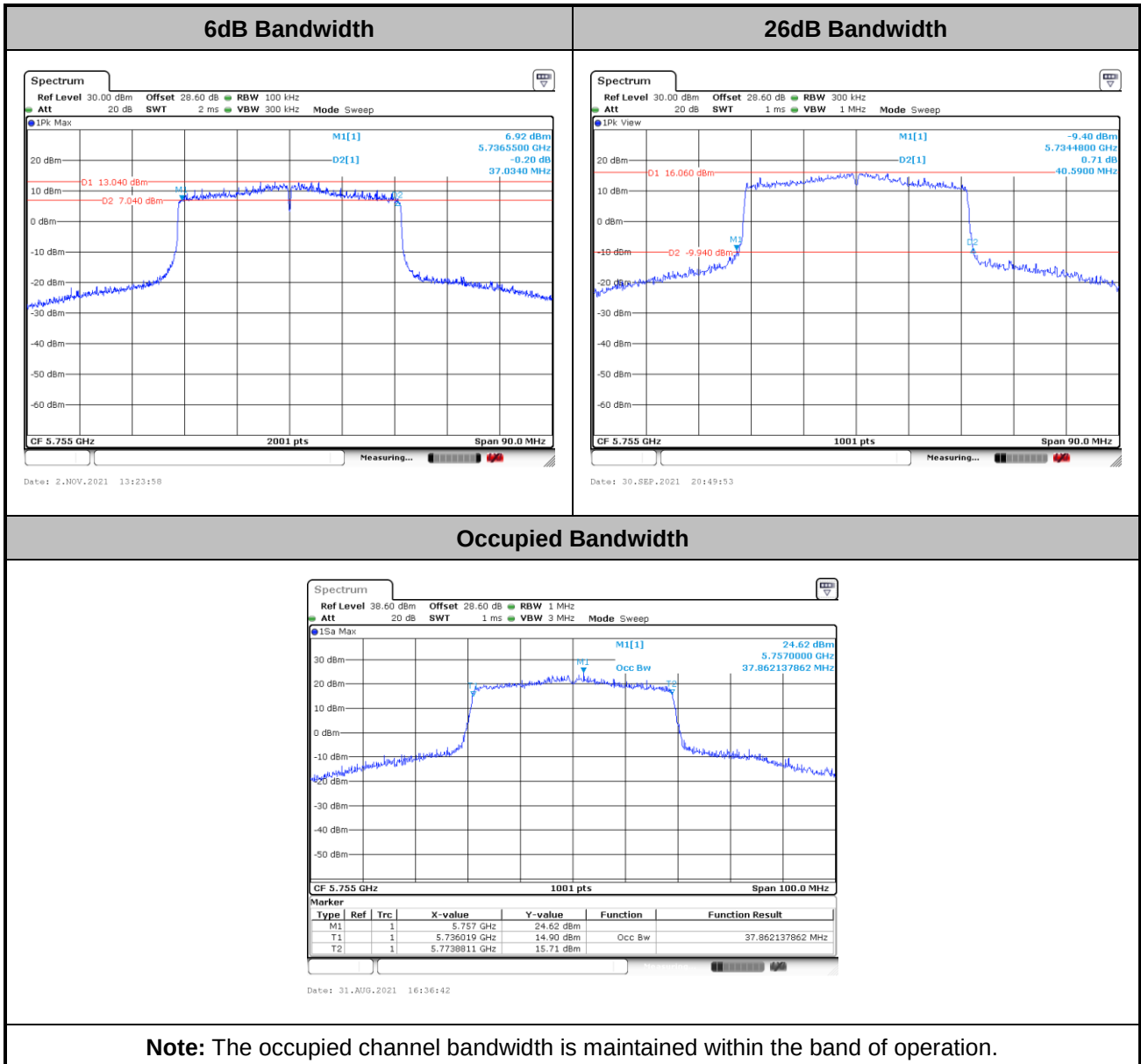
Occupied Bandwidth



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



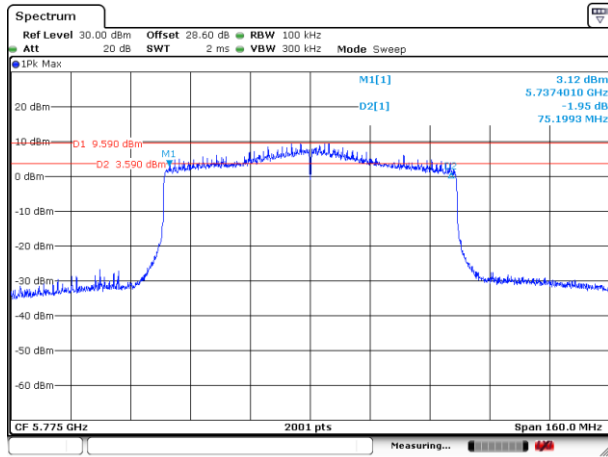
802.11ax HE40 CH151





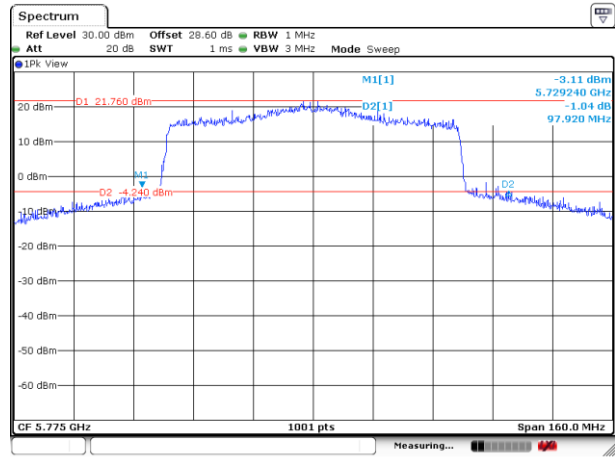
802.11ax HE80 CH155

6dB Bandwidth



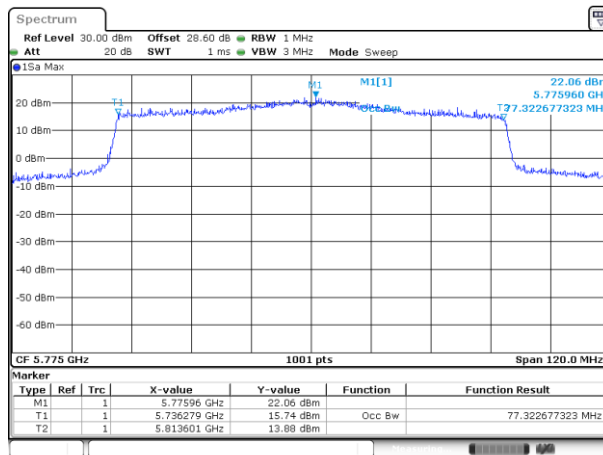
Date: 2.NOV.2021 13:37:43

26dB Bandwidth



Date: 31.NOV.2021 17:14:47

Occupied Bandwidth



Date: 31.NOV.2021 17:17:08

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

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 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

See list of measuring equipment of this test report.

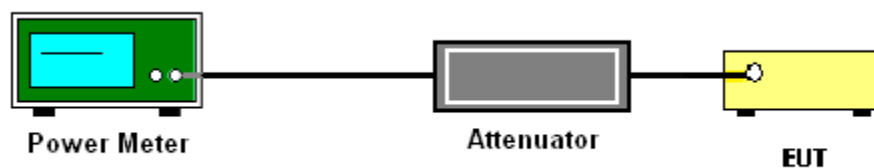
3.2.3 Test Procedures

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 output power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

See list of measuring equipment of 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):

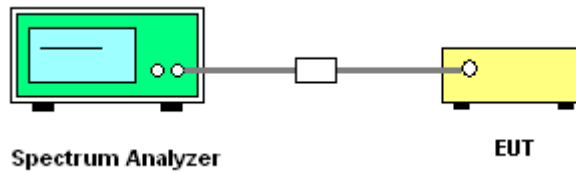
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 MHz.
- Set VBW = 1 MHz.
- Number of points in sweep $\geq 2 \text{ Span} / \text{RBW}$.
- Sweep time $\leq (\text{number of points in sweep}) \times T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Detector = power averaging (rms).
- Trace mode = max hold.
- Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measured PSD should be added with $10 \cdot \log(500\text{kHz}/\text{RBW})$ and recorded on the report.
3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

Method (c): Measure and add $10 \log(N_{\text{ANT}})$ dB.

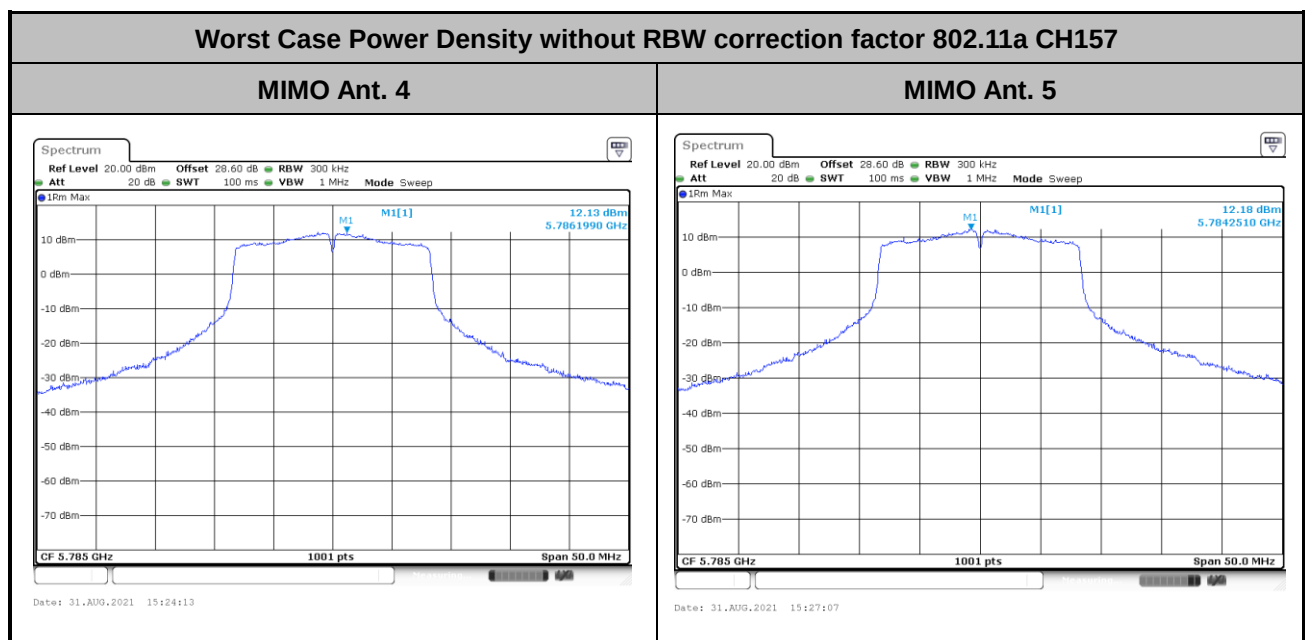
With this technique, spectrum measurements are performed at each output of the device, but rather than summing the spectra or the spectral peaks across the outputs, the quantity $10 \log(N_{\text{ANT}})$ dB is added to each spectrum value before comparing to the emission limit.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

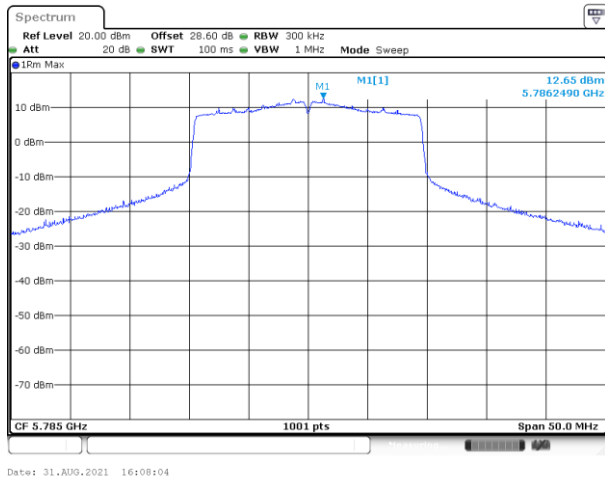




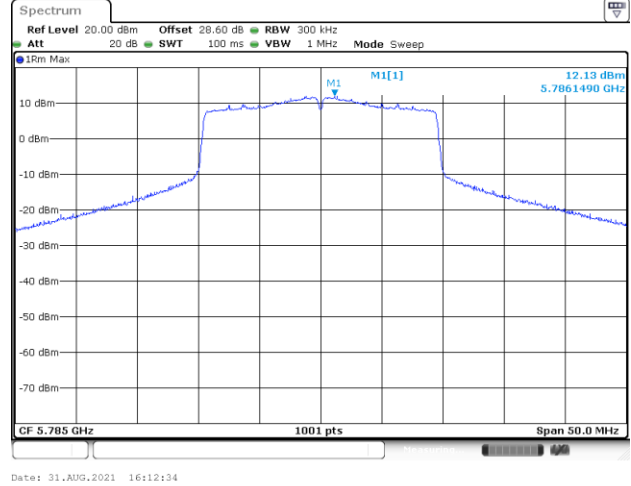
<802.11ax mode>

Worst Case Power Density without RBW correction factor 802.11ax HE20 CH157

MIMO Ant. 4



MIMO Ant. 5



3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

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

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

Frequency (MHz)	Emission limit (dBm/MHz)	Field Strength at 3m (dBμV/m)
Below 5650	-27	68.2
5650 – 5700	-27 – 10	68.2 – 105.2
5700 – 5720	10 – 15.6	105.2 – 110.8
5720 – 5725	15.6 – 27	110.8 – 122.2
5850 – 5855	27 – 15.6	122.2 – 110.8
5855 – 5875	15.6 – 10	110.8 – 105.2
5875 – 5925	10 – -27	105.2 – 68.2
Above 5925	-27	68.2

Note: Field strength at 3 m distance is converted to EIRP as the following equation:

$$\text{EIRP[dBm]} = \text{E[dB}\mu\text{V/m]} - 95.2$$

- (2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as the following table:

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

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

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

(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

See list of measuring equipment of this test report.

