FCC RF Test Report

APPLICANT	:	**Ubiquiti Networks, Inc.**
EQUIPMENT	:	**IsoStation AC**
BRAND NAME	:	**UBIQUITI**
MODEL NAME	:	**IS-5AC**
FCC ID	:	**SWX-IS5AC**
STANDARD	:	**FCC Part 15 Subpart E §15.407**
CLASSIFICATION	:	**(NII) Unlicensed National Information Infrastructure**

The product was received on Dec. 24, 2016 and testing was completed on Feb. 07, 2017. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR6N2220-01B	Rev. 01	Initial issue of report	Feb. 10, 2017
FR6N2220-01B	Rev. 02	Revising the description in section 3.2.1 and 3.3.1	Feb. 16, 2017

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	2.1049 15.403(i)	26dB & 99% Bandwidth	-	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	FCC ≤ 30 dBm (depend on band)	Pass	-
3.3	15.407(a)	Power Spectral Density	FCC ≤ 17 dBm (depend on band)	Pass	-
3.4	15.407(b)	Unwanted Emissions	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass	Under limit 0.14 dB at 5456.880 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 10.00 dB at 0.150 MHz
3.6	15.407(g)	Frequency Stability	Within Operation Band	Pass	-
3.7	15.407(c)	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.8	15.203 & 15.407(a)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Ubiquiti Networks, Inc.
2580 Orchard Parkway San Jose, CA 95131

1.2 Manufacturer

Ubiquiti Networks, Inc.
2580 Orchard Parkway San Jose, CA 95131

1.3 Feature of Equipment Under Test

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

Product Specification subjective to this standard	
Antenna Type	WLAN: Horn Antenna

1.4 Modification of EUT

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

1.5 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	**Sporton Site No.**	
	TH05-HY	CO05-HY

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

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd Rd. Guishan Dist, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No. :**
	03CH10-HY

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

1.6 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 v01r03
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

Remark:

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

2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

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

2.1 Test Mode

Final test mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates as below table.

MIMO Antenna

Modulation	Data Rate
802.11ac VHT10	VHT0
802.11ac VHT20	VHT0
802.11ac VHT30	VHT0
802.11ac VHT40	VHT0
802.11ac VHT50	VHT0
802.11ac VHT60	VHT0
802.11ac VHT80	VHT0

Test Cases	
AC Conducted Emission	Mode 1 : WLAN (2.4GHz) Link + WLAN (5GHz) Link + RJ-45 Link + PoE Adapter

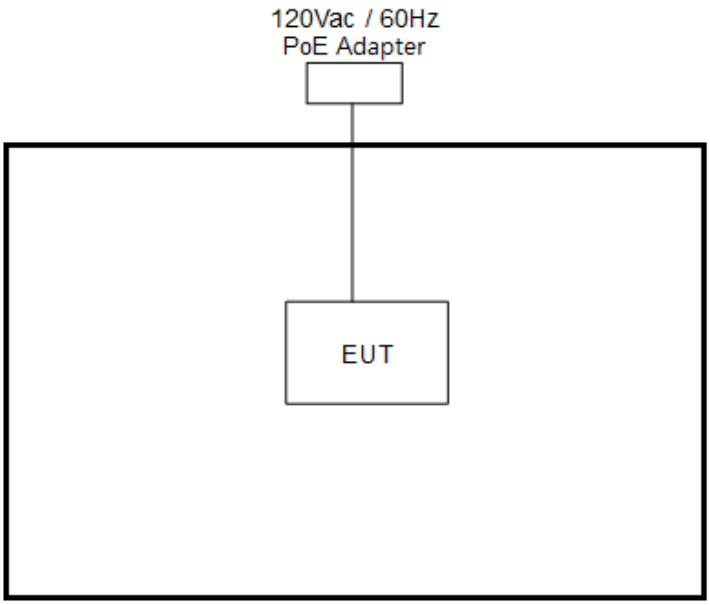
Ch. #		Band I：5150-5250 MHz	Band I：5150-5250 MHz	Band I：5150-5250 MHz
		802.11ac VHT10	802.11ac VHT20	802.11ac VHT30
L	Low	32	33	34
M	Middle	40	40	40
H	High	49	48	47

Ch. #		Band I：5150-5250 MHz	Band I：5150-5250 MHz	Band I：5150-5250 MHz
		802.11ac VHT40	802.11ac VHT50	802.11ac VHT60
L	Low	35	36	37
M	Middle	40	40	40
H	High	46	45	44

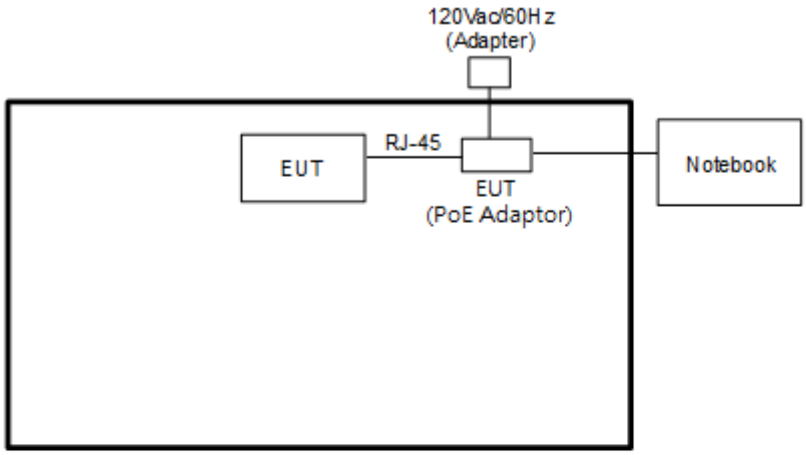
Ch. #		Band I：5150-5250 MHz
		802.11ac VHT80
L	Low	38
M	Middle	40
H	High	42

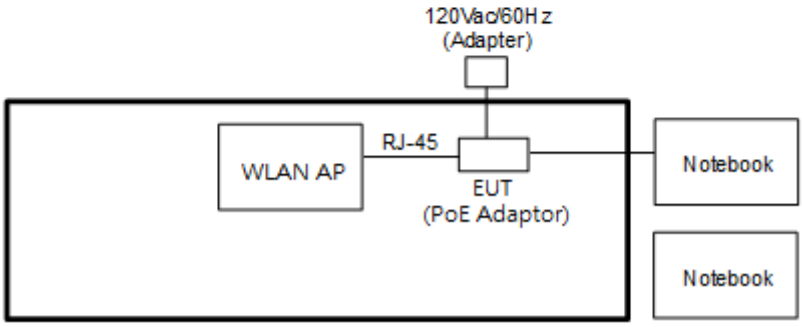
2.2 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission>





2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	AP	Ubiquiti	IS-5AC	N/A	N/A	Shielded, 1.8 m
2.	Notebook	DELL	P20G	FCC DoC/ Contains FCC ID: QDS-BRCM1051	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 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

2.4 EUT Operation Test Setup

For WLAN function, programmed RF utility, “CMD” installed in the notebook make the EUT provide functions like channel selection and power level for continuous transmitting and receiving signals.

2.5 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

Offset = RF cable loss + attenuator factor.

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

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

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

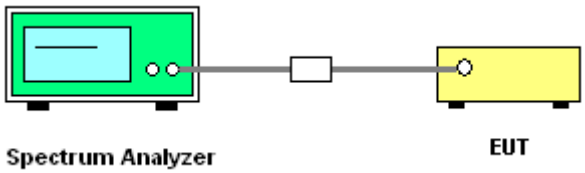
3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r03. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1MHz and set the Video bandwidth (VBW) ≥ 3 * RBW.
8. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

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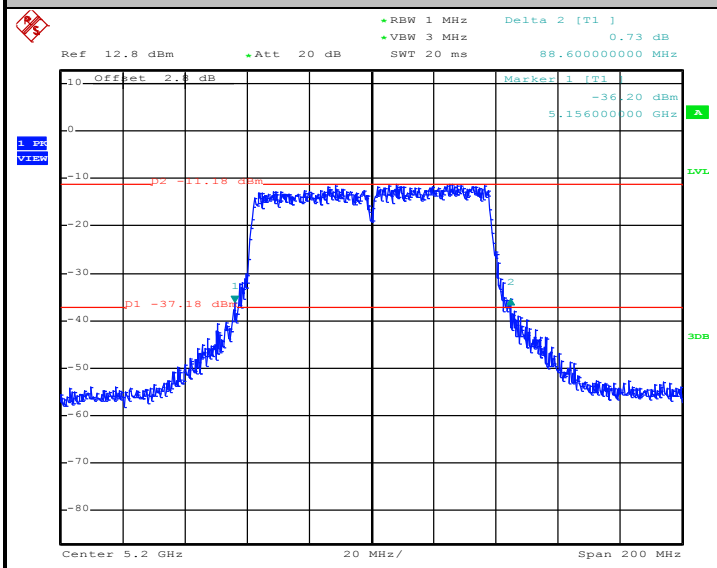
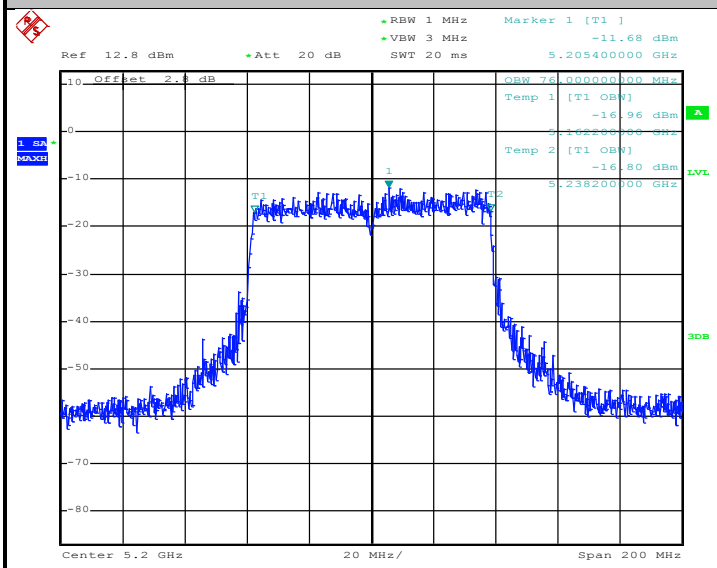
Maximum 26dB Bandwidth



Date: 26.JAN.2017 14:41:15

Maximum 99% Occupied Bandwidth



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

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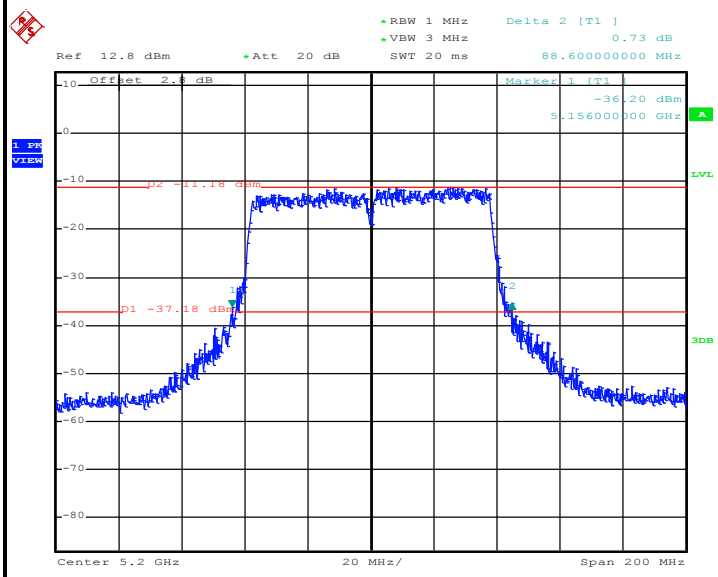
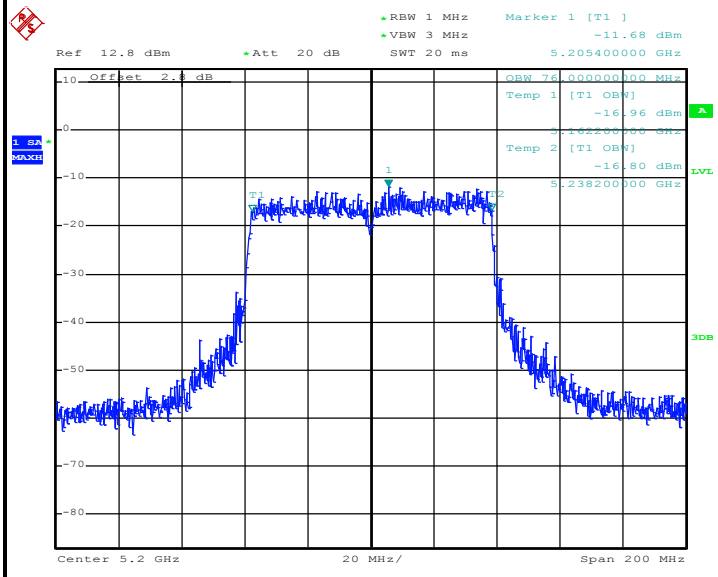
Maximum 26dB Bandwidth



Maximum 99% Occupied Bandwidth



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

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

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For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power.

For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power is required for each 1 dB of antenna gain in excess of 23 dBi.

PTMP

For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi.

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.

The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Procedures

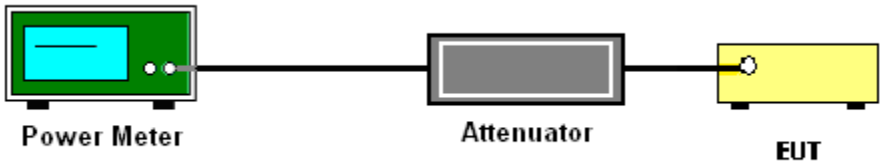
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r03 for CDD modes.

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

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

3.2.4 Test Setup

For normal channel:



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

<FCC 14-30 CFR 15.407>

PTP

For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.

PTMP

For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz 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

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r03. Section F) Maximum power spectral density.

 # Method SA-2 #

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

1. The testing follows Method SA-2 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r03.
   - Measure the duty cycle.
   - Set span to encompass the entire emission bandwidth (EBW) of the signal.
   - Set RBW = 1 MHz.
   - Set VBW ≥ 3 MHz.
   - Number of points in sweep ≥ 2 Span / RBW.
   - Sweep time = auto.

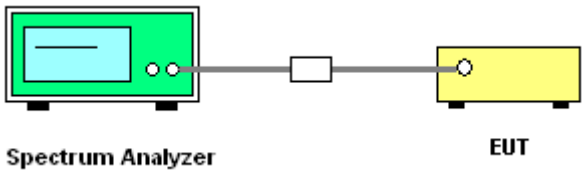
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.

2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
4. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

Method (a): Measure and sum the spectra across the outputs.

The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points, the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

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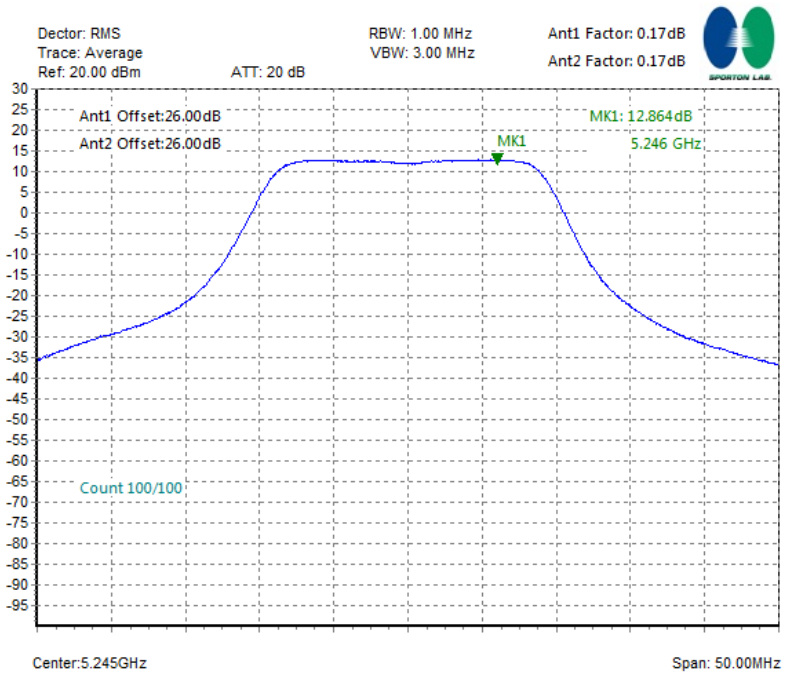
Worst Case Power Density (dBm/3kHz)



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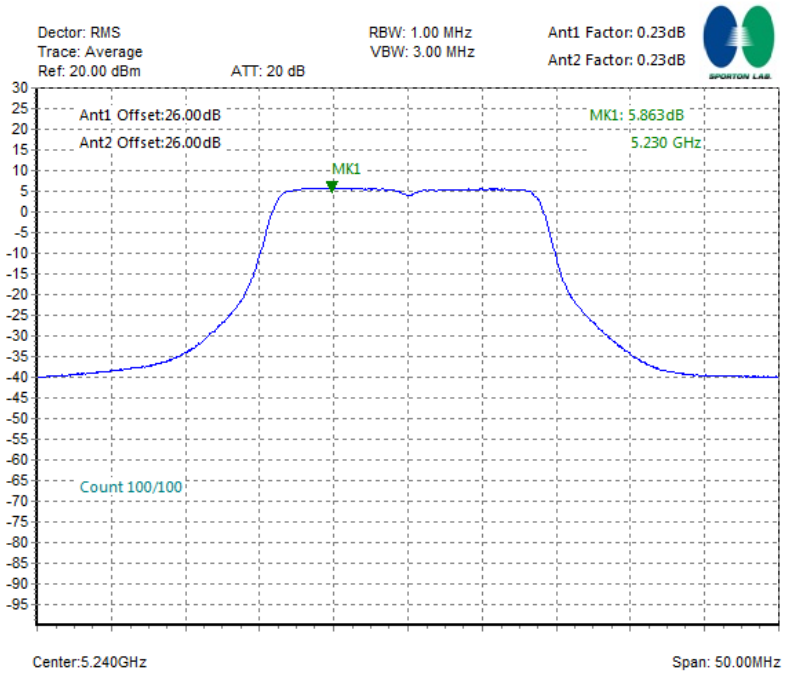
Worst Case Power Density (dBm/3kHz)



3.4 Unwanted Emissions Measurement

This section as specified in FCC Part 15.407(b) is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement. The unwanted emissions shall comply with 15.407(b)(1) to (6), and restricted bands per FCC Part15.205.

3.4.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of –27dBm/MHz.

(2) Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table,

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

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

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

EIRP (dBm)	Field Strength at 3m (dBμV/m)
-17	78.3
- 27	68.3

(3) KDB789033 D02 v01r03 G)2)c) As specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in 15.407(b)(4)). However, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit.

3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r03. Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

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

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

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

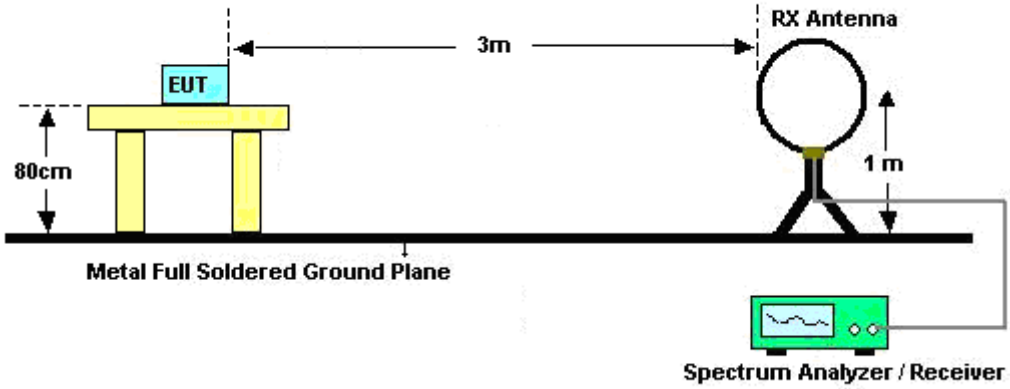
   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

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

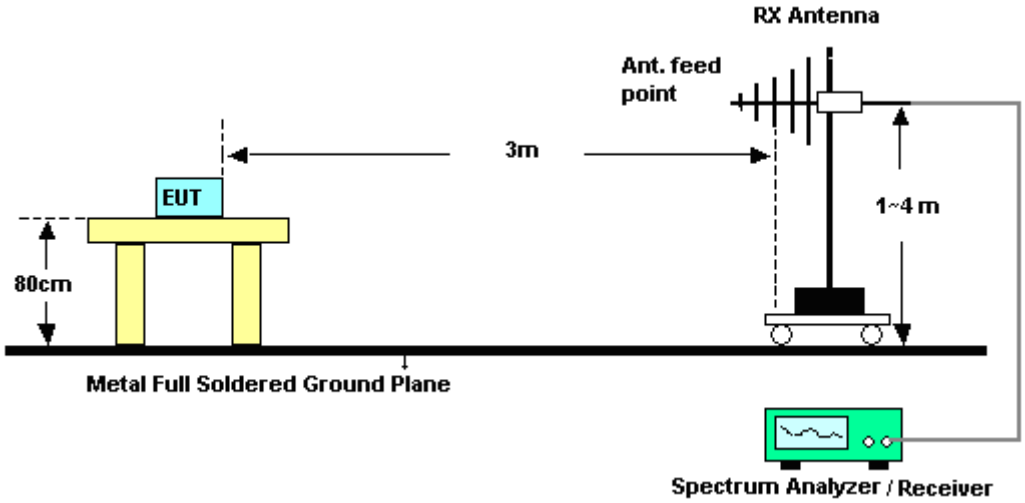
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband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

3.4.4 Test Setup

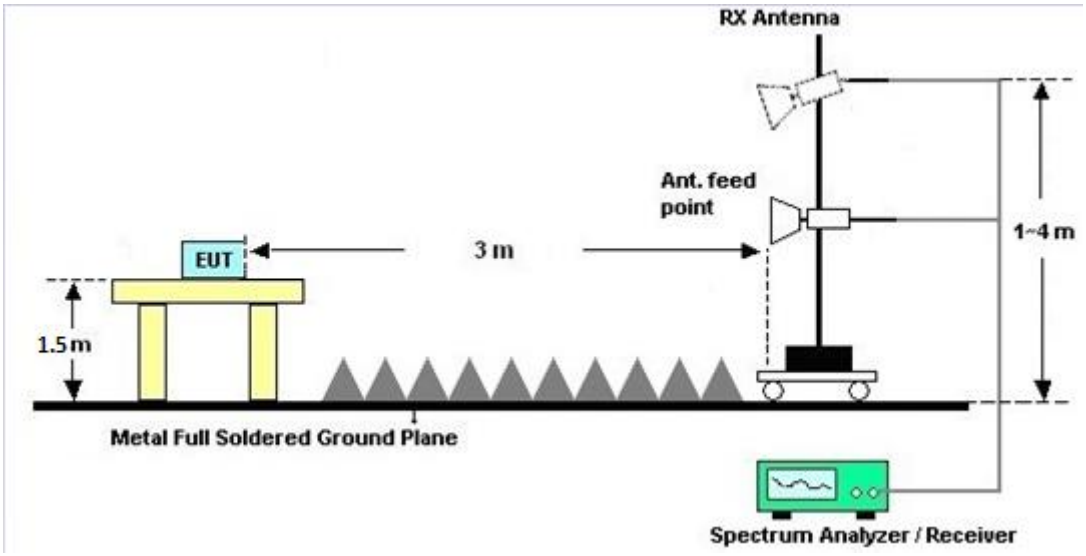
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.4.5 Test Results of Radiated Spurious 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 per 15.31(o) was not reported.

3.4.6 Test Result of Radiated Spurious at 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 Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

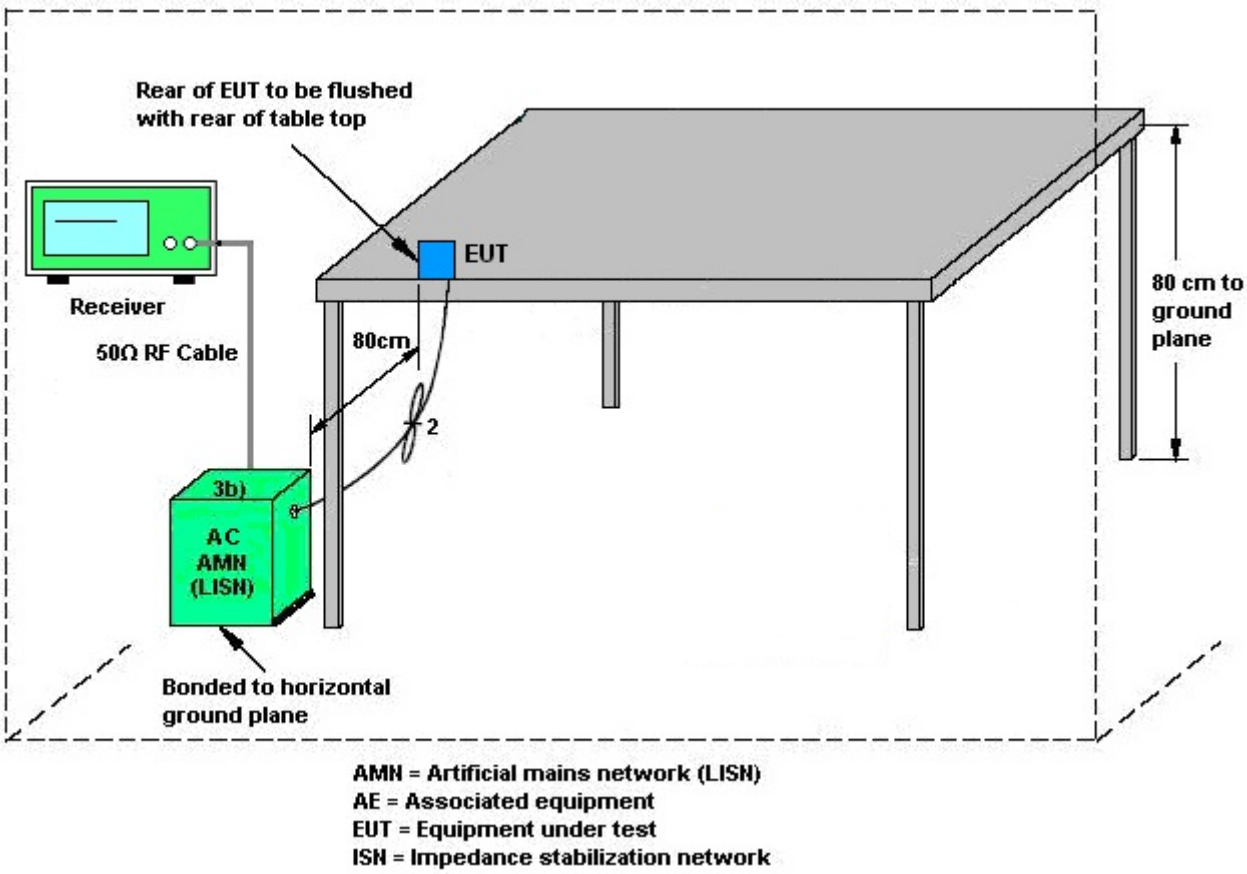
3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 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 Frequency Stability Measurement

3.6.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

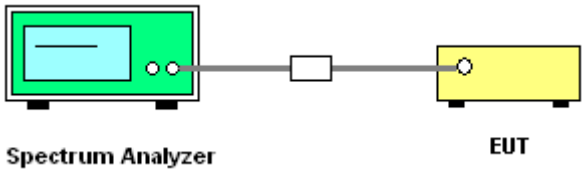
3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Procedures

1. To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
2. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

3.6.4 Test Setup



3.6.5 Test Result of Frequency Stability

Please refer to Appendix A.

