



FCC RADIO TEST REPORT

FCC ID : 2AR05-7879
Equipment : Digital Media Receiver
Model name : C7H6N3
Applicant : Teachey-1625 LLC
8 Wright St., 1st Floor
Westport, CT 06880
Standard : FCC Part 15 Subpart E §15.407

The product was received on Apr. 03, 2019 and testing was started from Jul. 03, 2019 and completed on Aug. 19, 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.

Louis Wu

Reviewed by: Louis Wu

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

Report No.	Version	Description	Issued Date
FR940344-01E	01	Initial issue of report	Aug. 21, 2019

Summary of Test Result

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

Declaration of Conformity:

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

Comments and Explanations:

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

Reviewed by: Wii Chang

Report Producer: Jessie Ho

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Digital Media Receiver
Model Name	C7H6N3
FCC ID	2ARO5-7879
EUT supports Radios application	WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE

1.2 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Channel Frequency Range	5745 MHz ~ 5825 MHz
Maximum Output Power <CDD Modes>	MIMO<Ant. 1+2> 802.11a : 19.71 dBm / 0.0935 W 802.11n HT20 : 19.61 dBm / 0.0914 W 802.11n HT40 : 18.56 dBm / 0.0718 W 802.11ac VHT20: 19.51 dBm / 0.0893 W 802.11ac VHT40: 18.41 dBm / 0.0693 W 802.11ac VHT80: 18.16 dBm / 0.0655 W
Maximum Output Power to Antenna <TXBF Modes>	MIMO<Ant. 1+2> 802.11ac VHT20 : 20.61 dBm / 0.1151 W 802.11ac VHT40 : 19.86 dBm / 0.0968 W 802.11ac VHT80 : 19.96 dBm / 0.0991 W
99% Occupied Bandwidth <CDD Modes>	MIMO <Ant. 1> 802.11a : 17.03 MHz 802.11n HT20 : 18.08 MHz 802.11n HT40 : 37.06 MHz 802.11ac VHT80 : 76.96 MHz MIMO <Ant. 2> 802.11a : 16.73 MHz 802.11n HT20 : 17.73 MHz 802.11n HT40 : 36.66 MHz 802.11ac VHT80 : 76.84 MHz
99% Occupied Bandwidth <TXBF Modes>	MIMO<Ant. 1> 802.11ac VHT20 : 18.08 MHz 802.11ac VHT40 : 36.86 MHz 802.11ac VHT80 : 76.72 MHz MIMO<Ant. 2> 802.11ac VHT20 : 18.03 MHz 802.11ac VHT40 : 36.76 MHz 802.11ac VHT80 : 77.08 MHz
Antenna Gain / Gain	Ant. 1: Fixed Internal Antenna with gain 5.40 dBi Ant. 2: Fixed Internal Antenna with gain 6.14 dBi



Antenna Function Description		Ant. 1	Ant. 2
	802.11 a/n/ac MIMO	V	V
	802.11ac TXBF	V	V
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK/QPSK/16QAM/64QAM/256QAM)		

Remark: MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.

1.3 Modification of EUT

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

1.4 Testing Location

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory		
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	Sporton Site No.		
	TH05-HY	CO05-HY	DFS02-HY

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

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory		
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855		
Test Site No.	Sporton Site No.		
	03CH15-HY		

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

FCC designation No.: TW1190 and TW0007



1.5 Applicable Standards

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

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

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

2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in two setup, without accessories and with accessories. The worst cases (with accessories) were recorded in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

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

Note:

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

2.2 Test Mode

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

MIMO Mode

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

TXBF Mode

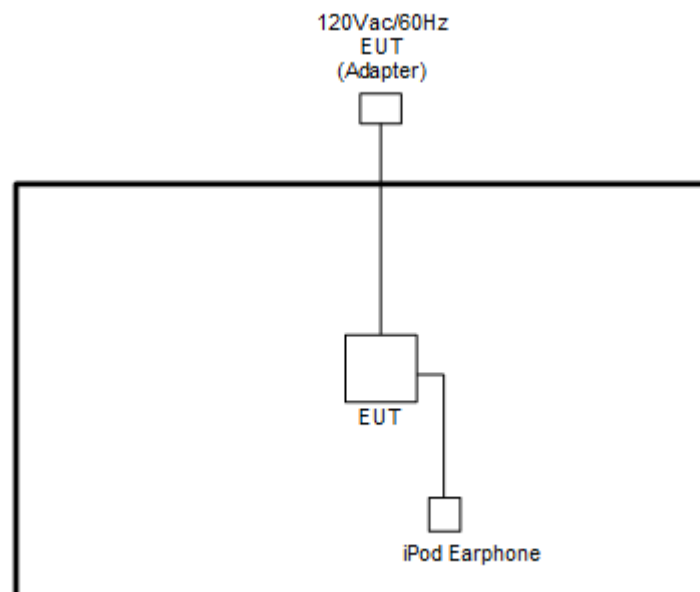
Modulation	Data Rate
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : WLAN (5GHz) Link + Bluetooth Link + MPEG4 + AC Adapter

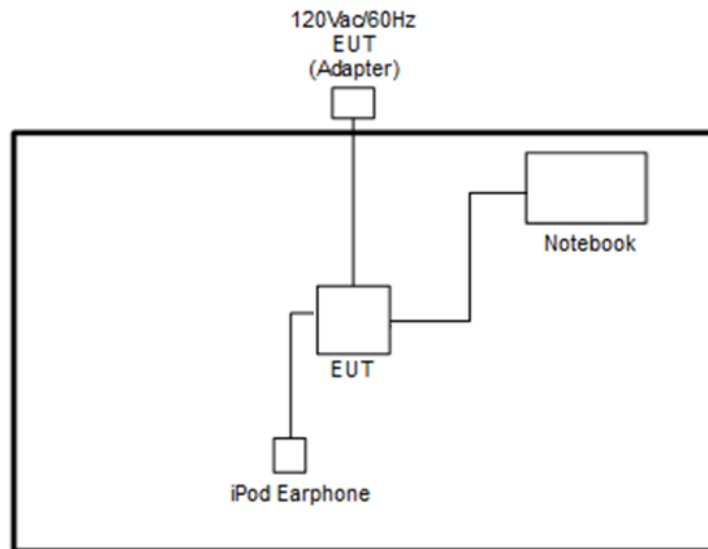
Ch. #		Band IV : 5725-5850 MHz			
		802.11a	802.11n HT20	802.11n HT40	802.11ac VHT80
L	Low	149	149	151	-
M	Middle	157	157	-	155
H	High	165	165	159	-

2.3 Connection Diagram of Test System

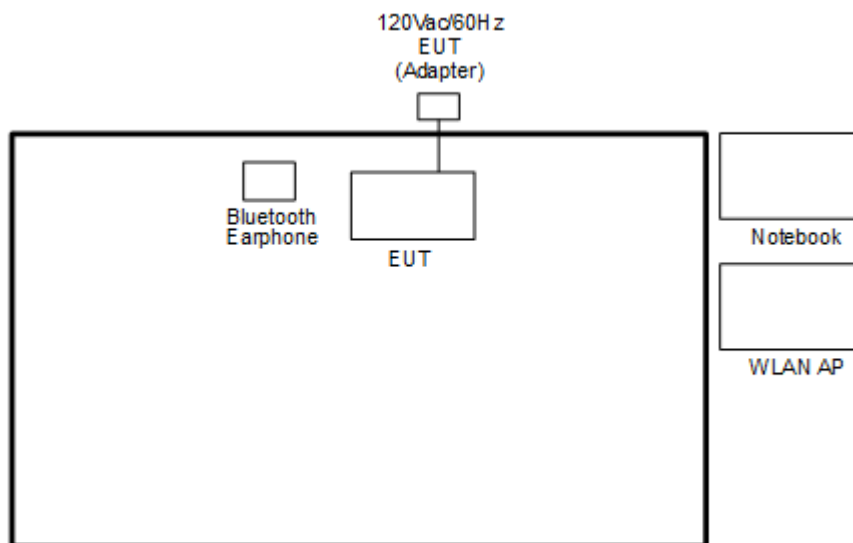
<WLAN Tx Mode>



<TXBF Mode>



<AC Conducted Emission Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
2.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Notebook	DELL	Latitude E7440	NA	NA	NA
5.	Notebook	Lenovo	L570	NA	NA	NA
6.	iPod Earphone	Apple	A1387	N/A	NA	NA

2.5 EUT Operation Test Setup

The RF test items, utility “Compliance. tool Version 1.0.0.52” 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 “adb” 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.

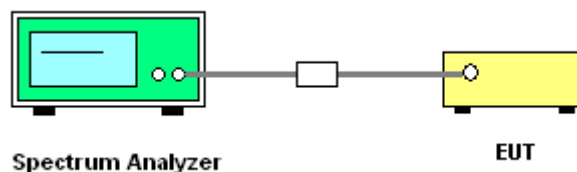
3.1.2 Measuring Instruments

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

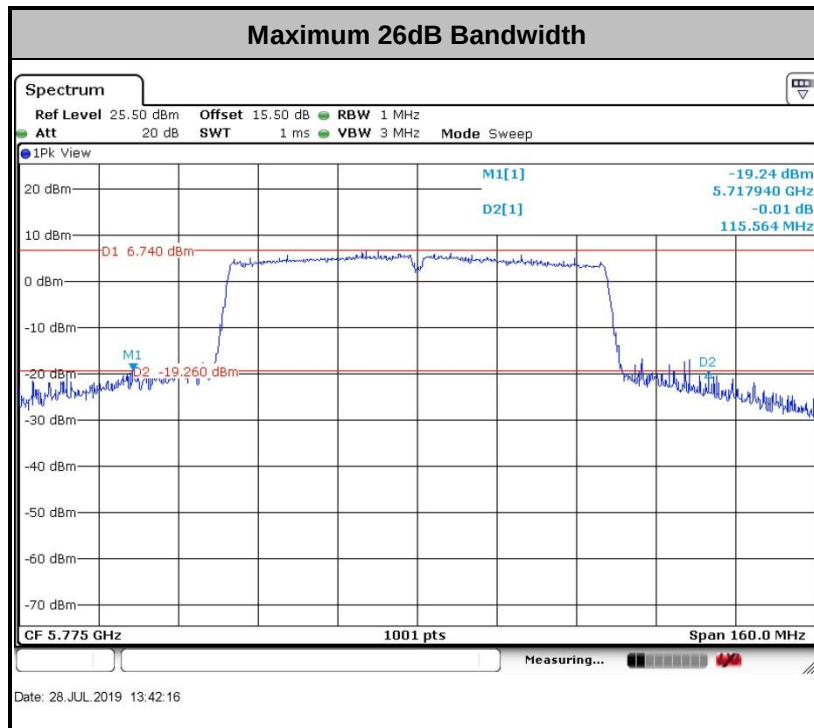
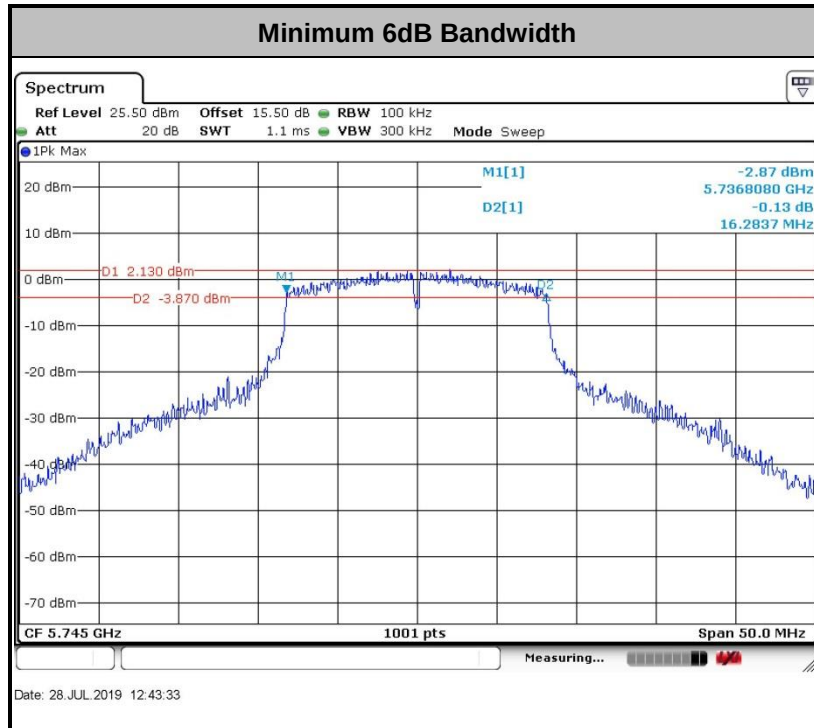


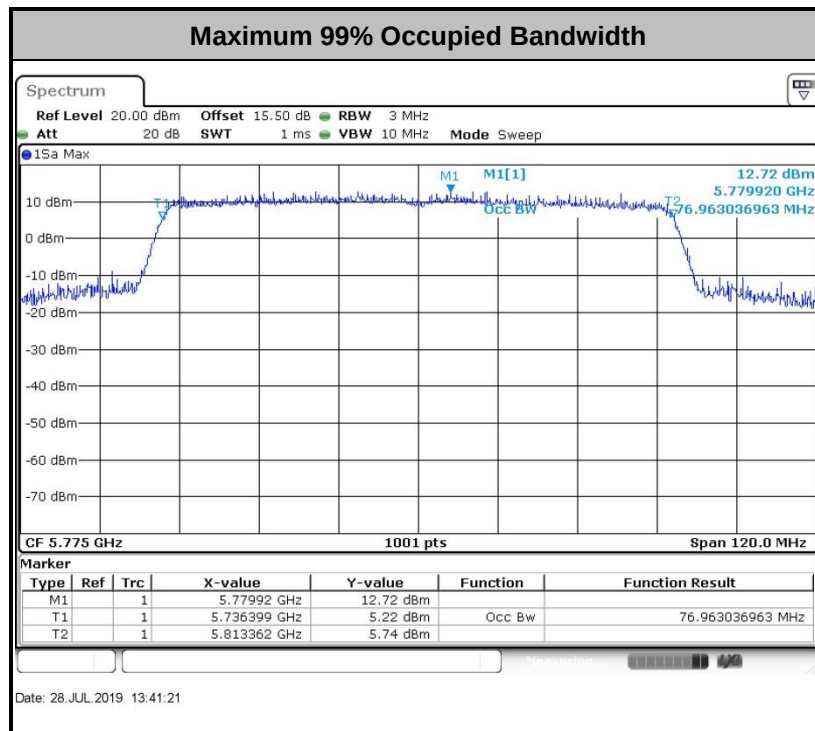
3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.



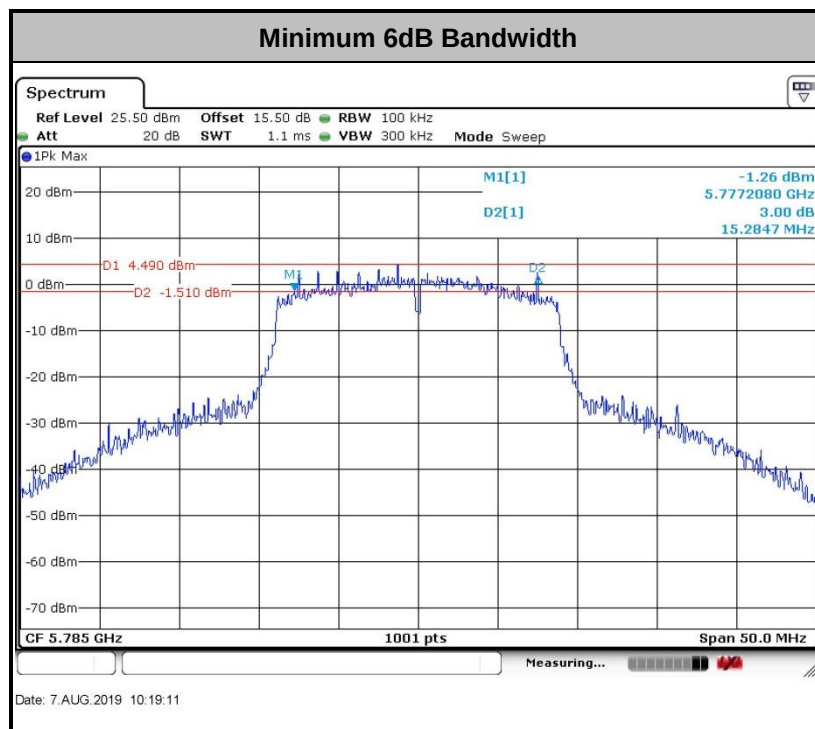
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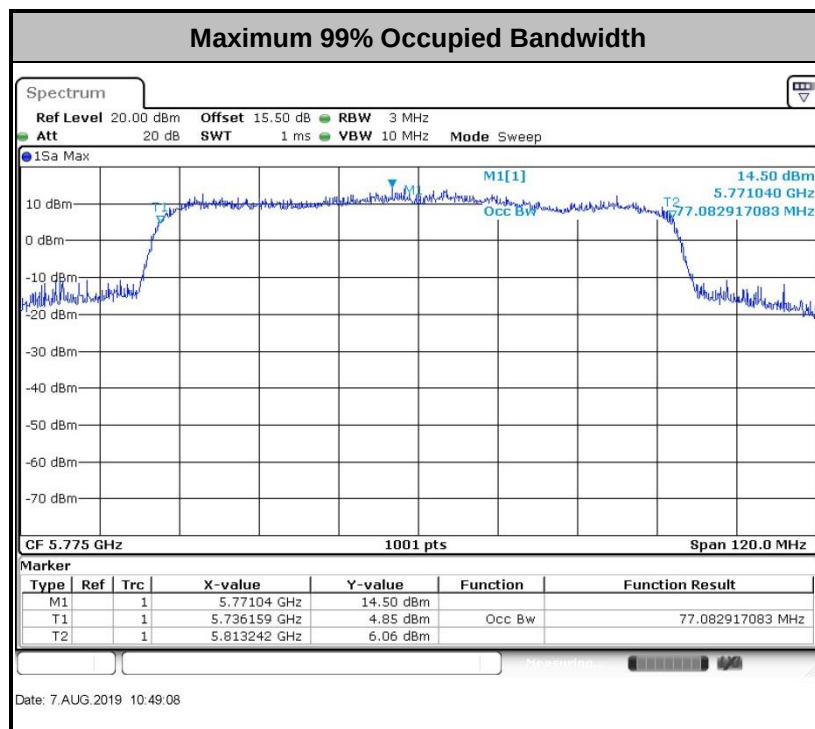
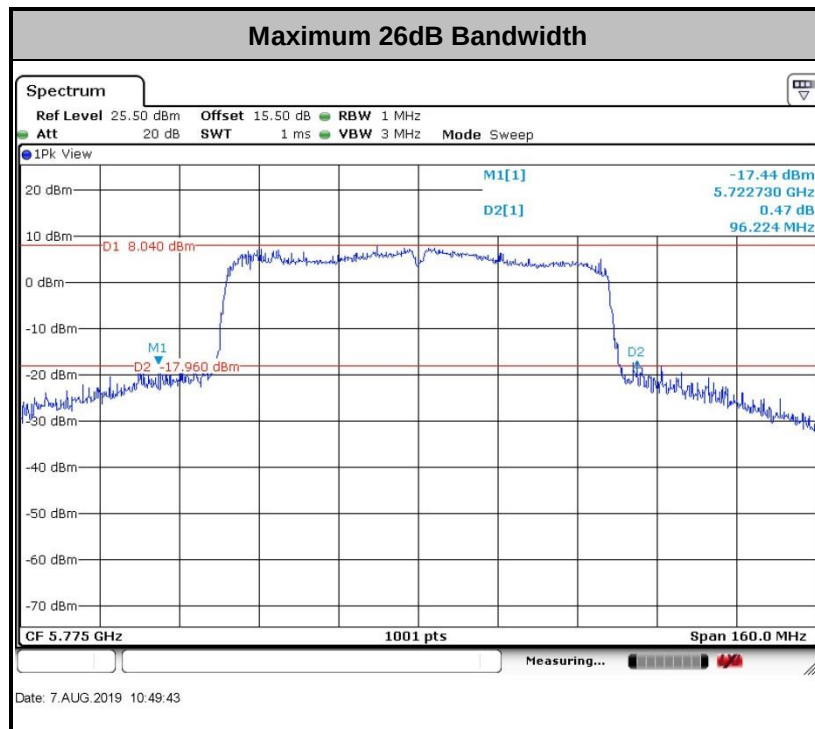




Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<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-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.

