FCC RADIO TEST REPORT

FCC ID	**:**	**S9GR550**
Equipment	**:**	**Wireless Access Point**
Brand Name	**:**	**Ruckus**
Model Name	**:**	**R550**
Applicant	**:**	**Ruckus Wireless Inc. 350 W. Java Dr., Sunnyvale CA 94089 USA**
Manufacturer	**:**	**Ruckus Wireless Inc. 350 W. Java Dr., Sunnyvale CA 94089 USA**
Standard	**:**	**FCC Part 15 Subpart E §15.407**

The product was received on Jan. 22, 2020 and testing was started from Jan. 28, 2020 and completed on Mar. 10, 2020. We, Sporton International (USA) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by A2LA or any agency of government.

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

Approved by: Ken Chen

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

Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FR200117001F	01	Initial issue of report	Mar. 26, 2020
FR200117001F	02	Revising antenna gain information.	Apr. 17, 2020

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403 (i)	6dB & 26dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.407 (a)	Maximum Conducted Output Power	Pass	-
3.3	15.407 (a)	Power Spectral Density	Pass	-
3.4	15.407(b)	Unwanted Emissions	Pass	Under limit 0.04 dB at 5924.600 MHz
3.5	15.207	AC Conducted Emission	Pass	Under limit 2.48 dB at 0.461 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.

1 General Description

1.1 Product Feature of Equipment Under Test

Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ax, Wi-Fi 5GHz 802.11a/n/ac/ax and Zigbee.

Product Specification subjective to this standard	
Antenna Type	WLAN <Ant. 1>: Internal Antenna <Ant. 2>: Internal Antenna Bluetooth: Metal Antenna Zigbee: Metal Antenna

1.2 Modification of EUT

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

1.3 Testing Location

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

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. 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 three orthogonal panels, X, Y, Z. The worst cases (Y plane) 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.
2. The above Frequency and Channel in "#" were 802.11ac VHT80.

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 (Covered by HE20)	MCS0
802.11n HT40 (Covered by HE40)	MCS0
802.11ac VHT20 (Covered by HE20)	MCS0
802.11ac VHT40 (Covered by HE40)	MCS0
802.11ac VHT80 (Covered by HE80)	MCS0
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0

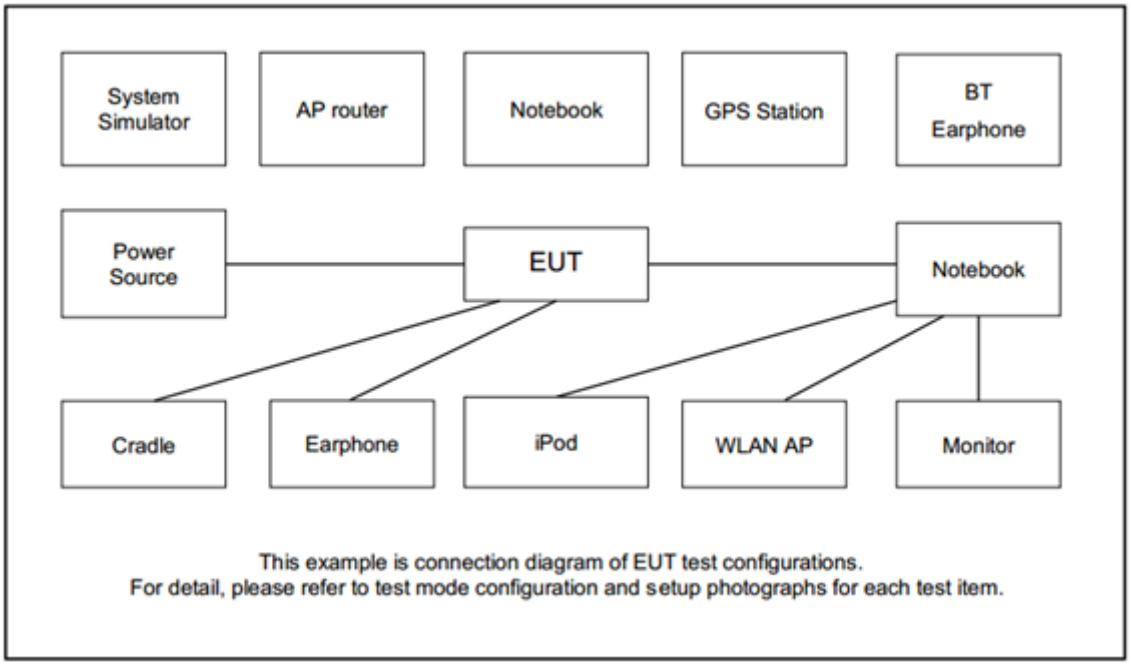
Test Cases	
AC Conducted Emission	Mode 1： WLAN (2.4GHz) Idle + WLAN (5GHz) Link + zigbee Idle + PoE + LAN Link

Remark: Radiated Spurious Emissions for LF and above 18G only test the worst case. Please refer to Sporton Report Number FR200117001D.

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

Remark: For radiation spurious emission, the 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	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	Laptop	DELL	P79G	FCC DoC	N/A	N/A
3.	Laptop	DELL	E6430	N/A	N/A	N/A
4.	Notebook	HP	15t-cu000	PD97265NG	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	USB Flash drive	SanDisk	N/A	N/A	N/A	N/A
6.	PoE Adapter	Ruckus Wireless Inc.	N/A	N/A	N/A	N/A
7.	Adapter	Ruckus Wireless Inc.	APH-5020	N/A	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “Putty” 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 10dB attenuator.

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

= 4.2 + 10 = 14.2 (dB)

3 Test Result

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

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

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

26dB and 99% Occupied bandwidth are reporting only.

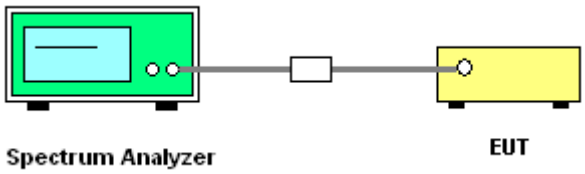
3.1.2 Measuring Instruments

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 5.725-5.85GHz
2. Set RBW = 100kHz.
3. Set the VBW ≥ 3 x RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.
7. Measure and record the results in the test report.

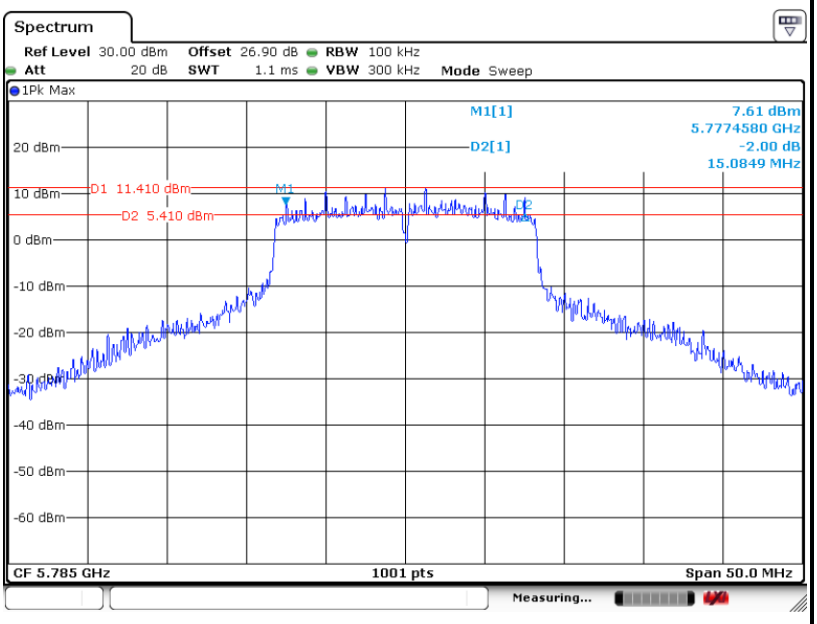
3.1.4 Test Setup



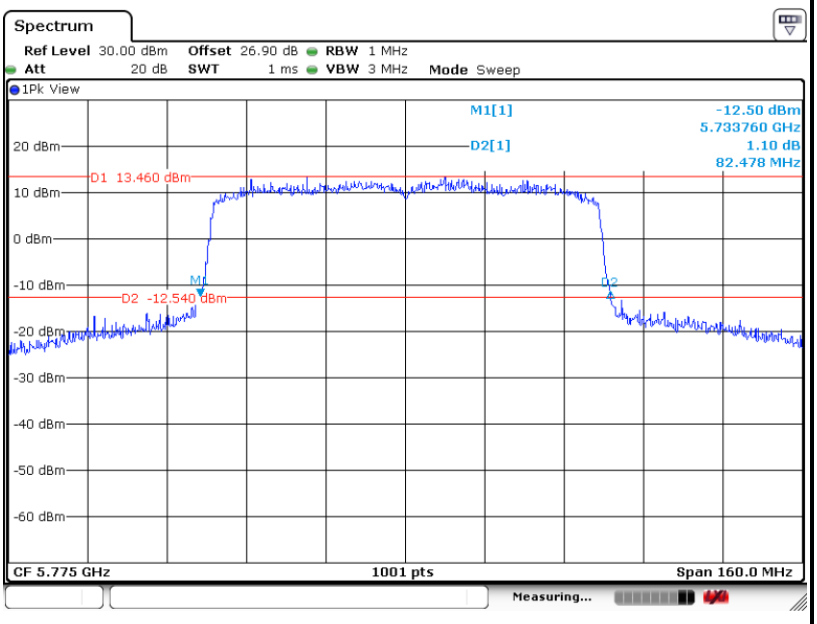
3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.

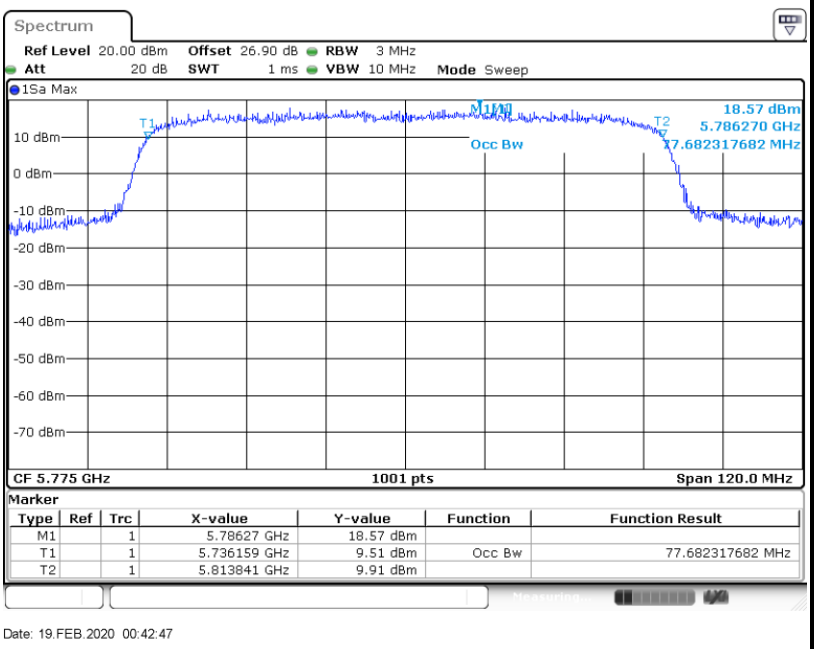
Minimum 6dB Bandwidth



Maximum 26dB Bandwidth



Maximum 99% Occupied Bandwidth



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.

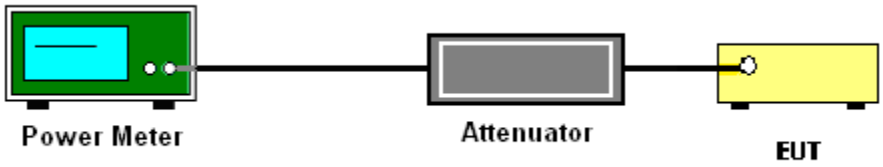
3.2.3 Test Procedures

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):

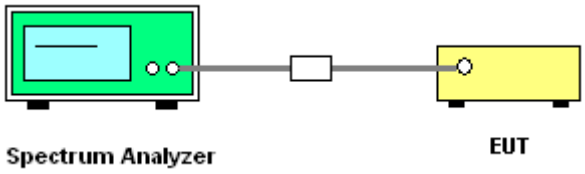
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 kHz.
- Set VBW ≥ 1 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time ≤ (number of points in sweep) × T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which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

1. The RF output of EUT 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.

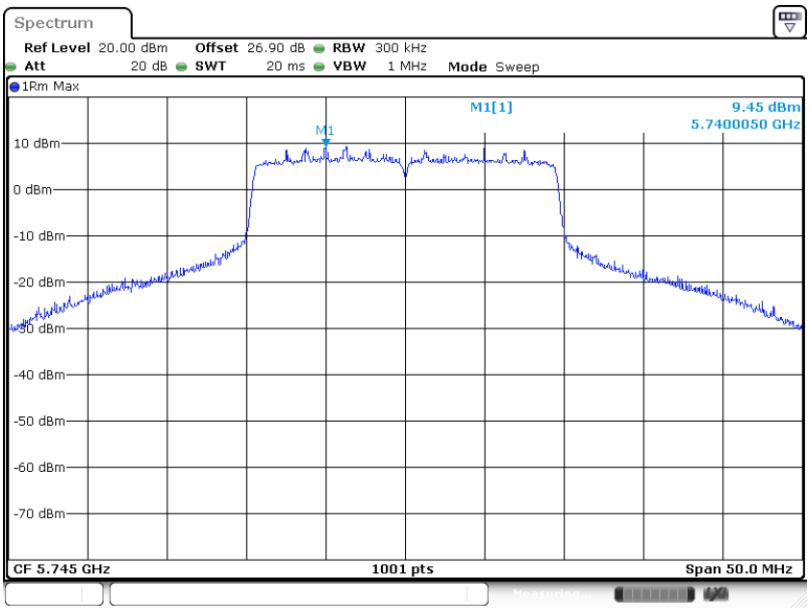
3.3.4 Test Setup



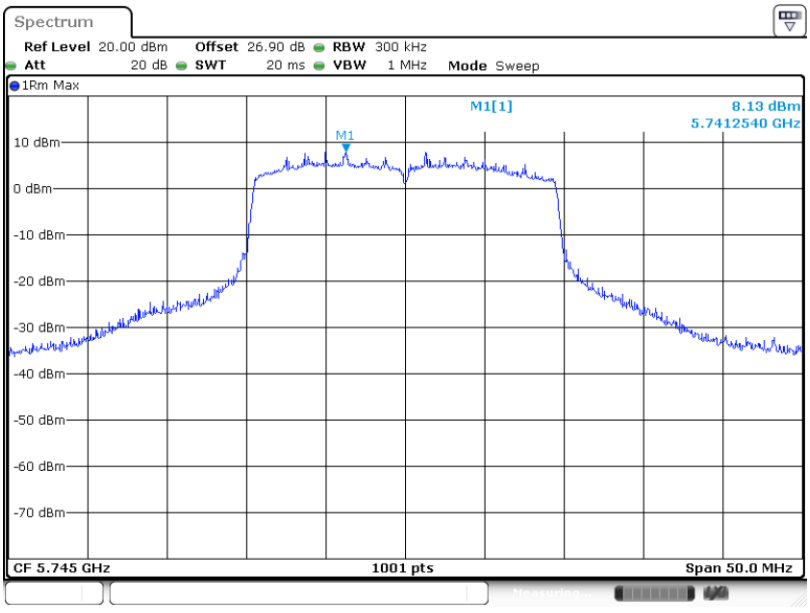
3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/MHz) for MIMO Ant. 1

