FCC RADIO TEST REPORT

FCC ID	:	**2AJOTTA-1108**
Equipment	:	**Smart Phone**
Brand Name	:	**NOKIA**
Model Name	:	**TA-1108**
Applicant	:	**HMD Global Oy** **Bertel Jungin aukio 9, 02600 Espoo, Finland**
Manufacturer	:	**HMD Global Oy** **Bertel Jungin aukio 9, 02600 Espoo, Finland**
Standard	:	**FCC Part 15 Subpart E §15.407**

The product was received on Apr. 30, 2018 and testing was started from May 14, 2018 and completed on Oct. 31, 2018. 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 report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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

Approved by: Joseph Lin

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

Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FR843024-03D	01	Initial issue of report	Nov. 15, 2018

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403(i)	26dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.407(a)	Maximum Conducted Output Power	Pass	-
3.3	15.407(a)	Power Spectral Density	Pass	-
3.4	15.407(b)	Unwanted Emissions	Pass	Under limit 7.16 dB at 30.810 MHz
3.5	15.207	AC Conducted Emission	Pass	Under limit 11.46 dB at 3.377 MHz
3.6	15.407(c)	Automatically Discontinue Transmission	Pass	-
3.7	15.203 15.407(a)	Antenna Requirement	Pass	-
Remark: FR843024-03D test report of Conducted and Radiated reuse test data from the FR843024D test report.				

Declaration of Conformity:
The judgment of conformity in the report is based on the measurement results excluding the measurement uncertainty.
Comments and Explanations:
None

Reviewed by: Wii Chang

Report Producer: Maggie Chiang

1 General Description

1.1 Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac, FM Receiver, and GNSS

Product Specification subjective to this standard	
Antenna Type	WWAN: Monopole Antenna WLAN: Monopole Antenna Bluetooth: Monopole Antenna GPS/Glonass/Galileo/BDS: PIFA Antenna FM: using earphone as antenna

1.2 Modification of EUT

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

1.3 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1190 and TW0007 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	**Sporton Site No.**		
	TH05-HY	CO05-HY	03CH07-HY

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

1.4 Applicable Standards

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

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

Remark:

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

2 Test Configuration of Equipment Under Test

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

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

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5725 MHz Band 3 (U-NII-2C)	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

Note:

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

2.2 Test Mode

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

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

Test Cases	
AC Conducted Emission	Mode 1: GSM850 Idle + WLAN (2.4GHz) Link + Bluetooth Link + GPS Rx + Earphone + USB Type C Cable (Charging from Adapter 1) Mode 2: GSM1900 Idle + WLAN (5GHz) Link + Bluetooth Link + Camera (Front) + Earphone + USB Type C Cable (Charging from Adapter 2) Mode 3: WCDMA Band II Idle + WLAN (2.4GHz) Link + Bluetooth Link + Camera (Rear) + Earphone + USB Type C Cable (Charging from Adapter 1) Mode 4: WCDMA Band V Idle + WLAN (5GHz) Link + Bluetooth Link + MPEG4 + Earphone + USB Type C Cable (Charging from Adapter 2) Mode 5: LTE Band 4 Idle + WLAN (2.4GHz) Idle + Bluetooth Idle + FM Rx + Earphone + USB Type C Cable (Data Link with Notebook)

Remark:

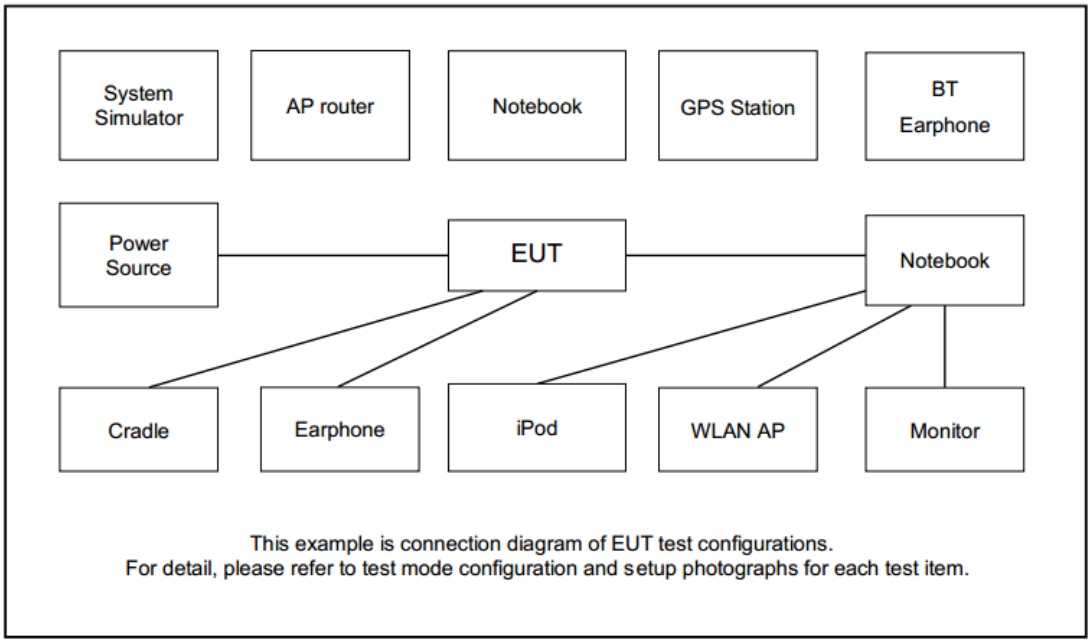
1. The worst case of conducted emission is mode 1; only the test data of it was reported.
2. For Radiated test cases, the tests were performed with Adapter 1, Earphone, and USB Cable 1.
3. Data Linking with Notebook means data application transferred mode between EUT and Notebook.

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	106
M	Middle	42	58	-
H	High	-	-	-

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
3.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
4.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
5.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
6.	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
7.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, an engineering program was provided to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

Offset = RF cable loss + attenuator factor.

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

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

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 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.

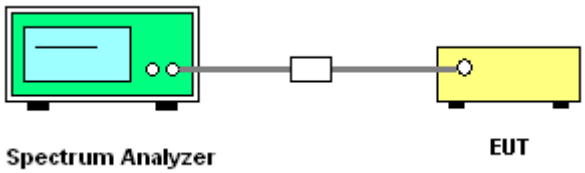
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
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 1-5% of the emission bandwidth and set the Video bandwidth (VBW) ≥ 3 * RBW.
8. Measure and record the results in the test report.

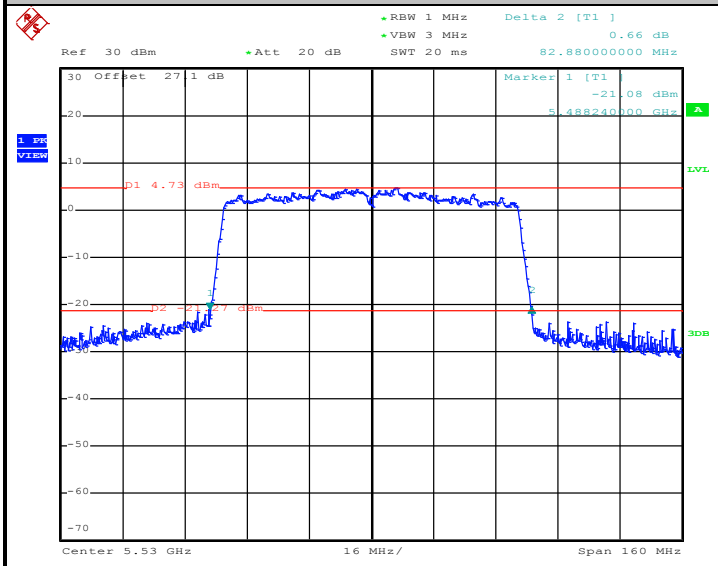
3.1.4 Test Setup



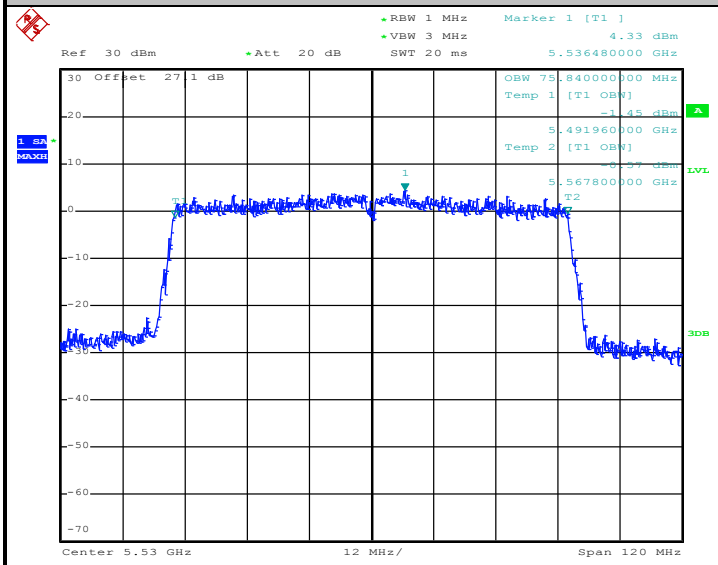
3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

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>

For the 5.15–5.25 GHz bands:

■ For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW. For an indoor 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.

For the 5.25–5.725 GHz bands:

■ The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz.

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.

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

See list of measuring equipment of this test report.

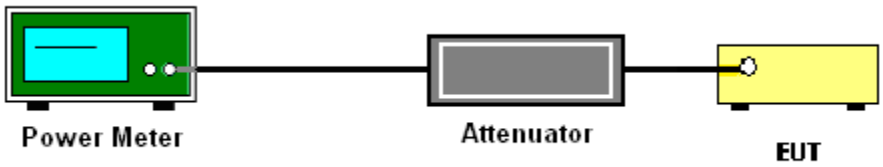
3.2.3 Test Procedures

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

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

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

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

For the 5.15–5.25 GHz bands:

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1.0 MHz band. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1.0 MHz band.

For the 5.25–5.725 GHz bands:

The maximum power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

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

3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

3.3.3 Test Procedures

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

Section F) Maximum power spectral density.

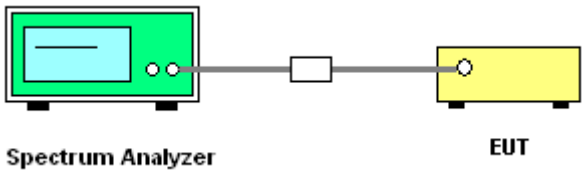
 # Method SA-2 #

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

- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 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.

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

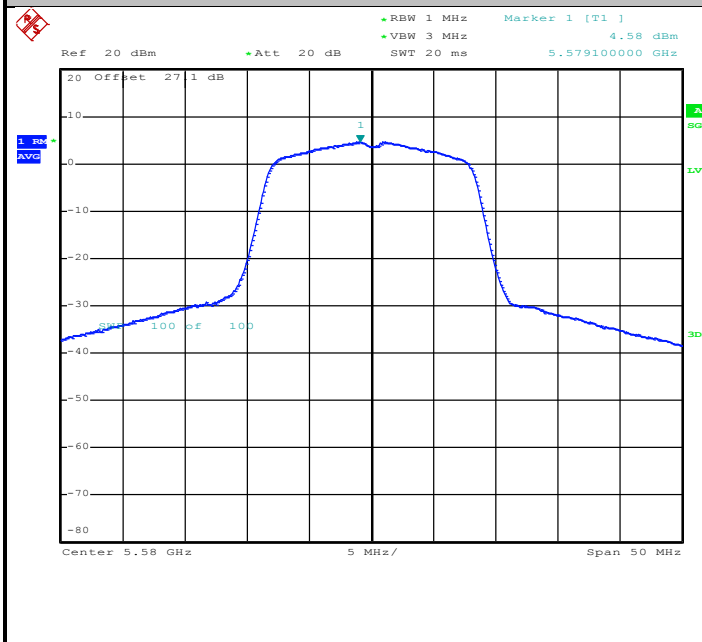
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/MHz)



Note: Average Power Density (dB) = Measured value+ Duty Factor

3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

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

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

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

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

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

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

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

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

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

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

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

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

3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

   Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

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

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

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

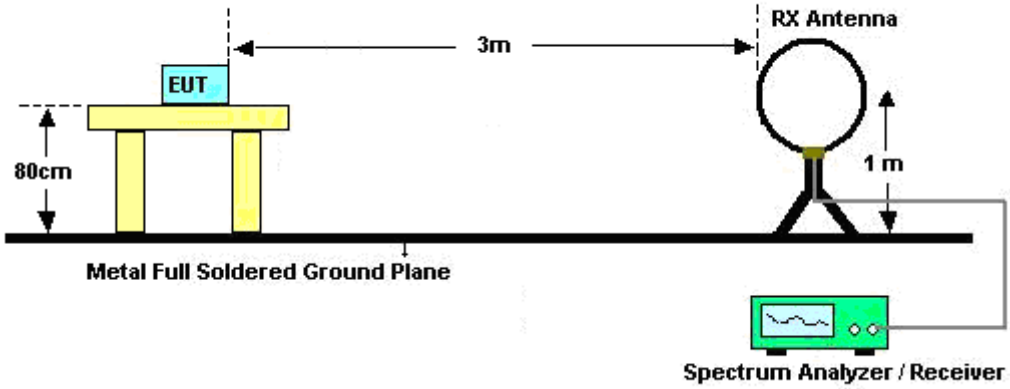
(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

- 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.

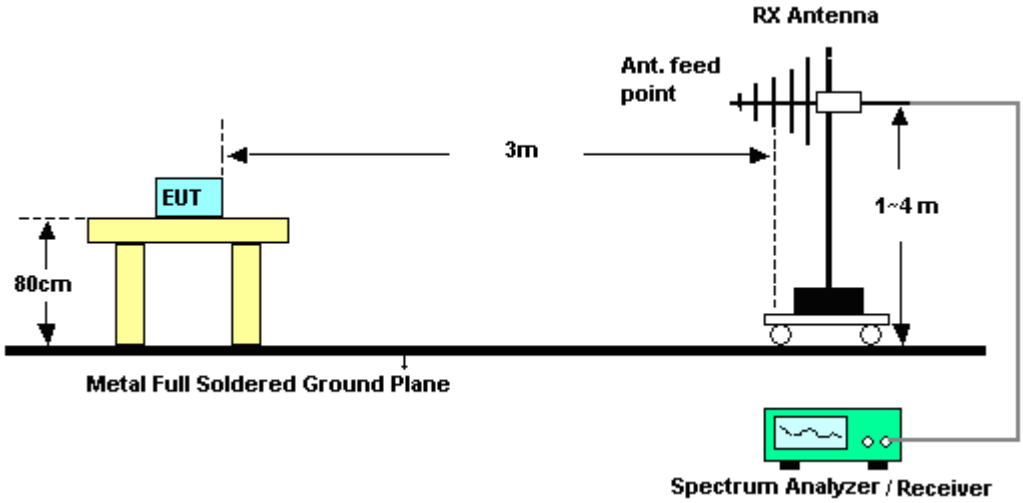
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband 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

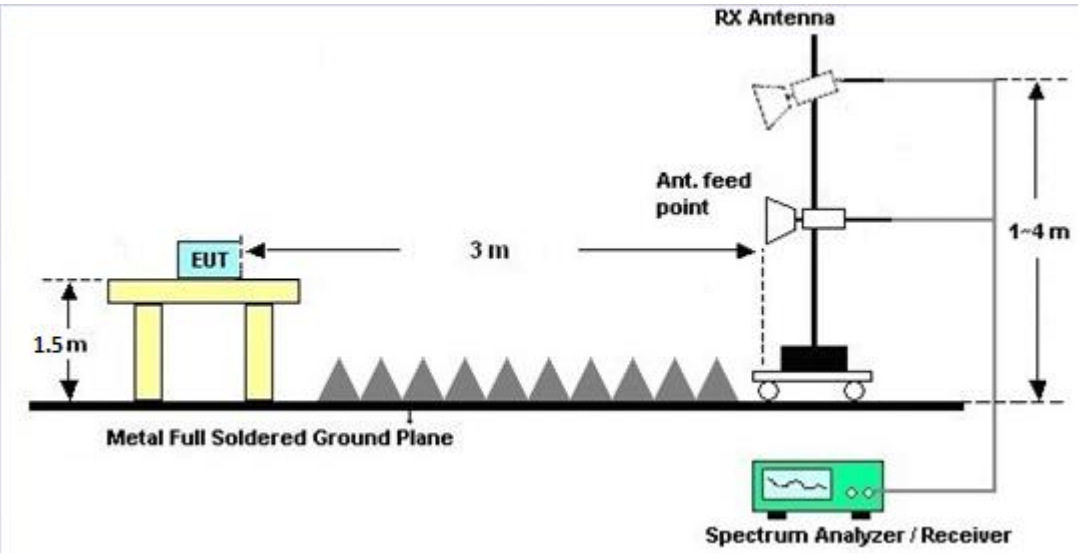
For radiated emissions below 30MHz



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 was not reported.

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

3.4.6 Test Result of Radiated 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.

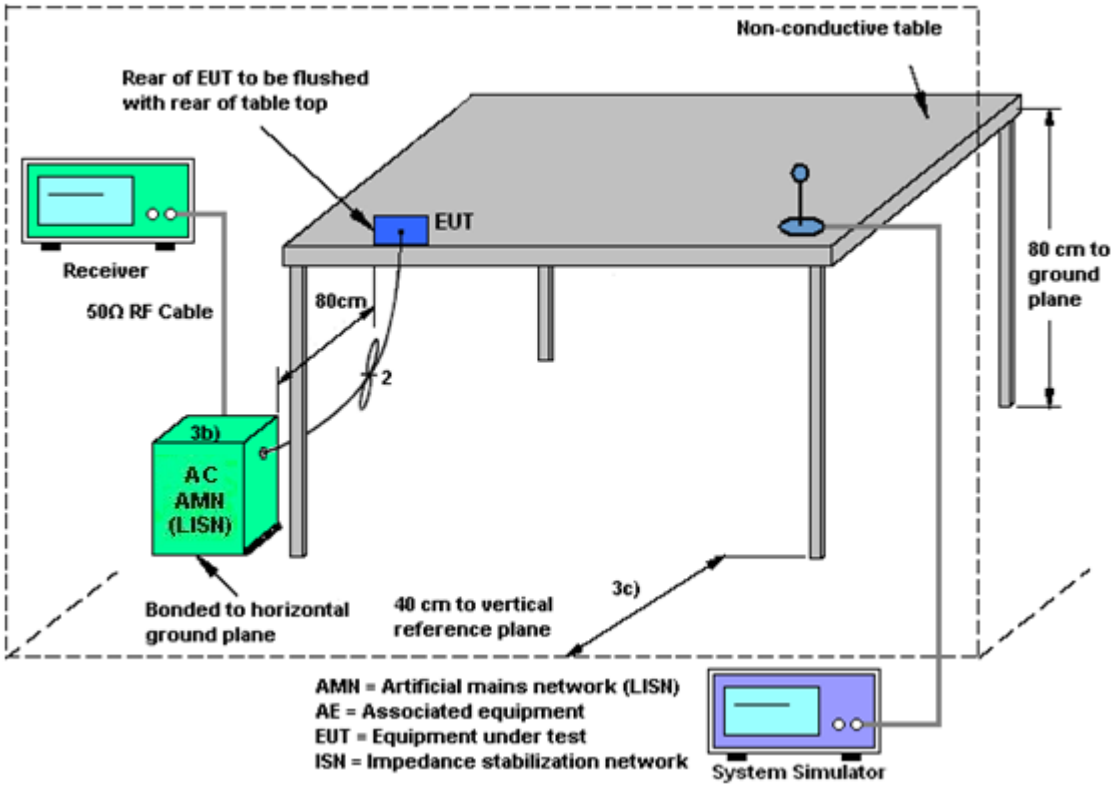
3.5.2 Measuring Instruments

See list of measuring equipment of this test report.

