FCC RADIO TEST REPORT

FCC ID	:	**PY7-61352Q**
Equipment	:	**Observer**
Brand Name	:	**Sony Mobile**
Applicant	:	**Sony Mobile Communications Inc. 4-12-3 Higashi-shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan**
Manufacturer	:	**Sony Mobile Communications Inc. 4-12-3 Higashi-shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan**
Standard	:	**FCC Part 15 Subpart C §15.247**

The product was received on Jan. 09, 2018 and testing was started from Jan. 17, 2018 and completed on Mar. 18, 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 INTERTIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Jones Tsai

Approved by: Jones Tsai

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

Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FR6D2013-01	01	Initial issue of report	Jun. 04, 2018
FR6D2013-01	02	1. Revising the connection diagram in 2.3. 2. Adding average power test procedures in section 3.2.3. 3. Revising the measuring equipment in section 4.	Aug. 03, 2018
FR6D2013-01	03	Revising the connection diagram in 2.3.	Aug. 08, 2018

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.247(a)(2)	6dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.247(b)	Power Output Measurement	Pass	-
3.3	15.247(e)	Power Spectral Density	Pass	-
3.4	15.247(d)	Conducted Band Edges	Pass	-
		Conducted Spurious Emission	Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Pass	Under limit 3.03 dB at 2390.000 MHz
3.6	15.207	AC Conducted Emission	Pass	Under limit 18.30 dB at 0.150 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	Pass	-

Reviewed by: Joseph Lin

Report Producer: Natasha Hsieh

1 General Description

1.1 Product Feature of Equipment Under Test

Bluetooth, and DTS/UNII b/g/n

Standards-related Product Specification	
Antenna Type / Gain	Chip Antenna type with gain 2.5 dBi

EUT Information List		
HW Version	SW Version	Performed Test Item
A	1.0	RF conducted measurement
		Radiated Spurious Emission
		Conducted Emission

Accessory Information List			
AC adapter	Model No.	S/N	Performed Test Item
	UH20	3515W34406073	Radiated Spurious Emission Conducted Emission

Note:

1. Above EUT list used are electrically identical per declared by manufacturer.
2. Above the accessories list are used to exercise the EUT during test, and the serial number of each type of accessories is listed in each section of this report.
3. For other wireless features of this EUT, test report will be issued separately.

1.2 Modification of EUT

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

1.3 Testing Location

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

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

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

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	03CH11-HY

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

1.4 Applicable Standards

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

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04
- ANSI C63.10-2013

Remark:

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

2 Test Configuration of Equipment Under Test

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

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

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		

2.2 Test Mode

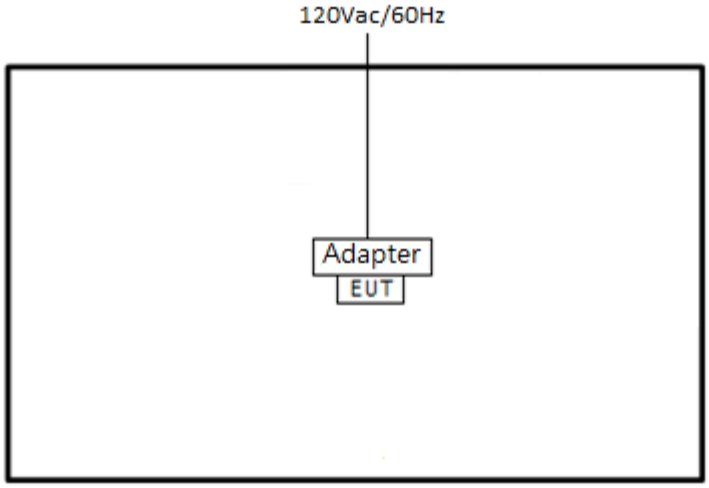
Final test modes are considering the modulation and worse data rates as below table.

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

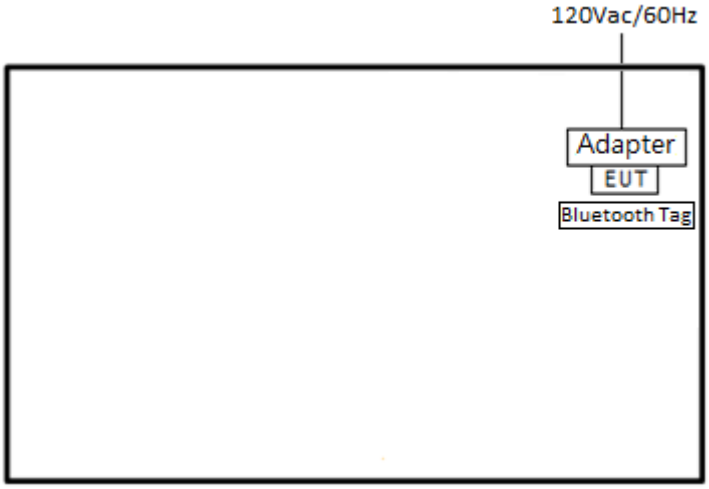
Test Cases	
AC Conducted Emission	Mode 1 :EUT Charging + WLAN Idle + Bluetooth On

2.3 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emissions 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.	Tag	Sony	D52.1	PY7-32042C	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “Putty” 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.

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

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

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

3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

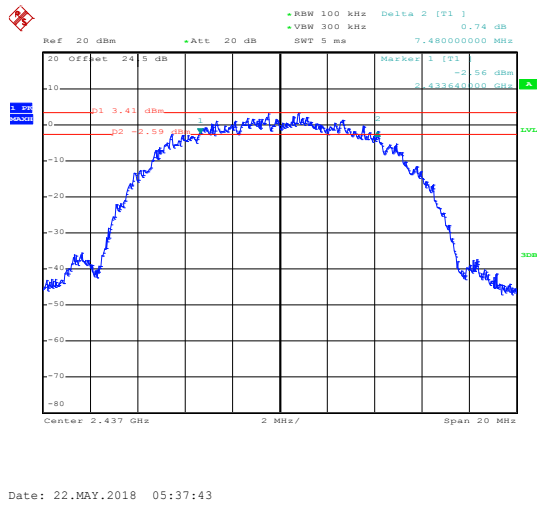
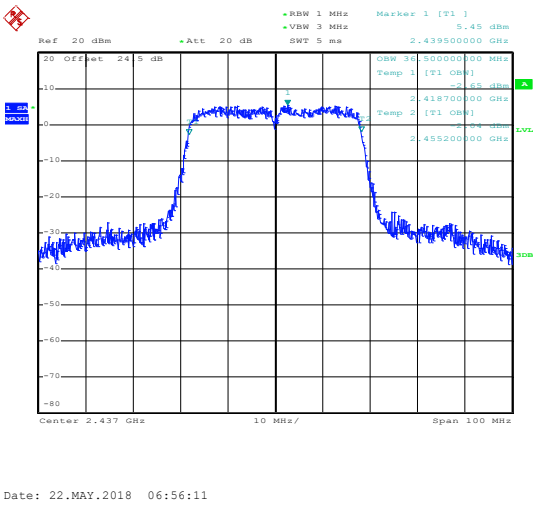
3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v04.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = 1MHz and set the Video bandwidth (VBW) = 3MHz.
6. Measure and record the results in the test report.