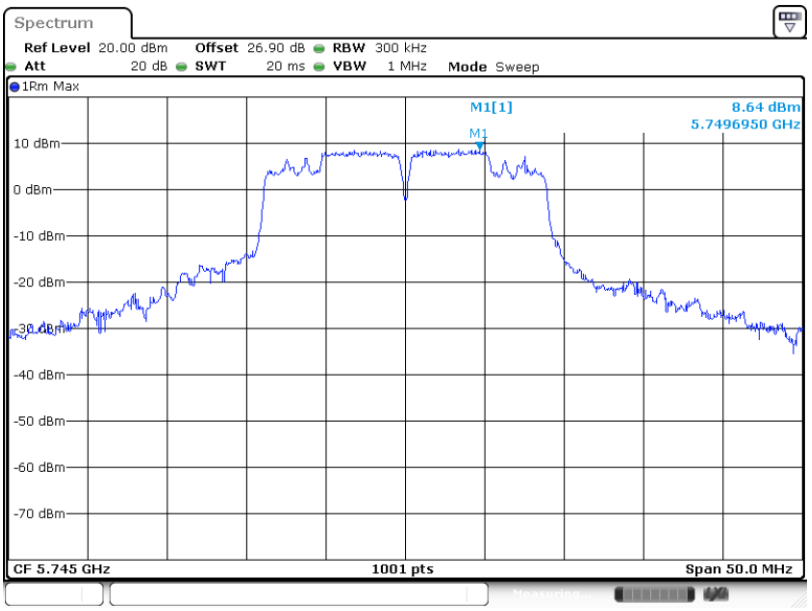


Worst Case Power Density (dBm/MHz) for MIMO Ant. 2

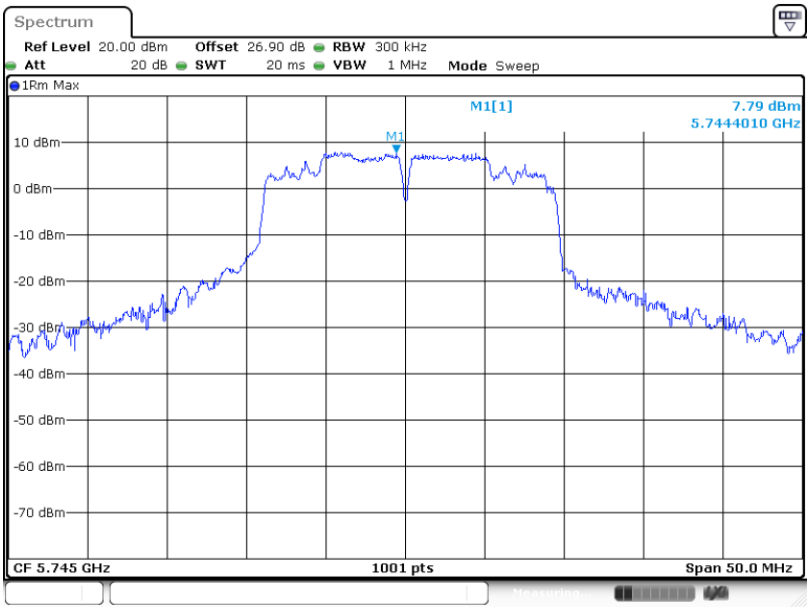


<For Band-edge Unmodulated>

Worst Case Power Density (dBm/3kHz) for MIMO Ant. 1

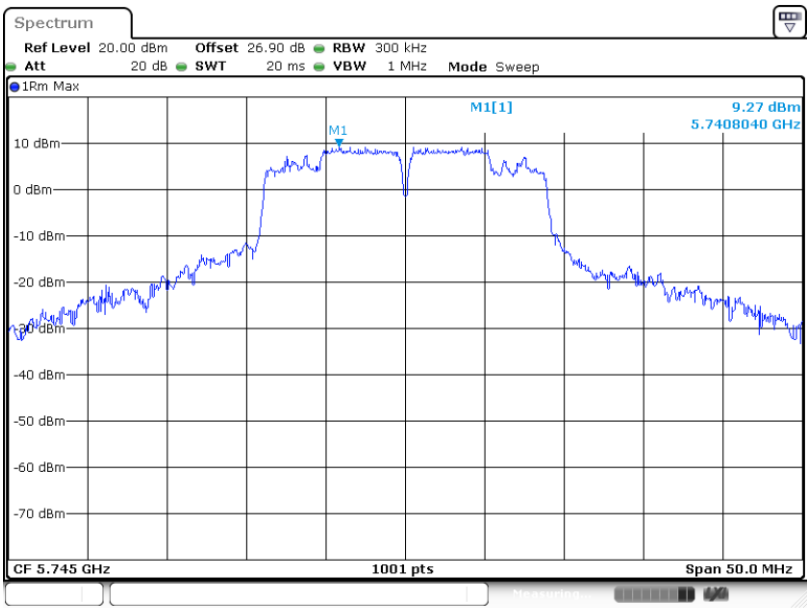


Worst Case Power Density (dBm/3kHz) for MIMO Ant. 2

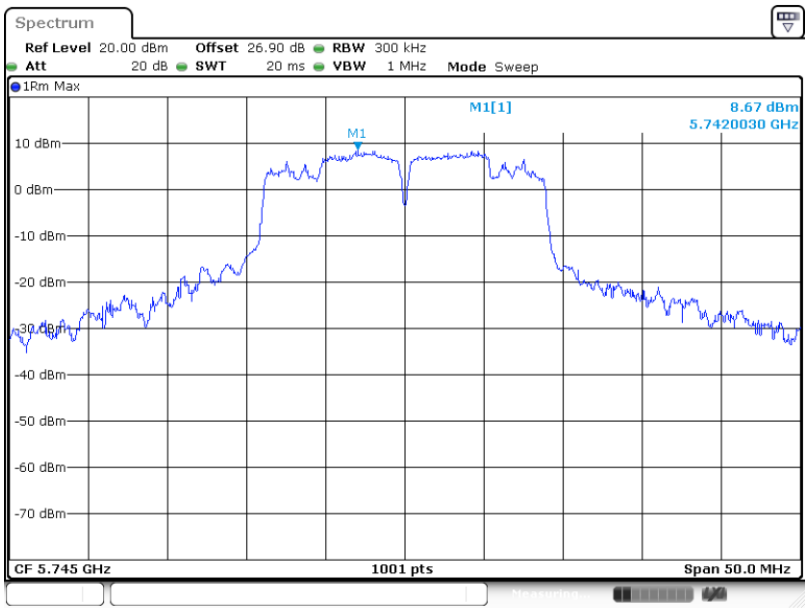


<For Middle Unmodulated>

Worst Case Power Density (dBm/3kHz) for MIMO Ant. 1



Worst Case Power Density (dBm/3kHz) for MIMO Ant. 2



3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

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

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

(2) Unwanted spurious emissions 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.

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

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

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

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

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

3.4.2 Measuring Instruments

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 1000MHz

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

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

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

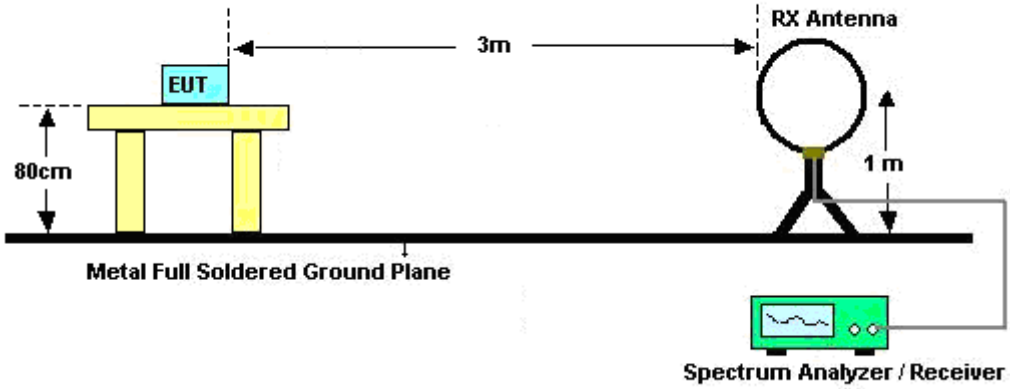
(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

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

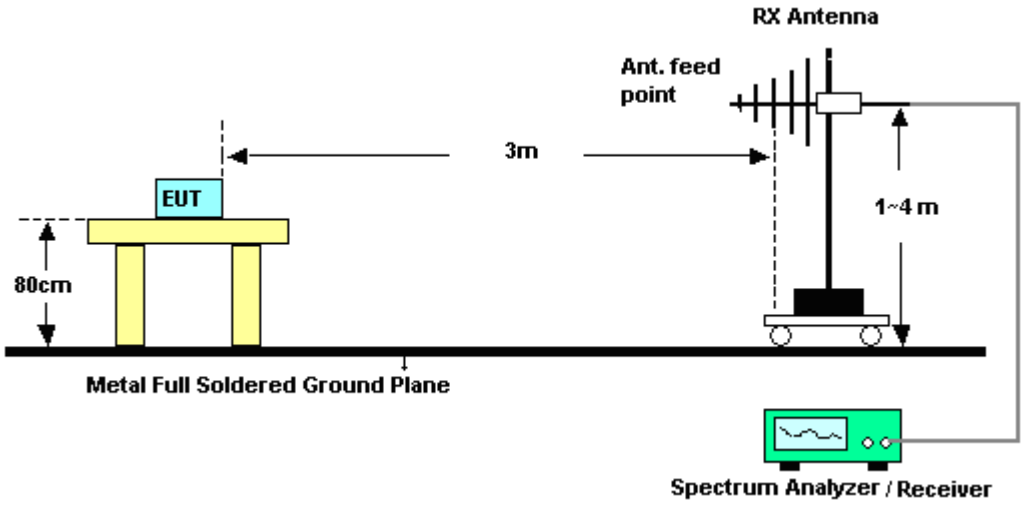
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband 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 1GHz, 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 1GHz, the emission level of the EUT in peak mode was 20dB 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

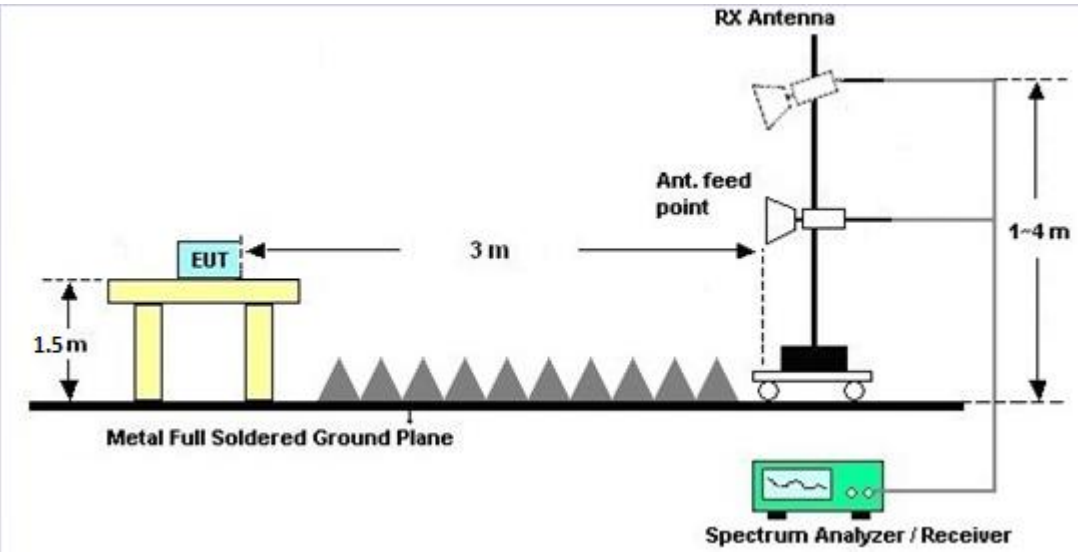
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

*Decreases with the logarithm of the frequency.

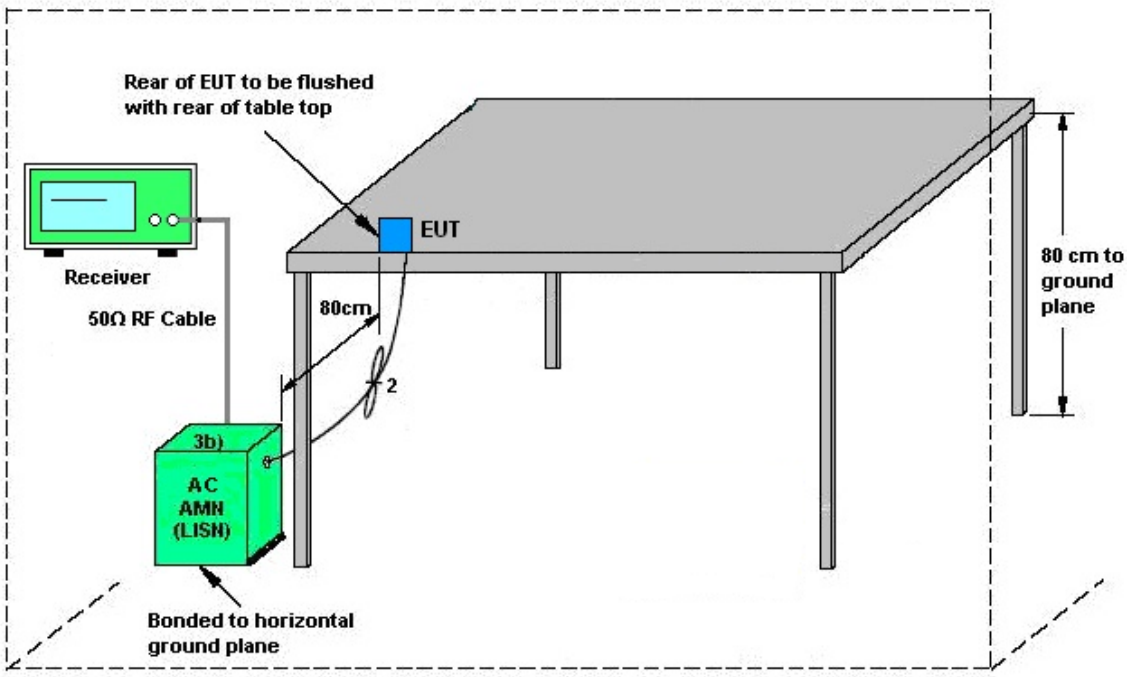
3.5.2 Measuring Instruments

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 should 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



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

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

Two antenna has different polarization, one is horizontal and the other one is vertical.

Horizontal antenna gain = 1.0 dBi

Vertical antenna gain = 2.5 dBi

Which use the larger one to calculate the EIRP.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
LISN	TESEQ	NNB51	47407	N/A	Jun. 26, 2019	Feb. 25, 2020	Jun. 25, 2020	Conduction (CO01-CA)
EMI Test Receiver	R&S	ESR7	102177	9KHz~7GHz	Jun. 27, 2019	Feb. 25, 2020	Jun. 26, 2020	Conduction (CO01-CA)
Pulse limiter with 10dB attenuation	R&S	VTSD 9561-F N	9561-F-N00412	N/A	Jun. 11, 2019	Feb. 25, 2020	Jun. 10, 2020	Conduction (CO01-CA)
Test Software	EMC32	N/A	N/A	N/A	N/A	Feb. 25, 2020	N/A	Conduction (CO01-CA)
Hygrometer	Testo	608-H1	45142595	N/A	Aug. 07, 2019	Jan. 28, 2020 ~ Feb. 29, 2020	Aug. 06, 2020	Conducted (TH01-CA)
Power Sensor	DARE	RPR3006W	RPR6W-1 901027	50MHz~18GH z	Jun. 27, 2019	Jan. 28, 2020 ~ Feb. 29, 2020	Jun. 26, 2020	Conducted (TH01-CA))
Spectrum Analyzer	Rohde & Schwarz	FSV 40	100895	10Hz~40GHz	Aug. 29, 2019	Jan. 28, 2020 ~ Feb. 29, 2020	Aug. 28, 2020	Conducted (TH01-CA)
Switch Box & RF Cable	EM	EMSW18	SW107090 2	N/A	N/A	Jan. 28, 2020~ Feb. 29, 2020	N/A	Conducted (TH01-CA)
Bilog Antenna	TESEQ	6111D	50392	30MHz~1GHz	May 15, 2019	Feb. 06, 2020 ~ Mar. 10, 2020	May 14, 2020	Radiation (03CH02-CA)
Horn Antenna	SCHWARZBE CK	BBHA 9120D	01894	1GHz~18GHz	Jul. 22, 2019	Feb. 06, 2020 ~ Mar. 10, 2020	Jul. 21, 2020	Radiation (03CH02-CA)
Amplifier	SONOMA	310N	372241	N/A	Jul. 26, 2019	Feb. 06, 2020 ~ Mar. 10, 2020	Jul. 25, 2020	Radiation (03CH02-CA)
Preamplifier	Keysight	83017A	MY532703 21	1GHz~26.5G Hz	Jul. 26, 2019	Feb. 06, 2020 ~ Mar. 10, 2020	Jul. 25, 2020	Radiation (03CH02-CA)
Preamplifier	Jet-Power	JPA0118-55-3 03	171000180 0055007	1GHz~18GHz	Apr. 01, 2019	Feb. 06, 2020 ~ Mar. 10, 2020	Mar. 31, 2020	Radiation (03CH02-CA)
Spectrum Analyzer	Keysight	N9010A	MY574202 21	10Hz~44GHz	Sep. 11, 2019	Feb. 06, 2020 ~ Mar. 10, 2020	Sep. 10, 2020	Radiation (03CH02-CA)
Filter	Wainwright	WLK12-1200-1272-11000-4 0SS	SN2	1.2G Low Pass	Aug. 02, 2019	Feb. 06, 2020 ~ Mar. 10, 2020	Aug. 01, 2020	Radiation (03CH02-CA)
Filter	Wainwright	WHKX12-270 0-3000-18000 -60ST	SN10	3G Highpass	Aug. 02, 2019	Feb. 06, 2020 ~ Mar. 10, 2020	Aug. 01, 2020	Radiation (03CH02-CA)
Hygrometer	TESEO	608-H1	45142602	N/A	Jul. 25, 2019	Feb. 06, 2020 ~ Mar. 10, 2020	Jul. 24, 2020	Radiation (03CH02-CA)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Feb. 06, 2020 ~ Mar. 10, 2020	N/A	Radiation (03CH02-CA)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Feb. 06, 2020 ~ Mar. 10, 2020	N/A	Radiation (03CH02-CA)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Feb. 06, 2020 ~ Mar. 10, 2020	N/A	Radiation (03CH02-CA)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**1.7**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.4**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**6.5**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**6.3**

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Howard Lin	Temperature:	21~25	°C
Test Date:	2020/1/28~2020/2/29	Relative Humidity:	51~54	%