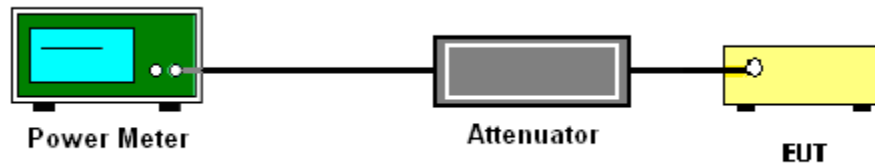
<TXBF Modes>

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):

5. Measurement is performed using a wideband RF power meter.
6. The EUT is configured to transmit at its maximum power control level.
7. Measure the average power of the transmitter
8. 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-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.

<TXBF Modes>

Method SA-3

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

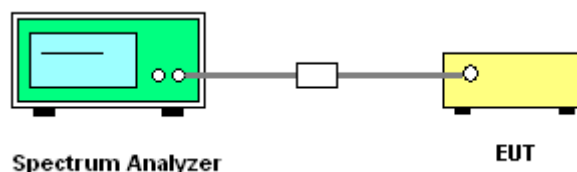
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 kHz.
- Set VBW $\geq$ 1 MHz.
- Number of points in sweep $\geq$ 2 Span / RBW.
- Sweep time $\leq$ (number of points in sweep) $\times$ T, when duty cycle is less than 98 percent where T is the minimum transmission 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 $1/N_{ANT}^{th}$ of the PSD limit.

3.3.4 Test Setup

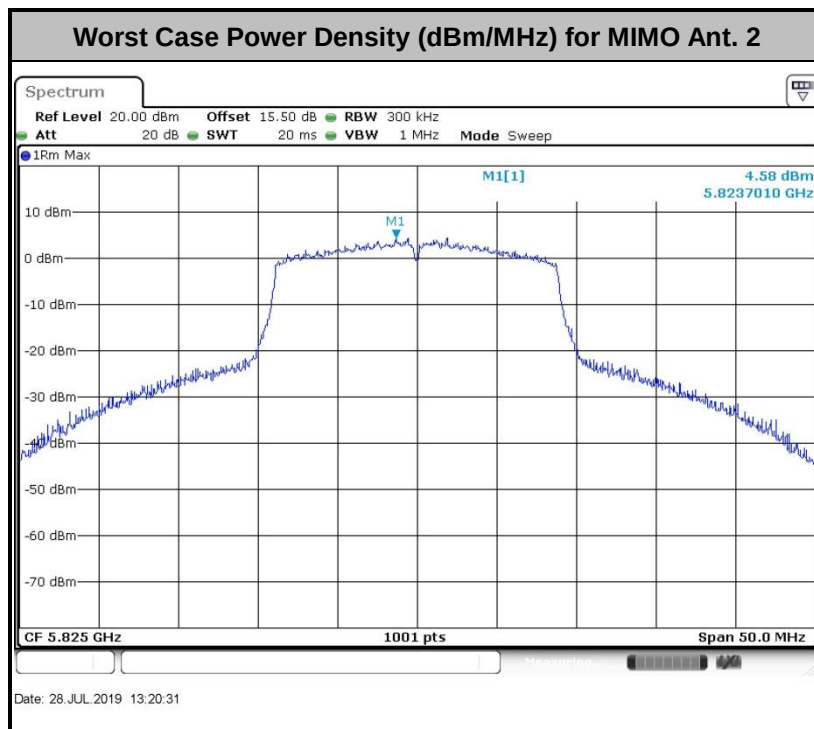
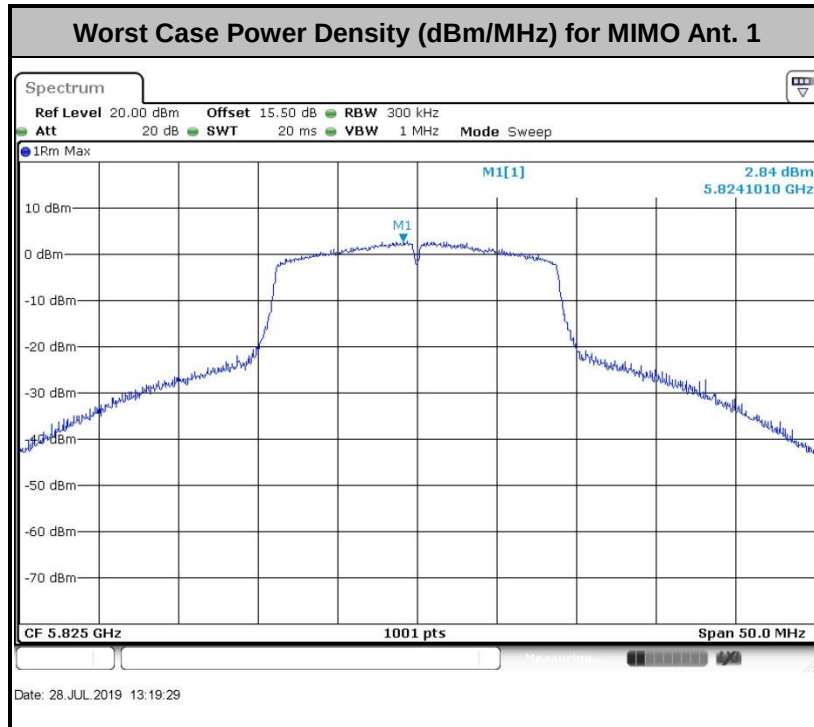


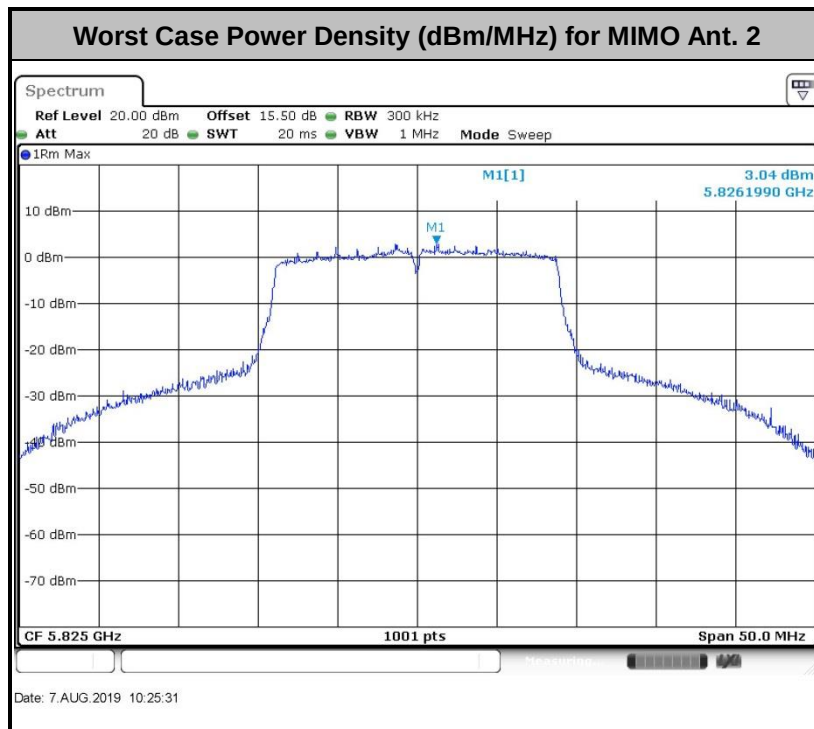
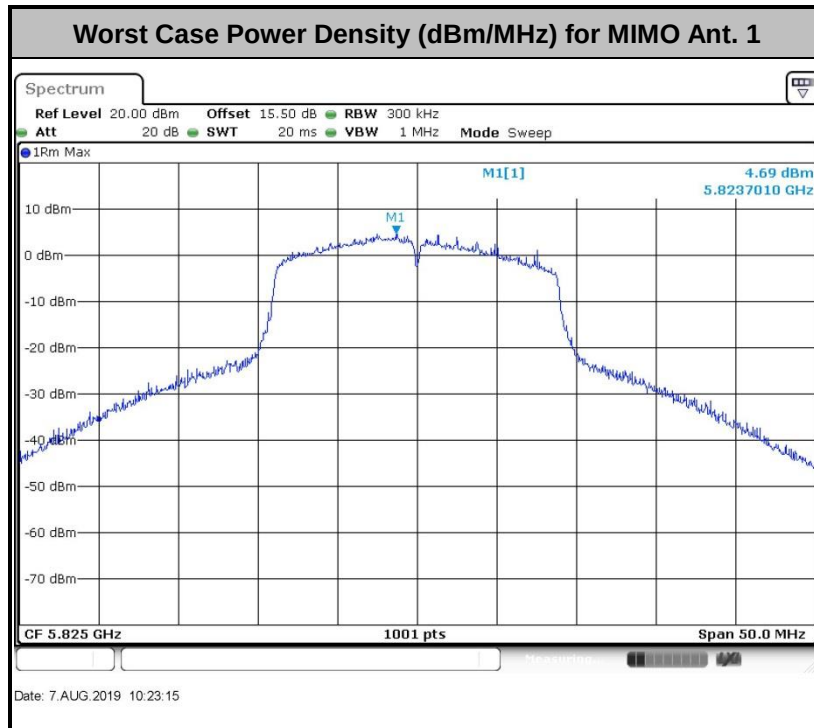


3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

<CDD Modes>



<TXBF Modes>


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.

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

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

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

- (i) 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

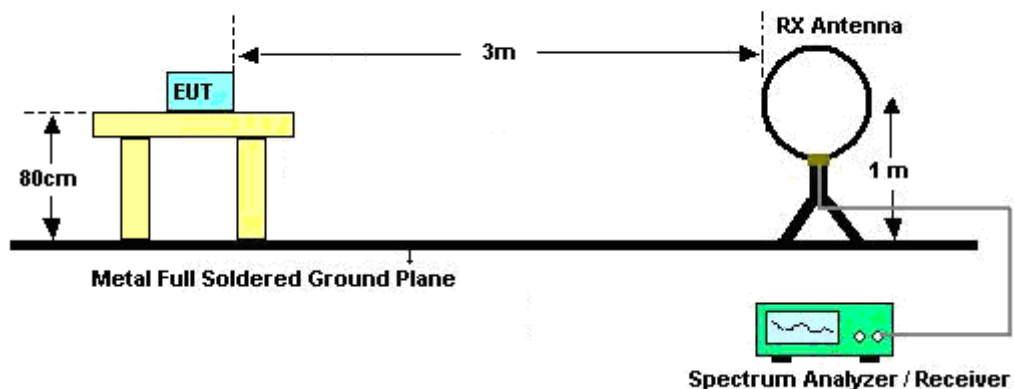
(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

- 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.

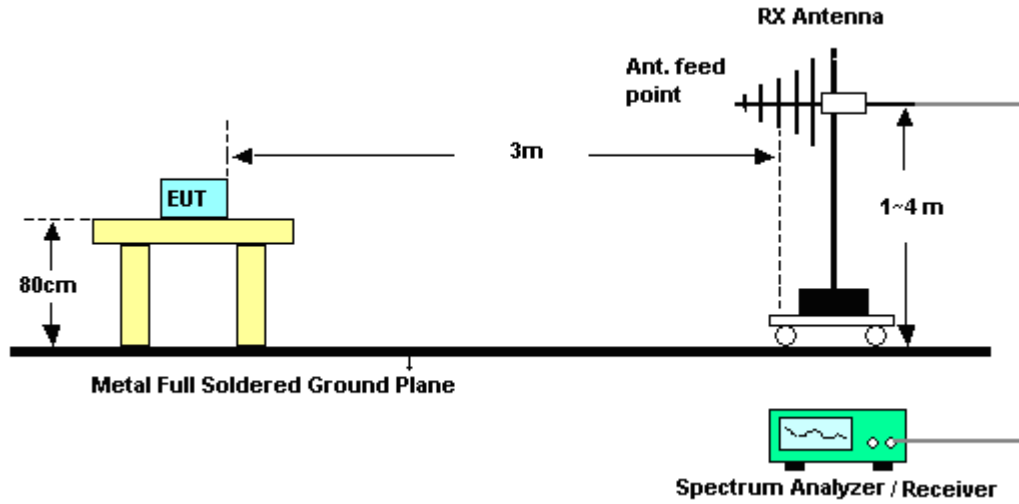
3.4.4 Test Setup

For radiated emissions below 30MHz

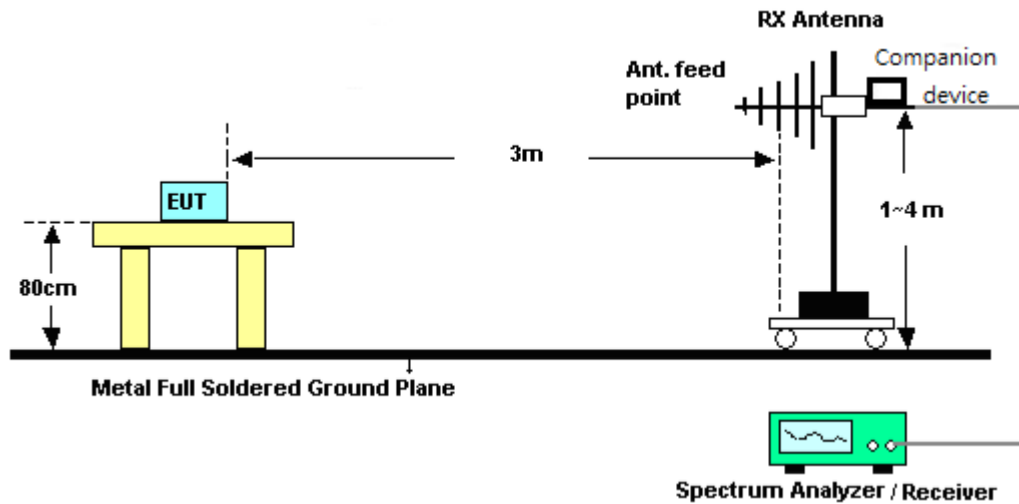


For radiated emissions from 30MHz to 1GHz

<CDD Mode>

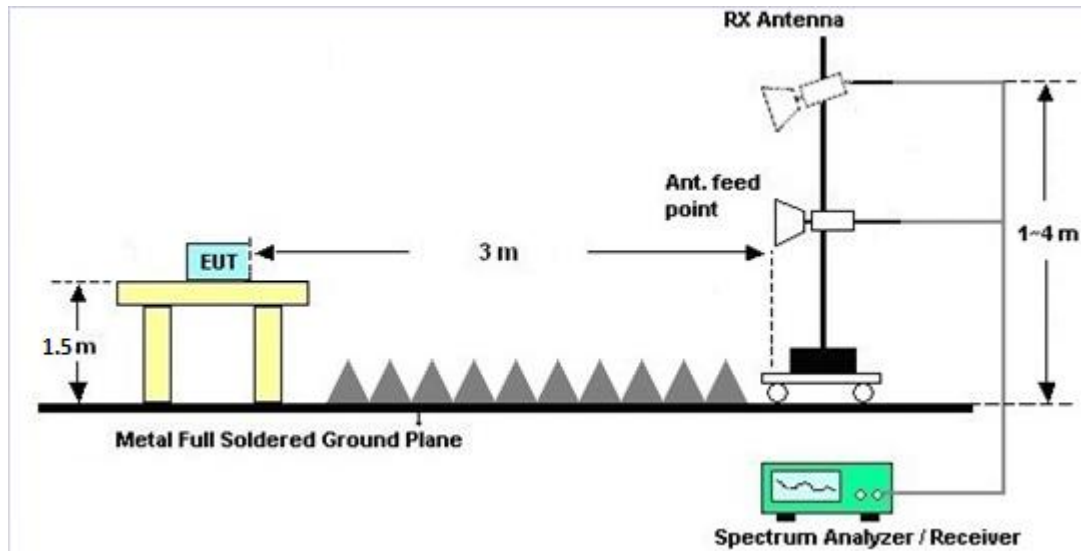


<TXBF Modes>

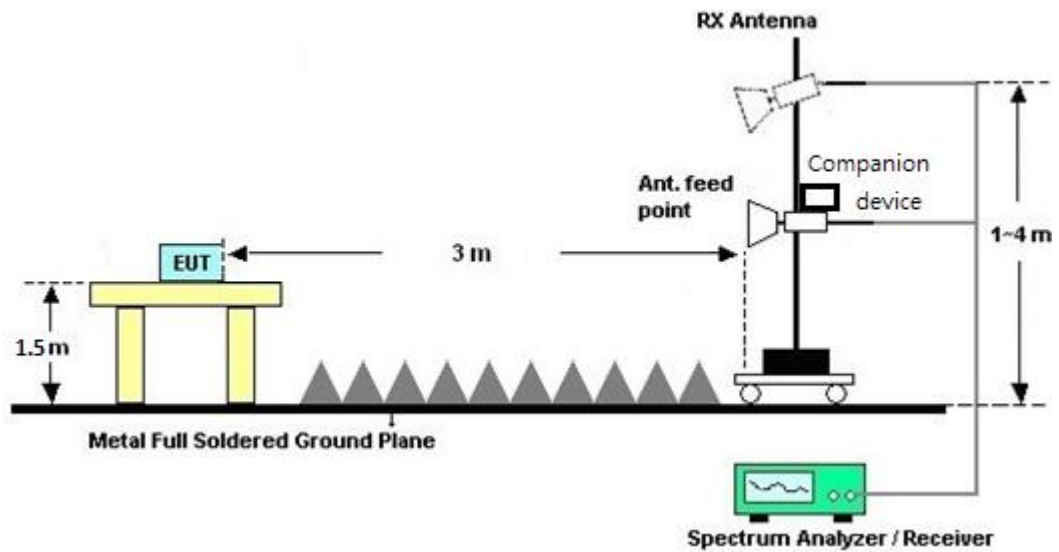


For radiated emissions above 1GHz

<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.

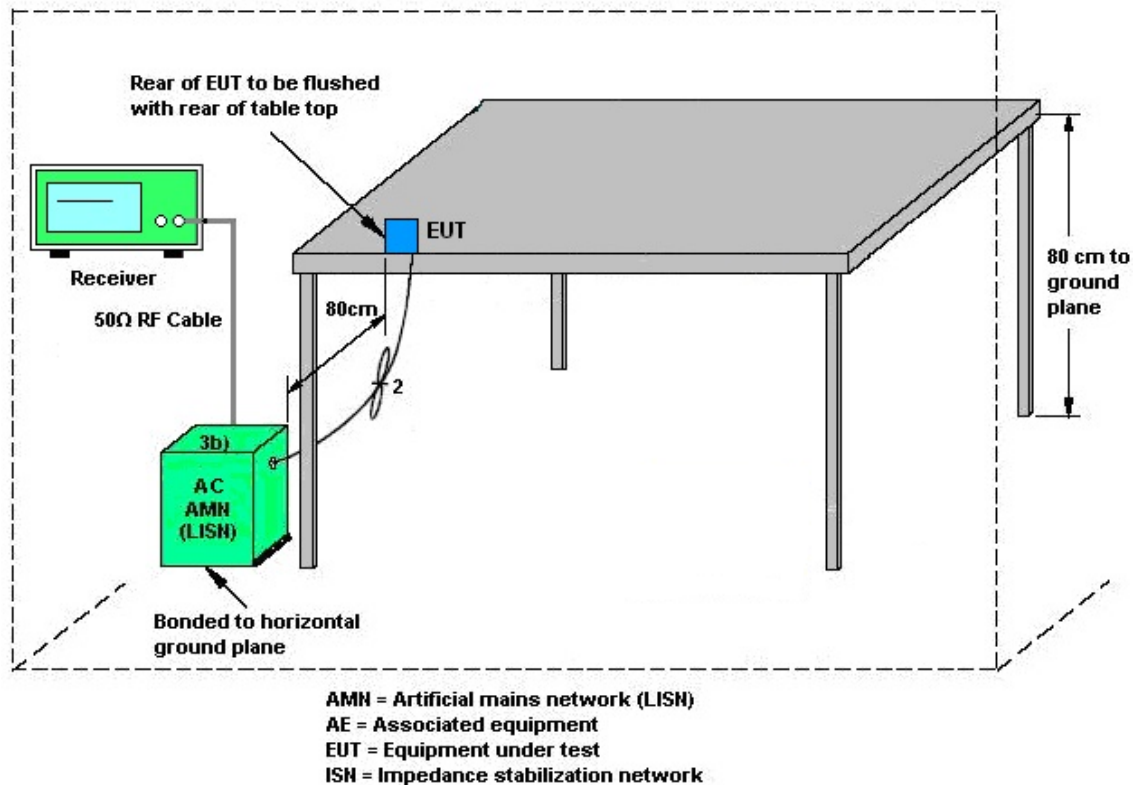
3.5.2 Measuring Instruments

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

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

- A. Information start: make EUT supply information to the access point.
- B. Information stop: stop supplying information to the access point.