3.5.3 Test Procedures

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

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Automatically Discontinue Transmission

3.6.1 Limit of Automatically Discontinue Transmission

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

3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Result of Automatically Discontinue Transmission

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

3.7 Antenna Requirements

3.7.1 Standard Applicable

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

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

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

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	0932001	N/A	Sep. 26, 2017	May 14, 2018~ May 28, 2018	Sep. 25, 2018	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	0846202	300MHz~40GHz	Sep. 26, 2017	May 14, 2018~ May 28, 2018	Sep. 25, 2018	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101067	9kHz ~ 30GHz	Nov. 13, 2017	May 14, 2018~ May 28, 2018	Nov. 12, 2018	Conducted (TH05-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890001	1V~20V 0.5A~4A	Oct. 06, 2017	May 14, 2018~ May 28, 2018	Oct. 05, 2018	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1300484	N/A	Mar. 01, 2018	May 14, 2018~ May 28, 2018	Feb. 28, 2019	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Oct. 31, 2018	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9KHz~3.6GHz	Dec. 08, 2017	Oct. 31, 2018	Dec. 07, 2018	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 30, 2017	Oct. 31, 2018	Nov. 29, 2018	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Dec. 08, 2017	Oct. 31, 2018	Dec. 07, 2018	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Oct. 31, 2018	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 03, 2018	Oct. 31, 2018	Jan. 02, 2019	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 03, 2018	Oct. 31, 2018	Jan. 02, 2019	Conduction (CO05-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	35419&03	30MHz to 1GHz	Dec. 18, 2017	May 18, 2018~ May 25, 2018	Dec. 17, 2018	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 23, 2017	May 18, 2018~ May 25, 2018	Aug. 22, 2018	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Nov. 10, 2017	May 18, 2018~ May 25, 2018	Nov. 09, 2018	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590075	1GHz ~ 18GHz	Apr. 25, 2018	May 18, 2018~ May 25, 2018	Apr. 24, 2019	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~ 26.5GHz	Oct. 30, 2017	May 18, 2018~ May 25, 2018	Oct. 29, 2018	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Apr. 17, 2018	May 18, 2018~ May 25, 2018	Apr. 16, 2019	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	May 18, 2018~ May 25, 2018	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	May 18, 2018~ May 25, 2018	N/A	Radiation (03CH07-HY)
Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 18, 2017	May 18, 2018~ May 25, 2018	Jul. 17, 2018	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz- 40GHz	Nov. 10, 2017	May 18, 2018~ May 25, 2018	Nov. 09, 2018	Radiation (03CH07-HY)
Amplifier	SONOMA	310N	187231	9kHz~1GHz	Jan. 08, 2018	May 18, 2018~ May 25, 2018	Jan. 07, 2019	Radiation (03CH07-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY53290053	20Hz to 26.5GHz	Jan. 16, 2018	May 18, 2018~ May 25, 2018	Jan. 15, 2019	Radiation (03CH07-HY)
Test Software	Audix	E3 6.2009-8-24	N/A	N/A	N/A	May 18, 2018~ May 25, 2018	N/A	Radiation (03CH07-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.2**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.7**

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.2**

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Shiang Wang/Lena Lo/Shiming Liu	Temperature:	21~25	°C
Test Date:	2018/5/14~2018/5/27	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		
11a	6Mbps	1	36	5180	17.30	-	22.30	-	-		22.38	-		
11a	6Mbps	1	44	5220	17.20	-	22.10	-	-		22.36	-		
11a	6Mbps	1	48	5240	17.30	-	21.90	-	-		22.38	-		
HT40	MCS0	1	38	5190	36.30	-	63.41	-	-		23.01	-		
HT40	MCS0	1	46	5230	36.20	-	55.77	-	-		23.01	-		
VHT80	MCS0	1	42	5210	75.84	-	81.92	-	-		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		
11a	6Mbps	1	36	5180	0.12	-	13.88	-		24.00	-	-7.16	-		Pass
11a	6Mbps	1	44	5220	0.12	-	13.73	-		24.00	-	-7.16	-		Pass
11a	6Mbps	1	48	5240	0.12	-	13.70	-		24.00	-	-7.16	-		Pass
HT20	MCS0	1	36	5180	0.13	-	13.78	-		24.00	-	-7.16	-		Pass
HT20	MCS0	1	44	5220	0.13	-	13.93	-		24.00	-	-7.16	-		Pass
HT20	MCS0	1	48	5240	0.13	-	13.96	-		24.00	-	-7.16	-		Pass
HT40	MCS0	1	38	5190	0.28	-	13.71	-		24.00	-	-7.16	-		Pass
HT40	MCS0	1	46	5230	0.28	-	13.97	-		24.00	-	-7.16	-		Pass
VHT20	MCS0	1	36	5180	0.13	-	11.74	-		24.00	-	-7.16	-		Pass
VHT20	MCS0	1	44	5220	0.13	-	11.62	-		24.00	-	-7.16	-		Pass
VHT20	MCS0	1	48	5240	0.13	-	11.73	-		24.00	-	-7.16	-		Pass
VHT40	MCS0	1	38	5190	0.27	-	11.73	-		24.00	-	-7.16	-		Pass
VHT40	MCS0	1	46	5230	0.27	-	11.69	-		24.00	-	-7.16	-		Pass
VHT80	MCS0	1	42	5210	0.46	-	11.92	-		24.00	-	-7.16	-		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		
11a	6Mbps	1	36	5180	0.12	-	3.88	-		11.00	-	-7.16	-		Pass
11a	6Mbps	1	44	5220	0.12	-	3.93	-		11.00	-	-7.16	-		Pass
11a	6Mbps	1	48	5240	0.12	-	3.72	-		11.00	-	-7.16	-		Pass
HT40	MCS0	1	38	5190	0.28	-	0.66	-		11.00	-	-7.16	-		Pass
HT40	MCS0	1	46	5230	0.28	-	0.31	-		11.00	-	-7.16	-		Pass
VHT80	MCS0	1	42	5210	0.46	-	-5.01	-		11.00	-	-7.16	-		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band II															
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)		FCC 26dB Bandwidth Power Limit (dBm)		Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	52	5260	17.60	-	21.50	-	23.46	-	29.46	-	23.98	-	
11a	6Mbps	1	60	5300	17.40	-	21.50	-	23.41	-	29.41	-	23.98	-	
11a	6Mbps	1	64	5320	17.30	-	21.50	-	23.38	-	29.38	-	23.98	-	
HT40	MCS0	1	54	5270	36.30	-	41.76	-	23.98	-	30.00	-	23.98	-	
HT40	MCS0	1	62	5310	36.30	-	43.87	-	23.98	-	30.00	-	23.98	-	
VHT80	MCS0	1	58	5290	75.84	-	81.92	-	23.98	-	30.00	-	23.98	-	

TEST RESULTS DATA
Average Power Table

FCC Band II															
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	52	5260	0.12	-	13.82	-		23.98	-	-5.82	-	26.99	Pass
11a	6Mbps	1	60	5300	0.12	-	13.71	-		23.98	-	-5.82	-	26.99	Pass
11a	6Mbps	1	64	5320	0.12	-	13.84	-		23.98	-	-5.82	-	26.99	Pass
HT20	MCS0	1	52	5260	0.13	-	13.98	-		23.98	-	-5.82	-	26.99	Pass
HT20	MCS0	1	60	5300	0.13	-	13.92	-		23.98	-	-5.82	-	26.99	Pass
HT20	MCS0	1	64	5320	0.13	-	13.81	-		23.98	-	-5.82	-	26.99	Pass
HT40	MCS0	1	54	5270	0.28	-	13.73	-		23.98	-	-5.82	-	26.99	Pass
HT40	MCS0	1	62	5310	0.28	-	13.94	-		23.98	-	-5.82	-	26.99	Pass
VHT20	MCS0	1	52	5260	0.13	-	11.66	-		23.98	-	-5.82	-	26.99	Pass
VHT20	MCS0	1	60	5300	0.13	-	11.95	-		23.98	-	-5.82	-	26.99	Pass
VHT20	MCS0	1	64	5320	0.13	-	11.88	-		23.98	-	-5.82	-	26.99	Pass
VHT40	MCS0	1	54	5270	0.27	-	11.78	-		23.98	-	-5.82	-	26.99	Pass
VHT40	MCS0	1	62	5310	0.27	-	11.93	-		23.98	-	-5.82	-	26.99	Pass
VHT80	MCS0	1	58	5290	0.46	-	9.36	-		23.98	-	-5.82	-	26.99	Pass

TEST RESULTS DATA
Power Spectral Density

Band II															
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		
11a	6Mbps	1	52	5260	0.12	-	3.60	-		11.00	-	-5.82	-		Pass
11a	6Mbps	1	60	5300	0.12	-	3.54	-		11.00	-	-5.82	-		Pass
11a	6Mbps	1	64	5320	0.12	-	3.33	-		11.00	-	-5.82	-		Pass
HT40	MCS0	1	54	5270	0.28	-	-0.70	-		11.00	-	-5.82	-		Pass
HT40	MCS0	1	62	5310	0.28	-	-0.19	-		11.00	-	-5.82	-		Pass
VHT80	MCS0	1	58	5290	0.46	-	-7.59	-		11.00	-	-5.82	-		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band III																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth In U-NII 2C (MHz)		26 dB Bandwidth In U-NII 2C (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		6 dB Bandwidth for Straddle Channel (MHz)	
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2
11a	6Mbps	1	100	5500	17.35	-	21.70	-	23.39	-	29.39	-	23.98	-	----	----
11a	6Mbps	1	116	5580	17.30	-	21.60	-	23.38	-	29.38	-	23.98	-	----	----
11a	6Mbps	1	140	5700	17.25	-	24.10	-	23.37	-	29.37	-	23.98	-	----	----
HT40	MCS0	1	102	5510	36.30	-	52.92	-	23.98	-	30.00	-	23.98	-	----	----
HT40	MCS0	1	110	5550	36.20	-	52.09	-	23.98	-	30.00	-	23.98	-	----	----
HT40	MCS0	1	134	5670	36.40	-	64.71	-	23.98	-	30.00	-	23.98	-	----	----
VHT80	MCS0	1	106	5530	75.84	-	82.88	-	23.98	-	30.00	-	23.98	-	----	----

TEST RESULTS DATA
Average Power Table

FCC Band III															
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	100	5500	0.12	-	13.75	-		23.98	-	-4.65	-	26.99	Pass
11a	6Mbps	1	116	5580	0.12	-	13.77	-		23.98	-	-4.65	-	26.99	Pass
11a	6Mbps	1	140	5700	0.12	-	13.88	-		23.98	-	-4.65	-	26.99	Pass
HT20	MCS0	1	100	5500	0.13	-	13.84	-		23.98	-	-4.65	-	26.99	Pass
HT20	MCS0	1	116	5580	0.13	-	13.91	-		23.98	-	-4.65	-	26.99	Pass
HT20	MCS0	1	140	5700	0.13	-	13.84	-		23.98	-	-4.65	-	26.99	Pass
HT40	MCS0	1	102	5510	0.28	-	13.82	-		23.98	-	-4.65	-	26.99	Pass
HT40	MCS0	1	110	5550	0.28	-	13.98	-		23.98	-	-4.65	-	26.99	Pass
HT40	MCS0	1	134	5670	0.28	-	13.78	-		23.98	-	-4.65	-	26.99	Pass
VHT20	MCS0	1	100	5500	0.13	-	11.70	-		23.98	-	-4.65	-	26.99	Pass
VHT20	MCS0	1	116	5580	0.13	-	11.81	-		23.98	-	-4.65	-	26.99	Pass
VHT20	MCS0	1	140	5700	0.13	-	11.72	-		23.98	-	-4.65	-	26.99	Pass
VHT40	MCS0	1	102	5510	0.27	-	11.90	-		23.98	-	-4.65	-	26.99	Pass
VHT40	MCS0	1	110	5550	0.27	-	11.96	-		23.98	-	-4.65	-	26.99	Pass
VHT40	MCS0	1	134	5670	0.27	-	11.85	-		23.98	-	-4.65	-	26.99	Pass
VHT80	MCS0	1	106	5530	0.46	-	8.02	-		23.98	-	-4.65	-	26.99	Pass

TEST RESULTS DATA
Power Spectral Density

Band III															
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		
11a	6Mbps	1	100	5500	0.12	-	4.18	-		11.00	-	-4.65	-		Pass
11a	6Mbps	1	116	5580	0.12	-	4.70	-		11.00	-	-4.65	-		Pass
11a	6Mbps	1	140	5700	0.12	-	4.22	-		11.00	-	-4.65	-		Pass
HT40	MCS0	1	102	5510	0.28	-	0.33	-		11.00	-	-4.65	-		Pass
HT40	MCS0	1	110	5550	0.28	-	0.37	-		11.00	-	-4.65	-		Pass
HT40	MCS0	1	134	5670	0.28	-	0.20	-		11.00	-	-4.65	-		Pass
VHT80	MCS0	1	106	5530	0.46	-	-7.38	-		11.00	-	-4.65	-		Pass

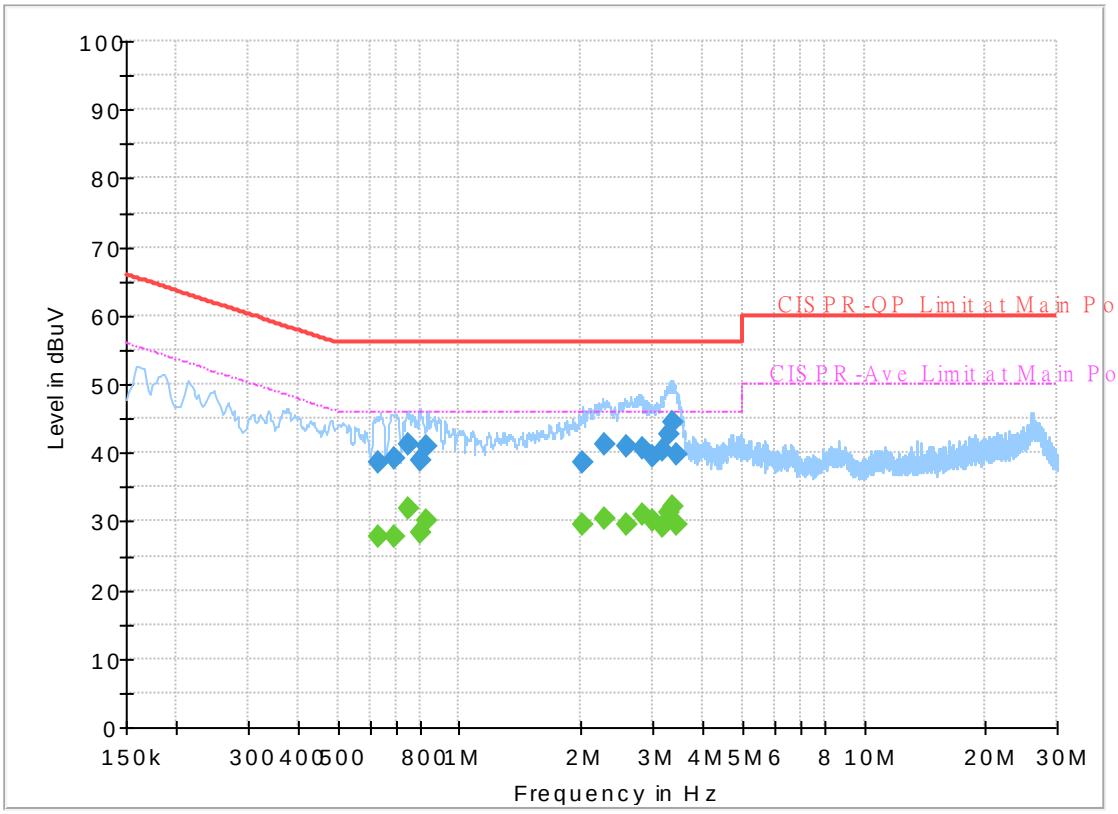
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Rick Lin	**Temperature :**	23~24℃
		Relative Humidity :	55~57%

