



FCC RADIO TEST REPORT

FCC ID : 2AP65-7225
Equipment : Digital Media Receiver
Model Name : P5B83L
Applicant : Lindland LLC
9121 Anson Way, Ste. 200, Raleigh, NC 27615
Standard : FCC Part 15 Subpart E §15.407

The product was completed on Jul. 19, 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: Jones Tsai

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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



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History of this test report

Report No.	Version	Description	Issued Date
FR842408-01E	01	Initial issue of report	Jul. 30, 2018
FR842408-01E	02	Revising the description of applicable standards in section 1.5 and test results in section 3.4.5.	Aug. 28, 2018



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)
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
3.5	15.207	AC Conducted Emission	Pass
3.6	15.407(c)	Automatically Discontinue Transmission	Pass
3.7	15.203 15.407(a)	Antenna Requirement	Pass

Reviewed by: Joseph Lin

Report Producer: Wui Chang

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Digital Media Receiver
Model Name	P5B83L
FCC ID	2AP65-7225
EUT supports Radios application	WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth LE

1.2 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz
Maximum Output Power to Antenna	<Ant. 1> 802.11a : 18.18 dBm / 0.0658 W 802.11n HT20 : 17.14 dBm / 0.0518 W 802.11n HT40 : 17.05 dBm / 0.0507 W 802.11ac VHT20 : 17.11 dBm / 0.0514 W 802.11ac VHT40 : 17.01 dBm / 0.0502 W 802.11ac VHT80 : 9.39 dBm / 0.0087 W <Ant. 2> 802.11a : 18.31 dBm / 0.0678 W 802.11n HT20 : 17.21 dBm / 0.0526 W 802.11n HT40 : 17.01 dBm / 0.0502 W 802.11ac VHT20 : 17.22 dBm / 0.0527 W 802.11ac VHT40 : 16.94 dBm / 0.0494 W 802.11ac VHT80 : 10.86 dBm / 0.0122 W
99% Occupied Bandwidth	<Ant. 1> 802.11a : 17.18 MHz 802.11n HT20 : 18.03 MHz 802.11n HT40 : 37.06 MHz 802.11ac VHT80 : 76.84 MHz <Ant. 2> 802.11a : 17.38 MHz 802.11n HT20 : 18.03 MHz 802.11n HT40 : 37.06 MHz 802.11ac VHT80 : 76.72 MHz
Antenna Type / Gain	Ant. 1 : Fixed Internal Antenna type with gain 0.88 dBi Ant. 2 : Fixed Internal Antenna type with gain 4.00 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)



1.3 Modification of EUT

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

1.4 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

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

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

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

1.5 Applicable Standards

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

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

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

2 Test Configuration of Equipment Under Test

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

Note:

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

2.2 Test Mode

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

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

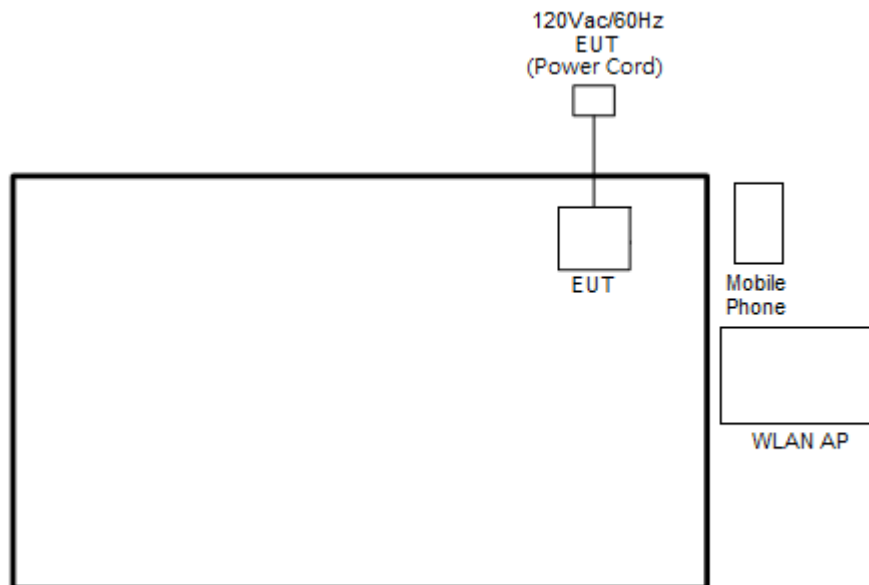
Test Cases	
AC Conducted Emission	Mode 1 : WLAN (5GHz) Link + MP3 + AC Charging

Ch. #		Band I : 5150-5250 MHz	Band I : 5150-5250 MHz
		802.11a	802.11n HT20
L	Low	36	36
M	Middle	44	44
H	High	48	48

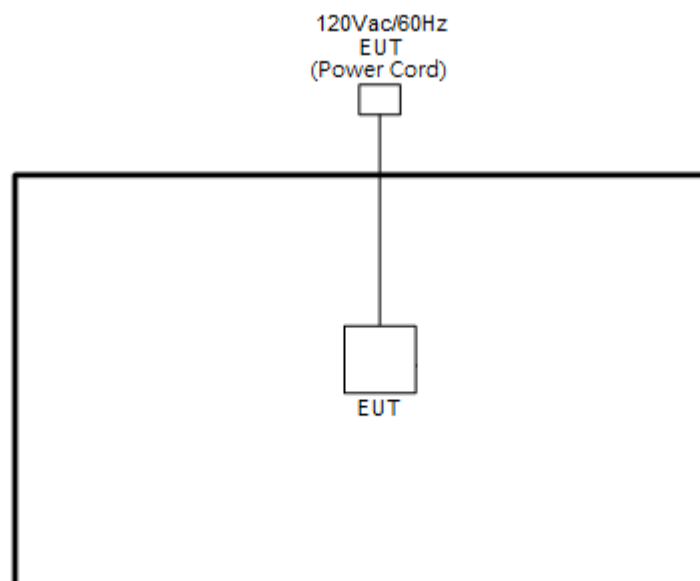
Ch. #		Band I : 5150-5250 MHz	Band I : 5150-5250 MHz
		802.11n HT40	802.11ac VHT80
L	Low	38	-
M	Middle	-	42
H	High	46	-

2.3 Connection Diagram of Test System

<AC Conducted Emission Mode>



<WLAN Tx Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8m
2.	Notebook	DELL	Latitude E3340	FCC DoC/ Contains FCC ID: PD97260NGU	N/A	AC I/P: Unshielded, 1.2m DC O/P: Shielded, 1.8m

2.5 EUT Operation Test Setup

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

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

Offset = RF cable loss + attenuator factor.

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

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

3 Test Result

3.1 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.

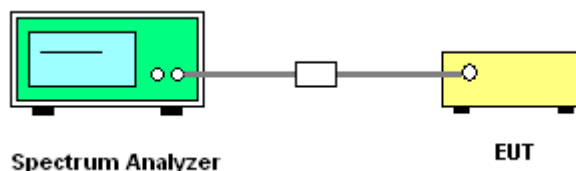
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

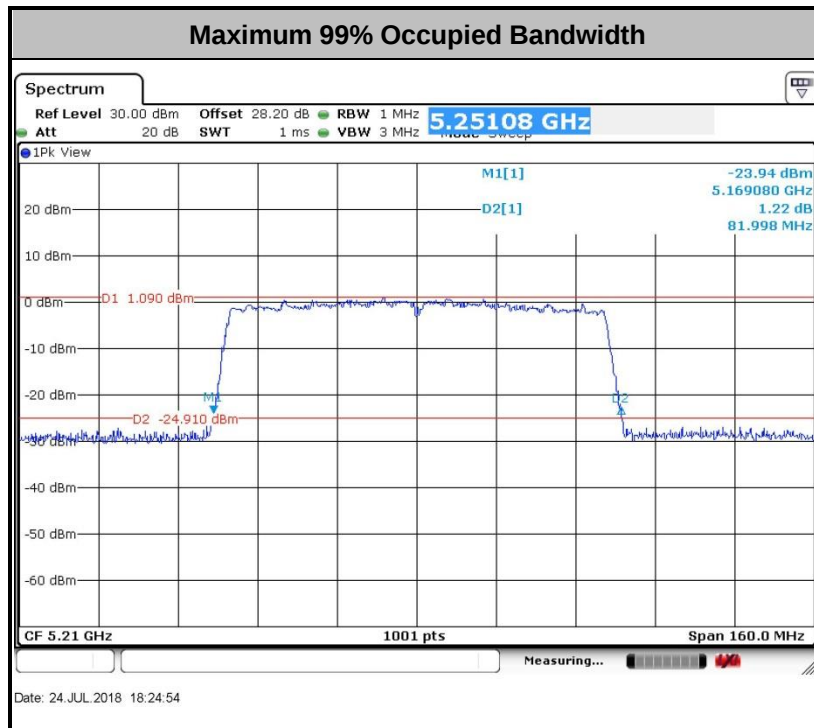
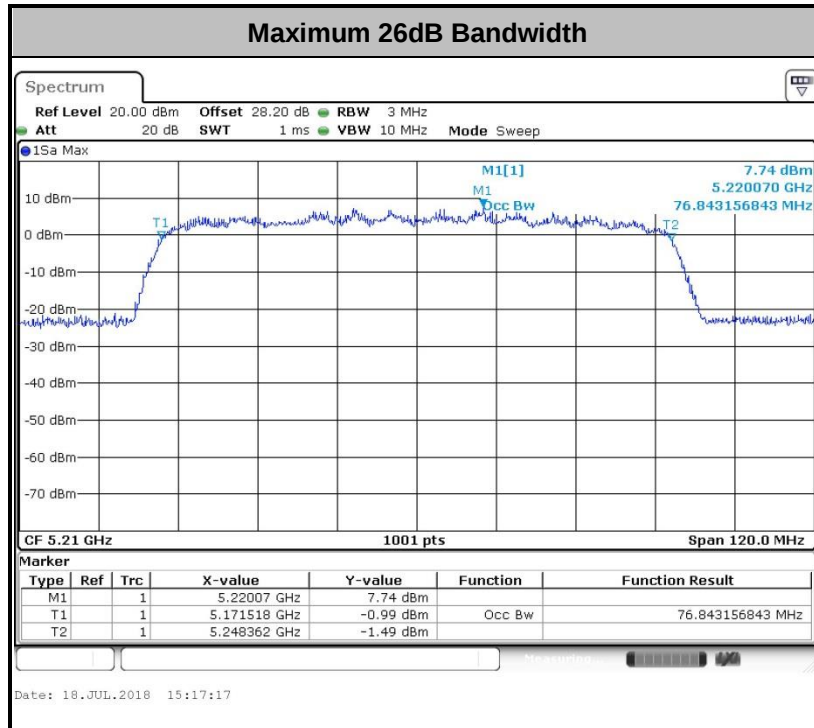
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB 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) $\geq 3 * RBW$.
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.



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.

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

3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

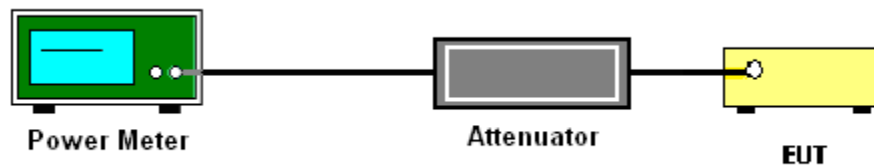
3.2.3 Test Procedures

The testing follows Method PM 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.

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.

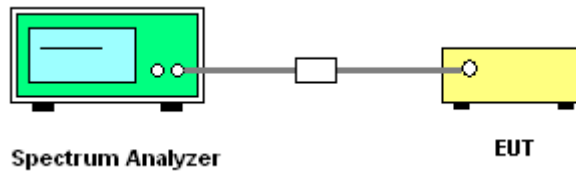
Section F) Maximum power spectral density.

Method SA-2

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

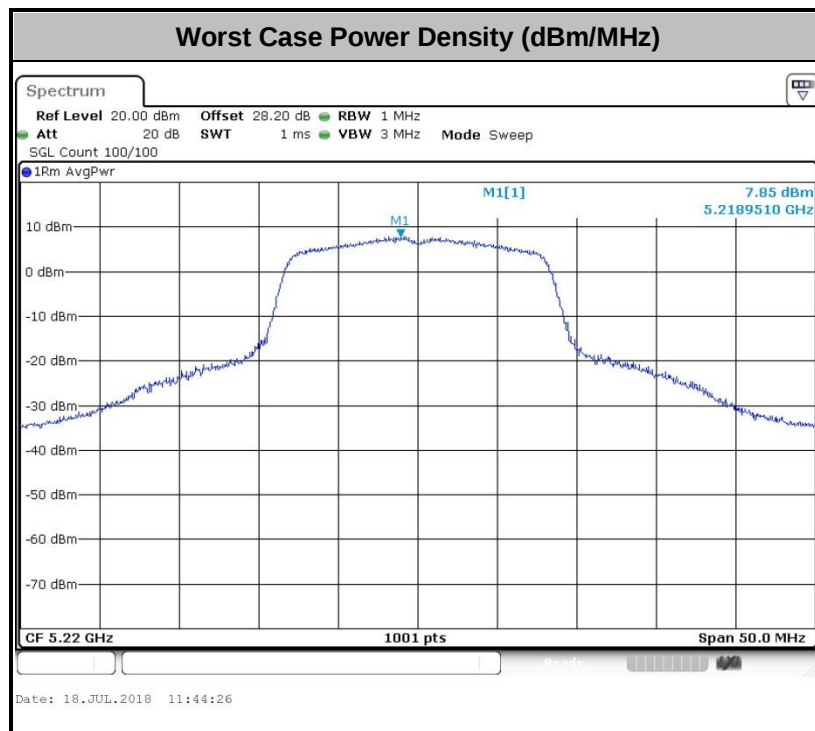
- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW $\geq$ 3 MHz.
- Number of points in sweep $\geq$ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add $10 \log(1/x)$, 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.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



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

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

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

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

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

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

- (i) Section 15.407(b)(1) to (b)(3) specify the unwanted emission limits for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz.³
- (ii) Section 15.407(b)(4) specifies the unwanted emission limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are in terms of a Peak detector. An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the devices using the alternative limit.⁴

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

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

3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

3.4.3 Test Procedures

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

(1) Procedure for Unwanted Emissions Measurements Below 1000MHz

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

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

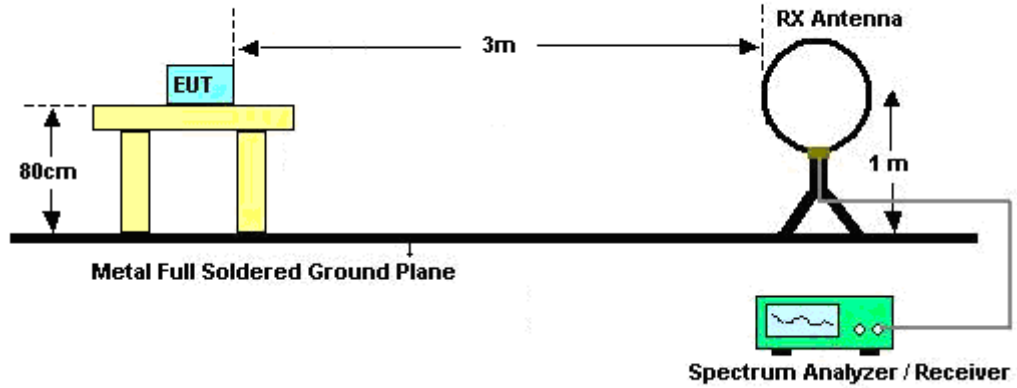
- RBW = 1 MHz
- VBW ≥ 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

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

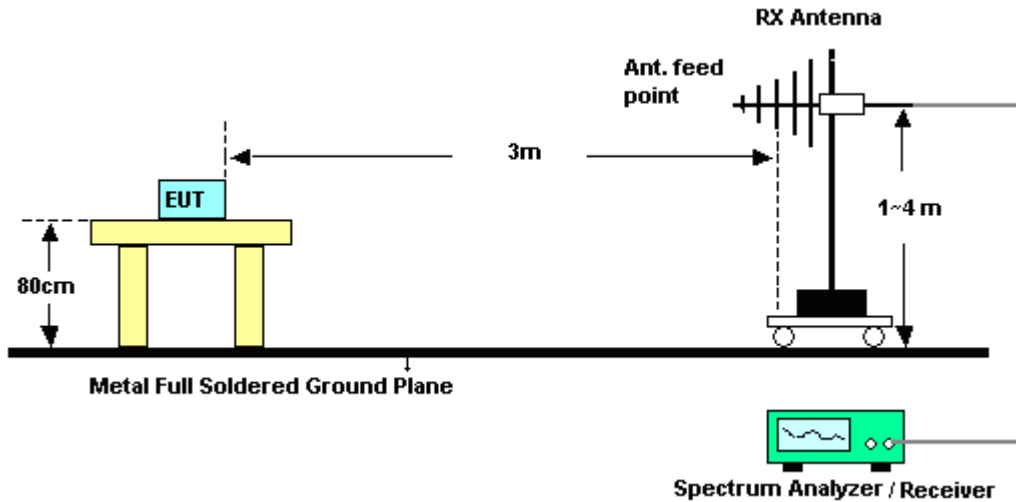
- RBW = 1 MHz
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - $VBW \geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
 3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
 4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
 5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
 6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
 7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

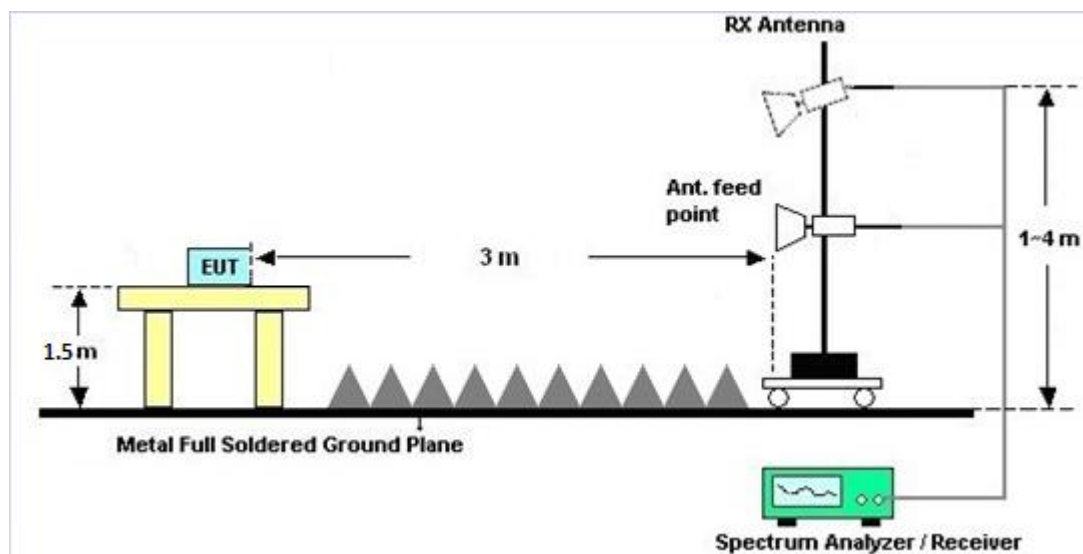
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



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.