3.7 Automatically Discontinue Transmission

3.7.1 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.

3.7.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.7.3 Test Result of Automatically Discontinue Transmission

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

3.8 Antenna Requirements

3.8.1 Standard Applicable

According to FCC 47 CFR Section 15.407(a)(1)(2) ,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.

3.8.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.8.3 Antenna Gain

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.

<PTP>

	Ant 1 (dBi)	Ant 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band I	14.00	14.00	14.00	17.01	0.00	0.00

<PTMP>

	Ant 1 (dBi)	Ant 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band I	14.00	14.00	14.00	17.01	8.00	11.01

Power limit reduction = Composite gain – 6dBi, (min = 0)

PSD limit reduction = Composite gain + PSD Array gain – 6dBi, (min = 0)

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	1132003	300MHz~40GHz	Aug. 04, 2016	Jan. 18, 2017 ~ Feb. 07, 2017	Aug. 03, 2017	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1126017	300MHz~40GHz	Aug. 04, 2016	Jan. 18, 2017 ~ Feb. 07, 2017	Aug. 03, 2017	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 25, 2016	Jan. 18, 2017 ~ Feb. 07, 2017	Nov. 24, 2017	Conducted (TH05-HY)
Temperature Chamber	ESPEC	SU-241	92003713	-30℃ ~95℃	Jun. 06, 2016	Jan. 18, 2017 ~ Feb. 07, 2017	Jun. 05, 2017	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jan. 05, 2017	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 30, 2016	Jan. 05, 2017	Aug. 29, 2017	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 29, 2016	Jan. 05, 2017	Nov. 28, 2017	Conduction (CO05-HY)
Amplifier	SONOMA	310N	187311	9kHz~1GHz	Oct. 26, 2016	Jan. 17, 2017 ~ Jan. 25, 2017	Oct. 25, 2017	Radiation (03CH10-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	35413&02	30MHz~1GHz	Jan. 07, 2017	Jan. 17, 2017 ~ Jan. 25, 2017	Jan. 06, 2018	Radiation (03CH10-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1325	1GHz ~ 18GHz	Sep. 30, 2016	Jan. 17, 2017 ~ Jan. 25, 2017	Sep. 29, 2017	Radiation (03CH10-HY)
Preamplifier	Keysight	83017A	MY53270078	1GHz~26.5GHz	Oct. 26, 2016	Jan. 17, 2017 ~ Jan. 25, 2017	Oct. 25, 2017	Radiation (03CH10-HY)
Preamplifier	MITEQ	TTA0204	1872107	2GHz~40GHz	Feb. 15, 2016	Jan. 17, 2017 ~ Jan. 25, 2017	Feb. 14, 2017	Radiation (03CH10-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200485	10Hz ~ 44GHz	Oct. 17, 2016	Jan. 17, 2017 ~ Jan. 25, 2017	Oct. 16, 2017	Radiation (03CH10-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Jan. 17, 2017 ~ Jan. 25, 2017	N/A	Radiation (03CH10-HY)
Turn Table	EMEC	TT 2200	N/A	0~360 Degree	N/A	Jan. 17, 2017 ~ Jan. 25, 2017	N/A	Radiation (03CH10-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Oct. 20, 2016	Jan. 17, 2017 ~ Jan. 25, 2017	Oct. 19, 2018	Radiation (03CH10-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz ~ 40GHz	Apr. 15, 2016	Jan. 17, 2017 ~ Jan. 25, 2017	Apr. 14, 2017	Radiation (03CH10-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY55420170	N/A	Mar. 10, 2016	Jan. 17, 2017 ~ Jan. 25, 2017	Mar. 09, 2017	Radiation (03CH10-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.70**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.60**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.90**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.20**

Appendix A. Conducted Test Results

<PTP>

Appendix A. Test Result of Conducted Test Items

Test Engineer:	AC Chang	Temperature:	21~25	°C
Test Date:	2017/01/18 ~ 2017/02/07	Relative Humidity:	51~54	%

TEST RESULTS DATA
26dB and 99% OBW

Band I														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)			Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
VHT10	VHT0	2	32	5160	10.20	10.28	13.53	13.70	-		20.09			
VHT10	VHT0	2	40	5200	10.08	10.13	14.00	13.78	-		20.03			
VHT10	VHT0	2	49	5245	10.13	10.08	13.65	13.65	-		20.03			
VHT20	VHT0	2	33	5165	19.10	18.80	25.95	25.15	-		22.74			
VHT20	VHT0	2	40	5200	18.70	18.50	25.65	24.65	-		22.67			
VHT20	VHT0	2	48	5240	18.70	18.65	24.45	24.90	-		22.71			
VHT30	VHT0	2	34	5170	28.05	27.83	38.18	36.90	-		23.01			
VHT30	VHT0	2	40	5200	27.75	27.83	36.00	36.75	-		23.01			
VHT30	VHT0	2	47	5235	27.53	27.83	35.93	35.93	-		23.01			
VHT40	VHT0	2	35	5175	38.30	38.10	46.70	46.00	-		23.01			
VHT40	VHT0	2	40	5200	36.70	36.60	45.40	45.00	-		23.01			
VHT40	VHT0	2	46	5230	36.70	36.80	45.50	44.70	-		23.01			
VHT50	VHT0	2	36	5180	50.63	49.25	55.38	57.75	-		23.01			
VHT50	VHT0	2	40	5200	44.75	44.88	54.25	54.50	-		23.01			
VHT50	VHT0	2	45	5225	44.88	44.88	56.25	55.50	-		23.01			
VHT60	VHT0	2	37	5185	55.80	55.50	68.40	67.20	-		23.01			
VHT60	VHT0	2	40	5200	55.05	55.20	66.30	66.30	-		23.01			
VHT60	VHT0	2	44	5220	55.05	55.20	66.30	66.75	-		23.01			
VHT80	VHT0	2	38	5190	76.00	76.00	86.40	86.80	-		23.01			
VHT80	VHT0	2	40	5200	75.80	76.00	86.80	88.60	-		23.01			
VHT80	VHT0	2	42	5210	75.60	75.60	86.80	86.60	-		23.01			

TEST RESULTS DATA
Average Power Table

FCC Band I															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
VHT10	VHT0	2	32	5160	0.17	0.17	2.51	2.54	5.53	30.00		14.00			Pass
VHT10	VHT0	2	40	5220	0.17	0.17	17.78	18.50	21.16	30.00		14.00			Pass
VHT10	VHT0	2	49	5245	0.17	0.17	18.19	18.52	21.37	30.00		14.00			Pass
VHT20	VHT0	2	33	5165	0.23	0.23	-0.21	-0.10	2.86	30.00		14.00			Pass
VHT20	VHT0	2	40	5200	0.23	0.23	18.13	18.93	21.56	30.00		14.00			Pass
VHT20	VHT0	2	48	5240	0.23	0.23	18.49	18.59	21.55	30.00		14.00			Pass
VHT30	VHT0	2	34	5170	0.35	0.35	-0.17	0.58	3.23	30.00		14.00			Pass
VHT30	VHT0	2	40	5200	0.35	0.35	18.06	19.01	21.57	30.00		14.00			Pass
VHT30	VHT0	2	47	5235	0.35	0.35	18.30	19.01	21.68	30.00		14.00			Pass
VHT40	VHT0	2	35	5175	0.46	0.52	-3.86	-3.34	-0.58	30.00		14.00			Pass
VHT40	VHT0	2	40	5200	0.46	0.52	13.86	14.96	17.46	30.00		14.00			Pass
VHT40	VHT0	2	46	5235	0.46	0.52	18.02	18.63	21.35	30.00		14.00			Pass
VHT50	VHT0	2	36	5180	0.56	0.56	-3.81	-3.15	-0.46	30.00		14.00			Pass
VHT50	VHT0	2	40	5200	0.56	0.56	9.91	10.33	13.13	30.00		14.00			Pass
VHT50	VHT0	2	45	5225	0.56	0.56	16.53	16.96	19.76	30.00		14.00			Pass
VHT60	VHT0	2	37	5185	0.66	0.62	-4.58	-4.32	-1.44	30.00		14.00			Pass
VHT60	VHT0	2	40	5200	0.66	0.62	8.19	8.65	11.44	30.00		14.00			Pass
VHT60	VHT0	2	44	5220	0.66	0.62	12.20	12.22	15.22	30.00		14.00			Pass
VHT80	VHT0	2	38	5190	0.56	0.56	-6.38	-6.29	-3.33	30.00		14.00			Pass
VHT80	VHT0	2	40	5200	0.56	0.56	-2.18	-1.87	0.99	30.00		14.00			Pass
VHT80	VHT0	2	42	5210	0.66	0.62	4.49	4.78	7.65	30.00		14.00			Pass

TEST RESULTS DATA
Power Spectral Density

FCC Band I															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
VHT10	VHT0	2	32	5160	0.17	0.17			-3.34	17.00		17.01			Pass
VHT10	VHT0	2	40	5220	0.17	0.17			12.52	17.00		17.01			Pass
VHT10	VHT0	2	49	5245	0.17	0.17			12.86	17.00		17.01			Pass
VHT20	VHT0	2	33	5165	0.23	0.23			-9.00	17.00		17.01			Pass
VHT20	VHT0	2	40	5200	0.23	0.23			9.66	17.00		17.01			Pass
VHT20	VHT0	2	48	5240	0.23	0.23			10.06	17.00		17.01			Pass
VHT30	VHT0	2	34	5170	0.35	0.35			-9.07	17.00		17.01			Pass
VHT30	VHT0	2	40	5200	0.35	0.35			8.31	17.00		17.01			Pass
VHT30	VHT0	2	47	5235	0.35	0.35			8.40	17.00		17.01			Pass
VHT40	VHT0	2	35	5175	0.46	0.52			-15.55	17.00		17.01			Pass
VHT40	VHT0	2	40	5200	0.46	0.52			-1.87	17.00		17.01			Pass
VHT40	VHT0	2	46	5235	0.46	0.52			6.64	17.00		17.01			Pass
VHT50	VHT0	2	36	5180	0.56	0.56			-16.46	17.00		17.01			Pass
VHT50	VHT0	2	40	5200	0.56	0.56			-2.65	17.00		17.01			Pass
VHT50	VHT0	2	45	5225	0.56	0.56			4.05	17.00		17.01			Pass
VHT60	VHT0	2	37	5185	0.66	0.62			-19.35	17.00		17.01			Pass
VHT60	VHT0	2	40	5200	0.66	0.62			-5.23	17.00		17.01			Pass
VHT60	VHT0	2	44	5220	0.66	0.62			-1.40	17.00		17.01			Pass
VHT80	VHT0	2	38	5190	0.85	0.90			-27.55	17.00		17.01			Pass
VHT80	VHT0	2	40	5200	0.85	0.90			-17.00	17.00		17.01			Pass
VHT80	VHT0	2	42	5210	0.85	0.90			-10.29	17.00		17.01			Pass

TEST RESULTS DATA
Frequency Stability

Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stablility (ppm)	Temperature (°C)	Voltage (V)	Note
VHT10	VHT0	1	32	5160	5160.020	0.020	3.88	70	230	
VHT10	VHT0	1	32	5160	5160.000	0.000	0.00	-40	230	
VHT10	VHT0	1	32	5160	5160.010	0.010	1.94	20	253	
VHT10	VHT0	1	32	5160	5160.020	0.020	3.88	20	207	
VHT10	VHT0	1	32	5160	5160.010	0.010	1.94	20	230	

<PTMP>

Appendix A. Test Result of Conducted Test Items

Test Engineer:	AC Chang	Temperature:	21~25	°C
Test Date:	2017/01/18 ~ 2017/01/26	Relative Humidity:	51~54	%

TEST RESULTS DATA
26dB and 99% OBW

Band I														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)			Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
VHT10	VHT0	2	32	5160	10.20	10.28	13.53	13.70	-		20.09			
VHT10	VHT0	2	40	5200	10.18	10.18	13.63	13.70	-		20.08			
VHT10	VHT0	2	49	5245	10.08	10.08	13.48	13.48	-		20.03			
VHT20	VHT0	2	33	5165	19.10	18.80	25.95	25.15	-		22.74			
VHT20	VHT0	2	40	5200	18.50	18.55	25.75	24.25	-		22.67			
VHT20	VHT0	2	48	5240	18.55	18.60	24.95	24.45	-		22.68			
VHT30	VHT0	2	34	5170	28.05	27.83	38.18	36.90	-		23.01			
VHT30	VHT0	2	40	5200	27.38	27.60	36.08	36.38	-		23.01			
VHT30	VHT0	2	47	5235	27.53	27.53	35.63	36.38	-		23.01			
VHT40	VHT0	2	35	5175	38.30	38.10	46.70	46.00	-		23.01			
VHT40	VHT0	2	40	5200	36.70	36.60	45.40	45.00	-		23.01			
VHT40	VHT0	2	46	5235	36.70	36.60	46.00	44.20	-		23.01			
VHT50	VHT0	2	36	5180	50.63	49.25	55.38	57.75	-		23.01			
VHT50	VHT0	2	40	5200	44.75	44.88	54.25	54.50	-		23.01			
VHT50	VHT0	2	45	5225	44.88	44.88	56.25	55.50	-		23.01			
VHT60	VHT0	2	37	5185	55.80	55.50	68.40	67.20	-		23.01			
VHT60	VHT0	2	40	5200	55.05	55.20	66.30	66.30	-		23.01			
VHT60	VHT0	2	44	5220	55.05	55.20	66.30	66.75	-		23.01			
VHT80	VHT0	2	38	5190	76.00	76.00	86.40	86.80	-		23.01			
VHT80	VHT0	2	40	5200	75.80	76.00	86.80	88.60	-		23.01			
VHT80	VHT0	2	42	5210	75.60	75.60	86.60	86.60	-		23.01			

Report Number : FR6N2220-01B

TEST RESULTS DATA
Average Power Table

FCC Band I															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
VHT10	VHT0	2	32	5160	0.17	0.17	2.51	2.54	5.53	22.00		14.00			Pass
VHT10	VHT0	2	40	5200	0.17	0.17	11.43	12.90	15.24	22.00		14.00			Pass
VHT10	VHT0	2	49	5245	0.17	0.17	11.75	12.51	15.16	22.00		14.00			Pass
VHT20	VHT0	2	33	5165	0.23	0.23	-0.21	-0.10	2.86	22.00		14.00			Pass
VHT20	VHT0	2	40	5200	0.23	0.23	14.86	16.48	18.76	22.00		14.00			Pass
VHT20	VHT0	2	48	5240	0.23	0.23	15.23	16.22	18.77	22.00		14.00			Pass
VHT30	VHT0	2	34	5170	0.35	0.35	-0.17	0.58	3.23	22.00		14.00			Pass
VHT30	VHT0	2	40	5200	0.35	0.35	16.09	17.61	19.92	22.00		14.00			Pass
VHT30	VHT0	2	47	5235	0.35	0.35	16.31	17.39	19.89	22.00		14.00			Pass
VHT40	VHT0	2	35	5175	0.46	0.52	-3.86	-3.34	-0.58	22.00		14.00			Pass
VHT40	VHT0	2	40	5200	0.46	0.52	13.86	14.96	17.46	22.00		14.00			Pass
VHT40	VHT0	2	46	5230	0.46	0.52	18.02	18.63	21.35	22.00		14.00			Pass
VHT50	VHT0	2	36	5180	0.56	0.56	-3.81	-3.15	-0.46	22.00		14.00			Pass
VHT50	VHT0	2	40	5200	0.56	0.56	9.91	10.33	13.13	22.00		14.00			Pass
VHT50	VHT0	2	45	5225	0.56	0.56	16.53	16.96	19.76	22.00		14.00			Pass
VHT60	VHT0	2	37	5185	0.66	0.62	-4.58	-4.32	-1.44	22.00		14.00			Pass
VHT60	VHT0	2	40	5200	0.66	0.62	8.19	8.65	11.44	22.00		14.00			Pass
VHT60	VHT0	2	44	5220	0.66	0.62	12.20	12.22	15.22	22.00		14.00			Pass
VHT80	VHT0	2	38	5190	0.56	0.56	-6.38	-6.29	-3.33	22.00		14.00			Pass
VHT80	VHT0	2	40	5200	0.56	0.56	-2.18	-1.87	0.99	22.00		14.00			Pass
VHT80	VHT0	2	42	5210	0.66	0.62	4.49	4.78	7.65	22.00		14.00			Pass

TEST RESULTS DATA
Power Spectral Density

FCC Band I															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
VHT10	VHT0	2	32	5160	0.17	0.17			-3.34	5.99		17.01			Pass
VHT10	VHT0	2	40	5200	0.17	0.17			5.26	5.99		17.01			Pass
VHT10	VHT0	2	49	5245	0.17	0.17			5.55	5.99		17.01			Pass
VHT20	VHT0	2	33	5165	0.23	0.23			-9.00	5.99		17.01			Pass
VHT20	VHT0	2	40	5200	0.23	0.23			5.81	5.99		17.01			Pass
VHT20	VHT0	2	48	5240	0.23	0.23			5.86	5.99		17.01			Pass
VHT30	VHT0	2	34	5170	0.35	0.35			-9.07	5.99		17.01			Pass
VHT30	VHT0	2	40	5200	0.35	0.35			5.30	5.99		17.01			Pass
VHT30	VHT0	2	47	5235	0.35	0.35			5.59	5.99		17.01			Pass
VHT40	VHT0	2	35	5175	0.46	0.52			-15.55	5.99		17.01			Pass
VHT40	VHT0	2	40	5200	0.46	0.52			-1.87	5.99		17.01			Pass
VHT40	VHT0	2	46	5230	0.46	0.52			5.12	5.99		17.01			Pass
VHT50	VHT0	2	36	5180	0.56	0.56			-16.46	5.99		17.01			Pass
VHT50	VHT0	2	40	5200	0.56	0.56			-2.65	5.99		17.01			Pass
VHT50	VHT0	2	45	5225	0.56	0.56			4.05	5.99		17.01			Pass
VHT60	VHT0	2	37	5185	0.66	0.62			-19.35	5.99		17.01			Pass
VHT60	VHT0	2	40	5200	0.66	0.62			-5.23	5.99		17.01			Pass
VHT60	VHT0	2	44	5220	0.66	0.62			-1.40	5.99		17.01			Pass
VHT80	VHT0	2	38	5190	0.85	0.90			-27.55	5.99		17.01			Pass
VHT80	VHT0	2	40	5200	0.85	0.90			-17.00	5.99		17.01			Pass
VHT80	VHT0	2	42	5210	0.85	0.90			-10.29	5.99		17.01			Pass

TEST RESULTS DATA
Frequency Stability

Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stablility (ppm)	Temperature (°C)	Voltage (V)	Note
VHT10	VHT0	1	32	5160	5160.020	0.020	3.88	50	230	
VHT10	VHT0	1	32	5160	5160.000	0.000	0.00	-30	230	
VHT10	VHT0	1	32	5160	5160.010	0.010	1.94	20	253	
VHT10	VHT0	1	32	5160	5160.020	0.020	3.88	20	207	
VHT10	VHT0	1	32	5160	5160.010	0.010	1.94	20	230	

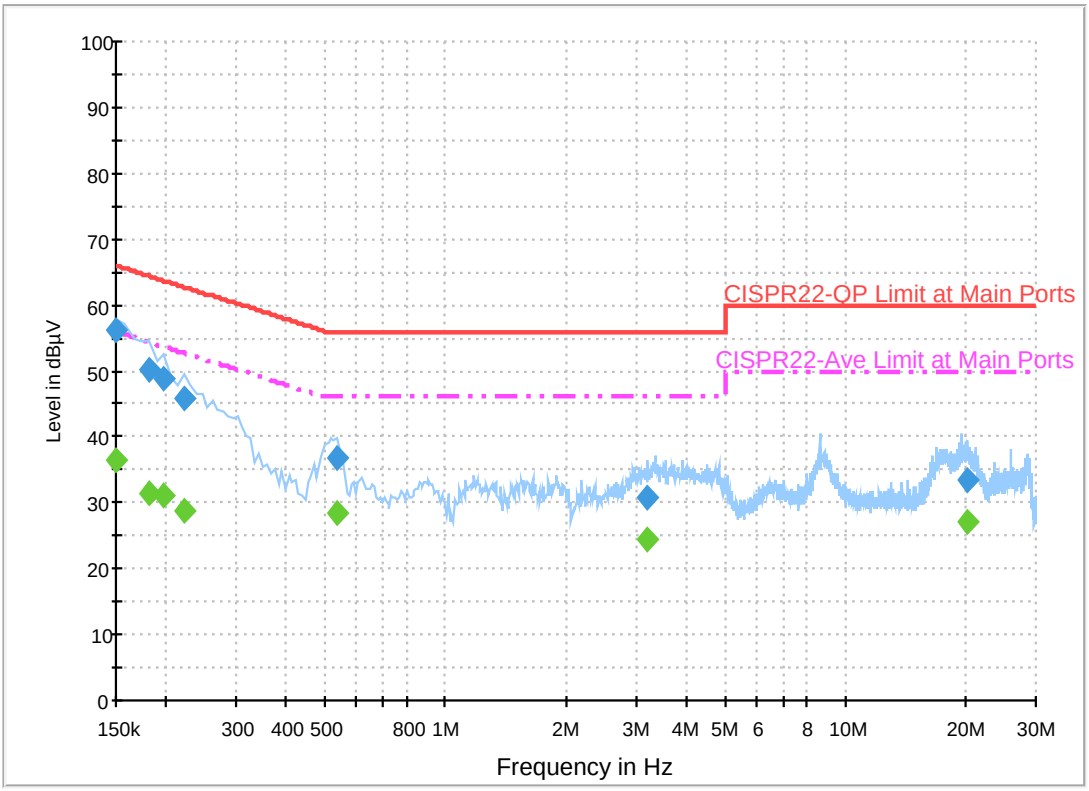
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Arthur Hsieh	**Temperature :**	24~26℃
		Relative Humidity :	50~51%

EUT Information

Report NO :	6N2220-01
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

ENV216 Auto Test FCC Power Bar - L



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	56.0	Off	L1	19.6	10.0	66.0
0.182000	50.2	Off	L1	19.6	14.2	64.4
0.198000	48.7	Off	L1	19.6	15.0	63.7
0.222000	45.8	Off	L1	19.6	16.9	62.7
0.534000	36.8	Off	L1	19.6	19.2	56.0
3.214000	30.8	Off	L1	19.6	25.2	56.0
20.270000	33.5	Off	L1	20.6	26.5	60.0

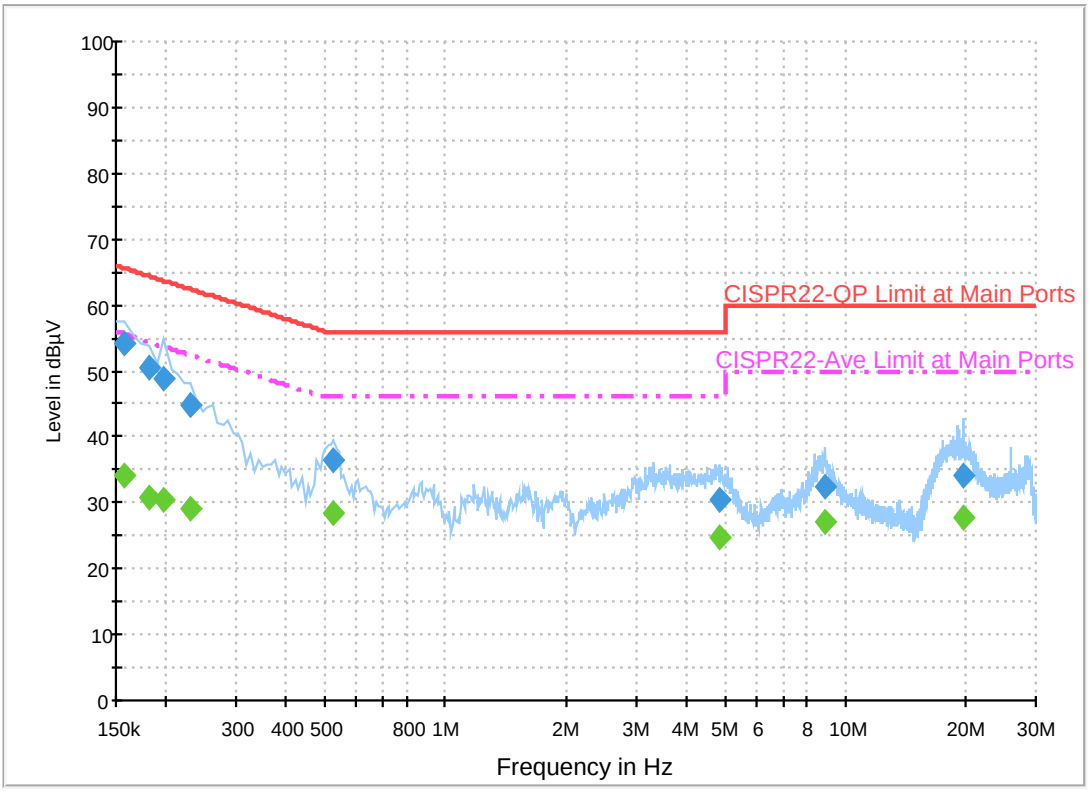
Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	36.3	Off	L1	19.6	19.7	56.0
0.182000	31.4	Off	L1	19.6	23.0	54.4
0.198000	31.3	Off	L1	19.6	22.4	53.7
0.222000	28.9	Off	L1	19.6	23.8	52.7
0.534000	28.4	Off	L1	19.6	17.6	46.0
3.214000	24.4	Off	L1	19.6	21.6	46.0
20.270000	27.0	Off	L1	20.6	23.0	50.0

