



FCC RADIO TEST REPORT

FCC ID : A4RG454V
Equipment : Wireless Device
Model Name : G454V
Applicant : Google LLC
1600 Amphitheatre Parkway,
Mountain View, California, 94043 USA
Standard : FCC Part 15 Subpart E §15.407

The product was received on Oct. 05, 2021 and testing was performed from Oct. 09, 2021 to Nov. 08, 2021. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Louis Wu

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory

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



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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	3.12 dB under the limit at 17967.000 MHz
3.5	15.207	AC Conducted Emission	Pass	10.49 dB under the limit at 0.215 MHz and 0.211 MHz
3.6	15.203 15.407(a)	Antenna Requirement	Pass	-

Remark: The FR142340-05E report reuses AC Conducted Emission test data from the FD142340-04 report.

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

Reviewed by: Avis Chuang

Report Producer: Tina Chuang



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Wireless Device
Model Name	G454V
FCC ID	A4RG454V
EUT supports Radios application	WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE

Remark: The above EUT's information was declared by manufacturer.

EUT Information List	
S/N	Performed Test Item
1923105GN017RP	Conducted Measurement
1923105GN017WJ	Radiated Spurious Emission
1923105GN0180U	Conducted Emission

1.2 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Channel Frequency Range	5745 MHz ~ 5825 MHz
Maximum Output Power	<p><Ant. 1> 802.11a: 16.40 dBm / 0.00437 W 802.11n HT20: 16.50 dBm / 0.0447 W 802.11n HT40: 16.40 dBm / 0.00437 W 802.11ac VHT20: 16.40 dBm / 0.00437 W 802.11ac VHT40: 16.40 dBm / 0.00437 W 802.11ac VHT80: 15.20 dBm / 0.0331 W</p> <p><Ant. 2> 802.11a: 16.40 dBm / 0.00437 W 802.11n HT20: 16.50 dBm / 0.0447 W 802.11n HT40: 16.30 dBm / 0.0427 W 802.11ac VHT20: 16.40 dBm / 0.00437 W 802.11ac VHT40: 16.20 dBm / 0.0417 W 802.11ac VHT80: 15.30 dBm / 0.0339 W</p>
99% Occupied Bandwidth	<p><Ant. 1> 802.11a: 17.63 MHz 802.11n HT20: 18.03 MHz 802.11n HT40: 37.16 MHz 802.11ac VHT80: 76.36 MHz</p> <p><Ant. 2> 802.11a: 17.58 MHz 802.11n HT20: 18.08 MHz 802.11n HT40: 37.06 MHz 802.11ac VHT80: 76.36 MHz</p>
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)
Antenna Type / Gain	<p><Ant. 1> : PCB PIFA Antenna with gain 5.32 dBi <Ant. 2> : PCB PIFA Antenna with gain 3.68 dBi</p>

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

1.3 Modification of EUT

No modifications made to the EUT during the testing.



1.4 Testing Location

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

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

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. TH05-HY, 03CH12-HY

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

FCC designation No.: TW1190 and TW3786

1.5 Applicable Standards

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

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

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.



2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find X Plane for Ant. 1 and Y Plane for Ant. 2 as worst plane.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

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

Note:

1. The above Frequency and Channel with "*" are 802.11n HT40 and 802.11ac VHT40.
2. The above Frequency and Channel with "#" are 802.11ac VHT80



2.2 Test Mode

The final test modes consider the modulation and the worst data rates as shown in the table below.

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20 (Covered by HT20)	MCS0
802.11ac VHT40 (Covered by HT40)	MCS0
802.11ac VHT80	MCS0

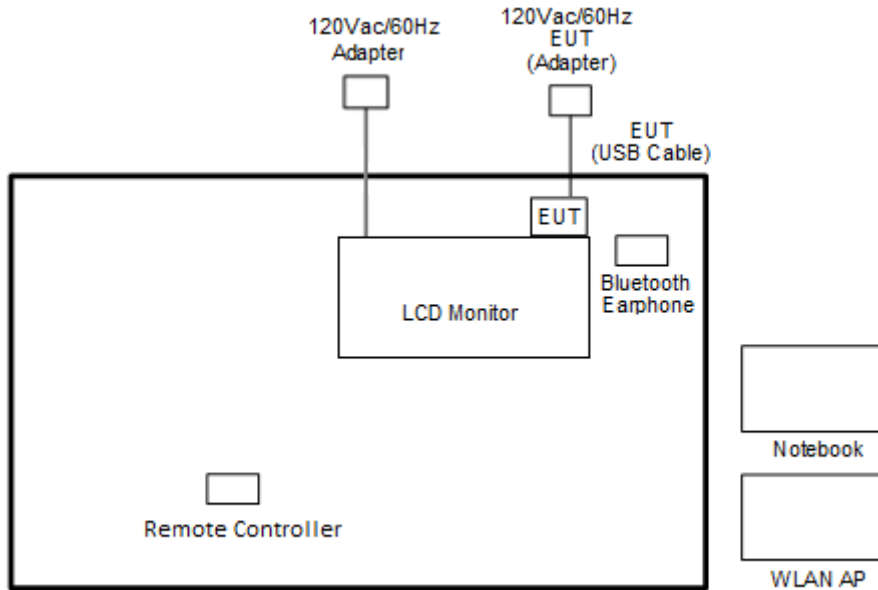
Test Cases	
AC Conducted Emission	Mode 1 : WLAN (5GHz) Link + Bluetooth Link (Bluetooth Earphone) + Controller Link + Video Streaming (1080p, 60Hz, 4:2:2, 12bits) + USB Cable 1 (Charging from AC Adapter (Aohai))
Remark: For Radiated Test Cases, the tests were performed with USB Cable 2.	

Ch. #	Band IV : 5725-5850 MHz			
	802.11a	802.11n HT20	802.11n HT40	802.11ac VHT80
L Low	149	149	151	-
M Middle	157	157	-	155
H High	165	165	159	-

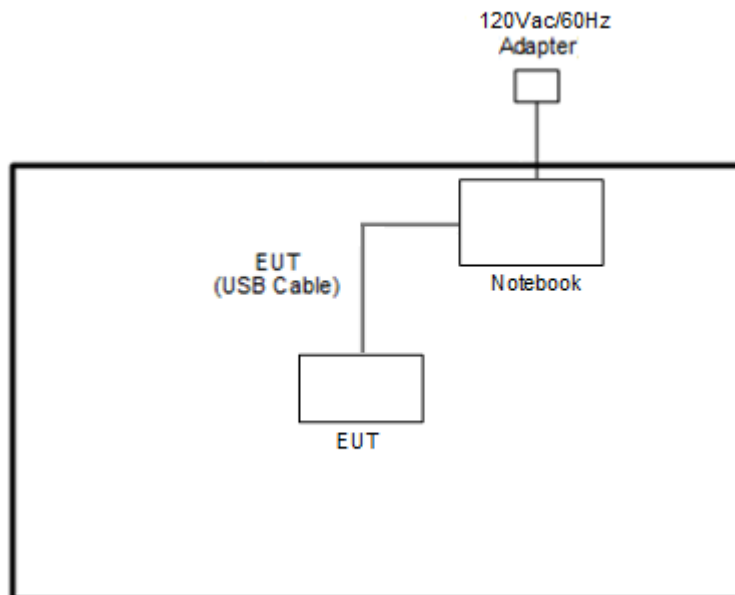
Remark: For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.

2.3 Connection Diagram of Test System

<AC Conducted Emission Mode>



<WLAN Tx Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
2.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8m
3.	Notebook	Dell	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Notebook	Acer	A515-54G-51QB	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	LCD Monitor	Sharp	LC-50UA6800T	N/A	N/A	N/A
6.	Remote controller	N/A	N/A	N/A	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility "CMD V10.0.18362.1256" was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

Offset = RF cable loss + attenuator factor.

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

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

3 Test Result

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

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

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

26dB and 99% Occupied bandwidth are reporting only.

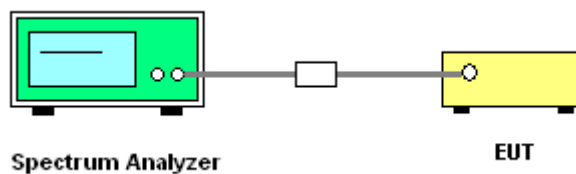
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup

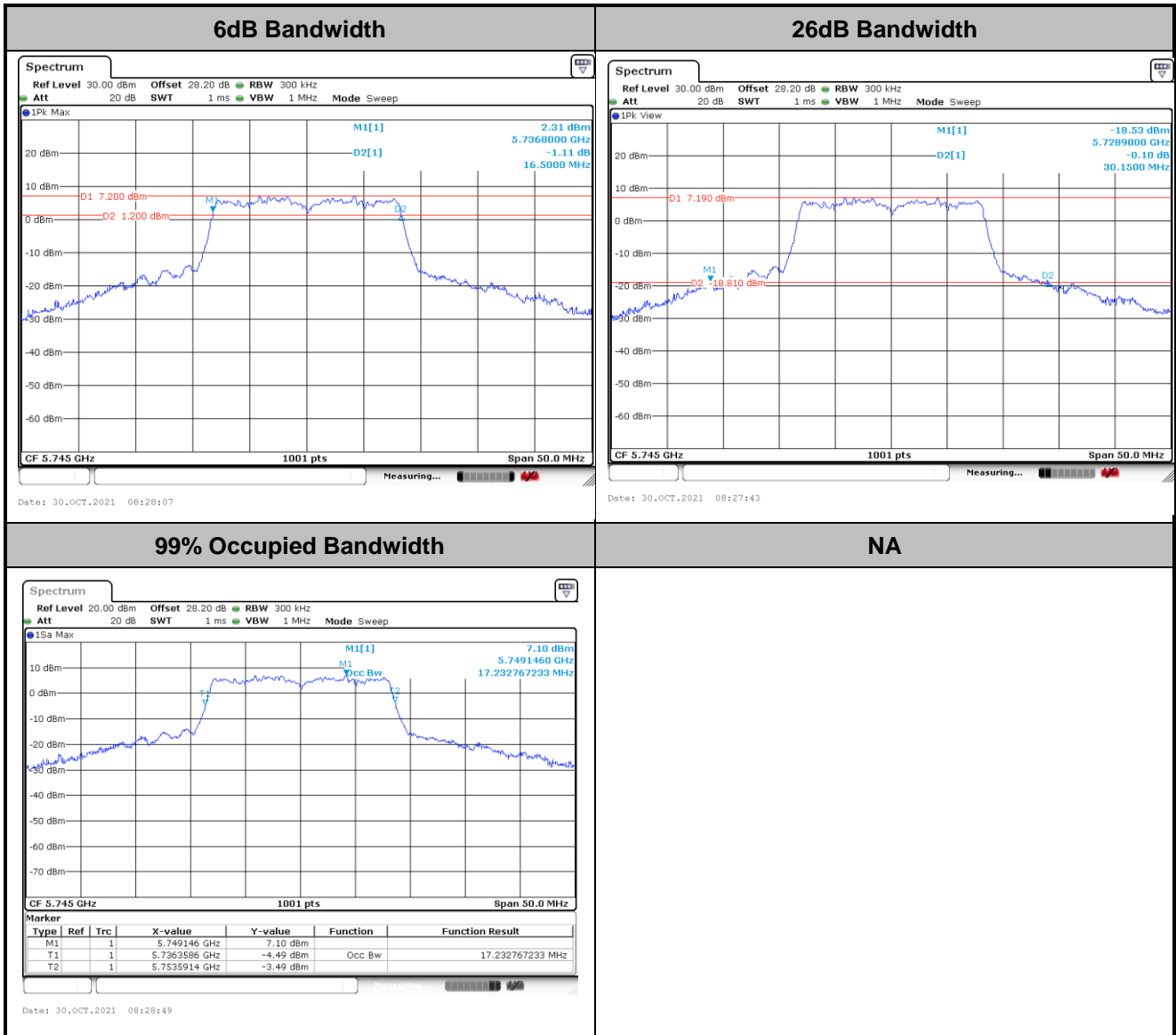


3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.