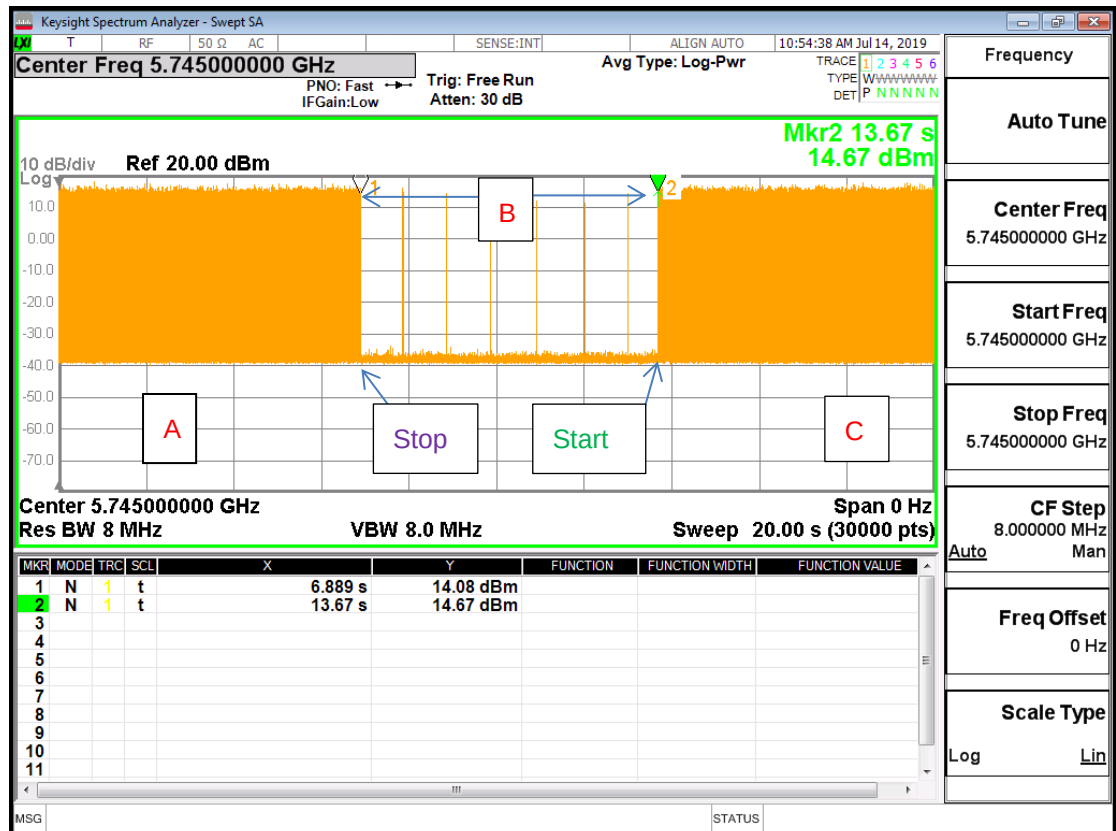
While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving.

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

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



5745MHz



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

3.7 Antenna Requirements

3.7.1 Standard Applicable

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

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = G_{ANT} + 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 G_{ANT} 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., F)2)f)i).

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

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

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

			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant. 1 (dBi)	Ant. 2 (dBi)				
Band IV	5.40	6.14	6.14	8.79	0.14	2.79

Power Limit Reduction = $DG(\text{Power}) - 6\text{dBi}$, (min = 0)

PSD Limit Reduction = $DG(\text{PSD}) - 6\text{dBi}$, (min = 0)

TXBF modes

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

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

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.

			DG	DG	Power	PSD
			for	for	Limit	Limit
	Ant. 1	Ant. 2	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
Band IV	5.40	6.14	8.79	8.79	2.79	2.79

$Power\ Limit\ Reduction = DG(Power) - 6dBi, (min = 0)$

$PSD\ Limit\ Reduction = DG(PSD) - 6dBi, (min = 0)$



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Keysight	N9010A	MY56070412	10Hz~7GHz	Aug. 16, 2018	Jul. 14, 2019	Aug. 15, 2019	DFS (DFS02-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jul. 03, 2019	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 12, 2018	Jul. 03, 2019	Nov. 11, 2019	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 14, 2018	Jul. 03, 2019	Nov. 13, 2019	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 09, 2018	Jul. 03, 2019	Nov. 08, 2019	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Jul. 03, 2019	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Dec. 31, 2018	Jul. 03, 2019	Dec. 30, 2019	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Dec. 31, 2018	Jul. 03, 2019	Dec. 30, 2019	Conduction (CO05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jan. 07, 2019	Jul. 22, 2019~ Aug. 06, 2019	Jan. 06, 2020	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL6111D&008 00N1D01N-06	41912&05	30MHz to 1GHz	Feb. 12, 2019	Jul. 22, 2019~ Aug. 06, 2019	Feb. 11, 2020	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1620	1G~18GHz	Oct. 17, 2018	Jul. 22, 2019~ Aug. 06, 2019	Oct. 16, 2019	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz~40GHz	May 14, 2019	Jul. 22, 2019~ Aug. 06, 2019	May 13, 2020	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 06, 2018	Jul. 22, 2019~ Aug. 06, 2019	Dec. 05, 2019	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 28, 2018	Jul. 22, 2019~ Aug. 06, 2019	Dec. 27, 2019	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-303	171000180005 5007	1GHz~18GHz	Apr. 01, 2019	Jul. 22, 2019~ Aug. 06, 2019	Mar. 31, 2020	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-303	171000180005 4001	1GHz~18GHz	May 19, 2019	Jul. 22, 2019~ Aug. 06, 2019	May 18, 2020	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 23, 2018	Jul. 22, 2019~ Aug. 06, 2019	Aug. 22, 2019	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A (MXE)	MY54130085	20Hz ~ 8.4GHz	Nov. 01, 2018	Jul. 22, 2019~ Aug. 06, 2019	Oct. 31, 2019	Radiation (03CH15-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100390	20Hz~26.5GHz	Dec. 27, 2018	Jul. 22, 2019~ Aug. 06, 2019	Dec. 26, 2019	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Jul. 22, 2019~ Aug. 06, 2019	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Jul. 22, 2019~ Aug. 06, 2019	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24(k5)	RK-000451	N/A	N/A	Jul. 22, 2019~ Aug. 06, 2019	N/A	Radiation (03CH15-HY)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY36980/4	30M-18G	Apr. 15, 2019	Jul. 22, 2019~ Aug. 06, 2019	Apr. 14, 2020	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9838/4	30M-18G	Apr. 15, 2019	Jul. 22, 2019~ Aug. 06, 2019	Apr. 14, 2020	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY802430/4	30M~18GHz	May 13, 2019	Jul. 22, 2019~ Aug. 06, 2019	May 12, 2020	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30MHz-40GHz	Mar. 13, 2019	Jul. 22, 2019~ Aug. 06, 2019	Mar. 12, 2020	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY4274/2	30MHz-40GHz	Mar. 13, 2019	Jul. 22, 2019~ Aug. 06, 2019	Mar. 12, 2020	Radiation (03CH15-HY)
Filter	Wainwright	WLK4-1000-153 0-8000-40SS	SN11	1G Low Pass	Sep. 16, 2018	Jul. 22, 2019~ Aug. 06, 2019	Sep. 15, 2019	Radiation (03CH15-HY)
Filter	Wainwright	WHKX8-5872.5- 6750-18000-40S T	SN3	6.75 GHz Highpass	Sep. 16, 2018	Jul. 22, 2019~ Aug. 06, 2019	Sep. 15, 2019	Radiation (03CH15-HY)
<CDD Mode>								
Power Sensor	DARE	RPR3006W	16I00054SNO 10	10MHz~6GHz	Dec. 19, 2018	Jul. 11, 2019~ Jul. 28, 2019	Dec. 18, 2019	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101397	10Hz~40GHz	Nov. 13, 2018	Jul. 11, 2019~ Jul. 28, 2019	Nov. 12, 2019	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1208382	N/A	Mar. 27, 2019	Jul. 11, 2019~ Jul. 28, 2019	Mar. 26, 2020	Conducted (TH05-HY)
<TXBF Mode>								
Power Sensor	DARE	RPR3006W	16I00054SNO 10	10MHz~6GHz	Dec. 19, 2018	Jul. 25, 2019~ Aug. 19, 2019	Dec. 18, 2019	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101397	10Hz~40GHz	Nov. 13, 2018	Jul. 25, 2019~ Aug. 19, 2019	Nov. 12, 2019	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1208382	N/A	Mar. 27, 2019	Jul. 25, 2019~ Aug. 19, 2019	Mar. 26, 2020	Conducted (TH05-HY)

5 Uncertainty of Evaluation

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

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.2
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Appendix A. Test Result of Conducted Test Items**<CDD Mode>**

Test Engineer:	AnAn Wu/Howard Lin	Temperature:	21~25	°C
Test Date:	2019/7/11~2019/7/28	Relative Humidity:	51~54	%
TX Tool	Compliance	TX Tool Version	1.0.0.52	

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

Band IV												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	149	5745	17.03	16.68	34.27	26.57	16.28	16.28	0.5	Pass
11a	6Mbps	2	157	5785	16.98	16.73	34.87	27.47	16.28	16.28	0.5	Pass
11a	6Mbps	2	165	5825	16.93	16.68	34.02	27.12	16.28	16.28	0.5	Pass
HT20	MCS0	2	149	5745	18.03	17.68	36.36	30.77	17.58	17.58	0.5	Pass
HT20	MCS0	2	157	5785	18.08	17.73	34.07	34.07	17.58	17.58	0.5	Pass
HT20	MCS0	2	165	5825	17.93	17.73	35.27	31.82	17.53	17.58	0.5	Pass
HT40	MCS0	2	151	5755	36.86	36.66	67.07	45.23	36.23	36.23	0.5	Pass
HT40	MCS0	2	159	5795	37.06	36.66	66.35	45.50	36.36	36.32	0.5	Pass
VHT80	MCS0	2	155	5775	76.96	76.84	115.56	99.58	76.40	76.24	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV												
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	149	5745	16.00	16.40	19.21	29.86		6.14		Pass
11a	6Mbps	2	157	5785	16.60	16.80	19.71	29.86		6.14		Pass
11a	6Mbps	2	165	5825	16.50	16.60	19.56	29.86		6.14		Pass
HT20	MCS0	2	149	5745	16.10	16.50	19.31	29.86		6.14		Pass
HT20	MCS0	2	157	5785	16.50	16.70	19.61	29.86		6.14		Pass
HT20	MCS0	2	165	5825	16.20	16.40	19.31	29.86		6.14		Pass
HT40	MCS0	2	151	5755	15.30	15.40	18.36	29.86		6.14		Pass
HT40	MCS0	2	159	5795	15.50	15.60	18.56	29.86		6.14		Pass
VHT20	MCS0	2	149	5745	16.00	16.40	19.21	29.86		6.14		Pass
VHT20	MCS0	2	157	5785	16.40	16.60	19.51	29.86		6.14		Pass
VHT20	MCS0	2	165	5825	16.10	16.30	19.21	29.86		6.14		Pass
VHT40	MCS0	2	151	5755	15.20	15.30	18.26	29.86		6.14		Pass
VHT40	MCS0	2	159	5795	15.40	15.40	18.41	29.86		6.14		Pass
VHT80	MCS0	2	155	5775	15.10	15.20	18.16	29.86		6.14		Pass

TEST RESULTS DATA
Power Spectral Density

Band IV																
Mod.	Data Rate	N _{Tx}	CH.	Freq. (MHz)	Duty Factor (dB)		10log (500kHz /RBW) Factor (dB)		Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	149	5745	0.00	0.00	2.22	4.17	4.94	7.95	27.21		8.79		Pass	
11a	6Mbps	2	157	5785	0.00	0.00	2.22	4.87	5.96	8.97	27.21		8.79		Pass	
11a	6Mbps	2	165	5825	0.00	0.00	2.22	5.49	6.09	9.10	27.21		8.79		Pass	
HT20	MCS0	2	149	5745	0.00	0.00	2.22	4.82	6.32	9.33	27.21		8.79		Pass	
HT20	MCS0	2	157	5785	0.00	0.00	2.22	5.31	6.02	9.03	27.21		8.79		Pass	
HT20	MCS0	2	165	5825	0.00	0.00	2.22	5.06	6.80	9.81	27.21		8.79		Pass	
HT40	MCS0	2	151	5755	0.00	0.00	2.22	1.22	2.00	5.01	27.21		8.79		Pass	
HT40	MCS0	2	159	5795	0.00	0.00	2.22	0.78	1.53	4.54	27.21		8.79		Pass	
VHT80	MCS0	2	155	5775	0.00	0.00	2.22	-2.89	-2.64	0.37	27.21		8.79		Pass	

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

<TXBF Mode>

Test Engineer:	Howard Lin	Temperature:	21~25	°C
Test Date:	2019/7/25~2019/8/19	Relative Humidity:	51~54	%
TX Tool	Compliance	TX Tool Version	1.0.0.52	

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

Band IV												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
VHT20	MCS0	2	149	5745	17.83	17.78	32.97	26.67	17.63	15.98	0.5	Pass
VHT20	MCS0	2	157	5785	18.08	17.83	31.02	29.42	17.13	15.29	0.5	Pass
VHT20	MCS0	2	165	5825	17.93	18.03	26.97	32.42	15.49	16.93	0.5	Pass
VHT40	MCS0	2	151	5755	36.86	36.06	57.63	47.92	35.60	35.07	0.5	Pass
VHT40	MCS0	2	159	5795	36.66	36.76	58.62	49.72	35.69	33.81	0.5	Pass
VHT80	MCS0	2	155	5775	76.72	77.08	81.36	96.22	76.24	75.17	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
VHT20	MCS0	2	149	5745	17.00	17.50	20.27	27.21		8.79		Pass
VHT20	MCS0	2	157	5785	17.00	17.20	20.11	27.21		8.79		Pass
VHT20	MCS0	2	165	5825	17.50	17.70	20.61	27.21		8.79		Pass
VHT40	MCS0	2	151	5755	16.70	17.00	19.86	27.21		8.79		Pass
VHT40	MCS0	2	159	5795	16.50	16.80	19.66	27.21		8.79		Pass
VHT80	MCS0	2	155	5775	16.90	17.00	19.96	27.21		8.79		Pass

TEST RESULTS DATA
Power Spectral Density

Band IV																
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Duty Factor (dB)		10log (500kHz /RBW) Factor (dB)		Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
VHT20	MCS0	2	149	5745	0.00	0.00	2.22		5.72	5.62	8.73	27.21		8.79		Pass
VHT20	MCS0	2	157	5785	0.00	0.00	2.22		6.05	4.82	9.06	27.21		8.79		Pass
VHT20	MCS0	2	165	5825	0.00	0.00	2.22		6.91	5.26	9.92	27.21		8.79		Pass
VHT40	MCS0	2	151	5755	0.00	0.00	2.22		2.92	3.26	6.27	27.21		8.79		Pass
VHT40	MCS0	2	159	5795	0.00	0.00	2.22		2.35	2.39	5.40	27.21		8.79		Pass
VHT80	MCS0	2	155	5775	0.00	0.00	2.22		0.63	-1.24	3.64	27.21		8.79		Pass

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



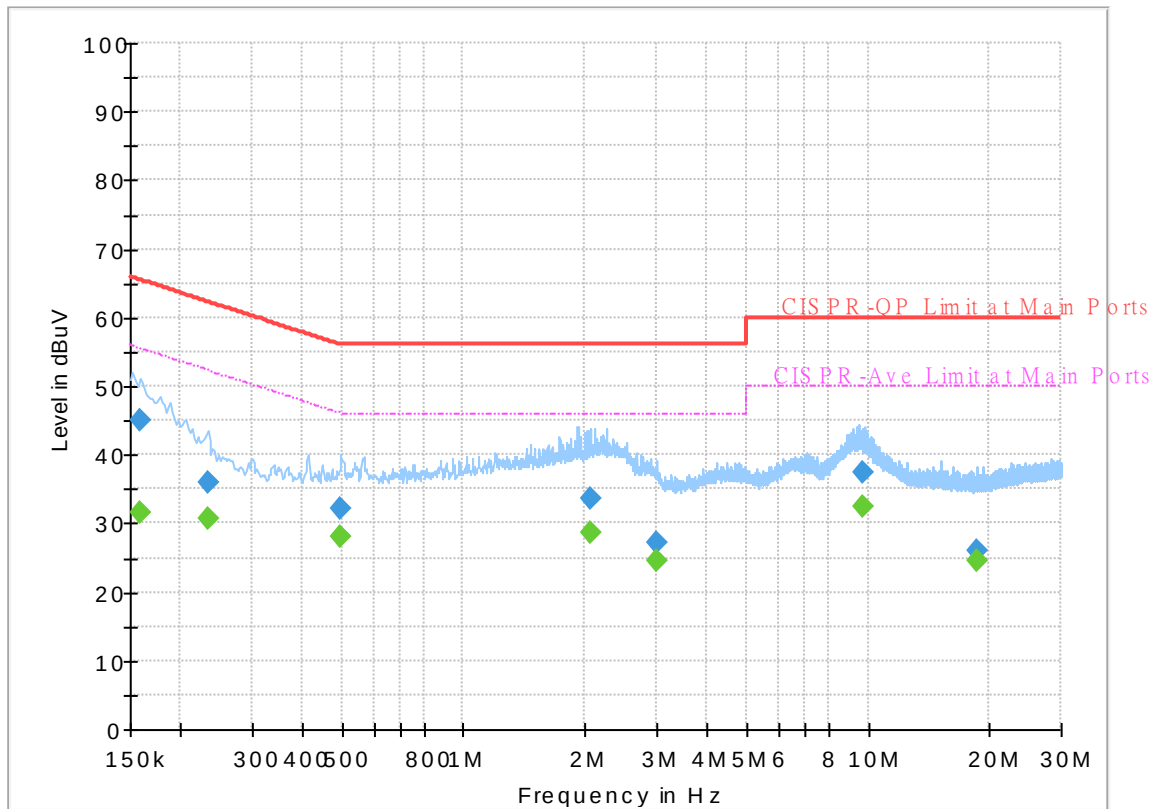
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Jimmy Chang	Temperature :	22~24℃
		Relative Humidity :	52~55%