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

Band IV MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	149	5745	17.13	16.68	32.07	24.28	16.28	15.88	0.5	Pass
11a	6Mbps	2	157	5785	16.98	16.53	31.47	22.18	15.08	16.28	0.5	Pass
11a	6Mbps	2	165	5825	17.08	16.43	32.27	21.38	16.28	15.28	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	22.31	20.32	24.44	30.00		2.50		Pass
11a	6Mbps	2	157	5785	21.98	20.29	24.23	30.00		2.50		Pass
11a	6Mbps	2	165	5825	21.89	19.43	23.84	30.00		2.50		Pass
HT20	MCS0	2	149	5745	22.27	20.42	24.45	30.00		2.50		Pass
HT20	MCS0	2	157	5785	21.95	20.01	24.10	30.00		2.50		Pass
HT20	MCS0	2	165	5825	21.93	19.17	23.78	30.00		2.50		Pass
HT40	MCS0	2	151	5755	21.81	21.07	24.47	30.00		2.50		Pass
HT40	MCS0	2	159	5795	21.49	20.73	24.14	30.00		2.50		Pass
VHT20	MCS0	2	149	5745	22.21	20.38	24.40	30.00		2.50		Pass
VHT20	MCS0	2	157	5785	21.87	19.95	24.03	30.00		2.50		Pass
VHT20	MCS0	2	165	5825	21.83	19.11	23.69	30.00		2.50		Pass
VHT40	MCS0	2	151	5755	21.73	21.05	24.41	30.00		2.50		Pass
VHT40	MCS0	2	159	5795	21.38	20.67	24.05	30.00		2.50		Pass
VHT80	MCS0	2	155	5775	20.17	18.84	22.57	30.00		2.50		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		11.49	9.53	14.50	30.00		2.50		Pass
11a	6Mbps	2	157	5785	2.22		11.30	10.56	14.31	30.00		2.50		Pass
11a	6Mbps	2	165	5825	2.22		10.92	9.34	13.93	30.00		2.50		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	1	149	5745	Full	19.18	18.93	31.72	24.28	17.78	16.73	0.5	Pass
HE20	MCS0	1	157	5785	Full	19.13	19.03	31.27	23.23	16.78	18.58	0.5	Pass
HE20	MCS0	1	165	5825	Full	19.33	18.88	30.52	22.53	18.23	17.43	0.5	Pass
HE40	MCS0	1	151	5755	Full	38.36	38.36	65.36	51.70	37.85	37.67	0.5	Pass
HE40	MCS0	1	159	5795	Full	38.56	38.36	59.97	49.18	37.85	38.03	0.5	Pass
HE80	MCS0	1	155	5775	Full	77.68	77.56	82.48	82.32	73.85	76.40	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	1	149	5745	Full	22.34	20.49	24.52	30.00		2.50		Pass
HE20	MCS0	1	157	5785	Full	22.02	20.08	24.17	30.00		2.50		Pass
HE20	MCS0	1	165	5825	Full	21.97	19.24	23.83	30.00		2.50		Pass
HE40	MCS0	1	151	5755	Full	21.84	21.14	24.51	30.00		2.50		Pass
HE40	MCS0	1	159	5795	Full	21.54	20.81	24.20	30.00		2.50		Pass
HE80	MCS0	1	155	5775	Full	20.21	18.93	22.63	30.00		2.50		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	1	149	5745	Full	2.22		11.67	10.35	14.68	30.00		2.50		Pass
HE20	MCS0	1	157	5785	Full	2.22		11.27	9.48	14.28	30.00		2.50		Pass
HE20	MCS0	1	165	5825	Full	2.22		11.39	8.69	14.40	30.00		2.50		Pass
HE40	MCS0	1	151	5755	Full	2.22		7.28	7.33	10.34	30.00		2.50		Pass
HE40	MCS0	1	159	5795	Full	2.22		7.10	6.93	10.11	30.00		2.50		Pass
HE80	MCS0	1	155	5775	Full	2.22		3.14	1.98	6.15	30.00		2.50		Pass

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

TEST RESULTS DATA
Average Power Table

<Band-edge Unmodulated>

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	1	149	5745	Full	20.99	19.76	23.43	30.00		2.50		Pass
HE20	MCS0	1	157	5785	Full	20.62	19.29	23.02	30.00		2.50		Pass
HE20	MCS0	1	165	5825	Full	20.45	19.02	22.80	30.00		2.50		Pass
HE40	MCS0	1	151	5755	Full	19.46	18.50	22.02	30.00		2.50		Pass
HE40	MCS0	1	159	5795	Full	19.25	18.20	21.77	30.00		2.50		Pass
HE80	MCS0	1	155	5775	Full	22.15	21.90	25.04	30.00		2.50		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	1	149	5745	Full	2.22		11.49	10.89	14.50	30.00		2.50		Pass
HE20	MCS0	1	157	5785	Full	2.22		10.87	9.92	13.88	30.00		2.50		Pass
HE20	MCS0	1	165	5825	Full	2.22		11.14	9.57	14.15	30.00		2.50		Pass
HE40	MCS0	1	151	5755	Full	2.22		7.07	6.35	10.08	30.00		2.50		Pass
HE40	MCS0	1	159	5795	Full	2.22		6.83	6.05	9.84	30.00		2.50		Pass
HE80	MCS0	1	155	5775	Full	2.22		0.30	1.04	4.05	30.00		2.50		Pass

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

TEST RESULTS DATA
Average Power Table

<Middle Unmodulated>

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	1	149	5745	Full	21.41	20.22	23.87	30.00		2.50		Pass
HE20	MCS0	1	157	5785	Full	21.39	20.30	23.89	30.00		2.50		Pass
HE20	MCS0	1	165	5825	Full	21.18	19.59	23.47	30.00		2.50		Pass
HE40	MCS0	1	151	5755	Full	19.39	18.45	21.96	30.00		2.50		Pass
HE40	MCS0	1	159	5795	Full	18.97	17.74	21.41	30.00		2.50		Pass
HE80	MCS0	1	155	5775	Full	17.31	16.40	19.89	30.00		2.50		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	1	149	5745	Full	2.22		11.27	9.82	14.28	30.00		2.50		Pass
HE20	MCS0	1	157	5785	Full	2.22		11.19	10.41	14.20	30.00		2.50		Pass
HE20	MCS0	1	165	5825	Full	2.22		11.14	9.46	14.15	30.00		2.50		Pass
HE40	MCS0	1	151	5755	Full	2.22		7.20	6.18	10.21	30.00		2.50		Pass
HE40	MCS0	1	159	5795	Full	2.22		6.87	5.46	9.88	30.00		2.50		Pass
HE80	MCS0	1	155	5775	Full	2.22		1.96	1.64	4.97	30.00		2.50		Pass

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

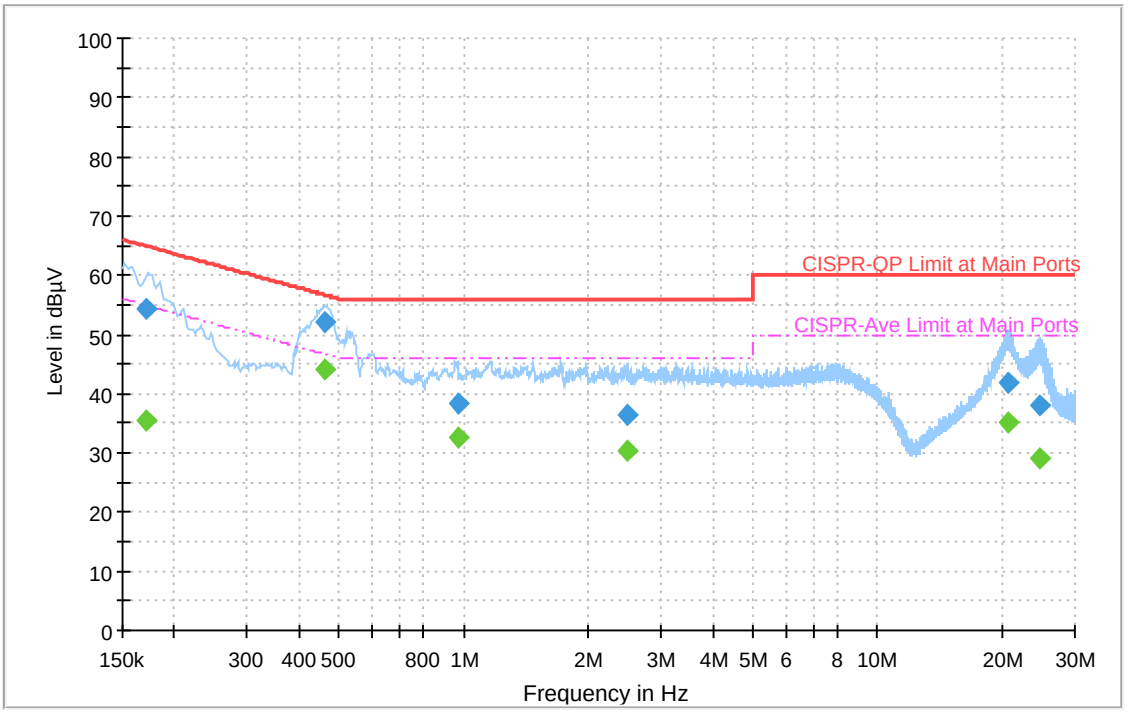
Appendix B. AC Conducted Emission Test Results

Test Engineer :	JC Liang	**Temperature :**	24~26℃
		Relative Humidity :	22~25%

EUT Information

Site:	CO01-CA
Project:	200117001
Power:	120Vac/60Hz
Mode:	1

Full Spectrum



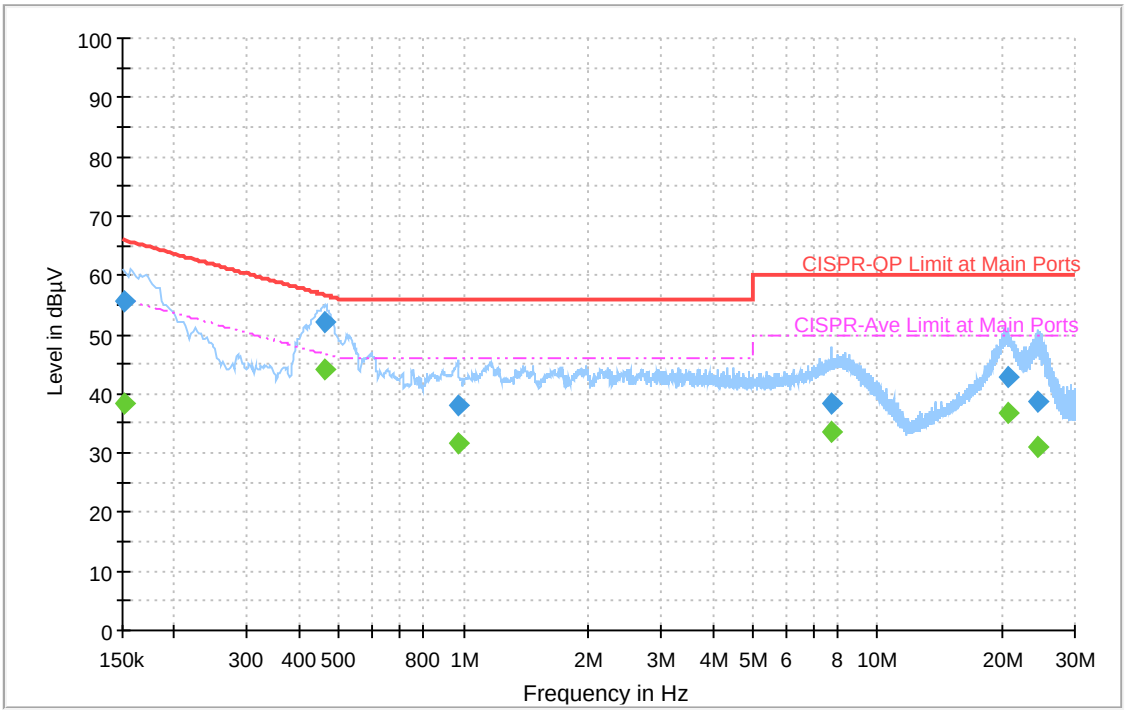
Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.170250	---	35.62	54.95	19.33	L1	OFF	20.3
0.170250	54.31	---	64.95	10.64	L1	OFF	20.3
0.460500	---	44.12	46.68	2.56	L1	OFF	20.4
0.460500	51.95	---	56.68	4.73	L1	OFF	20.4
0.971250	---	32.49	46.00	13.51	L1	OFF	20.4
0.971250	38.47	---	56.00	17.53	L1	OFF	20.4
2.484330	---	30.21	46.00	15.79	L1	OFF	20.4
2.484330	36.36	---	56.00	19.64	L1	OFF	20.4
20.640750	---	35.14	50.00	14.86	L1	OFF	20.7
20.640750	41.76	---	60.00	18.24	L1	OFF	20.7
24.702000	---	29.18	50.00	20.82	L1	OFF	20.8
24.702000	37.87	---	60.00	22.13	L1	OFF	20.8

EUT Information

Site:	CO01-CA
Project:	200117001
Power:	120Vac/60Hz
Mode:	1

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	38.43	55.88	17.45	N	OFF	20.3
0.152250	55.63	---	65.88	10.25	N	OFF	20.3
0.460500	---	44.20	46.68	2.48	N	OFF	20.4
0.460500	51.93	---	56.68	4.75	N	OFF	20.4
0.971250	---	31.73	46.00	14.27	N	OFF	20.4
0.971250	37.90	---	56.00	18.10	N	OFF	20.4
7.741500	---	33.48	50.00	16.52	N	OFF	20.5
7.741500	38.49	---	60.00	21.51	N	OFF	20.5
20.715000	---	36.76	50.00	13.24	N	OFF	20.7
20.715000	42.79	---	60.00	17.21	N	OFF	20.7
24.384750	---	30.98	50.00	19.02	N	OFF	20.8
24.384750	38.52	---	60.00	21.48	N	OFF	20.8

Appendix C. Radiated Spurious Emission

Test Engineer :	Calvin Wu, Leo Luo, and Jacky Hong	Temperature :	19~22℃
		Relative Humidity :	36~45%

Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(MHz)	(dBµV/m)	Limit (dB)	Line (dBµV/m)	Level (dBµV)	Factor (dB/m)	Loss (dB)	Factor (dB)	Pos (cm)	Pos (deg)	Avg. (P/A)	(H/V)
802.11a CH 149 5745MHz		5646.2	53.66	-14.54	68.2	40.27	31.74	11.6	29.95	400	219	P	H
		5699.6	56.94	-47.97	104.91	43.37	31.86	11.68	29.97	400	219	P	H
		5719.2	71.69	-38.89	110.58	58	31.95	11.71	29.97	400	219	P	H
		5724.8	82.43	-39.31	121.74	68.71	31.98	11.72	29.98	400	219	P	H
	*	5745	118.5	-	-	104.65	32.08	11.75	29.98	400	219	P	H
	*	5745	110.75	-	-	96.9	32.08	11.75	29.98	400	219	A	H
													H
													H
		5641.8	53.24	-14.96	68.2	39.8	31.8	11.59	29.95	185	135	P	V
		5696.6	60.95	-41.74	102.69	47.35	31.89	11.68	29.97	185	135	P	V
		5719	76.19	-34.33	110.52	62.49	31.96	11.71	29.97	185	135	P	V
		5725	84.89	-37.31	122.2	71.17	31.98	11.72	29.98	185	135	P	V
	*	5745	120.23	-	-	106.42	32.04	11.75	29.98	185	135	P	V
	*	5745	112.14	-	-	98.33	32.04	11.75	29.98	185	135	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)
		5640.8	52.46	-15.74	68.2	39.07	31.75	11.59	29.95	398	205	P	H
		5687.4	53.19	-42.72	95.91	39.65	31.83	11.67	29.96	398	205	P	H
		5719.4	53.31	-57.32	110.63	39.61	31.95	11.72	29.97	398	205	P	H
		5723	54.84	-62.8	117.64	41.13	31.97	11.72	29.98	398	205	P	H
	*	5785	117.85	-	-	103.86	32.17	11.82	30	398	205	P	H
	*	5785	110.16	-	-	96.17	32.17	11.82	30	398	205	A	H
		5851.8	56.59	-61.51	118.1	42.43	32.31	11.87	30.02	398	205	P	H
		5857	55.41	-54.83	110.24	41.24	32.32	11.87	30.02	398	205	P	H
		5911.6	53.98	-24.11	78.09	39.71	32.41	11.9	30.04	398	205	P	H
		5948.2	54.1	-14.1	68.2	39.73	32.5	11.92	30.05	398	205	P	H
													H
802.11a CH 157 5785MHz													H
		5605	54.15	-14.05	68.2	40.76	31.79	11.54	29.94	241	131	P	V
		5686.8	54.42	-41.04	95.46	40.85	31.87	11.66	29.96	241	131	P	V
		5719.2	55.46	-55.12	110.58	41.76	31.96	11.71	29.97	241	131	P	V
		5724	58.42	-61.5	119.92	44.7	31.98	11.72	29.98	241	131	P	V
	*	5785	119.81	-	-	105.84	32.15	11.82	30	241	131	P	V
	*	5785	112.04	-	-	98.07	32.15	11.82	30	241	131	A	V
		5851.4	58.2	-60.81	119.01	43.97	32.38	11.87	30.02	241	131	P	V
		5859.8	55.46	-53.99	109.45	41.22	32.39	11.87	30.02	241	131	P	V
		5879.2	55.12	-46.96	102.08	40.85	32.42	11.88	30.03	241	131	P	V
		5935.4	54.27	-13.93	68.2	39.93	32.48	11.91	30.05	241	131	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)
	*	5825	118.41	-	-	104.31	32.26	11.85	30.01	390	205	P	H
	*	5825	110.41	-	-	96.31	32.26	11.85	30.01	390	205	A	H
		5852.6	74.35	-41.92	116.27	60.19	32.31	11.87	30.02	390	205	P	H
		5855.8	74.11	-36.47	110.58	59.94	32.32	11.87	30.02	390	205	P	H
		5888.4	57.38	-37.87	95.25	43.16	32.36	11.89	30.03	390	205	P	H
		5935.2	53.73	-14.47	68.2	39.41	32.46	11.91	30.05	390	205	P	H
													H
802.11a													H
CH 165	*	5825	119.56	-	-	105.44	32.28	11.85	30.01	191	135	P	V
5825MHz	*	5825	111.44	-	-	97.32	32.28	11.85	30.01	191	135	A	V
		5850.4	76.73	-44.56	121.29	62.5	32.38	11.87	30.02	191	135	P	V
		5862.2	74.29	-34.49	108.78	60.05	32.39	11.87	30.02	191	135	P	V
		5879.6	60.45	-41.33	101.78	46.18	32.42	11.88	30.03	191	135	P	V
		5928	55.55	-12.65	68.2	41.22	32.47	11.91	30.05	191	135	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	59.73	-14.27	74	61.69	40.21	17.23	59.4	292	139	P	H
		11490	49.9	-4.1	54	51.86	40.21	17.23	59.4	292	139	A	H
		17235	47.73	-20.47	68.2	44.51	40.4	21.21	58.39	100	0	P	H
													H
		11490	54.41	-19.59	74	56.32	40.26	17.23	59.4	100	185	P	V
		11490	44.42	-9.58	54	46.33	40.26	17.23	59.4	100	185	A	V
		17235	48.65	-19.55	68.2	45.31	40.52	21.21	58.39	100	0	P	V
													V
802.11a CH 157 5785MHz		11570	59.3	-14.7	74	61.4	40.15	17.29	59.54	193	118	P	H
		11570	49.39	-4.61	54	51.49	40.15	17.29	59.54	193	118	A	H
		17355	48.64	-19.56	68.2	44.14	41.23	21.3	58.03	100	0	P	H
													H
		11570	54.36	-19.64	74	56.38	40.23	17.29	59.54	400	202	P	V
		11570	44.49	-9.51	54	46.51	40.23	17.29	59.54	400	202	A	V
		17355	49.2	-19	68.2	44.67	41.26	21.3	58.03	100	0	P	V
													V
802.11a CH 165 5825MHz		11650	54.47	-19.53	74	56.88	39.95	17.34	59.7	186	108	P	V
		11650	45.7	-8.3	54	48.11	39.95	17.34	59.7	186	108	A	V
		17475	49.89	-18.31	68.2	44.06	42.11	21.39	57.67	100	0	P	V
													H
		11650	57.51	-16.49	74	59.99	39.88	17.34	59.7	186	118	P	H
		11650	48.52	-5.48	54	51	39.88	17.34	59.7	186	118	A	H
		17475	49	-19.2	68.2	43.13	42.15	21.39	57.67	100	0	P	H
													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)
		5609	54.21	-13.99	68.2	40.77	31.84	11.54	29.94	400	197	P	H
		5699.8	63.21	-41.84	105.05	49.64	31.86	11.68	29.97	400	197	P	H
		5720	77.68	-33.12	110.8	63.97	31.96	11.72	29.97	400	197	P	H
		5725	85.77	-36.43	122.2	72.05	31.98	11.72	29.98	400	197	P	H
	*	5745	119.59	-	-	105.74	32.08	11.75	29.98	400	197	P	H
	*	5745	110	-	-	96.15	32.08	11.75	29.98	400	197	A	H
802.11ax													H
HE20 Full													H
CH 149		5643.8	54.91	-13.29	68.2	41.46	31.8	11.6	29.95	248	127	P	V
5745MHz		5700	66.34	-38.86	105.2	52.73	31.9	11.68	29.97	248	127	P	V
		5719.4	82.88	-27.75	110.63	69.17	31.96	11.72	29.97	248	127	P	V
		5724.4	90.99	-29.84	120.83	77.27	31.98	11.72	29.98	248	127	P	V
	*	5745	122.15	-	-	108.34	32.04	11.75	29.98	248	127	P	V
	*	5745	112.1	-	-	98.29	32.04	11.75	29.98	248	127	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)
		5606.6	52.61	-15.59	68.2	39.17	31.84	11.54	29.94	397	204	P	H
		5685.2	53.23	-41.05	94.28	39.71	31.82	11.66	29.96	397	204	P	H
		5702.8	54.16	-51.83	105.99	40.57	31.87	11.69	29.97	397	204	P	H
		5722.2	54.64	-61.18	115.82	40.93	31.97	11.72	29.98	397	204	P	H
	*	5785	117.32	-	-	103.33	32.17	11.82	30	397	204	P	H
	*	5785	108.73	-	-	94.74	32.17	11.82	30	397	204	A	H
		5852.8	56.67	-59.15	115.82	42.51	32.31	11.87	30.02	397	204	P	H
		5855.2	54.66	-56.08	110.74	40.49	32.32	11.87	30.02	397	204	P	H
		5877	54.35	-49.36	103.71	40.15	32.35	11.88	30.03	397	204	P	H
		5936.8	54.29	-13.91	68.2	39.95	32.47	11.92	30.05	397	204	P	H
802.11ax													H
HE20 Full													H
CH 157		5633.8	53.31	-14.89	68.2	39.88	31.8	11.58	29.95	192	135	P	V
5785MHz		5697.4	54.28	-49	103.28	40.68	31.89	11.68	29.97	192	135	P	V
		5719.8	56.79	-53.95	110.74	43.08	31.96	11.72	29.97	192	135	P	V
		5721.4	58.29	-55.7	113.99	44.58	31.97	11.72	29.98	192	135	P	V
	*	5785	120.71	-	-	106.74	32.15	11.82	30	192	135	P	V
	*	5785	110.37	-	-	96.4	32.15	11.82	30	192	135	A	V
		5852.4	60.41	-56.32	116.73	46.18	32.38	11.87	30.02	192	135	P	V
		5860	55.3	-54.1	109.4	41.06	32.39	11.87	30.02	192	135	P	V
		5878	53.94	-49.03	102.97	39.68	32.41	11.88	30.03	192	135	P	V
		5933	54.14	-14.06	68.2	39.81	32.47	11.91	30.05	192	135	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	117.97	-	-	103.87	32.26	11.85	30.01	184	119	P	H
	*	5825	107.45	-	-	93.35	32.26	11.85	30.01	184	119	A	H
		5850	70.01	-52.19	122.2	55.85	32.31	11.87	30.02	184	119	P	H
		5857.6	65.37	-44.7	110.07	51.2	32.32	11.87	30.02	184	119	P	H
		5875.2	55.35	-49.7	105.05	41.15	32.35	11.88	30.03	184	119	P	H
		5925	54.29	-13.91	68.2	39.98	32.44	11.91	30.04	184	119	P	H
													H
													H
	*	5825	121.8	-	-	107.68	32.28	11.85	30.01	192	134	P	V
	*	5825	111.07	-	-	96.95	32.28	11.85	30.01	192	134	A	V
		5850	80.22	-41.98	122.2	65.99	32.38	11.87	30.02	192	134	P	V
		5857	75.51	-34.73	110.24	61.27	32.39	11.87	30.02	192	134	P	V
		5878.8	61.07	-41.31	102.38	46.81	32.41	11.88	30.03	192	134	P	V
		5945.6	55.35	-12.85	68.2	40.99	32.49	11.92	30.05	192	134	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)
		11490	60.53	-13.47	74	62.49	40.21	17.23	59.4	258	138	P	H
		11490	48.89	-5.11	54	50.85	40.21	17.23	59.4	258	138	A	H
802.11ax		17235	48.67	-19.53	68.2	45.45	40.4	21.21	58.39	100	0	P	H
HE20 Full													H
CH 149		11490	54.44	-19.56	74	56.35	40.26	17.23	59.4	400	190	P	V
5745MHz		11490	44.13	-9.87	54	46.04	40.26	17.23	59.4	400	190	A	V
		17235	48.14	-20.06	68.2	44.8	40.52	21.21	58.39	100	0	P	V
													V
		11570	57.77	-16.23	74	59.87	40.15	17.29	59.54	192	118	P	H
		11570	47.87	-6.13	54	49.97	40.15	17.29	59.54	192	118	A	H
802.11ax		17355	49.21	-18.99	68.2	44.71	41.23	21.3	58.03	100	0	P	H
HE20 Full													H
CH 157		11570	49.77	-24.23	74	51.79	40.23	17.29	59.54	100	0	P	V
5785MHz		17355	49.79	-18.41	68.2	45.26	41.26	21.3	58.03	100	0	P	V
		11570	49.77	-24.23	74	51.79	40.23	17.29	59.54	100	0	P	V
													V
		11650	58.04	-15.96	74	60.52	39.88	17.34	59.7	189	116	P	H
		11650	46.98	-7.02	54	49.46	39.88	17.34	59.7	189	116	A	H
802.11ax		17475	49.25	-18.95	68.2	43.38	42.15	21.39	57.67	100	0	P	H
HE20 Full													H
CH 165		11650	54.58	-19.42	74	56.99	39.95	17.34	59.7	187	109	P	V
5825MHz		11650	44.74	-9.26	54	47.15	39.95	17.34	59.7	187	109	A	V
		17475	49.69	-18.51	68.2	43.86	42.11	21.39	57.67	100	0	P	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)
		5642.4	56.57	-11.63	68.2	43.17	31.75	11.6	29.95	400	222	P	H
		5699.4	70.41	-34.35	104.76	56.84	31.86	11.68	29.97	400	222	P	H
		5719.2	88.57	-22.01	110.58	74.88	31.95	11.71	29.97	400	222	P	H
		5723.2	88.86	-29.24	118.1	75.15	31.97	11.72	29.98	400	222	P	H
	*	5755	116.44	-	-	102.55	32.11	11.77	29.99	400	222	P	H
	*	5755	107.26	-	-	93.37	32.11	11.77	29.99	400	222	A	H
		5853.4	66.26	-48.19	114.45	52.1	32.31	11.87	30.02	400	222	P	H
		5855.2	63.52	-47.22	110.74	49.35	32.32	11.87	30.02	400	222	P	H
		5875.4	57.59	-47.31	104.9	43.39	32.35	11.88	30.03	400	222	P	H
		5934	53.64	-14.56	68.2	39.32	32.46	11.91	30.05	400	222	P	H
802.11ax													H
HE40 Full													H
CH 151		5648.4	65.69	-2.51	68.2	52.23	31.8	11.61	29.95	245	133	P	V
5755MHz		5697.4	77.57	-25.71	103.28	63.97	31.89	11.68	29.97	245	133	P	V
		5718.8	92.9	-17.56	110.46	79.2	31.96	11.71	29.97	245	133	P	V
		5723.6	94.98	-24.03	119.01	81.26	31.98	11.72	29.98	245	133	P	V
	*	5755	118.49	-	-	104.64	32.07	11.77	29.99	245	133	P	V
	*	5755	109.19	-	-	95.34	32.07	11.77	29.99	245	133	A	V
		5851	71.15	-48.77	119.92	56.92	32.38	11.87	30.02	245	133	P	V
		5858.8	67.91	-41.82	109.73	53.67	32.39	11.87	30.02	245	133	P	V
		5880.4	63.3	-37.89	101.19	49.03	32.42	11.88	30.03	245	133	P	V
		5932.4	56.7	-11.5	68.2	42.37	32.47	11.91	30.05	245	133	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)
		5633.2	54.46	-13.74	68.2	41.06	31.77	11.58	29.95	393	193	P	H
		5693.8	67.98	-32.65	100.63	54.43	31.84	11.68	29.97	393	193	P	H
		5719	70.44	-40.08	110.52	56.75	31.95	11.71	29.97	393	193	P	H
		5725	72.75	-49.45	122.2	59.03	31.98	11.72	29.98	393	193	P	H
	*	5795	116.9	-	-	102.88	32.19	11.83	30	393	193	P	H
	*	5795	107.05	-	-	93.03	32.19	11.83	30	393	193	A	H
		5851	78.76	-41.16	119.92	64.6	32.31	11.87	30.02	393	193	P	H
		5855.6	76.21	-34.42	110.63	62.04	32.32	11.87	30.02	393	193	P	H
		5879.2	70.8	-31.28	102.08	56.6	32.35	11.88	30.03	393	193	P	H
		5925.8	61.35	-6.85	68.2	47.04	32.44	11.91	30.04	393	193	P	H
802.11ax													H
HE40 Full													H
CH 159		5649.6	55.66	-12.54	68.2	42.2	31.8	11.61	29.95	186	134	P	V
5795MHz		5698.6	69.39	-34.78	104.17	55.78	31.9	11.68	29.97	186	134	P	V
		5717	72.4	-37.56	109.96	58.71	31.95	11.71	29.97	186	134	P	V
		5723.6	75.15	-43.86	119.01	61.43	31.98	11.72	29.98	186	134	P	V
	*	5795	118.4	-	-	104.39	32.18	11.83	30	186	134	P	V
	*	5795	109.37	-	-	95.36	32.18	11.83	30	186	134	A	V
		5851.6	82.36	-36.19	118.55	68.13	32.38	11.87	30.02	186	134	P	V
		5861	78.37	-30.75	109.12	64.13	32.39	11.87	30.02	186	134	P	V
		5879.4	74.61	-27.32	101.93	60.34	32.42	11.88	30.03	186	134	P	V
		5932	61.47	-6.73	68.2	47.14	32.47	11.91	30.05	186	134	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)
		11510	55.31	-18.69	74	57.26	40.22	17.25	59.42	258	139	P	H
		11510	45.88	-8.12	54	47.83	40.22	17.25	59.42	258	139	A	H
802.11ax		17265	48.68	-19.52	68.2	45.19	40.57	21.23	58.31	100	0	P	H
HE40 Full													H
CH 151		11510	48.68	-25.32	74	50.57	40.28	17.25	59.42	100	0	P	V
5755MHz		17265	48.35	-19.85	68.2	44.75	40.68	21.23	58.31	100	0	P	V
		11510	48.68	-25.32	74	50.57	40.28	17.25	59.42	100	0	P	V
													V
		11590	56.08	-17.92	74	58.26	40.1	17.3	59.58	189	117	P	H
		11590	45.8	-8.2	54	47.98	40.1	17.3	59.58	189	117	A	H
802.11ax		17385	48.95	-19.25	68.2	44.11	41.46	21.32	57.94	100	0	P	H
HE40 Full													H
CH 159		11590	51.49	-22.51	74	53.59	40.18	17.3	59.58	400	200	P	V
5795MHz		11590	41.86	-12.14	54	43.96	40.18	17.3	59.58	400	200	A	V
		17385	48.96	-19.24	68.2	44.07	41.51	21.32	57.94	100	0	P	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)
		5644.2	60.67	-7.53	68.2	47.27	31.75	11.6	29.95	125	108	P	H
		5694.4	70.39	-30.68	101.07	56.83	31.85	11.68	29.97	125	108	P	H
		5715.6	75.26	-34.31	109.57	61.59	31.93	11.71	29.97	125	108	P	H
		5723.8	75.44	-44.02	119.46	61.73	31.97	11.72	29.98	125	108	P	H
	*	5775	108.99	-	-	95.03	32.15	11.8	29.99	125	108	P	H
	*	5775	100.04	-	-	86.08	32.15	11.8	29.99	125	108	A	H
		5852.8	71.58	-44.24	115.82	57.42	32.31	11.87	30.02	125	108	P	H
		5855.8	69.88	-40.7	110.58	55.71	32.32	11.87	30.02	125	108	P	H
		5876.2	65.64	-38.67	104.31	51.44	32.35	11.88	30.03	125	108	P	H
		5932.6	55.33	-12.87	68.2	41.01	32.46	11.91	30.05	125	108	P	H
802.11ax													H
HE80 Full													H
CH 155		5649.6	67.42	-0.78	68.2	53.96	31.8	11.61	29.95	176	130	P	V
5775MHz		5698.6	79.33	-24.84	104.17	65.72	31.9	11.68	29.97	176	130	P	V
		5715.8	83.37	-26.26	109.63	69.68	31.95	11.71	29.97	176	130	P	V
		5722	83.74	-31.62	115.36	70.03	31.97	11.72	29.98	176	130	P	V
	*	5775	113.79	-	-	99.86	32.12	11.8	29.99	176	130	P	V
	*	5775	104.29	-	-	90.36	32.12	11.8	29.99	176	130	A	V
		5852.6	81.44	-34.83	116.27	67.21	32.38	11.87	30.02	176	130	P	V
		5856.2	79.89	-30.57	110.46	65.65	32.39	11.87	30.02	176	130	P	V
		5875.8	73	-31.61	104.61	58.74	32.41	11.88	30.03	176	130	P	V
		5927.6	64.73	-3.47	68.2	50.4	32.47	11.91	30.05	176	130	P	V
													V
													V

Remark

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

Band 4 5725~5850MHz

WIFI 802.11ax HE80_Full (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	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)
		11550	49.66	-24.34	74	51.69	40.2	17.27	59.5	100	0	P	H
		17325	48.75	-19.45	68.2	44.59	41	21.28	58.12	100	0	P	H
802.11ax													H
HE80 Full													H
CH 155		11550	47.64	-26.36	74	49.59	40.28	17.27	59.5	100	0	P	V
5775MHz		17325	48.81	-19.39	68.2	44.6	41.05	21.28	58.12	100	0	P	V
													V
													V

Remark	
	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.