EUT Information

Report NO :	6N2220-01
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral

ENV216 Auto Test FCC Power Bar - N



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	54.3	Off	N	19.6	11.3	65.6
0.182000	50.7	Off	N	19.6	13.7	64.4
0.198000	48.7	Off	N	19.6	15.0	63.7
0.230000	44.8	Off	N	19.6	17.6	62.4
0.526000	36.3	Off	N	19.6	19.7	56.0
4.862000	30.4	Off	N	19.8	25.6	56.0
8.918000	32.4	Off	N	20.0	27.6	60.0
19.886000	34.0	Off	N	20.7	26.0	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	34.1	Off	N	19.6	21.5	55.6
0.182000	30.9	Off	N	19.6	23.5	54.4
0.198000	30.4	Off	N	19.6	23.3	53.7
0.230000	29.0	Off	N	19.6	23.4	52.4
0.526000	28.4	Off	N	19.6	17.6	46.0
4.862000	24.7	Off	N	19.8	21.3	46.0
8.918000	27.2	Off	N	20.0	22.8	50.0
19.886000	27.8	Off	N	20.7	22.2	50.0

Appendix C. Radiated Spurious Emission

Test Engineer :	Tsung Lee, Stan Hsieh, and Kyle Chuang	Temperature :	22~24°C
		Relative Humidity :	46~48%

Band 1 - 5150~5250MHz

WIFI 802.11ac VHT10 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable 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)
		5150	57.95	-16.05	74	50.57	31.98	7.94	32.54	214	185	P	H
		5150	51.47	-2.53	54	44.09	31.98	7.94	32.54	214	185	A	H
	*	5160	106.27	-	-	98.87	32	7.94	32.54	214	185	P	H
	*	5160	99.9	-	-	92.5	32	7.94	32.54	214	185	A	H
													H
													H
													H
													H
802.11ac													H
VTH10													H
CH 32		5149.76	59.37	-14.63	74	51.99	31.98	7.94	32.54	207	175	P	V
5160MHz		5150	52.52	-1.48	54	45.14	31.98	7.94	32.54	207	175	A	V
	*	5160	108.46	-	-	101.06	32	7.94	32.54	207	175	P	V
	*	5160	101.21	-	-	93.81	32	7.94	32.54	207	175	A	V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5142.22	58.44	-15.56	74	51.06	31.98	7.94	32.54	222	190	P	H
		5144.82	48.88	-5.12	54	41.5	31.98	7.94	32.54	222	190	A	H
	*	5200	118.85	-	-	111.44	32.04	7.91	32.54	222	190	P	H
	*	5200	112.57	-	-	105.16	32.04	7.91	32.54	222	190	A	H
		5407.2	58.77	-15.23	74	50.75	32.28	8.29	32.55	222	190	P	H
		5458.56	50.96	-3.04	54	42.88	32.34	8.29	32.55	222	190	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VTH10													H
CH 40		5143.78	58.76	-15.24	74	51.38	31.98	7.94	32.54	213	175	P	V
5200MHz		5149.5	49.52	-4.48	54	42.14	31.98	7.94	32.54	213	175	A	V
	*	5200	119.45	-	-	112.04	32.04	7.91	32.54	213	175	P	V
	*	5200	112.65	-	-	105.24	32.04	7.91	32.54	213	175	A	V
		5384.4	55.57	-18.43	74	47.57	32.26	8.29	32.55	213	175	P	V
		5356.56	47.88	-6.12	54	39.97	32.22	8.23	32.54	213	175	A	V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VTH10 CH 49 5245MHz		5050.7	57.4	-16.6	74	50.08	31.86	7.99	32.53	201	186	P	H
		5140.66	49.07	-4.93	54	41.69	31.98	7.94	32.54	201	186	A	H
	*	5245	119.55	-	-	111.87	32.1	8.12	32.54	201	186	P	H
	*	5245	112	-	-	104.32	32.1	8.12	32.54	201	186	A	H
		5456.16	60.46	-13.54	74	52.38	32.34	8.29	32.55	201	186	P	H
		5444.16	51.59	-2.41	54	43.53	32.32	8.29	32.55	201	186	A	H
													H
													H
													H
													H
		5134.68	56.84	-17.16	74	49.48	31.96	7.94	32.54	222	177	P	V
		5149.5	48.75	-5.25	54	41.37	31.98	7.94	32.54	222	177	A	V
	*	5245	117.98	-	-	110.3	32.1	8.12	32.54	222	177	P	V
	*	5245	111.81	-	-	104.13	32.1	8.12	32.54	222	177	A	V
		5452.08	56.48	-17.52	74	48.4	32.34	8.29	32.55	222	177	P	V
		5456.64	48.32	-5.68	54	40.24	32.34	8.29	32.55	222	177	A	V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 - 5150~5250MHz

***WIFI 802.11ac VHT10* (Harmonic @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		10320	47.48	-26.52	74	46.84	39.61	11.93	50.9	100	0	P	H
		15480	47.63	-26.37	74	46.59	38.19	14.75	51.9	100	0	P	H
802.11ac													H
VTH10													H
CH 32		10320	46.47	-27.53	74	45.83	39.61	11.93	50.9	100	0	P	V
5160MHz		15480	47.46	-26.54	74	46.42	38.19	14.75	51.9	100	0	P	V
													V
													V
		10400	50.86	-23.14	74	50.02	39.74	12	50.9	100	0	P	H
		15600	46.51	-27.49	74	45.72	37.93	14.78	51.92	100	0	P	H
802.11ac													H
VTH10													H
CH 40		10400	47.5	-26.5	74	46.66	39.74	12	50.9	100	0	P	V
5200MHz		15600	47.2	-26.8	74	46.41	37.93	14.78	51.92	100	0	P	V
													V
													V
		10490	48.08	-25.92	74	47.05	39.87	12.06	50.9	100	0	P	H
		15735	47.07	-26.93	74	46.5	37.71	14.81	51.95	100	0	P	H
802.11ac													H
VTH10													H
CH 49		10490	46.61	-27.39	74	45.58	39.87	12.06	50.9	100	0	P	V
5245MHz		15735	47.06	-26.94	74	46.49	37.71	14.81	51.95	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 - 5150~5250MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		5149.76	57.95	-16.05	74	50.57	31.98	7.94	32.54	212	190	P	H
		5150	53.09	-0.91	54	45.71	31.98	7.94	32.54	212	190	A	H
	*	5165	100.52	-	-	93.15	32	7.91	32.54	212	190	P	H
	*	5165	92.86	-	-	85.49	32	7.91	32.54	212	190	A	H
													H
													H
													H
													H
802.11ac													H
VHT20													H
CH 33		5149.5	60.78	-13.22	74	53.4	31.98	7.94	32.54	218	178	P	V
5165MHz		5150	53.65	-0.35	54	46.27	31.98	7.94	32.54	218	178	A	V
	*	5165	101.62	-	-	94.25	32	7.91	32.54	218	178	P	V
	*	5165	95.36	-	-	87.99	32	7.91	32.54	218	178	A	V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5148.2	58.84	-15.16	74	51.46	31.98	7.94	32.54	215	188	P	H
		5149.76	50.21	-3.79	54	42.83	31.98	7.94	32.54	215	188	A	H
	*	5200	117	-	-	109.59	32.04	7.91	32.54	215	188	P	H
	*	5200	110.47	-	-	103.06	32.04	7.91	32.54	215	188	A	H
		5354.88	58.71	-15.29	74	50.8	32.22	8.23	32.54	215	188	P	H
		5454	51.31	-2.69	54	43.23	32.34	8.29	32.55	215	188	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT20													H
CH 40		5146.9	58.5	-15.5	74	51.12	31.98	7.94	32.54	235	177	P	V
5200MHz		5148.2	51.11	-2.89	54	43.73	31.98	7.94	32.54	235	177	A	V
	*	5200	117.75	-	-	110.34	32.04	7.91	32.54	235	177	P	V
	*	5200	110.67	-	-	103.26	32.04	7.91	32.54	235	177	A	V
		5427.84	56.13	-17.87	74	48.09	32.3	8.29	32.55	235	177	P	V
		5351.04	47.9	-6.1	54	39.99	32.22	8.23	32.54	235	177	A	V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5130.52	58.32	-15.68	74	50.96	31.96	7.94	32.54	211	190	P	H
		5147.94	49.05	-4.95	54	41.67	31.98	7.94	32.54	211	190	A	H
	*	5240	117.08	-	-	109.53	32.08	8.01	32.54	211	190	P	H
	*	5240	110.21	-	-	102.66	32.08	8.01	32.54	211	190	A	H
		5446.08	59.45	-14.55	74	51.37	32.34	8.29	32.55	211	190	P	H
		5456.4	51.48	-2.52	54	43.4	32.34	8.29	32.55	211	190	A	H
													H
													H
802.11ac													H
VHT20													H
CH 48		5144.56	58.1	-15.9	74	50.72	31.98	7.94	32.54	222	175	P	V
5240MHz		5148.98	49.28	-4.72	54	41.9	31.98	7.94	32.54	222	175	A	V
	*	5240	117.77	-	-	110.22	32.08	8.01	32.54	222	175	P	V
	*	5240	108.84	-	-	101.29	32.08	8.01	32.54	222	175	A	V
		5382.48	56.64	-17.36	74	48.64	32.26	8.29	32.55	222	175	P	V
		5459.76	47.92	-6.08	54	39.84	32.34	8.29	32.55	222	175	A	V
													V
													V
													V
													V

Remark

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

Band 1 - 5150~5250MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		10330	46.74	-27.26	74	46.08	39.63	11.93	50.9	100	0	P	H
		15495	47.1	-26.9	74	46.15	38.1	14.75	51.9	100	0	P	H
802.11ac													H
VHT20													H
CH 33		10330	47.26	-26.74	74	46.6	39.63	11.93	50.9	100	0	P	V
5165MHz		15495	47.79	-26.21	74	46.84	38.1	14.75	51.9	100	0	P	V
													V
													V
		10400	46.94	-27.06	74	46.1	39.74	12	50.9	100	0	P	H
		15600	47.75	-26.25	74	46.96	37.93	14.78	51.92	100	0	P	H
802.11ac													H
VHT20													H
CH 40		10400	47.12	-26.88	74	46.28	39.74	12	50.9	100	0	P	V
5200MHz		15600	46.58	-27.42	74	45.79	37.93	14.78	51.92	100	0	P	V
													V
													V
		10480	48.37	-25.63	74	47.34	39.87	12.06	50.9	100	0	P	H
		15720	47.07	-26.93	74	46.47	37.74	14.81	51.95	100	0	P	H
802.11ac													H
VHT20													H
CH 48		10480	46.9	-27.1	74	45.87	39.87	12.06	50.9	100	0	P	V
5240MHz		15720	47.28	-26.72	74	46.68	37.74	14.81	51.95	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 - 5150~5250MHz

WIFI 802.11ac VHT30 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		5149.24	60.25	-13.75	74	52.87	31.98	7.94	32.54	216	189	P	H
		5150	51.85	-2.15	54	44.47	31.98	7.94	32.54	216	189	A	H
	*	5170	94.01	-	-	86.64	32	7.91	32.54	216	189	P	H
	*	5170	88.03	-	-	80.66	32	7.91	32.54	216	189	A	H
		5403.12	48.63	-25.37	74	40.61	32.28	8.29	32.55	216	189	P	H
		5440.56	40.82	-13.18	54	32.76	32.32	8.29	32.55	216	189	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT30													H
CH 34		5149.76	57.82	-16.18	74	50.44	31.98	7.94	32.54	222	176	P	V
5170MHz		5150	53.45	-0.55	54	46.07	31.98	7.94	32.54	222	176	A	V
	*	5170	95.54	-	-	88.17	32	7.91	32.54	222	176	P	V
	*	5170	88.96	-	-	81.59	32	7.91	32.54	222	176	A	V
		5460	48.62	-25.38	74	40.54	32.34	8.29	32.55	222	176	P	V
		5443.92	40.93	-13.07	54	32.87	32.32	8.29	32.55	222	176	A	V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5145.34	60.43	-13.57	74	53.05	31.98	7.94	32.54	209	182	P	H
		5149.24	52.05	-1.95	54	44.67	31.98	7.94	32.54	209	182	A	H
	*	5200	116.17	-	-	108.76	32.04	7.91	32.54	209	182	P	H
	*	5200	109.78	-	-	102.37	32.04	7.91	32.54	209	182	A	H
		5438.4	60.62	-13.38	74	52.56	32.32	8.29	32.55	209	182	P	H
		5455.68	52.06	-1.94	54	43.98	32.34	8.29	32.55	209	182	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT30													H
CH 40		5145.34	59.36	-14.64	74	51.98	31.98	7.94	32.54	215	178	P	V
5200MHz		5149.24	53.84	-0.16	54	46.46	31.98	7.94	32.54	215	178	A	V
	*	5200	116.91	-	-	109.5	32.04	7.91	32.54	215	178	P	V
	*	5200	109.44	-	-	102.03	32.04	7.91	32.54	215	178	A	V
		5395.2	56.54	-17.46	74	48.52	32.28	8.29	32.55	215	178	P	V
		5412.96	48.59	-5.41	54	40.55	32.3	8.29	32.55	215	178	A	V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5143.26	58.08	-15.92	74	50.7	31.98	7.94	32.54	195	186	P	H
		5150	49.94	-4.06	54	42.56	31.98	7.94	32.54	195	186	A	H
	*	5235	117.25	-	-	109.7	32.08	8.01	32.54	195	186	P	H
	*	5235	111.19	-	-	103.64	32.08	8.01	32.54	195	186	A	H
		5444.88	59.23	-14.77	74	51.17	32.32	8.29	32.55	195	186	P	H
		5457.36	52.57	-1.43	54	44.49	32.34	8.29	32.55	195	186	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT30													H
CH 47		5136.5	56.97	-17.03	74	49.61	31.96	7.94	32.54	212	180	P	V
5235MHz		5149.24	50.42	-3.58	54	43.04	31.98	7.94	32.54	212	180	A	V
	*	5235	116.99	-	-	109.44	32.08	8.01	32.54	212	180	P	V
	*	5235	110.09	-	-	102.54	32.08	8.01	32.54	212	180	A	V
		5414.64	55.78	-18.22	74	47.74	32.3	8.29	32.55	212	180	P	V
		5385.12	48.78	-5.22	54	40.78	32.26	8.29	32.55	212	180	A	H
													V
													V
													V
													V
													V
													V
													V
													V

Remark

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

Band 1 - 5150~5250MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		10340	46.6	-27.4	74	45.94	39.63	11.93	50.9	100	0	P	H
		15510	46.77	-27.23	74	45.86	38.07	14.75	51.91	100	0	P	H
802.11ac													H
VHT30													H
CH 34		10340	46.57	-27.43	74	45.91	39.63	11.93	50.9	100	0	P	V
5170MHz		15510	46.81	-27.19	74	45.9	38.07	14.75	51.91	100	0	P	V
													V
													V
		10400	47.56	-26.44	74	46.72	39.74	12	50.9	100	0	P	H
		15600	47.45	-26.55	74	46.66	37.93	14.78	51.92	100	0	P	H
802.11ac													H
VHT30													H
CH 40		10400	46.48	-27.52	74	45.64	39.74	12	50.9	100	0	P	V
5200MHz		15600	47.46	-26.54	74	46.67	37.93	14.78	51.92	100	0	P	V
													V
													V
		10470	47	-27	74	46.02	39.85	12.03	50.9	100	0	P	H
		15705	46.6	-27.4	74	45.98	37.77	14.8	51.95	100	0	P	H
802.11ac													H
VHT30													H
CH 47		10470	47.35	-26.65	74	46.37	39.85	12.03	50.9	100	0	P	V
5235MHz		15705	46.98	-27.02	74	46.36	37.77	14.8	51.95	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 - 5150~5250MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		5149.24	58.84	-15.16	74	51.46	31.98	7.94	32.54	212	167	P	H
		5150	51.01	-2.99	54	43.63	31.98	7.94	32.54	212	167	A	H
	*	5175	93.72	-	-	86.33	32.02	7.91	32.54	212	167	P	H
	*	5175	87.46	-	-	80.07	32.02	7.91	32.54	212	167	A	H
		5423.52	47.89	-26.11	74	39.85	32.3	8.29	32.55	212	167	P	H
		5454.72	40.8	-13.2	54	32.72	32.34	8.29	32.55	212	167	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT40													H
CH 35		5148.72	60.74	-13.26	74	53.36	31.98	7.94	32.54	221	179	P	V
5175MHz		5149.76	53.28	-0.72	54	45.9	31.98	7.94	32.54	221	179	A	V
	*	5175	94.74	-	-	87.35	32.02	7.91	32.54	221	179	P	V
	*	5175	88.7	-	-	81.31	32.02	7.91	32.54	221	179	A	V
		5428.56	48.83	-25.17	74	40.77	32.32	8.29	32.55	221	179	P	V
		5416.56	41.04	-12.96	54	33	32.3	8.29	32.55	221	179	A	V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5150	59.81	-14.19	74	52.43	31.98	7.94	32.54	217	171	P	H
		5150	53.39	-0.61	54	46.01	31.98	7.94	32.54	217	171	A	H
	*	5200	112.94	-	-	105.53	32.04	7.91	32.54	217	171	P	H
	*	5200	106.04	-	-	98.63	32.04	7.91	32.54	217	171	A	H
		5448.48	52.6	-21.4	74	44.52	32.34	8.29	32.55	217	171	P	H
		5450.88	44.79	-9.21	54	36.71	32.34	8.29	32.55	217	171	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT40													H
CH 40		5146.64	60.44	-13.56	74	53.06	31.98	7.94	32.54	211	182	P	V
5200MHz		5150	53	-1	54	45.62	31.98	7.94	32.54	211	182	A	V
	*	5200	111.92	-	-	104.51	32.04	7.91	32.54	211	182	P	V
	*	5200	105.58	-	-	98.17	32.04	7.91	32.54	211	182	A	V
		5442.48	53.85	-20.15	74	45.79	32.32	8.29	32.55	211	182	P	V
		5354.88	46.23	-7.77	54	38.32	32.22	8.23	32.54	211	182	A	V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5144.04	58.38	-15.62	74	51	31.98	7.94	32.54	189	186	P	H
		5147.42	50.72	-3.28	54	43.34	31.98	7.94	32.54	189	186	A	H
	*	5230	116.84	-	-	109.29	32.08	8.01	32.54	189	186	P	H
	*	5230	109.93	-	-	102.38	32.08	8.01	32.54	189	186	A	H
		5456.16	59.54	-14.46	74	51.46	32.34	8.29	32.55	189	186	P	H
		5450.4	52.36	-1.64	54	44.28	32.34	8.29	32.55	189	186	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT40													H
CH 46		5145.6	57.21	-16.79	74	49.83	31.98	7.94	32.54	218	178	P	V
5230MHz		5145.34	51.02	-2.98	54	43.64	31.98	7.94	32.54	218	178	A	V
	*	5230	115.43	-	-	107.88	32.08	8.01	32.54	218	178	P	V
	*	5230	109.07	-	-	101.52	32.08	8.01	32.54	218	178	A	V
		5383.68	55.85	-18.15	74	47.85	32.26	8.29	32.55	218	178	P	V
		5410.08	49.03	-4.97	54	41.01	32.28	8.29	32.55	218	178	A	V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

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

Band 1 - 5150~5250MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		10350	46.3	-27.7	74	45.61	39.66	11.93	50.9	100	0	P	H
		15525	47.47	-26.53	74	46.55	38.07	14.76	51.91	100	0	P	H
802.11ac													H
VHT40													H
CH 35		10350	46.31	-27.69	74	45.62	39.66	11.93	50.9	100	0	P	V
5175MHz		15525	46.96	-27.04	74	46.04	38.07	14.76	51.91	100	0	P	V
													V
													V
		10400	48.3	-25.7	74	47.46	39.74	12	50.9	100	0	P	H
		15600	48.1	-25.9	74	47.31	37.93	14.78	51.92	100	0	P	H
802.11ac													H
VHT40													H
CH 40		10400	46.94	-27.06	74	46.1	39.74	12	50.9	100	0	P	V
5200MHz		15600	46.51	-27.49	74	45.72	37.93	14.78	51.92	100	0	P	V
													V
													V
		10460	47.08	-26.92	74	46.13	39.82	12.03	50.9	100	0	P	H
		15690	46.99	-27.01	74	46.33	37.8	14.8	51.94	100	0	P	H
802.11ac													H
VHT40													H
CH 46		10460	48.13	-25.87	74	47.18	39.82	12.03	50.9	100	0	P	V
5230MHz		15690	47.12	-26.88	74	46.46	37.8	14.8	51.94	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 - 5150~5250MHz

WIFI 802.11ac VHT50 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		5136.76	57.53	-16.47	74	50.17	31.96	7.94	32.54	203	179	P	H
		5150	50.26	-3.74	54	42.88	31.98	7.94	32.54	203	179	A	H
	*	5180	92.77	-	-	85.38	32.02	7.91	32.54	203	179	P	H
	*	5180	86.99	-	-	79.6	32.02	7.91	32.54	203	179	A	H
		5439.6	48.2	-25.8	74	40.14	32.32	8.29	32.55	203	179	P	H
		5442.24	40.8	-13.2	54	32.74	32.32	8.29	32.55	203	179	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT50													H
CH 36		5146.12	61.12	-12.88	74	53.74	31.98	7.94	32.54	209	177	P	V
5180MHz		5150	53.53	-0.47	54	46.15	31.98	7.94	32.54	209	177	A	V
	*	5180	94.39	-	-	87	32.02	7.91	32.54	209	177	P	V
	*	5180	88.14	-	-	80.75	32.02	7.91	32.54	209	177	A	V
		5360.16	48.53	-25.47	74	40.62	32.22	8.23	32.54	209	177	P	V
		5458.56	40.83	-13.17	54	32.75	32.34	8.29	32.55	209	177	A	V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5145.08	56.55	-17.45	74	49.17	31.98	7.94	32.54	198	170	P	H
		5148.72	50.13	-3.87	54	42.75	31.98	7.94	32.54	198	170	A	H
	*	5200	107.49	-	-	100.08	32.04	7.91	32.54	198	170	P	H
	*	5200	100.82	-	-	93.41	32.04	7.91	32.54	198	170	A	H
		5367.6	52.01	-21.99	74	44.02	32.24	8.29	32.54	198	170	P	H
		5444.88	44.59	-9.41	54	36.53	32.32	8.29	32.55	198	170	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT50													H
CH 40		5148.98	59.23	-14.77	74	51.85	31.98	7.94	32.54	218	179	P	V
5200MHz		5149.76	52.81	-1.19	54	45.43	31.98	7.94	32.54	218	179	A	V
	*	5200	106.87	-	-	99.46	32.04	7.91	32.54	218	179	P	V
	*	5200	100.72	-	-	93.31	32.04	7.91	32.54	218	179	A	V
		5435.76	50.87	-23.13	74	42.81	32.32	8.29	32.55	218	179	P	V
		5351.76	42.73	-11.27	54	34.82	32.22	8.23	32.54	218	179	A	V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5145.08	63.14	-10.86	74	55.76	31.98	7.94	32.54	197	177	P	H
		5147.42	53.06	-0.94	54	45.68	31.98	7.94	32.54	197	177	A	H
	*	5225	113.17	-	-	105.62	32.08	8.01	32.54	197	177	P	H
	*	5225	107.78	-	-	100.23	32.08	8.01	32.54	197	177	A	H
		5455.92	61.48	-12.52	74	53.4	32.34	8.29	32.55	197	177	P	H
		5456.88	53.86	-0.14	54	45.78	32.34	8.29	32.55	197	177	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT50													H
CH 45		5133.38	58.63	-15.37	74	51.27	31.96	7.94	32.54	196	177	P	V
5225MHz		5150	53.48	-0.52	54	46.1	31.98	7.94	32.54	196	177	A	V
	*	5225	113.77	-	-	106.22	32.08	8.01	32.54	196	177	P	V
	*	5225	107.58	-	-	100.03	32.08	8.01	32.54	196	177	A	V
		5352.72	58.32	-15.68	74	50.41	32.22	8.23	32.54	196	177	P	V
		5351.76	49.19	-4.81	54	41.28	32.22	8.23	32.54	196	177	A	V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

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

Band 1 - 5150~5250MHz

WIFI 802.11ac VHT50 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		10360	46.86	-27.14	74	46.11	39.69	11.96	50.9	100	0	P	H
		15540	46.59	-27.41	74	45.7	38.04	14.76	51.91	100	0	P	H
802.11ac													H
VHT50													H
CH 36		10360	47.25	-26.75	74	46.5	39.69	11.96	50.9	100	0	P	V
5180MHz		15540	46.79	-27.21	74	45.9	38.04	14.76	51.91	100	0	P	V
													V
													V
		10400	47.87	-26.13	74	47.03	39.74	12	50.9	100	0	P	H
		15600	47.23	-26.77	74	46.44	37.93	14.78	51.92	100	0	P	H
802.11ac													H
VHT50													H
CH 40		10400	46.33	-27.67	74	45.49	39.74	12	50.9	100	0	P	V
5200MHz		15600	46.63	-27.37	74	45.84	37.93	14.78	51.92	100	0	P	V
													V
													V
		10450	46.7	-27.3	74	45.75	39.82	12.03	50.9	100	0	P	H
		15675	47.12	-26.88	74	46.45	37.82	14.79	51.94	100	0	P	H
802.11ac													H
VHT50													H
CH 45		10450	46.47	-27.53	74	45.52	39.82	12.03	50.9	100	0	P	V
5225MHz		15675	46.86	-27.14	74	46.19	37.82	14.79	51.94	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 - 5150~5250MHz