3.4.3 Test Procedures

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

Section G) Unwanted emissions measurement.

(1) Procedure for Unwanted Emissions Measurements Below 1000 MHz

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

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

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

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

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

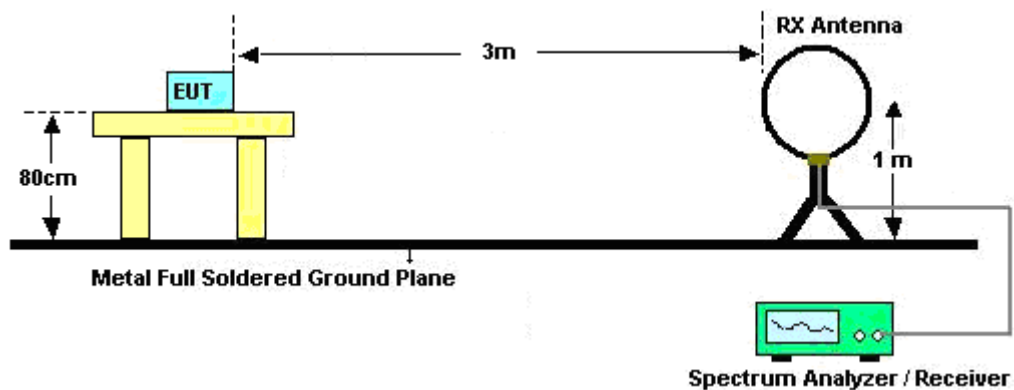
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT was placed at distance 3 meter from measurement antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband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

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

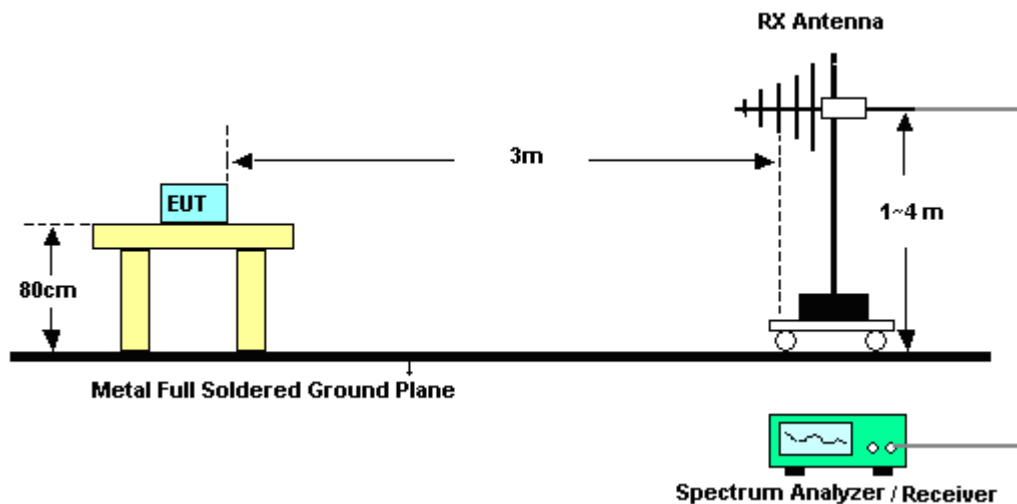
When there is no suspected emission found and the harmonic emission level is with at least 6dB margin against average limit line, the position is marked as “-“.

3.4.4 Test Setup

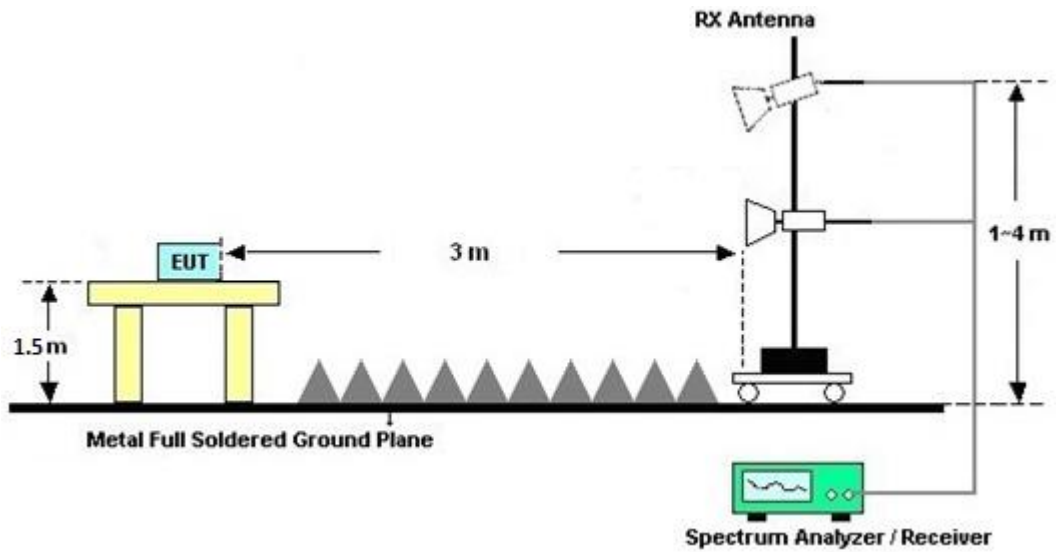
For radiated emissions below 30MHz



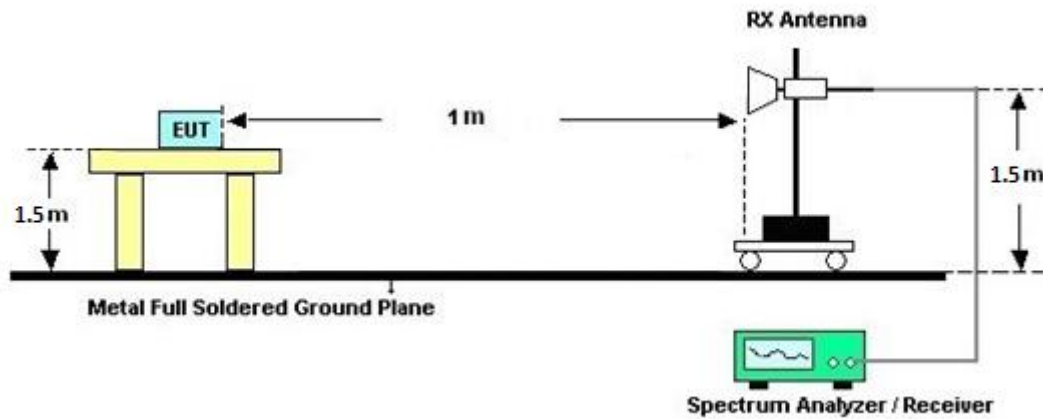
For radiated emissions from 30MHz to 1GHz



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 started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

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



3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix C and D.

3.4.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

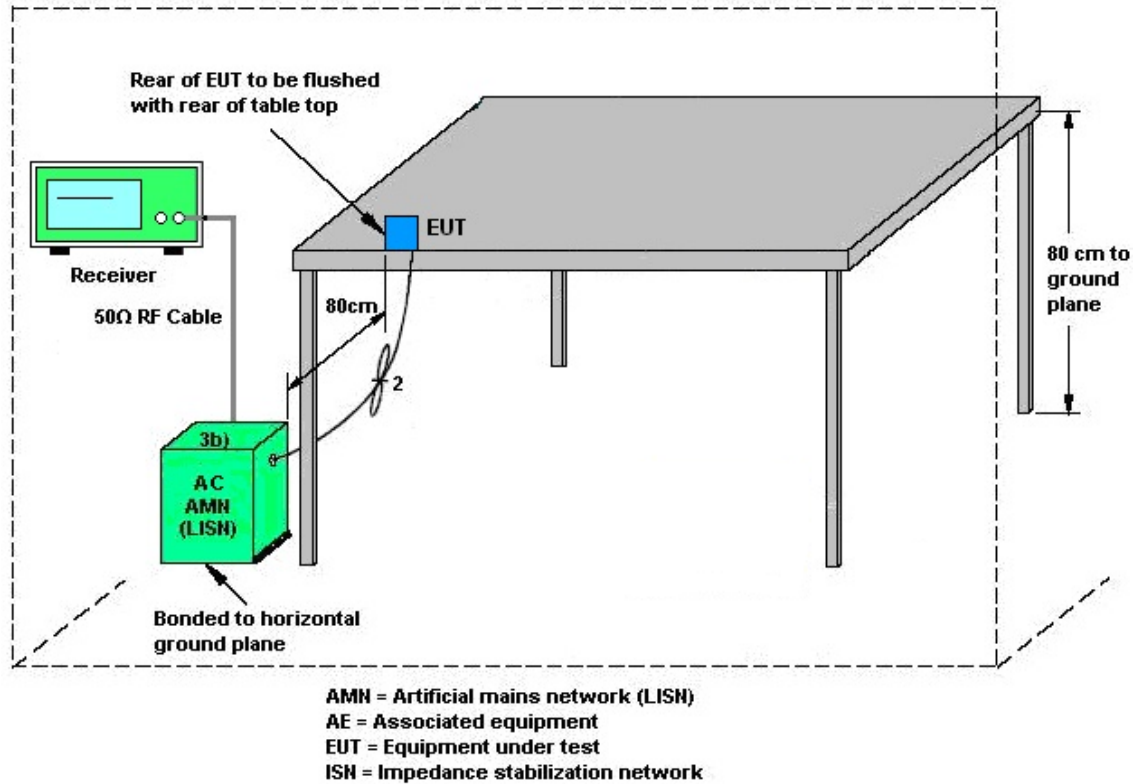
3.5.2 Measuring Instruments

See list of measuring equipment of this test report.

3.5.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was 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 sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Antenna Requirements

3.6.1 Standard Applicable

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

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.6.3 Antenna Gain

Refer to FCC KDB 662911 D01 Multiple Transmitter Output v02r01

<CDD Modes >

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 k th antenna is being fed by spatial stream j , or zero if it is not;

G_k is the gain in dBi of the k th antenna.

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

Directional gain = $10 \cdot \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi

Where $G_1, G_2, \dots, G_N$ denote single antenna gain.

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

Directional gain of power measurement = $\max(3.6, 4.2) + 0 = 4.2\text{ dBi}$

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

The directional gain of EUT is listed in the following table.

<CDD Modes>						
			DG	DG	Power	PSD
			for	for	Limit	Limit
	Ant. 4	Ant. 5	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
Band IV	5.71	4.78	5.71	8.27	0.00	2.27

Calculation example:

Directional gain of PSD measurement =

$10 \times \log \{ [10^{(5.71\text{dBi}/20)} + 10^{(4.78\text{dBi}/20)}]^2 / 2 \} = 8.27\text{ dBi}$