<Band-edge Unmodulated>

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)
		5645.6	54.87	-13.33	68.2	41.48	31.74	11.6	29.95	385	218	P	H
		5699	69.98	-34.48	104.46	56.41	31.86	11.68	29.97	385	218	P	H
		5716.2	83.5	-26.24	109.74	69.82	31.94	11.71	29.97	385	218	P	H
		5720.8	89.29	-23.33	112.62	75.59	31.96	11.72	29.98	385	218	P	H
	*	5745	121.12	-	-	107.27	32.08	11.75	29.98	385	218	P	H
	*	5745	113.02	-	-	99.17	32.08	11.75	29.98	385	218	A	H
802.11ax													H
HE20 Full													H
CH 149		5648.2	57.39	-10.81	68.2	43.94	31.8	11.6	29.95	176	138	P	V
5745MHz		5699	70.67	-33.79	104.46	57.06	31.9	11.68	29.97	176	138	P	V
		5719.4	81	-29.63	110.63	67.29	31.96	11.72	29.97	176	138	P	V
		5725	88.25	-33.95	122.2	74.53	31.98	11.72	29.98	176	138	P	V
	*	5745	124.36	-	-	110.55	32.04	11.75	29.98	176	138	P	V
	*	5745	115.5	-	-	101.69	32.04	11.75	29.98	176	138	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)
802.11ax HE20 Full CH 165 5825MHz	*	5825	120.27	-	-	106.17	32.26	11.85	30.01	392	237	P	H
	*	5825	112.09	-	-	97.99	32.26	11.85	30.01	392	237	A	H
		5851.2	76.54	-42.92	119.46	62.38	32.31	11.87	30.02	392	237	P	H
		5859.2	72.5	-37.12	109.62	58.33	32.32	11.87	30.02	392	237	P	H
		5876.4	68.47	-35.69	104.16	54.27	32.35	11.88	30.03	392	237	P	H
		5934.8	55.53	-12.67	68.2	41.21	32.46	11.91	30.05	392	237	P	H
													H
													H
	*	5825	121.92	-	-	107.8	32.28	11.85	30.01	194	133	P	V
	*	5825	114.3	-	-	100.18	32.28	11.85	30.01	194	133	A	V
		5853.8	89.24	-24.3	113.54	75.01	32.38	11.87	30.02	194	133	P	V
		5855.8	87.87	-22.71	110.58	73.63	32.39	11.87	30.02	194	133	P	V
		5877.4	70.95	-32.47	103.42	56.69	32.41	11.88	30.03	194	133	P	V
		5947.6	55.97	-12.23	68.2	41.61	32.49	11.92	30.05	194	133	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 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)
		5642.2	56.27	-11.93	68.2	42.87	31.75	11.6	29.95	386	219	P	H
		5687.4	69.72	-26.19	95.91	56.18	31.83	11.67	29.96	386	219	P	H
		5719.4	85.72	-24.91	110.63	72.02	31.95	11.72	29.97	386	219	P	H
		5723	87.59	-30.05	117.64	73.88	31.97	11.72	29.98	386	219	P	H
	*	5755	116.3	-	-	102.41	32.11	11.77	29.99	386	219	P	H
	*	5755	108.25	-	-	94.36	32.11	11.77	29.99	386	219	A	H
		5851.2	71.41	-48.05	119.46	57.25	32.31	11.87	30.02	386	219	P	H
		5855.8	61.82	-48.76	110.58	47.65	32.32	11.87	30.02	386	219	P	H
		5877.2	64.62	-38.95	103.57	50.42	32.35	11.88	30.03	386	219	P	H
		5944.2	56.32	-11.88	68.2	41.96	32.49	11.92	30.05	386	219	P	H
802.11ax													H
HE40 Full													H
CH 151		5645.4	65.73	-2.47	68.2	52.28	31.8	11.6	29.95	189	134	P	V
5755MHz		5700	73.09	-32.11	105.2	59.48	31.9	11.68	29.97	189	134	P	V
		5715.8	90.69	-18.94	109.63	77	31.95	11.71	29.97	189	134	P	V
		5720.4	91.36	-20.35	111.71	77.64	31.97	11.72	29.97	189	134	P	V
	*	5755	119.79	-	-	105.94	32.07	11.77	29.99	189	134	P	V
	*	5755	111.21	-	-	97.36	32.07	11.77	29.99	189	134	A	V
		5850.6	60.14	-60.69	120.83	45.91	32.38	11.87	30.02	189	134	P	V
		5870.8	67.97	-38.4	106.37	53.72	32.4	11.88	30.03	189	134	P	V
		5876	68.68	-35.78	104.46	54.42	32.41	11.88	30.03	189	134	P	V
		5931.2	57.24	-10.96	68.2	42.91	32.47	11.91	30.05	189	134	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)
		5639	64.15	-4.05	68.2	50.75	31.76	11.59	29.95	400	197	P	H
		5683.6	69.96	-23.14	93.1	56.44	31.82	11.66	29.96	400	197	P	H
		5708.2	64.92	-42.58	107.5	51.29	31.9	11.7	29.97	400	197	P	H
		5725	66.23	-55.97	122.2	52.51	31.98	11.72	29.98	400	197	P	H
	*	5795	118.51	-	-	104.49	32.19	11.83	30	400	197	P	H
	*	5795	110.77	-	-	96.75	32.19	11.83	30	400	197	A	H
		5853	81.01	-34.35	115.36	66.85	32.31	11.87	30.02	400	197	P	H
		5858.2	71.72	-38.18	109.9	57.55	32.32	11.87	30.02	400	197	P	H
		5882.6	73.53	-26.03	99.56	59.31	32.36	11.89	30.03	400	197	P	H
		5925	65.96	-2.24	68.2	51.65	32.44	11.91	30.04	400	197	P	H
802.11ax													H
HE40 Full													H
CH 159		5643.2	66.02	-2.18	68.2	52.57	31.8	11.6	29.95	242	131	P	V
5795MHz		5696.6	74.31	-28.38	102.69	60.71	31.89	11.68	29.97	242	131	P	V
		5714.4	70.36	-38.87	109.23	56.67	31.95	11.71	29.97	242	131	P	V
		5723.2	71.12	-46.98	118.1	57.41	31.97	11.72	29.98	242	131	P	V
	*	5795	121.18	-	-	107.17	32.18	11.83	30	242	131	P	V
	*	5795	112.51	-	-	98.5	32.18	11.83	30	242	131	A	V
		5850	83.49	-38.71	122.2	69.26	32.38	11.87	30.02	242	131	P	V
		5861	75.27	-33.85	109.12	61.03	32.39	11.87	30.02	242	131	P	V
		5883.2	77.59	-21.52	99.11	63.31	32.42	11.89	30.03	242	131	P	V
		5928.2	60.88	-7.32	68.2	46.55	32.47	11.91	30.05	242	131	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)
		5620.6	58.03	-10.17	68.2	44.6	31.81	11.56	29.94	400	227	P	H
		5680.2	73.26	-17.33	90.59	59.76	31.81	11.65	29.96	400	227	P	H
		5704.4	73.43	-33	106.43	59.83	31.88	11.69	29.97	400	227	P	H
		5724.8	74.04	-47.7	121.74	60.32	31.98	11.72	29.98	400	227	P	H
	*	5775	109.38	-	-	95.42	32.15	11.8	29.99	400	227	P	H
	*	5775	100.08	-	-	86.12	32.15	11.8	29.99	400	227	A	H
		5852.6	64	-52.27	116.27	49.84	32.31	11.87	30.02	400	227	P	H
		5864.4	62	-46.17	108.17	47.81	32.33	11.88	30.02	400	227	P	H
		5894.4	63.23	-27.58	90.81	49	32.37	11.89	30.03	400	227	P	H
		5934	58.09	-10.11	68.2	43.77	32.46	11.91	30.05	400	227	P	H
802.11ax													H
HE80 Full													H
CH 155		5640.6	63.36	-4.84	68.2	49.92	31.8	11.59	29.95	188	134	P	V
5775MHz		5655.6	69.6	-2.76	72.36	56.12	31.81	11.62	29.95	188	134	P	V
		5717.6	82.17	-27.96	110.13	68.47	31.96	11.71	29.97	188	134	P	V
		5721.8	74.72	-40.18	114.9	61.01	31.97	11.72	29.98	188	134	P	V
	*	5775	110.33	-	-	96.4	32.12	11.8	29.99	188	134	P	V
	*	5775	101.95	-	-	88.02	32.12	11.8	29.99	188	134	A	V
		5850	77.66	-44.54	122.2	63.43	32.38	11.87	30.02	188	134	P	V
		5862.4	67.83	-40.9	108.73	53.59	32.39	11.87	30.02	188	134	P	V
		5881.6	67.4	-32.9	100.3	53.13	32.42	11.88	30.03	188	134	P	V
		5943.2	58.46	-9.74	68.2	44.11	32.48	11.92	30.05	188	134	P	V
													V
													V

Remark

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

<Middle Unmodulated>

Band 4 5725~5850MHz

WIFI 802.11ax HE20_Full (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax HE20 Full CH 165 5825MHz	*	5830	116.4	-	-	102.28	32.27	11.86	30.01	400	213	P	H
	*	5830	110.33	-	-	96.21	32.27	11.86	30.01	400	213	A	H
		5850	92.07	-30.13	122.2	77.91	32.31	11.87	30.02	400	213	P	H
		5858.6	90.9	-18.89	109.79	76.73	32.32	11.87	30.02	400	213	P	H
		5877	78.12	-25.59	103.71	63.92	32.35	11.88	30.03	400	213	P	H
		5936.6	61.24	-6.96	68.2	46.9	32.47	11.92	30.05	400	213	P	H
													H
													H
	*	5830	118.3	-	-	104.15	32.3	11.86	30.01	275	253	P	V
	*	5830	110.7	-	-	96.55	32.3	11.86	30.01	275	253	A	V
		5850.8	94.21	-26.17	120.38	79.98	32.38	11.87	30.02	275	253	P	V
		5855.2	89.61	-21.13	110.74	75.37	32.39	11.87	30.02	275	253	P	V
		5875	77.78	-27.42	105.2	63.52	32.41	11.88	30.03	275	253	P	V
		5927.8	63.66	-4.54	68.2	49.33	32.47	11.91	30.05	275	253	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 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)
		5647	60.22	-7.98	68.2	46.83	31.74	11.6	29.95	279	212	P	H
		5699.8	75.23	-29.82	105.05	61.66	31.86	11.68	29.97	279	212	P	H
		5720	84.98	-25.82	110.8	71.27	31.96	11.72	29.97	279	212	P	H
		5724.6	88.18	-33.11	121.29	74.46	31.98	11.72	29.98	279	212	P	H
	*	5755	119.12	-	-	105.23	32.11	11.77	29.99	279	212	P	H
	*	5755	110.78	-	-	96.89	32.11	11.77	29.99	279	212	A	H
		5850.8	63.6	-56.78	120.38	49.44	32.31	11.87	30.02	279	212	P	H
		5855.4	62.59	-48.1	110.69	48.42	32.32	11.87	30.02	279	212	P	H
		5877.4	59.57	-43.85	103.42	45.37	32.35	11.88	30.03	279	212	P	H
		5929	53.97	-14.23	68.2	39.66	32.45	11.91	30.05	279	212	P	H
802.11ax													H
HE40 Full													H
CH 151		5647.2	62.08	-6.12	68.2	48.63	31.8	11.6	29.95	253	254	P	V
5755MHz		5692.4	75.39	-24.21	99.6	61.81	31.88	11.67	29.97	253	254	P	V
		5720	89.62	-21.18	110.8	75.91	31.96	11.72	29.97	253	254	P	V
		5723.6	90.29	-28.72	119.01	76.57	31.98	11.72	29.98	253	254	P	V
	*	5755	119.41	-	-	105.56	32.07	11.77	29.99	253	254	P	V
	*	5755	110.96	-	-	97.11	32.07	11.77	29.99	253	254	A	V
		5851.2	65.83	-53.63	119.46	51.6	32.38	11.87	30.02	253	254	P	V
		5856.2	64.1	-46.36	110.46	49.86	32.39	11.87	30.02	253	254	P	V
		5881.4	60.87	-39.58	100.45	46.6	32.42	11.88	30.03	253	254	P	V
		5926.2	54.27	-13.93	68.2	39.93	32.47	11.91	30.04	253	254	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)
		5646	53.02	-15.18	68.2	39.63	31.74	11.6	29.95	100	219	P	H
		5694	58.83	-41.95	100.78	45.28	31.84	11.68	29.97	100	219	P	H
		5719	64.56	-45.96	110.52	50.87	31.95	11.71	29.97	100	219	P	H
		5722.6	69.29	-47.44	116.73	55.58	31.97	11.72	29.98	100	219	P	H
	*	5795	114.52	-	-	100.5	32.19	11.83	30	100	219	P	H
	*	5795	107.83	-	-	93.81	32.19	11.83	30	100	219	A	H
		5852.2	71.67	-45.51	117.18	57.51	32.31	11.87	30.02	100	219	P	H
		5855.2	72.13	-38.61	110.74	57.96	32.32	11.87	30.02	100	219	P	H
		5875.4	65.1	-39.8	104.9	50.9	32.35	11.88	30.03	100	219	P	H
		5930	54.52	-13.68	68.2	40.21	32.45	11.91	30.05	100	219	P	H
802.11ax													H
HE40 Full													H
CH 159		5649.6	55.73	-12.47	68.2	42.27	31.8	11.61	29.95	303	84	P	V
5795MHz		5697	63.87	-39.12	102.99	50.27	31.89	11.68	29.97	303	84	P	V
		5719.2	70.19	-40.39	110.58	56.49	31.96	11.71	29.97	303	84	P	V
		5721.4	71.25	-42.74	113.99	57.54	31.97	11.72	29.98	303	84	P	V
	*	5795	117.51	-	-	103.5	32.18	11.83	30	303	84	P	V
	*	5795	111.27	-	-	97.26	32.18	11.83	30	303	84	A	V
		5851.8	77.73	-40.37	118.1	63.5	32.38	11.87	30.02	303	84	P	V
		5856.8	73.91	-36.39	110.3	59.67	32.39	11.87	30.02	303	84	P	V
		5876.4	68.41	-35.75	104.16	54.15	32.41	11.88	30.03	303	84	P	V
		5926.4	59.82	-8.38	68.2	45.48	32.47	11.91	30.04	303	84	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)
		5630	66.22	-1.98	68.2	52.8	31.78	11.58	29.94	304	195	P	H
		5690	78.54	-19.29	97.83	65	31.83	11.67	29.96	304	195	P	H
		5717.8	80.98	-29.2	110.18	67.29	31.95	11.71	29.97	304	195	P	H
		5722.4	80.43	-35.84	116.27	66.72	31.97	11.72	29.98	304	195	P	H
	*	5775	108.66	-	-	94.7	32.15	11.8	29.99	304	195	P	H
	*	5775	101.21	-	-	87.25	32.15	11.8	29.99	304	195	A	H
		5852	74.69	-42.95	117.64	60.53	32.31	11.87	30.02	304	195	P	H
		5864.4	79.74	-28.43	108.17	65.55	32.33	11.88	30.02	304	195	P	H
		5924.6	68.45	-0.04	68.49	54.14	32.44	11.91	30.04	304	195	P	H
		5925.4	66.96	-1.24	68.2	52.65	32.44	11.91	30.04	304	195	P	H
802.11ax													H
HE80 Full													H
CH 155		5632.4	61.94	-6.26	68.2	48.51	31.8	11.58	29.95	179	247	P	V
5775MHz		5689.4	73.99	-23.39	97.38	60.4	31.88	11.67	29.96	179	247	P	V
		5720	78.9	-31.9	110.8	65.19	31.96	11.72	29.97	179	247	P	V
		5720	78.9	-31.9	110.8	65.19	31.96	11.72	29.97	179	247	P	V
	*	5775	107.98	-	-	94.05	32.12	11.8	29.99	179	247	P	V
	*	5775	99.28	-	-	85.35	32.12	11.8	29.99	179	247	A	V
		5853.2	74.31	-40.59	114.9	60.08	32.38	11.87	30.02	179	247	P	V
		5860.6	75.44	-33.79	109.23	61.2	32.39	11.87	30.02	179	247	P	V
		5875	68.7	-36.5	105.2	54.44	32.41	11.88	30.03	179	247	P	V
		5931.8	64.05	-4.15	68.2	49.72	32.47	11.91	30.05	179	247	P	V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average 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	**P**eak or **A**verage
H/V	**H**orizontal or **V**ertical

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

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

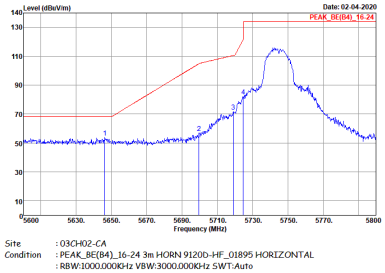
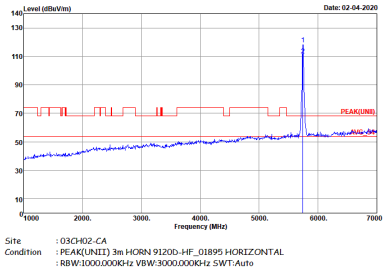
Test Engineer :	Calvin Wu, Leo Luo, and Jacky Hong	**Temperature :**	19~22℃
		Relative Humidity :	36~45%

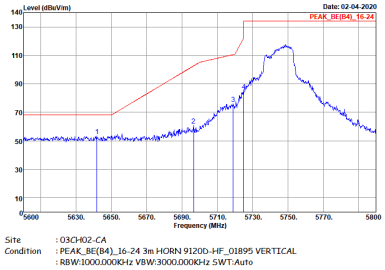
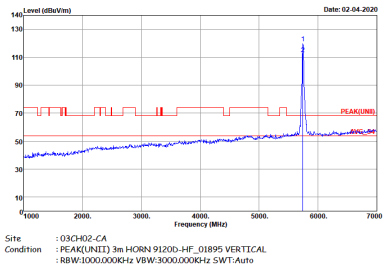
Note symbol

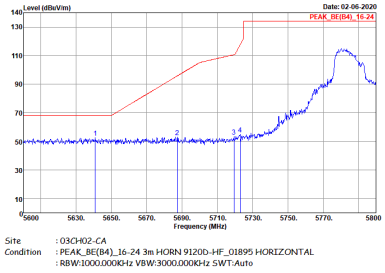
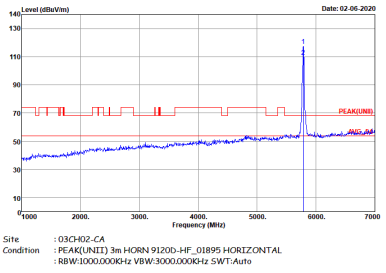
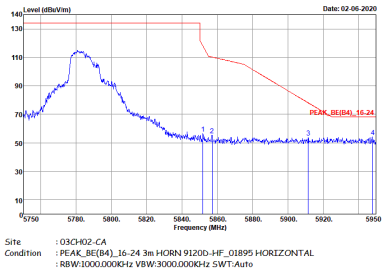
-L	**Low channel location**
-R	**High channel location**

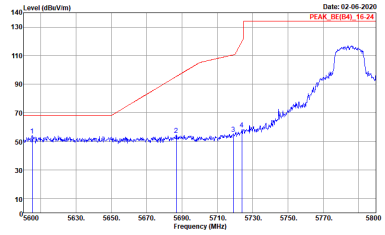
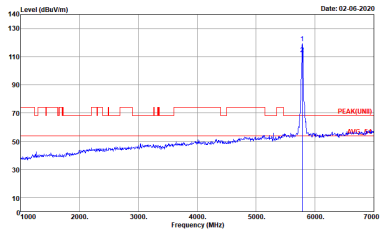
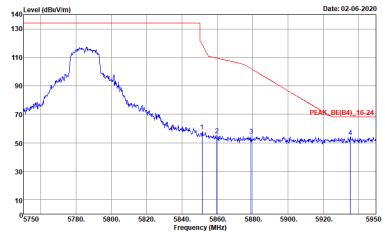
Band 4 - 5725~5850MHz

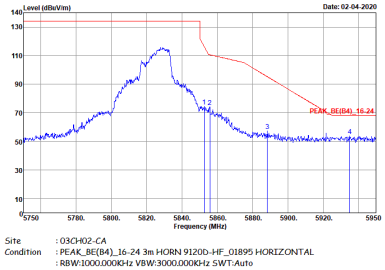
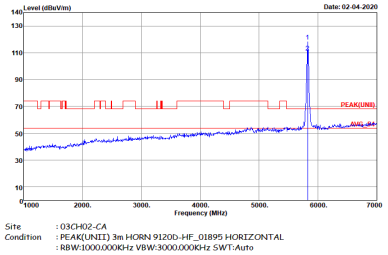
WIFI 802.11a (Band Edge @ 3m)

