



FCC RADIO TEST REPORT

FCC ID : 2AG7G-C1A
Equipment : Plume PowerPod
Brand Name : Plume Design Inc
Model name : C1A
Applicant : Plume Design Inc
 290 S California Ave, Suite 200, Palo Alto, CA 94306, USA
Manufacturer : Plume Design Inc
 290 S California Ave, Suite 200, Palo Alto, CA 94306, USA
Standard : FCC Part 15 Subpart E §15.407

The product was received on Jan. 28, 2019 and testing was started from Jan. 30, 2019 and completed on Apr. 09, 2019. 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.

Approved by: Jones Tsai

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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History of this test report



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403 (i)	6dB & 26dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.407 (a)	Maximum Conducted Output Power	Pass	-
3.3	15.407 (a)	Power Spectral Density	Pass	-
3.4	15.407(b)	Unwanted Emissions	Pass	Under limit 1.03 dB at 5647.500 MHz
3.5	15.207	AC Conducted Emission	Pass	Under limit 12.51 dB at 0.641 MHz
3.6	15.407 (c)	Automatically Discontinue Transmission	Pass	-
3.7	15.203 & 15.407 (a)	Antenna Requirement	Pass	-

Declaration of Conformity:

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

Comments and Explanations:

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

Reviewed by: Wii Chang**Report Producer: Natasha Hsieh**



1 General Description

1.1 Product Feature of Equipment Under Test

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

Product specification subjective to this standard	
Antenna Type	WLAN 2.4GHz: <Ant. 1>: PIFA Antenna <Ant. 2>: PIFA Antenna WLAN 5GHz: <Ant. 1>: PIFA Antenna <Ant. 2>: PIFA Antenna <Ant. 3>: PIFA Antenna <Ant. 4>: PIFA Antenna Bluetooth: PIFA Antenna

1.2 Modification of EUT

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

1.3 Testing Location

Test Site	SPORTON INTERNATIONAL INC.	
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

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

Test Site	SPORTON INTERNATIONAL INC.	
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.	
	03CH11-HY	

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

FCC Designation No. TW1190 and TW0007



1.4 Applicable Standards

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

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane for CDD Mode; Z plane for Ant. 2 and Ant. 3 with TXBF Mode; Y plane for Ant. 4 with TXBF Mode) 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.

<CDD Mode>

Single Mode

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

MIMO Mode

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

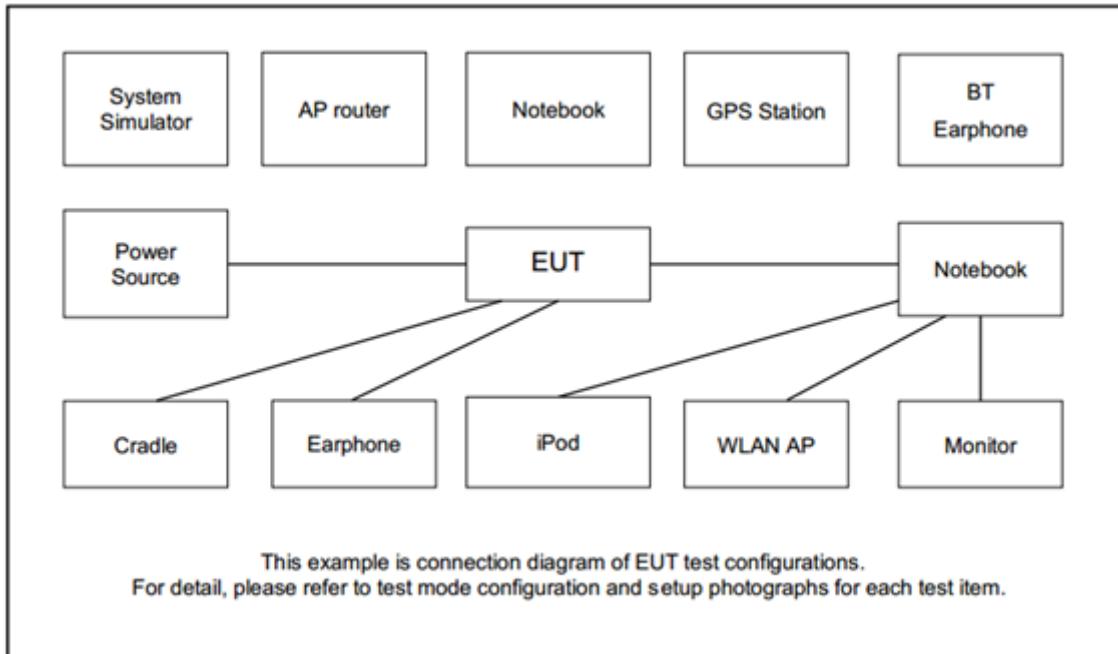
TXBF Mode

Modulation	Data Rate
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : WLAN (5GHz) Link + Bluetooth Idle + Lan Link

Ch. #	Band IV : 5725-5850 MHz			
	802.11a	802.11ac VHT20	802.11ac VHT40	802.11ac VHT80
L	Low	149	149	151
M	Middle	157	157	-
H	High	165	165	159

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0m	N/A
2.	Mobile Phone	Samsung	SM-A703F/DS	N/A	N/A	Unshielded, 1.8m
3.	LCD Monitor	Asus	S2316-HC	FCC DoC	Shielded, 1.6m	Unshielded, 1.8m
4.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8m

2.5 EUT Operation Test Setup

The RF test items, utility “access M Tool.exe” 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.

For TXBF mode, the modulation modes and data rates manipulated by the command lines in the engineering program made the EUT link to another EUT by power under the normal operation. The “tera term” software tool was used to enable the EUT to transmit signals continuously.



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.

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



3 Test Result

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

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

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

26dB and 99% Occupied bandwidth are reporting only.

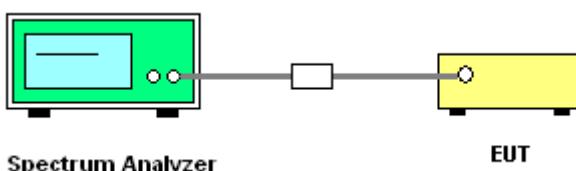
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

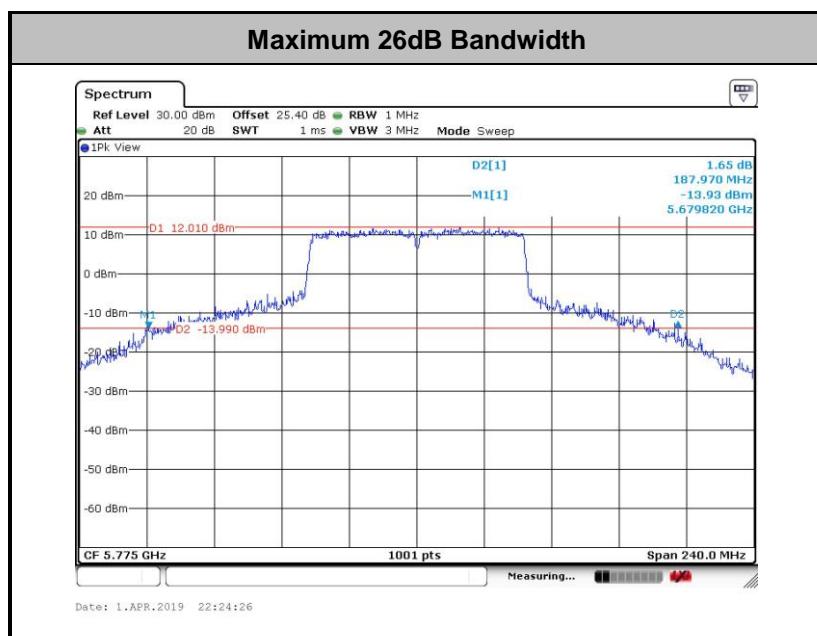
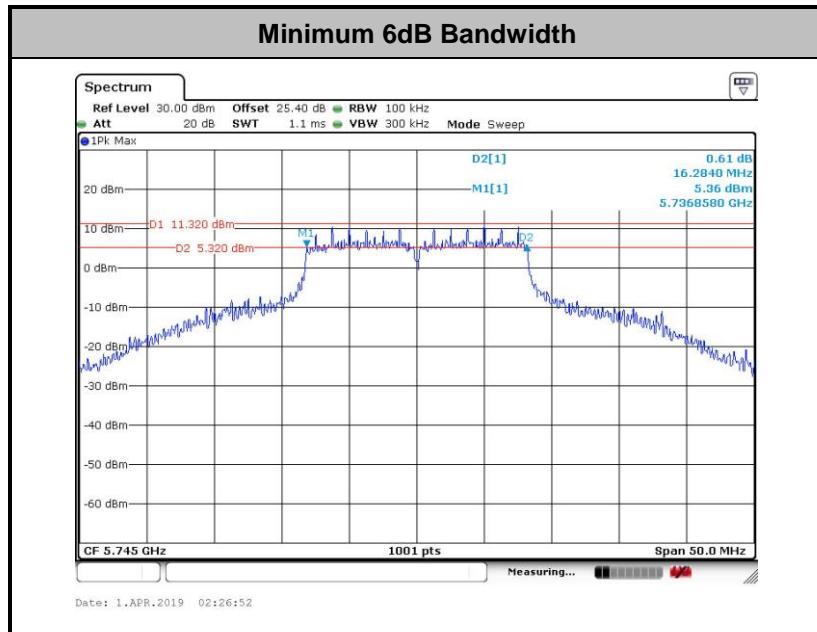


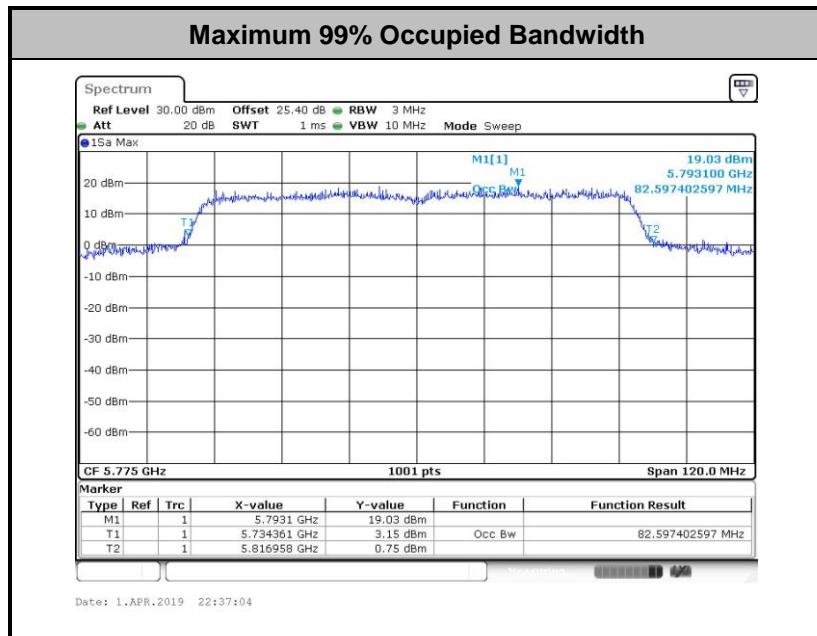
3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.



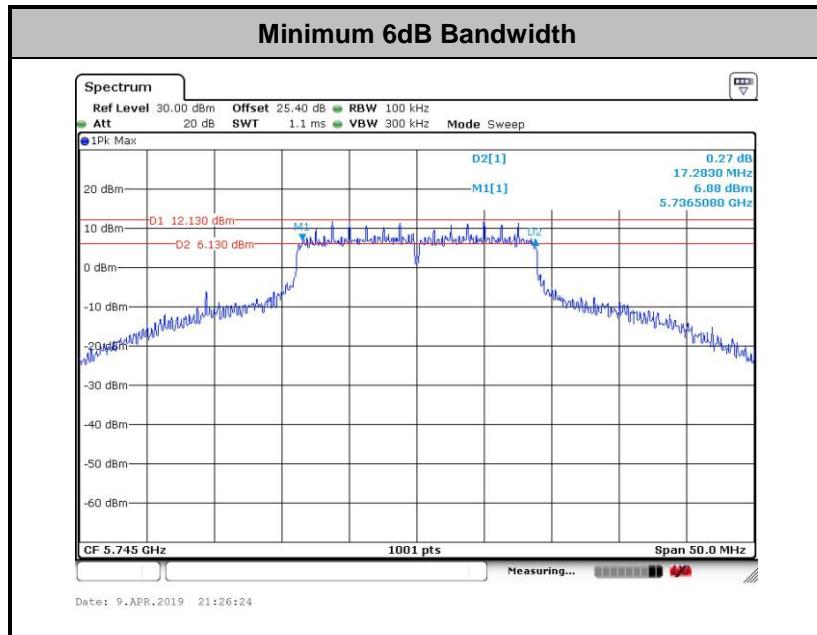
<CDD Mode>

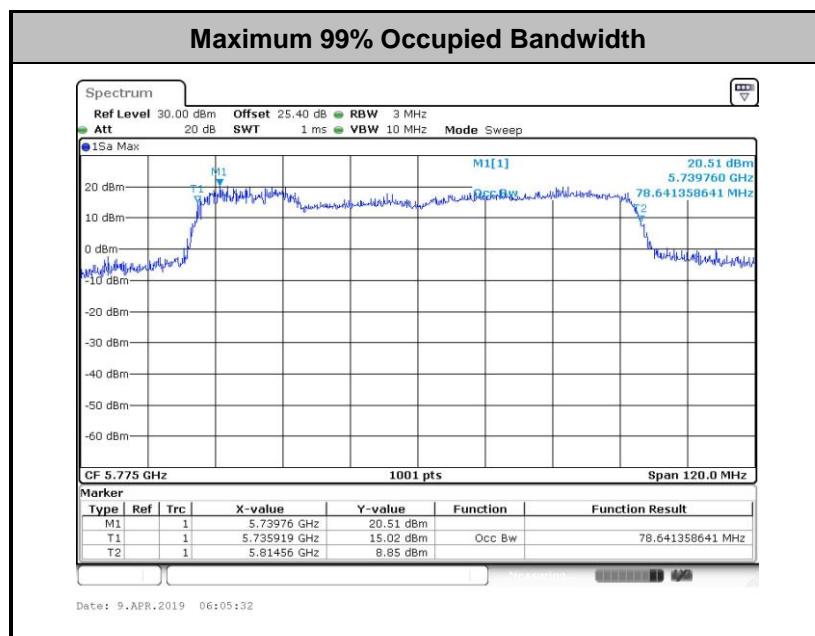
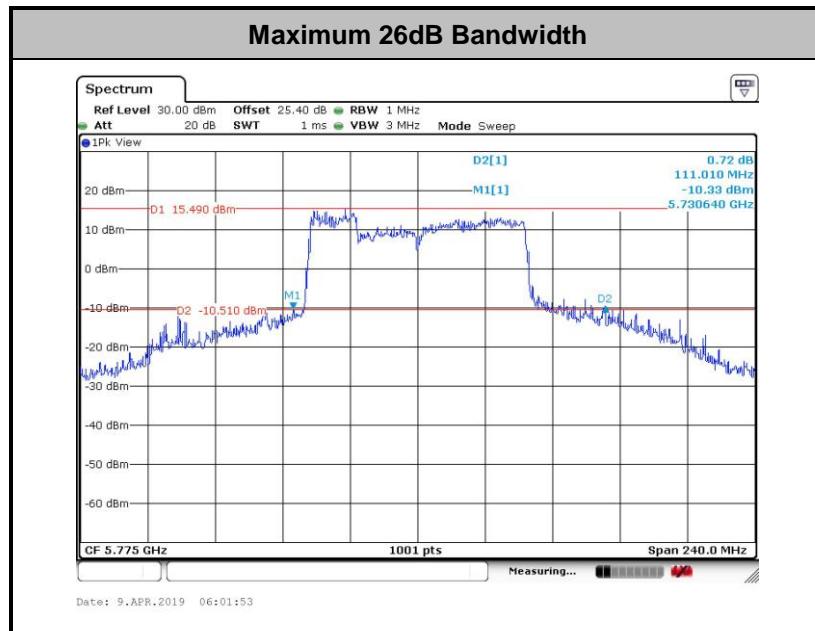




Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<TXBF Modes>





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

<CDD Modes>

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

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, $10 \log(1/x)$, where x is the duty cycle.

<TXBF Modes>

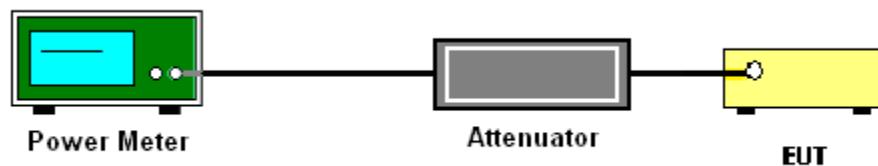
The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01 for TXBF modes.

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.

<CDD Modes>

Method SA-2

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 kHz.
- Set VBW \geq 1 MHz.
- Number of points in sweep \geq 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add $10 \log(500\text{kHz}/\text{RBW})$ to the test result.
- Add $10 \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add $10 \log(1/0.25) = 6$ dB if the duty cycle is 25 percent.



<TXBF Modes>

Method SA-3

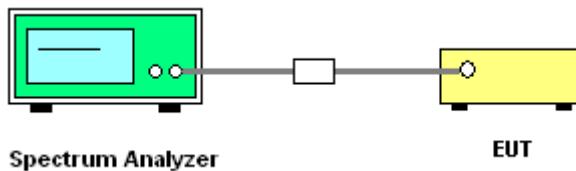
(power averaging (rms) detection with max hold):

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 300 kHz.
 - Set VBW \geq 1 MHz.
 - Number of points in sweep \geq 2 Span / RBW.
 - Sweep time \leq (number of points in sweep) \times T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
 - Detector = power averaging (rms).
 - Trace mode = max hold.
 - Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
 2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
 3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

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

With this technique, spectrum measurements are performed at each output of the device, but rather than summing the spectra or the spectral peaks across the outputs, the quantity $10 \log(N_{ANT})$ dB is added to each spectrum value before comparing to the emission limit. The addition of $10 \log(N_{ANT})$ dB serves to apportion the emission limit among the N_{ANT} outputs so that each output is permitted to contribute no more than $1/N_{ANT}^{\text{th}}$ of the PSD limit.

3.3.4 Test Setup

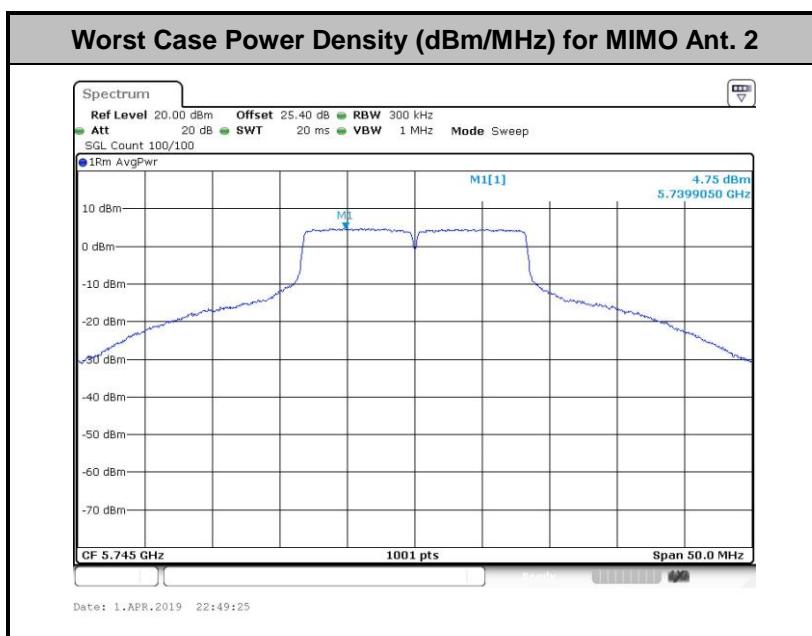
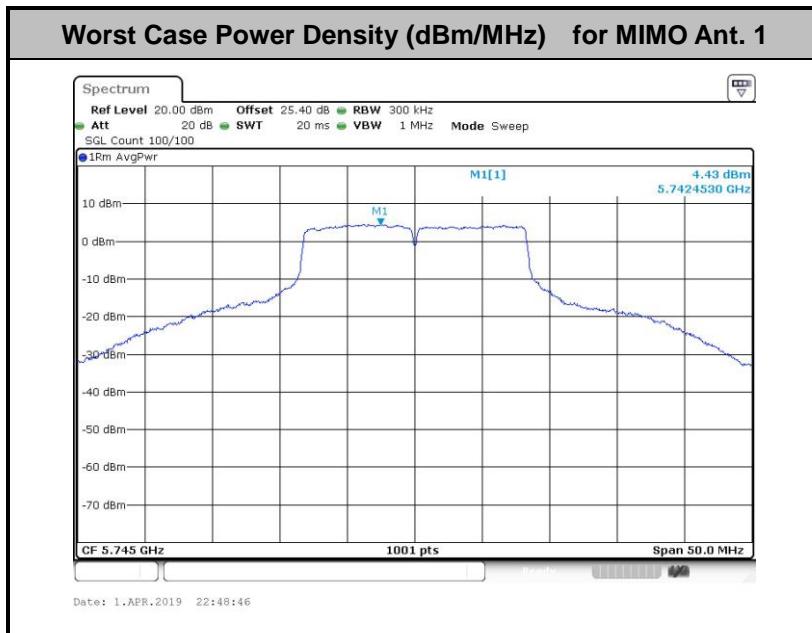


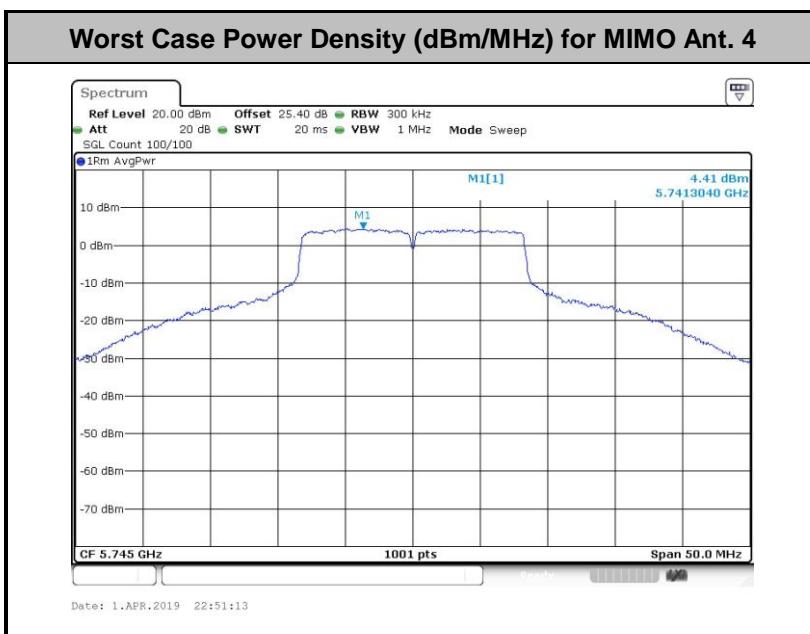
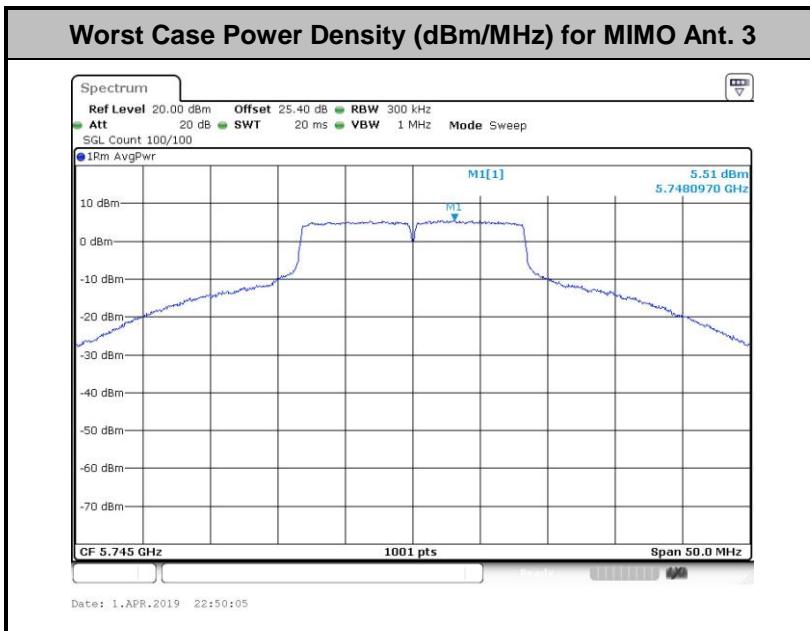


3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

<CDD Modes>

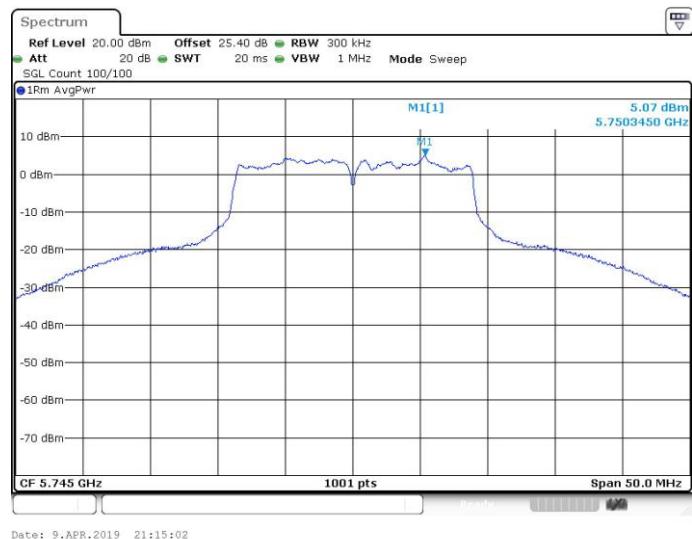




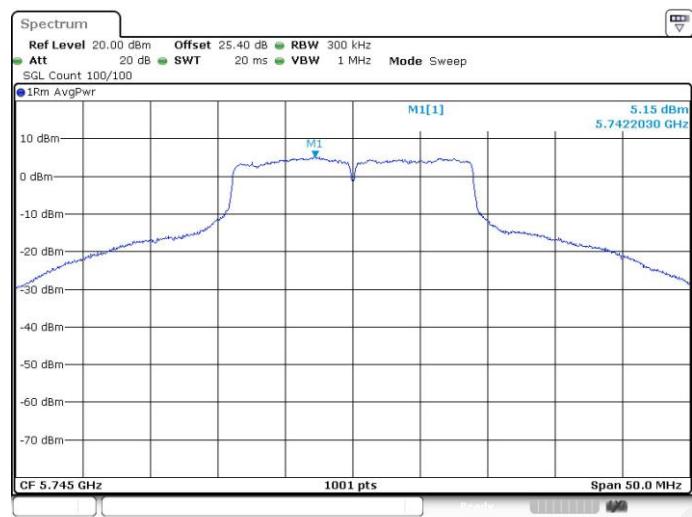


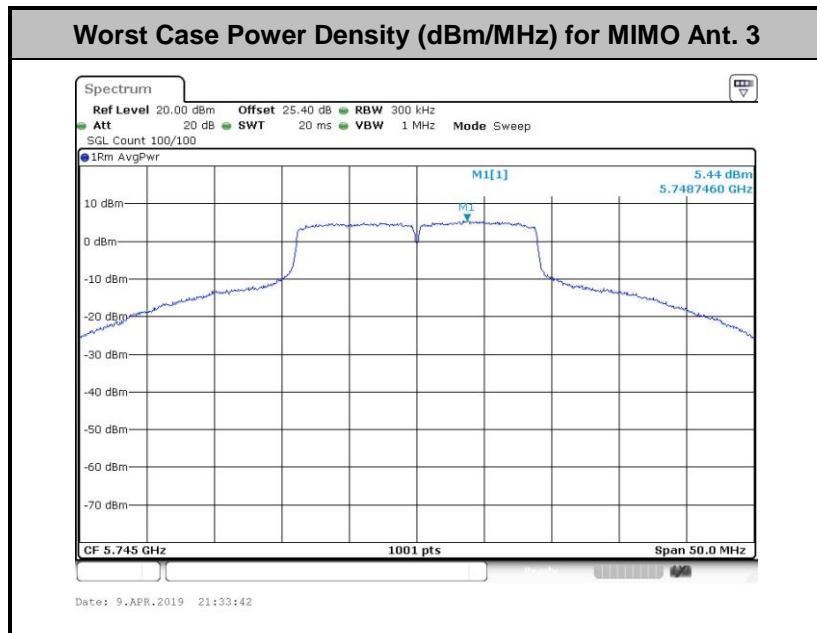
<TXBF Modes>

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



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







3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

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

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

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

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

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

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

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



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

- (i) Section 15.407(b)(1) to (b)(3) specify the unwanted emission limits 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.³
- (ii) Section 15.407(b)(4) specifies the unwanted emission limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are in terms of a Peak detector. An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the devices using the alternative limit.⁴

Note 3: An out-of-band emission that complies with both the average and peak limits of Section 15.209 is not required to satisfy the -27 dBm/MHz peak emission limit.

Note 4: Only devices with antenna gains of 10 dBi or less may be approved using the emission limits specified in Section 15.247(d) till March 2, 2018; all other devices operating in this band must use the mask specified in Section 15.407(b)(4)(i).

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 \geq 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

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

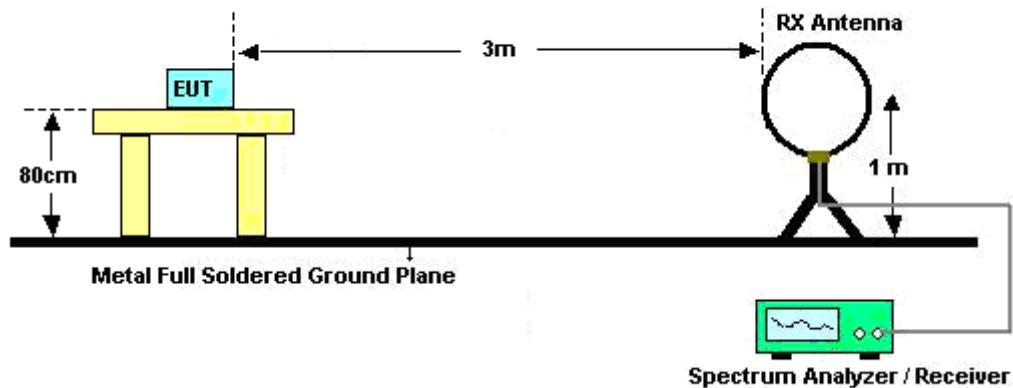
- RBW = 1 MHz
- VBW = 10 Hz, when duty cycle is no less than 98 percent.
- VBW \geq 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.



2. The EUT was placed on a turntable with 0.8 meter for frequency below 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.

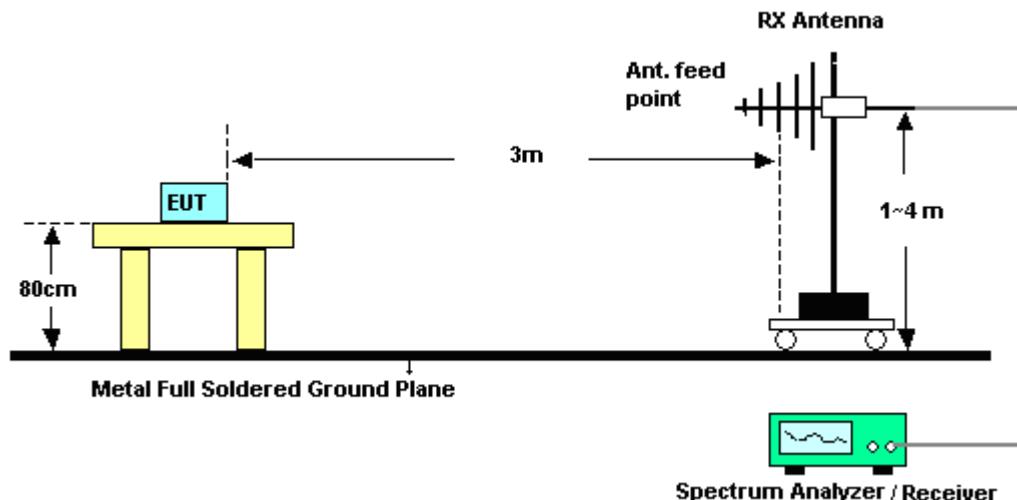
3.4.4 Test Setup

For radiated emissions below 30MHz



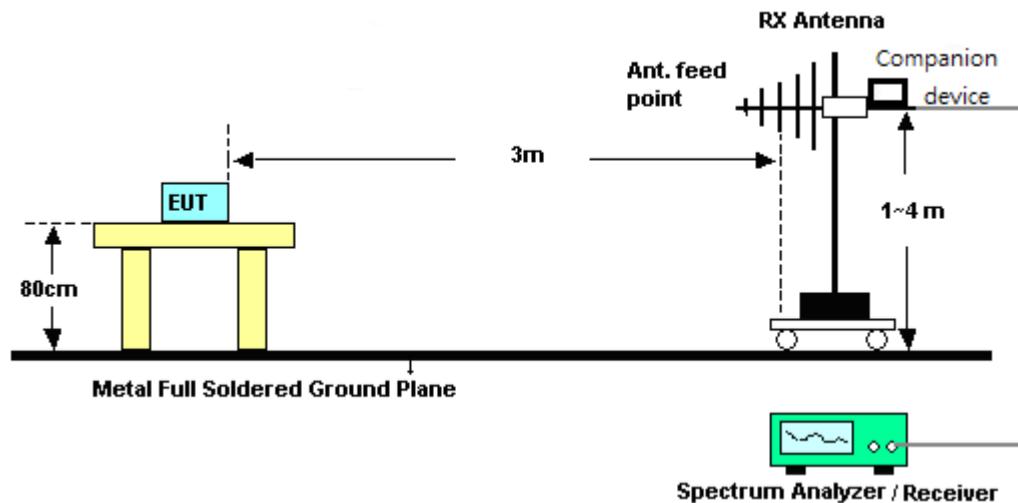
For radiated emissions from 30MHz to 1GHz

<CDD Mode>



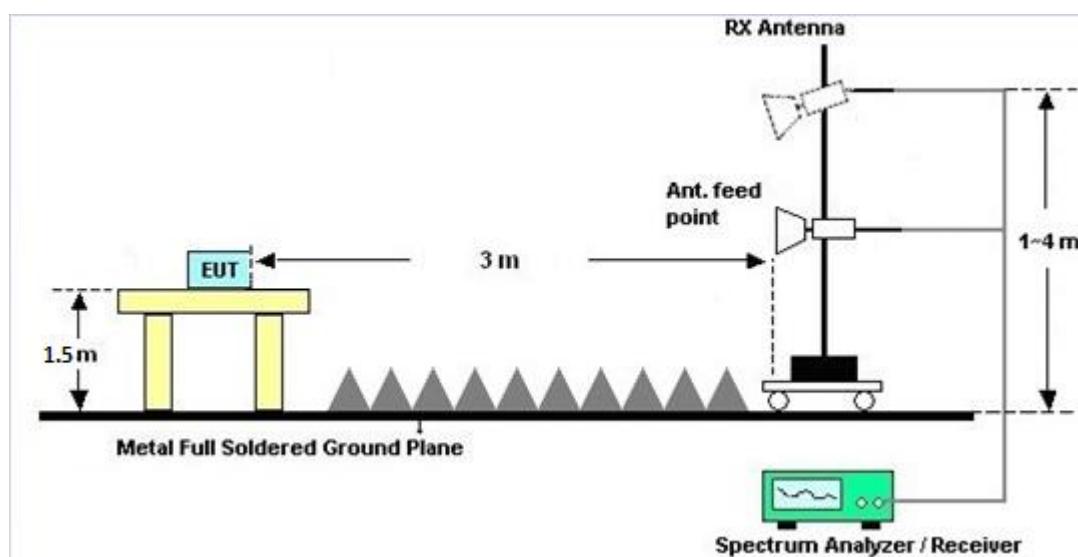


<TXBF Modes>

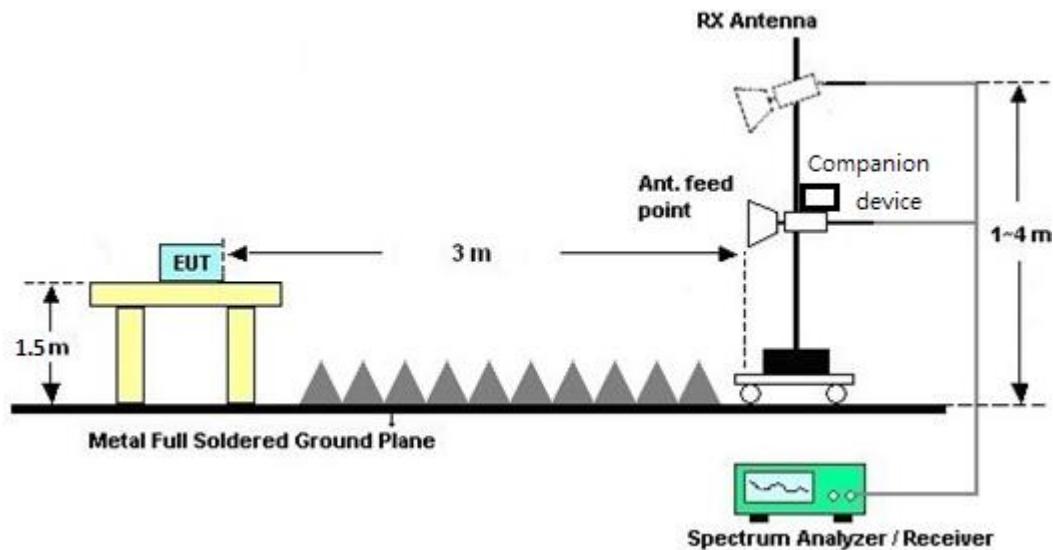


For radiated emissions above 1GHz

<CDD Mode>



<TXBF Modes>



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

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

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

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix C and D.

3.4.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.



3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

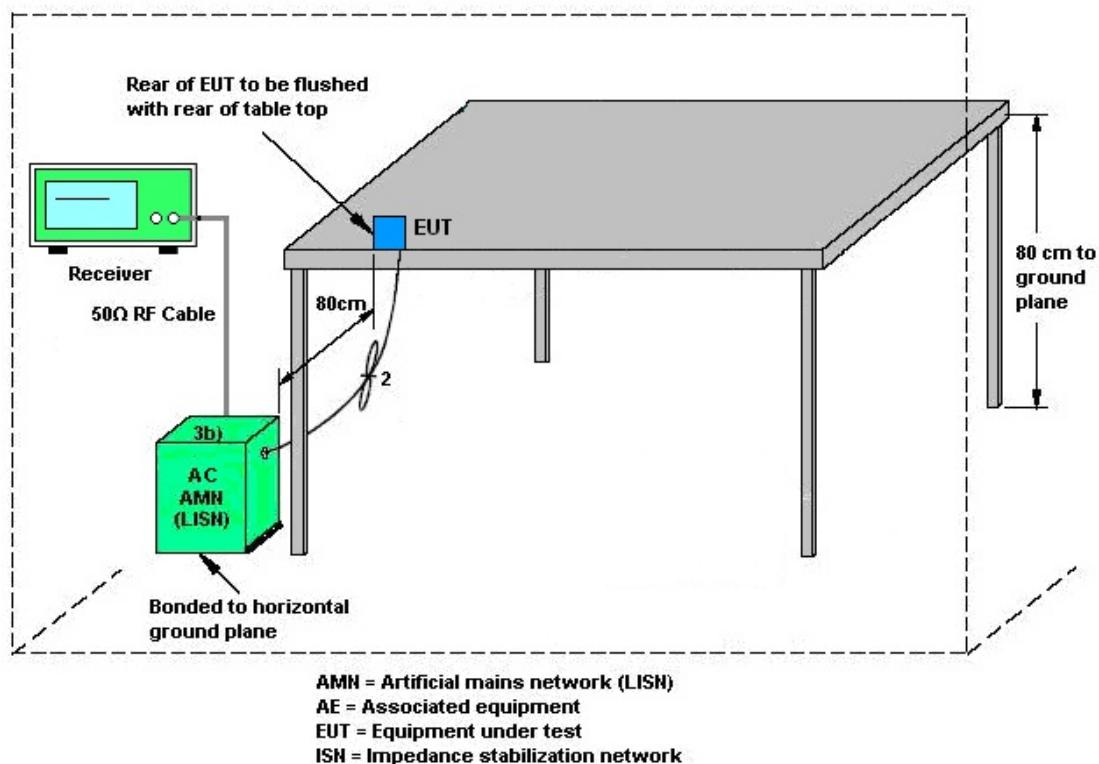
3.5.2 Measuring Instruments

See list of measuring equipment of this test report.

3.5.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN 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



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.6 Automatically Discontinue Transmission

3.6.1 Limit of Automatically Discontinue Transmission

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

3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Result of Automatically Discontinue Transmission

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



3.7 Antenna Requirements

3.7.1 Standard Applicable

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

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.



3.7.3 Antenna Gain

<CDD Modes>

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

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

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

Array Gain = $10 \log(N_{ANT}/N_{SS}=1)$ dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

Directional gain may be calculated by using the formulas applicable to equal gain antennas with

GANT set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain G_{ANT} is set equal to the antenna having the highest gain, i.e., F2)f)i).

For PSD, the directional gain calculation is following F2)f)ii) of KDB 662911 D01 v02r01.

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

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

Antenna Gain	Ant 1 (dBi)	Ant 2 (dBi)	Ant 3 (dBi)	Ant 4 (dBi)
5.8G Band	3.00	4.40	3.10	3.60

5.8G Band Antenna	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
1	3.00	3.00	0.00	0.00
1+2	4.40	6.74	0.00	0.74
1+2+3	4.40	8.30	0.00	2.30
1+2+3+4	4.40	9.56	0.00	3.56

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

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



<TXBF Modes>

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

$$\text{DirectionalGain} = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k / 20}$ if the k th antenna is being fed by spatial stream j , or zero if it is not;
 G_k is the gain in dBi of the k th antenna.

The EUT supports beamforming for 802.11ac modes.

The directional gain calculation is following F)2)e)ii) of KDB 662911 D01 v02r01.

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

The directional gain “DG” is calculated as following table.

