FCC RADIO TEST REPORT

FCC ID	:	**2ATUQ-6699**
Equipment	:	**Tablet**
Model name	:	**K72LL3**
Applicant	:	**Mangled Horses LLC** **225 Wilmington-West Chester Pike, Suite 202, Chadds Ford, PA 19317**
Standard	:	**FCC Part 15 Subpart E §15.407**

The product was received on Oct. 30, 2019 and testing was started from Nov. 07, 2019 and completed on Jan. 07, 2020. We, SPORTON INTERNATIONAL INC., EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

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

Louis Wu

Approved by: Louis Wu

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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

Table of Contents

History of this test report **3**
Summary of Test Result **4**
1 General Description **5**
1.1 Product Feature of Equipment Under Test 5
1.2 Product Specification of Equipment Under Test 5
1.3 Modification of EUT 6
1.4 Testing Location 6
1.5 Applicable Standards 6
2 Test Configuration of Equipment Under Test **7**
2.1 Carrier Frequency and Channel 7
2.2 Test Mode 8
2.3 Connection Diagram of Test System 9
2.4 Support Unit used in test configuration and system 10
2.5 EUT Operation Test Setup 11
2.6 Measurement Results Explanation Example 11
3 Test Result **12**
3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement 12
3.2 Maximum Conducted Output Power Measurement 15
3.3 Power Spectral Density Measurement 16
3.4 Unwanted Emissions Measurement 18
3.5 AC Conducted Emission Measurement 23
3.6 Automatically Discontinue Transmission 25
3.7 Antenna Requirements 27
4 List of Measuring Equipment **28**
5 Uncertainty of Evaluation **30**
Appendix A. Conducted Test Results
Appendix B. AC Conducted Emission Test Result
Appendix C. Radiated Spurious Emission
Appendix D. Radiated Spurious Emission Plots
Appendix E. Duty Cycle Plots

History of this test report

Report No.	Version	Description	Issued Date
FR982217-01E	01	Initial issue of report	Jan. 08, 2020
FR982217-01E	02	1. Correct the WPC function is supporting receive only. 2. Add the FCC ID of Wireless Charger in section 2.4.	Jan. 15, 2020
FR982217-01E	03	Add the description of worst mode in section 2.2	Jan. 17, 2020
FR982217-01E	04	Add the near view of Radiated Emission in setup photo	Jan. 23, 2020

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)
3.1	15.403 (i)	6dB & 26dB Bandwidth	Pass
3.1	2.1049	99% Occupied Bandwidth	Reporting only
3.2	15.407 (a)	Maximum Conducted Output Power	Pass
3.3	15.407 (a)	Power Spectral Density	Pass
3.4	15.407(b)	Unwanted Emissions	Pass
3.5	15.207	AC Conducted Emission	Pass
3.6	15.407 (c)	Automatically Discontinue Transmission	Pass
3.7	15.203 & 15.407 (a)	Antenna Requirement	Pass

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Wii Chang
Report Producer: Lucy Wu

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Tablet
Model Name	K72LL3
FCC ID	2ATUQ-6699
EUT supports Radios application	WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE WPC Receive only

1.2 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5745 MHz ~ 5825 MHz
Maximum Output Power to Antenna	**<Ant. 1>** 802.11a : 13.70 dBm / 0.0234 W 802.11n HT20 : 13.70 dBm / 0.0234 W 802.11n HT40 : 13.80 dBm / 0.0240 W 802.11ac VHT20: 11.80 dBm / 0.0151 W 802.11ac VHT40: 11.70 dBm / 0.0148 W 802.11ac VHT80: 11.10 dBm / 0.0129 W **<Ant. 2>** 802.11a : 13.40 dBm / 0.0219 W 802.11n HT20 : 13.40 dBm / 0.0219 W 802.11n HT40 : 13.50 dBm / 0.0224 W 802.11ac VHT20: 11.40 dBm / 0.0138 W 802.11ac VHT40: 11.20 dBm / 0.0132 W 802.11ac VHT80: 10.80 dBm / 0.0120 W
99% Occupied Bandwidth	**<Ant. 1>** 802.11a : 16.73 MHz 802.11n HT20 : 17.68 MHz 802.11n HT40 : 36.66 MHz 802.11ac VHT80: 76.00 MHz **<Ant. 2>** 802.11a : 16.73 MHz 802.11n HT20 : 17.73 MHz 802.11n HT40 : 36.46 MHz 802.11ac VHT80: 76.12 MHz
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)
Antenna Type / Gain	**Ant. 1 :** IFA Antenna with gain 2.50 dBi **Ant. 2 :** Monopole Antenna with gain 2.80 dBi

1.3 Modification of EUT

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

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, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	**Sporton Site No.**		
	TH05-HY	CO05-HY	DFS02-HY

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

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	03CH13-HY

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

FCC designation No.: TW1190 and TW0007

1.5 Applicable Standards

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

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

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

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

Note:

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

2.2 Test Mode

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

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 + Play MPEG4 from SD Card + USB Cable (Charging from Adapter (AP15))

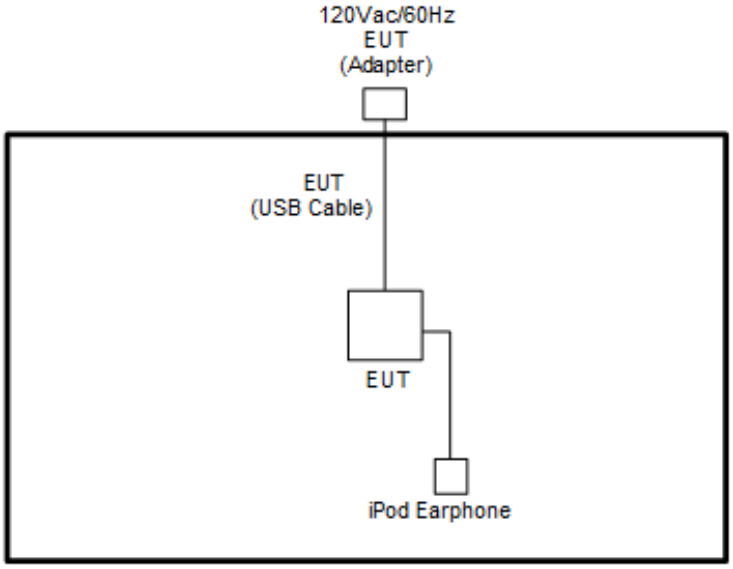
Remark:

1. For Radiated Test Cases, the tests were performed with Adapter 1.
2. The AC Conducted Emission test case has leveraged from the worst mode of Part 15B AC Conducted Emission.
3. The worst mode of radiated spurious emissions is 802.11a CH165 for Ant.1 and 802.11n HT20 CH157 for Ant.2, and the EUT with Wireless Charger was verified and recorded in this report.

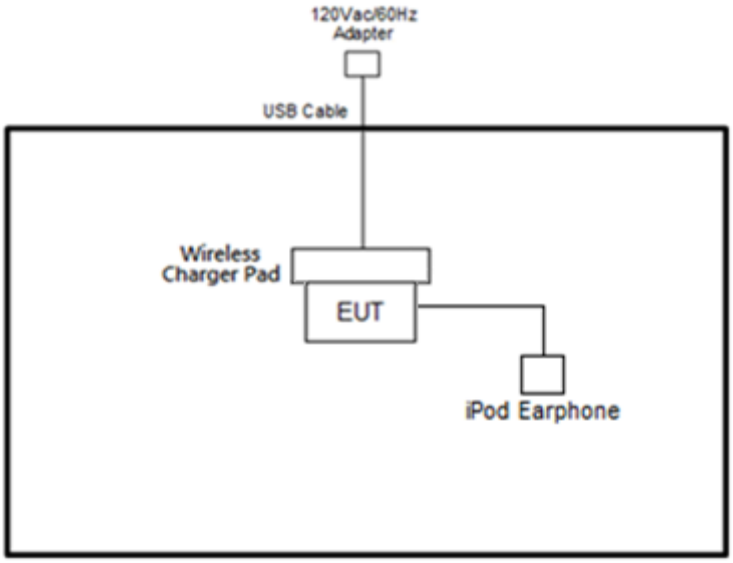
Ch. #		Band IV：5725-5850 MHz			
		802.11a	802.11n HT20	802.11n HT40	802.11ac VHT80
L	Low	149	149	151	-
M	Middle	157	157	-	155
H	High	165	165	159	-

2.3 Connection Diagram of Test System

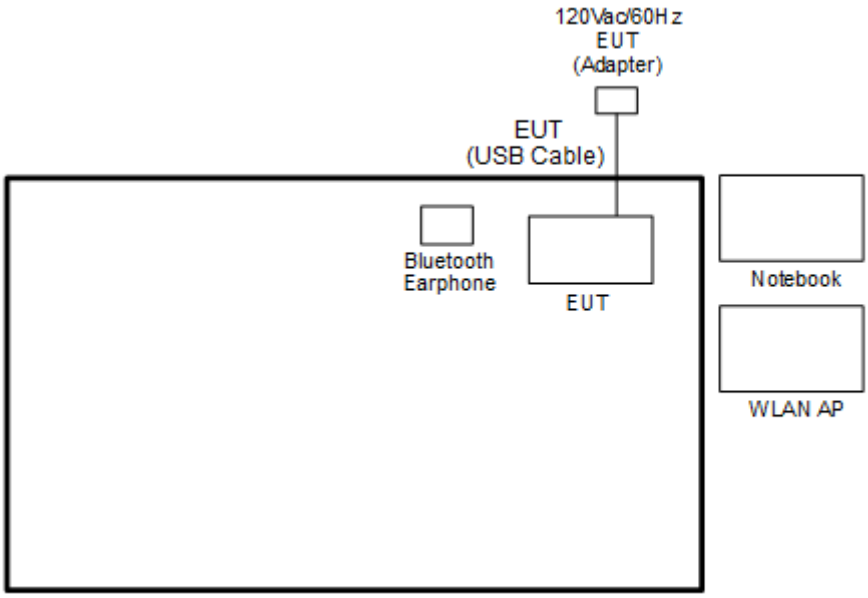
<WLAN Tx with Adapter Mode>



<WLAN Tx with Wireless Charger Mode>



<AC Conducted Emission Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade 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-AC1750	MSQ-RTAC66U	N/A	Unshielded,1.8m
3.	Notebook	DELL	Latitude E3340	FCC DoC/ Contains FCC ID: PD97260NGU	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
5.	Wireless Charger	ANKER	A2524	2AOKB-A2524	N/A	N/A
6.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A

2.5 EUT Operation Test Setup

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

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

Offset = RF cable loss + attenuator factor.

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

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

= 4.2 + 10 = 14.2 (dB)

3 Test Result

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

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

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

26dB and 99% Occupied bandwidth are reporting only.

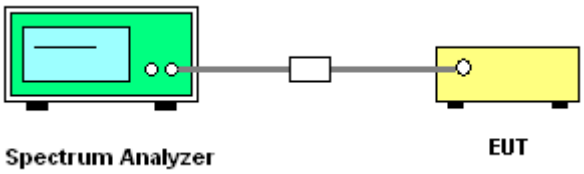
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

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

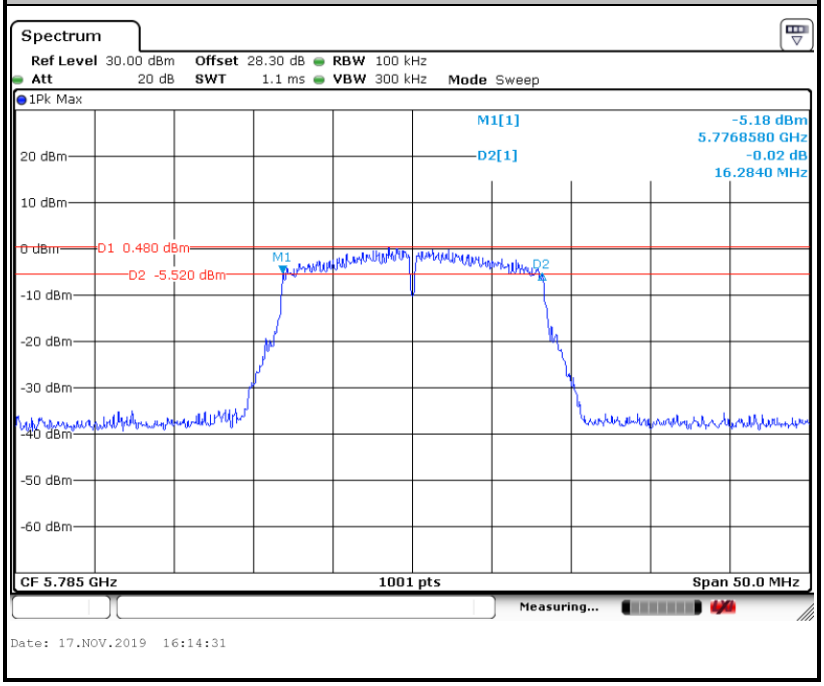
3.1.4 Test Setup



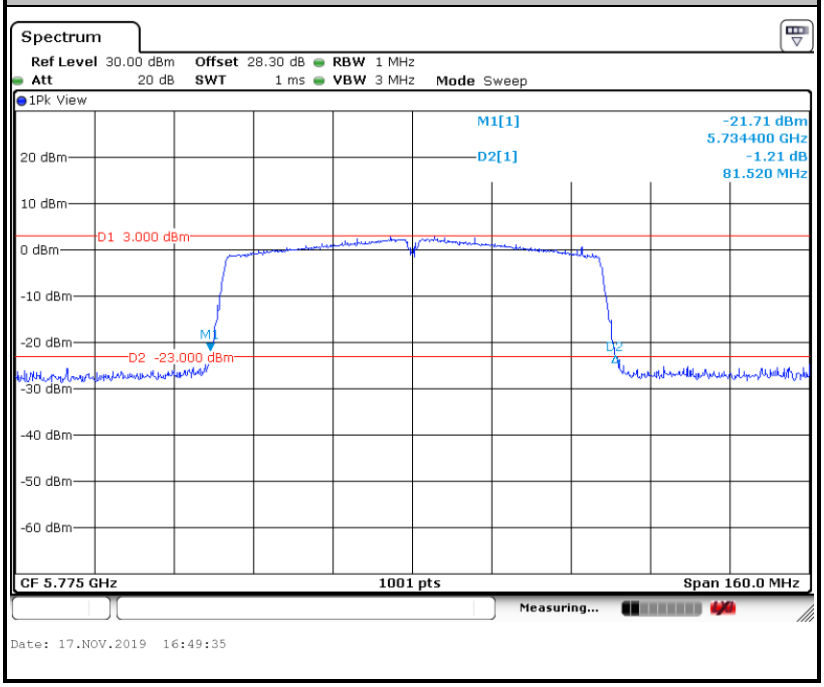
3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.

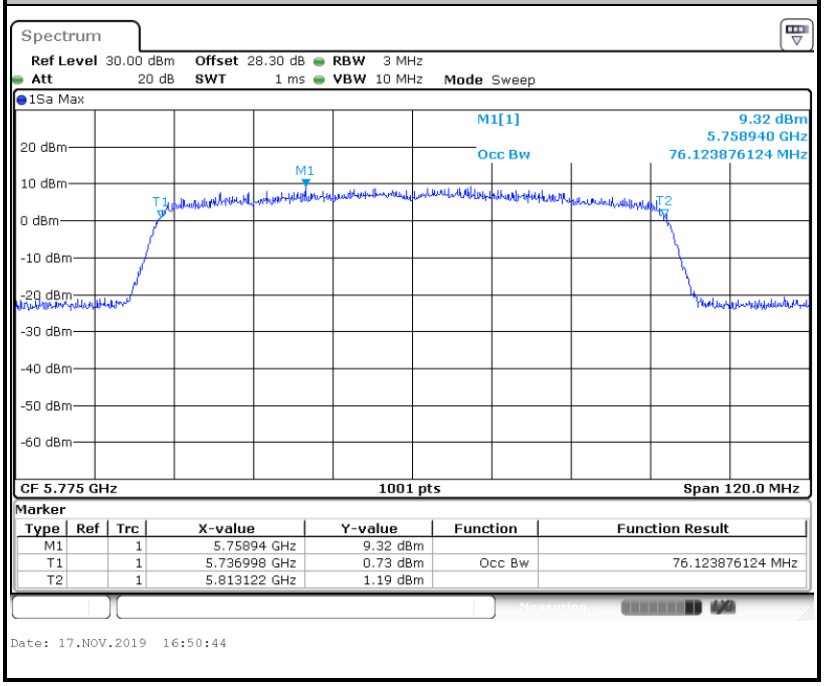
Minimum 6dB Bandwidth



Maximum 26dB Bandwidth



Maximum 99% Occupied Bandwidth



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

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

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

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

3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

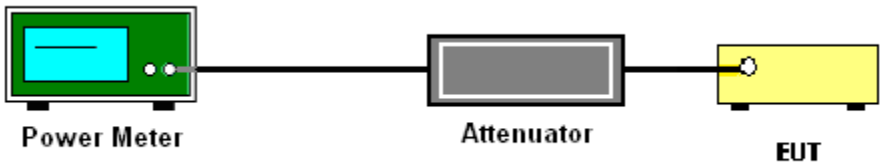
3.2.3 Test Procedures

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

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

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

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

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

3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

3.3.3 Test Procedures

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

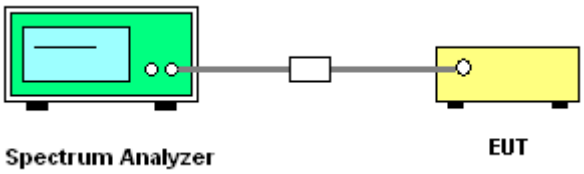
 # Method SA-3 #

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

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

1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

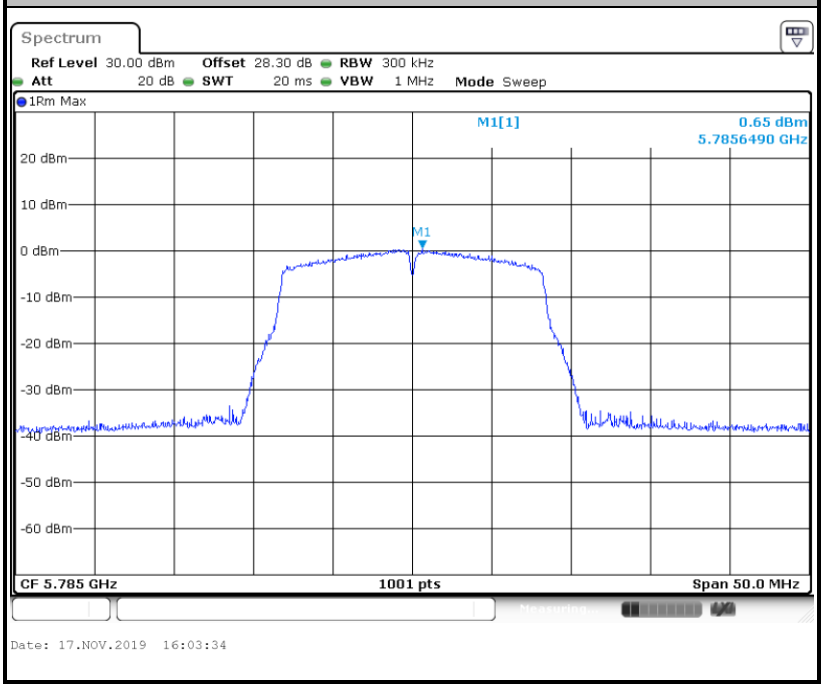
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/MHz)



3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

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

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

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

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

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

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

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

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

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

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

3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

3.4.3 Test Procedures

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

(1) Procedure for Unwanted Emissions Measurements Below 1000MHz

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

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

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

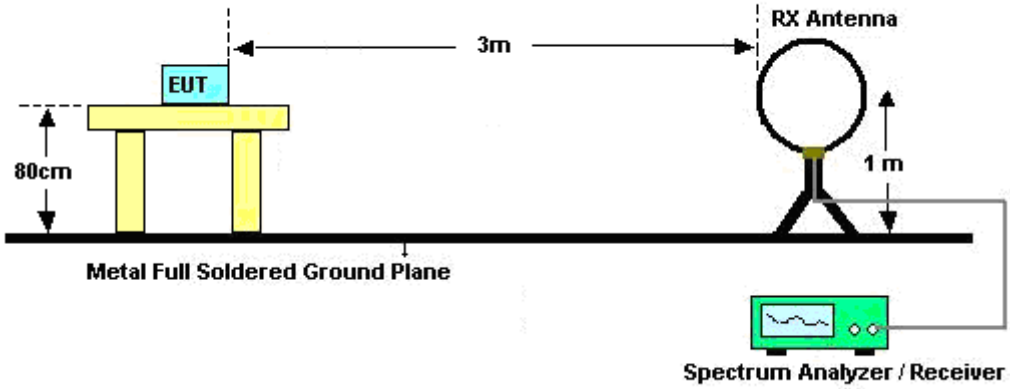
(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