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	R&S	HFH2-Z2E	100840	9kHz~30MHz	Jun. 21, 2021	Aug. 11, 2021~ Nov. 02, 2021	Jun. 20, 2022	Radiation (03CH02-CA)
Bilog Antenna	TESEQ	6111D	50392	30MHz~1GHz	Aug. 10, 2021	Aug. 11, 2021~ Nov. 02, 2021	Aug. 09, 2022	Radiation (03CH02-CA)
Horn Antenna	SCHWARZBECK	BBHA 9120D	02113	1GHz~18GHz	Jul. 08, 2021	Aug. 11, 2021~ Nov. 02, 2021	Jul. 07, 2022	Radiation (03CH02-CA)
Horn Antenna	SCHWARZBECK	BBHA 9170D	00842	18GHz~40GHz	Jul. 20, 2021	Aug. 11, 2021~ Nov. 02, 2021	Jul. 19, 2022	Radiation (03CH02-CA)
Amplifier	SONOMA	310N	372240	N/A	Aug. 09, 2021	Aug. 11, 2021~ Nov. 02, 2021	Aug. 08, 2022	Radiation (03CH02-CA)
Preamplifier	Keysight	83017A	MY53270323	1GHz~26.5GHz	Jul. 27, 2021	Aug. 11, 2021~ Nov. 02, 2021	Jul. 26, 2022	Radiation (03CH02-CA)
Preamplifier	E-instrument	ERA-100M-18 G-56-01-A70	EC1900251	1GHz~18GHz	Mar. 30, 2021	Aug. 11, 2021~ Nov. 02, 2021	Mar. 29, 2022	Radiation (03CH02-CA)
Preamplifier	Jet-Power	JPA0118-55-30 3	17100018000 55004	1GHz~18GHz	Jul. 21, 2021	Aug. 11, 2021~ Nov. 02, 2021	Jul. 20, 2022	Radiation (03CH02-CA)
Preamplifier	EMEC	EMC18G40G	60725	18GHz~40GHz	Jul. 21, 2021	Aug. 11, 2021~ Nov. 02, 2021	Jul. 20, 2022	Radiation (03CH02-CA)
Spectrum Analyzer	Keysight	N9010A	MY54200485	10Hz~44GHz	Mar. 05, 2021	Aug. 11, 2021~ Nov. 02, 2021	Mar. 04, 2022	Radiation (03CH02-CA)
Filter	Wainwright	WHKX8-5872. 5-6750-18000- 40ST	SN08	6.75GHz High Pass Filter	Jul. 23, 2021	Aug. 11, 2021~ Nov. 02, 2021	Jul. 22, 2022	Radiation (03CH02-CA)
Filter	Wainwright	WHKX12-2700 -3000-18000-6 0ST	SN10	3 GHz High Pass Filter	Jul. 23, 2021	Aug. 11, 2021~ Nov. 02, 2021	Jul. 22, 2022	Radiation (03CH02-CA)
Filter	Wainwright	WLK12-1200-1 272-11000-40 SS	SN1	1.2G Low Pass	Jul. 23, 2021	Aug. 11, 2021~ Nov. 02, 2021	Jul. 22, 2022	Radiation (03CH02-CA)
Hygrometer	TESEO	608-H1	45142602	N/A	Aug. 04, 2021	Aug. 11, 2021~ Nov. 02, 2021	Aug. 03, 2022	Radiation (03CH02-CA)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Aug. 11, 2021~ Nov. 02, 2021	N/A	Radiation (03CH02-CA)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Aug. 11, 2021~ Nov. 02, 2021	N/A	Radiation (03CH02-CA)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Aug. 11, 2021~ Nov. 02, 2021	N/A	Radiation (03CH02-CA)
Software	Audix	E3	N/A	N/A	N/A	Aug. 11, 2021~ Nov. 02, 2021	N/A	Radiation (03CH02-CA)
Hygrometer	Testo	608-H1	45141354	N/A	Jul. 30, 2021	Aug. 30, 2021~ Nov. 02, 2021	Jul. 29, 2022	Conducted (TH01-CA)
Power Sensor	DARE!!	RPR3006W	RPR6W-1901 024	10MHz-6GHz	Jul. 13, 2021	Aug. 30, 2021~ Nov. 02, 2021	Jul. 12, 2022	Conducted (TH01-CA)
Switch	EM Electronics	EMSW18	SW1070902	N/A	Aug. 03, 2021	Aug. 30, 2021~ Nov. 02, 2021	Aug. 02, 2022	Conducted (TH01-CA)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101545	10Hz-40GHz	Jun. 01, 2021	Aug. 30, 2021~ Nov. 02, 2021	May 31, 2022	Conducted (TH01-CA)
LISN	TESEQ	NNB51	47407	N/A	Jul. 21, 2021	Aug. 16, 2021~ Aug. 17, 2021	Jul. 20, 2022	Conduction (CO01-CA)
LISN	TESEQ	NNB51	47415	N/A	Jun. 30, 2021	Aug. 16, 2021~ Aug. 17, 2021	Jun. 29, 2022	Conduction (CO01-CA)
EMI Test Receiver	R&S	ESR7	102177	9KHz~7GHz	Jun. 02, 2021	Aug. 16, 2021~ Aug. 17, 2021	Jun. 01, 2022	Conduction (CO01-CA)
Pulse limiter with 10dB attenuation	R&S	VTSD 9561-F N	9561-F- N00412	N/A	Jul. 07, 2021	Aug. 16, 2021~ Aug. 17, 2021	Jul. 06, 2022	Conduction (CO01-CA)
Test Software	R&S	EMC32 V10.30.0	N/A	N/A	N/A	Aug. 16, 2021~ Aug. 17, 2021	N/A	Conduction (CO01-CA)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.0 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.7 dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.2 dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.4 dB
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Steve Chen	Temperature:	20.3~23.3	°C
Test Date:	2021/8/30~2021/11/02	Relative Humidity:	34.1~45.6	%

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

Band IV MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant 4	Ant 5	Ant 4	Ant 5	Ant 4	Ant 5		
11a	6Mbps	2	149	5745	16.38	16.43	20.10	20.75	15.18	15.18	0.5	Pass
11a	6Mbps	2	157	5785	16.43	16.48	20.85	21.60	15.17	15.18	0.5	Pass
11a	6Mbps	2	165	5825	16.33	16.33	19.65	19.50	15.15	15.15	0.5	Pass

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

Band IV MIMO													
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
						Ant 4	Ant 5	Ant 4	Ant 5	Ant 4	Ant 5		
HE20	MCS0	2	149	5745	Full	18.98	18.93	23.55	22.40	16.02	16.50	0.5	Pass
HE20	MCS0	2	157	5785	Full	19.08	19.28	27.25	29.30	16.43	16.28	0.5	Pass
HE20	MCS0	2	161	5805	Full	18.83	18.78	20.75	21.35	15.97	16.45	0.5	Pass
HE20	MCS0	2	165	5825	Full	18.83	18.83	20.95	21.10	17.04	16.50	0.5	Pass
HE40	MCS0	2	151	5755	Full	37.86	37.86	40.59	40.32	37.03	37.08	0.5	Pass
HE40	MCS0	2	159	5795	Full	38.16	38.36	52.20	63.90	37.08	36.44	0.5	Pass
HE80	MCS0	2	155	5775	Full	77.32	77.44	97.92	108.00	75.20	74.00	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO												
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 4	Ant 5	SUM	Ant 4	Ant 5	Ant 4	Ant 5	
11a	6Mbps	2	149	5745	26.71	26.41	29.57	30.00		5.71		Pass
11a	6Mbps	2	157	5785	26.91	26.71	29.82	30.00		5.71		Pass
11a	6Mbps	2	165	5825	24.11	23.81	26.97	30.00		5.71		Pass
HT20	MCS0	2	149	5745	26.71	26.51	29.62	30.00		5.71		Pass
HT20	MCS0	2	157	5785	27.01	26.81	29.92	30.00		5.71		Pass
HT20	MCS0	2	165	5825	22.01	21.61	24.82	30.00		5.71		Pass
HT40	MCS0	2	151	5755	26.21	26.21	29.22	30.00		5.71		Pass
HT40	MCS0	2	159	5795	26.71	26.61	29.67	30.00		5.71		Pass
VHT20	MCS0	2	149	5745	26.71	26.51	29.62	30.00		5.71		Pass
VHT20	MCS0	2	157	5785	26.91	26.81	29.87	30.00		5.71		Pass
VHT20	MCS0	2	165	5825	22.01	21.71	24.87	30.00		5.71		Pass
VHT40	MCS0	2	151	5755	26.21	26.11	29.17	30.00		5.71		Pass
VHT40	MCS0	2	159	5795	26.61	26.51	29.57	30.00		5.71		Pass
VHT80	MCS0	2	155	5775	26.71	26.81	29.77	30.00		5.71		Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
						Ant 4	Ant 5	SUM	Ant 4	Ant 5	Ant 4	Ant 5	
HE20	MCS0	2	149	5745	Full	26.91	26.61	29.77	30.00		5.71		Pass
HE20	MCS0	2	157	5785	Full	27.01	26.91	29.97	30.00		5.71		Pass
HE20	MCS0	2	161	5805	Full	23.11	22.11	25.65	30.00		5.71		Pass
HE20	MCS0	2	165	5825	Full	22.21	21.91	25.07	30.00		5.71		Pass
HE40	MCS0	2	151	5755	Full	26.41	26.51	29.47	30.00		5.71		Pass
HE40	MCS0	2	159	5795	Full	26.91	27.01	29.97	30.00		5.71		Pass
HE80	MCS0	2	155	5775	Full	26.91	26.91	29.92	30.00		5.71		Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Power Density (dBm/300kHz)		RBW Factor (dB)	Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)	DG (dBi)	Pass /Fail
					Ant 4	Ant 5		Ant 4	Ant 5	SUM			
11a	6Mbps	2	149	5745	11.69	11.78	2.22	13.91	14.00	17.01	27.73	8.27	Pass
11a	6Mbps	2	157	5785	12.13	12.18	2.22	14.35	14.40	17.41	27.73	8.27	Pass
11a	6Mbps	2	165	5825	9.06	9.03	2.22	11.28	11.25	14.29	27.73	8.27	Pass

Note 1: PSD is measured with RBW = 300kHz and RBW factor = $10 \cdot \log(500\text{kHz}/300\text{kHz})$

PSD (dBm/500kHz) = PSD (dBm/300kHz) + RBW factor

Note 2: PSD Sum = Max PSD(Ant. 4, Ant. 5) + $10 \log(2)$

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config	Average Power Density (dBm/300kHz)		RBW Factor (dB)	Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)	DG (dBi)	Pass /Fail
						Ant 4	Ant 5		Ant 4	Ant 5	SUM			
HE20	MCS0	2	149	5745	Full	12.19	11.82	2.22	14.41	14.04	17.42	27.73	8.27	Pass
HE20	MCS0	2	157	5785	Full	12.65	12.13	2.22	14.87	14.35	17.88	27.73	8.27	Pass
HE20	MCS0	2	161	5805	Full	8.51	6.93	2.22	10.73	9.15	13.74	27.73	8.27	Pass
HE20	MCS0	2	165	5825	Full	7.51	6.56	2.22	9.73	8.78	12.74	27.73	8.27	Pass
HE40	MCS0	2	151	5755	Full	8.52	8.56	2.22	10.74	10.78	13.79	27.73	8.27	Pass
HE40	MCS0	2	159	5795	Full	9.01	8.97	2.22	11.23	11.19	14.24	27.73	8.27	Pass
HE80	MCS0	2	155	5775	Full	6.68	6.4	2.22	8.90	8.62	11.91	27.73	8.27	Pass

Note 1: PSD is measured with RBW = 300kHz and RBW factor = $10 \cdot \text{LOG}(500\text{kHz}/300\text{kHz})$

PSD (dBm/500kHz) = PSD (dBm/300kHz) + RBW factor

Note 2: PSD Sum = Max PSD(Ant. 4, Ant. 5) + $10 \log(2)$



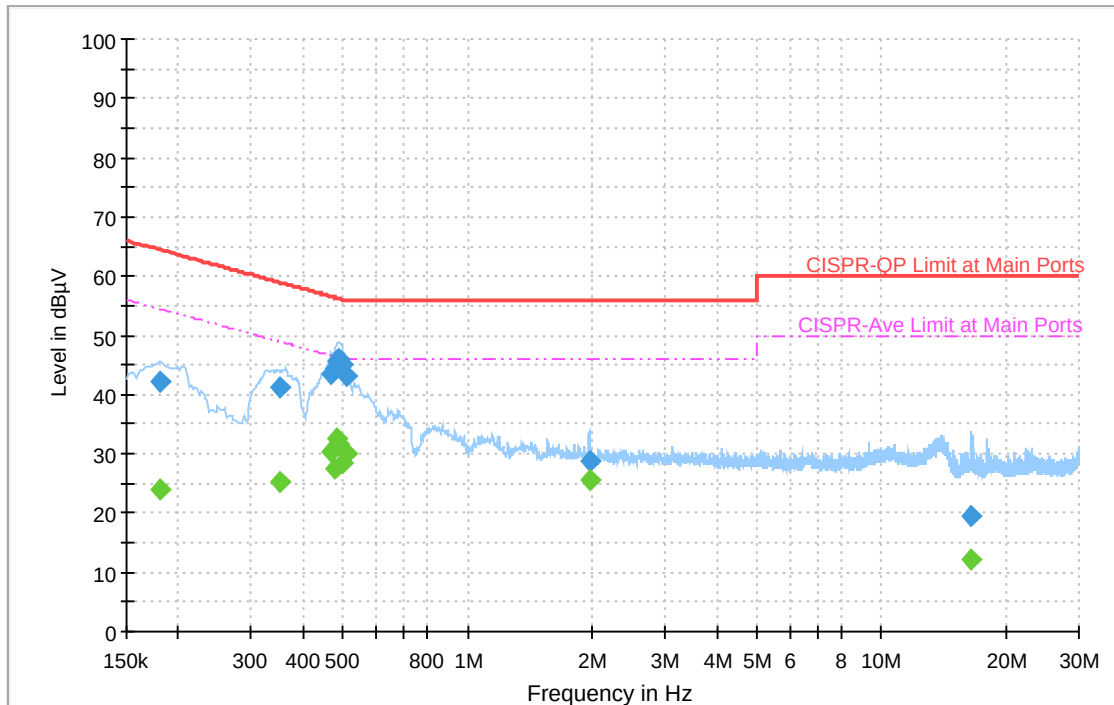
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Jordan Huang	Temperature :	24~46°C
		Relative Humidity :	43~47%