EUT Information

Report NO :	843024-03
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

Full Spectrum



Final_Result

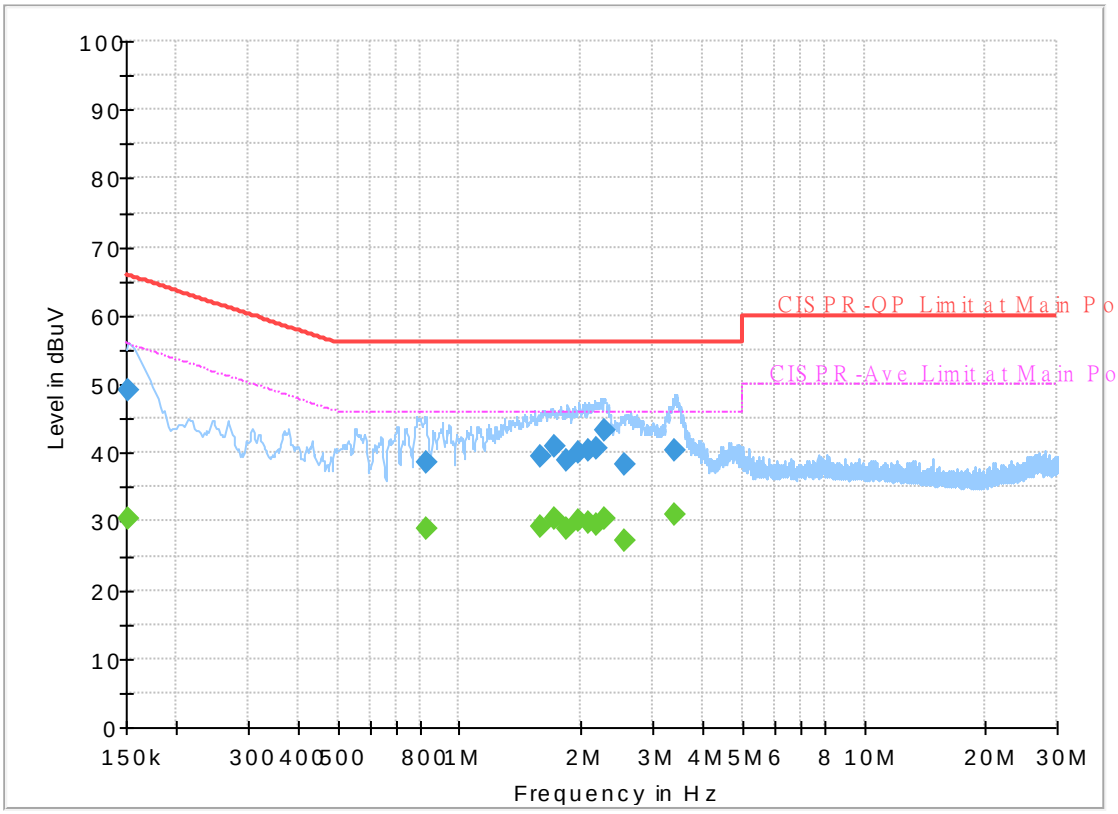
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.631500	---	27.72	46.00	18.28	L1	OFF	19.6
0.631500	38.71	---	56.00	17.29	L1	OFF	19.6
0.692250	---	27.75	46.00	18.25	L1	OFF	19.6
0.692250	39.04	---	56.00	16.96	L1	OFF	19.6
0.744000	---	31.81	46.00	14.19	L1	OFF	19.6
0.744000	41.16	---	56.00	14.84	L1	OFF	19.6
0.798000	---	28.38	46.00	17.62	L1	OFF	19.6
0.798000	39.01	---	56.00	16.99	L1	OFF	19.6
0.831750	---	30.01	46.00	15.99	L1	OFF	19.6
0.831750	40.86	---	56.00	15.14	L1	OFF	19.6
2.024250	---	29.42	46.00	16.58	L1	OFF	19.6
2.024250	38.54	---	56.00	17.46	L1	OFF	19.6
2.289750	---	30.31	46.00	15.69	L1	OFF	19.5
2.289750	41.23	---	56.00	14.77	L1	OFF	19.5
2.582250	---	29.63	46.00	16.37	L1	OFF	19.6
2.582250	40.82	---	56.00	15.18	L1	OFF	19.6
2.834250	---	31.12	46.00	14.88	L1	OFF	19.6
2.834250	40.78	---	56.00	15.22	L1	OFF	19.6
3.018750	---	30.08	46.00	15.92	L1	OFF	19.6
3.018750	39.49	---	56.00	16.51	L1	OFF	19.6
3.187500	---	29.28	46.00	16.72	L1	OFF	19.6

3.187500	40.34	---	56.00	15.66	L1	OFF	19.6
3.275250	---	31.41	46.00	14.59	L1	OFF	19.7
3.275250	42.82	---	56.00	13.18	L1	OFF	19.7
3.376500	---	32.31	46.00	13.69	L1	OFF	19.7
3.376500	44.54	---	56.00	11.46	L1	OFF	19.7
3.462000	---	29.40	46.00	16.60	L1	OFF	19.7
3.462000	39.85	---	56.00	16.15	L1	OFF	19.7

EUT Information

Report NO :	843024-03
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	30.54	55.88	25.34	N	OFF	19.5
0.152250	49.13	---	65.88	16.75	N	OFF	19.5
0.827250	---	28.98	46.00	17.02	N	OFF	19.6
0.827250	38.64	---	56.00	17.36	N	OFF	19.6
1.583250	---	29.19	46.00	16.81	N	OFF	19.6
1.583250	39.50	---	56.00	16.50	N	OFF	19.6
1.709250	---	30.34	46.00	15.66	N	OFF	19.6
1.709250	40.87	---	56.00	15.13	N	OFF	19.6
1.848750	---	28.92	46.00	17.08	N	OFF	19.6
1.848750	38.75	---	56.00	17.25	N	OFF	19.6
1.965750	---	29.99	46.00	16.01	N	OFF	19.6
1.965750	40.05	---	56.00	15.95	N	OFF	19.6
2.087250	---	29.89	46.00	16.11	N	OFF	19.4
2.087250	40.27	---	56.00	15.73	N	OFF	19.4
2.181750	---	29.60	46.00	16.40	N	OFF	19.5
2.181750	40.78	---	56.00	15.22	N	OFF	19.5
2.292000	---	30.50	46.00	15.50	N	OFF	19.5
2.292000	43.27	---	56.00	12.73	N	OFF	19.5
2.568750	---	27.27	46.00	18.73	N	OFF	19.6
2.568750	38.29	---	56.00	17.71	N	OFF	19.6
3.401250	---	30.93	46.00	15.07	N	OFF	19.7

3.401250	**40.24**	**---**	**56.00**	**15.76**	**N**	**OFF**	**19.7**

Appendix C. Radiated Spurious Emission

Test Engineer :	Jesse Wang and Stan Hsieh	Temperature :	22~24°C
		Relative Humidity :	51~53%

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5070.72	49.11	-24.89	74	39.05	34.29	10.9	35.13	285	62	P	H
		5138.58	40.04	-13.96	54	29.83	34.39	10.96	35.14	285	62	A	H
	*	5180	91	-	-	80.65	34.46	11.03	35.14	285	62	P	H
	*	5180	83.72	-	-	73.37	34.46	11.03	35.14	285	62	A	H
													H
													H
		5138.06	49.19	-24.81	74	38.98	34.39	10.96	35.14	102	308	P	V
		5132.08	39.89	-14.11	54	29.68	34.39	10.96	35.14	102	308	A	V
	*	5180	94.7	-	-	84.35	34.46	11.03	35.14	102	308	P	V
	*	5180	87.39	-	-	77.04	34.46	11.03	35.14	102	308	A	V
													V
													V
802.11a CH 44 5220MHz		5119.08	49.08	-24.92	74	38.9	34.36	10.96	35.14	263	65	P	H
		5103.74	39.73	-14.27	54	29.57	34.34	10.96	35.14	263	65	A	H
	*	5220	91.5	-	-	81.04	34.5	11.1	35.14	263	65	P	H
	*	5220	82.96	-	-	72.5	34.5	11.1	35.14	263	65	A	H
		5449.08	48.61	-25.39	74	37.74	34.83	11.2	35.16	263	65	P	H
		5452.16	39.92	-14.08	54	29.05	34.83	11.2	35.16	263	65	A	H
		5043.68	49.3	-24.7	74	39.33	34.27	10.83	35.13	102	308	P	V
		5137.28	39.85	-14.15	54	29.64	34.39	10.96	35.14	102	308	A	V
	*	5220	94.47	-	-	84.01	34.5	11.1	35.14	102	308	P	V
	*	5220	86	-	-	75.54	34.5	11.1	35.14	102	308	A	V
		5362.56	49.16	-24.84	74	38.46	34.71	11.14	35.15	102	308	P	V
		5445.72	40	-14	54	29.13	34.83	11.2	35.16	102	308	A	V

802.11a CH 48 5240MHz		5091.26	48.94	-25.06	74	38.83	34.34	10.9	35.13	261	60	P	H
		5150	39.69	-14.31	54	29.39	34.41	11.03	35.14	261	60	A	H
	*	5240	90.49	-	-	79.99	34.53	11.11	35.14	261	60	P	H
	*	5240	83.46	-	-	72.96	34.53	11.11	35.14	261	60	A	H
		5389.16	50.55	-23.45	74	39.81	34.74	11.15	35.15	261	60	P	H
		5453.28	39.92	-14.08	54	29.05	34.83	11.2	35.16	261	60	A	H
		5138.84	50.21	-23.79	74	40	34.39	10.96	35.14	109	304	P	V
		5139.36	39.72	-14.28	54	29.51	34.39	10.96	35.14	109	304	A	V
	*	5240	93.67	-	-	83.17	34.53	11.11	35.14	109	304	P	V
	*	5240	86.81	-	-	76.31	34.53	11.11	35.14	109	304	A	V
		5455.8	49.1	-24.9	74	38.23	34.83	11.2	35.16	109	304	P	V
		5457.48	40	-14	54	29.13	34.83	11.2	35.16	109	304	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		10360	44.24	-23.96	68.2	49.54	37.19	16.84	59.33	100	0	P	H
		15540	46.33	-27.67	74	42.44	40.43	20.05	56.59	100	0	P	H
													H
													H
		10360	44.28	-23.92	68.2	49.58	37.19	16.84	59.33	100	0	P	V
		15540	46.55	-27.45	74	42.66	40.43	20.05	56.59	100	0	P	V
													V
													V
802.11a CH 44 5220MHz		10440	45.2	-23	68.2	50.24	37.25	16.98	59.27	100	0	P	H
		15660	48.32	-25.68	74	44.28	40.52	20.09	56.57	100	0	P	H
													H
													H
		10440	45.11	-23.09	68.2	50.15	37.25	16.98	59.27	100	0	P	V
		15660	47.97	-26.03	74	43.93	40.52	20.09	56.57	100	0	P	V
													V
													V
802.11a CH 48 5240MHz		10480	45.36	-22.84	68.2	50.26	37.29	17.03	59.22	100	0	P	H
		15720	47.19	-26.81	74	43.07	40.58	20.1	56.56	100	0	P	H
													H
													H
		10480	45.2	-23	68.2	50.1	37.29	17.03	59.22	100	0	P	V
		15720	46.52	-27.48	74	42.4	40.58	20.1	56.56	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 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5083.2	49.1	-24.9	74	39.01	34.32	10.9	35.13	248	59	P	H
		5147.94	40.63	-13.37	54	30.33	34.41	11.03	35.14	248	59	A	H
	*	5190	86.93	-	-	76.51	34.46	11.1	35.14	248	59	P	H
	*	5190	79.07	-	-	68.65	34.46	11.1	35.14	248	59	A	H
802.11n		5457.76	49.41	-24.59	74	38.54	34.83	11.2	35.16	248	59	P	H
HT40		5457.2	40.67	-13.33	54	29.8	34.83	11.2	35.16	248	59	A	H
CH 38		5148.98	48.9	-25.1	74	38.6	34.41	11.03	35.14	100	311	P	V
5190MHz		5150	41.35	-12.65	54	31.05	34.41	11.03	35.14	100	311	A	V
	*	5190	90.01	-	-	79.59	34.46	11.1	35.14	100	311	P	V
	*	5190	82.47	-	-	72.05	34.46	11.1	35.14	100	311	A	V
		5419.4	49.03	-24.97	74	38.26	34.78	11.15	35.16	100	311	P	V
		5454.12	40.76	-13.24	54	29.89	34.83	11.2	35.16	100	311	A	V
		5050.44	50.03	-23.97	74	40.06	34.27	10.83	35.13	272	62	P	H
		5130.52	40.4	-13.6	54	30.19	34.39	10.96	35.14	272	62	A	H
	*	5230	88.54	-	-	78.04	34.53	11.11	35.14	272	62	P	H
	*	5230	80.03	-	-	69.53	34.53	11.11	35.14	272	62	A	H
802.11n		5365.08	49.06	-24.94	74	38.36	34.71	11.14	35.15	272	62	P	H
HT40		5437.88	40.78	-13.22	54	29.93	34.81	11.2	35.16	272	62	A	H
CH 46		5122.98	49.24	-24.76	74	39.03	34.39	10.96	35.14	100	304	P	V
5230MHz		5138.06	40.93	-13.07	54	30.72	34.39	10.96	35.14	100	304	A	V
	*	5230	91.4	-	-	80.9	34.53	11.11	35.14	100	304	P	V
	*	5230	83.53	-	-	73.03	34.53	11.11	35.14	100	304	A	V
		5445.16	49.16	-24.84	74	38.31	34.81	11.2	35.16	100	304	P	V
		5450.48	40.75	-13.25	54	29.88	34.83	11.2	35.16	100	304	A	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 Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		5134.42	55.27	-18.73	74	45.06	34.39	10.96	35.14	109	68	P	H
		5147.68	44.56	-9.44	54	34.26	34.41	11.03	35.14	109	68	A	H
	*	5210	82.86	-	-	72.4	34.5	11.1	35.14	109	68	P	H
	*	5210	76.76	-	-	66.3	34.5	11.1	35.14	109	68	A	H
		5376.84	49.63	-24.37	74	38.93	34.71	11.14	35.15	109	68	P	H
		5427.24	42.74	-11.26	54	31.92	34.78	11.2	35.16	109	68	A	H
		5142.48	55.94	-18.06	74	45.64	34.41	11.03	35.14	101	299	P	V
		5149.5	46.86	-7.14	54	36.56	34.41	11.03	35.14	101	299	A	V
	*	5210	88.43	-	-	77.97	34.5	11.1	35.14	101	299	P	V
	*	5210	82.47	-	-	72.01	34.5	11.1	35.14	101	299	A	V
		5446.56	49.33	-24.67	74	38.46	34.83	11.2	35.16	101	299	P	V
		5363.4	45.59	-8.41	54	34.89	34.71	11.14	35.15	101	299	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 - 5250~5350MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 52 5260MHz		5143.15	49.43	-24.57	74	39.13	34.41	11.03	35.14	284	26	P	H
		5135.45	39.67	-14.33	54	29.46	34.39	10.96	35.14	284	26	A	H
	*	5260	88.84	-	-	78.31	34.57	11.11	35.15	284	26	P	H
	*	5260	81.89	-	-	71.36	34.57	11.11	35.15	284	26	A	H
		5441.28	49.25	-24.75	74	38.4	34.81	11.2	35.16	284	26	P	H
		5444.88	39.93	-14.07	54	29.08	34.81	11.2	35.16	284	26	A	H
		5134.4	48.96	-25.04	74	38.75	34.39	10.96	35.14	100	317	P	V
		5134.4	39.75	-14.25	54	29.54	34.39	10.96	35.14	100	317	A	V
	*	5260	95.07	-	-	84.54	34.57	11.11	35.15	100	317	P	V
	*	5260	86.7	-	-	76.17	34.57	11.11	35.15	100	317	A	V
		5392.32	49.91	-24.09	74	39.17	34.74	11.15	35.15	100	317	P	V
		5393.04	40.21	-13.79	54	29.47	34.74	11.15	35.15	100	317	A	V
802.11a CH 60 5300MHz		5091	48.96	-25.04	74	38.85	34.34	10.9	35.13	248	60	P	H
		5126	39.54	-14.46	54	29.33	34.39	10.96	35.14	248	60	A	H
	*	5300	92.48	-	-	81.89	34.62	11.12	35.15	248	60	P	H
	*	5300	84.42	-	-	73.83	34.62	11.12	35.15	248	60	A	H
		5426.64	48.98	-25.02	74	38.16	34.78	11.2	35.16	248	60	P	H
		5439.84	40.04	-13.96	54	29.19	34.81	11.2	35.16	248	60	A	H
		5067.2	48.85	-25.15	74	38.79	34.29	10.9	35.13	100	306	P	V
		5093.8	39.67	-14.33	54	29.57	34.34	10.9	35.14	100	306	A	V
	*	5300	97.12	-	-	86.53	34.62	11.12	35.15	100	306	P	V
	*	5300	88.7	-	-	78.11	34.62	11.12	35.15	100	306	A	V
		5442.24	49.78	-24.22	74	38.93	34.81	11.2	35.16	100	306	P	V
		5405.04	40.28	-13.72	54	29.53	34.76	11.15	35.16	100	306	A	V

802.11a CH 64 5320MHz	*	5320	93.16	-	-	82.54	34.64	11.13	35.15	284	60	P	H
	*	5320	84.99	-	-	74.37	34.64	11.13	35.15	284	60	A	H
		5419.36	48.43	-25.57	74	37.66	34.78	11.15	35.16	284	60	P	H
		5438.4	40.12	-13.88	54	29.27	34.81	11.2	35.16	284	60	A	H
													H
													H
	*	5320	95.57	-	-	84.95	34.64	11.13	35.15	100	245	P	V
	*	5320	87.56	-	-	76.94	34.64	11.13	35.15	100	245	A	V
		5353.28	49.21	-24.79	74	38.53	34.69	11.14	35.15	100	245	P	V
		5405.12	40.49	-13.51	54	29.74	34.76	11.15	35.16	100	245	A	V
													V
													V