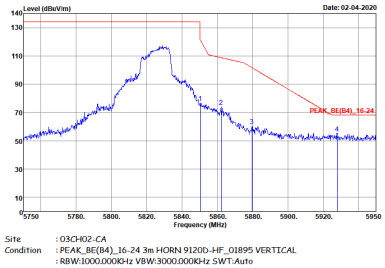
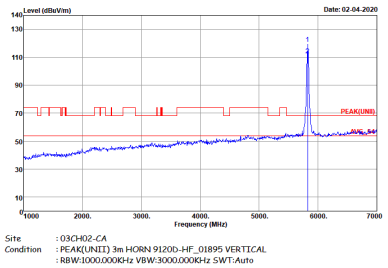
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1+2	Horizontal	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1+2	Vertical	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

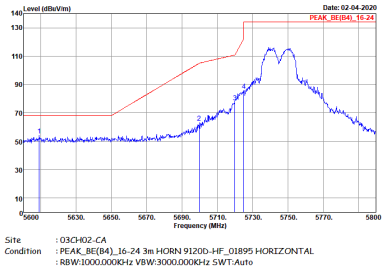
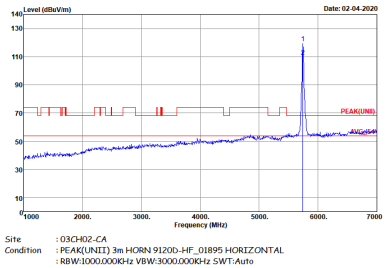
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF_01895 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF_01895 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

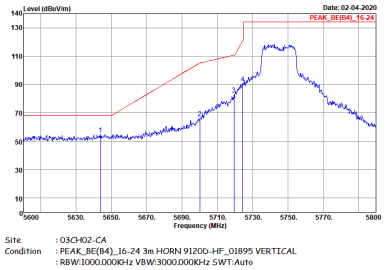
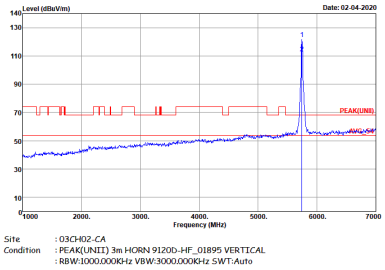
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1+2	Horizontal	Fundamental
Peak		

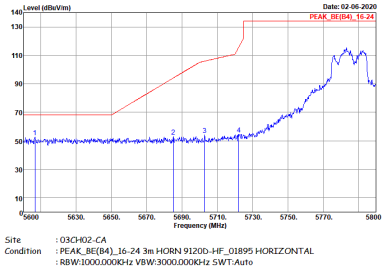
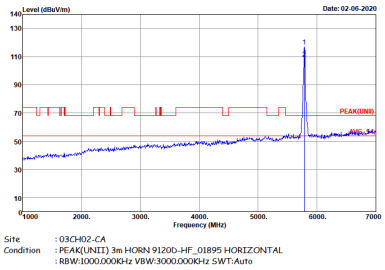
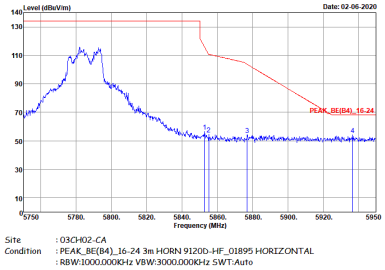
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1+2	Vertical	Fundamental
Peak		

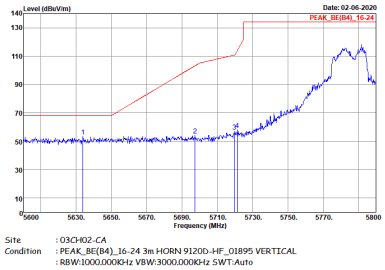
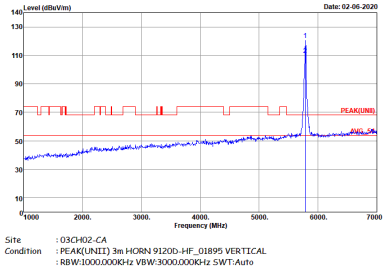
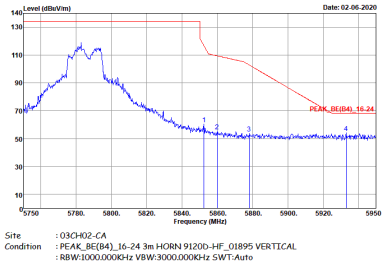
Band 4 - 5725~5850MHz

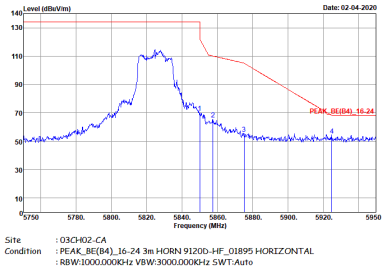
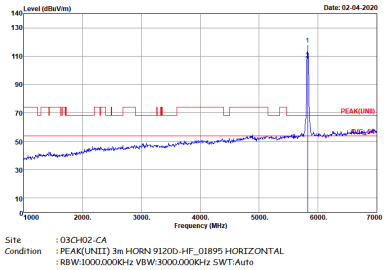
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

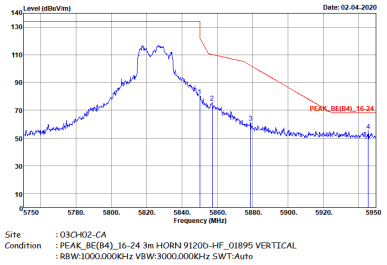
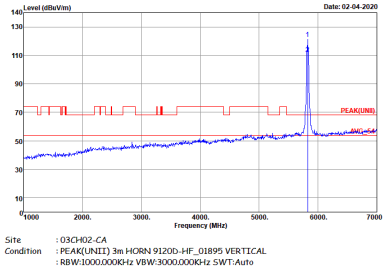
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Horizontal	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Vertical	Fundamental
Peak		

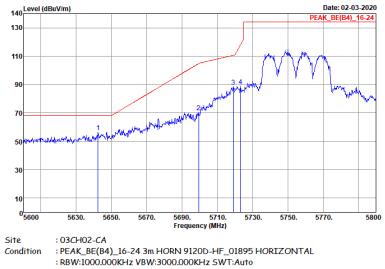
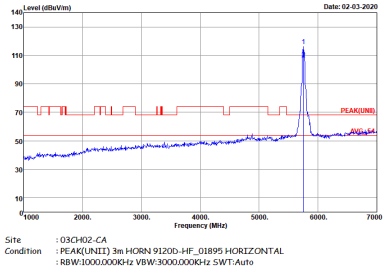
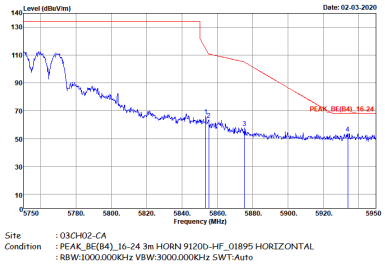
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
1+2	Horizontal	Fundamental
Peak		
Peak		Left blank

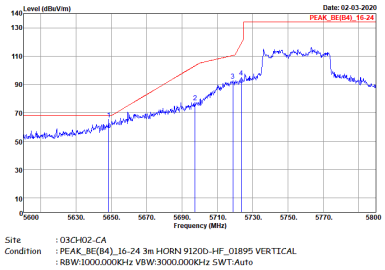
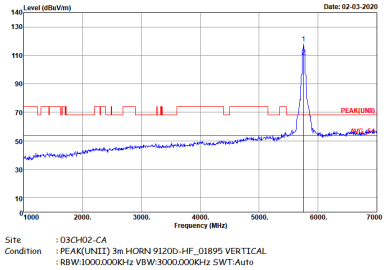
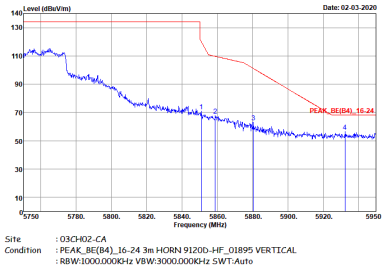
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
1+2	Vertical	Fundamental
Peak		
Peak		Left blank

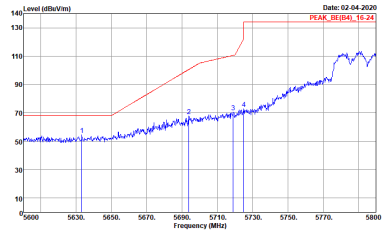
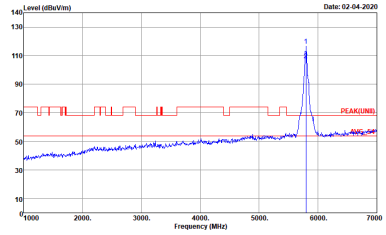
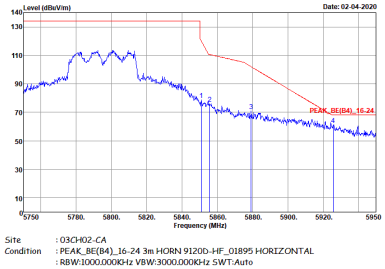
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
1+2	Horizontal	Fundamental
Peak		

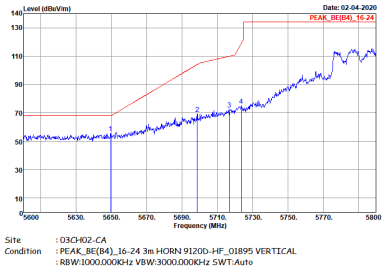
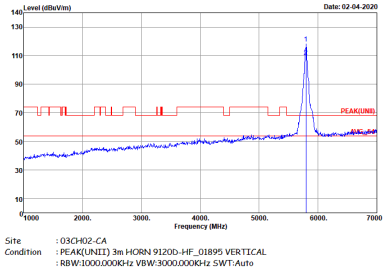
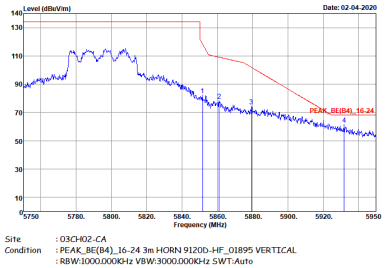
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
1+2	Vertical	Fundamental
Peak		

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

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
1+2	Horizontal	Fundamental
Peak		
Peak		Left blank

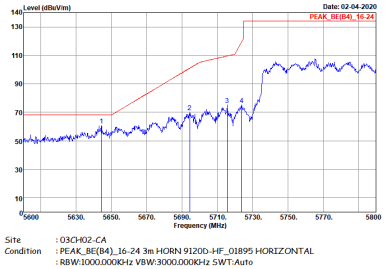
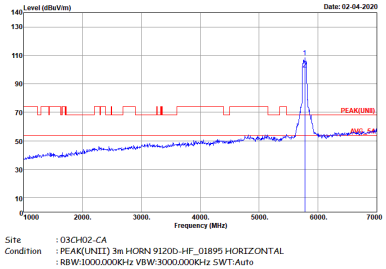
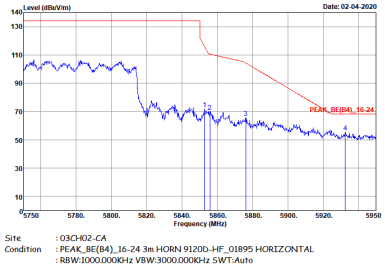
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
1+2	Vertical	Fundamental
Peak		
Peak		Left blank

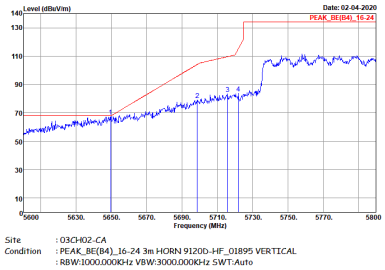
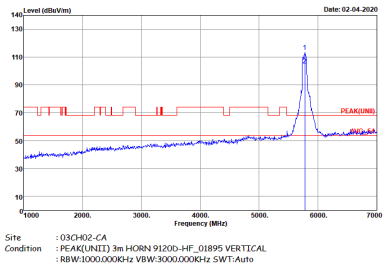
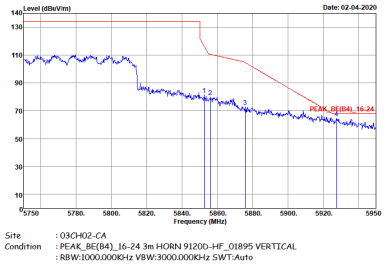
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full HT40 CH159 5795MHz	
1+2	Horizontal	Fundamental
Peak		
Peak		Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
1+2	Vertical	Fundamental
Peak		
Peak		Left blank

Band 4 5725~5850MHz

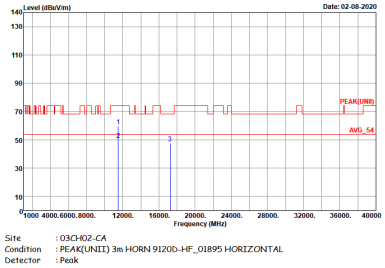
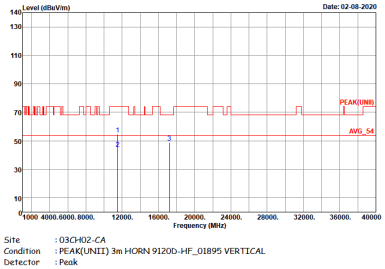
WIFI 802.11ax HE80 Full (Band Edge @ 3m)

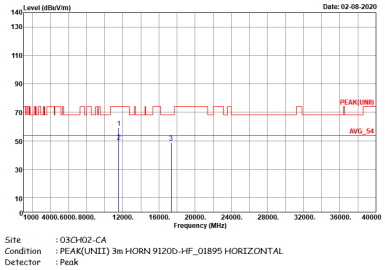
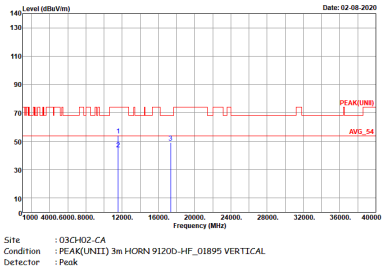
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
1+2	Horizontal	Fundamental
Peak		
Peak		Left blank

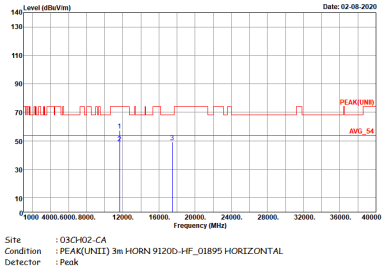
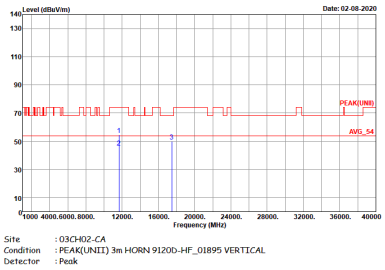
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
1+2	Vertical	Fundamental
Peak		
Peak		Left blank

Band 4 - 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

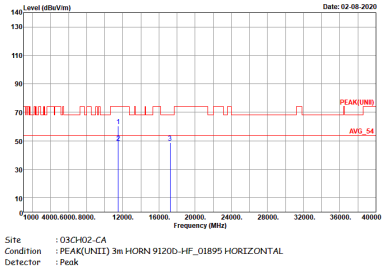
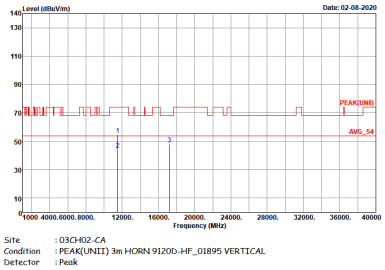
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
1+2	Horizontal	Vertical
Peak Avg.		

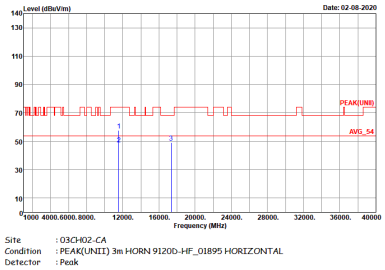
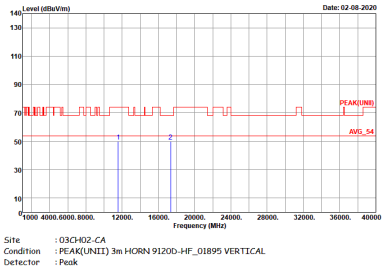
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
1+2	Horizontal	Vertical
Peak Avg.		

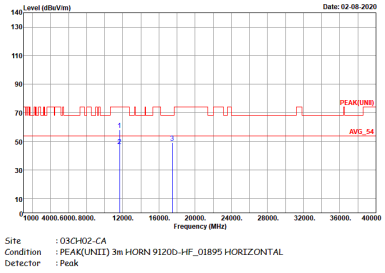
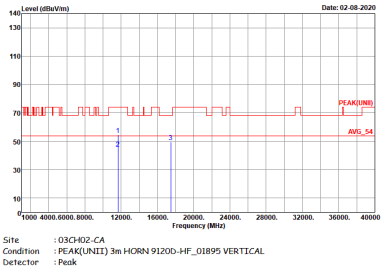
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
1+2	Horizontal	Vertical
Peak Avg.		

Band 4 - 5725~5850MHz

WIFI 802.11ax HE20 Full (Harmonic @ 3m)

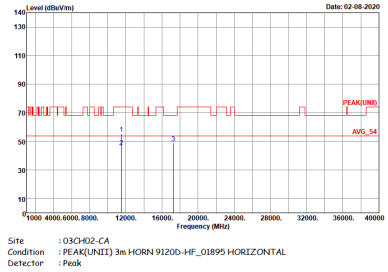
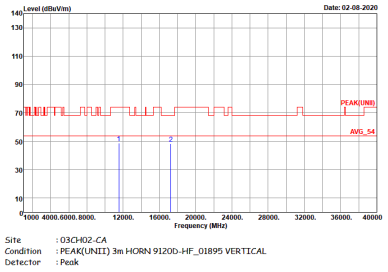
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Horizontal	Vertical
Peak Avg.		