Antenna Gain	Ant 1 (dBi)	Ant 2 (dBi)	Ant 3 (dBi)	Ant 4 (dBi)
5.8G Band	3.00	4.40	3.10	3.60
5.8G Band Antenna	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
1+2	6.74	6.74	0.74	0.74
1+2+3	8.30	8.30	2.30	2.30
1+2+3+4	9.56	9.56	3.56	3.56

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

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



4 List of Measuring Equipment

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	Feb. 27, 2019	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9KHz~3.6GHz	Nov. 12, 2018	Feb. 27, 2019	Nov. 11, 2019	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 14, 2018	Feb. 27, 2019	Nov. 13, 2019	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 09, 2018	Feb. 27, 2019	Nov. 08, 2019	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Feb. 27, 2019	N/A	Conduction (CO05-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	Sep. 14, 2018	Feb. 27, 2019	Sep. 13, 2019	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	9561-F N00373	9kHz-200MHz	Nov. 08, 2018	Feb. 27, 2019	Nov. 07, 2019	Conduction (CO05-HY)
<CDD Mode>								
Power Meter	Anritsu	ML2495A	1132003	N/A	Aug. 16, 2018	Feb. 27, 2019 ~ Apr. 02, 2019	Aug. 15, 2019	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1126017	300MHz~40GHz	Aug. 16, 2018	Feb. 27, 2019 ~ Apr. 02, 2019	Aug. 15, 2019	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 21, 2018	Feb. 27, 2019 ~ Apr. 02, 2019	Nov. 20, 2019	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV 30	100895	9kHz~30GHz	Apr. 20, 2018	Feb. 27, 2019 ~ Apr. 02, 2019	Apr. 19, 2019	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1208384	N/A	Apr. 17, 2018	Feb. 27, 2019 ~ Apr. 02, 2019	Apr. 16, 2019	Conducted (TH05-HY)
<TXBF Mode>								
Power Meter	Anritsu	ML2495A	1132003	N/A	Aug. 16, 2018	Apr. 02, 2019 ~ Apr. 09, 2019	Aug. 15, 2019	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1126017	300MHz~40GHz	Aug. 16, 2018	Apr. 02, 2019 ~ Apr. 09, 2019	Aug. 15, 2019	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 21, 2018	Apr. 02, 2019 ~ Apr. 09, 2019	Nov. 20, 2019	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV 30	100895	9kHz~30GHz	Apr. 20, 2018	Apr. 02, 2019 ~ Apr. 09, 2019	Apr. 19, 2019	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1208382	N/A	Mar. 27, 2019	Apr. 02, 2019 ~ Apr. 09, 2019	Mar. 26, 2020	Conducted (TH05-HY)



FCC RADIO TEST REPORT

Report No. : FR912813D

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 16, 2018	Jan. 30, 2019~Mar. 20, 2019	Jul. 15, 2019	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 04, 2018	Jan. 30, 2019~Mar. 20, 2019	Dec. 03, 2019	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D&N-6-06	35414&AT-N0602	30MHz~1GHz	Oct. 13, 2018	Jan. 30, 2019~Mar. 20, 2019	Oct. 12, 2019	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz ~ 18GHz	Oct. 30, 2018	Jan. 30, 2019~Mar. 20, 2019	Oct. 29, 2019	Radiation (03CH11-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Nov. 22, 2018	Jan. 30, 2019~Mar. 20, 2019	Nov. 21, 2019	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 14, 2018	Jan. 30, 2019~Mar. 20, 2019	Nov. 13, 2020	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz ~ 44GHz	Oct. 19, 2018	Jan. 30, 2019~Mar. 20, 2019	Oct. 18, 2019	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Jan. 30, 2019~Mar. 20, 2019	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Jan. 30, 2019~Mar. 20, 2019	N/A	Radiation (03CH11-HY)
Preamplifier	Jet-Power	JPA0118-55-303	1710001800054001	1GHz~18GHz	Apr. 16, 2018	Jan. 30, 2019~Mar. 20, 2019	Apr. 15, 2019	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Dec. 05, 2018	Jan. 30, 2019~Mar. 20, 2019	Dec. 04, 2019	Radiation (03CH11-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY53290045	N/A	Jan. 19, 2019	Jan. 30, 2019~Mar. 20, 2019	Jan. 18, 2020	Radiation (03CH11-HY)
Software	Audix	E3 6.2009-8-24	RK-001042	N/A	N/A	Jan. 30, 2019~Mar. 20, 2019	N/A	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz-30MHz	Jan. 13, 2019	Jan. 30, 2019~Mar. 20, 2019	Jan. 12, 2020	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30MHz-40GHz	Jan. 13, 2019	Jan. 30, 2019~Mar. 20, 2019	Jan. 12, 2020	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	30M-18G	Jan. 13, 2019	Jan. 30, 2019~Mar. 20, 2019	Jan. 12, 2020	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY4274/2	30MHz-40GHz	Jan. 13, 2019	Jan. 30, 2019~Mar. 20, 2019	Jan. 12, 2020	Radiation (03CH11-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-4OST	SN3	6.75GHz High Pass	Sep. 17, 2018	Jan. 30, 2019~Mar. 20, 2019	Sep. 16, 2019	Radiation (03CH11-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN11	1G Low Pass	Sep. 16, 2018	Jan. 30, 2019~Mar. 20, 2019	Sep. 15, 2019	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60SS	SN3	2.7G High Pass	Sep. 16, 2018	Jan. 30, 2019~Mar. 20, 2019	Sep. 15, 2019	Radiation (03CH11-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	2.2
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	5.2
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	5.5
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	5.2
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Appendix A. Test Result of Conducted Test Items

<CDD Mode>

Test Engineer:	Eason Huang	Temperature:	21~25	°C
Test Date:	2019/2/27~4/2	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% OBW

Band IV															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)			26 dB Bandwidth (MHz)			6 dB Bandwidth (MHz)			6 dB BW Min. Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 3	Ant 1	Ant 2	Ant 3	Ant 1	Ant 2	Ant 3		
11a	6Mbps	1	149	5745	24.13	-	-	42.96	-	-	16.30	-	-	0.5	Pass
11a	6Mbps	1	157	5785	23.13	-	-	42.76	-	-	16.33	-	-	0.5	Pass
11a	6Mbps	1	165	5825	22.23	-	-	42.66	-	-	16.33	-	-	0.5	Pass
VHT20	MCS0	1	149	5745	25.52	-	-	47.70	-	-	17.53	-	-	0.5	Pass
VHT20	MCS0	1	157	5785	24.23	-	-	48.45	-	-	17.53	-	-	0.5	Pass
VHT20	MCS0	1	165	5825	23.92	-	-	47.15	-	-	17.53	-	-	0.5	Pass
VHT40	MCS0	1	151	5755	56.04	-	-	100.49	-	-	36.23	-	-	0.5	Pass
VHT40	MCS0	1	159	5795	53.85	-	-	95.54	-	-	36.23	-	-	0.5	Pass
VHT80	MCS0	1	155	5775	79.84	-	-	183.74	-	-	75.92	-	-	0.5	Pass
11a	6Mbps	2	149	5745	24.38	25.67	-	42.96	43.16	-	16.33	16.33	-	0.5	Pass
11a	6Mbps	2	157	5785	23.13	27.57	-	42.86	46.05	-	16.33	16.33	-	0.5	Pass
11a	6Mbps	2	165	5825	23.18	26.92	-	42.51	46.00	-	16.33	16.33	-	0.5	Pass
VHT20	MCS0	2	149	5745	26.02	28.92	-	48.45	48.73	-	17.58	17.53	-	0.5	Pass
VHT20	MCS0	2	157	5785	25.12	28.92	-	45.73	48.61	-	17.53	17.53	-	0.5	Pass
VHT20	MCS0	2	165	5825	24.83	27.92	-	46.09	47.77	-	17.53	17.53	-	0.5	Pass
VHT40	MCS0	2	151	5755	56.94	65.03	-	98.66	102.26	-	36.26	36.36	-	0.5	Pass
VHT40	MCS0	2	159	5795	55.45	65.23	-	99.02	102.02	-	36.36	36.32	-	0.5	Pass
VHT80	MCS0	2	155	5775	77.80	77.80	-	142.90	146.97	-	76.24	76.24	-	0.5	Pass
11a	6Mbps	3	149	5745	24.83	27.67	28.97	42.92	45.26	49.03	16.33	16.28	16.33	0.5	Pass
11a	6Mbps	3	157	5785	22.23	26.02	27.77	42.41	42.71	45.50	16.28	16.28	16.28	0.5	Pass
11a	6Mbps	3	165	5825	23.08	27.37	29.27	42.71	43.41	48.61	16.33	16.33	16.33	0.5	Pass
VHT20	MCS0	3	149	5745	26.27	28.12	30.92	50.77	48.79	48.85	17.53	17.58	17.58	0.5	Pass
VHT20	MCS0	3	157	5785	25.82	28.97	31.62	48.73	49.09	50.59	17.58	17.58	17.53	0.5	Pass
VHT20	MCS0	3	165	5825	24.13	28.17	31.42	46.03	47.95	48.91	17.53	17.58	17.58	0.5	Pass
VHT40	MCS0	3	151	5755	46.95	56.84	58.64	94.95	98.78	97.58	36.26	36.36	36.26	0.5	Pass
VHT40	MCS0	3	159	5795	55.54	67.13	70.63	97.10	102.26	108.85	36.32	36.32	36.41	0.5	Pass
VHT80	MCS0	3	155	5775	80.32	80.44	82.597	187.97	185.09	182.22	76.24	76.12	76.24	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power with duty factor (dBm)				FCC Conducted Power Limit (dBm)			DG (dBi)			Pass/Fail
					Ant 1	Ant 2	Ant 3	SUM	Ant 1	Ant 2	Ant 3	Ant 1	Ant 2	Ant 3	
11a	6Mbps	1	149	5745	22.18	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
11a	6Mbps	1	157	5785	22.28	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
11a	6Mbps	1	165	5825	22.08	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
HT20	MCS0	1	149	5745	21.84	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
HT20	MCS0	1	157	5785	21.84	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
HT20	MCS0	1	165	5825	21.74	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
HT40	MCS0	1	151	5755	22.28	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
HT40	MCS0	1	159	5795	22.38	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
VHT20	MCS0	1	149	5745	21.98	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
VHT20	MCS0	1	157	5785	21.98	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
VHT20	MCS0	1	165	5825	21.88	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
VHT40	MCS0	1	151	5755	22.56	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
VHT40	MCS0	1	159	5795	22.46	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
VHT80	MCS0	1	155	5775	22.22	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
11a	6Mbps	2	149	5745	22.03	22.27	-	25.16	30.00			4.40			Pass
11a	6Mbps	2	157	5785	21.93	21.87	-	24.91	30.00			4.40			Pass
11a	6Mbps	2	165	5825	22.13	22.07	-	25.11	30.00			4.40			Pass
HT20	MCS0	2	149	5745	21.79	22.04	-	24.93	30.00			4.40			Pass
HT20	MCS0	2	157	5785	21.89	21.94	-	24.92	30.00			4.40			Pass
HT20	MCS0	2	165	5825	21.99	22.04	-	25.02	30.00			4.40			Pass
HT40	MCS0	2	151	5755	22.48	22.98	-	25.75	30.00			4.40			Pass
HT40	MCS0	2	159	5795	22.38	22.98	-	25.70	30.00			4.40			Pass
VHT20	MCS0	2	149	5745	21.97	22.09	-	25.04	30.00			4.40			Pass
VHT20	MCS0	2	157	5785	21.97	22.09	-	25.04	30.00			4.40			Pass
VHT20	MCS0	2	165	5825	22.07	22.19	-	25.14	30.00			4.40			Pass
VHT40	MCS0	2	151	5755	22.43	23.08	-	25.78	30.00			4.40			Pass
VHT40	MCS0	2	159	5795	22.43	23.18	-	25.83	30.00			4.40			Pass
VHT80	MCS0	2	155	5775	19.70	19.52	-	22.62	30.00			4.40			Pass
11a	6Mbps	3	149	5745	22.23	22.32	23.17	27.37	30.00			4.40			Pass
11a	6Mbps	3	157	5785	21.63	21.92	22.47	26.79	30.00			4.40			Pass
11a	6Mbps	3	165	5825	22.23	22.22	23.07	27.30	30.00			4.40			Pass
HT20	MCS0	3	149	5745	21.82	22.45	22.91	27.19	30.00			4.40			Pass
HT20	MCS0	3	157	5785	21.82	22.35	22.71	27.08	30.00			4.40			Pass
HT20	MCS0	3	165	5825	21.72	22.15	22.81	27.02	30.00			4.40			Pass
HT40	MCS0	3	151	5755	21.34	22.24	22.54	26.84	30.00			4.40			Pass
HT40	MCS0	3	159	5795	22.14	23.14	23.04	27.57	30.00			4.40			Pass
VHT20	MCS0	3	149	5745	21.98	22.67	23.07	27.37	30.00			4.40			Pass
VHT20	MCS0	3	157	5785	22.08	22.57	22.87	27.29	30.00			4.40			Pass
VHT20	MCS0	3	165	5825	22.08	22.27	22.97	27.23	30.00			4.40			Pass
VHT40	MCS0	3	151	5755	21.58	22.36	22.66	26.99	30.00			4.40			Pass
VHT40	MCS0	3	159	5795	22.28	23.16	23.16	27.66	30.00			4.40			Pass
VHT80	MCS0	3	155	5775	21.69	21.71	22.1	26.61	30.00			4.40			Pass

TEST RESULTS DATA
Power Spectral Density

FCC Band IV															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Power Density with RBW and duty factor (dBm/500kHz)				Average PSD Limit (dBm/500kHz)			DG (dBi)			Pass /Fail
					Ant 1	Ant 2	Ant 3	SUM	Ant 1	Ant 2	Ant 3	Ant 1	Ant 2	Ant 3	
11a	6Mbps	1	149	5745	7.24	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
11a	6Mbps	1	157	5785	7.29	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
11a	6Mbps	1	165	5825	7.25	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
VHT20	MCS0	1	149	5745	7.05	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
VHT20	MCS0	1	157	5785	6.91	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
VHT20	MCS0	1	165	5825	6.90	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
VHT40	MCS0	1	151	5755	4.63	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
VHT40	MCS0	1	159	5795	4.44	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
VHT80	MCS0	1	155	5775	1.14	-	-		30.00	30.00	30.00	3.00	4.40	3.10	Pass
11a	6Mbps	2	149	5745	7.36	5.82	-	11.05	29.26			6.74			Pass
11a	6Mbps	2	157	5785	6.52	4.46	-	9.69	29.26			6.74			Pass
11a	6Mbps	2	165	5825	6.57	4.51	-	9.74	29.26			6.74			Pass
VHT20	MCS0	2	149	5745	6.47	4.36	-	9.59	29.26			6.74			Pass
VHT20	MCS0	2	157	5785	6.37	4.19	-	9.42	29.26			6.74			Pass
VHT20	MCS0	2	165	5825	6.26	4.11	-	9.34	29.26			6.74			Pass
VHT40	MCS0	2	151	5755	3.66	2.28	-	7.51	29.26			6.74			Pass
VHT40	MCS0	2	159	5795	3.57	2.26	-	7.49	29.26			6.74			Pass
VHT80	MCS0	2	155	5775	-1.89	-3.97	-	1.26	29.26			6.74			Pass
11a	6Mbps	3	149	5745	6.97	7.15	7.78	12.55	27.70			8.30			Pass
11a	6Mbps	3	157	5785	6.26	6.53	7.03	11.80	27.70			8.30			Pass
11a	6Mbps	3	165	5825	6.66	6.95	7.56	12.33	27.70			8.30			Pass
VHT20	MCS0	3	149	5745	6.72	7.16	7.50	12.27	27.70			8.30			Pass
VHT20	MCS0	3	157	5785	6.49	6.87	7.09	11.86	27.70			8.30			Pass
VHT20	MCS0	3	165	5825	6.55	6.69	7.39	12.16	27.70			8.30			Pass
VHT40	MCS0	3	151	5755	3.46	4.05	4.29	9.06	27.70			8.30			Pass
VHT40	MCS0	3	159	5795	3.74	4.91	4.74	9.68	27.70			8.30			Pass
VHT80	MCS0	3	155	5775	0.76	0.60	0.86	5.63	27.70			8.30			Pass

<CDD Mode>

Test Engineer:	Eason Huang	Temperature:	21~25	°C
Test Date:	2018/2/27~04/02	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% OBW

Band IV														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	26dB Bandwidth (MHz)				6 dB Bandwidth (MHz)				6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 3	Ant 4	Ant 1	Ant 2	Ant 3	Ant 4		
11a	6Mbps	4	149	5745	43.16	47.47	51.07	45.44	16.33	16.33	16.33	16.33	0.5	Pass
11a	6Mbps	4	157	5785	42.74	47.17	49.09	45.02	16.28	16.28	16.33	16.28	0.5	Pass
11a	6Mbps	4	165	5825	42.62	45.08	49.03	42.38	16.33	16.33	16.33	16.33	0.5	Pass
VHT20	MCS0	4	149	5745	47.05	49.03	50.95	49.15	17.58	17.58	17.58	17.58	0.5	Pass
VHT20	MCS0	4	157	5785	48.79	48.79	53.53	49.33	17.58	17.58	17.58	17.58	0.5	Pass
VHT20	MCS0	4	165	5825	46.99	48.37	49.93	47.65	17.58	17.58	17.58	17.58	0.5	Pass
VHT40	MCS0	4	151	5755	86.91	99.26	99.38	90.03	36.36	36.36	36.36	36.26	0.5	Pass
VHT40	MCS0	4	159	5795	94.23	100.82	101.9	97.46	36.36	36.36	36.36	36.36	0.5	Pass
VHT80	MCS0	4	155	5775	137.62	119.88	130.59	110.29	76.12	76.36	76.36	76.36	0.5	Pass

Band IV														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)									Pass/Fail
					Ant 1	Ant 2	Ant 3	Ant 4						
11a	6Mbps	4	149	5745	24.78	27.57	29.47	27.87						Pass
11a	6Mbps	4	157	5785	24.13	27.57	29.97	27.32						Pass
11a	6Mbps	4	165	5825	23.23	26.92	30.02	27.02						Pass
VHT20	MCS0	4	149	5745	26.82	29.12	31.67	29.87						Pass
VHT20	MCS0	4	157	5785	25.77	29.27	31.87	28.57						Pass
VHT20	MCS0	4	165	5825	25.17	29.17	32.41	27.92						Pass
VHT40	MCS0	4	151	5755	43.76	53.05	53.55	48.25						Pass
VHT40	MCS0	4	159	5795	53.04	61.44	65.93	58.04						Pass
VHT80	MCS0	4	155	5775	77.20	77.08	77.20	77.20						Pass

TEST RESULTS DATA
Average Power Table

Band IV															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power with duty factor (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)				Pass/ Fail
					Ant 1	Ant 2	Ant 3	Ant 4	SUM		Ant 1	Ant 2	Ant 3	Ant 4	
11a	6Mbps	4	149	5745	21.85	22.43	22.97	22.03	28.36	30.00	4.40	4.40	4.40	4.40	Pass
11a	6Mbps	4	157	5785	21.75	22.43	22.77	22.03	28.28	30.00	4.40	4.40	4.40	4.40	Pass
11a	6Mbps	4	165	5825	21.85	22.23	22.87	21.63	28.19	30.00	4.40	4.40	4.40	4.40	Pass
HT20	MCS0	4	149	5745	21.70	22.35	22.95	21.88	28.27	30.00	4.40	4.40	4.40	4.40	Pass
HT20	MCS0	4	157	5785	21.40	22.25	22.55	21.68	28.01	30.00	4.40	4.40	4.40	4.40	Pass
HT20	MCS0	4	165	5825	21.60	22.15	22.85	21.58	28.10	30.00	4.40	4.40	4.40	4.40	Pass
HT40	MCS0	4	151	5755	20.88	21.98	21.68	20.76	27.38	30.00	4.40	4.40	4.40	4.40	Pass
HT40	MCS0	4	159	5795	21.68	22.78	22.78	21.76	28.30	30.00	4.40	4.40	4.40	4.40	Pass
VHT20	MCS0	4	149	5745	21.79	22.48	23.01	21.88	28.34	30.00	4.40	4.40	4.40	4.40	Pass
VHT20	MCS0	4	157	5785	21.59	22.28	22.61	21.68	28.08	30.00	4.40	4.40	4.40	4.40	Pass
VHT20	MCS0	4	165	5825	21.69	22.18	22.81	21.58	28.11	30.00	4.40	4.40	4.40	4.40	Pass
VHT40	MCS0	4	151	5755	20.96	22.06	21.78	20.83	27.46	30.00	4.40	4.40	4.40	4.40	Pass
VHT40	MCS0	4	159	5795	21.76	22.86	22.88	21.83	28.39	30.00	4.40	4.40	4.40	4.40	Pass
VHT80	MCS0	4	155	5775	17.51	17.81	17.86	16.92	23.56	30.00	4.40	4.40	4.40	4.40	Pass

TEST RESULTS DATA
Power Spectral Density

FCC Band IV															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Power Density with RBW and duty factor (dBm/500kHz)					Average PSD Limit (dBm/500kHz)	DG (dBi)				Pass /Fail
					Ant 1	Ant 2	Ant 3	Ant 4	SUM		Ant 1	Ant 2	Ant 3	Ant 4	
11a	6Mbps	4	149	5745	6.90	7.20	8.00	6.86	14.02	26.44	9.56				Pass
11a	6Mbps	4	157	5785	6.88	7.38	7.64	6.89	13.66	26.44	9.56				Pass
11a	6Mbps	4	165	5825	6.92	7.23	7.69	6.71	13.71	26.44	9.56				Pass
VHT20	MCS0	4	149	5745	6.87	7.27	7.63	6.76	13.65	26.44	9.56				Pass
VHT20	MCS0	4	157	5785	6.40	6.89	7.20	6.42	13.22	26.44	9.56				Pass
VHT20	MCS0	4	165	5825	6.51	6.91	7.33	6.21	13.35	26.44	9.56				Pass
VHT40	MCS0	4	151	5755	2.80	4.04	3.65	2.58	10.06	26.44	9.56				Pass
VHT40	MCS0	4	159	5795	3.48	4.60	4.46	3.36	10.62	26.44	9.56				Pass
VHT80	MCS0	4	155	5775	-3.55	-3.40	-3.50	-4.27	2.62	26.44	9.56				Pass

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

<TXBF Mode>

Test Engineer:	Eason Huang	Temperature:	21~25	°C
Test Date:	2019/4/2~4/9	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% OBW

Band IV															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)			26 dB Bandwidth (MHz)			6 dB Bandwidth (MHz)			6 dB BW Min. Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 3	Ant 1	Ant 2	Ant 3	Ant 1	Ant 2	Ant 3		
VHT20	MCS0	2	149	5745	25.12	27.07	-	47.47	47.77	-	17.58	17.58	-	0.5	Pass
VHT20	MCS0	2	157	5785	24.38	28.22	-	47.17	48.79	-	17.58	17.53	-	0.5	Pass
VHT20	MCS0	2	165	5825	24.03	26.77	-	46.99	47.47	-	17.58	17.58	-	0.5	Pass
VHT40	MCS0	2	151	5755	55.34	60.74	-	97.58	95.66	-	35.43	36.23	-	0.5	Pass
VHT40	MCS0	2	159	5795	56.44	66.43	-	93.03	96.74	-	35.34	35.69	-	0.5	Pass
VHT80	MCS0	2	155	5775	78.28	78.64	-	110.29	111.01	-	75.60	75.60	-	0.5	Pass
VHT20	MCS0	3	149	5745	22.78	27.62	31.77	43.04	48.73	52.45	17.38	17.28	17.53	0.5	Pass
VHT20	MCS0	3	157	5785	23.23	28.07	31.17	47.41	49.63	52.99	17.53	17.53	17.48	0.5	Pass
VHT20	MCS0	3	165	5825	24.43	26.67	32.42	47.17	48.85	50.83	17.53	17.58	17.48	0.5	Pass
VHT40	MCS0	3	151	5755	46.85	54.05	58.74	90.15	94.47	93.39	36.23	35.43	35.694	0.5	Pass
VHT40	MCS0	3	159	5795	58.24	69.63	69.13	93.75	104.06	104.66	35.34	36.32	35.69	0.5	Pass
VHT80	MCS0	3	155	5775	78.04	78.04	78.161	87.91	88.23	101.34	75.76	75.76	75.12	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power with duty factor (dBm)				FCC Conducted Power Limit (dBm)			DG (dBi)			Pass/Fail
					Ant 1	Ant 2	Ant 3	SUM	Ant 1	Ant 2	Ant 3	Ant 1	Ant 2	Ant 3	
HT20	MCS0	2	149	5745	22.20	22.90	-	25.57	29.26	29.26	29.26	6.74	6.74	6.74	Pass
HT20	MCS0	2	157	5785	22.30	22.90	-	25.62	29.26	29.26	29.26	6.74	6.74	6.74	Pass
HT20	MCS0	2	165	5825	22.10	22.50	-	25.31	29.26	29.26	29.26	6.74	6.74	6.74	Pass
HT40	MCS0	2	151	5755	22.30	23.50	-	25.95	29.26	29.26	29.26	6.74	6.74	6.74	Pass
HT40	MCS0	2	159	5795	22.30	23.50	-	25.95	29.26	29.26	29.26	6.74	6.74	6.74	Pass
VHT20	MCS0	2	149	5745	22.30	23.00	-	25.67	29.26	29.26	29.26	6.74	6.74	6.74	Pass
VHT20	MCS0	2	157	5785	22.40	23.00	-	25.72	29.26	29.26	29.26	6.74	6.74	6.74	Pass
VHT20	MCS0	2	165	5825	22.20	22.70	-	25.47	29.26	29.26	29.26	6.74	6.74	6.74	Pass
VHT40	MCS0	2	151	5755	22.40	23.60	-	26.05	29.26	29.26	29.26	6.74	6.74	6.74	Pass
VHT40	MCS0	2	159	5795	22.40	23.60	-	26.05	29.26	29.26	29.26	6.74	6.74	6.74	Pass
VHT80	MCS0	2	155	5775	20.70	21.00	-	23.86	29.26	29.26	29.26	6.74	6.74	6.74	Pass
HT20	MCS0	3	149	5745	22.00	22.50	22.9	27.25	27.70	27.70	27.70	8.30	8.30	8.30	Pass
HT20	MCS0	3	157	5785	21.90	22.60	22.7	27.19	27.70	27.70	27.70	8.30	8.30	8.30	Pass
HT20	MCS0	3	165	5825	21.90	22.50	22.9	27.22	27.70	27.70	27.70	8.30	8.30	8.30	Pass
HT40	MCS0	3	151	5755	21.20	22.60	22.4	26.88	27.70	27.70	27.70	8.30	8.30	8.30	Pass
HT40	MCS0	3	159	5795	22.10	23.10	23.1	27.56	27.70	27.70	27.70	8.30	8.30	8.30	Pass
VHT20	MCS0	3	149	5745	22.10	22.60	23	27.35	27.70	27.70	27.70	8.30	8.30	8.30	Pass
VHT20	MCS0	3	157	5785	22.00	22.70	22.9	27.32	27.70	27.70	27.70	8.30	8.30	8.30	Pass
VHT20	MCS0	3	165	5825	22.00	22.60	23.1	27.36	27.70	27.70	27.70	8.30	8.30	8.30	Pass
VHT40	MCS0	3	151	5755	21.30	22.70	22.5	26.98	27.70	27.70	27.70	8.30	8.30	8.30	Pass
VHT40	MCS0	3	159	5795	22.20	23.20	23.2	27.66	27.70	27.70	27.70	8.30	8.30	8.30	Pass
VHT80	MCS0	3	155	5775	19.60	19.50	20.1	24.51	27.70	27.70	27.70	8.30	8.30	8.30	Pass

TEST RESULTS DATA
Power Spectral Density

FCC Band IV															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Power Density with RBW and duty factor (dBm/500kHz)				Average PSD Limit (dBm/500kHz)			DG (dBi)			Pass /Fail
					Ant 1	Ant 2	Ant 3	SUM	Ant 1	Ant 2	Ant 3	Ant 1	Ant 2	Ant 3	
VHT20	MCS0	2	149	5745	6.53	5.95	-	11.18	29.26	29.26	29.26	6.74	6.74	6.74	Pass
VHT20	MCS0	2	157	5785	6.49	5.59	-	10.82	29.26	29.26	29.26	6.74	6.74	6.74	Pass
VHT20	MCS0	2	165	5825	6.65	4.95	-	10.18	29.26	29.26	29.26	6.74	6.74	6.74	Pass
VHT40	MCS0	2	151	5755	2.20	2.37	-	7.60	29.26	29.26	29.26	6.74	6.74	6.74	Pass
VHT40	MCS0	2	159	5795	4.34	3.33	-	8.56	29.26	29.26	29.26	6.74	6.74	6.74	Pass
VHT80	MCS0	2	155	5775	-2.27	-1.70	-	3.53	29.26	29.26	29.26	6.74	6.74	6.74	Pass
VHT20	MCS0	3	149	5745	7.29	7.37	7.66	12.43	27.70	27.70	27.70	8.30	8.30	8.30	Pass
VHT20	MCS0	3	157	5785	7.25	7.00	7.24	12.02	27.70	27.70	27.70	8.30	8.30	8.30	Pass
VHT20	MCS0	3	165	5825	7.52	7.40	7.54	12.31	27.70	27.70	27.70	8.30	8.30	8.30	Pass
VHT40	MCS0	3	151	5755	3.77	4.31	4.14	9.08	27.70	27.70	27.70	8.30	8.30	8.30	Pass
VHT40	MCS0	3	159	5795	4.31	5.06	4.69	9.83	27.70	27.70	27.70	8.30	8.30	8.30	Pass
VHT80	MCS0	3	155	5775	-1.34	-1.44	-1.53	3.43	27.70	27.70	27.70	8.30	8.30	8.30	Pass

<TXBF Mode>

Test Engineer:	Eason Huang	Temperature:	21~25	°C
Test Date:	2018/4/2~4/9	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% OBW

Band IV														
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	26dB Bandwidth (MHz)				6 dB Bandwidth (MHz)				6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 3	Ant 4	Ant 1	Ant 2	Ant 3	Ant 4		
VHT20	MCS0	4	149	5745	38.91	42.51	44.96	43.61	17.63	17.63	17.58	17.58	0.5	Pass
VHT20	MCS0	4	157	5785	41.56	42.06	43.26	43.71	17.73	17.73	17.58	17.58	0.5	Pass
VHT20	MCS0	4	165	5825	39.81	41.01	46.85	40.76	17.53	17.68	17.58	17.53	0.5	Pass
VHT40	MCS0	4	151	5755	77.44	92.91	79.12	72.53	36.23	36.32	35.69	36.32	0.5	Pass
VHT40	MCS0	4	159	5795	68.81	87.87	87.03	75.40	35.96	36.06	36.36	36.36	0.5	Pass
VHT80	MCS0	4	155	5775	89.03	96.70	106.61	93.67	75.64	75.64	75.64	75.64	0.5	Pass

Band IV														
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)									Pass/Fail
					Ant 1	Ant 2	Ant 3	Ant 4						
VHT20	MCS0	4	149	5745	18.28	19.48	20.53	19.63						Pass
VHT20	MCS0	4	157	5785	19.08	19.63	20.48	19.48						Pass
VHT20	MCS0	4	165	5825	19.08	19.93	21.63	19.23						Pass
VHT40	MCS0	4	151	5755	37.86	40.86	40.96	38.76						Pass
VHT40	MCS0	4	159	5795	37.76	39.56	43.36	38.56						Pass
VHT80	MCS0	4	155	5775	78.28	78.16	78.40	78.16						Pass

TEST RESULTS DATA
Average Power Table

Band IV															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power with duty factor (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)				Pass/ Fail
					Ant 1	Ant 2	Ant 3	Ant 4	SUM		Ant 1	Ant 2	Ant 3	Ant 4	
HT20	MCS0	4	149	5745	19.60	20.60	20.7	19.30	26.11	26.44	9.56	9.56	9.56	9.56	Pass
HT20	MCS0	4	157	5785	19.50	20.40	20.6	19.30	26.01	26.44	9.56	9.56	9.56	9.56	Pass
HT20	MCS0	4	165	5825	19.90	20.60	21	19.10	26.23	26.44	9.56	9.56	9.56	9.56	Pass
HT40	MCS0	4	151	5755	19.60	20.80	20.7	19.40	26.19	26.44	9.56	9.56	9.56	9.56	Pass
HT40	MCS0	4	159	5795	19.50	20.80	20.7	19.30	26.15	26.44	9.56	9.56	9.56	9.56	Pass
VHT20	MCS0	4	149	5745	19.70	20.70	20.8	19.40	26.21	26.44	9.56	9.56	9.56	9.56	Pass
VHT20	MCS0	4	157	5785	19.60	20.50	20.6	19.40	26.08	26.44	9.56	9.56	9.56	9.56	Pass
VHT20	MCS0	4	165	5825	20.00	20.70	21.1	19.20	26.33	26.44	9.56	9.56	9.56	9.56	Pass
VHT40	MCS0	4	151	5755	19.70	20.90	20.8	19.50	26.29	26.44	9.56	9.56	9.56	9.56	Pass
VHT40	MCS0	4	159	5795	19.60	20.90	20.7	19.40	26.22	26.44	9.56	9.56	9.56	9.56	Pass
VHT80	MCS0	4	155	5775	19.80	19.80	20.1	19.20	25.76	26.44	9.56	9.56	9.56	9.56	Pass

TEST RESULTS DATA
Power Spectral Density

FCC Band IV															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Power Density with RBW and duty factor (dBm/500kHz)					Average PSD Limit (dBm/500kHz)	DG (dBi)				Pass /Fail
					Ant 1	Ant 2	Ant 3	Ant 4	SUM		Ant 1	Ant 2	Ant 3	Ant 4	
VHT20	MCS0	4	149	5745	4.09	5.52	5.62	4.14	11.64	26.44	9.56				Pass
VHT20	MCS0	4	157	5785	4.82	5.75	4.94	3.64	11.77	26.44	9.56				Pass
VHT20	MCS0	4	165	5825	5.56	5.04	5.07	3.56	11.58	26.44	9.56				Pass
VHT40	MCS0	4	151	5755	1.87	2.78	2.56	1.60	8.80	26.44	9.56				Pass
VHT40	MCS0	4	159	5795	1.61	2.09	2.31	1.15	8.33	26.44	9.56				Pass
VHT80	MCS0	4	155	5775	-0.90	-1.77	-1.09	-1.27	5.12	26.44	9.56				Pass

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



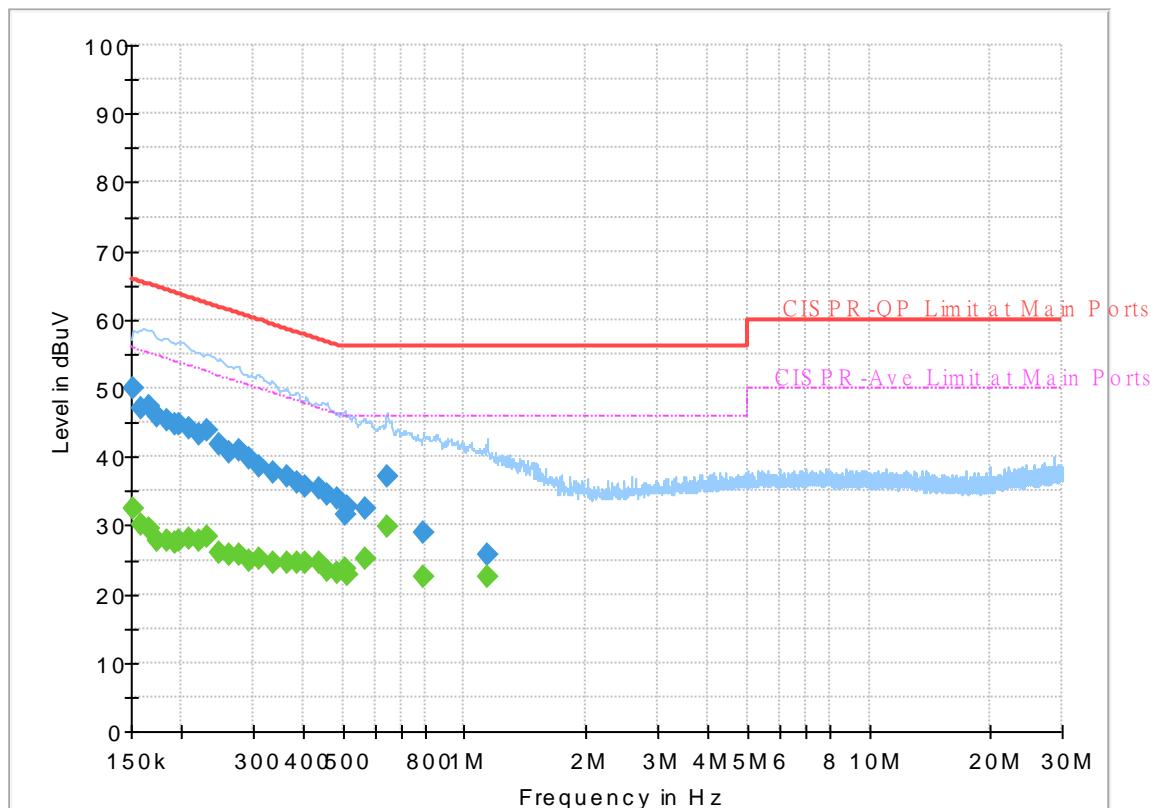
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Rick Lin	Temperature :	25~26°C
		Relative Humidity :	52~54%

EUT Information

Report NO : 912813
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



Final Result

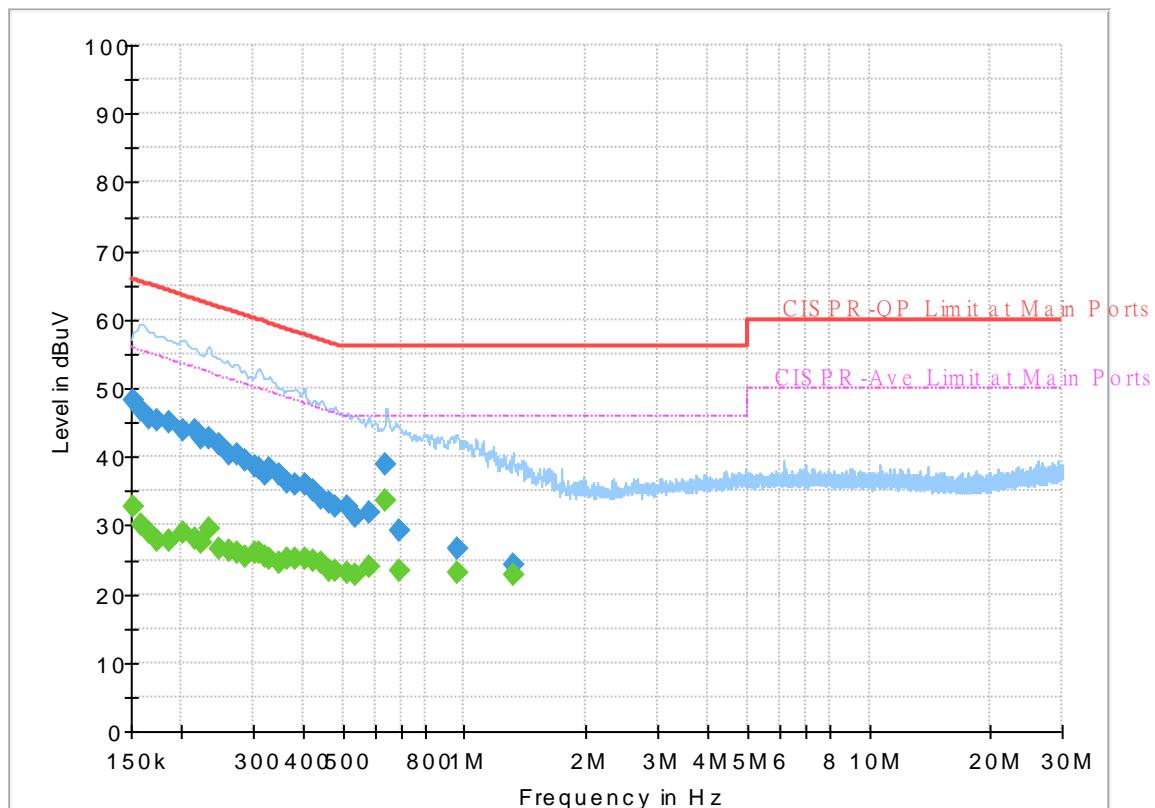
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	32.50	55.88	23.38	L1	OFF	19.5
0.152250	49.93	---	65.88	15.95	L1	OFF	19.5
0.159000	---	30.22	55.52	25.30	L1	OFF	19.5
0.159000	47.00	---	65.52	18.52	L1	OFF	19.5
0.165750	---	29.42	55.17	25.75	L1	OFF	19.5
0.165750	47.37	---	65.17	17.80	L1	OFF	19.5
0.174750	---	27.67	54.73	27.06	L1	OFF	19.5
0.174750	45.93	---	64.73	18.80	L1	OFF	19.5
0.183750	---	27.91	54.31	26.40	L1	OFF	19.5
0.183750	45.29	---	64.31	19.02	L1	OFF	19.5
0.192750	---	27.35	53.92	26.57	L1	OFF	19.5
0.192750	44.67	---	63.92	19.25	L1	OFF	19.5
0.197250	---	27.69	53.73	26.04	L1	OFF	19.5
0.197250	44.84	---	63.73	18.89	L1	OFF	19.5
0.208500	---	28.19	53.27	25.08	L1	OFF	19.5
0.208500	44.11	---	63.27	19.16	L1	OFF	19.5
0.219750	---	27.70	52.83	25.13	L1	OFF	19.5
0.219750	43.19	---	62.83	19.64	L1	OFF	19.5
0.231000	---	28.35	52.41	24.06	L1	OFF	19.5
0.231000	43.77	---	62.41	18.64	L1	OFF	19.5
0.249000	---	26.17	51.79	25.62	L1	OFF	19.5

0.249000	41.73	---	61.79	20.06	L1	OFF	19.5
0.262500	---	25.87	51.35	25.48	L1	OFF	19.5
0.262500	40.71	---	61.35	20.64	L1	OFF	19.5
0.276000	---	25.78	50.94	25.16	L1	OFF	19.5
0.276000	40.82	---	60.94	20.12	L1	OFF	19.5
0.294000	---	24.87	50.41	25.54	L1	OFF	19.5
0.294000	39.64	---	60.41	20.77	L1	OFF	19.5
0.312000	---	25.12	49.92	24.80	L1	OFF	19.5
0.312000	38.45	---	59.92	21.47	L1	OFF	19.5
0.336750	---	24.70	49.28	24.58	L1	OFF	19.5
0.336750	37.58	---	59.28	21.70	L1	OFF	19.5
0.363750	---	24.49	48.64	24.15	L1	OFF	19.5
0.363750	37.17	---	58.64	21.47	L1	OFF	19.5
0.386250	---	24.50	48.14	23.64	L1	OFF	19.5
0.386250	36.22	---	58.14	21.92	L1	OFF	19.5
0.406500	---	24.42	47.72	23.30	L1	OFF	19.5
0.406500	35.76	---	57.72	21.96	L1	OFF	19.5
0.435750	---	24.66	47.14	22.48	L1	OFF	19.5
0.435750	35.31	---	57.14	21.83	L1	OFF	19.5
0.458250	---	23.50	46.72	23.22	L1	OFF	19.5
0.458250	34.48	---	56.72	22.24	L1	OFF	19.5
0.483000	---	23.24	46.29	23.05	L1	OFF	19.5
0.483000	33.85	---	56.29	22.44	L1	OFF	19.5
0.505500	---	23.58	46.00	22.42	L1	OFF	19.5
0.505500	31.62	---	56.00	24.38	L1	OFF	19.5
0.514500	---	22.95	46.00	23.05	L1	OFF	19.5
0.514500	32.64	---	56.00	23.36	L1	OFF	19.5
0.566250	---	25.21	46.00	20.79	L1	OFF	19.5
0.566250	32.37	---	56.00	23.63	L1	OFF	19.5
0.642750	---	29.93	46.00	16.07	L1	OFF	19.6
0.642750	37.20	---	56.00	18.80	L1	OFF	19.6
0.793500	---	22.54	46.00	23.46	L1	OFF	19.6
0.793500	28.91	---	56.00	27.09	L1	OFF	19.6
1.137750	---	22.55	46.00	23.45	L1	OFF	19.6
1.137750	25.59	---	56.00	30.41	L1	OFF	19.6

EUT Information

Report NO : 912813
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Neutral

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	32.71	55.88	23.17	N	OFF	19.5
0.152250	48.15	---	65.88	17.73	N	OFF	19.5
0.159000	---	30.10	55.52	25.42	N	OFF	19.5
0.159000	46.79	---	65.52	18.73	N	OFF	19.5
0.165750	---	29.02	55.17	26.15	N	OFF	19.5
0.165750	45.57	---	65.17	19.60	N	OFF	19.5
0.174750	---	27.69	54.73	27.04	N	OFF	19.5
0.174750	45.19	---	64.73	19.54	N	OFF	19.5
0.186000	---	27.76	54.21	26.45	N	OFF	19.5
0.186000	44.95	---	64.21	19.26	N	OFF	19.5
0.201750	---	28.92	53.54	24.62	N	OFF	19.5
0.201750	43.96	---	63.54	19.58	N	OFF	19.5
0.215250	---	28.03	53.00	24.97	N	OFF	19.5
0.215250	43.77	---	63.00	19.23	N	OFF	19.5
0.224250	---	27.49	52.66	25.17	N	OFF	19.5
0.224250	42.72	---	62.66	19.94	N	OFF	19.5
0.233250	---	29.51	52.33	22.82	N	OFF	19.5
0.233250	42.65	---	62.33	19.68	N	OFF	19.5
0.249000	---	26.74	51.79	25.05	N	OFF	19.5
0.249000	41.88	---	61.79	19.91	N	OFF	19.5
0.262500	---	26.25	51.35	25.10	N	OFF	19.5

0.262500	40.22	---	61.35	21.13	N	OFF	19.5
0.273750	---	26.10	51.00	24.90	N	OFF	19.5
0.273750	40.49	---	61.00	20.51	N	OFF	19.5
0.287250	---	25.55	50.60	25.05	N	OFF	19.5
0.287250	39.51	---	60.60	21.09	N	OFF	19.5
0.303000	---	26.11	50.16	24.05	N	OFF	19.5
0.303000	38.50	---	60.16	21.66	N	OFF	19.5
0.309750	---	25.96	49.98	24.02	N	OFF	19.5
0.309750	38.33	---	59.98	21.65	N	OFF	19.5
0.321000	---	25.53	49.68	24.15	N	OFF	19.5
0.321000	37.57	---	59.68	22.11	N	OFF	19.5
0.330000	---	25.20	49.45	24.25	N	OFF	19.5
0.330000	38.16	---	59.45	21.29	N	OFF	19.5
0.348000	---	24.57	49.01	24.44	N	OFF	19.5
0.348000	37.42	---	59.01	21.59	N	OFF	19.5
0.366000	---	25.21	48.59	23.38	N	OFF	19.5
0.366000	36.34	---	58.59	22.25	N	OFF	19.5
0.384000	---	25.24	48.19	22.95	N	OFF	19.5
0.384000	35.99	---	58.19	22.20	N	OFF	19.5
0.402000	---	25.16	47.81	22.65	N	OFF	19.5
0.402000	35.99	---	57.81	21.82	N	OFF	19.5
0.424500	---	24.89	47.36	22.47	N	OFF	19.5
0.424500	35.02	---	57.36	22.34	N	OFF	19.5
0.442500	---	24.47	47.02	22.55	N	OFF	19.5
0.442500	34.05	---	57.02	22.97	N	OFF	19.5
0.462750	---	23.43	46.64	23.21	N	OFF	19.5
0.462750	33.35	---	56.64	23.29	N	OFF	19.5
0.480750	---	23.38	46.33	22.95	N	OFF	19.5
0.480750	32.61	---	56.33	23.72	N	OFF	19.5
0.514500	---	23.01	46.00	22.99	N	OFF	19.5
0.514500	32.64	---	56.00	23.36	N	OFF	19.5
0.537000	---	22.89	46.00	23.11	N	OFF	19.5
0.537000	31.30	---	56.00	24.70	N	OFF	19.5
0.582000	---	24.01	46.00	21.99	N	OFF	19.5
0.582000	31.83	---	56.00	24.17	N	OFF	19.5
0.640500	---	33.49	46.00	12.51	N	OFF	19.6
0.640500	38.96	---	56.00	17.04	N	OFF	19.6
0.692250	---	23.35	46.00	22.65	N	OFF	19.6
0.692250	29.30	---	56.00	26.70	N	OFF	19.6
0.957750	---	23.11	46.00	22.89	N	OFF	19.6
0.957750	26.54	---	56.00	29.46	N	OFF	19.6
1.317750	---	22.67	46.00	23.33	N	OFF	19.6
1.317750	24.13	---	56.00	31.87	N	OFF	19.6



Appendix C. Radiated Spurious Emission

Test Engineer :	HAO Shu, Ken Wu, and JC Liang	Temperature :	20~25°C
		Relative Humidity :	50~55%