EUT Information

Report NO : 940344-01
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



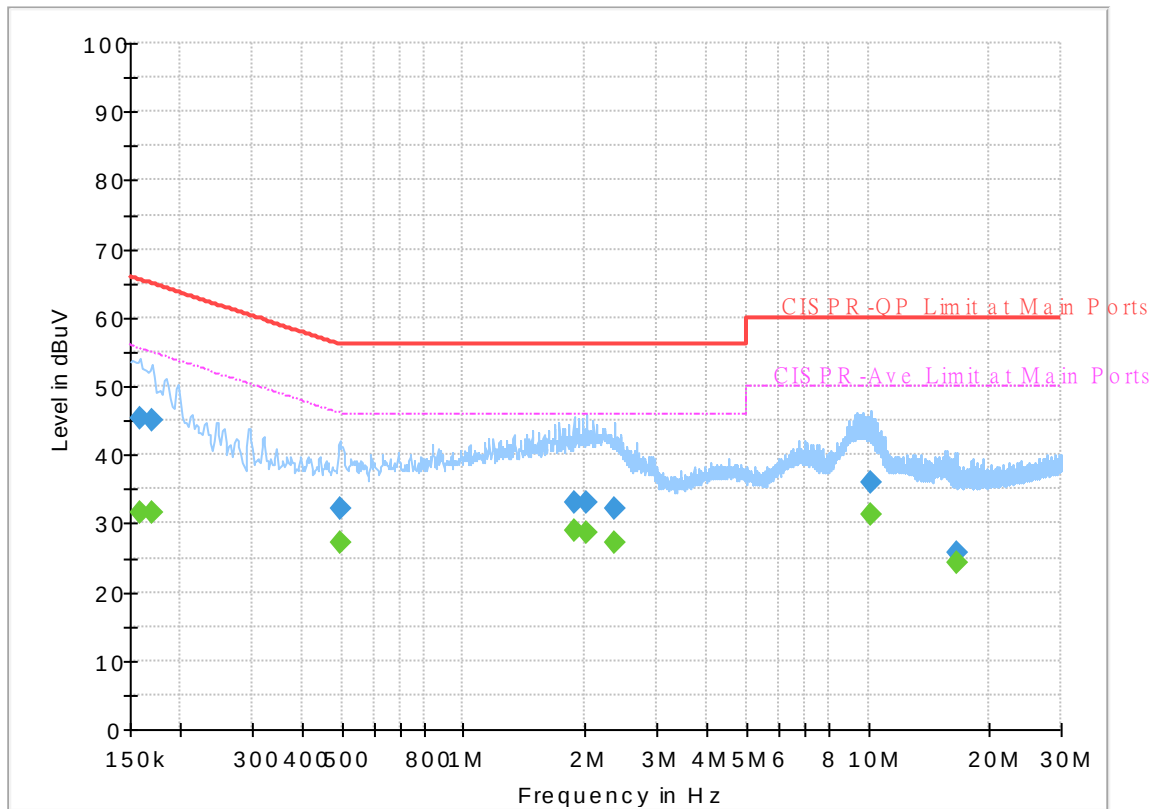
Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.159000	---	31.68	55.52	23.84	L1	OFF	19.4
0.159000	45.04	---	65.52	20.48	L1	OFF	19.4
0.233250	---	30.67	52.33	21.66	L1	OFF	19.4
0.233250	36.03	---	62.33	26.30	L1	OFF	19.4
0.496500	---	28.16	46.06	17.90	L1	OFF	19.4
0.496500	32.15	---	56.06	23.91	L1	OFF	19.4
2.064750	---	28.78	46.00	17.22	L1	OFF	19.5
2.064750	33.58	---	56.00	22.42	L1	OFF	19.5
3.012000	---	24.60	46.00	21.40	L1	OFF	19.5
3.012000	27.12	---	56.00	28.88	L1	OFF	19.5
9.678750	---	32.52	50.00	17.48	L1	OFF	19.8
9.678750	37.42	---	60.00	22.58	L1	OFF	19.8
18.519000	---	24.66	50.00	25.34	L1	OFF	20.1
18.519000	26.12	---	60.00	33.88	L1	OFF	20.1

EUT Information

Report NO : 940344-01
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Neutral

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.159000	---	31.68	55.52	23.84	N	OFF	19.5
0.159000	45.18	---	65.52	20.34	N	OFF	19.5
0.170250	---	31.53	54.95	23.42	N	OFF	19.5
0.170250	45.16	---	64.95	19.79	N	OFF	19.5
0.494250	---	27.26	46.10	18.84	N	OFF	19.5
0.494250	32.10	---	56.10	24.00	N	OFF	19.5
1.873500	---	28.85	46.00	17.15	N	OFF	19.6
1.873500	32.97	---	56.00	23.03	N	OFF	19.6
2.024250	---	28.64	46.00	17.36	N	OFF	19.6
2.024250	33.09	---	56.00	22.91	N	OFF	19.6
2.357250	---	27.06	46.00	18.94	N	OFF	19.6
2.357250	32.09	---	56.00	23.91	N	OFF	19.6
10.162500	---	31.20	50.00	18.80	N	OFF	19.9
10.162500	35.83	---	60.00	24.17	N	OFF	19.9
16.638000	---	24.38	50.00	25.62	N	OFF	20.1
16.638000	25.74	---	60.00	34.26	N	OFF	20.1



Appendix C. Radiated Spurious Emission

Test Engineer :	Karl Hou and BigShow Wang	Temperature :	23~26°C
		Relative Humidity :	50~57%

<CDD Mode>

Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preampl Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 149 5745MHz		5633	53.35	-14.85	68.2	42.1	31.73	9.85	30.33	199	120	P	H
		5683.4	53.16	-39.79	92.95	41.91	31.75	9.86	30.36	199	120	P	H
		5718.2	58.28	-52.02	110.3	46.86	31.93	9.86	30.37	199	120	P	H
		5725	65.46	-56.74	122.2	54.05	31.93	9.86	30.38	199	120	P	H
	*	5745	108.41	-	-	96.94	32	9.86	30.39	199	120	P	H
	*	5745	100.27	-	-	88.8	32	9.86	30.39	199	120	A	H
		5635.6	53.89	-14.31	68.2	42.64	31.73	9.85	30.33	208	97	P	V
		5689	55.39	-41.7	97.09	44.09	31.8	9.86	30.36	208	97	P	V
		5719.6	63.01	-47.68	110.69	51.59	31.93	9.86	30.37	208	97	P	V
		5724.6	71.6	-49.69	121.29	60.19	31.93	9.86	30.38	208	97	P	V
	*	5745	113.04	-	-	101.57	32	9.86	30.39	208	97	P	V
	*	5745	105.35	-	-	93.88	32	9.86	30.39	208	97	A	V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 157 5785MHz		5624	51.51	-16.69	68.2	40.21	31.77	9.85	30.32	253	60	P	H
		5698.8	51.99	-52.33	104.32	40.69	31.8	9.86	30.36	253	60	P	H
		5714.6	51.69	-57.6	109.29	40.33	31.87	9.86	30.37	253	60	P	H
		5723	50.97	-66.67	117.64	39.56	31.93	9.86	30.38	253	60	P	H
	*	5785	108.89	-	-	97.3	32.13	9.87	30.41	253	60	P	H
	*	5785	99.79	-	-	88.2	32.13	9.87	30.41	253	60	A	H
		5853.4	51.91	-62.54	114.45	40.21	32.2	9.94	30.44	253	60	P	H
		5855.4	52.34	-58.35	110.69	40.61	32.23	9.94	30.44	253	60	P	H
		5903	52.29	-32.15	84.44	40.46	32.3	10	30.47	253	60	P	H
		5935.2	51	-17.2	68.2	39.08	32.37	10.04	30.49	253	60	P	H
		5610	53.75	-14.45	68.2	42.42	31.8	9.85	30.32	223	91	P	V
		5670.2	54.35	-28.84	83.19	43.09	31.75	9.86	30.35	223	91	P	V
		5710.2	54.46	-53.6	108.06	43.1	31.87	9.86	30.37	223	91	P	V
		5720.8	53.95	-58.67	112.62	42.53	31.93	9.86	30.37	223	91	P	V
	*	5785	113.35	-	-	101.76	32.13	9.87	30.41	223	91	P	V
	*	5785	105.62	-	-	94.03	32.13	9.87	30.41	223	91	A	V
		5851.4	52.37	-66.64	119.01	40.68	32.2	9.93	30.44	223	91	P	V
		5862.2	52.76	-56.02	108.78	41.03	32.23	9.95	30.45	223	91	P	V
		5900.6	53.89	-32.33	86.22	42.06	32.3	10	30.47	223	91	P	V
		5931	52.91	-15.29	68.2	40.99	32.37	10.03	30.48	223	91	P	V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 165 5825MHz	*	5825	109.03	-	-	97.36	32.2	9.9	30.43	229	353	P	H
	*	5825	101.72	-	-	90.05	32.2	9.9	30.43	229	353	A	H
		5851.4	60.55	-58.46	119.01	48.86	32.2	9.93	30.44	229	353	P	H
		5856	56.15	-54.37	110.52	44.43	32.23	9.94	30.45	229	353	P	H
		5906.6	53.27	-28.51	81.78	41.41	32.33	10	30.47	229	353	P	H
		5929.4	51.82	-16.38	68.2	39.9	32.37	10.03	30.48	229	353	P	H
	*	5825	113.24	-	-	101.57	32.2	9.9	30.43	205	93	P	V
	*	5825	105.97	-	-	94.3	32.2	9.9	30.43	205	93	A	V
		5853.8	63.82	-49.72	113.54	52.09	32.23	9.94	30.44	205	93	P	V
		5858.2	59.84	-50.06	109.9	48.12	32.23	9.94	30.45	205	93	P	V
		5900	54.11	-32.55	86.66	42.29	32.3	9.99	30.47	205	93	P	V
		5942.8	53.21	-14.99	68.2	41.25	32.4	10.05	30.49	205	93	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 149 5745MHz		11490	59.61	-14.39	74	67.13	40.17	14.5	62.19	193	21	P	H
		11490	49.54	-4.46	54	57.06	40.17	14.5	62.19	193	21	A	H
		17235	49	-19.2	68.2	48.87	40.7	18.51	59.08	100	0	P	H
		11490	61.88	-12.12	74	69.4	40.17	14.5	62.19	272	50	P	V
		11490	51.2	-2.8	54	58.72	40.17	14.5	62.19	272	50	A	V
		17235	49.37	-18.83	68.2	49.24	40.7	18.51	59.08	100	0	P	V
802.11a CH 157 5785MHz		11570	59.85	-14.15	74	67.55	40	14.56	62.26	191	20	P	H
		11570	48.3	-5.7	54	56	40	14.56	62.26	191	20	A	H
		17355	50.5	-17.7	68.2	49.2	41.4	18.72	58.82	100	0	P	H
		11570	61.88	-12.12	74	69.58	40	14.56	62.26	267	49	P	V
		11570	50.21	-3.79	54	57.91	40	14.56	62.26	267	49	A	V
		17355	50.57	-17.63	68.2	49.27	41.4	18.72	58.82	100	0	P	V
802.11a CH 165 5825MHz		11650	57.67	-16.33	74	65.71	39.66	14.62	62.32	199	18	P	H
		11650	46	-8	54	54.04	39.66	14.62	62.32	199	18	A	H
		17475	50.58	-17.62	68.2	47.83	42.43	18.88	58.56	100	0	P	H
		11650	59.87	-14.13	74	67.91	39.66	14.62	62.32	258	48	P	V
		11650	47.85	-6.15	54	55.89	39.66	14.62	62.32	258	48	A	V
		17475	50.83	-17.37	68.2	48.08	42.43	18.88	58.56	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 149 5745MHz		5623	52.48	-15.72	68.2	41.18	31.77	9.85	30.32	234	355	P	H
		5693.4	53.27	-47.06	100.33	41.97	31.8	9.86	30.36	234	355	P	H
		5720	57.94	-52.86	110.8	46.52	31.93	9.86	30.37	234	355	P	H
		5725	67.53	-54.67	122.2	56.12	31.93	9.86	30.38	234	355	P	H
	*	5745	108.37	-	-	96.9	32	9.86	30.39	234	355	P	H
	*	5745	99.21	-	-	87.74	32	9.86	30.39	234	355	A	H
		5618	53.75	-14.45	68.2	42.45	31.77	9.85	30.32	237	95	P	V
		5696.4	56.6	-45.95	102.55	45.3	31.8	9.86	30.36	237	95	P	V
		5719.4	63.82	-46.81	110.63	52.4	31.93	9.86	30.37	237	95	P	V
		5724.4	72.35	-48.48	120.83	60.94	31.93	9.86	30.38	237	95	P	V
	*	5745	113.03	-	-	101.56	32	9.86	30.39	237	95	P	V
	*	5745	103.87	-	-	92.4	32	9.86	30.39	237	95	A	V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 157 5785MHz		5622	51.53	-16.67	68.2	40.23	31.77	9.85	30.32	226	332	P	H
		5651.2	51.95	-17.14	69.09	40.73	31.7	9.86	30.34	226	332	P	H
		5711	52.37	-55.91	108.28	41.01	31.87	9.86	30.37	226	332	P	H
		5724.2	51.42	-68.96	120.38	40.01	31.93	9.86	30.38	226	332	P	H
	*	5785	108.75	-	-	97.16	32.13	9.87	30.41	226	332	P	H
	*	5785	99.36	-	-	87.77	32.13	9.87	30.41	226	332	A	H
		5852	50.83	-66.81	117.64	39.14	32.2	9.93	30.44	226	332	P	H
		5862	51.54	-57.3	108.84	39.81	32.23	9.95	30.45	226	332	P	H
		5915	51.41	-24.16	75.57	39.55	32.33	10.01	30.48	226	332	P	H
		5940.2	52.48	-15.72	68.2	40.52	32.4	10.05	30.49	226	332	P	H
		5629.2	53.56	-14.64	68.2	42.27	31.77	9.85	30.33	212	93	P	V
		5676.2	53.76	-33.87	87.63	42.5	31.75	9.86	30.35	212	93	P	V
		5716.8	55.13	-54.78	109.91	43.77	31.87	9.86	30.37	212	93	P	V
		5720	53.9	-56.9	110.8	42.48	31.93	9.86	30.37	212	93	P	V
	*	5785	113.65	-	-	102.06	32.13	9.87	30.41	212	93	P	V
	*	5785	103.79	-	-	92.2	32.13	9.87	30.41	212	93	A	V
		5850.6	53.89	-66.94	120.83	42.2	32.2	9.93	30.44	212	93	P	V
		5867.8	53.57	-53.64	107.21	41.84	32.23	9.95	30.45	212	93	P	V
		5918.6	53.36	-19.56	72.92	41.49	32.33	10.02	30.48	212	93	P	V
		5938.8	52.97	-15.23	68.2	41.02	32.4	10.04	30.49	212	93	P	V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 165 5825MHz	*	5825	109.66	-	-	97.99	32.2	9.9	30.43	260	329	P	H
	*	5825	100.05	-	-	88.38	32.2	9.9	30.43	260	329	A	H
		5850.6	58.04	-62.79	120.83	46.35	32.2	9.93	30.44	260	329	P	H
		5857.4	54.37	-55.76	110.13	42.65	32.23	9.94	30.45	260	329	P	H
		5875.4	53.07	-51.83	104.9	41.3	32.27	9.96	30.46	260	329	P	H
		5933	52.29	-15.91	68.2	40.37	32.37	10.04	30.49	260	329	P	H
	*	5825	113.64	-	-	101.97	32.2	9.9	30.43	187	91	P	V
	*	5825	104.32	-	-	92.65	32.2	9.9	30.43	187	91	A	V
		5851.2	62.33	-57.13	119.46	50.64	32.2	9.93	30.44	187	91	P	V
		5855.6	59.41	-51.22	110.63	47.68	32.23	9.94	30.44	187	91	P	V
		5876.4	55.14	-49.02	104.16	43.36	32.27	9.97	30.46	187	91	P	V
		5929.6	53.51	-14.69	68.2	41.59	32.37	10.03	30.48	187	91	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 149 5745MHz		11490	61.06	-12.94	74	68.58	40.17	14.5	62.19	187	21	P	H
		11490	48.76	-5.24	54	56.28	40.17	14.5	62.19	187	21	A	H
		17235	48.54	-19.66	68.2	48.41	40.7	18.51	59.08	400	0	P	H
		11490	62.4	-11.6	74	69.92	40.17	14.5	62.19	273	50	P	V
		11490	50.23	-3.77	54	57.75	40.17	14.5	62.19	273	50	A	V
		17235	50.01	-18.19	68.2	49.88	40.7	18.51	59.08	100	0	P	V
802.11n HT20 CH 157 5785MHz		11570	59.42	-14.58	74	67.12	40	14.56	62.26	191	20	P	H
		11570	47.55	-6.45	54	55.25	40	14.56	62.26	191	20	A	H
		17355	49.93	-18.27	68.2	48.63	41.4	18.72	58.82	100	0	P	H
		11570	61.16	-12.84	74	68.86	40	14.56	62.26	261	49	P	V
		11570	48.97	-5.03	54	56.67	40	14.56	62.26	261	49	A	V
		17355	49.74	-18.46	68.2	48.44	41.4	18.72	58.82	100	0	P	V
802.11n HT20 CH 165 5825MHz		11650	49.82	-24.18	74	57.86	39.66	14.62	62.32	100	0	P	H
		17475	51.04	-17.16	68.2	48.29	42.43	18.88	58.56	100	0	P	H
		11650	57.99	-16.01	74	66.03	39.66	14.62	62.32	258	46	P	V
		11650	47.59	-6.41	54	55.63	39.66	14.62	62.32	258	46	A	V
		17475	50.01	-18.19	68.2	47.26	42.43	18.88	58.56	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 151 5755MHz		5603.8	52.29	-15.91	68.2	40.95	31.8	9.85	30.31	303	266	P	H
		5700	54.36	-50.84	105.2	43.06	31.8	9.86	30.36	303	266	P	H
		5717	67.52	-42.44	109.96	56.16	31.87	9.86	30.37	303	266	P	H
		5725	69.88	-52.32	122.2	58.47	31.93	9.86	30.38	303	266	P	H
	*	5755	104.34	-	-	92.79	32.07	9.87	30.39	303	266	P	H
	*	5755	95.32	-	-	83.77	32.07	9.87	30.39	303	266	A	H
		5854	51.06	-62.02	113.08	39.33	32.23	9.94	30.44	303	266	P	H
		5857.6	51.37	-58.7	110.07	39.65	32.23	9.94	30.45	303	266	P	H
		5881.4	51.49	-48.96	100.45	39.71	32.27	9.97	30.46	303	266	P	H
		5937.8	51.26	-16.94	68.2	39.34	32.37	10.04	30.49	303	266	P	H
		5639.2	53.61	-14.59	68.2	42.36	31.73	9.85	30.33	232	88	P	V
		5698.8	61.1	-43.22	104.32	49.8	31.8	9.86	30.36	232	88	P	V
		5717.6	74.12	-36.01	110.13	62.7	31.93	9.86	30.37	232	88	P	V
		5721.4	76.24	-37.75	113.99	64.83	31.93	9.86	30.38	232	88	P	V
	*	5755	109.68	-	-	98.13	32.07	9.87	30.39	232	88	P	V
	*	5755	100.61	-	-	89.06	32.07	9.87	30.39	232	88	A	V
		5853	52.59	-62.77	115.36	40.89	32.2	9.94	30.44	232	88	P	V
		5873	53.11	-52.65	105.76	41.33	32.27	9.96	30.45	232	88	P	V
		5881	53.08	-47.66	100.74	41.3	32.27	9.97	30.46	232	88	P	V
		5933.6	53.24	-14.96	68.2	41.32	32.37	10.04	30.49	232	88	P	V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 159 5795MHz		5618.8	51.49	-16.71	68.2	40.19	31.77	9.85	30.32	301	267	P	H
		5698.4	51.67	-52.35	104.02	40.37	31.8	9.86	30.36	301	267	P	H
		5710.6	52.47	-55.7	108.17	41.11	31.87	9.86	30.37	301	267	P	H
		5724.4	52.7	-68.13	120.83	41.29	31.93	9.86	30.38	301	267	P	H
	*	5795	104.89	-	-	93.23	32.2	9.87	30.41	301	267	P	H
	*	5795	95.45	-	-	83.79	32.2	9.87	30.41	301	267	A	H
		5851	52.01	-67.91	119.92	40.32	32.2	9.93	30.44	301	267	P	H
		5855.4	53.44	-57.25	110.69	41.71	32.23	9.94	30.44	301	267	P	H
		5893.6	51.68	-39.72	91.4	39.85	32.3	9.99	30.46	301	267	P	H
		5945.4	51.31	-16.89	68.2	39.35	32.4	10.05	30.49	301	267	P	H
		5638.8	53.19	-15.01	68.2	41.94	31.73	9.85	30.33	204	89	P	V
		5698.6	54.89	-49.28	104.17	43.59	31.8	9.86	30.36	204	89	P	V
		5701	55.72	-49.76	105.48	44.35	31.87	9.86	30.36	204	89	P	V
		5724.8	55.52	-66.22	121.74	44.11	31.93	9.86	30.38	204	89	P	V
	*	5795	110	-	-	98.34	32.2	9.87	30.41	204	89	P	V
	*	5795	100.5	-	-	88.84	32.2	9.87	30.41	204	89	A	V
		5853.6	57.18	-56.81	113.99	45.45	32.23	9.94	30.44	204	89	P	V
		5859.6	55.3	-54.21	109.51	43.58	32.23	9.94	30.45	204	89	P	V
		5883.4	53.65	-45.31	98.96	41.87	32.27	9.97	30.46	204	89	P	V
		5949.2	53.04	-15.16	68.2	41.07	32.4	10.06	30.49	204	89	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 151 5755MHz		11510	49.03	-24.97	74	56.52	40.2	14.52	62.21	100	0	P	H
		17265	48.41	-19.79	68.2	48.07	40.8	18.56	59.02	100	0	P	H
		11510	48.97	-25.03	74	56.46	40.2	14.52	62.21	100	0	P	V
		17265	48.52	-19.68	68.2	48.18	40.8	18.56	59.02	100	0	P	V
802.11n HT40 CH 159 5795MHz		11590	49.85	-24.15	74	57.6	39.95	14.57	62.27	100	0	P	H
		17385	49.95	-18.25	68.2	48.22	41.73	18.75	58.75	100	0	P	H
		11590	47.8	-26.2	74	55.55	39.95	14.57	62.27	100	0	P	V
		17385	49.9	-18.3	68.2	48.17	41.73	18.75	58.75	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 155 5775MHz		5650	53.82	-14.38	68.2	42.6	31.7	9.86	30.34	284	37	P	H
		5700	66.8	-38.4	105.2	55.5	31.8	9.86	30.36	284	37	P	H
		5716	70.65	-39.03	109.68	59.29	31.87	9.86	30.37	284	37	P	H
		5722.4	70.06	-46.21	116.27	58.65	31.93	9.86	30.38	284	37	P	H
	*	5775	101.88	-	-	90.28	32.13	9.87	30.4	284	37	P	H
	*	5775	93.63	-	-	82.03	32.13	9.87	30.4	284	37	A	H
		5850.2	61.24	-60.5	121.74	49.55	32.2	9.93	30.44	284	37	P	H
		5858.6	60.35	-49.44	109.79	48.63	32.23	9.94	30.45	284	37	P	H
		5876.8	56.17	-47.69	103.86	44.39	32.27	9.97	30.46	284	37	P	H
		5938.2	52.04	-16.16	68.2	40.12	32.37	10.04	30.49	284	37	P	H
		5648.2	57.12	-11.08	68.2	45.88	31.73	9.85	30.34	224	19	P	V
		5699.4	70.18	-34.58	104.76	58.88	31.8	9.86	30.36	224	19	P	V
		5719.8	78.3	-32.44	110.74	66.88	31.93	9.86	30.37	224	19	P	V
		5723.4	74.12	-44.43	118.55	62.71	31.93	9.86	30.38	224	19	P	V
	*	5775	106.69	-	-	95.09	32.13	9.87	30.4	224	19	P	V
	*	5775	98.49	-	-	86.89	32.13	9.87	30.4	224	19	A	V
		5853.4	67.42	-47.03	114.45	55.72	32.2	9.94	30.44	224	19	P	V
		5856.8	66.55	-43.75	110.3	54.83	32.23	9.94	30.45	224	19	P	V
		5876.8	58.57	-45.29	103.86	46.79	32.27	9.97	30.46	224	19	P	V
		5932	53.23	-14.97	68.2	41.31	32.37	10.03	30.48	224	19	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11550	48.1	-25.9	74	55.74	40.05	14.55	62.24	100	0	P	H
VHT80		17325	50.36	-17.84	68.2	49.5	41.07	18.67	58.88	100	0	P	H
CH 155		11550	49.15	-24.85	74	56.79	40.05	14.55	62.24	100	0	P	V
5775MHz		17325	49.37	-18.83	68.2	48.51	41.07	18.67	58.88	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Emission below 1GHz****5GHz WIFI 802.11a (LF @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
5GHz 802.11a LF		30	24.27	-15.73	40	30.99	25.2	0.7	32.62	-	-	P	H
		126.03	34.62	-8.88	43.5	48.05	17.6	1.47	32.5	100	0	P	H
		221.09	26.19	-19.81	46	41.33	15.39	1.97	32.5	-	-	P	H
		331.67	29.64	-16.36	46	39.98	19.87	2.33	32.54	-	-	P	H
		368.53	36.7	-9.3	46	45.9	20.87	2.48	32.55	-	-	P	H
		626.55	29.02	-16.98	46	32.1	26.19	3.28	32.55	-	-	P	H
		30.97	30.54	-9.46	40	37.64	24.81	0.71	32.62	100	0	P	V
		126.03	30.03	-13.47	43.5	43.46	17.6	1.47	32.5	-	-	P	V
		257.95	25.03	-20.97	46	35.71	19.67	2.17	32.52	-	-	P	V
		405.39	30.19	-15.81	46	38.02	22.11	2.61	32.55	-	-	P	V
		600.36	31.49	-14.51	46	34.97	25.89	3.23	32.6	-	-	P	V
		824.43	33.49	-12.51	46	33.61	28.19	3.76	32.07	-	-	P	V
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)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT20 CH 149 5745MHz		5600.4	52	-16.2	68.2	40.66	31.8	9.85	30.31	238	253	P	H
		5692.8	51.5	-48.39	99.89	40.2	31.8	9.86	30.36	238	253	P	H
		5716.8	57.7	-52.21	109.91	46.34	31.87	9.86	30.37	238	253	P	H
		5724	68.77	-51.15	119.92	57.36	31.93	9.86	30.38	238	253	P	H
	*	5745	109.78	-	-	98.31	32	9.86	30.39	238	253	P	H
	*	5745	102.44	-	-	90.97	32	9.86	30.39	238	253	A	H
		5625.4	54.74	-13.46	68.2	43.45	31.77	9.85	30.33	240	14	P	V
		5700	60.89	-44.31	105.2	49.59	31.8	9.86	30.36	240	14	P	V
		5720	70.08	-40.72	110.8	58.66	31.93	9.86	30.37	240	14	P	V
		5725	79.93	-42.27	122.2	68.52	31.93	9.86	30.38	240	14	P	V
	*	5745	116.07	-	-	104.6	32	9.86	30.39	240	14	P	V
	*	5745	108.26	-	-	96.79	32	9.86	30.39	240	14	A	V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 157 5785MHz		5626.6	51.29	-16.91	68.2	40	31.77	9.85	30.33	300	259	P	H
		5685.2	52.22	-42.06	94.28	40.92	31.8	9.86	30.36	300	259	P	H
		5705.8	52	-54.83	106.83	40.64	31.87	9.86	30.37	300	259	P	H
		5724.4	51.4	-69.43	120.83	39.99	31.93	9.86	30.38	300	259	P	H
	*	5785	112.61	-	-	101.02	32.13	9.87	30.41	300	259	P	H
	*	5785	104.64	-	-	93.05	32.13	9.87	30.41	300	259	A	H
		5852	50.97	-66.67	117.64	39.28	32.2	9.93	30.44	300	259	P	H
		5858.8	51.68	-58.05	109.73	39.96	32.23	9.94	30.45	300	259	P	H
		5917.4	51.53	-22.27	73.8	39.66	32.33	10.02	30.48	300	259	P	H
		5947.8	52.02	-16.18	68.2	40.06	32.4	10.05	30.49	300	259	P	H
		5640.8	53.3	-14.9	68.2	42.05	31.73	9.85	30.33	201	90	P	V
		5696	54.71	-47.54	102.25	43.41	31.8	9.86	30.36	201	90	P	V
		5716.6	53.85	-56	109.85	42.49	31.87	9.86	30.37	201	90	P	V
		5720.8	54.51	-58.11	112.62	43.09	31.93	9.86	30.37	201	90	P	V
	*	5785	116.41	-	-	104.82	32.13	9.87	30.41	201	90	P	V
	*	5785	108.42	-	-	96.83	32.13	9.87	30.41	201	90	A	V
		5850.4	53.4	-67.89	121.29	41.71	32.2	9.93	30.44	201	90	P	V
		5875	55.23	-49.97	105.2	43.45	32.27	9.96	30.45	201	90	P	V
		5875	55.23	-49.97	105.2	43.45	32.27	9.96	30.45	201	90	P	V
		5935.4	52.75	-15.45	68.2	40.83	32.37	10.04	30.49	201	90	P	V