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

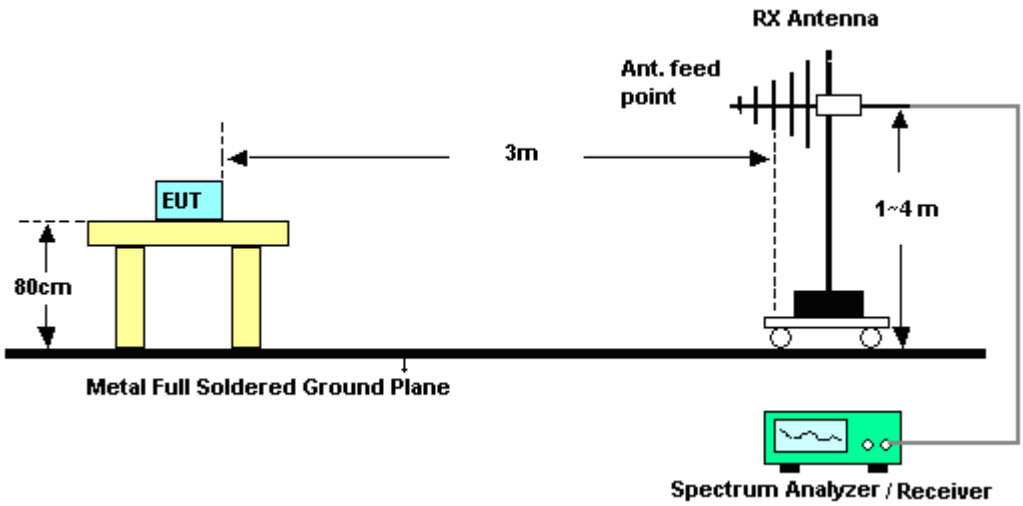
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

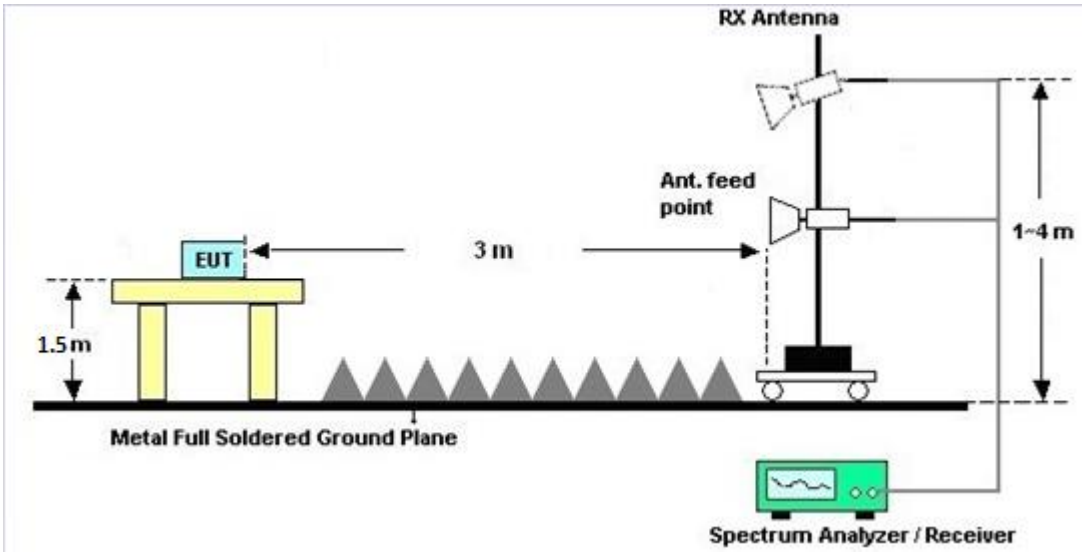
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

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

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix C and D.

3.4.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

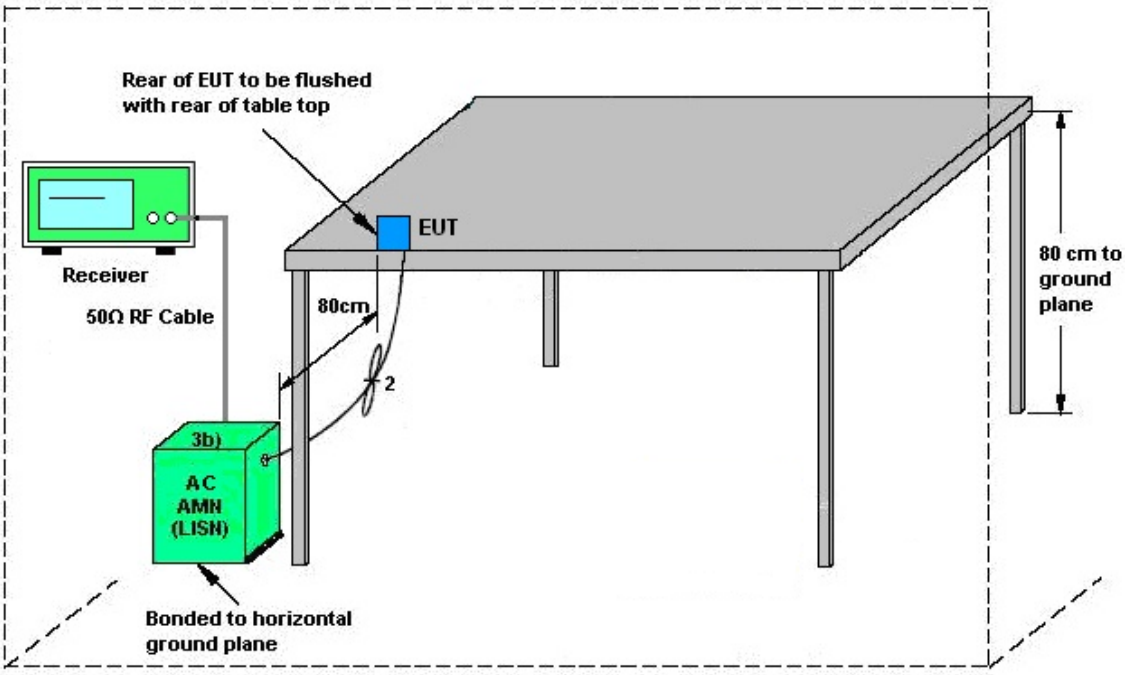
3.5.2 Measuring Instruments

See list of measuring equipment of this test report.

3.5.3 Test Procedures

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

3.5.4 Test Setup



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

3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Automatically Discontinue Transmission

3.6.1 Limit of Automatically Discontinue Transmission

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

3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Result of Automatically Discontinue Transmission

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

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

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

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

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

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

5745MHz

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

3.7 Antenna Requirements

3.7.1 Standard Applicable

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

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

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	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jan. 07, 2019	Nov. 07, 2019~ Nov. 25, 2019	Jan. 06, 2020	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1241	1GHz ~ 18GHz	Jul. 02, 2019	Nov. 07, 2019~ Nov. 25, 2019	Jul. 01, 2020	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	40103 & 07	30MHz~1GHz	Apr. 30, 2019	Nov. 07, 2019~ Nov. 25, 2019	Apr. 29, 2020	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Dec. 05, 2018	Nov. 07, 2019~ Nov. 25, 2019	Dec. 04, 2019	Radiation (03CH13-HY)
Preamplifier	Keysight	83017A	MY53270147	1GHz~26.5GHz	Mar. 15, 2019	Nov. 07, 2019~ Nov. 25, 2019	Mar. 14, 2020	Radiation (03CH13-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590074	1GHz~18GHz	May 20, 2019	Nov. 07, 2019~ Nov. 25, 2019	May 19, 2020	Radiation (03CH13-HY)
Amplifier	Sonoma-Instrument	310 N	187282	9KHz~1GHz	Dec. 18, 2018	Nov. 07, 2019~ Nov. 25, 2019	Dec. 17, 2019	Radiation (03CH13-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 06, 2018	Nov. 07, 2019~ Nov. 25, 2019	Dec. 05, 2019	Radiation (03CH13-HY)
Hygrometer	TECPEL	DTM-303B	TP150115	N/A	Nov. 06, 2019	Nov. 07, 2019~ Nov. 25, 2019	Nov. 07, 2020	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0030/126E	30M-18G	Feb. 13, 2019	Nov. 07, 2019~ Nov. 25, 2019	Feb. 12, 2020	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	804793/4	30M-18G	Feb. 13, 2019	Nov. 07, 2019~ Nov. 25, 2019	Feb. 12, 2020	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24961/4	30M-18G	Feb. 13, 2019	Nov. 07, 2019~ Nov. 25, 2019	Feb. 12, 2020	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30M~40GHz	Mar. 13, 2019	Nov. 07, 2019~ Nov. 25, 2019	Mar. 12, 2020	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY4274/2	30M~40GHz	Mar. 13, 2019	Nov. 07, 2019~ Nov. 25, 2019	Mar. 12, 2020	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY55370526	10Hz~44GHz	Mar. 19, 2019	Nov. 07, 2019~ Nov. 25, 2019	Mar. 18, 2020	Radiation (03CH13-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Nov. 07, 2019~ Nov. 25, 2019	N/A	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Nov. 07, 2019~ Nov. 25, 2019	N/A	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Nov. 07, 2019~ Nov. 25, 2019	N/A	Radiation (03CH13-HY)
Software	AUDIX	E3 6.2009-8-24c	RK-001124	N/A	N/A	Nov. 07, 2019~ Nov. 25, 2019	N/A	Radiation (03CH13-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20Hz ~ 8.4GHz	Nov. 01, 2019	Nov. 07, 2019~ Nov. 25, 2019	Oct. 31, 2020	Radiation (03CH13-HY)
Filter	Woken	WHKX8-5272.5-6750-18000-40ST	SN5	6.75G Highpass	Mar. 13, 2019	Nov. 07, 2019~ Nov. 25, 2019	Mar. 12, 2020	Radiation (03CH13-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN12	1.53GHz Low Pass Filter	Sep. 16, 2019	Nov. 07, 2019~ Nov. 25, 2019	Sep. 15, 2020	Radiation (03CH13-HY)
Hygrometer	Testo	608-H2	41410069	N/A	Jun. 17, 2019	Nov. 12, 2019~ Nov. 17, 2019	Jun. 16, 2020	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO10	10MHz~6GHz	Dec. 19, 2018	Nov. 12, 2019~ Nov. 17, 2019	Dec. 18, 2019	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Jul. 15, 2019	Nov. 12, 2019~ Nov. 17, 2019	Jul. 14, 2020	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1208382	N/A	Mar. 27, 2019	Nov. 12, 2019~ Nov. 17, 2019	Mar. 26, 2020	Conducted (TH05-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jan. 07, 2020	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 15, 2019	Jan. 07, 2020	Nov. 14, 2020	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Mar. 19, 2019	Jan. 07, 2020	Mar. 18, 2020	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 15, 2019	Jan. 07, 2020	Nov. 14, 2020	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Jan. 07, 2020	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 02, 2020	Jan. 07, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 02, 2020	Jan. 07, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Spectrum Analyzer	Keysight	N9010A	MY56070412	10Hz~7GHz	Aug. 27, 2019	Nov. 22, 2019	Aug. 26, 2020	DFS (DFS02-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.0

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.5

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.8

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Derek Hsu	Temperature:	21~25	°C
Test Date:	2019/11/12~2019/11/17	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	16.73	16.73	20.98	20.93	16.33	16.33	0.5	Pass
11a	6Mbps	1	157	5785	16.73	16.73	20.98	23.58	16.33	16.28	0.5	Pass
11a	6Mbps	1	165	5825	16.63	16.68	21.08	22.03	16.33	16.33	0.5	Pass
HT20	MCS0	1	149	5745	17.68	17.68	21.43	21.43	17.58	17.58	0.5	Pass
HT20	MCS0	1	157	5785	17.68	17.73	22.33	21.38	17.53	17.53	0.5	Pass
HT20	MCS0	1	165	5825	17.68	17.68	21.53	21.38	17.53	17.53	0.5	Pass
HT40	MCS0	1	151	5755	36.36	36.46	41.45	41.81	36.23	36.23	0.5	Pass
HT40	MCS0	1	159	5795	36.66	36.36	41.72	41.63	36.05	36.05	0.5	Pass
VHT80	MCS0	1	155	5775	76.00	76.12	81.36	81.52	76.24	76.40	0.5	Pass

Report Number : FR982217-01E

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	13.70	13.30		30.00	30.00	2.50	2.80	Pass
11a	6Mbps	1	157	5785	13.60	13.30		30.00	30.00	2.50	2.80	Pass
11a	6Mbps	1	165	5825	13.60	13.40		30.00	30.00	2.50	2.80	Pass
HT20	MCS0	1	149	5745	13.70	13.30		30.00	30.00	2.50	2.80	Pass
HT20	MCS0	1	157	5785	13.60	13.30		30.00	30.00	2.50	2.80	Pass
HT20	MCS0	1	165	5825	13.60	13.40		30.00	30.00	2.50	2.80	Pass
HT40	MCS0	1	151	5755	13.40	13.20		30.00	30.00	2.50	2.80	Pass
HT40	MCS0	1	159	5795	13.80	13.50		30.00	30.00	2.50	2.80	Pass
VHT20	MCS0	1	149	5745	11.80	11.40		30.00	30.00	2.50	2.80	Pass
VHT20	MCS0	1	157	5785	11.80	11.10		30.00	30.00	2.50	2.80	Pass
VHT20	MCS0	1	165	5825	11.60	11.30		30.00	30.00	2.50	2.80	Pass
VHT40	MCS0	1	151	5755	11.60	11.10		30.00	30.00	2.50	2.80	Pass
VHT40	MCS0	1	159	5795	11.70	11.20		30.00	30.00	2.50	2.80	Pass
VHT80	MCS0	1	155	5775	11.10	10.80		30.00	30.00	2.50	2.80	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	2.75	2.48		30.00	30.00	2.50	2.80	Pass
11a	6Mbps	1	157	5785	2.22	2.22	2.87	2.15		30.00	30.00	2.50	2.80	Pass
11a	6Mbps	1	165	5825	2.22	2.22	2.57	2.54		30.00	30.00	2.50	2.80	Pass
HT20	MCS0	1	149	5745	2.22	2.22	2.18	2.71		30.00	30.00	2.50	2.80	Pass
HT20	MCS0	1	157	5785	2.22	2.22	2.53	2.12		30.00	30.00	2.50	2.80	Pass
HT20	MCS0	1	165	5825	2.22	2.22	2.39	2.34		30.00	30.00	2.50	2.80	Pass
HT40	MCS0	1	151	5755	2.22	2.22	-0.91	-0.47		30.00	30.00	2.50	2.80	Pass
HT40	MCS0	1	159	5795	2.22	2.22	-0.56	-0.40		30.00	30.00	2.50	2.80	Pass
VHT80	MCS0	1	155	5775	2.22	2.22	-5.95	-6.36		30.00	30.00	2.50	2.80	Pass

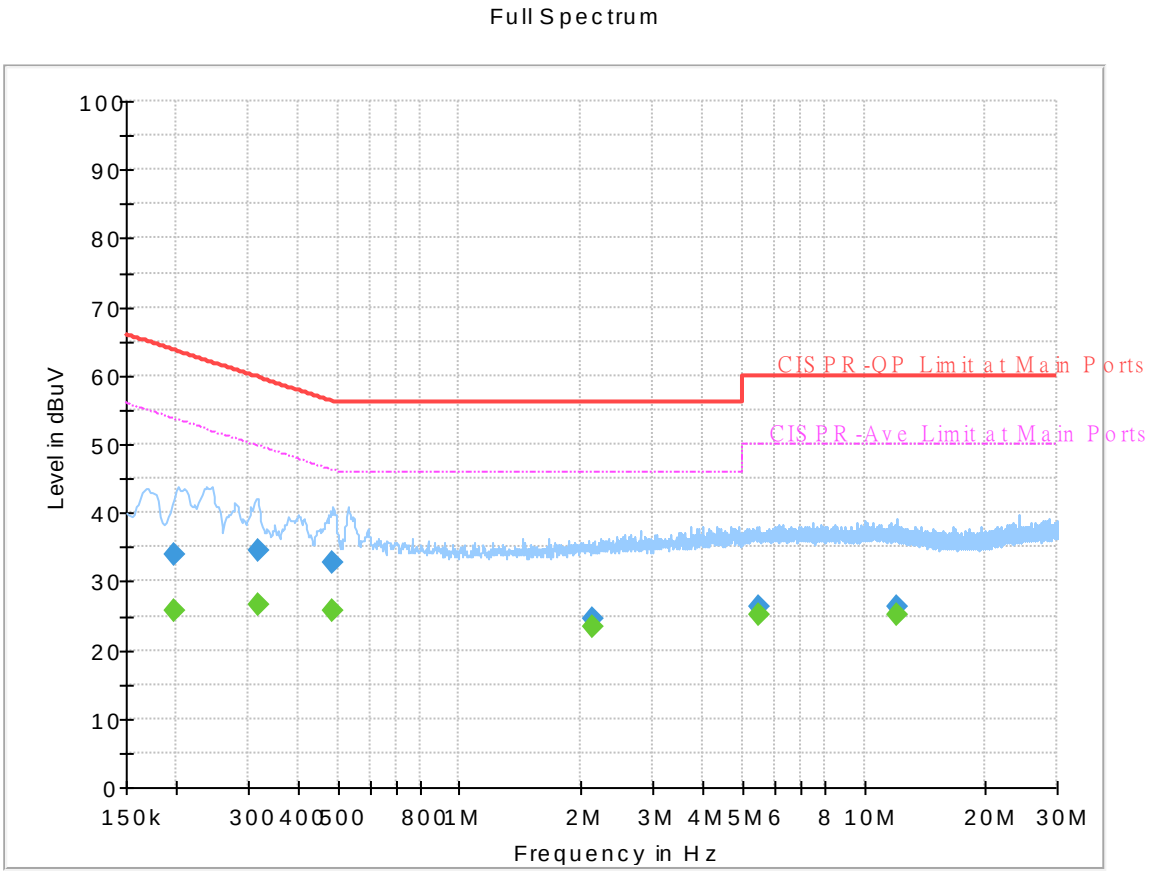
Note: PSD Sum = Max PSD(Ant. 0, Ant. 1) + 10 log (n)

Appendix B. AC Conducted Emission Test Results

Test Engineer :	Howard Huang	**Temperature :**	24~26℃
		Relative Humidity :	52~55%

EUT Information

Report NO :	982217-01
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line



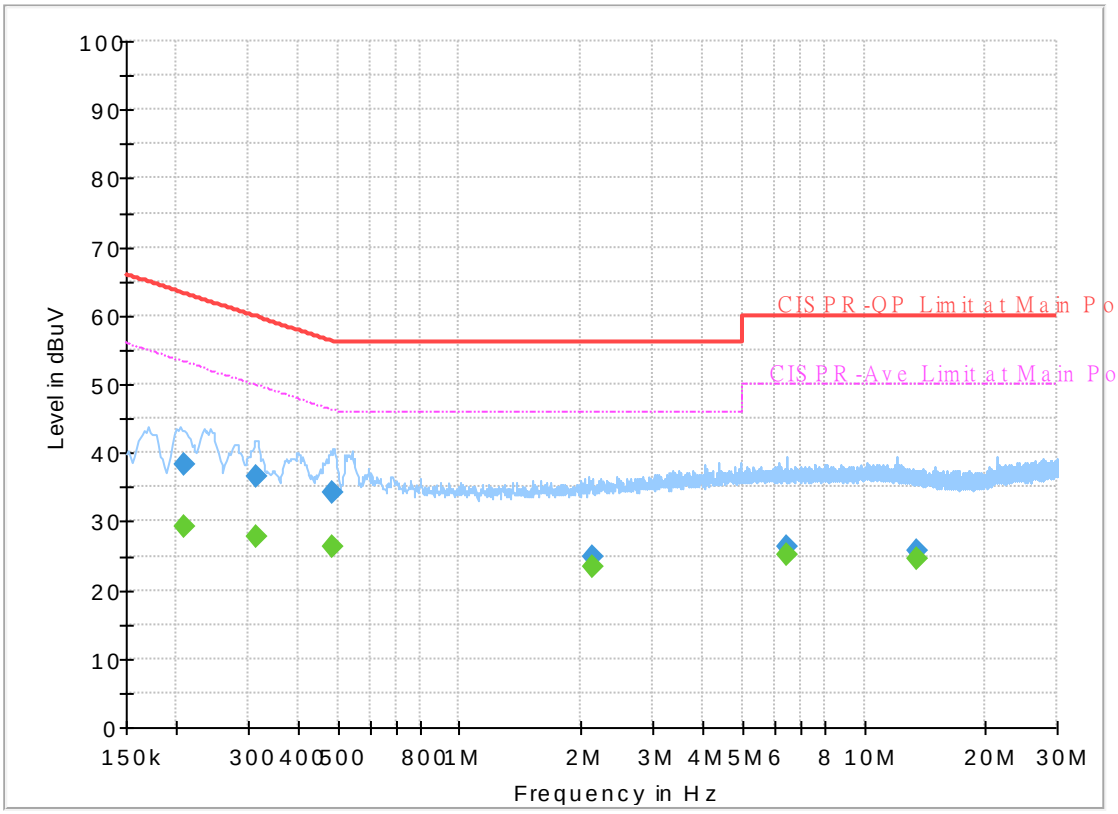
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.197250	---	25.65	53.73	28.08	L1	OFF	19.5
0.197250	34.00	---	63.73	29.73	L1	OFF	19.5
0.318480	---	26.63	49.75	23.12	L1	OFF	19.5
0.318480	34.52	---	59.75	25.23	L1	OFF	19.5
0.483000	---	25.86	46.29	20.43	L1	OFF	19.5
0.483000	32.80	---	56.29	23.49	L1	OFF	19.5
2.141250	---	23.38	46.00	22.62	L1	OFF	19.7
2.141250	24.64	---	56.00	31.36	L1	OFF	19.7
5.514000	---	25.03	50.00	24.97	L1	OFF	19.8
5.514000	26.43	---	60.00	33.57	L1	OFF	19.8
12.029640	---	25.01	50.00	24.99	L1	OFF	20.0
12.029640	26.22	---	60.00	33.78	L1	OFF	20.0