WIFI 802.11ac VHT60 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		5147.94	55.92	-18.08	74	48.54	31.98	7.94	32.54	212	186	P	H
		5150	49.94	-4.06	54	42.56	31.98	7.94	32.54	212	186	A	H
	*	5185	90.42	-	-	83.03	32.02	7.91	32.54	212	186	P	H
	*	5185	84.5	-	-	77.11	32.02	7.91	32.54	212	186	A	H
		5443.92	49.4	-24.6	74	41.34	32.32	8.29	32.55	212	186	P	H
		5454.24	40.79	-13.21	54	32.71	32.34	8.29	32.55	212	186	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT60													H
CH 37		5150	58.4	-15.6	74	51.02	31.98	7.94	32.54	213	176	P	V
5185MHz		5150	52.51	-1.49	54	45.13	31.98	7.94	32.54	213	176	A	V
	*	5185	90.5	-	-	83.11	32.02	7.91	32.54	213	176	P	V
	*	5185	85.45	-	-	78.06	32.02	7.91	32.54	213	176	A	V
		5388.24	47.83	-26.17	74	39.83	32.26	8.29	32.55	213	176	P	V
		5351.52	40.55	-13.45	54	32.64	32.22	8.23	32.54	213	176	A	V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5146.64	61.1	-12.9	74	53.72	31.98	7.94	32.54	209	176	P	H
		5150	53.49	-0.51	54	46.11	31.98	7.94	32.54	209	176	A	H
	*	5200	105.37	-	-	97.96	32.04	7.91	32.54	209	176	P	H
	*	5200	99.16	-	-	91.75	32.04	7.91	32.54	209	176	A	H
		5458.08	51.63	-22.37	74	43.55	32.34	8.29	32.55	209	176	P	H
		5455.92	44.7	-9.3	54	36.62	32.34	8.29	32.55	209	176	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT60													H
CH 40		5148.2	61.9	-12.1	74	54.52	31.98	7.94	32.54	224	177	P	V
5200MHz		5149.5	52.65	-1.35	54	45.27	31.98	7.94	32.54	224	177	A	V
	*	5200	105.4	-	-	97.99	32.04	7.91	32.54	224	177	P	V
	*	5200	98.5	-	-	91.09	32.04	7.91	32.54	224	177	A	V
		5404.56	50.79	-23.21	74	42.77	32.28	8.29	32.55	224	177	P	V
		5388	42.97	-11.03	54	34.97	32.26	8.29	32.55	224	177	A	V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5148.72	59.99	-14.01	74	52.61	31.98	7.94	32.54	215	184	P	H
		5149.76	52.44	-1.56	54	45.06	31.98	7.94	32.54	215	184	A	H
	*	5220	108.17	-	-	100.64	32.06	8.01	32.54	215	184	P	H
	*	5220	101.92	-	-	94.39	32.06	8.01	32.54	215	184	A	H
		5428.08	52.24	-21.76	74	44.2	32.3	8.29	32.55	215	184	P	H
		5452.8	44.64	-9.36	54	36.56	32.34	8.29	32.55	215	184	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT60													H
CH 44		5147.42	58.45	-15.55	74	51.07	31.98	7.94	32.54	217	174	P	V
5220MHz		5149.24	51.89	-2.11	54	44.51	31.98	7.94	32.54	217	174	A	V
	*	5220	107.4	-	-	99.87	32.06	8.01	32.54	217	174	P	V
	*	5220	100.55	-	-	93.02	32.06	8.01	32.54	217	174	A	V
		5368.32	50.44	-23.56	74	42.45	32.24	8.29	32.54	217	174	P	V
		5425.68	42.9	-11.1	54	34.86	32.3	8.29	32.55	217	174	A	V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

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

Band 1 - 5150~5250MHz

WIFI 802.11ac VHT60 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		10370	46.85	-27.15	74	46.1	39.69	11.96	50.9	100	0	P	H
		15555	47.62	-26.38	74	46.76	38.02	14.76	51.92	100	0	P	H
802.11ac													H
VHT60													H
CH 37		10370	46.4	-27.6	74	45.65	39.69	11.96	50.9	100	0	P	V
5185MHz		15555	46.21	-27.79	74	45.35	38.02	14.76	51.92	100	0	P	V
													V
													V
		10400	46.6	-27.4	74	45.76	39.74	12	50.9	100	0	P	H
		15600	47.25	-26.75	74	46.46	37.93	14.78	51.92	100	0	P	H
802.11ac													H
VHT60													H
CH 40		10400	46.31	-27.69	74	45.47	39.74	12	50.9	100	0	P	V
5200MHz		15600	47.7	-26.3	74	46.91	37.93	14.78	51.92	100	0	P	V
													V
													V
		10440	47.8	-26.2	74	46.88	39.79	12.03	50.9	100	0	P	H
		15660	47.75	-26.25	74	47.04	37.85	14.79	51.93	100	0	P	H
802.11ac													H
VHT60													H
CH 44		10440	46.73	-27.27	74	45.81	39.79	12.03	50.9	100	0	P	V
5220MHz		15660	46.43	-27.57	74	45.72	37.85	14.79	51.93	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 - 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		5150	62.6	-11.4	74	55.22	31.98	7.94	32.54	214	187	P	H
		5150	52.05	-1.95	54	44.67	31.98	7.94	32.54	214	187	A	H
	*	5190	82.43	-	-	75.04	32.02	7.91	32.54	214	187	P	H
	*	5190	76.5	-	-	69.11	32.02	7.91	32.54	214	187	A	H
		5426.64	48.08	-25.92	74	40.04	32.3	8.29	32.55	214	187	P	H
		5459.52	41.79	-12.21	54	33.71	32.34	8.29	32.55	214	187	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT80													H
CH 38		5150	60.06	-13.94	74	52.68	31.98	7.94	32.54	214	175	P	V
5190MHz		5150	52.8	-1.2	54	45.42	31.98	7.94	32.54	214	175	A	V
	*	5190	83.49	-	-	76.1	32.02	7.91	32.54	214	175	P	V
	*	5190	77.83	-	-	70.44	32.02	7.91	32.54	214	175	A	V
		5419.44	47.56	-26.44	74	39.52	32.3	8.29	32.55	214	175	P	V
		5455.92	40.97	-13.03	54	32.89	32.34	8.29	32.55	214	175	A	V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5147.16	57.97	-16.03	74	50.59	31.98	7.94	32.54	220	187	P	H
		5145.6	50	-4	54	42.62	31.98	7.94	32.54	220	187	A	H
	*	5200	92.31	-	-	84.9	32.04	7.91	32.54	220	187	P	H
	*	5200	86.6	-	-	79.19	32.04	7.91	32.54	220	187	A	H
		5442.48	48.04	-25.96	74	39.98	32.32	8.29	32.55	220	187	P	H
		5448.24	42.12	-11.88	54	34.04	32.34	8.29	32.55	220	187	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT80													H
CH 40		5150	61.66	-12.34	74	54.28	31.98	7.94	32.54	216	177	P	V
5200MHz		5150	53.87	-0.13	54	46.49	31.98	7.94	32.54	216	177	A	V
	*	5200	93.21	-	-	85.8	32.04	7.91	32.54	216	177	P	V
	*	5200	87.64	-	-	80.23	32.04	7.91	32.54	216	177	A	V
		5418.96	49.19	-24.81	74	41.15	32.3	8.29	32.55	216	177	P	V
		5418.96	42.68	-11.32	54	34.64	32.3	8.29	32.55	216	177	A	V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5137.54	60.5	-13.5	74	53.14	31.96	7.94	32.54	221	189	P	H
		5144.56	53.16	-0.84	54	45.78	31.98	7.94	32.54	221	189	A	H
	*	5210	99.26	-	-	91.73	32.06	8.01	32.54	221	189	P	H
	*	5210	94.49	-	-	86.96	32.06	8.01	32.54	221	189	A	H
		5443.44	48.04	-25.96	74	39.98	32.32	8.29	32.55	221	189	P	H
		5459.28	42.57	-11.43	54	34.49	32.34	8.29	32.55	221	189	A	H
													H
													H
													H
													H
													H
													H
802.11ac													H
VHT80													H
CH 42		5148.46	59.93	-14.07	74	52.55	31.98	7.94	32.54	220	187	P	V
5210MHz		5149.76	52.18	-1.82	54	44.8	31.98	7.94	32.54	220	187	A	V
	*	5210	99.25	-	-	91.72	32.06	8.01	32.54	220	187	P	V
	*	5210	92.82	-	-	85.29	32.06	8.01	32.54	220	187	A	V
		5434.08	47.73	-26.27	74	39.67	32.32	8.29	32.55	220	187	P	V
		5451.6	43.07	-10.93	54	34.99	32.34	8.29	32.55	220	187	A	V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

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

Band 1 - 5150~5250MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		10380	47.93	-26.07	74	47.16	39.71	11.96	50.9	100	0	P	H
		15570	46.3	-27.7	74	45.46	37.99	14.77	51.92	100	0	P	H
802.11ac													H
VHT80													H
CH 38		10380	47.13	-26.87	74	46.36	39.71	11.96	50.9	100	0	P	V
5190MHz		15570	47.35	-26.65	74	46.51	37.99	14.77	51.92	100	0	P	V
													V
													V
		10400	47.37	-26.63	74	46.53	39.74	12	50.9	100	0	P	H
		15600	46.81	-27.19	74	46.02	37.93	14.78	51.92	100	0	P	H
802.11ac													H
VHT60													H
CH 40		10400	47.67	-26.33	74	46.83	39.74	12	50.9	100	0	P	V
5200MHz		15600	47.6	-26.4	74	46.81	37.93	14.78	51.92	100	0	P	V
													V
													V
		10420	47.22	-26.78	74	46.35	39.77	12	50.9	100	0	P	H
		15630	47.02	-26.98	74	46.29	37.88	14.78	51.93	100	0	P	H
802.11ac													H
VHT80													H
CH 42		10420	46.77	-27.23	74	45.9	39.77	12	50.9	100	0	P	V
5210MHz		15630	46.8	-27.2	74	46.07	37.88	14.78	51.93	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		129.9	31.08	-12.42	43.5	44.51	18	1.33	32.76			P	H
		214.95	33.74	-9.76	43.5	48.61	16.25	1.62	32.74			P	H
		230.07	33.23	-12.77	46	47.35	17	1.62	32.74			P	H
		400.1	40.77	-5.23	46	48.98	22.42	2.13	32.76			P	H
		524.7	38.42	-7.58	46	44.51	24.35	2.47	32.91			P	H
		775.3	42.08	-3.92	46	44.33	27.7	2.97	32.92	100	0	P	H
													H
													H
													H
													H
5GHz													H
802.11ac													H
VHT80		35.4	36.98	-3.02	40	46.34	22.74	0.65	32.75	100	0	P	V
LF		81.57	29.31	-10.69	40	47.12	14.02	0.93	32.76			P	V
		210.09	32.88	-10.62	43.5	47.71	16.3	1.62	32.75			P	V
		575.1	41.36	-4.64	46	46.76	25	2.57	32.97			P	V
		600.3	39.51	-6.49	46	44.44	25.5	2.57	33			P	V
		775.3	39.25	-6.75	46	41.5	27.7	2.97	32.92			P	V
													V
													V
													V
													V
													V
													V

Remark

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

Note symbol

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

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

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

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable 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) + Cable 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

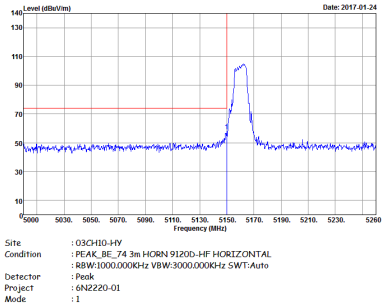
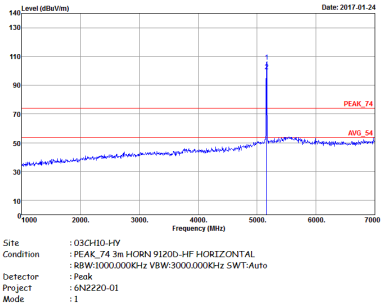
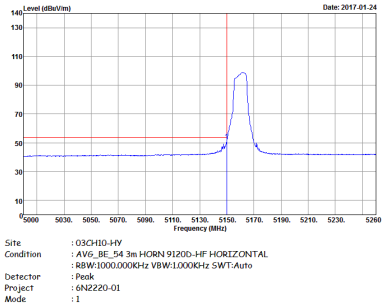
Test Engineer :	Tsung Lee, Stan Hsieh, and Kyle Chuang	**Temperature :**	22~24°C
		Relative Humidity :	46~48%

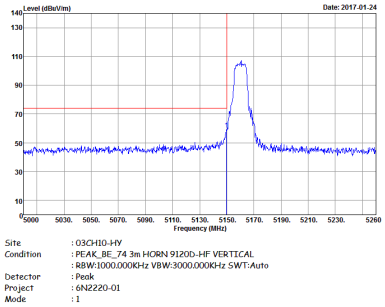
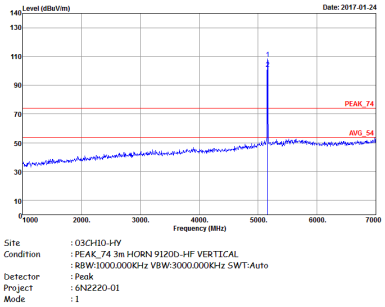
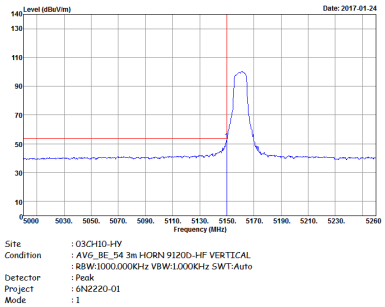
Note symbol

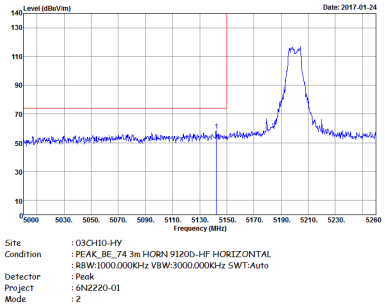
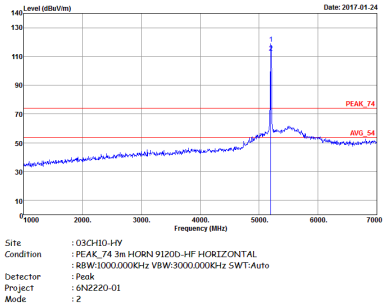
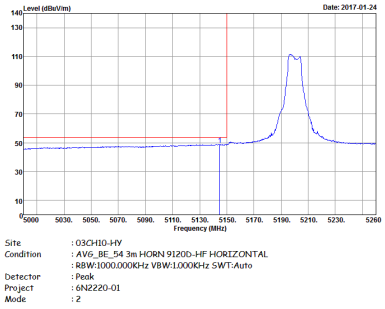
-L	**Low channel location**
-R	**High channel location**

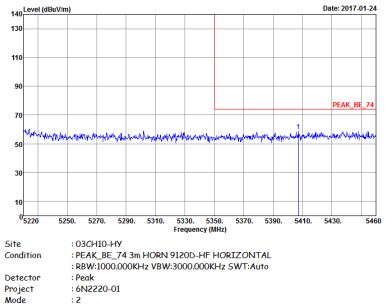
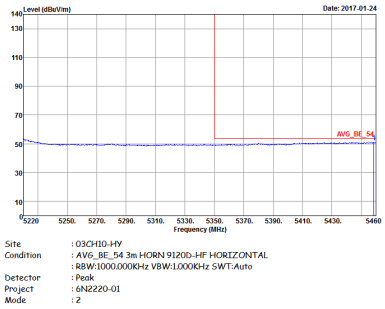
Band 1 - 5150~5250MHz

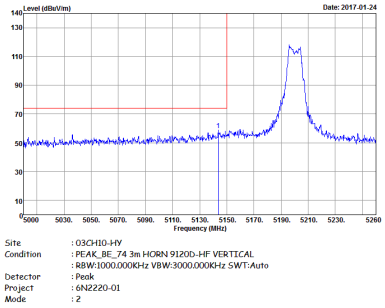
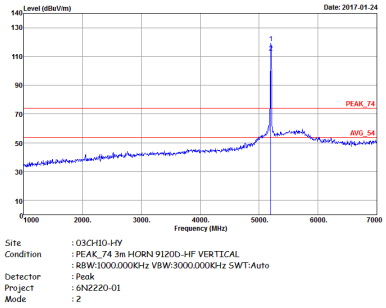
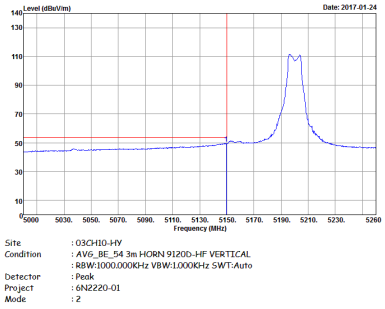
WIFI 802.11ac VHT10 (Band Edge @ 3m)

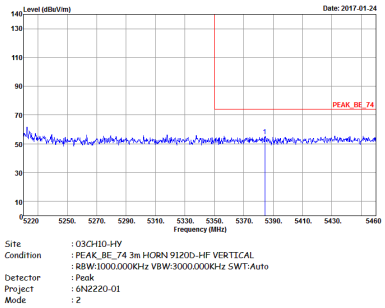
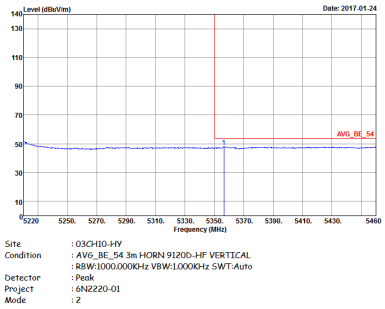
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT10 CH32 5160MHz	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

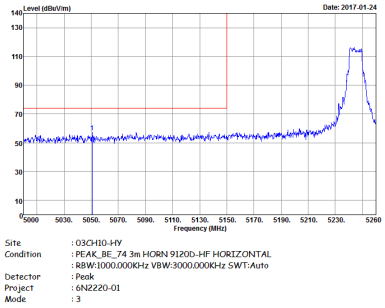
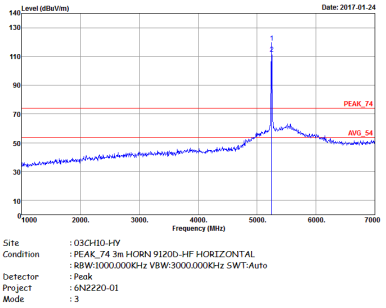
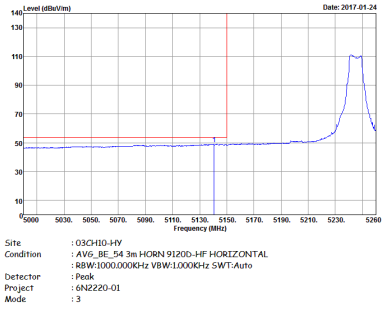
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT10 CH32 5160MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

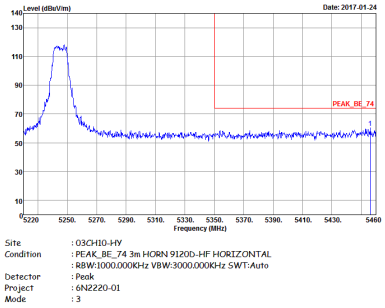
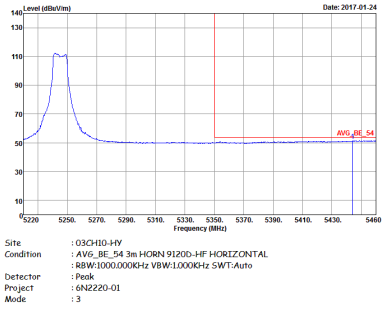
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT10 CH40 5200MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

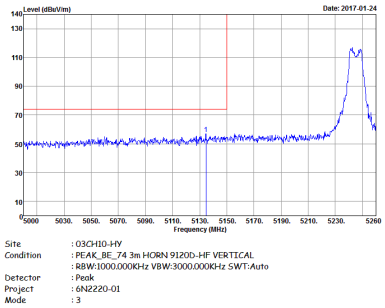
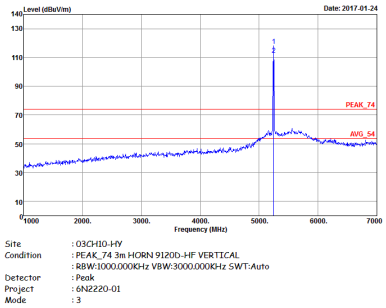
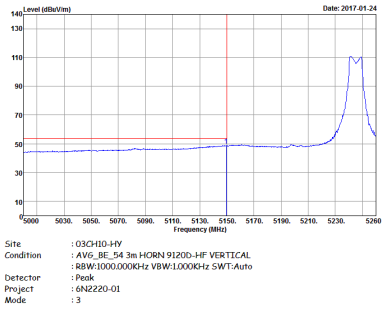
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT10 CH40 5200MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

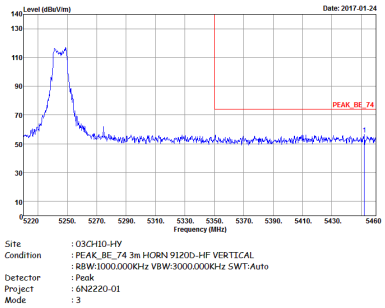
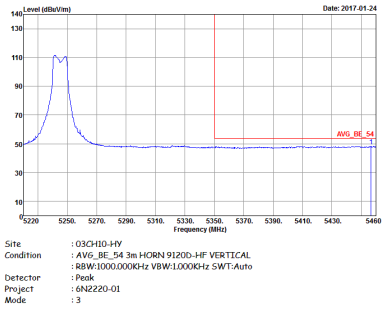
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT10 CH40 5200MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT10 CH40 5200MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT10 CH49 5245MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

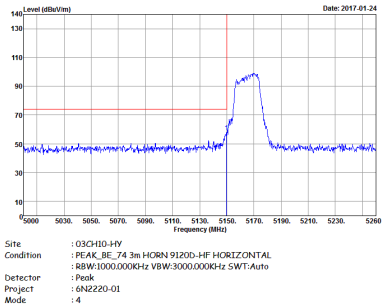
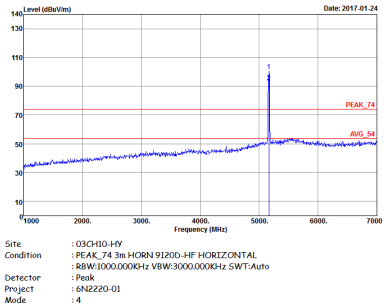
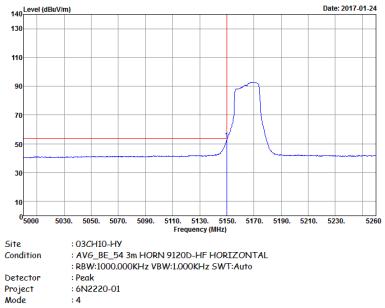
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT10 CH49 5245MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

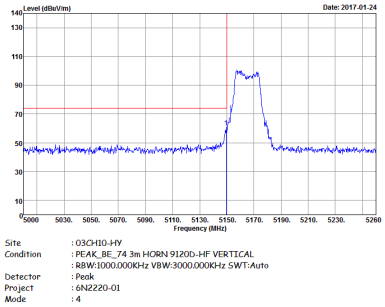
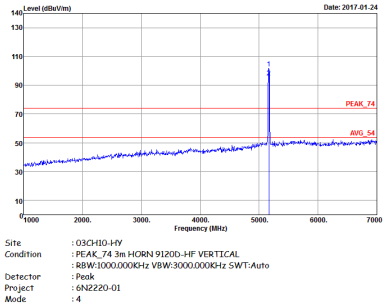
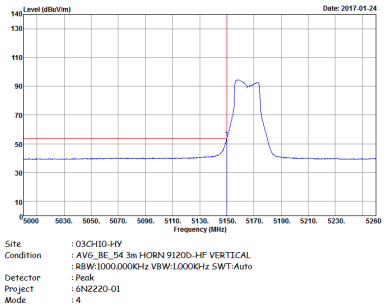
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT10 CH49 5245MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

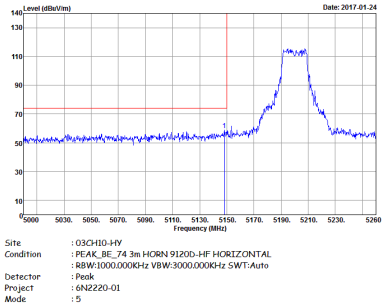
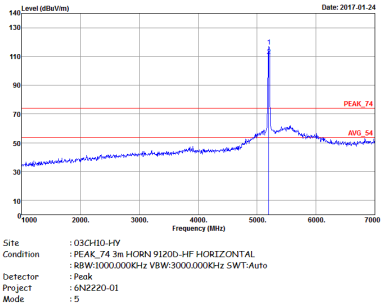
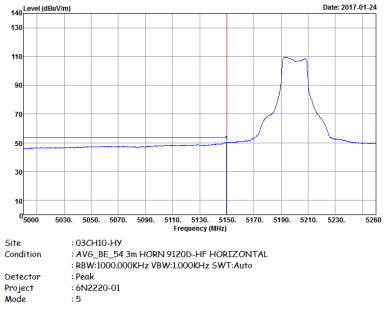
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT10 CH49 5245MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

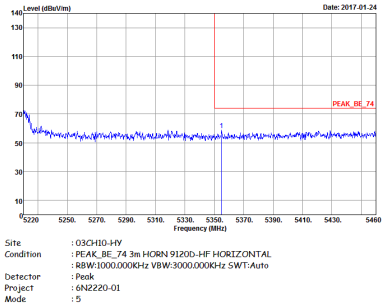
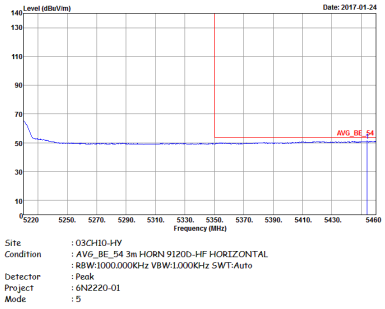
Band 1 5150~5250MHz