EUT Information

Site: CO01-CA
Power: 120Vac/60Hz
Mode: 1

Full Spectrum



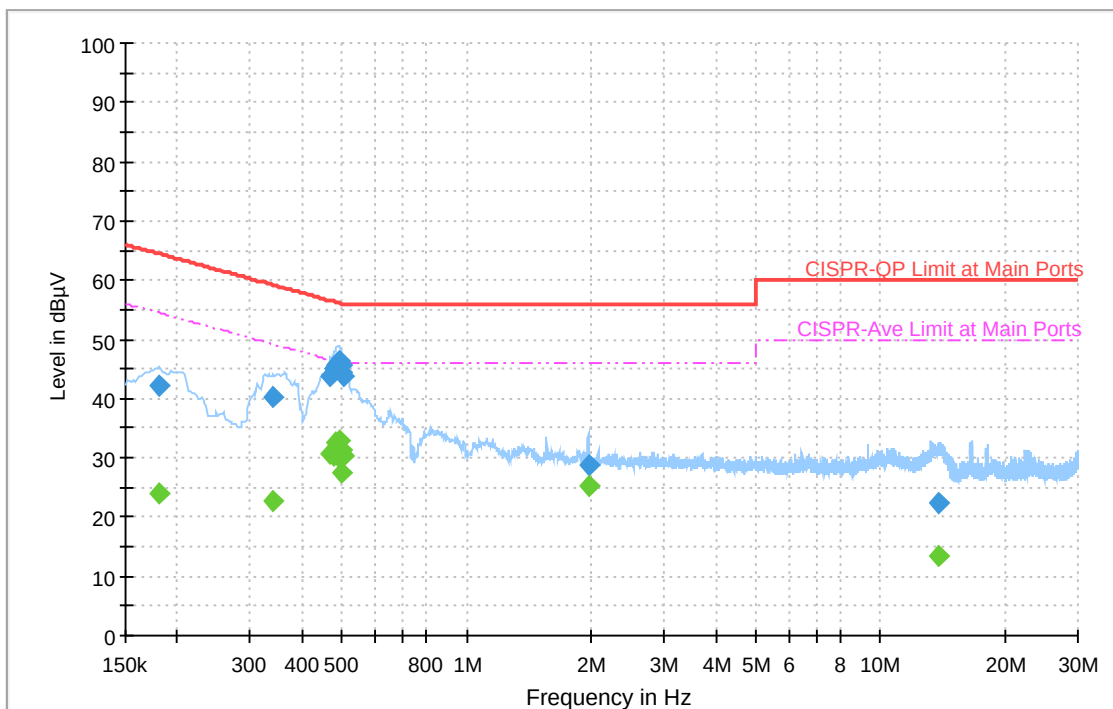
Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.181500	---	23.99	54.42	30.43	L1	OFF	20.3
0.181500	42.32	---	64.42	22.10	L1	OFF	20.3
0.350250	---	25.38	48.96	23.58	L1	OFF	20.3
0.350250	41.18	---	58.96	17.78	L1	OFF	20.3
0.469500	---	30.24	46.52	16.28	L1	OFF	20.3
0.469500	43.43	---	56.52	13.09	L1	OFF	20.3
0.476250	---	27.40	46.40	19.00	L1	OFF	20.3
0.476250	44.45	---	56.40	11.95	L1	OFF	20.3
0.483000	---	32.58	46.29	13.71	L1	OFF	20.3
0.483000	45.71	---	56.29	10.58	L1	OFF	20.3
0.489750	---	31.76	46.17	14.41	L1	OFF	20.3
0.489750	46.16	---	56.17	10.01	L1	OFF	20.3
0.498750	---	28.58	46.02	17.44	L1	OFF	20.3
0.498750	44.91	---	56.02	11.11	L1	OFF	20.3
0.507750	---	29.99	46.00	16.01	L1	OFF	20.3
0.507750	43.28	---	56.00	12.72	L1	OFF	20.3
1.965750	---	25.53	46.00	20.47	L1	OFF	20.3
1.965750	28.91	---	56.00	27.09	L1	OFF	20.3
16.417500	---	12.09	50.00	37.91	L1	OFF	20.6
16.417500	19.43	---	60.00	40.57	L1	OFF	20.6

EUT Information

Site: CO01-CA
Power: 120Vac/60Hz
Mode: 1

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.181500	42.22	---	64.42	22.20	N	OFF	20.2
0.181500	---	23.94	54.42	30.48	N	OFF	20.2
0.341250	40.41	---	59.17	18.76	N	OFF	20.3
0.341250	---	22.72	49.17	26.45	N	OFF	20.3
0.469500	43.63	---	56.52	12.89	N	OFF	20.3
0.469500	---	30.52	46.52	16.00	N	OFF	20.3
0.478500	45.16	---	56.37	11.21	N	OFF	20.3
0.478500	---	30.28	46.37	16.09	N	OFF	20.3
0.483000	45.79	---	56.29	10.50	N	OFF	20.3
0.483000	---	32.61	46.29	13.68	N	OFF	20.3
0.487500	45.94	---	56.21	10.27	N	OFF	20.3
0.487500	---	30.40	46.21	15.81	N	OFF	20.3
0.492000	46.25	---	56.13	9.88	N	OFF	20.3
0.492000	---	33.06	46.13	13.07	N	OFF	20.3
0.496500	45.54	---	56.06	10.52	N	OFF	20.3
0.496500	---	31.16	46.06	14.90	N	OFF	20.3
0.501000	44.46	---	56.00	11.54	N	OFF	20.3
0.501000	---	27.34	46.00	18.66	N	OFF	20.3
0.505500	43.80	---	56.00	12.20	N	OFF	20.3
0.505500	---	30.32	46.00	15.68	N	OFF	20.3
1.965750	28.75	---	56.00	27.25	N	OFF	20.3
1.965750	---	25.35	46.00	20.65	N	OFF	20.3

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
13.796250	22.50	---	60.00	37.50	N	OFF	20.5
13.796250	---	13.50	50.00	36.50	N	OFF	20.5



Appendix C. Radiated Spurious Emission

Test Engineer :	Michael Bui and Daniel Lee	Temperature :	20~24°C
		Relative Humidity :	42~48%

Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
4+5		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5646	58.18	-10.02	68.2	44.63	31.95	11.71	30.11	305	107	P	H
		5700	64.6	-40.6	105.2	50.94	32.04	11.78	30.16	305	107	P	H
		5718.8	81.42	-29.04	110.46	67.7	32.1	11.78	30.16	305	107	P	H
		5725	90.51	-31.69	122.2	76.78	32.12	11.78	30.17	305	107	P	H
	*	5745	124.02	-	-	110.23	32.18	11.78	30.17	305	107	P	H
	*	5745	116.81	-	-	103.02	32.18	11.78	30.17	305	107	A	H
													H
													H
		5645.2	54.49	-13.71	68.2	40.87	32.02	11.71	30.11	306	358	P	V
		5699.6	59.71	-45.2	104.91	45.97	32.12	11.78	30.16	306	358	P	V
		5717	76.61	-33.35	109.96	62.83	32.16	11.78	30.16	306	358	P	V
		5724.6	82.35	-38.94	121.29	68.55	32.18	11.78	30.16	306	358	P	V
	*	5745	121.98	-	-	108.15	32.22	11.78	30.17	306	358	P	V
	*	5745	115.65	-	-	101.82	32.22	11.78	30.17	306	358	A	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 157 5785MHz		5601.2	54.79	-13.41	68.2	41.27	31.99	11.65	30.12	289	114	P	H
		5695.6	58.15	-43.81	101.96	44.51	32.03	11.77	30.16	289	114	P	H
		5720	57.84	-52.96	110.8	44.12	32.1	11.78	30.16	289	114	P	H
		5725	59.13	-63.07	122.2	45.4	32.12	11.78	30.17	289	114	P	H
	*	5785	123.2	-	-	109.26	32.33	11.78	30.17	289	114	P	H
	*	5785	116.93	-	-	102.99	32.33	11.78	30.17	289	114	A	H
		5850.2	57.29	-64.45	121.74	43.16	32.44	11.87	30.18	289	114	P	H
		5868.4	56.63	-50.42	107.05	42.47	32.46	11.9	30.2	289	114	P	H
		5879.2	58.03	-44.05	102.08	43.85	32.47	11.92	30.21	289	114	P	H
		5928.2	53.98	-14.22	68.2	39.7	32.53	11.99	30.24	289	114	P	H
													H
													H
		5612.6	54.22	-13.98	68.2	40.63	32.04	11.67	30.12	304	358	P	V
		5685.2	54.55	-39.73	94.28	40.85	32.09	11.76	30.15	304	358	P	V
		5714.8	54.72	-54.63	109.35	40.95	32.15	11.78	30.16	304	358	P	V
		5720.6	56.46	-55.71	112.17	42.67	32.17	11.78	30.16	304	358	P	V
	*	5785	122.38	-	-	108.5	32.27	11.78	30.17	304	358	P	V
	*	5785	114.3	-	-	100.42	32.27	11.78	30.17	304	358	A	V
		5853.4	55.72	-58.73	114.45	41.56	32.46	11.88	30.18	304	358	P	V
		5861.8	55.46	-53.43	108.89	41.27	32.49	11.89	30.19	304	358	P	V
		5878.6	55.28	-47.25	102.53	41.03	32.54	11.92	30.21	304	358	P	V
		5929.6	54.39	-13.81	68.2	40	32.63	12	30.24	304	358	P	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 165 5825MHz	*	5825	122.22	-	-	108.16	32.41	11.82	30.17	291	109	P	H
	*	5825	115	-	-	100.94	32.41	11.82	30.17	291	109	A	H
		5852.8	62.86	-52.96	115.82	48.72	32.44	11.88	30.18	291	109	P	H
		5858.4	59.56	-50.29	109.85	45.41	32.45	11.89	30.19	291	109	P	H
		5876.4	56.92	-47.24	104.16	42.74	32.47	11.92	30.21	291	109	P	H
		5943	54.54	-13.66	68.2	40.24	32.54	12.01	30.25	291	109	P	H
													H
													H
	*	5825	120.59	-	-	106.57	32.37	11.82	30.17	346	358	P	V
	*	5825	113.4	-	-	99.38	32.37	11.82	30.17	346	358	A	V
		5850	63.76	-58.44	122.2	49.62	32.45	11.87	30.18	346	358	P	V
		5860	59.91	-49.49	109.4	45.73	32.48	11.89	30.19	346	358	P	V
		5875.2	55.4	-49.65	105.05	41.16	32.53	11.92	30.21	346	358	P	V
		5945.8	54.69	-13.51	68.2	40.28	32.65	12.01	30.25	346	358	P	V
													V
													V
													V
Remark - No other spurious found. - All results are PASS against Peak and Average limit line.													



Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 149 5745MHz		11490	50.71	-23.29	74	60.56	40.14	17.61	67.6	136	220	P	H
		11490	41.1	-12.9	54	50.95	40.14	17.61	67.6	136	220	A	H
		13314	49.49	-24.51	74	58.65	39.37	19.19	67.72	-	-	P	H
		13314	39.73	-14.27	54	48.89	39.37	19.19	67.72	-	-	A	H
		14491	52.27	-21.73	74	58.21	41.76	20.04	67.74	-	-	P	H
		14491	44.01	-9.99	54	49.95	41.76	20.04	67.74	-	-	A	H
		17235	55.12	-13.08	68.2	62.25	39.77	22.17	69.07	-	-	P	H
		18000	60.38	-13.62	74	58.36	48.43	23.01	69.42	-	-	P	H
		18000	50.72	-3.28	54	48.7	48.43	23.01	69.42	-	-	A	H
													H
													H
													H
		11490	57.01	-16.99	74	66.76	40.24	17.61	67.6	400	285	P	V
		11490	47.58	-6.42	54	57.33	40.24	17.61	67.6	400	285	A	V
		13347	50.29	-23.71	74	59.27	39.51	19.21	67.7	-	-	P	V
		13347	40.74	-13.26	54	49.72	39.51	19.21	67.7	-	-	A	V
		14491	51.43	-22.57	74	57.5	41.63	20.04	67.74	-	-	P	V
		14491	43.84	-10.16	54	49.91	41.63	20.04	67.74	-	-	A	V
		17235	64.19	-4.01	68.2	71.14	39.95	22.17	69.07	234	291	P	V
		18000	60.4	-13.6	74	58.8	48.01	23.01	69.42	-	-	P	V
		18000	49.9	-4.1	54	48.3	48.01	23.01	69.42	-	-	A	V
													V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 157 5785MHz		11570	49.83	-24.17	74	59.67	40.1	17.68	67.62	131	224	P	H
		11570	39.75	-14.25	54	49.59	40.1	17.68	67.62	131	224	A	H
		13380	50.58	-23.42	74	59.42	39.6	19.24	67.68	-	-	P	H
		13380	41.17	-12.83	54	50.01	39.6	19.24	67.68	-	-	A	H
		14491	53.75	-20.25	74	59.69	41.76	20.04	67.74	-	-	P	H
		14491	44.17	-9.83	54	50.11	41.76	20.04	67.74	-	-	A	H
		17355	57.97	-10.23	68.2	64.34	40.54	22.3	69.21	-	-	P	H
		18000	60.62	-13.38	74	58.6	48.43	23.01	69.42	-	-	P	H
		18000	50.72	-3.28	54	48.7	48.43	23.01	69.42	-	-	A	H
													H
													H
													H
		11570	50.57	-23.43	74	60.43	40.08	17.68	67.62	154	198	P	V
		11570	39.84	-14.16	54	49.7	40.08	17.68	67.62	154	198	A	V
		13325	50.39	-23.61	74	59.49	39.42	19.2	67.72	-	-	P	V
		13325	41.13	-12.87	54	50.23	39.42	19.2	67.72	-	-	A	V
		14491	51.78	-22.22	74	57.85	41.63	20.04	67.74	-	-	P	V
		14491	43.79	-10.21	54	49.86	41.63	20.04	67.74	-	-	A	V
		17355	66.69	-1.51	68.2	72.81	40.79	22.3	69.21	309	298	P	V
		17967	60.1	-13.9	74	59.3	47.25	22.97	69.42	-	-	P	V
		17967	49.6	-4.4	54	48.8	47.25	22.97	69.42	-	-	A	V
													V
													V
													V