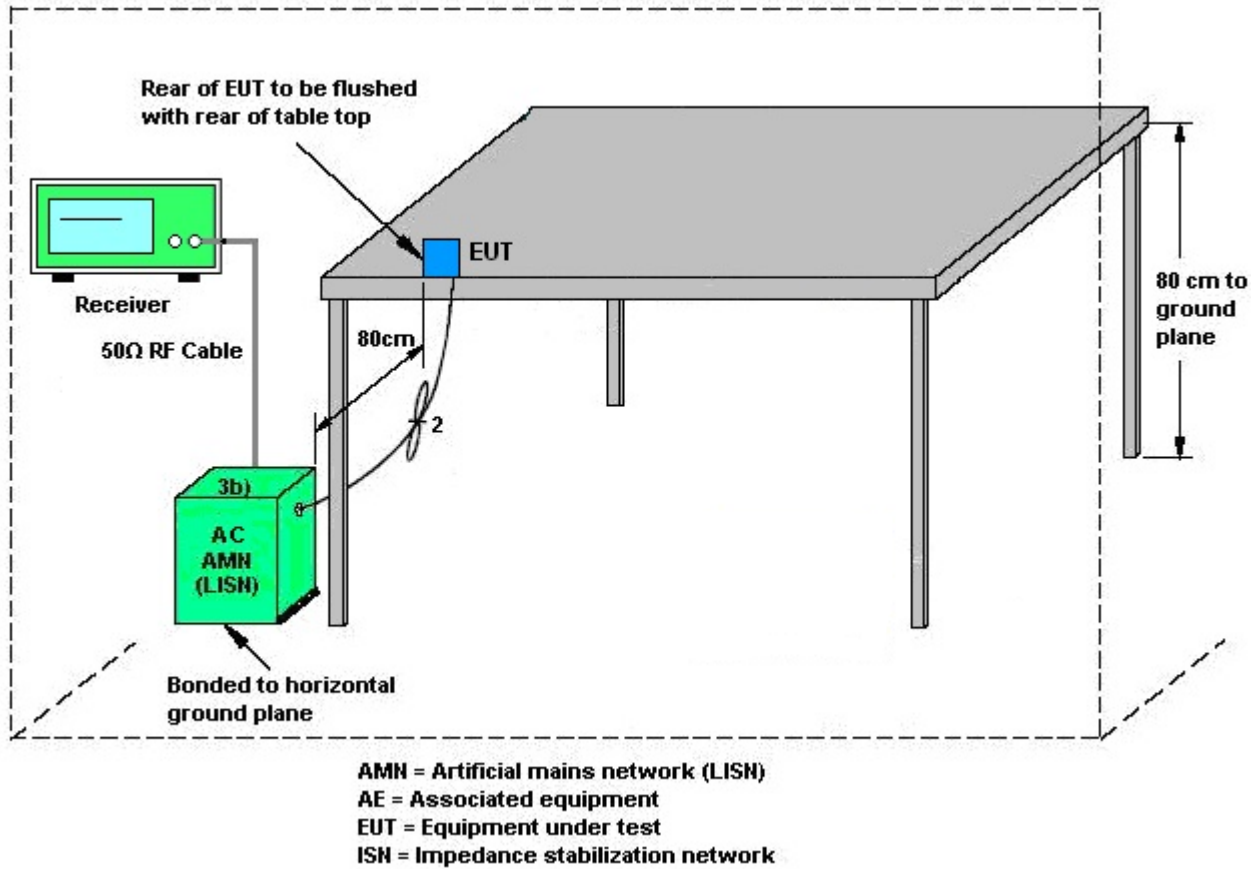
3.5.2 Measuring Instruments

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

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

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

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

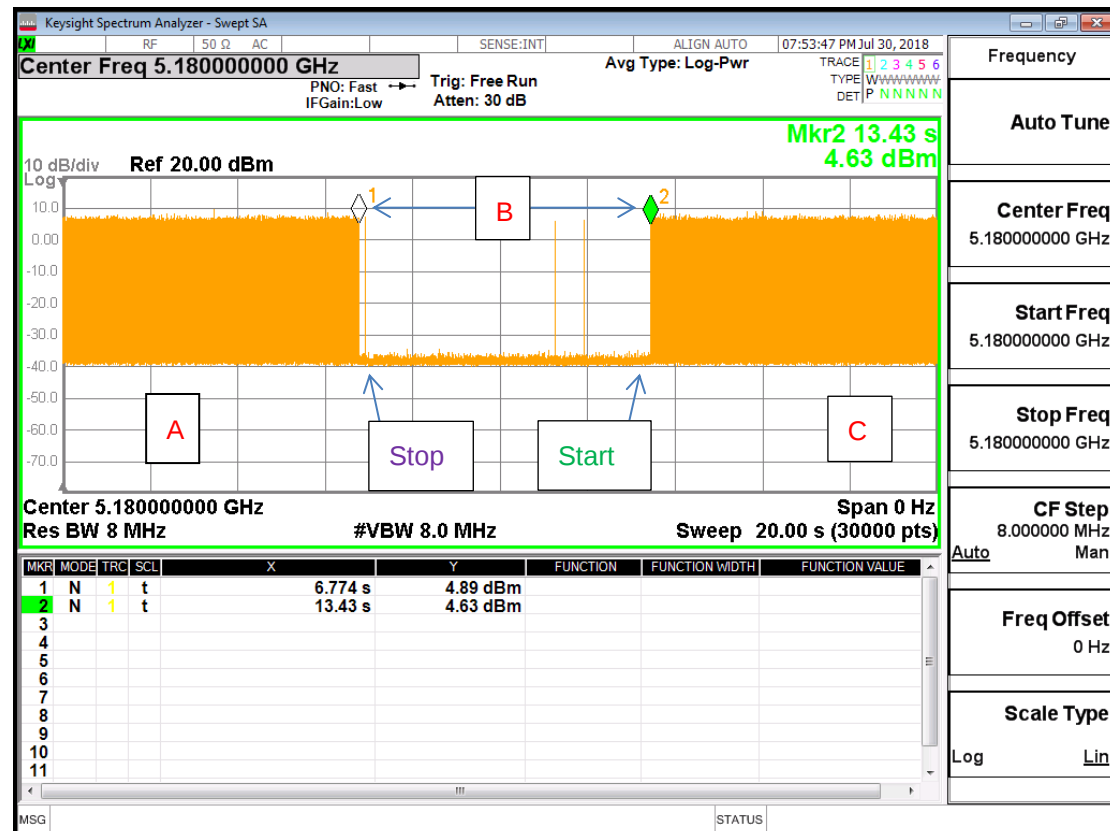
While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving.

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

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



5180MHz



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



3.7 Antenna Requirements

3.7.1 Standard Applicable

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

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

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



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	1240001	N/A	Sep. 07, 2017	Jun. 25, 2018~ Jul. 19, 2018	Sep. 06, 2018	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1207349	300MHz~ 40GHz	Sep. 07, 2017	Jun. 25, 2018~ Jul. 19, 2018	Sep. 06, 2018	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 21, 2017	Jun. 25, 2018~ Jul. 19, 2018	Nov. 20, 2018	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1300484	N/A	Mar. 01, 2018	Jun. 25, 2018~ Jul. 19, 2018	Feb. 28, 2019	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jun. 13, 2018~ Jul. 13, 2018	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	3.6GHz	Dec. 08, 2017	Jun. 13, 2018~ Jul. 13, 2018	Dec. 07, 2018	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 30, 2017	Jun. 13, 2018~ Jul. 13, 2018	Nov. 29, 2018	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Jun. 13, 2018~ Jul. 13, 2018	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 03, 2018	Jun. 13, 2018~ Jul. 13, 2018	Jan. 02, 2019	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 03, 2018	Jun. 13, 2018~ Jul. 13, 2018	Jan. 02, 2019	Conduction (CO05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Nov. 23, 2017	Jul. 18, 2018~ Jul. 19, 2018	Nov. 22, 2018	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-303	1710001800055 0006	1GHz~18GHz	Jul. 10, 2018	Jul. 18, 2018~ Jul. 19, 2018	Jul. 09, 2019	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 26, 2017	Jul. 18, 2018~ Jul. 19, 2018	Dec. 25, 2018	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL6111D&0 0800N1D01N-06	41912&05	30MHz to 1GHz	Jan. 10, 2018	Jul. 18, 2018~ Jul. 19, 2018	Jan. 09, 2019	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A (MXE)	MY54130085	20Hz ~ 8.4GHz	Oct. 31, 2017	Jul. 18, 2018~ Jul. 19, 2018	Oct. 30, 2018	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1620	1G~18GHz	Oct. 03, 2017	Jul. 18, 2018~ Jul. 19, 2018	Oct. 02, 2018	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 21, 2017	Jul. 18, 2018~ Jul. 19, 2018	Aug. 20, 2018	Radiation (03CH15-HY)
Spectrum Analyzer	Agilent	E4446A	MY50180136	3Hz~44GHz	Apr. 25, 2018	Jul. 18, 2018~ Jul. 19, 2018	Apr. 24, 2019	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Jul. 18, 2018~ Jul. 19, 2018	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Jul. 18, 2018~ Jul. 19, 2018	N/A	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 27, 2017	Jul. 18, 2018~ Jul. 19, 2018	Nov. 26, 2018	Radiation (03CH15-HY)
Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 16, 2018	Jul. 18, 2018~ Jul. 19, 2018	Jul. 15, 2019	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24 (K5)	ARD-SPR-000185	N/A	N/A	Jul. 18, 2018~ Jul. 19, 2018	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY36980/4	30M-18G	Apr. 16, 2018	Jul. 18, 2018~ Jul. 19, 2018	Apr. 15, 2019	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9838/4	30M-18GHz	Apr. 16, 2018	Jul. 18, 2018~ Jul. 19, 2018	Apr. 15, 2019	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	MTJ	000000-MT18A-100D3210	30M-18G	Apr. 16, 2018	Jul. 18, 2018~ Jul. 19, 2018	Apr. 15, 2019	Radiation (03CH15-HY)
Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30M~40GHz	Oct. 17, 2017	Jul. 18, 2018~ Jul. 19, 2018	Oct. 16, 2018	Radiation (03CH15-HY)
Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30M~40GHz	Oct. 17, 2017	Jul. 18, 2018~ Jul. 19, 2018	Oct. 16, 2018	Radiation (03CH15-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.70
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.20
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.50
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.20
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Jeremy Lin	Temperature:	21~25	°C
Test Date:	2018/06/25~2018/7/19	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	16.98	17.38	29.17	33.27	-		22.30	22.40	
11a	6Mbps	1	44	5220	17.18	17.33	32.07	33.57	-		22.35	22.39	
11a	6Mbps	1	48	5240	17.03	17.38	28.97	33.37	-		22.31	22.40	
HT20	MCS0	1	36	5180	17.98	18.03	32.07	33.42	-		22.55	22.56	
HT20	MCS0	1	44	5220	18.03	17.98	31.42	32.92	-		22.56	22.55	
HT20	MCS0	1	48	5240	17.93	18.03	32.42	33.32	-		22.54	22.56	
HT40	MCS0	1	38	5190	36.86	36.66	41.99	41.36	-		23.01	23.01	
HT40	MCS0	1	46	5230	37.06	37.06	70.04	69.77	-		23.01	23.01	
VHT80	MCS0	1	42	5210	76.84	76.72	82.00	82.00	-		23.01	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	0.29	0.31	17.77	17.61		24.00	24.00	0.88	4.00	Pass
11a	6Mbps	1	44	5220	0.29	0.31	18.18	18.31		24.00	24.00	0.88	4.00	Pass
11a	6Mbps	1	48	5240	0.29	0.31	18.09	18.29		24.00	24.00	0.88	4.00	Pass
HT20	MCS0	1	36	5180	0.31	0.30	17.14	16.45		24.00	24.00	0.88	4.00	Pass
HT20	MCS0	1	44	5220	0.31	0.30	17.07	17.15		24.00	24.00	0.88	4.00	Pass
HT20	MCS0	1	48	5240	0.31	0.30	17.05	17.21		24.00	24.00	0.88	4.00	Pass
HT40	MCS0	1	38	5190	0.61	0.61	13.66	12.49		24.00	24.00	0.88	4.00	Pass
HT40	MCS0	1	46	5230	0.61	0.61	17.05	17.01		24.00	24.00	0.88	4.00	Pass
VHT20	MCS0	1	36	5180	0.31	0.32	17.11	16.42		24.00	24.00	0.88	4.00	Pass
VHT20	MCS0	1	44	5220	0.31	0.32	17.05	17.12		24.00	24.00	0.88	4.00	Pass
VHT20	MCS0	1	48	5240	0.31	0.32	17.01	17.22		24.00	24.00	0.88	4.00	Pass
VHT40	MCS0	1	38	5190	0.61	0.61	13.63	12.43		24.00	24.00	0.88	4.00	Pass
VHT40	MCS0	1	46	5230	0.61	0.61	17.01	16.94		24.00	24.00	0.88	4.00	Pass
VHT80	MCS0	1	42	5210	1.15	1.16	9.39	10.86		24.00	24.00	0.88	4.00	Pass

TEST RESULTS DATA
Power Spectral Density

FCC Band I														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)		Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	36	5180	0.29	0.31	7.53	7.37		11.00	11.00	0.88	4.00	Pass
11a	6Mbps	1	44	5220	0.29	0.31	8.01	8.16		11.00	11.00	0.88	4.00	Pass
11a	6Mbps	1	48	5240	0.29	0.31	7.82	8.09		11.00	11.00	0.88	4.00	Pass
HT20	MCS0	1	36	5180	0.31	0.30	6.74	6.21		11.00	11.00	0.88	4.00	Pass
HT20	MCS0	1	44	5220	0.31	0.30	6.76	6.57		11.00	11.00	0.88	4.00	Pass
HT20	MCS0	1	48	5240	0.31	0.30	6.81	6.62		11.00	11.00	0.88	4.00	Pass
HT40	MCS0	1	38	5190	0.61	0.61	-0.11	-1.27		11.00	11.00	0.88	4.00	Pass
HT40	MCS0	1	46	5230	0.61	0.61	3.24	3.39		11.00	11.00	0.88	4.00	Pass
VHT80	MCS0	1	42	5210	1.15	1.16	-7.37	-6.41		11.00	11.00	0.88	4.00	Pass



Appendix B. AC Conducted Emission Test Results

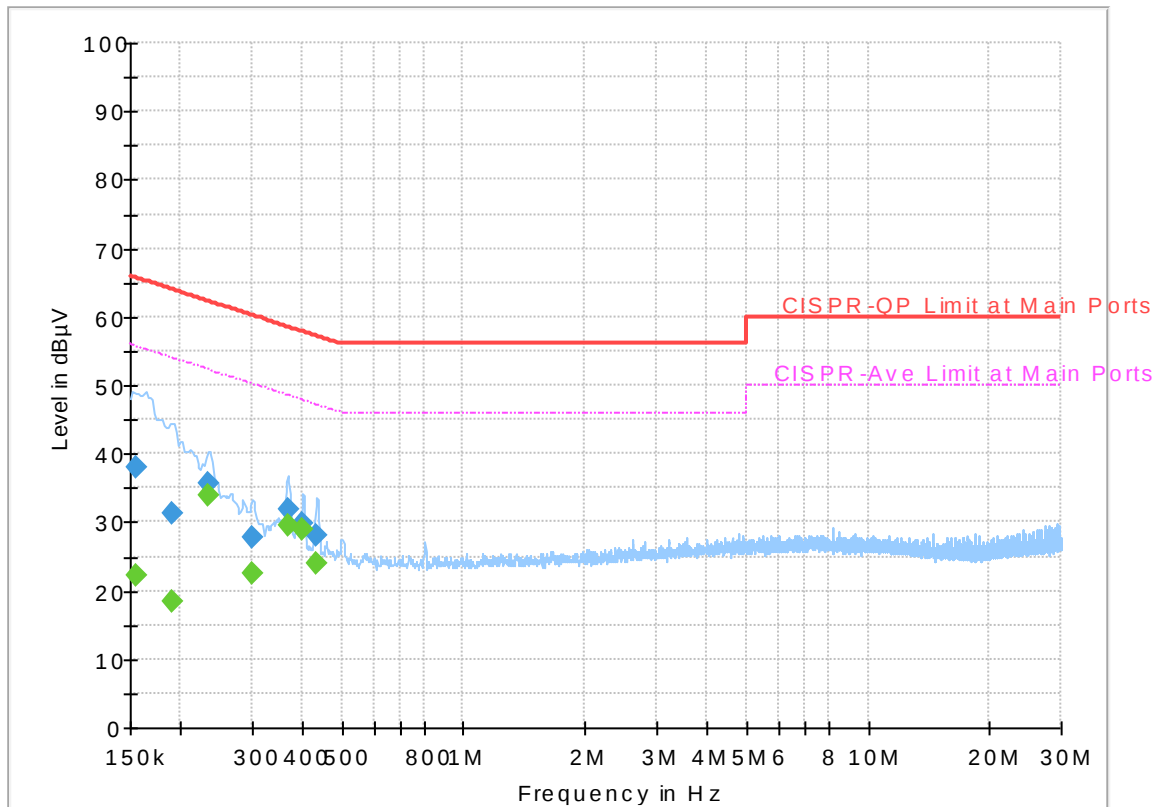
Test Engineer :	Kai-Chun Chu	Temperature :	25~27°C
		Relative Humidity :	50~52%

EUT Information

Report NO : 842408-01

Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



Final_Result

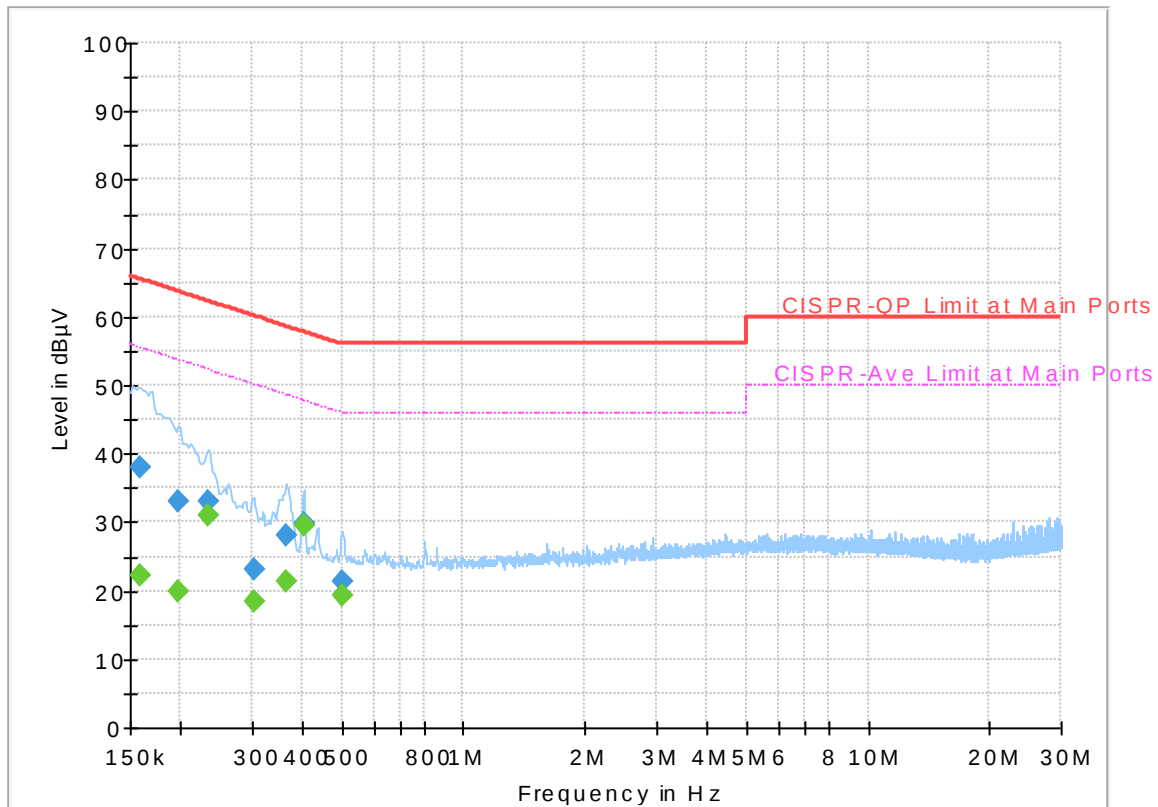
Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154500	---	22.14	55.75	33.61	L1	OFF	19.5
0.154500	38.06	---	65.75	27.69	L1	OFF	19.5
0.190500	---	18.28	54.02	35.74	L1	OFF	19.5
0.190500	31.36	---	64.02	32.66	L1	OFF	19.5
0.233250	---	33.92	52.33	18.41	L1	OFF	19.5
0.233250	35.61	---	62.33	26.72	L1	OFF	19.5
0.300750	---	22.63	50.22	27.59	L1	OFF	19.5
0.300750	27.70	---	60.22	32.52	L1	OFF	19.5
0.368250	---	29.61	48.54	18.93	L1	OFF	19.5
0.368250	31.86	---	58.54	26.68	L1	OFF	19.5
0.399750	---	28.88	47.86	18.98	L1	OFF	19.5
0.399750	29.74	---	57.86	28.12	L1	OFF	19.5
0.433500	---	23.91	47.19	23.28	L1	OFF	19.5
0.433500	28.08	---	57.19	29.11	L1	OFF	19.5

