



FCC RADIO TEST REPORT

FCC ID : U8G-P1AX02
Equipment : PEPWAVE / peplink Wireless Product
Brand Name : PEPWAVE / peplink
Model Name : MAX BR1 5G
 MAX-BR1-5GD-T
 MAX-BR1-5GH-T
Applicant : PISMO LABS TECHNOLOGY LIMITED
 A8, 5/F, HK Spinners Industrial Building, Phase 6, 481 Castle
 Peak Road, Cheung Sha Wan, Hong Kong
Manufacturer : PISMO LABS TECHNOLOGY LIMITED
 A8, 5/F, HK Spinners Industrial Building, Phase 6, 481 Castle
 Peak Road, Cheung Sha Wan, Hong Kong
Standard : FCC Part 15 Subpart E §15.407

The product was received on Mar. 25, 2021 and testing was started from Apr. 12, 2021 and completed on May 13, 2021. We, Sporton International Inc. EMC & Wireless Communications Laboratory,, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Louis Wu

Approved by: Louis Wu

Sporton International Inc. EMC & Wireless Communications Laboratory

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issued Date
FR131219C	01	Initial issue of report	May 21, 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 1.22 dB at 181.320 MHz
3.5	15.207	AC Conducted Emission	Pass	Under limit 11.64 dB at 14.206 MHz
3.6	15.407(c)	Automatically Discontinue Transmission	Pass	-
3.7	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.

Reviewed by: Lewis Ho
Report Producer: Dara Chiu



1 General Description

1.1 Product Feature of Equipment Under Test

Wi-Fi 2.4GHz 802.11b/g/n/ac/ax and Wi-Fi 5GHz 802.11a/n/ac/ax

Product Specification subjective to this standard		
Antenna Type	WLAN: Omni-directional Antenna	
Antenna information		
5725 MHz ~ 5850 MHz	Peak Gain (dBi)	Ant. 1: 4.73 Ant. 2: 4.73

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

1.2 Modification of EUT

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

1.3 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. CO05-HY, TH02-HY

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. 03CH16-HY (TAF Code: 3786)
Remark	The radiation emission test item subcontracted to Sporton International Inc. Wensan Laboratory

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

FCC designation No.: TW1190 and TW3786



1.4 Applicable Standards

According to the specifications 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 and without any deviation during the test.
2. The TAF code is not including all the FCC KDB listed without accreditation.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in two antenna panels (Horizontal and Vertical). The worst cases (Ant. Vertical) were recorded in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

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

Note:

1. The above Frequency and Channel in "*" were 802.11n HT40 and 802.11ac VHT40 and 802.11ax HE40.
2. The above Frequency and Channel in "#n" were 802.11ac VHT80 and 802.11ax HE80.



2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

MIMO Mode

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	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 ax HE80)	MCS0
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0

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

Ch. #	Band IV : 5725-5850 MHz				
	802.11a	802.11n HT20	802.11ax HE20	802.11ax HE40	802.11ax HE80
L Low	149	149	149	151	-
M Middle	157	157	157	-	155
H High	165	165	165	159	-

Remark: For radiation spurious emission, the final modulation and the worst data rate was reference the max RF conducted power.

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	DELL	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

2.5 EUT Operation Test Setup

The RF test items, utility “QSPR 5.0-00196” 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

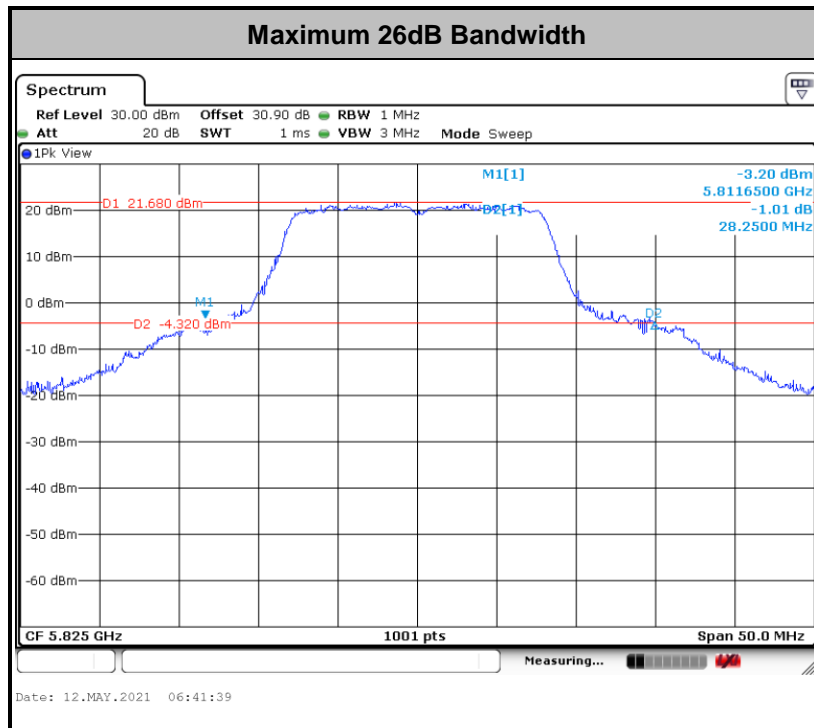
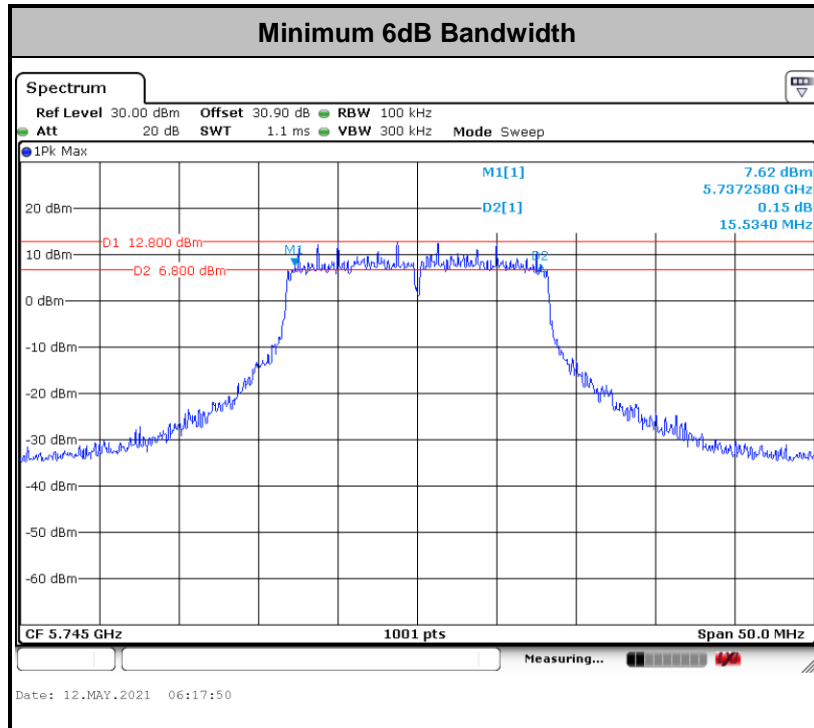
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth for the band 5.725-5.85 GHz
2. Set RBW = 100 kHz.
3. Set the VBW $\geq 3 \times$ RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is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

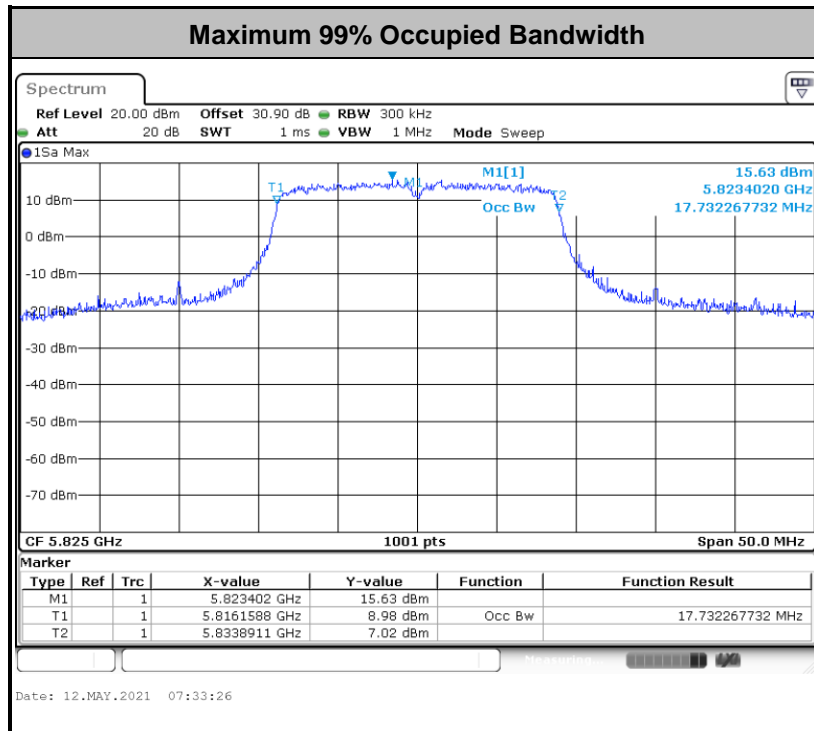
3.1.4 Test Setup



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

Please refer to Appendix A.

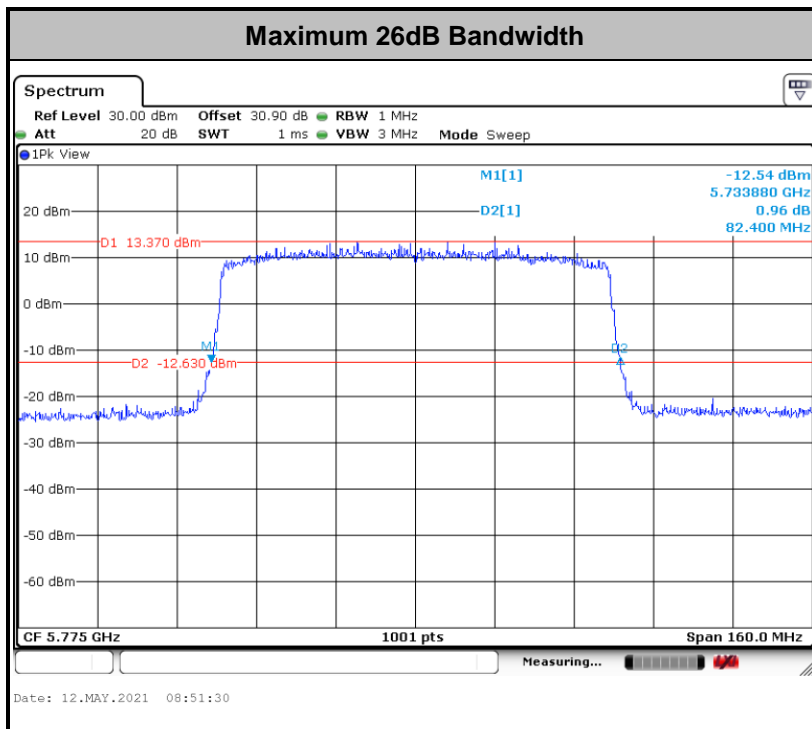
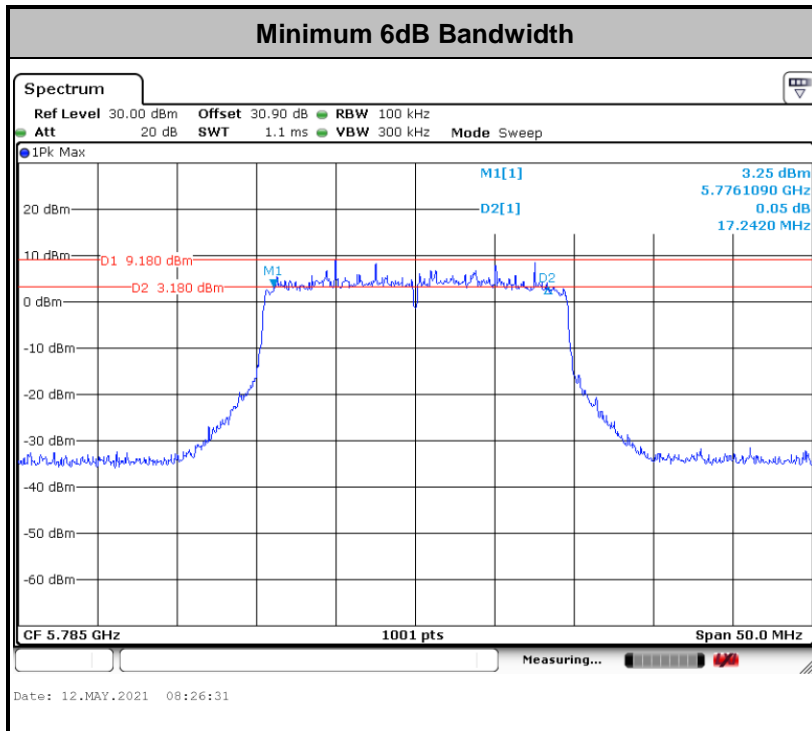