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.		(MHz)	(dBμV/m)	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
4+5				(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 165 5825MHz		11650	49.74	-24.26	74	59.94	39.69	17.76	67.65	155	227	P	H
		11650	40.09	-13.91	54	50.29	39.69	17.76	67.65	155	227	A	H
		13358	49.72	-24.28	74	58.67	39.53	19.22	67.7	-	-	P	H
		13358	40.65	-13.35	54	49.6	39.53	19.22	67.7	-	-	A	H
		14491	52.28	-21.72	74	58.22	41.76	20.04	67.74	-	-	P	H
		14491	43.77	-10.23	54	49.71	41.76	20.04	67.74	-	-	A	H
		17472	55.62	-12.58	68.2	60.95	41.61	22.42	69.36	-	-	P	H
		18000	60.82	-13.18	74	58.8	48.43	23.01	69.42	-	-	P	H
		18000	50.62	-3.38	54	48.6	48.43	23.01	69.42	-	-	A	H
													H
													H
													H
		11650	51.14	-22.86	74	61.22	39.81	17.76	67.65	154	114	P	V
		11650	39.92	-14.08	54	50	39.81	17.76	67.65	154	114	A	V
		13336	49.66	-24.34	74	58.7	39.46	19.21	67.71	-	-	P	V
		13336	39.88	-14.12	54	48.92	39.46	19.21	67.71	-	-	A	V
		14491	52.09	-21.91	74	58.16	41.63	20.04	67.74	-	-	P	V
		14491	43.68	-10.32	54	49.75	41.63	20.04	67.74	-	-	A	V
		17472	66.02	-2.18	68.2	71.28	41.68	22.42	69.36	225	236	P	V
		17967	60	-14	74	59.2	47.25	22.97	69.42	-	-	P	V
		17967	49.5	-4.5	54	48.7	47.25	22.97	69.42	-	-	A	V
													V
													V
												V	
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												
	3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is 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. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 149 5745MHz		5649.2	58.65	-9.55	68.2	45.1	31.95	11.71	30.11	257	108	P	H
		5699.4	68.61	-36.15	104.76	54.95	32.04	11.78	30.16	257	108	P	H
		5719.8	86.82	-23.92	110.74	73.1	32.1	11.78	30.16	257	108	P	H
		5724.6	93.25	-28.04	121.29	79.51	32.12	11.78	30.16	257	108	P	H
	*	5745	124.17	-	-	110.38	32.18	11.78	30.17	257	108	P	H
	*	5745	116.62	-	-	102.83	32.18	11.78	30.17	257	108	A	H
													H
													H
		5650	58.25	-9.95	68.2	44.63	32.01	11.72	30.11	320	0	P	V
		5698.4	72.32	-31.7	104.02	58.58	32.12	11.78	30.16	320	0	P	V
		5719.8	82.81	-27.93	110.74	69.03	32.16	11.78	30.16	320	0	P	V
		5724.4	89.98	-30.85	120.83	76.19	32.17	11.78	30.16	320	0	P	V
	*	5745	123.84	-	-	110.01	32.22	11.78	30.17	320	0	P	V
	*	5745	116.06	-	-	102.23	32.22	11.78	30.17	320	0	A	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 157 5785MHz		5601.8	57.82	-10.38	68.2	44.3	31.99	11.65	30.12	300	108	P	H
		5693.6	57.69	-42.79	100.48	44.04	32.03	11.77	30.15	300	108	P	H
		5719.4	62.72	-47.91	110.63	49	32.1	11.78	30.16	300	108	P	H
		5720.6	64.62	-47.55	112.17	50.9	32.1	11.78	30.16	300	108	P	H
	*	5785	124.54	-	-	110.6	32.33	11.78	30.17	300	108	P	H
	*	5785	117.14	-	-	103.2	32.33	11.78	30.17	300	108	A	H
		5850	62.1	-60.1	122.2	47.97	32.44	11.87	30.18	300	108	P	H
		5857.6	61.71	-48.36	110.07	47.57	32.45	11.88	30.19	300	108	P	H
		5875.8	59.67	-44.94	104.61	45.49	32.47	11.92	30.21	300	108	P	H
		5938.2	54.77	-13.43	68.2	40.47	32.54	12.01	30.25	300	108	P	H
													H
													H
		5601.8	55.5	-12.7	68.2	41.92	32.05	11.65	30.12	339	0	P	V
		5694	57.12	-43.66	100.78	43.39	32.11	11.77	30.15	339	0	P	V
		5718.8	63.26	-47.2	110.46	49.48	32.16	11.78	30.16	339	0	P	V
		5723.8	66.33	-53.13	119.46	52.54	32.17	11.78	30.16	339	0	P	V
	*	5785	125.58	-	-	111.7	32.27	11.78	30.17	339	0	P	V
	*	5785	116.15	-	-	102.27	32.27	11.78	30.17	339	0	A	V
		5853.2	62.97	-51.93	114.9	48.81	32.46	11.88	30.18	339	0	P	V
		5857.8	60.36	-49.65	110.01	46.19	32.48	11.88	30.19	339	0	P	V
		5877.2	57.49	-46.08	103.57	43.25	32.53	11.92	30.21	339	0	P	V
		5928.2	55.41	-12.79	68.2	41.03	32.63	11.99	30.24	339	0	P	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 161 5805MHz	*	5805	124.91	-	-	110.9	32.39	11.79	30.17	288	109	P	H
	*	5805	115.44	-	-	101.43	32.39	11.79	30.17	288	109	A	H
		5853.4	58.98	-55.47	114.45	44.84	32.44	11.88	30.18	288	109	P	H
		5862.4	57.16	-51.57	108.73	43.01	32.45	11.89	30.19	288	109	P	H
		5885	57.59	-40.18	97.77	43.4	32.48	11.93	30.22	288	109	P	H
		5939	55.3	-12.9	68.2	41	32.54	12.01	30.25	288	109	P	H
													H
													H
	*	5805	121.71	-	-	107.79	32.3	11.79	30.17	349	18	P	V
	*	5805	113.12	-	-	99.2	32.3	11.79	30.17	349	18	A	V
		5850.6	55.17	-65.66	120.83	41.03	32.45	11.87	30.18	349	18	P	V
		5865.4	55.04	-52.85	107.89	40.84	32.5	11.9	30.2	349	18	P	V
		5918	55.44	-17.92	73.36	41.08	32.62	11.98	30.24	349	18	P	V
		5941.6	54.79	-13.41	68.2	40.39	32.64	12.01	30.25	349	18	P	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 165 5825MHz	*	5825	121.73	-	-	107.67	32.41	11.82	30.17	291	110	P	H
	*	5825	113.9	-	-	99.84	32.41	11.82	30.17	291	110	A	H
		5851	59.17	-60.75	119.92	45.04	32.44	11.87	30.18	291	110	P	H
		5858	58.23	-51.73	109.96	44.09	32.45	11.88	30.19	291	110	P	H
		5875.2	56.56	-48.49	105.05	42.38	32.47	11.92	30.21	291	110	P	H
		5926	55.14	-13.06	68.2	40.87	32.52	11.99	30.24	291	110	P	H
													H
													H
	*	5825	120.14	-	-	106.12	32.37	11.82	30.17	298	358	P	V
	*	5825	112.06	-	-	98.04	32.37	11.82	30.17	298	358	A	V
		5852	60.05	-57.59	117.64	45.9	32.46	11.87	30.18	298	358	P	V
		5856.8	56.93	-53.37	110.3	42.77	32.47	11.88	30.19	298	358	P	V
		5889.4	55.65	-38.86	94.51	41.36	32.57	11.94	30.22	298	358	P	V
		5927.4	54.26	-13.94	68.2	39.88	32.63	11.99	30.24	298	358	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ax HE20 Full (Harmonic @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 149 5745MHz		11490	52.76	-21.24	74	62.61	40.14	17.61	67.6	371	344	P	H
		11490	44.36	-9.64	54	54.21	40.14	17.61	67.6	371	344	A	H
		13303	50.26	-23.74	74	59.49	39.32	19.18	67.73	-	-	P	H
		13303	40.41	-13.59	54	49.64	39.32	19.18	67.73	-	-	A	H
		14491	52.26	-21.74	74	58.2	41.76	20.04	67.74	-	-	P	H
		14491	44.07	-9.93	54	50.01	41.76	20.04	67.74	-	-	A	H
		17235	53.38	-14.82	68.2	60.51	39.77	22.17	69.07	-	-	P	H
		17956	59.65	-14.35	74	58.81	47.3	22.96	69.42	-	-	P	H
		17956	49.45	-4.55	54	48.61	47.3	22.96	69.42	-	-	A	H
													H
													H
													H
		11490	55.49	-18.51	74	65.24	40.24	17.61	67.6	380	285	P	V
		11490	45.8	-8.2	54	55.55	40.24	17.61	67.6	380	285	A	V
		13380	49.95	-24.05	74	58.79	39.6	19.24	67.68	-	-	P	V
		13380	41.27	-12.73	54	50.11	39.6	19.24	67.68	-	-	A	V
		14491	51.43	-22.57	74	57.5	41.63	20.04	67.74	-	-	P	V
		14491	43.51	-10.49	54	49.58	41.63	20.04	67.74	-	-	A	V
		17235	60.15	-8.05	68.2	67.1	39.95	22.17	69.07	-	-	P	V
		17967	59.7	-14.3	74	58.9	47.25	22.97	69.42	-	-	P	V
		17967	49.7	-4.3	54	48.9	47.25	22.97	69.42	-	-	A	V
													V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 157 5785MHz		11570	49.92	-24.08	74	59.76	40.1	17.68	67.62	236	306	P	H
		11570	40.58	-13.42	54	50.42	40.1	17.68	67.62	236	306	A	H
		13336	49.52	-24.48	74	58.57	39.45	19.21	67.71	-	-	P	H
		13336	41.07	-12.93	54	50.12	39.45	19.21	67.71	-	-	A	H
		14491	51.92	-22.08	74	57.86	41.76	20.04	67.74	-	-	P	H
		14491	43.82	-10.18	54	49.76	41.76	20.04	67.74	-	-	A	H
		17355	61.33	-6.87	68.2	67.7	40.54	22.3	69.21	400	71	P	H
		18000	60.72	-13.28	74	58.7	48.43	23.01	69.42	-	-	P	H
		18000	50.62	-3.38	54	48.6	48.43	23.01	69.42	-	-	A	H
													H
													H
													H
		11570	53.96	-20.04	74	63.82	40.08	17.68	67.62	251	255	P	V
		11570	45.37	-8.63	54	55.23	40.08	17.68	67.62	251	255	A	V
		13292	50.08	-23.92	74	59.36	39.28	19.17	67.73	-	-	P	V
		13292	40.27	-13.73	54	49.55	39.28	19.17	67.73	-	-	A	V
		14491	51.43	-22.57	74	57.5	41.63	20.04	67.74	-	-	P	V
		14491	43.68	-10.32	54	49.75	41.63	20.04	67.74	-	-	A	V
		17355	67.26	-0.94	68.2	73.38	40.79	22.3	69.21	204	235	P	V
		17978	59.57	-14.43	74	58.5	47.5	22.99	69.42	-	-	P	V
		17978	49.87	-4.13	54	48.8	47.5	22.99	69.42	-	-	A	V
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WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 161 5805MHz		11610	50.66	-23.34	74	52.4	39.93	17.06	59.38	205	306	P	H
		11610	39.82	-14.18	54	41.56	39.93	17.06	59.38	205	306	A	H
		13391	50.82	-23.18	74	52.9	39.64	18.57	60.97	-	-	P	H
		13391	39.04	-14.96	54	41.12	39.64	18.57	60.97	-	-	A	H
		14491	51.97	-22.03	74	51.46	41.76	19.36	61.29	-	-	P	H
		14491	42.55	-11.45	54	42.04	41.76	19.36	61.29	-	-	A	H
		17415	55.47	-12.73	68.2	49.54	41.05	21.68	57.48	-	-	P	H
		18000	60.08	-13.92	74	44.8	48.43	22.32	56.16	-	-	P	H
		18000	49.88	-4.12	54	34.6	48.43	22.32	56.16	-	-	A	H
													H
													H
													H
		11610	50.84	-23.16	74	52.6	39.91	17.06	59.38	255	164	P	V
		11610	40.1	-13.9	54	41.86	39.91	17.06	59.38	255	164	A	V
		13380	50.38	-23.62	74	52.51	39.6	18.56	60.97	-	-	P	V
		13380	39.93	-14.07	54	42.06	39.6	18.56	60.97	-	-	A	V
		14491	51.74	-22.26	74	51.36	41.63	19.36	61.29	-	-	P	V
		14491	41.37	-12.63	54	40.99	41.63	19.36	61.29	-	-	A	V
		17415	67.39	-0.81	68.2	61.24	41.27	21.68	57.48	206	233	P	V
		17967	60.27	-13.73	74	46.3	47.25	22.28	56.25	-	-	P	V
		17967	49.07	-4.93	54	35.1	47.25	22.28	56.25	-	-	A	V
													V
													V
													V

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11ax HE20 Full CH 165 5825MHz		11650	49.46	-24.54	74	59.66	39.69	17.76	67.65	144	159	P	H	
		11650	38.6	-15.4	54	48.8	39.69	17.76	67.65	144	159	A	H	
		13281	50.25	-23.75	74	59.59	39.24	19.16	67.74	-	-	P	H	
		13281	40.23	-13.77	54	49.57	39.24	19.16	67.74	-	-	A	H	
		14491	51.22	-22.78	74	57.16	41.76	20.04	67.74	-	-	P	H	
		14491	42.61	-11.39	54	48.55	41.76	20.04	67.74	-	-	A	H	
		17475	52.1	-16.1	68.2	57.39	41.64	22.43	69.36	-	-	P	H	
		18000	61.32	-12.68	74	59.3	48.43	23.01	69.42	-	-	P	H	
		18000	50.72	-3.28	54	48.7	48.43	23.01	69.42	-	-	A	H	
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													H	
													H	
		11650	49.86	-24.14	74	59.94	39.81	17.76	67.65	305	216	P	V	
		11650	40.17	-13.83	54	50.25	39.81	17.76	67.65	305	216	A	V	
		13358	50.03	-23.97	74	58.96	39.55	19.22	67.7	-	-	P	V	
		13358	40.77	-13.23	54	49.7	39.55	19.22	67.7	-	-	A	V	
		14491	51.78	-22.22	74	57.85	41.63	20.04	67.74	-	-	P	V	
		14491	42.73	-11.27	54	48.8	41.63	20.04	67.74	-	-	A	V	
		17475	66.64	-1.56	68.2	71.87	41.7	22.43	69.36	200	235	P	V	
		17989	59.83	-14.17	74	58.49	47.76	23	69.42	-	-	P	V	
		17989	50.03	-3.97	54	48.69	47.76	23	69.42	-	-	A	V	
														V
														V
													V	
Remark	1. No other spurious found.													
	2. All results are PASS against Peak and Average limit line.													
	3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is 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_Full (Band Edge @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 151 5755MHz		5646	67.2	-1	68.2	53.65	31.95	11.71	30.11	291	106	P	H
		5698.2	78.45	-25.42	103.87	64.79	32.04	11.78	30.16	291	106	P	H
		5719.8	94.35	-16.39	110.74	80.63	32.1	11.78	30.16	291	106	P	H
		5724.8	96.52	-25.22	121.74	82.78	32.12	11.78	30.16	291	106	P	H
	*	5755	123.42	-	-	109.6	32.21	11.78	30.17	291	106	P	H
	*	5755	115.74	-	-	101.92	32.21	11.78	30.17	291	106	A	H
		5850	69.14	-53.06	122.2	55.01	32.44	11.87	30.18	291	106	P	H
		5856.6	69.9	-40.45	110.35	55.76	32.45	11.88	30.19	291	106	P	H
		5877.4	63.68	-39.74	103.42	49.5	32.47	11.92	30.21	291	106	P	H
		5932	56.5	-11.7	68.2	42.21	32.53	12	30.24	291	106	P	H
													H
													H
		5642.6	63.83	-4.37	68.2	50.21	32.02	11.71	30.11	292	357	P	V
		5693.8	76.03	-24.6	100.63	62.3	32.11	11.77	30.15	292	357	P	V
		5718.4	88.51	-21.84	110.35	74.73	32.16	11.78	30.16	292	357	P	V
		5722	90.85	-24.51	115.36	77.06	32.17	11.78	30.16	292	357	P	V
	*	5755	121.62	-	-	107.77	32.24	11.78	30.17	292	357	P	V
	*	5755	113.51	-	-	99.66	32.24	11.78	30.17	292	357	A	V
		5850.2	66.41	-55.33	121.74	52.27	32.45	11.87	30.18	292	357	P	V
		5859.4	68.13	-41.44	109.57	53.95	32.48	11.89	30.19	292	357	P	V
		5877.8	62.81	-40.31	103.12	48.56	32.54	11.92	30.21	292	357	P	V
		5926.8	57.04	-11.16	68.2	42.66	32.63	11.99	30.24	292	357	P	V
													V
													V



WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 159 5795MHz		5648	63.58	-4.62	68.2	50.03	31.95	11.71	30.11	300	106	P	H
		5695.6	69.45	-32.51	101.96	55.81	32.03	11.77	30.16	300	106	P	H
		5718.8	75.41	-35.05	110.46	61.69	32.1	11.78	30.16	300	106	P	H
		5724	75.25	-44.67	119.92	61.52	32.11	11.78	30.16	300	106	P	H
	*	5795	123.01	-	-	109.03	32.37	11.78	30.17	300	106	P	H
	*	5795	115.35	-	-	101.37	32.37	11.78	30.17	300	106	A	H
		5851.6	81.18	-37.37	118.55	67.05	32.44	11.87	30.18	300	106	P	H
		5864.2	78.45	-29.77	108.22	64.29	32.45	11.9	30.19	300	106	P	H
		5875.2	73.61	-31.44	105.05	59.43	32.47	11.92	30.21	300	106	P	H
		5938	61.77	-6.43	68.2	47.47	32.54	12.01	30.25	300	106	P	H
													H
													H
		5633.8	63.94	-4.26	68.2	50.33	32.03	11.69	30.11	319	358	P	V
		5696	69.41	-32.84	102.25	55.69	32.11	11.77	30.16	319	358	P	V
		5715.8	71.62	-38.01	109.63	57.84	32.16	11.78	30.16	319	358	P	V
		5723.6	72.73	-46.28	119.01	58.94	32.17	11.78	30.16	319	358	P	V
	*	5795	121.34	-	-	107.45	32.28	11.78	30.17	319	358	P	V
	*	5795	113.44	-	-	99.55	32.28	11.78	30.17	319	358	A	V
		5852	82.67	-34.97	117.64	68.52	32.46	11.87	30.18	319	358	P	V
		5855.4	77.63	-33.06	110.69	63.47	32.47	11.88	30.19	319	358	P	V
		5875	71.19	-34.01	105.2	56.95	32.53	11.91	30.2	319	358	P	V
		5936.8	62.48	-5.72	68.2	48.08	32.64	12	30.24	319	358	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ax HE40_Full (Harmonic @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 151 5755MHz		11380	49.8	-24.2	74	59.95	40.03	17.51	67.69	258	42	P	H
		11380	39.47	-14.53	54	49.62	40.03	17.51	67.69	258	42	A	H
		13259	50.68	-23.32	74	60.13	39.16	19.14	67.75	-	-	P	H
		13259	40.98	-13.02	54	50.43	39.16	19.14	67.75	-	-	A	H
		14491	52.76	-21.24	74	58.7	41.76	20.04	67.74	-	-	P	H
		14491	44.18	-9.82	54	50.12	41.76	20.04	67.74	-	-	A	H
		17265	51.37	-16.83	68.2	58.33	39.94	22.2	69.1	-	-	P	H
		17989	60.33	-13.67	74	58.6	48.15	23	69.42	-	-	P	H
		17989	50.23	-3.77	54	48.5	48.15	23	69.42	-	-	A	H
													H
													H
													H
		11380	49.95	-24.05	74	60.11	40.02	17.51	67.69	306	147	P	V
		11380	40.14	-13.86	54	50.3	40.02	17.51	67.69	306	147	A	V
		13369	50.71	-23.29	74	59.6	39.57	19.23	67.69	-	-	P	V
		13369	40.81	-13.19	54	49.7	39.57	19.23	67.69	-	-	A	V
		14491	51.78	-22.22	74	57.85	41.63	20.04	67.74	-	-	P	V
		14491	42.91	-11.09	54	48.98	41.63	20.04	67.74	-	-	A	V
		17265	58.78	-9.42	68.2	65.54	40.14	22.2	69.1	-	-	P	V
		17934	59.65	-14.35	74	59.6	46.53	22.94	69.42	-	-	P	V
		17934	49.25	-4.75	54	49.2	46.53	22.94	69.42	-	-	A	V
													V
													V
													V

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 159 5795MHz		11590	50.31	-23.69	74	60.21	40.03	17.7	67.63	254	156	P	H
		11590	39.99	-14.01	54	49.89	40.03	17.7	67.63	254	156	A	H
		13292	50.34	-23.66	74	59.62	39.28	19.17	67.73	-	-	P	H
		13292	40.29	-13.71	54	49.57	39.28	19.17	67.73	-	-	A	H
		14480	52.45	-21.55	74	58.43	41.73	20.04	67.75	-	-	P	H
		14480	44.14	-9.86	54	50.12	41.73	20.04	67.75	-	-	A	H
		17385	57.48	-10.72	68.2	63.62	40.78	22.33	69.25	-	-	P	H
		17989	60.33	-13.67	74	58.6	48.15	23	69.42	-	-	P	H
		17989	50.23	-3.77	54	48.5	48.15	23	69.42	-	-	A	H
													H
													H
													H
		11590	49.46	-24.54	74	59.41	39.98	17.7	67.63	154	208	P	V
		11590	39.73	-14.27	54	49.68	39.98	17.7	67.63	154	208	A	V
		13391	50.01	-23.99	74	58.81	39.63	19.25	67.68	-	-	P	V
		13391	40.91	-13.09	54	49.71	39.63	19.25	67.68	-	-	A	V
		14480	52.08	-21.92	74	58.19	41.6	20.04	67.75	-	-	P	V
		14480	43.92	-10.08	54	50.03	41.6	20.04	67.75	-	-	A	V
		17385	67.57	-0.63	68.2	73.45	41.04	22.33	69.25	207	233	P	V
		18000	59.8	-14.2	74	58.2	48.01	23.01	69.42	-	-	P	V
		18000	50	-4	54	48.4	48.01	23.01	69.42	-	-	A	V
													V
													V
													V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												
	3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.												
	4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												



Band 4 5725~5850MHz

WIFI 802.11ax HE80_Full (Band Edge @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full CH 155 5775MHz		5643.4	65.07	-3.13	68.2	51.52	31.95	11.71	30.11	293	110	P	H
		5692.6	73.5	-26.24	99.74	59.85	32.03	11.77	30.15	293	110	P	H
		5713.8	77.7	-31.37	109.07	64	32.08	11.78	30.16	293	110	P	H
		5723.2	80.24	-37.86	118.1	66.51	32.11	11.78	30.16	293	110	P	H
	*	5775	121	-	-	107.1	32.29	11.78	30.17	293	110	P	H
	*	5775	111.81	-	-	97.91	32.29	11.78	30.17	293	110	A	H
		5854.2	79.06	-33.56	112.62	64.92	32.44	11.88	30.18	293	110	P	H
		5855	78.41	-32.39	110.8	64.27	32.44	11.88	30.18	293	110	P	H
		5875.2	71.56	-33.49	105.05	57.38	32.47	11.92	30.21	293	110	P	H
		5935.4	58.6	-9.6	68.2	44.31	32.53	12	30.24	293	110	P	H
													H
													H
		5643	60.18	-8.02	68.2	46.56	32.02	11.71	30.11	331	358	P	V
		5684.2	71.25	-22.29	93.54	57.54	32.09	11.76	30.14	331	358	P	V
		5713.6	74.04	-34.97	109.01	60.27	32.15	11.78	30.16	331	358	P	V
		5723.2	76.15	-41.95	118.1	62.36	32.17	11.78	30.16	331	358	P	V
	*	5775	117.49	-	-	103.62	32.26	11.78	30.17	331	358	P	V
	*	5775	108.79	-	-	94.92	32.26	11.78	30.17	331	358	A	V
		5853.6	76.58	-37.41	113.99	62.42	32.46	11.88	30.18	331	358	P	V
		5859.2	75.08	-34.54	109.62	60.9	32.48	11.89	30.19	331	358	P	V
		5875	69.89	-35.31	105.2	55.65	32.53	11.91	30.2	331	358	P	V
		5926.2	59.55	-8.65	68.2	45.17	32.63	11.99	30.24	331	358	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11ax HE80_Full (Harmonic @ 3m)

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11ax HE80 Full CH 155 5775MHz		11550	49.6	-24.4	74	59.36	40.18	17.67	67.61	166	208	P	H	
		11550	39.13	-14.87	54	48.89	40.18	17.67	67.61	166	208	A	H	
		13314	50.29	-23.71	74	59.45	39.37	19.19	67.72	-	-	P	H	
		13314	39.42	-14.58	54	48.58	39.37	19.19	67.72	-	-	A	H	
		14491	51.56	-22.44	74	57.5	41.76	20.04	67.74	-	-	P	H	
		14491	43.6	-10.4	54	49.54	41.76	20.04	67.74	-	-	A	H	
		17325	51.17	-17.03	68.2	57.74	40.35	22.26	69.18	-	-	P	H	
		17934	60.11	-13.89	74	59.8	46.79	22.94	69.42	-	-	P	H	
		17934	49.21	-4.79	54	48.9	46.79	22.94	69.42	-	-	A	H	
													H	
													H	
													H	
		11550	50.09	-23.91	74	59.85	40.18	17.67	67.61	307	144	P	V	
		11550	40.38	-13.62	54	50.14	40.18	17.67	67.61	307	144	A	V	
		13314	50.34	-23.66	74	59.5	39.37	19.19	67.72	-	-	P	V	
		13314	40.45	-13.55	54	49.61	39.37	19.19	67.72	-	-	A	V	
		14491	51.38	-22.62	74	57.45	41.63	20.04	67.74	-	-	P	V	
		14491	43.43	-10.57	54	49.5	41.63	20.04	67.74	-	-	A	V	
		17325	52.03	-16.17	68.2	58.37	40.58	22.26	69.18	-	-	P	V	
		17945	59.88	-14.12	74	59.6	46.75	22.95	69.42	-	-	P	V	
		17945	49.08	-4.92	54	48.8	46.75	22.95	69.42	-	-	A	V	
														V
														V
													V	
Remark	1. No other spurious found.													
	2. All results are PASS against Peak and Average limit line.													
	3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.													
	4. The emission level close to 18GHz is checked that the average emission level is noise floor only.													