EUT Information

Report NO : 842408-01

Test Voltage : 120Vac/60Hz
Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.159000	---	22.30	55.52	33.22	N	OFF	19.5
0.159000	38.00	---	65.52	27.52	N	OFF	19.5
0.197250	---	19.75	53.73	33.98	N	OFF	19.5
0.197250	33.05	---	63.73	30.68	N	OFF	19.5
0.233250	---	30.97	52.33	21.36	N	OFF	19.5
0.233250	33.06	---	62.33	29.27	N	OFF	19.5
0.303000	---	18.28	50.16	31.88	N	OFF	19.5
0.303000	23.11	---	60.16	37.05	N	OFF	19.5
0.363750	---	21.31	48.64	27.33	N	OFF	19.5
0.363750	28.14	---	58.64	30.50	N	OFF	19.5
0.402000	---	29.48	47.81	18.33	N	OFF	19.5
0.402000	29.90	---	57.81	27.91	N	OFF	19.5
0.501000	---	19.34	46.00	26.66	N	OFF	19.5
0.501000	21.27	---	56.00	34.73	N	OFF	19.5



Appendix C. Radiated Spurious Emission

Test Engineer :	Bill Chang, Kay Hou, Lance Chiang	Temperature :	22~26°C
		Relative Humidity :	52~58%

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5149.5	63.36	-10.64	74	53.04	31.79	8.63	30.1	177	287	P	H
		5150	52.86	-1.14	54	42.53	31.79	8.64	30.1	177	287	A	H
	*	5180	110.52	-	-	100.16	31.81	8.65	30.1	177	287	P	H
	*	5180	101.61	-	-	91.25	31.81	8.65	30.1	177	287	A	H
		5148.46	62.57	-11.43	74	52.25	31.79	8.63	30.1	100	357	P	V
		5149.76	51.25	-2.75	54	40.93	31.79	8.63	30.1	100	357	A	V
	*	5180	109.46	-	-	99.1	31.81	8.65	30.1	100	357	P	V
	*	5180	100.19	-	-	89.83	31.81	8.65	30.1	100	357	A	V
802.11a CH 44 5220MHz		5141.44	53.36	-20.64	74	43.04	31.79	8.63	30.1	180	287	P	H
		5149.5	44.38	-9.62	54	34.06	31.79	8.63	30.1	180	287	A	H
	*	5220	111.49	-	-	101.07	31.83	8.7	30.11	180	287	P	H
	*	5220	102.9	-	-	92.48	31.83	8.7	30.11	180	287	A	H
		5372.08	50.51	-23.49	74	39.66	31.92	9.05	30.12	180	287	P	H
		5354.16	41.96	-12.04	54	31.16	31.91	9.01	30.12	180	287	A	H
		5145.86	52.86	-21.14	74	42.54	31.79	8.63	30.1	146	357	P	V
		5150	43.74	-10.26	54	33.41	31.79	8.64	30.1	146	357	A	V
	*	5220	109.8	-	-	99.38	31.83	8.7	30.11	146	357	P	V
	*	5220	101.68	-	-	91.26	31.83	8.7	30.11	146	357	A	V
		5351.92	50.9	-23.1	74	40.11	31.91	9	30.12	146	357	P	V
		5353.04	42.43	-11.57	54	31.64	31.91	9	30.12	146	357	A	V



802.11a CH 48 5240MHz		5141.96	53.37	-20.63	74	43.05	31.79	8.63	30.1	176	288	P	H
		5150	43.87	-10.13	54	33.54	31.79	8.64	30.1	176	288	A	H
	*	5240	111.22	-	-	100.74	31.84	8.75	30.11	176	288	P	H
	*	5240	102.77	-	-	92.29	31.84	8.75	30.11	176	288	A	H
		5356.68	52.7	-21.3	74	41.9	31.91	9.01	30.12	176	288	P	H
		5352.48	42.24	-11.76	54	31.45	31.91	9	30.12	176	288	A	H
		5120.64	52.1	-21.9	74	41.81	31.77	8.62	30.1	100	342	P	V
		5139.62	42.76	-11.24	54	32.44	31.79	8.63	30.1	100	342	A	V
	*	5240	108.71	-	-	98.23	31.84	8.75	30.11	100	342	P	V
	*	5240	100.89	-	-	90.41	31.84	8.75	30.11	100	342	A	V
		5361.44	50.36	-23.64	74	39.54	31.92	9.02	30.12	100	342	P	V
		5356.96	41.86	-12.14	54	31.06	31.91	9.01	30.12	100	342	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	49.41	-18.79	68.2	57.8	39.63	13.33	61.35	100	0	P	H
		15540	50.77	-23.23	74	58.62	37.92	16.67	62.44	101	350	P	H
		15540	40.52	-13.48	54	48.37	37.92	16.67	62.44	101	350	A	H
		10360	48.65	-19.55	68.2	57.04	39.63	13.33	61.35	100	0	P	V
		15540	54.36	-19.64	74	62.21	37.92	16.67	62.44	366	352	P	V
		15540	44.42	-9.58	54	52.27	37.92	16.67	62.44	366	352	A	V
802.11a CH 44 5220MHz		10440	47.88	-20.32	68.2	56.22	39.77	13.38	61.49	100	0	P	H
		15660	53.07	-20.93	74	60.81	37.63	16.87	62.24	100	342	P	H
		10440	48.53	-19.67	68.2	56.87	39.77	13.38	61.49	100	0	P	V
		15660	57.01	-16.99	74	64.75	37.63	16.87	62.24	371	354	P	V
		15660	45.77	-8.23	54	53.51	37.63	16.87	62.24	371	354	A	V
802.11a CH 48 5240MHz		10480	48.8	-19.4	68.2	57.09	39.87	13.4	61.56	100	0	P	H
		15720	54.07	-19.93	74	61.81	37.46	16.95	62.15	167	332	P	H
		15720	42.01	-11.99	54	49.75	37.46	16.95	62.15	167	332	A	H
		10480	48.45	-19.75	68.2	56.74	39.87	13.4	61.56	100	0	P	V
		15720	56.69	-17.31	74	64.43	37.46	16.95	62.15	364	352	P	V
		15720	44.58	-9.42	54	52.32	37.46	16.95	62.15	364	352	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		5149.5	66.32	-7.68	74	56	31.79	8.63	30.1	173	288	P	H
		5150	52.25	-1.75	54	41.92	31.79	8.64	30.1	173	288	A	H
	*	5180	110.03	-	-	99.67	31.81	8.65	30.1	173	288	P	H
	*	5180	102.09	-	-	91.73	31.81	8.65	30.1	173	288	A	H
		5149.5	61.42	-12.58	74	51.1	31.79	8.63	30.1	142	357	P	V
		5150	51.47	-2.53	54	41.14	31.79	8.64	30.1	142	357	A	V
	*	5180	108.21	-	-	97.85	31.81	8.65	30.1	142	357	P	V
	*	5180	99.24	-	-	88.88	31.81	8.65	30.1	142	357	A	V
802.11n HT20 CH 44 5220MHz		5145.86	55.11	-18.89	74	44.79	31.79	8.63	30.1	118	277	P	H
		5142.22	44.84	-9.16	54	34.52	31.79	8.63	30.1	118	277	A	H
	*	5220	109.84	-	-	99.42	31.83	8.7	30.11	118	277	P	H
	*	5220	101.85	-	-	91.43	31.83	8.7	30.11	118	277	A	H
		5354.44	51.17	-22.83	74	40.37	31.91	9.01	30.12	118	277	P	H
		5350	41.95	-12.05	54	31.16	31.91	9	30.12	118	277	A	H
		5141.18	52.5	-21.5	74	42.18	31.79	8.63	30.1	100	340	P	V
		5148.46	44.14	-9.86	54	33.82	31.79	8.63	30.1	100	340	A	V
	*	5220	109.46	-	-	99.04	31.83	8.7	30.11	100	340	P	V
	*	5220	101.47	-	-	91.05	31.83	8.7	30.11	100	340	A	V
		5356.4	51.52	-22.48	74	40.72	31.91	9.01	30.12	100	340	P	V
		5362	42.37	-11.63	54	31.55	31.92	9.02	30.12	100	340	A	V



802.11n HT20 CH 48 5240MHz		5133.64	54.4	-19.6	74	44.09	31.78	8.63	30.1	100	278	P	H
		5149.24	44.53	-9.47	54	34.21	31.79	8.63	30.1	100	278	A	H
	*	5240	110.29	-	-	99.81	31.84	8.75	30.11	100	278	P	H
	*	5240	103.06	-	-	92.58	31.84	8.75	30.11	100	278	A	H
		5397.28	50.28	-23.72	74	39.37	31.94	9.1	30.13	100	278	P	H
		5352.76	42.72	-11.28	54	31.93	31.91	9	30.12	100	278	A	H
		5135.98	52.46	-21.54	74	42.15	31.78	8.63	30.1	147	341	P	V
		5149.5	43.33	-10.67	54	33.01	31.79	8.63	30.1	147	341	A	V
	*	5240	109.29	-	-	98.81	31.84	8.75	30.11	147	341	P	V
	*	5240	102.2	-	-	91.72	31.84	8.75	30.11	147	341	A	V
		5352.2	51.63	-22.37	74	40.84	31.91	9	30.12	147	341	P	V
		5351.36	42.93	-11.07	54	32.14	31.91	9	30.12	147	341	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		10360	48.37	-19.83	68.2	56.76	39.63	13.33	61.35	100	0	P	H
		15540	49.61	-24.39	74	57.46	37.92	16.67	62.44	100	0	P	H
		10360	48.55	-19.65	68.2	56.94	39.63	13.33	61.35	100	0	P	V
		15540	53.77	-20.23	74	61.62	37.92	16.67	62.44	399	353	P	V
		15540	43.25	-10.75	54	51.1	37.92	16.67	62.44	399	353	A	V
802.11n HT20 CH 44 5220MHz		10440	47.47	-20.73	68.2	55.81	39.77	13.38	61.49	100	0	P	H
		15660	51.23	-22.77	74	58.97	37.63	16.87	62.24	103	343	P	H
		15660	40.78	-13.22	54	48.52	37.63	16.87	62.24	103	343	A	H
		10440	46.54	-21.66	68.2	54.88	39.77	13.38	61.49	100	0	P	V
		15660	54.42	-19.58	74	62.16	37.63	16.87	62.24	396	350	P	V
		15660	43.9	-10.1	54	51.64	37.63	16.87	62.24	396	350	A	V
802.11n HT20 CH 48 5240MHz		10480	48.34	-19.86	68.2	56.63	39.87	13.4	61.56	100	0	P	H
		15720	54.06	-19.94	74	61.8	37.46	16.95	62.15	119	303	P	H
		15720	42.05	-11.95	54	49.79	37.46	16.95	62.15	119	303	A	H
		10480	47.35	-20.85	68.2	55.64	39.87	13.4	61.56	100	0	P	V
		15720	56.2	-17.8	74	63.94	37.46	16.95	62.15	398	350	P	V
		15720	44.48	-9.52	54	52.22	37.46	16.95	62.15	398	350	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11n 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 38 5190MHz		5149.76	68.27	-5.73	74	57.95	31.79	8.63	30.1	168	279	P	H
		5149.5	53.37	-0.63	54	43.05	31.79	8.63	30.1	168	279	A	H
	*	5190	103.86	-	-	93.5	31.81	8.65	30.1	168	279	P	H
	*	5190	96.78	-	-	86.42	31.81	8.65	30.1	168	279	A	H
		5438.16	49.81	-24.19	74	38.86	31.96	9.12	30.13	168	279	P	H
		5363.68	42.34	-11.66	54	31.51	31.92	9.03	30.12	168	279	A	H
		5149.5	68.12	-5.88	74	57.8	31.79	8.63	30.1	139	339	P	V
		5149.5	52.63	-1.37	54	42.31	31.79	8.63	30.1	139	339	A	V
	*	5190	102.73	-	-	92.37	31.81	8.65	30.1	139	339	P	V
	*	5190	95.66	-	-	85.3	31.81	8.65	30.1	139	339	A	V
		5395.6	50.66	-23.34	74	39.75	31.94	9.1	30.13	139	339	P	V
		5361.72	42.41	-11.59	54	31.59	31.92	9.02	30.12	139	339	A	V
802.11n HT40 CH 46 5230MHz		5146.9	58.05	-15.95	74	47.73	31.79	8.63	30.1	120	280	P	H
		5144.82	47.81	-6.19	54	37.49	31.79	8.63	30.1	120	280	A	H
	*	5230	107.41	-	-	96.95	31.84	8.73	30.11	120	280	P	H
	*	5230	100.07	-	-	89.61	31.84	8.73	30.11	120	280	A	H
		5355.56	52.42	-21.58	74	41.62	31.91	9.01	30.12	120	280	P	H
		5351.08	42.8	-11.2	54	32.01	31.91	9	30.12	120	280	A	H
		5146.64	56.46	-17.54	74	46.14	31.79	8.63	30.1	100	343	P	V
		5149.24	45.9	-8.1	54	35.58	31.79	8.63	30.1	100	343	A	V
	*	5230	105.22	-	-	94.76	31.84	8.73	30.11	100	343	P	V
	*	5230	98.04	-	-	87.58	31.84	8.73	30.11	100	343	A	V
		5350.24	51.76	-22.24	74	40.97	31.91	9	30.12	100	343	P	V
		5351.08	42.49	-11.51	54	31.7	31.91	9	30.12	100	343	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		10380	45.81	-22.39	68.2	54.18	39.67	13.34	61.38	100	0	P	H
		15570	46.17	-27.83	74	54	37.83	16.73	62.39	100	0	P	H
		10380	45.87	-22.33	68.2	54.24	39.67	13.34	61.38	100	0	P	V
		15570	46.28	-27.72	74	54.11	37.83	16.73	62.39	100	0	P	V
802.11n HT40 CH 46 5230MHz		10460	46.23	-21.97	68.2	54.57	39.8	13.39	61.53	100	0	P	H
		15690	48.48	-25.52	74	56.22	37.54	16.92	62.2	100	0	P	H
		10460	46.45	-21.75	68.2	54.79	39.8	13.39	61.53	100	0	P	V
		15690	52.16	-21.84	74	59.9	37.54	16.92	62.2	398	351	P	V
		15690	42.22	-11.78	54	49.96	37.54	16.92	62.2	398	351	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		5148.72	65.25	-8.75	74	54.93	31.79	8.63	30.1	100	280	P	H
		5150	52.71	-1.29	54	42.38	31.79	8.64	30.1	100	280	A	H
	*	5210	96.97	-	-	86.57	31.83	8.68	30.11	100	280	P	H
	*	5210	90.67	-	-	80.27	31.83	8.68	30.11	100	280	A	H
		5440.68	52.09	-21.91	74	41.14	31.96	9.12	30.13	100	280	P	H
		5383	43.64	-10.36	54	32.77	31.93	9.07	30.13	100	280	A	H
		5148.98	63.61	-10.39	74	53.29	31.79	8.63	30.1	146	339	P	V
		5150	51.6	-2.4	54	41.27	31.79	8.64	30.1	146	339	A	V
	*	5210	96.01	-	-	85.61	31.83	8.68	30.11	146	339	P	V
	*	5210	89.91	-	-	79.51	31.83	8.68	30.11	146	339	A	V
		5448.8	51.9	-22.1	74	40.94	31.97	9.12	30.13	146	339	P	V
		5387.48	44.03	-9.97	54	33.15	31.93	9.08	30.13	146	339	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 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10420	44.52	-23.68	68.2	52.89	39.73	13.36	61.46	100	0	P	H
VHT80		15630	46.58	-27.42	74	54.38	37.67	16.82	62.29	100	0	P	H
CH 42		10420	45.35	-22.85	68.2	53.72	39.73	13.36	61.46	100	0	P	V
5210MHz		15630	45.51	-28.49	74	53.31	37.67	16.82	62.29	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Emission below 1GHz****WIFI 802.11n HT40 (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)
802.11n HT40 LF		34.86	20.94	-19.06	40	30.69	22.16	0.72	32.64			P	H
		102.9	28.98	-14.52	43.5	43.92	16.32	1.23	32.57			P	H
		220.62	22.5	-23.5	46	36.77	16.37	1.78	32.54			P	H
		516.3	26.07	-19.93	46	31.67	24.14	2.68	32.55			P	H
		836.9	33.2	-12.8	46	32.47	29.16	3.42	32.03			P	H
		894.3	35.23	-10.77	46	33.91	29.33	3.51	31.73	100	0	P	H
		32.43	24.14	-15.86	40	32.85	23.25	0.69	32.65			P	V
		76.71	22.47	-17.53	40	40.76	13.15	1.06	32.59			P	V
		103.71	27.03	-16.47	43.5	41.89	16.39	1.24	32.57			P	V
		565.3	27.67	-18.33	46	31.02	26.23	2.81	32.56			P	V
		719.3	29.67	-16.33	46	31.27	27.57	3.15	32.44			P	V
		836.9	35.34	-10.66	46	34.61	29.16	3.42	32.03	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



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.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5150	66.97	-7.03	74	56.64	31.79	8.64	30.1	396	280	P	H
		5150	52.71	-1.29	54	42.38	31.79	8.64	30.1	396	280	A	H
	*	5180	112.29	-	-	101.93	31.81	8.65	30.1	396	280	P	H
	*	5180	105.12	-	-	94.76	31.81	8.65	30.1	396	280	A	H
		5150	62.42	-11.58	74	52.09	31.79	8.64	30.1	200	133	P	V
		5150	48.47	-5.53	54	38.14	31.79	8.64	30.1	200	133	A	V
	*	5180	107.72	-	-	97.36	31.81	8.65	30.1	200	133	P	V
	*	5180	100.53	-	-	90.17	31.81	8.65	30.1	200	133	A	V
802.11a CH 44 5220MHz		5137.8	55.28	-18.72	74	44.97	31.78	8.63	30.1	351	275	P	H
		5147.16	45.55	-8.45	54	35.23	31.79	8.63	30.1	351	275	A	H
	*	5220	113.34	-	-	102.92	31.83	8.7	30.11	351	275	P	H
	*	5220	106.18	-	-	95.76	31.83	8.7	30.11	351	275	A	H
		5358.08	53.04	-20.96	74	42.23	31.91	9.02	30.12	351	275	P	H
		5353.6	43.44	-10.56	54	32.64	31.91	9.01	30.12	351	275	A	H
		5040.82	52.38	-21.62	74	42.15	31.73	8.58	30.08	192	132	P	V
		5147.68	42.91	-11.09	54	32.59	31.79	8.63	30.1	192	132	A	V
	*	5220	107.23	-	-	96.81	31.83	8.7	30.11	192	132	P	V
	*	5220	100.11	-	-	89.69	31.83	8.7	30.11	192	132	A	V
		5355.28	50.6	-23.4	74	39.8	31.91	9.01	30.12	192	132	P	V
		5351.36	41.63	-12.37	54	30.84	31.91	9	30.12	192	132	A	V