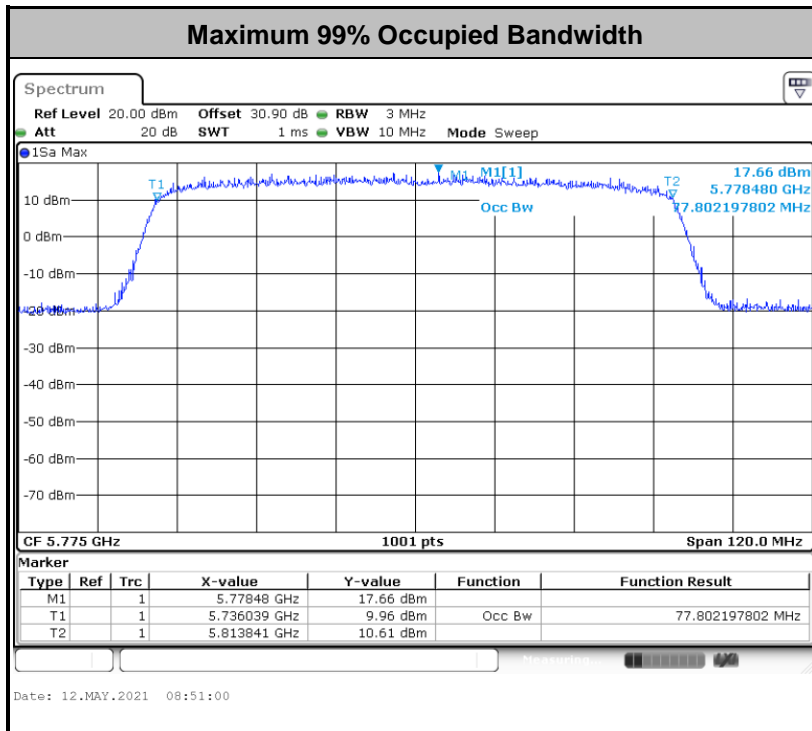


Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.



<For 802.11ax Mode>





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

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

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

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

3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

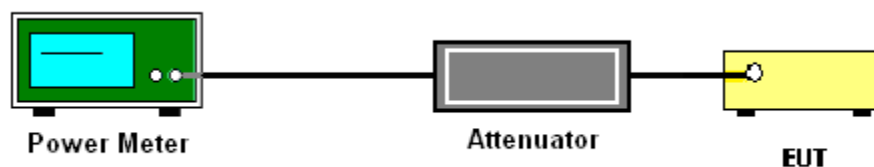
3.2.3 Test Procedures

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.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

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

3.3.2 Measuring Instruments

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.

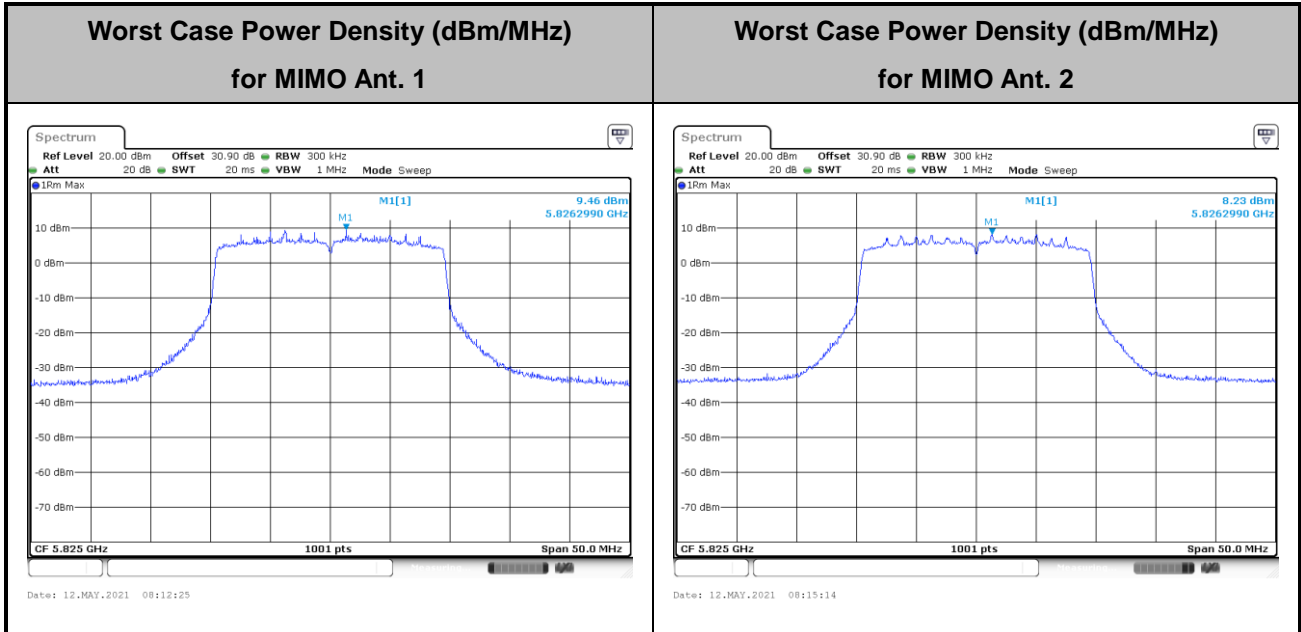
Method SA-3

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

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



<For 802.11ax Mode>





3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

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

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

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

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

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

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

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

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

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

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



3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

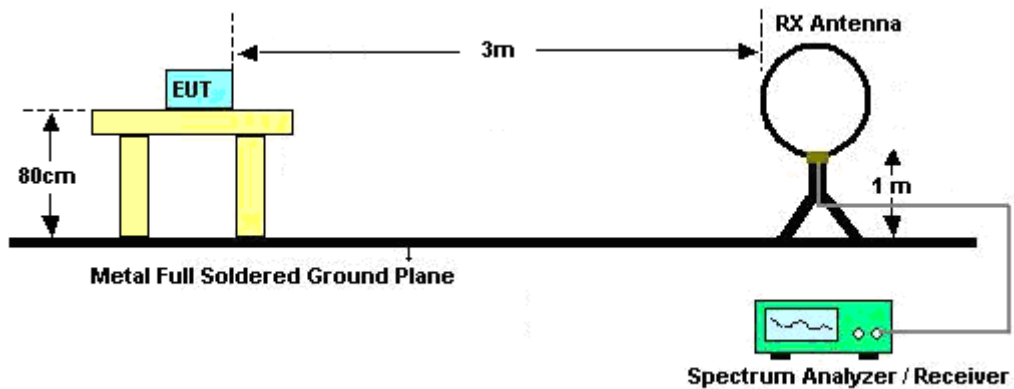
3.4.3 Test Procedures

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 set 3 meters from the interference receiving 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 of the antenna.
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. For testing below 1 GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.

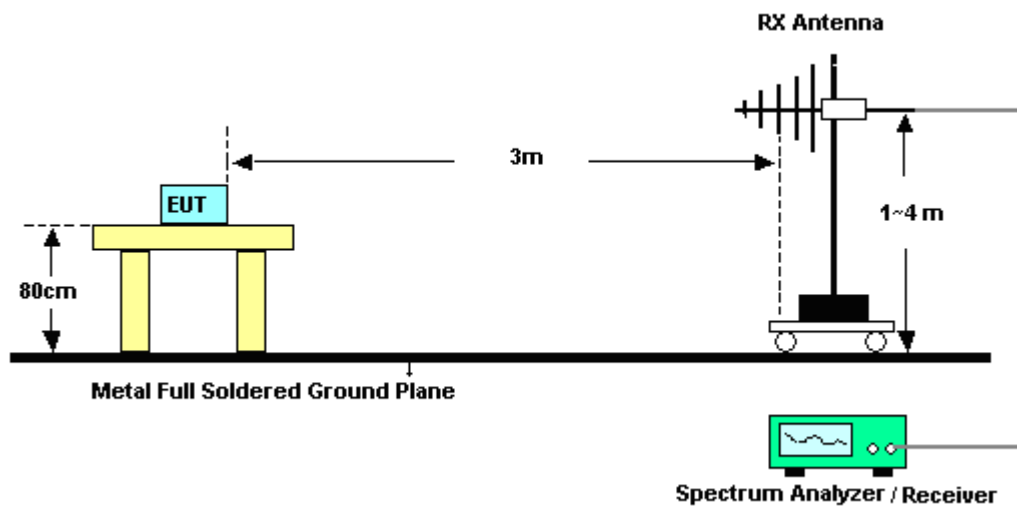
7. For testing above 1 GHz, the emission level of the EUT in peak mode was 20 dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

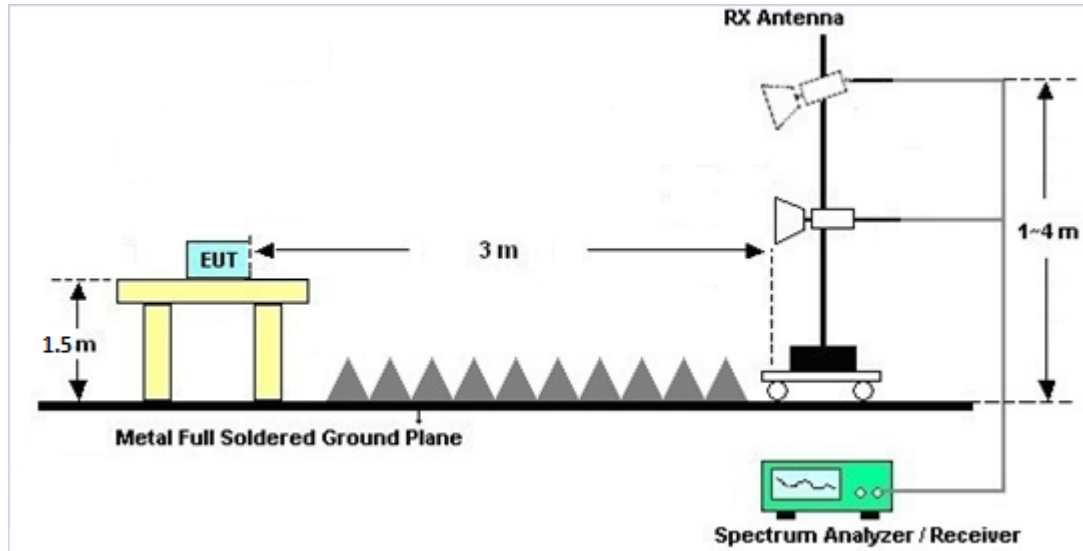
For radiated emissions below 30MHz



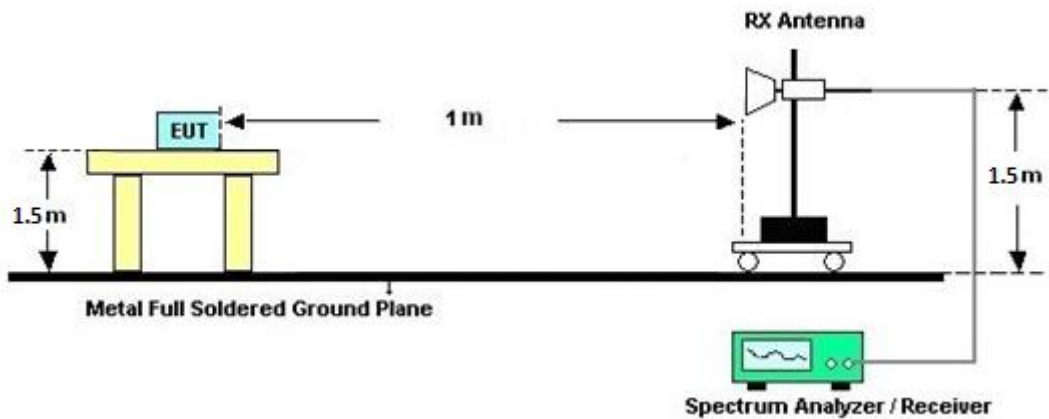
For radiated emissions from 30MHz to 1GHz



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 a comparison data 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 Automatically Discontinue Transmission

3.6.1 Limit of Automatically Discontinue Transmission

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

3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.