EUT Information

Report NO :	982217-01
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.208500	---	29.17	53.27	24.10	N	OFF	19.6
0.208500	38.16	---	63.27	25.11	N	OFF	19.6
0.313800	---	27.66	49.87	22.21	N	OFF	19.6
0.313800	36.68	---	59.87	23.19	N	OFF	19.6
0.487500	---	26.22	46.21	19.99	N	OFF	19.6
0.487500	34.12	---	56.21	22.09	N	OFF	19.6
2.132250	---	23.35	46.00	22.65	N	OFF	19.6
2.132250	24.71	---	56.00	31.29	N	OFF	19.6
6.457920	---	25.20	50.00	24.80	N	OFF	19.9
6.457920	26.19	---	60.00	33.81	N	OFF	19.9
13.497090	---	24.60	50.00	25.40	N	OFF	20.1
13.497090	25.65	---	60.00	34.35	N	OFF	20.1

Appendix C. Radiated Spurious Emission

Test Engineer :	Ryan Lin , JC Liang , Wilson Wu	Temperature :	21.5~23.5°C
		Relative Humidity :	46.5~49.5%

<EUT with Adapter Mode>

Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5617.6	51.97	-16.23	68.2	40.63	31.8	6.33	26.79	215	332	P	H
		5692.8	53.19	-46.7	99.89	41.72	31.97	6.36	26.86	215	332	P	H
		5718.6	55.62	-54.79	110.41	44.06	32.07	6.37	26.88	215	332	P	H
		5724.8	59.42	-62.32	121.74	47.84	32.1	6.37	26.89	215	332	P	H
	*	5745	103.96	-	-	92.31	32.18	6.38	26.91	215	332	P	H
	*	5745	96.4	-	-	84.75	32.18	6.38	26.91	215	332	A	H
		5609.4	52.28	-15.92	68.2	40.95	31.8	6.32	26.79	100	93	P	V
		5688	53.5	-42.85	96.35	42.05	31.95	6.36	26.86	100	93	P	V
		5719.6	60.87	-49.82	110.69	49.3	32.08	6.37	26.88	100	93	P	V
		5721.6	62.21	-52.24	114.45	50.64	32.09	6.37	26.89	100	93	P	V
	*	5745	105.59	-	-	93.94	32.18	6.38	26.91	100	93	P	V
	*	5745	97.92	-	-	86.27	32.18	6.38	26.91	100	93	A	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 157 5785MHz		5615.8	52.02	-16.18	68.2	40.68	31.8	6.33	26.79	101	328	P	H
		5694.2	53.21	-47.71	100.92	41.73	31.98	6.36	26.86	101	328	P	H
		5705	52.63	-53.97	106.6	41.12	32.02	6.36	26.87	101	328	P	H
		5720.6	51.55	-60.62	112.17	39.98	32.08	6.37	26.88	101	328	P	H
	*	5785	106.55	-	-	94.83	32.27	6.39	26.94	101	328	P	H
	*	5785	99.14	-	-	87.42	32.27	6.39	26.94	101	328	A	H
		5850.4	52.99	-68.3	121.29	41.15	32.4	6.44	27	101	328	P	H
		5870.6	53.46	-52.97	106.43	41.54	32.48	6.46	27.02	101	328	P	H
		5893.6	52.73	-38.67	91.4	40.73	32.57	6.47	27.04	101	328	P	H
		5933.4	51.98	-16.22	68.2	39.87	32.67	6.51	27.07	101	328	P	H
		5616.8	52.36	-15.84	68.2	41.02	31.8	6.33	26.79	100	302	P	V
		5671.8	52.82	-31.55	84.37	41.42	31.89	6.35	26.84	100	302	P	V
		5706.6	53.03	-54.02	107.05	41.51	32.03	6.36	26.87	100	302	P	V
		5724.8	52.07	-69.67	121.74	40.49	32.1	6.37	26.89	100	302	P	V
	*	5785	106.35	-	-	94.63	32.27	6.39	26.94	100	302	P	V
	*	5785	98.79	-	-	87.07	32.27	6.39	26.94	100	302	A	V
		5853.2	53.67	-61.23	114.9	41.82	32.41	6.44	27	100	302	P	V
		5870.2	52.88	-53.66	106.54	40.96	32.48	6.46	27.02	100	302	P	V
		5905.6	53.1	-29.42	82.52	41.06	32.61	6.48	27.05	100	302	P	V
		5932.4	52.05	-16.15	68.2	39.95	32.66	6.51	27.07	100	302	P	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	105.86	-	-	94.07	32.35	6.42	26.98	101	330	P	H
	*	5825	98.35	-	-	86.56	32.35	6.42	26.98	101	330	A	H
		5852.4	63.16	-53.57	116.73	51.31	32.41	6.44	27	101	330	P	H
		5858.4	60.35	-49.5	109.85	48.48	32.43	6.45	27.01	101	330	P	H
		5881	55.69	-45.05	100.74	43.74	32.52	6.46	27.03	101	330	P	H
		5944.8	53.8	-14.4	68.2	41.67	32.69	6.52	27.08	101	330	P	H
	*	5825	105.8	-	-	94.01	32.35	6.42	26.98	101	303	P	V
	*	5825	97.47	-	-	85.68	32.35	6.42	26.98	101	303	A	V
		5850.2	64.04	-57.7	121.74	52.2	32.4	6.44	27	101	303	P	V
		5855.4	61.7	-48.99	110.69	49.84	32.42	6.44	27	101	303	P	V
		5875.2	55.18	-49.87	105.05	43.24	32.5	6.46	27.02	101	303	P	V
		5943.8	54.57	-13.63	68.2	42.44	32.69	6.52	27.08	101	303	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 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	47.33	-26.67	74	53.27	39.9	10.46	56.3	100	0	P	H
		17235	47.26	-20.94	68.2	50.94	39.94	12.95	56.57	100	0	P	H
		11490	46.39	-27.61	74	52.33	39.9	10.46	56.3	100	0	P	V
		17235	47.94	-20.26	68.2	51.62	39.94	12.95	56.57	100	0	P	V
802.11a CH 157 5785MHz		11570	46.64	-27.36	74	52.61	39.83	10.5	56.3	100	0	P	H
		17355	49.48	-18.72	68.2	52.88	40.33	13.08	56.81	100	0	P	H
		11570	46.21	-27.79	74	52.18	39.83	10.5	56.3	100	0	P	V
		17355	48	-20.2	68.2	51.4	40.33	13.08	56.81	100	0	P	V
802.11a CH 165 5825MHz		11650	45.85	-28.15	74	52.06	39.55	10.54	56.3	100	0	P	H
		17475	49.47	-18.73	68.2	52.48	40.83	13.21	57.05	100	0	P	H
		11650	46.46	-27.54	74	52.67	39.55	10.54	56.3	100	0	P	V
		17475	48.57	-19.63	68.2	51.58	40.83	13.21	57.05	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n 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		5622.8	52.06	-16.14	68.2	40.73	31.8	6.33	26.8	195	327	P	H
		5687	54.69	-40.92	95.61	43.24	31.95	6.35	26.85	195	327	P	H
		5719.4	57.71	-52.92	110.63	46.14	32.08	6.37	26.88	195	327	P	H
		5723.8	62.94	-56.52	119.46	51.36	32.1	6.37	26.89	195	327	P	H
	*	5745	105.69	-	-	94.04	32.18	6.38	26.91	195	327	P	H
	*	5745	97.88	-	-	86.23	32.18	6.38	26.91	195	327	A	H
		5638.4	52.22	-15.98	68.2	40.89	31.8	6.34	26.81	101	92	P	V
		5686.4	53.9	-41.27	95.17	42.45	31.95	6.35	26.85	101	92	P	V
		5716.4	58.77	-51.02	109.79	47.21	32.07	6.37	26.88	101	92	P	V
		5722.8	61.57	-55.61	117.18	50	32.09	6.37	26.89	101	92	P	V
	*	5745	105.4	-	-	93.75	32.18	6.38	26.91	101	92	P	V
	*	5745	97.61	-	-	85.96	32.18	6.38	26.91	101	92	A	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 157 5785MHz		5638.4	51.79	-16.41	68.2	40.46	31.8	6.34	26.81	177	327	P	H
		5696.6	53.13	-49.56	102.69	41.64	31.99	6.36	26.86	177	327	P	H
		5712.4	52.91	-55.76	108.67	41.38	32.05	6.36	26.88	177	327	P	H
		5724.8	52.1	-69.64	121.74	40.52	32.1	6.37	26.89	177	327	P	H
	*	5785	105.59	-	-	93.87	32.27	6.39	26.94	177	327	P	H
	*	5785	97.88	-	-	86.16	32.27	6.39	26.94	177	327	A	H
		5850.2	52.89	-68.85	121.74	41.05	32.4	6.44	27	177	327	P	H
		5857.6	53.63	-56.44	110.07	41.75	32.43	6.45	27	177	327	P	H
		5900.4	52.52	-33.84	86.36	40.48	32.6	6.48	27.04	177	327	P	H
		5940.6	52.08	-16.12	68.2	39.97	32.68	6.51	27.08	177	327	P	H
		5611.6	52.59	-15.61	68.2	41.26	31.8	6.32	26.79	104	91	P	V
		5697.6	54.24	-49.19	103.43	42.75	31.99	6.36	26.86	104	91	P	V
		5703	52.3	-53.74	106.04	40.8	32.01	6.36	26.87	104	91	P	V
		5720	52.08	-58.72	110.8	40.51	32.08	6.37	26.88	104	91	P	V
	*	5785	104.43	-	-	92.71	32.27	6.39	26.94	104	91	P	V
	*	5785	96.85	-	-	85.13	32.27	6.39	26.94	104	91	A	V
		5854.2	50.83	-61.79	112.62	38.97	32.42	6.44	27	104	91	P	V
		5860.8	51.98	-57.19	109.17	40.1	32.44	6.45	27.01	104	91	P	V
		5878.8	53.1	-49.28	102.38	41.14	32.52	6.46	27.02	104	91	P	V
		5937	52.29	-15.91	68.2	40.18	32.67	6.51	27.07	104	91	P	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	105.65	-	-	93.86	32.35	6.42	26.98	151	328	P	H
	*	5825	97.58	-	-	85.79	32.35	6.42	26.98	151	328	A	H
		5853.8	57.24	-56.3	113.54	45.38	32.42	6.44	27	151	328	P	H
		5855.2	53.67	-57.07	110.74	41.81	32.42	6.44	27	151	328	P	H
		5917.2	53.61	-20.34	73.95	41.55	32.63	6.49	27.06	151	328	P	H
		5930.4	52.34	-15.86	68.2	40.25	32.66	6.5	27.07	151	328	P	H
	*	5825	104.92	-	-	93.13	32.35	6.42	26.98	101	299	P	V
	*	5825	96.63	-	-	84.84	32.35	6.42	26.98	101	299	A	V
		5852.4	56.89	-59.84	116.73	45.04	32.41	6.44	27	101	299	P	V
		5855.6	57.94	-52.69	110.63	46.08	32.42	6.44	27	101	299	P	V
		5881.4	54.64	-45.81	100.45	42.67	32.53	6.47	27.03	101	299	P	V
		5947.8	53.07	-15.13	68.2	40.93	32.7	6.52	27.08	101	299	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n 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	47.06	-26.94	74	53	39.9	10.46	56.3	100	0	P	H
		17235	47.45	-20.75	68.2	51.13	39.94	12.95	56.57	100	0	P	H
		11490	46.25	-27.75	74	52.19	39.9	10.46	56.3	100	0	P	V
		17235	48.64	-19.56	68.2	52.32	39.94	12.95	56.57	100	0	P	V
802.11n HT20 CH 157 5785MHz		11570	46.71	-27.29	74	52.68	39.83	10.5	56.3	100	0	P	H
		17355	48.29	-19.91	68.2	51.69	40.33	13.08	56.81	100	0	P	H
		11570	45.63	-28.37	74	51.6	39.83	10.5	56.3	100	0	P	V
		17355	49.53	-18.67	68.2	52.93	40.33	13.08	56.81	100	0	P	V
802.11n HT20 CH 165 5825MHz		11650	46.34	-27.66	74	52.55	39.55	10.54	56.3	100	0	P	H
		17475	49.11	-19.09	68.2	52.12	40.83	13.21	57.05	100	0	P	H
		11650	47.3	-26.7	74	53.51	39.55	10.54	56.3	100	0	P	V
		17475	48.11	-20.09	68.2	51.12	40.83	13.21	57.05	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n 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)
802.11n HT40 CH 151 5755MHz		5626.8	52.36	-15.84	68.2	41.03	31.8	6.33	26.8	284	323	P	H
		5692.2	55.63	-43.82	99.45	44.16	31.97	6.36	26.86	284	323	P	H
		5713.2	61.4	-47.5	108.9	49.86	32.05	6.37	26.88	284	323	P	H
		5724	63.46	-56.46	119.92	51.88	32.1	6.37	26.89	284	323	P	H
	*	5755	103.61	-	-	91.93	32.21	6.38	26.91	284	323	P	H
	*	5755	95.71	-	-	84.03	32.21	6.38	26.91	284	323	A	H
		5854.2	51.74	-60.88	112.62	39.88	32.42	6.44	27	284	323	P	H
		5856.6	51.02	-59.33	110.35	39.14	32.43	6.45	27	284	323	P	H
		5914.6	52.78	-23.09	75.87	40.71	32.63	6.49	27.05	284	323	P	H
		5947	52.1	-16.1	68.2	39.97	32.69	6.52	27.08	284	323	P	H
		5601	51.8	-16.4	68.2	40.46	31.8	6.32	26.78	110	93	P	V
		5696	55.71	-46.54	102.25	44.23	31.98	6.36	26.86	110	93	P	V
		5714.6	61.71	-47.58	109.29	50.16	32.06	6.37	26.88	110	93	P	V
		5722	64.22	-51.14	115.36	52.65	32.09	6.37	26.89	110	93	P	V
	*	5755	102.72	-	-	91.04	32.21	6.38	26.91	110	93	P	V
	*	5755	95.11	-	-	83.43	32.21	6.38	26.91	110	93	A	V
		5853.2	53.35	-61.55	114.9	41.5	32.41	6.44	27	110	93	P	V
		5872	52.09	-53.95	106.04	40.16	32.49	6.46	27.02	110	93	P	V
		5914.4	52.48	-23.54	76.02	40.41	32.63	6.49	27.05	110	93	P	V
		5946.6	52.2	-16	68.2	40.07	32.69	6.52	27.08	110	93	P	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 HT40 CH 159 5795MHz		5631.8	52.38	-15.82	68.2	41.06	31.8	6.33	26.81	280	324	P	H
		5665.8	52.5	-27.43	79.93	41.13	31.86	6.35	26.84	280	324	P	H
		5706.4	51.99	-55	106.99	40.47	32.03	6.36	26.87	280	324	P	H
		5722.2	53.24	-62.58	115.82	41.67	32.09	6.37	26.89	280	324	P	H
	*	5795	102.91	-	-	91.17	32.29	6.4	26.95	280	324	P	H
	*	5795	95.4	-	-	83.66	32.29	6.4	26.95	280	324	A	H
		5851.6	52.94	-65.61	118.55	41.09	32.41	6.44	27	280	324	P	H
		5859	53.47	-56.21	109.68	41.59	32.44	6.45	27.01	280	324	P	H
		5877.4	52.03	-51.39	103.42	40.08	32.51	6.46	27.02	280	324	P	H
		5937	52.66	-15.54	68.2	40.55	32.67	6.51	27.07	280	324	P	H
		5626.6	51.73	-16.47	68.2	40.4	31.8	6.33	26.8	107	91	P	V
		5693.2	52.39	-47.8	100.19	40.92	31.97	6.36	26.86	107	91	P	V
		5715.8	52.15	-57.48	109.63	40.6	32.06	6.37	26.88	107	91	P	V
		5722.2	53.6	-62.22	115.82	42.03	32.09	6.37	26.89	107	91	P	V
	*	5795	102.62	-	-	90.88	32.29	6.4	26.95	107	91	P	V
	*	5795	94.74	-	-	83	32.29	6.4	26.95	107	91	A	V
		5854.6	52.87	-58.84	111.71	41.01	32.42	6.44	27	107	91	P	V
		5864	52.3	-55.98	108.28	40.4	32.46	6.45	27.01	107	91	P	V
		5912.8	52.05	-25.15	77.2	39.98	32.63	6.49	27.05	107	91	P	V
		5946.2	52.11	-16.09	68.2	39.98	32.69	6.52	27.08	107	91	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n 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	46.6	-27.4	74	52.54	39.89	10.47	56.3	100	0	P	H
		17265	48.21	-19.99	68.2	51.89	39.97	12.98	56.63	100	0	P	H
		11510	46.62	-27.38	74	52.56	39.89	10.47	56.3	100	0	P	V
		17265	48.08	-20.12	68.2	51.76	39.97	12.98	56.63	100	0	P	V
802.11n HT40 CH 159 5795MHz		11590	45.92	-28.08	74	51.9	39.81	10.51	56.3	100	0	P	H
		17385	48.73	-19.47	68.2	51.98	40.51	13.11	56.87	100	0	P	H
		11590	45.6	-28.4	74	51.58	39.81	10.51	56.3	100	0	P	V
		17385	48.72	-19.48	68.2	51.97	40.51	13.11	56.87	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11ac 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)
802.11ac VHT80 CH 155 5775MHz		5631.8	52.14	-16.06	68.2	40.82	31.8	6.33	26.81	266	324	P	H
		5699	57.67	-46.79	104.46	46.18	32	6.36	26.87	266	324	P	H
		5717.4	60.6	-49.47	110.07	49.04	32.07	6.37	26.88	266	324	P	H
		5724.2	60.05	-60.33	120.38	48.47	32.1	6.37	26.89	266	324	P	H
	*	5775	96.35	-	-	84.64	32.25	6.39	26.93	266	324	P	H
	*	5775	88.63	-	-	76.92	32.25	6.39	26.93	266	324	A	H
		5850.8	53.35	-67.03	120.38	41.51	32.4	6.44	27	266	324	P	H
		5867.6	52.98	-54.29	107.27	41.07	32.47	6.45	27.01	266	324	P	H
		5880	53.01	-48.48	101.49	41.05	32.52	6.46	27.02	266	324	P	H
		5940.8	51.79	-16.41	68.2	39.68	32.68	6.51	27.08	266	324	P	H
		5610.8	52.91	-15.29	68.2	41.58	31.8	6.32	26.79	109	91	P	V
		5700	56.08	-49.12	105.2	44.59	32	6.36	26.87	109	91	P	V
		5716.2	61.09	-48.65	109.74	49.54	32.06	6.37	26.88	109	91	P	V
		5722.6	62.1	-54.63	116.73	50.53	32.09	6.37	26.89	109	91	P	V
	*	5775	96.64	-	-	84.93	32.25	6.39	26.93	109	91	P	V
	*	5775	88.65	-	-	76.94	32.25	6.39	26.93	109	91	A	V
		5850.4	54.5	-66.79	121.29	42.66	32.4	6.44	27	109	91	P	V
		5856.4	52.4	-58.01	110.41	40.52	32.43	6.45	27	109	91	P	V
		5881.8	52.07	-48.08	100.15	40.1	32.53	6.47	27.03	109	91	P	V
		5928.6	52.9	-15.3	68.2	40.81	32.66	6.5	27.07	109	91	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11ac 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	46.22	-27.78	74	52.18	39.85	10.49	56.3	100	0	P	H
		17325	47.93	-20.27	68.2	51.49	40.15	13.04	56.75	100	0	P	H
		11550	46.01	-27.99	74	51.97	39.85	10.49	56.3	100	0	P	V
		17325	47.21	-20.99	68.2	50.77	40.15	13.04	56.75	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