802.11a CH 48 5240MHz		5131.04	54.8	-19.2	74	44.49	31.78	8.63	30.1	350	281	P	H
		5148.72	44.83	-9.17	54	34.51	31.79	8.63	30.1	350	281	A	H
	*	5240	113.49	-	-	103.01	31.84	8.75	30.11	350	281	P	H
	*	5240	106.35	-	-	95.87	31.84	8.75	30.11	350	281	A	H
		5361.44	53	-21	74	42.18	31.92	9.02	30.12	350	281	P	H
		5351.64	44.17	-9.83	54	33.38	31.91	9	30.12	350	281	A	H
		5140.4	51.8	-22.2	74	41.48	31.79	8.63	30.1	207	133	P	V
		5150	42.38	-11.62	54	32.05	31.79	8.64	30.1	207	133	A	V
	*	5240	107.58	-	-	97.1	31.84	8.75	30.11	207	133	P	V
	*	5240	100.34	-	-	89.86	31.84	8.75	30.11	207	133	A	V
		5366.2	51.05	-22.95	74	40.22	31.92	9.03	30.12	207	133	P	V
		5350.52	41.74	-12.26	54	30.95	31.91	9	30.12	207	133	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. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		10360	48.17	-20.03	68.2	56.56	39.63	13.33	61.35	100	0	P	H
		15540	51.21	-22.79	74	59.06	37.92	16.67	62.44	121	350	P	H
		15540	43.21	-10.79	54	51.06	37.92	16.67	62.44	121	350	A	H
		10360	48.55	-19.65	68.2	56.94	39.63	13.33	61.35	100	0	P	V
		15540	56.11	-17.89	74	63.96	37.92	16.67	62.44	372	351	P	V
		15540	45.34	-8.66	54	53.19	37.92	16.67	62.44	372	351	A	V
802.11a CH 44 5220MHz		10443	48.04	-20.16	68.2	56.38	39.77	13.39	61.5	100	0	P	H
		15660	51.9	-22.1	74	59.64	37.63	16.87	62.24	123	333	P	H
		15660	43.32	-10.68	54	51.06	37.63	16.87	62.24	123	333	A	H
		10440	46.47	-21.73	68.2	54.81	39.77	13.38	61.49	100	0	P	V
		15660	56.94	-17.06	74	64.68	37.63	16.87	62.24	268	350	P	V
		15660	46.17	-7.83	54	53.91	37.63	16.87	62.24	268	350	A	V
802.11a CH 48 5240MHz		10480	48.79	-19.41	68.2	57.08	39.87	13.4	61.56	100	0	P	H
		15720	57.4	-16.6	74	65.14	37.46	16.95	62.15	400	333	P	H
		15720	46.65	-7.35	54	54.39	37.46	16.95	62.15	400	333	A	H
		10480	48.47	-19.73	68.2	56.76	39.87	13.4	61.56	100	0	P	V
		15720	58.51	-15.49	74	66.25	37.46	16.95	62.15	400	351	P	V
		15720	47.48	-6.52	54	55.22	37.46	16.95	62.15	400	351	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		5149.76	66.48	-7.52	74	56.16	31.79	8.63	30.1	358	277	P	H
		5150	52.6	-1.4	54	42.27	31.79	8.64	30.1	358	277	A	H
	*	5180	112.09	-	-	101.73	31.81	8.65	30.1	358	277	P	H
	*	5180	104.9	-	-	94.54	31.81	8.65	30.1	358	277	A	H
		5150	62.19	-11.81	74	51.86	31.79	8.64	30.1	201	132	P	V
		5150	47.53	-6.47	54	37.2	31.79	8.64	30.1	201	132	A	V
	*	5180	107.08	-	-	96.72	31.81	8.65	30.1	201	132	P	V
	*	5180	99.9	-	-	89.54	31.81	8.65	30.1	201	132	A	V
802.11n HT20 CH 44 5220MHz		5148.2	54.89	-19.11	74	44.57	31.79	8.63	30.1	351	277	P	H
		5149.5	45.67	-8.33	54	35.35	31.79	8.63	30.1	351	277	A	H
	*	5220	113.78	-	-	103.36	31.83	8.7	30.11	351	277	P	H
	*	5220	106.6	-	-	96.18	31.83	8.7	30.11	351	277	A	H
		5353.88	52.63	-21.37	74	41.83	31.91	9.01	30.12	351	277	P	H
		5350	43.71	-10.29	54	32.92	31.91	9	30.12	351	277	A	H
		5147.16	52.2	-21.8	74	41.88	31.79	8.63	30.1	191	131	P	V
		5148.2	42.84	-11.16	54	32.52	31.79	8.63	30.1	191	131	A	V
	*	5220	106.85	-	-	96.43	31.83	8.7	30.11	191	131	P	V
	*	5220	99.86	-	-	89.44	31.83	8.7	30.11	191	131	A	V
		5361.72	50.88	-23.12	74	40.06	31.92	9.02	30.12	191	131	P	V
		5353.32	42.08	-11.92	54	31.29	31.91	9	30.12	191	131	A	V



802.11n HT20 CH 48 5240MHz		5144.56	54.84	-19.16	74	44.52	31.79	8.63	30.1	352	276	P	H
		5147.94	44.8	-9.2	54	34.48	31.79	8.63	30.1	352	276	A	H
	*	5240	113.65	-	-	103.17	31.84	8.75	30.11	352	276	P	H
	*	5240	106.39	-	-	95.91	31.84	8.75	30.11	352	276	A	H
		5352.76	52.41	-21.59	74	41.62	31.91	9	30.12	352	276	P	H
		5351.36	44.19	-9.81	54	33.4	31.91	9	30.12	352	276	A	H
		5111.28	52.32	-21.68	74	42.02	31.77	8.62	30.09	205	133	P	V
		5147.16	42.55	-11.45	54	32.23	31.79	8.63	30.1	205	133	A	V
	*	5240	107.5	-	-	97.02	31.84	8.75	30.11	205	133	P	V
	*	5240	100.39	-	-	89.91	31.84	8.75	30.11	205	133	A	V
		5384.12	50.48	-23.52	74	39.61	31.93	9.07	30.13	205	133	P	V
		5359.2	41.85	-12.15	54	31.04	31.91	9.02	30.12	205	133	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		10360	48.4	-19.8	68.2	56.79	39.63	13.33	61.35	100	0	P	H
		15540	48.56	-25.44	74	56.41	37.92	16.67	62.44	100	0	P	H
		10360	46.98	-21.22	68.2	55.37	39.63	13.33	61.35	100	0	P	V
		15540	54.95	-19.05	74	62.8	37.92	16.67	62.44	400	355	P	V
		15540	42.38	-11.62	54	50.23	37.92	16.67	62.44	400	355	A	V
802.11n HT20 CH 44 5220MHz		10440	47.09	-21.11	68.2	55.43	39.77	13.38	61.49	100	0	P	H
		15660	56.13	-17.87	74	63.87	37.63	16.87	62.24	400	332	P	H
		15660	43.59	-10.41	54	51.33	37.63	16.87	62.24	400	332	A	H
		10440	46.13	-22.07	68.2	54.47	39.77	13.38	61.49	100	0	P	V
		15660	56.24	-17.76	74	63.98	37.63	16.87	62.24	400	347	P	V
		15660	43.88	-10.12	54	51.62	37.63	16.87	62.24	400	347	A	V
802.11n HT20 CH 48 5240MHz		10480	47.23	-20.97	68.2	55.52	39.87	13.4	61.56	100	0	P	H
		15720	54.72	-19.28	74	62.46	37.46	16.95	62.15	399	331	P	H
		15720	44.44	-9.56	54	52.18	37.46	16.95	62.15	399	331	A	H
		10480	46.51	-21.69	68.2	54.84	39.83	13.4	61.56	100	0	P	V
		15720	57.36	-16.64	74	65.1	37.46	16.95	62.15	367	350	P	V
		15720	45.62	-8.38	54	53.36	37.46	16.95	62.15	367	350	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5149.76	66.23	-7.77	74	55.91	31.79	8.63	30.1	356	276	P	H
		5149.5	52.1	-1.9	54	41.78	31.79	8.63	30.1	356	276	A	H
	*	5190	104.87	-	-	94.51	31.81	8.65	30.1	356	276	P	H
	*	5190	97.76	-	-	87.4	31.81	8.65	30.1	356	276	A	H
		5358.64	51	-23	74	40.19	31.91	9.02	30.12	356	276	P	H
		5395.32	42.01	-11.99	54	31.1	31.94	9.1	30.13	356	276	A	H
		5149.24	58.28	-15.72	74	47.96	31.79	8.63	30.1	224	132	P	V
		5149.76	47.45	-6.55	54	37.13	31.79	8.63	30.1	224	132	A	V
	*	5190	100.28	-	-	89.92	31.81	8.65	30.1	224	132	P	V
	*	5190	93.14	-	-	82.78	31.81	8.65	30.1	224	132	A	V
		5360.04	50.35	-23.65	74	39.54	31.91	9.02	30.12	224	132	P	V
		5428.08	41.85	-12.15	54	30.91	31.95	9.12	30.13	224	132	A	V
802.11n HT40 CH 46 5230MHz		5130.78	56.92	-17.08	74	46.61	31.78	8.63	30.1	349	277	P	H
		5149.76	48.18	-5.82	54	37.86	31.79	8.63	30.1	349	277	A	H
	*	5230	110.5	-	-	100.04	31.84	8.73	30.11	349	277	P	H
	*	5230	103.35	-	-	92.89	31.84	8.73	30.11	349	277	A	H
		5352.48	52.5	-21.5	74	41.71	31.91	9	30.12	349	277	P	H
		5363.96	44.47	-9.53	54	33.64	31.92	9.03	30.12	349	277	A	H
		5150	54.26	-19.74	74	43.93	31.79	8.64	30.1	207	132	P	V
		5149.24	45.06	-8.94	54	34.74	31.79	8.63	30.1	207	132	A	V
	*	5230	105.07	-	-	94.61	31.84	8.73	30.11	207	132	P	V
	*	5230	97.96	-	-	87.5	31.84	8.73	30.11	207	132	A	V
		5391.96	51.02	-22.98	74	40.13	31.93	9.09	30.13	207	132	P	V
		5360.6	42.38	-11.62	54	31.56	31.92	9.02	30.12	207	132	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		10380	45.35	-22.85	68.2	53.72	39.67	13.34	61.38	100	0	P	H
		15570	44.51	-29.49	74	52.34	37.83	16.73	62.39	100	0	P	H
		10380	45.14	-23.06	68.2	53.51	39.67	13.34	61.38	100	0	P	V
		15570	45.09	-28.91	74	52.92	37.83	16.73	62.39	100	0	P	V
802.11n HT40 CH 46 5230MHz		10460	46.02	-22.18	68.2	54.36	39.8	13.39	61.53	100	0	P	H
		15690	46.3	-27.7	74	54.04	37.54	16.92	62.2	100	0	P	H
		10460	46.24	-21.96	68.2	54.58	39.8	13.39	61.53	100	0	P	V
		15690	48.88	-25.12	74	56.62	37.54	16.92	62.2	100	0	P	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. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		5148.2	58.78	-15.22	74	48.46	31.79	8.63	30.1	352	277	P	H
		5148.46	51.97	-2.03	54	41.65	31.79	8.63	30.1	352	277	A	H
	*	5210	101.43	-	-	91.03	31.83	8.68	30.11	352	277	P	H
	*	5210	94.21	-	-	83.81	31.83	8.68	30.11	352	277	A	H
		5458.32	50.68	-23.32	74	39.73	31.97	9.12	30.14	352	277	P	H
		5350	43.95	-10.05	54	33.16	31.91	9	30.12	352	277	A	H
		5143	55.51	-18.49	74	45.19	31.79	8.63	30.1	195	135	P	V
		5146.38	48.7	-5.3	54	38.38	31.79	8.63	30.1	195	135	A	V
	*	5210	96.13	-	-	85.73	31.83	8.68	30.11	195	135	P	V
	*	5210	88.64	-	-	78.24	31.83	8.68	30.11	195	135	A	V
		5402.04	49.74	-24.26	74	38.82	31.94	9.11	30.13	195	135	P	V
		5416.04	43	-11	54	32.07	31.95	9.11	30.13	195	135	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 (Harmonic @ 3m)**

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10420	45.51	-22.69	68.2	53.88	39.73	13.36	61.46	100	0	P	H
VHT80		15630	46.2	-27.8	74	54	37.67	16.82	62.29	100	0	P	H
CH 42		10420	45.13	-23.07	68.2	53.5	39.73	13.36	61.46	100	0	P	V
5210MHz		15630	45.74	-28.26	74	53.54	37.67	16.82	62.29	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

WIFI 802.11n HT20 (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.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 LF		104.79	28.65	-14.85	43.5	43.42	16.48	1.24	32.57			P	H
		170.13	19.17	-24.33	43.5	34.2	15.75	1.57	32.55			P	H
		222.51	22.37	-23.63	46	36.4	16.6	1.79	32.54			P	H
		647.9	28.47	-17.53	46	31.31	26.55	2.98	32.53			P	H
		787.9	30.52	-15.48	46	31.21	28.09	3.3	32.25			P	H
		958.7	33.5	-12.5	46	29.63	31.15	3.66	31.2	100	0	P	H
		30.81	23.56	-16.44	40	31.55	23.98	0.68	32.65			P	V
		76.71	21.96	-18.04	40	40.25	13.15	1.06	32.59			P	V
		101.82	27.23	-16.27	43.5	42.26	16.23	1.23	32.57			P	V
		719.3	30.06	-15.94	46	31.66	27.57	3.15	32.44			P	V
		874.7	32.55	-13.45	46	31.58	29.11	3.48	31.83			P	V
		934.2	34.16	-11.84	46	31.19	30.55	3.6	31.41	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Note symbol

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

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

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

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

For Peak Limit @ 2390MHz:

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

For Average Limit @ 2390MHz:

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

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



Appendix D. Radiated Spurious Emission

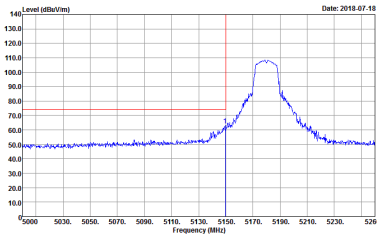
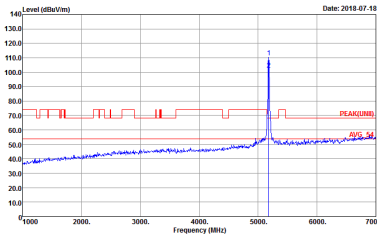
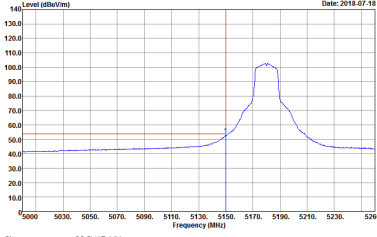
Test Engineer :	Bill Chang, Kay Hou, Lance Chiang	Temperature :	22~26°C
		Relative Humidity :	52~58%

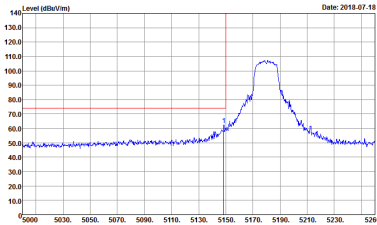
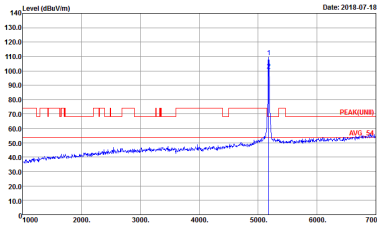
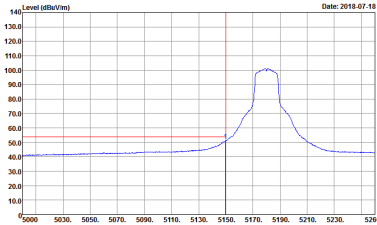
Note symbol

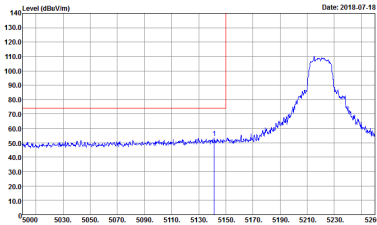
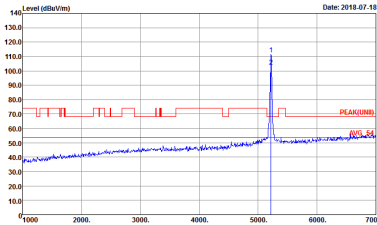
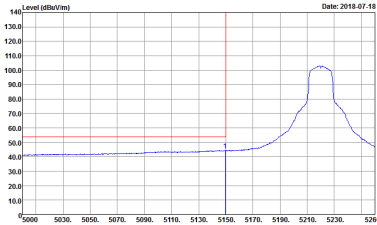
-L	Low channel location
-R	High channel location



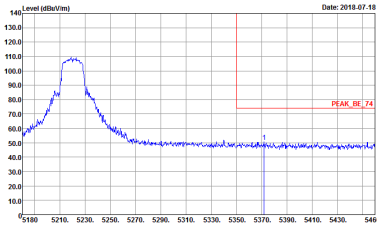
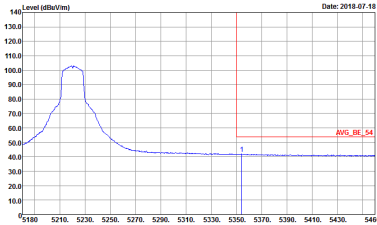
Band 1 - 5150~5250MHz
WIFI 802.11a (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto	Left blank

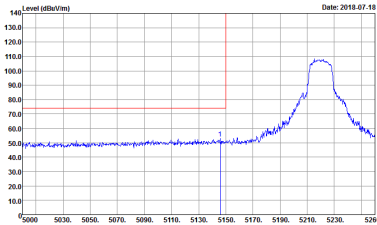
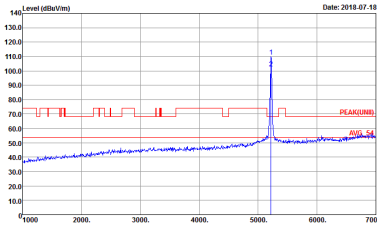
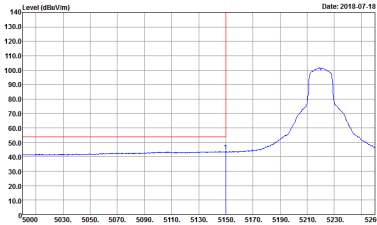
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
1	Vertical	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

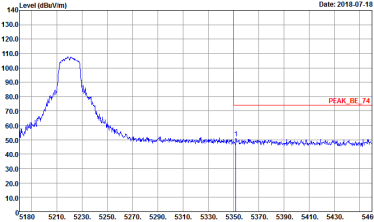
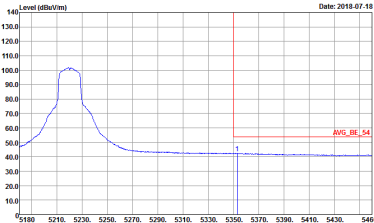


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

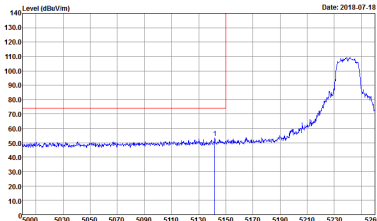
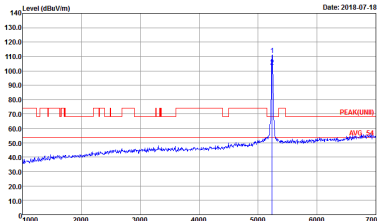
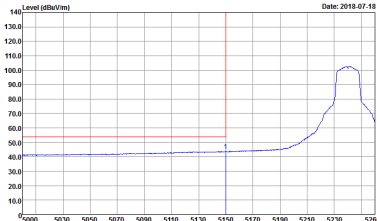


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

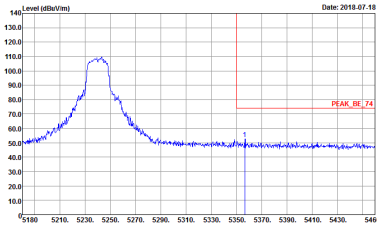
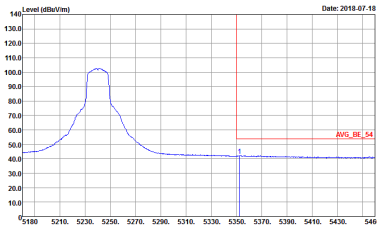