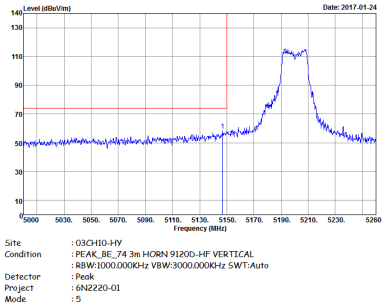
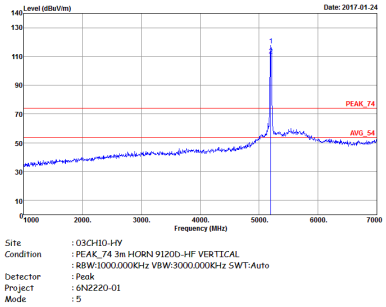
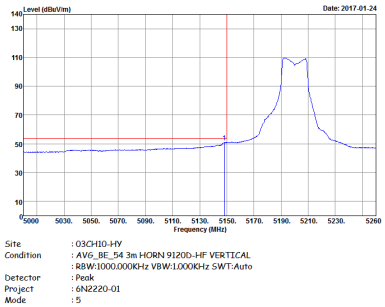
WIFI 802.11ac VHT20 (Band Edge @ 3m)

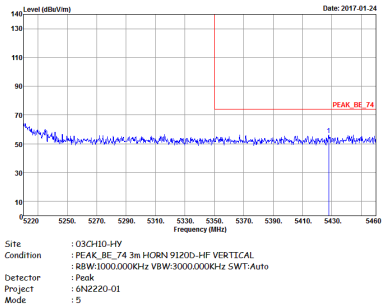
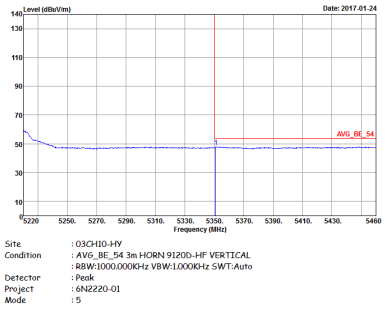
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH33 5165MHz	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

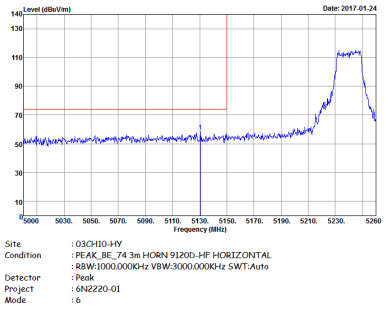
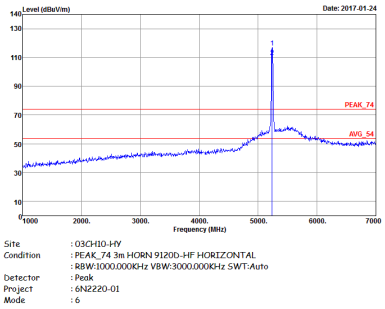
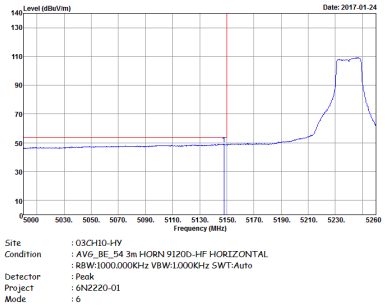
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH33 5165MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

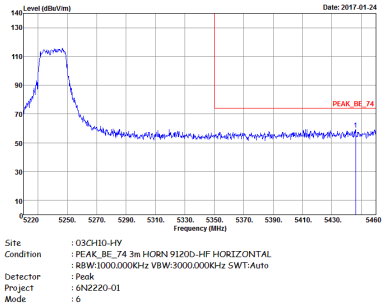
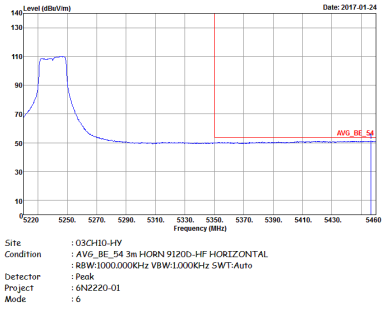
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH40 5200MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

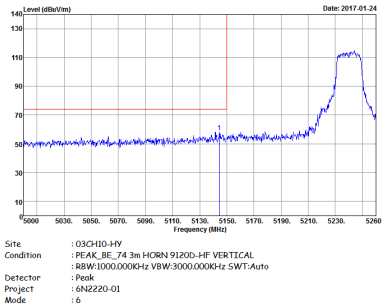
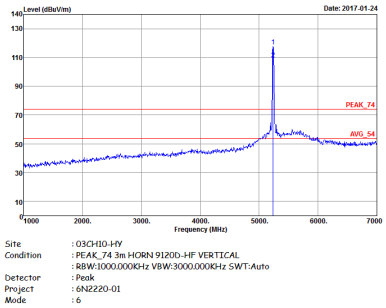
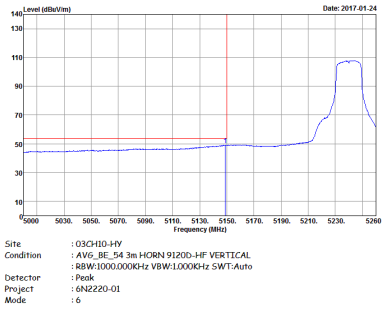
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH40 5200MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

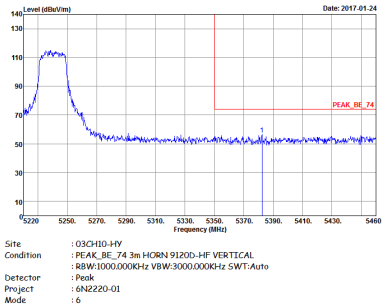
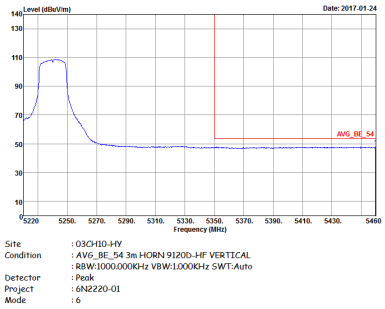
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH40 5200MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH40 5200MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH48 5240MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

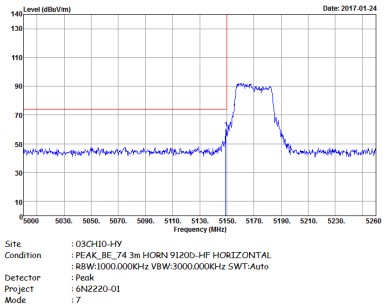
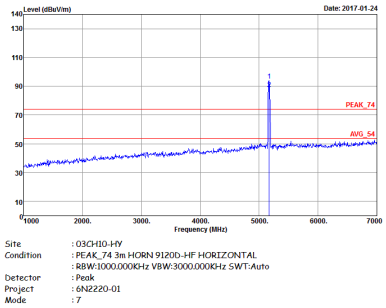
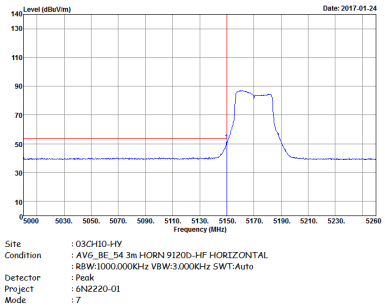
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH48 5240MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

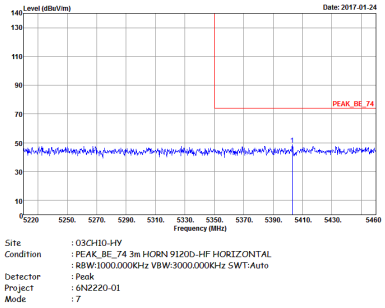
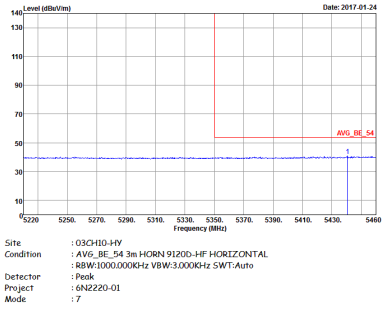
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH48 5240MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

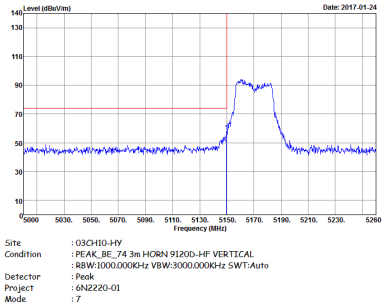
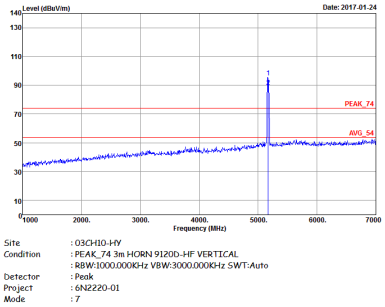
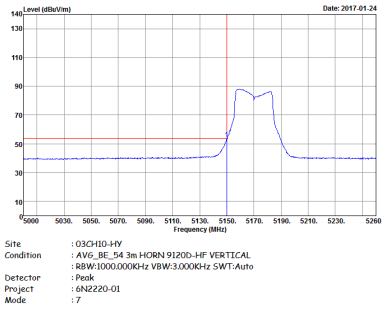
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH48 5240MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

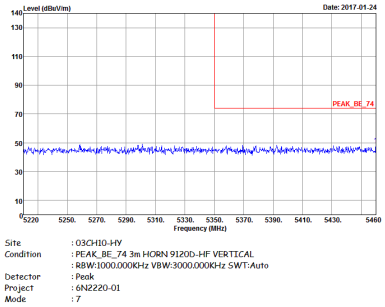
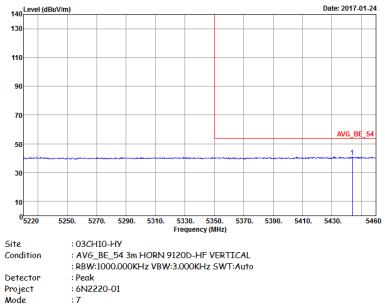
Band 1 5150~5250MHz

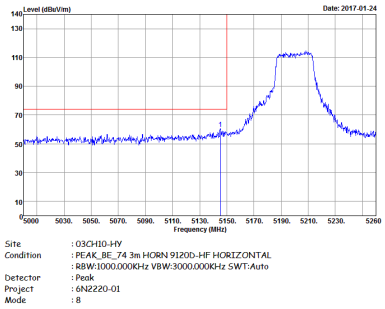
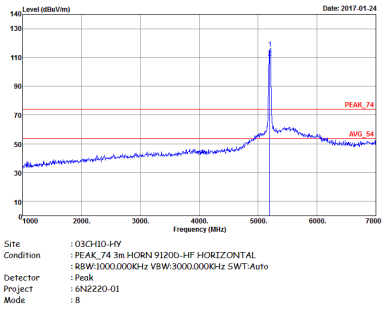
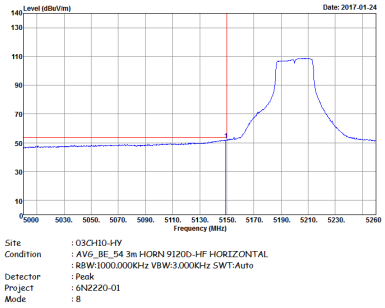
WIFI 802.11ac VHT30 (Band Edge @ 3m)

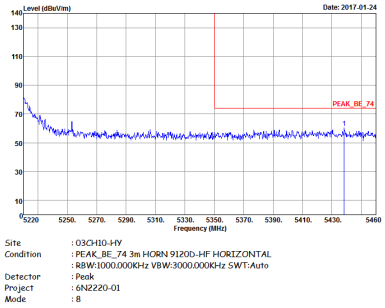
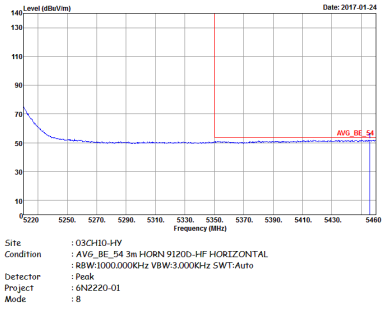
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT30 CH34 5170MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

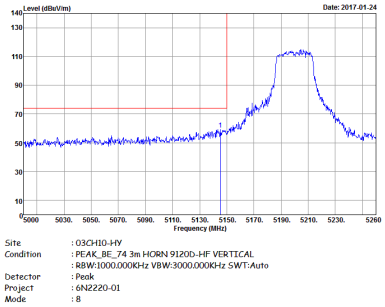
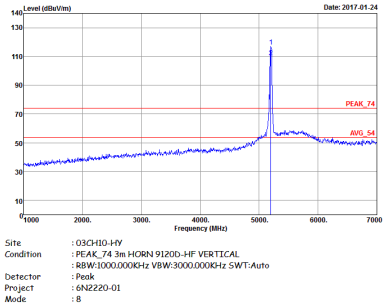
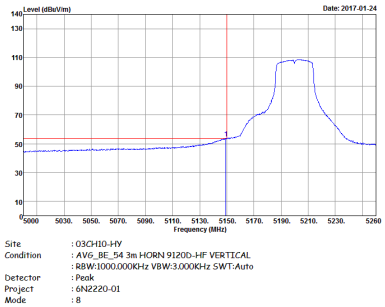
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT30 CH34 5170MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

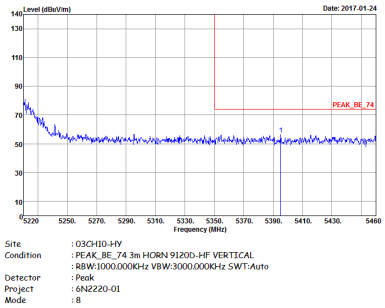
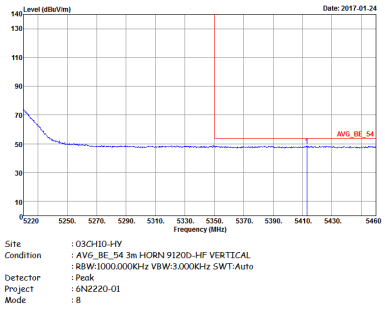
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT30 CH34 5170MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

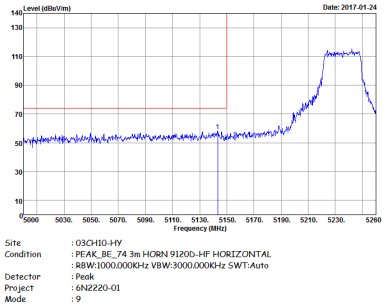
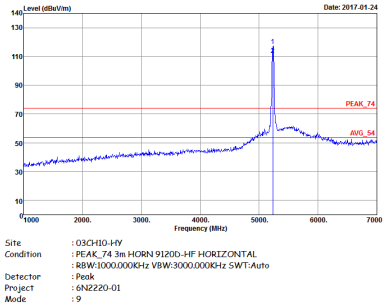
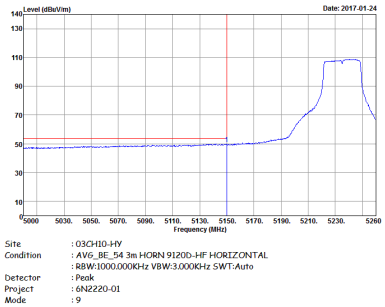
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT30 CH34 5170MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

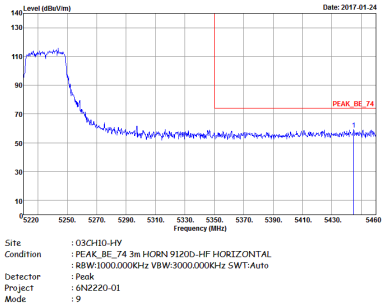
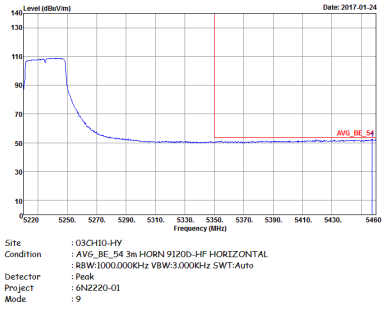
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT30 CH40 5200MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

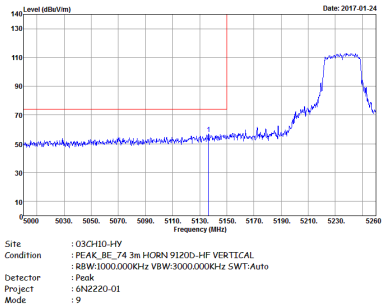
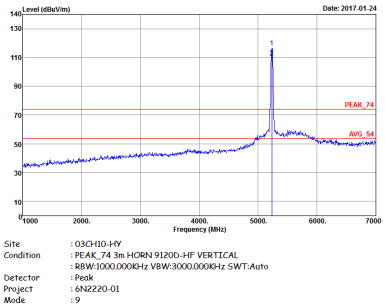
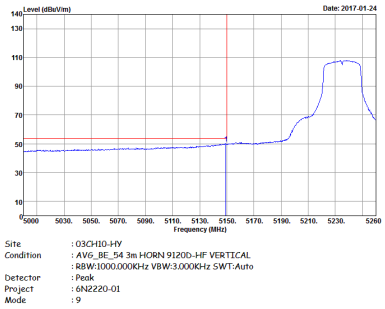
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT30 CH40 5200MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

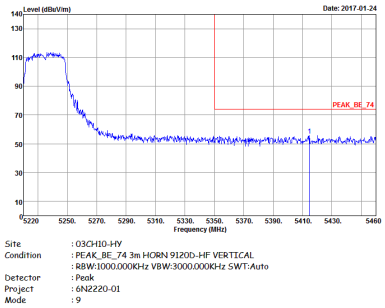
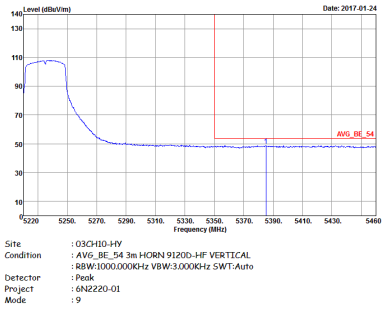
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT30 CH40 5200MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT30 CH40 5200MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

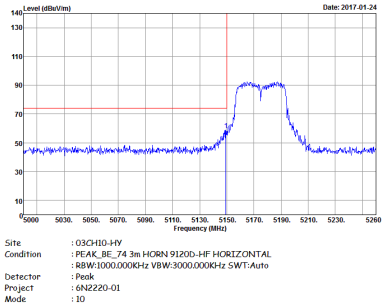
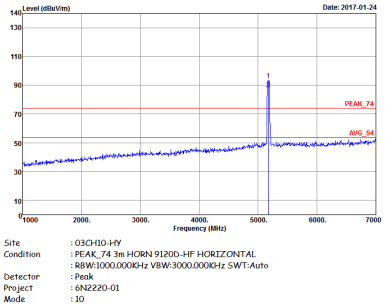
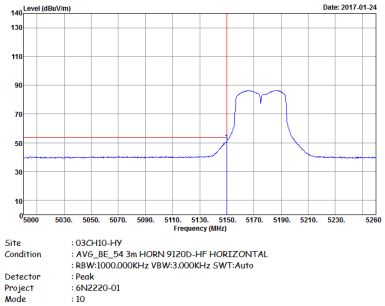
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT30 CH47 5235MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

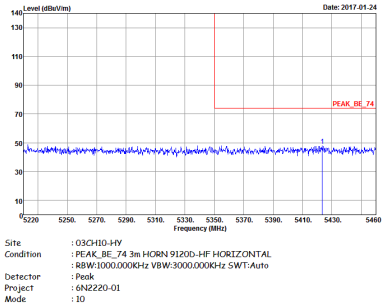
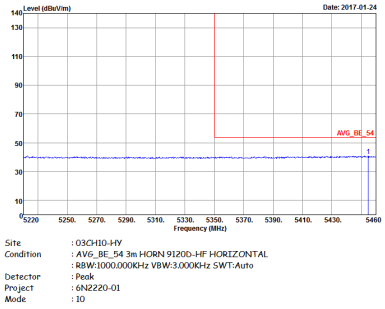
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT30 CH47 5235MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

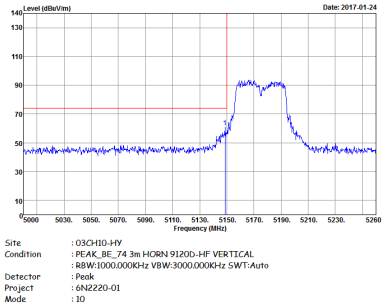
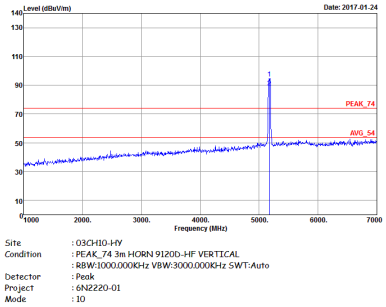
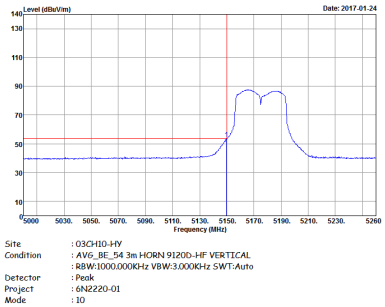
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT30 CH47 5235MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

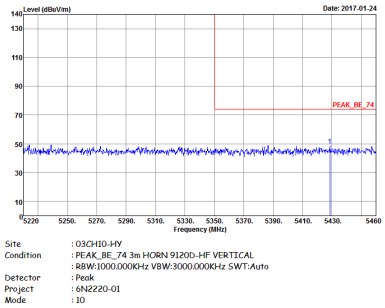
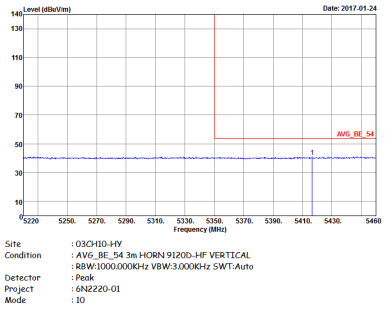
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT30 CH47 5235MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

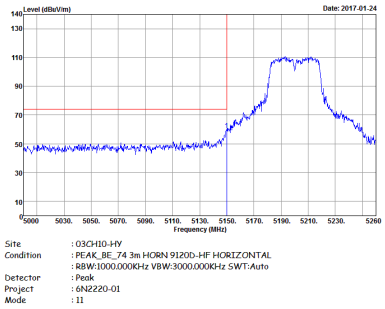
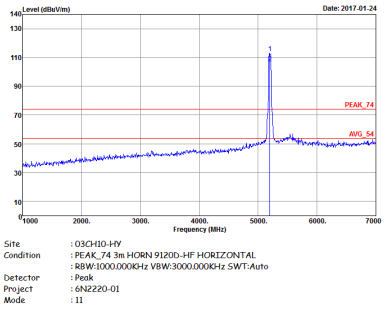
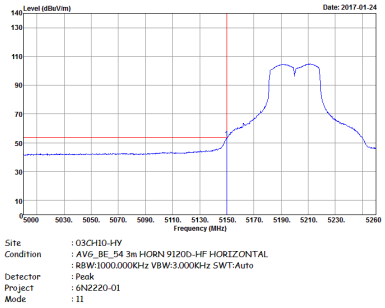
Band 1 5150~5250MHz
WIFI 802.11ac VHT40 (Band Edge @ 3m)

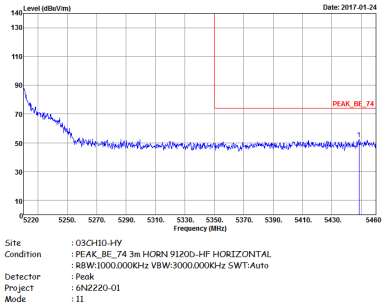
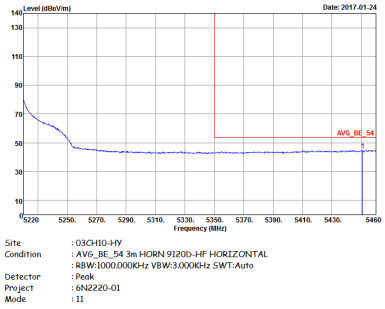
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH35 5175MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

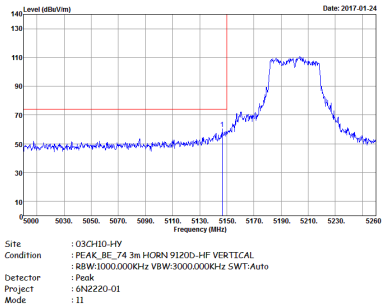
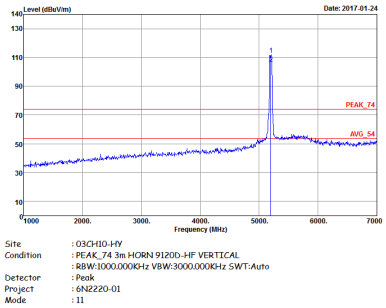
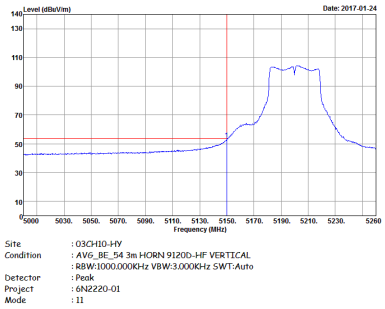
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH35 5175MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

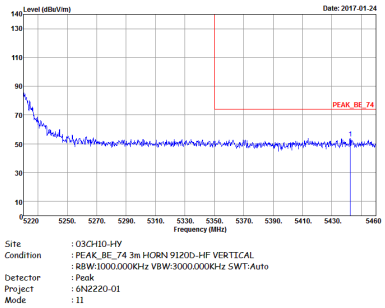
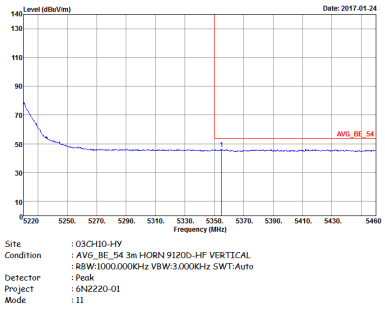
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH35 5175MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

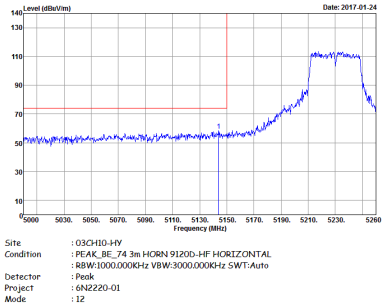
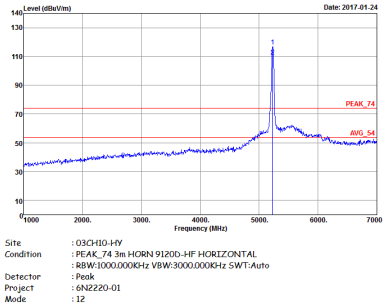
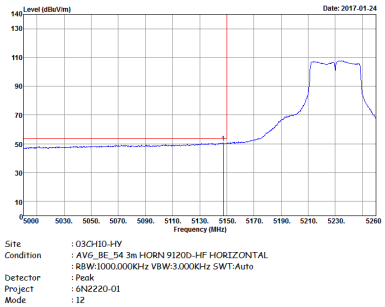
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH35 5175MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