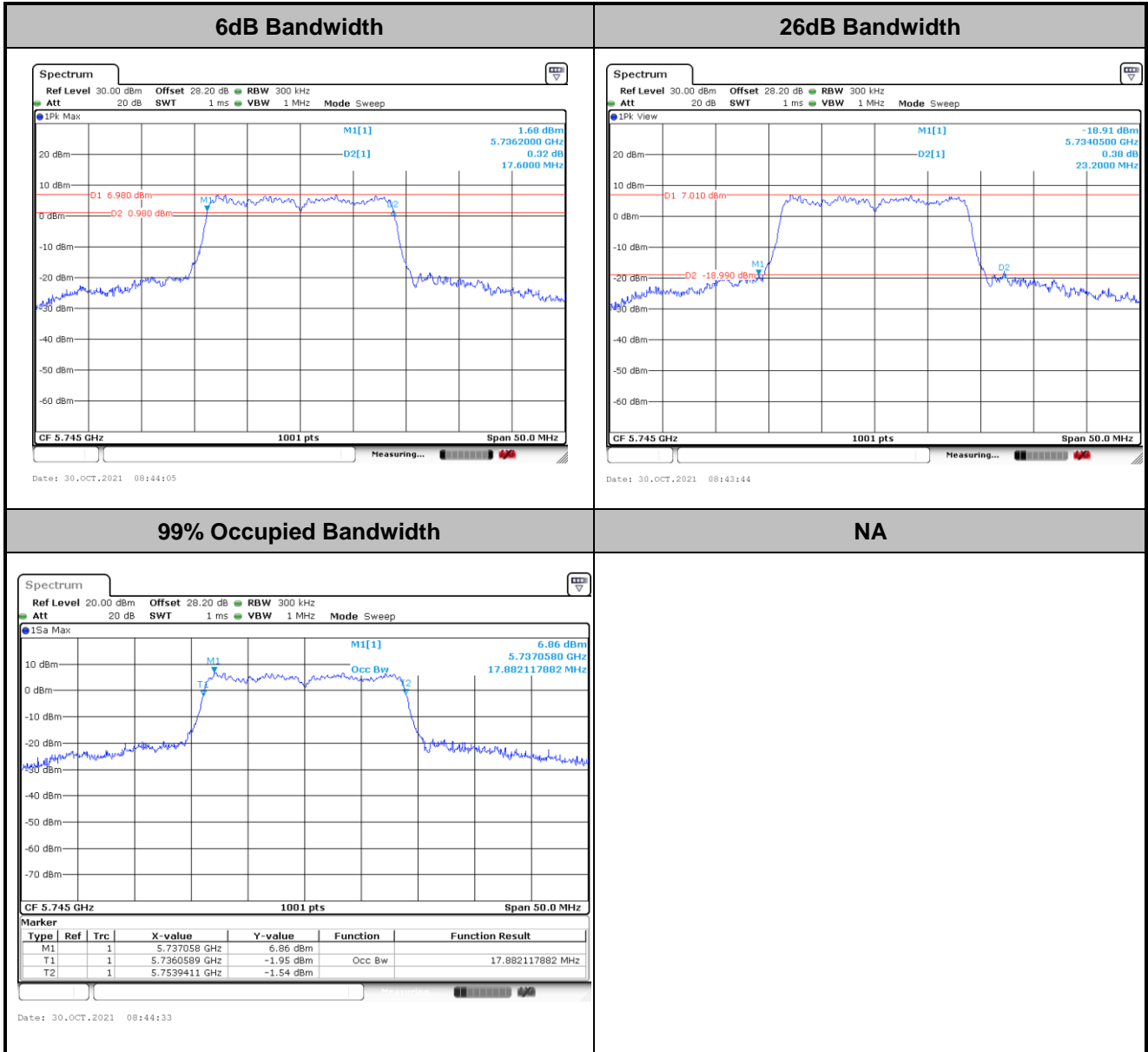


<802.11a>



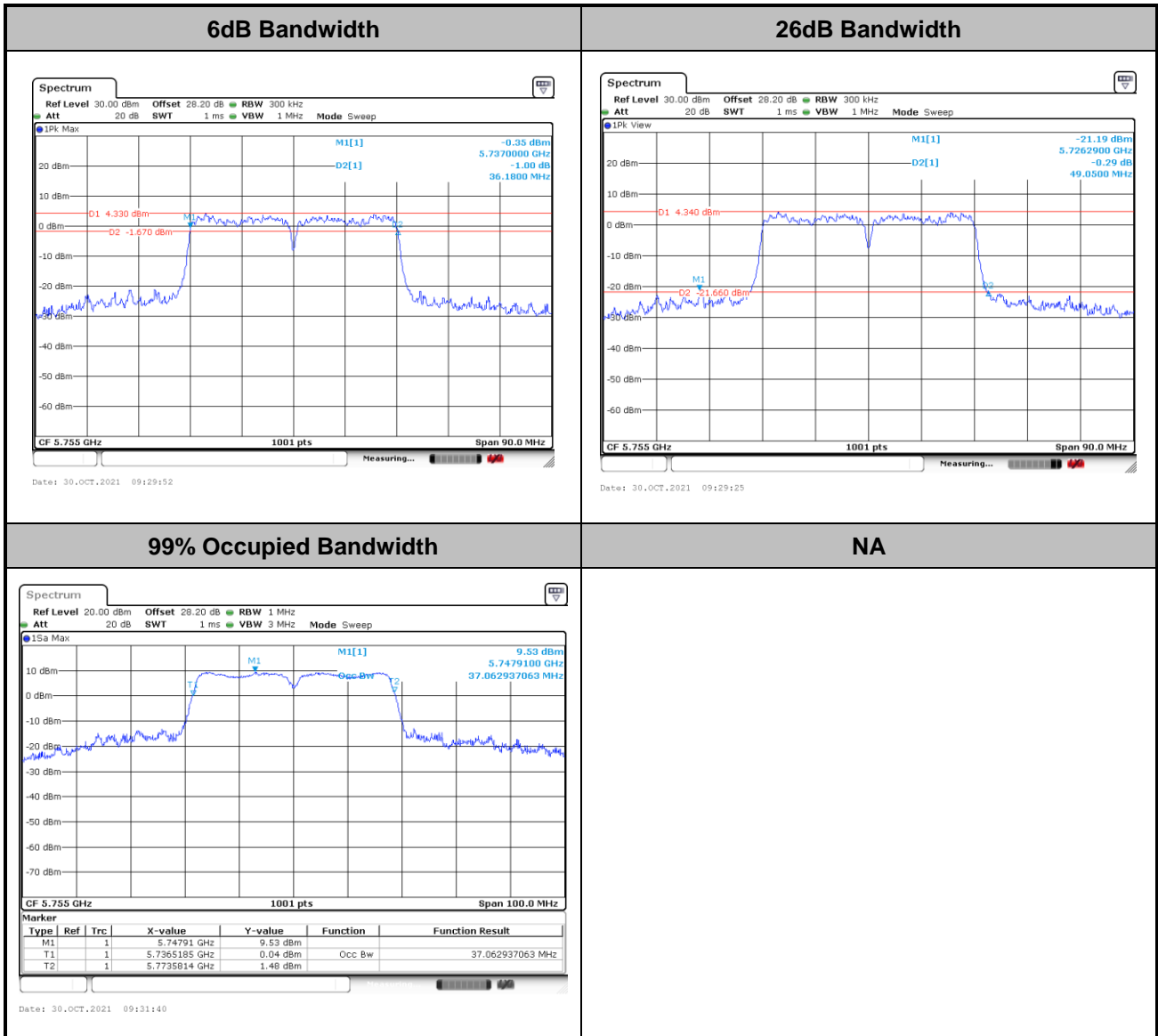


<802.11n HT20>



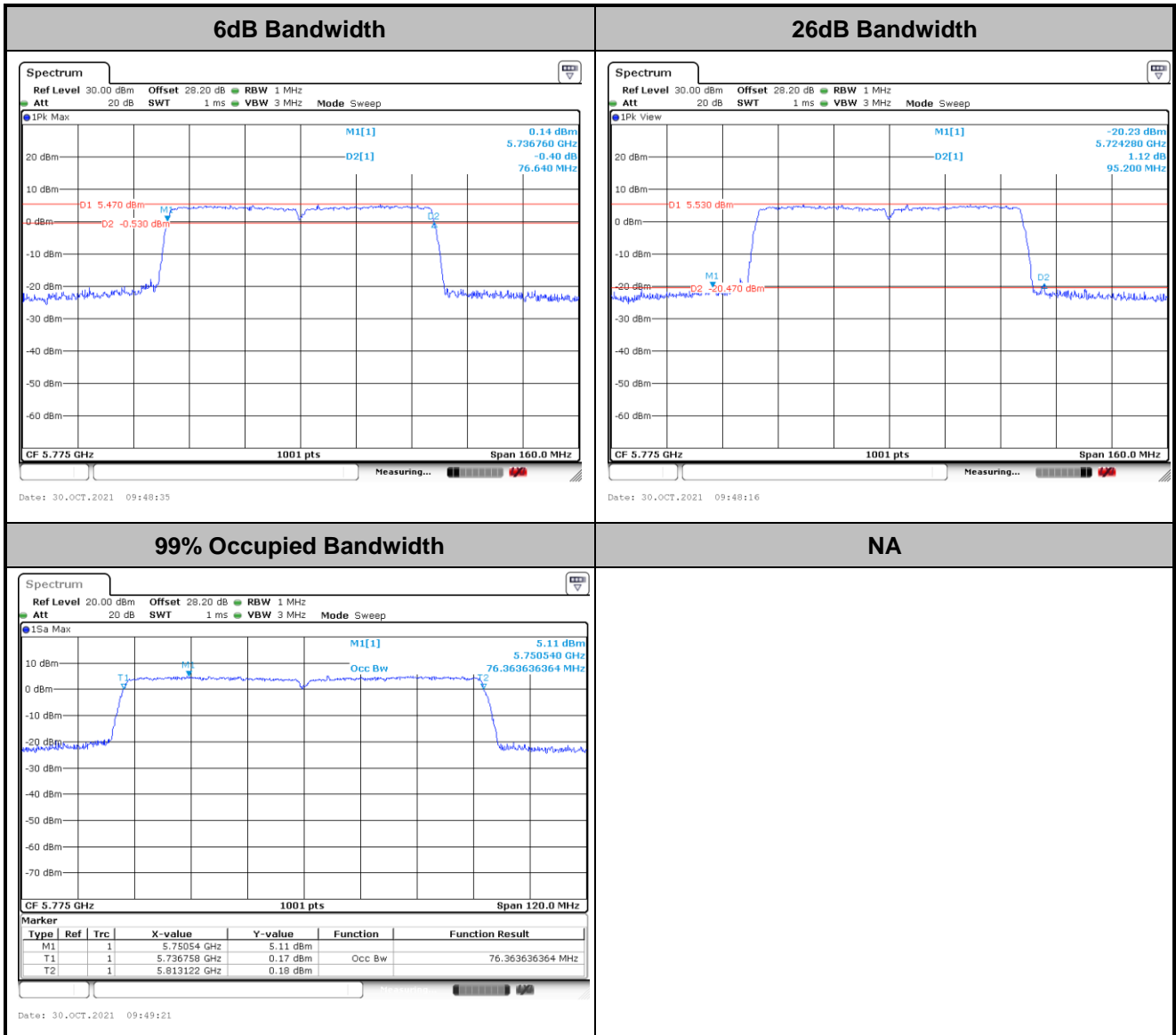


<802.11n HT40>





<802.11ac VHT80>



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

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

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

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

3.2.2 Measuring Instruments

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

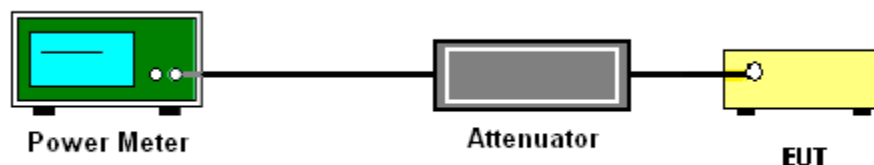
3.2.3 Test Procedures

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

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

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter.
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

Method SA-3

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

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 300 kHz.
 - Set VBW \geq 1 MHz.
 - Number of points in sweep \geq 2 Span / RBW.
 - Add $10 \log(500 \text{ kHz/RBW})$ to the measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement
 - Sweep time \leq (number of points in sweep) \times T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Detector = power averaging (rms).
 - Trace mode = max hold.
 - Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
1. The RF output of EUT is connected to the spectrum analyzer by a low loss cable.
 2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.



3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

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

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

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

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

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

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

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

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

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

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



3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000 MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW \geq 3 MHz
 - Detector = Peak
 - Sweep time = auto
 - Trace mode = max hold
 - (3) Procedures for Average Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW \geq 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the interference receiving antenna which is mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT is arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading.
When there is no suspected emission found and the emission level is with at least 6 dB margin

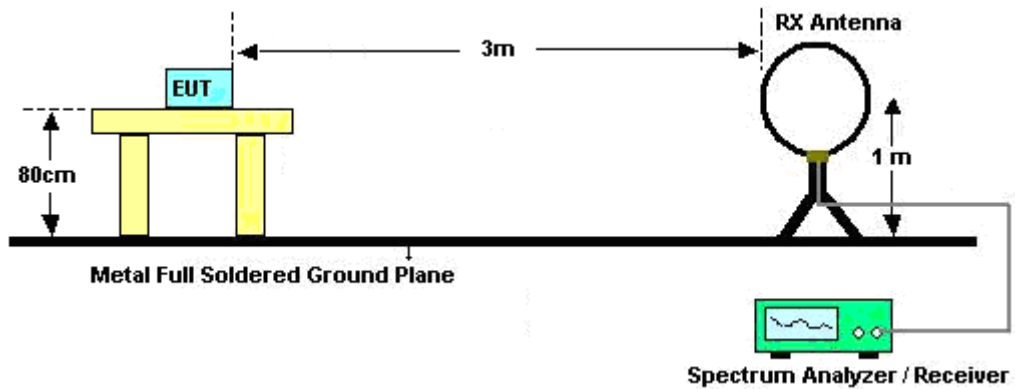
against QP limit line, the position is marked as “-“.

- Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies.

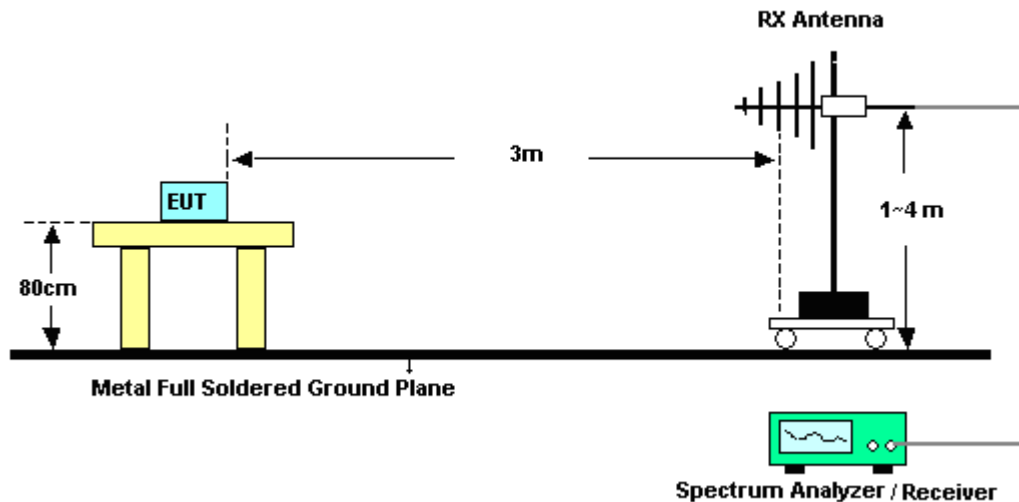
When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as “-“.

3.4.4 Test Setup

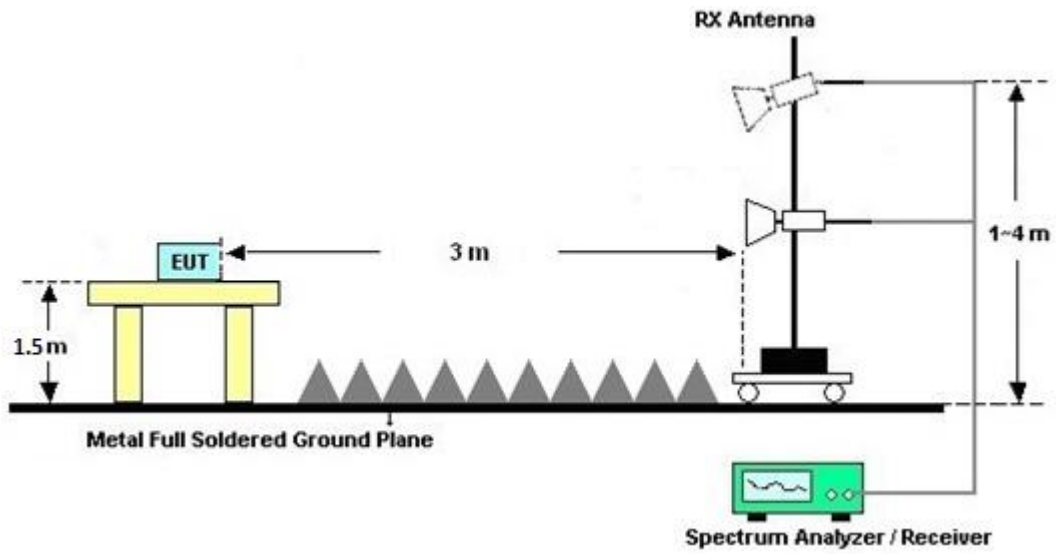
For radiated emissions below 30MHz



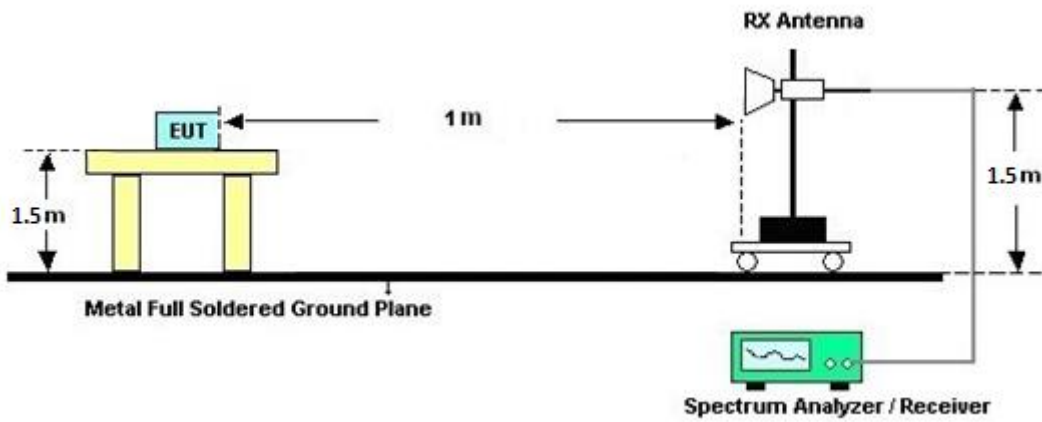
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz





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

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

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

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix C and D.

3.4.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.