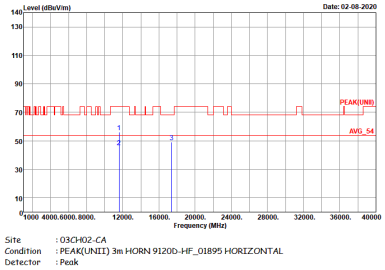
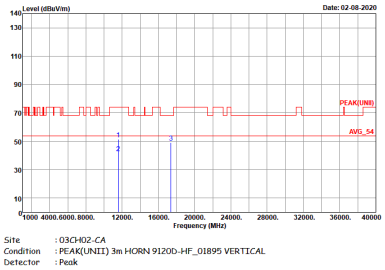
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
1+2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 HORIZONTAL Detector : Peak	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 VERTICAL Detector : Peak

Band 4 5725~5850MHz

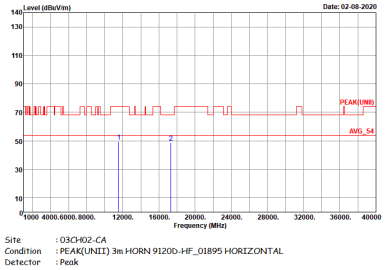
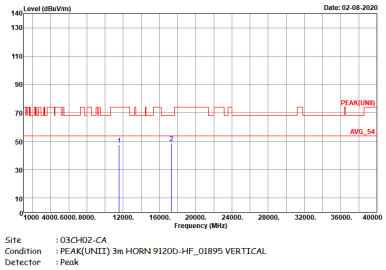
WIFI 802.11ax HE40 Full (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
1+2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
1+2	Horizontal	Vertical
Peak Avg.		

Band 4 5725~5850MHz

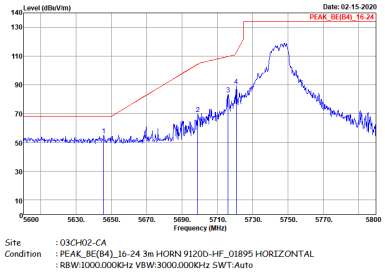
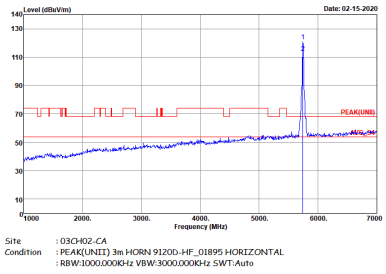
WIFI 802.11ax HE80 Full (Harmonic @ 3m)

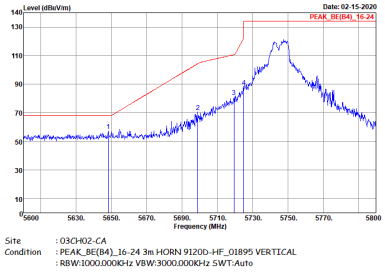
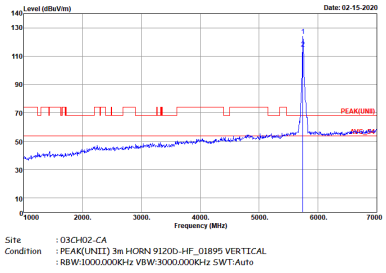
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
1+2	Horizontal	Vertical
Peak Avg.		

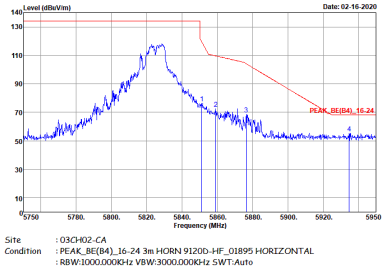
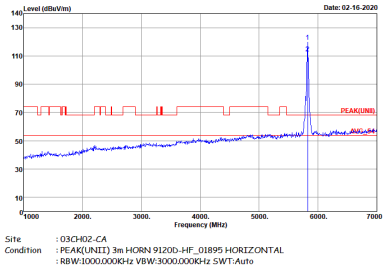
<Band-edge Unmodulated>

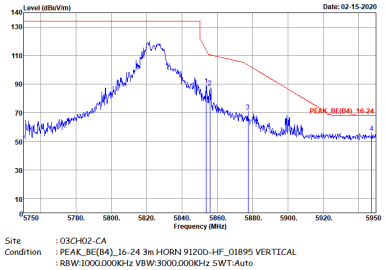
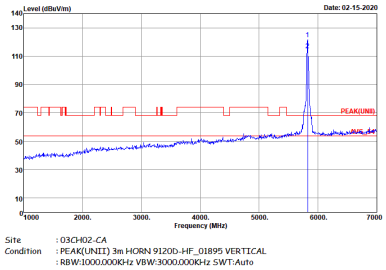
Band 4 - 5725~5850MHz

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

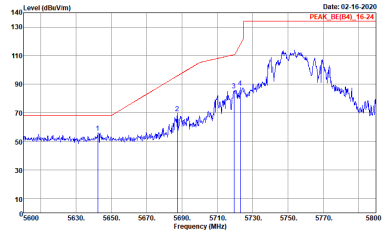
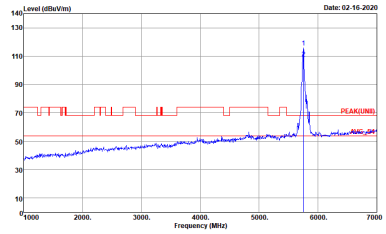
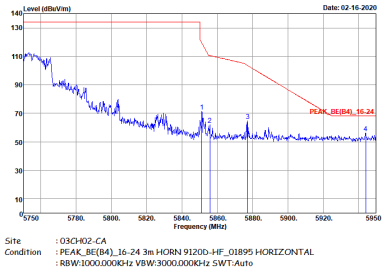
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Horizontal	Fundamental
Peak		

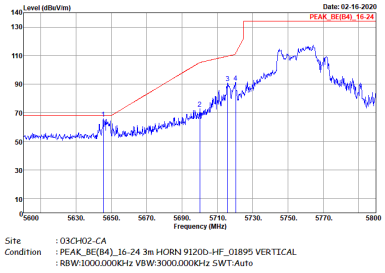
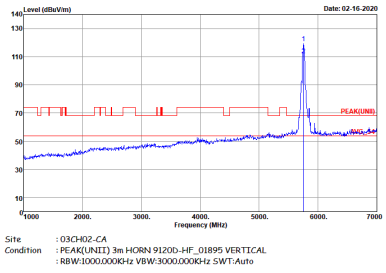
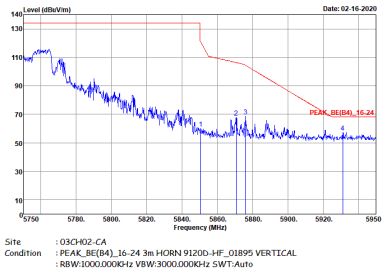
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Vertical	Fundamental
Peak		

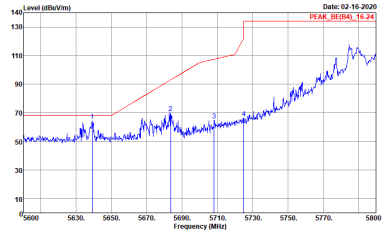
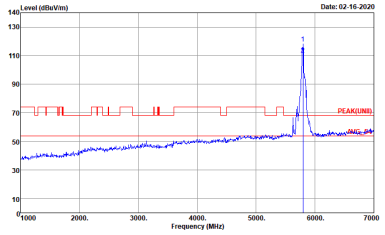
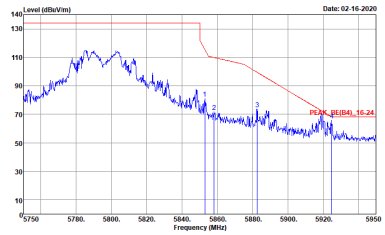
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
1+2	Horizontal	Fundamental
Peak		

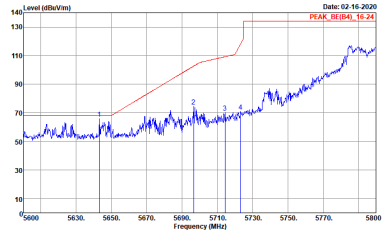
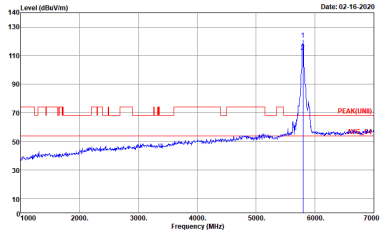
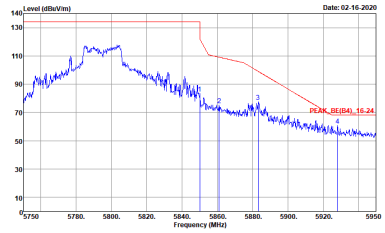
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
1+2	Vertical	Fundamental
Peak		

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

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
1+2	Horizontal	Fundamental
Peak		
Peak		Left blank

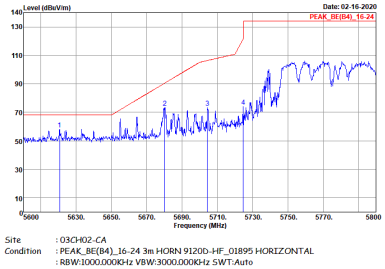
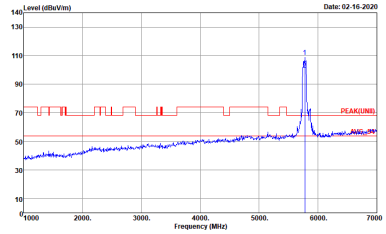
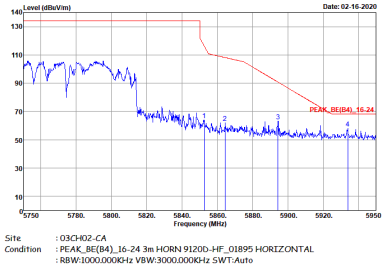
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
1+2	Vertical	Fundamental
Peak		
Peak		Left blank

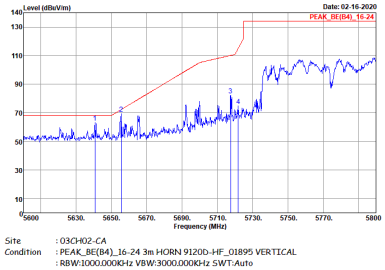
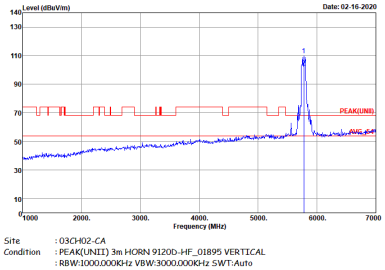
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full HT40 CH159 5795MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF_01895 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF_01895 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

Band 4 5725~5850MHz

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

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
1+2	Horizontal	Fundamental
Peak		
Peak		Left blank

<table>
<tr><td>WIFI</td><td colspan="2">Band 4 5725~5850MHz Band Edge @ 3m</td></tr>
<tr><td>ANT</td><td colspan="2">802.11ax HE80 Full CH155 5775MHz</td></tr>
<tr><td>1+2</td><td>Vertical</td><td>Fundamental</td></tr>
<tr><td>Peak</td><td> 
</td><td> 
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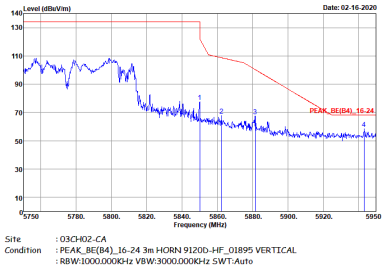
<tr><td>Peak</td><td> 
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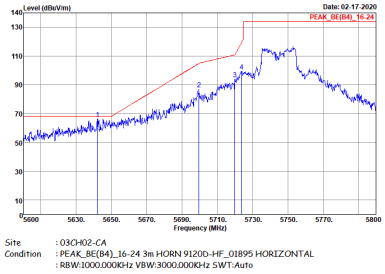
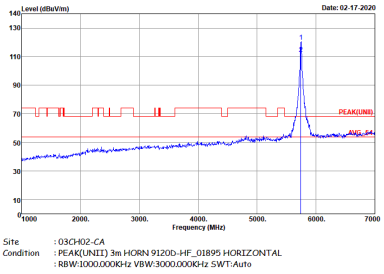
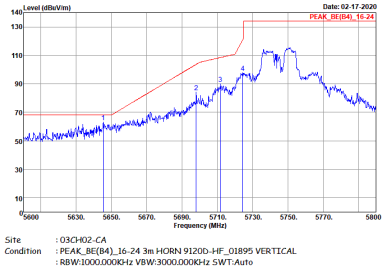
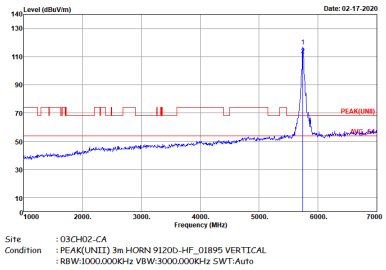
</table>

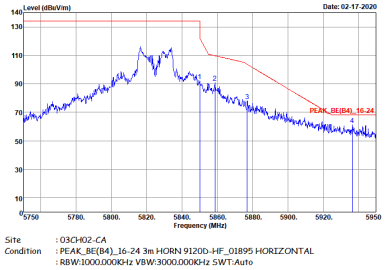
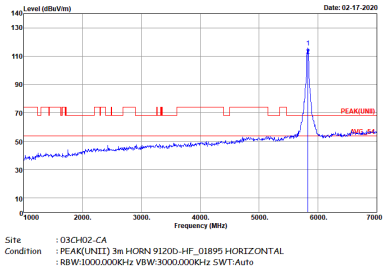
<Middle Unmodulated>

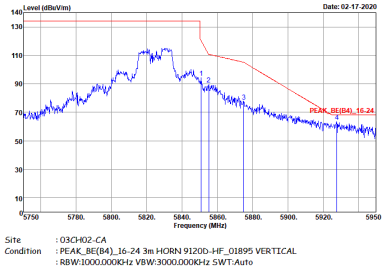
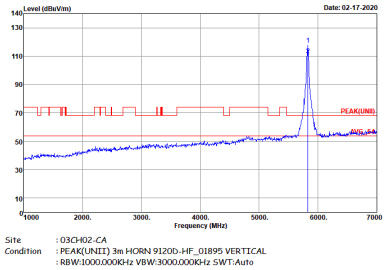
Band 4 - 5725~5850MHz

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		

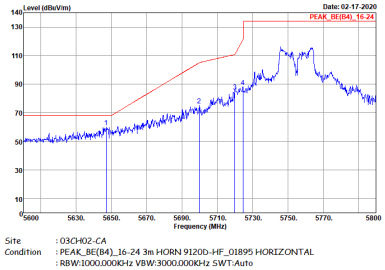
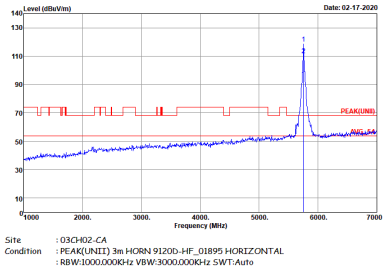
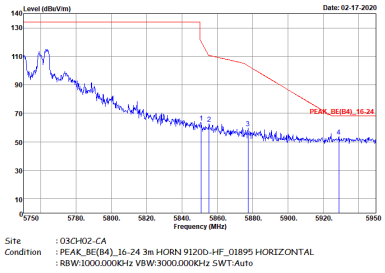
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
1+2	Vertical	Fundamental
Peak		

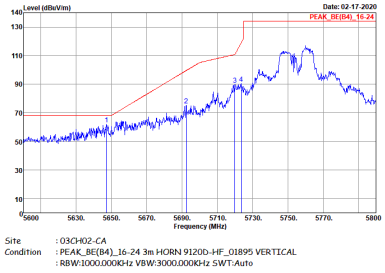
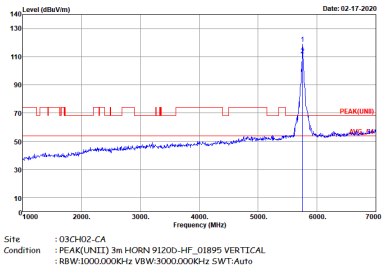
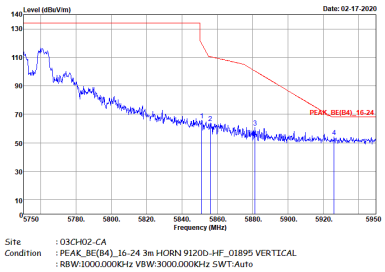
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
1+2	Horizontal	Fundamental
Peak		

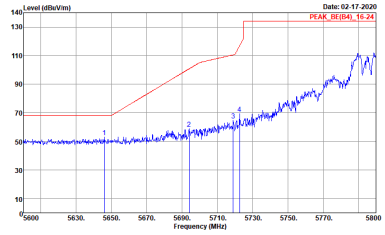
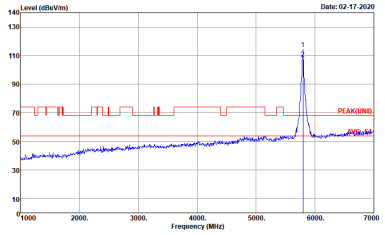
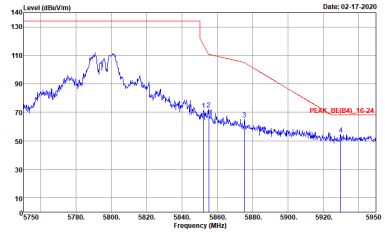
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
1+2	Vertical	Fundamental
Peak		