3.1.4 Test Setup

3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A.

Minimum 6dB Bandwidth	Maximum 99% Occupied Bandwidth
	

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

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting antenna with directional gain greater than 6dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

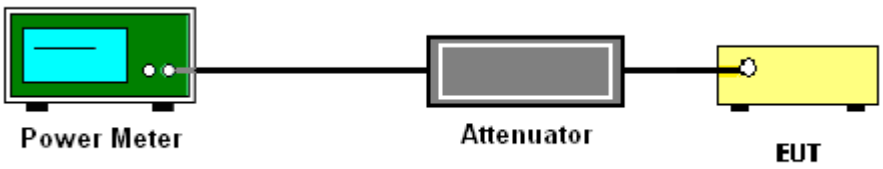
3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

3.2.3 Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v04 section 9.1.3 PKPM1 Peak power meter method.
2. For Average Power, the testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v04 section 9.2.3.1 Method AVGPM.
3. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. Set to the maximum power setting and enable the EUT transmit continuously.
5. Measure the conducted output power and record the results in the test report.

3.2.4 Test Setup



3.2.5 Test Result of Peak Output Power

Please refer to Appendix A.

3.2.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

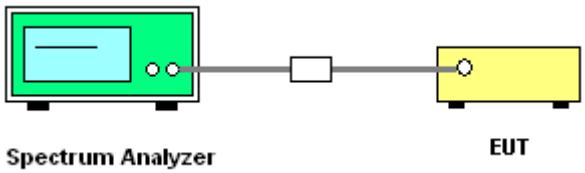
3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

3.3.3 Test Procedures

1. The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.

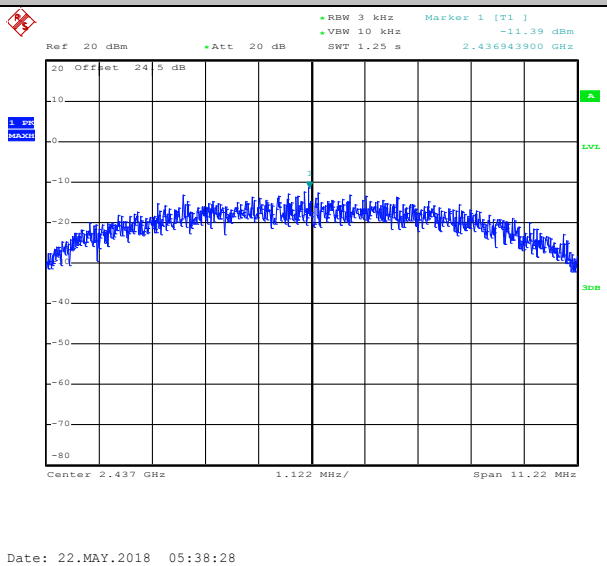
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/3kHz)



3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement.

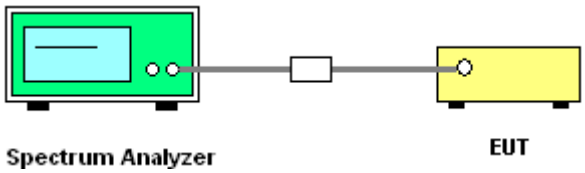
3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.4.4 Test Setup

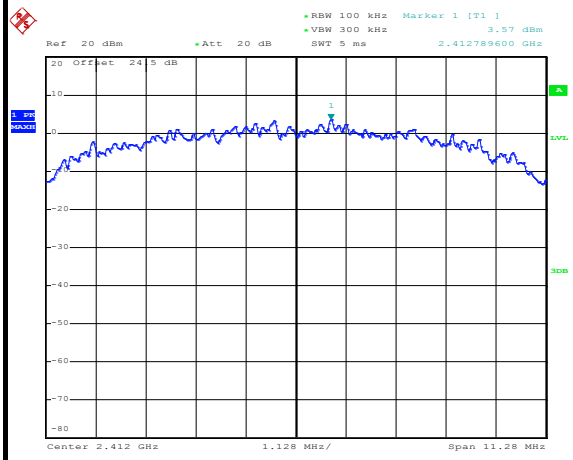
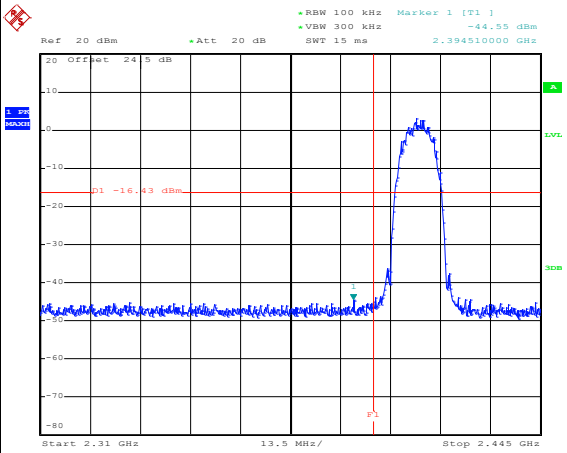


3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Engineer :	Ken HsuLena Lo and Shiang Wang	**Temperature :**	21~25℃
		Relative Humidity :	51~54%

Number of TX = 1, Ant. 1 (Measured)