WiFi Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
	*	5825	102.81	-	-	91.14	32.2	9.9	30.43	297	260	A	H
		5851.6	61.35	-57.2	118.55	49.66	32.2	9.93	30.44	297	260	P	H
		5857	56.09	-54.15	110.24	44.37	32.23	9.94	30.45	297	260	P	H
		5894.8	51.99	-38.52	90.51	40.17	32.3	9.99	30.47	297	260	P	H
		5944.6	51.93	-16.27	68.2	39.97	32.4	10.05	30.49	297	260	P	H
	*	5825	115.62	-	-	103.95	32.2	9.9	30.43	187	89	P	V
	*	5825	107.82	-	-	96.15	32.2	9.9	30.43	187	89	A	V
		5850.2	66.61	-55.13	121.74	54.92	32.2	9.93	30.44	187	89	P	V
		5860.4	62.51	-46.78	109.29	50.78	32.23	9.95	30.45	187	89	P	V
		5884	54.98	-43.54	98.52	43.2	32.27	9.97	30.46	187	89	P	V
		5948.2	52.9	-15.3	68.2	40.93	32.4	10.06	30.49	187	89	P	V



Band 4 5725~5850MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11490	48.3	-25.7	74	54.38	40.17	14.5	60.75	100	0	P	H
VHT20		17235	48.51	-19.69	68.2	46.22	40.7	18.51	56.92	100	0	P	H
CH 149		11490	47.88	-26.12	74	53.96	40.17	14.5	60.75	100	0	P	V
5745MHz		17235	49.4	-18.8	68.2	47.11	40.7	18.51	56.92	100	0	P	V
802.11ac		11570	48.44	-25.56	74	54.64	40	14.56	60.76	100	0	P	H
VHT20		17355	49.96	-18.24	68.2	46.32	41.4	18.72	56.48	100	0	P	H
CH 157		11570	47.63	-26.37	74	53.83	40	14.56	60.76	100	0	P	V
5785MHz		17355	49.92	-18.28	68.2	46.28	41.4	18.72	56.48	100	0	P	V
802.11ac		11650	47.4	-26.6	74	53.87	39.66	14.62	60.75	100	0	P	H
VHT20		17475	49.67	-18.53	68.2	44.41	42.43	18.88	56.05	100	0	P	H
CH 165		11650	47.19	-26.81	74	53.66	39.66	14.62	60.75	100	0	P	V
5825MHz		17475	49.16	-19.04	68.2	43.9	42.43	18.88	56.05	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 151 5755MHz		5609.6	51.23	-16.97	68.2	39.9	31.8	9.85	30.32	343	15	P	H
		5699.2	56.23	-48.38	104.61	44.93	31.8	9.86	30.36	343	15	P	H
		5719.8	70.62	-40.12	110.74	59.2	31.93	9.86	30.37	343	15	P	H
		5723.4	73.55	-45	118.55	62.14	31.93	9.86	30.38	343	15	P	H
	*	5755	105.81	-	-	94.26	32.07	9.87	30.39	343	15	P	H
	*	5755	98.65	-	-	87.1	32.07	9.87	30.39	343	15	A	H
		5852	50.83	-66.81	117.64	39.14	32.2	9.93	30.44	343	15	P	H
		5873.4	51.15	-54.5	105.65	39.37	32.27	9.96	30.45	343	15	P	H
		5892.4	51.89	-40.4	92.29	40.06	32.3	9.99	30.46	343	15	P	H
		5943.6	51.53	-16.67	68.2	39.57	32.4	10.05	30.49	343	15	P	H
		5644.4	56.29	-11.91	68.2	45.05	31.73	9.85	30.34	214	22	P	V
		5698.8	64.32	-40	104.32	53.02	31.8	9.86	30.36	214	22	P	V
		5714.8	84.74	-24.61	109.35	73.38	31.87	9.86	30.37	214	22	P	V
		5724.2	80.64	-39.74	120.38	69.23	31.93	9.86	30.38	214	22	P	V
	*	5755	113.09	-	-	101.54	32.07	9.87	30.39	214	22	P	V
	*	5755	105.42	-	-	93.87	32.07	9.87	30.39	214	22	A	V
		5851	52.96	-66.96	119.92	41.27	32.2	9.93	30.44	214	22	P	V
		5861.6	53.66	-55.29	108.95	41.93	32.23	9.95	30.45	214	22	P	V
		5887.4	53.17	-42.82	95.99	41.38	32.27	9.98	30.46	214	22	P	V
		5927.6	52.56	-15.64	68.2	40.64	32.37	10.03	30.48	214	22	P	V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 159 5795MHz		5624.2	50.98	-17.22	68.2	39.68	31.77	9.85	30.32	349	13	P	H
		5680.4	50.92	-39.81	90.73	39.66	31.75	9.86	30.35	349	13	P	H
		5719.2	52.26	-58.32	110.58	40.84	31.93	9.86	30.37	349	13	P	H
		5721.4	53.61	-60.38	113.99	42.2	31.93	9.86	30.38	349	13	P	H
	*	5795	106.92	-	-	95.26	32.2	9.87	30.41	349	13	P	H
	*	5795	99.36	-	-	87.7	32.2	9.87	30.41	349	13	A	H
		5852.4	54.16	-62.57	116.73	42.46	32.2	9.94	30.44	349	13	P	H
		5855.6	56.51	-54.12	110.63	44.78	32.23	9.94	30.44	349	13	P	H
		5901.2	52.34	-33.43	85.77	40.51	32.3	10	30.47	349	13	P	H
		5946.6	52.42	-15.78	68.2	40.46	32.4	10.05	30.49	349	13	P	H
		5636.6	53.77	-14.43	68.2	42.52	31.73	9.85	30.33	199	91	P	V
		5695.6	54.03	-47.93	101.96	42.73	31.8	9.86	30.36	199	91	P	V
		5710.4	56.91	-51.2	108.11	45.55	31.87	9.86	30.37	199	91	P	V
		5722.4	58.05	-58.22	116.27	46.64	31.93	9.86	30.38	199	91	P	V
	*	5795	112.77	-	-	101.11	32.2	9.87	30.41	199	91	P	V
	*	5795	105.17	-	-	93.51	32.2	9.87	30.41	199	91	A	V
		5850	58.9	-63.3	122.2	47.21	32.2	9.93	30.44	199	91	P	V
		5855	58.66	-52.14	110.8	46.93	32.23	9.94	30.44	199	91	P	V
		5882	55.65	-44.35	100	43.87	32.27	9.97	30.46	199	91	P	V
		5935.8	52.97	-15.23	68.2	41.05	32.37	10.04	30.49	199	91	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11510	47.92	-26.08	74	53.96	40.2	14.52	60.76	100	0	P	H
VHT40		17265	49.42	-18.78	68.2	46.87	40.8	18.56	56.81	100	0	P	H
CH 151		11510	48.55	-25.45	74	54.59	40.2	14.52	60.76	100	0	P	V
5755MHz		17265	49.59	-18.61	68.2	47.04	40.8	18.56	56.81	100	0	P	V
802.11ac		11590	48.1	-25.9	74	54.34	39.95	14.57	60.76	100	0	P	H
VHT40		17385	49.42	-18.78	68.2	45.32	41.73	18.75	56.38	100	0	P	H
CH 159		11590	47.67	-26.33	74	53.91	39.95	14.57	60.76	100	0	P	V
5795MHz		17385	49.89	-18.31	68.2	45.79	41.73	18.75	56.38	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 155 5775MHz		5647.2	52.13	-16.07	68.2	40.89	31.73	9.85	30.34	250	313	P	H
		5692.8	62.36	-37.53	99.89	51.06	31.8	9.86	30.36	250	313	P	H
		5720	68.22	-42.58	110.8	56.8	31.93	9.86	30.37	250	313	P	H
		5724.4	70.15	-50.68	120.83	58.74	31.93	9.86	30.38	250	313	P	H
	*	5775	102.95	-	-	91.35	32.13	9.87	30.4	250	313	P	H
	*	5775	94.81	-	-	83.21	32.13	9.87	30.4	250	313	A	H
		5853.6	60.28	-53.71	113.99	48.55	32.23	9.94	30.44	250	313	P	H
		5857.6	58.89	-51.18	110.07	47.17	32.23	9.94	30.45	250	313	P	H
		5878.2	54.14	-48.68	102.82	42.36	32.27	9.97	30.46	250	313	P	H
		5940	51.26	-16.94	68.2	39.3	32.4	10.05	30.49	250	313	P	H
		5650	58.61	-9.59	68.2	47.39	31.7	9.86	30.34	238	14	P	V
		5697.6	73.98	-29.45	103.43	62.68	31.8	9.86	30.36	238	14	P	V
		5717.8	78.89	-31.29	110.18	67.47	31.93	9.86	30.37	238	14	P	V
		5724.2	80.74	-39.64	120.38	69.33	31.93	9.86	30.38	238	14	P	V
	*	5775	109.22	-	-	97.62	32.13	9.87	30.4	238	14	P	V
	*	5775	101.72	-	-	90.12	32.13	9.87	30.4	238	14	A	V
		5852	68.81	-48.83	117.64	57.12	32.2	9.93	30.44	238	14	P	V
		5858.6	67.6	-42.19	109.79	55.88	32.23	9.94	30.45	238	14	P	V
		5878.6	61.66	-40.87	102.53	49.88	32.27	9.97	30.46	238	14	P	V
		5930.8	54.31	-13.89	68.2	42.39	32.37	10.03	30.48	238	14	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11550	48.01	-25.99	74	54.17	40.05	14.55	60.76	100	0	P	H
VHT80		17325	50.06	-18.14	68.2	46.91	41.07	18.67	56.59	100	0	P	H
CH 155		11550	47.54	-26.46	74	53.7	40.05	14.55	60.76	100	0	P	V
5775MHz		17325	49.86	-18.34	68.2	46.71	41.07	18.67	56.59	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
5GHz 802.11ac VHT80 LF		124.09	34.07	-9.43	43.5	47.53	17.6	1.45	32.51	-	-	P	H
		239.52	39.31	-6.69	46	52.52	17.24	2.06	32.51	100	0	P	H
		368.53	37.41	-8.59	46	46.61	20.87	2.48	32.55	-	-	P	H
		419.94	37.77	-8.23	46	45.08	22.6	2.64	32.55	-	-	P	H
		718.7	36.08	-9.92	46	37.86	27.12	3.46	32.36	-	-	P	H
		861.29	34.89	-11.11	46	33.78	29.1	3.87	31.86	-	-	P	H
		31.94	34.92	-5.08	40	42.68	24.14	0.72	32.62	100	63	P	V
		78.5	29.25	-10.75	40	47.35	13.25	1.2	32.55	-	-	P	V
		167.74	29.45	-14.05	43.5	44.3	15.83	1.82	32.5	-	-	P	V
		240.49	32.63	-13.37	46	45.72	17.36	2.06	32.51	-	-	P	V
		398.6	30.7	-15.3	46	38.82	21.84	2.59	32.55	-	-	P	V
		719.67	32.97	-13.03	46	34.69	27.18	3.46	32.36	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Note symbol

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



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

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

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

For Peak Limit @ 2390MHz:

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

For Average Limit @ 2390MHz:

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

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



Appendix D. Radiated Spurious Emission Plots

Test Engineer :	Karl Hou and BigShow Wang	Temperature :	23~26°C
		Relative Humidity :	50~57%