<CDD Mode>

Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol.
802.11a CH 149 5745MHz		5646.2	54.55	-13.65	68.2	45.92	31.71	10.08	33.16	196	282	P	H
		5700	65.36	-39.84	105.2	56.37	32	10.16	33.17	196	282	P	H
		5719.2	75.62	-34.96	110.58	66.57	32.04	10.19	33.18	196	282	P	H
		5724.4	81.28	-39.55	120.83	72.22	32.05	10.19	33.18	196	282	P	H
	*	5745	112.45	-	-	103.33	32.09	10.22	33.19	196	282	P	H
	*	5745	104.89	-	-	95.77	32.09	10.22	33.19	196	282	A	H
													H
													H
		5646.8	52.36	-15.84	68.2	43.72	31.71	10.09	33.16	194	113	P	V
		5700	62.83	-42.37	105.2	53.84	32	10.16	33.17	194	113	P	V
		5720	74.15	-36.65	110.8	65.1	32.04	10.19	33.18	194	113	P	V
		5724.6	81.34	-39.95	121.29	72.28	32.05	10.19	33.18	194	113	P	V
	*	5745	112.18	-	-	103.06	32.09	10.22	33.19	194	113	P	V
	*	5745	104.52	-	-	95.4	32.09	10.22	33.19	194	113	A	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol.
802.11a CH 157 5785MHz		5625.75	52.63	-15.57	68.2	43.97	31.75	10.06	33.15	196	283	P	H
		5698.5	55.37	-48.72	104.09	46.39	31.99	10.16	33.17	196	283	P	H
		5705.5	56.21	-50.53	106.74	47.21	32.01	10.17	33.18	196	283	P	H
		5721.75	55.73	-59.06	114.79	46.68	32.04	10.19	33.18	196	283	P	H
	*	5785	112.3	-	-	103.05	32.17	10.28	33.2	196	283	P	H
	*	5785	104.79	-	-	95.54	32.17	10.28	33.2	196	283	A	H
		5850.25	55.71	-65.92	121.63	46.27	32.3	10.36	33.22	196	283	P	H
		5864.75	56.96	-51.11	108.07	47.46	32.36	10.37	33.23	196	283	P	H
		5885.25	55.85	-41.74	97.59	46.25	32.44	10.39	33.23	196	283	P	H
		5943.5	55.84	-12.36	68.2	46.04	32.59	10.46	33.25	196	283	P	H
													H
													H
		5648	50.66	-17.54	68.2	42.03	31.7	10.09	33.16	210	61	P	V
		5699.25	53.14	-51.51	104.65	44.15	32	10.16	33.17	210	61	P	V
		5710.75	55.26	-52.95	108.21	46.24	32.02	10.18	33.18	210	61	P	V
		5721.25	54.22	-59.43	113.65	45.17	32.04	10.19	33.18	210	61	P	V
	*	5785	111.77	-	-	102.52	32.17	10.28	33.2	210	61	P	V
	*	5785	104.27	-	-	95.02	32.17	10.28	33.2	210	61	A	V
		5853.25	55.95	-58.84	114.79	46.5	32.31	10.36	33.22	210	61	P	V
		5865	56.61	-51.39	108	47.11	32.36	10.37	33.23	210	61	P	V
		5883.75	55.32	-43.38	98.7	45.72	32.44	10.39	33.23	210	61	P	V
		5945	54.12	-14.08	68.2	44.32	32.59	10.46	33.25	210	61	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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	112.34	-	-	102.97	32.25	10.33	33.21	195	283	P	H
	*	5825	104.77	-	-	95.4	32.25	10.33	33.21	195	283	A	H
		5851.395	73.64	-45.38	119.02	64.19	32.31	10.36	33.22	195	283	P	H
		5864.515	69.75	-38.38	108.13	60.25	32.36	10.37	33.23	195	283	P	H
		5879.48	60.84	-41.03	101.87	51.26	32.42	10.39	33.23	195	283	P	H
		5931.55	55.4	-12.8	68.2	45.65	32.56	10.44	33.25	195	283	P	H
													H
													H
	*	5825	112.15	-	-	102.78	32.25	10.33	33.21	196	120	P	V
	*	5825	104.49	-	-	95.12	32.25	10.33	33.21	196	120	A	V
		5850.37	72.94	-48.42	121.36	63.5	32.3	10.36	33.22	196	120	P	V
		5855.29	69.4	-41.32	110.72	59.94	32.32	10.36	33.22	196	120	P	V
		5877.225	62.64	-40.91	103.55	53.08	32.41	10.38	33.23	196	120	P	V
		5941.8	54.52	-13.68	68.2	44.73	32.58	10.46	33.25	196	120	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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		5512	57.88	-10.32	68.2	49.17	31.88	9.94	33.11	187	279	P	H
		5992	61.06	-7.14	68.2	51.22	32.6	10.51	33.27	187	279	P	H
		11490	47.36	-26.64	74	53.15	39.7	15.91	61.4	100	0	P	H
		17235	47.3	-20.9	68.2	44.08	40.51	20.22	57.51	100	0	P	H
		5992	61.28	-6.92	68.2	51.44	32.6	10.51	33.27	186	66	P	V
		11490	45.26	-28.74	74	51.05	39.7	15.91	61.4	100	0	P	V
		17235	47.73	-20.47	68.2	44.51	40.51	20.22	57.51	100	0	P	V
													V
802.11a CH 157 5785MHz		6034	60.22	-7.98	68.2	50.31	32.67	10.53	33.29	197	341	P	H
		11570	45.41	-28.59	74	51.46	39.49	15.96	61.5	100	0	P	H
		17355	45.66	-22.54	68.2	41.46	40.98	20.33	57.11	100	0	P	H
													H
		6034	56.67	-11.53	68.2	46.76	32.67	10.53	33.29	210	61	P	V
		11570	45.83	-28.17	74	51.88	39.49	15.96	61.5	100	0	P	V
		17355	46.76	-21.44	68.2	42.56	40.98	20.33	57.11	100	0	P	V
													V
802.11a CH 165 5825MHz		6076	58.39	-9.81	68.2	48.52	32.65	10.53	33.31	182	319	P	H
		11650	45.89	-28.11	74	52.27	39.2	16.01	61.59	100	0	P	H
		17475	45.71	-22.49	68.2	40.4	41.58	20.44	56.71	100	0	P	H
													H
		6076	59.22	-8.98	68.2	49.35	32.65	10.53	33.31	182	68	P	V
		11650	44.58	-29.42	74	50.96	39.2	16.01	61.59	100	0	P	V
		17475	49.53	-18.67	68.2	44.22	41.58	20.44	56.71	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT20 CH 149 5745MHz		5649	52.25	-15.95	68.2	43.62	31.7	10.09	33.16	100	311	P	H
		5698	62.39	-41.34	103.73	53.41	31.99	10.16	33.17	100	311	P	H
		5718.4	76.05	-34.3	110.35	67	32.04	10.19	33.18	100	311	P	H
		5724.8	80.74	-41	121.74	71.68	32.05	10.19	33.18	100	311	P	H
	*	5745	112.11	-	-	102.99	32.09	10.22	33.19	100	311	P	H
	*	5745	104.24	-	-	95.12	32.09	10.22	33.19	100	311	A	H
													H
													H
		5645.4	53.04	-15.16	68.2	44.41	31.71	10.08	33.16	198	110	P	V
		5699.6	62.32	-42.59	104.91	53.33	32	10.16	33.17	198	110	P	V
		5719.2	78.27	-32.31	110.58	69.22	32.04	10.19	33.18	198	110	P	V
		5723.8	80.89	-38.57	119.46	71.83	32.05	10.19	33.18	198	110	P	V
	*	5745	112.24	-	-	103.12	32.09	10.22	33.19	198	110	P	V
	*	5745	104.42	-	-	95.3	32.09	10.22	33.19	198	110	A	V
													V
													V



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WIFI Ant. 1	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol.
		5628.75	52.18	-16.02	68.2	43.53	31.74	10.06	33.15	191	284	P	H
		5699.75	53.75	-51.27	105.02	44.76	32	10.16	33.17	191	284	P	H
		5719	57.14	-53.38	110.52	48.09	32.04	10.19	33.18	191	284	P	H
		5723	56.68	-60.96	117.64	47.62	32.05	10.19	33.18	191	284	P	H
*		5785	112.83	-	-	103.58	32.17	10.28	33.2	191	284	P	H
*		5785	104.27	-	-	95.02	32.17	10.28	33.2	191	284	A	H
		5854.25	54.42	-58.09	112.51	44.96	32.32	10.36	33.22	191	284	P	H
		5856.25	55.64	-54.81	110.45	46.17	32.33	10.36	33.22	191	284	P	H
		5875	55.37	-49.83	105.2	45.82	32.4	10.38	33.23	191	284	P	H
		5937.25	53.39	-14.81	68.2	43.62	32.57	10.45	33.25	191	284	P	H
802.11ac													H
VHT20													H
CH 157		5641.5	51.88	-16.32	68.2	43.24	31.72	10.08	33.16	197	114	P	V
5785MHz		5699	55	-49.46	104.46	46.02	31.99	10.16	33.17	197	114	P	V
		5719	59.87	-50.65	110.52	50.82	32.04	10.19	33.18	197	114	P	V
		5724.5	57.22	-63.84	121.06	48.16	32.05	10.19	33.18	197	114	P	V
*		5785	112.08	-	-	102.83	32.17	10.28	33.2	197	114	P	V
*		5785	104.48	-	-	95.23	32.17	10.28	33.2	197	114	A	V
		5851.25	55.67	-63.68	119.35	46.22	32.31	10.36	33.22	197	114	P	V
		5860.5	56.17	-53.09	109.26	46.69	32.34	10.37	33.23	197	114	P	V
		5875.75	54.47	-50.17	104.64	44.92	32.4	10.38	33.23	197	114	P	V
		5943	54.29	-13.91	68.2	44.49	32.59	10.46	33.25	197	114	P	V
													V
													V



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WIFI Ant. 1	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol.
802.11ac	*	5825	111.92	-	-	102.55	32.25	10.33	33.21	100	311	P	H
	*	5825	104.22	-	-	94.85	32.25	10.33	33.21	100	311	A	H
		5853	71.92	-43.44	115.36	62.47	32.31	10.36	33.22	100	311	P	H
		5855.8	69.72	-40.86	110.58	60.26	32.32	10.36	33.22	100	311	P	H
		5879	61.21	-41.02	102.23	51.63	32.42	10.39	33.23	100	311	P	H
		5929.2	54.16	-14.04	68.2	44.41	32.56	10.44	33.25	100	311	P	H
													H
													H
5825MHz	*	5825	111.71	-	-	102.34	32.25	10.33	33.21	199	61	P	V
	*	5825	103.83	-	-	94.46	32.25	10.33	33.21	199	61	A	V
		5850.575	75.08	-45.81	120.89	65.64	32.3	10.36	33.22	199	61	P	V
		5855.495	71.63	-39.03	110.66	62.17	32.32	10.36	33.22	199	61	P	V
		5875.79	60.75	-43.86	104.61	51.2	32.4	10.38	33.23	199	61	P	V
		5932.165	54.44	-13.76	68.2	44.68	32.56	10.45	33.25	199	61	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT20 CH 149 5745MHz		5992	61.13	-7.07	68.2	51.29	32.6	10.51	33.27	100	311	P	H
		11490	46.64	-27.36	74	52.43	39.7	15.91	61.4	100	0	P	H
		17235	46.84	-21.36	68.2	43.62	40.51	20.22	57.51	100	0	P	H
													H
		5992	60.91	-7.29	68.2	51.07	32.6	10.51	33.27	197	122	P	V
		11490	46.2	-27.8	74	51.99	39.7	15.91	61.4	100	0	P	V
		17235	47.25	-20.95	68.2	44.03	40.51	20.22	57.51	100	0	P	V
802.11ac VHT20 CH 157 5785MHz		6028	60.17	-8.03	68.2	50.28	32.66	10.52	33.29	188	282	P	H
		11570	46.43	-27.57	74	52.48	39.49	15.96	61.5	100	0	P	H
		17355	46.99	-21.21	68.2	42.79	40.98	20.33	57.11	100	0	P	H
													H
		6034	60.68	-7.52	68.2	50.77	32.67	10.53	33.29	189	123	P	V
		11570	45.44	-28.56	74	51.49	39.49	15.96	61.5	100	0	P	V
		17355	46.97	-21.23	68.2	42.77	40.98	20.33	57.11	100	0	P	V
802.11ac VHT20 CH 165 5825MHz		6070	59.9	-8.3	68.2	50.02	32.66	10.53	33.31	100	311	P	H
		11650	46.24	-27.76	74	52.62	39.2	16.01	61.59	100	0	P	H
		17475	47.8	-20.4	68.2	42.49	41.58	20.44	56.71	100	0	P	H
													H
		6076	59.36	-8.84	68.2	49.49	32.65	10.53	33.31	178	70	P	V
		11650	45.14	-28.86	74	51.52	39.2	16.01	61.59	100	0	P	V
		17475	48.51	-19.69	68.2	43.2	41.58	20.44	56.71	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 VHT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5636.75	59.51	-8.69	68.2	50.86	31.73	10.07	33.15	188	285	P	H
		5699.25	70.08	-34.57	104.65	61.09	32	10.16	33.17	188	285	P	H
		5716.75	83.67	-26.22	109.89	74.64	32.03	10.18	33.18	188	285	P	H
		5725	85.14	-37.06	122.2	76.07	32.05	10.2	33.18	188	285	P	H
802.11ac VHT40 CH 151 5755MHz	*	5755	109.4	-	-	100.24	32.11	10.24	33.19	188	285	P	H
	*	5755	102.07	-	-	92.91	32.11	10.24	33.19	188	285	A	H
		5853	58.31	-57.05	115.36	48.86	32.31	10.36	33.22	188	285	P	H
		5856.75	58.43	-51.88	110.31	48.96	32.33	10.36	33.22	188	285	P	H
		5875	53.98	-51.22	105.2	44.43	32.4	10.38	33.23	188	285	P	H
		5931.25	52.43	-15.77	68.2	42.68	32.56	10.44	33.25	188	285	P	H
													H
													H
		5633.25	60.26	-7.94	68.2	51.61	31.73	10.07	33.15	198	115	P	V
		5699.75	71.39	-33.63	105.02	62.4	32	10.16	33.17	198	115	P	V
		5718	82.52	-27.72	110.24	73.47	32.04	10.19	33.18	198	115	P	V
		5723.5	85.56	-33.22	118.78	76.5	32.05	10.19	33.18	198	115	P	V
	*	5755	110.1	-	-	100.94	32.11	10.24	33.19	198	115	P	V
	*	5755	102.34	-	-	93.18	32.11	10.24	33.19	198	115	A	V
		5850.25	60.75	-60.88	121.63	51.31	32.3	10.36	33.22	198	115	P	V
		5855.25	60.68	-50.05	110.73	51.22	32.32	10.36	33.22	198	115	P	V
		5877	57.27	-46.44	103.71	47.71	32.41	10.38	33.23	198	115	P	V
		5929.5	51.78	-16.42	68.2	42.03	32.56	10.44	33.25	198	115	P	V
													V
													V



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WIFI Ant. 1	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol.
802.11ac		5648	52.1	-16.1	68.2	43.47	31.7	10.09	33.16	188	284	P	H
		5684.5	58.59	-35.17	93.76	49.71	31.91	10.14	33.17	188	284	P	H
		5717.75	64.41	-45.76	110.17	55.37	32.04	10.18	33.18	188	284	P	H
		5724.5	64.04	-57.02	121.06	54.98	32.05	10.19	33.18	188	284	P	H
	*	5795	109.36	-	-	100.08	32.19	10.29	33.2	188	284	P	H
	*	5795	102.13	-	-	92.85	32.19	10.29	33.2	188	284	A	H
		5850.25	71.94	-49.69	121.63	62.5	32.3	10.36	33.22	188	284	P	H
		5857.25	67.41	-42.76	110.17	57.94	32.33	10.36	33.22	188	284	P	H
		5893.25	62.48	-29.18	91.66	52.85	32.47	10.4	33.24	188	284	P	H
		5927	54.06	-14.14	68.2	44.32	32.55	10.44	33.25	188	284	P	H
													H
													H
5795MHz		5641.5	52.09	-16.11	68.2	43.45	31.72	10.08	33.16	194	114	P	V
		5694	59.68	-41.1	100.78	50.74	31.96	10.15	33.17	194	114	P	V
		5718	64.73	-45.51	110.24	55.68	32.04	10.19	33.18	194	114	P	V
		5725	64.35	-57.85	122.2	55.28	32.05	10.2	33.18	194	114	P	V
	*	5795	110.28	-	-	101	32.19	10.29	33.2	194	114	P	V
	*	5795	103.02	-	-	93.74	32.19	10.29	33.2	194	114	A	V
		5853.5	67.24	-46.98	114.22	57.79	32.31	10.36	33.22	194	114	P	V
		5856.75	67.37	-42.94	110.31	57.9	32.33	10.36	33.22	194	114	P	V
		5876	63.27	-41.19	104.46	53.72	32.4	10.38	33.23	194	114	P	V
		5930.25	56.56	-11.64	68.2	46.81	32.56	10.44	33.25	194	114	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT40 CH 151 5755MHz		11510	46.36	-27.64	74	52.17	39.67	15.92	61.4	100	0	P	H
		17265	47.35	-20.85	68.2	43.9	40.6	20.24	57.39	100	0	P	H
													H
													H
		11510	45.86	-28.14	74	51.67	39.67	15.92	61.4	100	0	P	V
		17265	47.57	-20.63	68.2	44.12	40.6	20.24	57.39	100	0	P	V
													V
													V
802.11ac VHT40 CH 159 5795MHz		11590	45.38	-28.62	74	51.5	39.43	15.97	61.52	100	0	P	H
		17385	45.52	-22.68	68.2	41.05	41.12	20.35	57	100	0	P	H
													H
													H
		11590	45.62	-28.38	74	51.74	39.43	15.97	61.52	100	0	P	V
		17385	47.21	-20.99	68.2	42.74	41.12	20.35	57	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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		5636.5	66.83	-1.37	68.2	58.18	31.73	10.07	33.15	186	284	P	H
		5699	77.36	-27.1	104.46	68.38	31.99	10.16	33.17	186	284	P	H
		5719	83.11	-27.41	110.52	74.06	32.04	10.19	33.18	186	284	P	H
		5723	83.33	-34.31	117.64	74.27	32.05	10.19	33.18	186	284	P	H
	*	5775	106.47	-	-	97.25	32.15	10.27	33.2	186	284	P	H
	*	5775	98.36	-	-	89.14	32.15	10.27	33.2	186	284	A	H
		5850	77.8	-44.4	122.2	68.36	32.3	10.36	33.22	186	284	P	H
		5856.25	77.63	-32.82	110.45	68.16	32.33	10.36	33.22	186	284	P	H
		5875.5	70.21	-34.62	104.83	60.66	32.4	10.38	33.23	186	284	P	H
		5939	60.61	-7.59	68.2	50.83	32.58	10.45	33.25	186	284	P	H
													H
													H
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 (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol.
802.11ac		11550	45.74	-28.26	74	51.71	39.55	15.95	61.47	100	0	P	H
		17325	46.66	-21.54	68.2	42.75	40.83	20.3	57.22	100	0	P	H
													H
VHT80													H
CH 155		11550	45.14	-28.86	74	51.11	39.55	15.95	61.47	100	0	P	V
5775MHz		17325	47.43	-20.77	68.2	43.52	40.83	20.3	57.22	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dB μ V/m)	(dB)	(dB μ V/m)	(dB μ V)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5649.4	52.06	-16.14	68.2	43.43	31.7	10.09	33.16	331	60	P	H
		5697.8	65	-38.58	103.58	56.02	31.99	10.16	33.17	331	60	P	H
		5717.2	72.79	-37.23	110.02	63.76	32.03	10.18	33.18	331	60	P	H
		5722.2	81.61	-34.21	115.82	72.56	32.04	10.19	33.18	331	60	P	H
	*	5745	115.37	-	-	106.25	32.09	10.22	33.19	331	60	P	H
	*	5745	108.21	-	-	99.09	32.09	10.22	33.19	331	60	A	H
													H
													H
		5647	55.56	-12.64	68.2	46.92	31.71	10.09	33.16	211	301	P	V
		5699	66.27	-38.19	104.46	57.29	31.99	10.16	33.17	211	301	P	V
		5718	77.91	-32.33	110.24	68.86	32.04	10.19	33.18	211	301	P	V
		5723	86.89	-30.75	117.64	77.83	32.05	10.19	33.18	211	301	P	V
	*	5745	118.1	-	-	108.98	32.09	10.22	33.19	211	301	P	V
	*	5745	111.27	-	-	102.15	32.09	10.22	33.19	211	301	A	V
													V
													V



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WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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		5625.5	51.07	-17.13	68.2	42.41	31.75	10.06	33.15	308	56	P	H
		5698.25	53.21	-50.7	103.91	44.23	31.99	10.16	33.17	308	56	P	H
		5710.5	55.58	-52.56	108.14	46.57	32.02	10.17	33.18	308	56	P	H
		5725	58.77	-63.43	122.2	49.7	32.05	10.2	33.18	308	56	P	H
	*	5785	115.24	-	-	105.99	32.17	10.28	33.2	308	56	P	H
	*	5785	108.35	-	-	99.1	32.17	10.28	33.2	308	56	A	H
		5854.25	53.23	-59.28	112.51	43.77	32.32	10.36	33.22	308	56	P	H
		5857	56.84	-53.4	110.24	47.37	32.33	10.36	33.22	308	56	P	H
		5896.75	54.01	-35.06	89.07	44.35	32.49	10.41	33.24	308	56	P	H
		5938.5	53.71	-14.49	68.2	43.93	32.58	10.45	33.25	308	56	P	H
													H
													H
		5622.25	53.37	-14.83	68.2	44.71	31.76	10.05	33.15	223	301	P	V
		5699	56.76	-47.7	104.46	47.78	31.99	10.16	33.17	223	301	P	V
		5716	59.26	-50.42	109.68	50.23	32.03	10.18	33.18	223	301	P	V
		5720.5	61.88	-50.06	111.94	52.83	32.04	10.19	33.18	223	301	P	V
	*	5785	117.82	-	-	108.57	32.17	10.28	33.2	223	301	P	V
	*	5785	111.08	-	-	101.83	32.17	10.28	33.2	223	301	A	V
		5850.5	56.69	-64.37	121.06	47.25	32.3	10.36	33.22	223	301	P	V
		5858.75	59.95	-49.8	109.75	50.48	32.33	10.36	33.22	223	301	P	V
		5876.5	57.31	-46.78	104.09	47.75	32.41	10.38	33.23	223	301	P	V
		5943.25	56.07	-12.13	68.2	46.27	32.59	10.46	33.25	223	301	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
	*	5825	114.58	-	-	105.21	32.25	10.33	33.21	337	58	P	H
	*	5825	107.8	-	-	98.43	32.25	10.33	33.21	337	58	A	H
		5851.2	74.44	-45.02	119.46	65	32.3	10.36	33.22	337	58	P	H
		5856	69.41	-41.11	110.52	59.95	32.32	10.36	33.22	337	58	P	H
		5879.2	60.12	-41.96	102.08	50.54	32.42	10.39	33.23	337	58	P	H
		5925.4	53.13	-15.07	68.2	43.39	32.55	10.44	33.25	337	58	P	H
													H
													H
802.11a													
CH 165	*	5825	117.63	-	-	108.26	32.25	10.33	33.21	212	304	P	V
5825MHz	*	5825	110.6	-	-	101.23	32.25	10.33	33.21	212	304	A	V
		5853	76.93	-38.43	115.36	67.48	32.31	10.36	33.22	212	304	P	V
		5857.2	70.79	-39.39	110.18	61.32	32.33	10.36	33.22	212	304	P	V
		5876.2	65.53	-38.78	104.31	55.98	32.4	10.38	33.23	212	304	P	V
		5938.4	56.75	-11.45	68.2	46.97	32.58	10.45	33.25	212	304	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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		5506	57.95	-10.25	68.2	49.23	31.89	9.94	33.11	331	8	P	H
		5992	61.94	-6.26	68.2	52.1	32.6	10.51	33.27	307	35	P	H
		11490	48.2	-25.8	74	53.99	39.7	15.91	61.4	100	0	P	H
		17235	46.4	-21.8	68.2	43.18	40.51	20.22	57.51	100	0	P	H
		5512	58.98	-9.22	68.2	50.27	31.88	9.94	33.11	211	301	P	V
		5986	63.43	-4.77	68.2	53.6	32.6	10.5	33.27	211	301	P	V
		11490	47.87	-26.13	74	53.66	39.7	15.91	61.4	100	0	P	V
		17235	47.6	-20.6	68.2	44.38	40.51	20.22	57.51	100	0	P	V
802.11a CH 157 5785MHz		6016	61.43	-6.77	68.2	51.56	32.63	10.52	33.28	316	41	P	H
		11570	47.98	-26.02	74	54.03	39.49	15.96	61.5	100	0	P	H
		17355	45.77	-22.43	68.2	41.57	40.98	20.33	57.11	100	0	P	H
													H
		5542	58.59	-9.61	68.2	49.92	31.82	9.97	33.12	208	308	P	V
		6034	63.15	-5.05	68.2	53.24	32.67	10.53	33.29	213	301	P	V
		11570	47.66	-26.34	74	53.71	39.49	15.96	61.5	100	0	P	V
		17355	47.52	-20.68	68.2	43.32	40.98	20.33	57.11	100	0	P	V
802.11a CH 165 5825MHz		5578	56.25	-11.95	68.2	47.58	31.8	10	33.13	320	34	P	H
		6076	61.14	-7.06	68.2	51.27	32.65	10.53	33.31	319	57	P	H
		11650	47.7	-26.3	74	54.08	39.2	16.01	61.59	100	0	P	H
		17475	45.74	-22.46	68.2	40.43	41.58	20.44	56.71	100	0	P	H
		5578	59.16	-9.04	68.2	50.49	31.8	10	33.13	213	305	P	V
		6076	64.35	-3.85	68.2	54.48	32.65	10.53	33.31	209	303	P	V
		11650	48.08	-25.92	74	54.46	39.2	16.01	61.59	100	0	P	V
		17475	47.12	-21.08	68.2	41.81	41.58	20.44	56.71	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 VHT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT20 CH 149 5745MHz		5646.4	53.72	-14.48	68.2	45.09	31.71	10.08	33.16	316	58	P	H
		5698.8	61.5	-42.82	104.32	52.52	31.99	10.16	33.17	316	58	P	H
		5717.8	77.1	-33.08	110.18	68.06	32.04	10.18	33.18	316	58	P	H
		5723.2	83.92	-34.18	118.1	74.86	32.05	10.19	33.18	316	58	P	H
	*	5745	114.77	-	-	105.65	32.09	10.22	33.19	316	58	P	H
	*	5745	106.8	-	-	97.68	32.09	10.22	33.19	316	58	A	H
													H
													H
		5644.2	54.37	-13.83	68.2	45.74	31.71	10.08	33.16	213	302	P	V
		5696.4	68.07	-34.48	102.55	59.11	31.98	10.15	33.17	213	302	P	V
		5719.8	78.21	-32.53	110.74	69.16	32.04	10.19	33.18	213	302	P	V
		5724.2	84.86	-35.52	120.38	75.8	32.05	10.19	33.18	213	302	P	V
	*	5745	117.36	-	-	108.24	32.09	10.22	33.19	213	302	P	V
	*	5745	110.09	-	-	100.97	32.09	10.22	33.19	213	302	A	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5649	51.04	-17.16	68.2	42.41	31.7	10.09	33.16	310	55	P	H
		5699.5	55.05	-49.78	104.83	46.06	32	10.16	33.17	310	55	P	H
		5711	55.43	-52.85	108.28	46.41	32.02	10.18	33.18	310	55	P	H
		5725	56.4	-65.8	122.2	47.33	32.05	10.2	33.18	310	55	P	H
*		5785	114.42	-	-	105.17	32.17	10.28	33.2	310	55	P	H
*		5785	107.1	-	-	97.85	32.17	10.28	33.2	310	55	A	H
		5850.5	56.41	-64.65	121.06	46.97	32.3	10.36	33.22	310	55	P	H
		5857.75	55.87	-54.16	110.03	46.4	32.33	10.36	33.22	310	55	P	H
		5887.5	53.9	-42.02	95.92	44.28	32.45	10.4	33.23	310	55	P	H
		5940.25	53.28	-14.92	68.2	43.5	32.58	10.45	33.25	310	55	P	H
802.11ac													H
VHT20													H
CH 157		5626.5	53.5	-14.7	68.2	44.84	31.75	10.06	33.15	209	303	P	V
5785MHz		5696.5	58.5	-44.12	102.62	49.53	31.98	10.16	33.17	209	303	P	V
		5720	59.17	-51.63	110.8	50.12	32.04	10.19	33.18	209	303	P	V
		5721.75	60.43	-54.36	114.79	51.38	32.04	10.19	33.18	209	303	P	V
*		5785	117.23	-	-	107.98	32.17	10.28	33.2	209	303	P	V
*		5785	110.06	-	-	100.81	32.17	10.28	33.2	209	303	A	V
		5854.25	58.87	-53.64	112.51	49.41	32.32	10.36	33.22	209	303	P	V
		5862.25	59.29	-49.48	108.77	49.8	32.35	10.37	33.23	209	303	P	V
		5876.75	58.25	-45.65	103.9	48.69	32.41	10.38	33.23	209	303	P	V
		5939.5	57.83	-10.37	68.2	48.05	32.58	10.45	33.25	209	303	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol.
	*	5825	114.29	-	-	104.92	32.25	10.33	33.21	318	62	P	H
	*	5825	107.32	-	-	97.95	32.25	10.33	33.21	318	62	A	H
		5851.4	73.44	-45.57	119.01	63.99	32.31	10.36	33.22	318	62	P	H
		5858.2	68.07	-41.83	109.9	58.6	32.33	10.36	33.22	318	62	P	H
		5883.4	58.89	-40.07	98.96	49.3	32.43	10.39	33.23	318	62	P	H
		5928.2	54.92	-13.28	68.2	45.17	32.56	10.44	33.25	318	62	P	H
802.11ac													H
VHT20													H
CH 165	*	5825	116.6	-	-	107.23	32.25	10.33	33.21	213	299	P	V
5825MHz	*	5825	109.6	-	-	100.23	32.25	10.33	33.21	213	299	A	V
		5850.8	80.7	-39.68	120.38	71.26	32.3	10.36	33.22	213	299	P	V
		5855.8	72.64	-37.94	110.58	63.18	32.32	10.36	33.22	213	299	P	V
		5875.6	62.82	-41.93	104.75	53.27	32.4	10.38	33.23	213	299	P	V
		5936.8	56.9	-11.3	68.2	47.13	32.57	10.45	33.25	213	299	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT20 CH 149 5745MHz		5992	62.93	-5.27	68.2	53.09	32.6	10.51	33.27	276	36	P	H
		11490	47.52	-26.48	74	53.31	39.7	15.91	61.4	100	0	P	H
		17235	46.99	-21.21	68.2	43.77	40.51	20.22	57.51	100	0	P	H
													H
		5902	58.9	-9.3	68.2	49.23	32.5	10.41	33.24	202	301	P	V
		5992	64.88	-3.32	68.2	55.04	32.6	10.51	33.27	213	301	P	V
		11490	46.56	-27.44	74	52.35	39.7	15.91	61.4	100	0	P	V
802.11ac VHT20 CH 157 5785MHz		17235	47.57	-20.63	68.2	44.35	40.51	20.22	57.51	100	0	P	V
		5536	58.13	-10.07	68.2	49.46	31.83	9.96	33.12	296	6	P	H
		6034	62.77	-5.43	68.2	52.86	32.67	10.53	33.29	317	61	P	H
		11570	47.78	-26.22	74	53.83	39.49	15.96	61.5	100	0	P	H
		17355	45.22	-22.98	68.2	41.02	40.98	20.33	57.11	100	0	P	H
		5554	60.15	-8.05	68.2	51.5	31.8	9.98	33.13	210	307	P	V
		6034	65.32	-2.88	68.2	55.41	32.67	10.53	33.29	213	300	P	V
802.11ac VHT20 CH 165 5825MHz		11570	47	-27	74	53.05	39.49	15.96	61.5	100	0	P	V
		17355	47.66	-20.54	68.2	43.46	40.98	20.33	57.11	100	0	P	V
		5590	59.69	-8.51	68.2	51.02	31.8	10.01	33.14	293	6	P	H
		6076	61.8	-6.4	68.2	51.93	32.65	10.53	33.31	293	34	P	H
		11650	47.8	-26.2	74	54.18	39.2	16.01	61.59	100	0	P	H
		17475	45.42	-22.78	68.2	40.11	41.58	20.44	56.71	100	0	P	H
		5584	59.9	-8.3	68.2	51.23	31.8	10.01	33.14	216	309	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 VHT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5646.75	60.46	-7.74	68.2	51.82	31.71	10.09	33.16	317	54	P	H
		5698.75	72.13	-32.15	104.28	63.15	31.99	10.16	33.17	317	54	P	H
		5718.75	86.94	-23.51	110.45	77.89	32.04	10.19	33.18	317	54	P	H
		5721.5	87.69	-26.53	114.22	78.64	32.04	10.19	33.18	317	54	P	H
802.11ac VHT40 CH 151 5755MHz	*	5755	112.93	-	-	103.77	32.11	10.24	33.19	317	54	P	H
	*	5755	105.43	-	-	96.27	32.11	10.24	33.19	317	54	A	H
		5851.5	61.33	-57.45	118.78	51.88	32.31	10.36	33.22	317	54	P	H
		5861	61.54	-47.58	109.12	52.06	32.34	10.37	33.23	317	54	P	H
		5875.5	57.39	-47.44	104.83	47.84	32.4	10.38	33.23	317	54	P	H
		5928.5	55.17	-13.03	68.2	45.42	32.56	10.44	33.25	317	54	P	H
													H
													H
		5637.5	63.41	-4.79	68.2	54.76	31.73	10.07	33.15	210	302	P	V
		5699.25	75.58	-29.07	104.65	66.59	32	10.16	33.17	210	302	P	V
		5718.5	91.52	-18.86	110.38	82.47	32.04	10.19	33.18	210	302	P	V
		5724.25	91.96	-28.53	120.49	82.9	32.05	10.19	33.18	210	302	P	V
	*	5755	115.14	-	-	105.98	32.11	10.24	33.19	210	302	P	V
	*	5755	108.37	-	-	99.21	32.11	10.24	33.19	210	302	A	V
		5851	64.59	-55.33	119.92	55.15	32.3	10.36	33.22	210	302	P	V
		5855.75	64.93	-45.66	110.59	55.47	32.32	10.36	33.22	210	302	P	V
		5883.25	60.44	-38.63	99.07	50.85	32.43	10.39	33.23	210	302	P	V
		5929.5	58.19	-10.01	68.2	48.44	32.56	10.44	33.25	210	302	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5644.5	54.44	-13.76	68.2	45.81	31.71	10.08	33.16	338	58	P	H
		5685.75	62.37	-32.32	94.69	53.49	31.91	10.14	33.17	338	58	P	H
		5718	67.75	-42.49	110.24	58.7	32.04	10.19	33.18	338	58	P	H
		5720.75	65.89	-46.62	112.51	56.84	32.04	10.19	33.18	338	58	P	H
	*	5795	111.95	-	-	102.67	32.19	10.29	33.2	338	58	P	H
	*	5795	105.26	-	-	95.98	32.19	10.29	33.2	338	58	A	H
		5850.75	71.54	-48.95	120.49	62.1	32.3	10.36	33.22	338	58	P	H
		5856.25	68.09	-42.36	110.45	58.62	32.33	10.36	33.22	338	58	P	H
		5879	63.63	-38.6	102.23	54.05	32.42	10.39	33.23	338	58	P	H
		5933.75	57.17	-11.03	68.2	47.4	32.57	10.45	33.25	338	58	P	H
802.11ac													H
VHT40													H
CH 159		5632.75	57.74	-10.46	68.2	49.09	31.73	10.07	33.15	203	300	P	V
5795MHz		5694	67.5	-33.28	100.78	58.56	31.96	10.15	33.17	203	300	P	V
		5719.25	69.44	-41.15	110.59	60.39	32.04	10.19	33.18	203	300	P	V
		5721.25	68.5	-45.15	113.65	59.45	32.04	10.19	33.18	203	300	P	V
	*	5795	115.16	-	-	105.88	32.19	10.29	33.2	203	300	P	V
	*	5795	108.11	-	-	98.83	32.19	10.29	33.2	203	300	A	V
		5851	74.38	-45.54	119.92	64.94	32.3	10.36	33.22	203	300	P	V
		5867	74.03	-33.41	107.44	64.52	32.37	10.37	33.23	203	300	P	V
		5879.25	68.28	-33.76	102.04	58.7	32.42	10.39	33.23	203	300	P	V
		5927	59.94	-8.26	68.2	50.2	32.55	10.44	33.25	203	300	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT40 CH 151 5755MHz		11510	47.29	-26.71	74	53.1	39.67	15.92	61.4	100	0	P	H
		17265	46.6	-21.6	68.2	43.15	40.6	20.24	57.39	100	0	P	H
													H
													H
		11510	46.9	-27.1	74	52.71	39.67	15.92	61.4	100	0	P	V
		17265	48.44	-19.76	68.2	44.99	40.6	20.24	57.39	100	0	P	V
													V
													V
802.11ac VHT40 CH 159 5795MHz		11590	47.73	-26.27	74	53.85	39.43	15.97	61.52	100	0	P	H
		17385	44.99	-23.21	68.2	40.52	41.12	20.35	57	100	0	P	H
													H
													H
		11590	46.39	-27.61	74	52.51	39.43	15.97	61.52	100	0	P	V
		17385	47.87	-20.33	68.2	43.4	41.12	20.35	57	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5630.25	61.52	-6.68	68.2	52.87	31.74	10.06	33.15	324	58	P	H
		5680	67.13	-23.31	90.44	58.29	31.88	10.13	33.17	324	58	P	H
		5700.25	74.82	-30.45	105.27	65.83	32	10.16	33.17	324	58	P	H
		5720.75	76.34	-36.17	112.51	67.29	32.04	10.19	33.18	324	58	P	H
802.11ac VHT80 CH 155 5775MHz	*	5775	105.5	-	-	96.28	32.15	10.27	33.2	324	58	P	H
	*	5775	98.36	-	-	89.14	32.15	10.27	33.2	324	58	A	H
		5852.75	73.13	-42.8	115.93	63.68	32.31	10.36	33.22	324	58	P	H
		5861.25	69.9	-39.15	109.05	60.41	32.35	10.37	33.23	324	58	P	H
		5894.25	64.02	-26.9	90.92	54.38	32.48	10.4	33.24	324	58	P	H
		5938.75	55.06	-13.14	68.2	45.28	32.58	10.45	33.25	324	58	P	H
													H
													H
		5630.25	66.52	-1.68	68.2	57.87	31.74	10.06	33.15	222	302	P	V
		5695.75	75.5	-26.57	102.07	66.55	31.97	10.15	33.17	222	302	P	V
		5713.25	78.05	-30.86	108.91	69.02	32.03	10.18	33.18	222	302	P	V
		5723.5	82.67	-36.11	118.78	73.61	32.05	10.19	33.18	222	302	P	V
	*	5775	109.14	-	-	99.92	32.15	10.27	33.2	222	302	P	V
	*	5775	101.64	-	-	92.42	32.15	10.27	33.2	222	302	A	V
		5853.5	74.53	-39.69	114.22	65.08	32.31	10.36	33.22	222	302	P	V
		5859	73.71	-35.97	109.68	64.23	32.34	10.36	33.22	222	302	P	V
		5878.5	68.33	-34.27	102.6	58.76	32.41	10.39	33.23	222	302	P	V
		5932.25	58.97	-9.23	68.2	49.21	32.56	10.45	33.25	222	302	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol.
802.11ac		11550	46.25	-27.75	74	52.22	39.55	15.95	61.47	100	0	P	H
		17325	46.33	-21.87	68.2	42.42	40.83	20.3	57.22	100	0	P	H
													H
VHT80													H
CH 155 5775MHz		11550	48.36	-25.64	74	54.33	39.55	15.95	61.47	100	0	P	V
		17325	48.24	-19.96	68.2	44.33	40.83	20.3	57.22	100	0	P	V
													V
Remark		1. No other spurious found. 2. All results are PASS against Peak and Average limit line.											



Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2+3		(MHz)	(dB μ V/m)	(dB)	(dB μ V/m)	(dB μ V)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5649.6	57.88	-10.32	68.2	49.25	31.7	10.09	33.16	214	282	P	H
		5697.4	71.45	-31.83	103.28	62.48	31.98	10.16	33.17	214	282	P	H
		5719.6	84.34	-26.35	110.69	75.29	32.04	10.19	33.18	214	282	P	H
		5724.2	88.58	-31.8	120.38	79.52	32.05	10.19	33.18	214	282	P	H
	*	5745	119.12	-	-	110	32.09	10.22	33.19	214	282	P	H
	*	5745	111.26	-	-	102.14	32.09	10.22	33.19	214	282	A	H
													H
													H
		5649	58.84	-9.36	68.2	50.21	31.7	10.09	33.16	281	306	P	V
		5695.4	71.83	-29.98	101.81	62.88	31.97	10.15	33.17	281	306	P	V
		5720	89.33	-21.47	110.8	80.28	32.04	10.19	33.18	281	306	P	V
		5723.4	91.86	-26.69	118.55	82.8	32.05	10.19	33.18	281	306	P	V
	*	5745	120.12	-	-	111	32.09	10.22	33.19	281	306	P	V
	*	5745	113.52	-	-	104.4	32.09	10.22	33.19	281	306	A	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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		5627.25	56.22	-11.98	68.2	47.56	31.75	10.06	33.15	206	284	P	H
		5697.25	60.02	-43.15	103.17	51.05	31.98	10.16	33.17	206	284	P	H
		5719.5	63.83	-46.83	110.66	54.78	32.04	10.19	33.18	206	284	P	H
		5724.25	66.95	-53.54	120.49	57.89	32.05	10.19	33.18	206	284	P	H
	*	5785	118.49	-	-	109.24	32.17	10.28	33.2	206	284	P	H
	*	5785	111.46	-	-	102.21	32.17	10.28	33.2	206	284	A	H
		5854.5	58.26	-53.68	111.94	48.8	32.32	10.36	33.22	206	284	P	H
		5856.25	57.82	-52.63	110.45	48.35	32.33	10.36	33.22	206	284	P	H
		5878.75	55.99	-46.42	102.41	46.41	32.42	10.39	33.23	206	284	P	H
		5946.25	55.83	-12.37	68.2	46.03	32.59	10.46	33.25	206	284	P	H
													H
													H
		5629.75	57.45	-10.75	68.2	48.8	31.74	10.06	33.15	216	297	P	V
		5693	61.71	-38.33	100.04	52.77	31.96	10.15	33.17	216	297	P	V
		5717.75	65.3	-44.87	110.17	56.26	32.04	10.18	33.18	216	297	P	V
		5721.75	67.41	-47.38	114.79	58.36	32.04	10.19	33.18	216	297	P	V
	*	5785	120.44	-	-	111.19	32.17	10.28	33.2	216	297	P	V
	*	5785	113.41	-	-	104.16	32.17	10.28	33.2	216	297	A	V
		5850.75	60.97	-59.52	120.49	51.53	32.3	10.36	33.22	216	297	P	V
		5860.5	59.41	-49.85	109.26	49.93	32.34	10.37	33.23	216	297	P	V
		5901.75	57.62	-27.75	85.37	47.95	32.5	10.41	33.24	216	297	P	V
		5939.5	57.2	-11	68.2	47.42	32.58	10.45	33.25	216	297	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
	*	5825	118.13	-	-	108.76	32.25	10.33	33.21	201	285	P	H
	*	5825	110.95	-	-	101.58	32.25	10.33	33.21	201	285	A	H
		5850.8	78.42	-41.96	120.38	68.98	32.3	10.36	33.22	201	285	P	H
		5855.2	74.12	-36.62	110.74	64.66	32.32	10.36	33.22	201	285	P	H
		5877.8	63.03	-40.09	103.12	53.46	32.41	10.39	33.23	201	285	P	H
		5930.6	55.86	-12.34	68.2	46.11	32.56	10.44	33.25	201	285	P	H
													H
													H
802.11a													
CH 165	*	5825	120.63	-	-	111.26	32.25	10.33	33.21	206	302	P	V
5825MHz	*	5825	113.24	-	-	103.87	32.25	10.33	33.21	206	302	A	V
		5851	82.38	-37.54	119.92	72.94	32.3	10.36	33.22	206	302	P	V
		5855	78.38	-32.42	110.8	68.92	32.32	10.36	33.22	206	302	P	V
		5877.2	62.87	-40.7	103.57	53.31	32.41	10.38	33.23	206	302	P	V
		5930	57.84	-10.36	68.2	48.09	32.56	10.44	33.25	206	302	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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		5992	63.96	-4.24	68.2	54.12	32.6	10.51	33.27	208	202	P	H
		11490	55.2	-18.8	74	60.99	39.7	15.91	61.4	176	275	P	H
		11490	45.47	-8.53	54	51.26	39.7	15.91	61.4	176	275	A	H
		17235	46.84	-21.36	68.2	43.62	40.51	20.22	57.51	100	0	P	H
		5992	66.63	-1.57	68.2	56.79	32.6	10.51	33.27	209	303	P	V
		11490	55.8	-18.2	74	61.59	39.7	15.91	61.4	185	333	P	V
		11490	46.29	-7.71	54	52.08	39.7	15.91	61.4	185	333	A	V
		17235	46.96	-21.24	68.2	43.74	40.51	20.22	57.51	100	0	P	V
802.11a CH 157 5785MHz		6016	64.35	-3.85	68.2	54.48	32.63	10.52	33.28	196	282	P	H
		11570	55.34	-18.66	74	61.39	39.49	15.96	61.5	176	276	P	H
		11570	45.2	-8.8	54	51.25	39.49	15.96	61.5	176	276	A	H
		17355	45.85	-22.35	68.2	41.65	40.98	20.33	57.11	100	0	P	H
		6034	66.86	-1.34	68.2	56.95	32.67	10.53	33.29	221	300	P	V
		11570	54.54	-19.46	74	60.59	39.49	15.96	61.5	180	334	P	V
		11570	46.2	-7.8	54	52.25	39.49	15.96	61.5	180	334	A	V
		17355	47.81	-20.39	68.2	43.61	40.98	20.33	57.11	100	0	P	V
802.11a CH 165 5825MHz		6070	62.39	-5.81	68.2	52.51	32.66	10.53	33.31	199	283	P	H
		11650	54.5	-19.5	74	60.88	39.2	16.01	61.59	175	273	P	H
		11650	44.99	-9.01	54	51.37	39.2	16.01	61.59	175	273	A	H
		17475	46.16	-22.04	68.2	40.85	41.58	20.44	56.71	100	0	P	H
		6076	67.01	-1.19	68.2	57.14	32.65	10.53	33.31	213	289	P	V
		11650	54.48	-19.52	74	60.86	39.2	16.01	61.59	176	333	P	V
		11650	45.83	-8.17	54	52.21	39.2	16.01	61.59	176	333	A	V
		17475	46.46	-21.74	68.2	41.15	41.58	20.44	56.71	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 VHT20 (Band Edge @ 3m)