Test Mode :	802.11b	**Test Channel :**	01

100kHz PSD reference Level	Channel Plot
	
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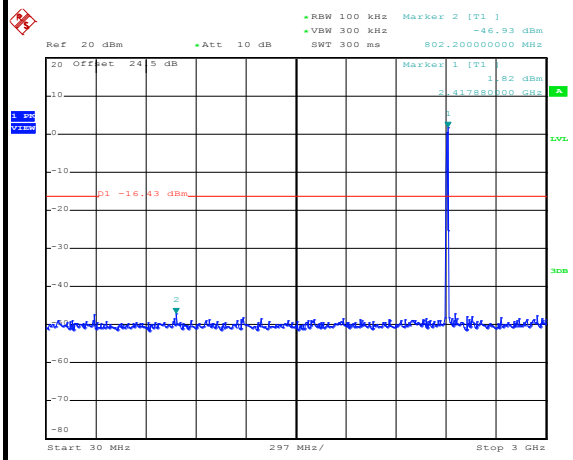
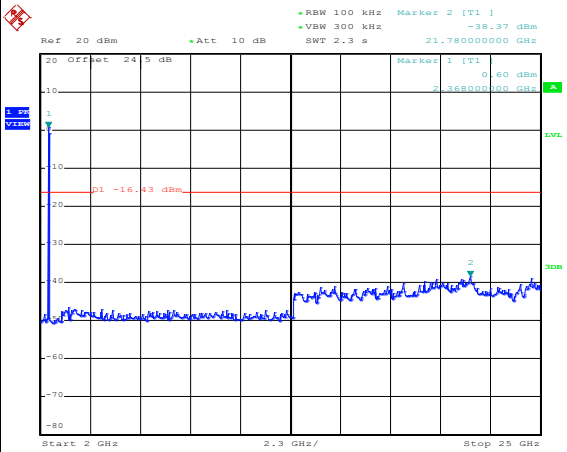
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
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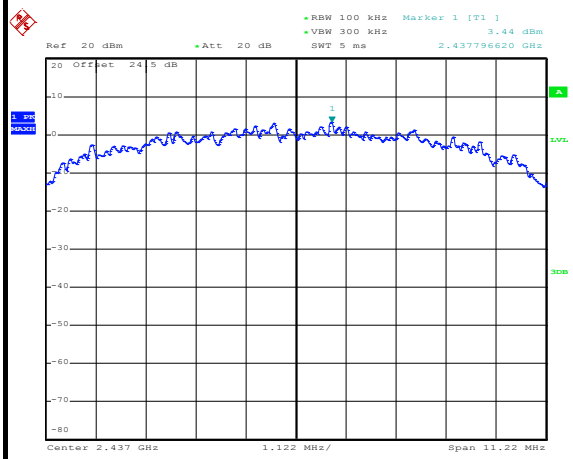
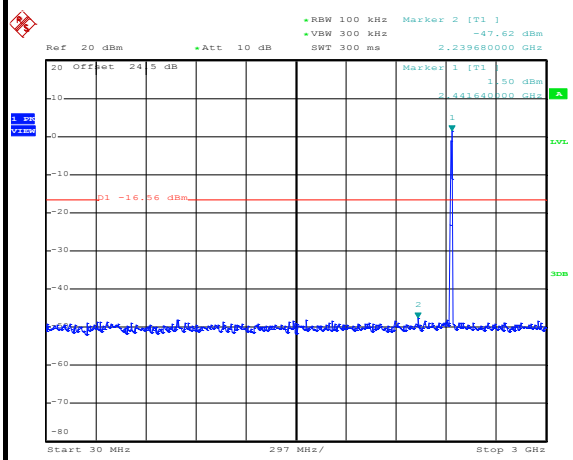
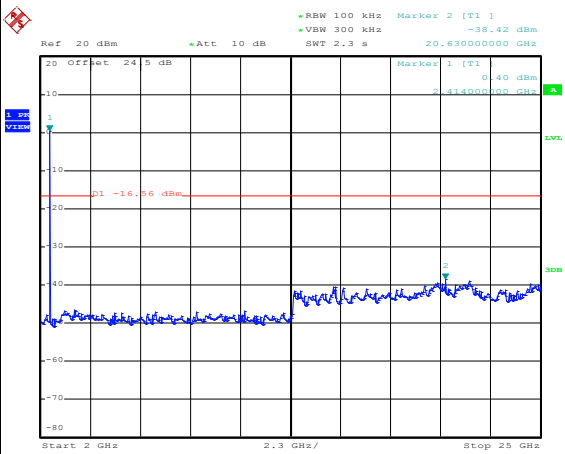
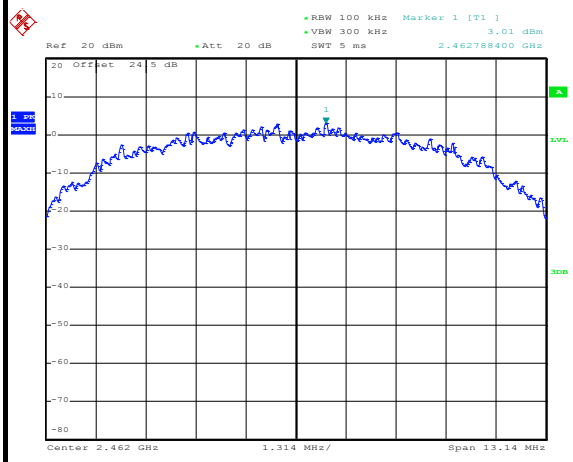
Test Mode :	802.11b	Test Channel :	06

100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

Test Mode :	802.11b	Test Channel :	11

100kHz PSD reference Level



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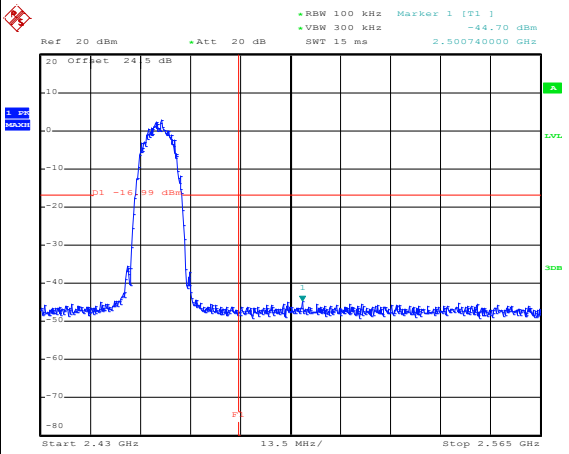
Channel Plot



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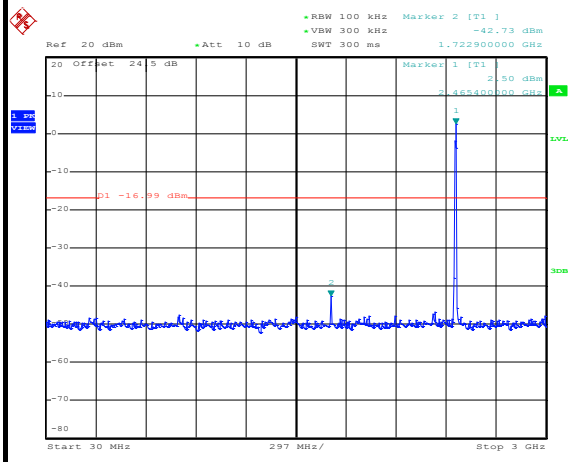
Spurious Emission 30MHz~3GHz



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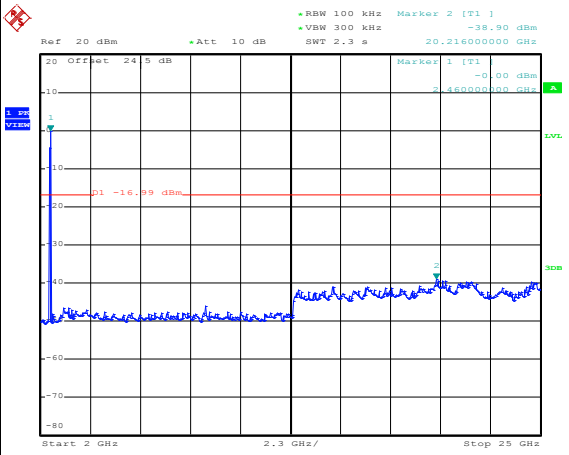
Spurious Emission 2GHz~25GHz