3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

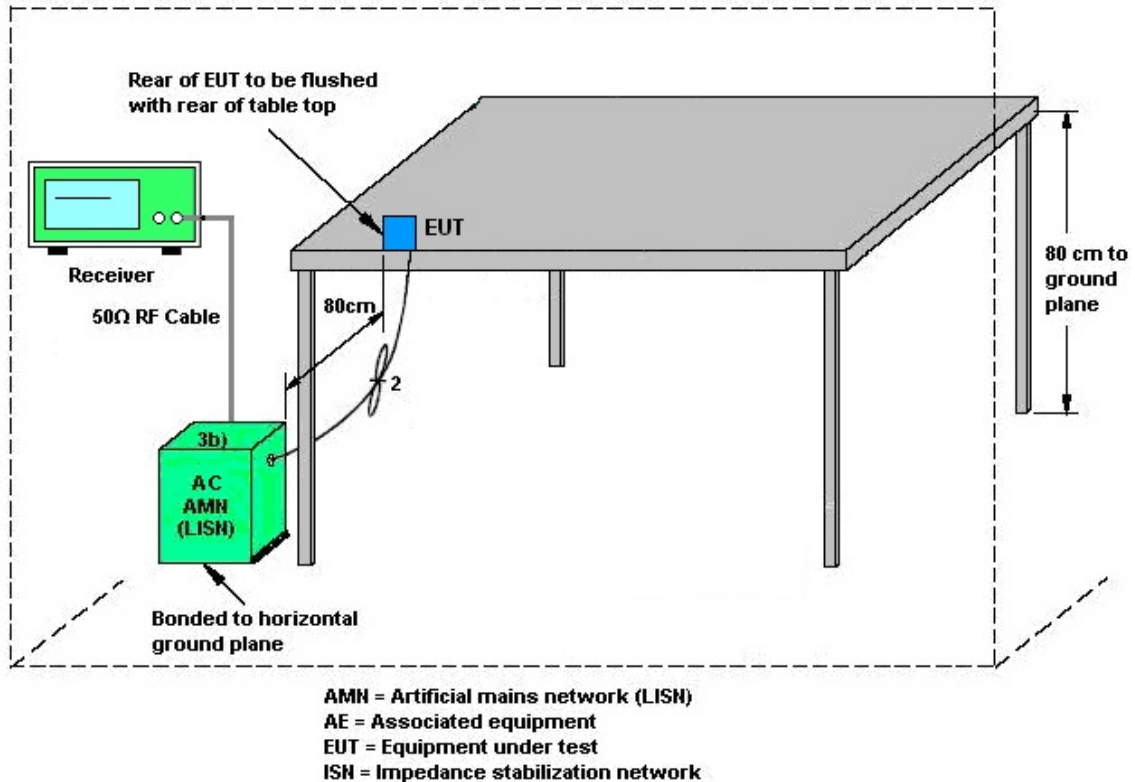
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.6 Antenna Requirements

3.6.1 Standard Applicable

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

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.6.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Oct. 12, 2021	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 30, 2020	Oct. 12, 2021	Nov. 29, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 18, 2020	Oct. 12, 2021	Nov. 17, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 01, 2020	Oct. 12, 2021	Nov. 30, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 16, 2020	Oct. 12, 2021	Nov. 15, 2021	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Oct. 12, 2021	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-FN	00691	N/A	Jul. 28, 2021	Oct. 12, 2021	Jul. 27, 2022	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 31, 2020	Oct. 12, 2021	Dec. 30, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 01, 2021	Oct. 09, 2021~Nov. 08, 2021	Feb. 28, 2022	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO12	10MHz~6GHz	Dec. 09, 2020	Oct. 09, 2021~Nov. 08, 2021	Dec. 08, 2021	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101565	10Hz ~ 40GHz	Nov. 13, 2020	Oct. 09, 2021~Nov. 08, 2021	Nov. 12, 2021	Conducted (TH05-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW200302	N/A	Mar. 17, 2021	Oct. 09, 2021~Nov. 08, 2021	Mar. 16, 2022	Conducted (TH05-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Jan. 04, 2021	Oct. 12, 2021~ Nov. 05, 2021	Jan. 03, 2022	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	41912 & 05	30MHz~1GHz	Oct. 08, 2021	Oct. 12, 2021~ Nov. 05, 2021	Oct. 07, 2022	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1328	1GHz~18GHz	Nov. 23, 2020	Oct. 12, 2021~ Nov. 05, 2021	Nov. 22, 2021	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	00993	18GHz~40GHz	Nov. 19, 2020	Oct. 12, 2021~ Nov. 05, 2021	Nov. 18, 2021	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 24, 2021	Oct. 12, 2021~ Nov. 05, 2021	Mar. 23, 2022	Radiation (03CH12-HY)
Preamplifier	Keysight	8449B	3008A02375	1GHz~26.5GHz	May 25, 2021	Oct. 12, 2021~ Nov. 05, 2021	May 24, 2022	Radiation (03CH12-HY)
Preamplifier	Jet-Power	JPA0118-55-30 3K	17100018000 54002	1GHz~18GHz	Jun. 16, 2021	Oct. 12, 2021~ Nov. 05, 2021	Jun. 15, 2022	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 11, 2020	Oct. 12, 2021~ Nov. 05, 2021	Dec. 10, 2021	Radiation (03CH12-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Jan. 15, 2021	Oct. 12, 2021~ Nov. 05, 2021	Jan. 14, 2022	Radiation (03CH12-HY)
Filter	Wainwright	WLKS1200-12 SS	SN2	1.2GHz Low Pass Filter	Mar. 17, 2021	Oct. 12, 2021~ Nov. 05, 2021	Mar. 16, 2022	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-2700 -3000-18000-6 0ST	SN2	3GHz High Pass Filter	Jul. 12, 2021	Oct. 12, 2021~ Nov. 05, 2021	Jul. 11, 2022	Radiation (03CH12-HY)
Filter	Wainwright	WHKX8-5872. 5-6750-18000- 40ST	SN2	6.75GHz High Pass Filter	Mar. 17, 2021	Oct. 12, 2021~ Nov. 05, 2021	Mar. 16, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 11, 2021	Oct. 12, 2021~ Nov. 05, 2021	Mar. 10, 2022	Radiation (03CH12-HY)
.RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30MHz~18GHz	Dec. 11, 2020	Oct. 12, 2021~ Nov. 05, 2021	Dec. 10, 2021	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Feb. 22, 2021	Oct. 12, 2021~ Nov. 05, 2021	Feb. 21, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz~40GHz	Feb. 22, 2021	Oct. 12, 2021~ Nov. 05, 2021	Feb. 21, 2022	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP140349	N/A	Sep. 30, 2021	Oct. 12, 2021~ Nov. 05, 2021	Sep. 29, 2022	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Oct. 12, 2021~ Nov. 05, 2021	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Oct. 12, 2021~ Nov. 05, 2021	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Oct. 12, 2021~ Nov. 05, 2021	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Oct. 12, 2021~ Nov. 05, 2021	N/A	Radiation (03CH12-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.1 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.8 dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.9 dB
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Mina Liu	Temperature:	21~25	°C
Test Date:	2021/10/9~2021/11/8	Relative Humidity:	51~54	%

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

Band IV single antenna												
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	1	149	5745	17.23	17.23	30.15	30.35	16.50	16.50	0.5	Pass
11a	6Mbps	1	157	5785	17.23	17.23	28.85	28.90	16.45	16.45	0.5	Pass
11a	6Mbps	1	165	5825	17.63	17.58	34.90	36.10	16.45	16.50	0.5	Pass
HT20	MCS0	1	149	5745	17.88	17.88	23.20	22.75	17.60	17.60	0.5	Pass
HT20	MCS0	1	157	5785	17.83	17.88	20.80	22.65	17.60	17.65	0.5	Pass
HT20	MCS0	1	165	5825	18.03	18.08	30.35	31.85	17.60	17.60	0.5	Pass
HT40	MCS0	1	151	5755	37.06	37.06	49.05	48.96	36.18	36.18	0.5	Pass
HT40	MCS0	1	159	5795	37.16	36.96	51.03	51.66	36.27	36.18	0.5	Pass
VHT80	MCS0	1	155	5775	76.36	76.36	95.20	97.92	76.64	76.96	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV single antenna												
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	1	149	5745	16.30	16.20		30.00	30.00	5.32	3.68	Pass
11a	6Mbps	1	157	5785	16.20	16.10		30.00	30.00	5.32	3.68	Pass
11a	6Mbps	1	165	5825	16.40	16.40		30.00	30.00	5.32	3.68	Pass
HT20	MCS0	1	149	5745	16.40	16.40		30.00	30.00	5.32	3.68	Pass
HT20	MCS0	1	157	5785	16.30	16.30		30.00	30.00	5.32	3.68	Pass
HT20	MCS0	1	165	5825	16.50	16.50		30.00	30.00	5.32	3.68	Pass
HT40	MCS0	1	151	5755	16.40	16.30		30.00	30.00	5.32	3.68	Pass
HT40	MCS0	1	159	5795	16.40	16.20		30.00	30.00	5.32	3.68	Pass
VHT20	MCS0	1	149	5745	16.30	16.40		30.00	30.00	5.32	3.68	Pass
VHT20	MCS0	1	157	5785	16.20	16.20		30.00	30.00	5.32	3.68	Pass
VHT20	MCS0	1	165	5825	16.40	16.40		30.00	30.00	5.32	3.68	Pass
VHT40	MCS0	1	151	5755	16.30	16.20		30.00	30.00	5.32	3.68	Pass
VHT40	MCS0	1	159	5795	16.40	16.20		30.00	30.00	5.32	3.68	Pass
VHT80	MCS0	1	155	5775	15.20	15.30		30.00	30.00	5.32	3.68	Pass

TEST RESULTS DATA
Power Spectral Density

Band IV single antenna														
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	1	149	5745	2.22	2.22	3.47	3.34		30.00	30.00	5.32	3.68	Pass
11a	6Mbps	1	157	5785	2.22	2.22	3.33	3.33		30.00	30.00	5.32	3.68	Pass
11a	6Mbps	1	165	5825	2.22	2.22	3.46	3.31		30.00	30.00	5.32	3.68	Pass
HT20	MCS0	1	149	5745	2.22	2.22	3.74	3.80		30.00	30.00	5.32	3.68	Pass
HT20	MCS0	1	157	5785	2.22	2.22	3.68	3.71		30.00	30.00	5.32	3.68	Pass
HT20	MCS0	1	165	5825	2.22	2.22	3.72	3.69		30.00	30.00	5.32	3.68	Pass
HT40	MCS0	1	151	5755	2.22	2.22	0.85	0.65		30.00	30.00	5.32	3.68	Pass
HT40	MCS0	1	159	5795	2.22	2.22	0.74	0.67		30.00	30.00	5.32	3.68	Pass
VHT80	MCS0	1	155	5775	2.22	2.22	-4.00	-4.03		30.00	30.00	5.32	3.68	Pass



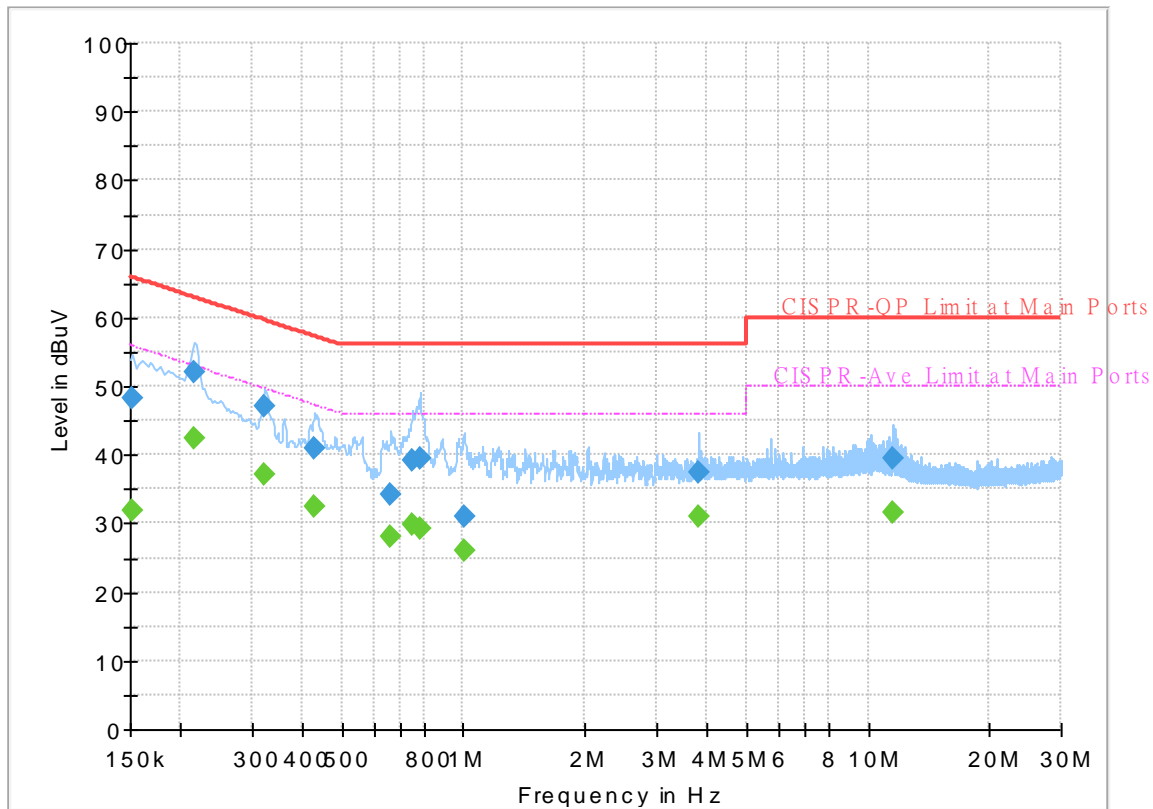
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Tom Lee	Temperature :	23~26°C
		Relative Humidity :	45~55%

EUT Information

Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



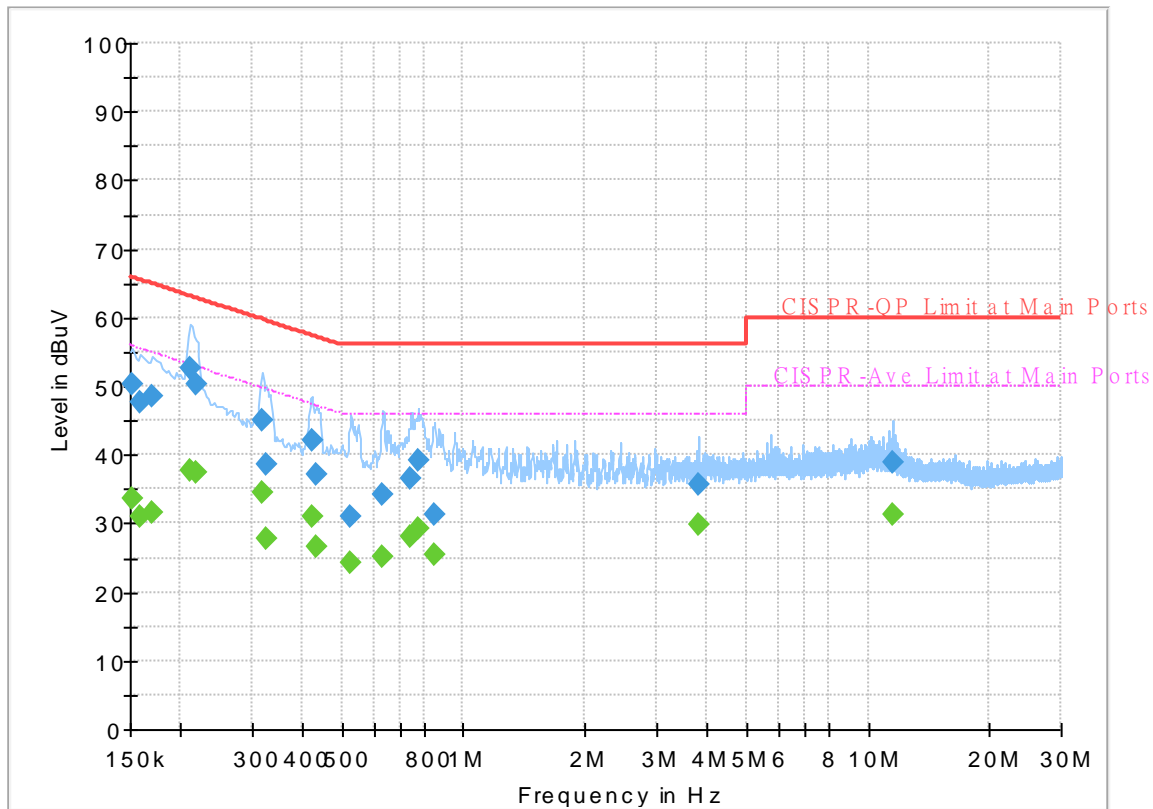
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	31.78	55.88	24.10	L1	OFF	19.7
0.152250	48.39	---	65.88	17.49	L1	OFF	19.7
0.215250	---	42.51	53.00	10.49	L1	OFF	19.7
0.215250	51.98	---	63.00	11.02	L1	OFF	19.7
0.323250	---	37.12	49.62	12.50	L1	OFF	19.7
0.323250	47.02	---	59.62	12.60	L1	OFF	19.7
0.429000	---	32.45	47.27	14.82	L1	OFF	19.7
0.429000	40.82	---	57.27	16.45	L1	OFF	19.7
0.663000	---	27.97	46.00	18.03	L1	OFF	20.0
0.663000	34.07	---	56.00	21.93	L1	OFF	20.0
0.748500	---	29.69	46.00	16.31	L1	OFF	20.0
0.748500	39.18	---	56.00	16.82	L1	OFF	20.0
0.782250	---	29.13	46.00	16.87	L1	OFF	20.1
0.782250	39.36	---	56.00	16.64	L1	OFF	20.1
1.000500	---	26.09	46.00	19.91	L1	OFF	20.2
1.000500	31.09	---	56.00	24.91	L1	OFF	20.2
3.819750	---	30.89	46.00	15.11	L1	OFF	20.0
3.819750	37.36	---	56.00	18.64	L1	OFF	20.0
11.458500	---	31.52	50.00	18.48	L1	OFF	20.2
11.458500	39.51	---	60.00	20.49	L1	OFF	20.2