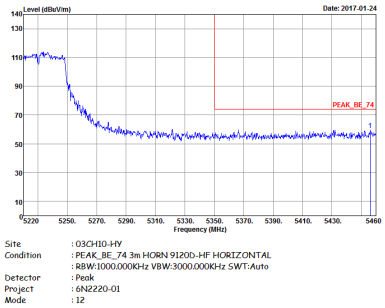
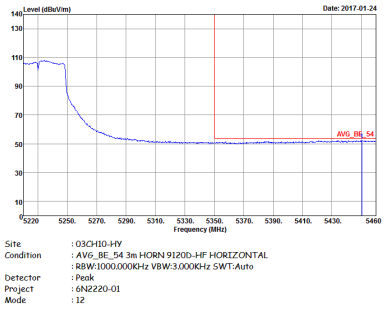
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH40 5200MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

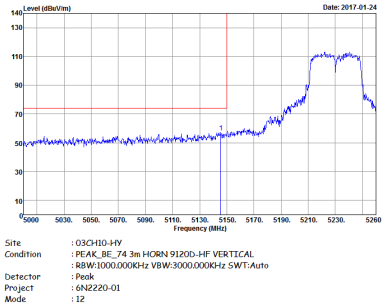
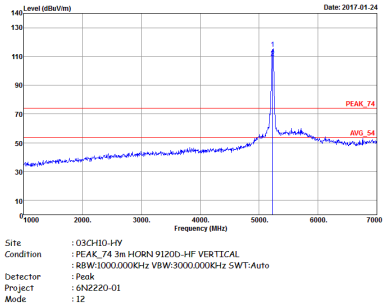
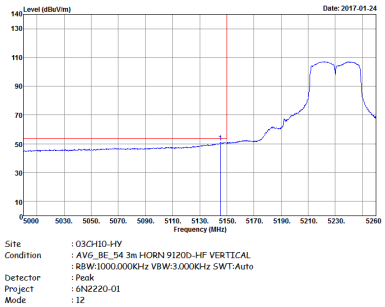
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH40 5200MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

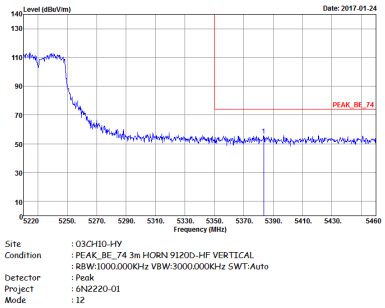
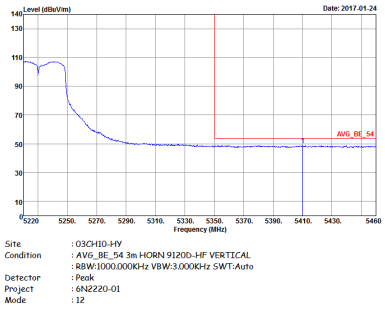
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH40 5200MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH40 5200MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

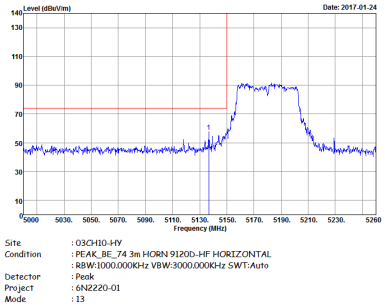
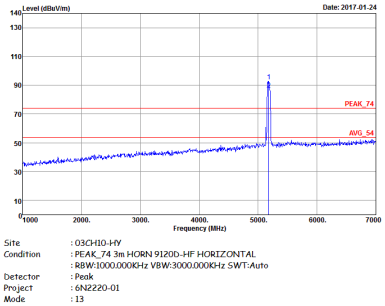
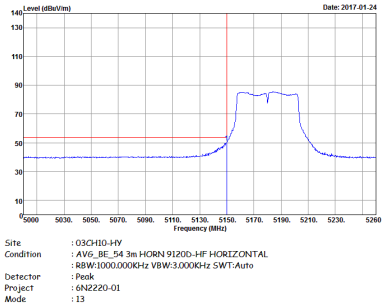
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH46 5230MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

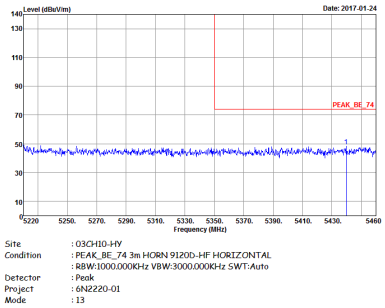
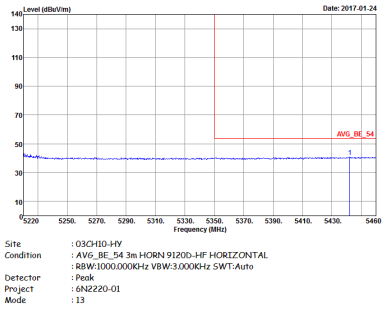
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH46 5230MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

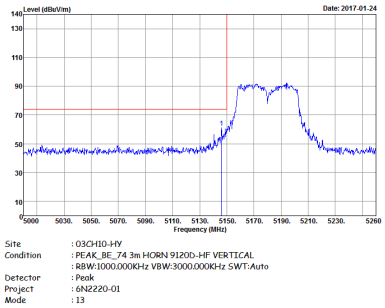
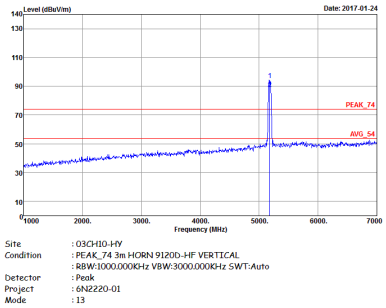
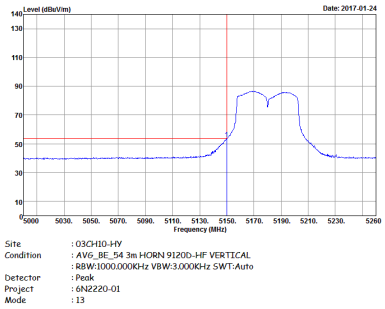
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH46 5230MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

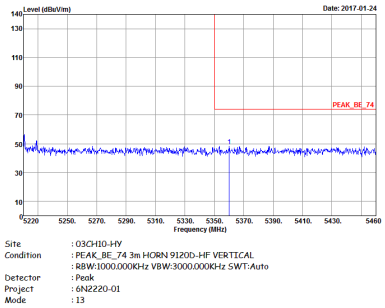
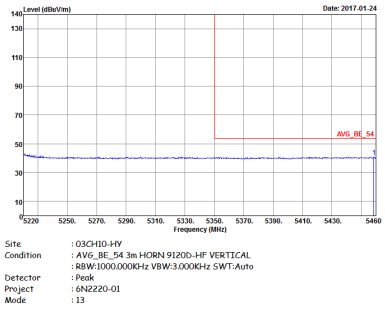
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH46 5230MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

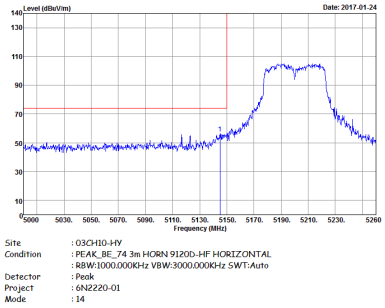
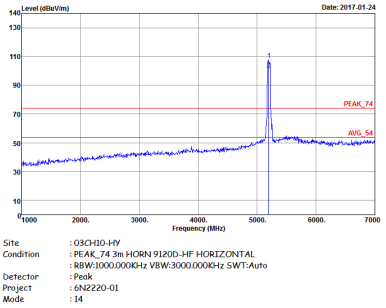
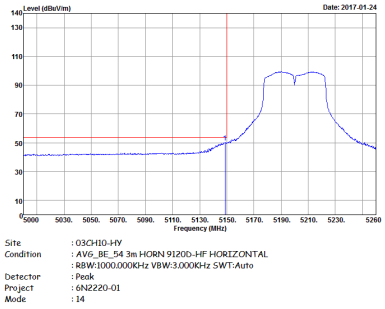
Band 1 5150~5250MHz
WIFI 802.11ac VHT50 (Band Edge @ 3m)

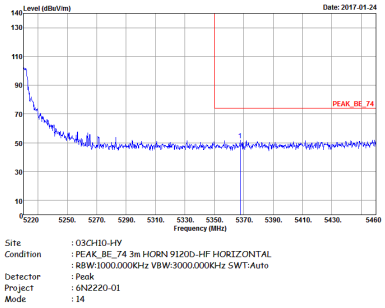
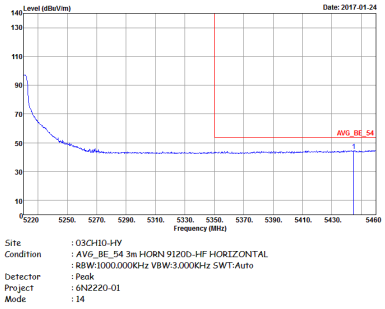
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT50 CH36 5180MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

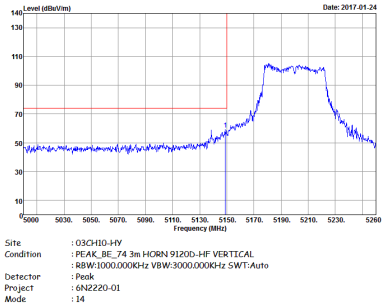
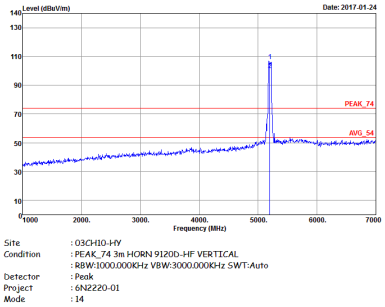
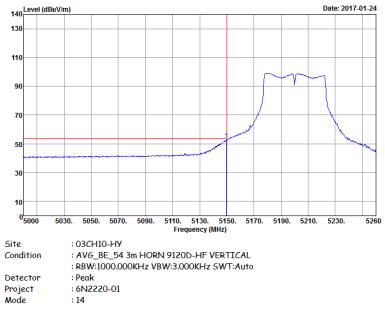
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT50 CH36 5180MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

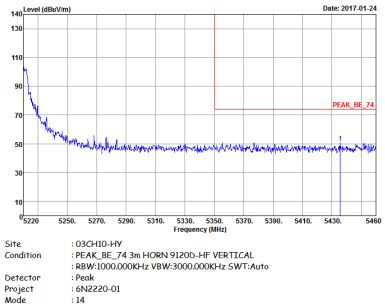
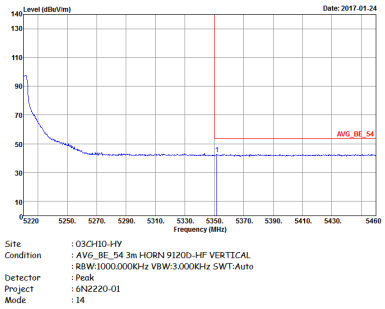
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT50 CH36 5180MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

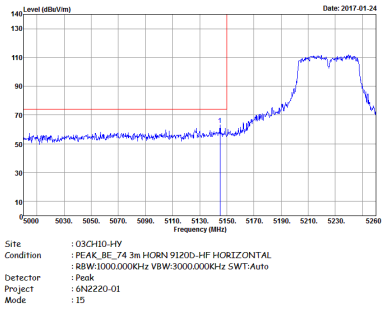
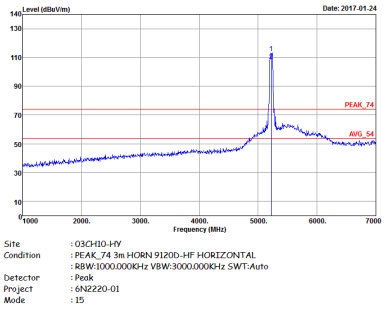
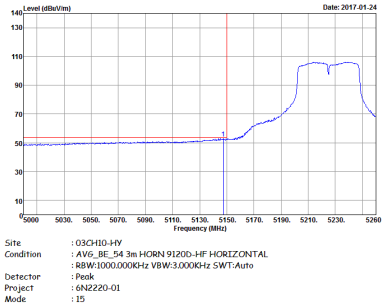
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT50 CH36 5180MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

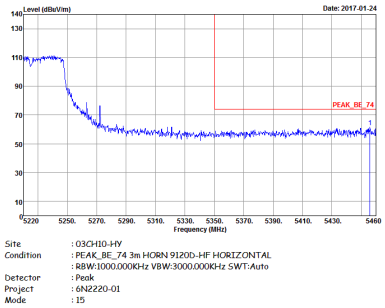
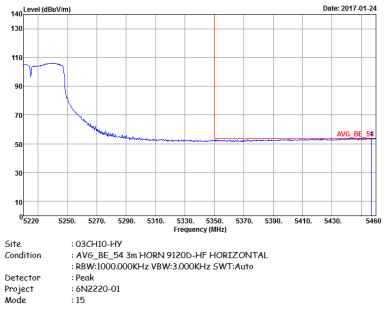
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT50 CH40 5200MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

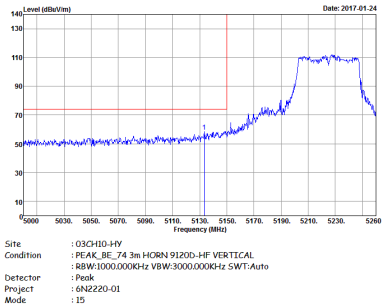
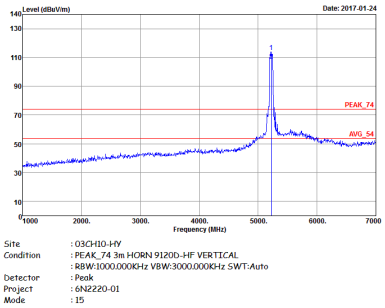
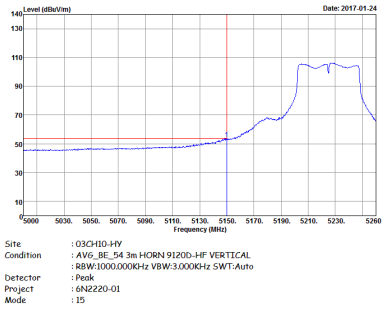
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT50 CH40 5200MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

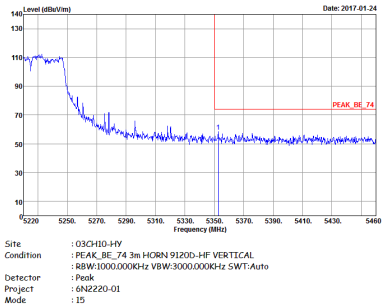
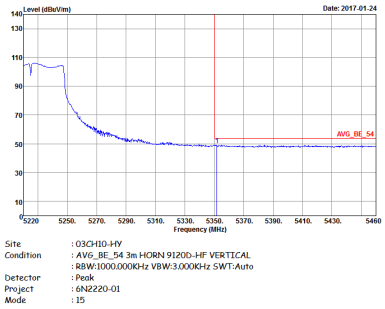
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT50 CH40 5200MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT50 CH40 5200MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

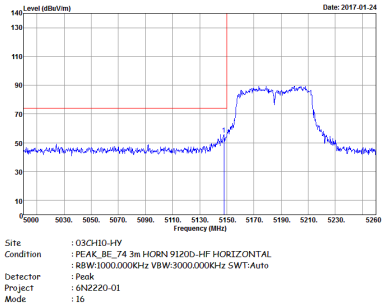
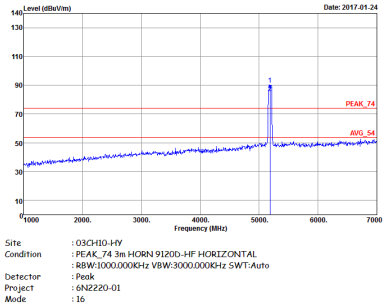
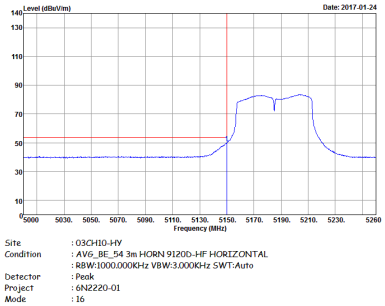
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT50 CH45 5225MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

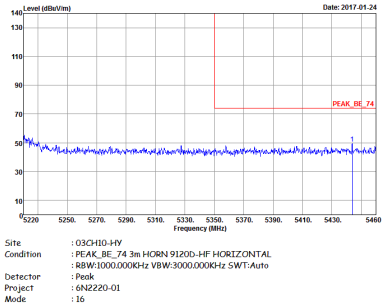
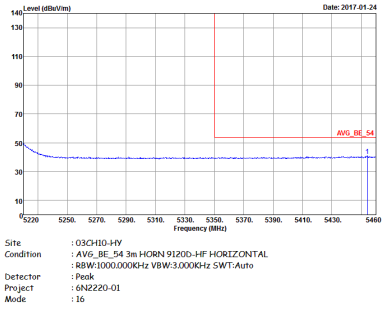
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT50 CH45 5225MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

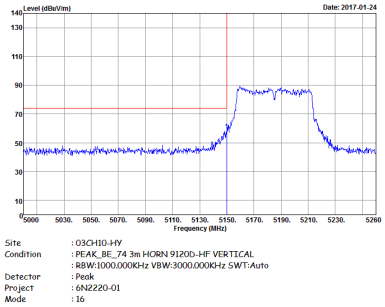
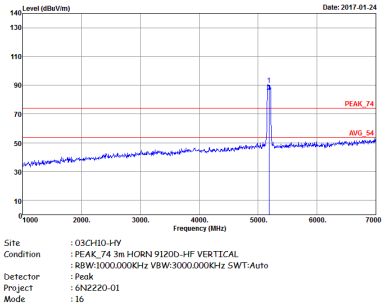
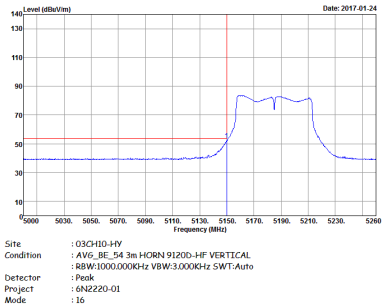
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT50 CH45 5225MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

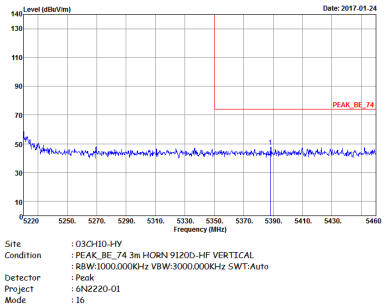
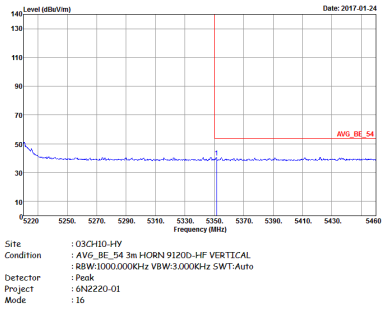
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT50 CH45 5225MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

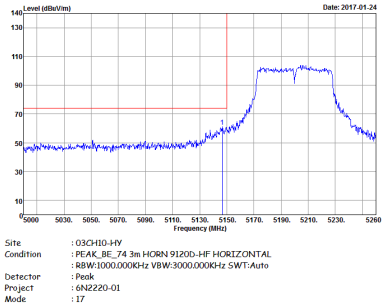
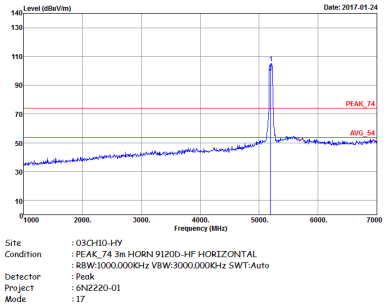
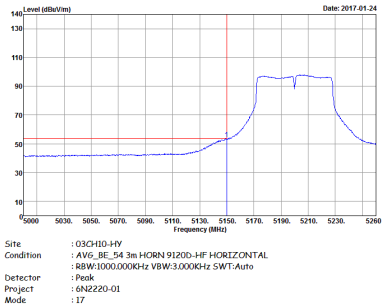
Band 1 5150~5250MHz
WIFI 802.11ac VHT60 (Band Edge @ 3m)

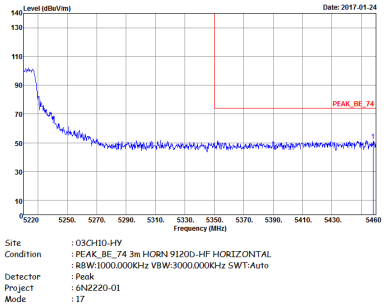
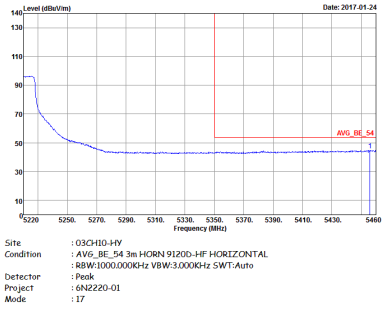
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT60 CH37 5185MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

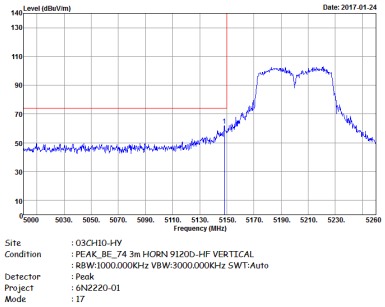
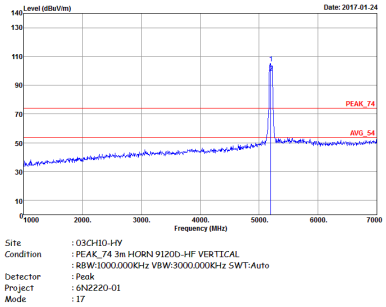
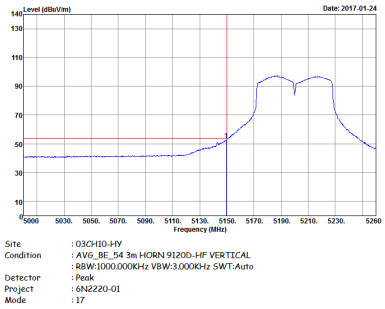
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT60 CH37 5185MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

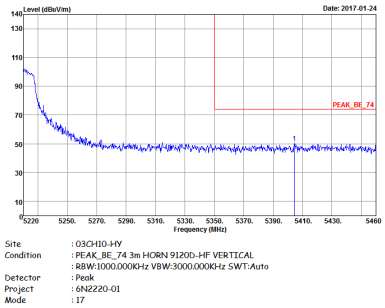
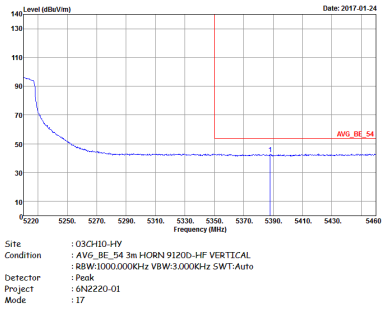
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT60 CH37 5185MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

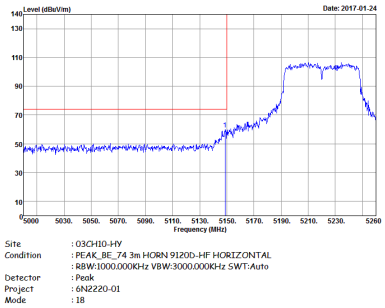
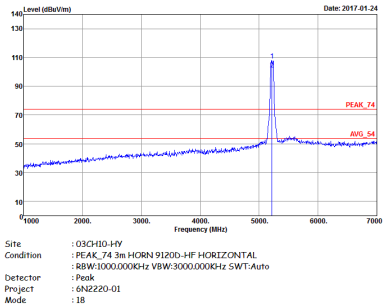
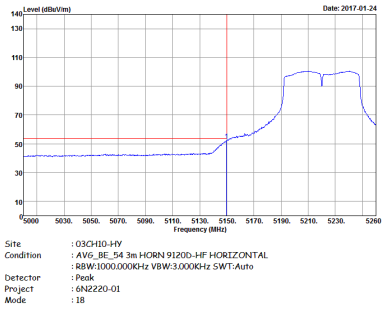
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT60 CH37 5185MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

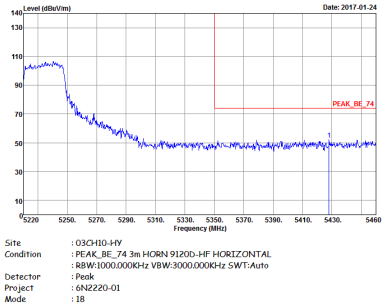
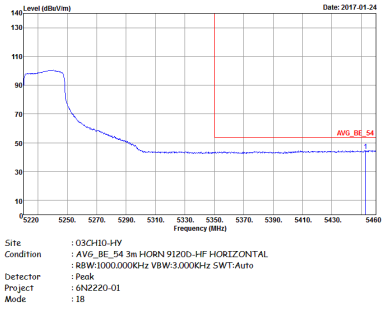
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT60 CH40 5200MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

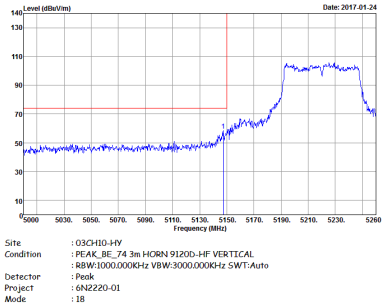
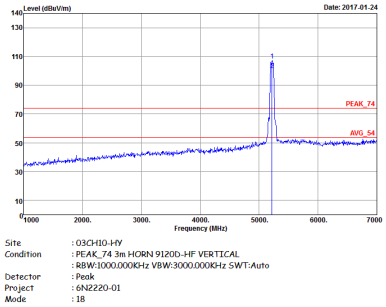
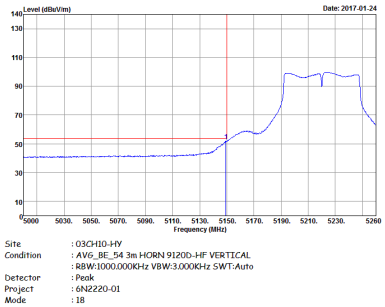
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT60 CH40 5200MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