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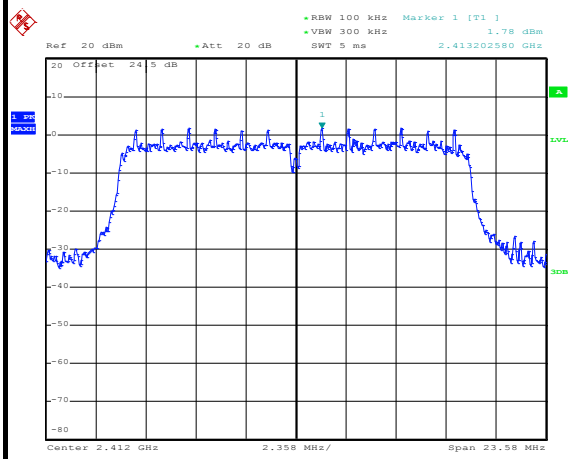
Test Mode :	802.11g	Test Channel :	01

100kHz PSD reference Level



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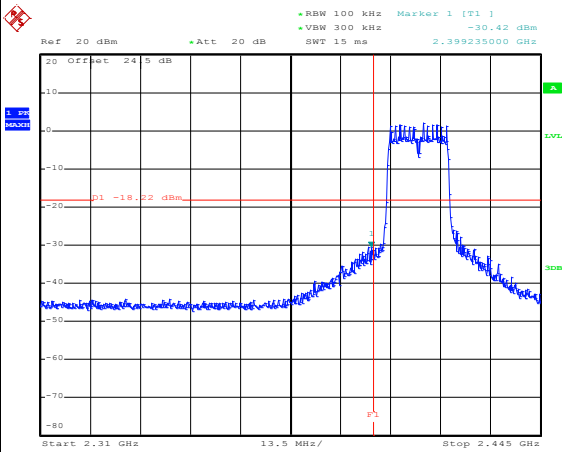
Channel Plot



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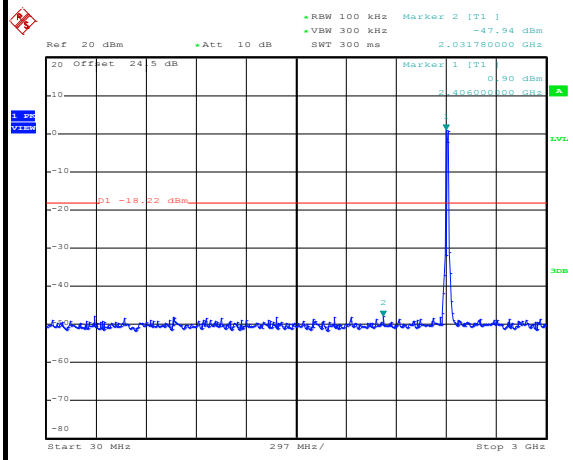
Spurious Emission 30MHz~3GHz



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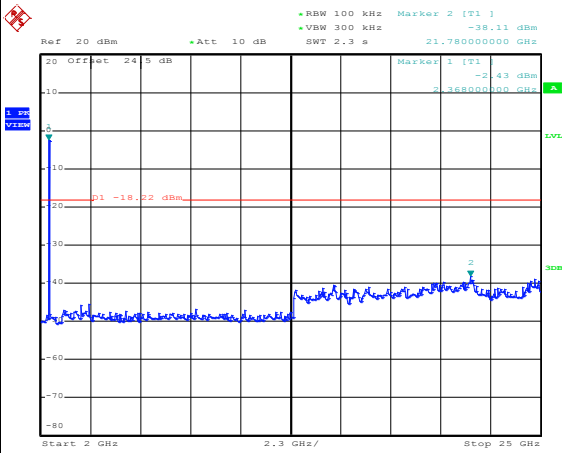
Spurious Emission 2GHz~25GHz



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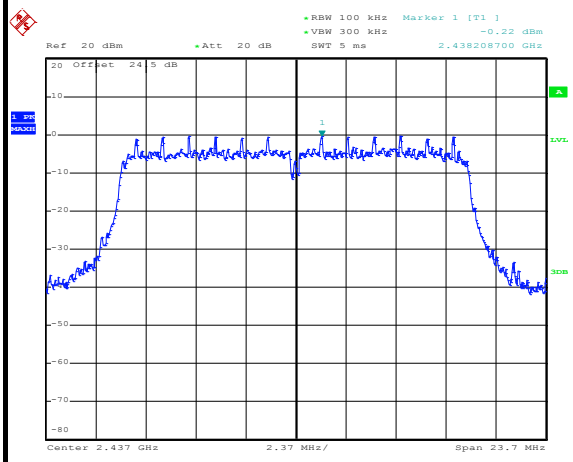
100kHz PSD reference Level	Channel Plot
	
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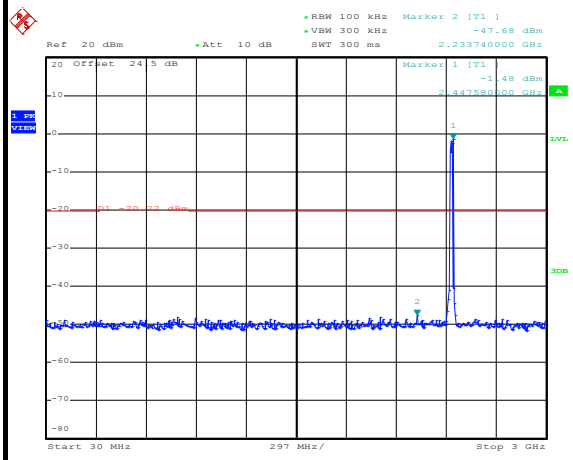
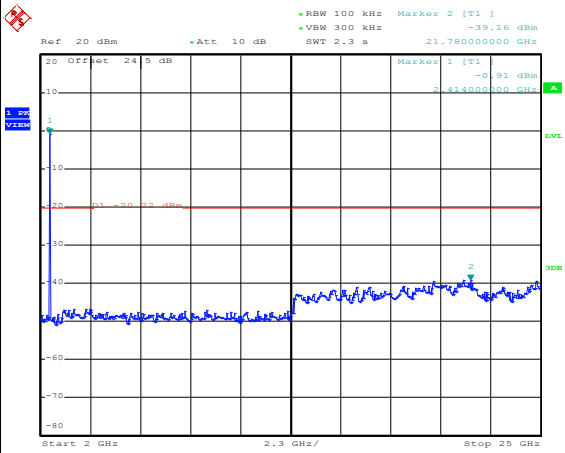
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	
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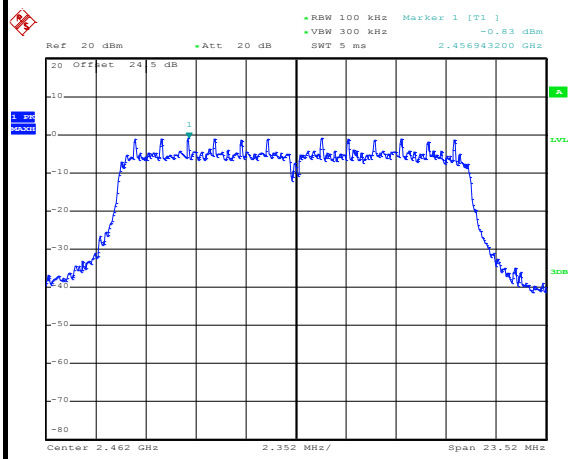
Test Mode :	802.11g	Test Channel :	11