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT20 CH 149 5745MHz		5642.4	61.08	-7.12	68.2	52.44	31.72	10.08	33.16	197	282	P	H
		5700	76.06	-29.14	105.2	67.07	32	10.16	33.17	197	282	P	H
		5713.2	85.24	-23.66	108.9	76.21	32.03	10.18	33.18	197	282	P	H
		5723	91.79	-25.85	117.64	82.73	32.05	10.19	33.18	197	282	P	H
	*	5745	118.73	-	-	109.61	32.09	10.22	33.19	197	282	P	H
	*	5745	111.21	-	-	102.09	32.09	10.22	33.19	197	282	A	H
													H
													H
		5647.2	59.27	-8.93	68.2	50.63	31.71	10.09	33.16	356	305	P	V
		5698.8	75.2	-29.12	104.32	66.22	31.99	10.16	33.17	356	305	P	V
		5718.6	86.88	-23.53	110.41	77.83	32.04	10.19	33.18	356	305	P	V
		5721.8	92.58	-22.32	114.9	83.53	32.04	10.19	33.18	356	305	P	V
	*	5745	119.61	-	-	110.49	32.09	10.22	33.19	356	305	P	V
	*	5745	112.47	-	-	103.35	32.09	10.22	33.19	356	305	A	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5617.75	54.43	-13.77	68.2	45.78	31.76	10.04	33.15	215	283	P	H
		5695.5	59.4	-42.48	101.88	50.45	31.97	10.15	33.17	215	283	P	H
		5720	60.97	-49.83	110.8	51.92	32.04	10.19	33.18	215	283	P	H
		5724.5	63.74	-57.32	121.06	54.68	32.05	10.19	33.18	215	283	P	H
*		5785	118	-	-	108.75	32.17	10.28	33.2	215	283	P	H
*		5785	110.65	-	-	101.4	32.17	10.28	33.2	215	283	A	H
		5850.75	60.38	-60.11	120.49	50.94	32.3	10.36	33.22	215	283	P	H
		5855.25	58.91	-51.82	110.73	49.45	32.32	10.36	33.22	215	283	P	H
		5876	56.8	-47.66	104.46	47.25	32.4	10.38	33.23	215	283	P	H
		5948	55.55	-12.65	68.2	45.74	32.6	10.46	33.25	215	283	P	H
802.11ac													H
VHT20													H
CH 157		5631.5	56.51	-11.69	68.2	47.86	31.74	10.06	33.15	345	305	P	V
5785MHz		5693	61.56	-38.48	100.04	52.62	31.96	10.15	33.17	345	305	P	V
		5718.25	65.09	-45.22	110.31	56.04	32.04	10.19	33.18	345	305	P	V
		5723.75	66.25	-53.1	119.35	57.19	32.05	10.19	33.18	345	305	P	V
*		5785	119.32	-	-	110.07	32.17	10.28	33.2	345	305	P	V
*		5785	112.25	-	-	103	32.17	10.28	33.2	345	305	A	V
		5850.25	60.08	-61.55	121.63	50.64	32.3	10.36	33.22	345	305	P	V
		5856.5	60.9	-49.48	110.38	51.43	32.33	10.36	33.22	345	305	P	V
		5877.75	58.74	-44.42	103.16	49.17	32.41	10.39	33.23	345	305	P	V
		5946.75	56.36	-11.84	68.2	46.56	32.59	10.46	33.25	345	305	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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	*	5825	118.31	-	-	108.94	32.25	10.33	33.21	193	283	P	H
	*	5825	109.49	-	-	100.12	32.25	10.33	33.21	193	283	A	H
		5850	77.87	-44.33	122.2	68.43	32.3	10.36	33.22	193	283	P	H
		5855	75.42	-35.38	110.8	65.96	32.32	10.36	33.22	193	283	P	H
		5875.4	65.45	-39.45	104.9	55.9	32.4	10.38	33.23	193	283	P	H
		5925.4	55.66	-12.54	68.2	45.92	32.55	10.44	33.25	193	283	P	H
													H
													H
CH 165	*	5825	120.24	-	-	110.87	32.25	10.33	33.21	283	306	P	V
5825MHz	*	5825	111.1	-	-	101.73	32.25	10.33	33.21	283	306	A	V
		5850.6	82.01	-38.82	120.83	72.57	32.3	10.36	33.22	283	306	P	V
		5855.2	78.69	-32.05	110.74	69.23	32.32	10.36	33.22	283	306	P	V
		5883.4	63.95	-35.01	98.96	54.36	32.43	10.39	33.23	283	306	P	V
		5925.4	55.8	-12.4	68.2	46.06	32.55	10.44	33.25	283	306	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT20 CH 149 5745MHz		5992	66.57	-1.63	68.2	56.73	32.6	10.51	33.27	207	283	P	H
		11490	53.24	-20.76	74	59.03	39.7	15.91	61.4	177	274	P	H
		11490	44.05	-9.95	54	49.84	39.7	15.91	61.4	177	274	A	H
		17235	45.41	-22.79	68.2	42.19	40.51	20.22	57.51	100	0	P	H
		5992	65.24	-2.96	68.2	55.4	32.6	10.51	33.27	356	305	P	V
		11490	53.14	-20.86	74	58.93	39.7	15.91	61.4	174	327	P	V
		11490	44.6	-9.4	54	50.39	39.7	15.91	61.4	174	327	A	V
		17235	45.76	-22.44	68.2	42.54	40.51	20.22	57.51	100	0	P	V
802.11ac VHT20 CH 157 5785MHz		6034	61.47	-6.73	68.2	51.56	32.67	10.53	33.29	100	72	P	H
		11570	53.79	-20.21	74	59.84	39.49	15.96	61.5	174	275	P	H
		11570	44.14	-9.86	54	50.19	39.49	15.96	61.5	174	275	A	H
		17355	43.76	-24.44	68.2	39.56	40.98	20.33	57.11	100	0	P	H
		6022	65.38	-2.82	68.2	55.5	32.64	10.52	33.28	210	300	P	V
		11570	54.25	-19.75	74	60.3	39.49	15.96	61.5	180	334	P	V
		11570	44.88	-9.12	54	50.93	39.49	15.96	61.5	180	334	A	V
		17355	46.04	-22.16	68.2	41.84	40.98	20.33	57.11	100	0	P	V
802.11ac VHT20 CH 165 5825MHz		6076	61	-7.2	68.2	51.13	32.65	10.53	33.31	193	283	P	H
		11650	54.06	-19.94	74	60.44	39.2	16.01	61.59	179	275	P	H
		11650	43.6	-10.4	54	49.98	39.2	16.01	61.59	179	275	A	H
		17475	46.07	-22.13	68.2	40.76	41.58	20.44	56.71	100	0	P	H
		6076	63.83	-4.37	68.2	53.96	32.65	10.53	33.31	214	307	P	V
		11650	55.36	-18.64	74	61.74	39.2	16.01	61.59	177	334	P	V
		11650	44.83	-9.17	54	51.21	39.2	16.01	61.59	177	334	A	V
		17475	47.7	-20.5	68.2	42.39	41.58	20.44	56.71	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 VHT40 (Band Edge @ 3m)

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5647.75	64.75	-3.45	68.2	56.12	31.7	10.09	33.16	203	281	P	H
		5698.25	78.63	-25.28	103.91	69.65	31.99	10.16	33.17	203	281	P	H
		5718	91.45	-18.79	110.24	82.4	32.04	10.19	33.18	203	281	P	H
		5722.75	93.93	-23.14	117.07	84.87	32.05	10.19	33.18	203	281	P	H
802.11ac VHT40 CH 151 5755MHz	*	5755	115.34	-	-	106.18	32.11	10.24	33.19	203	281	P	H
	*	5755	108.21	-	-	99.05	32.11	10.24	33.19	203	281	A	H
		5850.5	61.97	-59.09	121.06	52.53	32.3	10.36	33.22	203	281	P	H
		5865.5	60.38	-47.48	107.86	50.88	32.36	10.37	33.23	203	281	P	H
		5889	57.11	-37.7	94.81	47.48	32.46	10.4	33.23	203	281	P	H
		5930.75	54.89	-13.31	68.2	45.14	32.56	10.44	33.25	203	281	P	H
													H
													H
		5645.5	66.11	-2.09	68.2	57.48	31.71	10.08	33.16	340	307	P	V
		5700	80.26	-24.94	105.2	71.27	32	10.16	33.17	340	307	P	V
		5717.25	93.02	-17.01	110.03	83.99	32.03	10.18	33.18	340	307	P	V
		5721.75	96.46	-18.33	114.79	87.41	32.04	10.19	33.18	340	307	P	V
	*	5755	117.93	-	-	108.77	32.11	10.24	33.19	340	307	P	V
	*	5755	109.83	-	-	100.67	32.11	10.24	33.19	340	307	A	V
		5852.5	62.65	-53.85	116.5	53.2	32.31	10.36	33.22	340	307	P	V
		5857.75	62.61	-47.42	110.03	53.14	32.33	10.36	33.22	340	307	P	V
		5877.25	60.16	-43.37	103.53	50.6	32.41	10.38	33.23	340	307	P	V
		5926.5	54.93	-13.27	68.2	45.19	32.55	10.44	33.25	340	307	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5643.25	64.78	-3.42	68.2	56.15	31.71	10.08	33.16	211	285	P	H
		5695	73.41	-28.1	101.51	64.46	31.97	10.15	33.17	211	285	P	H
		5719.5	79	-31.66	110.66	69.95	32.04	10.19	33.18	211	285	P	H
		5725	79.95	-42.25	122.2	70.88	32.05	10.2	33.18	211	285	P	H
	*	5795	116.57	-	-	107.29	32.19	10.29	33.2	211	285	P	H
	*	5795	108.61	-	-	99.33	32.19	10.29	33.2	211	285	A	H
		5852.25	82.52	-34.55	117.07	73.07	32.31	10.36	33.22	211	285	P	H
		5856.25	79.41	-31.04	110.45	69.94	32.33	10.36	33.22	211	285	P	H
		5875	72.62	-32.58	105.2	63.07	32.4	10.38	33.23	211	285	P	H
		5930.25	65.48	-2.72	68.2	55.73	32.56	10.44	33.25	211	285	P	H
802.11ac													H
VHT40													H
CH 159		5641.25	64.81	-3.39	68.2	56.17	31.72	10.08	33.16	361	306	P	V
5795MHz		5699.5	74.62	-30.21	104.83	65.63	32	10.16	33.17	361	306	P	V
		5719.5	78.8	-31.86	110.66	69.75	32.04	10.19	33.18	361	306	P	V
		5720.5	79.97	-31.97	111.94	70.92	32.04	10.19	33.18	361	306	P	V
	*	5795	118.69	-	-	109.41	32.19	10.29	33.2	361	306	P	V
	*	5795	110.09	-	-	100.81	32.19	10.29	33.2	361	306	A	V
		5850.75	85.24	-35.25	120.49	75.8	32.3	10.36	33.22	361	306	P	V
		5856.5	83.84	-26.54	110.38	74.37	32.33	10.36	33.22	361	306	P	V
		5878.75	75.74	-26.67	102.41	66.16	32.42	10.39	33.23	361	306	P	V
		5930.25	63.14	-5.06	68.2	53.39	32.56	10.44	33.25	361	306	P	V
													V
													V
Remark		1. No other spurious found. 2. All results are PASS against Peak and Average limit line.											



Band 4 5725~5850MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT40 CH 151 5755MHz		11510	48.75	-25.25	74	54.56	39.67	15.92	61.4	100	0	P	H
		17265	45.99	-22.21	68.2	42.54	40.6	20.24	57.39	100	0	P	H
													H
													H
		11510	48.66	-25.34	74	54.47	39.67	15.92	61.4	100	0	P	V
		17265	46.72	-21.48	68.2	43.27	40.6	20.24	57.39	100	0	P	V
													V
													V
802.11ac VHT40 CH 159 5795MHz		11590	51.72	-22.28	74	57.84	39.43	15.97	61.52	171	274	P	H
		11590	42.74	-11.26	54	48.86	39.43	15.97	61.52	171	274	A	H
		17385	44.91	-23.29	68.2	40.44	41.12	20.35	57	100	0	P	H
													H
		11590	53.23	-20.77	74	59.35	39.43	15.97	61.52	100	0	P	V
		11590	43.72	-10.28	54	49.84	39.43	15.97	61.52	100	0	A	V
		17385	48.13	-20.07	68.2	43.66	41.12	20.35	57	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5626.5	61.54	-6.66	68.2	52.88	31.75	10.06	33.15	200	285	P	H
		5688.25	71.11	-25.42	96.53	62.21	31.93	10.14	33.17	200	285	P	H
		5702.25	76.35	-29.48	105.83	67.36	32	10.16	33.17	200	285	P	H
		5722.5	76.41	-40.09	116.5	67.36	32.04	10.19	33.18	200	285	P	H
802.11ac VHT80 CH 155 5775MHz	*	5775	108.7	-	-	99.48	32.15	10.27	33.2	200	285	P	H
	*	5775	101.02	-	-	91.8	32.15	10.27	33.2	200	285	A	H
		5853.75	71.75	-41.9	113.65	62.3	32.31	10.36	33.22	200	285	P	H
		5868.25	69.4	-37.69	107.09	59.88	32.37	10.38	33.23	200	285	P	H
		5877.75	64.02	-39.14	103.16	54.45	32.41	10.39	33.23	200	285	P	H
		5928.25	54.72	-13.48	68.2	44.97	32.56	10.44	33.25	200	285	P	H
													H
													H
		5648.75	66.34	-1.86	68.2	57.71	31.7	10.09	33.16	339	305	P	V
		5697.25	72.75	-30.42	103.17	63.78	31.98	10.16	33.17	339	305	P	V
		5716.75	79.32	-30.57	109.89	70.29	32.03	10.18	33.18	339	305	P	V
		5721	83.68	-29.4	113.08	74.63	32.04	10.19	33.18	339	305	P	V
	*	5775	111.12	-	-	101.9	32.15	10.27	33.2	339	305	P	V
	*	5775	102.52	-	-	93.3	32.15	10.27	33.2	339	305	A	V
		5850.75	71.12	-49.37	120.49	61.68	32.3	10.36	33.22	339	305	P	V
		5859.5	72.08	-37.46	109.54	62.6	32.34	10.37	33.23	339	305	P	V
		5875.75	66.48	-38.16	104.64	56.93	32.4	10.38	33.23	339	305	P	V
		5928.25	57.49	-10.71	68.2	47.74	32.56	10.44	33.25	339	305	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol.
802.11ac		11550	45.98	-28.02	74	51.95	39.55	15.95	61.47	100	0	P	H
		17325	45.61	-22.59	68.2	41.7	40.83	20.3	57.22	100	0	P	H
													H
VHT80													H
5775MHz		11550	47.18	-26.82	74	53.15	39.55	15.95	61.47	100	0	P	V
		17325	46.28	-21.92	68.2	42.37	40.83	20.3	57.22	100	0	P	V
													V
Remark		1. No other spurious found. 2. All results are PASS against Peak and Average limit line.											



Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2+3+4		(MHz)	(dB μ V/m)	(dB)	(dB μ V/m)	(dB μ V)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5648.2	59.83	-8.37	68.2	51.2	31.7	10.09	33.16	207	309	P	H
		5692.4	70.79	-28.81	99.6	61.86	31.95	10.15	33.17	207	309	P	H
		5715.2	87.01	-22.45	109.46	77.98	32.03	10.18	33.18	207	309	P	H
		5724.2	87.66	-32.72	120.38	78.6	32.05	10.19	33.18	207	309	P	H
	*	5745	122.75	-	-	113.63	32.09	10.22	33.19	207	309	P	H
	*	5745	114.65	-	-	105.53	32.09	10.22	33.19	207	309	A	H
													H
													H
		5649.2	58.91	-9.29	68.2	50.28	31.7	10.09	33.16	280	303	P	V
		5700	74.36	-30.84	105.2	65.37	32	10.16	33.17	280	303	P	V
		5718.4	89.54	-20.81	110.35	80.49	32.04	10.19	33.18	280	303	P	V
		5720	88.13	-22.67	110.8	79.08	32.04	10.19	33.18	280	303	P	V
	*	5745	123.35	-	-	114.23	32.09	10.22	33.19	280	303	P	V
	*	5745	114.89	-	-	105.77	32.09	10.22	33.19	280	303	A	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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		5629.25	55.62	-12.58	68.2	46.97	31.74	10.06	33.15	218	308	P	H
		5693.5	60.68	-39.73	100.41	51.74	31.96	10.15	33.17	218	308	P	H
		5709.75	65.39	-42.54	107.93	56.38	32.02	10.17	33.18	218	308	P	H
		5720.5	64.67	-47.27	111.94	55.62	32.04	10.19	33.18	218	308	P	H
	*	5785	122.15	-	-	112.9	32.17	10.28	33.2	218	308	P	H
	*	5785	114.05	-	-	104.8	32.17	10.28	33.2	218	308	A	H
		5850.25	63.96	-57.67	121.63	54.52	32.3	10.36	33.22	218	308	P	H
		5858	62.99	-46.97	109.96	53.52	32.33	10.36	33.22	218	308	P	H
		5888.75	59.14	-35.85	94.99	49.52	32.45	10.4	33.23	218	308	P	H
		5938.75	56.9	-11.3	68.2	47.12	32.58	10.45	33.25	218	308	P	H
													H
													H
		5633	56.76	-11.44	68.2	48.11	31.73	10.07	33.15	277	302	P	V
		5698.75	61.35	-42.93	104.28	52.37	31.99	10.16	33.17	277	302	P	V
		5708.75	63.41	-44.24	107.65	54.4	32.02	10.17	33.18	277	302	P	V
		5720.75	63.81	-48.7	112.51	54.76	32.04	10.19	33.18	277	302	P	V
	*	5785	123	-	-	113.75	32.17	10.28	33.2	277	302	P	V
	*	5785	114.71	-	-	105.46	32.17	10.28	33.2	277	302	A	V
		5850	65	-57.2	122.2	55.56	32.3	10.36	33.22	277	302	P	V
		5855.5	61.7	-48.96	110.66	52.24	32.32	10.36	33.22	277	302	P	V
		5895.5	58.8	-31.19	89.99	49.15	32.48	10.41	33.24	277	302	P	V
		5937.25	59.81	-8.39	68.2	50.04	32.57	10.45	33.25	277	302	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
	*	5825	121.14	-	-	111.77	32.25	10.33	33.21	206	310	P	H
	*	5825	113.06	-	-	103.69	32.25	10.33	33.21	206	310	A	H
		5851.6	89.86	-28.69	118.55	80.41	32.31	10.36	33.22	206	310	P	H
		5856.8	75.8	-34.5	110.3	66.33	32.33	10.36	33.22	206	310	P	H
		5885.8	64.45	-32.73	97.18	54.85	32.44	10.39	33.23	206	310	P	H
		5938.8	58.2	-10	68.2	48.42	32.58	10.45	33.25	206	310	P	H
													H
													H
802.11a													
CH 165	*	5825	122.26	-	-	112.89	32.25	10.33	33.21	305	301	P	V
5825MHz	*	5825	113.86	-	-	104.49	32.25	10.33	33.21	305	301	A	V
		5850.4	80.67	-40.62	121.29	71.23	32.3	10.36	33.22	305	301	P	V
		5856.2	82.11	-28.35	110.46	72.65	32.32	10.36	33.22	305	301	P	V
		5878.8	69.39	-32.99	102.38	59.81	32.42	10.39	33.23	305	301	P	V
		5937	57.58	-10.62	68.2	47.81	32.57	10.45	33.25	305	301	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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		5991	66.31	-1.89	68.2	56.47	32.6	10.51	33.27	195	284	P	H
		11490	55.1	-18.9	74	60.89	39.7	15.91	61.4	195	344	P	H
		11490	45.46	-8.54	54	51.25	39.7	15.91	61.4	195	344	A	H
		17235	45.82	-22.38	68.2	42.6	40.51	20.22	57.51	100	0	P	H
		5980	67.07	-1.13	68.2	57.23	32.6	10.5	33.26	203	274	P	V
		11490	56.86	-17.14	74	62.65	39.7	15.91	61.4	216	40	P	V
		11490	47.15	-6.85	54	52.94	39.7	15.91	61.4	216	40	A	V
		17235	46.92	-21.28	68.2	43.7	40.51	20.22	57.51	100	0	P	V
802.11a CH 157 5785MHz		6034	67.05	-1.15	68.2	57.14	32.67	10.53	33.29	205	282	P	H
		11570	57.85	-16.15	74	63.9	39.49	15.96	61.5	224	272	P	H
		11570	47.94	-6.06	54	53.99	39.49	15.96	61.5	224	272	A	H
		17355	44.96	-23.24	68.2	40.76	40.98	20.33	57.11	100	0	P	H
		6016	65.42	-2.78	68.2	55.55	32.63	10.52	33.28	302	63	P	V
		11570	55.94	-18.06	74	61.99	39.49	15.96	61.5	100	358	P	V
		11570	46.79	-7.21	54	52.84	39.49	15.96	61.5	100	358	A	V
		17355	46.25	-21.95	68.2	42.05	40.98	20.33	57.11	100	0	P	V
802.11a CH 165 5825MHz		6060	65.8	-2.4	68.2	55.89	32.68	10.53	33.3	206	299	P	H
		11650	55.64	-18.36	74	62.02	39.2	16.01	61.59	220	273	P	H
		11650	48	-6	54	54.38	39.2	16.01	61.59	220	273	A	H
		17475	44.69	-23.51	68.2	39.38	41.58	20.44	56.71	100	0	P	H
		6060	66.3	-1.9	68.2	56.39	32.68	10.53	33.3	300	59	P	V
		11650	54.45	-19.55	74	60.83	39.2	16.01	61.59	100	357	P	V
		11650	46.39	-7.61	54	52.77	39.2	16.01	61.59	100	357	A	V
		17475	48.59	-19.61	68.2	43.28	41.58	20.44	56.71	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 VHT20 (Band Edge @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT20 CH 149 5745MHz		5647	57.47	-10.73	68.2	48.83	31.71	10.09	33.16	207	309	P	H
		5699.4	71.41	-33.35	104.76	62.42	32	10.16	33.17	207	309	P	H
		5720	86.1	-24.7	110.8	77.05	32.04	10.19	33.18	207	309	P	H
		5723.8	94.89	-24.57	119.46	85.83	32.05	10.19	33.18	207	309	P	H
	*	5745	120.51	-	-	111.39	32.09	10.22	33.19	207	309	P	H
	*	5745	112.02	-	-	102.9	32.09	10.22	33.19	207	309	A	H
													H
													H
		5649.2	59.34	-8.86	68.2	50.71	31.7	10.09	33.16	288	301	P	V
		5699	73.41	-31.05	104.46	64.43	31.99	10.16	33.17	288	301	P	V
		5719.6	84.5	-26.19	110.69	75.45	32.04	10.19	33.18	288	301	P	V
		5721.6	90.5	-23.95	114.45	81.45	32.04	10.19	33.18	288	301	P	V
	*	5745	121.94	-	-	112.82	32.09	10.22	33.19	288	301	P	V
	*	5745	114.13	-	-	105.01	32.09	10.22	33.19	288	301	A	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5630	53.35	-14.85	68.2	44.7	31.74	10.06	33.15	218	308	P	H
		5698	61.36	-42.37	103.73	52.38	31.99	10.16	33.17	218	308	P	H
		5717.75	62.6	-47.57	110.17	53.56	32.04	10.18	33.18	218	308	P	H
		5725	66.2	-56	122.2	57.13	32.05	10.2	33.18	218	308	P	H
	*	5785	119.85	-	-	110.6	32.17	10.28	33.2	218	308	P	H
	*	5785	111.85	-	-	102.6	32.17	10.28	33.2	218	308	A	H
		5850.25	61.39	-60.24	121.63	51.95	32.3	10.36	33.22	218	308	P	H
		5862.75	61.56	-47.07	108.63	52.07	32.35	10.37	33.23	218	308	P	H
		5882.75	59.13	-40.31	99.44	49.54	32.43	10.39	33.23	218	308	P	H
		5939.75	55.62	-12.58	68.2	45.84	32.58	10.45	33.25	218	308	P	H
802.11ac													H
VHT20													H
CH 157		5631.25	56.57	-11.63	68.2	47.92	31.74	10.06	33.15	277	302	P	V
5785MHz		5698.25	60.96	-42.95	103.91	51.98	31.99	10.16	33.17	277	302	P	V
		5718.25	64.4	-45.91	110.31	55.35	32.04	10.19	33.18	277	302	P	V
		5722.5	64.77	-51.73	116.5	55.72	32.04	10.19	33.18	277	302	P	V
	*	5785	122.3	-	-	113.05	32.17	10.28	33.2	277	302	P	V
	*	5785	113.85	-	-	104.6	32.17	10.28	33.2	277	302	A	V
		5850.25	64.06	-57.57	121.63	54.62	32.3	10.36	33.22	277	302	P	V
		5859.75	60.83	-48.64	109.47	51.35	32.34	10.37	33.23	277	302	P	V
		5881.5	58.68	-41.69	100.37	49.09	32.43	10.39	33.23	277	302	P	V
		5941.5	58.96	-9.24	68.2	49.17	32.58	10.46	33.25	277	302	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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	*	5825	120.29	-	-	110.92	32.25	10.33	33.21	206	310	P	H
	*	5825	111.88	-	-	102.51	32.25	10.33	33.21	206	310	A	H
		5850	84.8	-37.4	122.2	75.36	32.3	10.36	33.22	206	310	P	H
		5855.6	78.43	-32.2	110.63	68.97	32.32	10.36	33.22	206	310	P	H
		5877.2	68.36	-35.21	103.57	58.8	32.41	10.38	33.23	206	310	P	H
		5926	55.37	-12.83	68.2	45.63	32.55	10.44	33.25	206	310	P	H
													H
													H
5825MHz	*	5825	121.67	-	-	112.3	32.25	10.33	33.21	305	301	P	V
	*	5825	113.29	-	-	103.92	32.25	10.33	33.21	305	301	A	V
		5850.8	84.57	-35.81	120.38	75.13	32.3	10.36	33.22	305	301	P	V
		5855	80.19	-30.61	110.8	70.73	32.32	10.36	33.22	305	301	P	V
		5879.8	67.23	-34.4	101.63	57.65	32.42	10.39	33.23	305	301	P	V
		5926.8	58.52	-9.68	68.2	48.78	32.55	10.44	33.25	305	301	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT20 CH 149 5745MHz		5992	64.59	-3.61	68.2	54.75	32.6	10.51	33.27	316	62	P	H
		11490	55.61	-18.39	74	61.4	39.7	15.91	61.4	212	273	P	H
		11490	46.05	-7.95	54	51.84	39.7	15.91	61.4	212	273	A	H
		17235	47.04	-21.16	68.2	43.82	40.51	20.22	57.51	100	0	P	H
		5980	65.18	-3.02	68.2	55.34	32.6	10.5	33.26	200	279	P	V
		11490	54.53	-19.47	74	60.32	39.7	15.91	61.4	100	0	P	V
		11490	45.6	-8.4	54	51.39	39.7	15.91	61.4	100	0	A	V
		17235	47.78	-20.42	68.2	44.56	40.51	20.22	57.51	100	0	P	V
802.11ac VHT20 CH 157 5785MHz		6034	65.76	-2.44	68.2	55.85	32.67	10.53	33.29	205	282	P	H
		11570	56.18	-17.82	74	62.23	39.49	15.96	61.5	212	271	P	H
		11570	46.35	-7.65	54	52.4	39.49	15.96	61.5	212	271	A	H
		17355	46.05	-22.15	68.2	41.85	40.98	20.33	57.11	100	0	P	H
		6018	65.61	-2.59	68.2	55.73	32.64	10.52	33.28	302	63	P	V
		11570	54.05	-19.95	74	60.1	39.49	15.96	61.5	100	358	P	V
		11570	44.68	-9.32	54	50.73	39.49	15.96	61.5	100	358	A	V
		17355	46.78	-21.42	68.2	42.58	40.98	20.33	57.11	100	0	P	V
802.11ac VHT20 CH 165 5825MHz		6076	60.08	-8.12	68.2	50.21	32.65	10.53	33.31	100	0	P	H
		11650	55.59	-18.41	74	61.97	39.2	16.01	61.59	209	272	P	H
		11650	47.83	-6.17	54	54.21	39.2	16.01	61.59	209	272	A	H
		17475	46.66	-21.54	68.2	41.35	41.58	20.44	56.71	100	0	P	H
		6076	65.03	-3.17	68.2	55.16	32.65	10.53	33.31	100	0	P	V
		11650	54	-20	74	60.38	39.2	16.01	61.59	100	358	P	V
		11650	46.24	-7.76	54	52.62	39.2	16.01	61.59	100	358	A	V
		17475	48.83	-19.37	68.2	43.52	41.58	20.44	56.71	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 VHT40 (Band Edge @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5643.5	65.94	-2.26	68.2	57.31	31.71	10.08	33.16	203	310	P	H
		5698.25	79.98	-23.93	103.91	71	31.99	10.16	33.17	203	310	P	H
		5718.5	92.91	-17.47	110.38	83.86	32.04	10.19	33.18	203	310	P	H
		5723.25	94.21	-24	118.21	85.15	32.05	10.19	33.18	203	310	P	H
	*	5755	116.84	-	-	107.68	32.11	10.24	33.19	203	310	P	H
	*	5755	109.4	-	-	100.24	32.11	10.24	33.19	203	310	A	H
		5853.75	65.15	-48.5	113.65	55.7	32.31	10.36	33.22	203	310	P	H
		5862.5	64.57	-44.13	108.7	55.08	32.35	10.37	33.23	203	310	P	H
		5879.25	59.6	-42.44	102.04	50.02	32.42	10.39	33.23	203	310	P	H
		5929	56.63	-11.57	68.2	46.88	32.56	10.44	33.25	203	310	P	H
802.11ac													H
VHT40													H
CH 151		5646.75	66.05	-2.15	68.2	57.41	31.71	10.09	33.16	273	300	P	V
5755MHz		5691.5	78.09	-20.84	98.93	69.16	31.95	10.15	33.17	273	300	P	V
		5716.5	93.37	-16.45	109.82	84.34	32.03	10.18	33.18	273	300	P	V
		5721.25	96.15	-17.5	113.65	87.1	32.04	10.19	33.18	273	300	P	V
	*	5755	118.56	-	-	109.4	32.11	10.24	33.19	273	300	P	V
	*	5755	110.7	-	-	101.54	32.11	10.24	33.19	273	300	A	V
		5851.5	65.67	-53.11	118.78	56.22	32.31	10.36	33.22	273	300	P	V
		5856.5	64.42	-45.96	110.38	54.95	32.33	10.36	33.22	273	300	P	V
		5876.25	61.04	-43.23	104.27	51.49	32.4	10.38	33.23	273	300	P	V
		5927.25	57.16	-11.04	68.2	47.42	32.55	10.44	33.25	273	300	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5645	62.99	-5.21	68.2	54.36	31.71	10.08	33.16	215	309	P	H
		5700	71.55	-33.65	105.2	62.56	32	10.16	33.17	215	309	P	H
		5710.5	77.61	-30.53	108.14	68.6	32.02	10.17	33.18	215	309	P	H
		5725	79.92	-42.28	122.2	70.85	32.05	10.2	33.18	215	309	P	H
	*	5795	118.18	-	-	108.9	32.19	10.29	33.2	215	309	P	H
	*	5795	110.21	-	-	100.93	32.19	10.29	33.2	215	309	A	H
		5850.75	84.35	-36.14	120.49	74.91	32.3	10.36	33.22	215	309	P	H
		5855.5	82.41	-28.25	110.66	72.95	32.32	10.36	33.22	215	309	P	H
		5875.5	75.73	-29.1	104.83	66.18	32.4	10.38	33.23	215	309	P	H
		5925.75	64.89	-3.31	68.2	55.15	32.55	10.44	33.25	215	309	P	H
802.11ac													H
VHT40													H
CH 159		5639.25	60.5	-7.7	68.2	51.86	31.72	10.07	33.15	344	298	P	V
5795MHz		5699	69.99	-34.47	104.46	61.01	31.99	10.16	33.17	344	298	P	V
		5719.25	75.78	-34.81	110.59	66.73	32.04	10.19	33.18	344	298	P	V
		5724.5	76.22	-44.84	121.06	67.16	32.05	10.19	33.18	344	298	P	V
	*	5795	119.2	-	-	109.92	32.19	10.29	33.2	344	298	P	V
	*	5795	111.72	-	-	102.44	32.19	10.29	33.2	344	298	A	V
		5851	82.34	-37.58	119.92	72.9	32.3	10.36	33.22	344	298	P	V
		5856	81.59	-28.93	110.52	72.13	32.32	10.36	33.22	344	298	P	V
		5879.75	70.86	-30.81	101.67	61.28	32.42	10.39	33.23	344	298	P	V
		5926.25	61.86	-6.34	68.2	52.12	32.55	10.44	33.25	344	298	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT40 CH 151 5755MHz		11510	52.48	-21.52	74	58.29	39.67	15.92	61.4	212	273	P	H
		11510	45.15	-8.85	54	50.96	39.67	15.92	61.4	212	273	A	H
		17265	46.58	-21.62	68.2	43.13	40.6	20.24	57.39	100	0	P	H
													H
		11510	54.33	-19.67	74	60.14	39.67	15.92	61.4	100	354	P	V
		11510	44.9	-9.1	54	50.71	39.67	15.92	61.4	100	354	A	V
		17265	48.63	-19.57	68.2	45.18	40.6	20.24	57.39	100	0	P	V
													V
802.11ac VHT40 CH 159 5795MHz		11590	52.82	-21.18	74	58.94	39.43	15.97	61.52	209	272	P	H
		11590	45.27	-8.73	54	51.39	39.43	15.97	61.52	209	272	A	H
		17385	45.3	-22.9	68.2	40.83	41.12	20.35	57	100	0	P	H
													H
		11590	51.81	-22.19	74	57.93	39.43	15.97	61.52	100	354	P	V
		11590	44.66	-9.34	54	50.78	39.43	15.97	61.52	100	354	A	V
		17385	47.84	-20.36	68.2	43.37	41.12	20.35	57	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol.
802.11ac		11550	45.91	-28.09	74	51.88	39.55	15.95	61.47	100	0	P	H
		17325	45.43	-22.77	68.2	41.52	40.83	20.3	57.22	100	0	P	H
													H
VHT80													H
5775MHz		11550	47.27	-26.73	74	53.24	39.55	15.95	61.47	100	0	P	V
		17325	47.06	-21.14	68.2	43.15	40.83	20.3	57.22	100	0	P	V
													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	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2+3+4		(MHz)	(dB μ V/m)	(dB)	(dB μ V/m)	(dB μ V)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
5GHz 802.11a LF		91.11	29.63	-13.87	43.5	45.87	14.76	1.33	32.33	-	-	P	H
		185.2	28.88	-14.62	43.5	44.62	14.61	1.9	32.25	-	-	P	H
		265.71	32.44	-13.56	46	43.32	19.16	2.16	32.2	-	-	P	H
		600.36	29.05	-16.95	46	32.67	25.38	3.21	32.21	-	-	P	H
		764.29	30.35	-15.65	46	30.76	27.88	3.68	31.97	-	-	P	H
		953.44	33.46	-12.54	46	29.44	30.72	4.16	30.86	100	0	P	H
													H
													H
													H
													H
													H
													H
													H
													H
Remark	1.	No other spurious found.											
	2.	All results are PASS against limit line.											



<TXBF Mode>

Band 4 - 5725~5850MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dB μ V/m)	(dB)	(dB μ V/m)	(dB μ V)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT20 CH 149 5745MHz		5649.05	55.07	-13.13	68.2	46.44	31.7	10.09	33.16	205	278	P	H
		5698.1	70.57	-33.23	103.8	61.59	31.99	10.16	33.17	205	278	P	H
		5712.5	82.42	-26.28	108.7	73.39	32.03	10.18	33.18	205	278	P	H
		5724.425	88.64	-32.25	120.89	79.58	32.05	10.19	33.18	205	278	P	H
	*	5745	118.67	-	-	109.55	32.09	10.22	33.19	205	278	P	H
	*	5745	110.64	-	-	101.52	32.09	10.22	33.19	205	278	A	H
													H
													H
		5646.125	54.87	-13.33	68.2	46.24	31.71	10.08	33.16	215	300	P	V
		5696.525	70.57	-32.07	102.64	61.6	31.98	10.16	33.17	215	300	P	V
		5719.925	85.74	-25.04	110.78	76.69	32.04	10.19	33.18	215	300	P	V
		5724.2	91.75	-28.63	120.38	82.69	32.05	10.19	33.18	215	300	P	V
	*	5745	119.37	-	-	110.25	32.09	10.22	33.19	215	300	P	V
	*	5745	111.16	-	-	102.04	32.09	10.22	33.19	215	300	A	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5629.25	53.84	-14.36	68.2	45.19	31.74	10.06	33.15	196	274	P	H
		5696.75	55.66	-47.14	102.8	46.69	31.98	10.16	33.17	196	274	P	H
		5712	58.95	-49.61	108.56	49.93	32.02	10.18	33.18	196	274	P	H
		5725	59.41	-62.79	122.2	50.34	32.05	10.2	33.18	196	274	P	H
*		5785	117.83	-	-	108.58	32.17	10.28	33.2	196	274	P	H
*		5785	110.26	-	-	101.01	32.17	10.28	33.2	196	274	A	H
		5850.25	61.94	-59.69	121.63	52.5	32.3	10.36	33.22	196	274	P	H
		5867.25	59.67	-47.7	107.37	50.16	32.37	10.37	33.23	196	274	P	H
		5882	57.59	-42.41	100	48	32.43	10.39	33.23	196	274	P	H
		5949.75	56.96	-11.24	68.2	47.15	32.6	10.46	33.25	196	274	P	H
802.11ac													H
VHT20													H
CH 157		5619.75	53.64	-14.56	68.2	44.98	31.76	10.05	33.15	226	296	P	V
5785MHz		5697.25	56.16	-47.01	103.17	47.19	31.98	10.16	33.17	226	296	P	V
		5719.25	58.28	-52.31	110.59	49.23	32.04	10.19	33.18	226	296	P	V
		5721.25	61.85	-51.8	113.65	52.8	32.04	10.19	33.18	226	296	P	V
*		5785	118.54	-	-	109.29	32.17	10.28	33.2	226	296	P	V
*		5785	111.09	-	-	101.84	32.17	10.28	33.2	226	296	A	V
		5850.75	58.84	-61.65	120.49	49.4	32.3	10.36	33.22	226	296	P	V
		5856.5	59.13	-51.25	110.38	49.66	32.33	10.36	33.22	226	296	P	V
		5876.5	57.52	-46.57	104.09	47.96	32.41	10.38	33.23	226	296	P	V
		5939	57.86	-10.34	68.2	48.08	32.58	10.45	33.25	226	296	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol.
	*	5825	117.18	-	-	107.81	32.25	10.33	33.21	193	282	P	H
	*	5825	108.7	-	-	99.33	32.25	10.33	33.21	193	282	A	H
		5851.19	83.17	-36.32	119.49	73.73	32.3	10.36	33.22	193	282	P	H
		5856.725	78.99	-31.33	110.32	69.52	32.33	10.36	33.22	193	282	P	H
		5879.89	63.46	-38.11	101.57	53.88	32.42	10.39	33.23	193	282	P	H
		5932.575	56.09	-12.11	68.2	46.32	32.57	10.45	33.25	193	282	P	H
802.11ac													H
VHT20													H
CH 165	*	5825	118.74	-	-	109.37	32.25	10.33	33.21	226	298	P	V
5825MHz	*	5825	110.61	-	-	101.24	32.25	10.33	33.21	226	298	A	V
		5850.985	75.88	-44.07	119.95	66.44	32.3	10.36	33.22	226	298	P	V
		5858.16	71.17	-38.74	109.91	61.7	32.33	10.36	33.22	226	298	P	V
		5876.61	63.83	-40.17	104	54.27	32.41	10.38	33.23	226	298	P	V
		5932.37	56.07	-12.13	68.2	46.31	32.56	10.45	33.25	226	298	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT20 CH 149 5745MHz		5992	64.46	-3.74	68.2	54.62	32.6	10.51	33.27	205	278	P	H
		11490	48.72	-25.28	74	54.51	39.7	15.91	61.4	100	0	P	H
		17235	45.15	-23.05	68.2	41.93	40.51	20.22	57.51	100	0	P	H
													H
		5992	65.18	-3.02	68.2	55.34	32.6	10.51	33.27	215	300	P	V
		11490	54.76	-19.24	74	60.55	39.7	15.91	61.4	201	166	P	V
		11490	45.18	-8.82	54	50.97	39.7	15.91	61.4	201	166	A	V
802.11ac VHT20 CH 157 5785MHz		17235	45.33	-22.87	68.2	42.11	40.51	20.22	57.51	100	0	P	V
		6034	62.36	-5.84	68.2	52.45	32.67	10.53	33.29	196	274	P	H
		11570	47.73	-26.27	74	53.78	39.49	15.96	61.5	100	0	P	H
		17355	45.04	-23.16	68.2	40.84	40.98	20.33	57.11	100	0	P	H
													H
		6034	63.1	-5.1	68.2	53.19	32.67	10.53	33.29	226	296	P	V
		11570	54.75	-19.25	74	60.8	39.49	15.96	61.5	201	165	P	V
802.11ac VHT20 CH 165 5825MHz		11570	45.45	-8.55	54	51.5	39.49	15.96	61.5	201	165	A	V
		17355	43.93	-24.27	68.2	39.73	40.98	20.33	57.11	100	0	P	V
													V
		6076	59.25	-8.95	68.2	49.38	32.65	10.53	33.31	193	282	P	H
		11650	47.83	-26.17	74	54.21	39.2	16.01	61.59	100	0	P	H
		17475	47.75	-20.45	68.2	42.44	41.58	20.44	56.71	100	0	P	H
													H
Remark	1.	No other spurious found.											
	2.	All results are PASS against Peak and Average limit line.											



Band 4 5725~5850MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT40 CH 151 5755MHz		5648.5	65.53	-2.67	68.2	56.9	31.7	10.09	33.16	195	277	P	H
		5694.75	75.51	-25.82	101.33	66.56	31.97	10.15	33.17	195	277	P	H
		5720	90.08	-20.72	110.8	81.03	32.04	10.19	33.18	195	277	P	H
		5724	92.19	-27.73	119.92	83.13	32.05	10.19	33.18	195	277	P	H
	*	5755	117.73	-	-	108.57	32.11	10.24	33.19	195	277	P	H
	*	5755	111.14	-	-	101.98	32.11	10.24	33.19	195	277	A	H
		5851.25	67.8	-51.55	119.35	58.35	32.31	10.36	33.22	195	277	P	H
		5857	64.8	-45.44	110.24	55.33	32.33	10.36	33.22	195	277	P	H
		5877.75	63.94	-39.22	103.16	54.37	32.41	10.39	33.23	195	277	P	H
		5931.25	55.45	-12.75	68.2	45.7	32.56	10.44	33.25	195	277	P	H
													H
													H
		5645.75	62.06	-6.14	68.2	53.43	31.71	10.08	33.16	202	299	P	V
		5699	77.43	-27.03	104.46	68.45	31.99	10.16	33.17	202	299	P	V
		5720	88.96	-21.84	110.8	79.91	32.04	10.19	33.18	202	299	P	V
		5723.5	94.02	-24.76	118.78	84.96	32.05	10.19	33.18	202	299	P	V
	*	5755	117.17	-	-	108.01	32.11	10.24	33.19	202	299	P	V
	*	5755	109.91	-	-	100.75	32.11	10.24	33.19	202	299	A	V
		5853.5	66.61	-47.61	114.22	57.16	32.31	10.36	33.22	202	299	P	V
		5869.5	65.56	-41.18	106.74	56.03	32.38	10.38	33.23	202	299	P	V
		5878	63.83	-39.14	102.97	54.26	32.41	10.39	33.23	202	299	P	V
		5928.5	59.39	-8.81	68.2	49.64	32.56	10.44	33.25	202	299	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5650	56.31	-11.89	68.2	47.68	31.7	10.09	33.16	197	279	P	H
		5695.25	63.3	-38.4	101.7	54.35	31.97	10.15	33.17	197	279	P	H
		5720	71.22	-39.58	110.8	62.17	32.04	10.19	33.18	197	279	P	H
		5721.25	70.92	-42.73	113.65	61.87	32.04	10.19	33.18	197	279	P	H
	*	5795	116.97	-	-	107.69	32.19	10.29	33.2	197	279	P	H
	*	5795	110.64	-	-	101.36	32.19	10.29	33.2	197	279	A	H
		5850	75.51	-46.69	122.2	66.07	32.3	10.36	33.22	197	279	P	H
		5855.5	75.99	-34.67	110.66	66.53	32.32	10.36	33.22	197	279	P	H
		5876.25	70.9	-33.37	104.27	61.35	32.4	10.38	33.23	197	279	P	H
		5925	59.21	-8.99	68.2	49.47	32.55	10.44	33.25	197	279	P	H
802.11ac													H
VHT40													H
CH 159		5646.75	58.19	-10.01	68.2	49.55	31.71	10.09	33.16	223	300	P	V
5795MHz		5690.25	64.89	-33.12	98.01	55.97	31.94	10.15	33.17	223	300	P	V
		5716.5	71.43	-38.39	109.82	62.4	32.03	10.18	33.18	223	300	P	V
		5721	70.91	-42.17	113.08	61.86	32.04	10.19	33.18	223	300	P	V
	*	5795	116.32	-	-	107.04	32.19	10.29	33.2	223	300	P	V
	*	5795	110.92	-	-	101.64	32.19	10.29	33.2	223	300	A	V
		5852.5	76.44	-40.06	116.5	66.99	32.31	10.36	33.22	223	300	P	V
		5856	77.73	-32.79	110.52	68.27	32.32	10.36	33.22	223	300	P	V
		5879.5	69.93	-31.93	101.86	60.35	32.42	10.39	33.23	223	300	P	V
		5926.5	60.43	-7.77	68.2	50.69	32.55	10.44	33.25	223	300	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT40 CH 151 5755MHz		11510	51.43	-22.57	74	57.24	39.67	15.92	61.4	107	357	P	H
		11510	41.76	-12.24	54	47.57	39.67	15.92	61.4	107	357	A	H
		17265	45.02	-23.18	68.2	41.57	40.6	20.24	57.39	100	0	P	H
													H
		11510	48.55	-25.45	74	54.36	39.67	15.92	61.4	100	0	P	V
		17265	45.2	-23	68.2	41.75	40.6	20.24	57.39	100	0	P	V
													V
													V
802.11ac VHT40 CH 159 5795MHz		11590	48.83	-25.17	74	54.95	39.43	15.97	61.52	100	0	P	H
		17385	45.84	-22.36	68.2	41.37	41.12	20.35	57	100	0	P	H
													H
													H
		11590	52.76	-21.24	74	58.88	39.43	15.97	61.52	209	25	P	V
		11590	44.36	-9.64	54	50.48	39.43	15.97	61.52	209	25	A	V
		17385	44.93	-23.27	68.2	40.46	41.12	20.35	57	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5620.75	65.72	-2.48	68.2	57.06	31.76	10.05	33.15	194	279	P	H
		5698.75	75.75	-28.53	104.28	66.77	31.99	10.16	33.17	194	279	P	H
		5710.75	79.9	-28.31	108.21	70.88	32.02	10.18	33.18	194	279	P	H
		5722.5	80.87	-35.63	116.5	71.82	32.04	10.19	33.18	194	279	P	H
802.11ac VHT80	*	5775	110.49	-	-	101.27	32.15	10.27	33.2	194	279	P	H
	*	5775	107.11	-	-	97.89	32.15	10.27	33.2	194	279	A	H
		5850.5	77.58	-43.48	121.06	68.14	32.3	10.36	33.22	194	279	P	H
		5860.75	75.91	-33.28	109.19	66.43	32.34	10.37	33.23	194	279	P	H
		5875.75	73.36	-31.28	104.64	63.81	32.4	10.38	33.23	194	279	P	H
		5931.25	60.72	-7.48	68.2	50.97	32.56	10.44	33.25	194	279	P	H
													H
													H
CH 155 5775MHz		5647.25	66.7	-1.5	68.2	58.06	31.71	10.09	33.16	208	301	P	V
		5696	80.18	-22.07	102.25	71.22	31.98	10.15	33.17	208	301	P	V
		5719.75	83.34	-27.39	110.73	74.29	32.04	10.19	33.18	208	301	P	V
		5720.75	81.57	-30.94	112.51	72.52	32.04	10.19	33.18	208	301	P	V
	*	5775	111.71	-	-	102.49	32.15	10.27	33.2	208	301	P	V
	*	5775	109.09	-	-	99.87	32.15	10.27	33.2	208	301	A	V
		5850	79.23	-42.97	122.2	69.79	32.3	10.36	33.22	208	301	P	V
		5856.25	78.68	-31.77	110.45	69.21	32.33	10.36	33.22	208	301	P	V
		5883.5	70.65	-28.24	98.89	61.06	32.43	10.39	33.23	208	301	P	V
		5929.75	61.68	-6.52	68.2	51.93	32.56	10.44	33.25	208	301	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol.
802.11ac		11550	45.99	-28.01	74	51.96	39.55	15.95	61.47	100	0	P	H
		17325	45.68	-22.52	68.2	41.77	40.83	20.3	57.22	100	0	P	H
													H
VHT80													H
5775MHz	CH 155	11550	47.44	-26.56	74	53.41	39.55	15.95	61.47	100	0	P	V
		17325	44.53	-23.67	68.2	40.62	40.83	20.3	57.22	100	0	P	V
													V
Remark		1. No other spurious found. 2. All results are PASS against Peak and Average limit line.											