EUT Information

Test Voltage : 120Vac/60Hz
 Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	33.60	55.88	22.28	N	OFF	19.7
0.152250	50.31	---	65.88	15.57	N	OFF	19.7
0.159000	---	31.08	55.52	24.44	N	OFF	19.7
0.159000	47.66	---	65.52	17.86	N	OFF	19.7
0.170250	---	31.60	54.95	23.35	N	OFF	19.7
0.170250	48.51	---	64.95	16.44	N	OFF	19.7
0.210750	---	37.69	53.18	15.49	N	OFF	19.7
0.210750	52.69	---	63.18	10.49	N	OFF	19.7
0.217500	---	37.42	52.91	15.49	N	OFF	19.7
0.217500	50.20	---	62.91	12.71	N	OFF	19.7
0.316500	---	34.53	49.80	15.27	N	OFF	19.7
0.316500	45.02	---	59.80	14.78	N	OFF	19.7
0.325500	---	27.90	49.57	21.67	N	OFF	19.7
0.325500	38.62	---	59.57	20.95	N	OFF	19.7
0.422250	---	31.05	47.40	16.35	N	OFF	19.7
0.422250	42.02	---	57.40	15.38	N	OFF	19.7
0.433500	---	26.52	47.19	20.67	N	OFF	19.7
0.433500	37.28	---	57.19	19.91	N	OFF	19.7
0.528000	---	24.25	46.00	21.75	N	OFF	19.8
0.528000	30.97	---	56.00	25.03	N	OFF	19.8
0.633750	---	25.15	46.00	20.85	N	OFF	19.9

0.633750	34.33	---	56.00	21.67	N	OFF	19.9
0.741750	---	27.98	46.00	18.02	N	OFF	20.0
0.741750	36.56	---	56.00	19.44	N	OFF	20.0
0.773250	---	29.21	46.00	16.79	N	OFF	20.1
0.773250	39.23	---	56.00	16.77	N	OFF	20.1
0.845250	---	25.49	46.00	20.51	N	OFF	20.1
0.845250	31.43	---	56.00	24.57	N	OFF	20.1
3.819750	---	29.87	46.00	16.13	N	OFF	20.0
3.819750	35.77	---	56.00	20.23	N	OFF	20.0
11.458500	---	31.29	50.00	18.71	N	OFF	20.2
11.458500	38.81	---	60.00	21.19	N	OFF	20.2



Appendix C. Radiated Spurious Emission

Test Engineer :	Jack Cheng , Lance Chiang and Chuan Chu	Temperature :	23.8~26.2°C
		Relative Humidity :	56.5~68.6%

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

WIFI Ant.	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11a CH 149 5745MHz		5610.8	53.06	-15.14	68.2	44.58	31.6	10.48	33.6	100	50	P	H	
		5695	61.6	-39.91	101.51	52.91	31.78	10.52	33.61	100	50	P	H	
		5719.2	70.96	-39.62	110.58	62.17	31.88	10.53	33.62	100	50	P	H	
		5724	80.08	-39.84	119.92	71.27	31.9	10.53	33.62	100	50	P	H	
	*	5745	113.25	-	-	104.35	31.98	10.54	33.62	100	50	P	H	
	*	5745	105.42	-	-	96.52	31.98	10.54	33.62	100	50	A	H	
														H
														H
			5636	50.84	-17.36	68.2	42.36	31.6	10.49	33.61	333	323	P	V
			5699.8	54.16	-50.89	105.05	45.45	31.8	10.52	33.61	333	323	P	V
			5717.6	64.54	-45.59	110.13	55.76	31.87	10.53	33.62	333	323	P	V
			5724.6	71.76	-49.53	121.29	62.95	31.9	10.53	33.62	333	323	P	V
	*	5745	107.91	-	-	99.01	31.98	10.54	33.62	333	323	P	V	
	*	5745	100.17	-	-	91.27	31.98	10.54	33.62	333	323	A	V	
														V
													V	



WIFI Ant. 1	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)
		5609.4	53.37	-14.83	68.2	44.89	31.6	10.48	33.6	119	96	P	H
		5664.4	52.81	-26.08	78.89	44.25	31.66	10.51	33.61	119	96	P	H
		5715.4	54.35	-55.16	109.51	45.58	31.86	10.53	33.62	119	96	P	H
		5724.8	53.75	-67.99	121.74	44.94	31.9	10.53	33.62	119	96	P	H
	*	5785	112.03	-	-	103.03	32.07	10.55	33.62	119	96	P	H
	*	5785	104.23	-	-	95.23	32.07	10.55	33.62	119	96	A	H
		5850.8	58.06	-62.32	120.38	48.86	32.2	10.63	33.63	119	96	P	H
		5863.2	58.06	-50.44	108.5	48.79	32.25	10.65	33.63	119	96	P	H
		5875.6	55.87	-48.88	104.75	46.55	32.3	10.66	33.64	119	96	P	H
		5939.8	53.72	-14.48	68.2	44.21	32.4	10.75	33.64	119	96	P	H
													H
													H
802.11a													
CH 157													
5785MHz		5613.2	50.94	-17.26	68.2	42.45	31.6	10.49	33.6	385	343	P	V
		5658.6	50.8	-23.79	74.59	42.28	31.63	10.5	33.61	385	343	P	V
		5706.2	52.34	-54.6	106.94	43.61	31.82	10.52	33.61	385	343	P	V
		5720	51	-59.8	110.8	42.21	31.88	10.53	33.62	385	343	P	V
	*	5785	107.09	-	-	98.09	32.07	10.55	33.62	385	343	P	V
	*	5785	99.3	-	-	90.3	32.07	10.55	33.62	385	343	A	V
		5854.6	53.58	-58.13	111.71	44.36	32.22	10.63	33.63	385	343	P	V
		5868.8	52.63	-54.3	106.93	43.33	32.28	10.65	33.63	385	343	P	V
		5919.8	53.16	-18.87	72.03	43.68	32.4	10.72	33.64	385	343	P	V
		5932.6	51.68	-16.52	68.2	42.18	32.4	10.74	33.64	385	343	P	V
													V
													V



WiFi Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11a CH 165 5825MHz	*	5825	111.16	-	-	102.05	32.15	10.59	33.63	122	97	P	H	
	*	5825	103.48	-	-	94.37	32.15	10.59	33.63	122	97	A	H	
		5850	74.35	-47.85	122.2	65.15	32.2	10.63	33.63	122	97	P	H	
		5855.2	70.97	-39.77	110.74	61.75	32.22	10.63	33.63	122	97	P	H	
		5880.4	62.75	-38.44	101.19	53.4	32.32	10.67	33.64	122	97	P	H	
		5930	55.14	-13.06	68.2	45.64	32.4	10.74	33.64	122	97	P	H	
														H
														H
	*	5825	107.15	-	-	98.04	32.15	10.59	33.63	378	349	P	V	
	*	5825	99.39	-	-	90.28	32.15	10.59	33.63	378	349	A	V	
		5851.4	70.18	-48.83	119.01	60.97	32.21	10.63	33.63	378	349	P	V	
		5855.4	65.15	-45.54	110.69	55.93	32.22	10.63	33.63	378	349	P	V	
		5875	60.4	-44.8	105.2	51.08	32.3	10.66	33.64	378	349	P	V	
		5936.4	52.52	-15.68	68.2	43.02	32.4	10.74	33.64	378	349	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	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	46.85	-27.15	74	48.34	39.98	16.96	58.43	-	-	P	H	
		17235	46.61	-21.59	68.2	45.32	40.24	20.36	59.31	-	-	P	H	
		17956	57.35	-16.65	74	44.62	49.12	20.72	57.11	102	88	P	H	
		17956	49.75	-4.25	54	37.02	49.12	20.72	57.11	102	88	A	H	
													H	
													H	
			11490	47.12	-26.88	74	48.61	39.98	16.96	58.43	-	-	P	V
			17235	45.92	-22.28	68.2	44.63	40.24	20.36	59.31	-	-	P	V
			17956	56.19	-17.81	74	43.46	49.12	20.72	57.11	100	122	P	V
			17956	49.98	-4.02	54	37.25	49.12	20.72	57.11	100	122	A	V
														V
														V
802.11a CH 157 5785MHz		11570	47.68	-26.32	74	49.36	39.72	17.03	58.43	-	-	P	H	
		17355	48.41	-19.79	68.2	45.84	41	20.42	58.85	-	-	P	H	
		17945	57.54	-16.46	74	45.16	48.81	20.71	57.14	100	101	P	H	
		17945	49.45	-4.55	54	37.07	48.81	20.71	57.14	100	101	A	H	
													H	
													H	
			11570	47.39	-26.61	74	49.07	39.72	17.03	58.43	-	-	P	V
			17355	47.43	-20.77	68.2	44.86	41	20.42	58.85	-	-	P	V
			17967	57.02	-16.98	74	43.95	49.44	20.72	57.09	100	52	P	V
			17967	50.88	-3.12	54	37.81	49.44	20.72	57.09	100	52	A	V
														V
														V



802.11a CH 165 5825MHz		11650	47.13	-26.87	74	49.2	39.3	17.09	58.46	-	-	P	H
		17475	47.73	-20.47	68.2	43.96	41.7	20.47	58.4	-	-	P	H
		17956	56.34	-17.66	74	43.61	49.12	20.72	57.11	100	101	P	H
		17956	49.81	-4.19	54	37.08	49.12	20.72	57.11	100	101	A	H
													H
													H
		11650	46.78	-27.22	74	48.85	39.3	17.09	58.46	-	-	P	V
		17475	48.23	-19.97	68.2	44.46	41.7	20.47	58.4	-	-	P	V
		17967	56.54	-17.46	74	43.47	49.44	20.72	57.09	102	35	P	V
		17967	50.29	-3.71	54	37.22	49.44	20.72	57.09	102	35	A	V
													V
													V
Remark	<ol style="list-style-type: none"> 1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 149 5745MHz		5638.2	52.71	-15.49	68.2	44.22	31.6	10.5	33.61	105	97	P	H	
		5698.2	59.66	-44.21	103.87	50.96	31.79	10.52	33.61	105	97	P	H	
		5719.8	70.06	-40.68	110.74	61.27	31.88	10.53	33.62	105	97	P	H	
		5724	78.37	-41.55	119.92	69.56	31.9	10.53	33.62	105	97	P	H	
	*	5745	111.93	-	-	103.03	31.98	10.54	33.62	105	97	P	H	
	*	5745	104.43	-	-	95.53	31.98	10.54	33.62	105	97	A	H	
														H
														H
			5642.8	51.54	-16.66	68.2	43.05	31.6	10.5	33.61	352	350	P	V
			5695.6	55.42	-46.54	101.96	46.73	31.78	10.52	33.61	352	350	P	V
			5716.8	66.56	-43.35	109.91	57.78	31.87	10.53	33.62	352	350	P	V
			5724.2	73.88	-46.5	120.38	65.07	31.9	10.53	33.62	352	350	P	V
	*		5745	108.55	-	-	99.65	31.98	10.54	33.62	352	350	P	V
	*		5745	101.13	-	-	92.23	31.98	10.54	33.62	352	350	A	V
													V	
													V	



WIFI Ant. 1	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)
		5627.6	54.02	-14.18	68.2	45.54	31.6	10.49	33.61	119	97	P	H
		5670.6	53.19	-30.29	83.48	44.61	31.68	10.51	33.61	119	97	P	H
		5709.8	54.3	-53.65	107.95	45.56	31.84	10.52	33.62	119	97	P	H
		5723.6	53.86	-65.15	119.01	45.06	31.89	10.53	33.62	119	97	P	H
	*	5785	112	-	-	103	32.07	10.55	33.62	119	97	P	H
	*	5785	104.42	-	-	95.42	32.07	10.55	33.62	119	97	A	H
		5850.4	57.09	-64.2	121.29	47.89	32.2	10.63	33.63	119	97	P	H
		5857.6	56.55	-53.52	110.07	47.31	32.23	10.64	33.63	119	97	P	H
		5884.8	53.65	-44.27	97.92	44.28	32.34	10.67	33.64	119	97	P	H
		5936.4	53.94	-14.26	68.2	44.44	32.4	10.74	33.64	119	97	P	H
802.11n													H
HT20													H
CH 157		5636.4	50.32	-17.88	68.2	41.84	31.6	10.49	33.61	345	350	P	V
5785MHz		5688.6	51.3	-45.49	96.79	42.64	31.75	10.52	33.61	345	350	P	V
		5704	51.78	-54.54	106.32	43.05	31.82	10.52	33.61	345	350	P	V
		5720.8	50.77	-61.85	112.62	41.98	31.88	10.53	33.62	345	350	P	V
	*	5785	108.39	-	-	99.39	32.07	10.55	33.62	345	350	P	V
	*	5785	100.98	-	-	91.98	32.07	10.55	33.62	345	350	A	V
		5851.8	54.59	-63.51	118.1	45.38	32.21	10.63	33.63	345	350	P	V
		5857.4	56.62	-53.51	110.13	47.38	32.23	10.64	33.63	345	350	P	V
		5884.2	52.78	-45.59	98.37	43.41	32.34	10.67	33.64	345	350	P	V
		5940.2	51.75	-16.45	68.2	42.24	32.4	10.75	33.64	345	350	P	V
													V
													V