100kHz PSD reference Level



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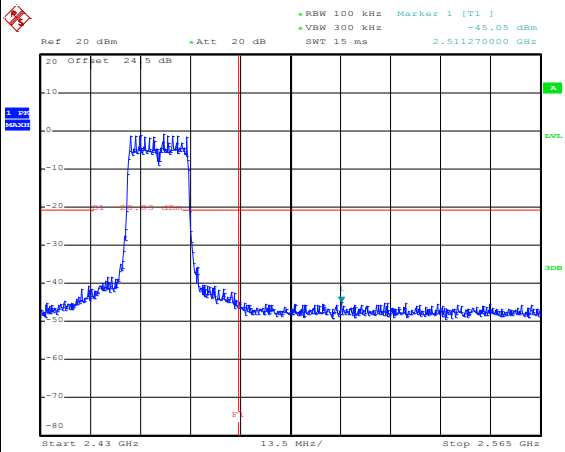
Channel Plot



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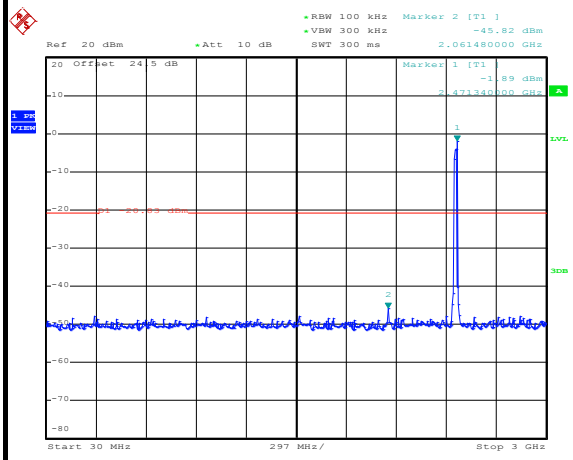
Spurious Emission 30MHz~3GHz



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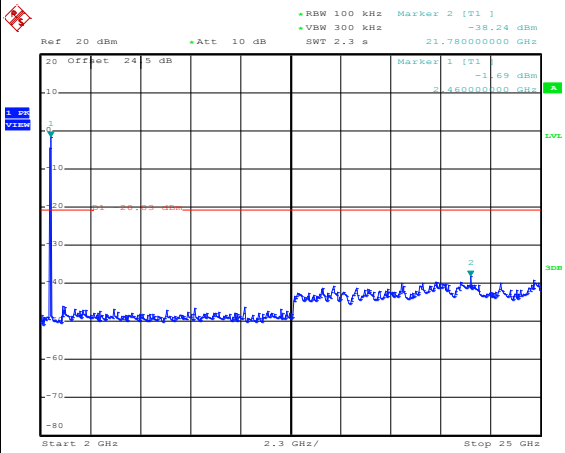
Spurious Emission 2GHz~25GHz



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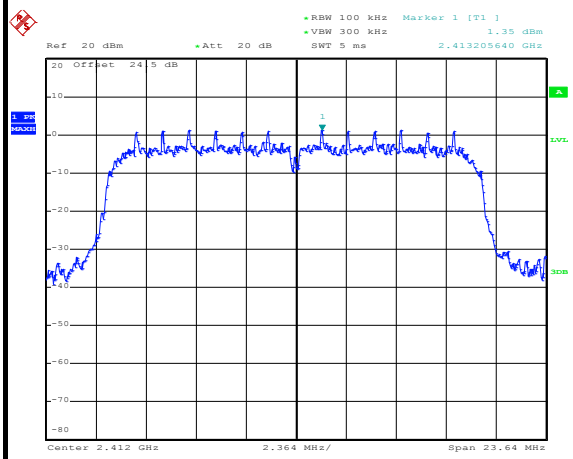
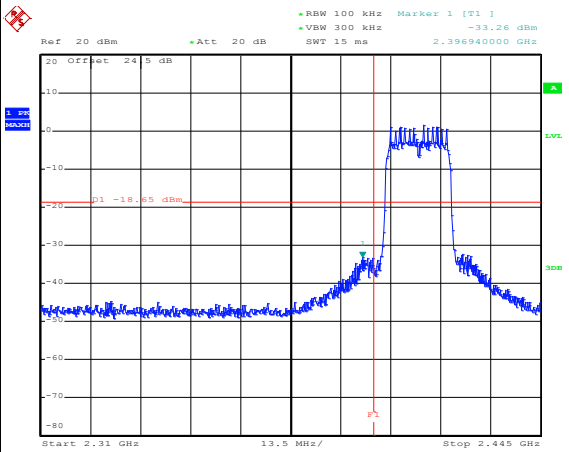
Test Mode :	802.11n HT20	Test Channel :	01