5GHz WIFI 802.11a (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 802.11a LF		130.88	12.3	-31.2	43.5	26.2	17.3	0.99	32.19	-	-	P	H
		267.65	14.77	-31.23	46	26.41	19.12	1.39	32.15	-	-	P	H
		564.47	22.41	-23.59	46	26.89	25.71	2.03	32.22	-	-	P	H
		744.89	25.81	-20.19	46	27.69	27.8	2.32	32	-	-	P	H
		820.55	25.91	-20.09	46	27.47	27.73	2.5	31.79	-	-	P	H
		956.35	29.86	-16.14	46	27.48	30.63	2.68	30.93	100	0	P	H
		139.61	12.03	-31.47	43.5	25.99	17.2	1.02	32.18	-	-	P	V
		256.01	14.74	-31.26	46	26.47	19.06	1.36	32.15	-	-	P	V
		515	20.2	-25.8	46	26.8	23.7	1.88	32.18	-	-	P	V
		749.74	25.75	-20.25	46	27.61	27.8	2.33	31.99	-	-	P	V
		922.4	28.22	-17.78	46	27.56	29.25	2.63	31.22	-	-	P	V
		953.44	30	-16	46	27.73	30.57	2.66	30.96	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

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		5611.2	52.22	-15.98	68.2	40.89	31.8	6.32	26.79	185	53	P	H
		5685.8	52.89	-41.83	94.72	41.45	31.94	6.35	26.85	185	53	P	H
		5717.4	57.2	-52.87	110.07	45.64	32.07	6.37	26.88	185	53	P	H
		5724.8	60.63	-61.11	121.74	49.05	32.1	6.37	26.89	185	53	P	H
	*	5745	105.99	-	-	94.34	32.18	6.38	26.91	185	53	P	H
	*	5745	97.97	-	-	86.32	32.18	6.38	26.91	185	53	A	H
		5615	51.65	-16.55	68.2	40.31	31.8	6.33	26.79	253	95	P	V
		5692.2	52.53	-46.92	99.45	41.06	31.97	6.36	26.86	253	95	P	V
		5717.4	54.92	-55.15	110.07	43.36	32.07	6.37	26.88	253	95	P	V
		5722.2	58.59	-57.23	115.82	47.02	32.09	6.37	26.89	253	95	P	V
	*	5745	104.49	-	-	92.84	32.18	6.38	26.91	253	95	P	V
	*	5745	97.08	-	-	85.43	32.18	6.38	26.91	253	95	A	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 157 5785MHz		5623	51.68	-16.52	68.2	40.35	31.8	6.33	26.8	174	51	P	H
		5687	52.31	-43.3	95.61	40.86	31.95	6.35	26.85	174	51	P	H
		5709	53.21	-54.51	107.72	41.68	32.04	6.36	26.87	174	51	P	H
		5724	51.74	-68.18	119.92	40.16	32.1	6.37	26.89	174	51	P	H
	*	5785	106.64	-	-	94.92	32.27	6.39	26.94	174	51	P	H
	*	5785	98.76	-	-	87.04	32.27	6.39	26.94	174	51	A	H
		5850	51.56	-70.64	122.2	39.72	32.4	6.44	27	174	51	P	H
		5856.6	52.84	-57.51	110.35	40.96	32.43	6.45	27	174	51	P	H
		5894.4	53.04	-37.77	90.81	41.02	32.58	6.48	27.04	174	51	P	H
		5928.6	51.52	-16.68	68.2	39.43	32.66	6.5	27.07	174	51	P	H
		5616.8	52.18	-16.02	68.2	40.84	31.8	6.33	26.79	259	93	P	V
		5676.2	52.29	-35.34	87.63	40.89	31.9	6.35	26.85	259	93	P	V
		5719.2	52.03	-58.55	110.58	40.46	32.08	6.37	26.88	259	93	P	V
		5724.6	52.01	-69.28	121.29	40.43	32.1	6.37	26.89	259	93	P	V
	*	5785	104.98	-	-	93.26	32.27	6.39	26.94	259	93	P	V
	*	5785	97.52	-	-	85.8	32.27	6.39	26.94	259	93	A	V
		5853	52.61	-62.75	115.36	40.76	32.41	6.44	27	259	93	P	V
		5870.2	53.75	-52.79	106.54	41.83	32.48	6.46	27.02	259	93	P	V
		5898.2	52.67	-35.32	87.99	40.64	32.59	6.48	27.04	259	93	P	V
		5945.6	51.82	-16.38	68.2	39.69	32.69	6.52	27.08	259	93	P	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	106.71	-	-	94.92	32.35	6.42	26.98	180	52	P	H
	*	5825	98.53	-	-	86.74	32.35	6.42	26.98	180	52	A	H
		5850.8	55.37	-65.01	120.38	43.53	32.4	6.44	27	180	52	P	H
		5857.8	59.32	-50.69	110.01	47.44	32.43	6.45	27	180	52	P	H
		5879	53.25	-48.98	102.23	41.29	32.52	6.46	27.02	180	52	P	H
		5936.6	51.96	-16.24	68.2	39.85	32.67	6.51	27.07	180	52	P	H
	*	5825	106.19	-	-	94.4	32.35	6.42	26.98	240	91	P	V
	*	5825	97.93	-	-	86.14	32.35	6.42	26.98	240	91	A	V
		5851.6	58.93	-59.62	118.55	47.08	32.41	6.44	27	240	91	P	V
		5855.8	60.02	-50.56	110.58	48.16	32.42	6.44	27	240	91	P	V
		5885.6	52.53	-44.8	97.33	40.55	32.54	6.47	27.03	240	91	P	V
		5940.8	52.05	-16.15	68.2	39.94	32.68	6.51	27.08	240	91	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 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	46.71	-27.29	74	52.65	39.9	10.46	56.3	100	0	P	H
		17235	48.01	-20.19	68.2	51.69	39.94	12.95	56.57	100	0	P	H
		11490	46.76	-27.24	74	52.7	39.9	10.46	56.3	100	0	P	V
		17235	48.25	-19.95	68.2	51.93	39.94	12.95	56.57	100	0	P	V
802.11a CH 157 5785MHz		11570	45.72	-28.28	74	51.69	39.83	10.5	56.3	100	0	P	H
		17355	48.42	-19.78	68.2	51.82	40.33	13.08	56.81	100	0	P	H
		11570	45.6	-28.4	74	51.57	39.83	10.5	56.3	100	0	P	V
		17355	48.87	-19.33	68.2	52.27	40.33	13.08	56.81	100	0	P	V
802.11a CH 165 5825MHz		11650	46.63	-27.37	74	52.84	39.55	10.54	56.3	100	0	P	H
		17475	49.25	-18.95	68.2	52.26	40.83	13.21	57.05	100	0	P	H
		11650	46.69	-27.31	74	52.9	39.55	10.54	56.3	100	0	P	V
		17475	50.96	-17.24	68.2	53.97	40.83	13.21	57.05	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n 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		5638.2	52.65	-15.55	68.2	41.32	31.8	6.34	26.81	186	52	P	H
		5698	52.44	-51.29	103.73	40.95	31.99	6.36	26.86	186	52	P	H
		5719.8	59.04	-51.7	110.74	47.47	32.08	6.37	26.88	186	52	P	H
		5725	62.63	-59.57	122.2	51.05	32.1	6.37	26.89	186	52	P	H
	*	5745	105.85	-	-	94.2	32.18	6.38	26.91	186	52	P	H
	*	5745	98.51	-	-	86.86	32.18	6.38	26.91	186	52	A	H
		5617	52.03	-16.17	68.2	40.69	31.8	6.33	26.79	249	96	P	V
		5676.4	52.46	-35.32	87.78	41.05	31.91	6.35	26.85	249	96	P	V
		5720	56.04	-54.76	110.8	44.47	32.08	6.37	26.88	249	96	P	V
		5723.8	60.24	-59.22	119.46	48.66	32.1	6.37	26.89	249	96	P	V
	*	5745	104.73	-	-	93.08	32.18	6.38	26.91	249	96	P	V
	*	5745	97.31	-	-	85.66	32.18	6.38	26.91	249	96	A	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 157 5785MHz		5630.2	52.95	-15.25	68.2	41.62	31.8	6.33	26.8	175	52	P	H
		5681.4	52.09	-39.38	91.47	40.66	31.93	6.35	26.85	175	52	P	H
		5718.6	52.58	-57.83	110.41	41.02	32.07	6.37	26.88	175	52	P	H
		5722.8	52.92	-64.26	117.18	41.35	32.09	6.37	26.89	175	52	P	H
	*	5785	106.44	-	-	94.72	32.27	6.39	26.94	175	52	P	H
	*	5785	98.8	-	-	87.08	32.27	6.39	26.94	175	52	A	H
		5850	52.52	-69.68	122.2	40.68	32.4	6.44	27	175	52	P	H
		5862.4	54.22	-54.51	108.73	42.33	32.45	6.45	27.01	175	52	P	H
		5909	53.94	-26.07	80.01	41.88	32.62	6.49	27.05	175	52	P	H
		5942	51.77	-16.43	68.2	39.66	32.68	6.51	27.08	175	52	P	H
		5618.6	51.74	-16.46	68.2	40.4	31.8	6.33	26.79	251	93	P	V
		5698	51.6	-52.13	103.73	40.11	31.99	6.36	26.86	251	93	P	V
		5702.2	51.75	-54.07	105.82	40.25	32.01	6.36	26.87	251	93	P	V
		5723.4	51.49	-67.06	118.55	39.92	32.09	6.37	26.89	251	93	P	V
	*	5785	105.25	-	-	93.53	32.27	6.39	26.94	251	93	P	V
	*	5785	97.78	-	-	86.06	32.27	6.39	26.94	251	93	A	V
		5851.8	51.97	-66.13	118.1	40.12	32.41	6.44	27	251	93	P	V
		5855.6	53.38	-57.25	110.63	41.52	32.42	6.44	27	251	93	P	V
		5918.6	52.66	-20.26	72.92	40.59	32.64	6.49	27.06	251	93	P	V
		5929.6	52.15	-16.05	68.2	40.06	32.66	6.5	27.07	251	93	P	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	105.8	-	-	94.01	32.35	6.42	26.98	177	50	P	H
	*	5825	98.26	-	-	86.47	32.35	6.42	26.98	177	50	A	H
		5854.8	55.5	-55.76	111.26	43.64	32.42	6.44	27	177	50	P	H
		5856	55.02	-55.5	110.52	43.16	32.42	6.44	27	177	50	P	H
		5881.4	53.61	-46.84	100.45	41.64	32.53	6.47	27.03	177	50	P	H
		5931	52	-16.2	68.2	39.91	32.66	6.5	27.07	177	50	P	H
	*	5825	105.52	-	-	93.73	32.35	6.42	26.98	234	92	P	V
	*	5825	97.53	-	-	85.74	32.35	6.42	26.98	234	92	A	V
		5850.6	56.27	-64.56	120.83	44.43	32.4	6.44	27	234	92	P	V
		5857.2	54.16	-56.02	110.18	42.28	32.43	6.45	27	234	92	P	V
		5888.4	53.2	-42.05	95.25	41.21	32.55	6.47	27.03	234	92	P	V
		5944.6	52.69	-15.51	68.2	40.56	32.69	6.52	27.08	234	92	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n 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	46.4	-27.6	74	52.34	39.9	10.46	56.3	100	0	P	H
		17235	47.85	-20.35	68.2	51.53	39.94	12.95	56.57	100	0	P	H
		11490	47.07	-26.93	74	53.01	39.9	10.46	56.3	100	0	P	V
		17235	47.99	-20.21	68.2	51.67	39.94	12.95	56.57	100	0	P	V
802.11n HT20 CH 157 5785MHz		11570	45.62	-28.38	74	51.59	39.83	10.5	56.3	100	0	P	H
		17355	48.47	-19.73	68.2	51.87	40.33	13.08	56.81	100	0	P	H
		11570	45.78	-28.22	74	51.75	39.83	10.5	56.3	100	0	P	V
		17355	48.48	-19.72	68.2	51.88	40.33	13.08	56.81	100	0	P	V
802.11n HT20 CH 165 5825MHz		11650	46.34	-27.66	74	52.55	39.55	10.54	56.3	100	0	P	H
		17475	49.06	-19.14	68.2	52.07	40.83	13.21	57.05	100	0	P	H
		11650	46.7	-27.3	74	52.91	39.55	10.54	56.3	100	0	P	V
		17475	48.54	-19.66	68.2	51.55	40.83	13.21	57.05	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n 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)
802.11n HT40 CH 151 5755MHz		5614.4	51.9	-16.3	68.2	40.56	31.8	6.33	26.79	176	51	P	H
		5697.6	55.86	-47.57	103.43	44.37	31.99	6.36	26.86	176	51	P	H
		5718	60.94	-49.3	110.24	49.38	32.07	6.37	26.88	176	51	P	H
		5724.6	63.28	-58.01	121.29	51.7	32.1	6.37	26.89	176	51	P	H
	*	5755	103.12	-	-	91.44	32.21	6.38	26.91	176	51	P	H
	*	5755	95.58	-	-	83.9	32.21	6.38	26.91	176	51	A	H
		5851.2	52.32	-67.14	119.46	40.48	32.4	6.44	27	176	51	P	H
		5871.6	51.87	-54.28	106.15	39.94	32.49	6.46	27.02	176	51	P	H
		5914.2	53.09	-23.08	76.17	41.02	32.63	6.49	27.05	176	51	P	H
		5935.2	51.74	-16.46	68.2	39.63	32.67	6.51	27.07	176	51	P	H
		5648.6	52.16	-16.04	68.2	40.84	31.8	6.34	26.82	254	96	P	V
		5698	53.47	-50.26	103.73	41.98	31.99	6.36	26.86	254	96	P	V
		5716.8	59.95	-49.96	109.91	48.39	32.07	6.37	26.88	254	96	P	V
		5724.6	62.27	-59.02	121.29	50.69	32.1	6.37	26.89	254	96	P	V
	*	5755	102.13	-	-	90.45	32.21	6.38	26.91	254	96	P	V
	*	5755	94.37	-	-	82.69	32.21	6.38	26.91	254	96	A	V
		5850	51.29	-70.91	122.2	39.45	32.4	6.44	27	254	96	P	V
		5871.6	52.97	-53.18	106.15	41.04	32.49	6.46	27.02	254	96	P	V
		5923.2	52.46	-17.07	69.53	40.37	32.65	6.5	27.06	254	96	P	V
		5931.6	52.26	-15.94	68.2	40.16	32.66	6.51	27.07	254	96	P	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 HT40 CH 159 5795MHz		5644.2	51.47	-16.73	68.2	40.15	31.8	6.34	26.82	168	50	P	H
		5676	52.57	-34.91	87.48	41.16	31.9	6.35	26.84	168	50	P	H
		5711.4	53.1	-55.29	108.39	41.57	32.05	6.36	26.88	168	50	P	H
		5724.8	52.73	-69.01	121.74	41.15	32.1	6.37	26.89	168	50	P	H
	*	5795	103.28	-	-	91.54	32.29	6.4	26.95	168	50	P	H
	*	5795	95.65	-	-	83.91	32.29	6.4	26.95	168	50	A	H
		5852	56.69	-60.95	117.64	44.84	32.41	6.44	27	168	50	P	H
		5860.6	54.83	-54.4	109.23	42.95	32.44	6.45	27.01	168	50	P	H
		5886.4	54	-42.74	96.74	42.01	32.55	6.47	27.03	168	50	P	H
		5950	52.91	-15.29	68.2	40.78	32.7	6.52	27.09	168	50	P	H
		5628.8	52.28	-15.92	68.2	40.95	31.8	6.33	26.8	248	92	P	V
		5698	51.51	-52.22	103.73	40.02	31.99	6.36	26.86	248	92	P	V
		5709.4	52.87	-54.96	107.83	41.34	32.04	6.36	26.87	248	92	P	V
		5724	51.24	-68.68	119.92	39.66	32.1	6.37	26.89	248	92	P	V
	*	5795	102.64	-	-	90.9	32.29	6.4	26.95	248	92	P	V
	*	5795	95.1	-	-	83.36	32.29	6.4	26.95	248	92	A	V
		5854.2	54.32	-58.3	112.62	42.46	32.42	6.44	27	248	92	P	V
		5856.4	54.09	-56.32	110.41	42.21	32.43	6.45	27	248	92	P	V
		5921.8	54.28	-16.28	70.56	42.2	32.64	6.5	27.06	248	92	P	V
		5932.4	51.53	-16.67	68.2	39.43	32.66	6.51	27.07	248	92	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n 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	47.22	-26.78	74	53.16	39.89	10.47	56.3	100	0	P	H
		17265	47.56	-20.64	68.2	51.24	39.97	12.98	56.63	100	0	P	H
		11510	47.01	-26.99	74	52.95	39.89	10.47	56.3	100	0	P	V
		17265	48.11	-20.09	68.2	51.79	39.97	12.98	56.63	100	0	P	V
802.11n HT40 CH 159 5795MHz		11590	46.53	-27.47	74	52.51	39.81	10.51	56.3	100	0	P	H
		17385	48.21	-19.99	68.2	51.46	40.51	13.11	56.87	100	0	P	H
		11590	45.67	-28.33	74	51.65	39.81	10.51	56.3	100	0	P	V
		17385	50.1	-18.1	68.2	53.35	40.51	13.11	56.87	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11ac 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)
802.11ac VHT80 CH 155 5775MHz		5618.2	51.58	-16.62	68.2	40.24	31.8	6.33	26.79	170	51	P	H
		5695.2	57.75	-43.91	101.66	46.27	31.98	6.36	26.86	170	51	P	H
		5717.6	61.22	-48.91	110.13	49.66	32.07	6.37	26.88	170	51	P	H
		5723	61.36	-56.28	117.64	49.79	32.09	6.37	26.89	170	51	P	H
	*	5775	97.67	-	-	85.96	32.25	6.39	26.93	170	51	P	H
	*	5775	89.6	-	-	77.89	32.25	6.39	26.93	170	51	A	H
		5850.6	53.6	-67.23	120.83	41.76	32.4	6.44	27	170	51	P	H
		5856	54.56	-55.96	110.52	42.7	32.42	6.44	27	170	51	P	H
		5876.6	53.14	-50.87	104.01	41.19	32.51	6.46	27.02	170	51	P	H
		5939	52.72	-15.48	68.2	40.61	32.68	6.51	27.08	170	51	P	H
		5645	51.76	-16.44	68.2	40.44	31.8	6.34	26.82	255	94	P	V
		5699	56.01	-48.45	104.46	44.52	32	6.36	26.87	255	94	P	V
		5711	58.68	-49.6	108.28	47.16	32.04	6.36	26.88	255	94	P	V
		5722.6	60.37	-56.36	116.73	48.8	32.09	6.37	26.89	255	94	P	V
	*	5775	96.55	-	-	84.84	32.25	6.39	26.93	255	94	P	V
	*	5775	88.45	-	-	76.74	32.25	6.39	26.93	255	94	A	V
		5852.6	54.06	-62.21	116.27	42.21	32.41	6.44	27	255	94	P	V
		5860.8	53.42	-55.75	109.17	41.54	32.44	6.45	27.01	255	94	P	V
		5895.6	52.88	-37.04	89.92	40.86	32.58	6.48	27.04	255	94	P	V
		5942	51.6	-16.6	68.2	39.49	32.68	6.51	27.08	255	94	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11ac 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	46.28	-27.72	74	52.24	39.85	10.49	56.3	100	0	P	H
		17325	48.49	-19.71	68.2	52.05	40.15	13.04	56.75	100	0	P	H
		11550	45.7	-28.3	74	51.66	39.85	10.49	56.3	100	0	P	V
		17325	47.61	-20.59	68.2	51.17	40.15	13.04	56.75	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

5GHz WIFI 802.11n HT20 (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 802.11n HT20 LF		113.42	11.95	-31.55	43.5	26.43	16.8	0.92	32.2	-	-	P	H
		261.83	14.74	-31.26	46	25.86	19.66	1.37	32.15	-	-	P	H
		618.79	22.62	-23.38	46	27.03	25.65	2.15	32.21	-	-	P	H
		759.44	26.81	-19.19	46	28.63	27.8	2.35	31.97	-	-	P	H
		853.53	28.74	-17.26	46	28.95	28.8	2.62	31.63	-	-	P	H
		951.5	29.78	-16.22	46	27.56	30.53	2.66	30.97	100	0	P	H
		126.03	12.33	-31.17	43.5	26.35	17.2	0.97	32.19	-	-	P	V
		263.77	14.14	-31.86	46	25.29	19.62	1.38	32.15	-	-	P	V
		477.17	19.89	-26.11	46	27.11	23.14	1.81	32.17	-	-	P	V
		710.94	24.42	-21.58	46	27.79	26.44	2.26	32.07	-	-	P	V
		870.02	27.99	-18.01	46	28.23	28.7	2.61	31.55	-	-	P	V
		955.38	29.24	-16.76	46	26.9	30.61	2.67	30.94	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