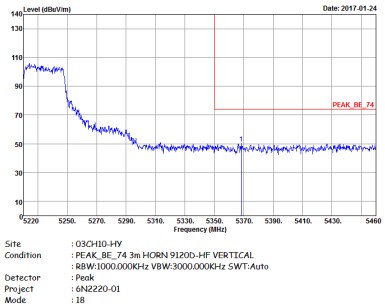
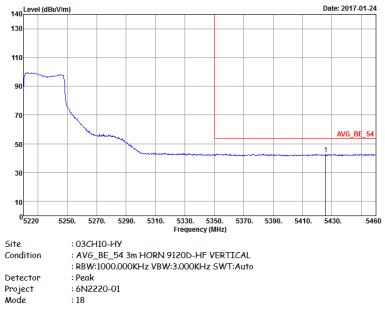
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT60 CH40 5200MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT60 CH40 5200MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT60 CH44 5220MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

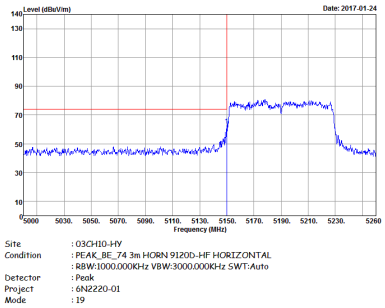
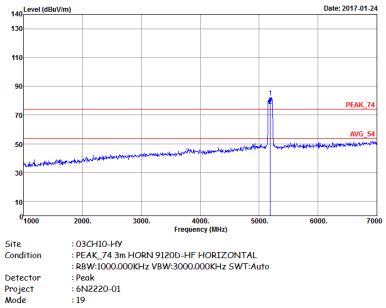
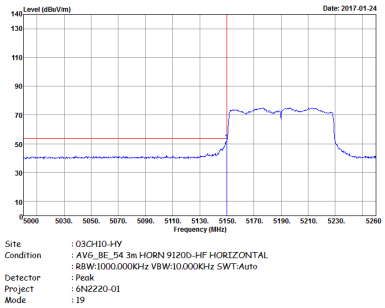
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT60 CH44 5220MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

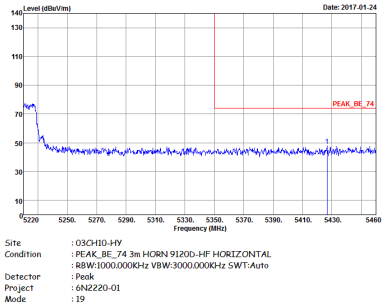
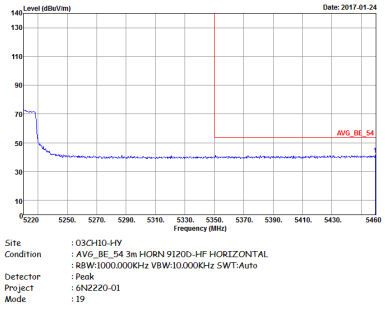
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT60 CH44 5220MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

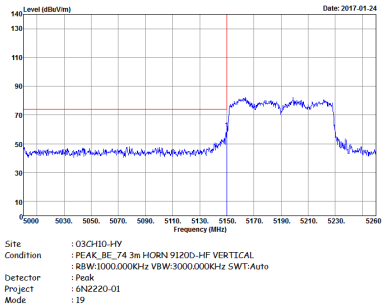
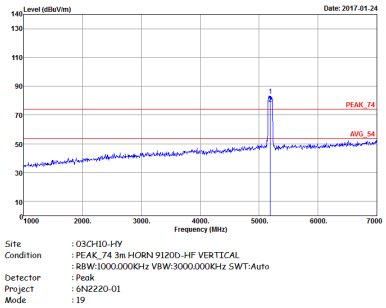
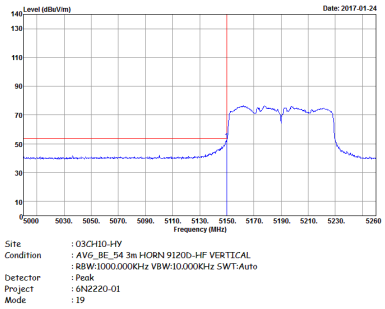
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT60 CH44 5220MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

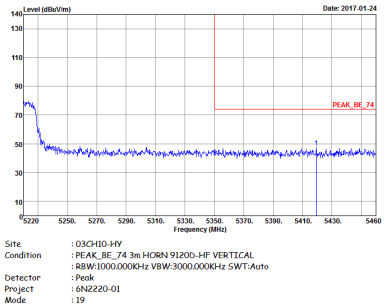
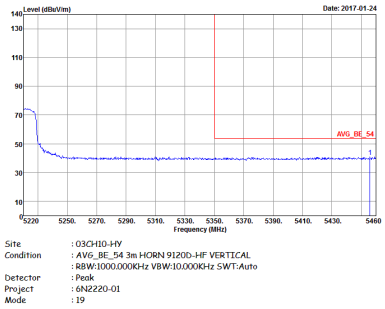
Band 1 5150~5250MHz

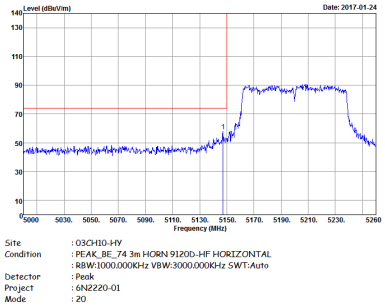
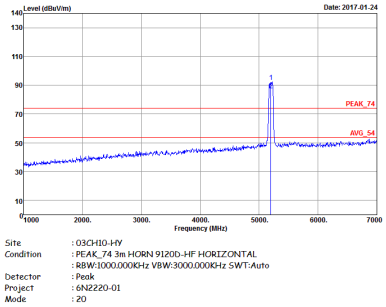
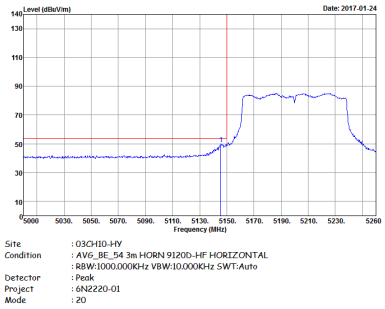
WIFI 802.11ac VHT80 (Band Edge @ 3m)

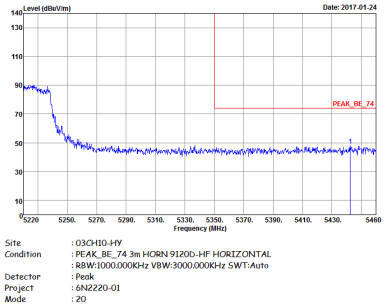
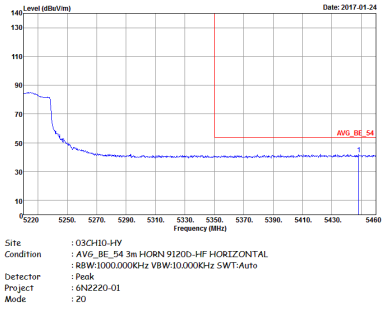
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH38 5190MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

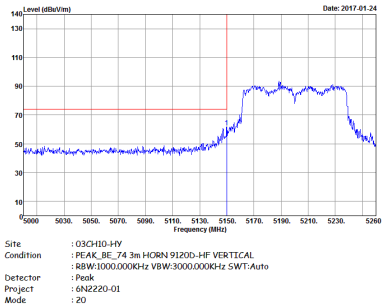
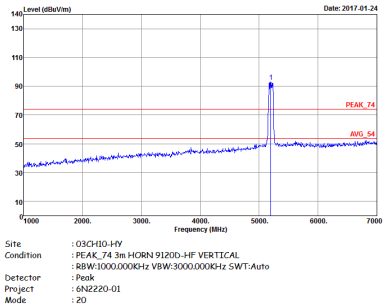
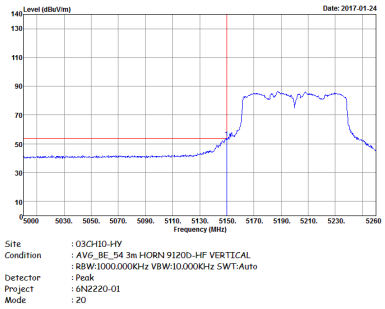
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH38 5190MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

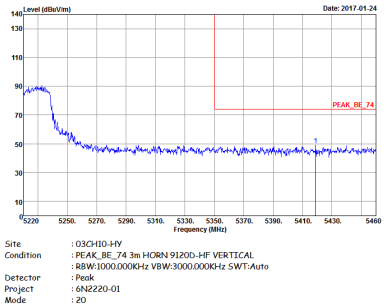
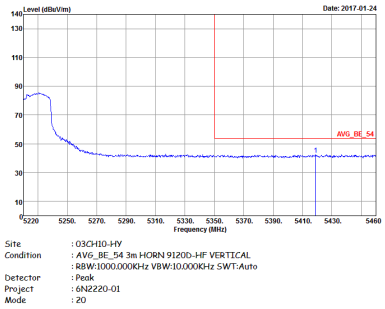
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH38 5190MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

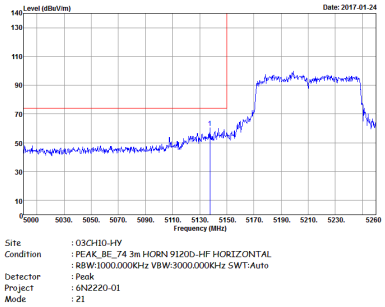
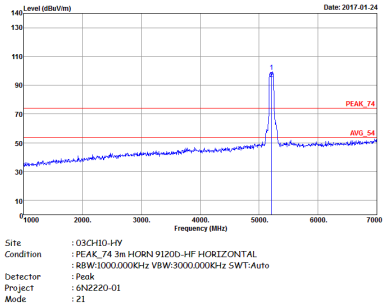
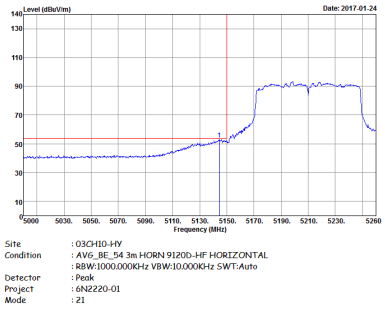
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH38 5190MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

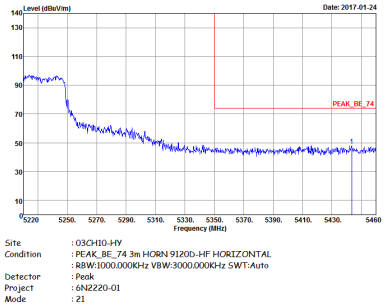
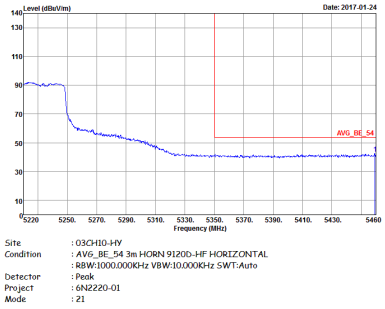
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH40 5200MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

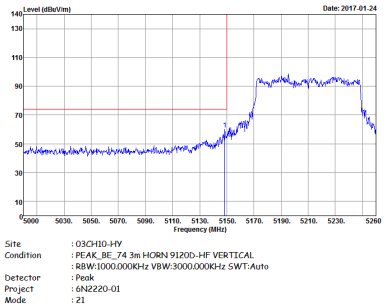
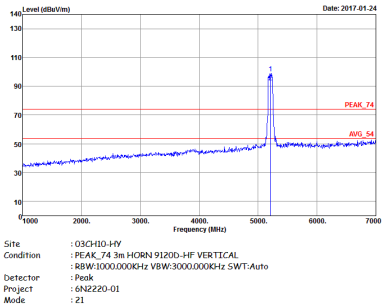
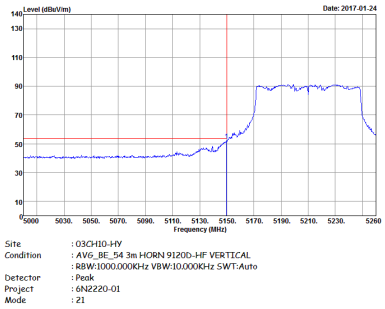
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH40 5200MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

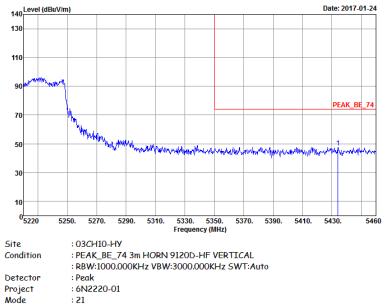
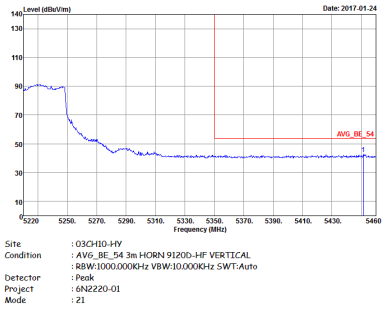
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH40 5200MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH40 5200MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		Left blank

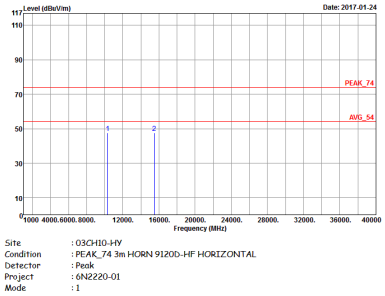
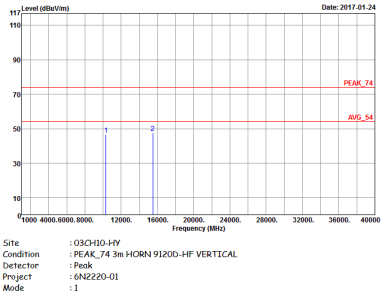
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

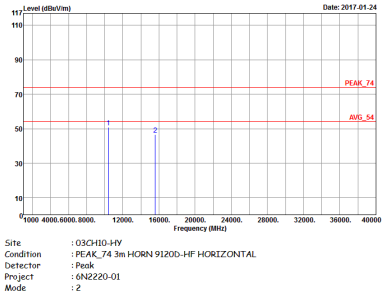
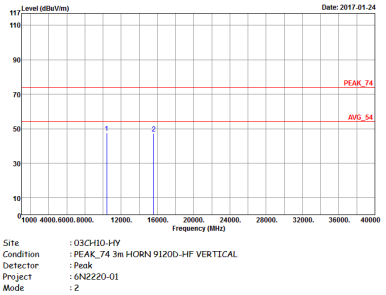
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

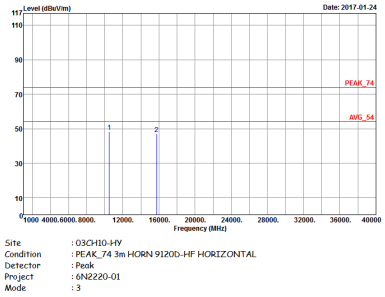
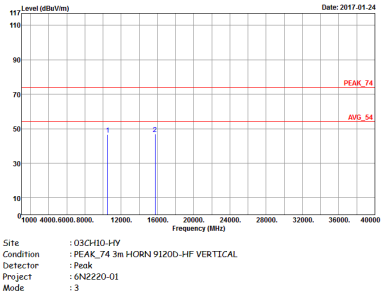
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

Band 1 - 5150~5250MHz

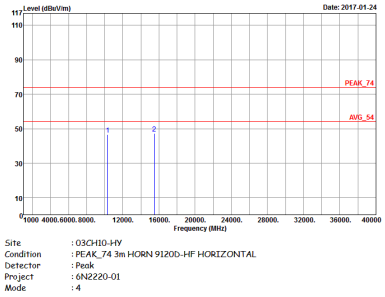
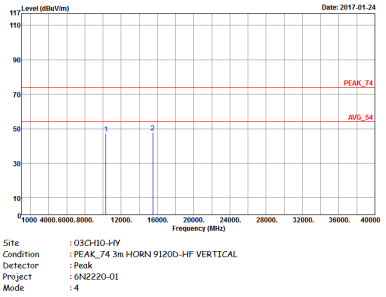
WIFI 802.11ac VHT10 (Harmonic @ 3m)

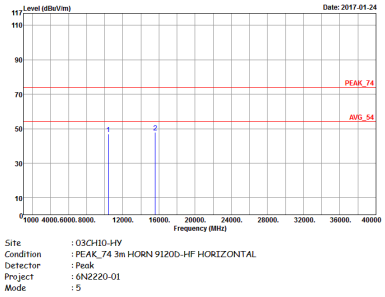
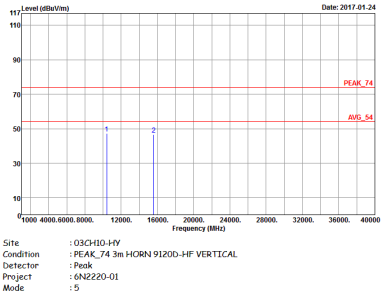
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT10 CH32 5160MHz	
1+2	Horizontal	Vertical
Peak Avg.		

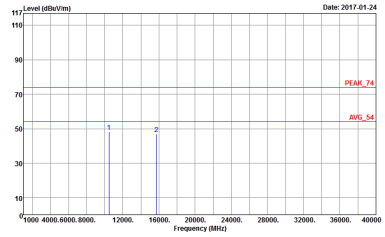
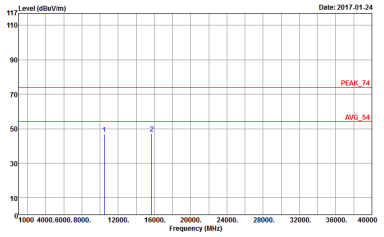
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT10 CH40 5200MHz	
1+2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT10 CH49 5245MHz	
1+2	Horizontal	Vertical
Peak Avg.		

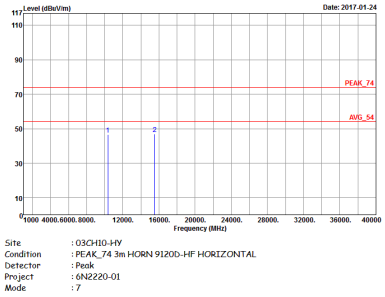
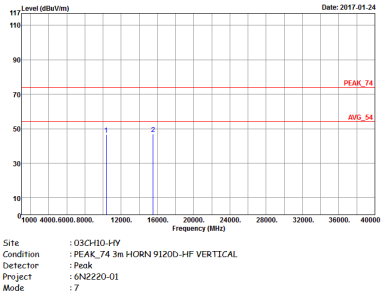
Band 1 5150~5250MHz
WIFI 802.11ac VHT20 (Harmonic @ 3m)

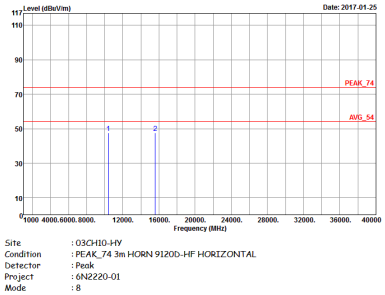
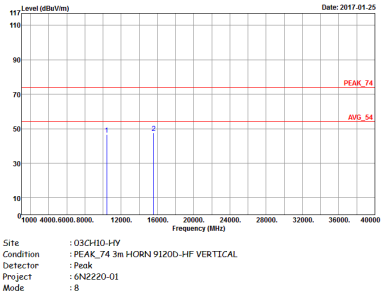
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH33 5165MHz	
1+2	Horizontal	Vertical
Peak Avg.		

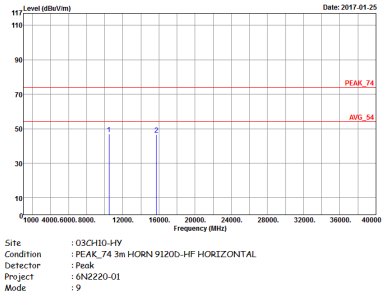
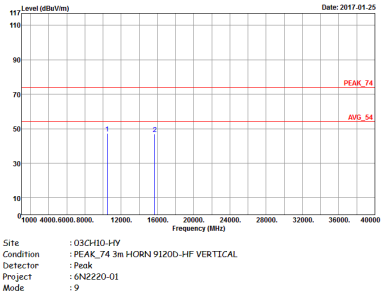
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH40 5200MHz	
1+2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH48 5240MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH10-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 6N2220-01 Mode : 6	 Site : 03CH10-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 6N2220-01 Mode : 6

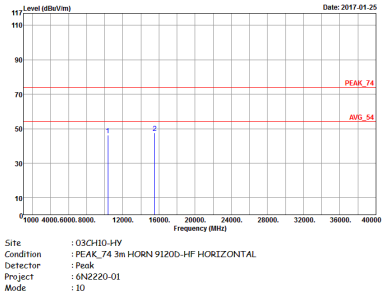
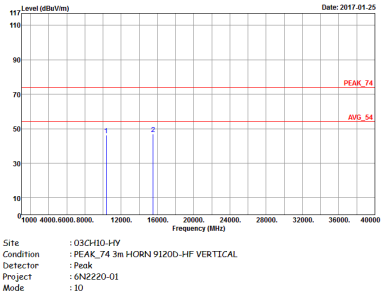
Band 1 5150~5250MHz
WIFI 802.11ac VHT30 (Harmonic @ 3m)

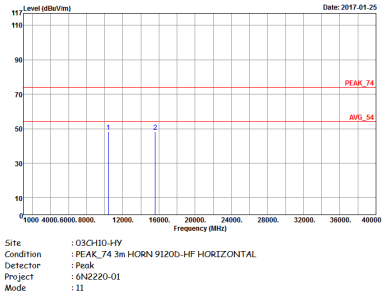
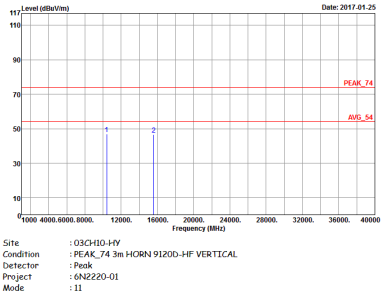
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT30 CH34 5170MHz	
1+2	Horizontal	Vertical
Peak Avg.		

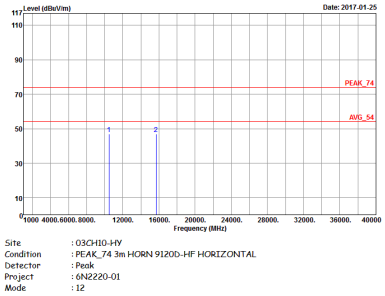
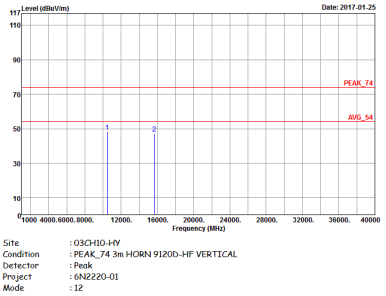
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT30 CH40 5200MHz	
1+2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT30 CH47 5235MHz	
1+2	Horizontal	Vertical
Peak Avg.		

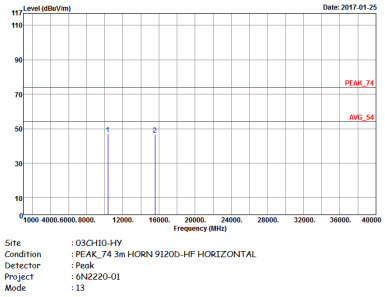
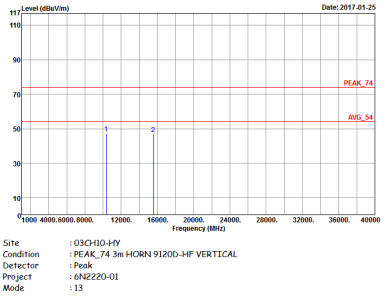
Band 1 5150~5250MHz
WIFI 802.11ac VHT40 (Harmonic @ 3m)

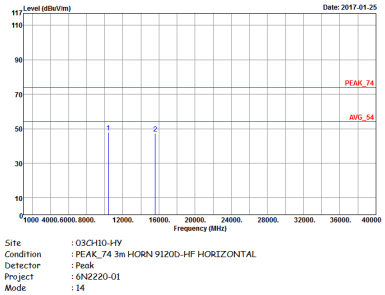
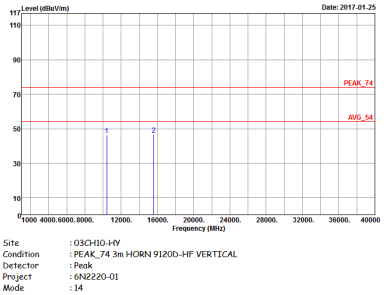
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH35 5175MHz	
1+2	Horizontal	Vertical
Peak Avg.		

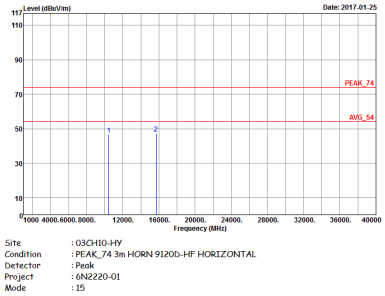
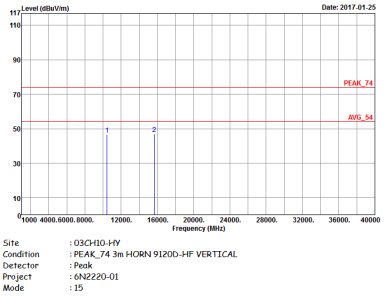
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH40 5200MHz	
1+2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH46 5230MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH10-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 6N2220-01 Mode : 12	 Site : 03CH10-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 6N2220-01 Mode : 12

Band 1 5150~5250MHz
WIFI 802.11ac VHT50 (Harmonic @ 3m)

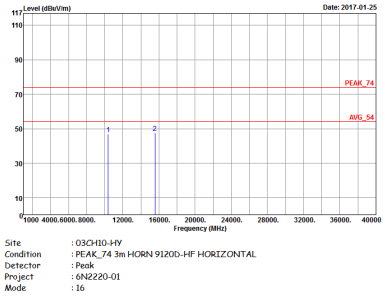
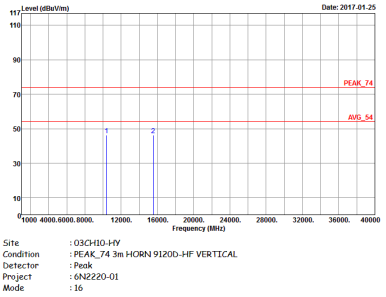
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT50 CH35 5180MHz	
1+2	Horizontal	Vertical
Peak Avg.		