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 165 5825MHz	*	5825	111.13	-	-	102.02	32.15	10.59	33.63	122	98	P	H	
	*	5825	103.43	-	-	94.32	32.15	10.59	33.63	122	98	A	H	
		5853.6	73.83	-40.16	113.99	64.62	32.21	10.63	33.63	122	98	P	H	
		5856.6	69.5	-40.85	110.35	60.26	32.23	10.64	33.63	122	98	P	H	
		5882.6	64.71	-34.85	99.56	55.35	32.33	10.67	33.64	122	98	P	H	
		5930.8	53.55	-14.65	68.2	44.05	32.4	10.74	33.64	122	98	P	H	
														H
														H
	*	5825	108.05	-	-	98.94	32.15	10.59	33.63	356	360	P	V	
	*	5825	100.54	-	-	91.43	32.15	10.59	33.63	356	360	A	V	
		5850	74.05	-48.15	122.2	64.85	32.2	10.63	33.63	356	360	P	V	
		5857.2	70.88	-39.3	110.18	61.64	32.23	10.64	33.63	356	360	P	V	
		5875.6	60.28	-44.47	104.75	50.96	32.3	10.66	33.64	356	360	P	V	
		5944.6	52.2	-16	68.2	42.68	32.4	10.76	33.64	356	360	P	V	
														V
													V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 149 5745MHz		11490	46.74	-27.26	74	48.23	39.98	16.96	58.43	-	-	P	H	
		17235	45.48	-22.72	68.2	44.19	40.24	20.36	59.31	-	-	P	H	
		17956	55.73	-18.27	74	43	49.12	20.72	57.11	102	100	P	H	
		17956	49.95	-4.05	54	37.22	49.12	20.72	57.11	102	100	A	H	
													H	
													H	
			11490	47.32	-26.68	74	48.81	39.98	16.96	58.43	-	-	P	V
			17235	46.38	-21.82	68.2	45.09	40.24	20.36	59.31	-	-	P	V
			17956	56.26	-17.74	74	43.53	49.12	20.72	57.11	103	33	P	V
			17956	49.79	-4.21	54	37.06	49.12	20.72	57.11	103	33	A	V
802.11n HT20 CH 157 5785MHz		11570	46.93	-27.07	74	48.61	39.72	17.03	58.43	-	-	P	H	
		17355	47.86	-20.34	68.2	45.29	41	20.42	58.85	-	-	P	H	
		17967	56.64	-17.36	74	43.57	49.44	20.72	57.09	100	101	P	H	
		17967	50.13	-3.87	54	37.06	49.44	20.72	57.09	100	101	A	H	
													H	
													H	
			11570	48.37	-25.63	74	50.03	39.74	17.03	58.43	-	-	P	V
			17355	47.16	-21.04	68.2	44.59	41	20.42	58.85	-	-	P	V
			17967	58.39	-15.61	74	45.32	49.44	20.72	57.09	101	28	P	V
			17967	50.3	-3.7	54	37.23	49.44	20.72	57.09	101	28	A	V
												V		
												V		



802.11n HT20 CH 165 5825MHz		11650	46.92	-27.08	74	48.99	39.3	17.09	58.46	-	-	P	H
		17475	47.75	-20.45	68.2	43.98	41.7	20.47	58.4	-	-	P	H
		17967	55.96	-18.04	74	42.89	49.44	20.72	57.09	100	122	P	H
		17967	50.13	-3.87	54	37.06	49.44	20.72	57.09	100	122	A	H
													H
													H
		11650	46.87	-27.13	74	48.94	39.3	17.09	58.46	-	-	P	V
		17475	48.18	-20.02	68.2	44.41	41.7	20.47	58.4	-	-	P	V
		17967	56.36	-17.64	74	43.29	49.44	20.72	57.09	105	29	P	V
		17967	50.36	-3.64	54	37.29	49.44	20.72	57.09	105	29	A	V
													V
													V
Remark	<ol style="list-style-type: none"> 1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 												



Band 4 5725~5850MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	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	52.93	-15.27	68.2	44.44	31.6	10.5	33.61	102	96	P	H
		5698.2	62.24	-41.63	103.87	53.54	31.79	10.52	33.61	102	96	P	H
		5717.6	76.04	-34.09	110.13	67.26	31.87	10.53	33.62	102	96	P	H
		5724.6	80.47	-40.82	121.29	71.66	31.9	10.53	33.62	102	96	P	H
	*	5755	109.2	-	-	100.27	32.01	10.54	33.62	102	96	P	H
	*	5755	101.35	-	-	92.42	32.01	10.54	33.62	102	96	A	H
		5852.4	60.19	-56.54	116.73	50.98	32.21	10.63	33.63	102	96	P	H
		5863.2	58.17	-50.33	108.5	48.9	32.25	10.65	33.63	102	96	P	H
		5902.2	56.25	-28.78	85.03	46.79	32.4	10.7	33.64	102	96	P	H
		5929.4	53.86	-14.34	68.2	44.37	32.4	10.73	33.64	102	96	P	H
802.11n													H
HT40													H
CH 151		5640.8	52.21	-15.99	68.2	43.72	31.6	10.5	33.61	368	352	P	V
5755MHz		5699	56.28	-48.18	104.46	47.57	31.8	10.52	33.61	368	352	P	V
		5719.4	69.84	-40.79	110.63	61.05	31.88	10.53	33.62	368	352	P	V
		5725	73.72	-48.48	122.2	64.91	31.9	10.53	33.62	368	352	P	V
	*	5755	106.65	-	-	97.72	32.01	10.54	33.62	368	352	P	V
	*	5755	98.65	-	-	89.72	32.01	10.54	33.62	368	352	A	V
		5850.8	55.95	-64.43	120.38	46.75	32.2	10.63	33.63	368	352	P	V
		5871.4	55.76	-50.45	106.21	46.44	32.29	10.66	33.63	368	352	P	V
		5892.8	54.01	-37.98	91.99	44.59	32.37	10.69	33.64	368	352	P	V
		5934	51.19	-17.01	68.2	41.69	32.4	10.74	33.64	368	352	P	V
													V
													V



WIFI Ant. 1	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)
		5634.2	52.31	-15.89	68.2	43.83	31.6	10.49	33.61	126	99	P	H
		5692.8	53.02	-46.87	99.89	44.34	31.77	10.52	33.61	126	99	P	H
		5709	55.27	-52.45	107.72	46.53	31.84	10.52	33.62	126	99	P	H
		5721.8	57.03	-57.87	114.9	48.23	31.89	10.53	33.62	126	99	P	H
	*	5795	109.64	-	-	100.62	32.09	10.56	33.63	126	99	P	H
	*	5795	101.6	-	-	92.58	32.09	10.56	33.63	126	99	A	H
		5853.6	70.06	-43.93	113.99	60.85	32.21	10.63	33.63	126	99	P	H
		5857.2	67.77	-42.41	110.18	58.53	32.23	10.64	33.63	126	99	P	H
		5879.4	65.77	-36.16	101.93	56.42	32.32	10.67	33.64	126	99	P	H
		5928.4	58.08	-10.12	68.2	48.59	32.4	10.73	33.64	126	99	P	H
802.11n													H
HT40													H
CH 159		5643.2	52.21	-15.99	68.2	43.72	31.6	10.5	33.61	362	16	P	V
5795MHz		5694.6	52.59	-48.63	101.22	43.9	31.78	10.52	33.61	362	16	P	V
		5718.8	53.63	-56.83	110.46	44.84	31.88	10.53	33.62	362	16	P	V
		5724.6	54.53	-66.76	121.29	45.72	31.9	10.53	33.62	362	16	P	V
	*	5795	106.55	-	-	97.53	32.09	10.56	33.63	362	16	P	V
	*	5795	98.93	-	-	89.91	32.09	10.56	33.63	362	16	A	V
		5850.6	67.76	-53.07	120.83	58.56	32.2	10.63	33.63	362	16	P	V
		5855.2	65.88	-44.86	110.74	56.66	32.22	10.63	33.63	362	16	P	V
		5878.6	59.16	-43.37	102.53	49.82	32.31	10.67	33.64	362	16	P	V
		5929.2	54.62	-13.58	68.2	45.13	32.4	10.73	33.64	362	16	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT40 CH 151 5755MHz		11510	47.17	-26.83	74	48.64	39.96	16.97	58.4	-	-	P	H	
		17265	47.02	-21.18	68.2	45.48	40.36	20.37	59.19	-	-	P	H	
		17956	57.06	-16.94	74	44.33	49.12	20.72	57.11	100	122	P	H	
		17956	49.95	-4.05	54	37.22	49.12	20.72	57.11	100	122	A	H	
													H	
													H	
			11510	47	-27	74	48.47	39.96	16.97	58.4	-	-	P	V
			17265	47.09	-21.11	68.2	45.55	40.36	20.37	59.19	-	-	P	V
			17956	57.33	-16.67	74	44.6	49.12	20.72	57.11	101	27	P	V
			17956	49.78	-4.22	54	37.05	49.12	20.72	57.11	101	27	A	V
													V	
													V	
802.11n HT40 CH 159 5795MHz		11590	47.84	-26.16	74	49.59	39.64	17.05	58.44	-	-	P	H	
		17385	48.58	-19.62	68.2	45.63	41.26	20.43	58.74	-	-	P	H	
		17967	56.97	-17.03	74	43.9	49.44	20.72	57.09	100	102	P	H	
		17967	50.77	-3.23	54	37.7	49.44	20.72	57.09	100	102	A	H	
													H	
													H	
			11590	47.54	-26.46	74	49.29	39.64	17.05	58.44	-	-	P	V
			17385	47.54	-20.66	68.2	44.59	41.26	20.43	58.74	-	-	P	V
			17967	56.73	-17.27	74	43.66	49.44	20.72	57.09	102	33	P	V
			17967	50.63	-3.37	54	37.56	49.44	20.72	57.09	102	33	A	V
													V	
													V	
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 													



Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	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)
		5605.4	58.2	-10	68.2	49.72	31.6	10.48	33.6	101	95	P	H
		5690.4	71.03	-27.09	98.12	62.36	31.76	10.52	33.61	101	95	P	H
		5703.6	73.47	-32.74	106.21	64.75	31.81	10.52	33.61	101	95	P	H
		5724	73.27	-46.65	119.92	64.46	31.9	10.53	33.62	101	95	P	H
	*	5775	104.66	-	-	95.68	32.05	10.55	33.62	101	95	P	H
	*	5775	96.5	-	-	87.52	32.05	10.55	33.62	101	95	A	H
		5850.6	72.16	-48.67	120.83	62.96	32.2	10.63	33.63	101	95	P	H
		5862.2	69.38	-39.4	108.78	60.12	32.25	10.64	33.63	101	95	P	H
		5882.6	68.17	-31.39	99.56	58.81	32.33	10.67	33.64	101	95	P	H
		5932.4	59.38	-8.82	68.2	49.88	32.4	10.74	33.64	101	95	P	H
802.11ac													H
VHT80													H
CH 155		5602.8	56.09	-12.11	68.2	47.61	31.6	10.48	33.6	349	14	P	V
5775MHz		5696	67.02	-35.23	102.25	58.33	31.78	10.52	33.61	349	14	P	V
		5718.4	70.58	-39.77	110.35	61.8	31.87	10.53	33.62	349	14	P	V
		5723.6	71.02	-47.99	119.01	62.22	31.89	10.53	33.62	349	14	P	V
	*	5775	102.21	-	-	93.23	32.05	10.55	33.62	349	14	P	V
	*	5775	94.13	-	-	85.15	32.05	10.55	33.62	349	14	A	V
		5850.4	68.08	-53.21	121.29	58.88	32.2	10.63	33.63	349	14	P	V
		5865.4	66	-41.89	107.89	56.72	32.26	10.65	33.63	349	14	P	V
		5882.4	64.49	-35.21	99.7	55.13	32.33	10.67	33.64	349	14	P	V
		5925.8	57.44	-10.76	68.2	47.95	32.4	10.73	33.64	349	14	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 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	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)	
802.11ac VHT80 CH 155 5775MHz		11550	48.05	-25.95	74	49.66	39.8	17.01	58.42	-	-	P	H	
		17325	48.07	-20.13	68.2	45.92	40.72	20.4	58.97	-	-	P	H	
		17967	57.84	-16.16	74	44.77	49.44	20.72	57.09	100	54	P	H	
		17967	50.76	-3.24	54	37.69	49.44	20.72	57.09	100	54	A	H	
													H	
													H	
			11550	47.76	-26.24	74	49.37	39.8	17.01	58.42	-	-	P	V
			17325	48.31	-19.89	68.2	46.16	40.72	20.4	58.97	-	-	P	V
			17967	57.33	-16.67	74	44.26	49.44	20.72	57.09	101	2	P	V
			17967	50.75	-3.25	54	37.68	49.44	20.72	57.09	101	2	A	V
													V	
													V	
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 													



Emission above 18GHz

5GHz WIFI 802.11ac VHT80 (SHF @ 1m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.	
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.		
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)	
5GHz 802.11ac VHT80 SHF		38020	47.8	-20.4	68.2	41.76	43.14	18.98	56.08	-	-	P	H	
													H	
													H	
													H	
			38108	47.27	-20.93	68.2	40.99	43.29	19	56.01	-	-	P	V
														V
														V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 													



Emission below 1GHz

5GHz WIFI 802.11ac VHT80 (LF @ 3m)

WIFI Ant. 1	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)
5GHz 802.11ac VHT80 LF		30	23.18	-16.82	40	26.81	25.2	0.81	29.64	-	-	P	H
		207.51	36.53	-6.97	43.5	48.68	15.2	2.13	29.48	-	-	P	H
		370.47	33.38	-12.62	46	38.87	20.91	2.83	29.23	-	-	P	H
		846.74	33.98	-12.02	46	28.83	29.13	4.42	28.4	-	-	P	H
		902.03	39.33	-6.67	46	33.96	28.98	4.58	28.19	-	-	P	H
		955.38	35.42	-10.58	46	27.84	31.02	4.69	28.13	-	-	P	H
		30	25.24	-14.76	40	28.87	25.2	0.81	29.64	-	-	P	V
		203.63	29.29	-14.21	43.5	41.52	15.15	2.11	29.49	-	-	P	V
		666.32	37.38	-8.62	46	35.62	26.6	3.84	28.68	-	-	P	V
		745.86	37.51	-8.49	46	33.77	28.23	4.12	28.61	-	-	P	V
		896.21	37.96	-8.04	46	32.78	28.82	4.57	28.21	-	-	P	V
		943.74	35.91	-10.09	46	28.88	30.52	4.66	28.15	-	-	P	V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only 												



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

WIFI Ant. 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		5640.6	50.46	-17.74	68.2	41.97	31.6	10.5	33.61	100	33	P	H	
		5697.8	59.71	-43.87	103.58	51.01	31.79	10.52	33.61	100	33	P	H	
		5711.6	67.41	-41.04	108.45	58.66	31.85	10.52	33.62	100	33	P	H	
		5724.2	76.32	-44.06	120.38	67.51	31.9	10.53	33.62	100	33	P	H	
	*	5745	111.01	-	-	102.11	31.98	10.54	33.62	100	33	P	H	
	*	5745	103.45	-	-	94.55	31.98	10.54	33.62	100	33	A	H	
														H
														H
			5617.4	51.17	-17.03	68.2	42.68	31.6	10.49	33.6	100	25	P	V
			5698	58.36	-45.37	103.73	49.66	31.79	10.52	33.61	100	25	P	V
			5713.8	67.71	-41.36	109.07	58.94	31.86	10.53	33.62	100	25	P	V
			5724	75.26	-44.66	119.92	66.45	31.9	10.53	33.62	100	25	P	V
	*		5745	110.02	-	-	101.12	31.98	10.54	33.62	100	25	P	V
	*		5745	102.47	-	-	93.57	31.98	10.54	33.62	100	25	A	V
														V
														V