Emission below 1GHz

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
4+5		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax HE20 Full SHF		36502	48.52	-19.68	68.2	38.83	42.54	21.92	54.77	150	200	P	H
		39230	52.54	-21.46	74	38.35	44.43	24.07	54.31	150	195	P	H
		39230	44.25	-9.75	54	30.06	44.43	24.07	54.31	150	195	A	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		36502	48.25	-19.95	68.2	38.51	42.59	21.92	54.77	150	182	P	V
		39758	52.77	-21.23	74	37.36	44.62	24.43	53.64	150	342	P	V
		39758	45.5	-8.5	54	30.09	44.62	24.43	53.64	150	342	A	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Emission below 1GHz

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

WIFI Ant. 4+5	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full LF		71.71	26.23	-13.77	40	44.58	12.57	1.51	32.43	-	-	P	H
		125.06	32.74	-10.76	43.5	45.6	17.7	1.84	32.4	-	-	P	H
		153.19	29.47	-14.03	43.5	42.86	16.98	2.04	32.41	-	-	P	H
		250.19	28.8	-17.2	46	40.09	18.52	2.6	32.41	-	-	P	H
		753.62	36.29	-9.71	46	36.07	28	4.59	32.37	-	-	P	H
		874.87	38.59	-7.41	46	36.24	29.1	5.03	31.78	-	-	P	H
													H
													H
													H
													H
													H
													H
		51.34	33.13	-6.87	40	50.69	13.63	1.24	32.43	-	-	P	V
		105.66	27.79	-15.71	43.5	41.9	16.57	1.73	32.41	-	-	P	V
		125.06	34.06	-9.44	43.5	46.92	17.7	1.84	32.4	-	-	P	V
		746.83	39.58	-6.42	46	39.46	27.94	4.57	32.39	-	-	P	V
		753.62	35.67	-10.33	46	35.45	28	4.59	32.37	-	-	P	V
		874.87	38.72	-7.28	46	36.37	29.1	5.03	31.78	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line. 3. The emission position marked as “-” means no suspected emission found 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.	
4+5		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a		5640	56.76	-11.44	68.2	43.21	31.95	11.71	30.11	299	123	P	H
CH 149		11550	35.91	-18.09	54	45.67	40.18	17.67	67.61	173	217	A	H
5745MHz													

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

For Peak Limit @ 5640MHz:

1. Level(dBμV/m)
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
 = 31.95(dB/m) + 11.71(dB) + 43.21(dBμV) – 30.11 (dB)
 = 56.76 (dBμV/m)
2. Over Limit(dB)
 = Level(dBμV/m) – Limit Line(dBμV/m)
 = 56.76(dBμV/m) – 68.2(dBμV/m)
 = -11.44(dB)

For Average Limit @ 11550MHz:

1. Level(dBμV/m)
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
 = 40.18(dB/m) + 17.67(dB) + 45.67(dBμV) – 67.61(dB)
 = 35.91 (dBμV/m)
2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)
 = 35.91(dBμV/m) – 54(dBμV/m)
 = -18.09(dB)

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

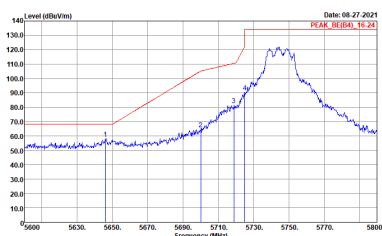
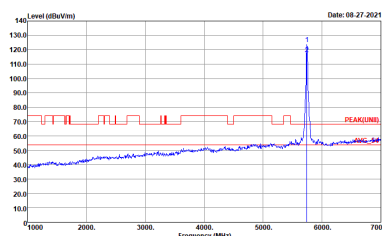


Appendix D. Radiated Spurious Emission Plots

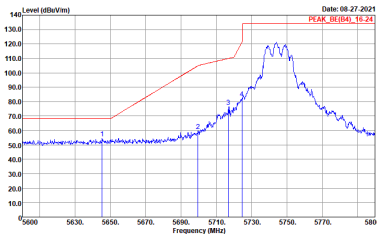
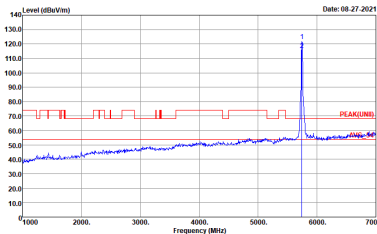
Test Engineer :	Michael Bui and Daniel Lee	Temperature :	20~24°C
		Relative Humidity :	42~48%

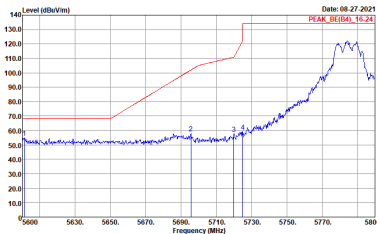
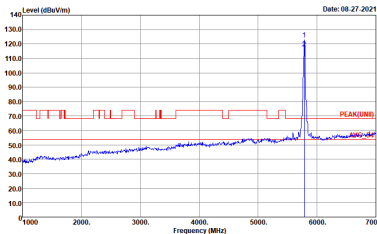
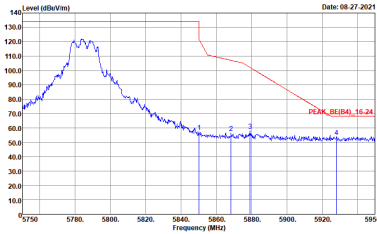
Band 4 - 5725~5850MHz

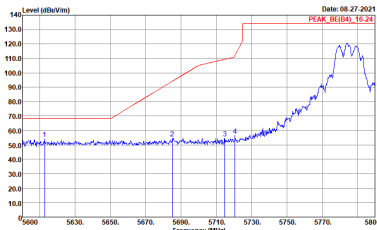
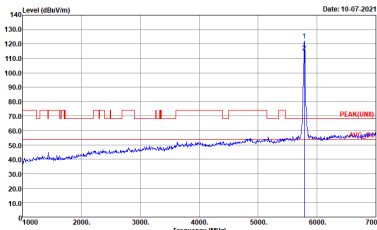
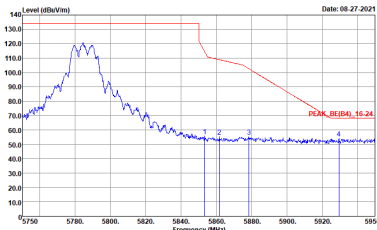
WIFI 802.11a (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_3C(B4)_16-24 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(LINE) 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

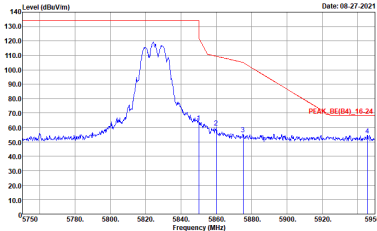
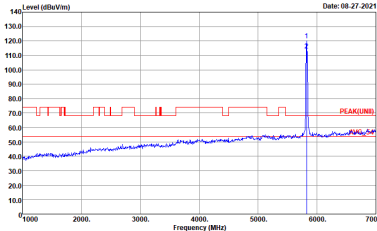
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(B4)_16-24 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(LINE1) 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



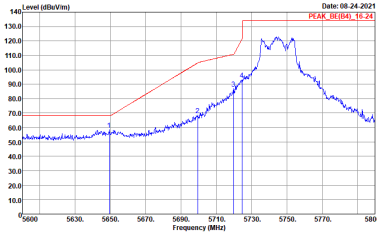
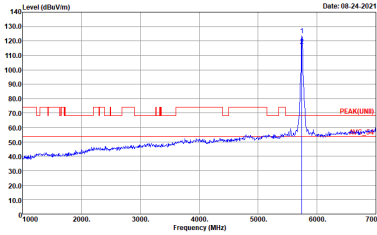
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
4+5	Horizontal	Fundamental
Peak	Level (dBuV/m) Date: 08-27-2021 Site : 03CH02-CA Condition : PEAK_36(B4)_16-24 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Level (dBuV/m) Date: 08-27-2021 Site : 03CH02-CA Condition : PEAK(LINE) 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

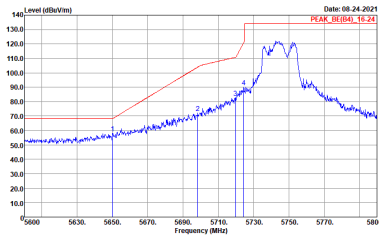
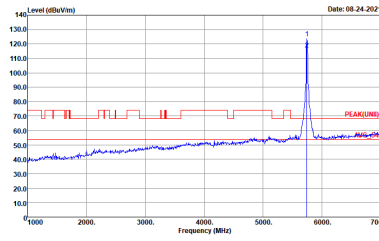


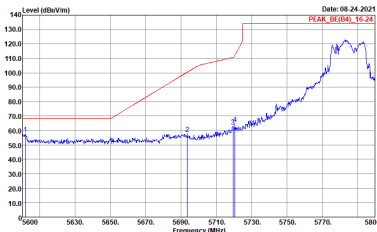
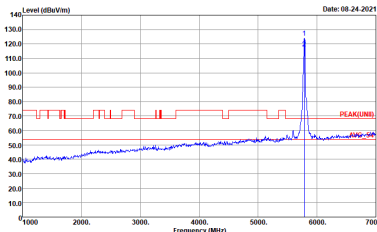
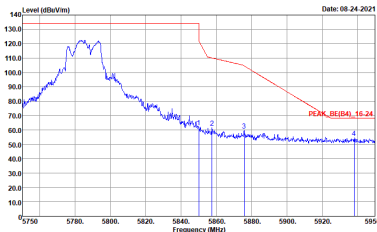
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_36[04]_16-24 3m HORN 91200-HF_02113 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK[UNIT] 3m HORN 91200-HF_02113 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

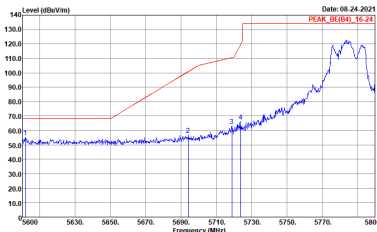
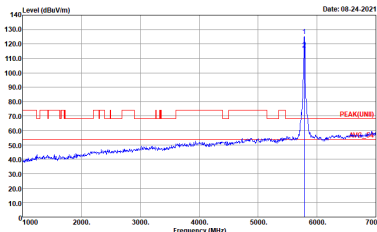
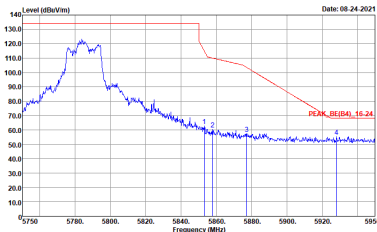


Band 4 5725~5850MHz
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

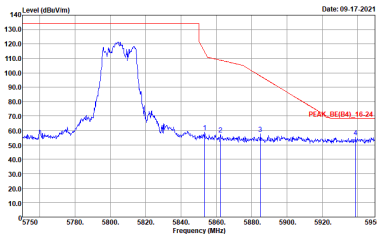
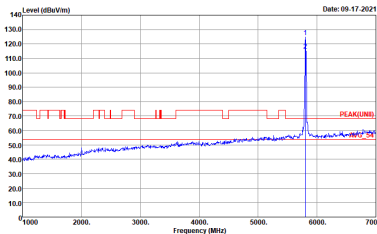
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNB) 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_36[04]_16-24 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK[UNIT] 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

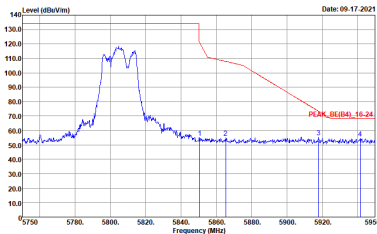
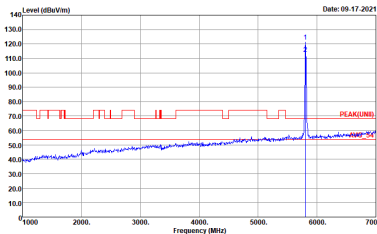
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(LINE) 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

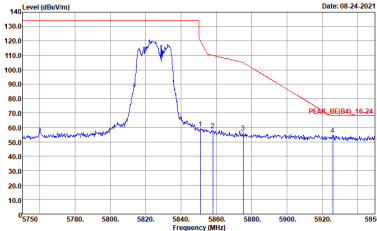
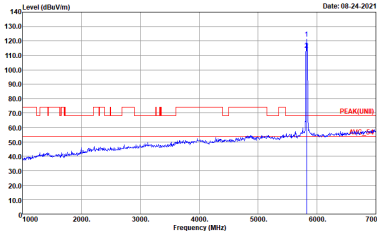


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH161 5805MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_36[04]_16-24 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK[UNIT] 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH161 5805MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_05(04)_16-24 3m HORN 91200-HF_02113 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK_05(04)_16-24 3m HORN 91200-HF_02113 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

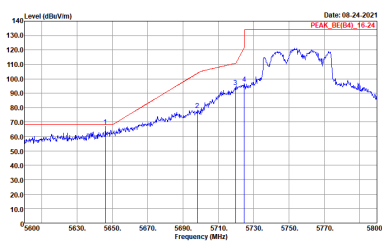
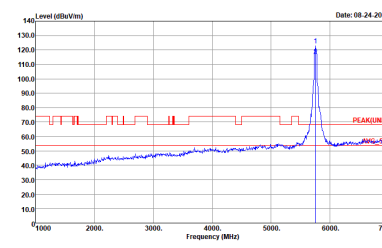
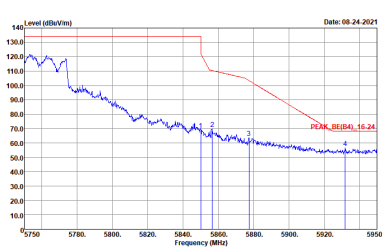


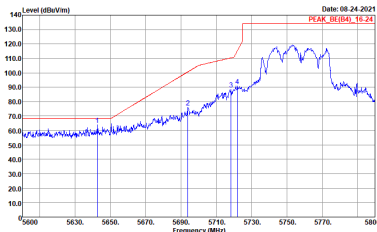
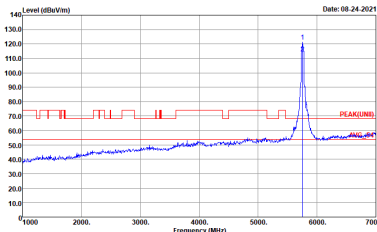
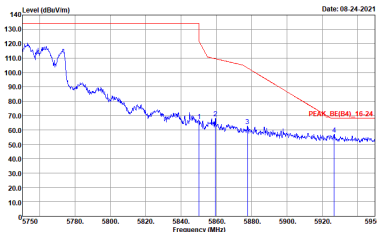
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ANT	802.11ax HE20 Full CH165 5825MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_36(B4)_16-24 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VSW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(LINE) 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VSW:3000.000KHz SWT:Auto

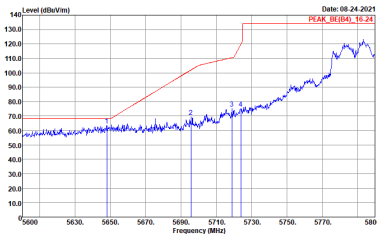
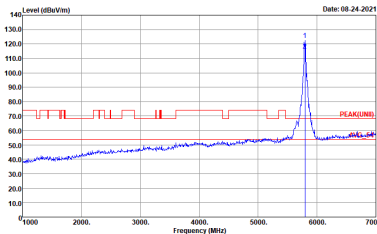
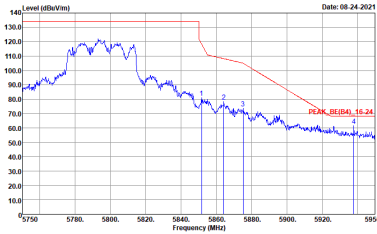