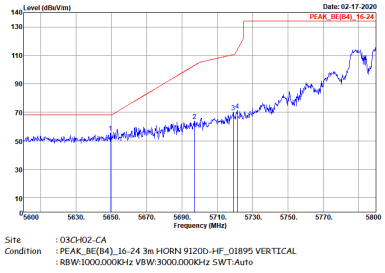
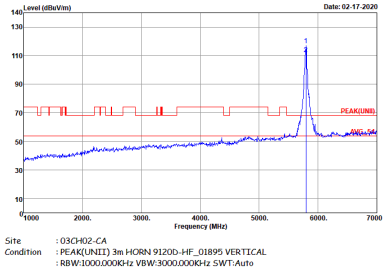
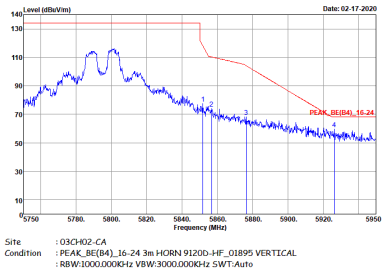
Band 4 5725~5850MHz

WIFI 802.11ax HE40 Full (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
1+2	Horizontal	Fundamental
Peak		
Peak		Left blank

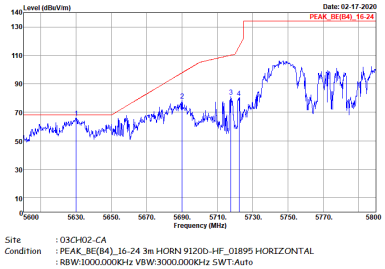
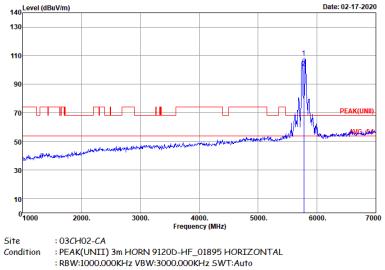
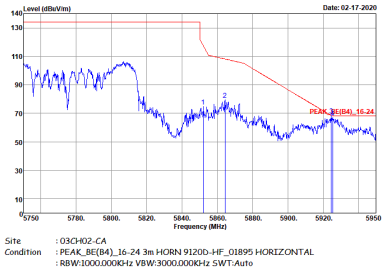
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
1+2	Vertical	Fundamental
Peak		
Peak		Left blank

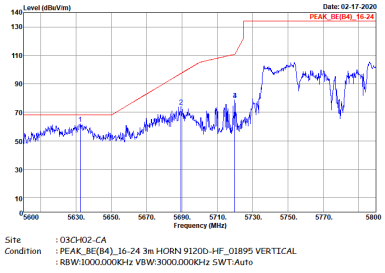
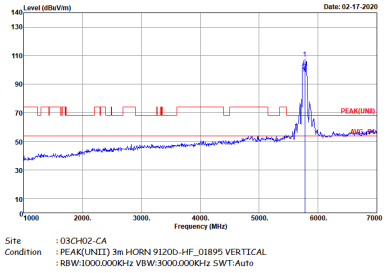
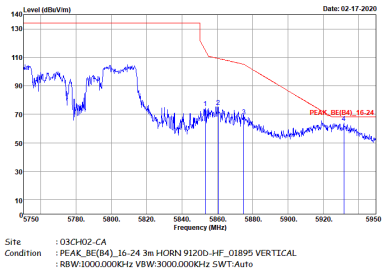
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full HT40 CH159 5795MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH02-CA Condition : PEAK(UNII) 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH02-CA Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF_01895 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
1+2	Vertical	Fundamental
Peak		
Peak		Left blank

Band 4 5725~5850MHz

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

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
1+2	Horizontal	Fundamental
Peak		
Peak		Left blank

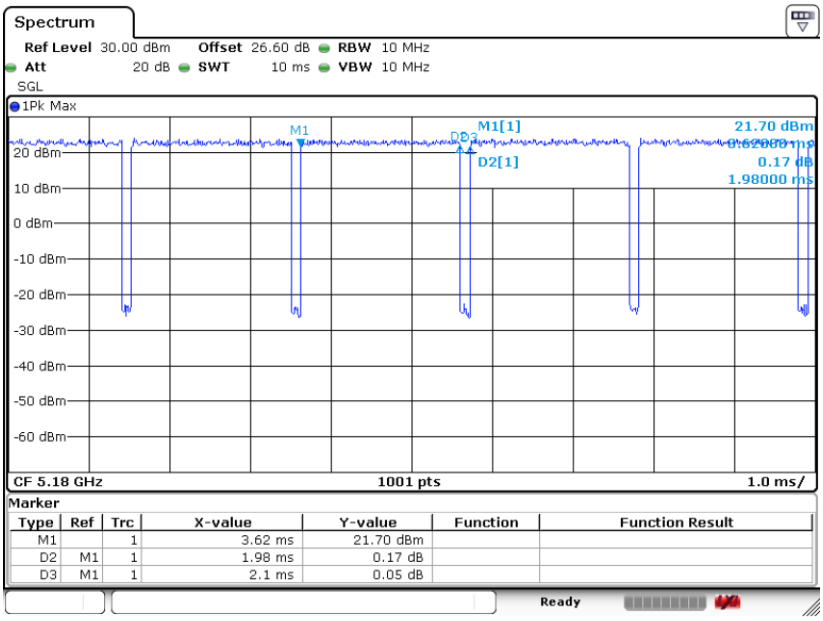
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
1+2	Vertical	Fundamental
Peak		
Peak		Left blank

Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
1+2	802.11a for Ant. 1	94.29	1980	0.51	1kHz	0.26
1+2	802.11a for Ant. 2	94.29	1980	0.51	1kHz	0.26
1+2	5GHz 802.11ax HE20 for Ant. 1	96.12	5450	0.18	300Hz	0.17
1+2	5GHz 802.11ax HE20 for Ant. 2	94.95	5450	0.18	300Hz	0.23
1+2	5GHz 802.11ax HE40 for Ant. 1	88.28	5420	0.18	300Hz	0.54
1+2	5GHz 802.11ax HE40 for Ant. 2	90.54	5420	0.18	300Hz	0.43
1+2	5GHz 802.11ax HE80 for Ant. 1	95.25	5410	0.18	300Hz	0.21
1+2	5GHz 802.11ax HE80 for Ant. 2	95.25	5410	0.18	300Hz	0.21

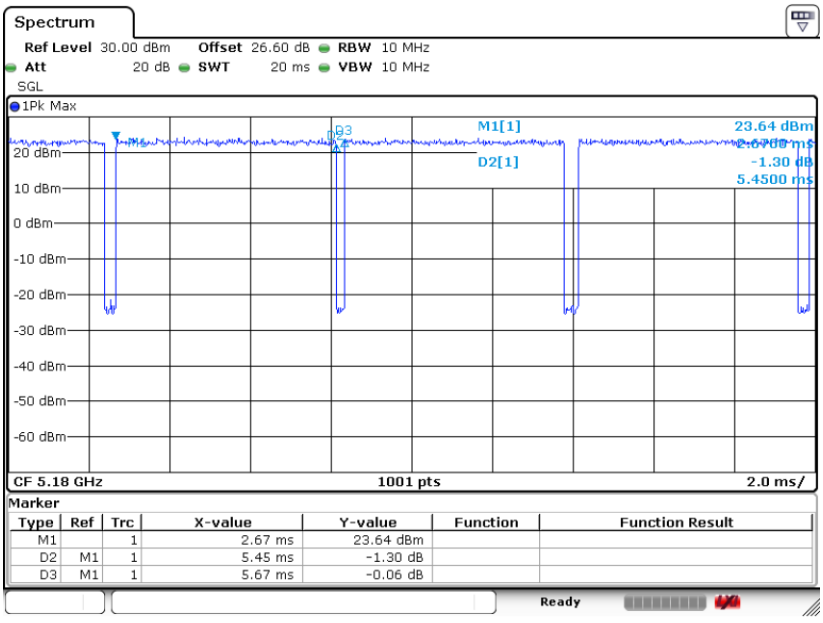
MIMO <Ant. 1>

802.11a



Date: 27.JAN.2020 13:47:01

802.11ax HE20



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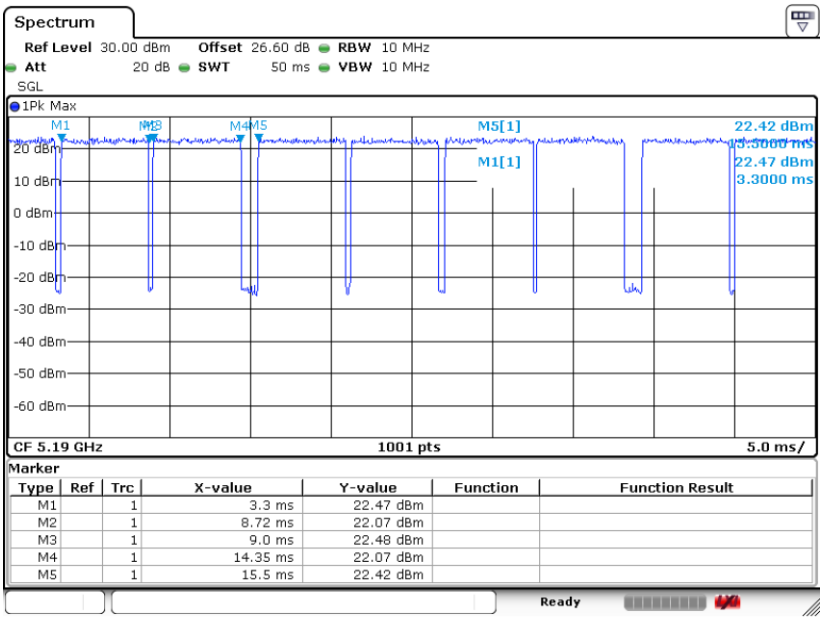
802.11ax HE40



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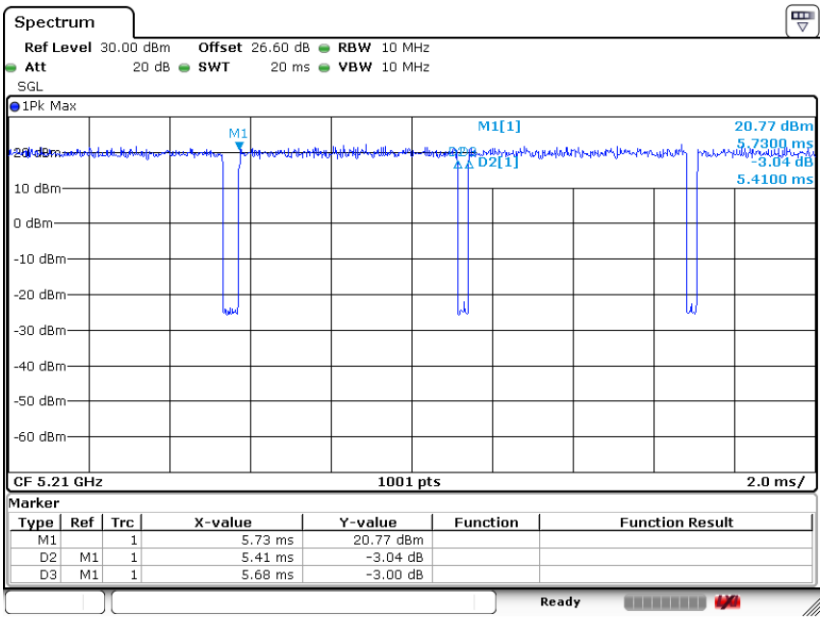
802.11ax HE80



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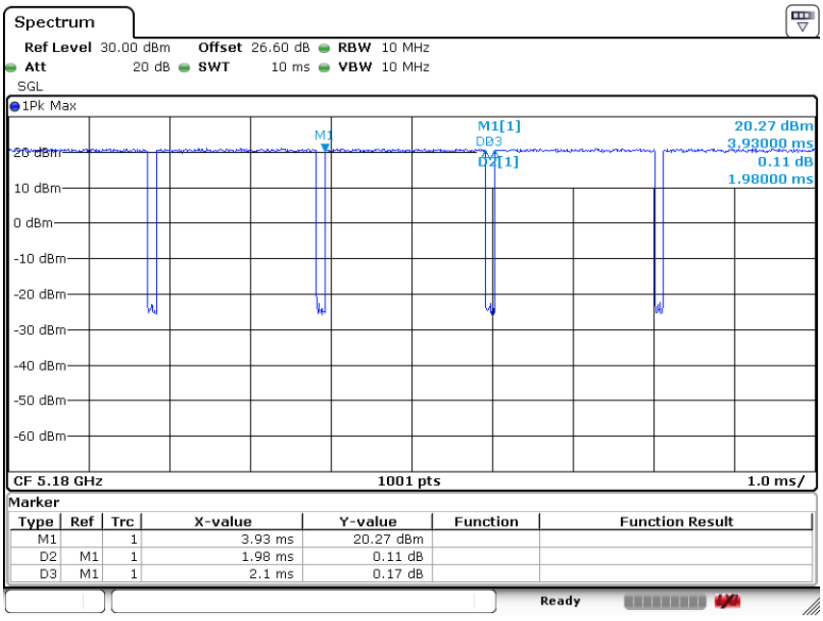
MIMO <Ant. 2>

802.11a



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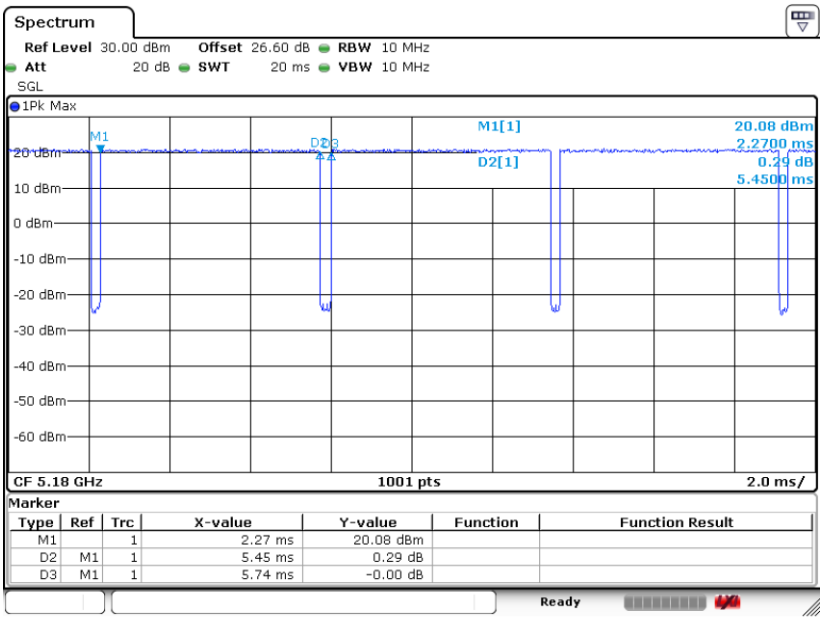
802.11ax HE20



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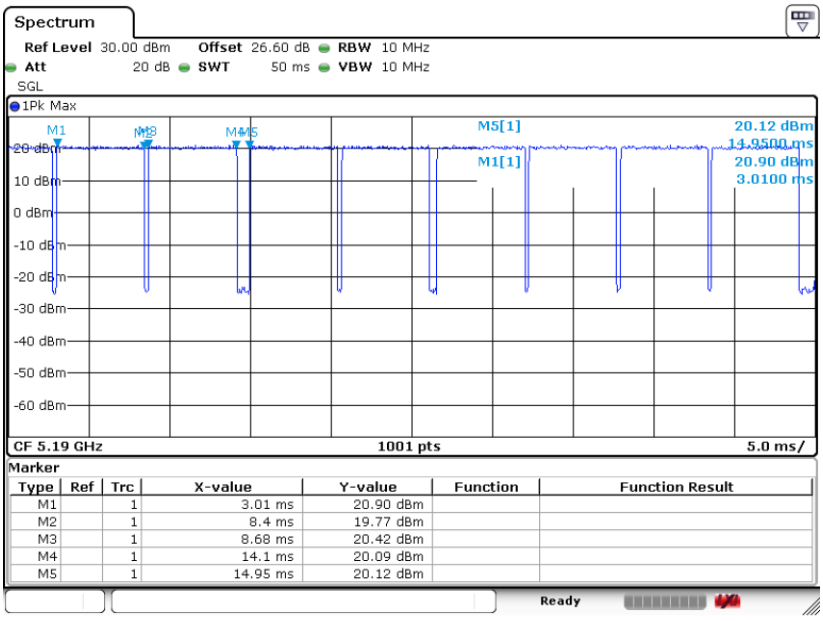
802.11ax HE40



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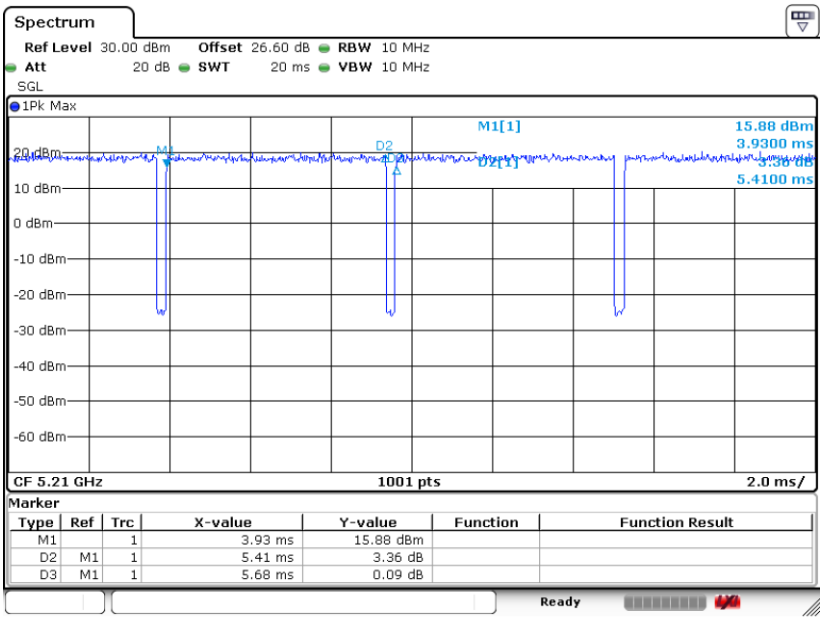
802.11ax HE80



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