Band 4 - 5725~5850MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2+3		(MHz)	(dB μ V/m)	(dB)	(dB μ V/m)	(dB μ V)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT20 CH 149 5745MHz		5648.15	59.28	-8.92	68.2	50.65	31.7	10.09	33.16	293	224	P	H
		5698.325	74.07	-29.9	103.97	65.09	31.99	10.16	33.17	293	224	P	H
		5719.925	87.64	-23.14	110.78	78.59	32.04	10.19	33.18	293	224	P	H
		5724.65	94.44	-26.96	121.4	85.38	32.05	10.19	33.18	293	224	P	H
	*	5745	119.29	-	-	110.17	32.09	10.22	33.19	293	224	P	H
	*	5745	111.22	-	-	102.1	32.09	10.22	33.19	293	224	A	H
													H
													H
		5639.825	60.08	-8.12	68.2	51.43	31.72	10.08	33.15	258	302	P	V
		5699.675	75.56	-29.4	104.96	66.57	32	10.16	33.17	258	302	P	V
		5719.925	89.6	-21.18	110.78	80.55	32.04	10.19	33.18	258	302	P	V
		5724.875	96.47	-25.45	121.92	87.41	32.05	10.19	33.18	258	302	P	V
	*	5745	122.28	-	-	113.16	32.09	10.22	33.19	258	302	P	V
	*	5745	114.12	-	-	105	32.09	10.22	33.19	258	302	A	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5628.25	53.5	-14.7	68.2	44.85	31.74	10.06	33.15	190	190	P	H
		5682	56.49	-35.43	91.92	47.64	31.89	10.13	33.17	190	190	P	H
		5715.25	61.08	-48.39	109.47	52.05	32.03	10.18	33.18	190	190	P	H
		5724.5	63.51	-57.55	121.06	54.45	32.05	10.19	33.18	190	190	P	H
	*	5785	116.45	-	-	107.2	32.17	10.28	33.2	190	190	P	H
	*	5785	108.75	-	-	99.5	32.17	10.28	33.2	190	190	A	H
		5852	59.19	-58.45	117.64	49.74	32.31	10.36	33.22	190	190	P	H
		5862	58.93	-49.91	108.84	49.44	32.35	10.37	33.23	190	190	P	H
		5881	55.72	-45.02	100.74	46.14	32.42	10.39	33.23	190	190	P	H
		5949.75	54.22	-13.98	68.2	44.41	32.6	10.46	33.25	190	190	P	H
802.11ac													H
VHT20													H
CH 157		5630.75	56.61	-11.59	68.2	47.96	31.74	10.06	33.15	296	299	P	V
5785MHz		5699.25	60.06	-44.59	104.65	51.07	32	10.16	33.17	296	299	P	V
		5714.75	64.62	-44.71	109.33	55.59	32.03	10.18	33.18	296	299	P	V
		5724.5	65.88	-55.18	121.06	56.82	32.05	10.19	33.18	296	299	P	V
	*	5785	121.85	-	-	112.6	32.17	10.28	33.2	296	299	P	V
	*	5785	113.05	-	-	103.8	32.17	10.28	33.2	296	299	A	V
		5852.5	63.09	-53.41	116.5	53.64	32.31	10.36	33.22	296	299	P	V
		5862.75	62.32	-46.31	108.63	52.83	32.35	10.37	33.23	296	299	P	V
		5877	58.78	-44.93	103.71	49.22	32.41	10.38	33.23	296	299	P	V
		5940	58.15	-10.05	68.2	48.37	32.58	10.45	33.25	296	299	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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	*	5825	117.76	-	-	108.39	32.25	10.33	33.21	200	219	P	H
	*	5825	110.16	-	-	100.79	32.25	10.33	33.21	200	219	A	H
		5852.42	78.5	-38.18	116.68	69.05	32.31	10.36	33.22	200	219	P	H
		5857.135	75.81	-34.39	110.2	66.34	32.33	10.36	33.22	200	219	P	H
		5874.97	62.31	-42.9	105.21	52.76	32.4	10.38	33.23	200	219	P	H
		5931.345	55.06	-13.14	68.2	45.31	32.56	10.44	33.25	200	219	P	H
													H
													H
CH 165	*	5825	120.86	-	-	111.49	32.25	10.33	33.21	277	299	P	V
5825MHz	*	5825	112.59	-	-	103.22	32.25	10.33	33.21	277	299	A	V
		5850.165	85.38	-36.44	121.82	75.94	32.3	10.36	33.22	277	299	P	V
		5855.085	81.75	-29.03	110.78	72.29	32.32	10.36	33.22	277	299	P	V
		5879.07	65.88	-36.3	102.18	56.3	32.42	10.39	33.23	277	299	P	V
		5937.905	58.68	-9.52	68.2	48.9	32.58	10.45	33.25	277	299	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT20 CH 149 5745MHz		5974	64.14	-4.06	68.2	54.31	32.6	10.49	33.26	293	224	P	H
		11490	54.93	-19.07	74	60.72	39.7	15.91	61.4	220	243	P	H
		11490	45.01	-8.99	54	50.8	39.7	15.91	61.4	220	243	A	H
		17235	46.51	-21.69	68.2	43.29	40.51	20.22	57.51	100	0	P	H
		5974	63.6	-4.6	68.2	53.77	32.6	10.49	33.26	258	302	P	V
		11490	56.31	-17.69	74	62.1	39.7	15.91	61.4	170	219	P	V
		11490	47.27	-6.73	54	53.06	39.7	15.91	61.4	170	219	A	V
		17235	45.22	-22.98	68.2	42	40.51	20.22	57.51	100	0	P	V
802.11ac VHT20 CH 157 5785MHz		6016	59.67	-8.53	68.2	49.8	32.63	10.52	33.28	190	190	P	H
		11570	55.01	-18.99	74	61.06	39.49	15.96	61.5	200	216	P	H
		11570	47.73	-6.27	54	53.78	39.49	15.96	61.5	200	216	A	H
		17355	45.64	-22.56	68.2	41.44	40.98	20.33	57.11	100	0	P	H
		6022	63.04	-5.16	68.2	53.16	32.64	10.52	33.28	296	299	P	V
		11570	58.08	-15.92	74	64.13	39.49	15.96	61.5	200	219	P	V
		11570	49.2	-4.8	54	55.25	39.49	15.96	61.5	200	219	A	V
		17355	45.78	-22.42	68.2	41.58	40.98	20.33	57.11	100	0	P	V
802.11ac VHT20 CH 165 5825MHz		6058	61.26	-6.94	68.2	51.35	32.68	10.53	33.3	200	219	P	H
		11650	54.29	-19.71	74	60.67	39.2	16.01	61.59	196	202	P	H
		11650	44.14	-9.86	54	50.52	39.2	16.01	61.59	196	202	A	H
		17475	48.28	-19.92	68.2	42.97	41.58	20.44	56.71	100	0	P	H
		6076	65.77	-2.43	68.2	55.9	32.65	10.53	33.31	277	299	P	V
		11650	57.9	-16.1	74	64.28	39.2	16.01	61.59	200	233	P	V
		11650	49.02	-4.98	54	55.4	39.2	16.01	61.59	200	233	A	V
		17475	47.56	-20.64	68.2	42.25	41.58	20.44	56.71	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 VHT40 (Band Edge @ 3m)

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5650	65.73	-2.47	68.2	57.1	31.7	10.09	33.16	193	189	P	H
		5696	78.51	-23.74	102.25	69.55	31.98	10.15	33.17	193	189	P	H
		5719	93.9	-16.62	110.52	84.85	32.04	10.19	33.18	193	189	P	H
		5723.75	93.17	-26.18	119.35	84.11	32.05	10.19	33.18	193	189	P	H
802.11ac VHT40 CH 151 5755MHz	*	5755	115.37	-	-	106.21	32.11	10.24	33.19	193	189	P	H
	*	5755	106.36	-	-	97.2	32.11	10.24	33.19	193	189	A	H
		5851.25	64.9	-54.45	119.35	55.45	32.31	10.36	33.22	193	189	P	H
		5855.75	62.48	-48.11	110.59	53.02	32.32	10.36	33.22	193	189	P	H
		5878.75	58.22	-44.19	102.41	48.64	32.42	10.39	33.23	193	189	P	H
		5930.75	54.18	-14.02	68.2	44.43	32.56	10.44	33.25	193	189	P	H
													H
													H
		5647.5	67.17	-1.03	68.2	58.54	31.7	10.09	33.16	270	300	P	V
		5699.75	80.55	-24.47	105.02	71.56	32	10.16	33.17	270	300	P	V
		5716.25	94.59	-15.16	109.75	85.56	32.03	10.18	33.18	270	300	P	V
		5723.75	96.69	-22.66	119.35	87.63	32.05	10.19	33.18	270	300	P	V
	*	5755	118.98	-	-	109.82	32.11	10.24	33.19	270	300	P	V
	*	5755	109.66	-	-	100.5	32.11	10.24	33.19	270	300	A	V
		5851.25	66.08	-53.27	119.35	56.63	32.31	10.36	33.22	270	300	P	V
		5856.25	65.57	-44.88	110.45	56.1	32.33	10.36	33.22	270	300	P	V
		5877.25	61.03	-42.5	103.53	51.47	32.41	10.38	33.23	270	300	P	V
		5933	59.7	-8.5	68.2	49.93	32.57	10.45	33.25	270	300	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak (P/A)	Avg. (H/V)
802.11ac		5628.25	63.49	-4.71	68.2	54.84	31.74	10.06	33.15	194	187	P	H
		5698.25	71.04	-32.87	103.91	62.06	31.99	10.16	33.17	194	187	P	H
		5714.5	76.91	-32.35	109.26	67.88	32.03	10.18	33.18	194	187	P	H
		5722	79.57	-35.79	115.36	70.52	32.04	10.19	33.18	194	187	P	H
	*	5795	115.1	-	-	105.82	32.19	10.29	33.2	194	187	P	H
	*	5795	106.59	-	-	97.31	32.19	10.29	33.2	194	187	A	H
		5853	82.15	-33.21	115.36	72.7	32.31	10.36	33.22	194	187	P	H
		5860	77.37	-32.03	109.4	67.89	32.34	10.37	33.23	194	187	P	H
		5875	73.17	-32.03	105.2	63.62	32.4	10.38	33.23	194	187	P	H
		5927.5	61.69	-6.51	68.2	51.94	32.56	10.44	33.25	194	187	P	H
													H
													H
VHT40		5647.25	66.34	-1.86	68.2	57.7	31.71	10.09	33.16	282	301	P	V
		5693.75	71.8	-28.79	100.59	62.86	31.96	10.15	33.17	282	301	P	V
		5720	76.88	-33.92	110.8	67.83	32.04	10.19	33.18	282	301	P	V
		5723.25	81.56	-36.65	118.21	72.5	32.05	10.19	33.18	282	301	P	V
	*	5795	119.39	-	-	110.11	32.19	10.29	33.2	282	301	P	V
	*	5795	110.98	-	-	101.7	32.19	10.29	33.2	282	301	A	V
		5852.5	86.15	-30.35	116.5	76.7	32.31	10.36	33.22	282	301	P	V
		5858.5	82.13	-27.69	109.82	72.66	32.33	10.36	33.22	282	301	P	V
		5877.5	76.45	-26.89	103.34	66.88	32.41	10.39	33.23	282	301	P	V
		5927.5	66.85	-1.35	68.2	57.1	32.56	10.44	33.25	282	301	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT40 CH 151 5755MHz		11510	49.77	-24.23	74	55.58	39.67	15.92	61.4	100	0	P	H
		17265	44.84	-23.36	68.2	41.39	40.6	20.24	57.39	100	0	P	H
													H
													H
		11510	49.95	-24.05	74	55.76	39.67	15.92	61.4	100	0	P	V
		17265	45.34	-22.86	68.2	41.89	40.6	20.24	57.39	100	0	P	V
													V
													V
802.11ac VHT40 CH 159 5795MHz		11590	53.93	-20.07	74	60.05	39.43	15.97	61.52	195	199	P	H
		11590	44.05	-9.95	54	50.17	39.43	15.97	61.52	195	199	A	H
		17385	44.97	-23.23	68.2	40.5	41.12	20.35	57	100	0	P	H
													H
		11590	54.86	-19.14	74	60.98	39.43	15.97	61.52	202	219	P	V
		11590	45.71	-8.29	54	51.83	39.43	15.97	61.52	202	219	A	V
		17385	44.16	-24.04	68.2	39.69	41.12	20.35	57	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5624.75	60.31	-7.89	68.2	51.66	31.75	10.05	33.15	193	190	P	H
		5692.75	79.5	-20.36	99.86	70.56	31.96	10.15	33.17	193	190	P	H
		5708.25	75.9	-31.61	107.51	66.89	32.02	10.17	33.18	193	190	P	H
		5722.25	79.22	-36.71	115.93	70.17	32.04	10.19	33.18	193	190	P	H
	*	5775	108.91	-	-	99.69	32.15	10.27	33.2	193	190	P	H
	*	5775	100.62	-	-	91.4	32.15	10.27	33.2	193	190	A	H
		5850	76.26	-45.94	122.2	66.82	32.3	10.36	33.22	193	190	P	H
		5861	73.71	-35.41	109.12	64.23	32.34	10.37	33.23	193	190	P	H
		5877.25	62.73	-40.8	103.53	53.17	32.41	10.38	33.23	193	190	P	H
		5940.75	57.39	-10.81	68.2	47.61	32.58	10.45	33.25	193	190	P	H
802.11ac													H
VHT80													H
CH 155													
5775MHz		5646.5	66.14	-2.06	68.2	57.5	31.71	10.09	33.16	283	300	P	V
		5695.25	79.59	-22.11	101.7	70.64	31.97	10.15	33.17	283	300	P	V
		5713.75	83.78	-25.27	109.05	74.75	32.03	10.18	33.18	283	300	P	V
		5722.25	82.96	-32.97	115.93	73.91	32.04	10.19	33.18	283	300	P	V
	*	5775	113.42	-	-	104.2	32.15	10.27	33.2	283	300	P	V
	*	5775	104.72	-	-	95.5	32.15	10.27	33.2	283	300	A	V
		5850.5	80.17	-40.89	121.06	70.73	32.3	10.36	33.22	283	300	P	V
		5855	79.09	-31.71	110.8	69.63	32.32	10.36	33.22	283	300	P	V
		5875.5	70.77	-34.06	104.83	61.22	32.4	10.38	33.23	283	300	P	V
		5930.25	63.5	-4.7	68.2	53.75	32.56	10.44	33.25	283	300	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1+2+3	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol.
802.11ac		11550	46.72	-27.28	74	52.69	39.55	15.95	61.47	100	0	P	H
		17325	43.84	-24.36	68.2	39.93	40.83	20.3	57.22	100	0	P	H
													H
VHT80													H
5775MHz		11550	47.17	-26.83	74	53.14	39.55	15.95	61.47	100	0	P	V
		17325	44.33	-23.87	68.2	40.42	40.83	20.3	57.22	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

5GHz WIFI 802.11ac VHT40 (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2+3		(MHz)	(dB μ V/m)	(dB)	(dB μ V/m)	(dB μ V)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
5GHz 802.11ac VHT40 LF		45.52	23.4	-16.6	40	38.51	16.32	0.94	32.37	-	-	P	H
		106.63	30.92	-12.58	43.5	45.25	16.56	1.42	32.31	100	0	P	H
		287.05	32.14	-13.86	46	43.24	18.84	2.25	32.19	-	-	P	H
		590.66	29.12	-16.88	46	32.65	25.49	3.19	32.21	-	-	P	H
		852.56	32.38	-13.62	46	30.86	29.18	3.94	31.6	-	-	P	H
		952.47	33.09	-12.91	46	29.12	30.68	4.16	30.87	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
Remark	1.	No other spurious found.											
	2.	All results are PASS against limit line.											



Band 4 - 5725~5850MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2+3+4		(MHz)	(dB μ V/m)	(dB)	(dB μ V/m)	(dB μ V)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac		5647.8	58.14	-10.06	68.2	49.51	31.7	10.09	33.16	198	119	P	V
		5699.4	73.58	-31.18	104.76	64.59	32	10.16	33.17	198	119	P	V
		5719.8	89.89	-20.85	110.74	80.84	32.04	10.19	33.18	198	119	P	V
		5724.4	94.97	-25.86	120.83	85.91	32.05	10.19	33.18	198	119	P	V
	*	5745	121.72	-	-	112.6	32.09	10.22	33.19	198	119	P	V
	*	5745	113.42	-	-	104.3	32.09	10.22	33.19	198	119	A	V
													H
													H
5745MHz		5650	57.41	-10.79	68.2	48.78	31.7	10.09	33.16	400	262	P	H
		5699.2	74.21	-30.4	104.61	65.22	32	10.16	33.17	400	262	P	H
		5719.8	89.36	-21.38	110.74	80.31	32.04	10.19	33.18	400	262	P	H
		5723.8	94.79	-24.67	119.46	85.73	32.05	10.19	33.18	400	262	P	H
	*	5745	120.42	-	-	111.3	32.09	10.22	33.19	400	262	P	H
	*	5745	112.27	-	-	103.15	32.09	10.22	33.19	400	262	A	H
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5632.75	54.46	-13.74	68.2	45.81	31.73	10.07	33.15	400	334	P	H
		5698.75	57.05	-47.23	104.28	48.07	31.99	10.16	33.17	400	334	P	H
		5710.5	61.44	-46.7	108.14	52.43	32.02	10.17	33.18	400	334	P	H
		5724.25	64.51	-55.98	120.49	55.45	32.05	10.19	33.18	400	334	P	H
	*	5785	119.99	-	-	110.74	32.17	10.28	33.2	400	334	P	H
	*	5785	111.95	-	-	102.7	32.17	10.28	33.2	400	334	A	H
		5851.25	60.33	-59.02	119.35	50.88	32.31	10.36	33.22	400	334	P	H
		5869.75	60.53	-46.14	106.67	51	32.38	10.38	33.23	400	334	P	H
		5877	57.42	-46.29	103.71	47.86	32.41	10.38	33.23	400	334	P	H
		5947.25	56.24	-11.96	68.2	46.44	32.59	10.46	33.25	400	334	P	H
802.11ac													H
VHT20													H
CH 157		5626.75	53.93	-14.27	68.2	45.27	31.75	10.06	33.15	298	128	P	V
5785MHz		5696.75	58.32	-44.48	102.8	49.35	31.98	10.16	33.17	298	128	P	V
		5718.75	62.9	-47.55	110.45	53.85	32.04	10.19	33.18	298	128	P	V
		5721.75	65.72	-49.07	114.79	56.67	32.04	10.19	33.18	298	128	P	V
	*	5785	121.05	-	-	111.8	32.17	10.28	33.2	298	128	P	V
	*	5785	114.05	-	-	104.8	32.17	10.28	33.2	298	128	A	V
		5852	61.7	-55.94	117.64	52.25	32.31	10.36	33.22	298	128	P	V
		5866	61.72	-46	107.72	52.22	32.36	10.37	33.23	298	128	P	V
		5876	59.42	-45.04	104.46	49.87	32.4	10.38	33.23	298	128	P	V
		5946.75	59.2	-9	68.2	49.4	32.59	10.46	33.25	298	128	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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	*	5825	121	-	-	111.63	32.25	10.33	33.21	225	259	P	H
	*	5825	112.16	-	-	102.79	32.25	10.33	33.21	225	259	A	H
		5850	90.42	-31.78	122.2	80.98	32.3	10.36	33.22	225	259	P	H
		5856.2	85.97	-24.49	110.46	76.51	32.32	10.36	33.22	225	259	P	H
		5875.6	73.27	-31.48	104.75	63.72	32.4	10.38	33.23	225	259	P	H
		5942.4	58.89	-9.31	68.2	49.1	32.58	10.46	33.25	225	259	P	H
													H
													H
CH 165	*	5825	121.03	-	-	111.66	32.25	10.33	33.21	322	69	P	V
5825MHz	*	5825	112.86	-	-	103.49	32.25	10.33	33.21	322	69	A	V
		5851.8	81.22	-36.88	118.1	71.77	32.31	10.36	33.22	322	69	P	V
		5855	77.78	-33.02	110.8	68.32	32.32	10.36	33.22	322	69	P	V
		5876	66.41	-38.05	104.46	56.86	32.4	10.38	33.23	322	69	P	V
		5940.6	56.73	-11.47	68.2	46.95	32.58	10.45	33.25	322	69	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT20 CH 149 5745MHz		5974	63.71	-4.49	68.2	53.88	32.6	10.49	33.26	198	119	P	V
		11490	54.37	-19.63	74	60.16	39.7	15.91	61.4	220	245	P	H
		11490	44.99	-9.01	54	50.78	39.7	15.91	61.4	220	245	A	H
		17235	48.39	-19.81	68.2	45.17	40.51	20.22	57.51	100	0	P	H
		5992	62.53	-5.67	68.2	52.69	32.6	10.51	33.27	400	262	P	H
		11490	59.91	-14.09	74	65.7	39.7	15.91	61.4	200	196	P	V
		11490	50.67	-3.33	54	56.46	39.7	15.91	61.4	200	196	A	V
		17235	49.31	-18.89	68.2	46.09	40.51	20.22	57.51	100	0	P	V
802.11ac VHT20 CH 157 5785MHz		6034	63.41	-4.79	68.2	53.5	32.67	10.53	33.29	400	334	P	H
		11570	54.68	-19.32	74	60.73	39.49	15.96	61.5	211	223	P	H
		11570	45.22	-8.78	54	51.27	39.49	15.96	61.5	211	223	A	H
		17355	47.11	-21.09	68.2	42.91	40.98	20.33	57.11	100	0	P	H
		6034	63.99	-4.21	68.2	54.08	32.67	10.53	33.29	298	128	P	V
		11570	58.49	-15.51	74	64.54	39.49	15.96	61.5	200	198	P	V
		11570	49.21	-4.79	54	55.26	39.49	15.96	61.5	200	198	A	V
		17355	45.81	-22.39	68.2	41.61	40.98	20.33	57.11	100	0	P	V
802.11ac VHT20 CH 165 5825MHz		6058	64.47	-3.73	68.2	54.56	32.68	10.53	33.3	225	259	P	H
		11650	56.74	-17.26	74	63.12	39.2	16.01	61.59	226	230	P	H
		11650	47.89	-6.11	54	54.27	39.2	16.01	61.59	226	230	A	H
		17475	47.29	-20.91	68.2	41.98	41.58	20.44	56.71	100	0	P	H
		5590	61.76	-6.44	68.2	53.09	31.8	10.01	33.14	322	69	P	V
		11650	60.07	-13.93	74	66.45	39.2	16.01	61.59	200	195	P	V
		11650	50.89	-3.11	54	57.27	39.2	16.01	61.59	200	195	A	V
		17475	47.99	-20.21	68.2	42.68	41.58	20.44	56.71	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 VHT40 (Band Edge @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5649	64.8	-3.4	68.2	56.17	31.7	10.09	33.16	282	264	P	H
		5697.25	81.82	-21.35	103.17	72.85	31.98	10.16	33.17	282	264	P	H
		5718.5	89.57	-20.81	110.38	80.52	32.04	10.19	33.18	282	264	P	H
		5725	95.24	-26.96	122.2	86.17	32.05	10.2	33.18	282	264	P	H
802.11ac VHT40 CH 151 5755MHz	*	5755	117.65	-	-	108.49	32.11	10.24	33.19	282	264	P	H
	*	5755	109.35	-	-	100.19	32.11	10.24	33.19	282	264	A	H
		5851.5	66.68	-52.1	118.78	57.23	32.31	10.36	33.22	282	264	P	H
		5856.5	64.36	-46.02	110.38	54.89	32.33	10.36	33.22	282	264	P	H
		5888.75	62.19	-32.8	94.99	52.57	32.45	10.4	33.23	282	264	P	H
		5933	59.86	-8.34	68.2	50.09	32.57	10.45	33.25	282	264	P	H
													H
													H
		5646.5	66.9	-1.3	68.2	58.26	31.71	10.09	33.16	227	110	P	V
		5696.75	79.03	-23.77	102.8	70.06	31.98	10.16	33.17	227	110	P	V
		5715.5	92.56	-16.98	109.54	83.53	32.03	10.18	33.18	227	110	P	V
		5723	92.6	-25.04	117.64	83.54	32.05	10.19	33.18	227	110	P	V
	*	5755	118.46	-	-	109.3	32.11	10.24	33.19	227	110	P	V
	*	5755	109.76	-	-	100.6	32.11	10.24	33.19	227	110	A	V
		5853.75	68.28	-45.37	113.65	58.83	32.31	10.36	33.22	227	110	P	V
		5856.25	67.28	-43.17	110.45	57.81	32.33	10.36	33.22	227	110	P	V
		5875.75	63.65	-40.99	104.64	54.1	32.4	10.38	33.23	227	110	P	V
		5926.5	58.47	-9.73	68.2	48.73	32.55	10.44	33.25	227	110	P	V
													V
													V



FCC RADIO TEST REPORT

Report No. : FR912813D

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5643	63.04	-5.16	68.2	54.41	31.71	10.08	33.16	212	266	P	H
		5693.75	69.29	-31.3	100.59	60.35	31.96	10.15	33.17	212	266	P	H
		5716.5	75.69	-34.13	109.82	66.66	32.03	10.18	33.18	212	266	P	H
		5724	76.62	-43.3	119.92	67.56	32.05	10.19	33.18	212	266	P	H
*		5795	118.88	-	-	109.6	32.19	10.29	33.2	212	266	P	H
*		5795	110.48	-	-	101.2	32.19	10.29	33.2	212	266	A	H
		5853.5	81.96	-32.26	114.22	72.51	32.31	10.36	33.22	212	266	P	H
		5859.5	81.85	-27.69	109.54	72.37	32.34	10.37	33.23	212	266	P	H
		5884.75	74.06	-23.9	97.96	64.46	32.44	10.39	33.23	212	266	P	H
		5927.5	67.09	-1.11	68.2	57.34	32.56	10.44	33.25	212	266	P	H
802.11ac													H
VHT40													H
CH 159		5643	62.64	-5.56	68.2	54.01	31.71	10.08	33.16	204	130	P	V
5795MHz		5699.5	70.12	-34.71	104.83	61.13	32	10.16	33.17	204	130	P	V
		5718	78.06	-32.18	110.24	69.01	32.04	10.19	33.18	204	130	P	V
		5724.25	82.57	-37.92	120.49	73.51	32.05	10.19	33.18	204	130	P	V
*		5795	120.4	-	-	111.12	32.19	10.29	33.2	204	130	P	V
*		5795	112.18	-	-	102.9	32.19	10.29	33.2	204	130	A	V
		5850	79.74	-42.46	122.2	70.3	32.3	10.36	33.22	204	130	P	V
		5860.5	81.2	-28.06	109.26	71.72	32.34	10.37	33.23	204	130	P	V
		5880.25	74.71	-26.59	101.3	65.13	32.42	10.39	33.23	204	130	P	V
		5928.75	66.62	-1.58	68.2	56.87	32.56	10.44	33.25	204	130	P	V
													V
													V
Remark		1. No other spurious found. 2. All results are PASS against Peak and Average limit line.											



Band 4 5725~5850MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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 VHT40 CH 151 5755MHz		11510	53.26	-20.74	74	59.07	39.67	15.92	61.4	216	222	P	H
		11510	44.1	-9.9	54	49.91	39.67	15.92	61.4	216	222	A	H
		17265	47.07	-21.13	68.2	43.62	40.6	20.24	57.39	100	0	P	H
													H
		11510	55.83	-18.17	74	61.64	39.67	15.92	61.4	200	196	P	V
		11510	46.58	-7.42	54	52.39	39.67	15.92	61.4	200	196	A	V
		17265	45.62	-22.58	68.2	42.17	40.6	20.24	57.39	100	0	P	V
													V
802.11ac VHT40 CH 159 5795MHz		11590	57.5	-16.5	74	63.62	39.43	15.97	61.52	235	225	P	H
		11590	48.03	-5.97	54	54.15	39.43	15.97	61.52	235	225	A	H
		17385	46.87	-21.33	68.2	42.4	41.12	20.35	57	100	0	P	H
													H
		11590	58.34	-15.66	74	64.46	39.43	15.97	61.52	200	192	P	V
		11590	48.93	-5.07	54	55.05	39.43	15.97	61.52	200	192	A	V
		17385	44.87	-23.33	68.2	40.4	41.12	20.35	57	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5649.5	65.18	-3.02	68.2	56.55	31.7	10.09	33.16	321	260	P	H
		5686.25	81.97	-13.09	95.06	73.08	31.92	10.14	33.17	321	260	P	H
		5718.5	81.25	-29.13	110.38	72.2	32.04	10.19	33.18	321	260	P	H
		5723.5	82.41	-36.37	118.78	73.35	32.05	10.19	33.18	321	260	P	H
802.11ac VHT80 CH 155 5775MHz	*	5775	111.75	-	-	102.53	32.15	10.27	33.2	321	260	P	H
	*	5775	103.82	-	-	94.6	32.15	10.27	33.2	321	260	A	H
		5850.5	79.26	-41.8	121.06	69.82	32.3	10.36	33.22	321	260	P	H
		5855.25	76.66	-34.07	110.73	67.2	32.32	10.36	33.22	321	260	P	H
		5875	75.18	-30.02	105.2	65.63	32.4	10.38	33.23	321	260	P	H
		5927.25	64.78	-3.42	68.2	55.04	32.55	10.44	33.25	321	260	P	H
													H
													H
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+2+3+4	Note	Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol.
802.11ac		11550	47.48	-26.52	74	53.45	39.55	15.95	61.47	100	0	P	H
		17325	43.71	-24.49	68.2	39.8	40.83	20.3	57.22	100	0	P	H
													H
VHT80													H
CH 155		11550	50.39	-23.61	74	56.36	39.55	15.95	61.47	200	289	P	V
5775MHz		11550	41.43	-12.57	54	47.4	39.55	15.95	61.47	200	289	A	V
		17325	44.01	-24.19	68.2	40.1	40.83	20.3	57.22	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Note symbol

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



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

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

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

For Peak Limit @ 2390MHz:

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

For Average Limit @ 2390MHz:

1. Level(dB μ V/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dB μ V) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 42.6(dB μ V) – 35.86 (dB)
= 43.54 (dB μ V/m)
2. Over Limit(dB) = Level(dB μ V/m) – Limit Line(dB μ V/m)
= 43.54(dB μ V/m) – 54(dB μ V/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 :	HAO Shu, Ken Wu, and JC Liang	Temperature :	20~25°C
		Relative Humidity :	50~55%

Note symbol

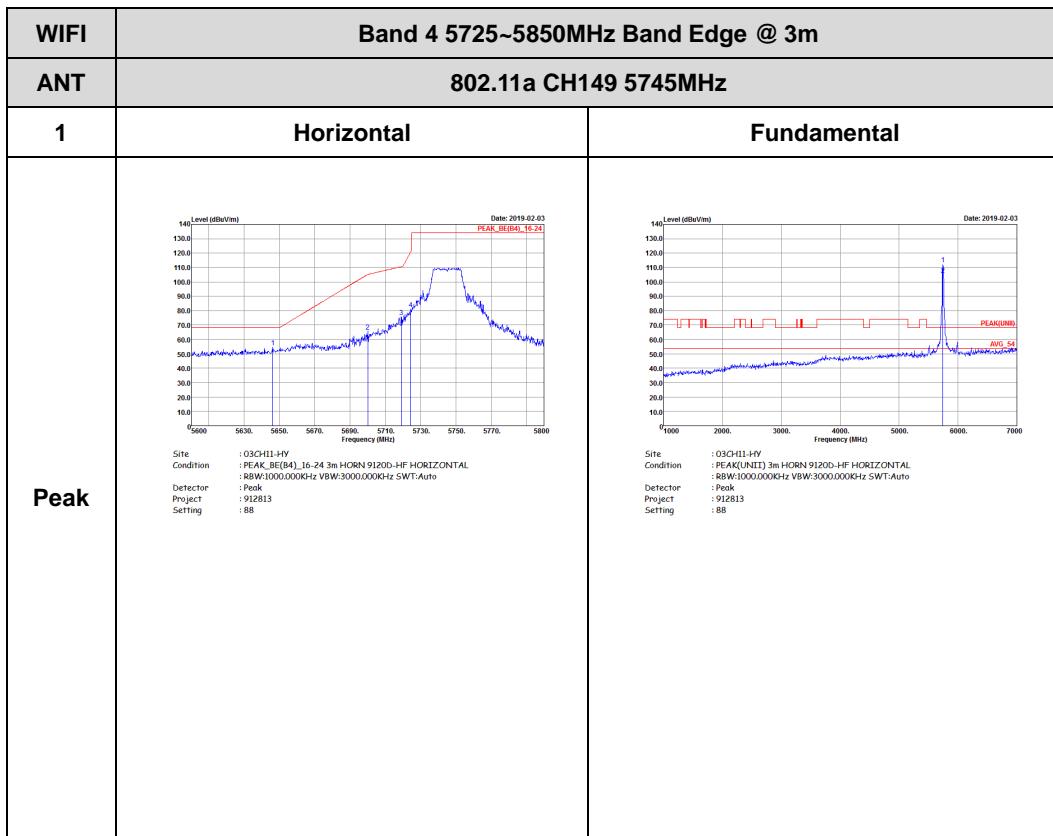
-L	Low channel location
-R	High channel location

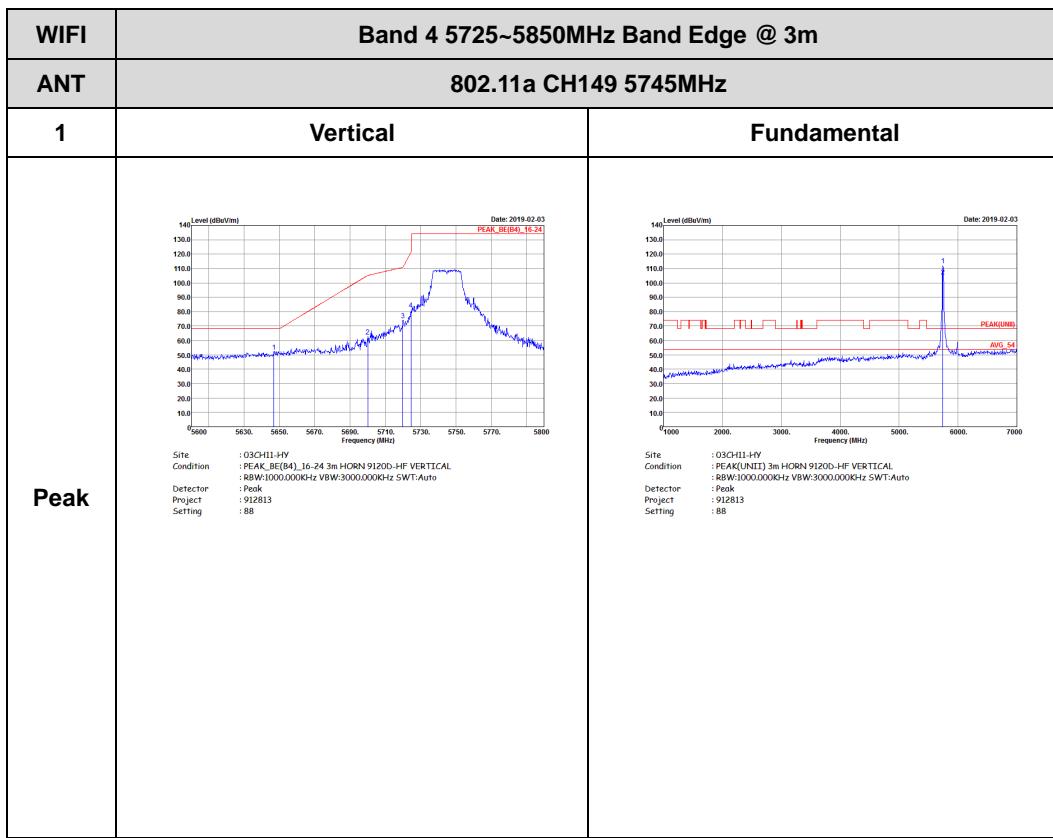


<CDD Mode>

Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)



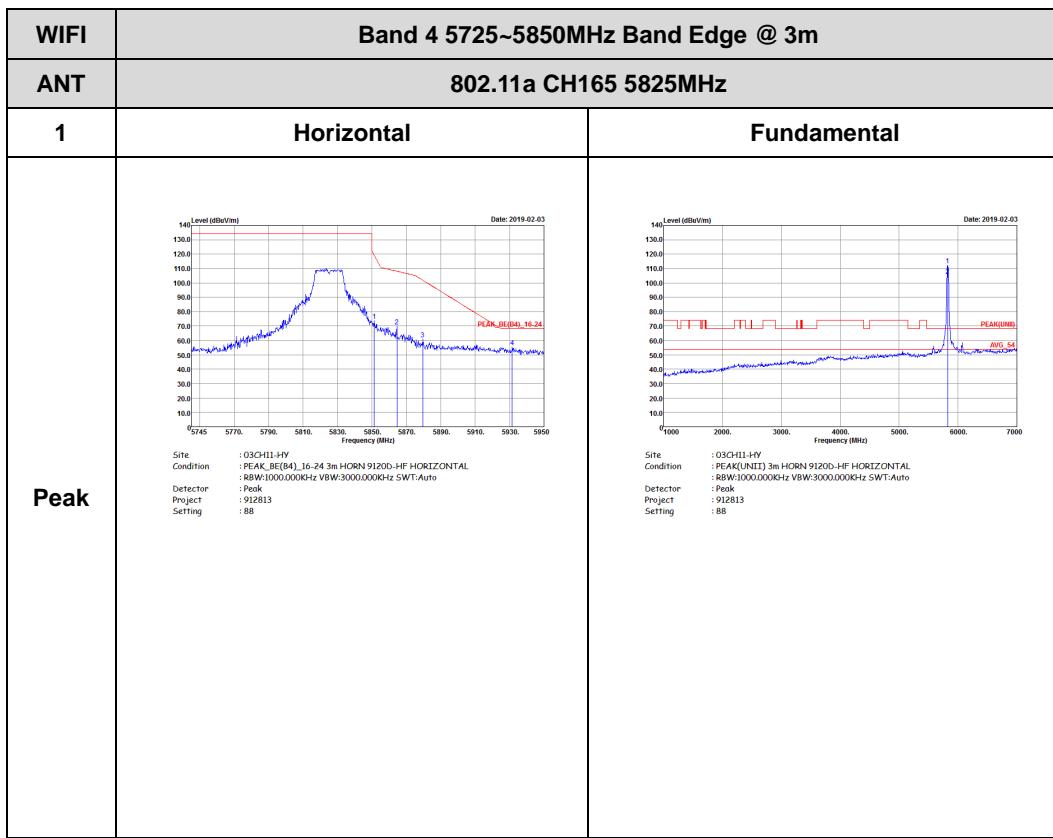


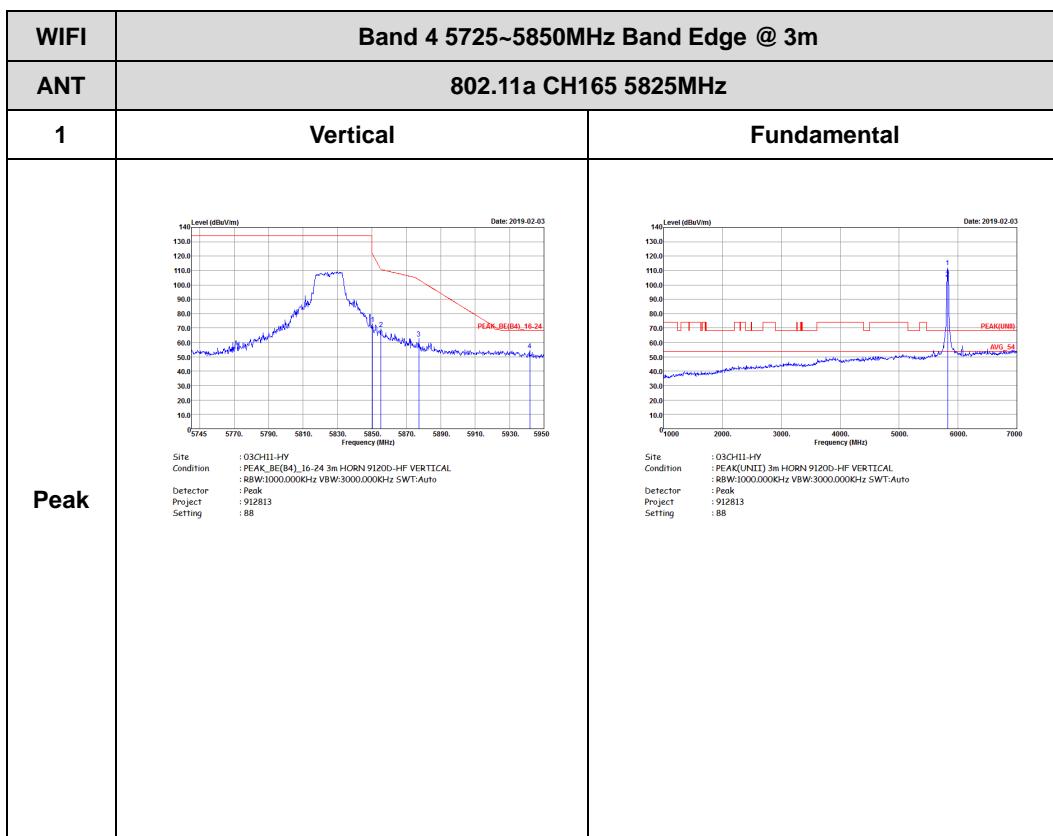


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88	 Site : 03CH11-HY Condition : PEAK(FM) 3m HORN 9120D-HF HORIZONTAL : BBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : FM Project : 912813 Setting : 88
Peak	 Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>	<p>Site : 03CH11-HY Condition : PEAK(B4) 3m HORN 9120D-HF VERTICAL : BBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL : BBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>	Left blank