3.7 Antenna Requirements

3.7.1 Standard Applicable

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

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = GANT + Array Gain, where Array Gain is as follows.

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

Array Gain = 10 log(NANT/NSS=1) dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4.

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

The EUT supports CDD mode.

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

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

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

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

<CDD Modes>						
			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant. 1 (dBi)	Ant. 2 (dBi)				
Band IV	4.73	4.73	4.73	7.74	0.00	1.74

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

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



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 03, 2021	May 11, 2021 ~ May 12 2021	Mar. 02, 2022	Conducted (TH02-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO10	10MHz~6GHz	Dec. 16, 2020	May 11, 2021 ~ May 12 2021	Dec. 15, 2021	Conducted (TH02-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz ~ 40GHz	Jul. 22, 2020	May 11, 2021 ~ May 12 2021	Jul. 21, 2021	Conducted (TH02-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW200302	N/A	Mar. 17, 2021	May 11, 2021 ~ May 12 2021	Mar. 16, 2022	Conducted (TH02-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jul. 14, 2020	Apr. 21, 2021 ~ May 13, 2021	Jul. 13, 2021	Radiation (03CH16-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00802N1D01N-06	47020 & 06	30MHz to 1GHz	Oct. 11, 2020	Apr. 21, 2021 ~ May 13, 2021	Oct. 10, 2021	Radiation (03CH16-HY)
Amplifier	SONOMA	310N	371607	9kHz~1G	Sep. 30, 2020	Apr. 21, 2021 ~ May 13, 2021	Sep. 29, 2021	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1522	1G~18GHz	Sep. 29, 2020	Apr. 21, 2021 ~ May 13, 2021	Sep. 28, 2021	Radiation (03CH16-HY)
Amplifier	EMCI	EMC051845SE	980729	1-18GHz	Jul. 10, 2020	Apr. 21, 2021 ~ May 13, 2021	Jul. 09, 2021	Radiation (03CH16-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz ~40GHz	May 22, 2020	Apr. 21, 2021 ~ May 13, 2021	May 21, 2021	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY53270264	1GHz~26.5GHz	Dec. 10, 2020	Apr. 21, 2021 ~ May 13, 2021	Dec. 09, 2021	Radiation (03CH16-HY)
EMI Test Receiver	Keysight	N9038A	MY59053012	3Hz~26.5GHz	Nov. 18, 2020	Apr. 21, 2021 ~ May 13, 2021	Nov. 17, 2021	Radiation (03CH16-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Jan. 15, 2021	Apr. 21, 2021 ~ May 13, 2021	Jan. 14, 2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11680/4PE	NA	Aug. 29, 2020	Apr. 21, 2021 ~ May 13, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11688/4PE	NA	Aug. 29, 2020	Apr. 21, 2021 ~ May 13, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	EC-A5-300-5757	NA	Aug. 29, 2020	Apr. 21, 2021 ~ May 13, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	Apr. 21, 2021 ~ May 13, 2021	N/A	Radiation (03CH16-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Apr. 21, 2021 ~ May 13, 2021	N/A	Radiation (03CH16-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Apr. 21, 2021 ~ May 13, 2021	N/A	Radiation (03CH16-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Apr. 21, 2021 ~ May 13, 2021	N/A	Radiation (03CH16-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Apr. 12, 2021	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 30, 2020	Apr. 12, 2021	Nov. 29, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 18, 2020	Apr. 12, 2021	Nov. 17, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 16, 2020	Apr. 12, 2021	Nov. 15, 2021	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Apr. 12, 2021	N/A	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Feb. 25, 2021	Apr. 12, 2021	Feb. 24, 2022	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 31, 2020	Apr. 12, 2021	Dec. 30, 2021	Conduction (CO05-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.3
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.5
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.3
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.7
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Shiming Liu	Temperature:	22.9~23.2	°C
Test Date:	2021/5/11~2021/5/12	Relative Humidity:	51.4~52	%

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

Band IV MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	149	5745	16.48	16.48	22.05	20.85	15.53	16.04	0.5	Pass
11a	6Mbps	2	157	5785	16.43	16.48	21.15	21.10	16.04	15.64	0.5	Pass
11a	6Mbps	2	165	5825	16.73	16.43	28.25	21.15	16.04	15.89	0.5	Pass
HT20	MCS0	2	149	5745	17.68	17.58	22.30	22.10	16.64	16.29	0.5	Pass
HT20	MCS0	2	157	5785	17.63	17.63	22.10	21.85	16.79	17.49	0.5	Pass
HT20	MCS0	2	165	5825	17.73	17.58	23.55	21.80	15.99	17.54	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	149	5745	23.80	22.50	26.21	30.00	30.00	4.73	4.73	Pass
11a	6Mbps	2	157	5785	22.30	22.40	25.36	30.00	30.00	4.73	4.73	Pass
11a	6Mbps	2	165	5825	24.10	22.20	26.26	30.00	30.00	4.73	4.73	Pass
HT20	MCS0	2	149	5745	23.30	22.10	25.75	30.00	30.00	4.73	4.73	Pass
HT20	MCS0	2	157	5785	21.90	22.00	24.96	30.00	30.00	4.73	4.73	Pass
HT20	MCS0	2	165	5825	23.80	21.80	25.92	30.00	30.00	4.73	4.73	Pass
HT40	MCS0	2	151	5755	21.10	20.10	23.64	30.00	30.00	4.73	4.73	Pass
HT40	MCS0	2	159	5795	20.20	19.90	23.06	30.00	30.00	4.73	4.73	Pass
VHT20	MCS0	2	149	5745	21.00	20.80	23.91	30.00	30.00	4.73	4.73	Pass
VHT20	MCS0	2	157	5785	20.20	20.20	23.21	30.00	30.00	4.73	4.73	Pass
VHT20	MCS0	2	165	5825	21.80	20.50	24.21	30.00	30.00	4.73	4.73	Pass
VHT40	MCS0	2	151	5755	21.20	20.20	23.74	30.00	30.00	4.73	4.73	Pass
VHT40	MCS0	2	159	5795	20.30	20.00	23.16	30.00	30.00	4.73	4.73	Pass
VHT80	MCS0	2	155	5775	20.20	20.00	23.11	30.00	30.00	4.73	4.73	Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	10log (500kHz /RBW) Factor (dB)		Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	149	5745	2.22		13.60	12.09	16.61	28.26		7.74		Pass
11a	6Mbps	2	157	5785	2.22		11.81	12.02	15.03	28.26		7.74		Pass
11a	6Mbps	2	165	5825	2.22		13.89	11.64	16.90	28.26		7.74		Pass
HT20	MCS0	2	149	5745	2.22		13.26	11.98	16.27	28.26		7.74		Pass
HT20	MCS0	2	157	5785	2.22		11.75	11.74	14.76	28.26		7.74		Pass
HT20	MCS0	2	165	5825	2.22		13.69	11.83	16.70	28.26		7.74		Pass

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

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

Band IV MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
						Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	149	5745	Full	18.93	18.98	22.65	22.60	18.49	17.64	0.5	Pass
HE20	MCS0	2	157	5785	Full	18.93	18.93	22.50	22.50	17.94	17.24	0.5	Pass
HE20	MCS0	2	165	5825	Full	18.88	18.93	22.65	22.95	17.94	18.29	0.5	Pass
HE40	MCS0	2	151	5755	Full	37.96	37.96	41.85	42.30	37.60	37.78	0.5	Pass
HE40	MCS0	2	159	5795	Full	37.96	37.86	42.03	41.94	37.78	37.87	0.5	Pass
HE80	MCS0	2	155	5775	Full	77.80	77.80	82.24	82.40	76.28	75.16	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
HE20	MCS0	2	149	5745	Full	21.10	20.90	24.01	30.00		4.73		Pass
HE20	MCS0	2	157	5785	Full	20.30	20.30	23.31	30.00		4.73		Pass
HE20	MCS0	2	165	5825	Full	21.90	20.60	24.31	30.00		4.73		Pass
HE40	MCS0	2	151	5755	Full	21.30	20.30	23.84	30.00		4.73		Pass
HE40	MCS0	2	159	5795	Full	20.40	20.10	23.26	30.00		4.73		Pass
HE80	MCS0	2	155	5775	Full	20.30	20.10	23.21	30.00		4.73		Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config	10log (500kHz /RBW) Factor (dB)		Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
						Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
HE20	MCS0	2	149	5745	Full	2.22	10.94	10.96	13.97	28.26	28.26	7.74	7.74	Pass	
HE20	MCS0	2	157	5785	Full	2.22	9.92	9.62	12.93	28.26	28.26	7.74	7.74	Pass	
HE20	MCS0	2	165	5825	Full	2.22	11.68	10.45	14.69	28.26	28.26	7.74	7.74	Pass	
HE40	MCS0	2	151	5755	Full	2.22	6.96	5.64	9.97	28.26	28.26	7.74	7.74	Pass	
HE40	MCS0	2	159	5795	Full	2.22	6.00	5.50	9.01	28.26	28.26	7.74	7.74	Pass	
HE80	MCS0	2	155	5775	Full	2.22	3.56	3.55	6.57	28.26	28.26	7.74	7.74	Pass	

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



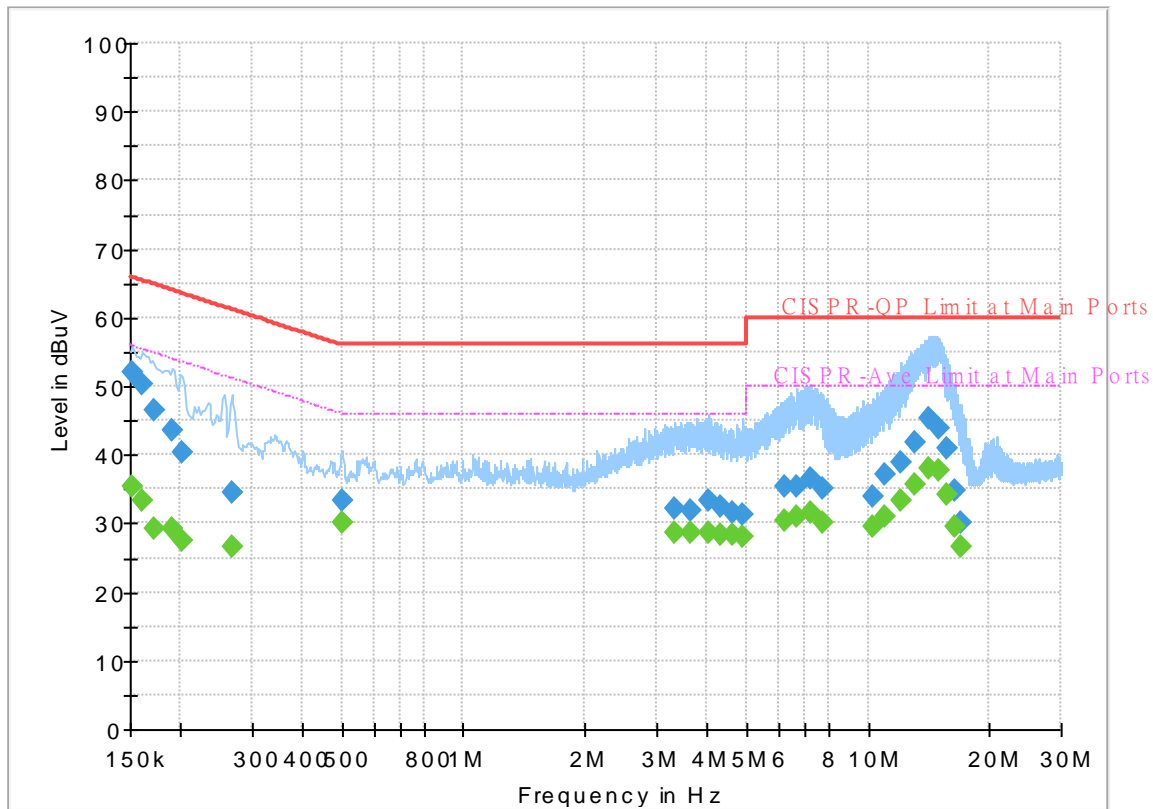
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Tom Lee	Temperature :	23~26°C
		Relative Humidity :	40~50%