Remark

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

Band 2 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 52 5260MHz		10520	45.1	-23.1	68.2	49.87	37.32	17.09	59.18	100	0	P	H
		15780	48.87	-25.13	74	44.71	40.62	20.08	56.54	100	0	P	H
													H
													H
		10520	45.25	-22.95	68.2	50.02	37.32	17.09	59.18	100	0	P	V
		15780	48.15	-25.85	74	43.99	40.62	20.08	56.54	100	0	P	V
													V
													V
802.11a CH 60 5300MHz		10600	45.31	-28.69	74	49.74	37.42	17.21	59.06	100	0	P	H
		15900	47.53	-26.47	74	43.15	40.72	20.18	56.52	100	0	P	H
													H
													H
		10600	47.05	-26.95	74	51.48	37.42	17.21	59.06	100	0	P	V
		15900	47.4	-26.6	74	43.02	40.72	20.18	56.52	100	0	P	V
													V
													V
802.11a CH 64 5320MHz		10640	46.86	-27.14	74	51.15	37.47	17.25	59.01	100	0	P	H
		15960	47.53	-26.47	74	43.03	40.77	20.24	56.51	100	0	P	H
													H
													H
		10640	45.14	-28.86	74	49.43	37.47	17.25	59.01	100	0	P	V
		15960	48.26	-25.74	74	43.76	40.77	20.24	56.51	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 54 5270MHz		5039.55	48.96	-25.04	74	38.99	34.27	10.83	35.13	273	60	P	H
		5138.6	40.65	-13.35	54	30.44	34.39	10.96	35.14	273	60	A	H
	*	5270	89.22	-	-	78.68	34.57	11.12	35.15	273	60	P	H
	*	5270	80.92	-	-	70.38	34.57	11.12	35.15	273	60	A	H
		5398.8	48.81	-25.19	74	38.06	34.76	11.15	35.16	273	60	P	H
		5451.84	40.76	-13.24	54	29.89	34.83	11.2	35.16	273	60	A	H
		5057.05	48.72	-25.28	74	38.73	34.29	10.83	35.13	100	93	P	V
		5121.45	40.64	-13.36	54	30.46	34.36	10.96	35.14	100	93	A	V
	*	5270	92.34	-	-	81.8	34.57	11.12	35.15	100	93	P	V
	*	5270	84.19	-	-	73.65	34.57	11.12	35.15	100	93	A	V
		5395.92	48.8	-25.2	74	38.04	34.76	11.15	35.15	100	93	P	V
		5447.04	41.11	-12.89	54	30.24	34.83	11.2	35.16	100	93	A	V
802.11n HT40 CH 62 5310MHz		5037.8	48.91	-25.09	74	38.94	34.27	10.83	35.13	282	58	P	H
		5123.2	40.45	-13.55	54	30.24	34.39	10.96	35.14	282	58	A	H
	*	5310	88.56	-	-	77.94	34.64	11.13	35.15	282	58	P	H
	*	5310	80.03	-	-	69.41	34.64	11.13	35.15	282	58	A	H
		5352.96	49.21	-24.79	74	38.53	34.69	11.14	35.15	282	58	P	H
		5351.76	41.21	-12.79	54	30.53	34.69	11.14	35.15	282	58	A	H
		5022.05	48.27	-25.73	74	38.32	34.25	10.83	35.13	100	115	P	V
		5138.25	40.52	-13.48	54	30.31	34.39	10.96	35.14	100	115	A	V
	*	5310	93.23	-	-	82.61	34.64	11.13	35.15	100	115	P	V
	*	5310	86.07	-	-	75.45	34.64	11.13	35.15	100	115	A	V
		5360.88	52.9	-21.1	74	42.2	34.71	11.14	35.15	100	115	P	V
		5352	43.58	-10.42	54	32.9	34.69	11.14	35.15	100	115	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58 5290MHz		5098	48.95	-25.05	74	38.85	34.34	10.9	35.14	300	72	P	H
		5138.95	42.18	-11.82	54	31.97	34.39	10.96	35.14	300	72	A	H
	*	5290	83.07	-	-	72.5	34.6	11.12	35.15	300	72	P	H
	*	5290	77.43	-	-	66.86	34.6	11.12	35.15	300	72	A	H
		5452.56	49.33	-24.67	74	38.46	34.83	11.2	35.16	300	72	P	H
		5356.8	44.28	-9.72	54	33.6	34.69	11.14	35.15	300	72	A	H
		5138.6	49.09	-24.91	74	38.88	34.39	10.96	35.14	100	100	P	V
		5141.05	41.91	-12.09	54	31.61	34.41	11.03	35.14	100	100	A	V
	*	5290	88.3	-	-	77.73	34.6	11.12	35.15	100	100	P	V
	*	5290	81.87	-	-	71.3	34.6	11.12	35.15	100	100	A	V
		5383.68	60.94	-13.06	74	50.2	34.74	11.15	35.15	100	100	P	V
		5395.44	50.65	-3.35	54	39.89	34.76	11.15	35.15	100	100	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 100 5500MHz		5448.08	49.03	-24.97	74	38.16	34.83	11.2	35.16	400	26	P	H
		5465.52	48.12	-20.08	68.2	37.18	34.85	11.25	35.16	400	26	P	H
		5451.92	40.03	-13.97	54	29.16	34.83	11.2	35.16	400	26	A	H
	*	5500	93.14	-	-	82.15	34.9	11.25	35.16	400	26	P	H
	*	5500	85.67	-	-	74.68	34.9	11.25	35.16	400	26	A	H
													H
		5451.92	49.99	-24.01	74	39.12	34.83	11.2	35.16	109	301	P	V
		5469.2	49.75	-18.45	68.2	38.81	34.85	11.25	35.16	109	301	P	V
		5458	41.21	-12.79	54	30.34	34.83	11.2	35.16	109	301	A	V
	*	5500	99.67	-	-	88.68	34.9	11.25	35.16	109	301	P	V
	*	5500	91.25	-	-	80.26	34.9	11.25	35.16	109	301	A	V
													V
802.11a CH 116 5580MHz		5438.8	49.39	-24.61	74	38.54	34.81	11.2	35.16	391	59	P	H
		5461.6	48.34	-19.86	68.2	37.42	34.83	11.25	35.16	391	59	P	H
		5457.04	40.22	-13.78	54	29.35	34.83	11.2	35.16	391	59	A	H
	*	5580	91.77	-	-	80.6	35	11.35	35.18	391	59	P	H
	*	5580	83.88	-	-	72.71	35	11.35	35.18	391	59	A	H
		5753.345	50.32	-17.88	68.2	38.74	35.26	11.53	35.21	391	59	P	H
		5438.56	50.57	-23.43	74	39.72	34.81	11.2	35.16	100	301	P	V
		5465.92	49.37	-18.83	68.2	38.43	34.85	11.25	35.16	100	301	P	V
		5457.76	40.74	-13.26	54	29.87	34.83	11.2	35.16	100	301	A	V
	*	5580	99.14	-	-	87.97	35	11.35	35.18	100	301	P	V
	*	5580	90.77	-	-	79.6	35	11.35	35.18	100	301	A	V
		5742.95	50.87	-17.33	68.2	39.31	35.24	11.53	35.21	100	301	P	V

802.11a CH 140 5700MHz	*	5700	89.72	-	-	78.29	35.17	11.46	35.2	384	14	P	H
	*	5700	81.03	-	-	69.6	35.17	11.46	35.2	384	14	A	H
		5744.6	51.16	-17.04	68.2	39.6	35.24	11.53	35.21	384	14	P	H
													H
													H
													H
	*	5700	96.77	-	-	85.34	35.17	11.46	35.2	100	298	P	V
	*	5700	88.41	-	-	76.98	35.17	11.46	35.2	100	298	A	V
		5726.2	52.97	-15.23	68.2	41.46	35.21	11.5	35.2	100	298	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 100 5500MHz		11000	45.24	-28.76	74	48.38	37.9	17.46	58.5	100	0	P	H
		16500	48.24	-19.96	68.2	42.13	41.8	20.51	56.2	100	0	P	H
													H
													H
		11000	45.62	-28.38	74	48.76	37.9	17.46	58.5	100	0	P	V
		16500	48.84	-19.36	68.2	42.73	41.8	20.51	56.2	100	0	P	V
													V
													V
802.11a CH 116 5580MHz		11160	46.71	-27.29	74	48.94	38.07	17.8	58.1	100	0	P	H
		16740	48.88	-19.32	68.2	42.26	41.94	20.69	56.01	100	0	P	H
													H
													H
		11160	47.18	-26.82	74	49.41	38.07	17.8	58.1	100	0	P	V
		16740	49.62	-18.58	68.2	43	41.94	20.69	56.01	100	0	P	V
													V
													V
802.11a CH 140 5700MHz		11400	45	-29	74	46.22	38.3	18.02	57.54	100	0	P	H
		17100	49.88	-18.32	68.2	42.65	41.96	21.05	55.78	100	0	P	H
													H
													H
		11400	44.99	-29.01	74	46.21	38.3	18.02	57.54	100	0	P	V
		17100	49.52	-18.68	68.2	42.29	41.96	21.05	55.78	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5451.76	49.58	-24.42	74	38.71	34.83	11.2	35.16	381	48	P	H
		5469.04	49.11	-19.09	68.2	38.17	34.85	11.25	35.16	381	48	P	H
		5452.48	40.9	-13.1	54	30.03	34.83	11.2	35.16	381	48	A	H
	*	5510	90.86	-	-	79.83	34.9	11.3	35.17	381	48	P	H
802.11n	*	5510	83.7	-	-	72.67	34.9	11.3	35.17	381	48	A	H
HT40		5730.35	50.1	-18.1	68.2	38.6	35.21	11.5	35.21	381	48	P	H
CH 102		5458.48	51.43	-22.57	74	40.56	34.83	11.2	35.16	108	103	P	V
5510MHz		5467.84	55.39	-12.81	68.2	44.45	34.85	11.25	35.16	108	103	P	V
		5456.08	42.75	-11.25	54	31.88	34.83	11.2	35.16	108	103	A	V
	*	5510	97.25	-	-	86.22	34.9	11.3	35.17	108	103	P	V
	*	5510	89.64	-	-	78.61	34.9	11.3	35.17	108	103	A	V
		5759.96	50.17	-18.03	68.2	38.6	35.26	11.53	35.22	108	103	P	V
		5351.2	49.78	-24.22	74	39.1	34.69	11.14	35.15	394	48	P	H
		5462.08	48.17	-20.03	68.2	37.25	34.83	11.25	35.16	394	48	P	H
		5440.24	40.92	-13.08	54	30.07	34.81	11.2	35.16	394	48	A	H
	*	5550	90.71	-	-	79.56	34.97	11.35	35.17	394	48	P	H
802.11n	*	5550	83.68	-	-	72.53	34.97	11.35	35.17	394	48	A	H
HT40		5745.155	50.57	-17.63	68.2	39.01	35.24	11.53	35.21	394	48	P	H
CH 110		5449.84	49.71	-24.29	74	38.84	34.83	11.2	35.16	100	104	P	V
5550MHz		5465.2	51.46	-16.74	68.2	40.52	34.85	11.25	35.16	100	104	P	V
		5459.2	41.79	-12.21	54	30.92	34.83	11.2	35.16	100	104	A	V
	*	5550	97.01	-	-	85.86	34.97	11.35	35.17	100	104	P	V
	*	5550	89.71	-	-	78.56	34.97	11.35	35.17	100	104	A	V
		5761.535	49.9	-18.3	68.2	38.33	35.26	11.53	35.22	100	104	P	V

		5360.15	49.55	-24.45	74	38.87	34.69	11.14	35.15	400	59	P	H
		5464.1	48.63	-19.57	68.2	37.69	34.85	11.25	35.16	400	59	P	H
		5446.95	40.73	-13.27	54	29.86	34.83	11.2	35.16	400	59	A	H
	*	5670	89.49	-	-	78.08	35.14	11.46	35.19	400	59	P	H
802.11n	*	5670	82.57	-	-	71.16	35.14	11.46	35.19	400	59	A	H
HT40		5739.8	50.4	-17.8	68.2	38.87	35.24	11.5	35.21	400	59	P	H
CH 134		5407.4	49.78	-24.22	74	39.03	34.76	11.15	35.16	100	103	P	V
5670MHz		5462	47.6	-20.6	68.2	36.68	34.83	11.25	35.16	100	103	P	V
		5417.9	41	-13	54	30.23	34.78	11.15	35.16	100	103	A	V
	*	5670	95.51	-	-	84.1	35.14	11.46	35.19	100	103	P	V
	*	5670	88.11	-	-	76.7	35.14	11.46	35.19	100	103	A	V
		5727.375	51.22	-16.98	68.2	39.71	35.21	11.5	35.2	100	103	P	V

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

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		5429.68	49.85	-24.15	74	39	34.81	11.2	35.16	400	55	P	H
		5470	49.4	-18.8	68.2	38.46	34.85	11.25	35.16	400	55	P	H
		5427.28	43.55	-10.45	54	32.73	34.78	11.2	35.16	400	55	A	H
	*	5530	84.19	-	-	73.14	34.92	11.3	35.17	400	55	P	H
	*	5530	78.71	-	-	67.66	34.92	11.3	35.17	400	55	A	H
		5738.54	50.68	-17.52	68.2	39.15	35.24	11.5	35.21	400	55	P	H
		5418.4	53.42	-20.58	74	42.65	34.78	11.15	35.16	100	300	P	V
		5468.8	54.32	-13.88	68.2	43.38	34.85	11.25	35.16	100	300	P	V
		5452.24	50.69	-3.31	54	39.82	34.83	11.2	35.16	100	300	A	V
	*	5530	90.32	-	-	79.27	34.92	11.3	35.17	100	300	P	V
	*	5530	83.69	-	-	72.64	34.92	11.3	35.17	100	300	A	V
		5743.58	49.78	-18.42	68.2	38.22	35.24	11.53	35.21	100	300	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

WIFI 802.11ac VHT80 (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 LF		37.83	23.7	-16.3	40	33.88	20.42	1.22	31.82	-	-	P	H
		192	29.21	-14.29	43.5	43.83	14.78	2.29	31.69	-	-	P	H
		271.38	28.54	-17.46	46	38.37	19.08	2.73	31.64	-	-	P	H
		873.3	31.79	-14.21	46	29.48	28.95	4.83	31.47	-	-	P	H
		937.7	32.33	-13.67	46	28.65	29.75	4.95	31.02	-	-	P	H
		956.6	33.1	-12.9	46	28.23	30.69	5.03	30.85	100	0	P	H
													H
													H
													H
													H
													H
													H
		37.83	31.79	-8.21	40	41.97	20.42	1.22	31.82	100	0	P	V
		92.91	27.99	-15.51	43.5	43.1	14.99	1.66	31.76	-	-	P	V
		274.35	23	-23	46	32.94	18.97	2.73	31.64	-	-	P	V
		833.4	30.12	-15.88	46	28.83	28.27	4.66	31.64	-	-	P	V
		878.2	31.16	-14.84	46	28.86	28.91	4.84	31.45	-	-	P	V
		955.2	32.79	-13.21	46	27.99	30.64	5.03	30.87	-	-	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	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

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

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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

Appendix D. Radiated Spurious Emission

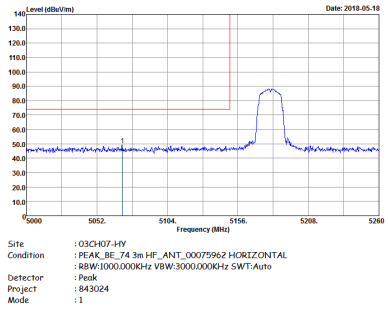
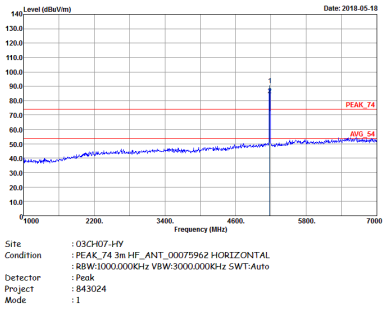
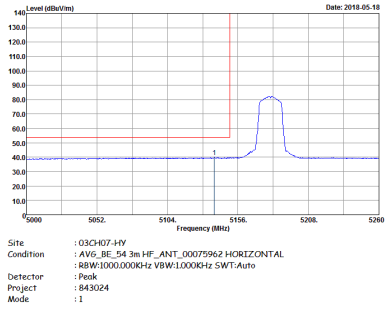
Test Engineer :	Jesse Wang and Stan Hsieh	**Temperature :**	22~24°C
		Relative Humidity :	51~53%

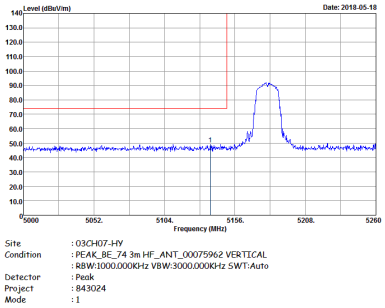
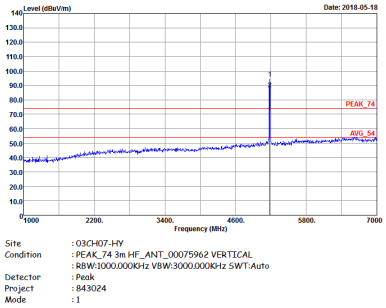
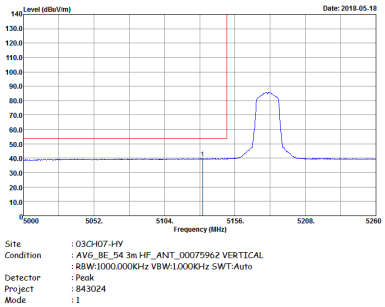
Note symbol

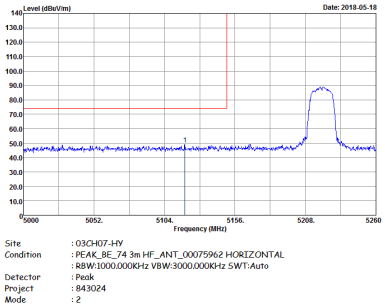
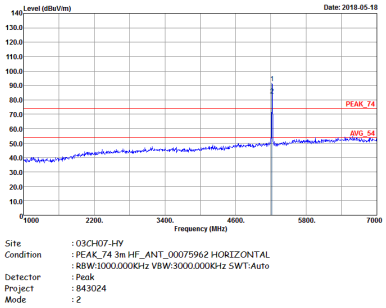
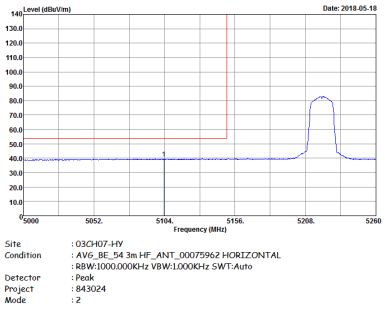
-L	**Low channel location**
-R	**High channel location**

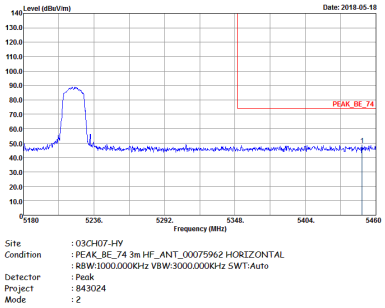
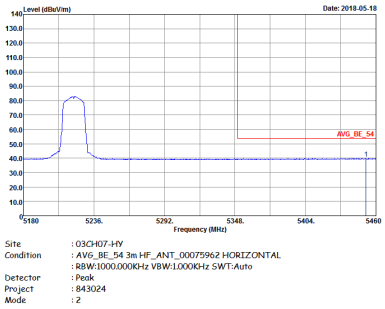
Band 1 - 5150~5250MHz

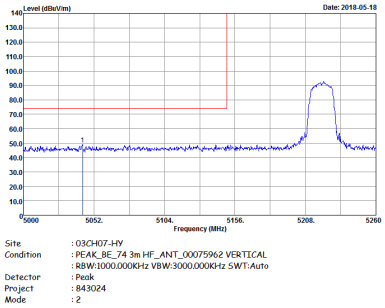
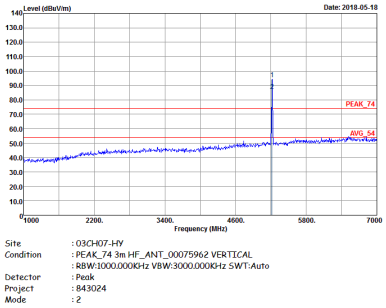
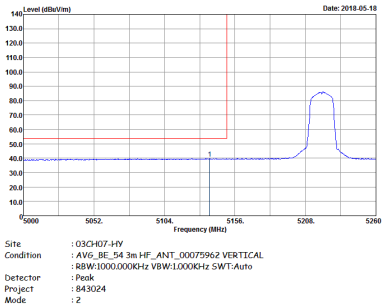
WIFI 802.11a (Band Edge @ 3m)

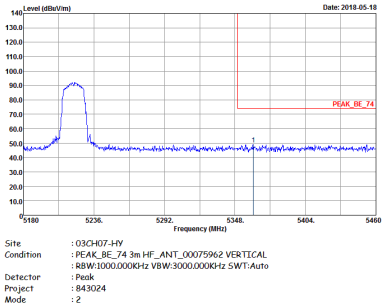
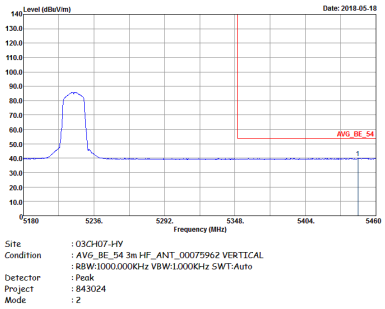
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