Note symbol

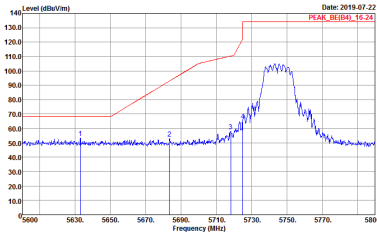
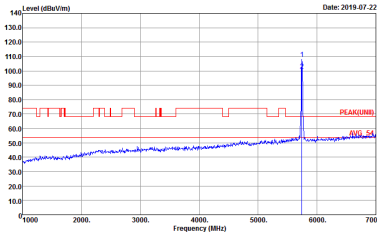
-L	Low channel location
-R	High channel location



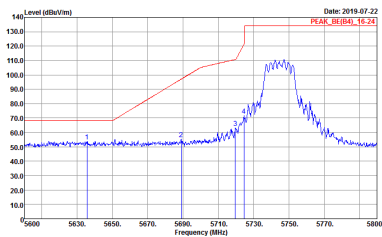
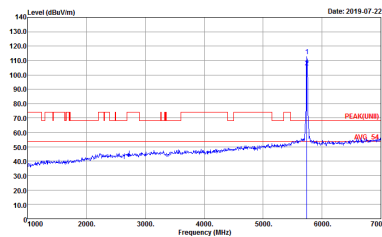
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Band 4 - 5725~5850MHz

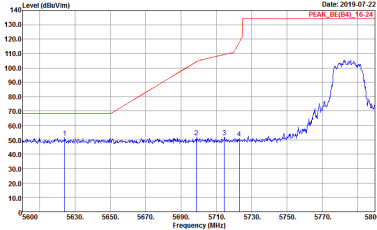
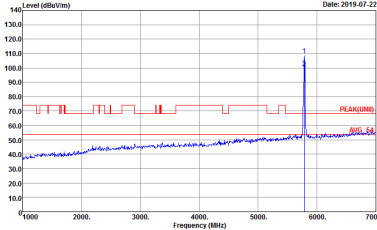
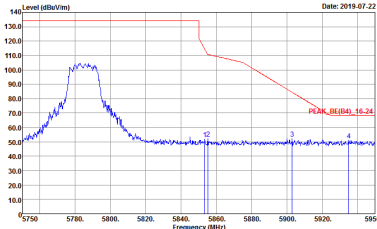
WIFI 802.11a (Band Edge @ 3m)

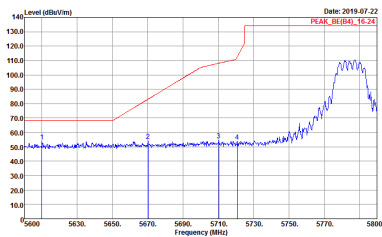
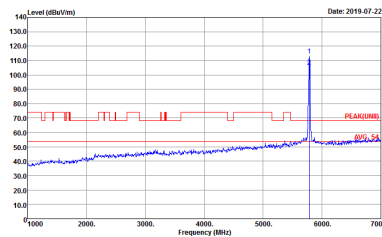
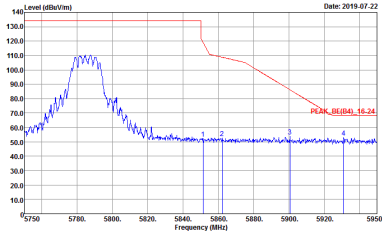
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 940344-01 Mode : 57	 Site : 03CH15-HY Condition : PEAK(FUND)_16-24 3m 91200_15_1620 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 940344-01 Mode : 57



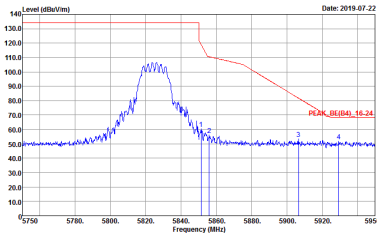
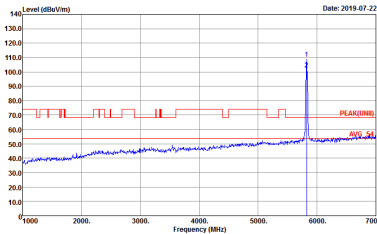
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-14Y Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 57	 Site : 03CH15-14Y Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 57



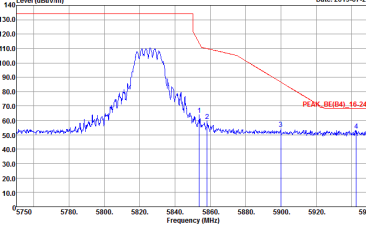
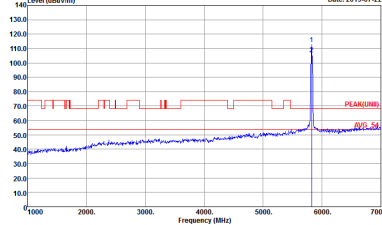
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 5B	 Site : 03CH15-HY Condition : PEAK(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 5B
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 5B	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 5B	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 5B
	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 5B	Left blank



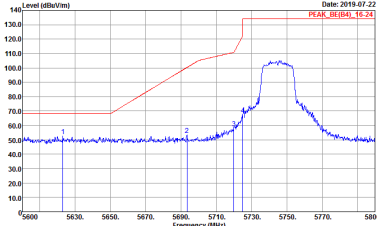
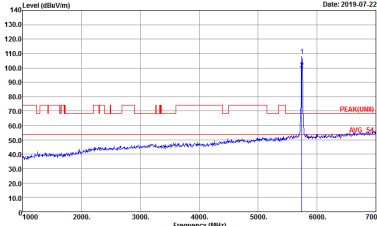
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-11Y Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 59	 Site : 03CH15-11Y Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 59



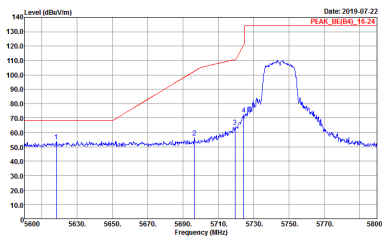
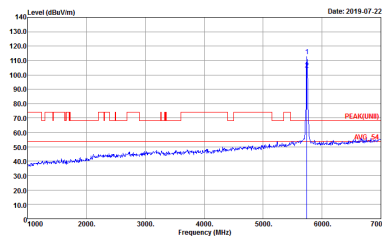
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-11Y Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 59	 Site : 03CH15-11Y Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 59



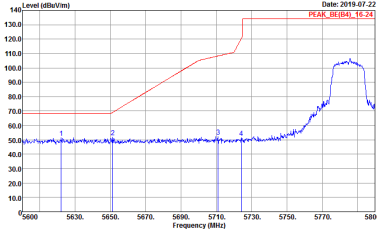
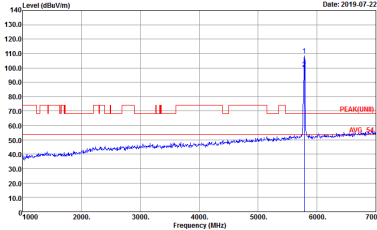
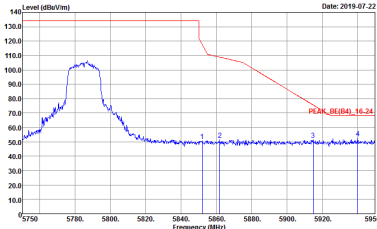
Band 4 5725~5850MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 60	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 60

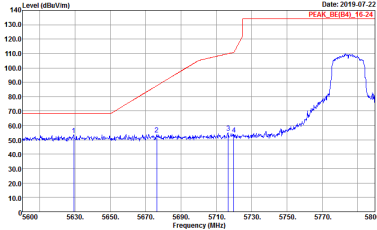
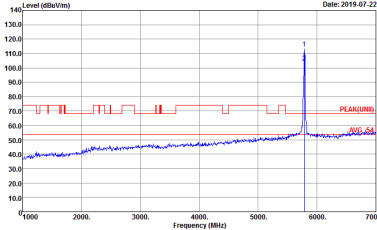
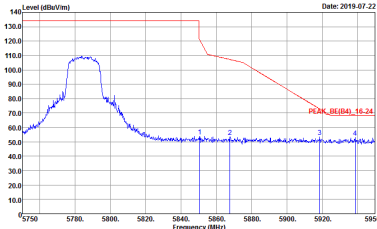


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-11Y Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 60	 Site : 03CH15-11Y Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 60

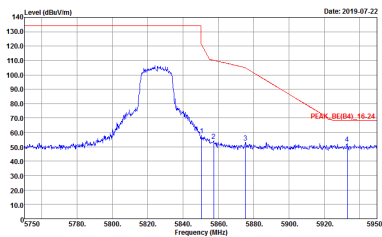
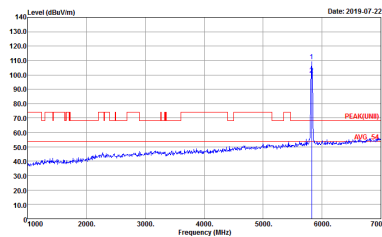


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 61	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 61
	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 61	Left blank

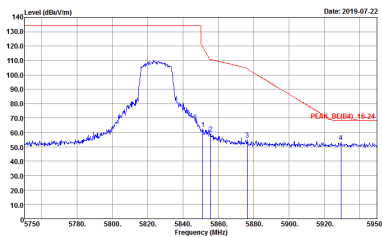
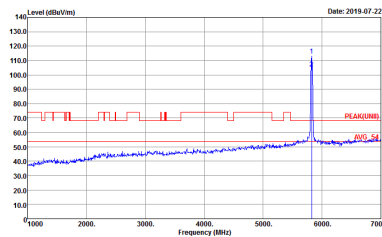


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 61	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 61
	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 61	Left blank



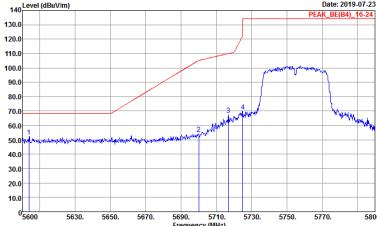
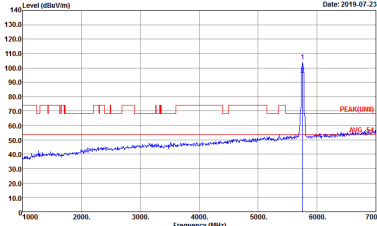
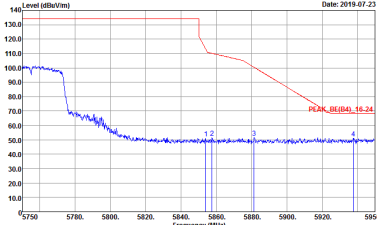
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-11Y Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 62	 Site : 03CH15-11Y Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 62



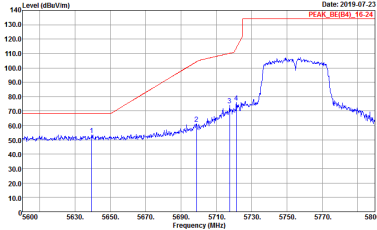
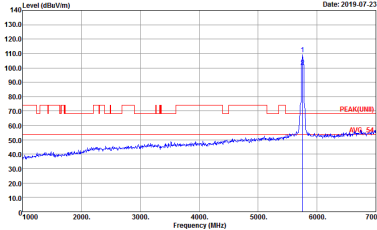
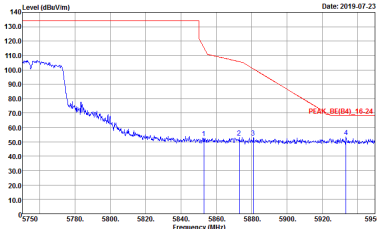
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-11Y Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 62	 Site : 03CH15-11Y Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 62



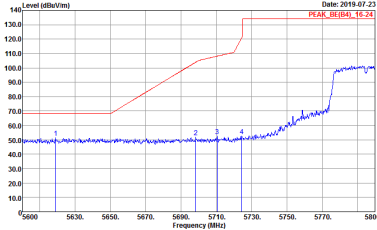
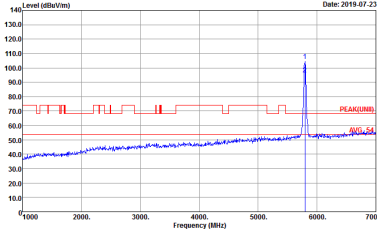
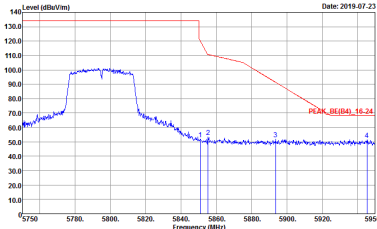
Band 4 5725~5850MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 63	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 63
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 63	Left blank

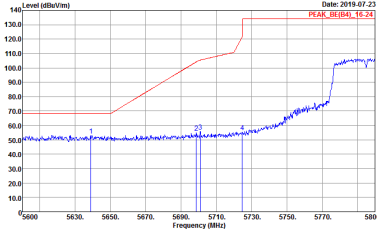
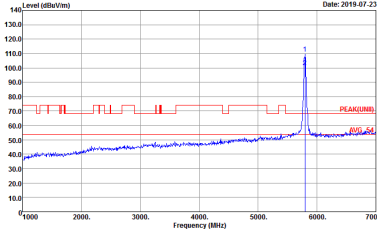
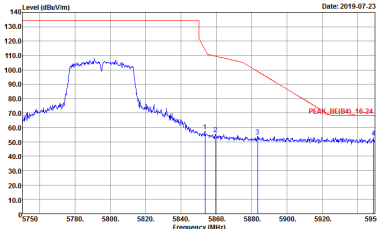


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 63	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 63
	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 63	Left blank

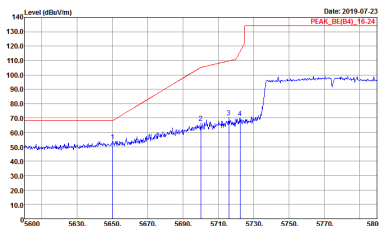
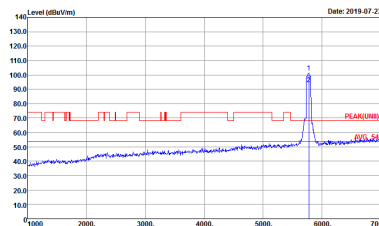
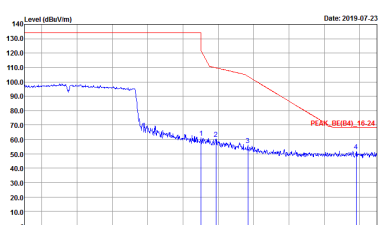


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 64	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 64
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 64	Left blank

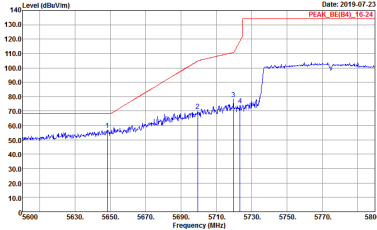
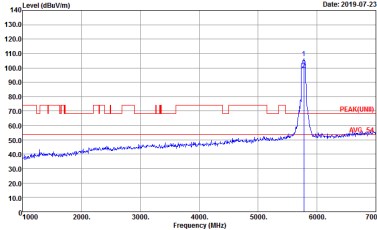
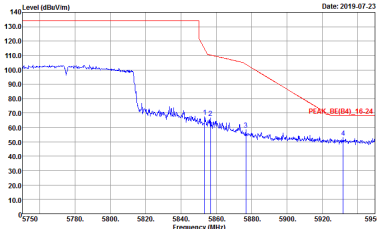


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 64	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 64
	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 64	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+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 940344-01 : 65	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 940344-01 : 65
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 940344-01 : 65	Left blank

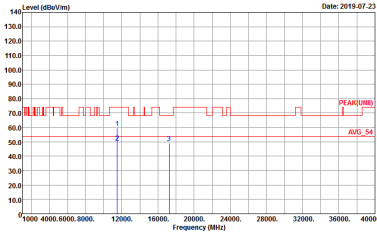
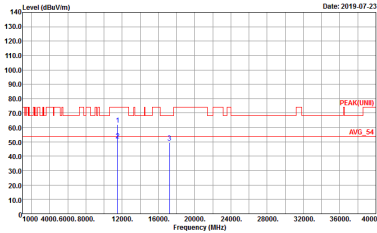


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 65	 Site : 03CH15-HY Condition : PEAK(FUND)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 65
	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 65	Left blank

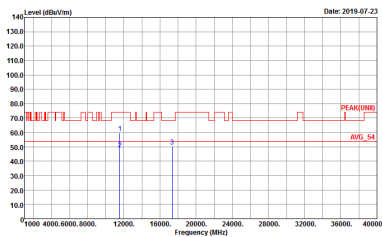
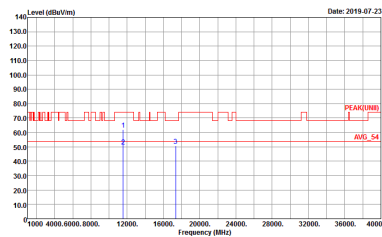


Band 4 - 5725~5850MHz

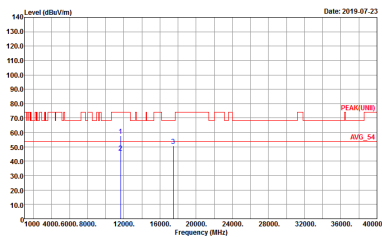
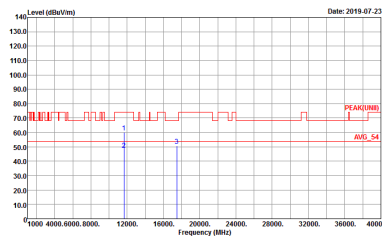
WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 57	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 57



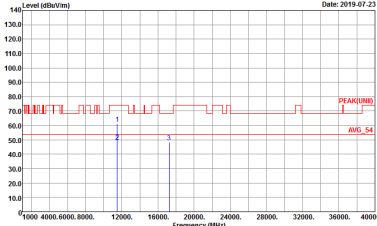
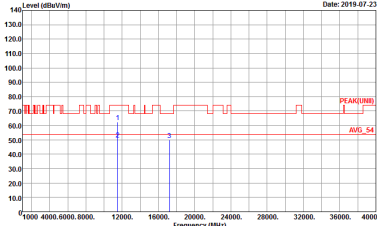
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-14Y Condition : PEAK(UNII) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 56	 Site : 03CH15-14Y Condition : PEAK(UNII) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 56



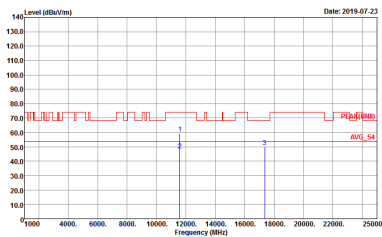
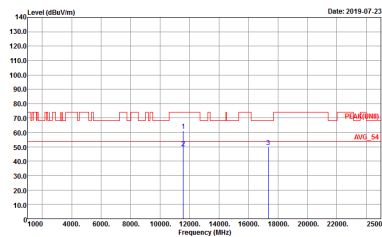
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-14Y Condition : PEAK(UNII) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 59	 Site : 03CH15-14Y Condition : PEAK(UNII) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 59



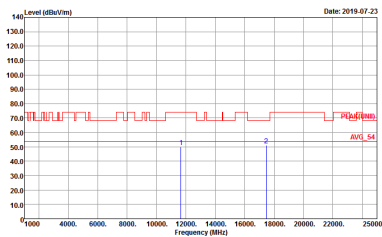
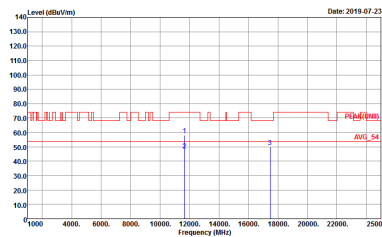
Band 4 5725~5850MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH149 5745MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 60	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 60



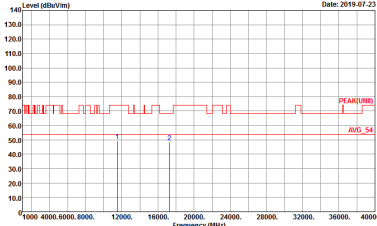
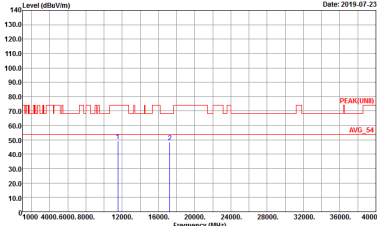
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH157 5785MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-14Y Condition : PEAK(UNII) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 61	 Site : 03CH15-14Y Condition : PEAK(UNII) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 61