EUT Information

Report NO : 131219
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



Final_Result

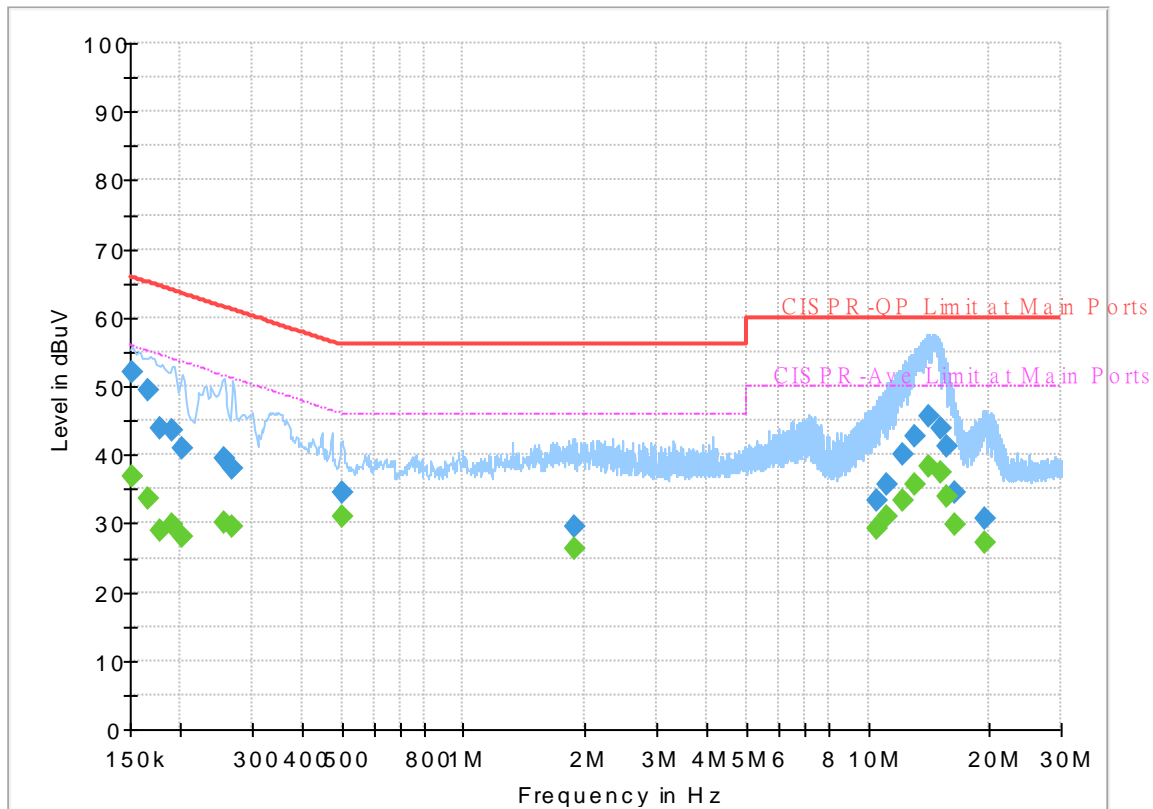
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	35.45	55.88	20.43	L1	OFF	19.7
0.152250	52.06	---	65.88	13.82	L1	OFF	19.7
0.161250	---	33.41	55.40	21.99	L1	OFF	19.7
0.161250	50.20	---	65.40	15.20	L1	OFF	19.7
0.172500	---	29.23	54.84	25.61	L1	OFF	19.7
0.172500	46.54	---	64.84	18.30	L1	OFF	19.7
0.190500	---	29.17	54.02	24.85	L1	OFF	19.7
0.190500	43.45	---	64.02	20.57	L1	OFF	19.7
0.201750	---	27.48	53.54	26.06	L1	OFF	19.7
0.201750	40.26	---	63.54	23.28	L1	OFF	19.7
0.267000	---	26.57	51.21	24.64	L1	OFF	19.7
0.267000	34.58	---	61.21	26.63	L1	OFF	19.7
0.501000	---	30.13	46.00	15.87	L1	OFF	19.9
0.501000	33.21	---	56.00	22.79	L1	OFF	19.9
3.340500	---	28.74	46.00	17.26	L1	OFF	20.1
3.340500	32.09	---	56.00	23.91	L1	OFF	20.1
3.657750	---	28.76	46.00	17.24	L1	OFF	20.1
3.657750	31.94	---	56.00	24.06	L1	OFF	20.1
4.020000	---	28.56	46.00	17.44	L1	OFF	20.1
4.020000	33.27	---	56.00	22.73	L1	OFF	20.1
4.337250	---	28.30	46.00	17.70	L1	OFF	20.1

4.337250	32.42	---	56.00	23.58	L1	OFF	20.1
4.614000	---	28.30	46.00	17.70	L1	OFF	20.1
4.614000	31.57	---	56.00	24.43	L1	OFF	20.1
4.911000	---	28.21	46.00	17.79	L1	OFF	20.1
4.911000	31.19	---	56.00	24.81	L1	OFF	20.1
6.213750	---	30.41	50.00	19.59	L1	OFF	20.1
6.213750	35.28	---	60.00	24.72	L1	OFF	20.1
6.677250	---	30.97	50.00	19.03	L1	OFF	20.1
6.677250	35.34	---	60.00	24.66	L1	OFF	20.1
7.212750	---	31.61	50.00	18.39	L1	OFF	20.1
7.212750	36.52	---	60.00	23.48	L1	OFF	20.1
7.746000	---	30.02	50.00	19.98	L1	OFF	20.1
7.746000	34.98	---	60.00	25.02	L1	OFF	20.1
10.284000	---	29.47	50.00	20.53	L1	OFF	20.2
10.284000	33.93	---	60.00	26.07	L1	OFF	20.2
11.019750	---	30.86	50.00	19.14	L1	OFF	20.2
11.019750	37.20	---	60.00	22.80	L1	OFF	20.2
12.086250	---	33.31	50.00	16.69	L1	OFF	20.3
12.086250	38.85	---	60.00	21.15	L1	OFF	20.3
13.011000	---	35.77	50.00	14.23	L1	OFF	20.3
13.011000	41.72	---	60.00	18.28	L1	OFF	20.3
14.091000	---	38.15	50.00	11.85	L1	OFF	20.3
14.091000	45.40	---	60.00	14.60	L1	OFF	20.3
15.033750	---	37.64	50.00	12.36	L1	OFF	20.3
15.033750	43.80	---	60.00	16.20	L1	OFF	20.3
15.616500	---	34.28	50.00	15.72	L1	OFF	20.4
15.616500	40.86	---	60.00	19.14	L1	OFF	20.4
16.309500	---	29.41	50.00	20.59	L1	OFF	20.4
16.309500	34.69	---	60.00	25.31	L1	OFF	20.4
16.966500	---	26.54	50.00	23.46	L1	OFF	20.4
16.966500	30.05	---	60.00	29.95	L1	OFF	20.4

EUT Information

Report NO : 131219
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	36.75	55.88	19.13	N	OFF	19.7
0.152250	52.03	---	65.88	13.85	N	OFF	19.7
0.165750	---	33.59	55.17	21.58	N	OFF	19.7
0.165750	49.37	---	65.17	15.80	N	OFF	19.7
0.177000	---	28.91	54.63	25.72	N	OFF	19.7
0.177000	43.84	---	64.63	20.79	N	OFF	19.7
0.190500	---	29.90	54.02	24.12	N	OFF	19.7
0.190500	43.68	---	64.02	20.34	N	OFF	19.7
0.201750	---	28.06	53.54	25.48	N	OFF	19.7
0.201750	40.95	---	63.54	22.59	N	OFF	19.7
0.255750	---	30.04	51.57	21.53	N	OFF	19.8
0.255750	39.54	---	61.57	22.03	N	OFF	19.8
0.269250	---	29.48	51.14	21.66	N	OFF	19.8
0.269250	38.00	---	61.14	23.14	N	OFF	19.8
0.501000	---	30.91	46.00	15.09	N	OFF	19.9
0.501000	34.46	---	56.00	21.54	N	OFF	19.9
1.884750	---	26.21	46.00	19.79	N	OFF	20.3
1.884750	29.58	---	56.00	26.42	N	OFF	20.3
10.457250	---	29.23	50.00	20.77	N	OFF	20.3
10.457250	33.44	---	60.00	26.56	N	OFF	20.3
11.159250	---	30.98	50.00	19.02	N	OFF	20.3

11.159250	35.74	---	60.00	24.26	N	OFF	20.3
12.178500	---	33.38	50.00	16.62	N	OFF	20.3
12.178500	39.95	---	60.00	20.05	N	OFF	20.3
13.071750	---	35.68	50.00	14.32	N	OFF	20.4
13.071750	42.69	---	60.00	17.31	N	OFF	20.4
14.205750	---	38.36	50.00	11.64	N	OFF	20.4
14.205750	45.68	---	60.00	14.32	N	OFF	20.4
15.101250	---	37.47	50.00	12.53	N	OFF	20.4
15.101250	43.76	---	60.00	16.24	N	OFF	20.4
15.697500	---	33.85	50.00	16.15	N	OFF	20.5
15.697500	41.23	---	60.00	18.77	N	OFF	20.5
16.327500	---	29.74	50.00	20.26	N	OFF	20.5
16.327500	34.43	---	60.00	25.57	N	OFF	20.5
19.542750	---	27.06	50.00	22.94	N	OFF	20.7
19.542750	30.71	---	60.00	29.29	N	OFF	20.7



Appendix C. Radiated Spurious Emission

Test Engineer :	Karl Hou, Caster Liao, and Andy Yang	Temperature :	20~25°C
		Relative Humidity :	50~60%

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

WIFI Ant.	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		5605	53.79	-14.41	68.2	38.23	31.69	13.64	29.77	250	347	P	H	
		5689.4	55	-42.38	97.38	39.4	31.68	13.72	29.8	250	347	P	H	
		5715	54.46	-54.94	109.4	38.74	31.79	13.74	29.81	250	347	P	H	
		5723.8	53.47	-65.99	119.46	37.7	31.84	13.75	29.82	250	347	P	H	
	*	5745	102.02	-	-	86.1	31.97	13.77	29.82	250	347	P	H	
	*	5745	93.83	-	-	77.91	31.97	13.77	29.82	250	347	A	H	
														H
														H
			5646	56.33	-11.87	68.2	40.83	31.61	13.68	29.79	196	353	P	V
			5650.8	57.06	-11.73	68.79	41.56	31.6	13.69	29.79	196	353	P	V
			5717.8	58.77	-51.41	110.18	43.02	31.81	13.75	29.81	196	353	P	V
			5722.4	63.64	-52.63	116.27	47.87	31.83	13.75	29.81	196	353	P	V
	*	5745	120.84	-	-	104.92	31.97	13.77	29.82	196	353	P	V	
	*	5745	113.11	-	-	97.19	31.97	13.77	29.82	196	353	A	V	
														V
														V