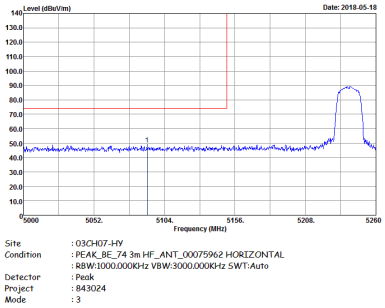
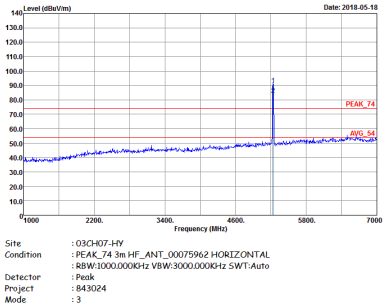
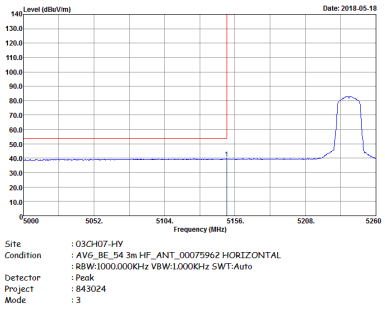
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

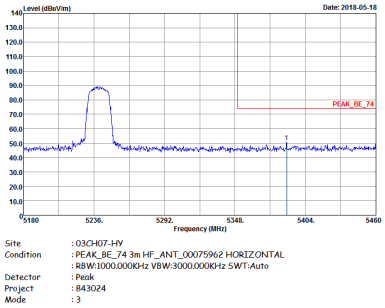
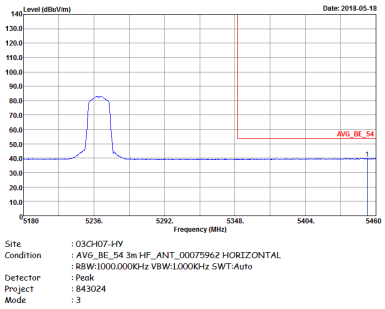
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

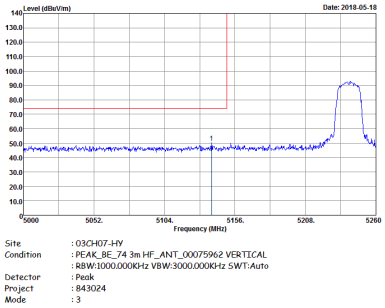
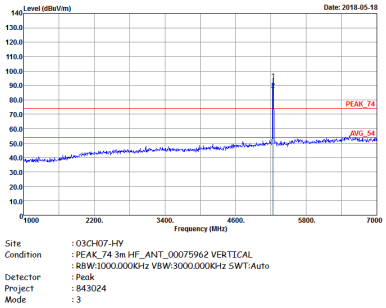
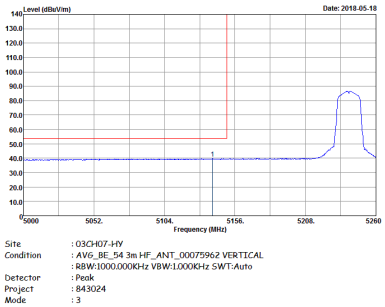
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

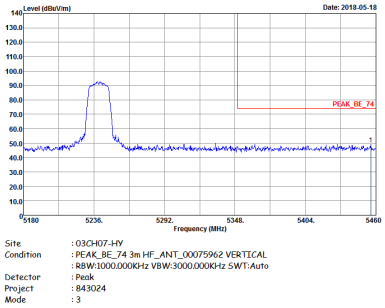
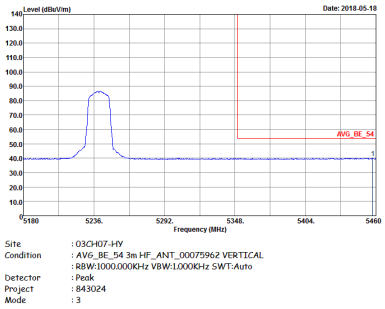
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

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

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

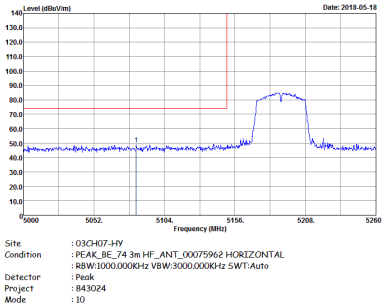
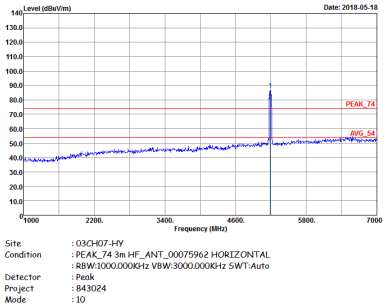
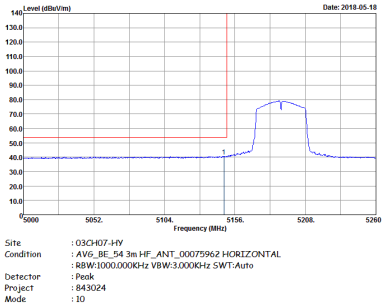
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

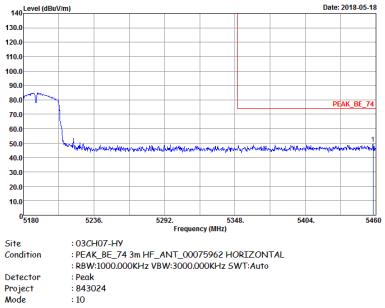
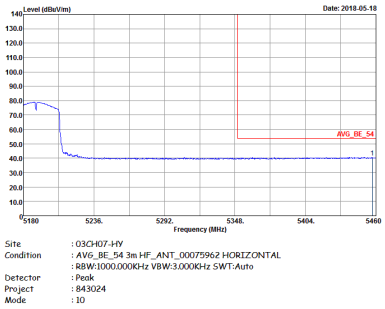
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

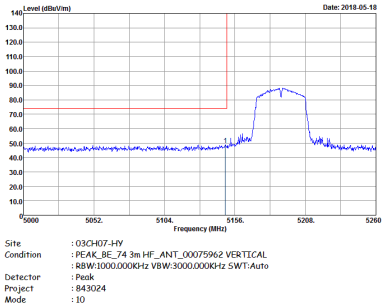
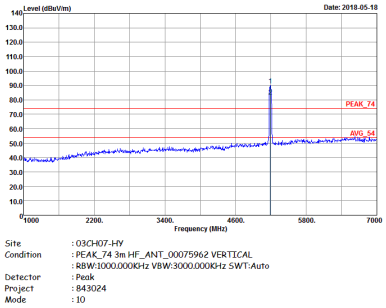
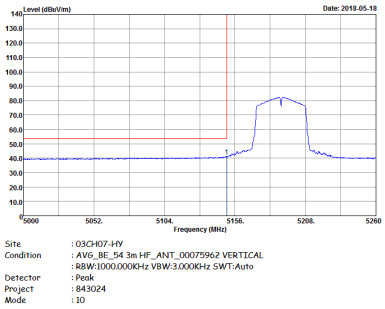
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

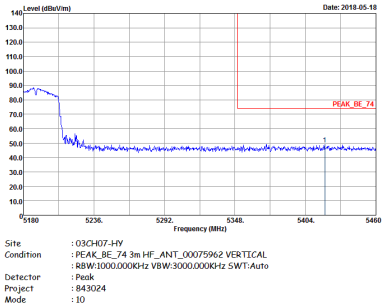
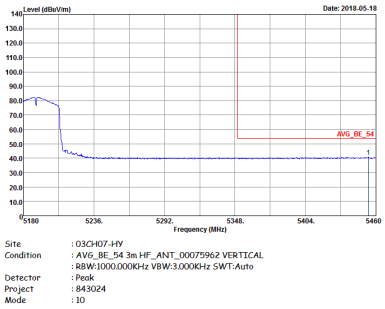
Band 1 5150~5250MHz

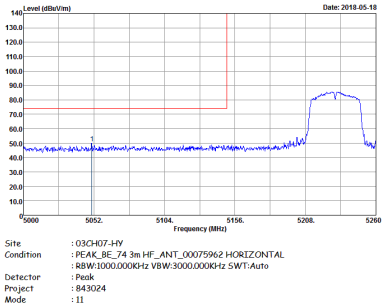
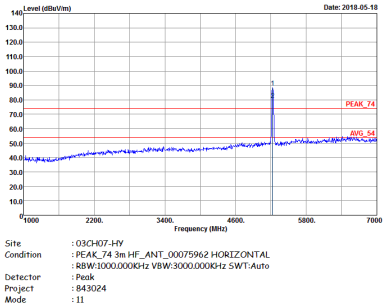
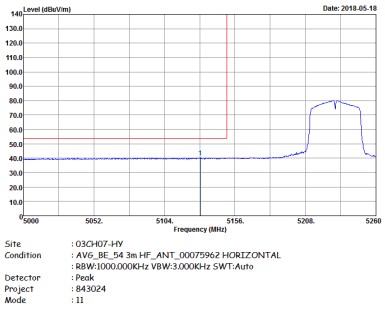
WIFI 802.11n HT40 (Band Edge @ 3m)

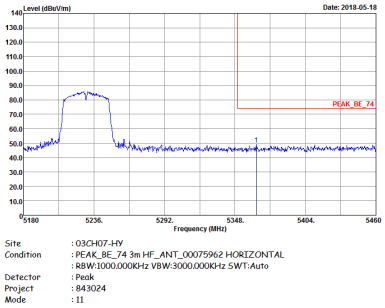
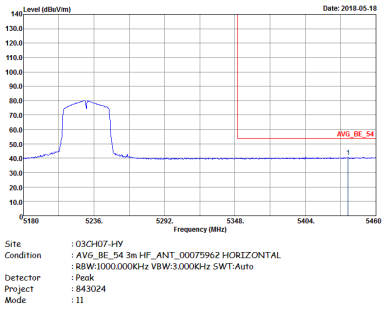
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

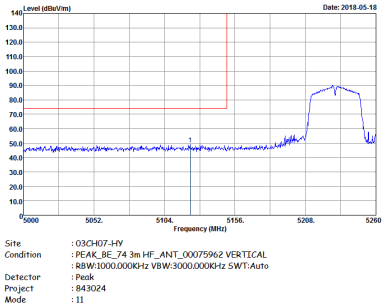
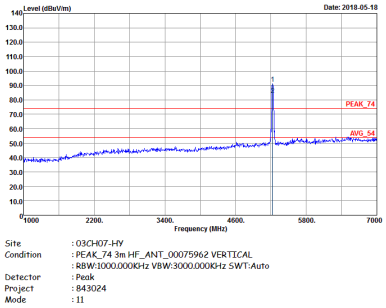
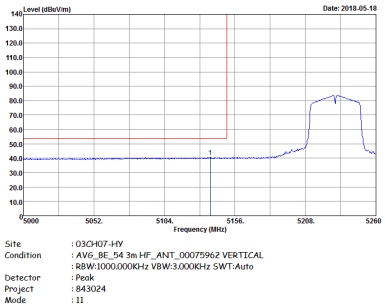
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

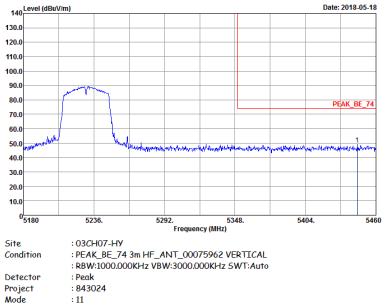
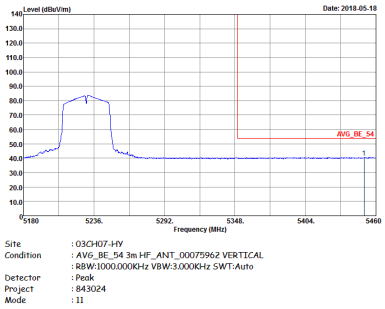
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

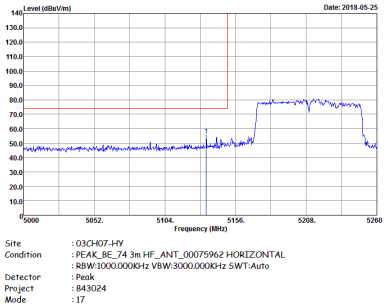
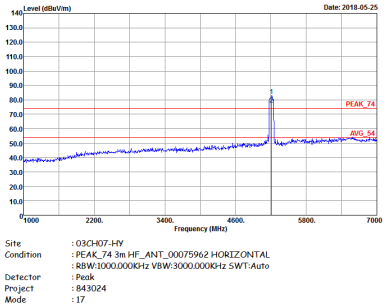
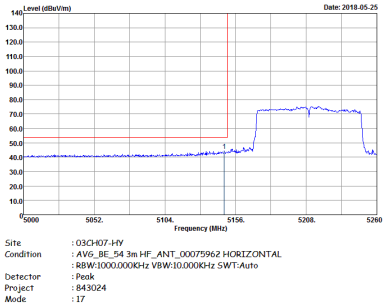
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

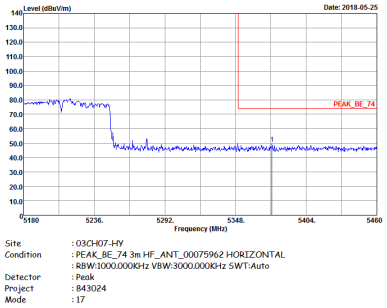
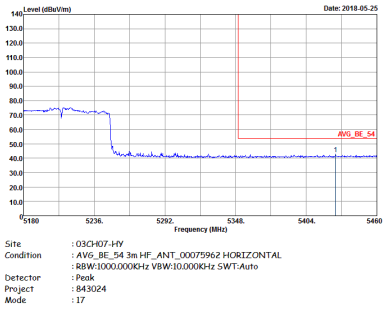
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

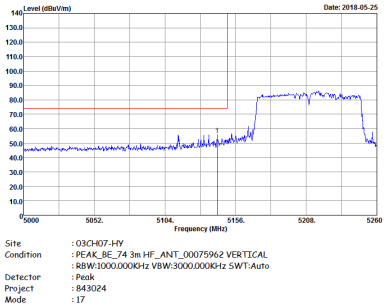
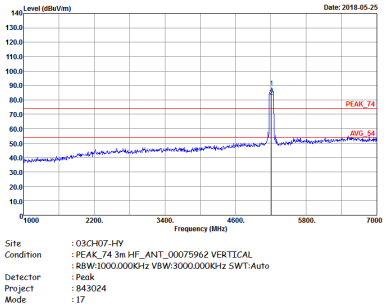
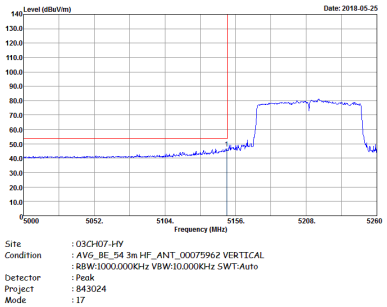
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

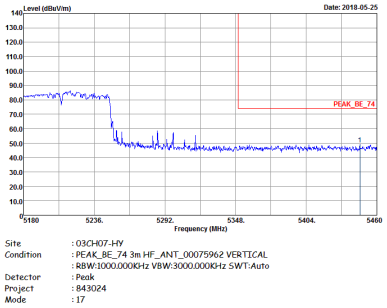
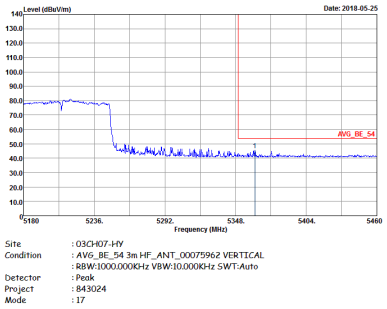
Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

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

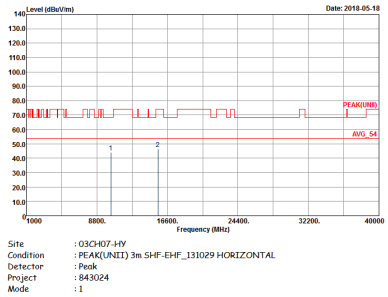
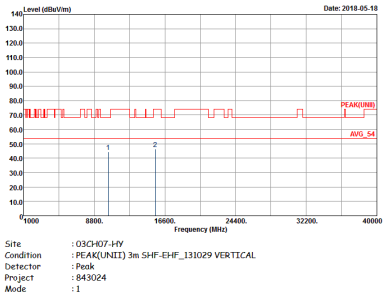
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

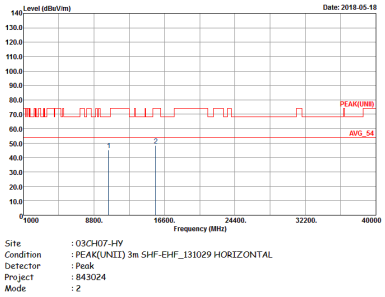
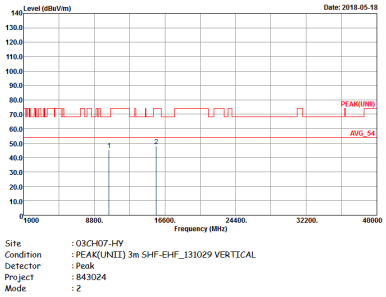
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

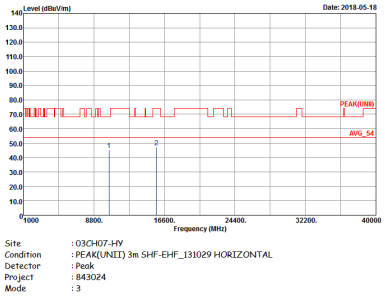
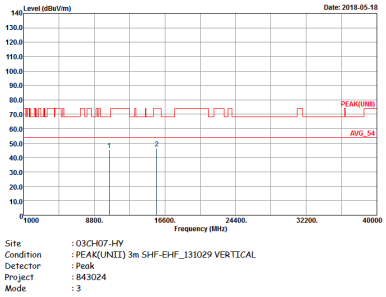
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

Band 1 - 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

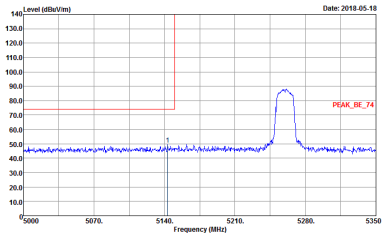
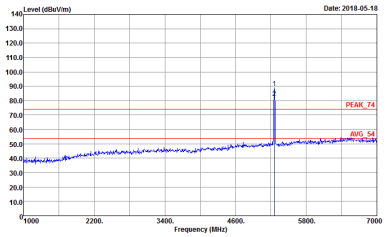
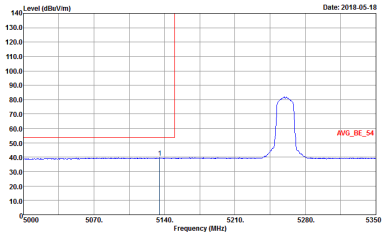
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH36 5180MHz	
1	Horizontal	Vertical
Peak Avg.	 	