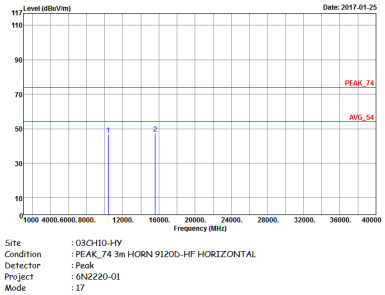
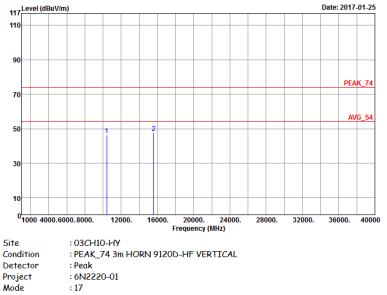
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT50 CH40 5200MHz	
1+2	Horizontal	Vertical
Peak Avg.		

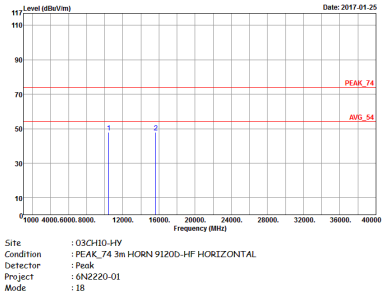
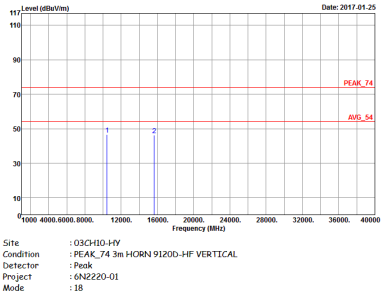
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT50 CH45 5225MHz	
1+2	Horizontal	Vertical
Peak Avg.		

Band 1 5150~5250MHz

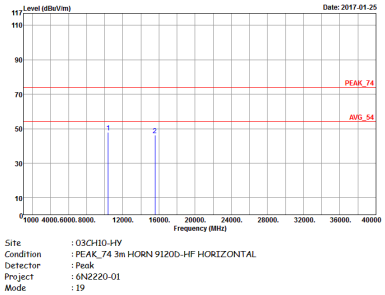
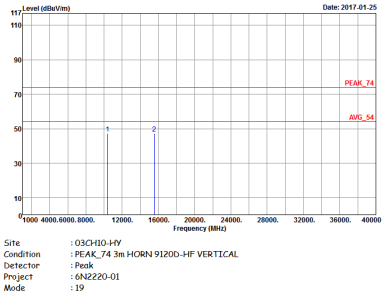
WIFI 802.11ac VHT60 (Harmonic @ 3m)

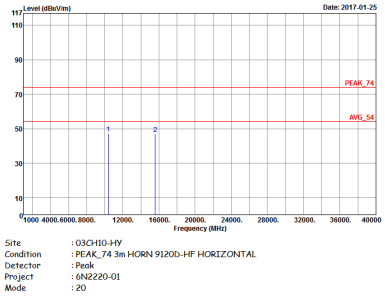
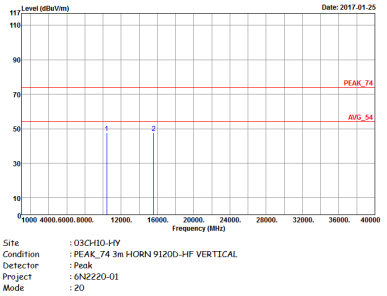
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT60 CH37 5185MHz	
1+2	Horizontal	Vertical
Peak Avg.		

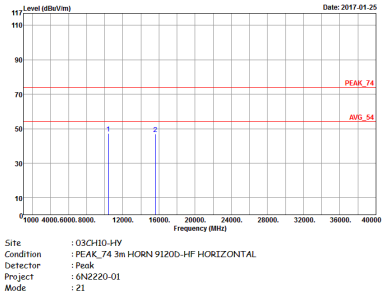
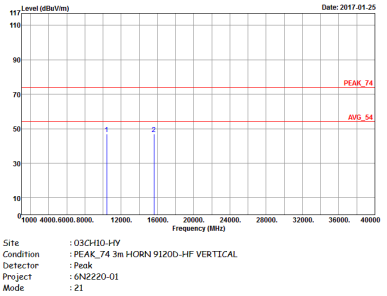
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT60 CH40 5200MHz	
1+2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT60 CH44 5220MHz	
1+2	Horizontal	Vertical
Peak Avg.		

Band 1 5150~5250MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

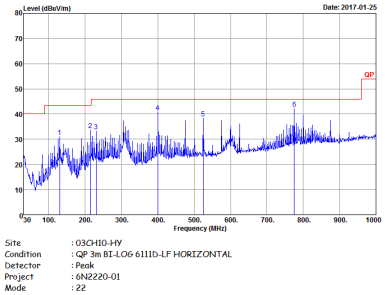
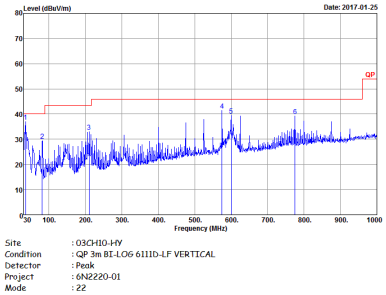
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH38 5190MHz	
1+2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH40 5200MHz	
1+2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz	
1+2	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

5GHz WIFI 802.11ac VHT80 (LF)

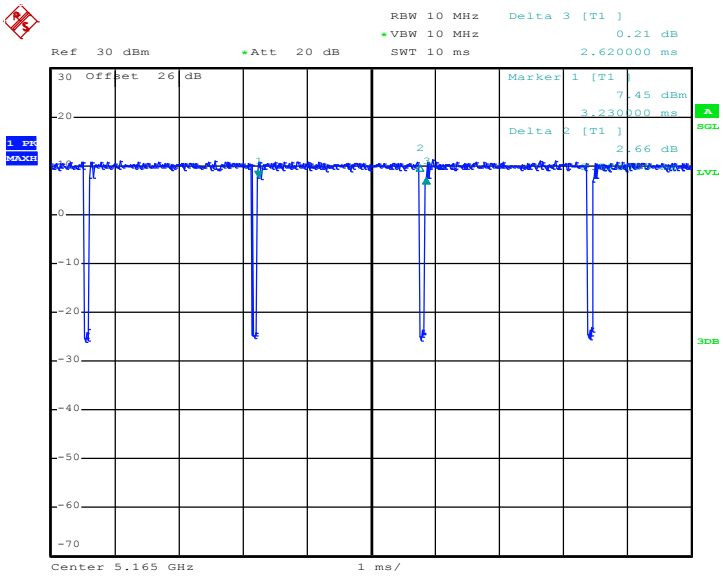
WIFI	5GHz WIFI	
ANT	802.11ac VHT80 LF	
1+2	Horizontal	Vertical
QP / Peak		

Appendix E Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
1	802.11ac VHT10	96.18	2520	0.396825397	1kHz
2	802.11ac VHT10	96.18	2520	0.396825397	1kHz
1	802.11ac VHT20	94.776	1270	0.787401575	1kHz
2	802.11ac VHT20	94.776	1270	0.787401575	1kHz
1	802.11ac VHT30	92.31	840	1.190476190	3kHz
2	802.11ac VHT30	92.31	840	1.190476190	3kHz
1	802.11ac VHT40	89.855	620	1.612903226	3kHz
2	802.11ac VHT40	88.732	630	1.587301587	3kHz
1	802.11ac VHT50	87.931	510	1.960784314	3kHz
2	802.11ac VHT50	87.931	510	1.960784314	3kHz
1	802.11ac VHT60	85.979	417	2.398081535	3kHz
2	802.11ac VHT60	86.667	416	2.403846154	3kHz
1	802.11ac VHT80	82.292	316	3.164556962	10kHz
2	802.11ac VHT80	81.25	312	3.205128205	10kHz

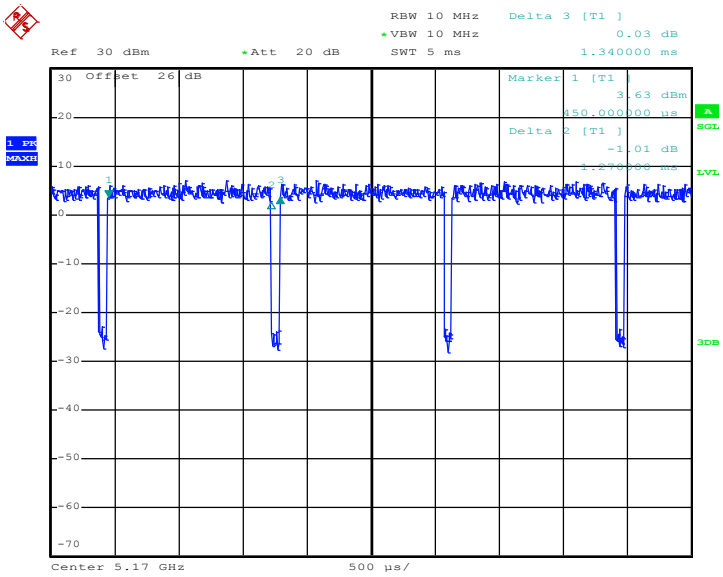
<MIMO Ant. 1+2(1)>

802.11ac VHT10



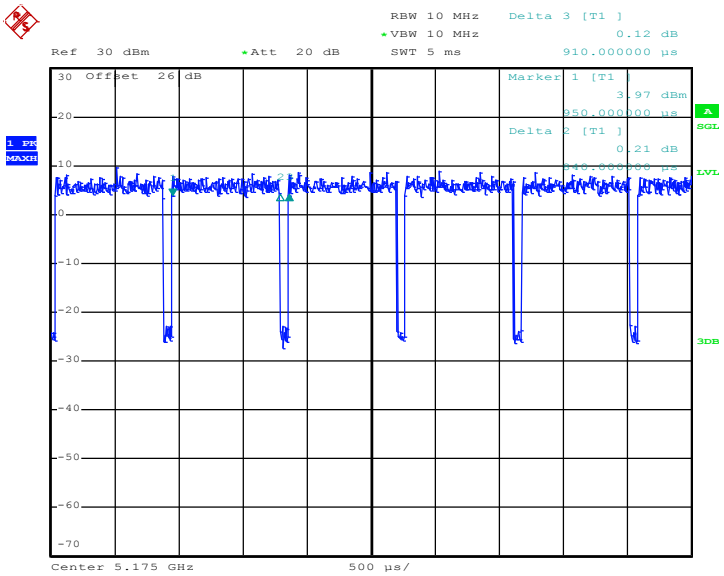
Date: 18.JAN.2017 01:52:36

802.11ac VHT20



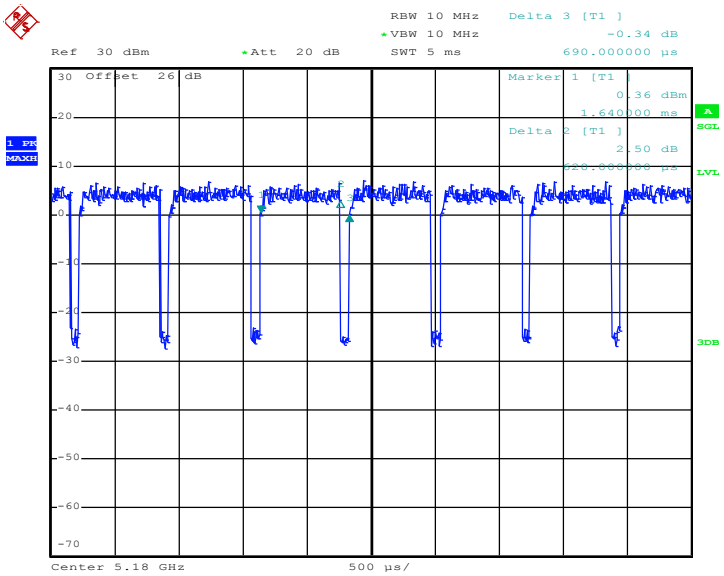
Date: 18.JAN.2017 03:13:54

802.11ac VHT30



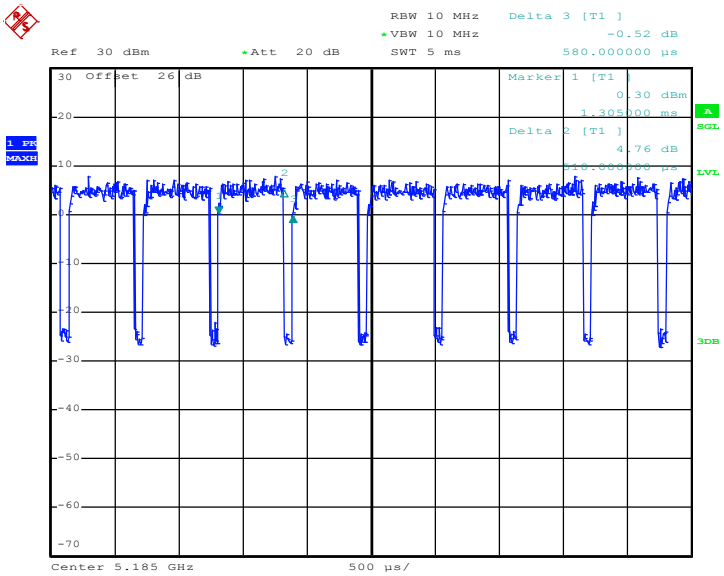
Date: 18.JAN.2017 03:55:39

802.11ac VHT40



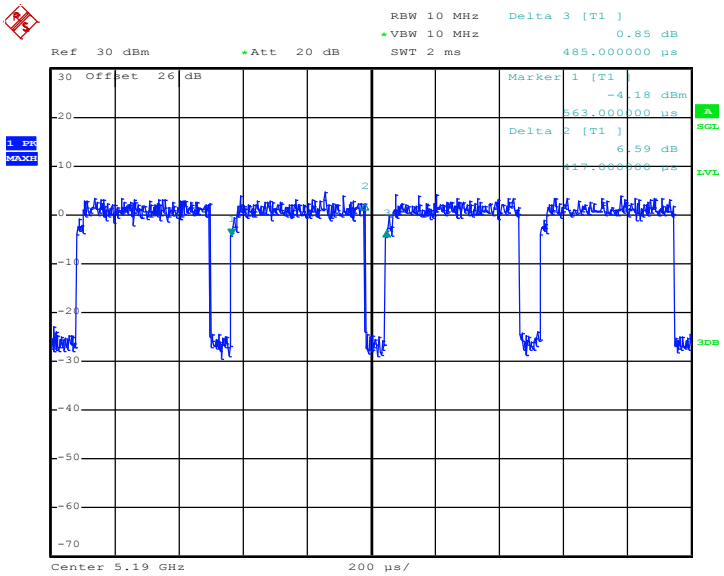
Date: 18.JAN.2017 04:19:57

802.11ac VHT50



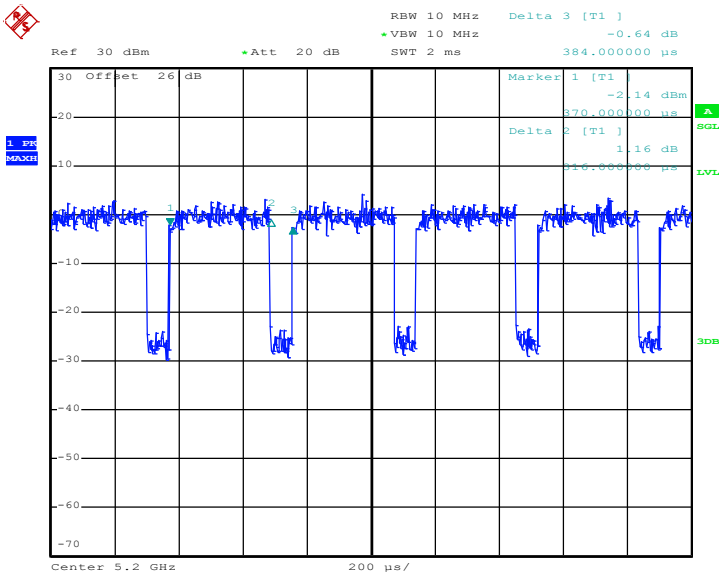
Date: 18.JAN.2017 07:01:13

802.11ac VHT60



Date: 18.JAN.2017 07:33:33

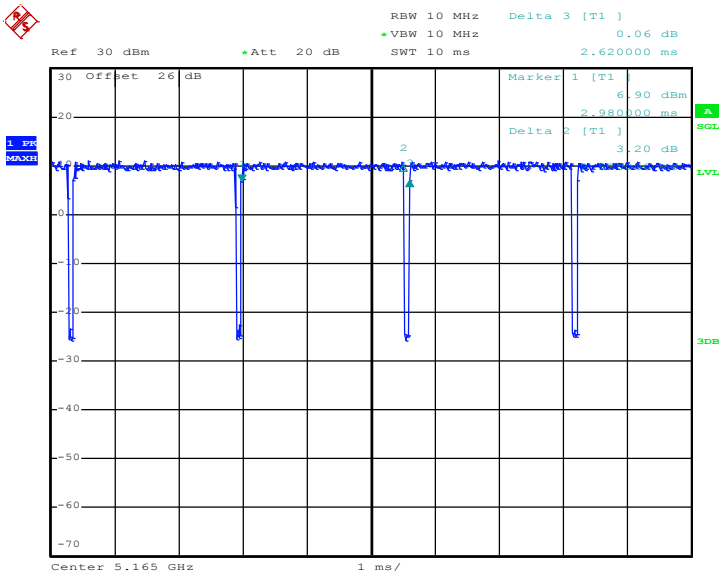
802.11ac VHT80



Date: 18.JAN.2017 07:56:29

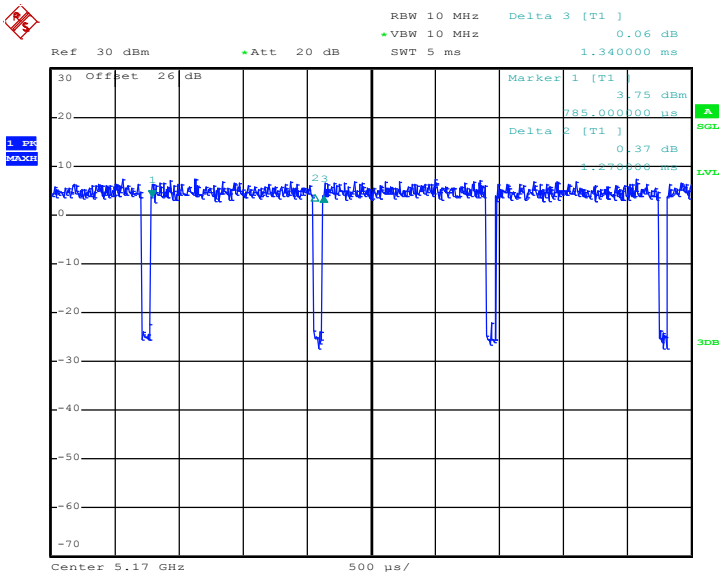
<MIMO Ant. 1+2(2)>

802.11ac VHT10



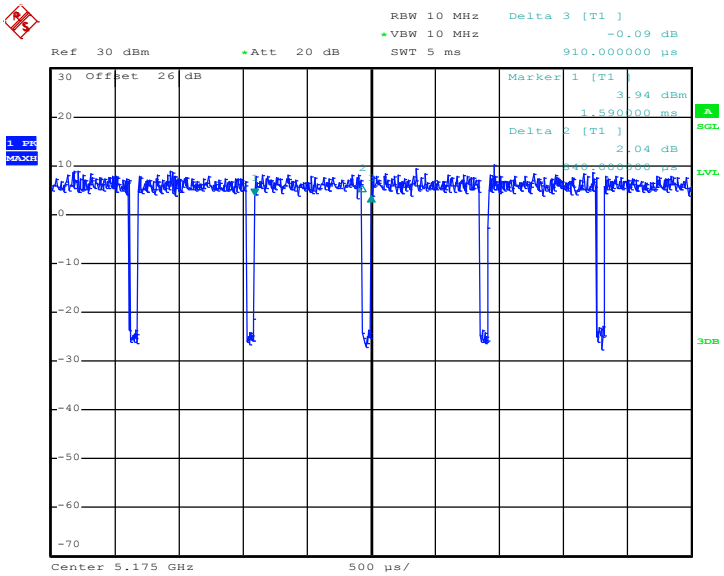
Date: 18.JAN.2017 01:53:56

802.11ac VHT20



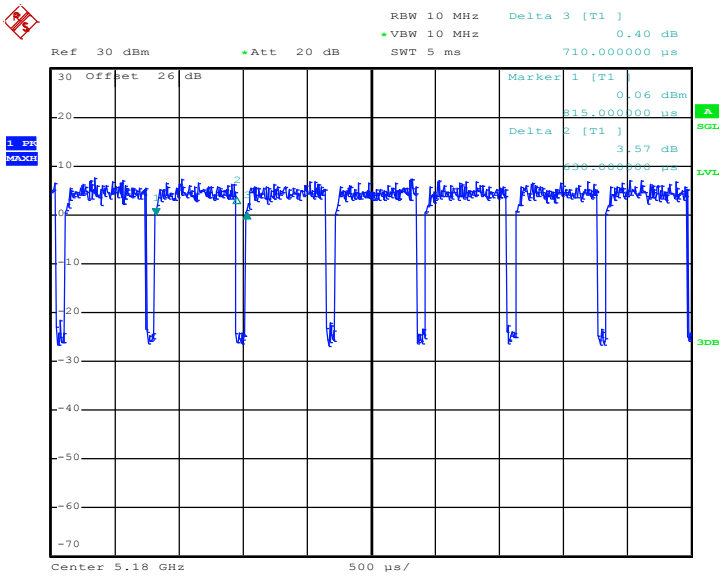
Date: 18.JAN.2017 03:14:41

802.11ac VHT30



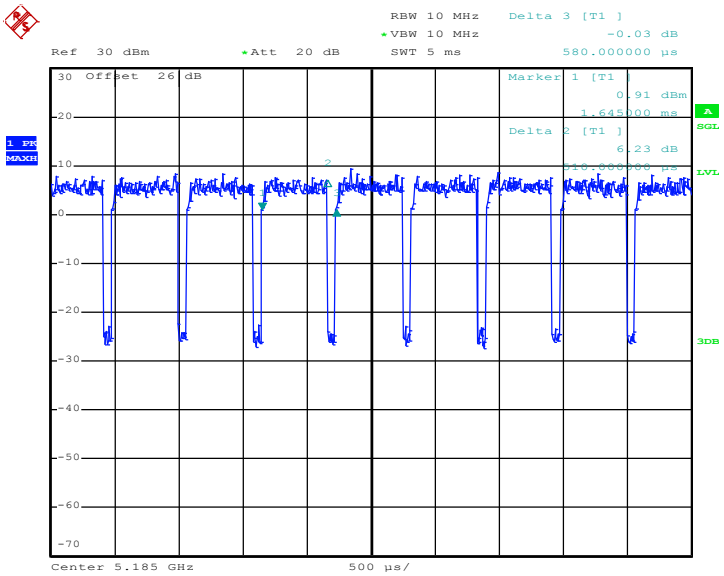
Date: 18.JAN.2017 03:56:25

802.11ac VHT40



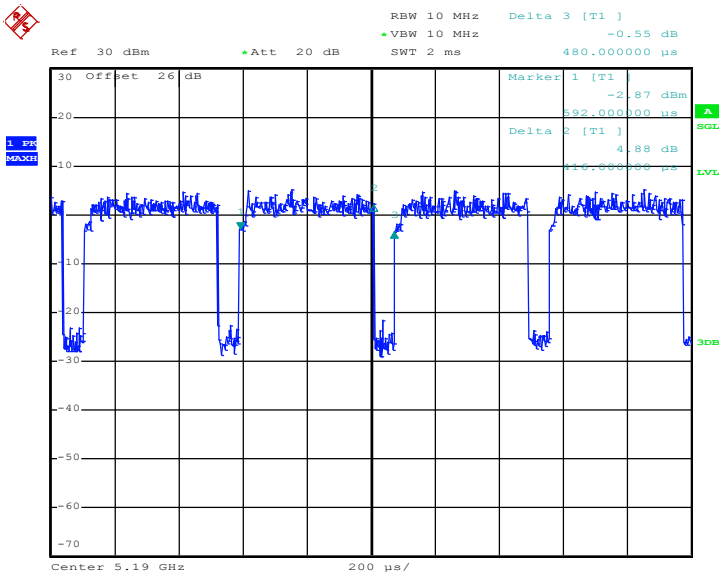
Date: 18.JAN.2017 04:20:35

802.11ac VHT50



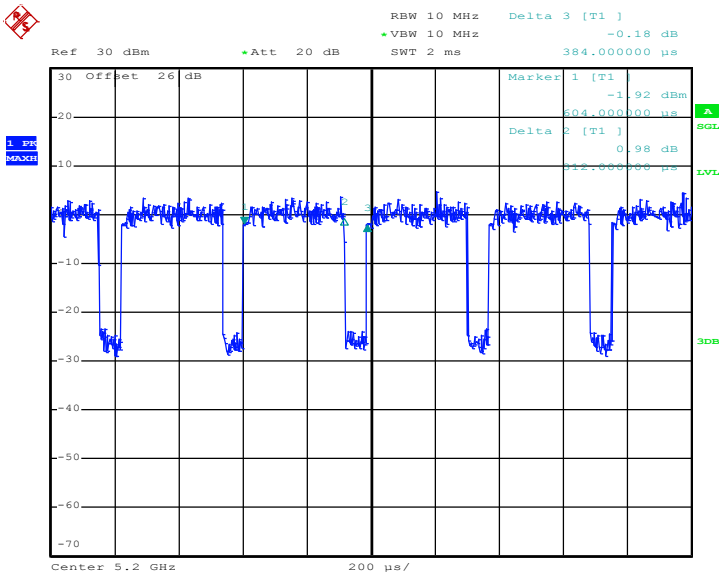
Date: 18.JAN.2017 07:01:52

802.11ac VHT60



Date: 18.JAN.2017 07:34:16

802.11ac VHT80



Date: 18.JAN.2017 07:57:20