WIFI Ant. 1+2	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		5616.2	54.37	-13.83	68.2	38.82	31.67	13.65	29.77	236	347	P	H	
		5686.4	53.79	-41.38	95.17	38.2	31.67	13.72	29.8	236	347	P	H	
		5702	54.44	-51.32	105.76	38.81	31.71	13.73	29.81	236	347	P	H	
		5721.6	53.91	-60.54	114.45	38.14	31.83	13.75	29.81	236	347	P	H	
	*	5785	101.02	-	-	85.05	32	13.81	29.84	236	347	P	H	
	*	5785	92.92	-	-	76.95	32	13.81	29.84	236	347	A	H	
		5852.6	53.7	-62.57	116.27	37.64	32.11	13.81	29.86	236	347	P	H	
		5863	53.36	-55.2	108.56	37.29	32.13	13.81	29.87	236	347	P	H	
		5910.6	53.63	-25.19	78.82	37.49	32.22	13.81	29.89	236	347	P	H	
		5941.6	53.55	-14.65	68.2	37.36	32.28	13.81	29.9	236	347	P	H	
														H
														H
			5636.8	56.51	-11.69	68.2	40.99	31.63	13.67	29.78	197	356	P	V
			5685.6	57.65	-36.93	94.58	42.06	31.67	13.72	29.8	197	356	P	V
			5706.4	56.21	-50.78	106.99	40.54	31.74	13.74	29.81	197	356	P	V
			5720.8	55.55	-57.07	112.62	39.79	31.82	13.75	29.81	197	356	P	V
	*	5785	120.41	-	-	104.44	32	13.81	29.84	197	356	P	V	
	*	5785	112.45	-	-	96.48	32	13.81	29.84	197	356	A	V	
			5854.6	55.66	-56.05	111.71	39.6	32.11	13.81	29.86	197	356	P	V
			5873	56.73	-49.03	105.76	40.64	32.15	13.81	29.87	197	356	P	V
		5877	57.32	-46.39	103.71	41.23	32.15	13.81	29.87	197	356	P	V	
		5927	55.5	-12.7	68.2	39.33	32.25	13.81	29.89	197	356	P	V	
													V	
													V	



WIFI Ant. 1+2	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	100.78	-	-	84.76	32.05	13.82	29.85	243	348	P	H	
	*	5825	92.89	-	-	76.87	32.05	13.82	29.85	243	348	A	H	
		5853.8	53.8	-59.74	113.54	37.74	32.11	13.81	29.86	243	348	P	H	
		5869	54.79	-52.09	106.88	38.71	32.14	13.81	29.87	243	348	P	H	
		5876.2	55.17	-49.14	104.31	39.08	32.15	13.81	29.87	243	348	P	H	
		5932	54.79	-13.41	68.2	38.61	32.26	13.81	29.89	243	348	P	H	
														H
														H
	*	5825	120.35	-	-	104.33	32.05	13.82	29.85	195	355	P	V	
	*	5825	112.66	-	-	96.64	32.05	13.82	29.85	195	355	A	V	
		5850.2	59.38	-62.36	121.74	43.33	32.1	13.81	29.86	195	355	P	V	
		5855	58.82	-51.98	110.8	42.76	32.11	13.81	29.86	195	355	P	V	
		5921.4	57.59	-13.26	70.85	41.43	32.24	13.81	29.89	195	355	P	V	
		5925.6	56.95	-11.25	68.2	40.78	32.25	13.81	29.89	195	355	P	V	
														V
														V
													V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	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	51.23	-22.77	74	46.72	39.91	20.11	55.51	100	26	P	H	
		11490	43.55	-10.45	54	39.04	39.91	20.11	55.51	100	26	A	H	
		17235	52.16	-16.04	68.2	42.83	40.9	25.16	56.73	100	0	P	H	
													H	
													H	
			5410	60.26	-13.74	74	45.14	31.36	13.48	29.72	194	359	P	V
			5410	49.95	-4.05	54	34.83	31.36	13.48	29.72	194	359	A	V
			11490	52.59	-21.41	74	48.08	39.91	20.11	55.51	245	358	P	V
			11490	47.13	-6.87	54	42.62	39.91	20.11	55.51	245	358	A	V
			17235	51.94	-16.26	68.2	42.61	40.9	25.16	56.73	100	0	P	V
														V
														V
802.11a CH 157 5785MHz		11570	50.34	-23.66	74	45.84	39.76	20.18	55.44	100	359	P	H	
		11570	44.06	-9.94	54	39.56	39.76	20.18	55.44	100	359	A	H	
		17355	51.67	-16.53	68.2	41.76	41.6	25.21	56.9	100	0	P	H	
													H	
													H	
			5458	59.81	-14.19	74	44.39	31.62	13.52	29.72	200	0	P	V
			5458	48.44	-5.56	54	33.02	31.62	13.52	29.72	200	0	A	V
			11570	51.85	-22.15	74	47.35	39.76	20.18	55.44	100	304	P	V
			11570	46.3	-7.7	54	41.8	39.76	20.18	55.44	100	304	A	V
			17355	51.11	-17.09	68.2	41.2	41.6	25.21	56.9	100	0	P	V
														V
														V



802.11a CH 165 5825MHz		11650	49.47	-24.53	74	45.07	39.55	20.23	55.38	100	0	P	H
		17475	52.06	-16.14	68.2	41.42	42.45	25.25	57.06	100	0	P	H
													H
													H
		5470	60.74	-7.46	68.2	45.3	31.64	13.53	29.73	191	0	P	V
		5470	50.98	-3.02	54	35.54	31.64	13.53	29.73	191	0	A	V
		11650	52.94	-21.06	74	48.54	39.55	20.23	55.38	100	354	P	V
		11650	47.05	-6.95	54	42.65	39.55	20.23	55.38	100	354	A	V
		17475	51.92	-16.28	68.2	41.28	42.45	25.25	57.06	100	0	P	V
													V
													V
Remark	<ol style="list-style-type: none"> 1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 												



Band 4 5725~5850MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	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)	
802.11n HT20 CH 149 5745MHz		5634.2	54.27	-13.93	68.2	38.75	31.63	13.67	29.78	261	331	P	H	
		5674.2	53.27	-32.88	86.15	37.71	31.65	13.71	29.8	261	331	P	H	
		5719.8	53.7	-57.04	110.74	37.94	31.82	13.75	29.81	261	331	P	H	
		5720.8	53.79	-58.83	112.62	38.03	31.82	13.75	29.81	261	331	P	H	
	*	5745	103.56	-	-	87.64	31.97	13.77	29.82	261	331	P	H	
	*	5745	94.84	-	-	78.92	31.97	13.77	29.82	261	331	A	H	
														H
														H
			5621	57.02	-11.18	68.2	41.48	31.66	13.66	29.78	198	0	P	V
			5667.8	57.04	-24.37	81.41	41.49	31.64	13.7	29.79	198	0	P	V
			5720	58.56	-52.24	110.8	42.8	31.82	13.75	29.81	198	0	P	V
			5724	64.6	-55.32	119.92	48.83	31.84	13.75	29.82	198	0	P	V
	*		5745	120.78	-	-	104.86	31.97	13.77	29.82	198	0	P	V
	*		5745	112.53	-	-	96.61	31.97	13.77	29.82	198	0	A	V
														V
													V	



WIFI Ant. 1+2	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)
		5647.4	54.29	-13.91	68.2	38.79	31.61	13.68	29.79	268	331	P	H
		5656.6	54.39	-18.71	73.1	38.88	31.61	13.69	29.79	268	331	P	H
		5706	54.08	-52.8	106.88	38.41	31.74	13.74	29.81	268	331	P	H
		5723.8	52.79	-66.67	119.46	37.02	31.84	13.75	29.82	268	331	P	H
	*	5785	102.53	-	-	86.56	32	13.81	29.84	268	331	P	H
	*	5785	94.33	-	-	78.36	32	13.81	29.84	268	331	A	H
		5850.6	54.65	-66.18	120.83	38.6	32.1	13.81	29.86	268	331	P	H
		5875	54.15	-51.05	105.2	38.06	32.15	13.81	29.87	268	331	P	H
		5896.4	55.62	-33.71	89.33	39.5	32.19	13.81	29.88	268	331	P	H
		5943.2	54.5	-13.7	68.2	38.3	32.29	13.81	29.9	268	331	P	H
802.11n													H
HT20													H
CH 157		5600	56.7	-11.5	68.2	41.13	31.7	13.64	29.77	203	2	P	V
5785MHz		5686.8	56.77	-38.69	95.46	41.18	31.67	13.72	29.8	203	2	P	V
		5713.8	55.76	-53.31	109.07	40.05	31.78	13.74	29.81	203	2	P	V
		5722.2	56.61	-59.21	115.82	40.84	31.83	13.75	29.81	203	2	P	V
	*	5785	120.94	-	-	104.97	32	13.81	29.84	203	2	P	V
	*	5785	112.5	-	-	96.53	32	13.81	29.84	203	2	A	V
		5851	55.15	-64.77	119.92	39.1	32.1	13.81	29.86	203	2	P	V
		5855.6	57.12	-53.51	110.63	41.07	32.11	13.81	29.87	203	2	P	V
		5878	58.2	-44.77	102.97	42.1	32.16	13.81	29.87	203	2	P	V
		5932	55.37	-12.83	68.2	39.19	32.26	13.81	29.89	203	2	P	V
													V
													V



WIFI Ant. 1+2	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)	
802.11n HT20 CH 165 5825MHz	*	5825	102.19	-	-	86.17	32.05	13.82	29.85	252	331	P	H	
	*	5825	93.83	-	-	77.81	32.05	13.82	29.85	252	331	A	H	
		5850	53.4	-68.8	122.2	37.35	32.1	13.81	29.86	252	331	P	H	
		5872	53.82	-52.22	106.04	37.74	32.14	13.81	29.87	252	331	P	H	
		5902.6	54.16	-30.58	84.74	38.02	32.21	13.81	29.88	252	331	P	H	
		5933.4	54.73	-13.47	68.2	38.54	32.27	13.81	29.89	252	331	P	H	
														H
														H
	*	5825	121.07	-	-	105.05	32.05	13.82	29.85	198	2	P	V	
	*	5825	112.59	-	-	96.57	32.05	13.82	29.85	198	2	A	V	
		5850.4	60.16	-61.13	121.29	44.11	32.1	13.81	29.86	198	2	P	V	
		5857	57.96	-52.28	110.24	41.91	32.11	13.81	29.87	198	2	P	V	
		5911.4	56.98	-21.25	78.23	40.84	32.22	13.81	29.89	198	2	P	V	
		5927.2	57.43	-10.77	68.2	41.26	32.25	13.81	29.89	198	2	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 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1+2	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)	
802.11n HT20 CH 149 5745MHz		11490	51.35	-22.65	74	46.84	39.91	20.11	55.51	100	29	P	H	
		11490	44.02	-9.98	54	39.51	39.91	20.11	55.51	100	29	A	H	
		17235	52	-16.2	68.2	42.67	40.9	25.16	56.73	100	0	P	H	
													H	
													H	
			5392	60.76	-13.24	74	45.74	31.27	13.46	29.71	200	0	P	V
			5392	50.42	-3.58	54	35.4	31.27	13.46	29.71	200	0	A	V
			11490	52.03	-21.97	74	47.52	39.91	20.11	55.51	240	359	P	V
			11490	46.54	-7.46	54	42.03	39.91	20.11	55.51	240	359	A	V
			17235	51.66	-16.54	68.2	42.33	40.9	25.16	56.73	100	0	P	V
													V	
													V	
802.11n HT20 CH 157 5785MHz		11570	50.28	-23.72	74	45.78	39.76	20.18	55.44	100	340	P	H	
		11570	42.67	-11.33	54	38.17	39.76	20.18	55.44	100	340	A	H	
		17355	52.06	-16.14	68.2	42.15	41.6	25.21	56.9	100	0	P	H	
													H	
													H	
			5446	59.01	-14.99	74	43.64	31.58	13.51	29.72	200	0	P	V
			5446	48.7	-5.3	54	33.33	31.58	13.51	29.72	200	0	A	V
			11570	53.09	-20.91	74	48.59	39.76	20.18	55.44	100	353	P	V
			11570	45.18	-8.82	54	40.68	39.76	20.18	55.44	100	353	A	V
			17355	51.31	-16.89	68.2	41.4	41.6	25.21	56.9	100	0	P	V
													V	
													V	



WIFI Ant. 1+2	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)	
802.11n HT20 CH 165 5825MHz		11650	50.32	-23.68	74	45.92	39.55	20.23	55.38	100	360	P	H	
		11650	43.55	-10.45	54	39.15	39.55	20.23	55.38	100	360	A	H	
		17475	52.03	-16.17	68.2	41.39	42.45	25.25	57.06	100	0	P	H	
													H	
													H	
			5470	59.93	-8.27	68.2	44.49	31.64	13.53	29.73	200	2	P	V
			5470	50.27	-3.73	54	34.83	31.64	13.53	29.73	200	2	A	V
			11650	52.77	-21.23	74	48.37	39.55	20.23	55.38	100	352	P	V
			11650	45.97	-8.03	54	41.57	39.55	20.23	55.38	100	352	A	V
			17475	52.28	-15.92	68.2	41.64	42.45	25.25	57.06	100	0	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 (Band Edge @ 3m)