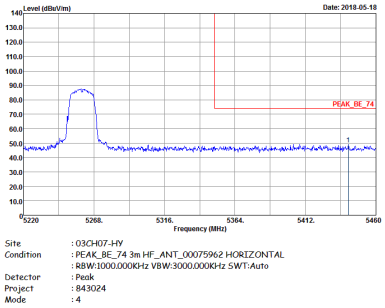
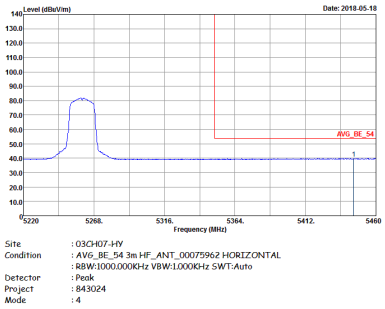
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH44 5220MHz	
1	Horizontal	Vertical
Peak Avg.		

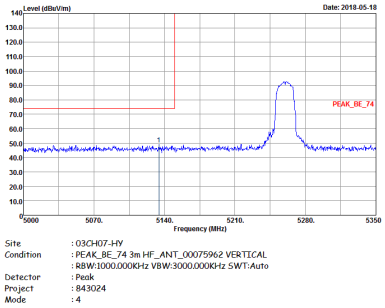
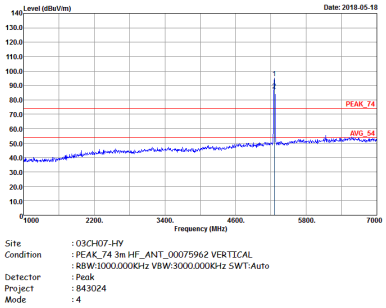
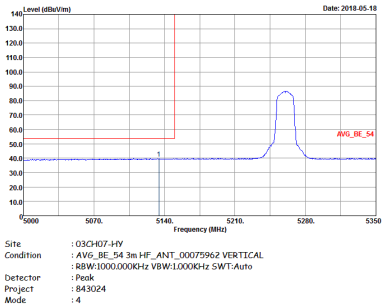
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH48 5240MHz	
1	Horizontal	Vertical
Peak Avg.		

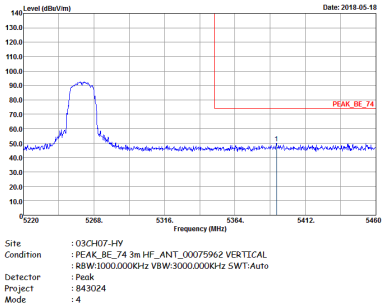
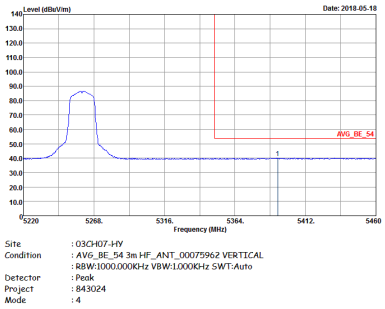
Band 2 - 5250~5350MHz

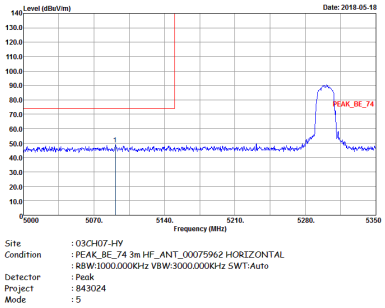
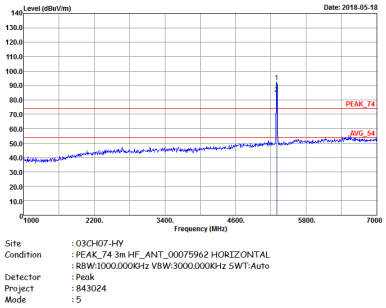
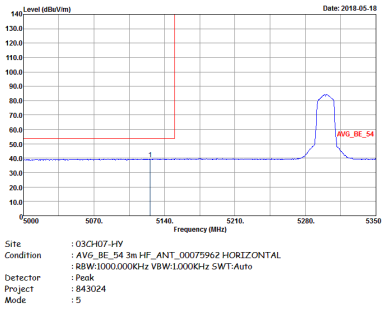
WIFI 802.11a (Band Edge @ 3m)

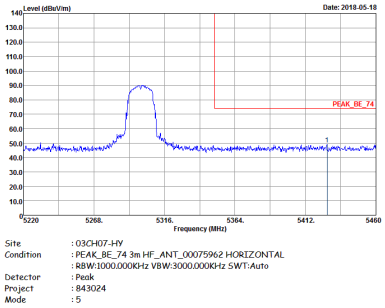
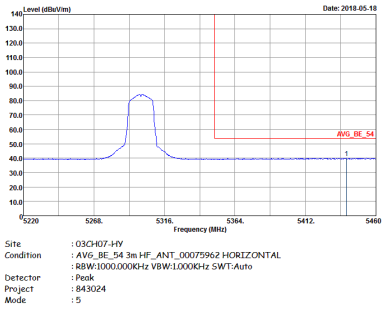
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH52 5260MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

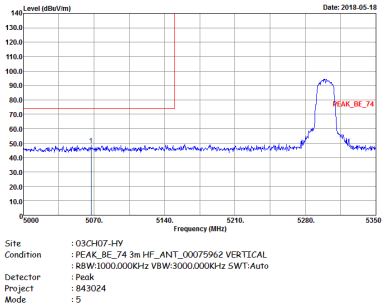
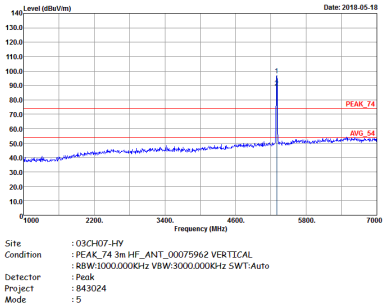
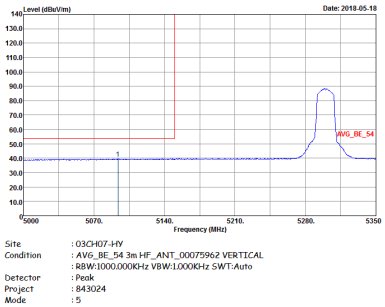
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH52 5260MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

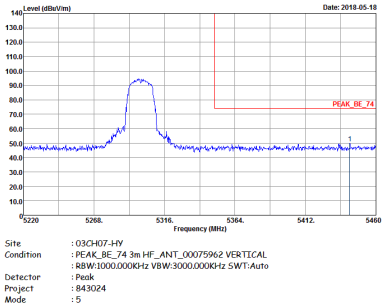
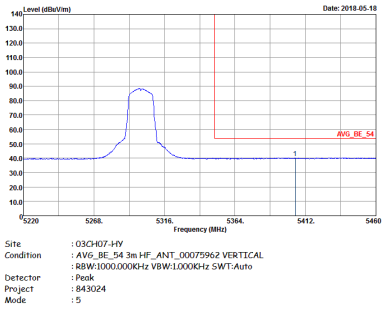
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH52 5260MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

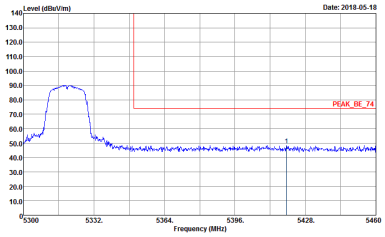
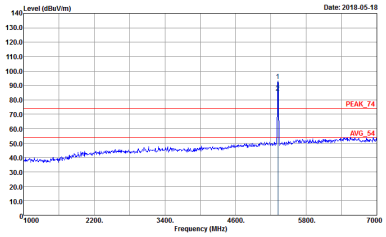
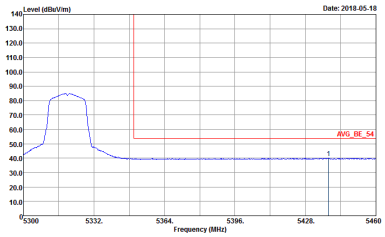
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH52 5260MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

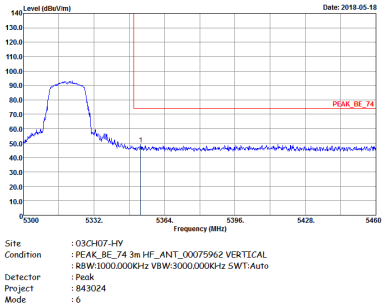
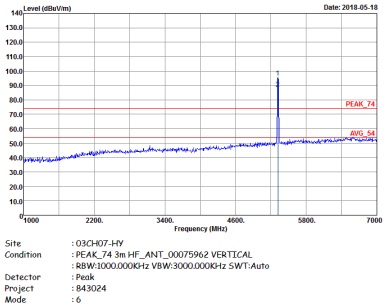
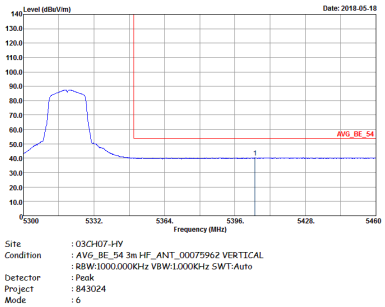
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH60 5300MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH60 5300MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH60 5300MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

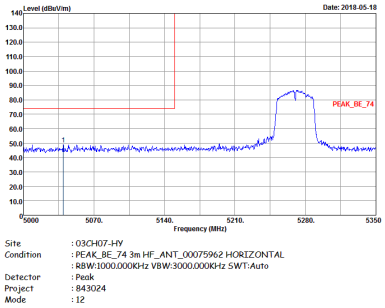
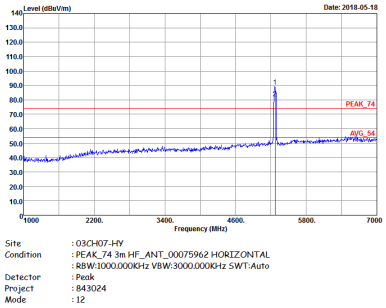
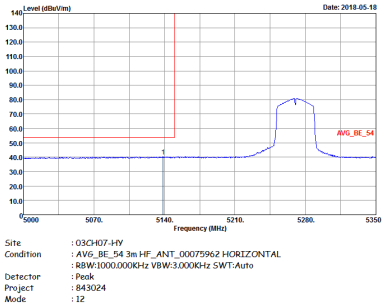
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH60 5300MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

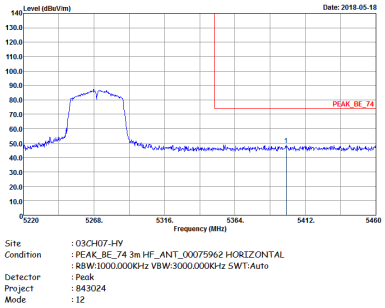
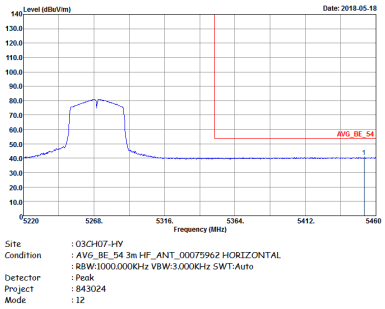
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH64 5320MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 843024 Mode : 6	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 843024 Mode : 6
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 843024 Mode : 6	Left blank

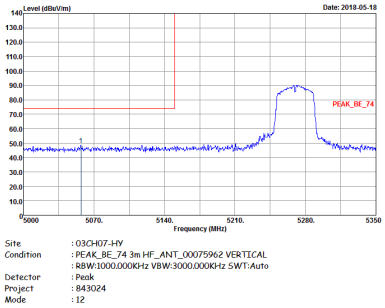
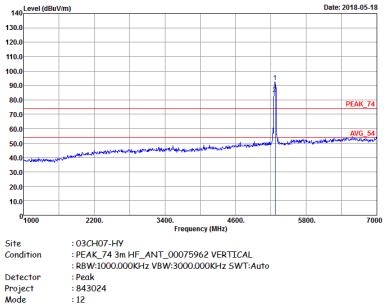
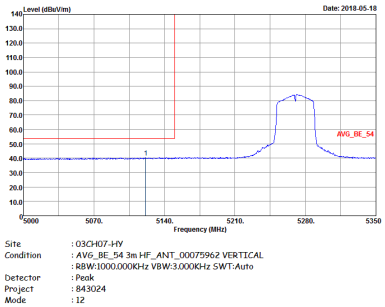
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH64 5320MHz	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

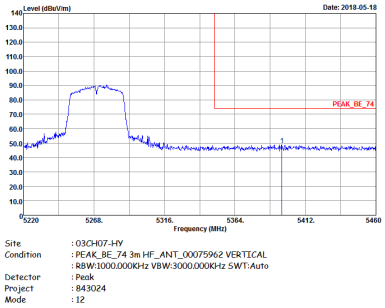
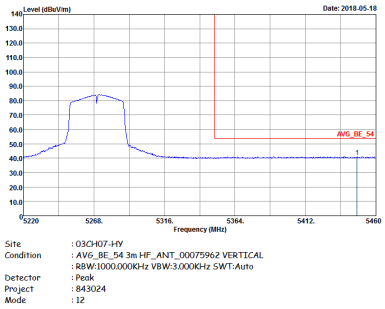
Band 2 5250~5350MHz

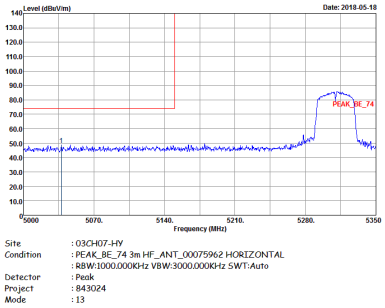
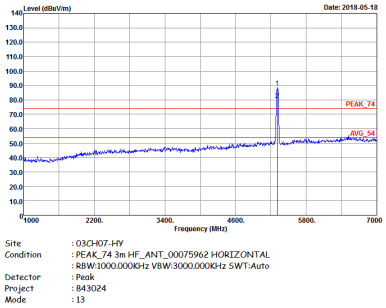
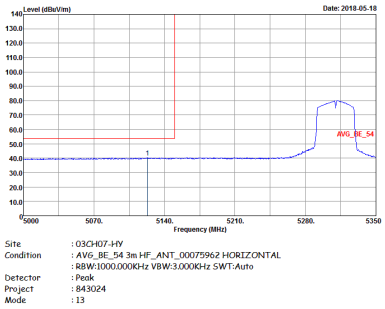
WIFI 802.11n HT40 (Band Edge @ 3m)

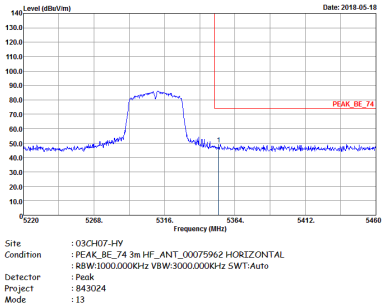
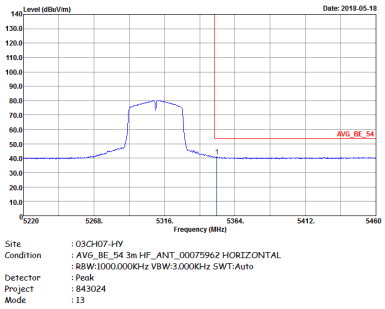
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH54 5270 MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

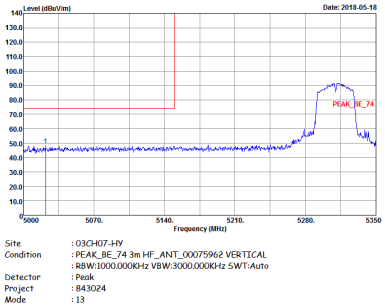
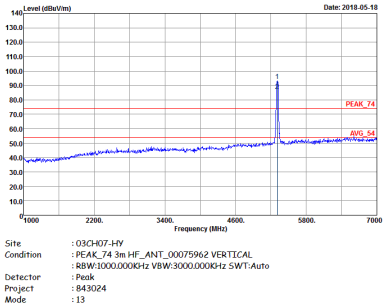
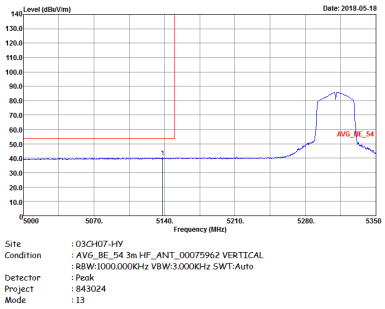
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH54 5270 MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

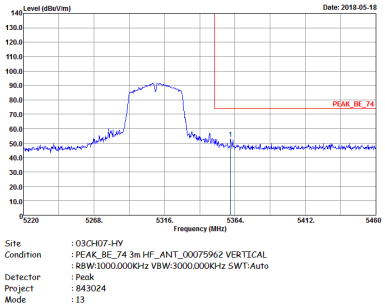
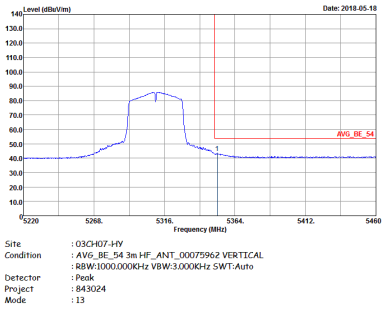
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH54 5270 MHz - L	
1	Vertical	Vertical
Peak		
Avg.		Left blank

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH54 5270 MHz - R	
1	Vertical	Vertical
Peak		Left blank
Avg.		Left blank

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

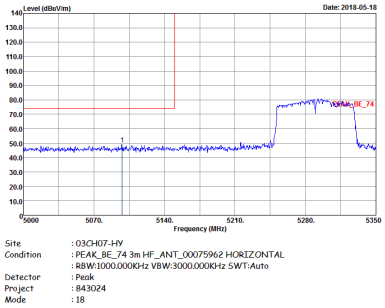
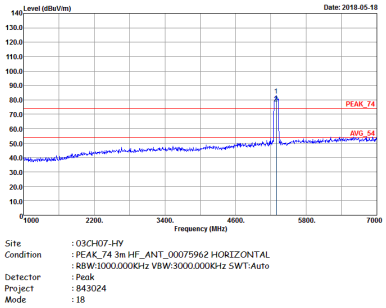
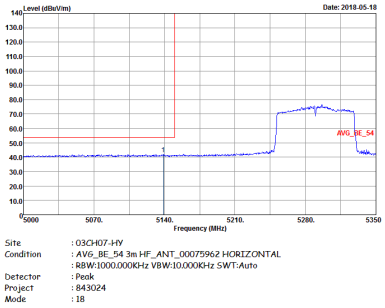
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