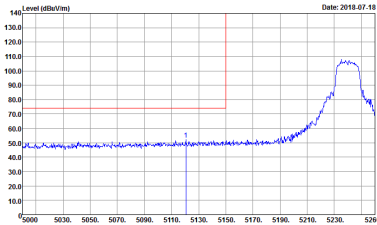
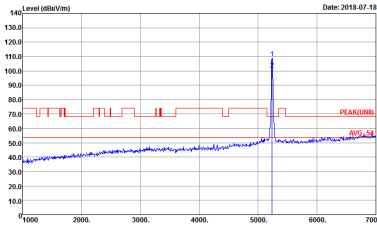
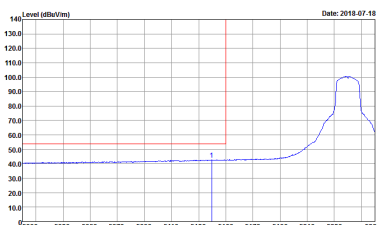
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



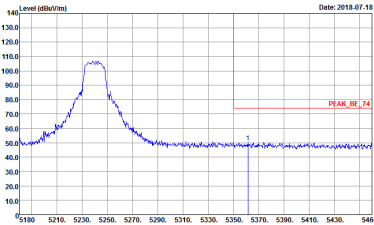
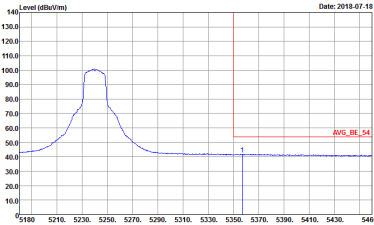
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

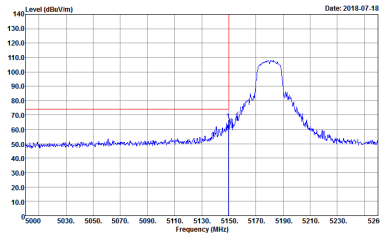
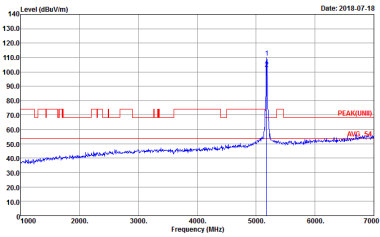
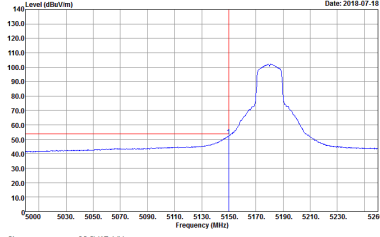
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

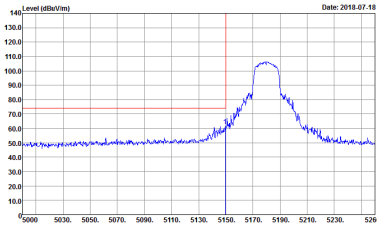
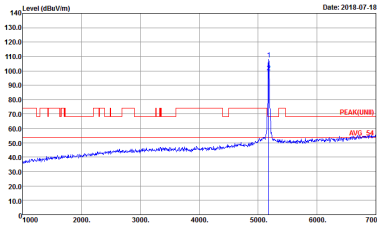
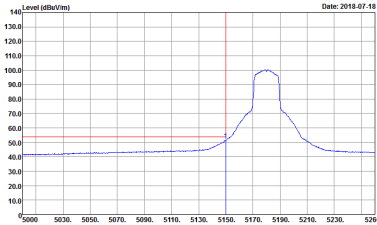


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

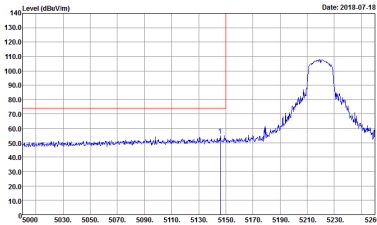
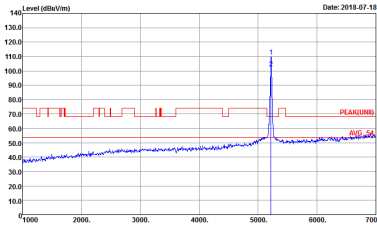
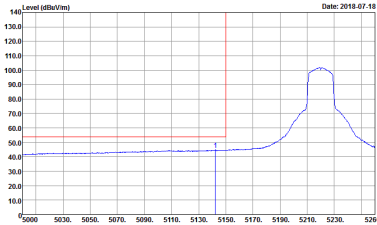


Band 1 5150~5250MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

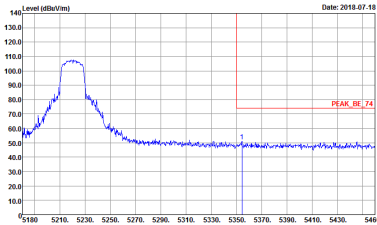
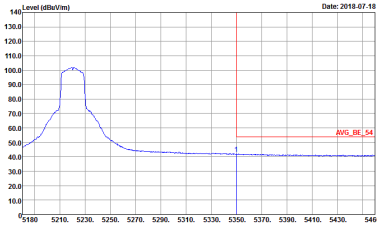
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH36 5180MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

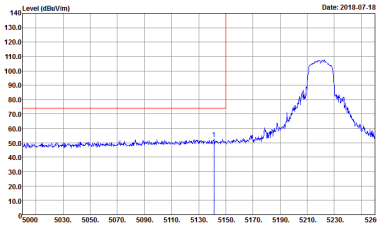
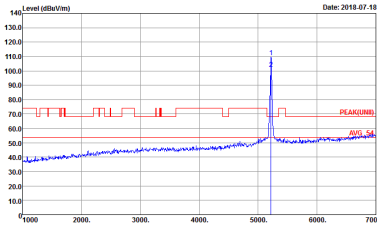
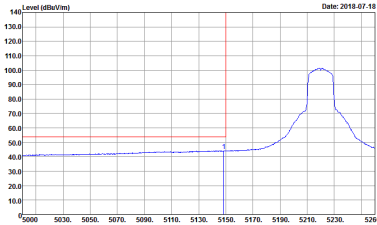
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH36 5180MHz	
1	Vertical	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



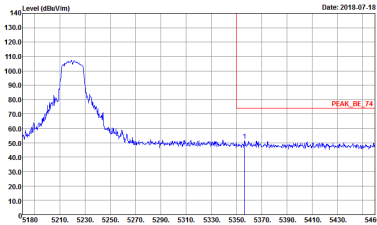
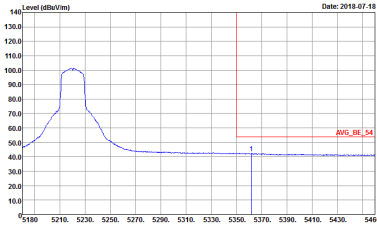
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



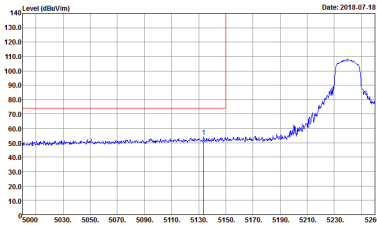
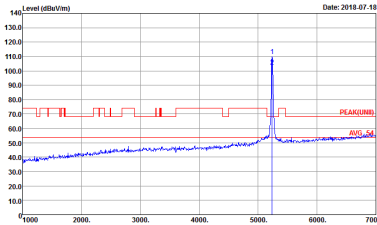
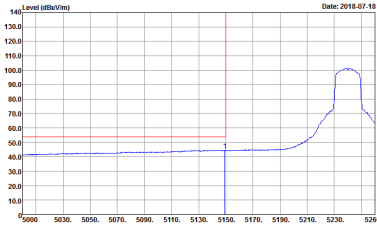
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - L	
1	Vertical	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

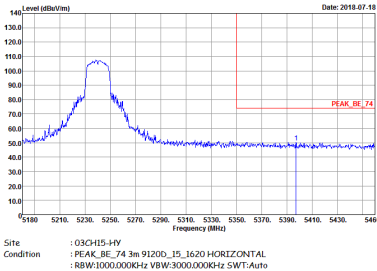
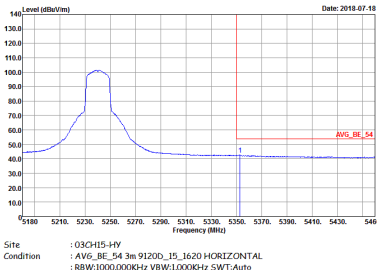


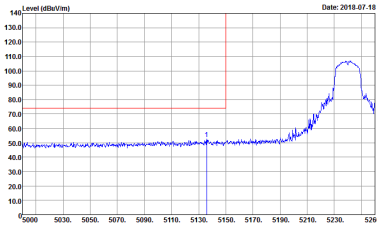
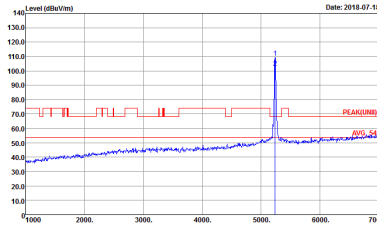
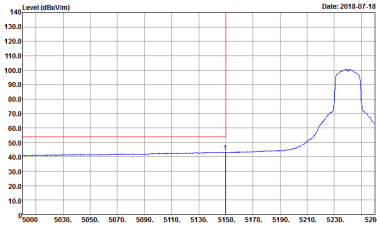
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



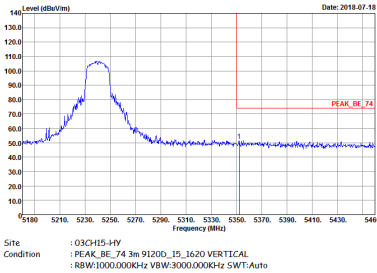
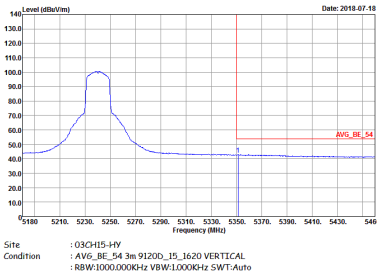
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH48 5240MHz - L	
1	Horizontal	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH48 5240MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

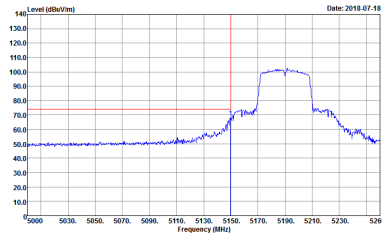
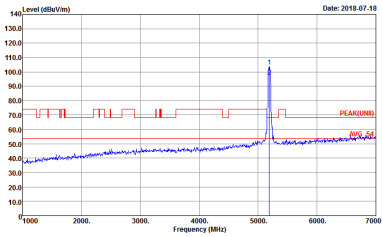
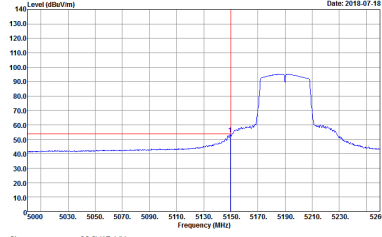
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH48 5240MHz - L	
1	Vertical	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



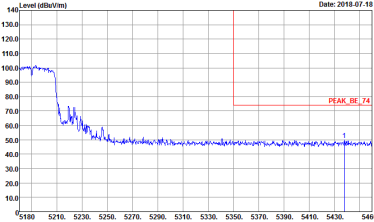
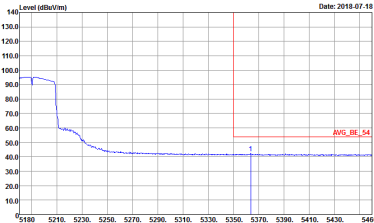
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH48 5240MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank



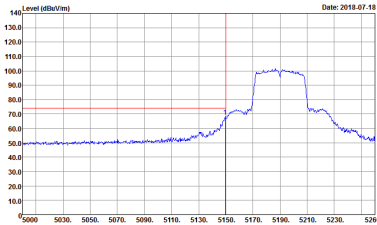
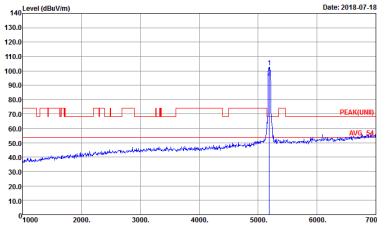
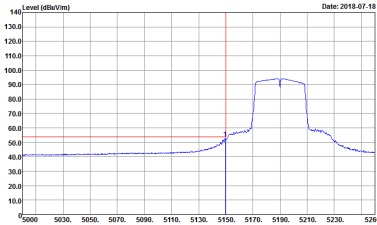
Band 1 5150~5250MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

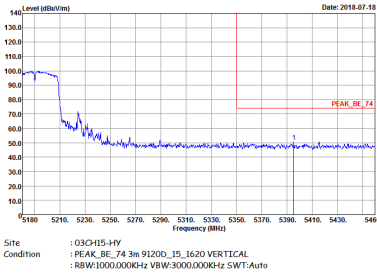
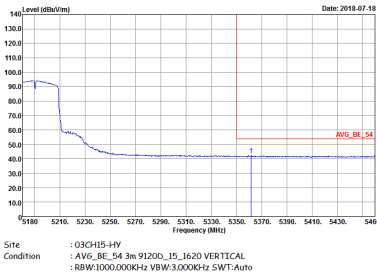


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

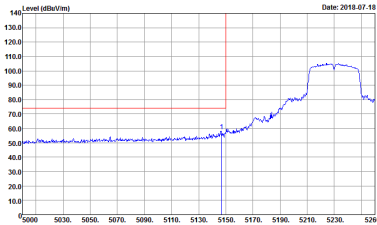
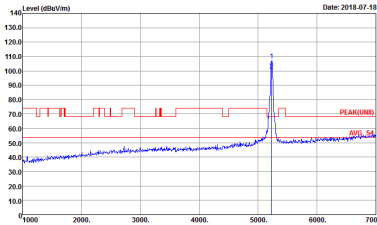
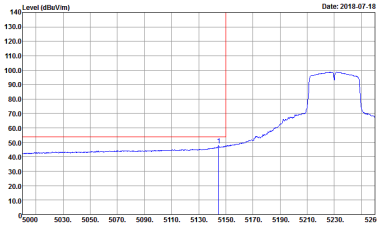


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1	Vertical	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

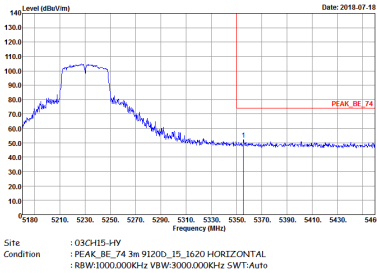
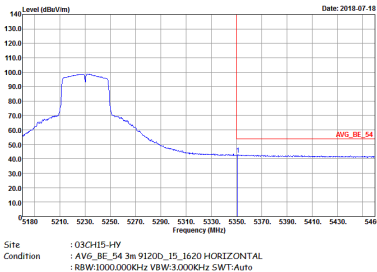


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - L	
1	Horizontal	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

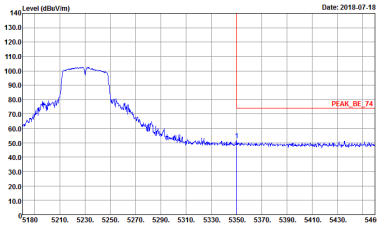
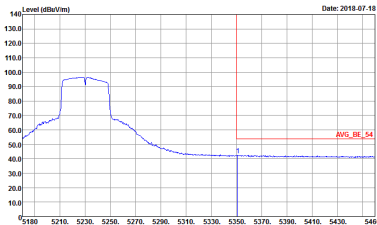


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank



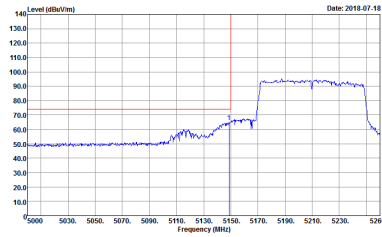
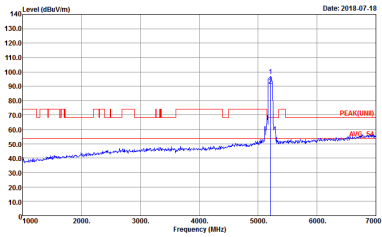
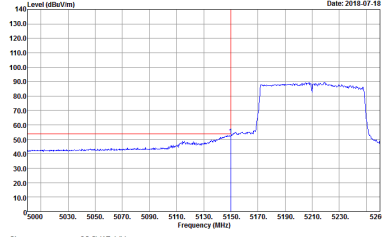
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - L	
1	Vertical	Fundamental
Peak	Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank



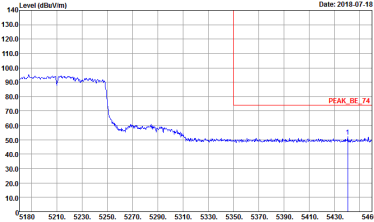
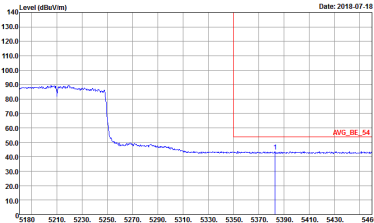
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



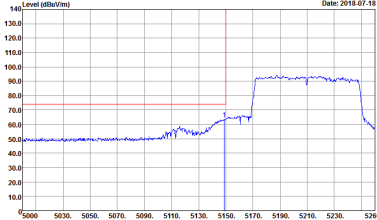
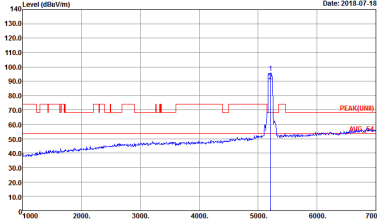
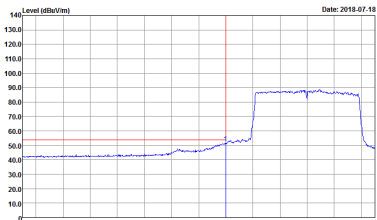
Band 1 5150~5250MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(FUND) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000kHz VBW:10.000kHz SWT:Auto	Left blank

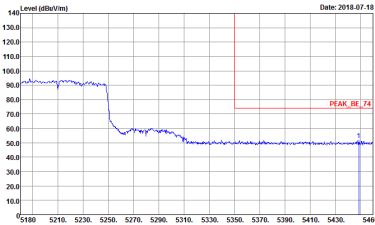
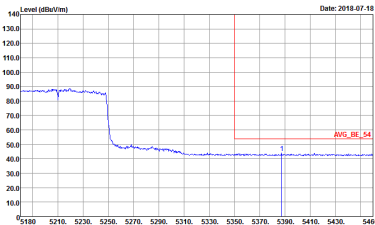


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:10.000KHz SWT:Auto	Left blank



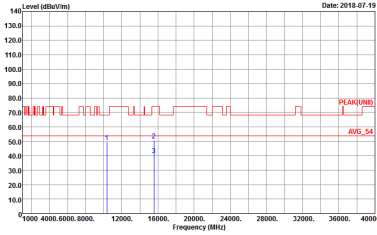
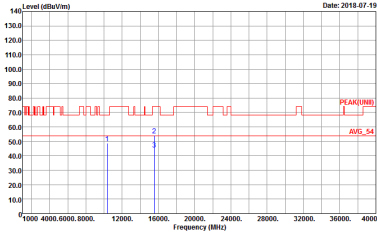
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:10.000KHz SWT:Auto	Left blank



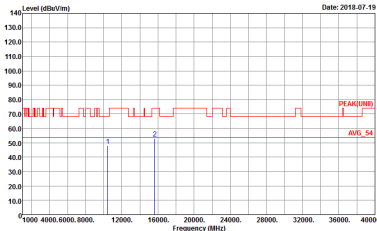
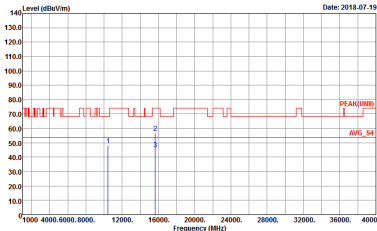
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:10.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:10.000KHz SWT:Auto	Left blank