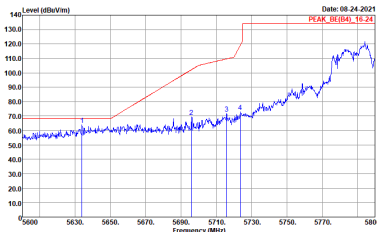
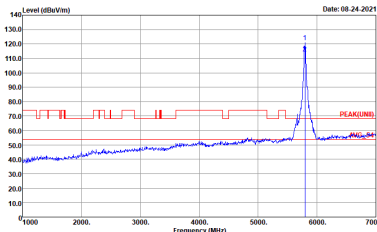
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
4+5	Vertical	Fundamental
Peak	Level (dBuV/m) Date: 08-24-2021 Site : 03CH02-CA Condition : PEAK_36(B4)_16-24 3m HORN 91200-HF_02113 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Level (dBuV/m) Date: 08-24-2021 Site : 03CH02-CA Condition : PEAK(LINE) 3m HORN 91200-HF_02113 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

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

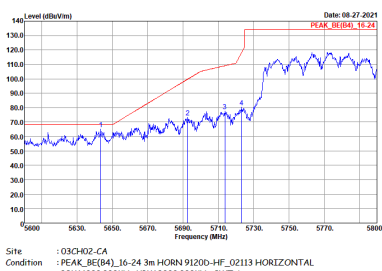
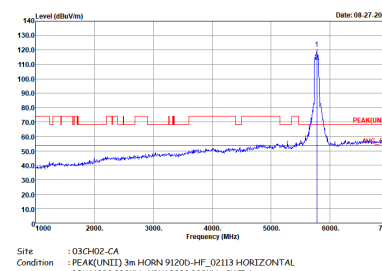
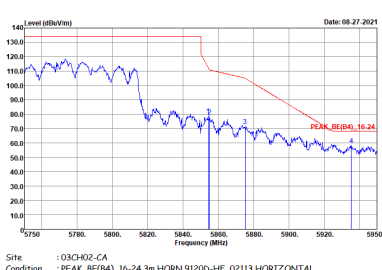
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNB) 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(LINE) 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

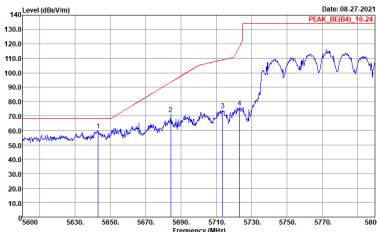
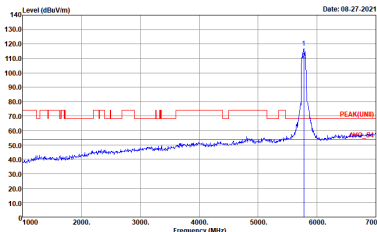
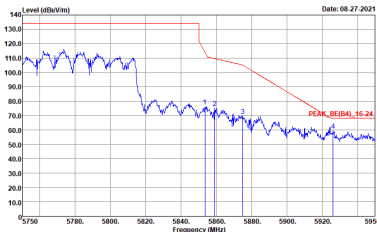
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(FUND)_16-24 3m HORN 91200-HF_02113 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

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

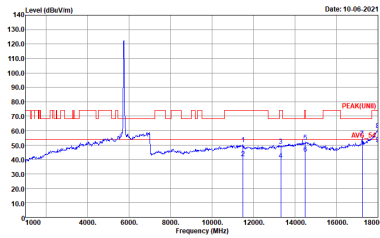
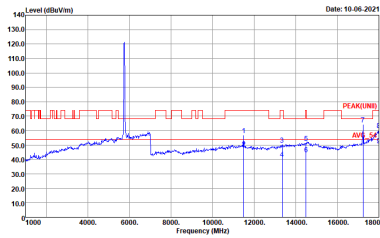
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
4+5	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(84)_16-24 3m HORN 91200-HF_02113 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



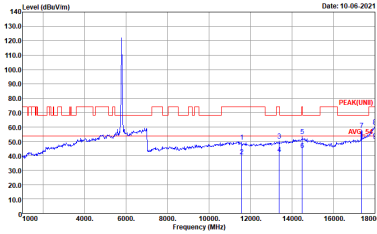
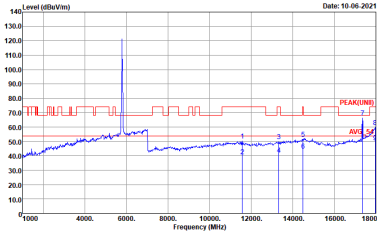
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
4+5	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(FUND)_16-24 3m HORN 91200-HF_02113 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF_02113 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



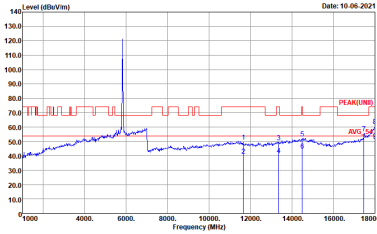
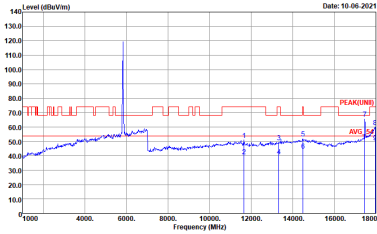
Band 4 - 5725~5850MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 HORIZONTAL	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 VERTICAL



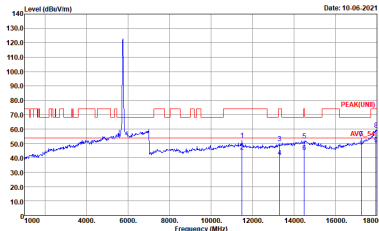
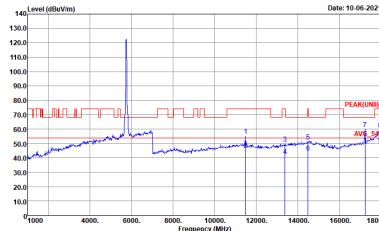
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEARQ(UNIT) 3m HORN 9120D-HF_02113 HORIZONTAL	 Site : 03CH02-CA Condition : PEARQ(UNIT) 3m HORN 9120D-HF_02113 VERTICAL



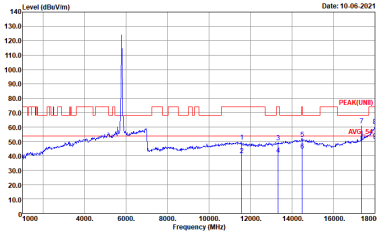
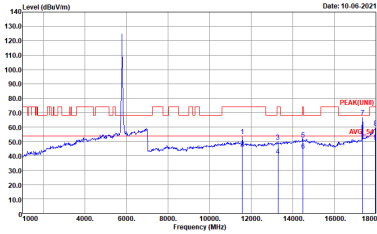
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 HORIZONTAL	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 VERTICAL



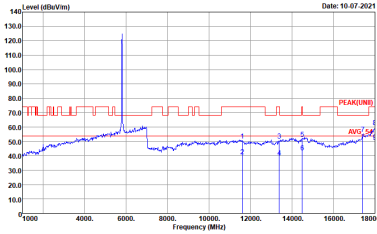
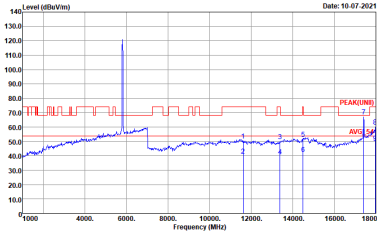
Band 4 5725~5850MHz
WIFI 802.11ax HE20 Full (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 HORIZONTAL	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 VERTICAL

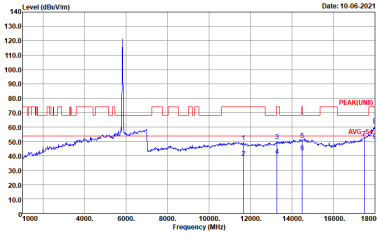
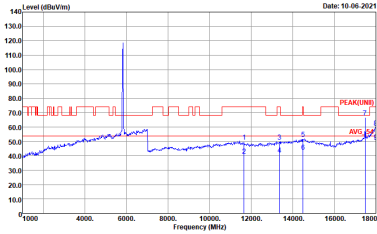


WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEARQ(UNIT) 3m HORN 9120D-HF_02113 HORIZONTAL	 Site : 03CH02-CA Condition : PEARQ(UNIT) 3m HORN 9120D-HF_02113 VERTICAL



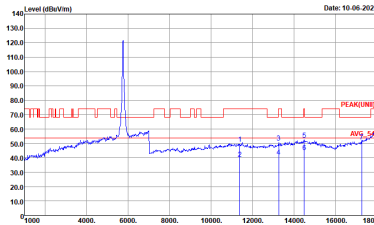
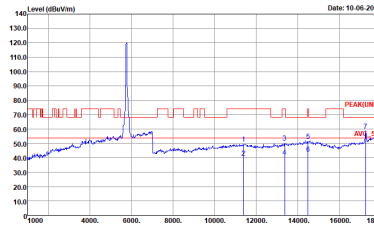
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH161 5805MHz	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 HORIZONTAL	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 VERTICAL



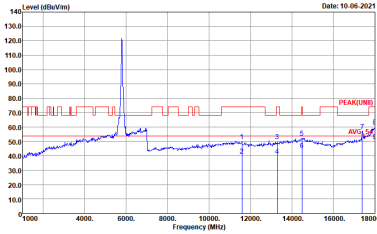
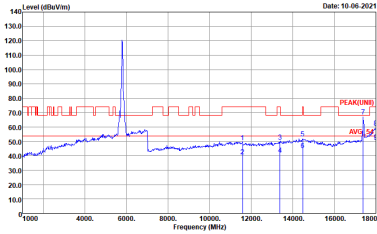
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEARQ(UNIT) 3m HORN 9120D-HF_02113 HORIZONTAL	 Site : 03CH02-CA Condition : PEARQ(UNIT) 3m HORN 9120D-HF_02113 VERTICAL



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

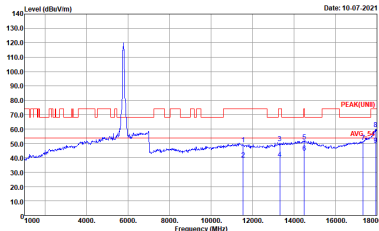
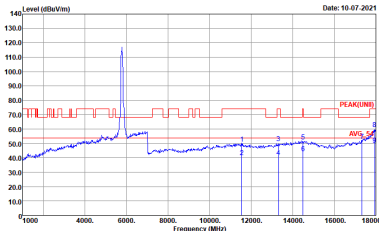
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 HORIZONTAL	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 VERTICAL



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEARQ(UNIT) 3m HORN 9120D-HF_02113 HORIZONTAL	 Site : 03CH02-CA Condition : PEARQ(UNIT) 3m HORN 9120D-HF_02113 VERTICAL



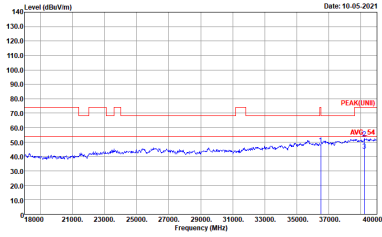
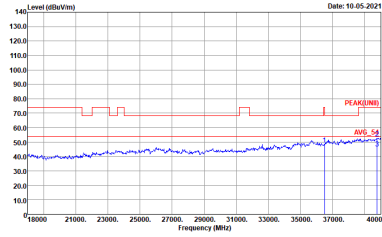
Band 4 5725~5850MHz
WIFI 802.11ax HE80 Full (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 HORIZONTAL	 Site : 03CH02-CA Condition : PEAK(UNIT) 3m HORN 9120D-HF_02113 VERTICAL

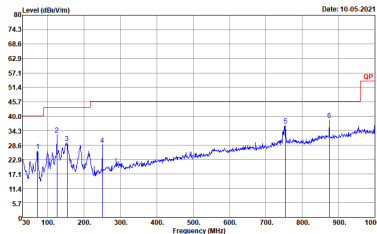
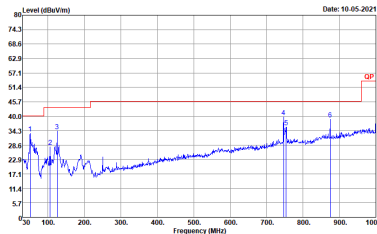


Emission above 18GHz

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

WIFI	5GHz WIFI	
ANT	802.11ax HE20 Full SHF	
4+5	Horizontal	Vertical
Peak	 Site : 03CH02-CA Condition : PEAK(UNB) 1m HORN 9170-SHF_00842 HORIZONTAL	 Site : 03CH02-CA Condition : PEAK(UNB) 1m HORN 9170-SHF_00842 VERTICAL

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

WIFI	5GHz WIFI	
ANT	802.11ax HE20 Full LF	
4+5	Horizontal	Vertical
QP / Peak	 Site : 03CH02-CA Condition : QP 3m 50392_2021 HORIZONTAL	 Site : 03CH02-CA Condition : QP 3m 50392_2021 VERTICAL



Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle (%)	T(us)	1/T(kHz)	VBW Setting
4+5	802.11a	91.77	1505	0.66	1kHz
4+5	5GHz 802.11ax HE20	89.85	5435	0.18	300Hz
4+5	5GHz 802.11ax HE40	89.66	5431	0.18	300Hz
4+5	5GHz 802.11ax HE80	90.45	5434	0.18	300Hz

MIMO <Ant. 4+5>