WIFI Ant. 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)
		5631.4	52.51	-15.69	68.2	44.03	31.6	10.49	33.61	106	35	P	H
		5690	51.56	-46.27	97.83	42.89	31.76	10.52	33.61	106	35	P	H
		5707.8	51.85	-55.54	107.39	43.11	31.83	10.52	33.61	106	35	P	H
		5720.4	52.94	-58.77	111.71	44.15	31.88	10.53	33.62	106	35	P	H
	*	5785	111.07	-	-	102.07	32.07	10.55	33.62	106	35	P	H
	*	5785	103.42	-	-	94.42	32.07	10.55	33.62	106	35	A	H
		5851.4	59.5	-59.51	119.01	50.29	32.21	10.63	33.63	106	35	P	H
		5856.2	59.59	-50.87	110.46	50.36	32.22	10.64	33.63	106	35	P	H
		5875.4	54.58	-50.32	104.9	45.26	32.3	10.66	33.64	106	35	P	H
		5932.6	53.24	-14.96	68.2	43.74	32.4	10.74	33.64	106	35	P	H
													H
													H
802.11a													
CH 157													
5785MHz		5637.6	51.74	-16.46	68.2	43.25	31.6	10.5	33.61	100	26	P	V
		5683.8	53.52	-39.73	93.25	44.88	31.74	10.51	33.61	100	26	P	V
		5715.6	52.78	-56.79	109.57	44.01	31.86	10.53	33.62	100	26	P	V
		5721.8	53.03	-61.87	114.9	44.23	31.89	10.53	33.62	100	26	P	V
	*	5785	110.15	-	-	101.15	32.07	10.55	33.62	100	26	P	V
	*	5785	102.69	-	-	93.69	32.07	10.55	33.62	100	26	A	V
		5851.6	56.88	-61.67	118.55	47.67	32.21	10.63	33.63	100	26	P	V
		5867.2	57.17	-50.21	107.38	47.88	32.27	10.65	33.63	100	26	P	V
		5877.8	54.29	-48.83	103.12	44.95	32.31	10.67	33.64	100	26	P	V
		5934.6	53.21	-14.99	68.2	43.71	32.4	10.74	33.64	100	26	P	V
													V
													V



WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11a CH 165 5825MHz	*	5825	111.47	-	-	102.36	32.15	10.59	33.63	100	34	P	H	
	*	5825	103.86	-	-	94.75	32.15	10.59	33.63	100	34	A	H	
		5850	75.4	-46.8	122.2	66.2	32.2	10.63	33.63	100	34	P	H	
		5863	71.76	-36.8	108.56	62.49	32.25	10.65	33.63	100	34	P	H	
		5881	64.38	-36.36	100.74	55.03	32.32	10.67	33.64	100	34	P	H	
		5929	54.7	-13.5	68.2	45.21	32.4	10.73	33.64	100	34	P	H	
														H
														H
	*	5825	110.93	-	-	101.82	32.15	10.59	33.63	100	25	25	P	V
	*	5825	103.61	-	-	94.5	32.15	10.59	33.63	100	25	25	A	V
		5853.2	73.79	-41.11	114.9	64.58	32.21	10.63	33.63	100	25	25	P	V
		5855.8	70.75	-39.83	110.58	61.52	32.22	10.64	33.63	100	25	25	P	V
		5886.2	64.49	-32.39	96.88	55.11	32.34	10.68	33.64	100	25	25	P	V
		5925.8	53.72	-14.48	68.2	44.23	32.4	10.73	33.64	100	25	25	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. 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	48.26	-25.74	74	49.75	39.98	16.96	58.43	-	-	P	H	
		17235	46.98	-21.22	68.2	45.69	40.24	20.36	59.31	-	-	P	H	
		17989	57.49	-16.51	74	43.71	50.08	20.73	57.03	100	35	P	H	
		17989	49.02	-4.98	54	35.24	50.08	20.73	57.03	100	35	A	H	
													H	
														H
			11490	47.78	-26.22	74	49.27	39.98	16.96	58.43	-	-	P	V
			17235	46.48	-21.72	68.2	45.19	40.24	20.36	59.31	-	-	P	V
			17989	56.94	-17.06	74	43.16	50.08	20.73	57.03	100	62	P	V
			17989	48.77	-5.23	54	34.99	50.08	20.73	57.03	100	62	A	V
														V
														V
802.11a CH 157 5785MHz		11570	47.05	-26.95	74	48.73	39.72	17.03	58.43	-	-	P	H	
		17355	47.44	-20.76	68.2	44.87	41	20.42	58.85	-	-	P	H	
		17989	57.59	-16.41	74	43.81	50.08	20.73	57.03	100	38	P	H	
		17989	49.02	-4.98	54	35.24	50.08	20.73	57.03	100	38	A	H	
													H	
														H
			11570	47.4	-26.6	74	49.08	39.72	17.03	58.43	-	-	P	V
			17355	48.29	-19.91	68.2	45.72	41	20.42	58.85	-	-	P	V
			17989	57.59	-16.41	74	43.81	50.08	20.73	57.03	100	84	P	V
			17989	49.4	-4.6	54	35.62	50.08	20.73	57.03	100	84	A	V
														V
														V



802.11a CH 165 5825MHz		11650	46.84	-27.16	74	48.91	39.3	17.09	58.46	-	-	P	H
		17475	48.94	-19.26	68.2	45.17	41.7	20.47	58.4	-	-	P	H
		17967	56.26	-17.74	74	43.19	49.44	20.72	57.09	100	35	P	H
		17967	48.29	-5.71	54	35.22	49.44	20.72	57.09	100	35	A	H
													H
													H
		11650	47.16	-26.84	74	49.23	39.3	17.09	58.46	-	-	P	V
		17475	48.13	-20.07	68.2	44.36	41.7	20.47	58.4	-	-	P	V
		17967	57.44	-16.56	74	44.37	49.44	20.72	57.09	100	58	P	V
		17967	49.2	-4.8	54	36.13	49.44	20.72	57.09	100	58	A	V
													V
													V
Remark	<ol style="list-style-type: none"> 1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 												



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

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 149 5745MHz		5617.8	51.75	-16.45	68.2	43.26	31.6	10.49	33.6	100	35	P	H	
		5687.4	57.23	-38.68	95.91	48.58	31.75	10.51	33.61	100	35	P	H	
		5714.2	69.5	-39.68	109.18	60.73	31.86	10.53	33.62	100	35	P	H	
		5724	75.28	-44.64	119.92	66.47	31.9	10.53	33.62	100	35	P	H	
	*	5745	110.65	-	-	101.75	31.98	10.54	33.62	100	35	P	H	
	*	5745	103.42	-	-	94.52	31.98	10.54	33.62	100	35	A	H	
														H
														H
			5601	51.55	-16.65	68.2	43.07	31.6	10.48	33.6	100	26	P	V
			5698.6	56.67	-47.5	104.17	47.97	31.79	10.52	33.61	100	26	P	V
			5719.6	68.24	-42.45	110.69	59.45	31.88	10.53	33.62	100	26	P	V
			5722.6	78.21	-38.52	116.73	69.41	31.89	10.53	33.62	100	26	P	V
	*		5745	110.5	-	-	101.6	31.98	10.54	33.62	100	26	P	V
	*		5745	102.97	-	-	94.07	31.98	10.54	33.62	100	26	A	V
														V
														V



WIFI Ant. 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)
		5636.2	52.09	-16.11	68.2	43.61	31.6	10.49	33.61	105	34	P	H
		5680.4	53.03	-37.7	90.73	44.41	31.72	10.51	33.61	105	34	P	H
		5714.8	53.55	-55.8	109.35	44.78	31.86	10.53	33.62	105	34	P	H
		5724.2	52.25	-68.13	120.38	43.44	31.9	10.53	33.62	105	34	P	H
	*	5785	110.6	-	-	101.6	32.07	10.55	33.62	105	34	P	H
	*	5785	103.13	-	-	94.13	32.07	10.55	33.62	105	34	A	H
		5852	58.48	-59.16	117.64	49.27	32.21	10.63	33.63	105	34	P	H
		5870.2	58.46	-48.08	106.54	49.16	32.28	10.65	33.63	105	34	P	H
		5876.8	53.01	-50.85	103.86	43.68	32.31	10.66	33.64	105	34	P	H
		5929	56.24	-11.96	68.2	46.75	32.4	10.73	33.64	105	34	P	H
802.11n													H
HT20													H
CH 157		5609.8	51.3	-16.9	68.2	42.82	31.6	10.48	33.6	100	26	P	V
5785MHz		5656.6	50.89	-22.21	73.1	42.37	31.63	10.5	33.61	100	26	P	V
		5718.2	51.96	-58.34	110.3	43.18	31.87	10.53	33.62	100	26	P	V
		5723.4	52.33	-66.22	118.55	43.53	31.89	10.53	33.62	100	26	P	V
	*	5785	109.92	-	-	100.92	32.07	10.55	33.62	100	26	P	V
	*	5785	102.55	-	-	93.55	32.07	10.55	33.62	100	26	A	V
		5850	57.44	-64.76	122.2	48.24	32.2	10.63	33.63	100	26	P	V
		5858.6	55.53	-54.26	109.79	46.29	32.23	10.64	33.63	100	26	P	V
		5888.2	53.3	-42.1	95.4	43.91	32.35	10.68	33.64	100	26	P	V
		5926.2	53.63	-14.57	68.2	44.14	32.4	10.73	33.64	100	26	P	V
													V
													V



WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 165 5825MHz	*	5825	111.35	-	-	102.24	32.15	10.59	33.63	100	34	P	H	
	*	5825	103.91	-	-	94.8	32.15	10.59	33.63	100	34	A	H	
		5852.4	76.62	-40.11	116.73	67.41	32.21	10.63	33.63	100	34	P	H	
		5856.4	73.52	-36.89	110.41	64.28	32.23	10.64	33.63	100	34	P	H	
		5876.8	61.75	-42.11	103.86	52.42	32.31	10.66	33.64	100	34	P	H	
		5929.4	56.22	-11.98	68.2	46.73	32.4	10.73	33.64	100	34	P	H	
														H
														H
	*	5825	110.95	-	-	101.84	32.15	10.59	33.63	100	26	26	P	V
	*	5825	103.48	-	-	94.37	32.15	10.59	33.63	100	26	26	A	V
		5850.2	75.56	-46.18	121.74	66.36	32.2	10.63	33.63	100	26	26	P	V
		5859	75.82	-33.86	109.68	66.57	32.24	10.64	33.63	100	26	26	P	V
		5876.4	66.37	-37.79	104.16	57.04	32.31	10.66	33.64	100	26	26	P	V
		5927.6	54.76	-13.44	68.2	45.27	32.4	10.73	33.64	100	26	26	P	V
														V
														V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



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

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 149 5745MHz		11490	47.27	-26.73	74	48.76	39.98	16.96	58.43	-	-	P	H	
		17235	45.89	-22.31	68.2	44.6	40.24	20.36	59.31	-	-	P	H	
		17978	56.34	-17.66	74	42.91	49.76	20.73	57.06	100	35	P	H	
		17978	48	-6	54	34.57	49.76	20.73	57.06	100	35	A	H	
													H	
													H	
			11490	47.85	-26.15	74	49.34	39.98	16.96	58.43	-	-	P	V
			17235	47.33	-20.87	68.2	46.04	40.24	20.36	59.31	-	-	P	V
			17978	57.19	-16.81	74	43.76	49.76	20.73	57.06	100	59	P	V
			17978	48.54	-5.46	54	35.11	49.76	20.73	57.06	100	59	A	V
802.11n HT20 CH 157 5785MHz		11570	47.64	-26.36	74	49.32	39.72	17.03	58.43	-	-	P	H	
		17355	47.71	-20.49	68.2	45.14	41	20.42	58.85	-	-	P	H	
		17978	56.4	-17.6	74	42.97	49.76	20.73	57.06	100	25	P	H	
		17978	49.14	-4.86	54	35.71	49.76	20.73	57.06	100	25	A	H	
													H	
													H	
			11570	47.46	-26.54	74	49.14	39.72	17.03	58.43	-	-	P	V
			17355	47.31	-20.89	68.2	44.74	41	20.42	58.85	-	-	P	V
			17978	57	-17	74	43.57	49.76	20.73	57.06	100	84	P	V
			17978	49.35	-4.65	54	35.92	49.76	20.73	57.06	100	84	A	V
												V		
												V		



802.11n HT20 CH 165 5825MHz		11650	46.84	-27.16	74	48.91	39.3	17.09	58.46	-	-	P	H
		17475	47.99	-20.21	68.2	44.22	41.7	20.47	58.4	-	-	P	H
		17967	56.89	-17.11	74	43.82	49.44	20.72	57.09	100	39	P	H
		17967	48.3	-5.7	54	35.23	49.44	20.72	57.09	100	39	A	H
													H
													H
		11650	47.06	-26.94	74	49.13	39.3	17.09	58.46	-	-	P	V
		17475	48.89	-19.31	68.2	45.12	41.7	20.47	58.4	-	-	P	V
		17967	56.77	-17.23	74	43.7	49.44	20.72	57.09	100	88	P	V
		17967	48.21	-5.79	54	35.14	49.44	20.72	57.09	100	88	A	V
													V
													V
Remark	<ol style="list-style-type: none"> 1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 												



Band 4 5725~5850MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 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)
		5606.4	53.16	-15.04	68.2	44.68	31.6	10.48	33.6	105	34	P	H
		5699.4	60.73	-44.03	104.76	52.02	31.8	10.52	33.61	105	34	P	H
		5717.4	76.56	-33.51	110.07	67.78	31.87	10.53	33.62	105	34	P	H
		5723.6	81.49	-37.52	119.01	72.69	31.89	10.53	33.62	105	34	P	H
	*	5755	108.52	-	-	99.59	32.01	10.54	33.62	105	34	P	H
	*	5755	101.2	-	-	92.27	32.01	10.54	33.62	105	34	A	H
		5852.6	59.91	-56.36	116.27	50.7	32.21	10.63	33.63	105	34	P	H
		5855.2	61.38	-49.36	110.74	52.16	32.22	10.63	33.63	105	34	P	H
		5876.6	61.4	-42.61	104.01	52.07	32.31	10.66	33.64	105	34	P	H
		5925.8	55.27	-12.93	68.2	45.78	32.4	10.73	33.64	105	34	P	H
802.11n													H
HT40													H
CH 151		5617.8	52.12	-16.08	68.2	43.63	31.6	10.49	33.6	100	25	P	V
5755MHz		5698.4	61.67	-42.35	104.02	52.97	31.79	10.52	33.61	100	25	P	V
		5719.2	82.33	-28.25	110.58	73.54	31.88	10.53	33.62	100	25	P	V
		5721.6	79.17	-35.28	114.45	70.37	31.89	10.53	33.62	100	25	P	V
	*	5755	108.15	-	-	99.22	32.01	10.54	33.62	100	25	P	V
	*	5755	100.86	-	-	91.93	32.01	10.54	33.62	100	25	A	V
		5854.4	61.47	-50.7	112.17	52.25	32.22	10.63	33.63	100	25	P	V
		5863	60.27	-48.29	108.56	51	32.25	10.65	33.63	100	25	P	V
		5875	57.93	-47.27	105.2	48.61	32.3	10.66	33.64	100	25	P	V
		5932.6	55.41	-12.79	68.2	45.91	32.4	10.74	33.64	100	25	P	V
													V
													V