<EUT with Wireless Charger Mode>

Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 165 5825MHz	*	5825	105.37	-	-	93.58	32.35	6.42	26.98	100	206	P	H
	*	5825	95.95	-	-	84.16	32.35	6.42	26.98	100	206	A	H
		5851.2	53.69	-65.77	119.46	41.85	32.4	6.44	27	100	206	P	H
		5855.2	53.2	-57.54	110.74	41.34	32.42	6.44	27	100	206	P	H
		5904.2	52.41	-31.14	83.55	40.37	32.61	6.48	27.05	100	206	P	H
		5944	51	-17.2	68.2	38.87	32.69	6.52	27.08	100	206	P	H
	*	5825	103.67	-	-	91.88	32.35	6.42	26.98	100	297	P	V
	*	5825	95.39	-	-	83.6	32.35	6.42	26.98	100	297	A	V
		5851.4	53.39	-65.62	119.01	41.54	32.41	6.44	27	100	297	P	V
		5860	51.44	-57.96	109.4	39.56	32.44	6.45	27.01	100	297	P	V
		5883.8	53.83	-44.84	98.67	41.85	32.54	6.47	27.03	100	297	P	V
		5926.2	52.15	-16.05	68.2	40.07	32.65	6.5	27.07	100	297	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n 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 157 5785MHz		11570	45.9	-28.1	74	51.87	39.83	10.5	56.3	100	0	P	H
		17355	48.2	-20	68.2	51.6	40.33	13.08	56.81	100	0	P	H
		11570	45.59	-28.41	74	51.56	39.83	10.5	56.3	100	0	P	V
		17355	47.44	-20.76	68.2	50.84	40.33	13.08	56.81	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

5GHz WIFI 802.11a (LF @ 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)
1													
5GHz 802.11a LF		66.86	31.25	-8.75	40	51	11.86	0.65	32.26	100	0	P	H
		82.38	28.41	-11.59	40	46.47	13.44	0.74	32.24			P	H
		220.12	22.82	-23.18	46	38.67	15.01	1.28	32.14			P	H
		794.36	29.69	-16.31	46	31.57	27.6	2.42	31.9			P	H
		901.06	35.53	-10.47	46	35.6	28.72	2.61	31.4			P	H
		947.62	34.05	-11.95	46	32.04	30.36	2.66	31.01			P	H
		41.64	38.51	-1.49	40	51.77	18.51	0.52	32.29	100	217	QP	V
		80.44	29.14	-10.86	40	47.44	13.2	0.74	32.24			P	V
		636.25	27.46	-18.54	46	31.39	26.08	2.18	32.19			P	V
		749.74	29.93	-16.07	46	31.79	27.8	2.33	31.99			P	V
		883.6	31.88	-14.12	46	32.15	28.6	2.62	31.49			P	V
		958.29	33.16	-12.84	46	30.72	30.67	2.68	30.91			P	V
Remark	1. No other spurious found. 2. All results are PASS against 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 165 5825MHz		11650	46.26	-27.74	74	52.47	39.55	10.54	56.3	100	0	P	H
		17475	48.66	-19.54	68.2	51.67	40.83	13.21	57.05	100	0	P	H
		11650	45.74	-28.26	74	51.95	39.55	10.54	56.3	100	0	P	V
		17475	48.36	-19.84	68.2	51.37	40.83	13.21	57.05	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n 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 157 5785MHz		5619.4	51.38	-16.82	68.2	40.05	31.8	6.33	26.8	189	54	P	H
		5681.4	51.87	-39.6	91.47	40.44	31.93	6.35	26.85	189	54	P	H
		5719.2	51.96	-58.62	110.58	40.39	32.08	6.37	26.88	189	54	P	H
		5721	51.56	-61.52	113.08	39.99	32.08	6.37	26.88	189	54	P	H
	*	5785	105.26	-	-	93.54	32.27	6.39	26.94	189	54	P	H
	*	5785	96.38	-	-	84.66	32.27	6.39	26.94	189	54	A	H
		5851.6	52.01	-66.54	118.55	40.16	32.41	6.44	27	189	54	P	H
		5863.4	52.11	-56.34	108.45	40.22	32.45	6.45	27.01	189	54	P	H
		5896.8	51.75	-37.28	89.03	39.72	32.59	6.48	27.04	189	54	P	H
		5940.2	51.3	-16.9	68.2	39.19	32.68	6.51	27.08	189	54	P	H
		5607.8	51.17	-17.03	68.2	39.83	31.8	6.32	26.78	253	90	P	V
		5671.4	51.46	-32.62	84.08	40.06	31.89	6.35	26.84	253	90	P	V
		5709	52.56	-55.16	107.72	41.03	32.04	6.36	26.87	253	90	P	V
		5723.4	50.56	-67.99	118.55	38.99	32.09	6.37	26.89	253	90	P	V
	*	5785	104.18	-	-	92.46	32.27	6.39	26.94	253	90	P	V
	*	5785	95.24	-	-	83.52	32.27	6.39	26.94	253	90	A	V
		5852.8	52.02	-63.8	115.82	40.17	32.41	6.44	27	253	90	P	V
		5867.2	53.25	-54.13	107.38	41.34	32.47	6.45	27.01	253	90	P	V
		5893.2	52.5	-39.2	91.7	40.5	32.57	6.47	27.04	253	90	P	V
		5941.4	51.88	-16.32	68.2	39.77	32.68	6.51	27.08	253	90	P	V

Emission below 1GHz

5GHz WIFI 802.11n HT20 (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 802.11n HT20 LF		30	30.46	-9.54	40	37.59	24.7	0.46	32.29	100	0	P	H
		69.77	28.81	-11.19	40	48.36	12.05	0.66	32.26	-	-	P	H
		79.47	27.68	-12.32	40	46.09	13.09	0.74	32.24	-	-	P	H
		214.3	22.98	-20.52	43.5	39.32	14.54	1.26	32.14	-	-	P	H
		822.49	30.47	-15.53	46	31.89	27.85	2.51	31.78	-	-	P	H
		949.56	33.44	-12.56	46	31.3	30.47	2.66	30.99	-	-	P	H
		42.61	35.68	-4.32	40	49.42	18.03	0.52	32.29	100	215	QP	V
		65.89	29.07	-10.93	40	49.07	11.61	0.65	32.26	-	-	P	V
		335.55	23.43	-22.57	46	34.45	19.62	1.51	32.15	-	-	P	V
		736.16	29.61	-16.39	46	31.78	27.55	2.3	32.02	-	-	P	V
		842.86	31.45	-14.55	46	31.88	28.66	2.59	31.68	-	-	P	V
		953.44	33.65	-12.35	46	31.38	30.57	2.66	30.96	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

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

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

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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

Appendix D. Radiated Spurious Emission Plots

Test Engineer :	Ryan Lin , JC Liang , Wilson Wu	**Temperature :**	21.5~23.5°C
		Relative Humidity :	46.5~49.5%

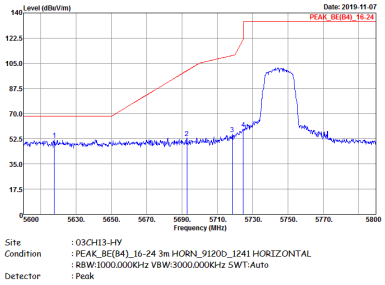
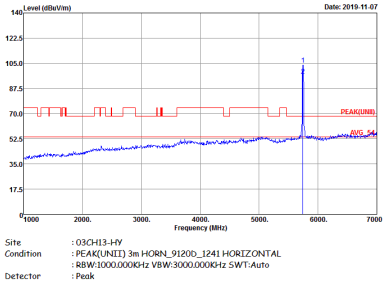
Note symbol

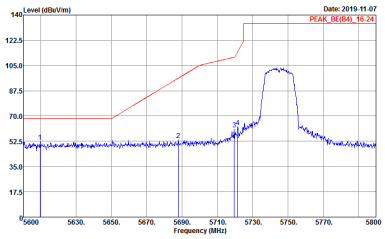
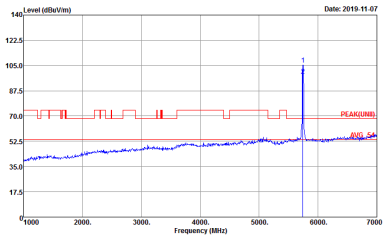
-L	**Low channel location**
-R	**High channel location**

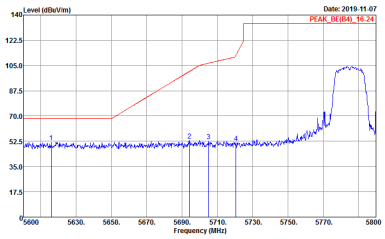
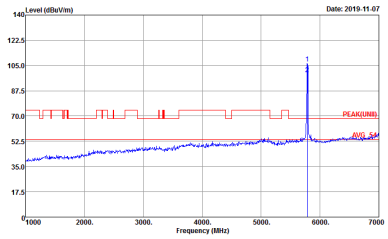
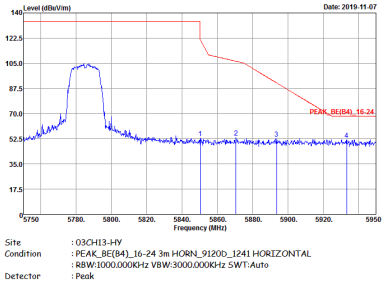
<EUT with Adapter Mode>

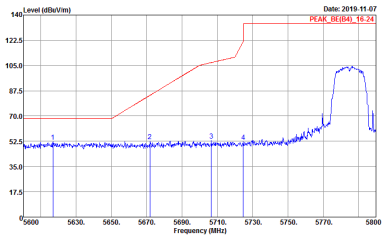
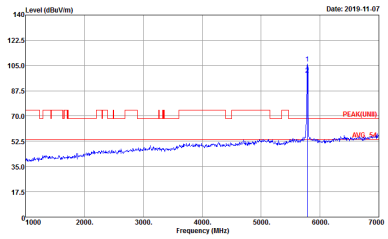
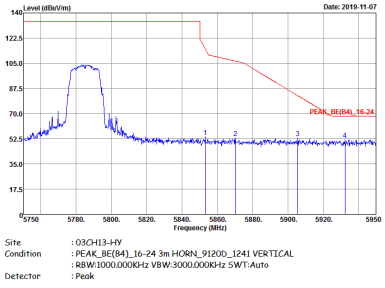
Band 4 - 5725~5850MHz

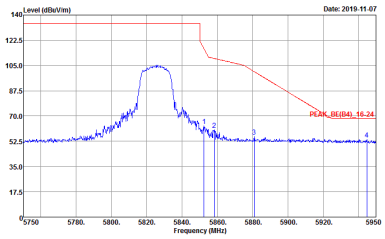
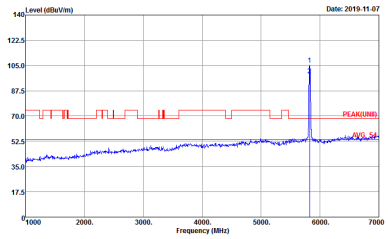
WIFI 802.11a (Band Edge @ 3m)

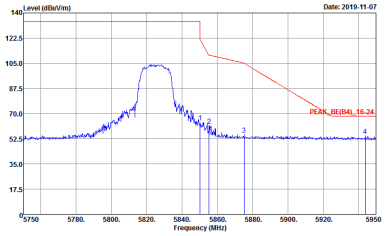
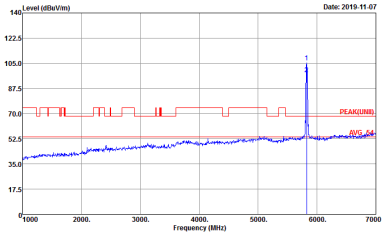
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1	Horizontal	Fundamental
Peak		

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

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

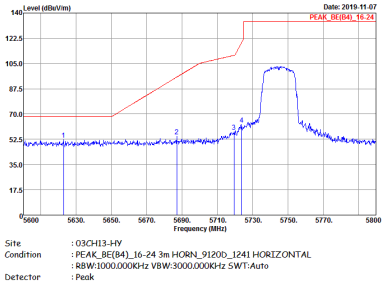
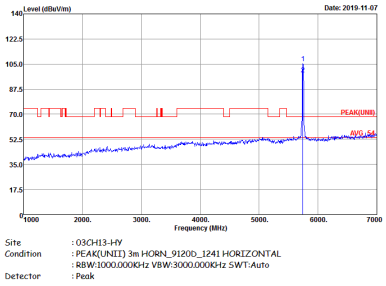
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

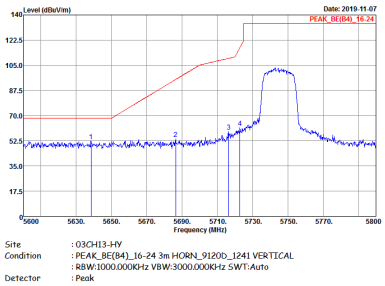
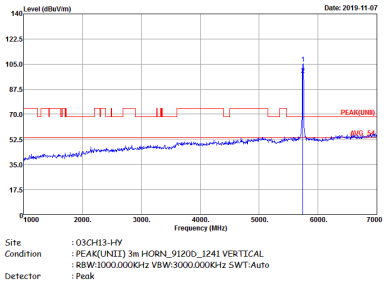
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1	Horizontal	Fundamental
Peak		

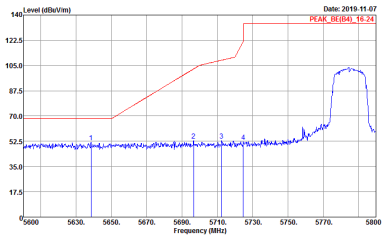
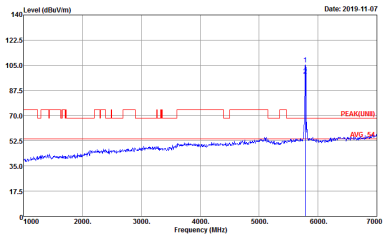
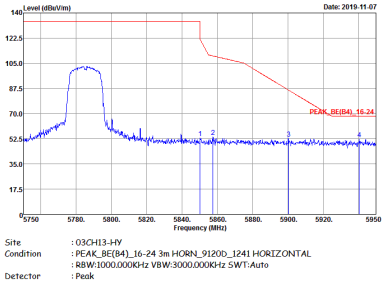
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak

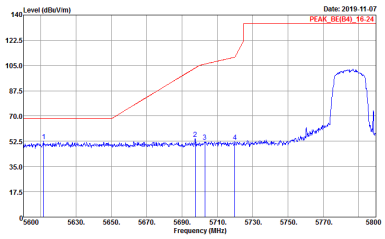
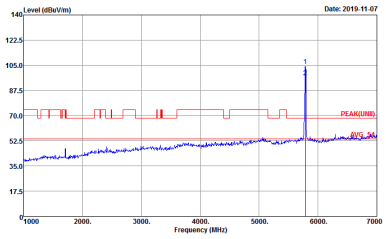
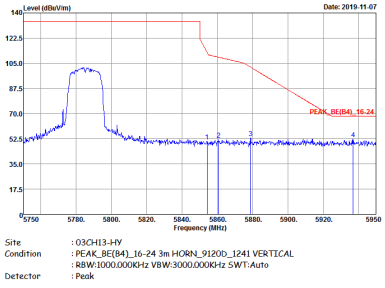
Band 4 5725~5850MHz

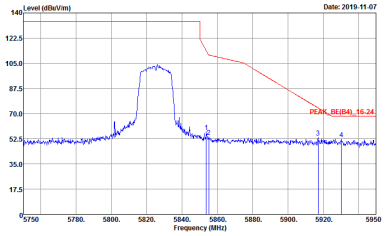
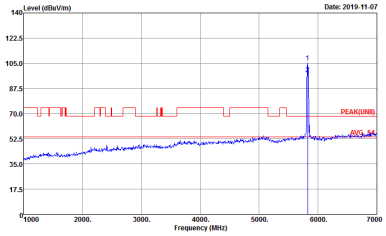
WIFI 802.11n HT20 (Band Edge @ 3m)

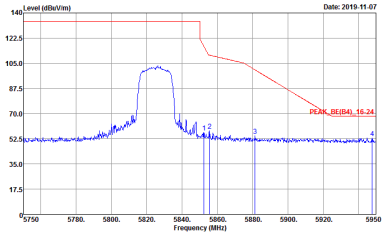
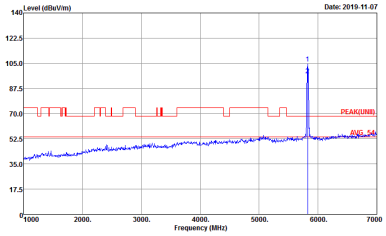
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Horizontal	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Vertical	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

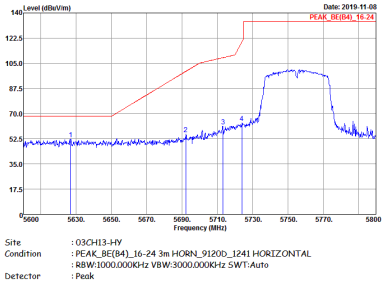
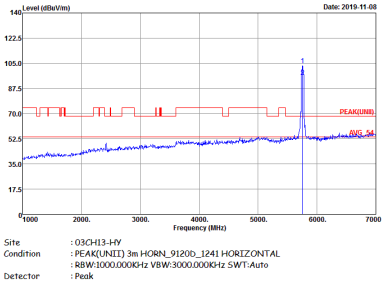
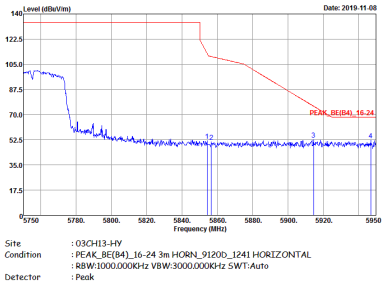
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

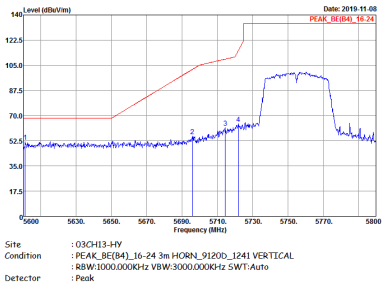
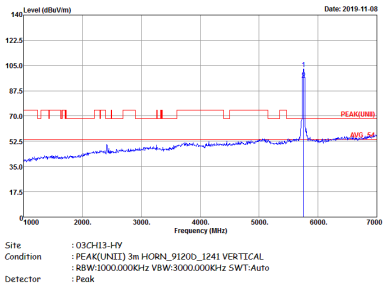
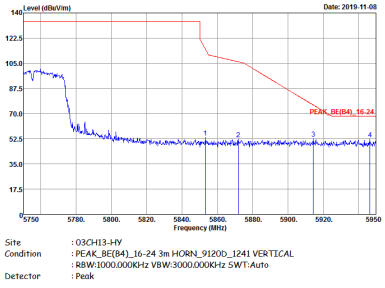
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak

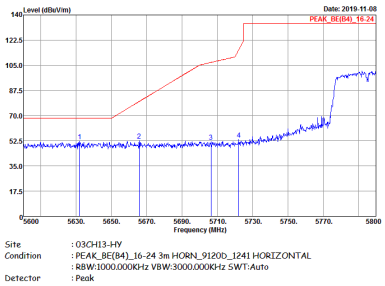
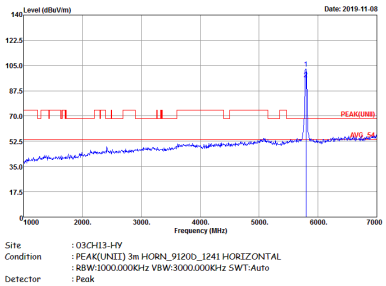
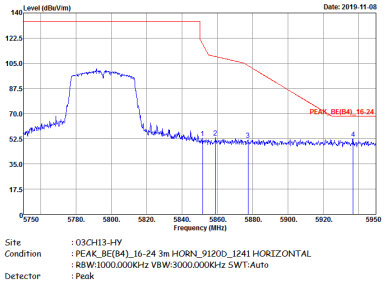
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak

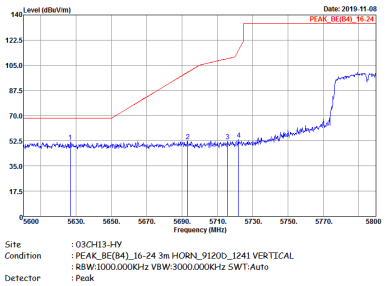
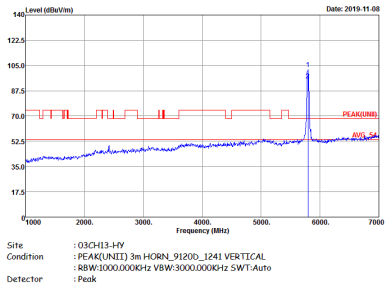
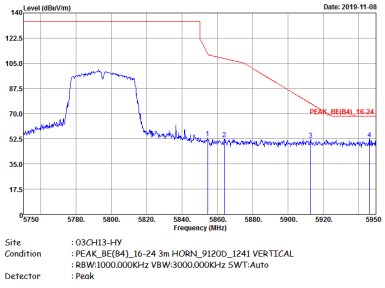
Band 4 5725~5850MHz