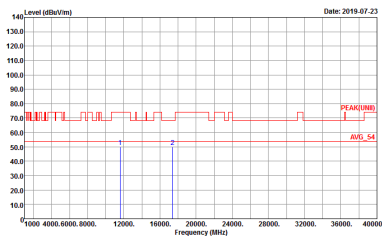
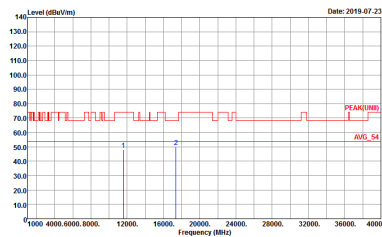
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-11Y Condition : PEAK(UNII) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 62	 Site : 03CH15-11Y Condition : PEAK(UNII) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 62



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

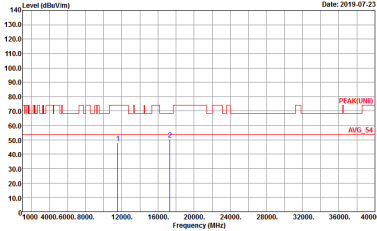
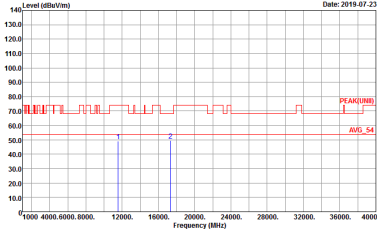
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 63	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 63



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH159 5795MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-11Y Condition : PEAK(UNB) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 64	 Site : 03CH15-11Y Condition : PEAK(UNB) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 64



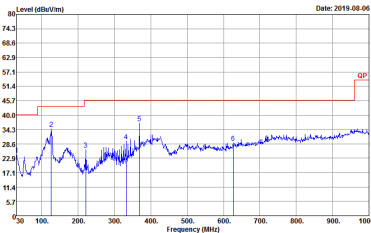
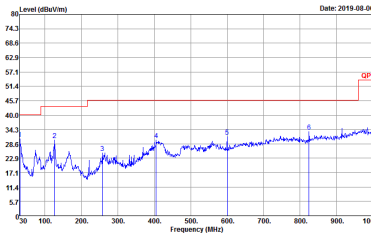
Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 65	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 65



Emission below 1GHz

5GHz WIFI 802.11a (LF)

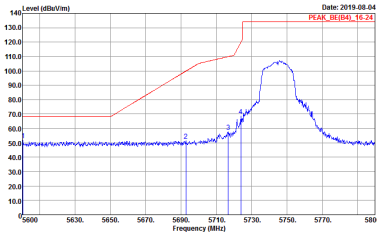
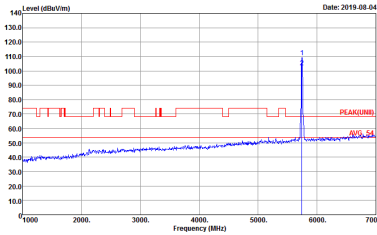
WIFI	5GHz 5725~5850MHz	
ANT	802.11a LF	
1+2	Horizontal	Vertical
QP / Peak	 Site : 03CH15-HY Condition : QP 3m BIL06_15_41912 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 73	 Site : 03CH15-HY Condition : QP 3m BIL06_15_41912 VERTICAL Detector : Peak Project : 940344-01 Mode : 73



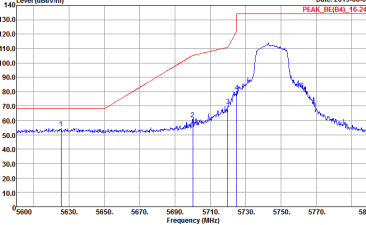
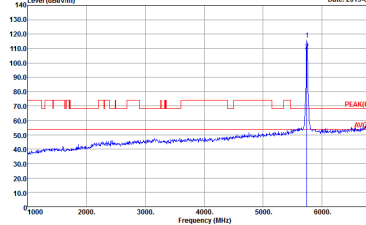
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Band 4 - 5725~5850MHz

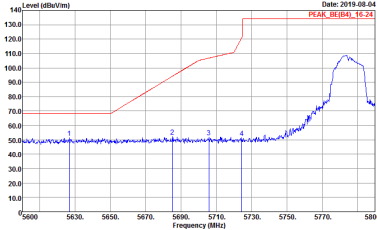
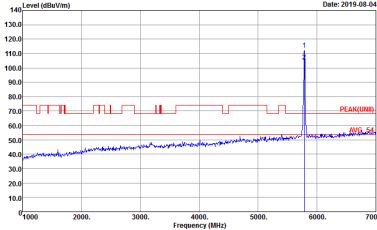
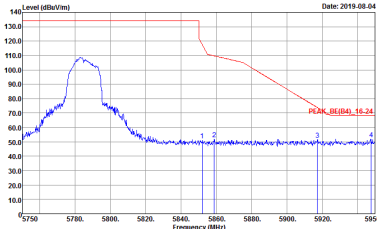
WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH149 5745MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_RE(84)_16-24 3m 91200_15_1620 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 940344-01 Mode : 66	 Site : 03CH15-HY Condition : PEAK_RE(84)_16-24 3m 91200_15_1620 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 940344-01 Mode : 66

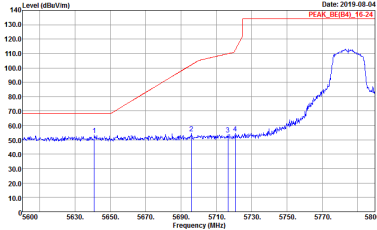
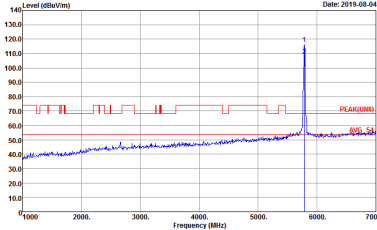
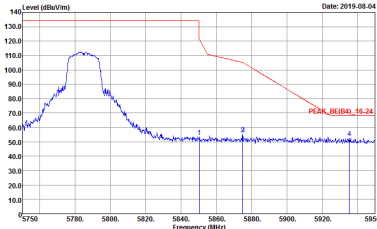


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH149 5745MHz	
1+2	Vertical	Fundamental
Peak Avg.	 Site : 03CH15-11Y Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 66	 Site : 03CH15-11Y Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 66

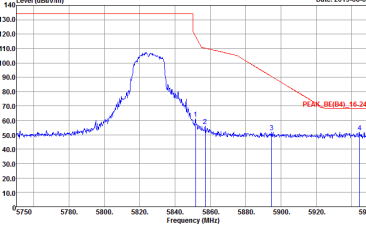
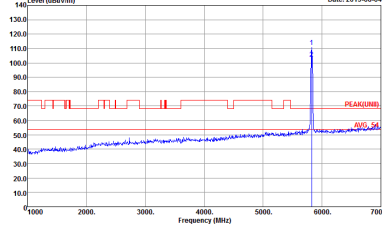


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH157 5785MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 67	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 67
	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 67	Left blank

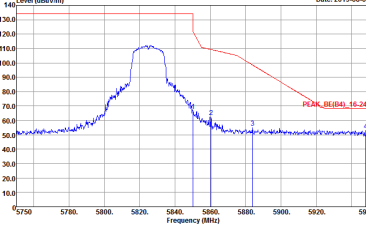
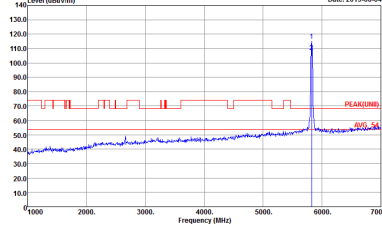


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH157 5785MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 67	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 67
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 67	Left blank



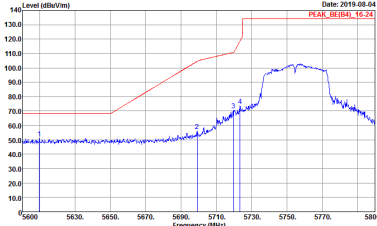
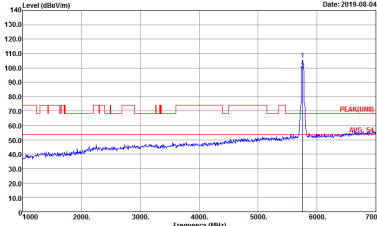
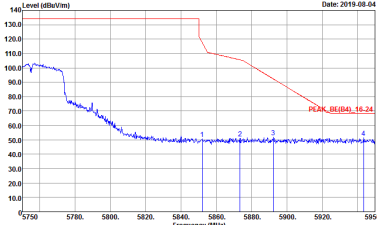
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH165 5825MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-11Y Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 68	 Site : 03CH15-11Y Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 68

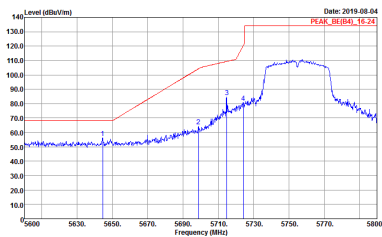
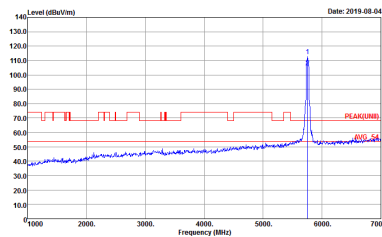
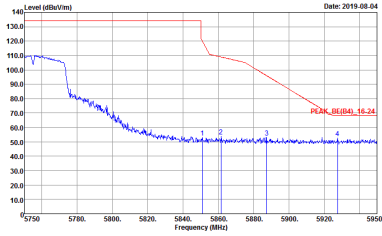


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH165 5825MHz	
1+2	Vertical	Fundamental
Peak Avg.	 Site : 03CH15-11Y Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 940344-01 Mode : 68	 Site : 03CH15-11Y Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 940344-01 Mode : 68

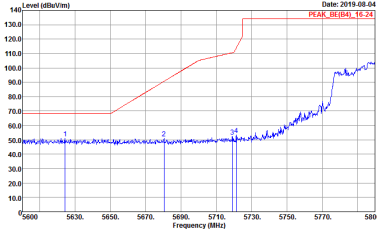
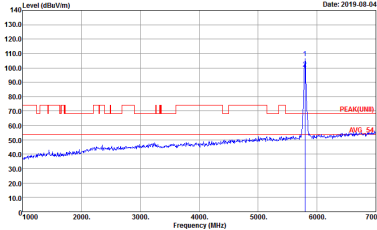
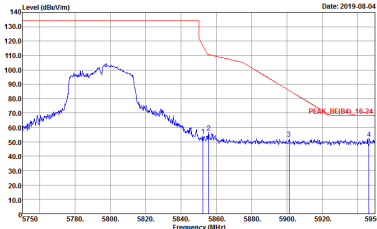


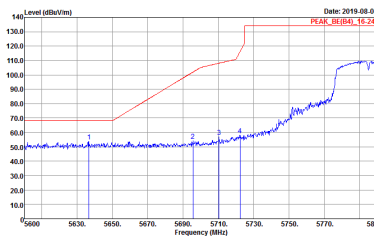
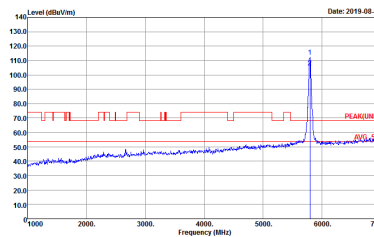
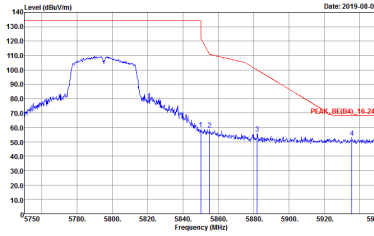
Band 4 5725~5850MHz
WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH151 5755MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 69	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 69
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 69	Left blank

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH151 5755MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 69	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 69
	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 69	Left blank

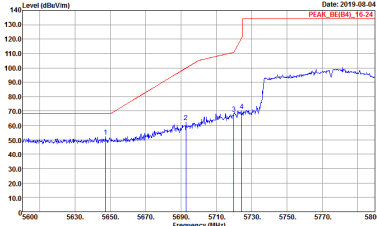
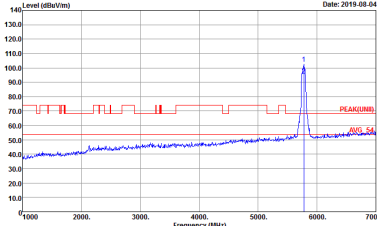
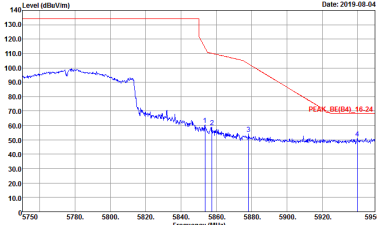


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH159 5795MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 70	 Site : 03CH15-HY Condition : PEAK(UNIT)_16-24 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 70
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 70	Left blank

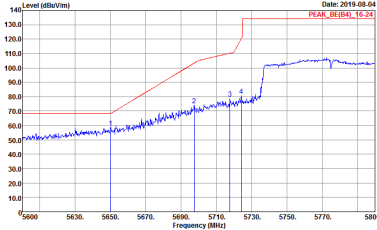
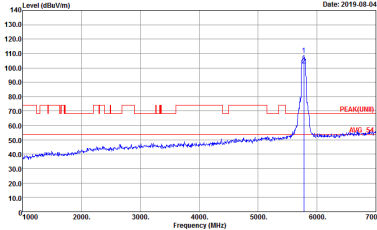
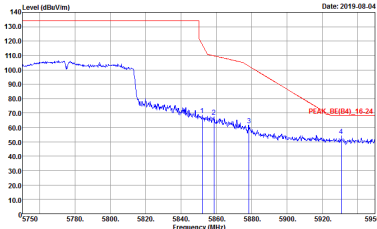
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH159 5795MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 70	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 70
	 Site : 03CH15-HY Condition : PEAK_BE(84)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 70	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+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 71	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 71
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 940344-01 Mode : 71	Left blank

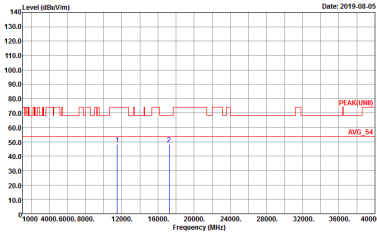
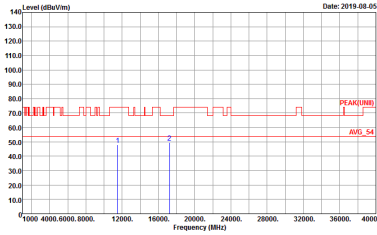


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 71	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 71
	 Site : 03CH15-HY Condition : PEAK_BE(B4)_16-24 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 71	Left blank



Band 4 - 5725~5850MHz

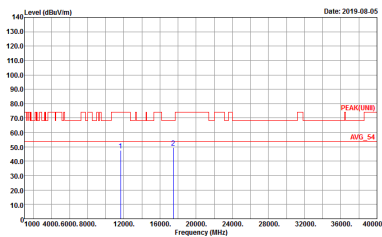
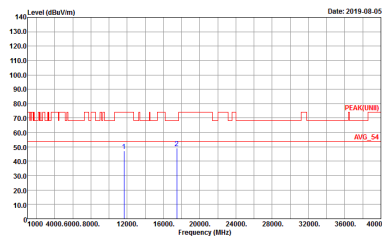
WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH149 5745MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 66	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 66



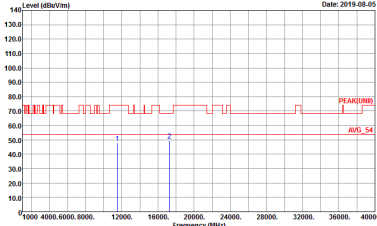
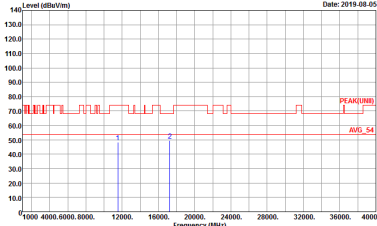
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH157 5785MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2019.08.05 Frequency (MHz) Site : 03CH15-14Y Condition : PEAK(UNII) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 67	Level (dBuV/m) Date: 2019.08.05 Frequency (MHz) Site : 03CH15-14Y Condition : PEAK(UNII) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 67



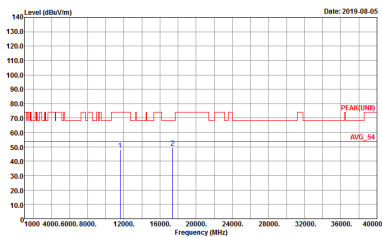
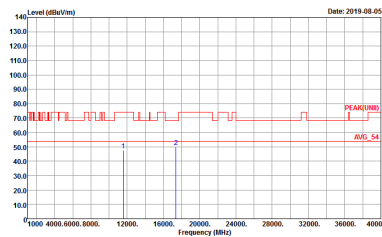
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH165 5825MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-11Y Condition : PEAK(UNII) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 68	 Site : 03CH15-11Y Condition : PEAK(UNII) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 68



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

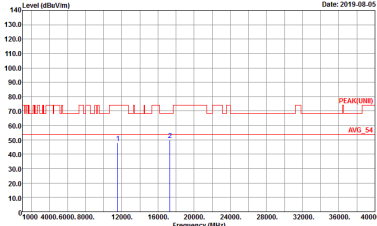
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH151 5755MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 69	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 69



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH159 5795MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-14Y Condition : PEAK(UNII) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 70	 Site : 03CH15-14Y Condition : PEAK(UNII) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 70

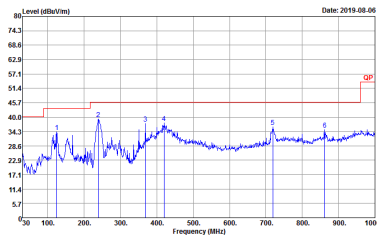
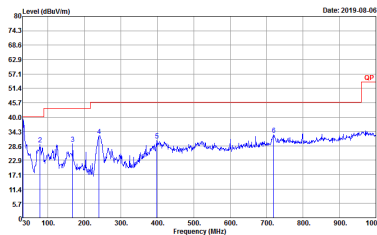


Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 71	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak Project : 940344-01 Mode : 71



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

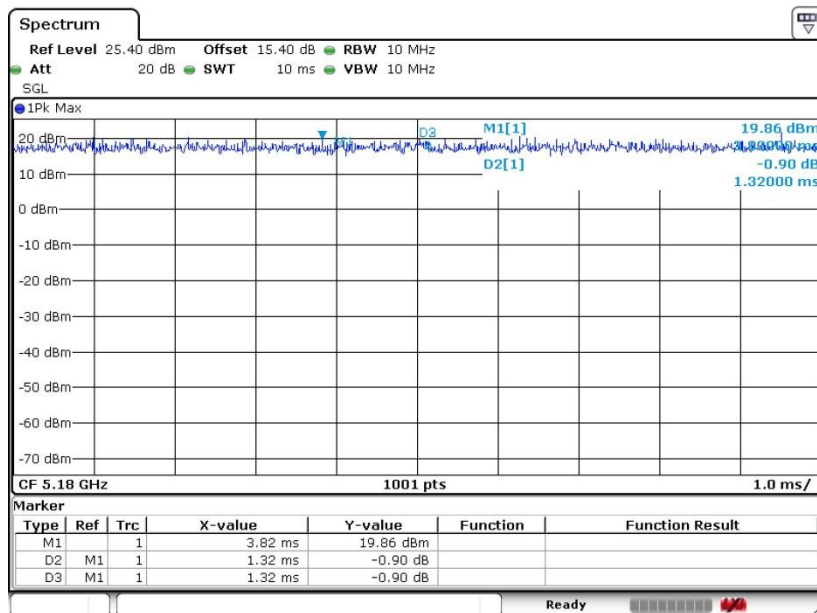
WIFI	5GHz 5725~5850MHz	
ANT	802.11ac VHT80 LF	
1+2	Horizontal	Vertical
QP / Peak	 Site : 03CH15-HY Condition : QP 3m B1L06_15_41912 HORIZONTAL Detector : Peak Project : 940344-01 Mode : 75	 Site : 03CH15-HY Condition : QP 3m B1L06_15_41912 VERTICAL Detector : Peak Project : 940344-01 Mode : 75

Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
0+1	802.11a for Ant. 0	100.00	1320	0.76	10Hz	0.00
0+1	802.11a for Ant. 1	100.00	1100	0.91	10Hz	0.00
0+1	5GHz 802.11n HT20 for Ant. 0	100.00	1180	0.85	10Hz	0.00
0+1	5GHz 802.11n HT20 for Ant. 1	100.00	950	1.05	10Hz	0.00
0+1	5GHz 802.11n HT40 for Ant. 0	100.00	1150	0.87	10Hz	0.00
0+1	5GHz 802.11n HT40 for Ant. 1	100.00	4120	0.24	10Hz	0.00
0+1	5GHz 802.11ac VHT20 for Ant. 0	100.00	1660	0.60	10Hz	0.00
0+1	5GHz 802.11ac VHT20 for Ant. 1	100.00	1620	0.64	10Hz	0.00
0+1	5GHz 802.11ac VHT40 for Ant. 0	100.00	1100	0.91	10Hz	0.00
0+1	5GHz 802.11ac VHT40 for Ant. 1	100.00	1360	0.74	10Hz	0.00
0+1	5GHz 802.11ac VHT80 for Ant. 0	100.00	940	1.06	10Hz	0.00
0+1	5GHz 802.11ac VHT80 for Ant. 1	100.00	2070	0.48	10Hz	0.00

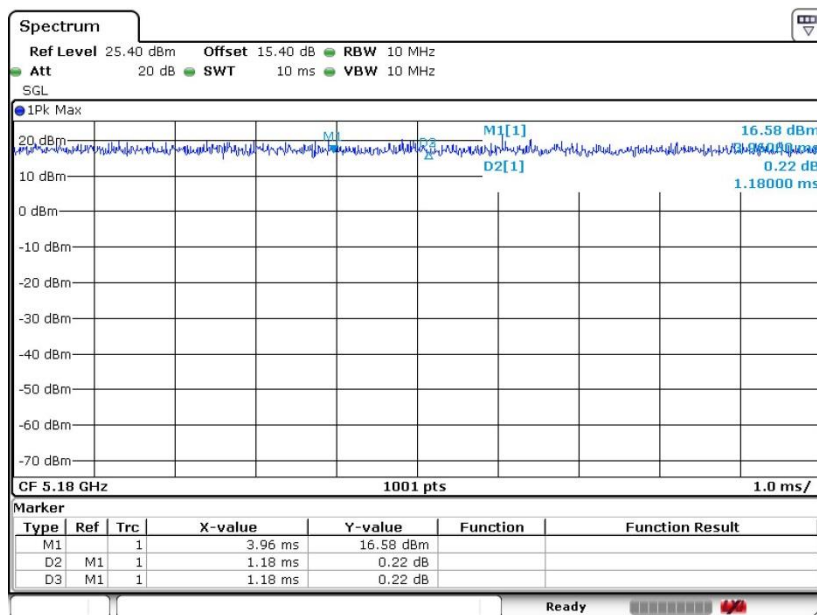
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802.11a



Date: 11.JUL.2019 20:28:21

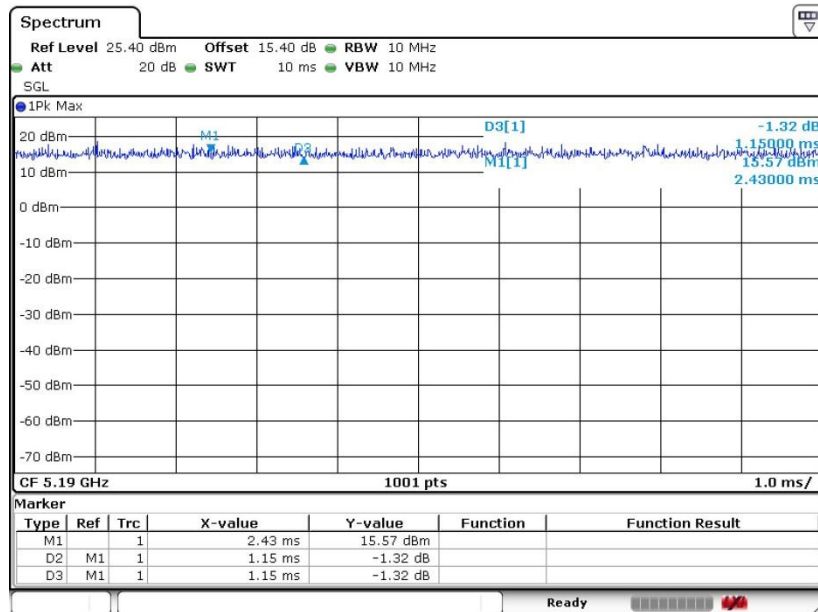
802.11n HT20



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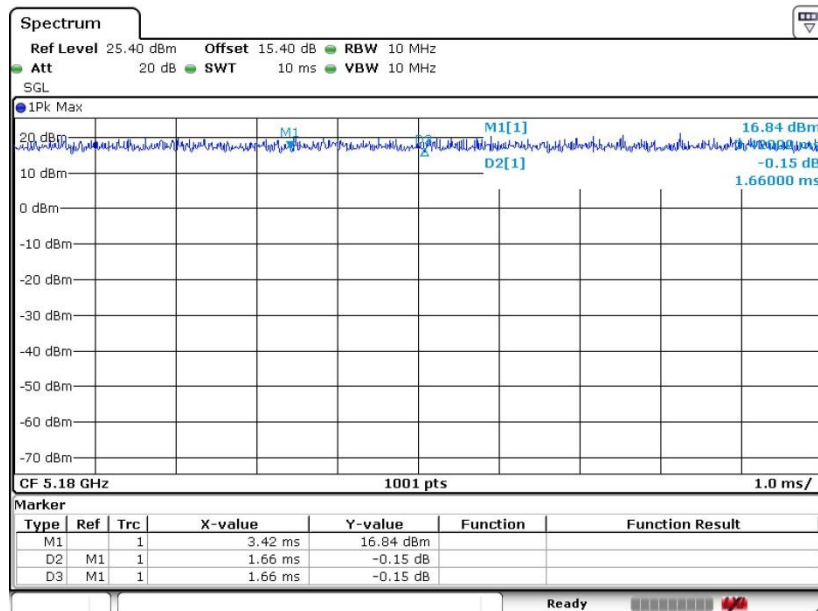


802.11n HT40



Date: 11.JUL.2019 20:32:05

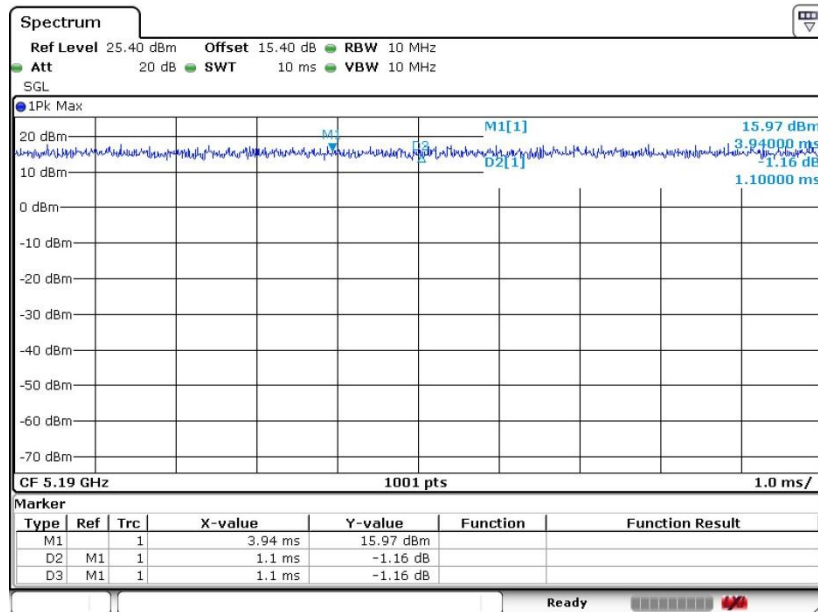
802.11ac VHT20



Date: 11.JUL.2019 20:33:49

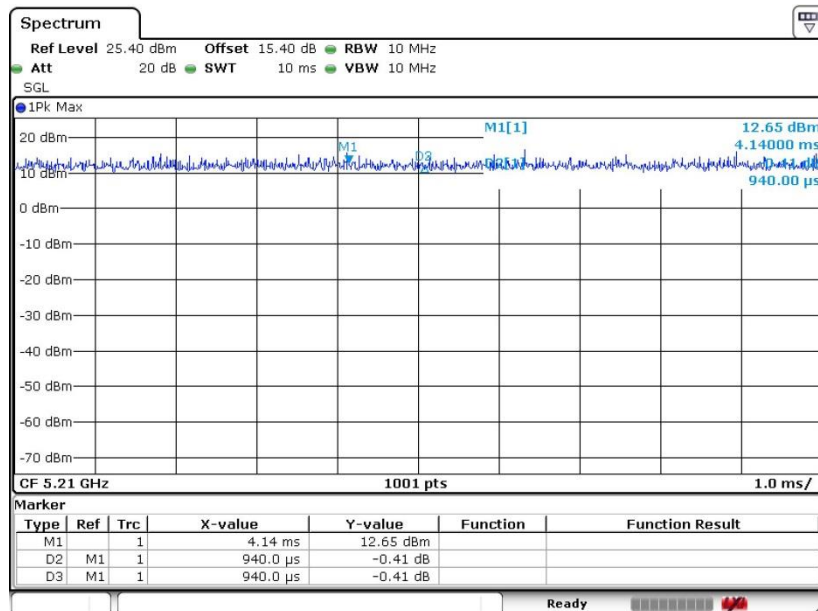


802.11ac VHT40



Date: 11.JUL.2019 20:35:26

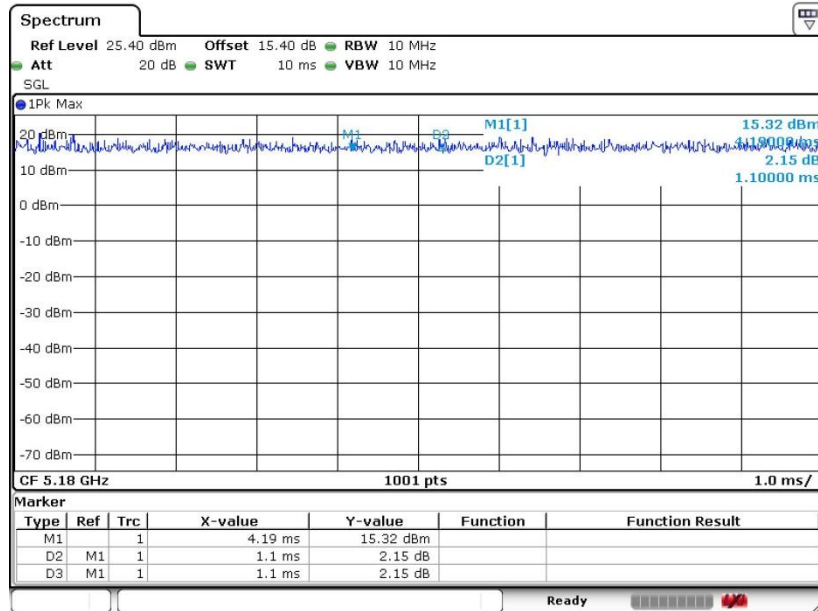
802.11ac VHT80



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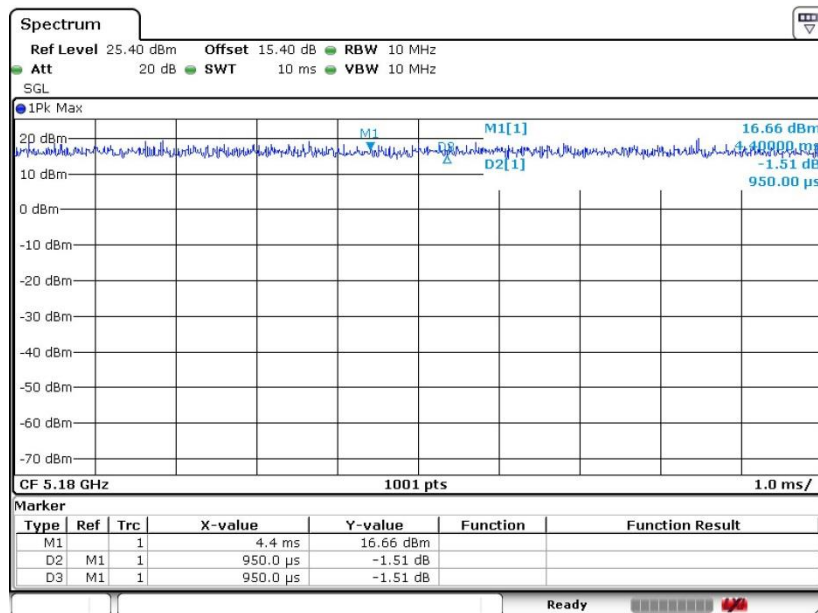
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802.11a



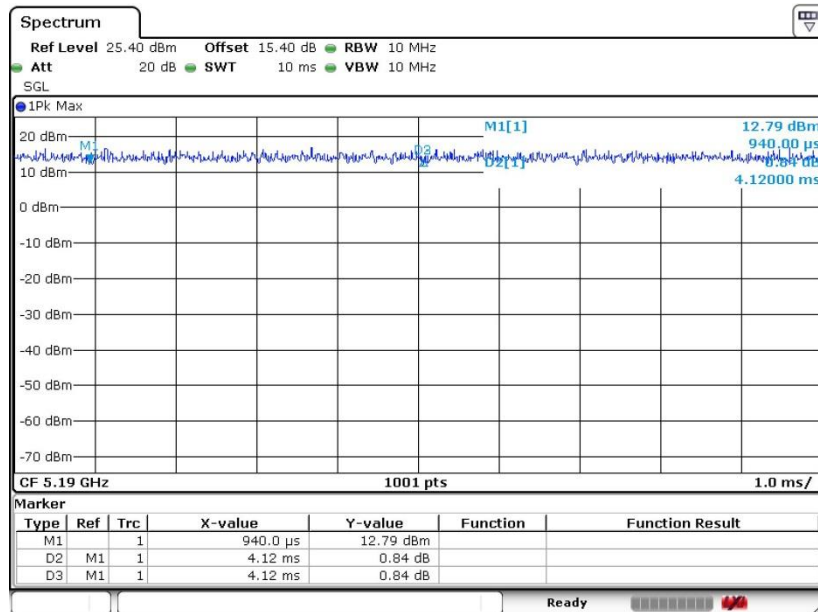
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802.11n HT20



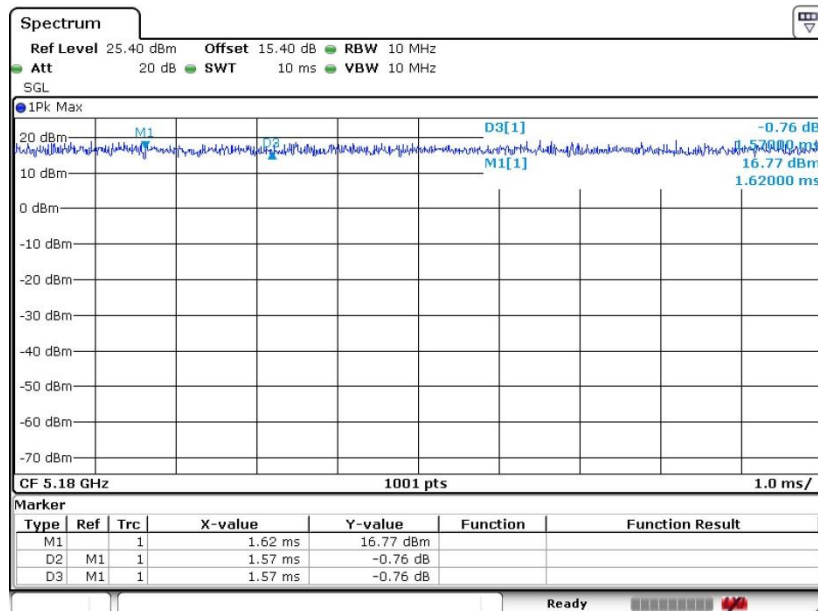
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802.11n HT40



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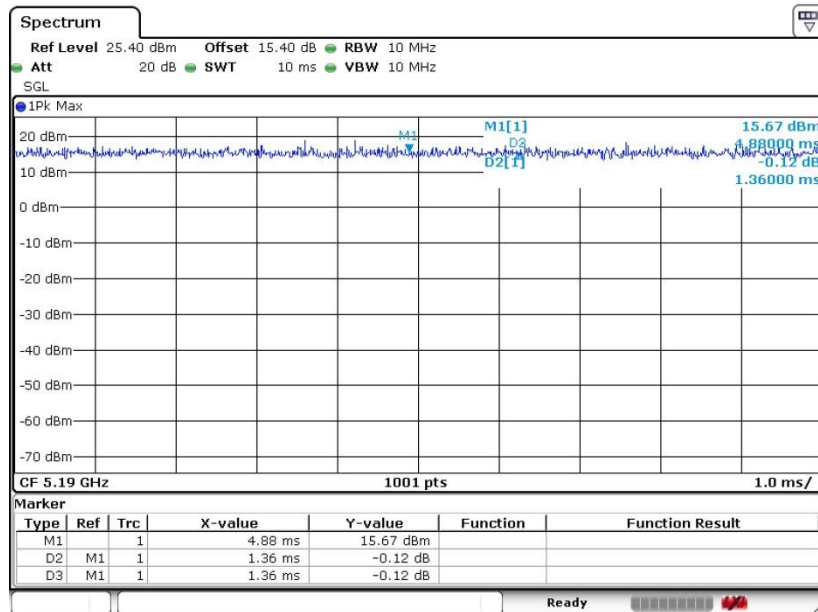
802.11ac VHT20



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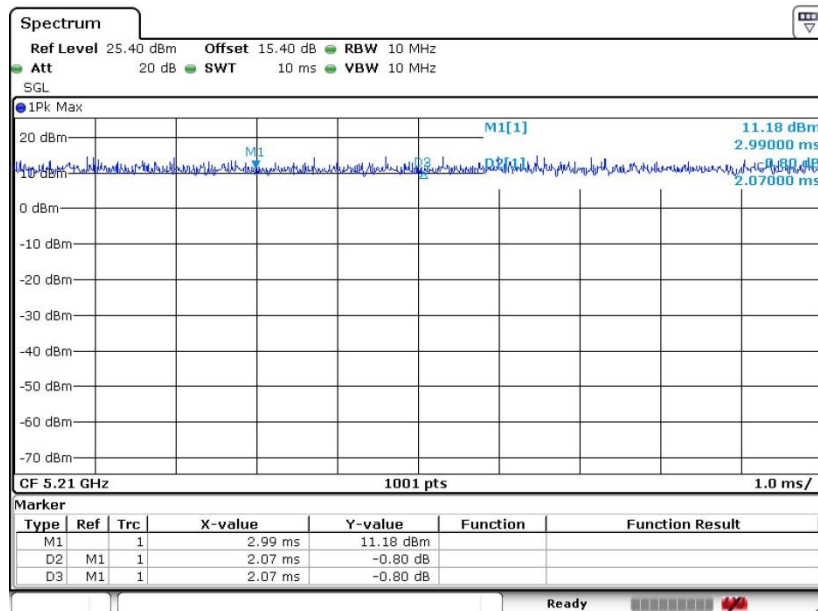


802.11ac VHT40



Date: 11.JUL.2019 20:34:55

802.11ac VHT80



Date: 11.JUL.2019 20:37:49

—THE END—