100kHz PSD reference Level



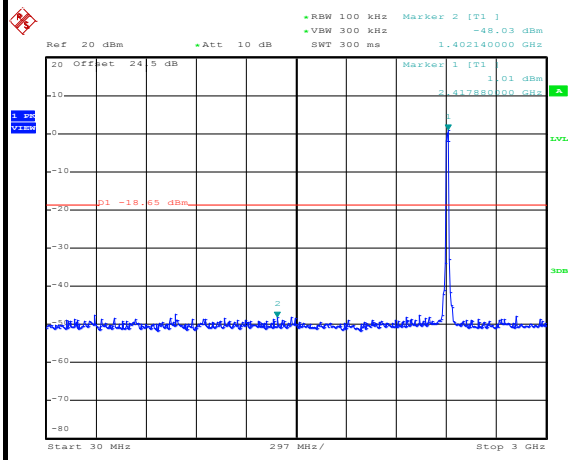
Date: 22.MAY.2018 06:27:23

Channel Plot



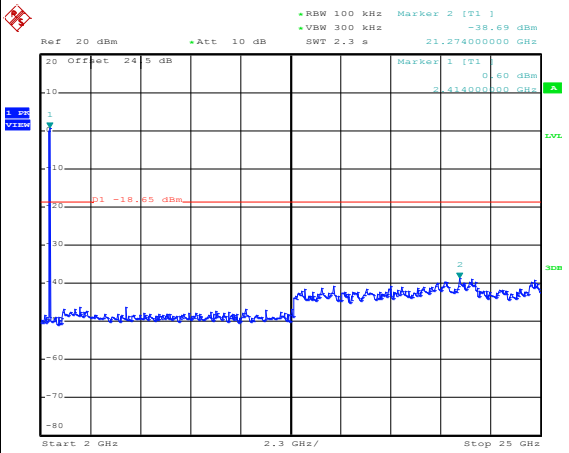
Date: 22.MAY.2018 06:28:44

Spurious Emission 30MHz~3GHz



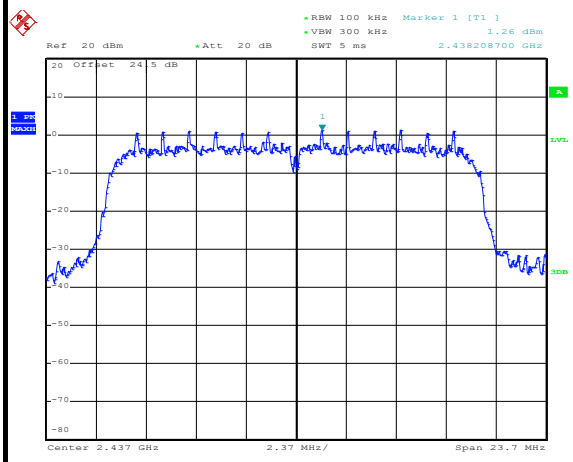
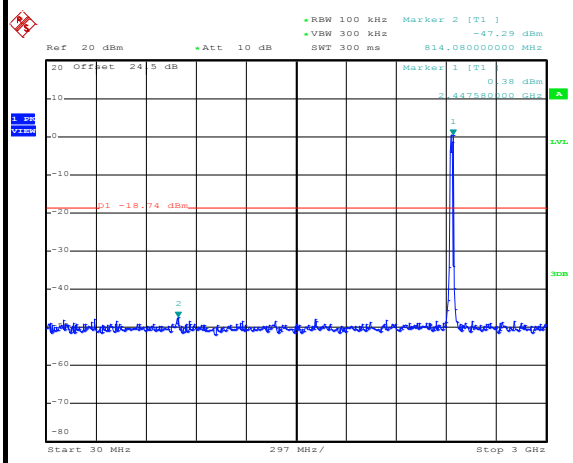
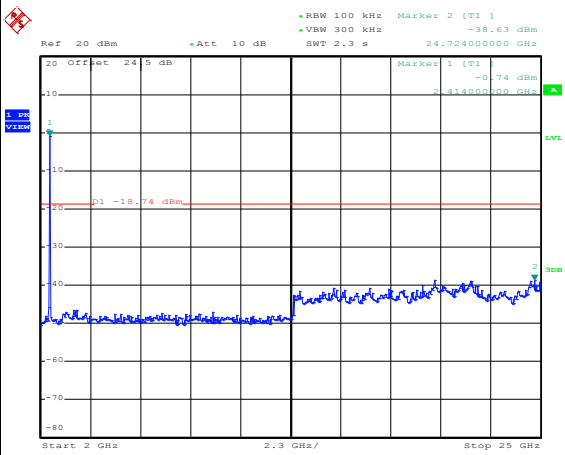
Date: 22.MAY.2018 06:29:35

Spurious Emission 2GHz~25GHz

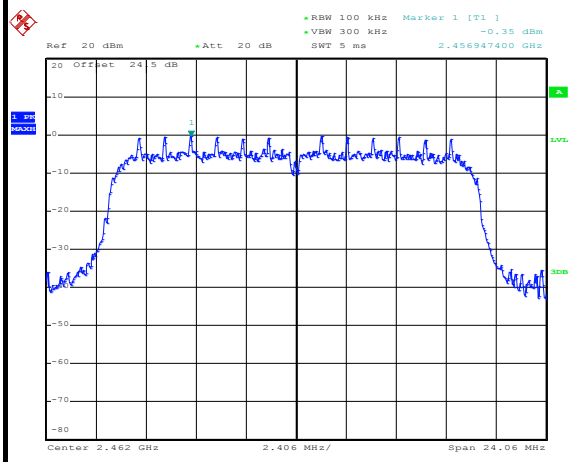
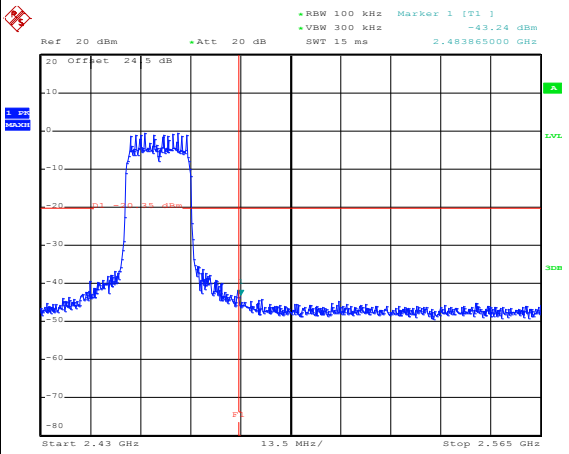
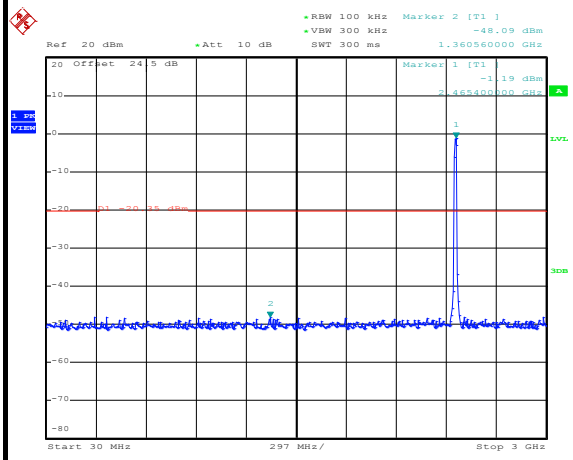
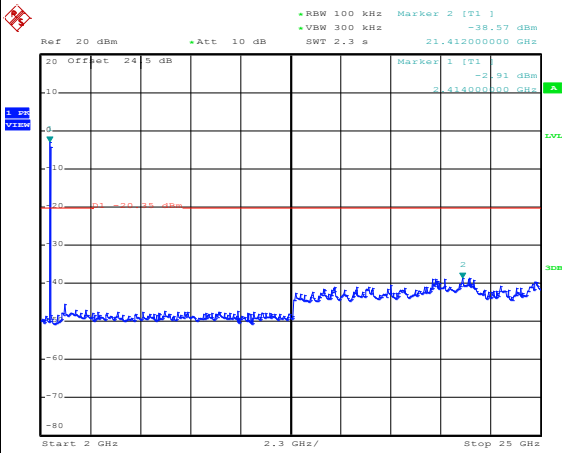