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		
Peak		Left blank

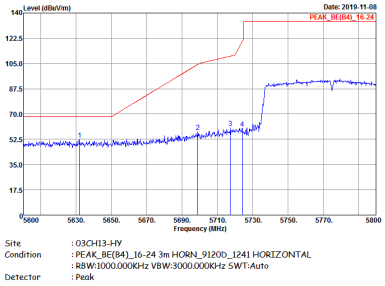
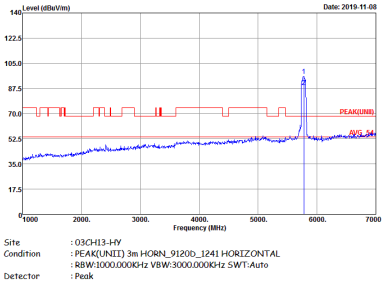
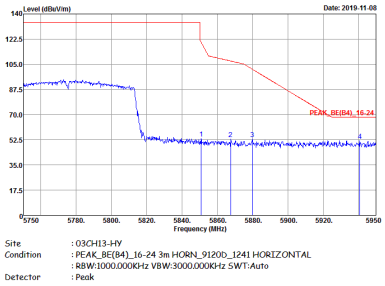
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

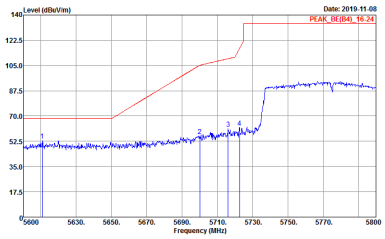
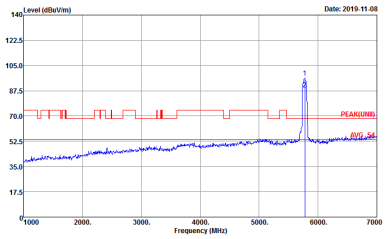
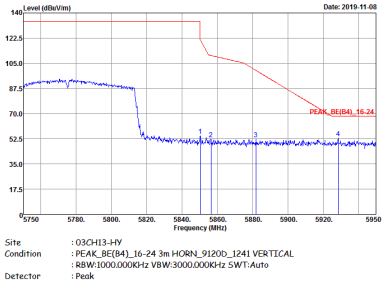
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

Band 4 5725~5850MHz

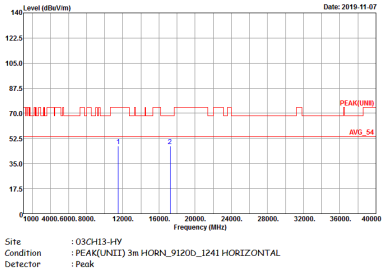
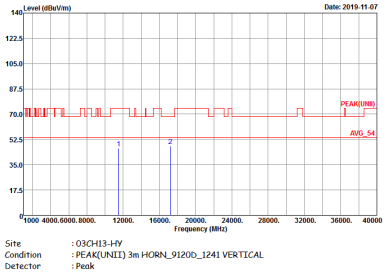
WIFI 802.11ac VHT80 (Band Edge @ 3m)

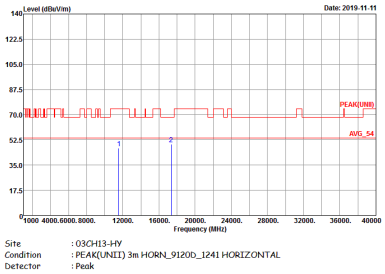
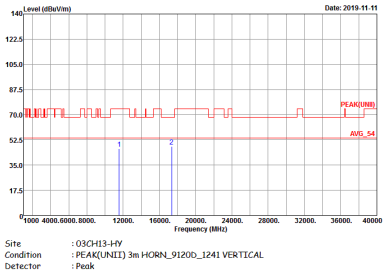
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

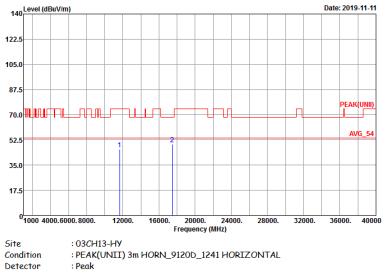
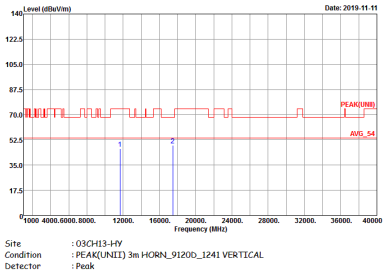
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

Band 4 - 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

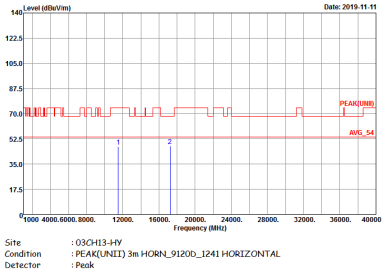
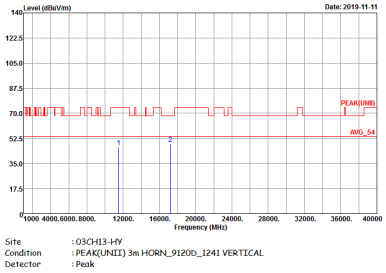
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
1	Horizontal	Vertical
Peak Avg.		

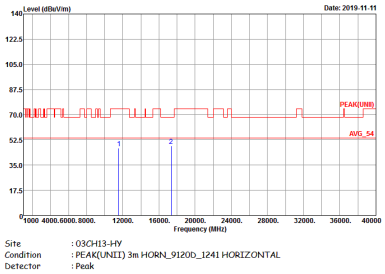
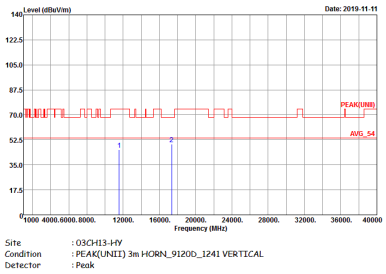
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Vertical
Peak Avg.		

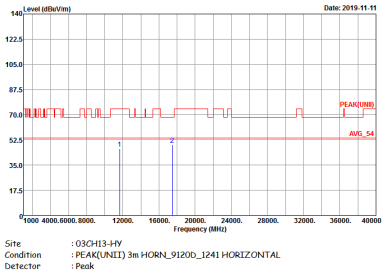
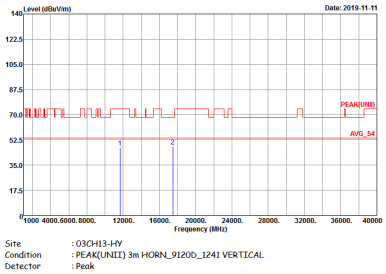
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
1	Horizontal	Vertical
Peak Avg.		

Band 4 5725~5850MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

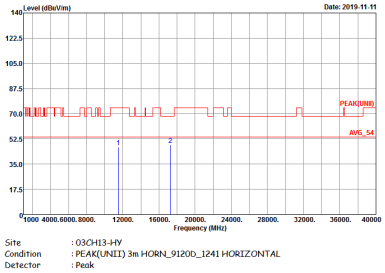
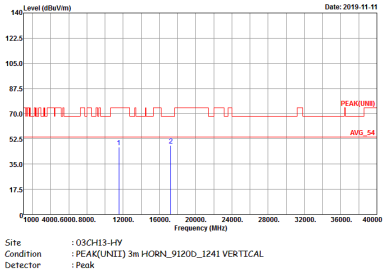
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1	Horizontal	Vertical
Peak Avg.		

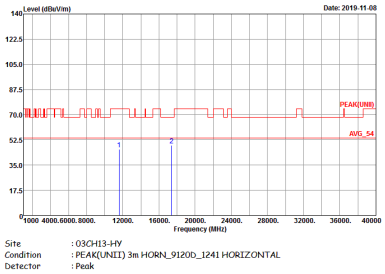
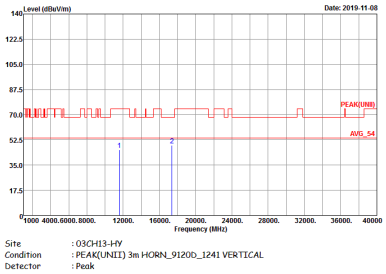
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Horizontal	Vertical
Peak Avg.		

Band 4 5725~5850MHz

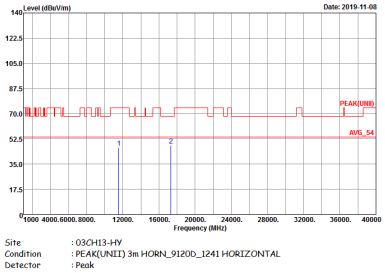
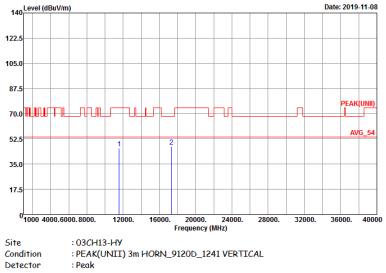
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1	Horizontal	Vertical
Peak Avg.		

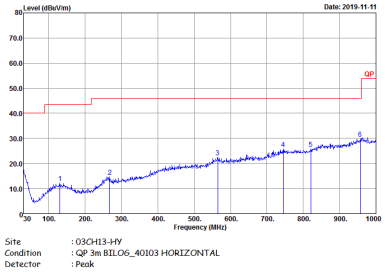
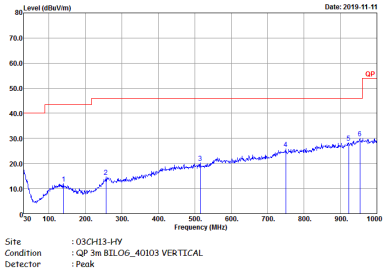
Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Horizontal	Vertical
Peak Avg.		

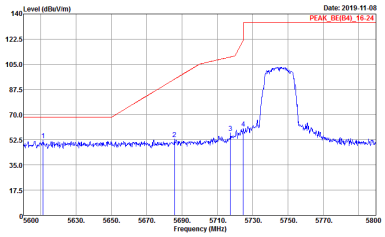
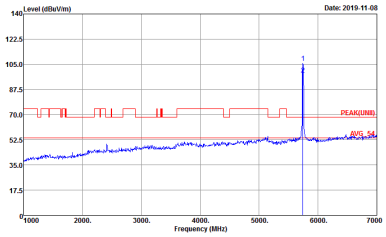
Emission below 1GHz

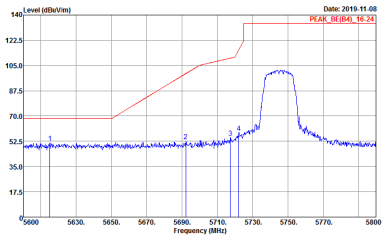
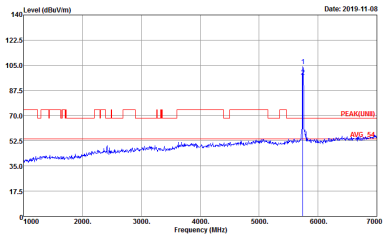
5GHz WIFI 802.11a (LF)

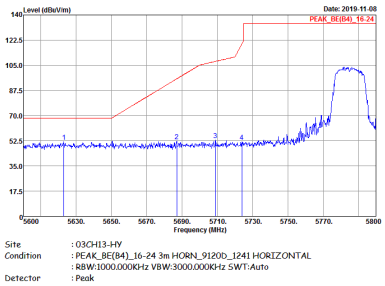
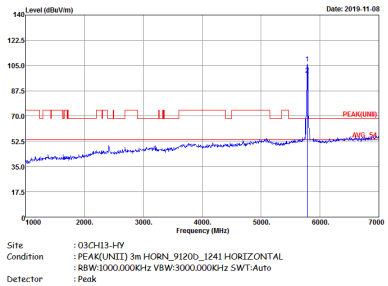
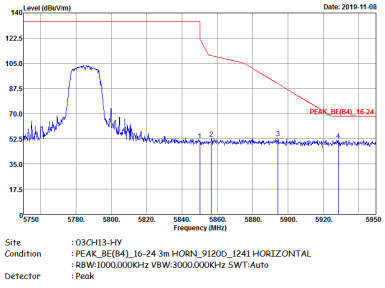
WIFI	5GHz 5725~5850MHz	
ANT	802.11a LF	
1	Horizontal	Vertical
QP / Peak		

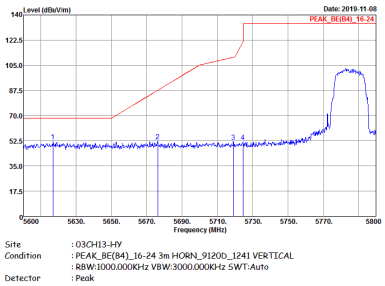
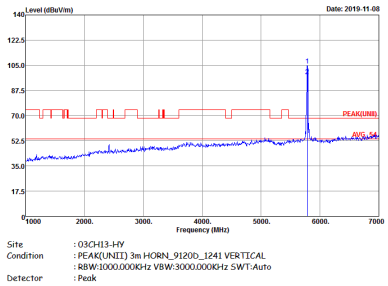
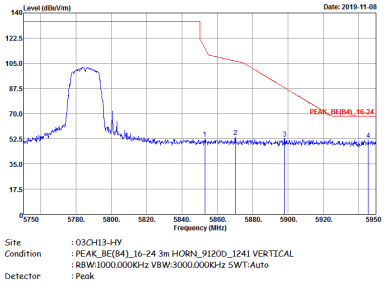
Band 4 - 5725~5850MHz

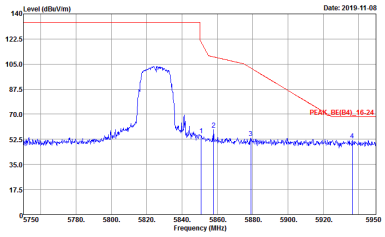
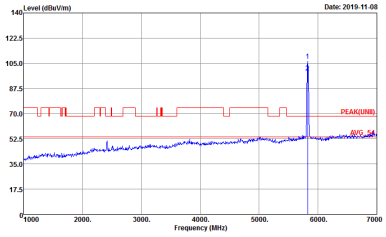
WIFI 802.11a (Band Edge @ 3m)

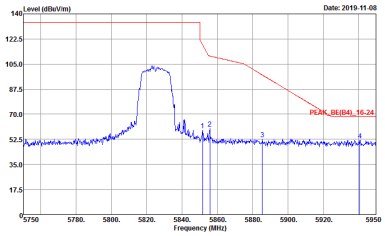
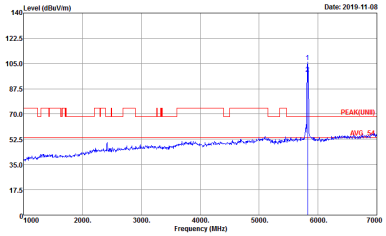
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
2	Horizontal	Fundamental
Peak		

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

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

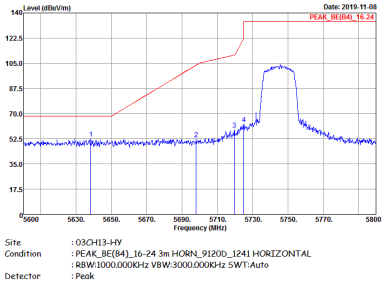
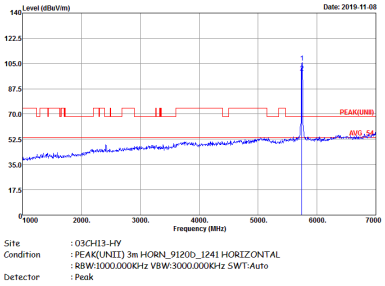
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
2	Vertical	Fundamental
Peak		
Peak		Left blank

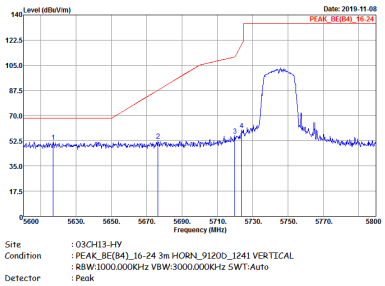
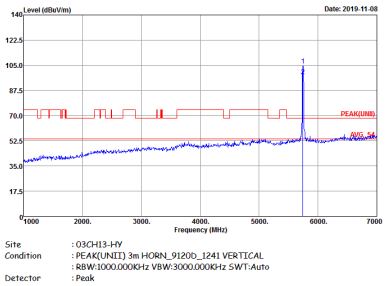
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
2	Horizontal	Fundamental
Peak		

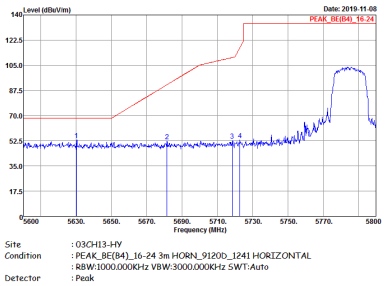
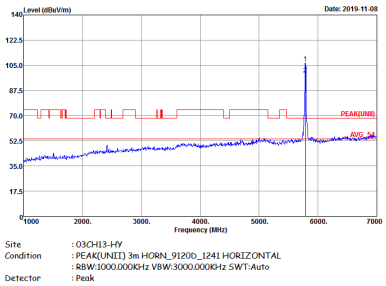
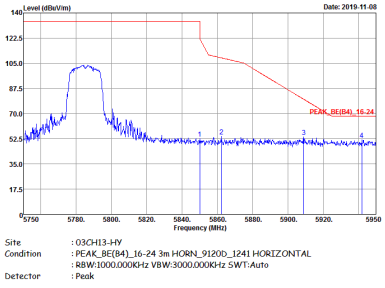
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
2	Vertical	Fundamental
Peak		

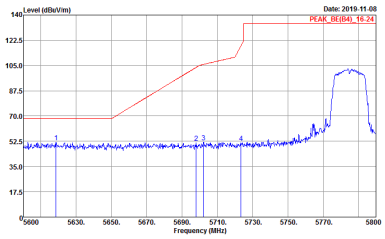
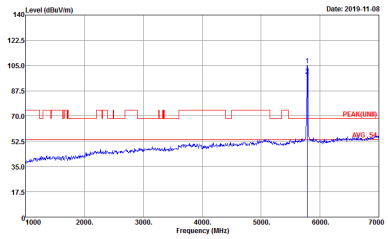
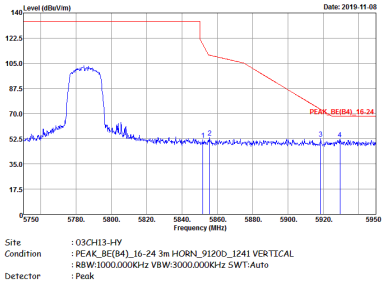
Band 4 5725~5850MHz

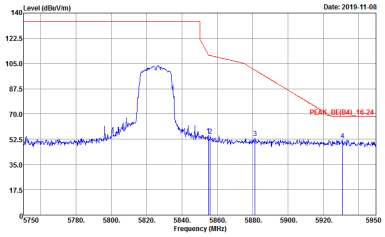
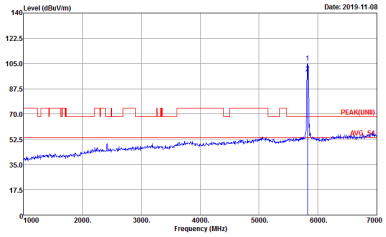
WIFI 802.11n HT20 (Band Edge @ 3m)

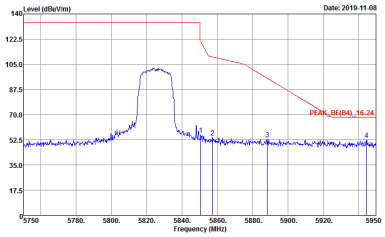
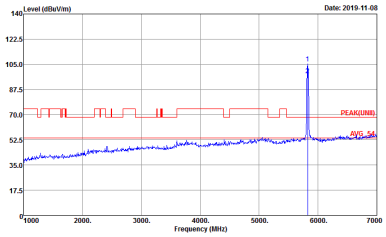
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
2	Horizontal	Fundamental
Peak		

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
2	Vertical	Fundamental
Peak		

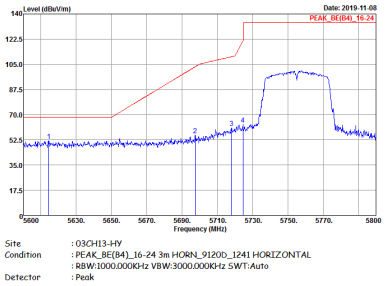
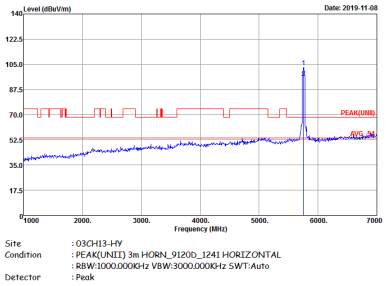
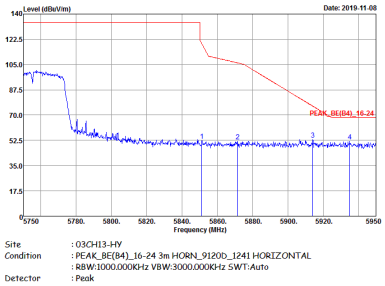
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
2	Horizontal	Fundamental
Peak		
Peak		Left blank