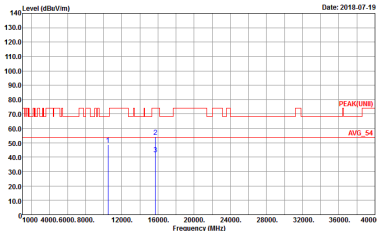
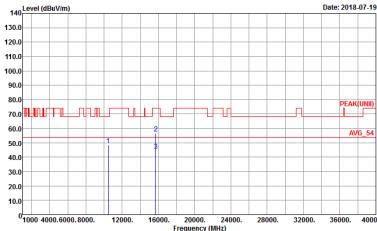
Band 1 - 5150~5250MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH36 5180MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak

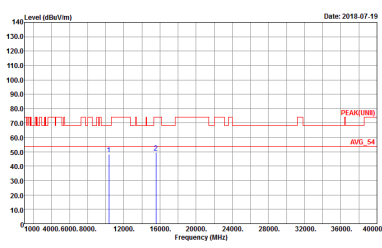
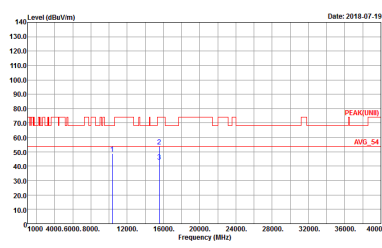


WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH44 5220MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak

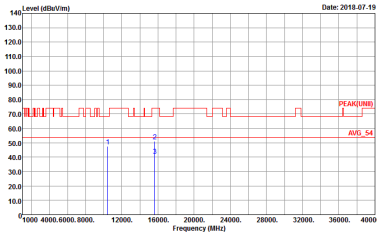
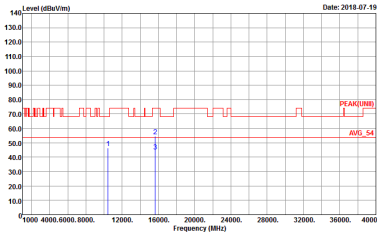


WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH48 5240MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak

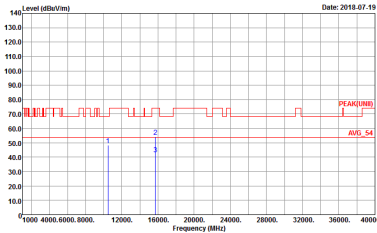
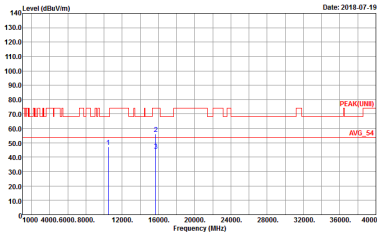
Band 1 5150~5250MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT20 CH36 5180MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-14V Condition : PEAK(LINE) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-14V Condition : PEAK(LINE) 3m 91200_15_1620 VERTICAL Detector : Peak

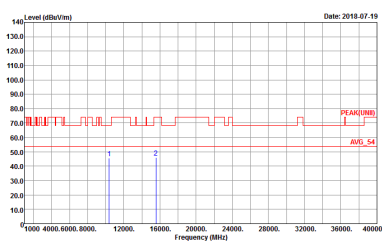
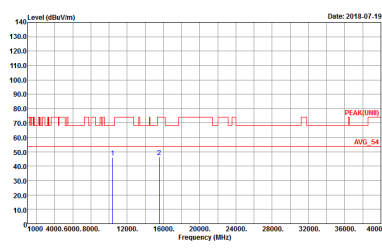


WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT20 CH44 5220MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak

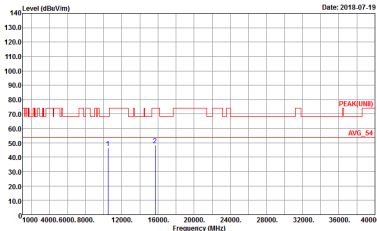
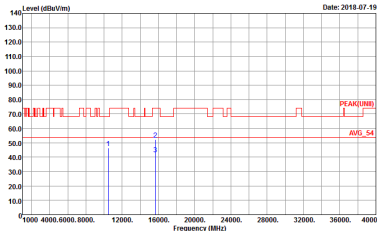


WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT20 CH48 5240MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak

Band 1 5150~5250MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

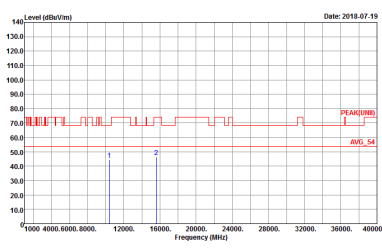
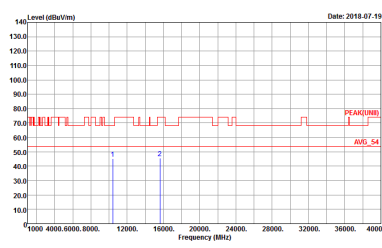
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT40 CH38 5190MHz	
1	Horizontal	Vertical
Peak	 Site : 03CH15-14V Condition : PEAK(LINE) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-14V Condition : PEAK(LINE) 3m 91200_15_1620 VERTICAL Detector : Peak



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT40 CH46 5230MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak

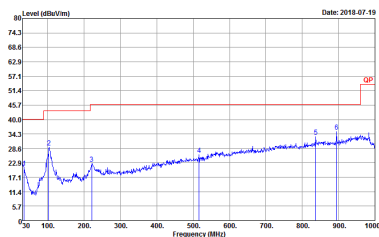
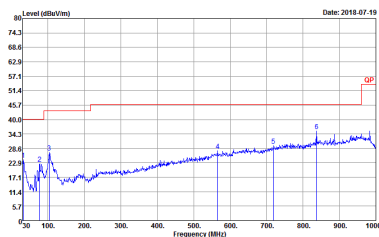


Band 1 5150~5250MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

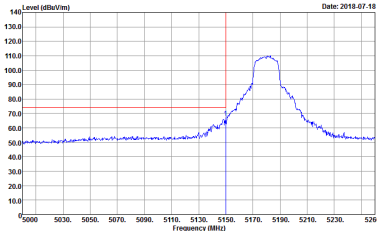
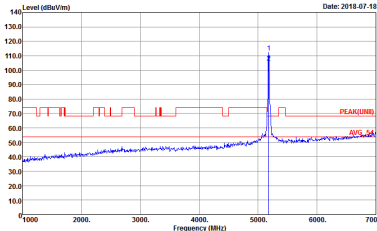
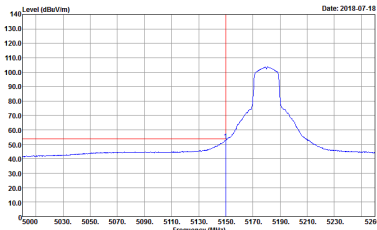
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz	
1	Horizontal	Vertical
Peak	 Site : 03CH15-14V Condition : PEAK(LINE1) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-14V Condition : PEAK(LINE1) 3m 91200_15_1620 VERTICAL Detector : Peak

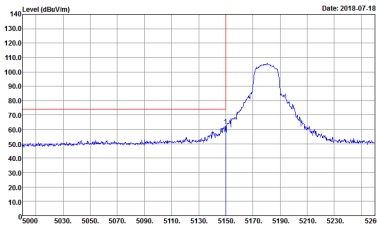
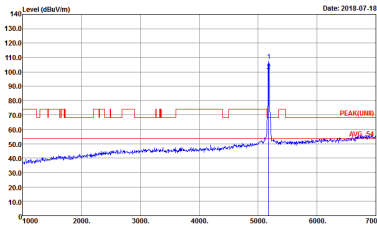
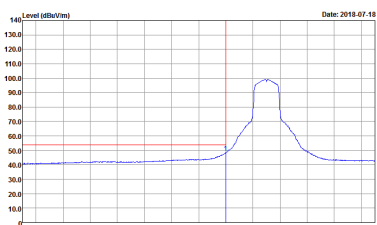


Emission below 1GHz
5GHz WIFI 802.11n HT40 (LF)

WIFI	5GHz WIFI	
ANT	802.11n HT40 LF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH15-HY Condition : QP 3m BIL06_15_41912 HORIZONTAL Detector : Peak	 Site : 03CH15-HY Condition : QP 3m BIL06_15_41912 VERTICAL Detector : Peak

Band 1 - 5150~5250MHz
WIFI 802.11a (Band Edge @ 3m)

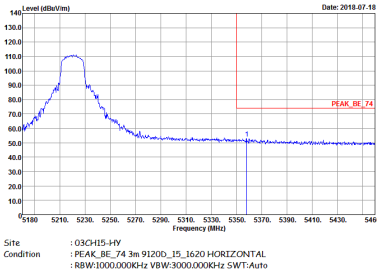
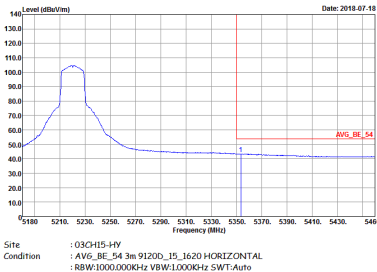
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000kHz VBW:1.000kHz SWT:Auto	Left blank

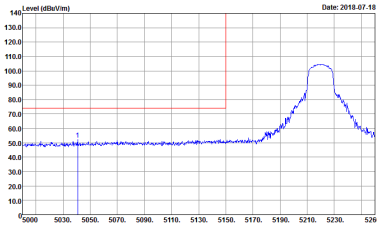
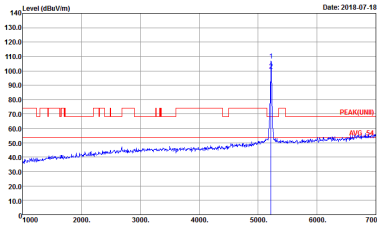
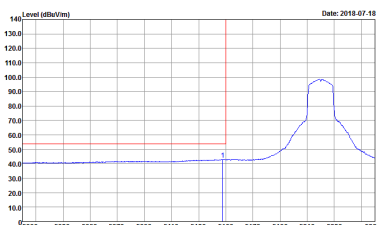
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



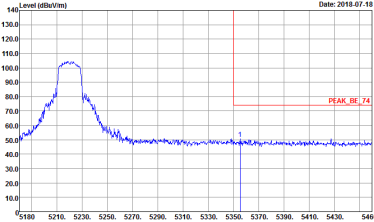
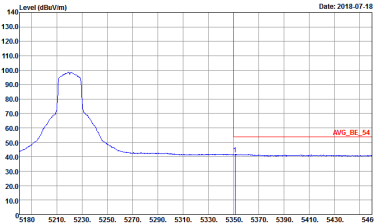
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - L	
2	Horizontal	Fundamental
Peak	Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



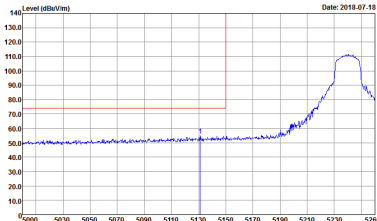
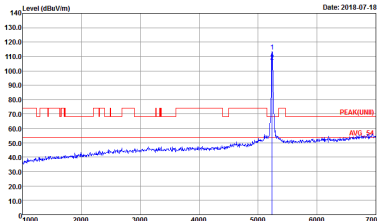
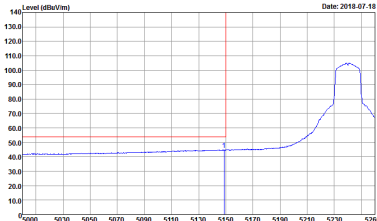
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - R	
2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - L	
2	Vertical	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

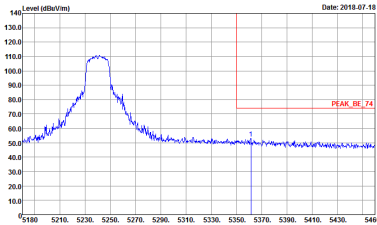
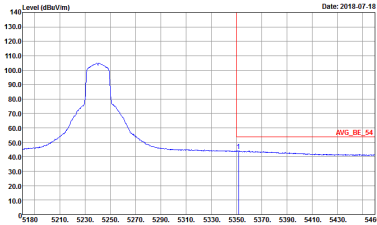


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH44 5220MHz - R	
2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

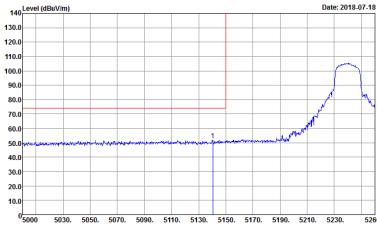
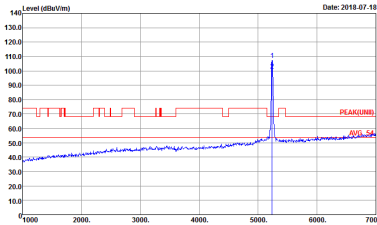
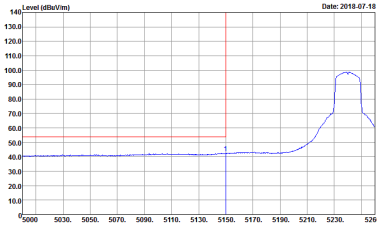


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - L	
2	Horizontal	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

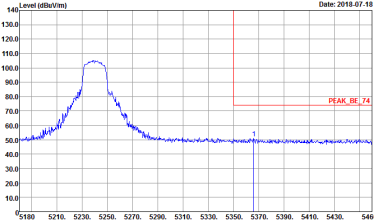
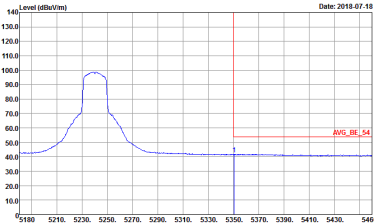


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



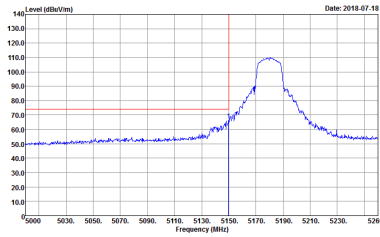
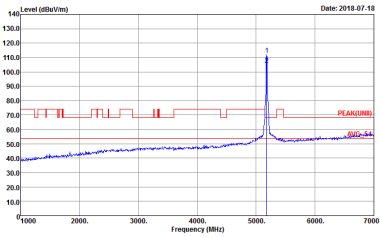
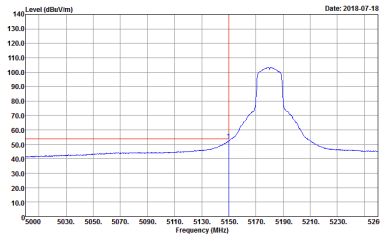
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - L	
2	Vertical	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

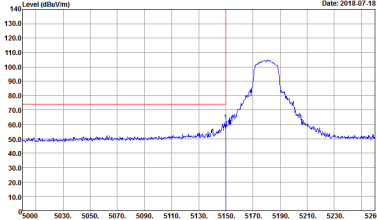
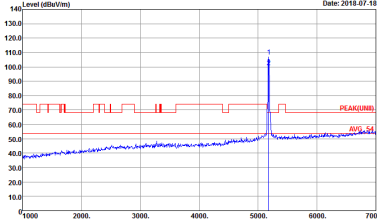
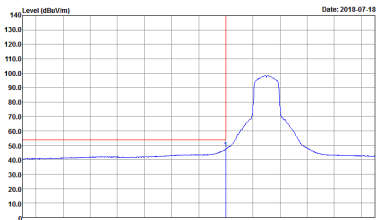


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH48 5240MHz - R	
2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

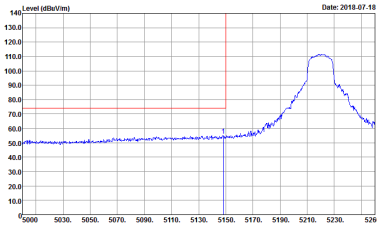
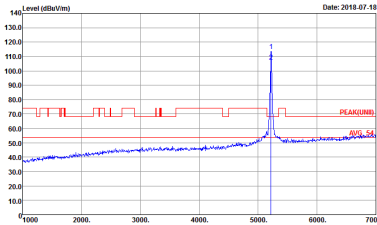
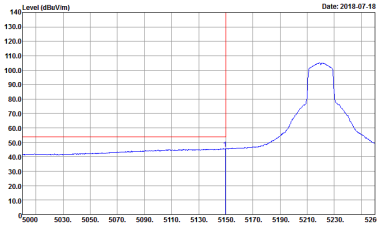


Band 1 5150~5250MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

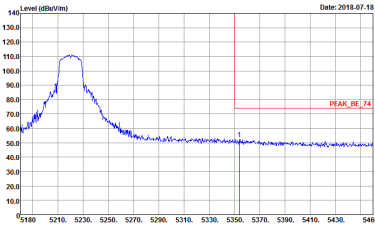
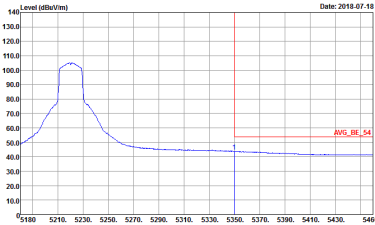
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH36 5180MHz	
2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

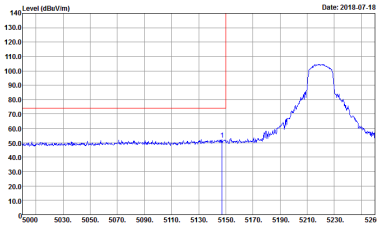
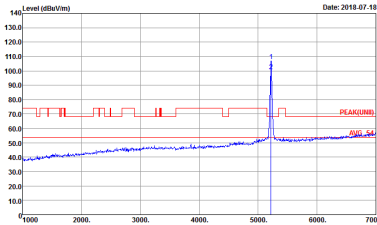
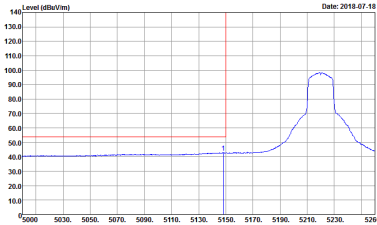
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH36 5180MHz	
2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



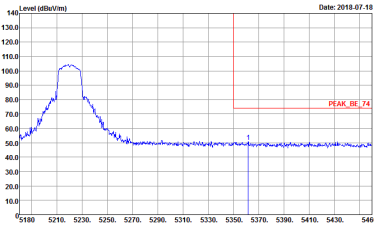
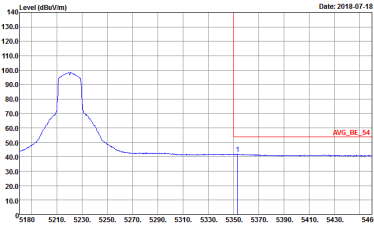
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - L	
2	Horizontal	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



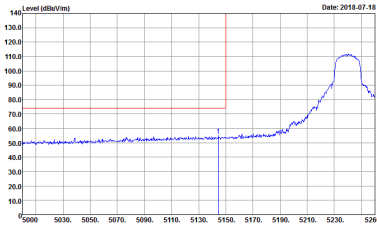
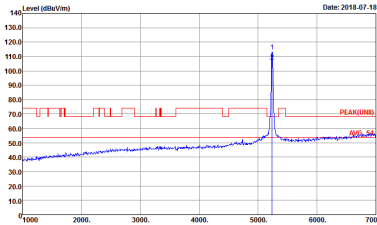
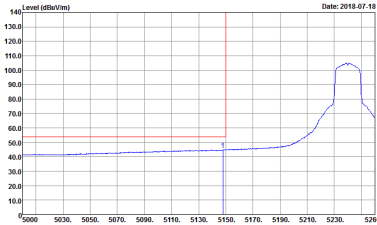
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - R	
2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - L	
2	Vertical	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

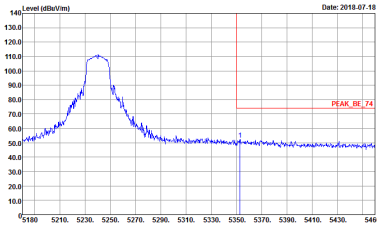
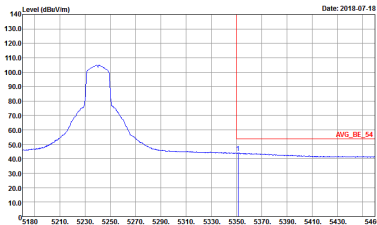