WIFI Ant. 1+2	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		5639.6	53.99	-14.21	68.2	38.47	31.62	13.68	29.78	400	237	P	H	
		5698.4	54.54	-49.48	104.02	38.92	31.7	13.73	29.81	400	237	P	H	
		5718.4	53.68	-56.67	110.35	37.93	31.81	13.75	29.81	400	237	P	H	
		5725	53.61	-68.59	122.2	37.83	31.85	13.75	29.82	400	237	P	H	
	*	5745	103.7	-	-	87.78	31.97	13.77	29.82	400	237	P	H	
	*	5745	94.22	-	-	78.3	31.97	13.77	29.82	400	237	A	H	
														H
														H
			5642	56.58	-11.62	68.2	41.06	31.62	13.68	29.78	200	359	P	V
			5650.6	56.89	-11.76	68.65	41.39	31.6	13.69	29.79	200	359	P	V
			5719.4	62.54	-48.09	110.63	46.78	31.82	13.75	29.81	200	359	P	V
			5723.4	64.09	-54.46	118.55	48.31	31.84	13.75	29.81	200	359	P	V
	*		5745	120.58	-	-	104.66	31.97	13.77	29.82	200	359	P	V
	*		5745	111.05	-	-	95.13	31.97	13.77	29.82	200	359	A	V
														V
														V



WIFI Ant. 1+2	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)
		5601.4	53.96	-14.24	68.2	38.39	31.7	13.64	29.77	400	234	P	H
		5690	54.62	-43.21	97.83	39.02	31.68	13.72	29.8	400	234	P	H
		5710.2	53.7	-54.36	108.06	38.01	31.76	13.74	29.81	400	234	P	H
		5721.6	52.69	-61.76	114.45	36.92	31.83	13.75	29.81	400	234	P	H
	*	5785	105.9	-	-	89.93	32	13.81	29.84	400	234	P	H
	*	5785	94.73	-	-	78.76	32	13.81	29.84	400	234	A	H
		5850.4	54.08	-67.21	121.29	38.03	32.1	13.81	29.86	400	234	P	H
		5874.2	54.17	-51.25	105.42	38.08	32.15	13.81	29.87	400	234	P	H
		5909.8	54.06	-25.36	79.42	37.92	32.22	13.81	29.89	400	234	P	H
		5950	55.06	-13.14	68.2	38.85	32.3	13.81	29.9	400	234	P	H
802.11ax													H
HE20 Full													H
CH 157		5601.2	57.12	-11.08	68.2	41.55	31.7	13.64	29.77	196	0	P	V
5785MHz		5685.6	57.66	-36.92	94.58	42.07	31.67	13.72	29.8	196	0	P	V
		5710.4	57.03	-51.08	108.11	41.34	31.76	13.74	29.81	196	0	P	V
		5722.8	56.99	-60.19	117.18	41.21	31.84	13.75	29.81	196	0	P	V
	*	5785	123.15	-	-	107.18	32	13.81	29.84	196	0	P	V
	*	5785	113.07	-	-	97.1	32	13.81	29.84	196	0	A	V
		5850.4	56.51	-64.78	121.29	40.46	32.1	13.81	29.86	196	0	P	V
		5856	58.31	-52.21	110.52	42.26	32.11	13.81	29.87	196	0	P	V
		5880.6	59.44	-41.6	101.04	43.34	32.16	13.81	29.87	196	0	P	V
		5927.2	57.22	-10.98	68.2	41.05	32.25	13.81	29.89	196	0	P	V
													V
													V



WIFI Ant. 1+2	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	104.51	-	-	88.49	32.05	13.82	29.85	391	233	P	H	
	*	5825	94.05	-	-	78.03	32.05	13.82	29.85	391	233	A	H	
		5854.4	54.42	-57.75	112.17	38.36	32.11	13.81	29.86	391	233	P	H	
		5863.6	55.25	-53.14	108.39	39.18	32.13	13.81	29.87	391	233	P	H	
		5909.4	55.14	-24.57	79.71	39	32.22	13.81	29.89	391	233	P	H	
		5948.8	55.39	-12.81	68.2	39.18	32.3	13.81	29.9	391	233	P	H	
														H
														H
	*	5825	123.14	-	-	107.12	32.05	13.82	29.85	198	0	P	V	
	*	5825	112.66	-	-	96.64	32.05	13.82	29.85	198	0	A	V	
		5851.2	63	-56.46	119.46	46.95	32.1	13.81	29.86	198	0	P	V	
		5856	59.36	-51.16	110.52	43.31	32.11	13.81	29.87	198	0	P	V	
		5881.2	57.81	-42.78	100.59	41.71	32.16	13.81	29.87	198	0	P	V	
		5928.4	58.15	-10.05	68.2	41.97	32.26	13.81	29.89	198	0	P	V	
														V
														V
													V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



Band 4 5725~5850MHz

WIFI 802.11ax HE20 Full (Harmonic @ 3m)

WIFI Ant. 1+2	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	51.27	-22.73	74	46.76	39.91	20.11	55.51	238	357	P	H	
		11490	42.56	-11.44	54	38.05	39.91	20.11	55.51	238	357	A	H	
		17235	52.21	-15.99	68.2	42.88	40.9	25.16	56.73	100	0	P	H	
													H	
													H	
			5386	58.22	-15.78	74	43.25	31.24	13.44	29.71	200	359	P	V
			5386	50.28	-3.72	54	35.31	31.24	13.44	29.71	200	359	A	V
			11490	52.26	-21.74	74	47.75	39.91	20.11	55.51	331	358	P	V
			11490	46.84	-7.16	54	42.33	39.91	20.11	55.51	331	358	A	V
			17235	52.39	-15.81	68.2	43.06	40.9	25.16	56.73	100	0	P	V
													V	
													V	
802.11ax HE20 Full CH 157 5785MHz		11570	49.9	-24.1	74	45.4	39.76	20.18	55.44	100	0	P	H	
		17355	51.9	-16.3	68.2	41.99	41.6	25.21	56.9	100	0	P	H	
													H	
													H	
			5416	60.64	-13.36	74	45.48	31.4	13.48	29.72	200	0	P	V
			5416	50.66	-3.34	54	35.5	31.4	13.48	29.72	200	0	A	V
			11570	53.14	-20.86	74	48.64	39.76	20.18	55.44	100	354	P	V
			11570	45.58	-8.42	54	41.08	39.76	20.18	55.44	100	354	A	V
			17355	51.5	-16.7	68.2	41.59	41.6	25.21	56.9	100	0	P	V
														V
													V	



WIFI Ant. 1+2	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	49.91	-24.09	74	45.51	39.55	20.23	55.38	100	0	P	H	
		17475	52.2	-16	68.2	41.56	42.45	25.25	57.06	100	0	P	H	
													H	
													H	
			5460	63.44	-4.76	68.2	48.02	31.62	13.52	29.72	200	0	P	V
			5460	50.17	-3.83	54	34.75	31.62	13.52	29.72	200	0	A	V
			11650	52.91	-21.09	74	48.51	39.55	20.23	55.38	100	0	P	V
			11650	46.48	-7.52	54	42.08	39.55	20.23	55.38	100	0	A	V
			17475	51.67	-16.53	68.2	41.03	42.45	25.25	57.06	100	0	P	V
														V
													V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



Band 4 5725~5850MHz
WIFI 802.11ax HE40_Full (Band Edge @ 3m)

WIFI Ant. 1+2	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)
		5602.8	54.36	-13.84	68.2	38.8	31.69	13.64	29.77	400	237	P	H
		5677.4	53.74	-34.78	88.52	38.18	31.65	13.71	29.8	400	237	P	H
		5715.4	55.7	-53.81	109.51	39.98	31.79	13.74	29.81	400	237	P	H
		5724.8	55.15	-66.59	121.74	39.37	31.85	13.75	29.82	400	237	P	H
	*	5755	104.68	-	-	88.73	32	13.78	29.83	400	237	P	H
	*	5755	94.7	-	-	78.75	32	13.78	29.83	400	237	A	H
		5852	53.95	-63.69	117.64	37.9	32.1	13.81	29.86	400	237	P	H
		5858.2	54.44	-55.46	109.9	38.38	32.12	13.81	29.87	400	237	P	H
		5878.8	55.02	-47.36	102.38	38.92	32.16	13.81	29.87	400	237	P	H
		5928.6	55.46	-12.74	68.2	39.28	32.26	13.81	29.89	400	237	P	H
802.11ax													H
HE40 Full													H
CH 151		5628	58.53	-9.67	68.2	43	31.64	13.67	29.78	202	0	P	V
5755MHz		5691.6	62.92	-36.09	99.01	47.32	31.68	13.72	29.8	202	0	P	V
		5713.6	71.76	-37.25	109.01	56.05	31.78	13.74	29.81	202	0	P	V
		5724.2	75.09	-45.29	120.38	59.31	31.85	13.75	29.82	202	0	P	V
	*	5755	122.08	-	-	106.13	32	13.78	29.83	200	360	P	V
	*	5755	112.7	-	-	96.75	32	13.78	29.83	200	360	A	V
		5850	57.41	-64.79	122.2	41.36	32.1	13.81	29.86	202	0	P	V
		5856	58.61	-51.91	110.52	42.56	32.11	13.81	29.87	202	0	P	V
		5889.2	58.16	-36.5	94.66	42.05	32.18	13.81	29.88	202	0	P	V
		5928.4	57.41	-10.79	68.2	41.23	32.26	13.81	29.89	202	0	P	V
													V
													V



WIFI Ant. 1+2	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)
		5640.4	54.42	-13.78	68.2	38.9	31.62	13.68	29.78	400	234	P	H
		5674	54.29	-31.71	86	38.73	31.65	13.71	29.8	400	234	P	H
		5718	54.16	-56.08	110.24	38.41	31.81	13.75	29.81	400	234	P	H
		5720.6	53.32	-58.85	112.17	37.56	31.82	13.75	29.81	400	234	P	H
	*	5795	104.64	-	-	88.66	32	13.82	29.84	400	234	P	H
	*	5795	94.82	-	-	78.84	32	13.82	29.84	400	234	A	H
		5853	53.64	-61.72	115.36	37.58	32.11	13.81	29.86	400	234	P	H
		5875	54.01	-51.19	105.2	37.92	32.15	13.81	29.87	400	234	P	H
		5886	54.64	-42.39	97.03	38.54	32.17	13.81	29.88	400	234	P	H
		5943.4	53.88	-14.32	68.2	37.68	32.29	13.81	29.9	400	234	P	H
802.11ax													H
HE40 Full													H
CH 159		5618	57.67	-10.53	68.2	42.12	31.66	13.66	29.77	202	358	P	V
5795MHz		5695.6	59.21	-42.75	101.96	43.59	31.69	13.73	29.8	202	358	P	V
		5714.2	59.53	-49.65	109.18	43.81	31.79	13.74	29.81	202	358	P	V
		5721.6	60.64	-53.81	114.45	44.87	31.83	13.75	29.81	202	358	P	V
	*	5795	122.28	-	-	106.3	32	13.82	29.84	212	360	P	V
	*	5795	113.06	-	-	97.08	32	13.82	29.84	212	360	A	V
		5855	67.71	-43.09	110.8	51.65	32.11	13.81	29.86	202	358	P	V
		5856	64.36	-46.16	110.52	48.31	32.11	13.81	29.87	202	358	P	V
		5882	59.16	-40.84	100	43.07	32.16	13.81	29.88	202	358	P	V
		5944.8	57.37	-10.83	68.2	41.17	32.29	13.81	29.9	202	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. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11ax HE40 Full CH 151 5755MHz		11510	52.99	-21.01	74	48.47	39.88	20.13	55.49	100	29	P	H	
		11510	44.63	-9.37	54	40.11	39.88	20.13	55.49	100	29	A	H	
		17265	51.97	-16.23	68.2	42.58	40.99	25.17	56.77	100	0	P	H	
													H	
													H	
			5398	60.75	-13.25	74	45.7	31.29	13.47	29.71	200	360	P	V
			5398	52.16	-1.84	54	37.11	31.29	13.47	29.71	200	360	A	V
			11510	54.67	-19.33	74	50.15	39.88	20.13	55.49	100	28	P	V
			11510	46.4	-7.6	54	41.88	39.88	20.13	55.49	100	28	A	V
			17265	51.45	-16.75	68.2	42.06	40.99	25.17	56.77	100	0	P	V
													V	
													V	
802.11ax HE40 Full CH 159 5795MHz		11590	49.51	-24.49	74	45.03	39.72	20.19	55.43	100	0	P	H	
		17385	51.65	-16.55	68.2	41.51	41.86	25.22	56.94	100	0	P	H	
													H	
													H	
			5440	62.37	-11.63	74	47.05	31.54	13.5	29.72	212	360	P	V
			5440	52.38	-1.62	54	37.06	31.54	13.5	29.72	212	360	A	V
			11590	53.89	-20.11	74	49.41	39.72	20.19	55.43	100	25	P	V
			11590	45.82	-8.18	54	41.34	39.72	20.19	55.43	100	25	A	V
			17385	51.67	-16.53	68.2	41.53	41.86	25.22	56.94	100	0	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 (Band Edge @ 3m)