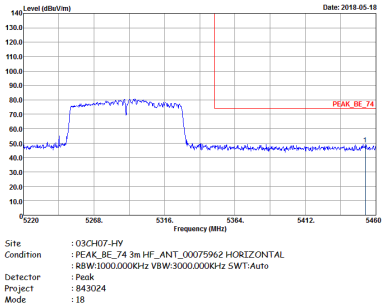
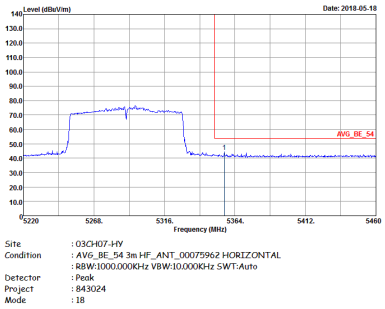
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

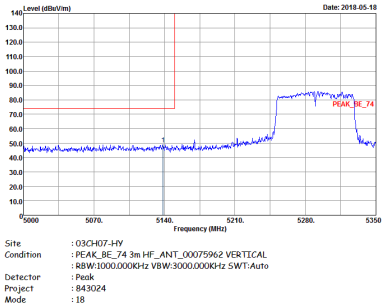
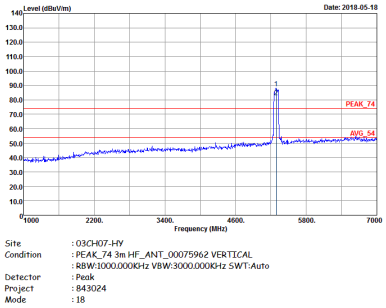
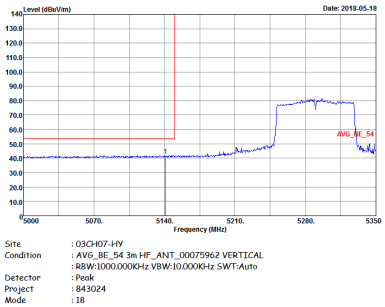
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

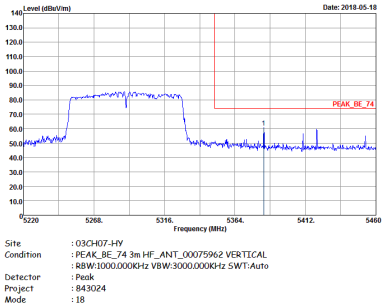
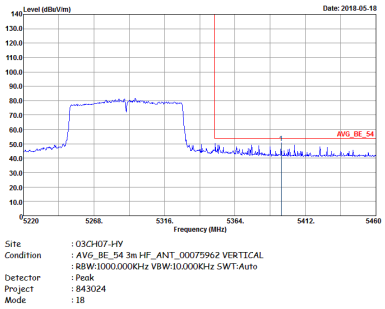
Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

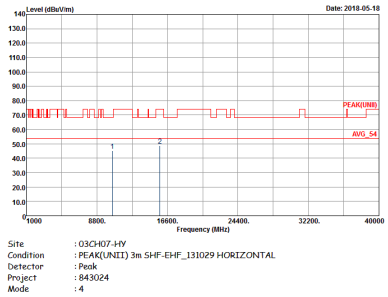
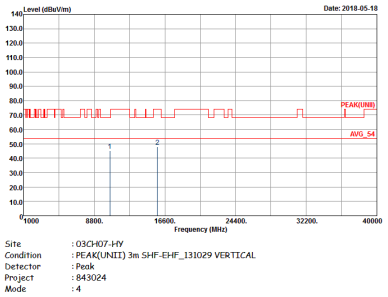
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

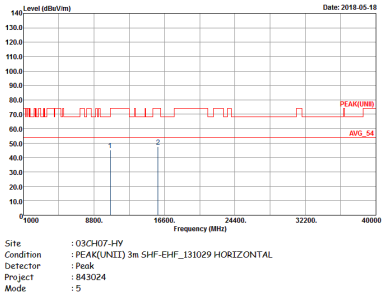
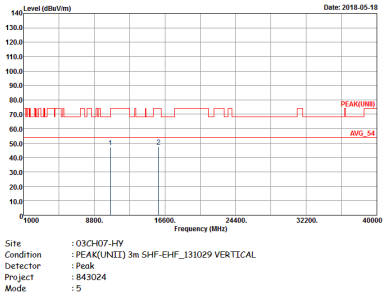
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

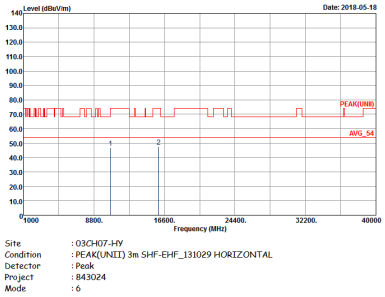
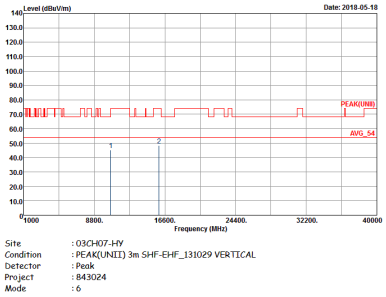
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

Band 2 - 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

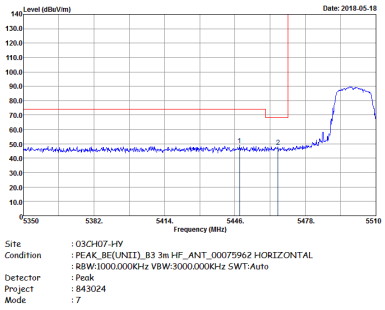
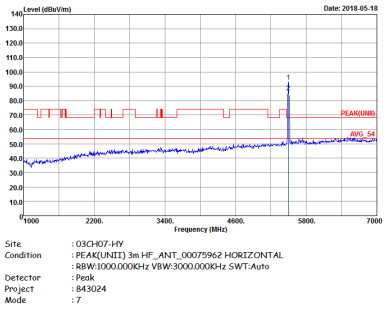
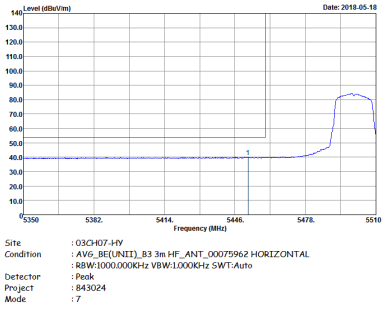
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11a CH52 5260MHz	
1	Horizontal	Vertical
Peak Avg.		

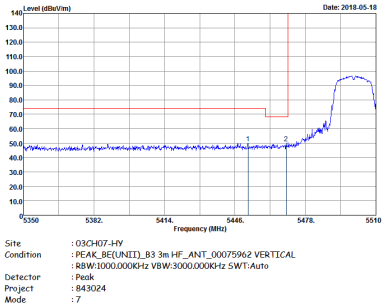
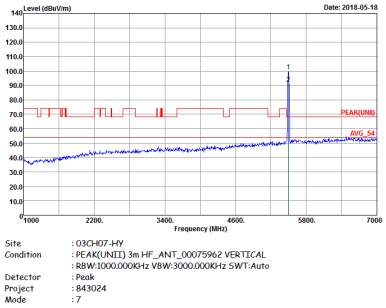
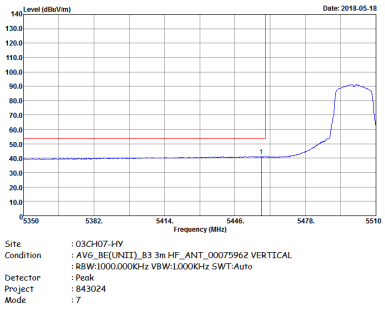
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11a CH60 5300MHz	
1	Horizontal	Vertical
Peak Avg.		

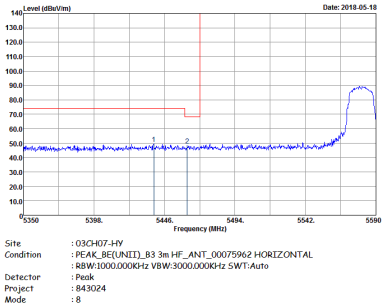
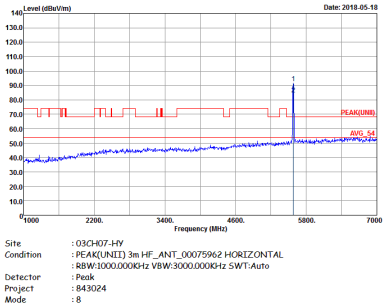
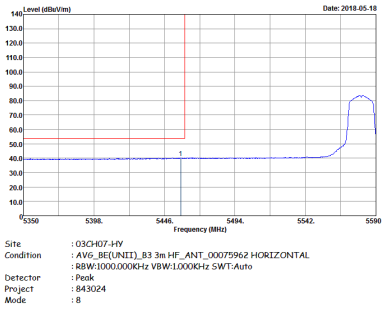
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11a CH64 5320MHz	
1	Horizontal	Vertical
Peak Avg.		

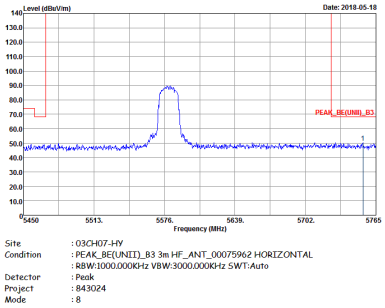
Band 3 - 5470~5725MHz

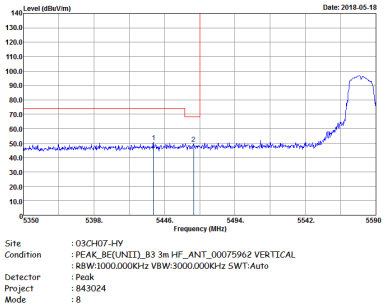
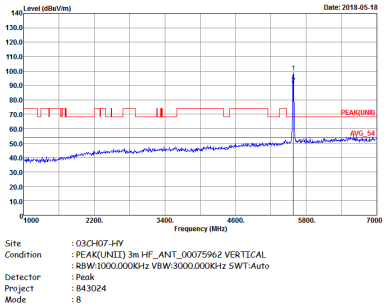
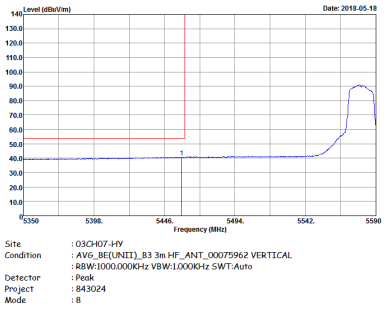
WIFI 802.11a (Band Edge @ 3m)

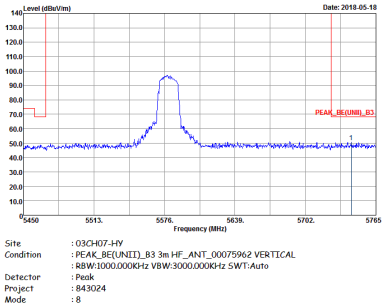
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH100 5500MHz	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

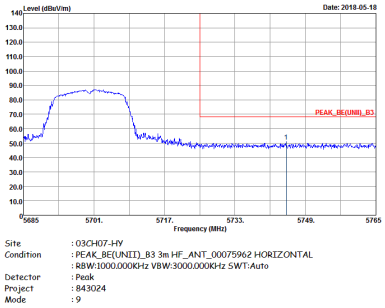
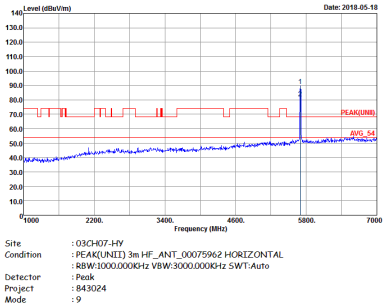
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH100 5500MHz	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

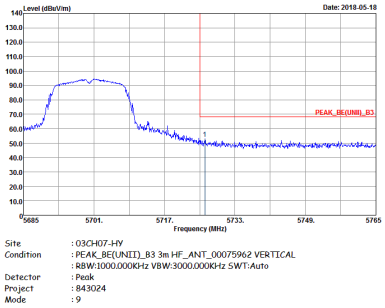
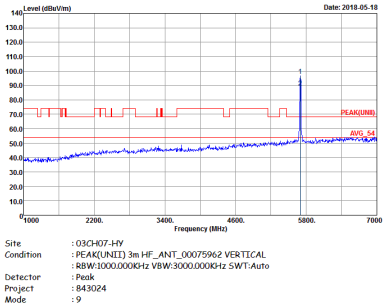
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH116 5580MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH116 5580MHz - R	
1	Horizontal	Fundamental
Peak		Left blank

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH116 5580MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

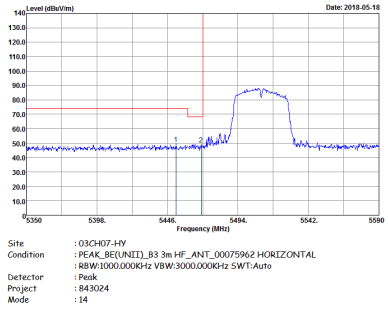
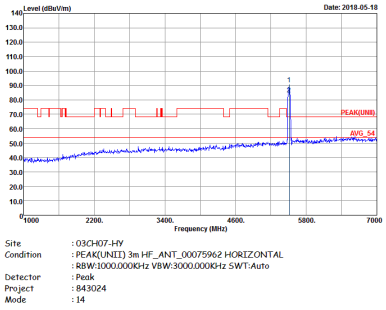
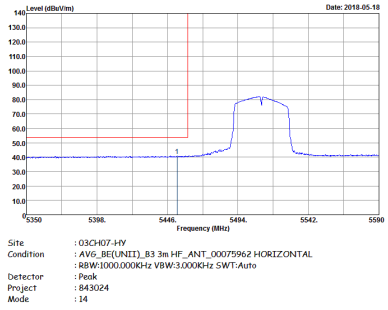
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH116 5580MHz - R	
1	Vertical	Fundamental
Peak		Left blank

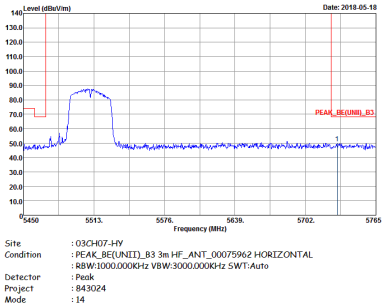
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH140 5700MHz	
1	Horizontal	Fundamental
Peak		

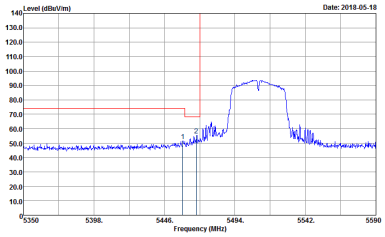
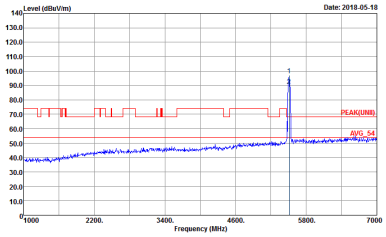
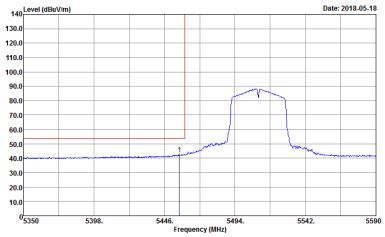
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH140 5700MHz	
1	Vertical	Fundamental
Peak		

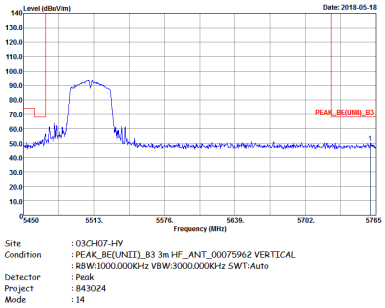
Band 3 5470~5725MHz

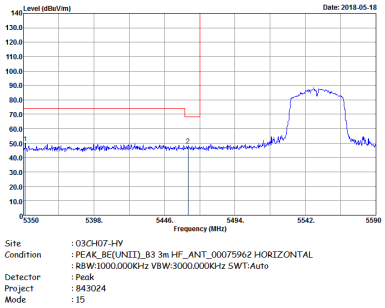
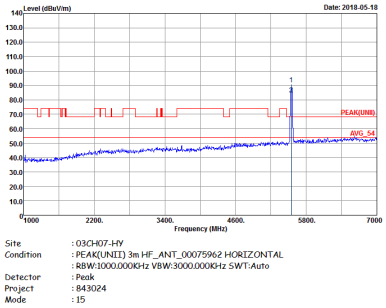
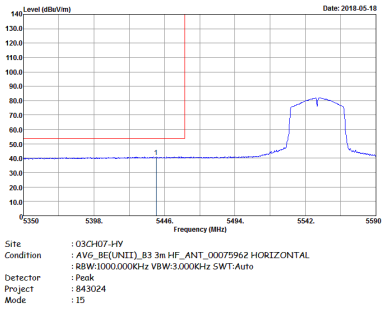
WIFI 802.11n HT40 (Band Edge @ 3m)

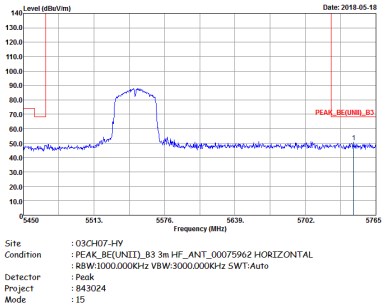
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

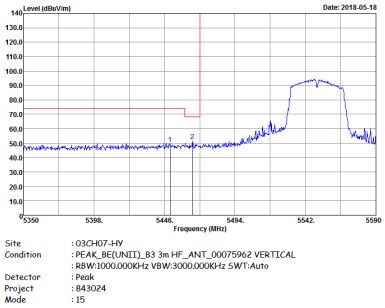
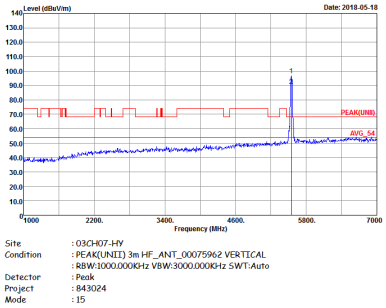
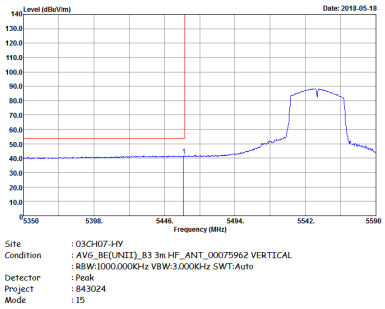
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - R	
1	Horizontal	Fundamental
Peak		Left blank