WIFI Ant. 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)
		5603.2	51.73	-16.47	68.2	43.25	31.6	10.48	33.6	100	35	P	H
		5686.4	52.29	-42.88	95.17	43.64	31.75	10.51	33.61	100	35	P	H
		5710.4	54.3	-53.81	108.11	45.56	31.84	10.52	33.62	100	35	P	H
		5725	55.86	-66.34	122.2	47.05	31.9	10.53	33.62	100	35	P	H
	*	5795	107.66	-	-	98.64	32.09	10.56	33.63	100	35	P	H
	*	5795	100.23	-	-	91.21	32.09	10.56	33.63	100	35	A	H
		5850.2	68.9	-52.84	121.74	59.7	32.2	10.63	33.63	100	35	P	H
		5856.2	65.56	-44.9	110.46	56.33	32.22	10.64	33.63	100	35	P	H
		5878.4	61.81	-40.86	102.67	52.47	32.31	10.67	33.64	100	35	P	H
		5926.4	55.45	-12.75	68.2	45.96	32.4	10.73	33.64	100	35	P	H
802.11n													H
HT40													H
CH 159		5627.8	52.13	-16.07	68.2	43.65	31.6	10.49	33.61	100	26	P	V
5795MHz		5663.6	51.82	-26.48	78.3	43.27	31.65	10.51	33.61	100	26	P	V
		5718.6	53.01	-57.4	110.41	44.23	31.87	10.53	33.62	100	26	P	V
		5722.2	53.95	-61.87	115.82	45.15	31.89	10.53	33.62	100	26	P	V
	*	5795	107.51	-	-	98.49	32.09	10.56	33.63	100	26	P	V
	*	5795	99.73	-	-	90.71	32.09	10.56	33.63	100	26	A	V
		5851	69.79	-50.13	119.92	60.59	32.2	10.63	33.63	100	26	P	V
		5860.8	66.89	-42.28	109.17	57.64	32.24	10.64	33.63	100	26	P	V
		5875.8	61.06	-43.55	104.61	51.74	32.3	10.66	33.64	100	26	P	V
		5931.6	56.25	-11.95	68.2	46.75	32.4	10.74	33.64	100	26	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT40 CH 151 5755MHz		11510	47.34	-26.66	74	48.81	39.96	16.97	58.4	-	-	P	H	
		17265	47.96	-20.24	68.2	46.42	40.36	20.37	59.19	-	-	P	H	
		17978	56.99	-17.01	74	43.56	49.76	20.73	57.06	100	33	P	H	
		17978	49.2	-4.8	54	35.77	49.76	20.73	57.06	100	33	A	H	
													H	
													H	
			11510	47.35	-26.65	74	48.82	39.96	16.97	58.4	-	-	P	V
			17265	46.65	-21.55	68.2	45.11	40.36	20.37	59.19	-	-	P	V
			17978	57.76	-16.24	74	44.33	49.76	20.73	57.06	100	58	P	V
			17978	49.55	-4.45	54	36.12	49.76	20.73	57.06	100	58	A	V
													V	
													V	
802.11n HT40 CH 159 5795MHz		11590	47.3	-26.7	74	49.05	39.64	17.05	58.44	-	-	P	H	
		17385	48.98	-19.22	68.2	46.03	41.26	20.43	58.74	-	-	P	H	
		17989	58.43	-15.57	74	44.65	50.08	20.73	57.03	100	35	P	H	
		17989	49.45	-4.55	54	35.67	50.08	20.73	57.03	100	35	A	H	
													H	
													H	
			11590	47.46	-26.54	74	49.21	39.64	17.05	58.44	-	-	P	V
			17385	48.45	-19.75	68.2	45.5	41.26	20.43	58.74	-	-	P	V
			17978	58.22	-15.78	74	44.79	49.76	20.73	57.06	100	44	P	V
			17978	49.32	-4.68	54	35.89	49.76	20.73	57.06	100	44	A	V
													V	
													V	
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 													



Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 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)
		5628	56.81	-11.39	68.2	48.33	31.6	10.49	33.61	100	35	P	H
		5699	68.93	-35.53	104.46	60.22	31.8	10.52	33.61	100	35	P	H
		5718.4	71.24	-39.11	110.35	62.46	31.87	10.53	33.62	100	35	P	H
		5722.4	70.99	-45.28	116.27	62.19	31.89	10.53	33.62	100	35	P	H
	*	5775	103.01	-	-	94.03	32.05	10.55	33.62	100	35	P	H
	*	5775	95.66	-	-	86.68	32.05	10.55	33.62	100	35	A	H
		5851.2	71.02	-48.44	119.46	61.82	32.2	10.63	33.63	100	35	P	H
		5859.6	68.4	-41.11	109.51	59.15	32.24	10.64	33.63	100	35	P	H
		5878.2	66.56	-36.26	102.82	57.22	32.31	10.67	33.64	100	35	P	H
		5925.2	59.19	-9.01	68.2	49.7	32.4	10.73	33.64	100	35	P	H
802.11ac													H
VHT80													H
CH 155		5616.6	55.52	-12.68	68.2	47.03	31.6	10.49	33.6	100	24	P	V
5775MHz		5690	67.51	-30.32	97.83	58.84	31.76	10.52	33.61	100	24	P	V
		5718.4	70.49	-39.86	110.35	61.71	31.87	10.53	33.62	100	24	P	V
		5721.8	70.67	-44.23	114.9	61.87	31.89	10.53	33.62	100	24	P	V
	*	5775	102.07	-	-	93.09	32.05	10.55	33.62	100	24	P	V
	*	5775	94.55	-	-	85.57	32.05	10.55	33.62	100	24	A	V
		5850.4	69.74	-51.55	121.29	60.54	32.2	10.63	33.63	100	24	P	V
		5861.8	68.14	-40.75	108.89	58.88	32.25	10.64	33.63	100	24	P	V
		5882.4	67.95	-31.75	99.7	58.59	32.33	10.67	33.64	100	24	P	V
		5931.6	61.65	-6.55	68.2	52.15	32.4	10.74	33.64	100	24	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 802.11ac VHT80 (Harmonic @ 3m)**

WIFI Ant. 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)	
802.11ac VHT80 CH 155 5775MHz		11550	48.55	-25.45	74	50.16	39.8	17.01	58.42	-	-	P	H	
		17325	49.01	-19.19	68.2	46.86	40.72	20.4	58.97	-	-	P	H	
		17945	57.35	-16.65	74	44.97	48.81	20.71	57.14	100	33	P	H	
		17945	47.49	-6.51	54	35.11	48.81	20.71	57.14	100	33	A	H	
													H	
													H	
			11550	47.57	-26.43	74	49.18	39.8	17.01	58.42	-	-	P	V
			17325	48.75	-19.45	68.2	46.6	40.72	20.4	58.97	-	-	P	V
			17945	57.24	-16.76	74	44.86	48.81	20.71	57.14	100	35	P	V
			17945	47.14	-6.86	54	34.76	48.81	20.71	57.14	100	35	A	V
													V	
													V	
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 													



Emission above 18GHz

5GHz WIFI 802.11ac VHT80 (SHF @ 1m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.	
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.		
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)	
5GHz 802.11ac VHT80 SHF		38152	47.05	-21.15	68.2	40.65	43.37	19.01	55.98	-	-	P	H	
													H	
													H	
													H	
			37470	46.89	-21.31	68.2	42.24	42.71	18.66	56.72	-	-	P	V
														V
														V
Remark	1. No other spurious found. 2. All results are PASS against limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.													



Emission below 1GHz

5GHz WIFI 802.11ac VHT80 (LF @ 3m)

WIFI Ant. 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)
5GHz 802.11ac VHT80 LF		58.13	31.32	-8.68	40	47.87	11.99	1.12	29.66	-	-	P	H
		205.57	29.53	-13.97	43.5	41.7	15.2	2.12	29.49	-	-	P	H
		365.62	34.72	-11.28	46	40.32	20.81	2.82	29.23	-	-	P	H
		746.83	36.04	-9.96	46	32.26	28.27	4.12	28.61	-	-	P	H
		873.9	34.62	-11.38	46	29.41	29	4.5	28.29	-	-	P	H
		958.29	35.97	-10.03	46	28.26	31.13	4.7	28.12	-	-	P	H
		32.91	29.26	-10.74	40	34.43	23.65	0.83	29.65	-	-	P	V
		208.48	28.67	-14.83	43.5	40.82	15.2	2.13	29.48	-	-	P	V
		500.45	29.03	-16.97	46	30.68	24.01	3.32	28.98	-	-	P	V
		742.95	35.07	-10.93	46	31.4	28.16	4.11	28.6	-	-	P	V
		862.26	34.56	-11.44	46	29.34	29.1	4.46	28.34	-	-	P	V
	954.41	36.64	-9.36	46	29.09	30.99	4.69	28.13	-	-	P	V	
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 												



Note symbol

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



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

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

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

For Peak Limit @ 2390MHz:

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

For Average Limit @ 2390MHz:

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

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



Appendix D. Radiated Spurious Emission Plots

Test Engineer :	Jack Cheng , Lance Chiang and Chuan Chu	Temperature :	23.8~26.2°C
		Relative Humidity :	56.5~68.6%

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	Horizontal	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> <p>Date: 2021-10-23 PEAK: 16 (100, 10, 20)</p>	<p>Site : 03CH12-HY Condition : PEAK(UN1) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> <p>Date: 2021-10-24 PEAK(UN1): 54</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(16)_16-24 3m HORN_91200_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT1) 3m HORN_91200_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT1) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



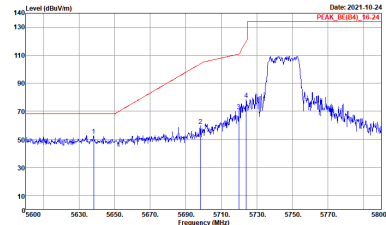
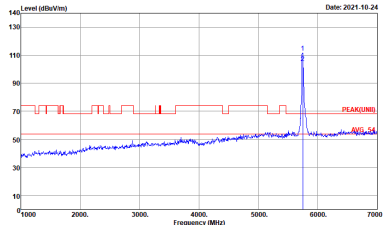
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(04)_16-24 3m HORN_91200_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>



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

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH12-1FY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL : RBW:3000.000kHz VBW:3000.000kHz SWT:Auto</p>	 <p>Site : 03CH12-1FY Condition : PEAK(UNL1) 3m HORN_9120D_1328 HORIZONTAL : RBW:3000.000kHz VBW:3000.000kHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT1) 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank

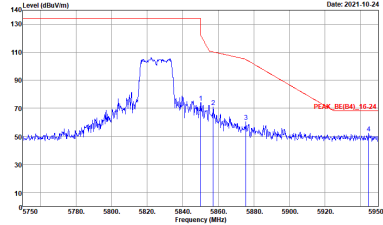
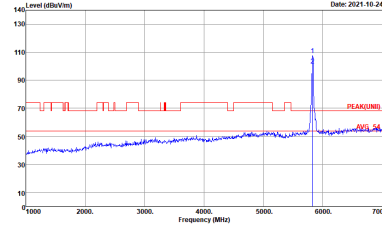


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>



Band 4 5725~5850MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH12-1HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL : RBW:3000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-1HY Condition : PEAK(UNL) 3m HORN_9120D_1328 HORIZONTAL : RBW:3000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH12-1HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL : RBW:3000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SW1:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT1) 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SW1:Auto</p>
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SW1:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH12-1HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL : RBW:3000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH12-1HY Condition : PEAK(UNL) 3m HORN_9120D_1328 HORIZONTAL : RBW:3000.000kHz VBW:3000.000kHz SWT:Auto</p>
Peak	<p>Site : 03CH12-1HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL : RBW:3000.000kHz VBW:3000.000kHz SWT:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT1) 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



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

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-14Y Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	<p>Site : 03CH12-14Y Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-1HY Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	<p>Site : 03CH12-1HY Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-1HY Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	<p>Site : 03CH12-1HY Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>



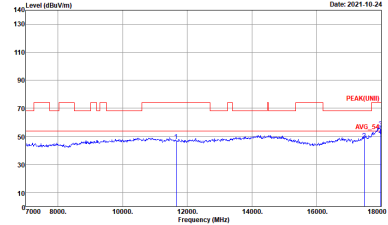
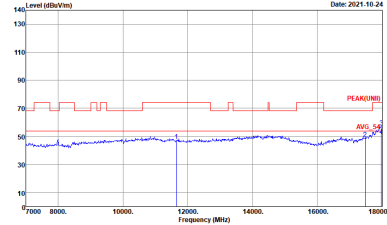
**Band 4 5725~5850MHz
WIFI 802.11n HT20 (Harmonic @ 3m)**

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-HY Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	<p>Site : 03CH12-HY Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-1Y Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	<p>Site : 03CH12-1Y Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Horizontal	Vertical
<p>Peak</p> <p>Avg.</p>	 <p>Site : 03CH12-1HY Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	 <p>Site : 03CH12-1HY Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>



**Band 4 5725~5850MHz
WIFI 802.11n HT40 (Harmonic @ 3m)**

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-HY Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	<p>Site : 03CH12-HY Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-1HY Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	<p>Site : 03CH12-1HY Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>



Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-HY Condition : PEAK(UNII) 3m HORN_91200_1328 HORIZONTAL</p>	<p>Site : 03CH12-HY Condition : PEAK(UNII) 3m HORN_91200_1328 VERTICAL</p>



Emission above 18GHz
5GHz WIFI 802.11ac VHT80 (SHF @ 1m)

WIFI	5GHz WIFI	
ANT	802.11ac VHT80 SHF	
1	Horizontal	Vertical
QP / Peak	<p>Horizontal emission spectrum plot showing Level (dBm/100MHz) vs Frequency (MHz) from 18000 to 40000. A peak is labeled PEAK(LIN1) and an average level is labeled AVG_54. Site: :03CH12-14Y, Condition: :PEAK(LIN1) In SHF HORN 88HA9170584 HORIZONTAL.</p>	<p>Vertical emission spectrum plot showing Level (dBm/100MHz) vs Frequency (MHz) from 18000 to 40000. A peak is labeled PEAK(LIN1) and an average level is labeled AVG_54. Site: :03CH12-14Y, Condition: :PEAK(LIN1) In SHF HORN 88HA9170584 VERTICAL.</p>



Emission below 1GHz
5GHz WIFI 802.11ac VHT80 (LF @ 3m)

WIFI	5GHz WIFI	
ANT	802.11ac VHT80 LF	
1	Horizontal	Vertical
QP / Peak	<p>Horizontal</p>	<p>Vertical</p>



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

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
2	Horizontal	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UN1) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
2	Vertical	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(04)_16-24 3m HORN_91200_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
2	Horizontal	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
2	Vertical	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
2	Horizontal	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(04)_16-24 3m HORN_91200_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
2	Vertical	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>



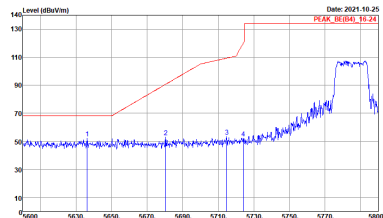
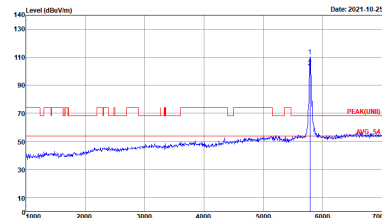
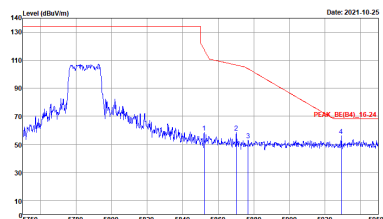
Band 4 5725~5850MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
2	Horizontal	Fundamental
Peak	<p>Site : 03CH2-1#Y Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL : RBW:3000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH2-1#Y Condition : PEAK_UNB1 3m HORN_9120D_1328 HORIZONTAL : RBW:3000.000kHz VBW:3000.000kHz SWT:Auto</p>

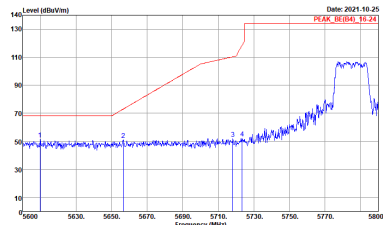
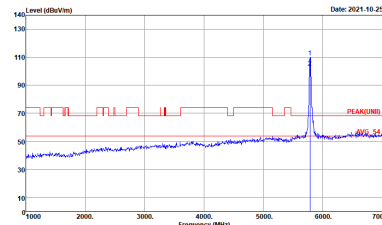
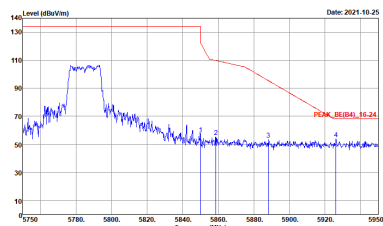


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
2	Vertical	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(10)_16-24 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
2	Horizontal	Fundamental
Peak	 <p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH12-HY Condition : PEAK(UNIT1) 3m HORN_91200_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	 <p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
2	Vertical	Fundamental
Peak	 <p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	 <p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
2	Horizontal	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(04)_16-24 3m HORN_91200_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT1) 3m HORN_91200_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>