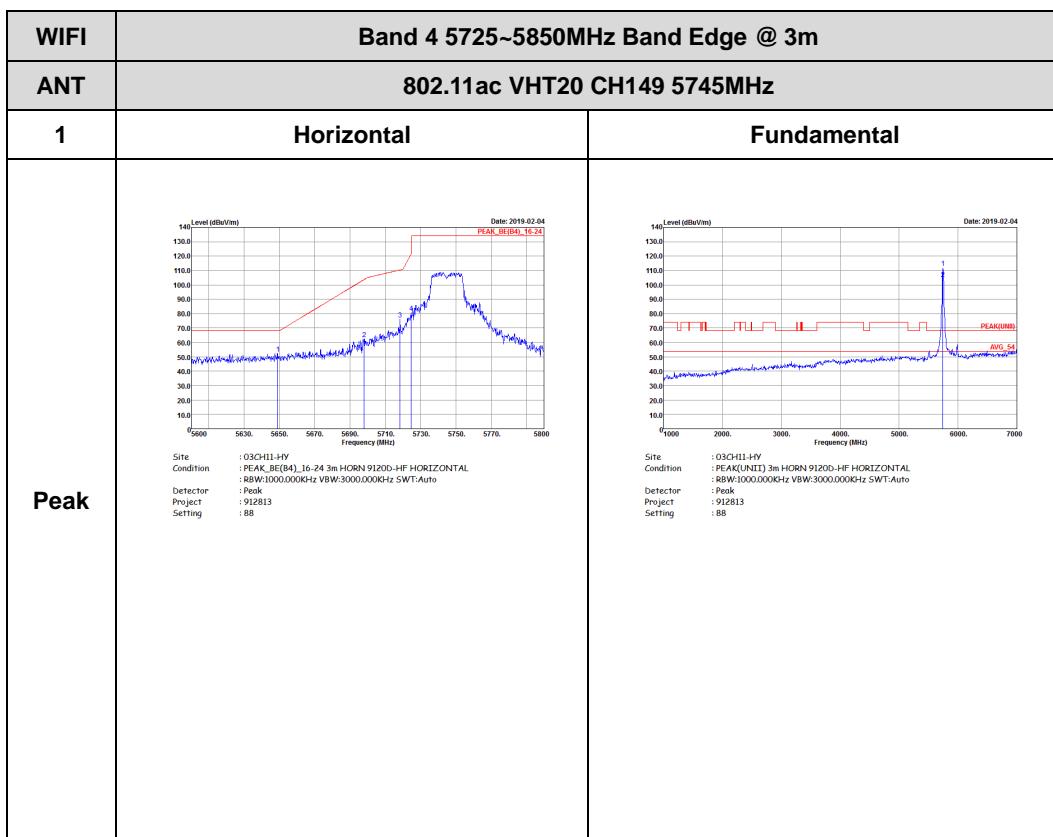


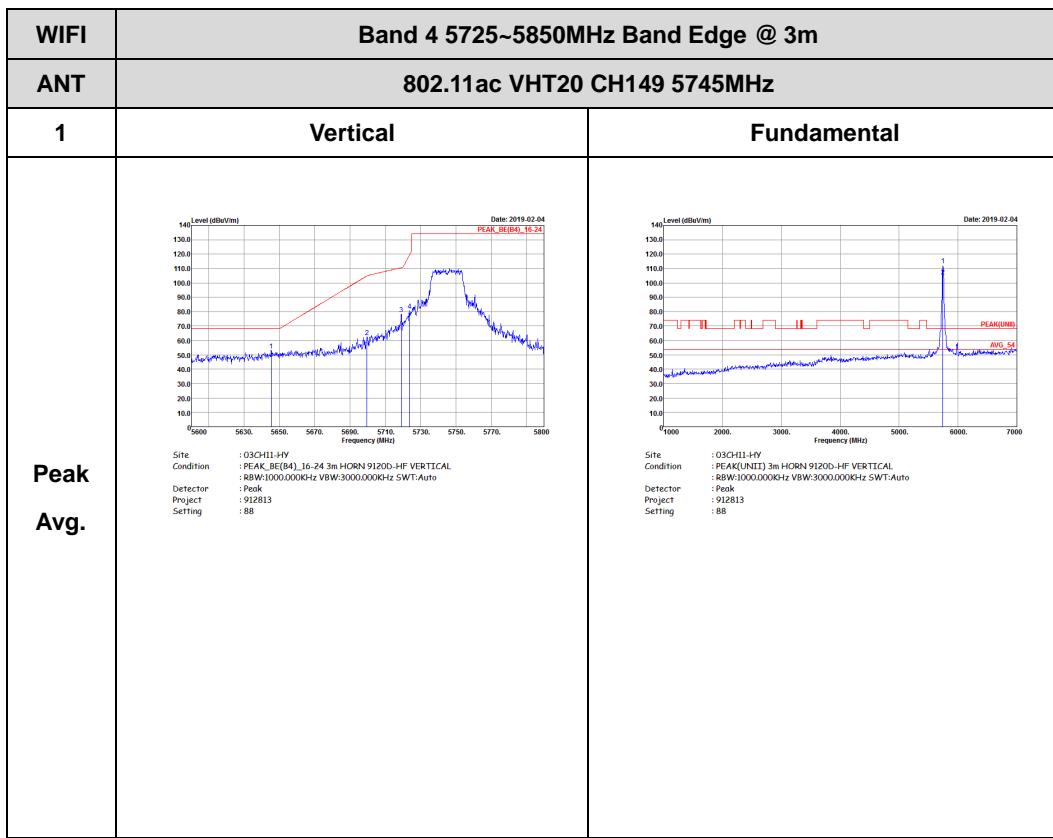


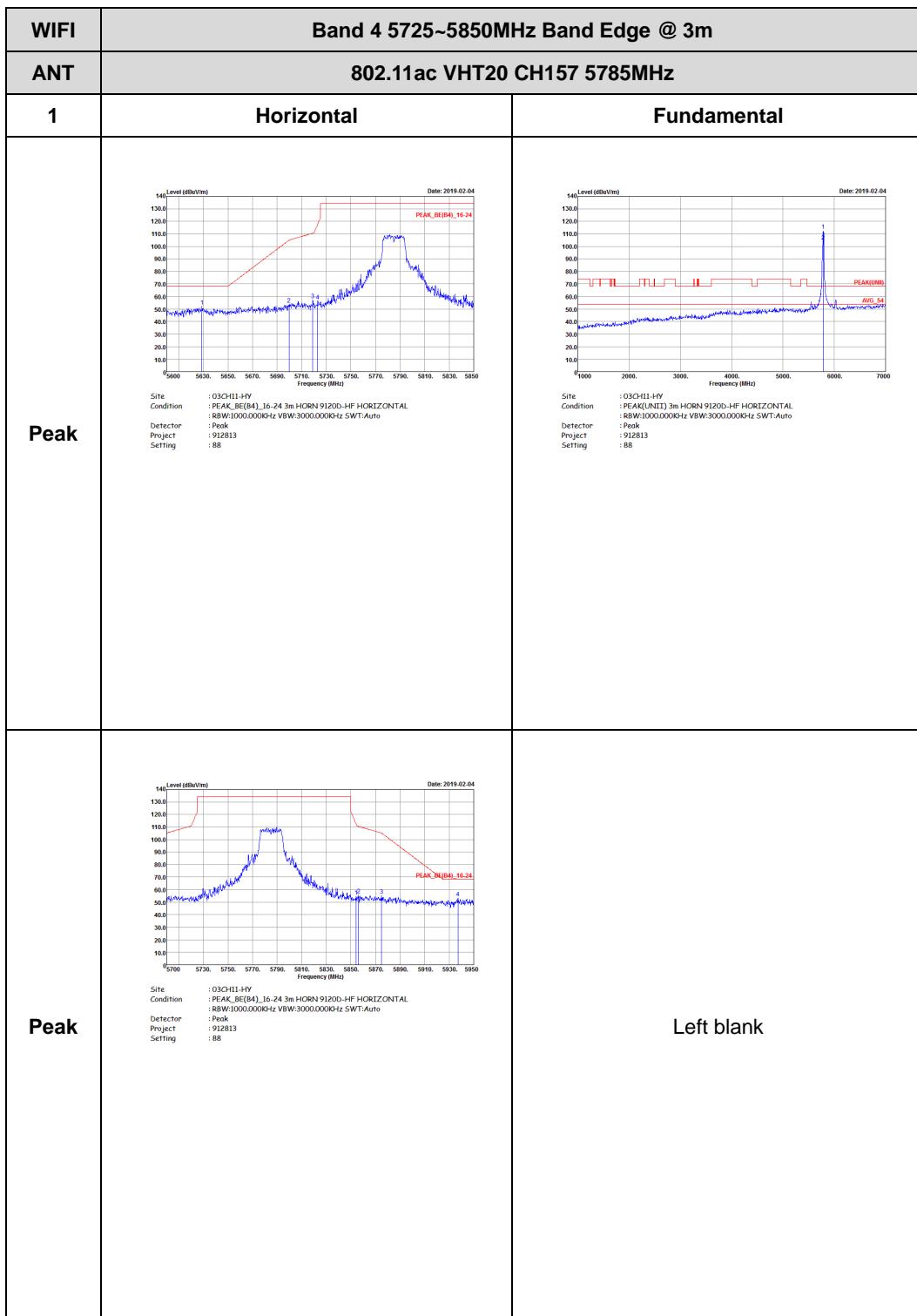


Band 4 5725~5850MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

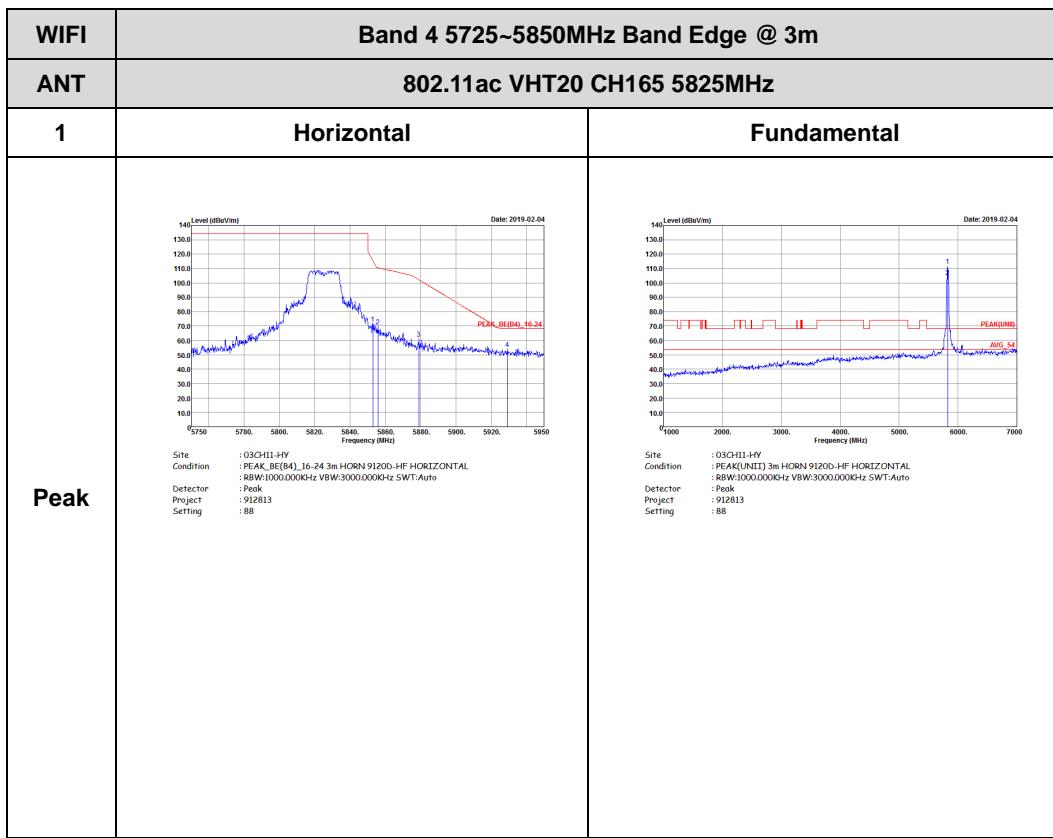


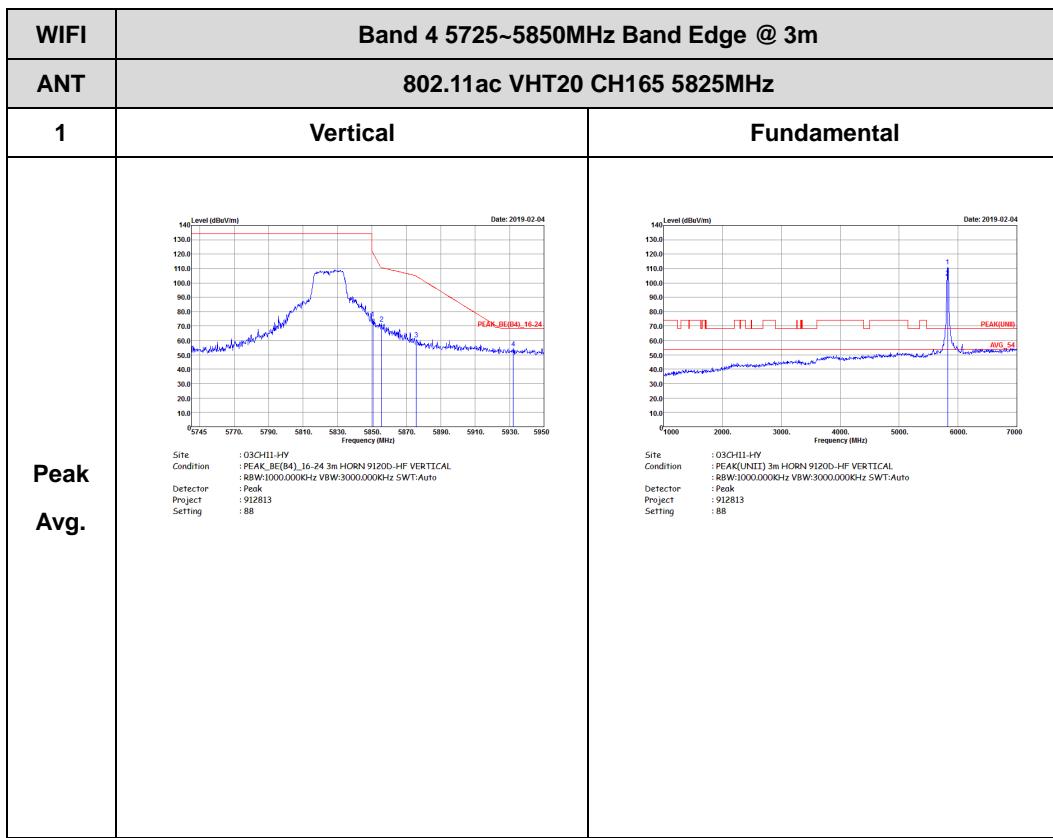






WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH157 5785MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 912813 Setting : 88</p>	<p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL Detector : BBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 912813 Setting : 88</p>
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 912813 Setting : 88</p>	Left blank

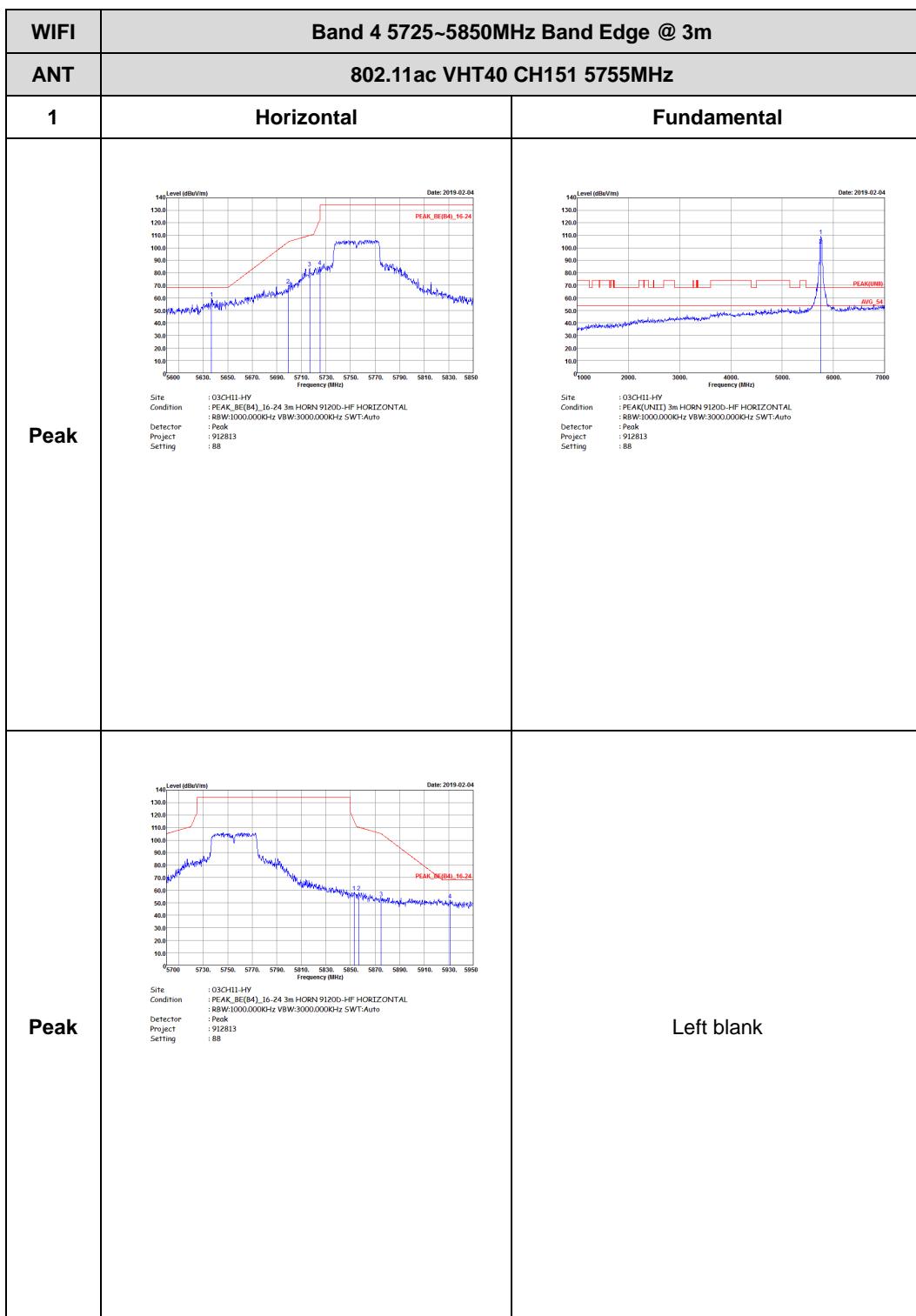






Band 4 5725~5850MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

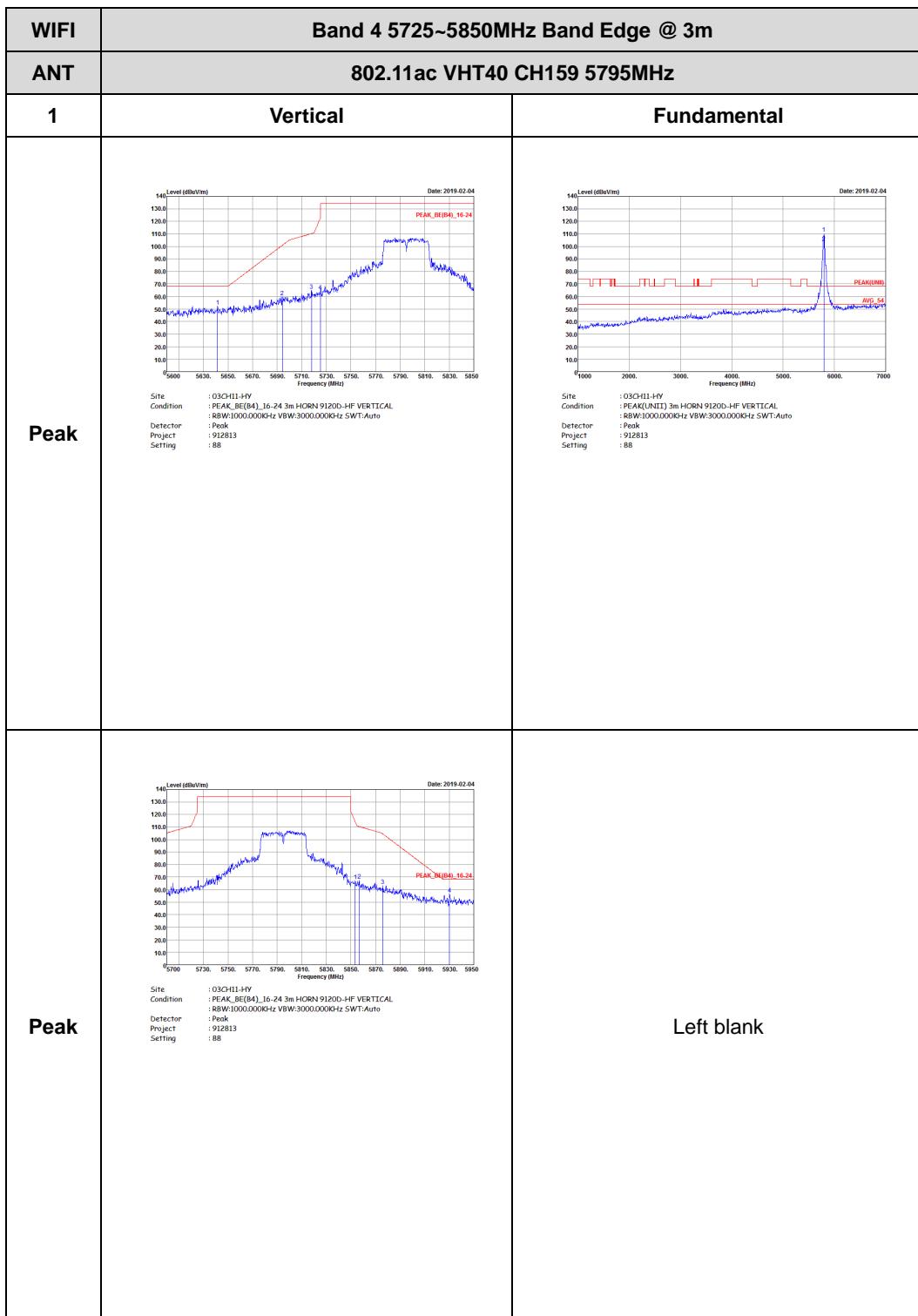




WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH151 5755MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 912813 Setting : 88</p>	<p>Site : 03CH11-HY Condition : PEAK(B4) 3m HORN 9120D-HF VERTICAL Detector : BBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 912813 Setting : 88</p>
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 912813 Setting : 88</p>	Left blank



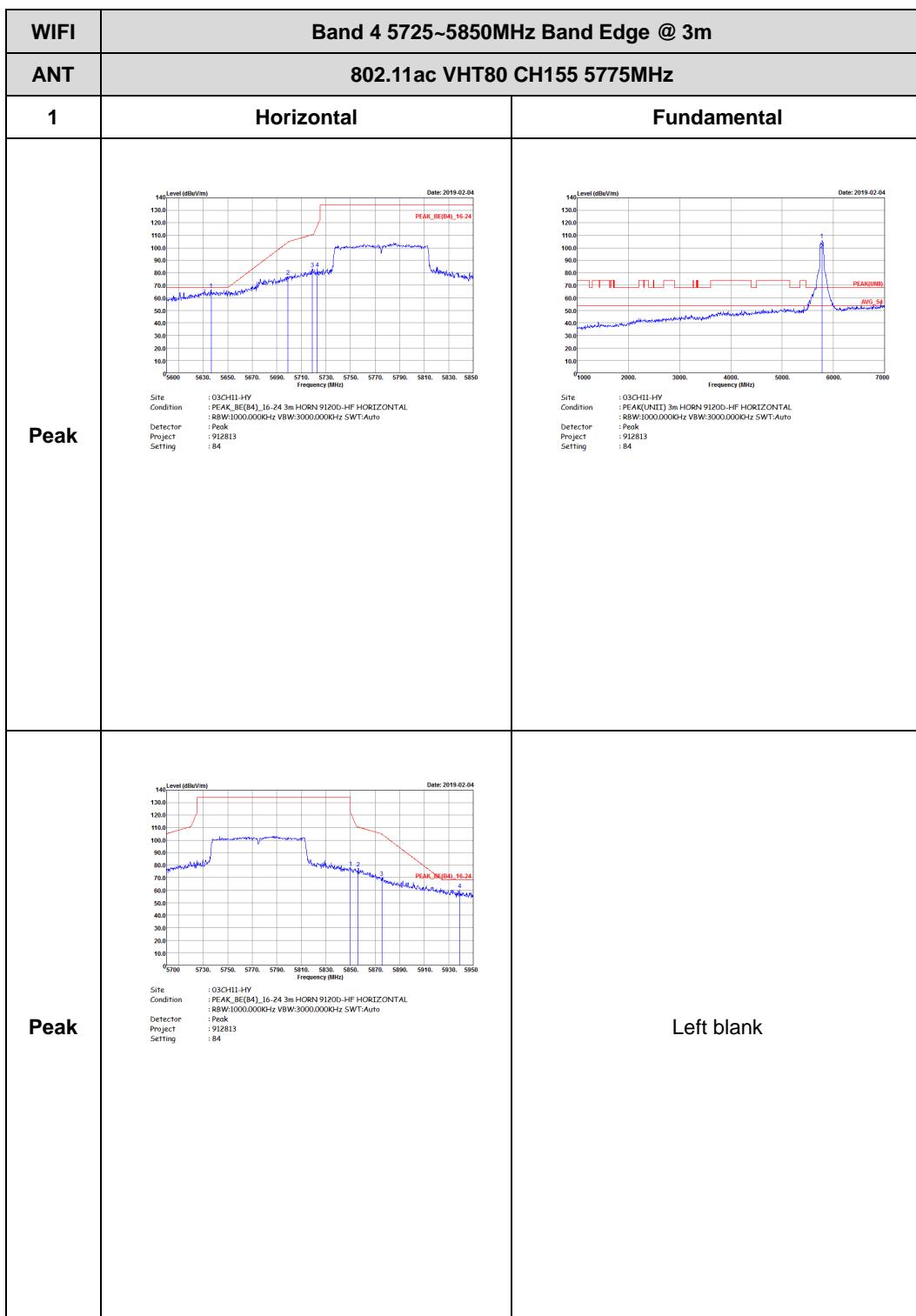
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH159 5795MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88	 Site : 03CH11-HY Condition : PEAK(UMB) 3m HORN 9120D-HF HORIZONTAL : BBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88
Peak	 Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88	Left blank





Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)



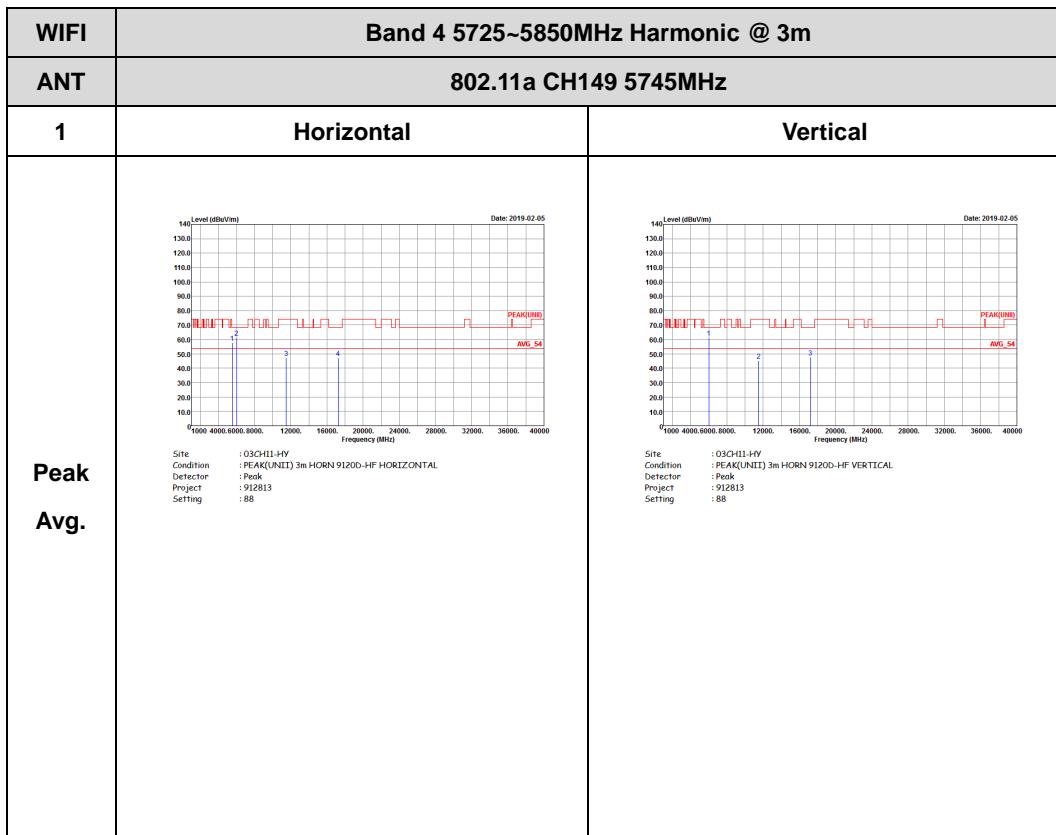


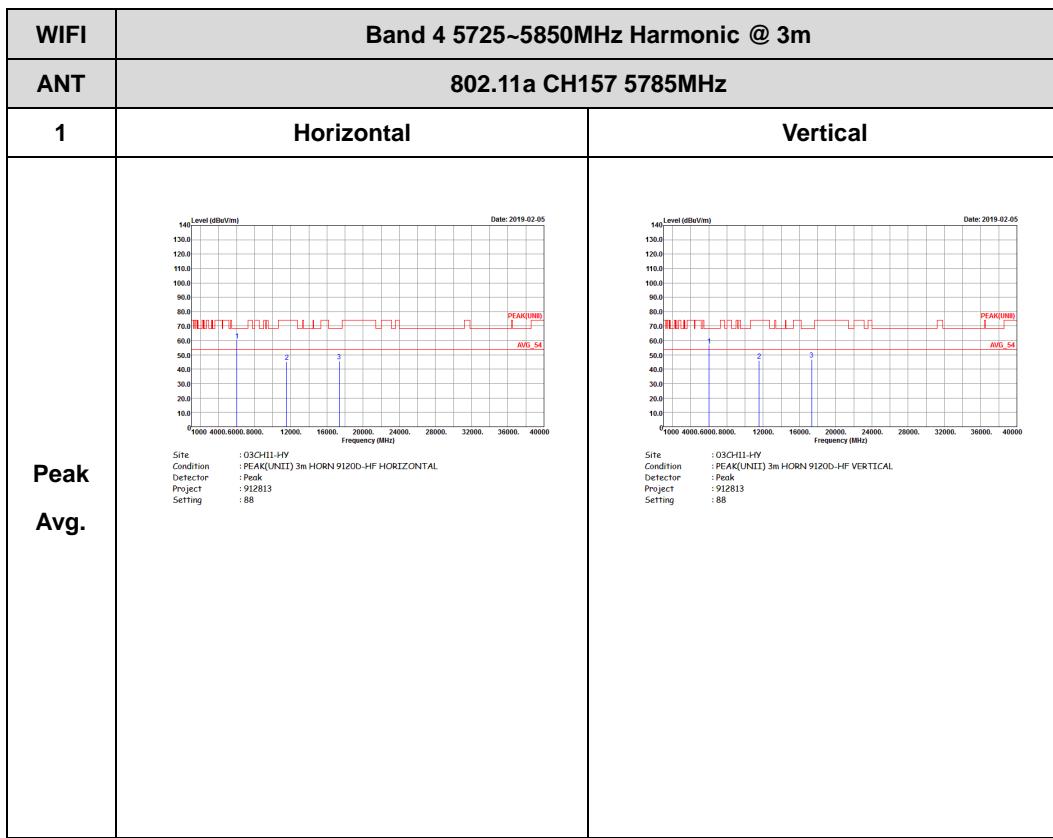
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 84</p>	<p>Site : 03CH11-HY Condition : PEAK(B4) 3m HORN 9120D-HF VERTICAL : BBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 84</p>
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 84</p>	Left blank

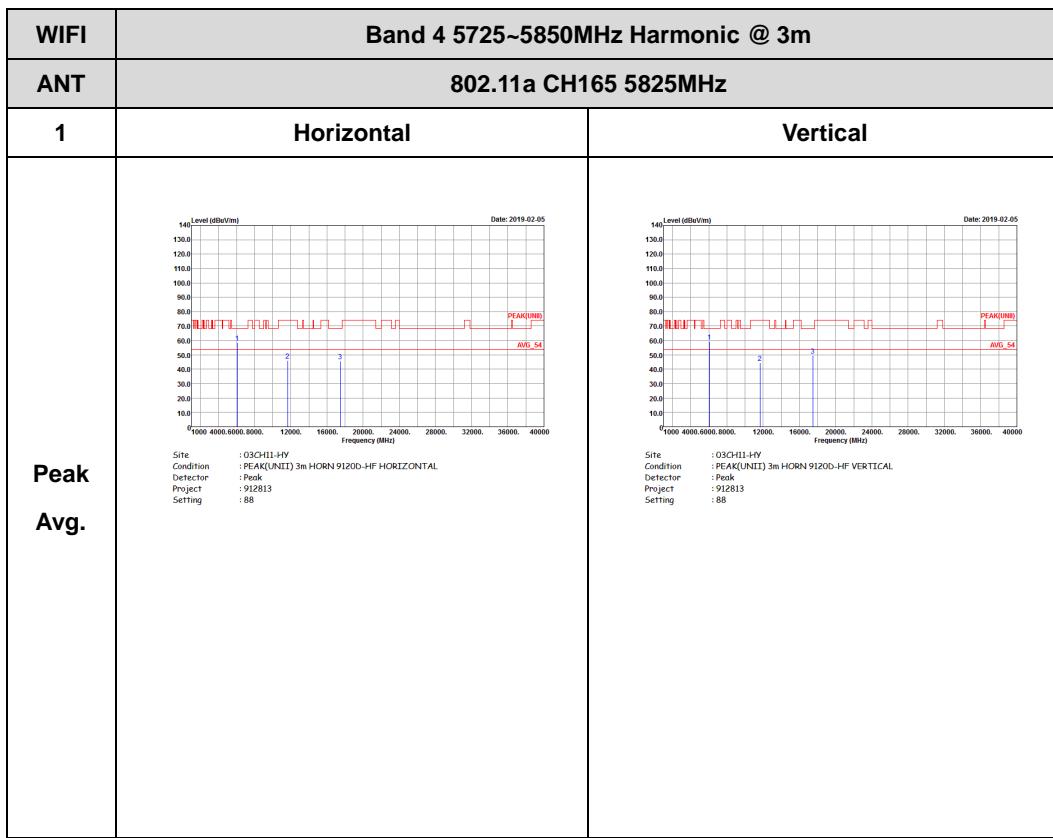


Band 4 - 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

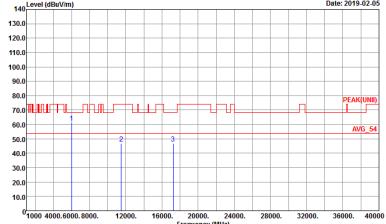
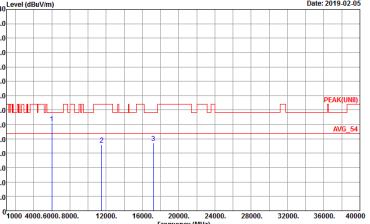


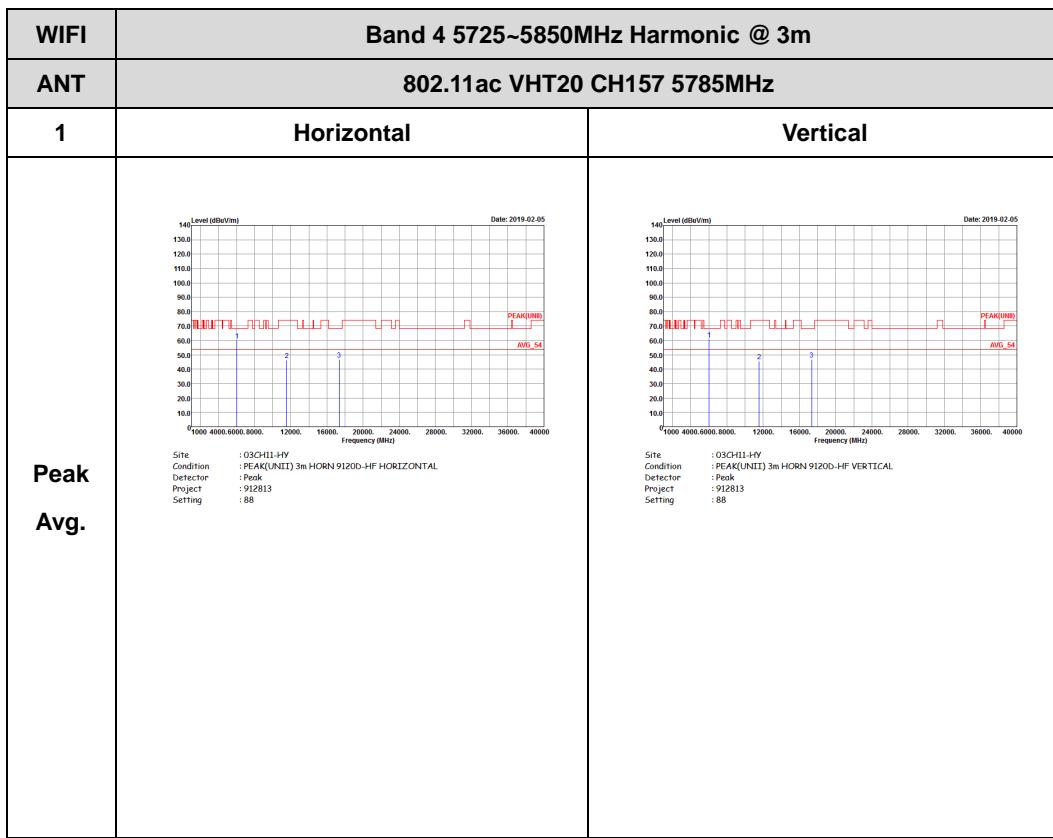


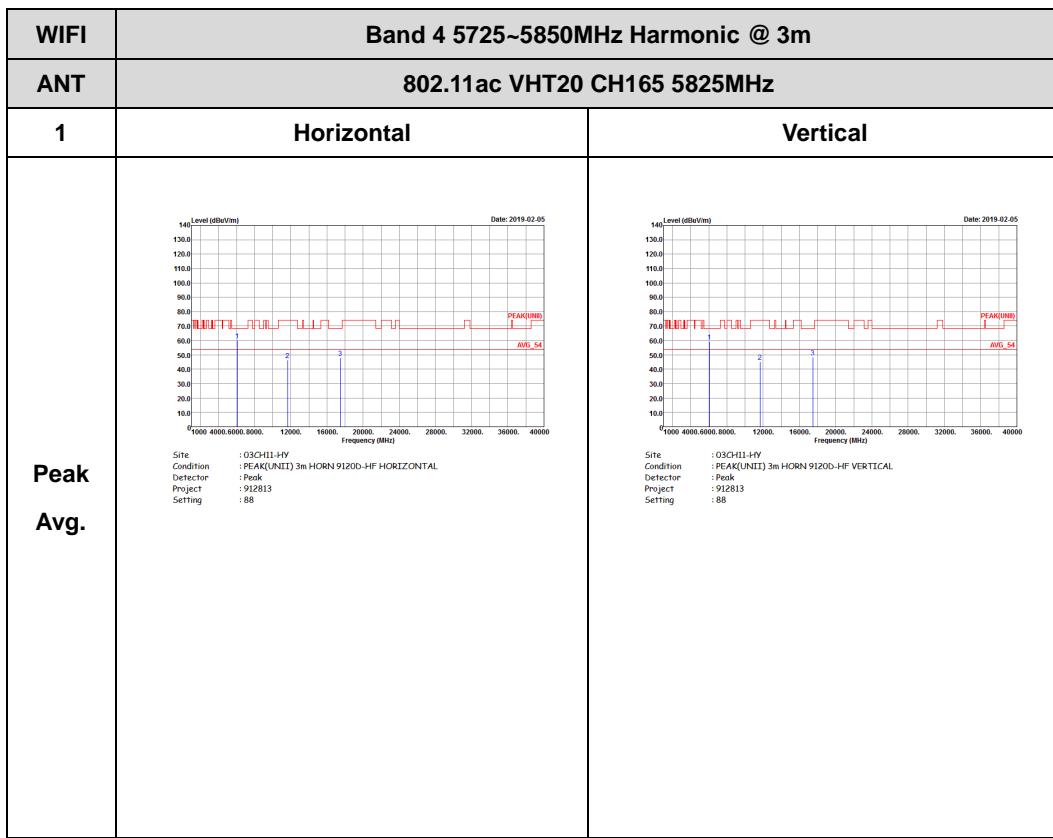




Band 4 5725~5850MHz
WIFI 802.11ac VHT20 (Harmonic @ 3m)

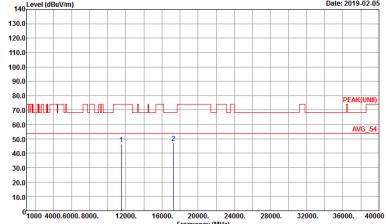
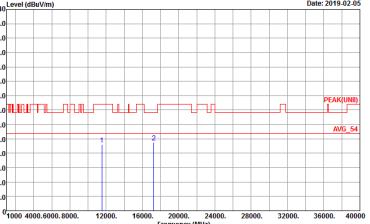
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH149 5745MHz	
1	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 912813 Setting : 88</p>	 <p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 912813 Setting : 88</p>

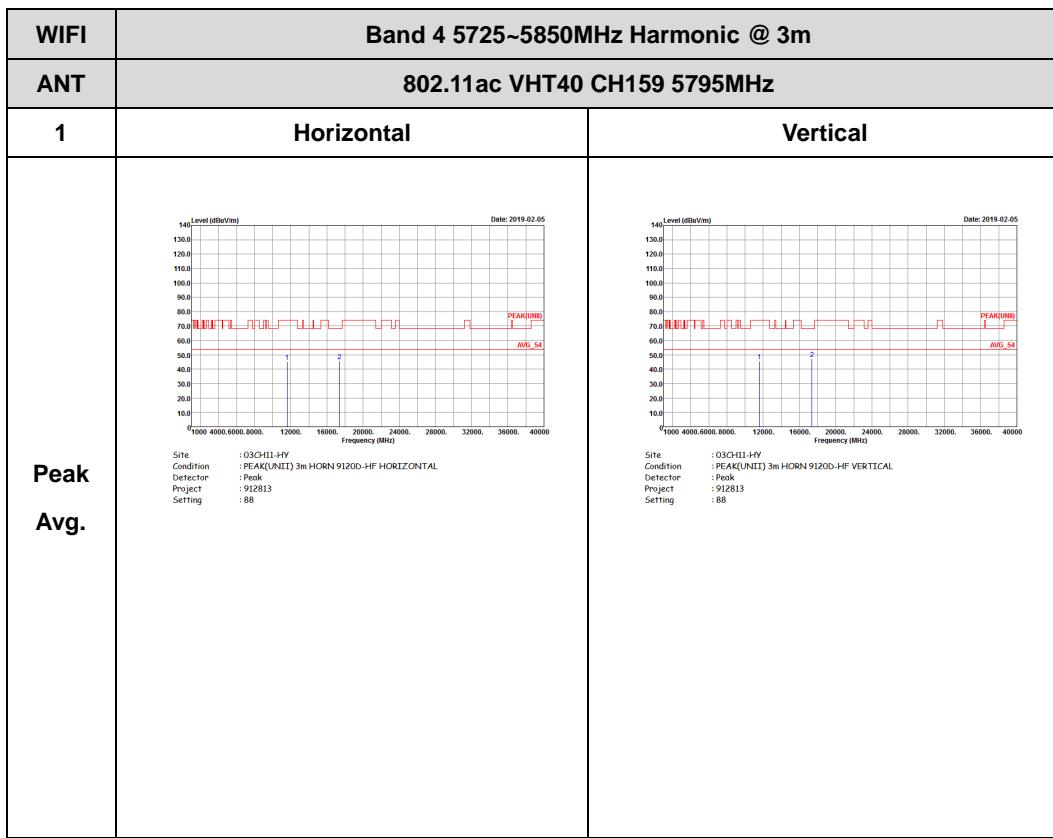






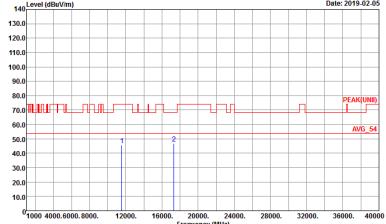
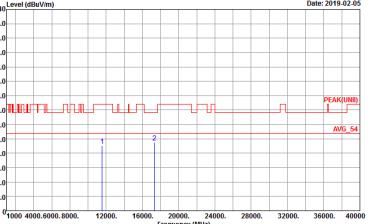
Band 4 5725~5850MHz
WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH151 5755MHz	
1	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 912813 Setting : 88</p>	 <p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 912813 Setting : 88</p>





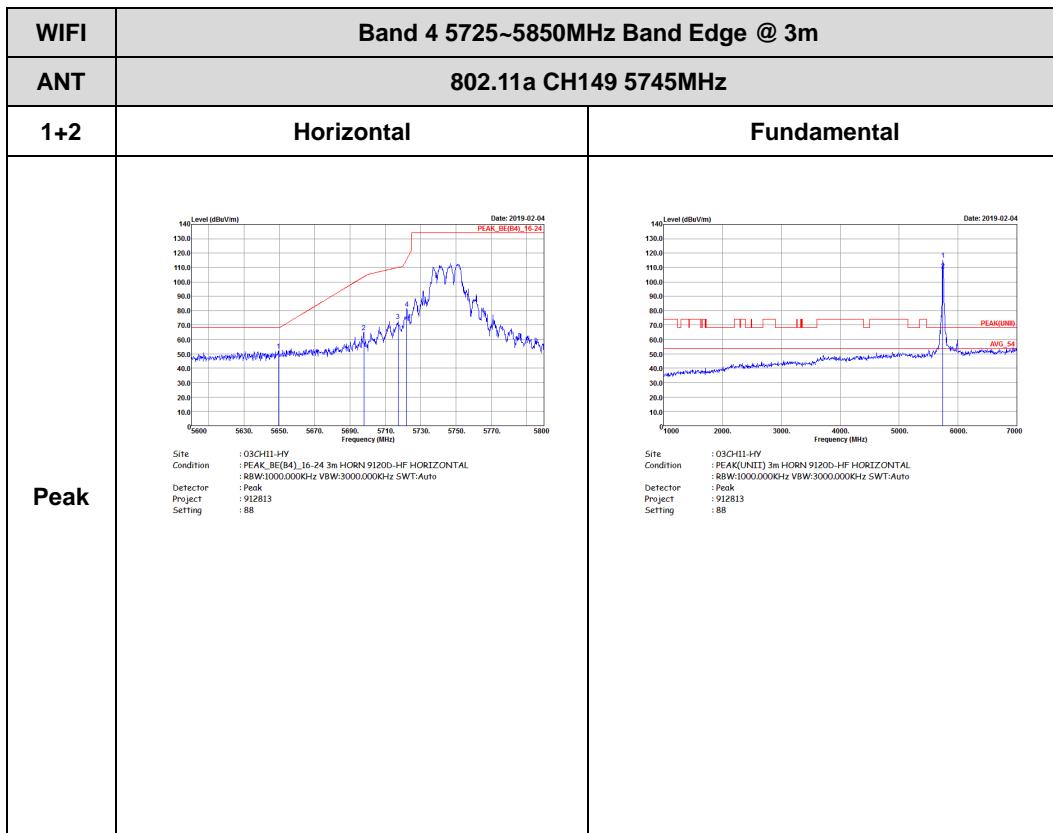
Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