Date: 22.MAY.2018 06:29:51

Test Mode :	802.11n HT20	Test Channel :	06

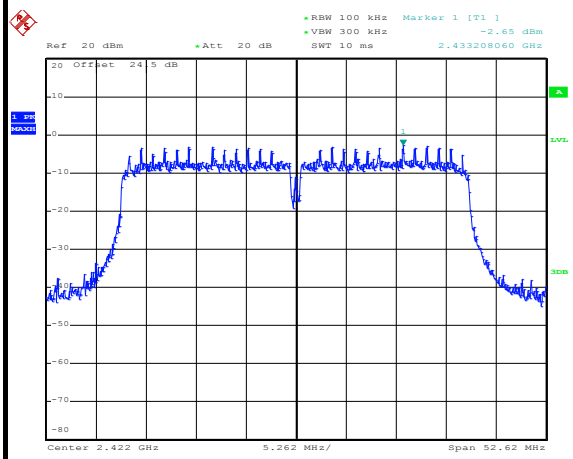
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

Test Mode :	802.11n HT20	Test Channel :	11

100kHz PSD reference Level	Channel Plot
	
Date: 22.MAY.2018 06:37:19	Date: 22.MAY.2018 06:38:34
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 22.MAY.2018 06:39:20	Date: 22.MAY.2018 06:40:04

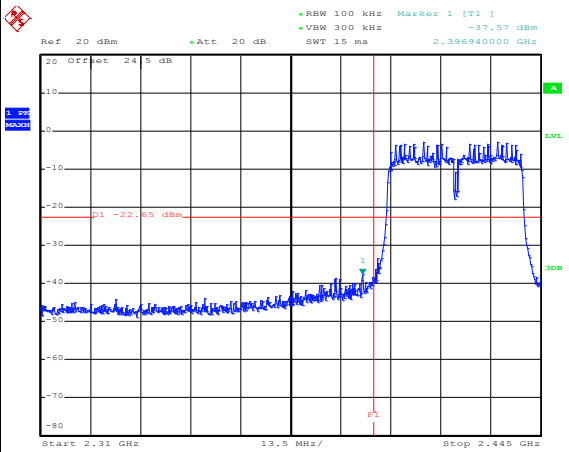
Test Mode :	802.11n HT40	Test Channel :	03

100kHz PSD reference Level



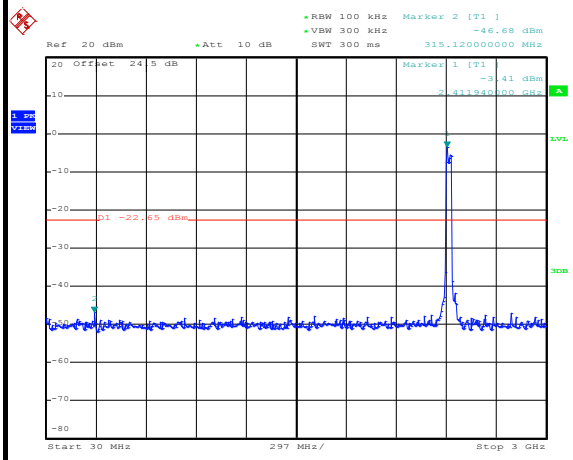
Date: 22.MAY.2018 06:44:40

Channel Plot



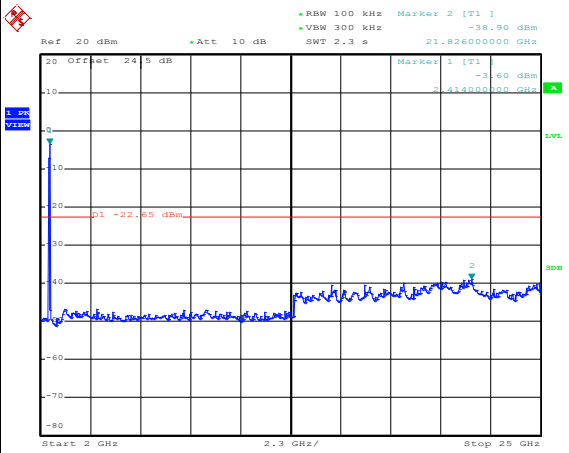
Date: 22.MAY.2018 06:45:09

Spurious Emission 30MHz~3GHz



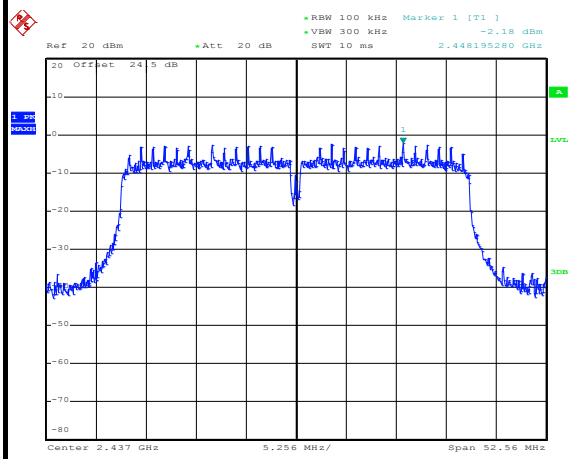
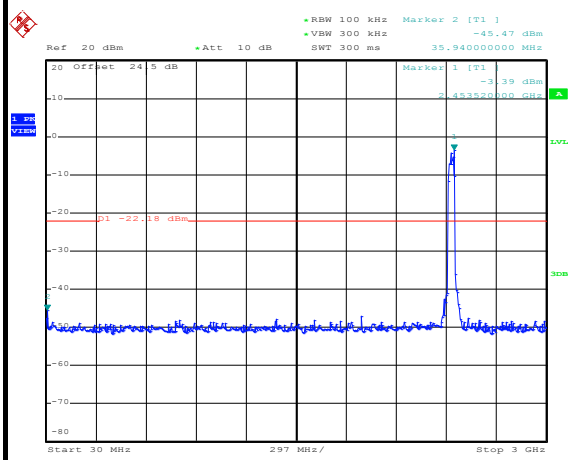
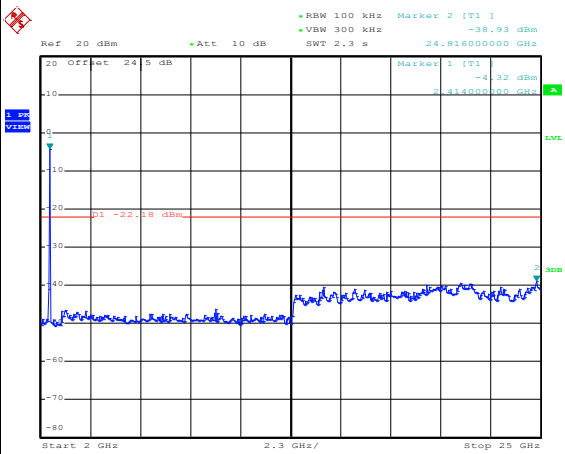
Date: 22.MAY.2018 06:46:30