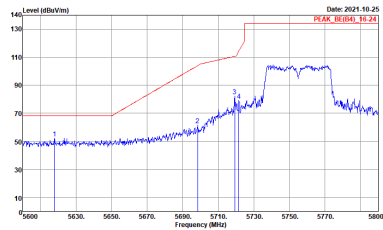
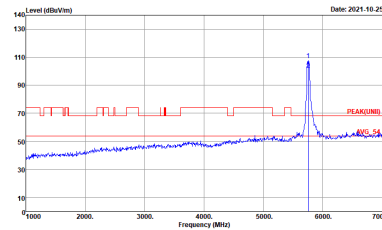
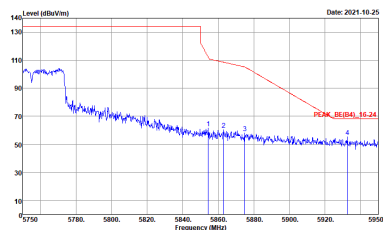
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
2	Vertical	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(04)_16-24 3m HORN_9120D_1328 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>



Band 4 5725~5850MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
2	Horizontal	Fundamental
Peak	<p>Site : 03CH12-1HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL : RBW:3000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-1HY Condition : PEAK(UNL) 3m HORN_9120D_1328 HORIZONTAL : RBW:3000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH12-1HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL : RBW:3000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
2	Vertical	Fundamental
Peak	 <p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH12-HY Condition : PEAK(UNIT1) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	 <p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
2	Horizontal	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



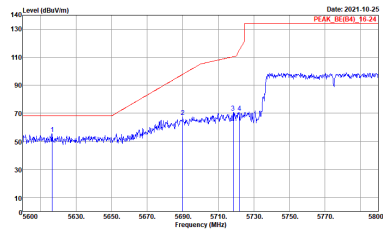
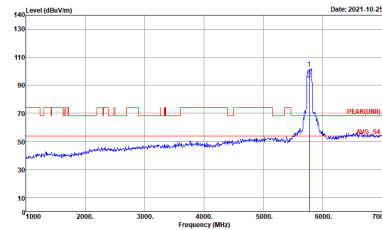
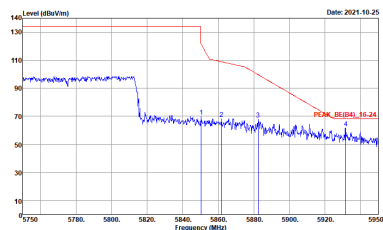
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
2	Vertical	Fundamental
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH12-HY Condition : PEAK(UNIT) 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
2	Horizontal	Fundamental
Peak	<p>Site : 03CH12-1HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL : RBW:3000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH12-1HY Condition : PEAK(UNL) 3m HORN_91200_1328 HORIZONTAL : RBW:3000.000kHz VBW:3000.000kHz SWT:Auto</p>
Peak	<p>Site : 03CH12-1HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL : RBW:3000.000kHz VBW:3000.000kHz SWT:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
2	Vertical	Fundamental
Peak	 <p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH12-HY Condition : PEAK(UNIT1) 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	 <p>Site : 03CH12-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



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

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-1FY Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	<p>Site : 03CH12-1FY Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-1HY Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	<p>Site : 03CH12-1HY Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>



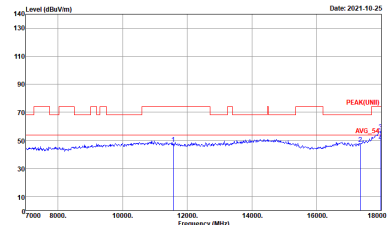
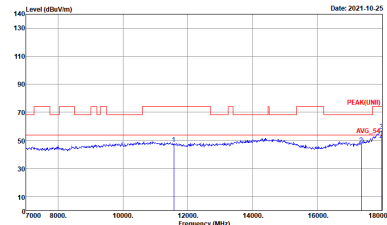
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-1Y Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	<p>Site : 03CH12-1Y Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>



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

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-HY Condition : PEAK(UNII) 3m HORN_91200_1328 HORIZONTAL</p>	<p>Site : 03CH12-HY Condition : PEAK(UNII) 3m HORN_91200_1328 VERTICAL</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
2	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH12-1HY Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	 <p>Site : 03CH12-1HY Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-1HY Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	<p>Site : 03CH12-1HY Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>



Band 4 5725~5850MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-HY Condition : PEAK(UNII) 3m HORN_91200_1328 HORIZONTAL</p>	<p>Site : 03CH12-HY Condition : PEAK(UNII) 3m HORN_91200_1328 VERTICAL</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-1Y Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	<p>Site : 03CH12-1Y Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>



Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
2	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH12-HY Condition : PEAK(UNII) 3m HORN_9120D_1328 HORIZONTAL</p>	<p>Site : 03CH12-HY Condition : PEAK(UNII) 3m HORN_9120D_1328 VERTICAL</p>

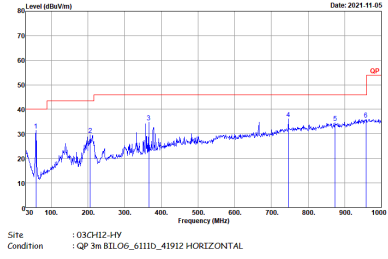
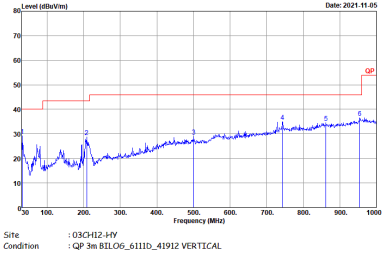


Emission above 18GHz
 5GHz WIFI 802.11ac VHT80 (SHF @ 1m)

WIFI	5GHz WIFI	
ANT	802.11ac VHT80 SHF	
2	Horizontal	Vertical
QP / Peak	<p>Site : 03CH12-FY Condition : PEAK[UNII] In SHF HORN BBH49170584 HORIZONTAL</p>	<p>Site : 03CH12-FY Condition : PEAK[UNII] In SHF HORN BBH49170584 VERTICAL</p>



Emission below 1GHz
5GHz WIFI 802.11ac VHT80 (LF @ 3m)

WIFI	5GHz WIFI	
ANT	802.11ac VHT80 LF	
2	Horizontal	Vertical
QP / Peak	 <p>Site : :03CH12-FY Condition : :QP 3m BILOG_6111D_41912 HORIZONTAL</p>	 <p>Site : :03CH12-FY Condition : :QP 3m BILOG_6111D_41912 VERTICAL</p>

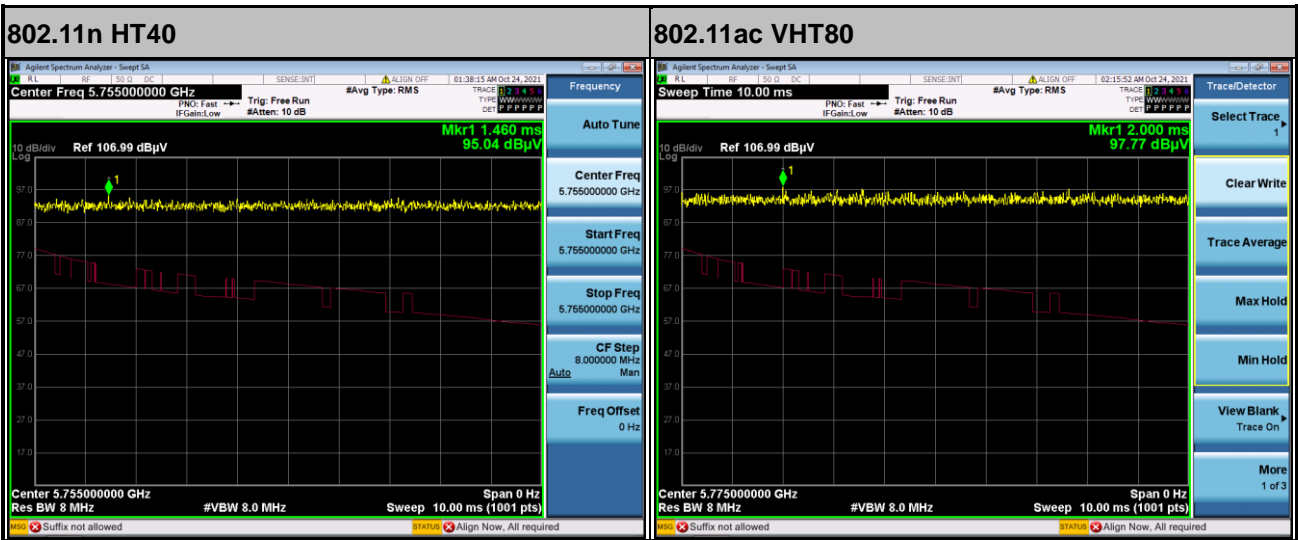
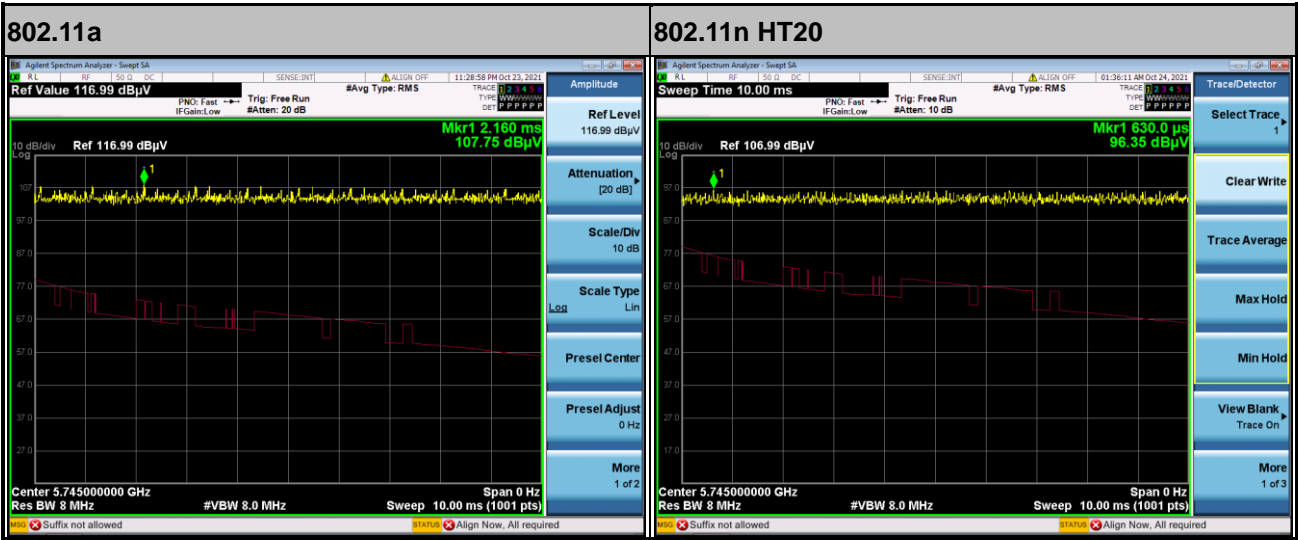


Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
1	802.11a	100.00	-	-	10Hz
1	5GHz 802.11n HT20	100.00	-	-	10Hz
1	5GHz 802.11n HT40	100.00	-	-	10Hz
1	5GHz 802.11ac VHT80	100.00	-	-	10Hz
2	802.11a	100.00	-	-	10Hz
2	5GHz 802.11n HT20	100.00	-	-	10Hz
2	5GHz 802.11n HT40	100.00	-	-	10Hz
2	5GHz 802.11ac VHT80	100.00	-	-	10Hz

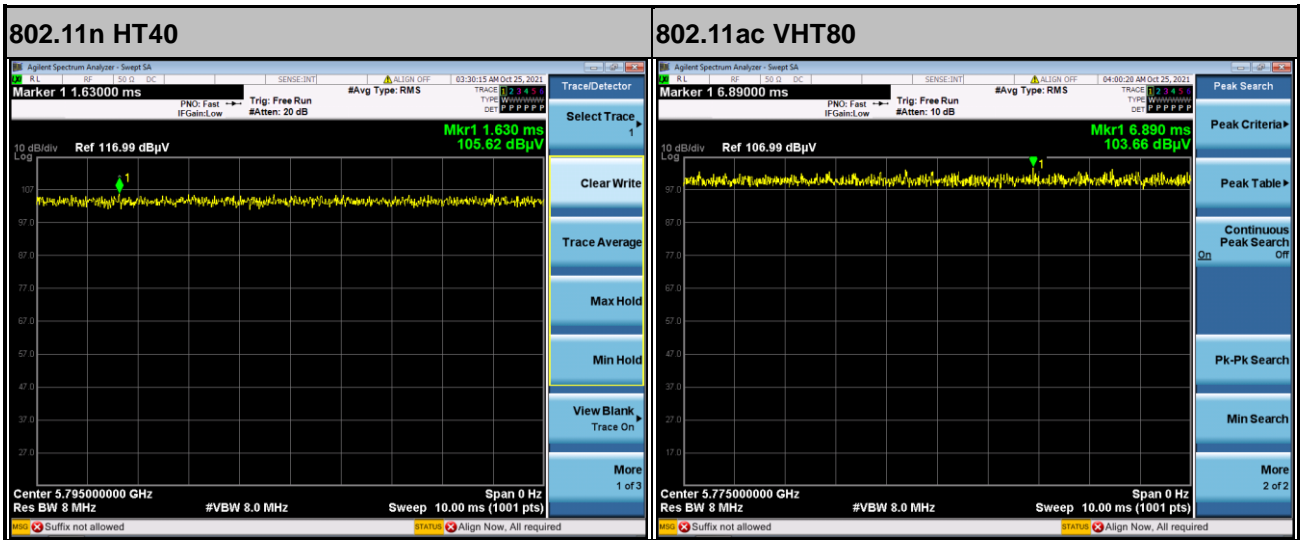
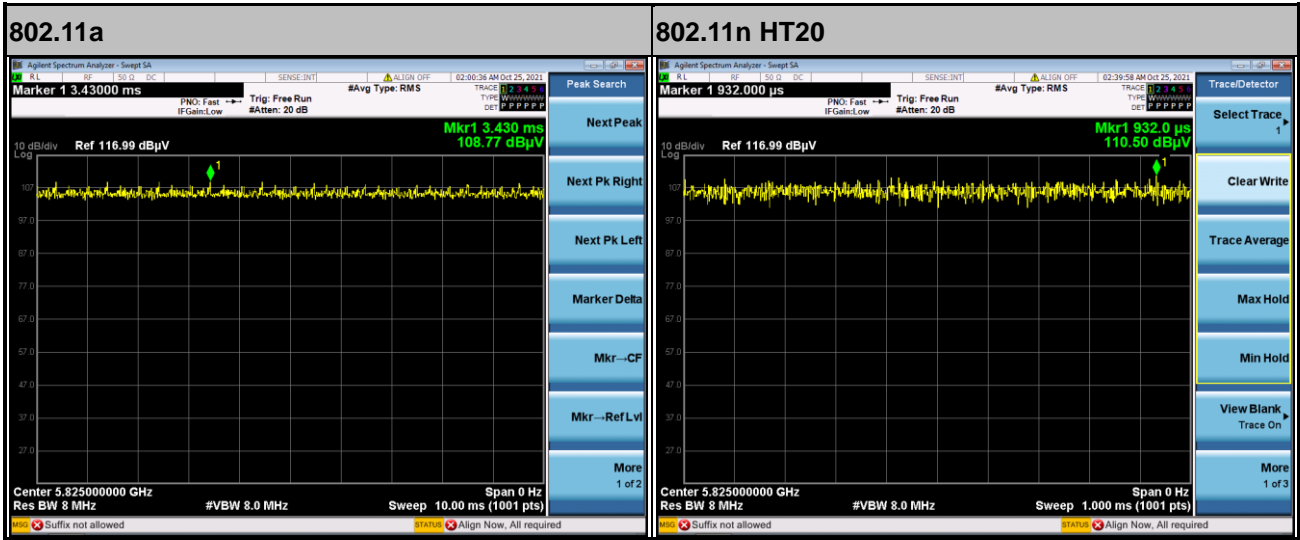


<Ant. 1>





<Ant. 2>



—THE END—