WIFI Ant. 1+2	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)
		5626	54.03	-14.17	68.2	38.5	31.65	13.66	29.78	400	233	P	H
		5692.6	54.55	-45.19	99.74	38.94	31.69	13.72	29.8	400	233	P	H
		5718.2	55.91	-54.39	110.3	40.16	31.81	13.75	29.81	400	233	P	H
		5725	54.48	-67.72	122.2	38.7	31.85	13.75	29.82	400	233	P	H
	*	5775	100.44	-	-	84.47	32	13.8	29.83	400	233	P	H
	*	5775	91.19	-	-	75.22	32	13.8	29.83	400	233	A	H
		5851	54.89	-65.03	119.92	38.84	32.1	13.81	29.86	400	233	P	H
		5865.6	54.52	-53.31	107.83	38.45	32.13	13.81	29.87	400	233	P	H
		5912	54.99	-22.8	77.79	38.85	32.22	13.81	29.89	400	233	P	H
		5935	55.45	-12.75	68.2	39.27	32.27	13.81	29.9	400	233	P	H
802.11ax													H
HE80 Full													H
CH 155		5641.8	61.06	-7.14	68.2	45.54	31.62	13.68	29.78	188	1	P	V
5775MHz		5693.4	70.74	-29.59	100.33	55.13	31.69	13.72	29.8	188	1	P	V
		5711.6	74.88	-33.57	108.45	59.18	31.77	13.74	29.81	188	1	P	V
		5724	75.45	-44.47	119.92	59.68	31.84	13.75	29.82	188	1	P	V
	*	5775	118.91	-	-	102.94	32	13.8	29.83	188	1	P	V
	*	5775	109.51	-	-	93.54	32	13.8	29.83	188	1	A	V
		5851.2	72.14	-47.32	119.46	56.09	32.1	13.81	29.86	188	1	P	V
		5861.4	71.22	-37.79	109.01	55.16	32.12	13.81	29.87	188	1	P	V
		5881.6	65.22	-35.08	100.3	49.13	32.16	13.81	29.88	188	1	P	V
		5931.6	59.08	-9.12	68.2	42.9	32.26	13.81	29.89	188	1	P	V
													V
													V

Remark

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



Band 4 5725~5850MHz

WIFI 802.11ax HE80_Full (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	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	49.83	-24.17	74	45.33	39.8	20.16	55.46	100	0	P	H	
		17325	52.53	-15.67	68.2	42.86	41.32	25.2	56.85	100	0	P	H	
													H	
													H	
			5404	61.5	-12.5	74	46.42	31.32	13.47	29.71	200	0	P	V
			5404	51.22	-2.78	54	36.14	31.32	13.47	29.71	200	0	A	V
			11550	53.39	-20.61	74	48.89	39.8	20.16	55.46	100	0	P	V
			11550	46	-8	54	41.5	39.8	20.16	55.46	100	0	A	V
			17325	52.28	-15.92	68.2	42.61	41.32	25.2	56.85	100	0	P	V
														V
													V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



Emission above 1GHz
 WIFI 802.11ax HE40 Full (SHF @ 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.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax HE40 Full SHF		28032	42.19	-26.01	68.2	40.36	39.9	15.94	54.01	150	0	P	H
		36216	44.55	-23.65	68.2	39.79	42.69	18.67	56.6	150	0	P	H
													H
													H
													H
													H
													H
													H
													H
													H
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													H
													H
													H
		22796	40.32	-33.68	74	42.91	38.58	12.39	53.56	150	0	P	V
		31178	44.75	-23.45	68.2	43.21	40.49	16.52	55.47	150	0	P	V
													V
													V
													V
													V
													V
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													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Emission below 1GHz

WIFI 802.11ax HE40 Full (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.	
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.		
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)	
802.11ax HE40 Full LF		181.32	42.28	-1.22	43.5	57.8	15.12	2.21	32.85	117	115	Q	H	
		240.49	40	-6	46	52.76	17.39	2.61	32.76	122	113	Q	H	
		321.97	37.05	-8.95	46	46.94	19.6	3.02	32.51	-	-	P	H	
		379.2	33.27	-12.73	46	41.11	21.27	3.3	32.41	-	-	P	H	
		789.51	32.85	-13.15	46	32.75	28.02	4.89	32.81	-	-	P	H	
		868.08	36.62	-9.38	46	34.84	29.18	5.16	32.56	-	-	P	H	
														H
														H
														H
														H
														H
														H
														H
			62.98	33.02	-6.98	40	52.69	11.96	1.16	32.79	100	0	P	V
			173.56	33.92	-9.58	43.5	49.07	15.54	2.14	32.83	-	-	P	V
			240.49	32.69	-13.31	46	45.45	17.39	2.61	32.76	-	-	P	V
			321.97	29.59	-16.41	46	39.48	19.6	3.02	32.51	-	-	P	V
			744.89	34.93	-11.07	46	34.73	28.12	4.69	32.61	-	-	P	V
			901.06	37.02	-8.98	46	34.93	29.19	5.3	32.4	-	-	P	V
														V
													V	
													V	
													V	
													V	
													V	
Remark	1. No other spurious found. 2. All results are PASS against limit line.													



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	Peak or Average
H/V	Horizontal or Vertical



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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)
= 55.45 (dBμV/m)
2. Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.45(dBμV/m) – 74(dBμV/m)
= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)
= 43.54 (dBμV/m)
2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)
= 43.54(dBμV/m) – 54(dBμV/m)
= -10.46(dB)

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



Appendix D. Radiated Spurious Emission Plots

Test Engineer :	Karl Hou, Caster Liao, and Andy Yang	Temperature :	20~25°C
		Relative Humidity :	50~60%

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

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1+2	Horizontal	Fundamental
Peak	<p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>	<p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1+2	Vertical	Fundamental
Peak	<p>Date: 2021-04-21 PEAK: 125.21</p> <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	<p>Date: 2021-04-21 PEAK: 125.21</p> <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+2	Horizontal	Fundamental
<p>Peak</p>	<p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>
<p>Peak</p>	<p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>	<p>Left blank</p>

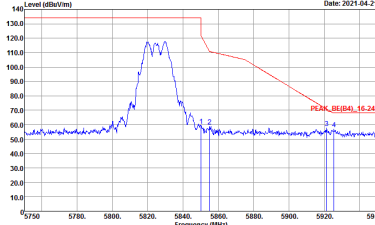
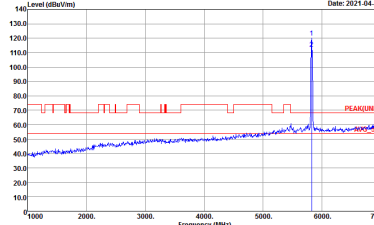


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+2	Vertical	Fundamental
Peak	<p>Date: 2021-04-21 PEAK_BE(04)_15-21</p> <p>Site : 03CH16-HY Condition : PEAK_BE(04)_16-24 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	<p>Date: 2021-04-23</p> <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>
Peak	<p>Date: 2021-04-21 PEAK_BE(04)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(04)_16-24 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1+2	Horizontal	Fundamental
Peak	<p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	<p>Site : 03CH16-HY Condition : PEAK(UNI) 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>



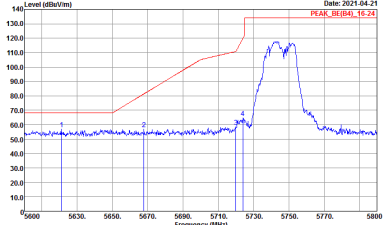
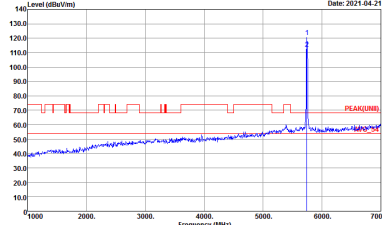
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1+2	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	 <p>Site : 03CH16-HY Condition : PEAK(UNI) 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>



Band 4 5725~5850MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

Table with 2 columns: Horizontal and Fundamental. It contains two spectral plots showing Level (dBu/m) vs Frequency (MHz) with associated site and condition metadata.



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1+2	Vertical	Fundamental
Peak	 <p>Date: 2021-04-21 PEAK_BE(49)_15-21</p> <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	 <p>Date: 2021-04-21 PEAK(UR)</p> <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>

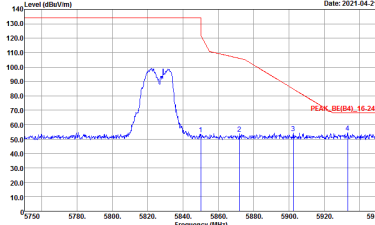
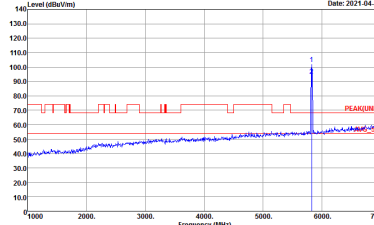


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1+2	Horizontal	Fundamental
<p>Peak</p>	<p>Date: 2021-04-21 PEAK_BE(84)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	<p>Date: 2021-04-21 PEAK(UB)</p> <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>
<p>Peak</p>	<p>Date: 2021-04-21 PEAK_BE(84)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	<p>Left blank</p>

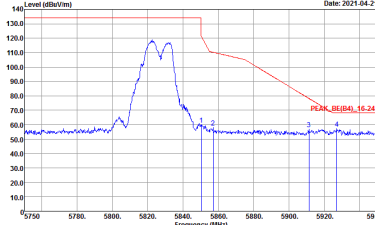
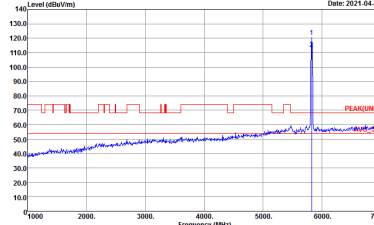


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1+2	Vertical	Fundamental
<p>Peak</p>	<p>Date: 2021-04-21 PEAK_BE(04)_15-21</p> <p>Site : 03CH16-HY Condition : PEAK_BE(04)_16-24 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	<p>Date: 2021-04-21 PEAK(04)</p> <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>
<p>Peak</p>	<p>Date: 2021-04-21 PEAK_BE(04)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(04)_16-24 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	<p>Left blank</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1+2	Horizontal	Fundamental
Peak	 <p>Date: 2021-04-21</p> <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	 <p>Date: 2021-04-21</p> <p>Site : 03CH16-HY Condition : PEAK(UNI) 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1+2	Vertical	Fundamental
Peak	 <p>Date: 2021-04-21</p> <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	 <p>Date: 2021-04-21</p> <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>



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

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Horizontal	Fundamental
Peak	<p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>	<p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Vertical	Fundamental
Peak	<p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
1+2	Horizontal	Fundamental
Peak	<p>Date: 2021-04-21 PEAK_BE(84)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	<p>Date: 2021-04-21 PEAK(UB)</p> <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>
Peak	<p>Date: 2021-04-21 PEAK_BE(84)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	Left blank

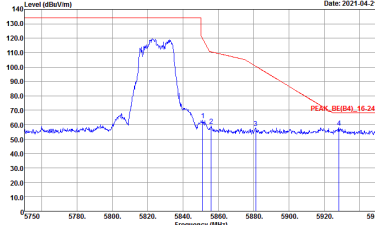
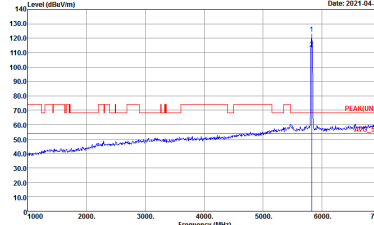