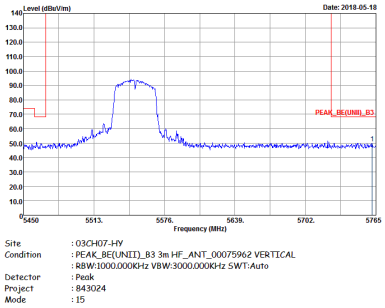
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE(UNII)_B3 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 843024 Mode : 14	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 843024 Mode : 14
Avg.	 Site : 03CH07-HY Condition : AVG_BE(UNII)_B3 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 843024 Mode : 14	Left blank

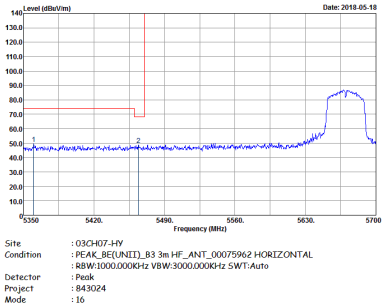
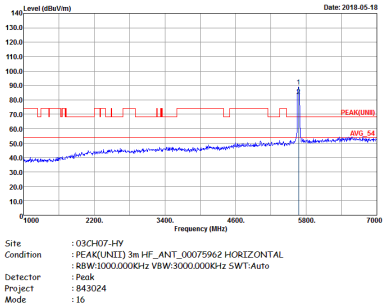
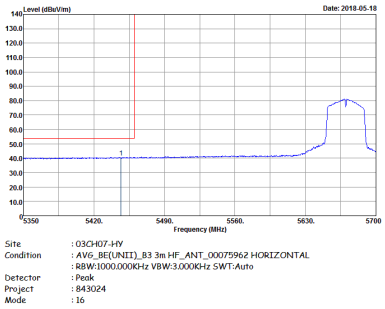
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE(UNII)_B3 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 843024 Mode : 14	Left blank

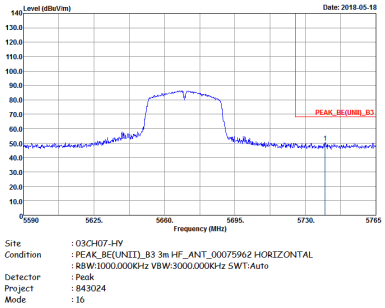
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH110 5550MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

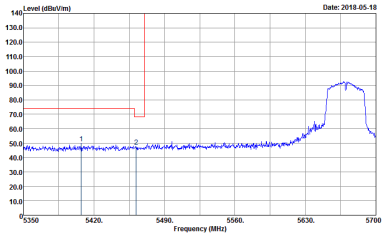
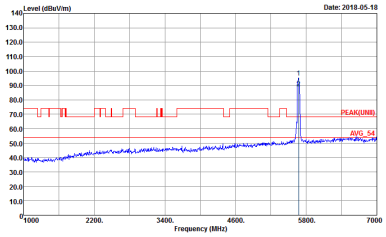
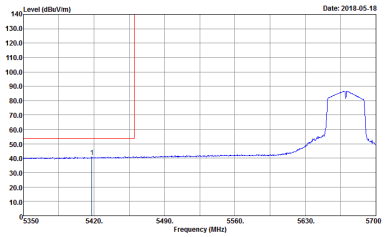
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH110 5550MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE(UNII)_B3 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 843024 Mode : 15	Left blank

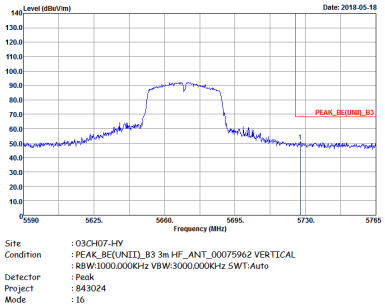
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH110 5550MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH110 5550MHz - R	
1	Vertical	Fundamental
Peak		Left blank

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH134 5670MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

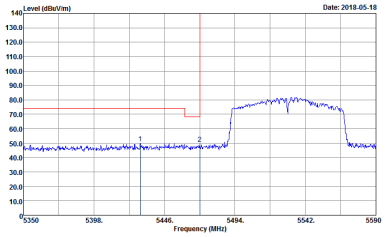
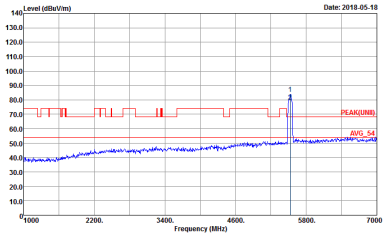
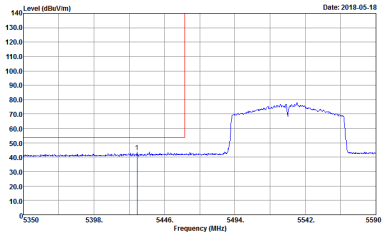
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH134 5670MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE(UNII)_B3 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 843024 Mode : 16	Left blank

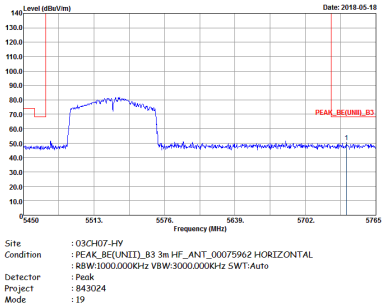
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH134 5670MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE(UNII)_B3 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 843024 Mode : 16	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 843024 Mode : 16
Avg.	 Site : 03CH07-HY Condition : AVG_BE(UNII)_B3 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 843024 Mode : 16	Left blank

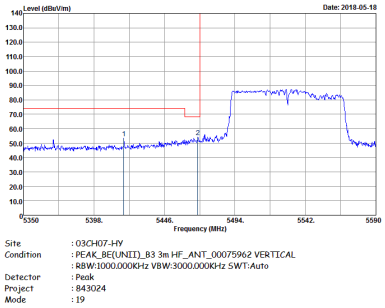
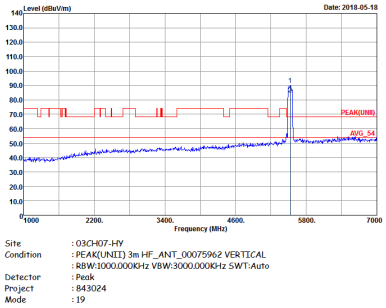
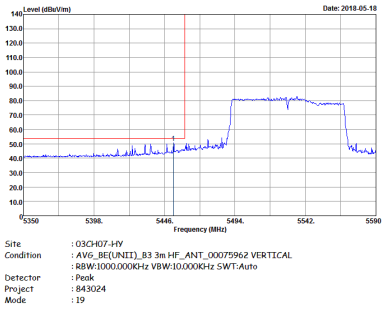
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH134 5670MHz - R	
1	Vertical	Fundamental
Peak		Left blank

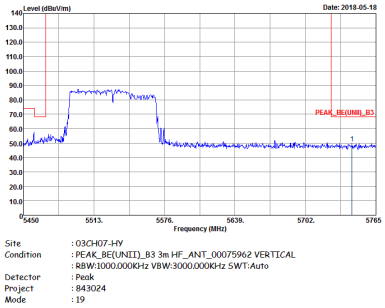
Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

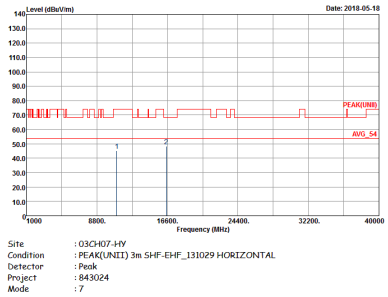
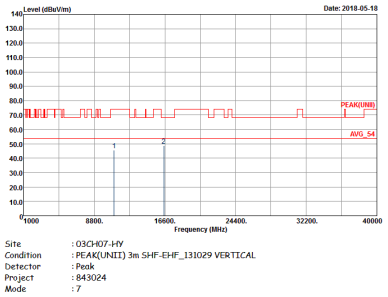
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE(UNII)_B3 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 843024 Mode : 19	Left blank

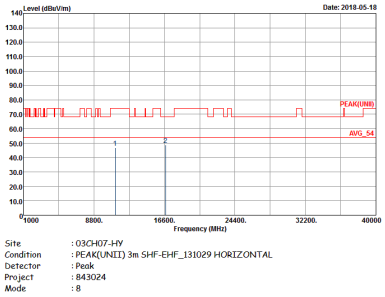
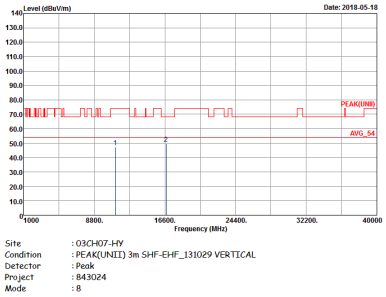
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

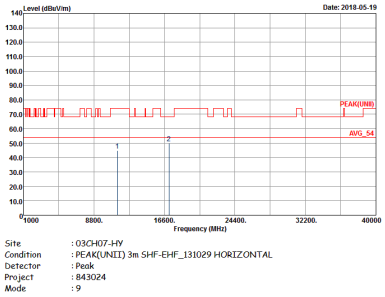
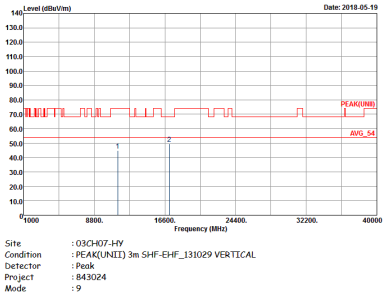
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - R	
1	Vertical	Fundamental
Peak		Left blank

Band 3 - 5470~5725MHz

WIFI 802.11a (Harmonic @ 3m)

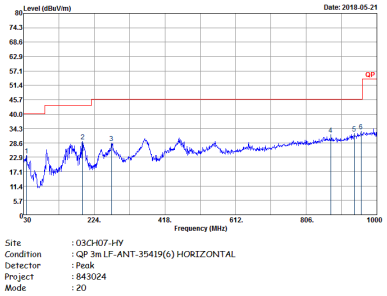
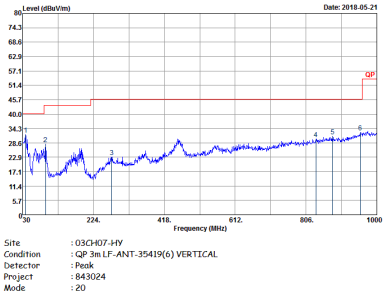
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11a CH100 5500MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11a CH116 5580MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11a CH140 5700MHz	
1	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

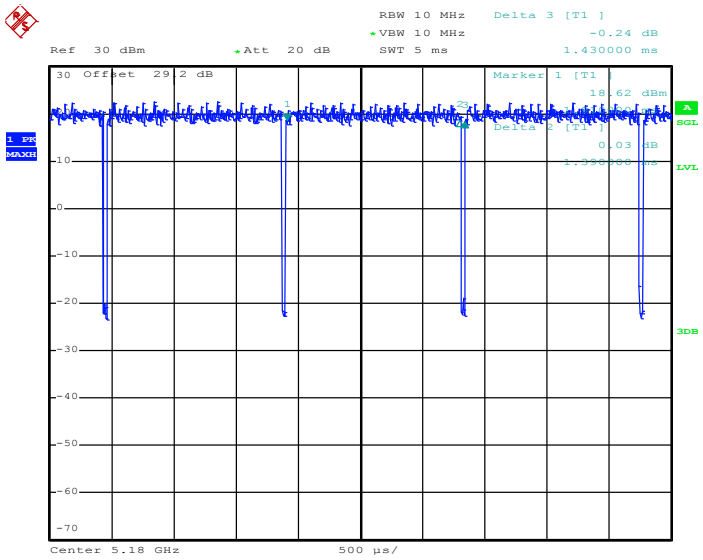
5GHz WIFI 802.11ac VHT80 (LF)

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

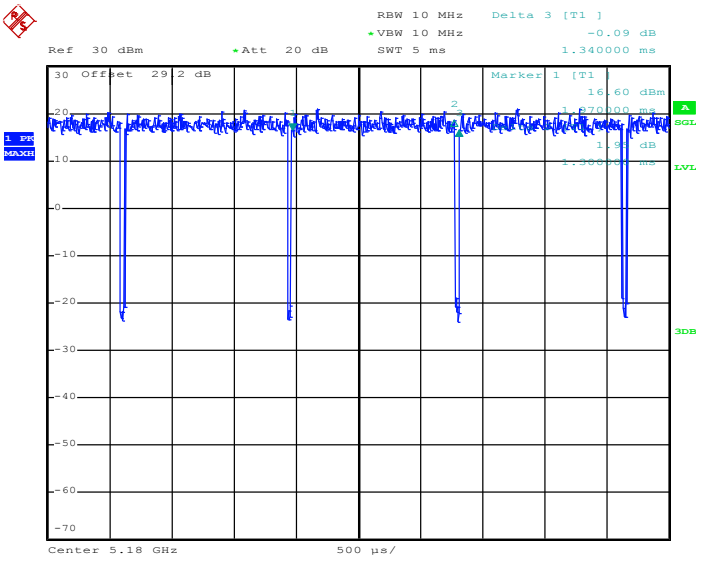
Appendix E. Duty Cycle Plots

Band	Duty Cycle (%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor (dB)
802.11a	97.20	1390.00	0.72	1kHz	0.12
5GHz 802.11n HT20	97.01	1300.00	0.77	1kHz	0.13
5GHz 802.11n HT40	93.86	642.00	1.56	3kHz	0.28
5GHz 802.11ac VHT20	97.04	1310.00	0.76	1kHz	0.13
5GHz 802.11ac VHT40	93.91	648.00	1.54	3kHz	0.27
5GHz 802.11ac VHT80	90.00	324.00	3.09	10kHz	0.46

802.11a

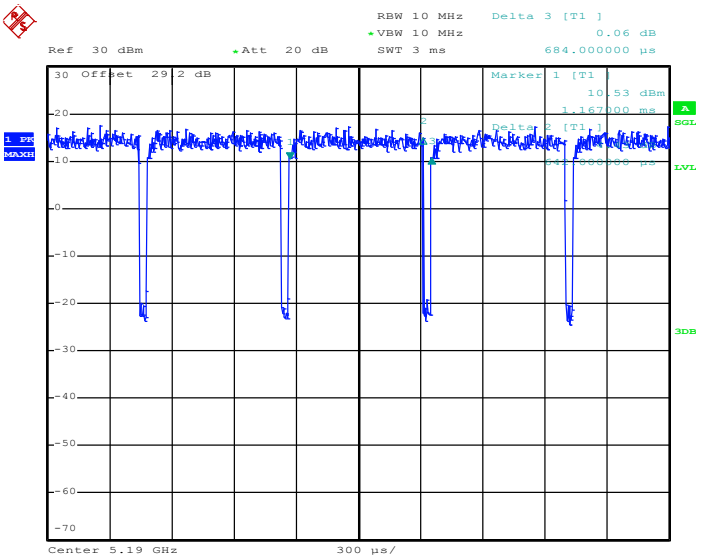


802.11n HT20



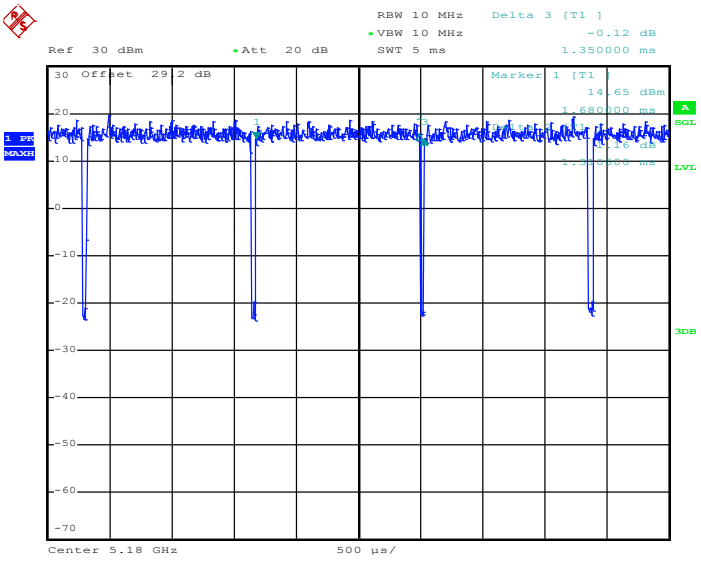
Date: 15.MAY.2018 00:42:25

802.11n HT40



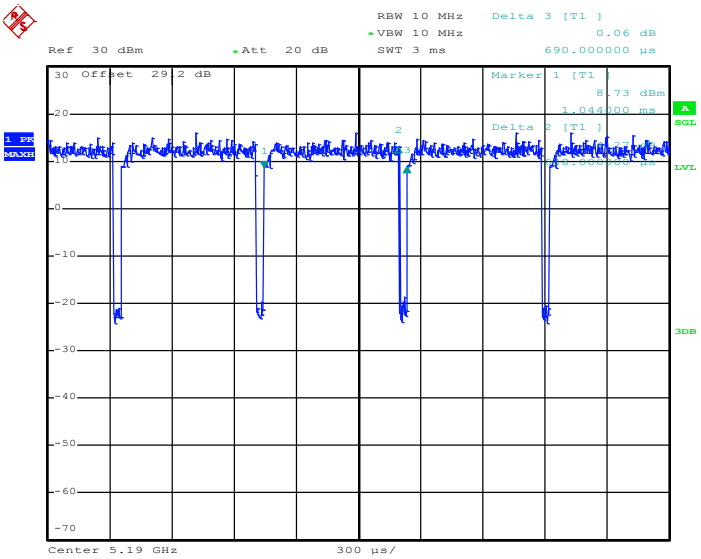
Date: 15.MAY.2018 00:50:34

802.11ac VHT20



Date: 15.MAY.2018 01:07:42

802.11ac VHT40



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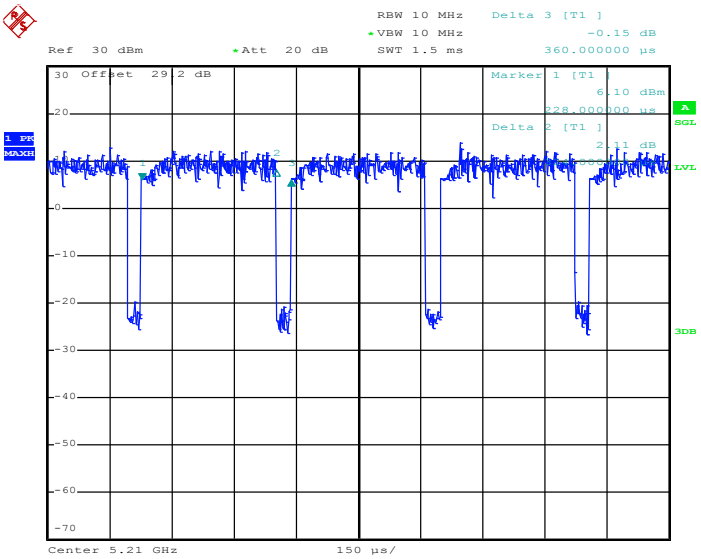
802.11ac VHT80



Date: 15.MAY.2018 01:34:12