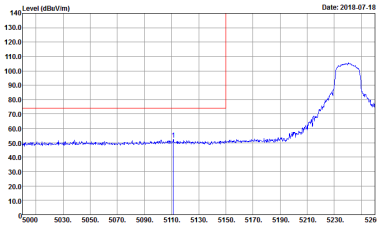
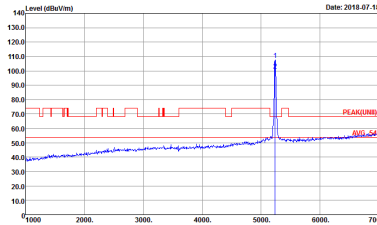
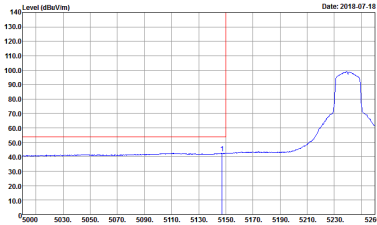
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH44 5220MHz - R	
2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



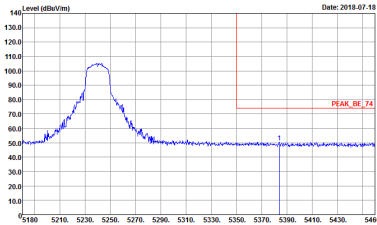
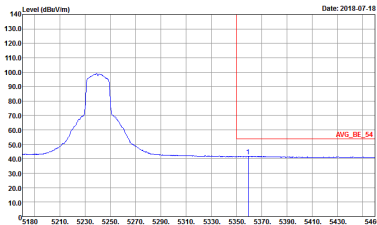
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH48 5240MHz - L	
2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH48 5240MHz - R	
2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

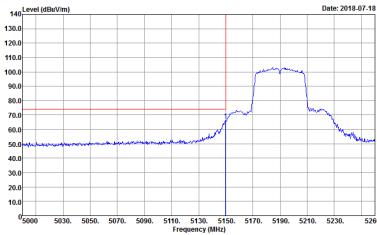
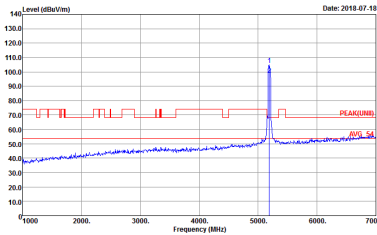
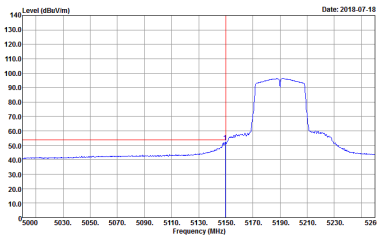
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH48 5240MHz - L	
2	Vertical	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



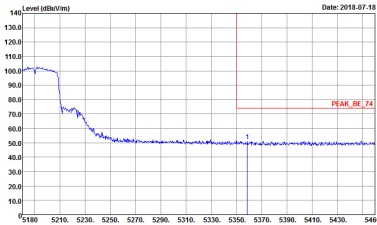
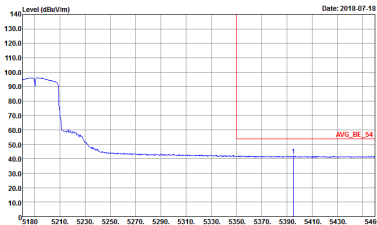
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT20 CH48 5240MHz - R	
2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank



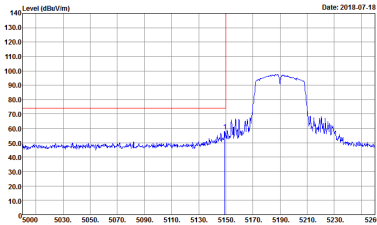
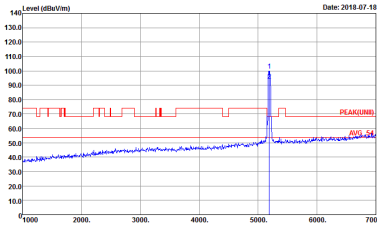
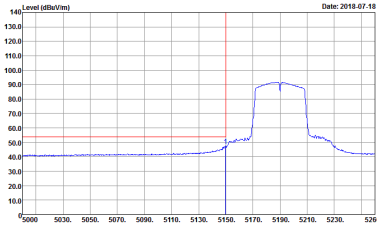
Band 1 5150~5250MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK(FUND) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

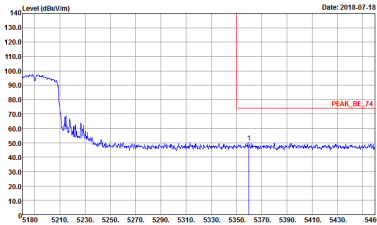
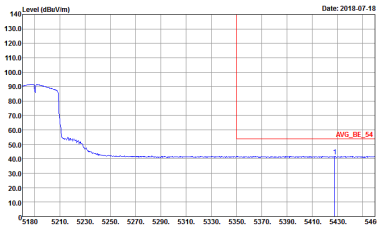


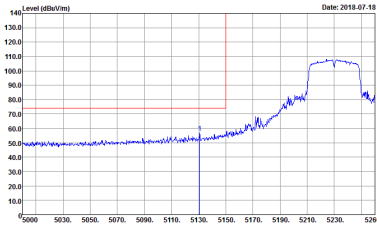
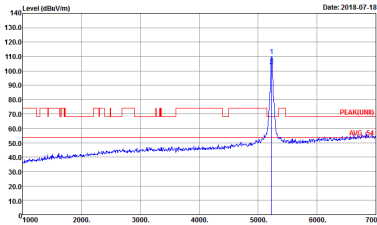
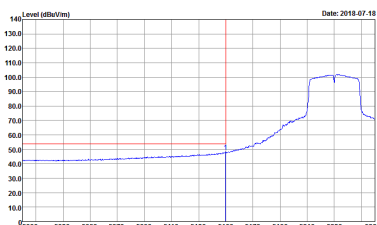
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
2	Vertical	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank



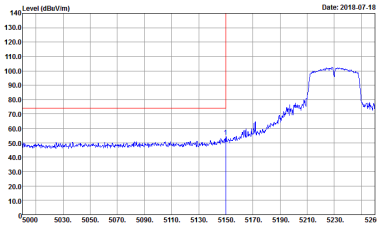
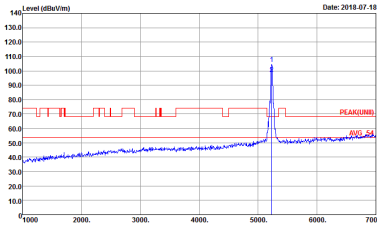
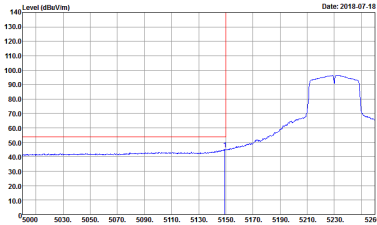
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - L	
2	Horizontal	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

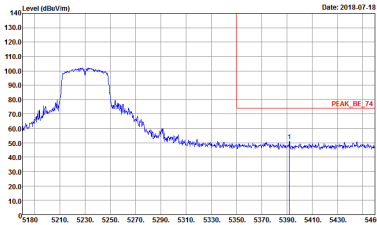
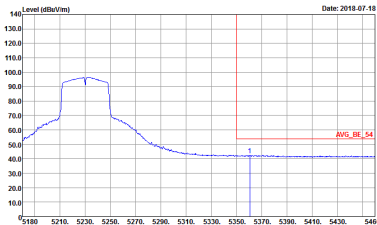


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - R	
2	Horizontal	Fundamental
Peak	Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank



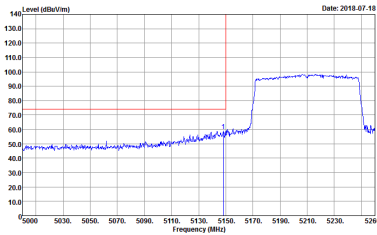
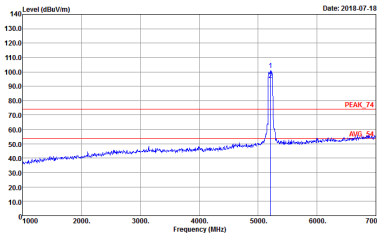
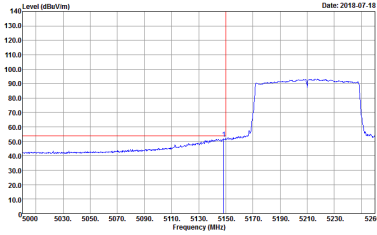
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - L	
2	Vertical	Fundamental
Peak	 Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH15-HY : PEAK(UNIT) 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank



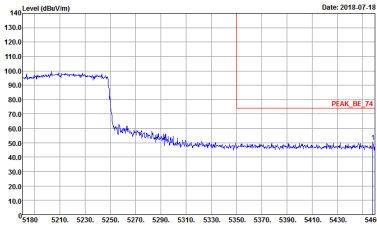
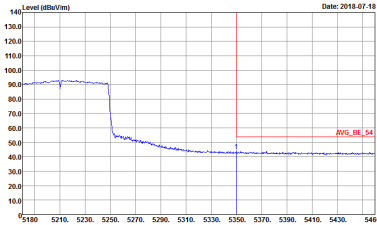
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH46 5230MHz - R	
2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

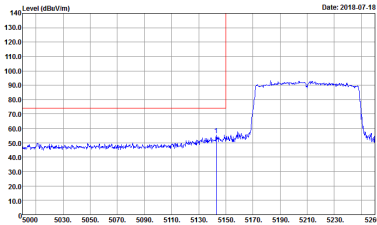
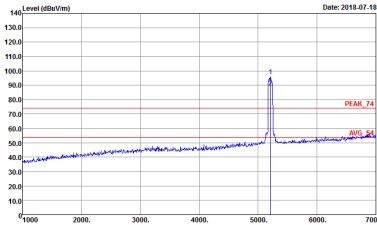
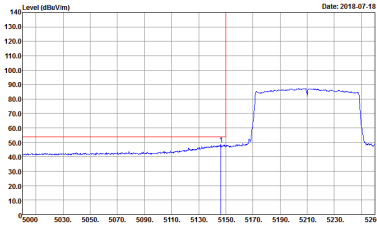


Band 1 5150~5250MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

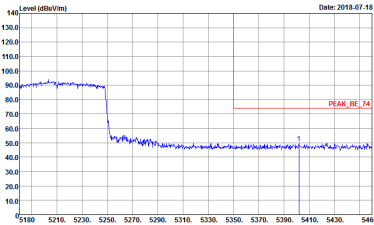
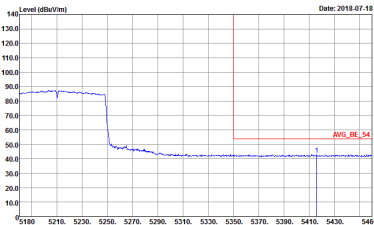
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:10.000KHz SWT:Auto	Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:10.000KHz SWT:Auto	Left blank

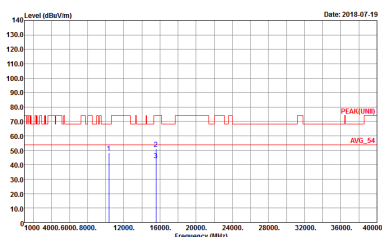
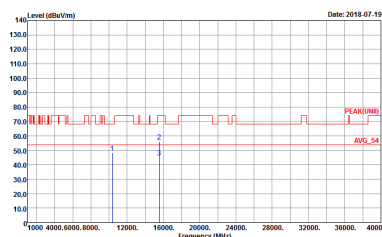
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:10.000KHz SWT:Auto	Left blank



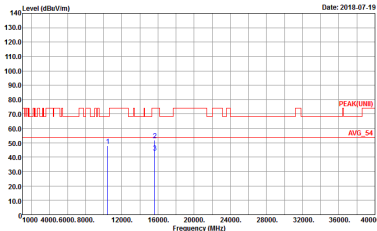
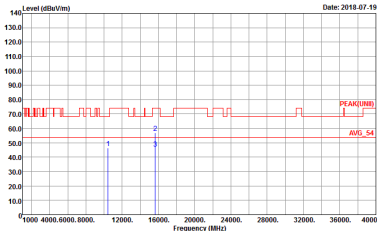
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_15_1620 VERTICAL : RBW:1000.000KHz VBW:10.000KHz SWT:Auto	Left blank



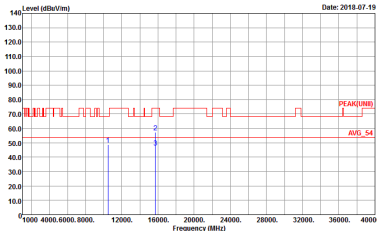
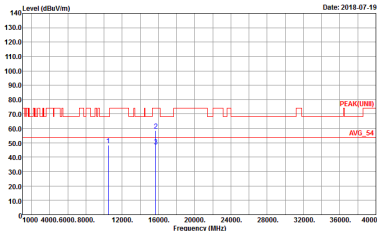
Band 1 - 5150~5250MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH36 5180MHz	
2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak



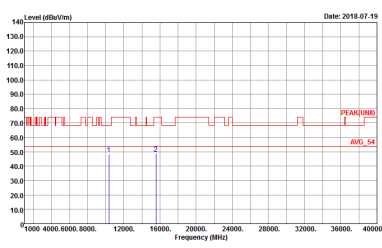
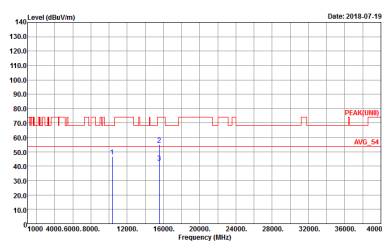
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH44 5220MHz	
2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak



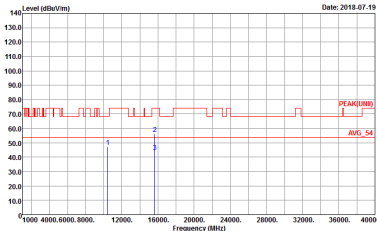
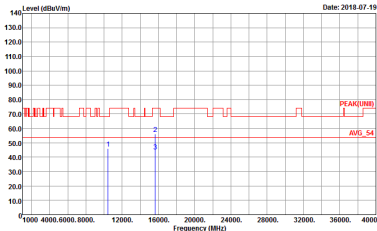
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH48 5240MHz	
2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak



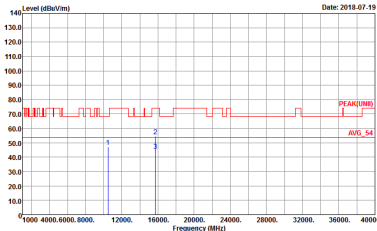
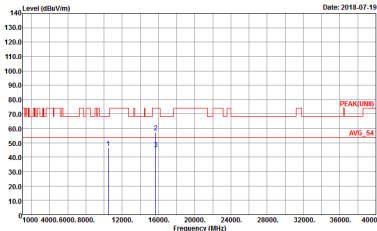
Band 1 5150~5250MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT20 CH36 5180MHz	
2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-14V Condition : PEAK(LINE1) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-14V Condition : PEAK(LINE1) 3m 91200_15_1620 VERTICAL Detector : Peak

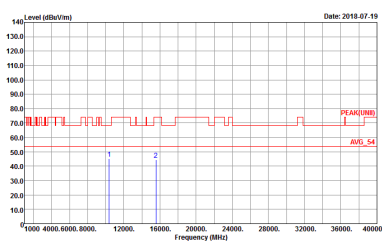
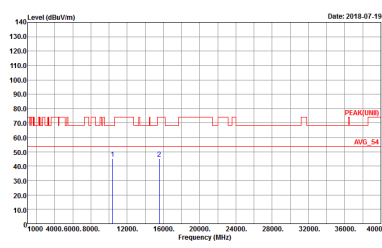


WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT20 CH44 5220MHz	
2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak

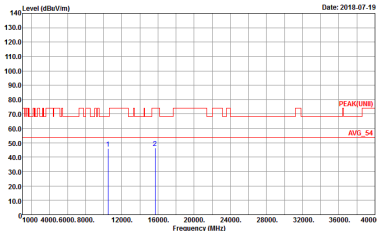
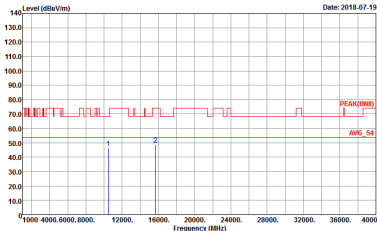


WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT20 CH48 5240MHz	
2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak

Band 1 5150~5250MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

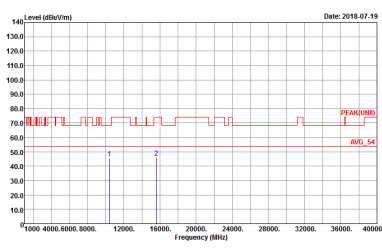
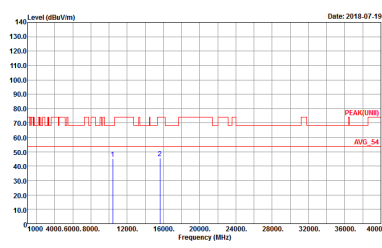
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT40 CH38 5190MHz	
2	Horizontal	Vertical
Peak	 Site : 03CH15-14V Condition : PEAK(LINE) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-14V Condition : PEAK(LINE) 3m 91200_15_1620 VERTICAL Detector : Peak



WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT40 CH46 5230MHz	
2	Horizontal	Vertical
Peak	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-HY Condition : PEAK(UNIT) 3m 91200_15_1620 VERTICAL Detector : Peak

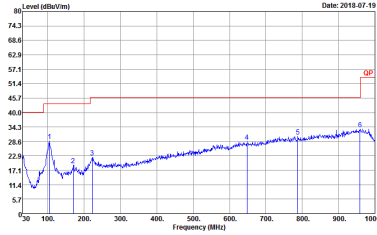
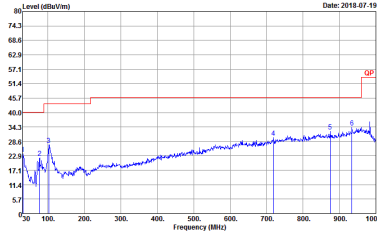


Band 1 5150~5250MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz	
2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-14V Condition : PEAK(LINE1) 3m 91200_15_1620 HORIZONTAL Detector : Peak	 Site : 03CH15-14V Condition : PEAK(LINE1) 3m 91200_15_1620 VERTICAL Detector : Peak



Emission below 1GHz
5GHz WIFI 802.11n HT20 (LF)

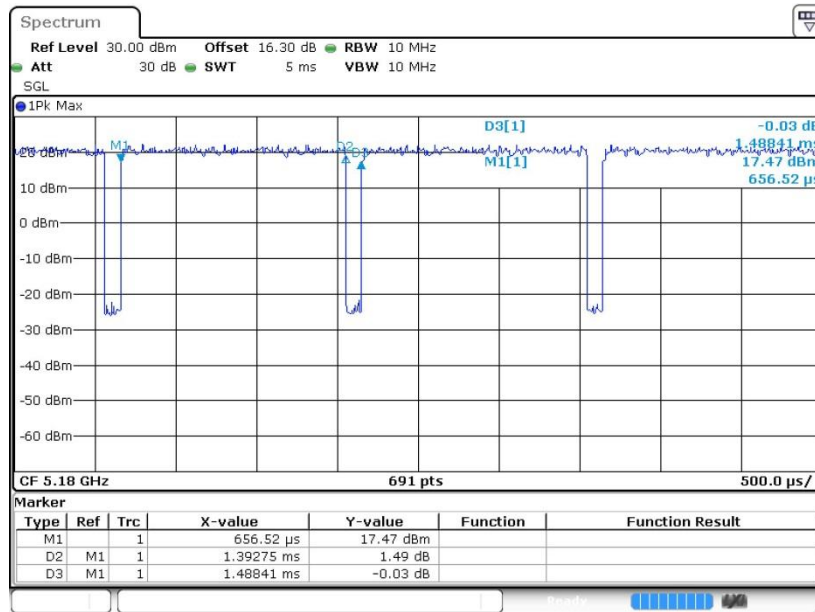
WIFI	5GHz WIFI	
ANT	802.11n HT20 LF	
2	Horizontal	Vertical
QP / Peak	 Site : 03CH15-HY Condition : QP 3m B1LOG_15_41912 HORIZONTAL Detector : Peak	 Site : 03CH15-HY Condition : QP 3m B1LOG_15_41912 VERTICAL Detector : Peak

Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
1	802.11a	93.57	1392.75	0.72	1kHz	0.29
2	802.11a	93.20	1391.30	0.72	1kHz	0.31
1	5GHz 802.11n HT20	93.17	1305.80	0.77	1kHz	0.31
2	5GHz 802.11n HT20	93.26	1304.35	0.77	1kHz	0.30
1	5GHz 802.11n HT40	86.80	647.83	1.54	3kHz	0.61
2	5GHz 802.11n HT40	86.82	649.28	1.54	3kHz	0.61
1	5GHz 802.11ac VHT20	93.02	1313.04	0.76	1kHz	0.31
2	5GHz 802.11ac VHT20	92.82	1311.59	0.76	1kHz	0.32
1	5GHz 802.11ac VHT40	86.90	653.62	1.53	3kHz	0.61
2	5GHz 802.11ac VHT40	86.87	652.17	1.53	3kHz	0.61
1	5GHz 802.11ac VHT80	76.71	324.64	3.08	10kHz	1.15
2	5GHz 802.11ac VHT80	76.63	323.19	3.09	10kHz	1.16

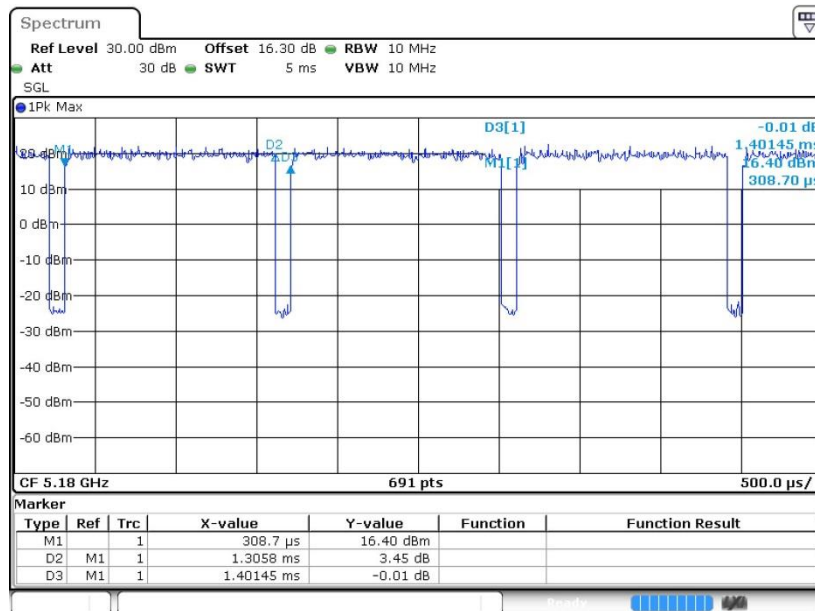
<Ant. 1>

802.11a



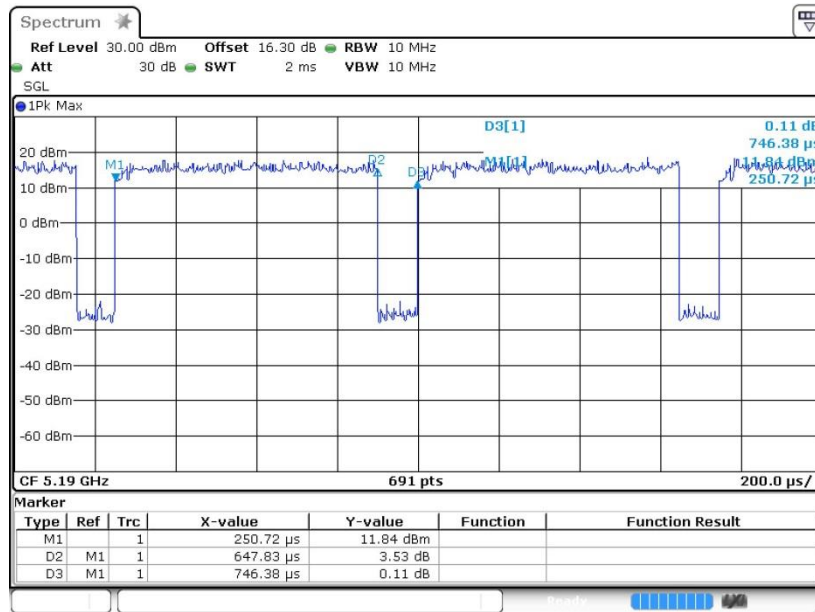
Date: 13 JUN 2018 19:54:28

802.11n HT20



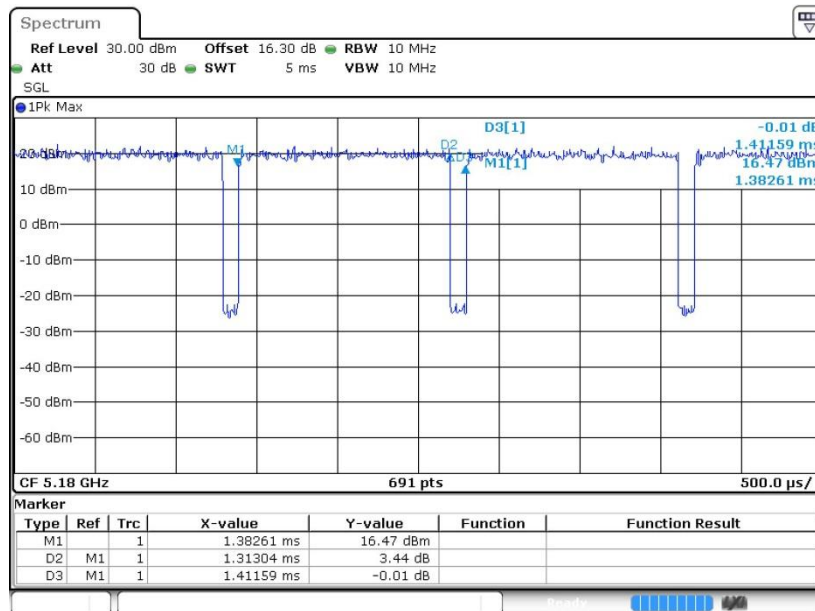
Date: 13 JUN 2018 20:00:07

802.11n HT40



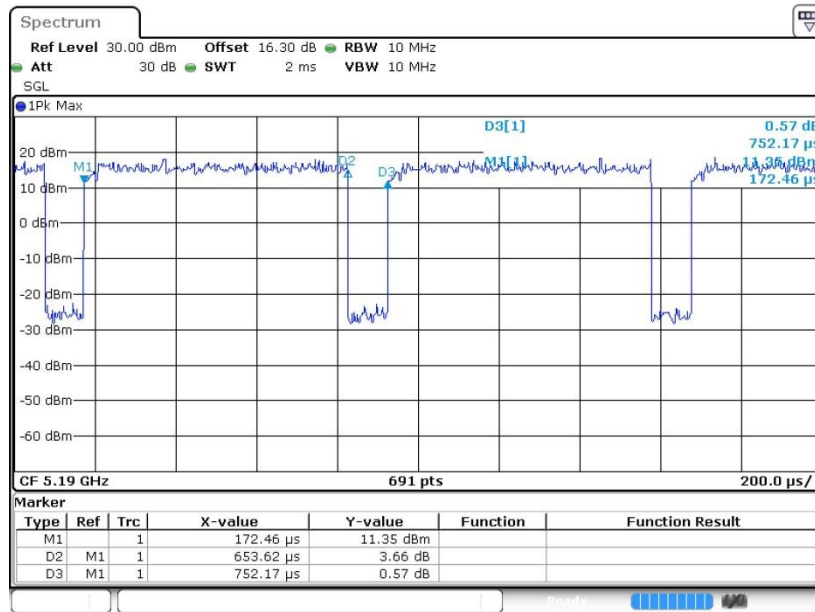
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802.11ac VHT20



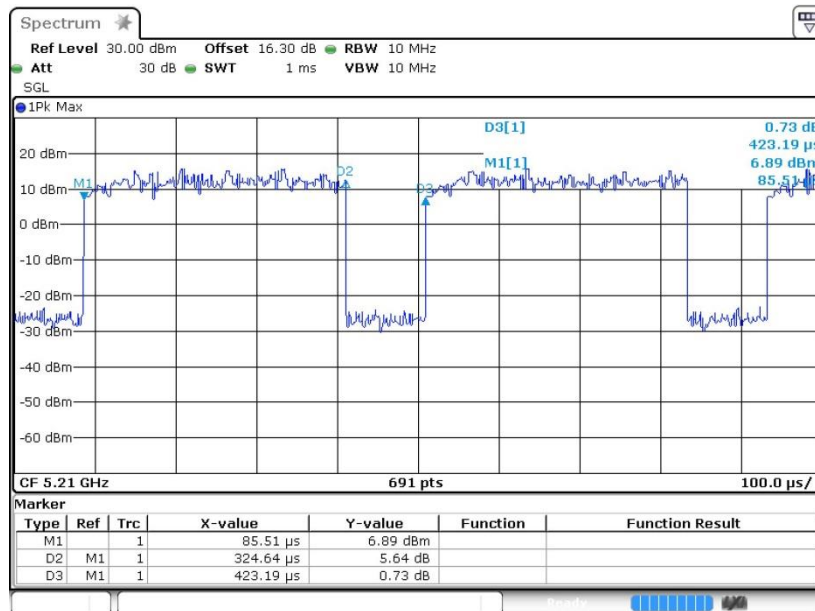
Date: 13 JUN 2018 20:28:59

802.11ac VHT40



Date: 13 JUN 2018 20:24:15

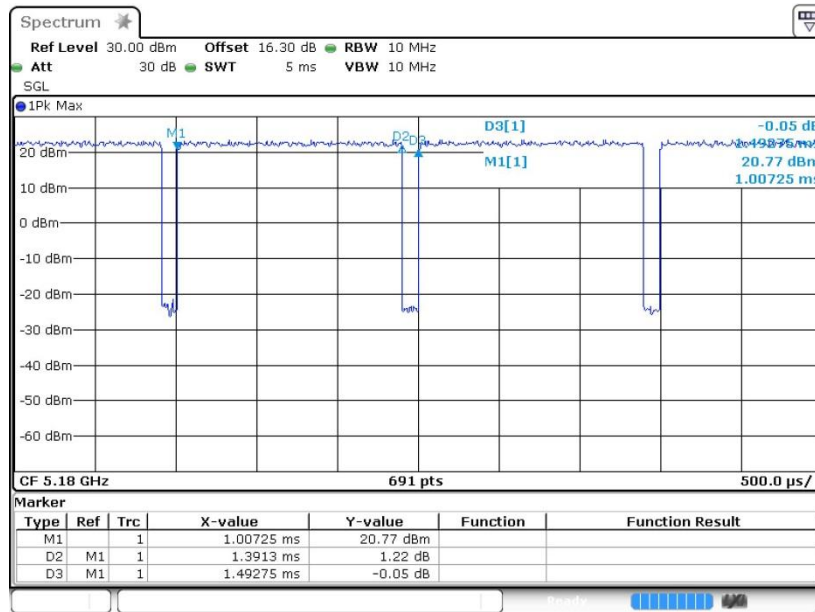
802.11ac VHT80



Date: 13 JUN 2018 20:47:15

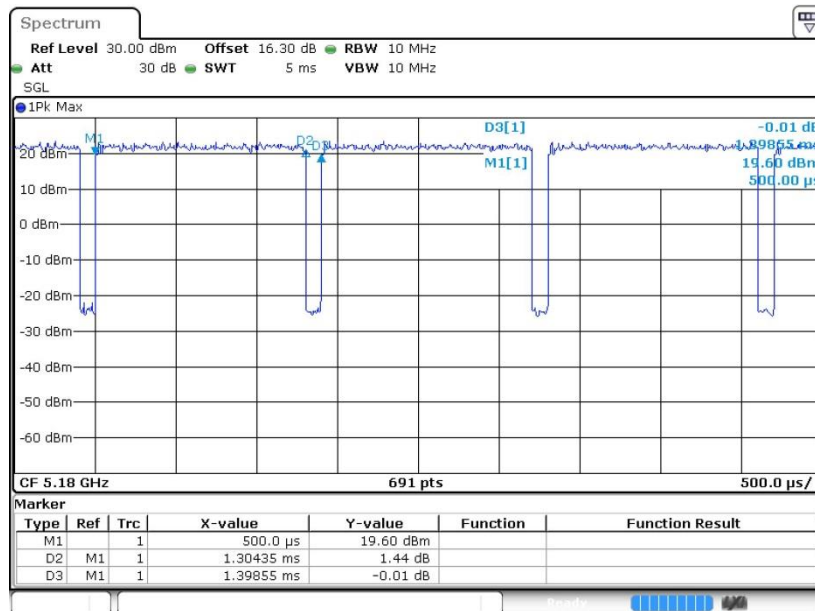
<Ant. 2>

802.11a



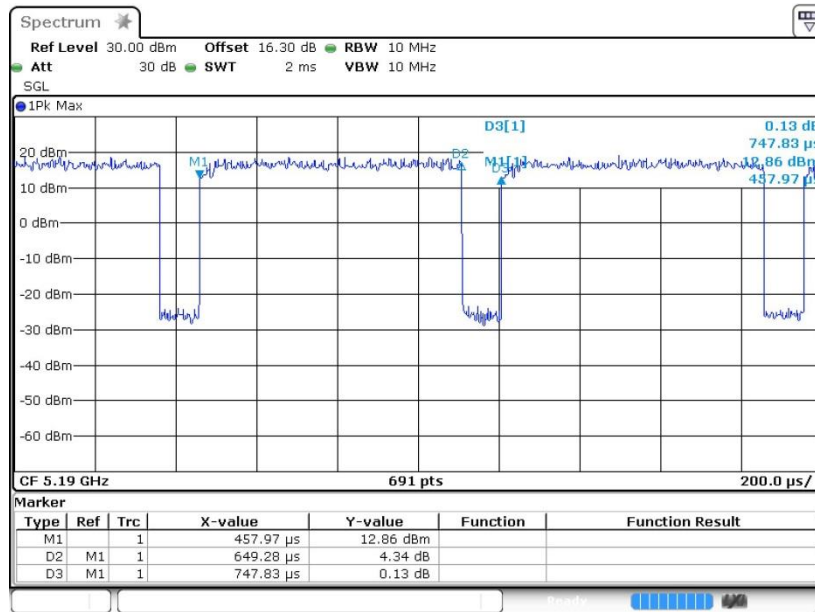
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802.11n HT20



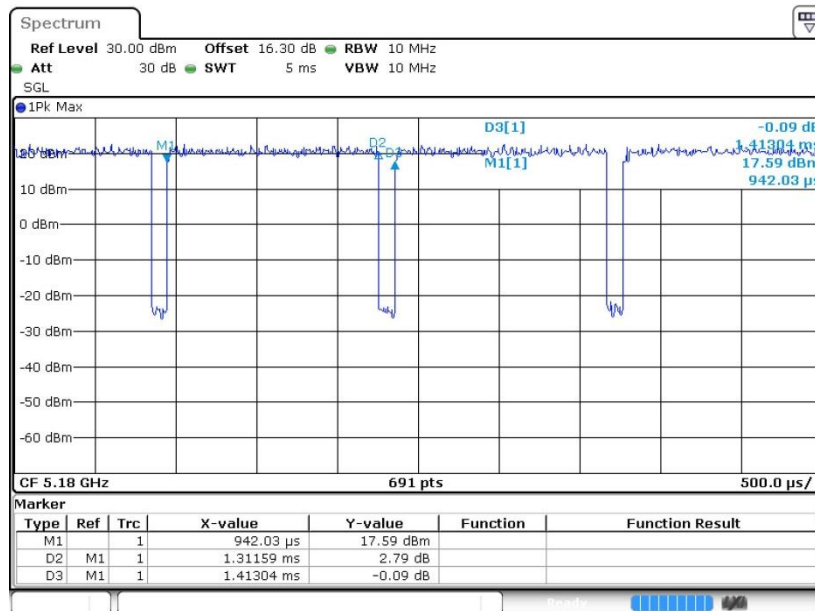
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802.11n HT40



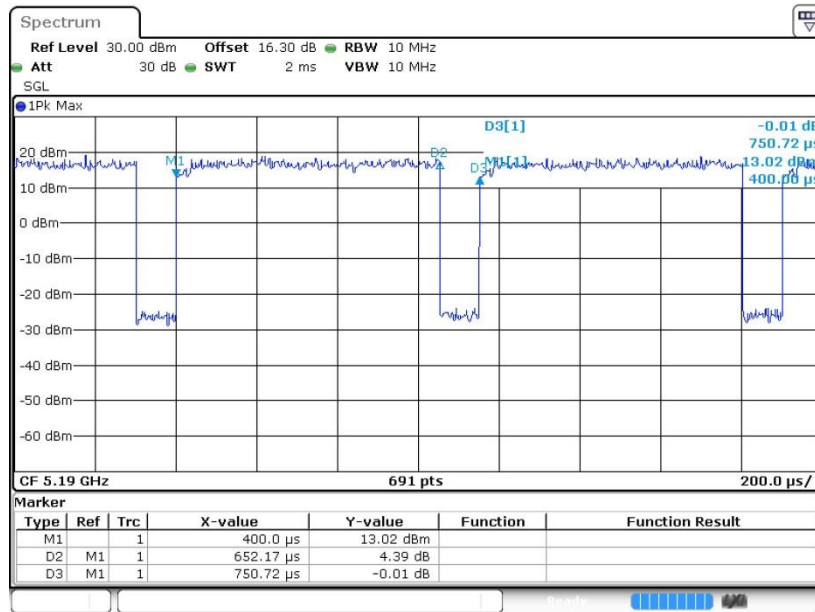
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802.11ac VHT20



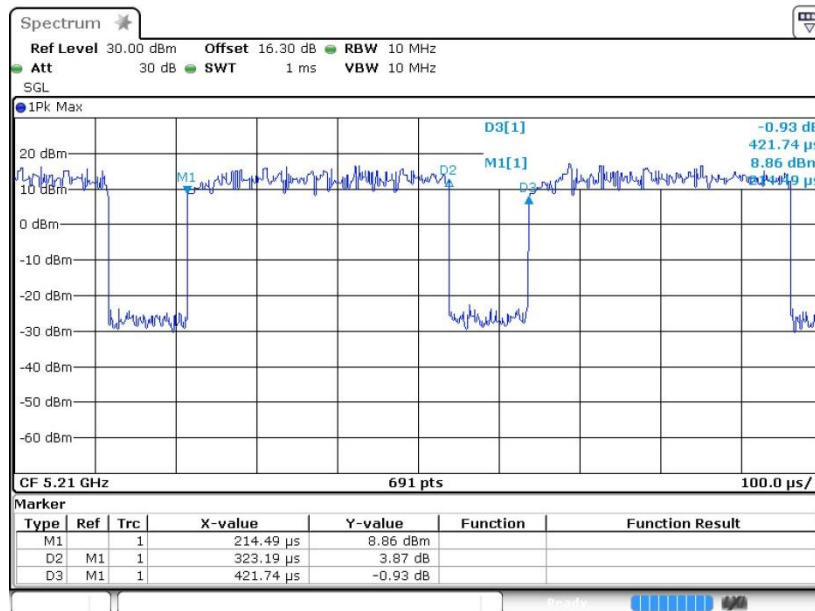
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802.11ac VHT40



Date: 13 JUN 2018 17:23:51

802.11ac VHT80



Date: 13 JUN 2018 17:24:51

—THE END—