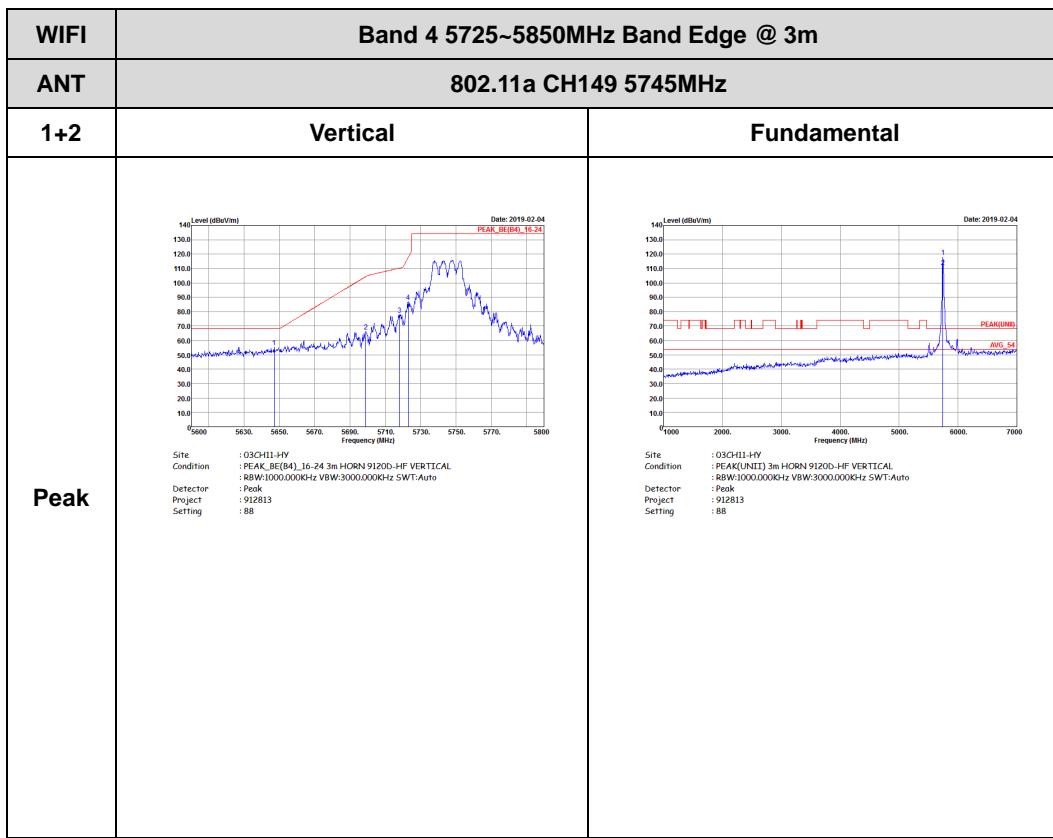
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 912813 Setting : 84</p>	 <p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 912813 Setting : 84</p>

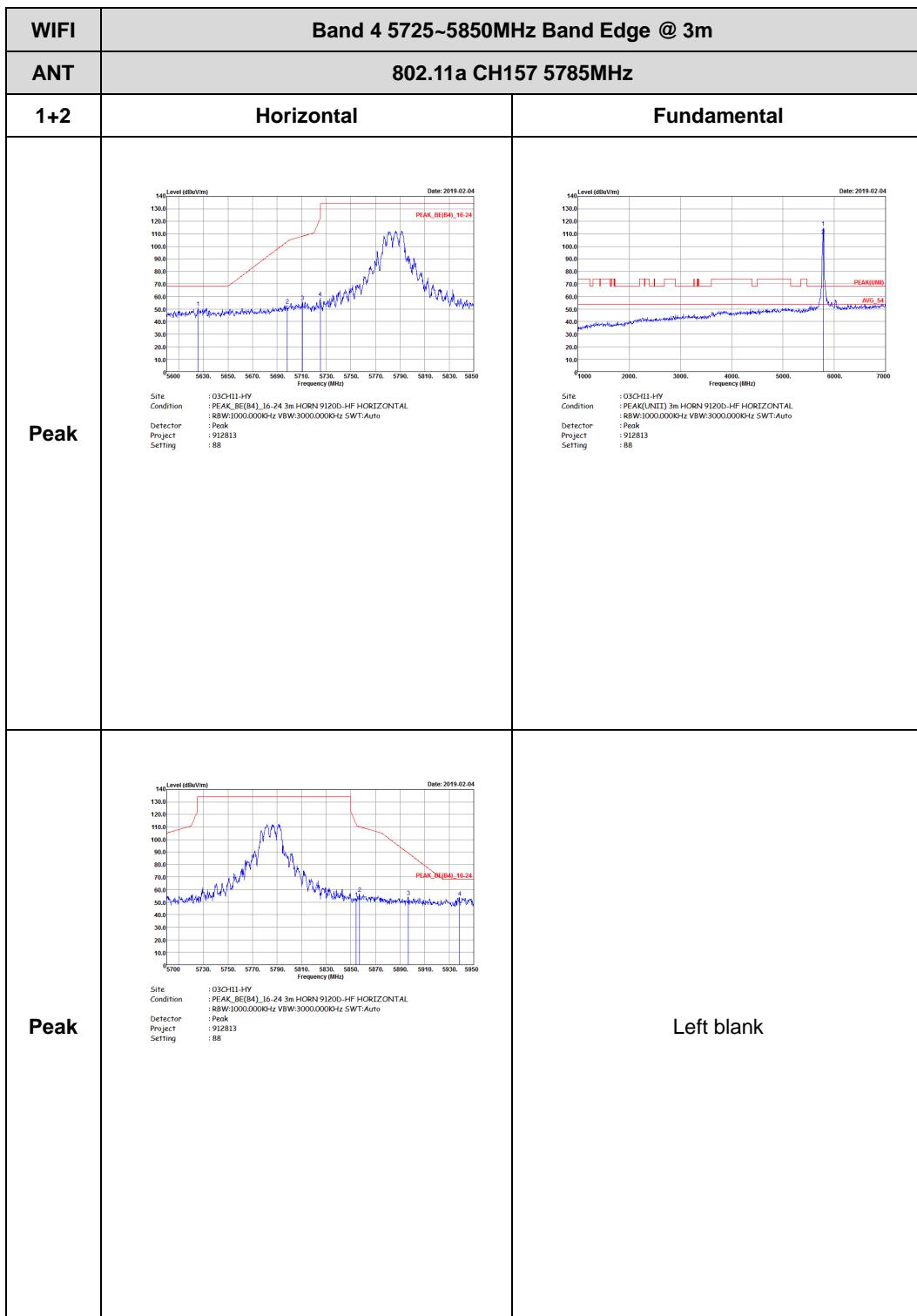


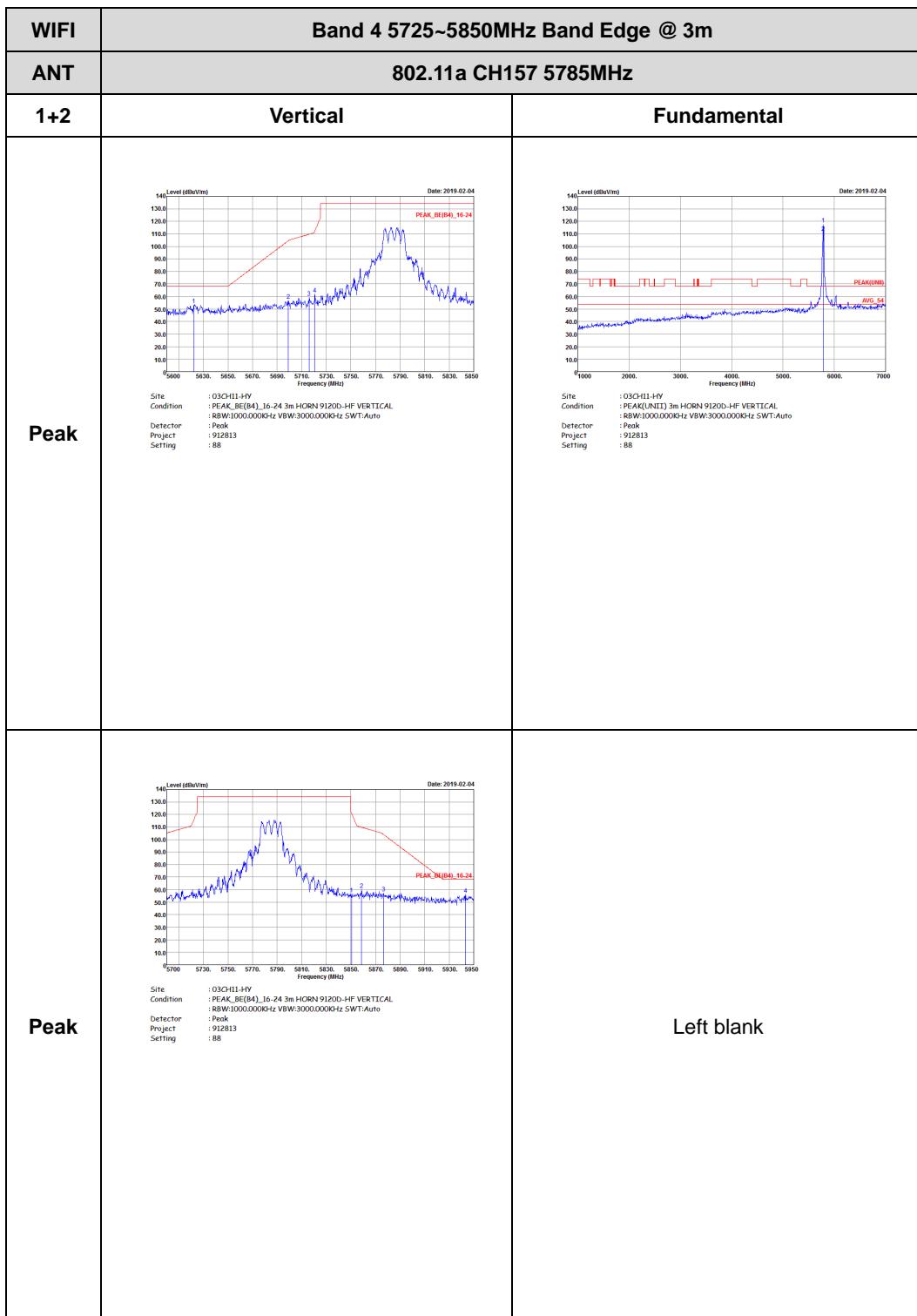
Band 4 - 5725~5850MHz

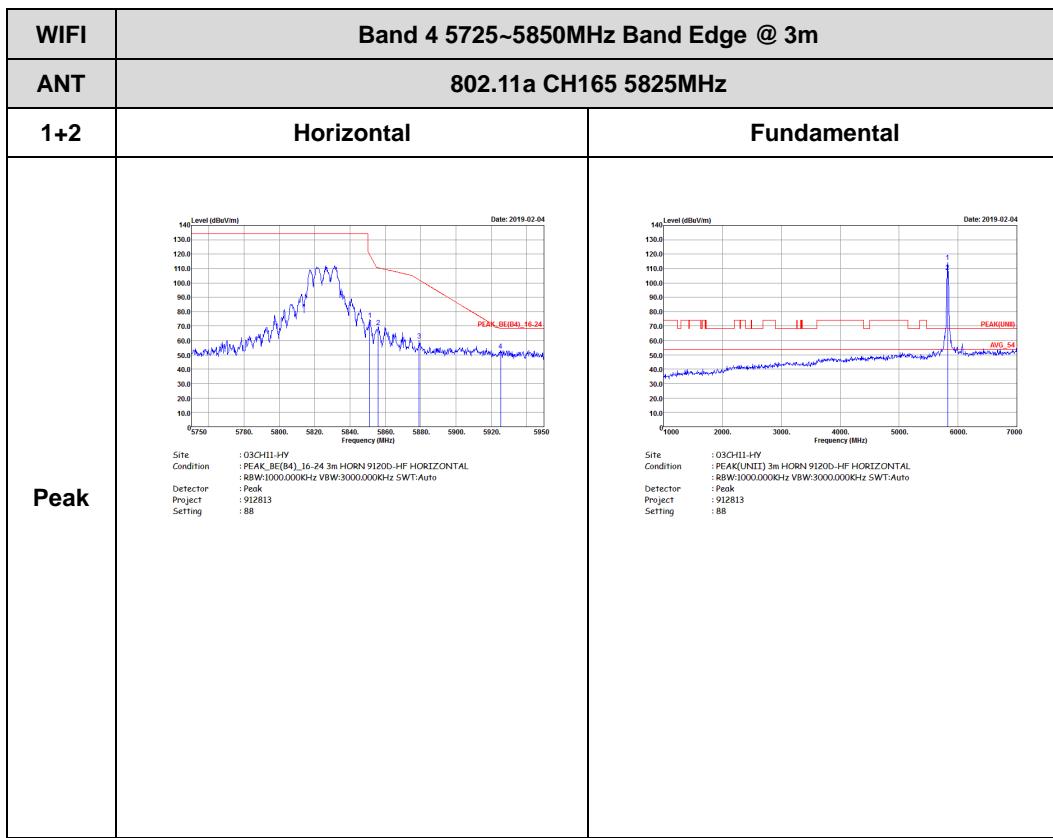
WIFI 802.11a (Band Edge @ 3m)

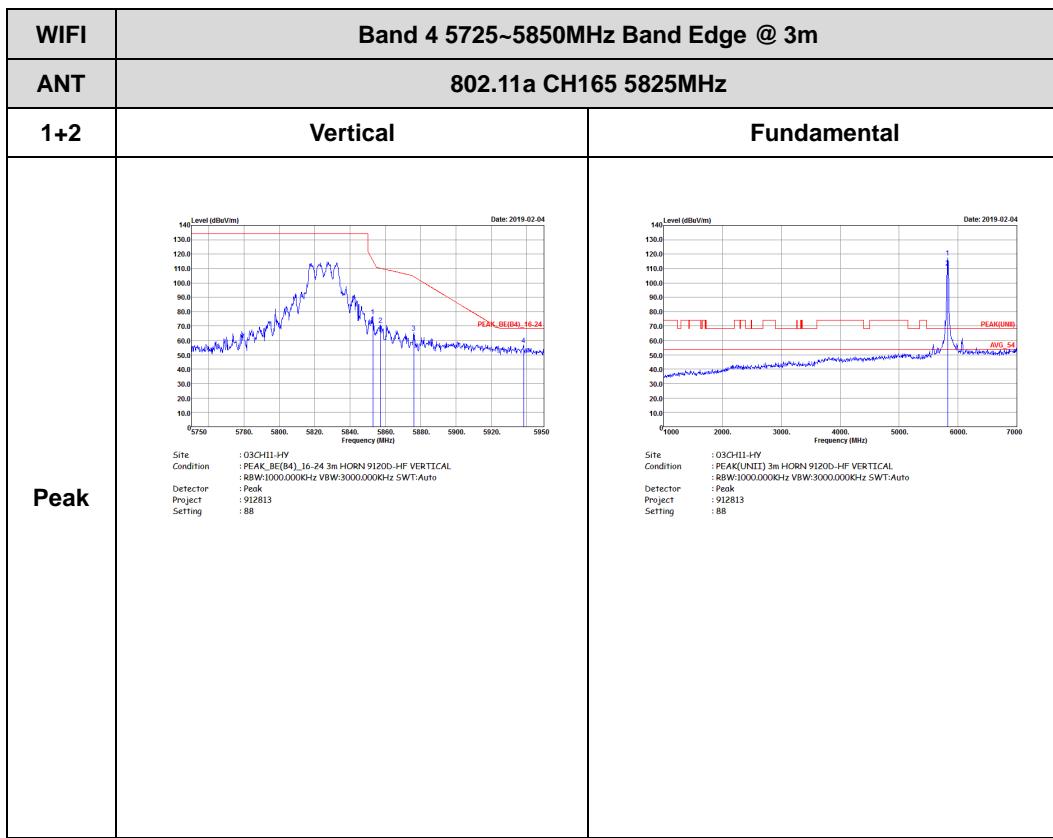








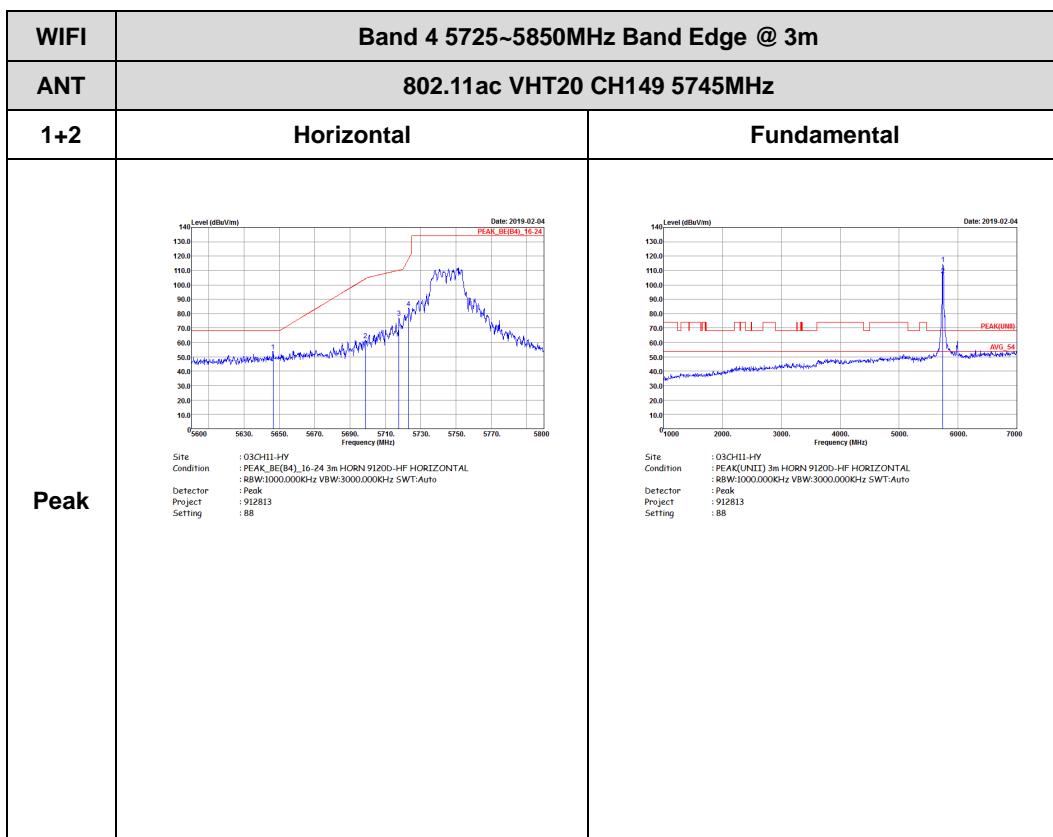


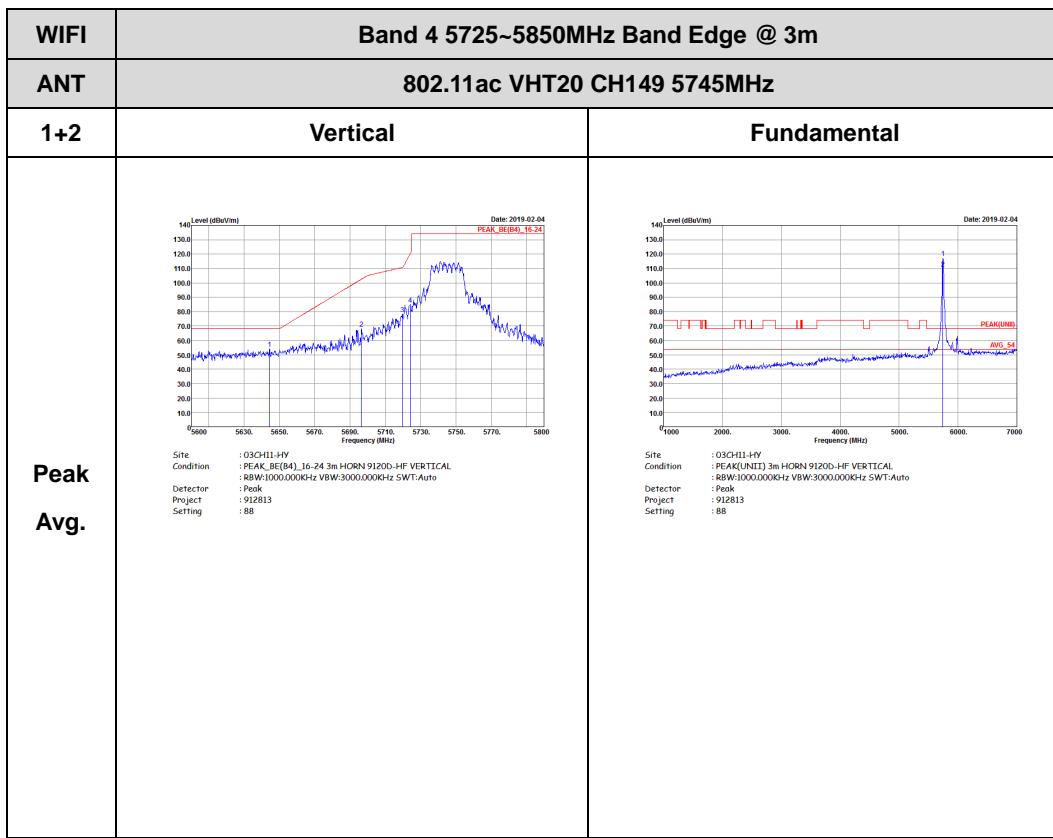




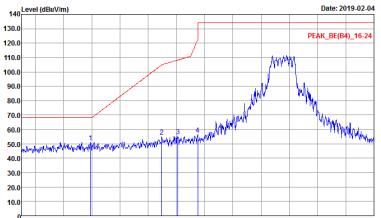
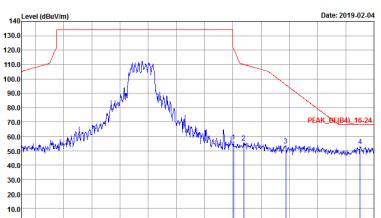
Band 4 5725~5850MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)



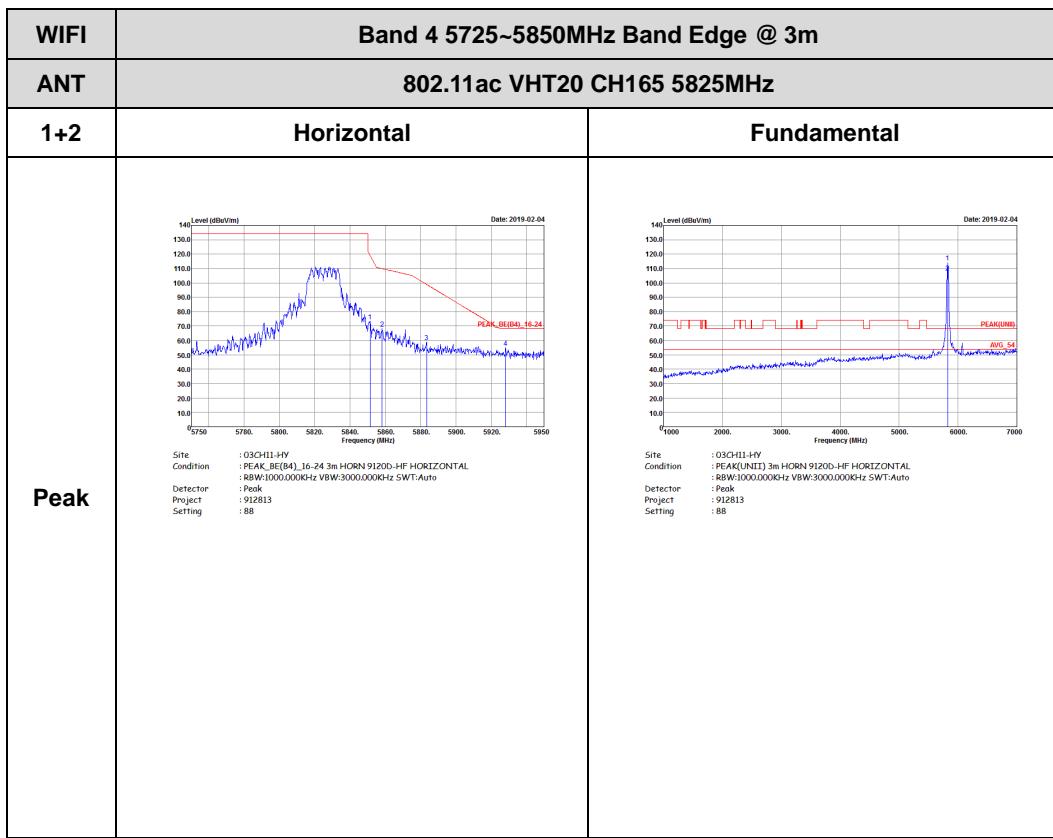


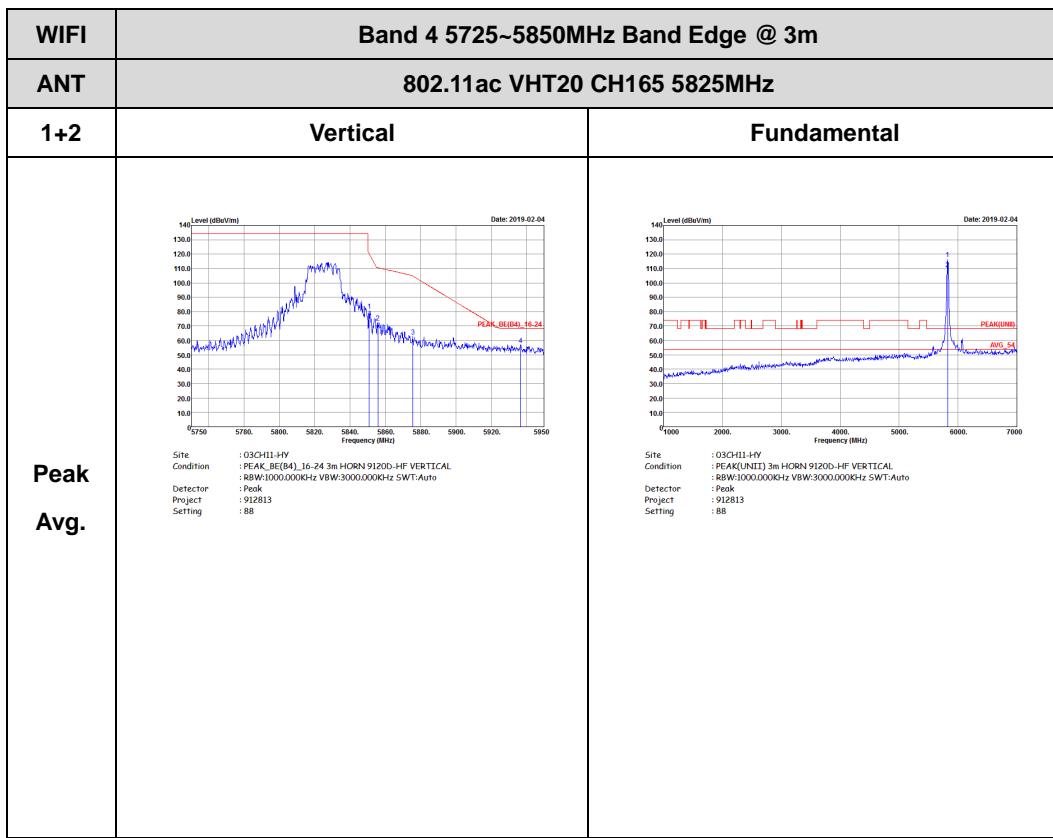


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH157 5785MHz	
1+2	Horizontal	Fundamental
Peak	 <p>Level (dBuV/m) vs Frequency (MHz) from 5600 to 5850. A red step-like line shows a peak labeled "PEAK_BE(84)_16-24" reaching ~130 dBuV/m at 5785 MHz. A blue line shows noise level around 50 dBuV/m.</p> <p>Date: 2019-02-04</p> <p>Site : 03CH11-HY Condition : PEAK_BE(84)_16-24 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>	 <p>Level (dBuV/m) vs Frequency (MHz) from 1000 to 7000. A red line shows a sharp peak labeled "PEAK(FUND)" reaching ~130 dBuV/m at 5785 MHz. A blue line shows noise level around 40 dBuV/m.</p> <p>Date: 2019-02-04</p> <p>Site : 03CH11-HY Condition : PEAK(FUND) 3m HORN 9120D-HF HORIZONTAL : BBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>
Peak	 <p>Level (dBuV/m) vs Frequency (MHz) from 5700 to 5950. A red line shows a peak labeled "PEAK_BE(84)_16-24" reaching ~130 dBuV/m at 5785 MHz. A blue line shows noise level around 50 dBuV/m.</p> <p>Date: 2019-02-04</p> <p>Site : 03CH11-HY Condition : PEAK_BE(84)_16-24 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH157 5785MHz	
1+2	Vertical	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>	<p>Site : 03CH11-HY Condition : PEAK(BB) 3m HORN 9120D-HF VERTICAL : BBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>	Left blank



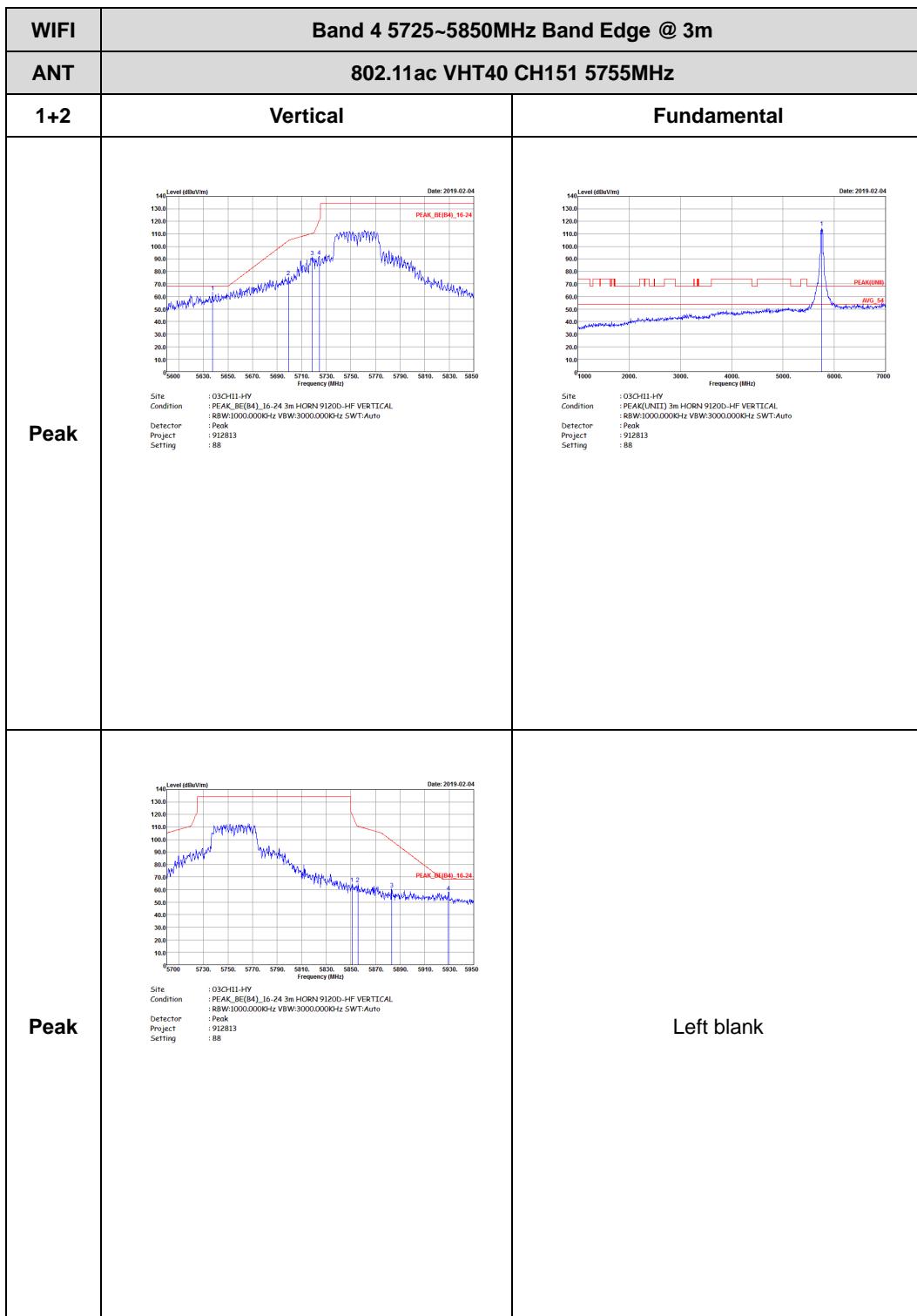


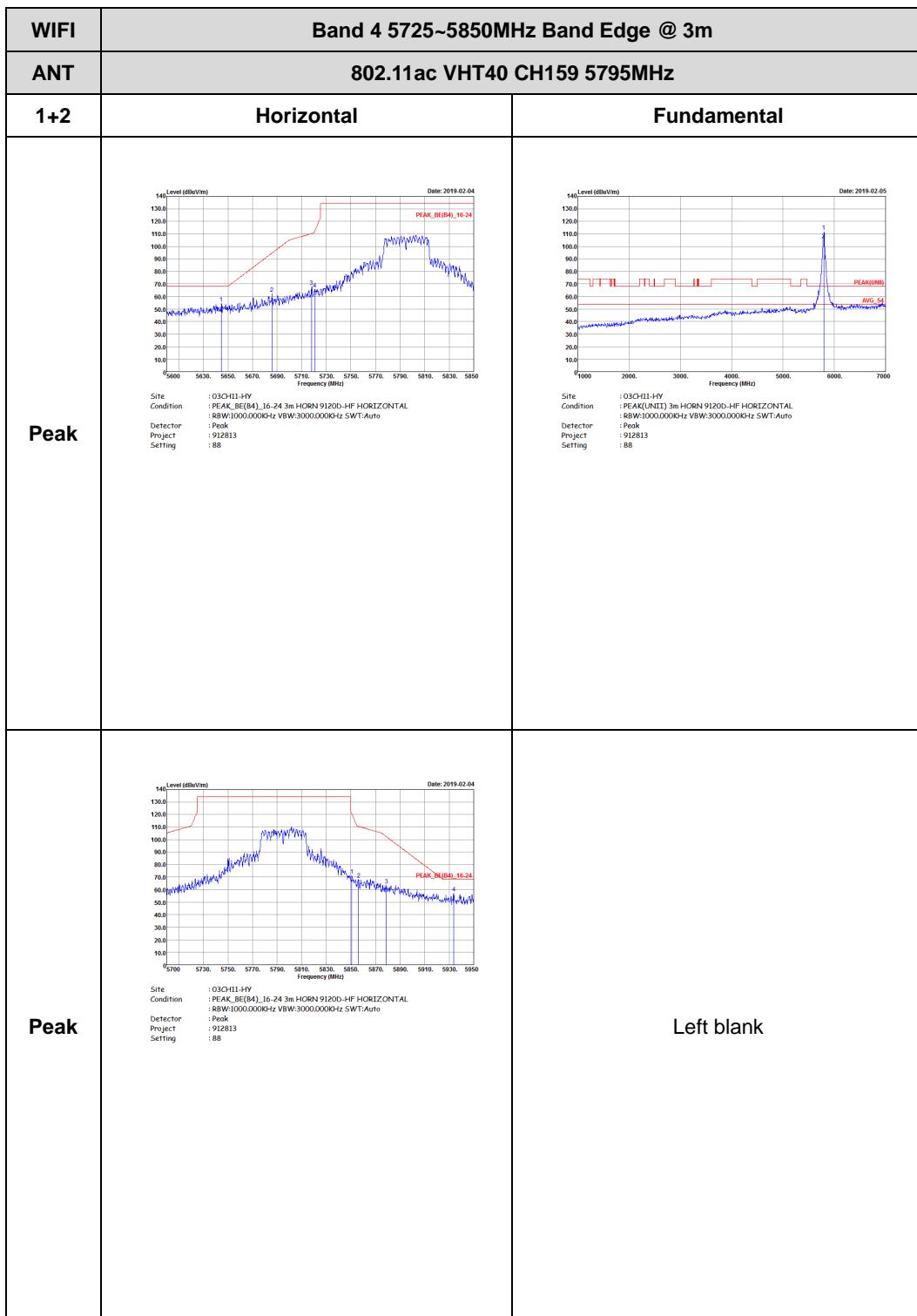


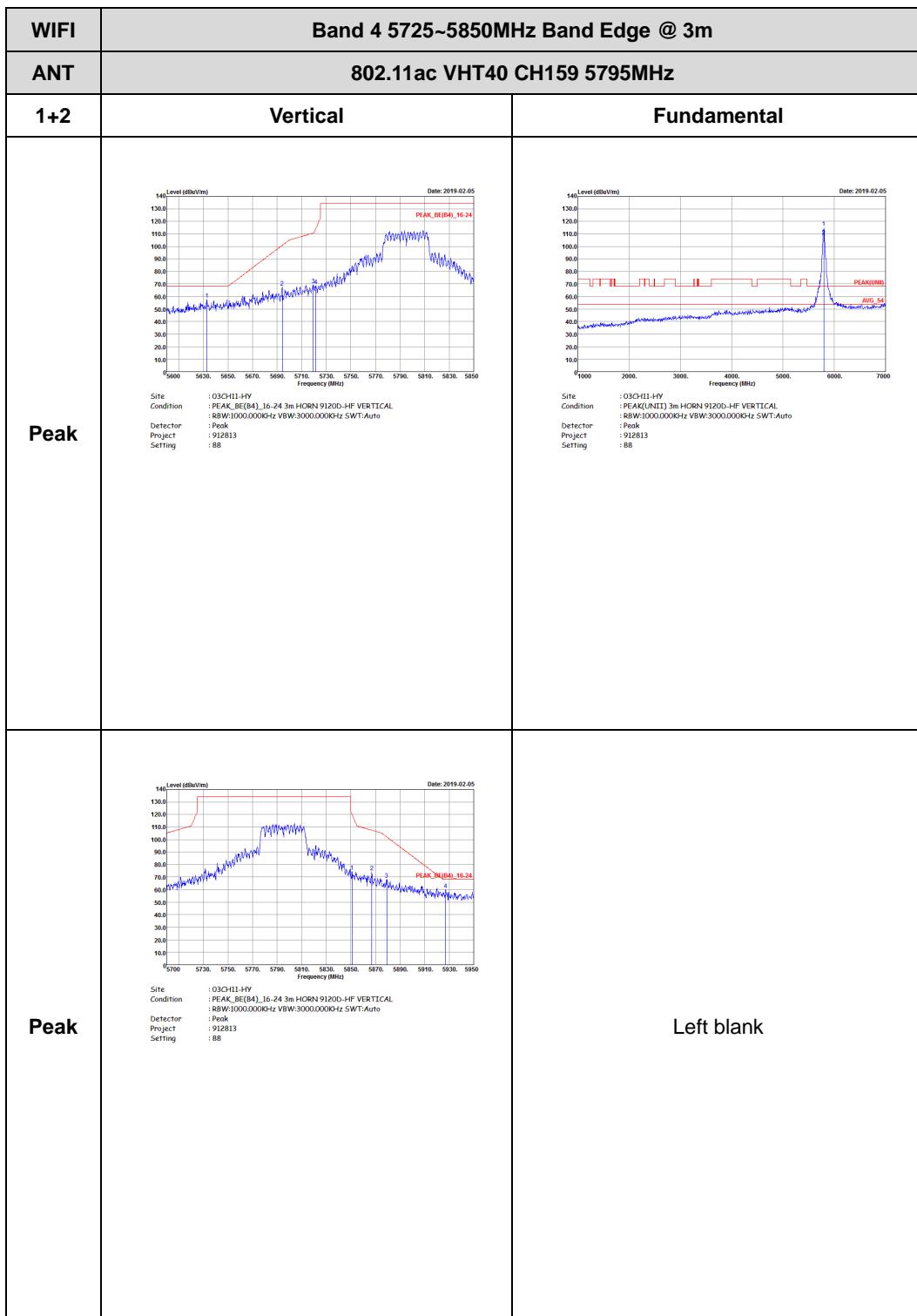
Band 4 5725~5850MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH151 5755MHz	
1+2	Horizontal	
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>	<p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>	Left blank