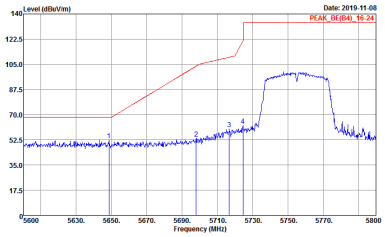
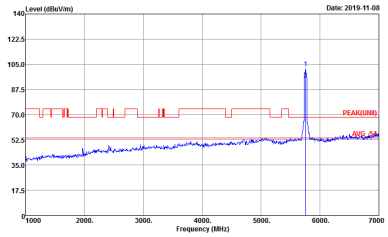
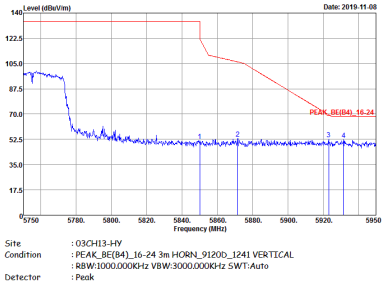
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
2	Vertical	Fundamental
Peak		
Peak		Left blank

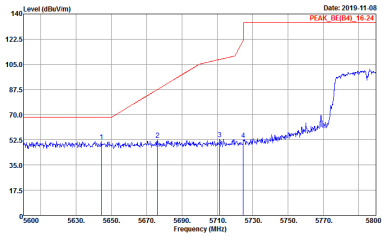
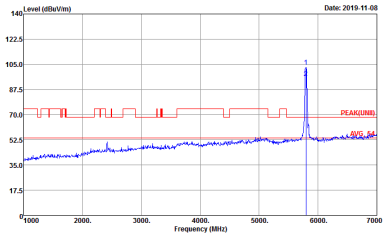
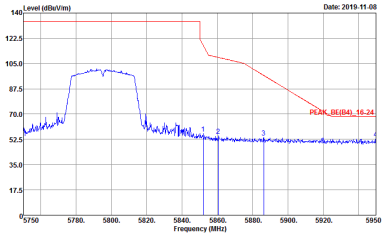
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
2	Horizontal	Fundamental
Peak		

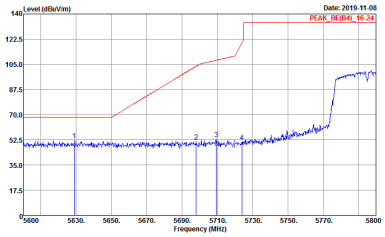
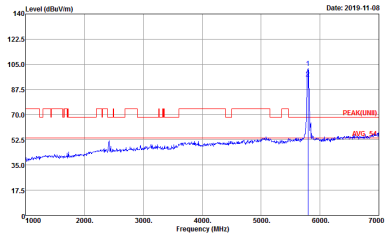
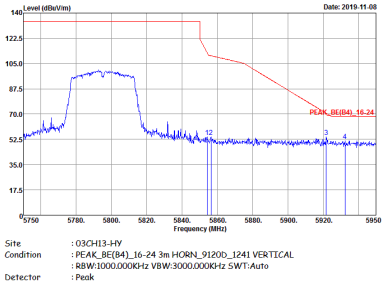
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
2	Vertical	Fundamental
Peak		

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		
Peak		Left blank

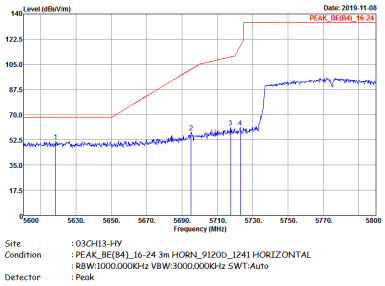
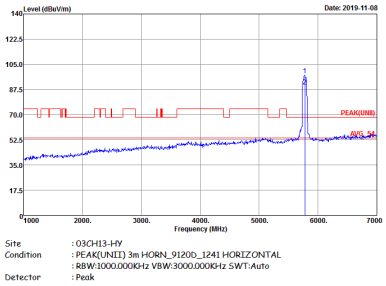
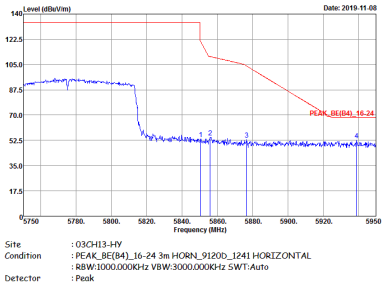
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
2	Vertical	Fundamental
Peak		
Peak		Left blank

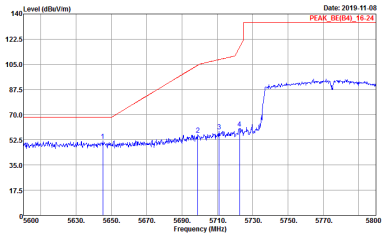
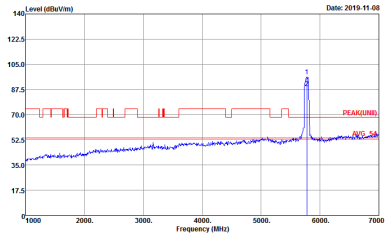
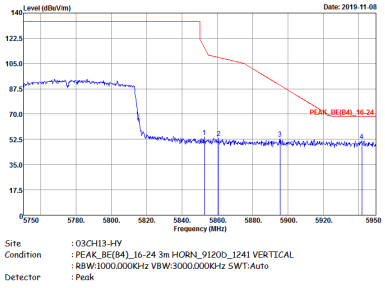
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
2	Horizontal	Fundamental
Peak		
Peak		Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
2	Vertical	Fundamental
Peak		
Peak		Left blank

Band 4 5725~5850MHz

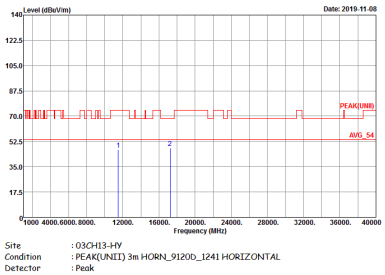
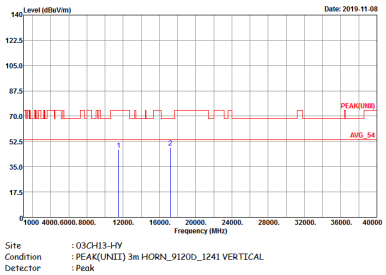
WIFI 802.11ac VHT80 (Band Edge @ 3m)

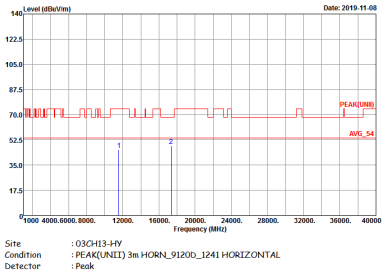
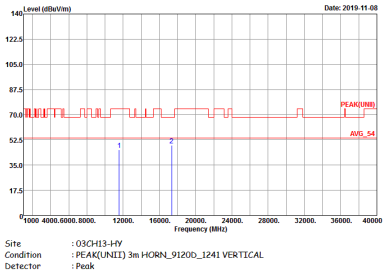
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
2	Horizontal	Fundamental
Peak		
Peak		Left blank

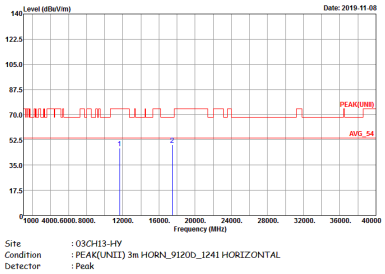
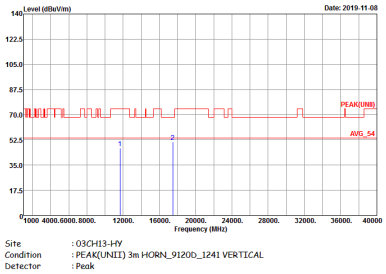
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
2	Vertical	Fundamental
Peak		
Peak		Left blank

Band 4 - 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

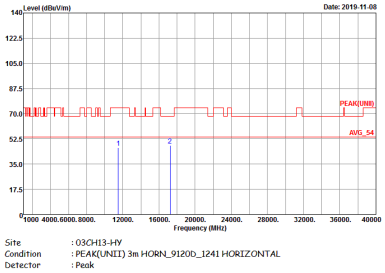
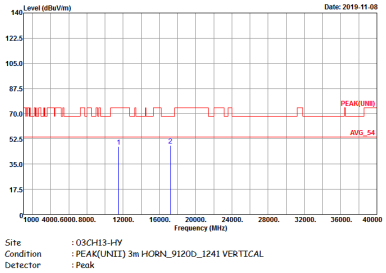
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
2	Horizontal	Vertical
Peak Avg.		

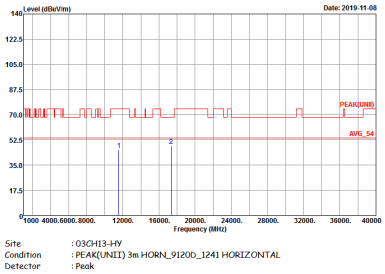
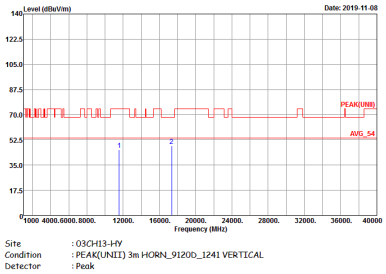
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
2	Horizontal	Vertical
Peak Avg.		

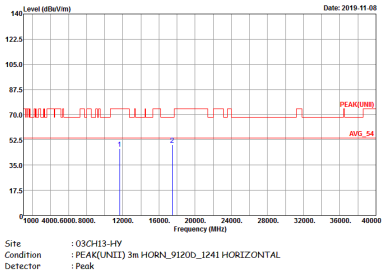
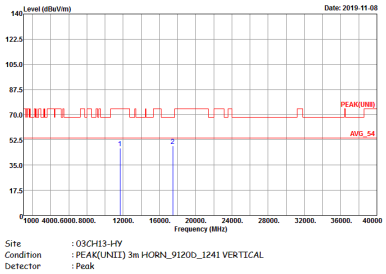
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
2	Horizontal	Vertical
Peak Avg.		

Band 4 5725~5850MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

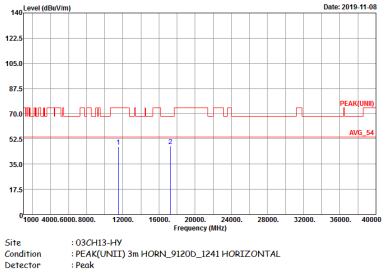
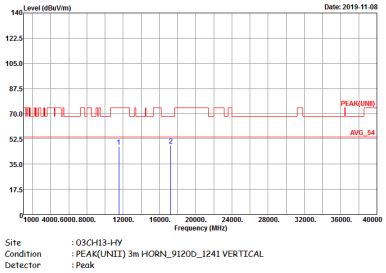
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
2	Horizontal	Vertical
Peak Avg.		

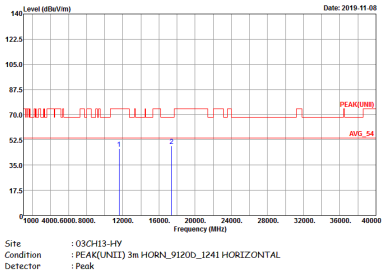
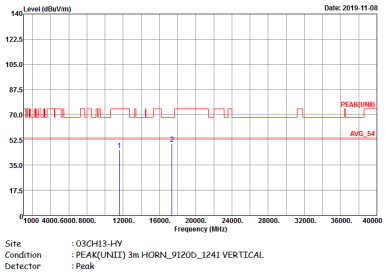
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
2	Horizontal	Vertical
Peak Avg.		

Band 4 5725~5850MHz

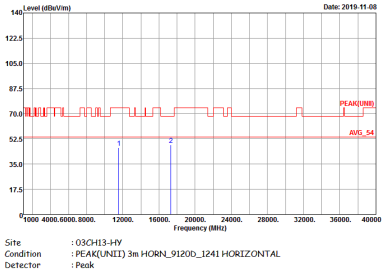
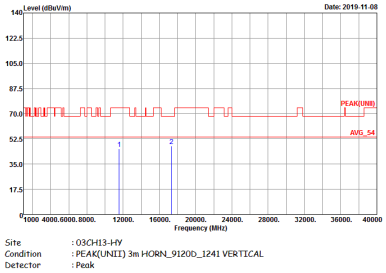
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
2	Horizontal	Vertical
Peak Avg.		

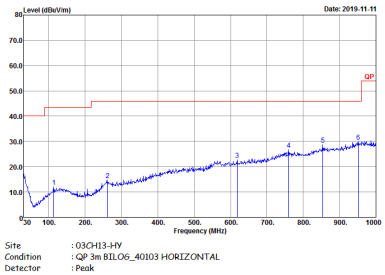
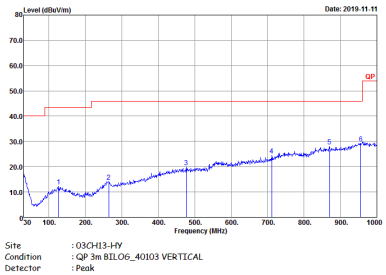
Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
2	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

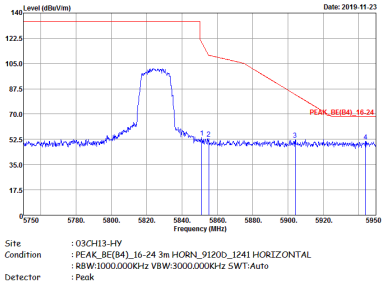
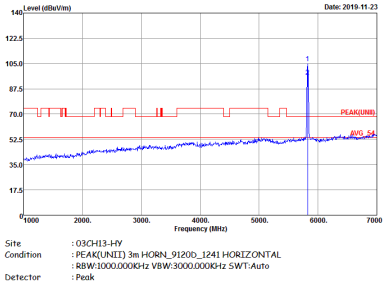
5GHz WIFI 802.11n HT20 (LF)

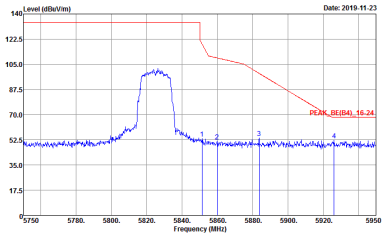
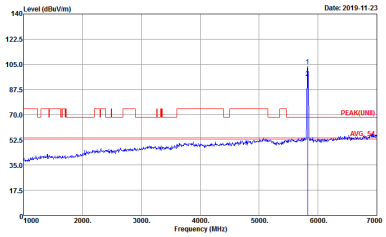
WIFI	5GHz 5725~5850MHz	
ANT	802.11n HT20 LF	
2	Horizontal	Vertical
QP / Peak		

<EUT with Wireless Charger Mode>

Band 4 - 5725~5850MHz

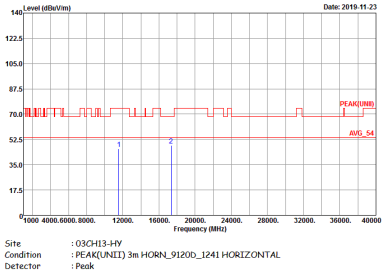
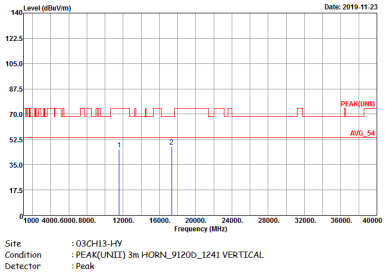
WIFI 802.11a (Band Edge @ 3m)

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

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

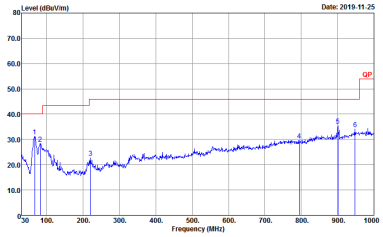
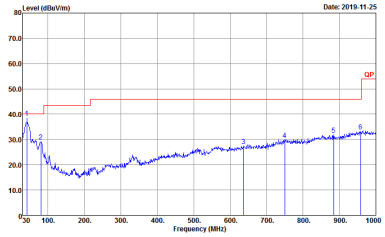
Band 4 - 5725~5850MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1	Horizontal	Vertical
Peak Avg.		

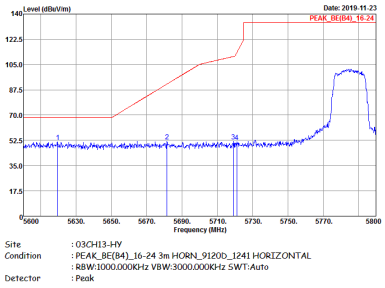
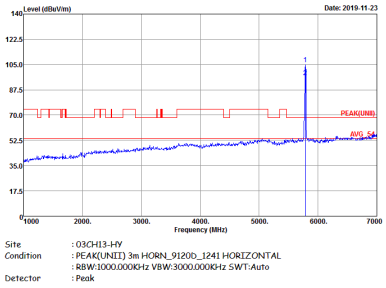
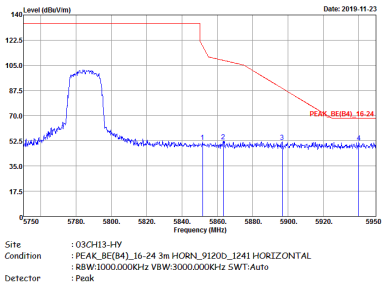
Emission below 1GHz

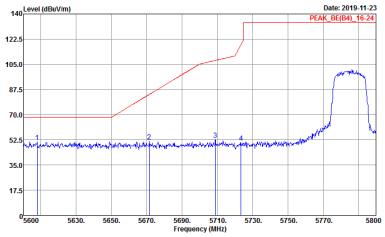
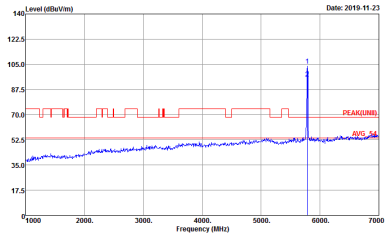
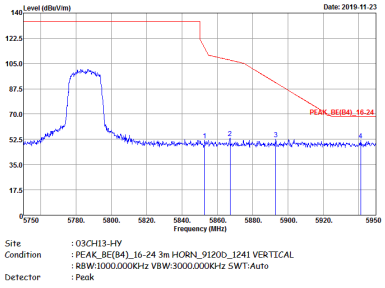
5GHz WIFI 802.11a (LF)

WIFI	5GHz 5725~5850MHz	
ANT	802.11a LF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH13-HY Condition : QP 3m BILO6_40103 HORIZONTAL Detector : Peak	 Site : 03CH13-HY Condition : QP 3m BILO6_40103 VERTICAL Detector : Peak

Band 4 - 5725~5850MHz

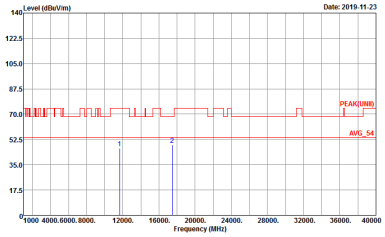
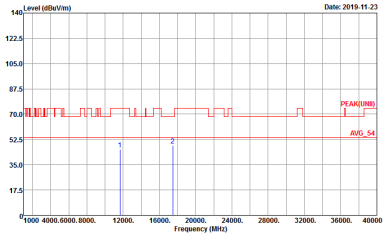
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
2	Horizontal	Fundamental
Peak		
Peak		Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
2	Vertical	Fundamental
Peak		
Peak		Left blank

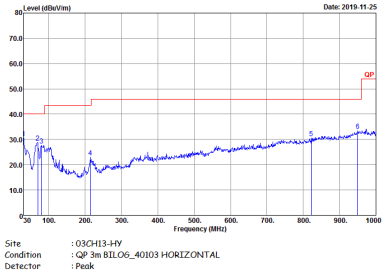
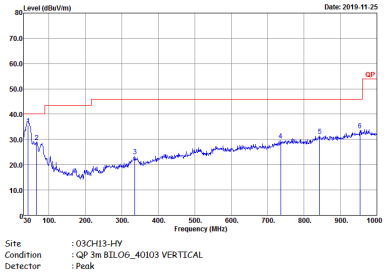
Band 4 - 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

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

Emission below 1GHz

5GHz WIFI 802.11n HT20 (LF)

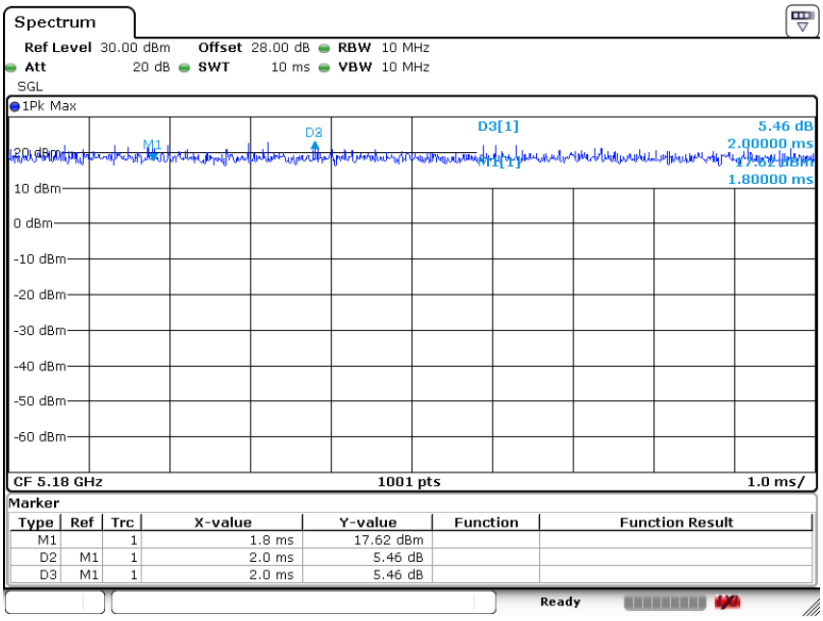
WIFI	5GHz 5725~5850MHz	
ANT	802.11n HT20 LF	
2	Horizontal	Vertical
QP / Peak		

Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
1	802.11a	100.00	-	-	10Hz	0.00
2	802.11a	100.00	-	-	10Hz	0.00
1	5GHz 802.11n HT20	100.00	-	-	10Hz	0.00
2	5GHz 802.11n HT20	100.00	-	-	10Hz	0.00
1	5GHz 802.11n HT40	100.00	-	-	10Hz	0.00
2	5GHz 802.11n HT40	100.00	-	-	10Hz	0.00
1	5GHz 802.11ac VHT20	100.00	-	-	10Hz	0.00
2	5GHz 802.11ac VHT20	100.00	-	-	10Hz	0.00
1	5GHz 802.11ac VHT40	100.00	-	-	10Hz	0.00
2	5GHz 802.11ac VHT40	100.00	-	-	10Hz	0.00
1	5GHz 802.11ac VHT80	100.00	-	-	10Hz	0.00
2	5GHz 802.11ac VHT80	100.00	-	-	10Hz	0.00

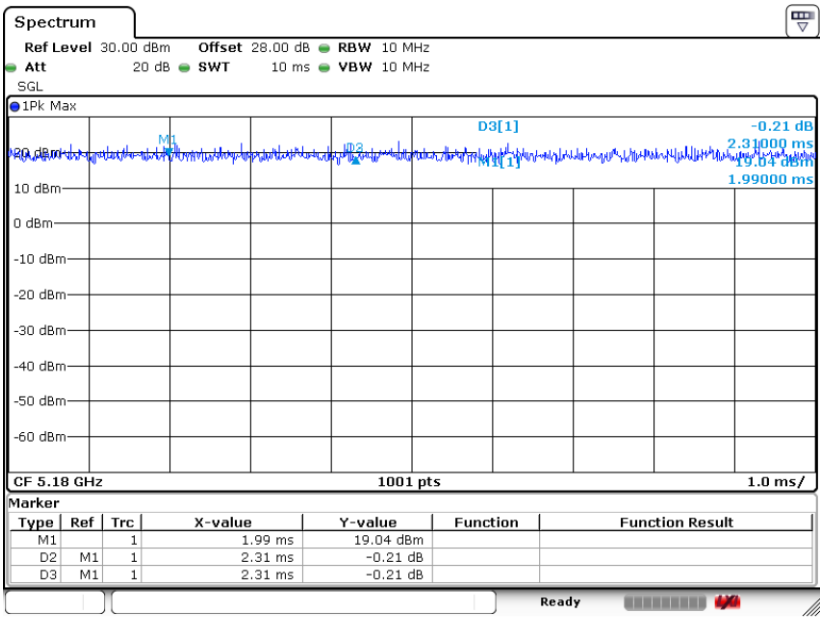
<Ant. 1>

802.11a



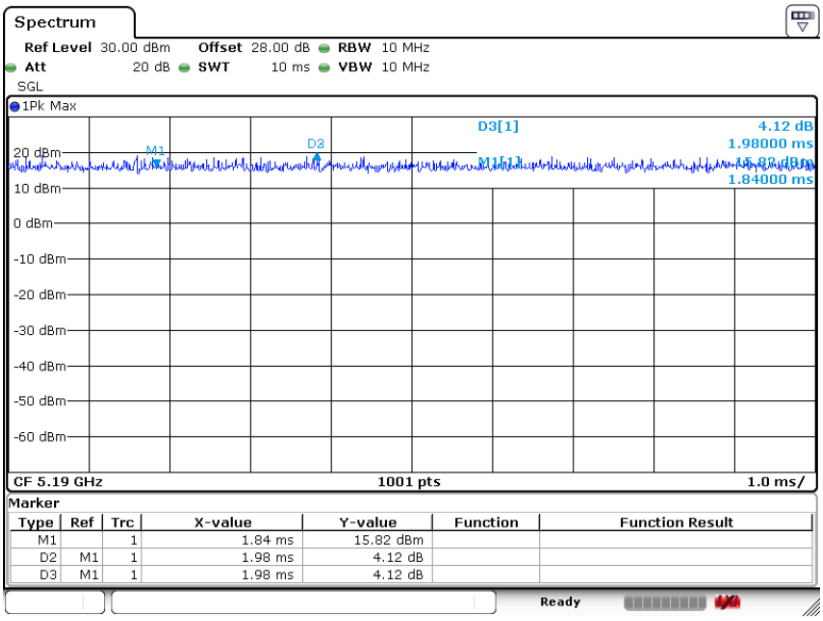
Date: 12.NOV.2019 21:42:49

802.11n HT20



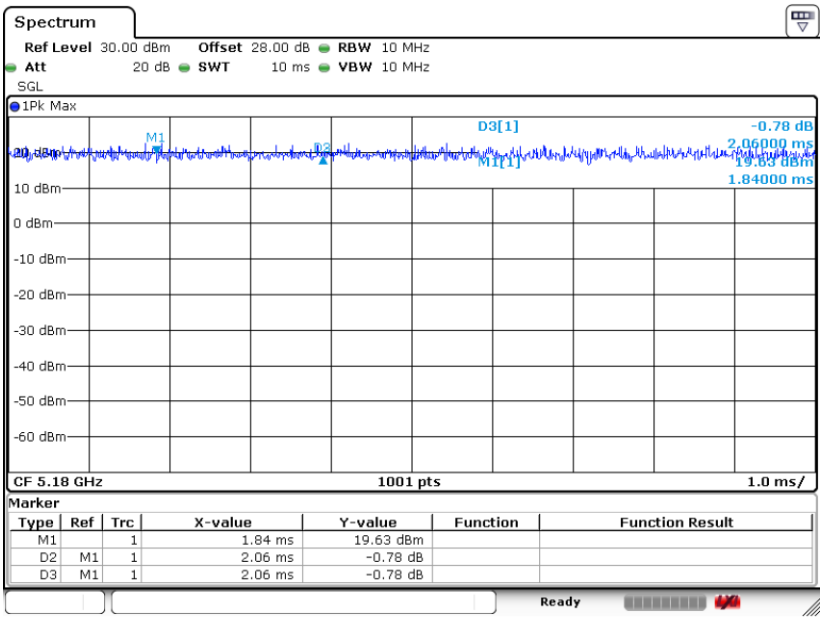
Date: 12.NOV.2019 22:30:04

802.11n HT40



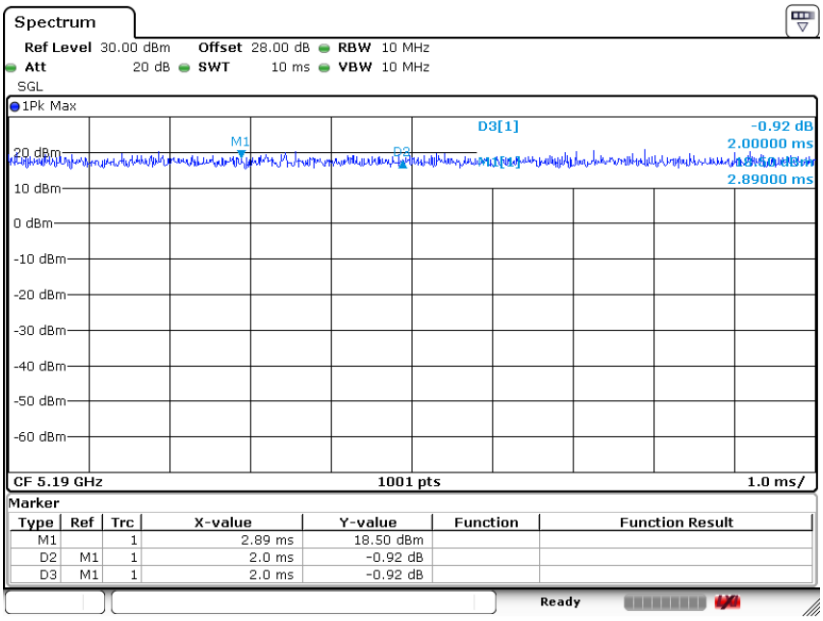
Date: 12.NOV.2019 23:25:36

802.11ac VHT20



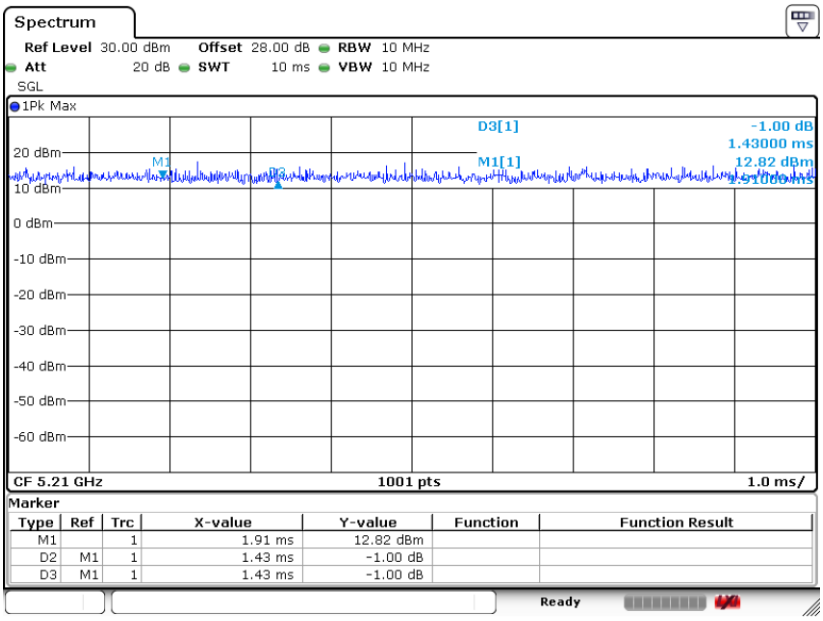
Date: 13.NOV.2019 02:21:32

802.11ac VHT40



Date: 13.NOV.2019 02:23:00

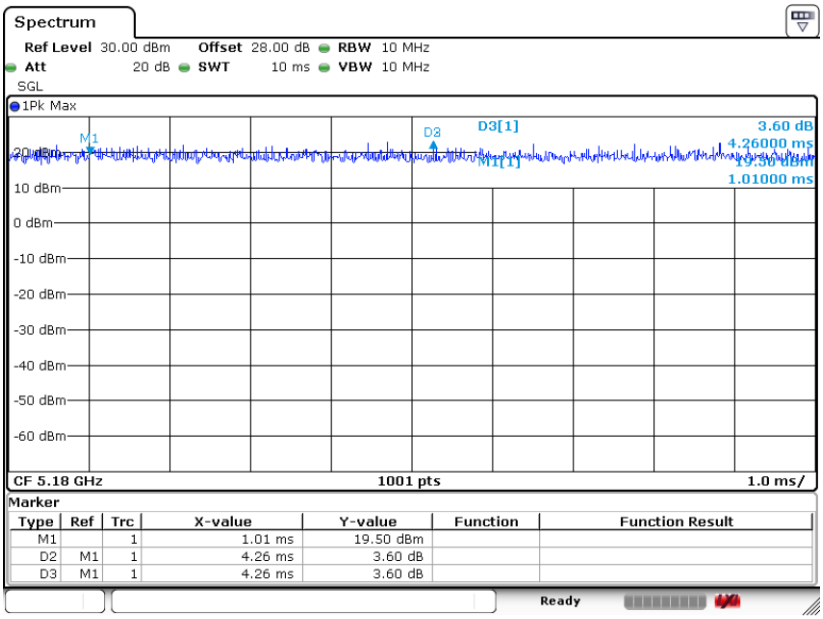
802.11ac VHT80



Date: 13.NOV.2019 02:25:26

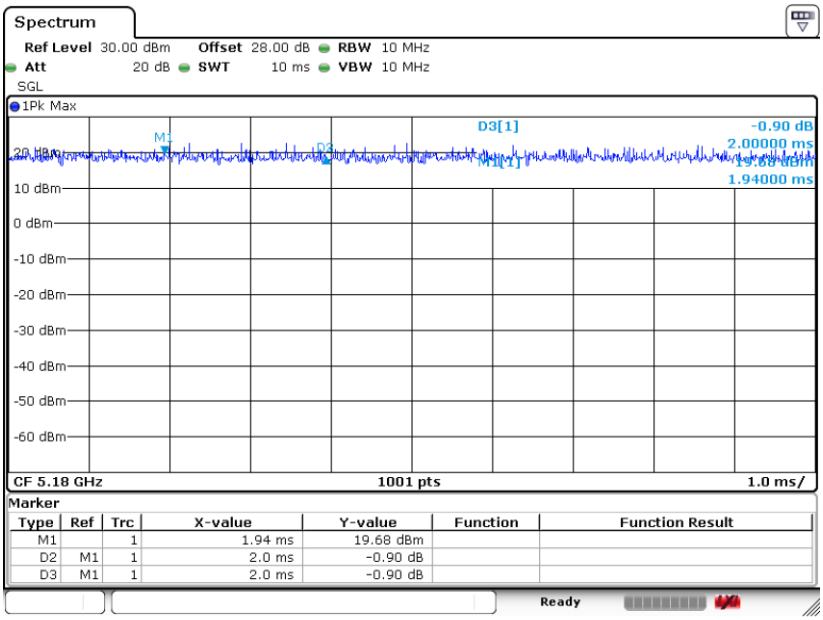
<Ant. 2>

802.11a



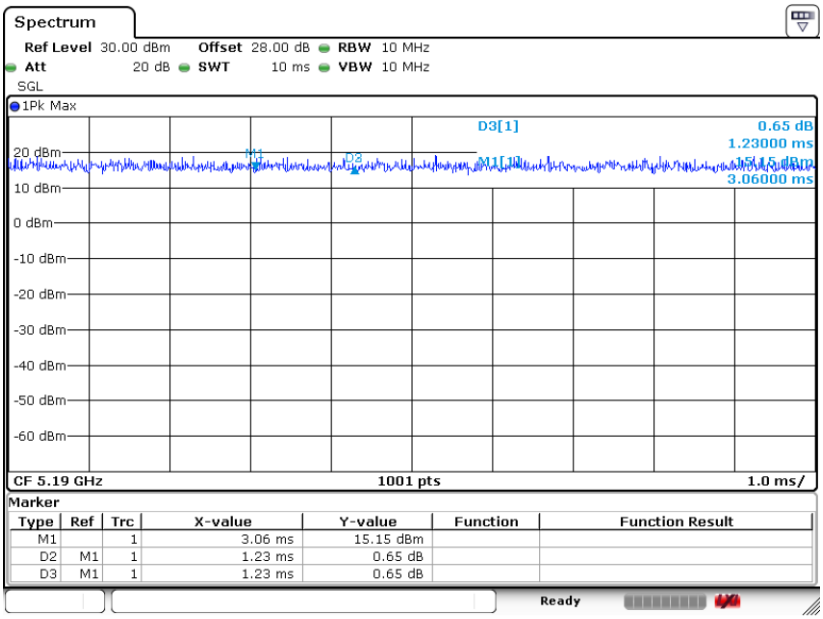
Date: 12.NOV.2019 21:59:28

802.11n HT20



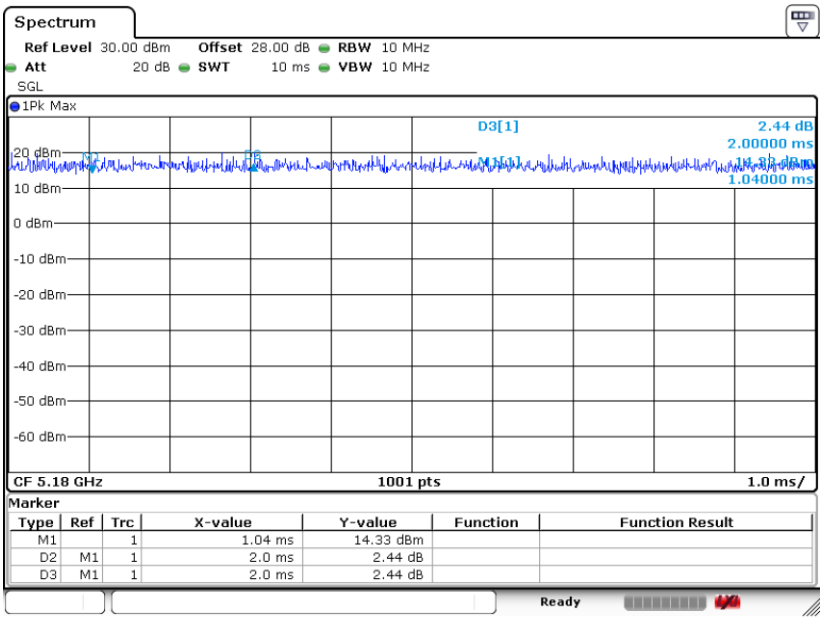
Date: 12.NOV.2019 22:50:56

802.11n HT40



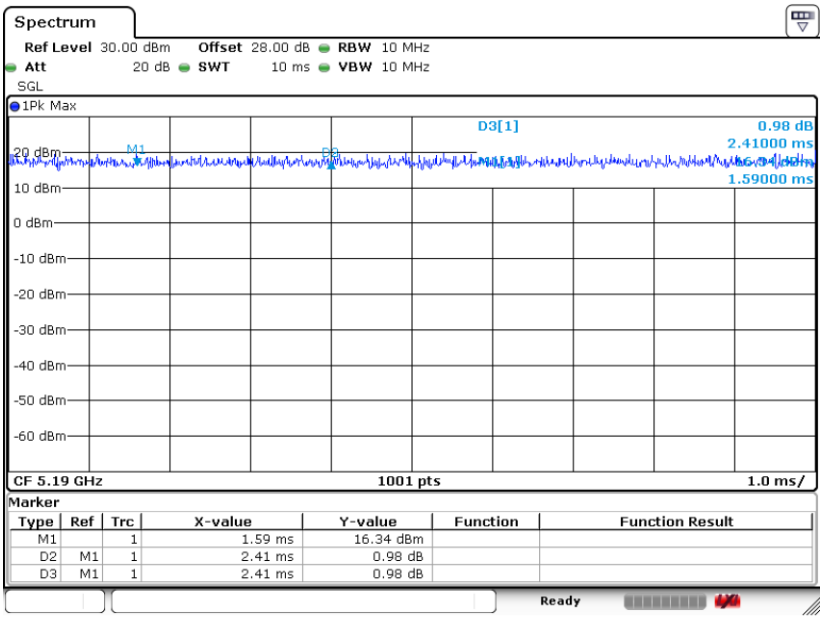
Date: 12.NOV.2019 23:26:23

802.11ac VHT20



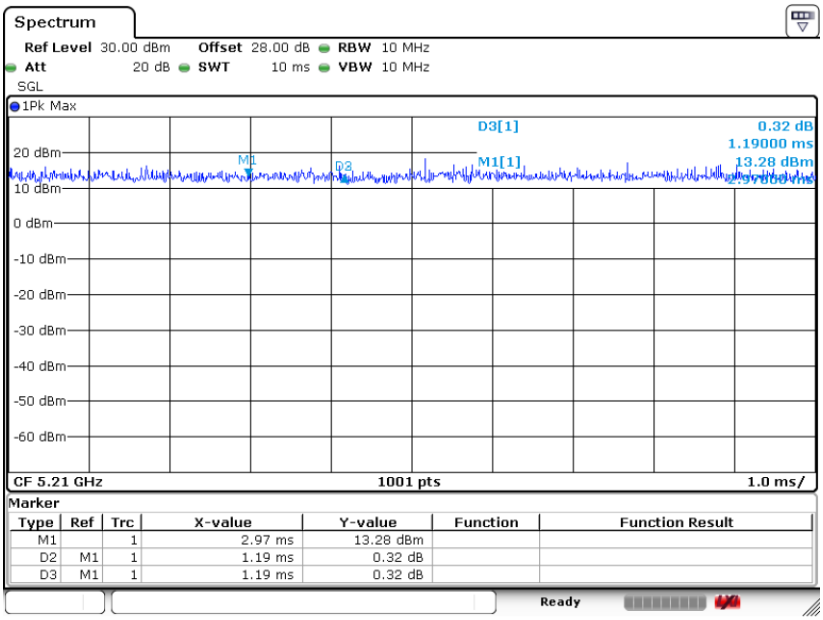
Date: 12.NOV.2019 23:50:23

802.11ac VHT40



Date: 13.NOV.2019 02:23:54

802.11ac VHT80



Date: 13.NOV.2019 02:24:52

———THE END———