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
1+2	Vertical	Fundamental
Peak	<p>Date: 2021-04-21 PEAK_BE(84)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	<p>Date: 2021-04-21 PEAK(UNII)_3m 91200_1522 VERTICAL</p> <p>Site : 03CH16-HY Condition : PEAK(UNII)_3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>
Peak	<p>Date: 2021-04-21 PEAK_BE(84)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
1+2	Horizontal	Fundamental
Peak	<p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	<p>Site : 03CH16-HY Condition : PEAK(UWB) 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>



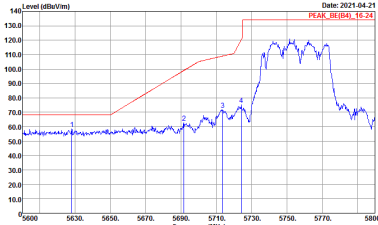
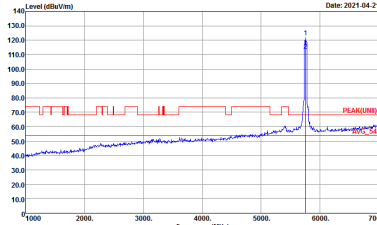
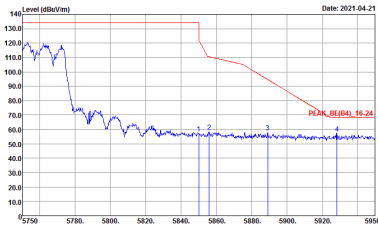
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
1+2	Vertical	Fundamental
Peak	 <p>Date: 2021-04-21</p> <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>	 <p>Date: 2021-04-21</p> <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219</p>



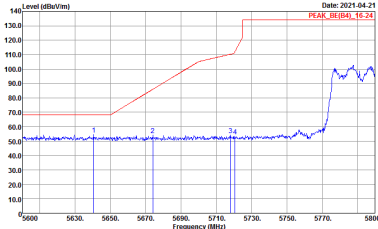
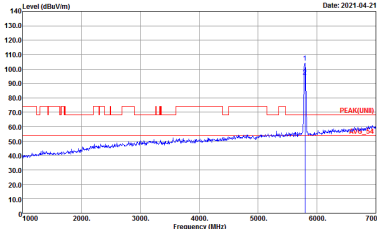
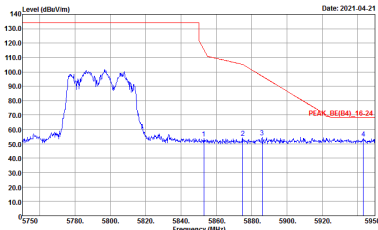
Band 4 5725~5850MHz
WIFI 802.11ax HE40 Full (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
1+2	Horizontal	Fundamental
<p>Peak</p>	<p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219 Setting : 19.5</p>	<p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219 Setting : 19.5</p>
<p>Peak</p>	<p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219 Setting : 19.5</p>	<p>Left blank</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
1+2	Vertical	Fundamental
Peak	 <p>Date: 2021-04-21 PEAK_BE(84)_15-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 VERTICAL Detector : Peak Project : 131219 Setting : 19.5</p>	 <p>Date: 2021-04-21 PEAK(UNB) ROC-01</p> <p>Site : 03CH16-HY Condition : PEAK(UNB) 3m 91200_1522 VERTICAL Detector : Peak Project : 131219 Setting : 19.5</p>
Peak	 <p>Date: 2021-04-21 PEAK_BE(84)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 VERTICAL Detector : Peak Project : 131219 Setting : 19.5</p>	Left blank



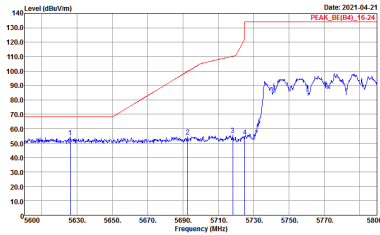
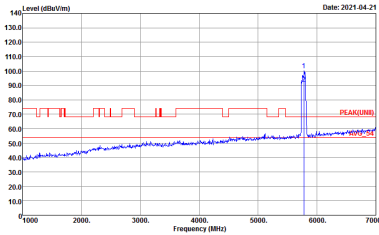
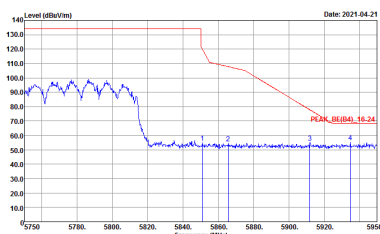
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full HT40 CH159 5795MHz	
1+2	Horizontal	Fundamental
Peak	 <p>Date: 2021-04-21 PEAK_BE(84)_15-21</p> <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219 Setting : 19.5</p>	 <p>Date: 2021-04-21 PEAK(84)</p> <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219 Setting : 19.5</p>
Peak	 <p>Date: 2021-04-21 PEAK_BE(84)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219 Setting : 19.5</p>	Left blank



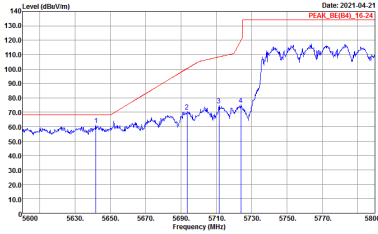
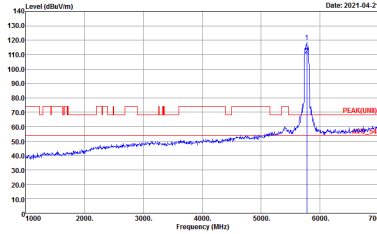
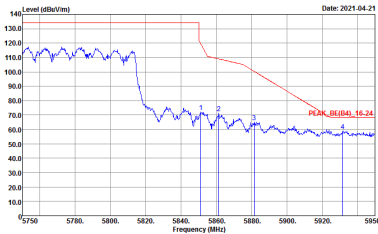
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
1+2	Vertical	Fundamental
Peak	<p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522 VERTICAL Detector : Peak Project : 131219 Setting : 19.5</p>	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL Detector : Peak Project : 131219 Setting : 19.5</p>
Peak	<p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522 VERTICAL Detector : Peak Project : 131219 Setting : 19.5</p>	Left blank



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

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
1+2	Horizontal	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219 Setting : 19.5</p>	 <p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219 Setting : 19.5</p>
Peak	 <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 131219 Setting : 19.5</p>	Left blank



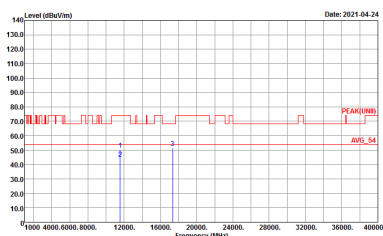
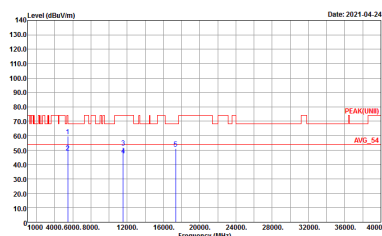
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
1+2	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 VERTICAL Detector : Peak Project : 131219 Setting : 19.5</p>	 <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL Detector : Peak Project : 131219 Setting : 19.5</p>
<p>Peak</p>	 <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522 VERTICAL Detector : Peak Project : 131219 Setting : 19.5</p>	<p>Left blank</p>



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

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
1+2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH16-1FY Condition : PEAK(UNII) 3m 9120D_1522 HORIZONTAL Detector : Peak Project : 131219</p>	<p>Site : 03CH16-1FY Condition : PEAK(UNII) 3m 9120D_1522 VERTICAL Detector : Peak Project : 131219</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
1+2	Horizontal	Vertical
<p>Peak Avg.</p>	 <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>	 <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL Detector : Peak Project : 131219</p>



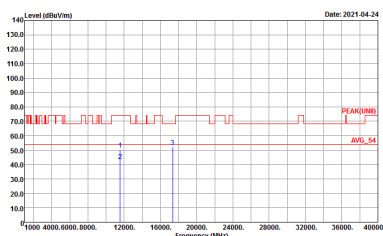
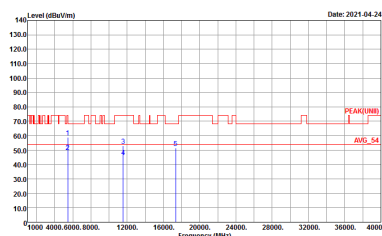
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
1+2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL Detector : Peak Project : 131219</p>



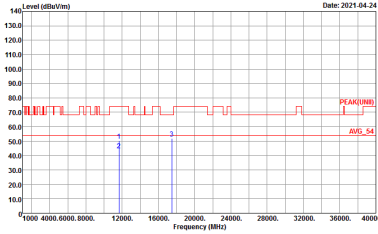
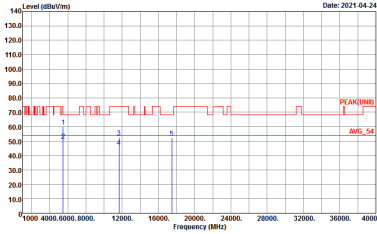
Band 4 5725~5850MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

Table with 2 columns: Horizontal and Vertical. Each column contains a spectrum plot showing Level (dBu/m) vs Frequency (MHz) with peak and average markers. Includes site and condition details for both orientations.



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1+2	Horizontal	Vertical
<p>Peak</p> <p>Avg.</p>	 <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>	 <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL Detector : Peak Project : 131219</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1+2	Horizontal	Vertical
<p>Peak</p> <p>Avg.</p>	 <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>	 <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL Detector : Peak Project : 131219</p>



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

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL Detector : Peak Project : 131219</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
1+2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL Detector : Peak Project : 131219</p>



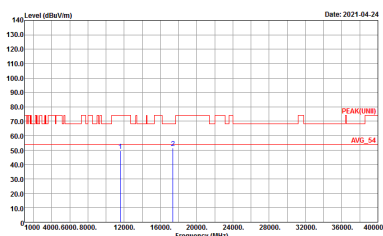
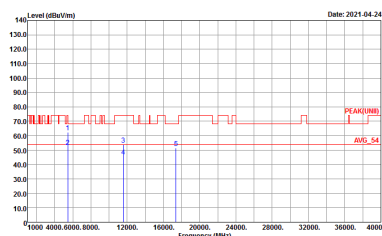
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
1+2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL Detector : Peak Project : 131219</p>



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

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
1+2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219 Setting : 19.5</p>	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL Detector : Peak Project : 131219 Setting : 19.5</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
1+2	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219 Setting : 19.5</p>	 <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL Detector : Peak Project : 131219 Setting : 19.5</p>



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

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
1+2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 131219</p>	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522 VERTICAL Detector : Peak Project : 131219</p>



Emission above 18GHz
5GHz WIFI 802.11ax HE40 Full (SHF)

WIFI	5GHz WIFI	
ANT	802.11ax HE40 Full SHF	
1+2	Horizontal	Vertical
Peak	<p>Site : 03CH16-HY Condition : PEAK(UNII) 1m SHF HORN 88HA9170584 HORIZONTAL Detector : Peak Project : 131219</p>	<p>Site : 03CH16-HY Condition : PEAK(UNII) 1m SHF HORN 88HA9170584 VERTICAL Detector : Peak Project : 131219</p>



Emission below 1GHz
5GHz WIFI 802.11ax HE40 Full (LF)

WIFI	5GHz WIFI	
ANT	802.11ax HE40 Full LF	
1+2	Horizontal	Vertical
QP / Peak	<p>Site : 03CH16-1FY Condition : QP 3m B1LOG_47020406 HORIZONTAL Detector : Peak Project : 131219</p>	<p>Site : 03CH16-1FY Condition : QP 3m B1LOG_47020406 VERTICAL Detector : Peak Project : 131219</p>



Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
1+2	802.11a	93.18	1435	0.70	1kHz	0.31
1+2	5GHz 802.11n HT20	91.41	5430	0.18	1kHz	0.39
1+2	5GHz 802.11ax HE20 Full RU	95.03	5445	0.18	1kHz	0.22
1+2	5GHz 802.11ax HE40 Full RU	95.78	5445	0.18	1kHz	0.19
1+2	5GHz 802.11ax HE80 Full RU	93.21	5355	0.19	1kHz	0.31

MIMO <Ant. 1+2>