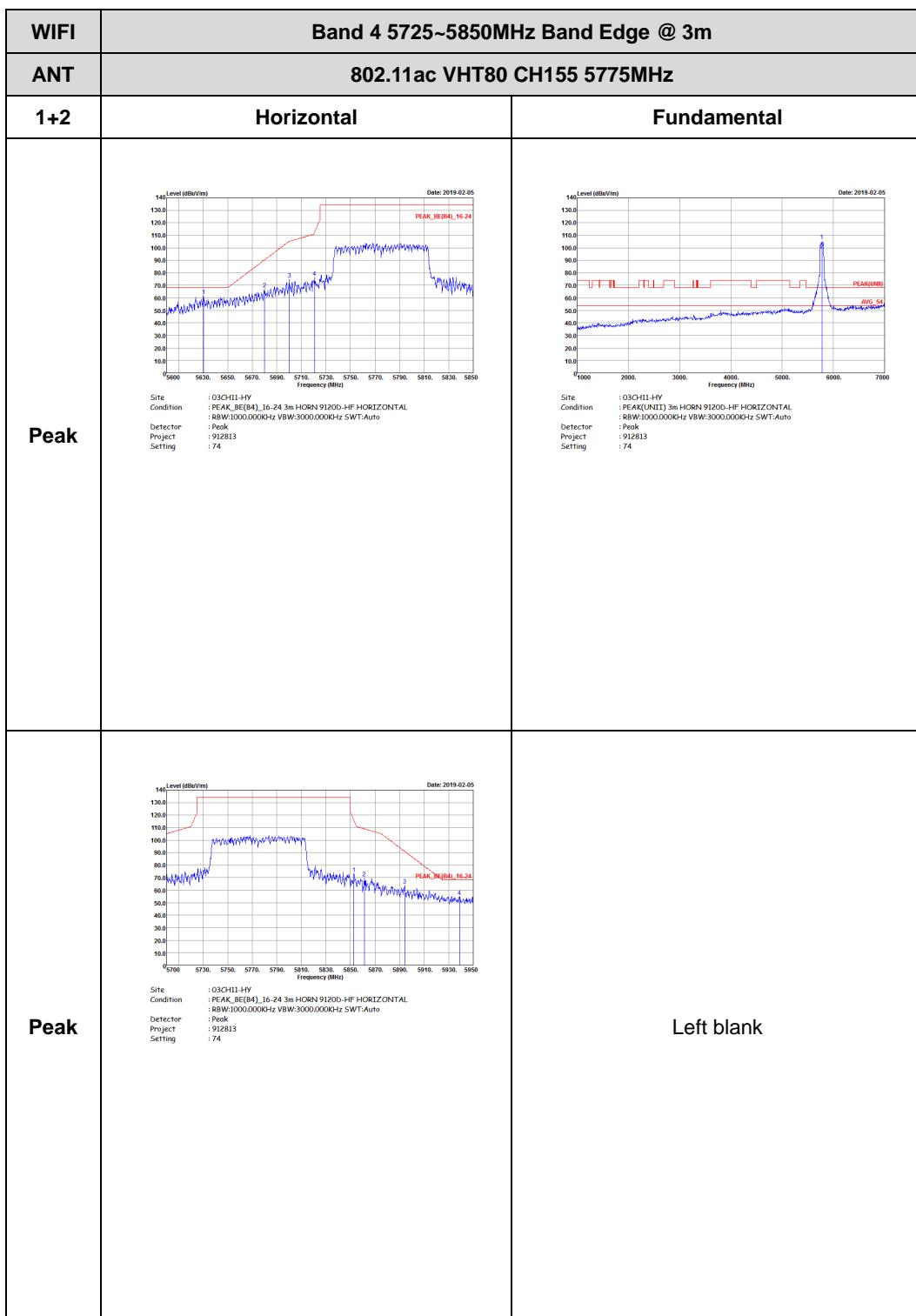


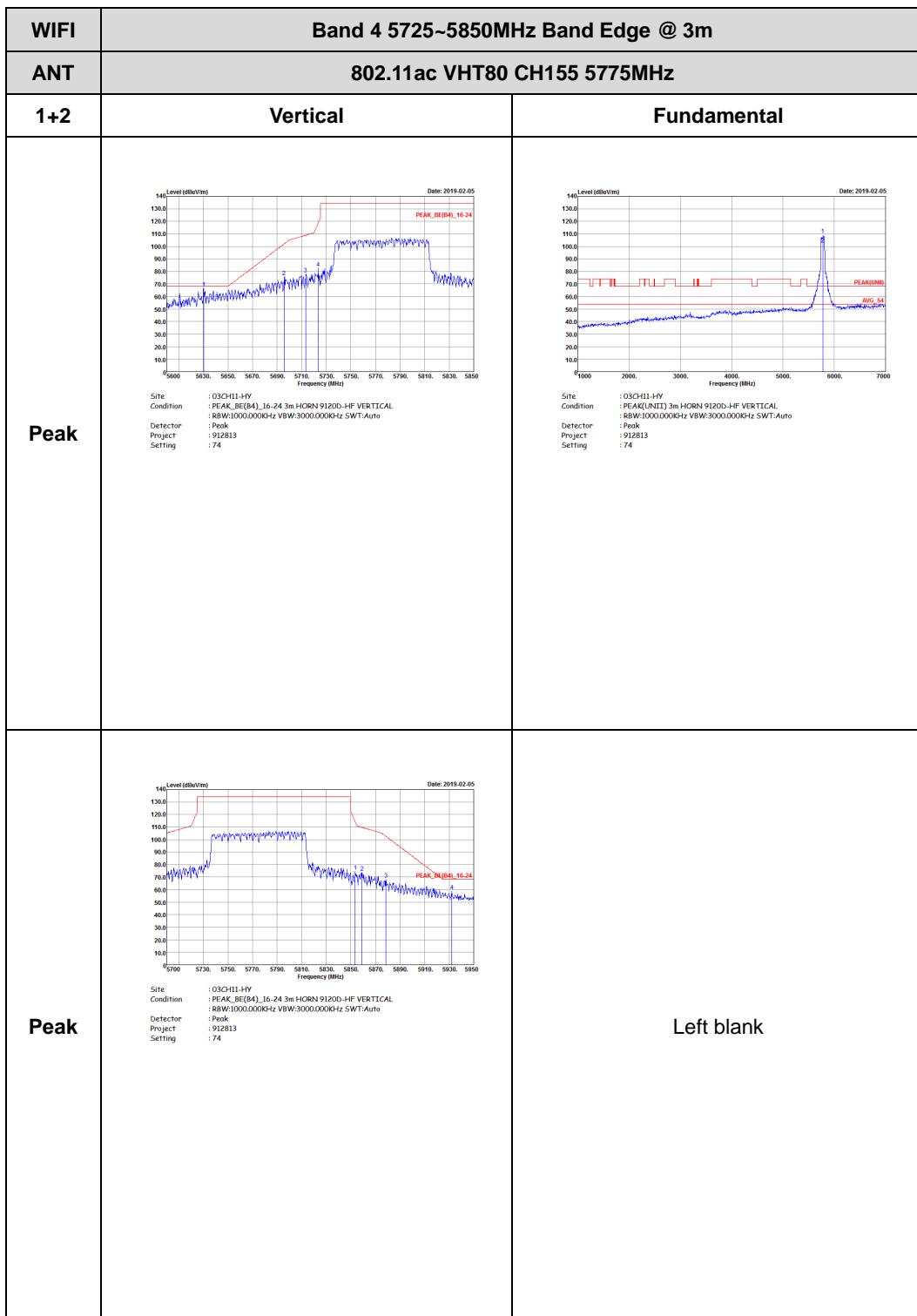




Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

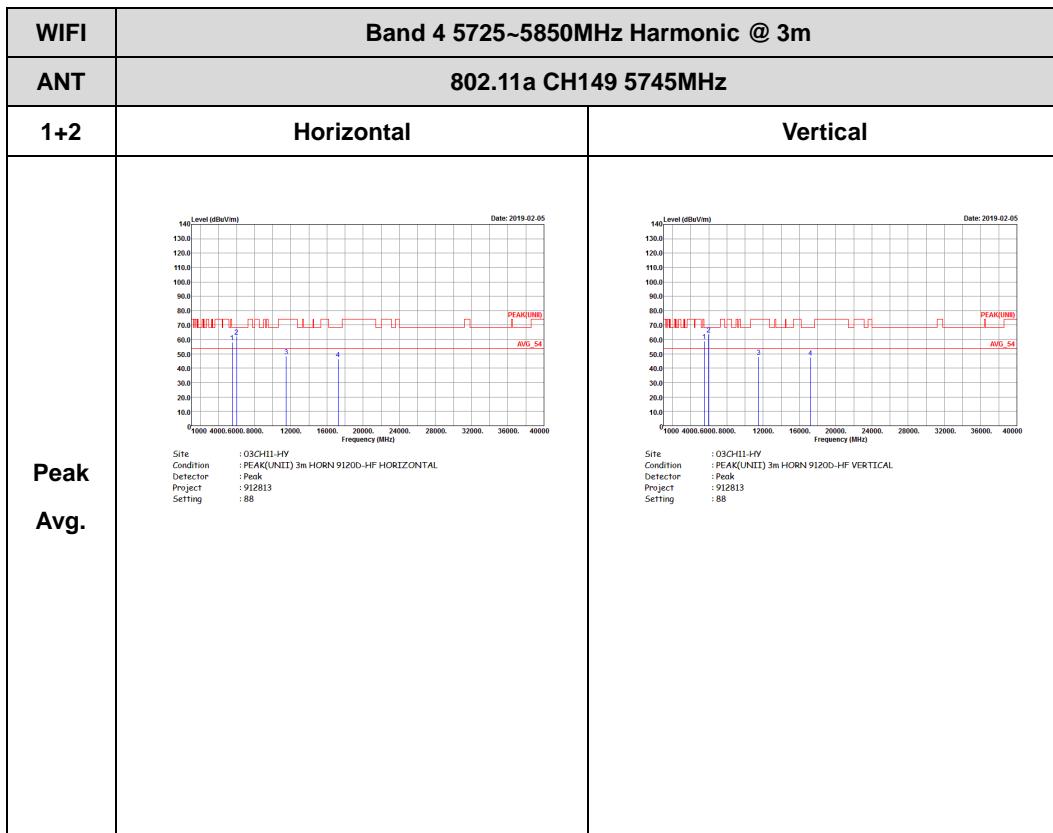


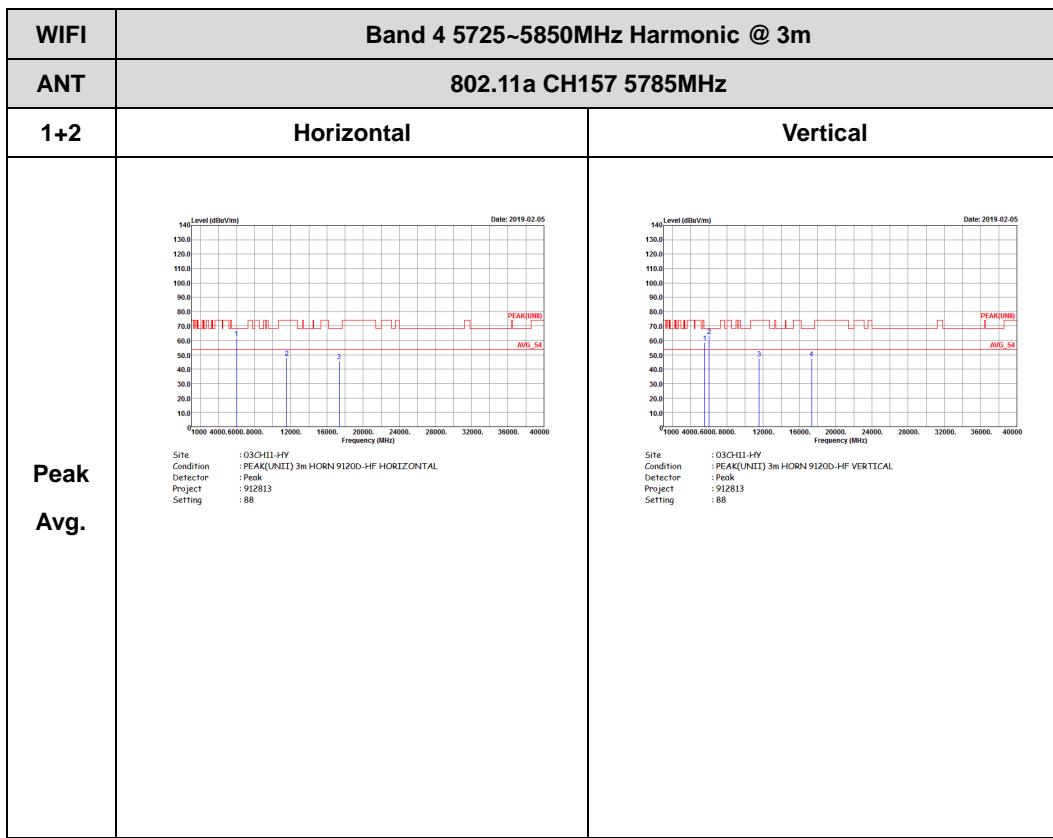


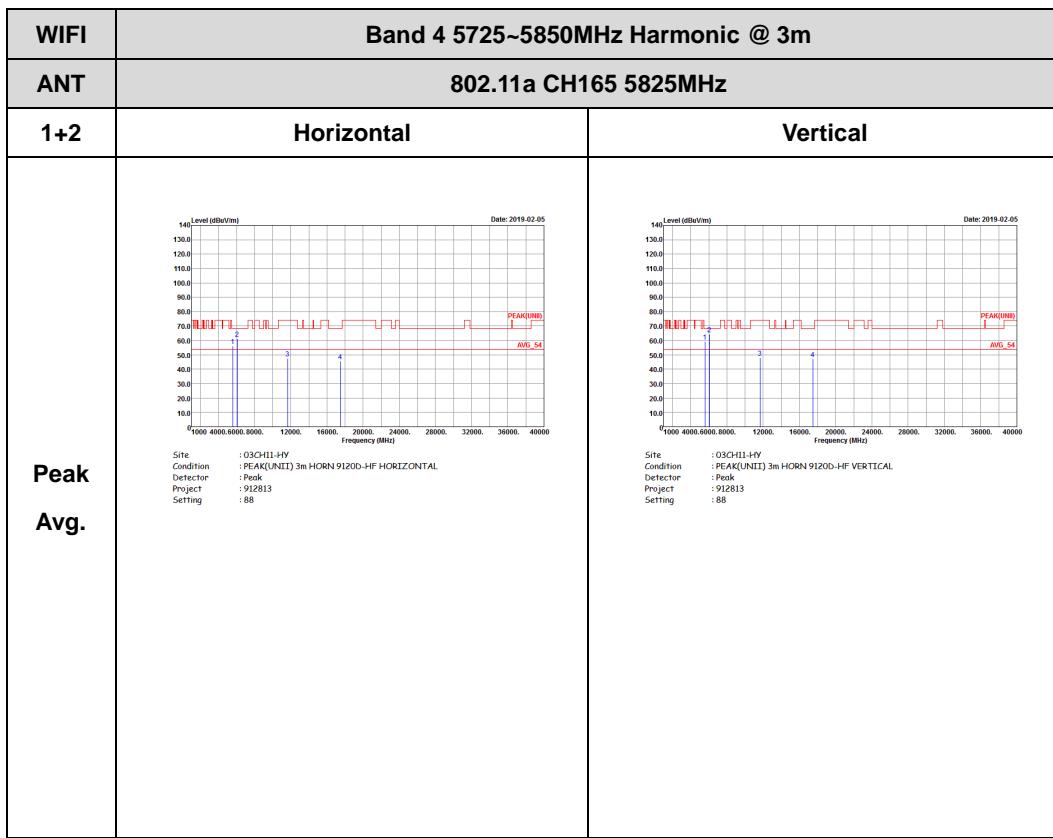


Band 4 - 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)





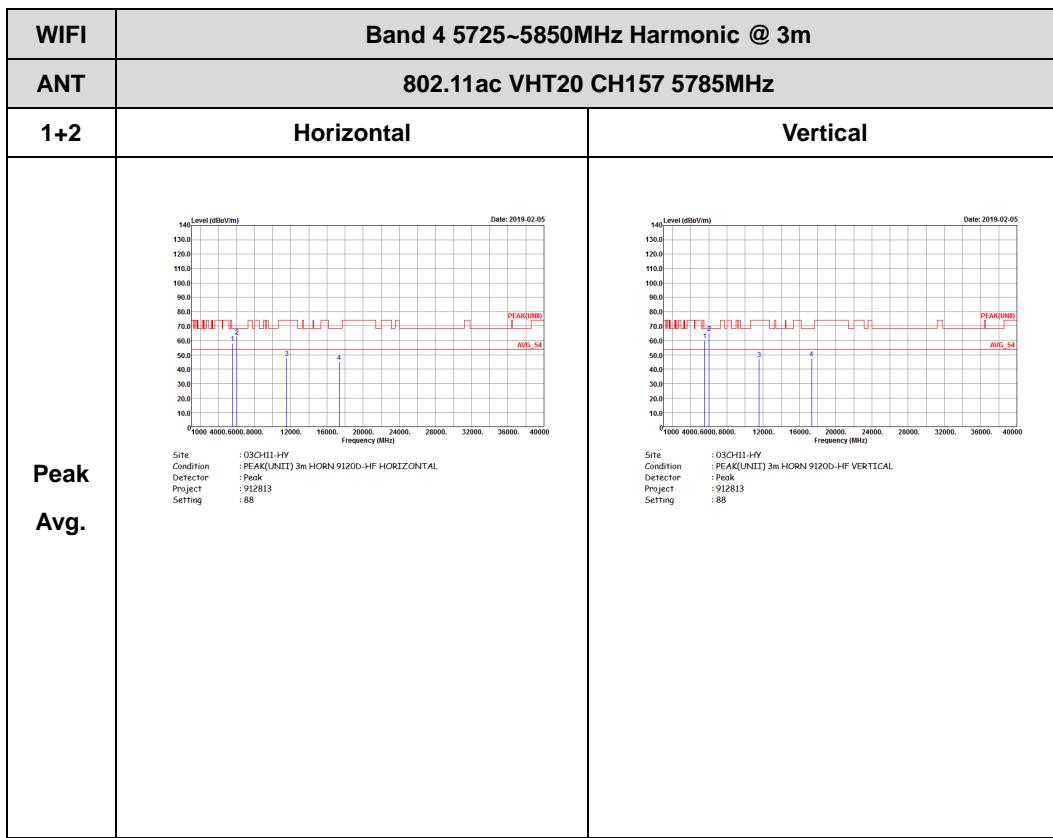


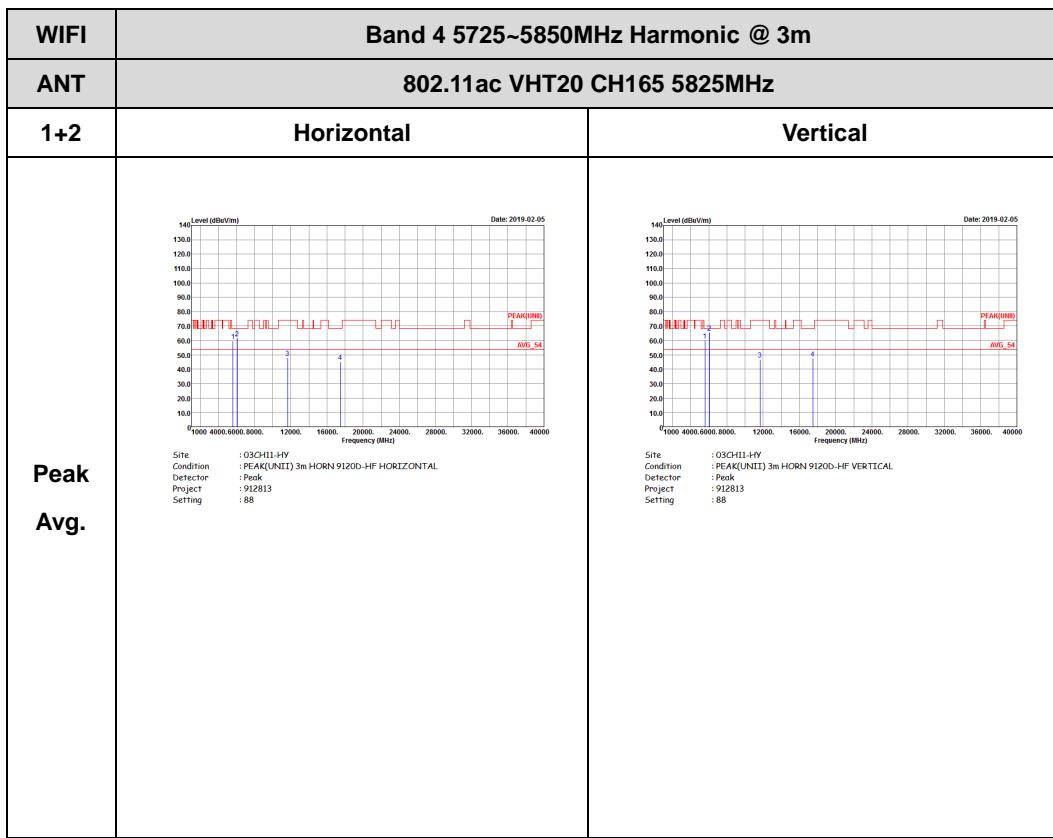


Band 4 5725~5850MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH149 5745MHz	
1+2	Horizontal	Vertical
Peak	 <p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 912813 Setting : 88</p>	 <p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 912813 Setting : 88</p>
Avg.		

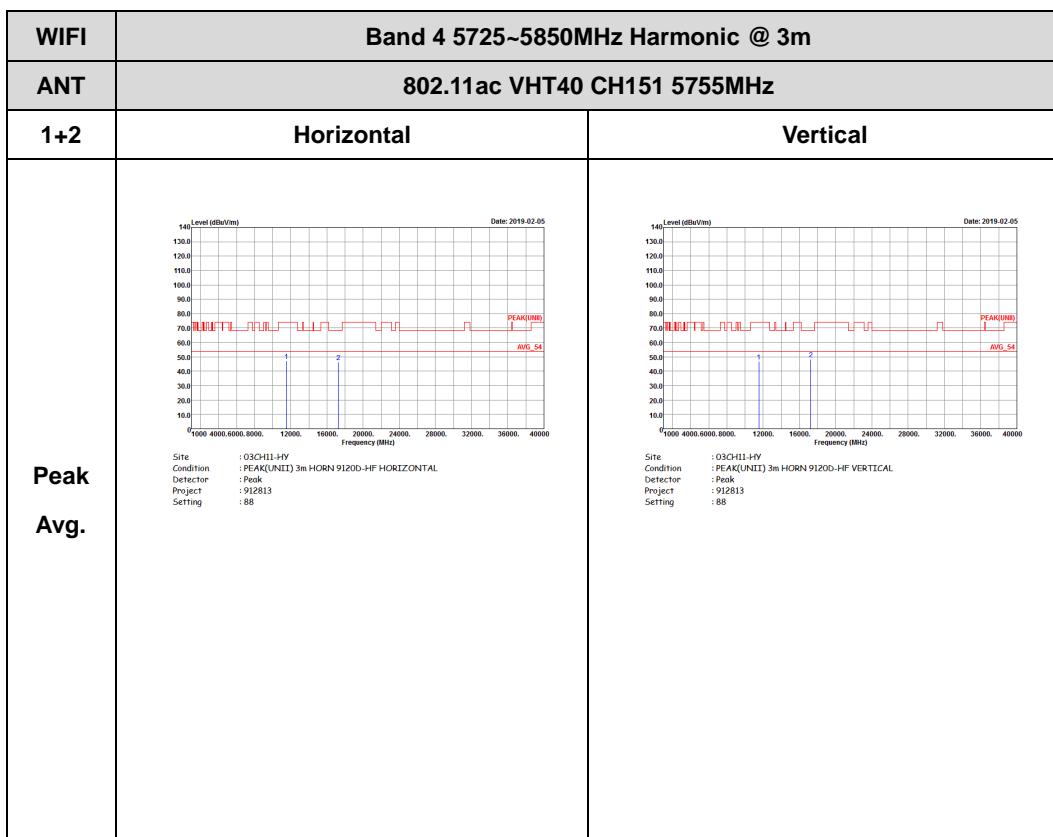


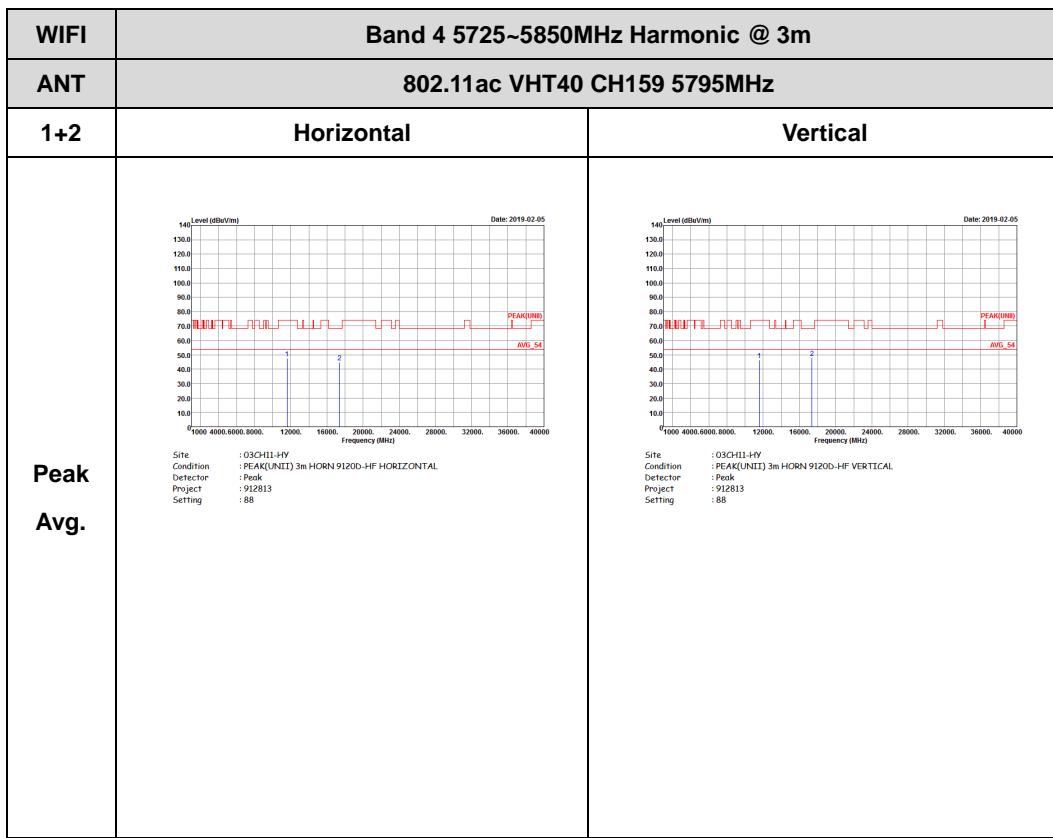




Band 4 5725~5850MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

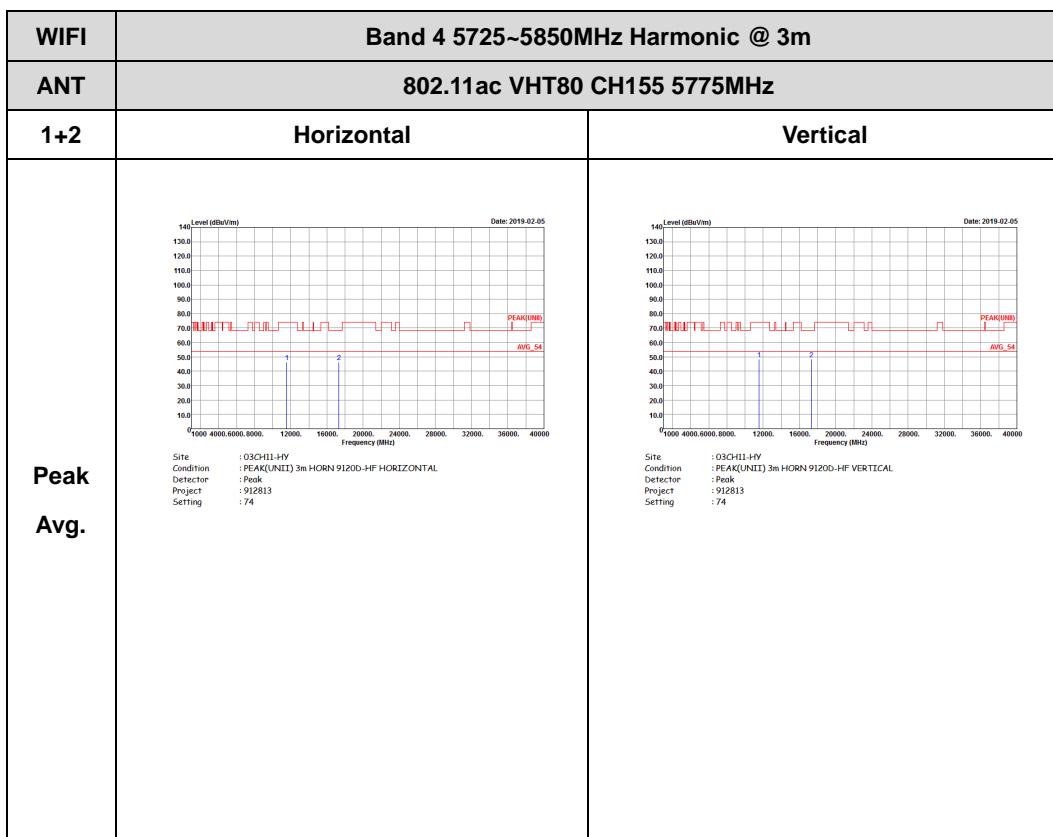






Band 4 5725~5850MHz

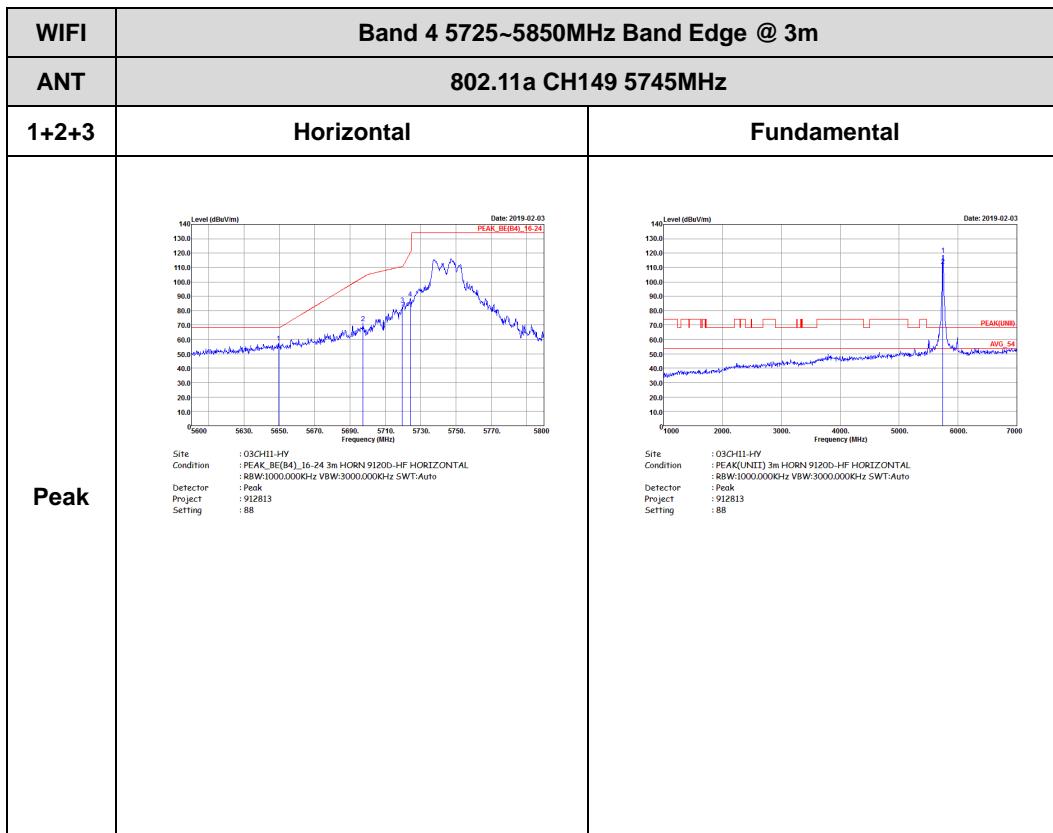
WIFI 802.11ac VHT80 (Harmonic @ 3m)

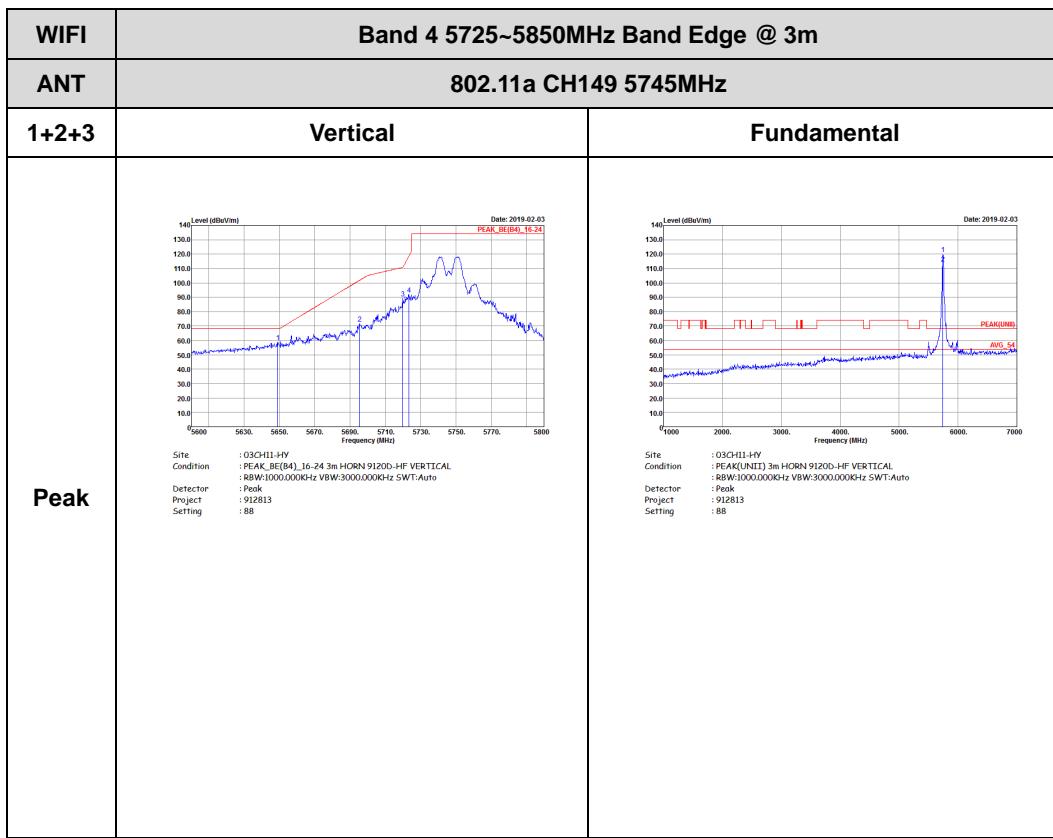


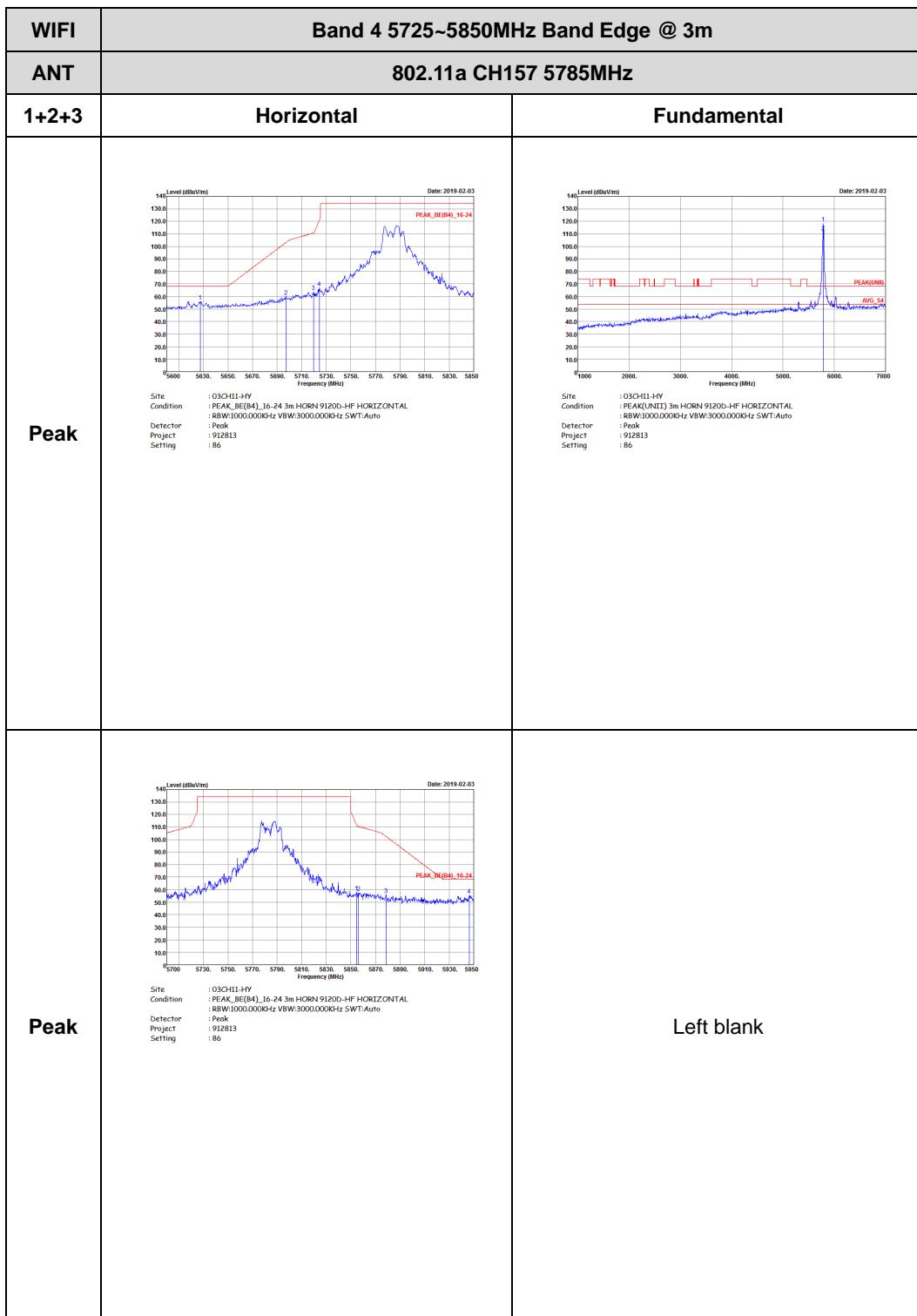


Band 4 - 5725~5850MHz

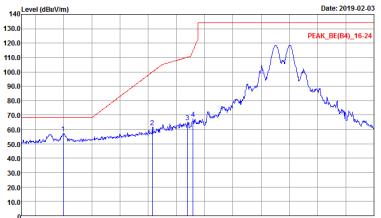
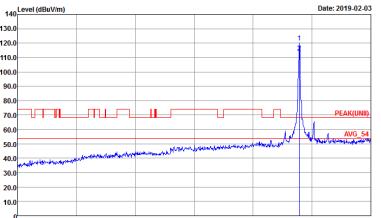
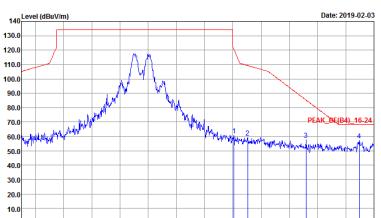
WIFI 802.11a (Band Edge @ 3m)

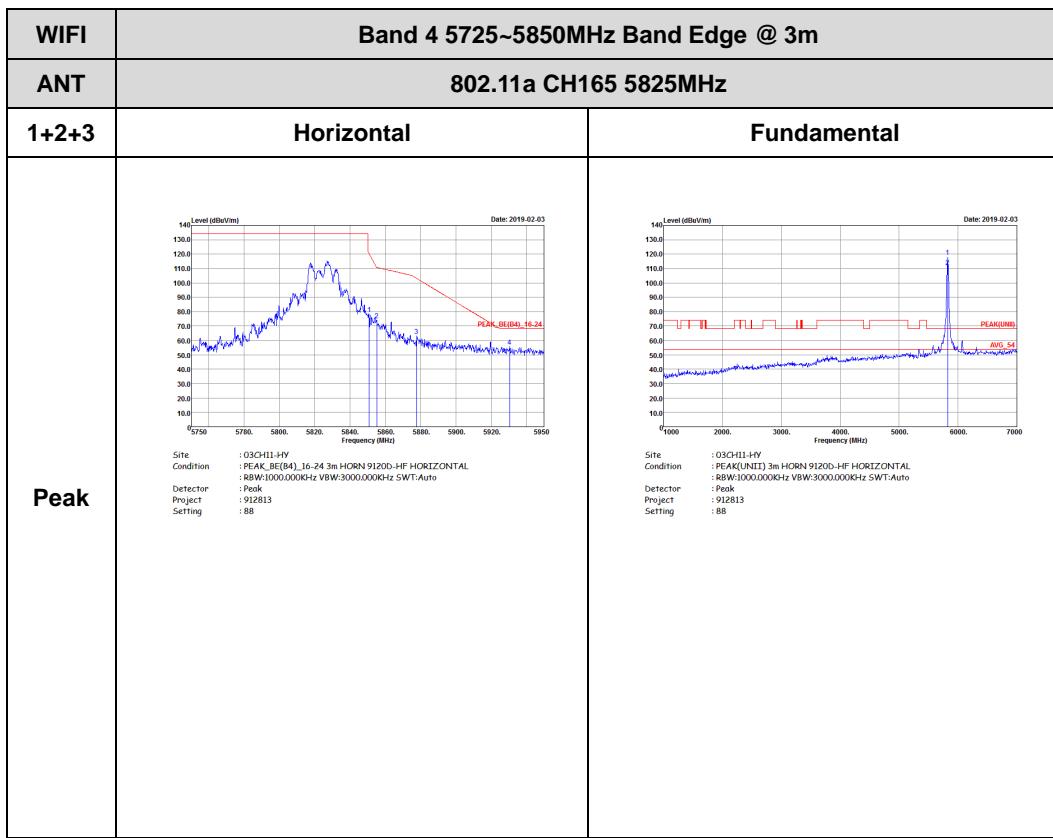


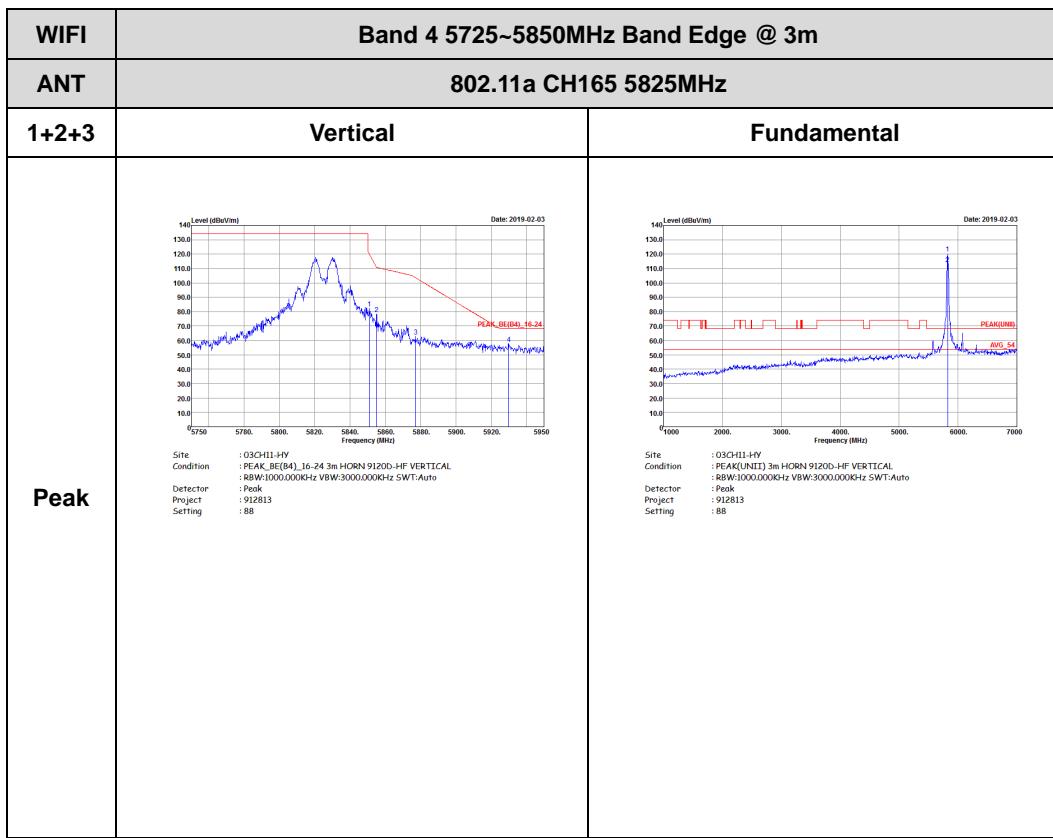






WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+2+3	Vertical	Fundamental
Peak	 <p>Site : 03CH11-HY Condition : PEAK_BED(4)_16-24 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 86</p>	 <p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL : BBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 86</p>
Peak	 <p>Site : 03CH11-HY Condition : PEAK_BEF(4)_16-24 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 86</p>	Left blank



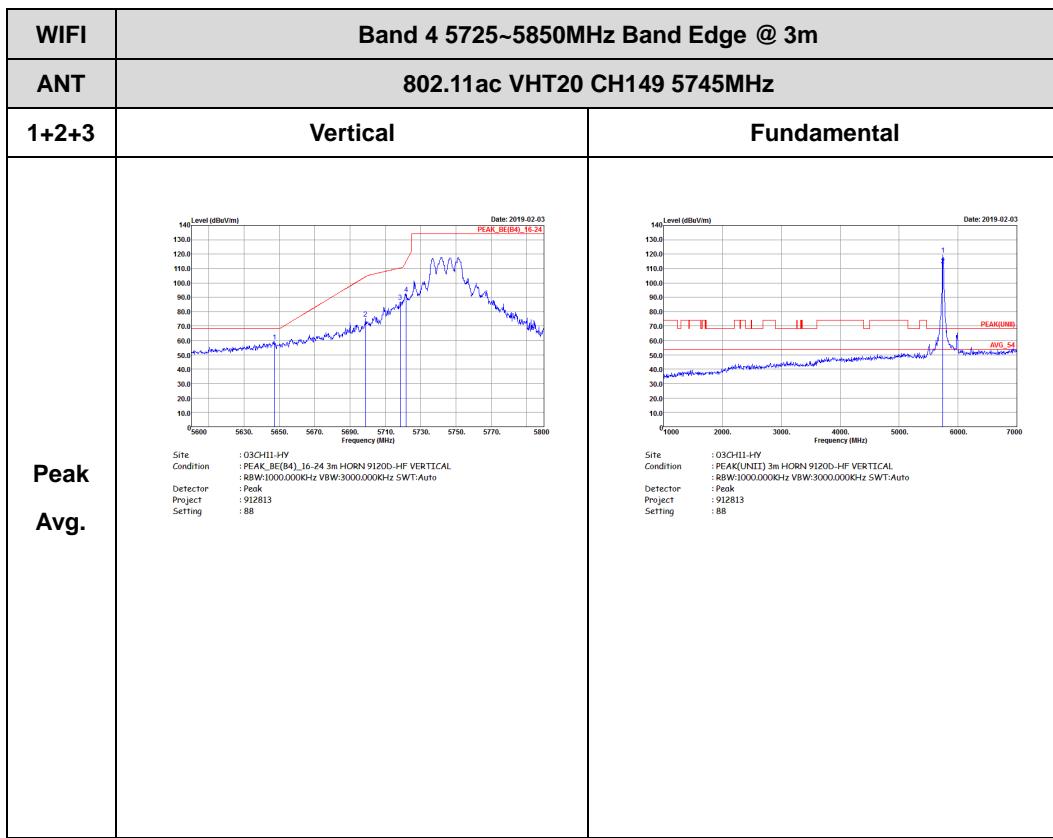


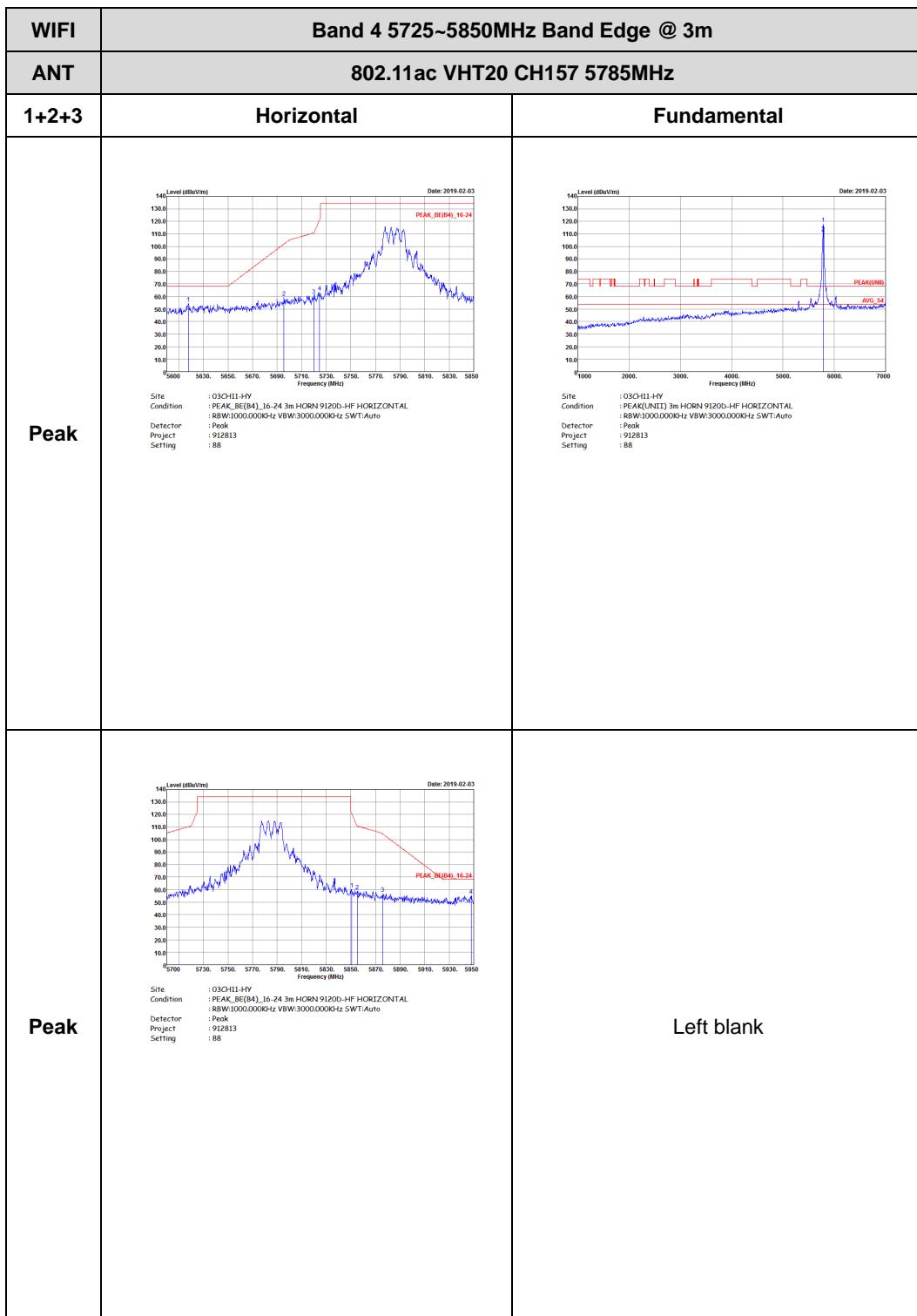


Band 4 5725~5850MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH149 5745MHz	
1+2+3	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88	 Site : 03CH11-HY Condition : PEAK(UMB) 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88







WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH157 5785MHz	
1+2+3	Vertical	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>	<p>Site : 03CH11-HY Condition : PEAK(B4) 3m HORN 9120D-HF VERTICAL : BBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912813 Setting : 88</p>	Left blank