Spurious Emission 2GHz~25GHz



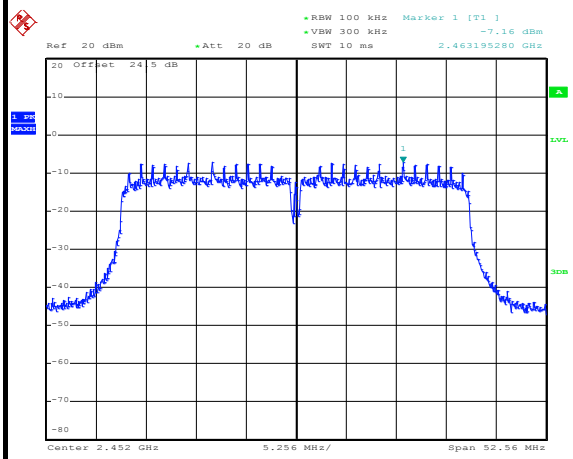
Date: 22.MAY.2018 06:46:49

Test Mode :	802.11n HT40	Test Channel :	06

100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

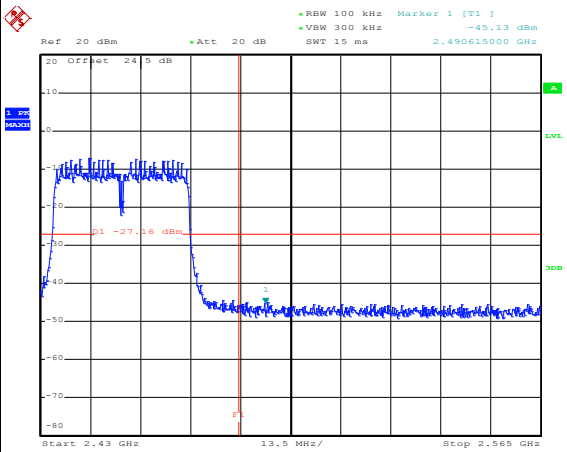
Test Mode :	802.11n HT40	Test Channel :	09

100kHz PSD reference Level



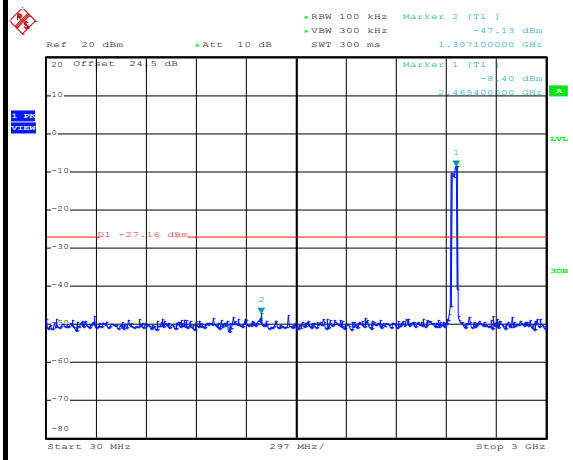
Date: 22.MAY.2018 07:00:40

Channel Plot



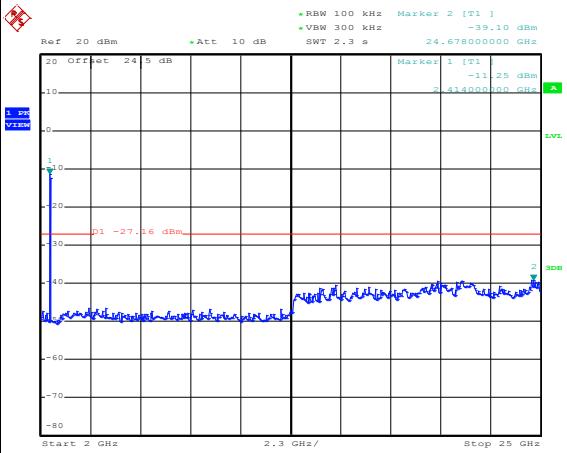
Date: 22.MAY.2018 07:00:56

Spurious Emission 30MHz~3GHz



Date: 22.MAY.2018 07:01:14

Spurious Emission 2GHz~25GHz



Date: 22.MAY.2018 07:01:36

3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

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

3.5.2 Measuring Instruments

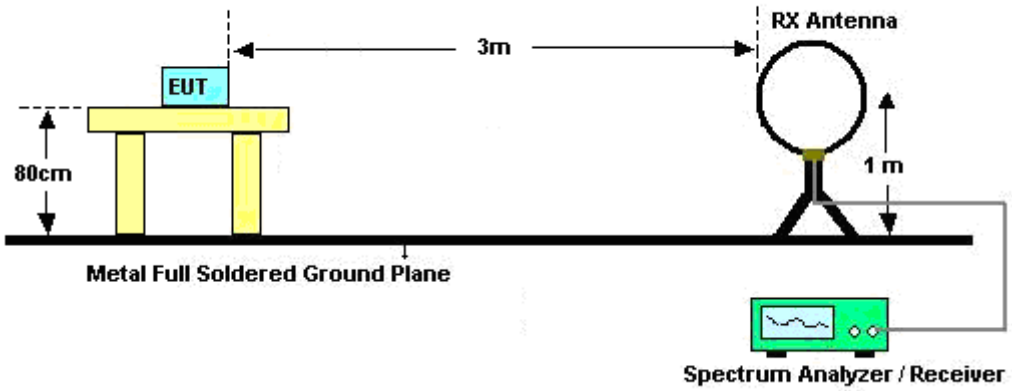
See list of measuring equipment of this test report.

3.5.3 Test Procedures

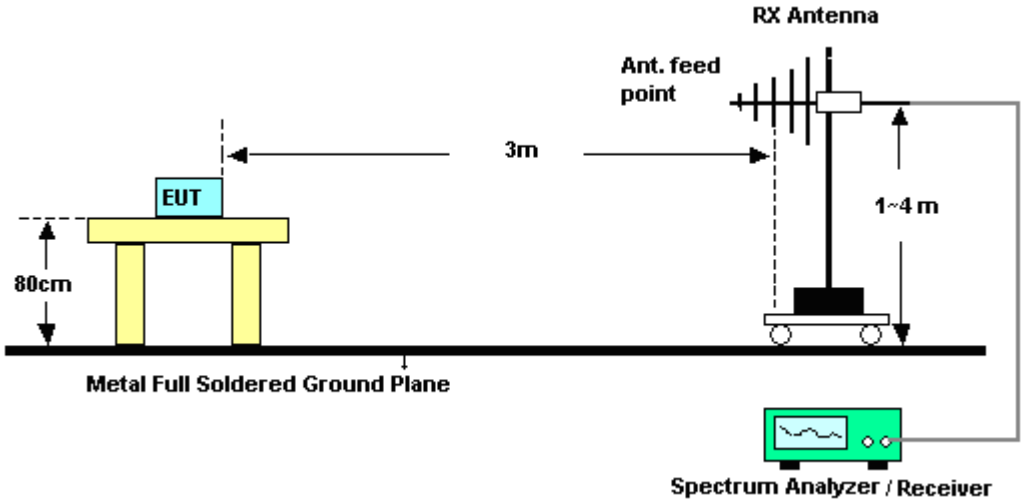
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. 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.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
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.
8. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW=100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

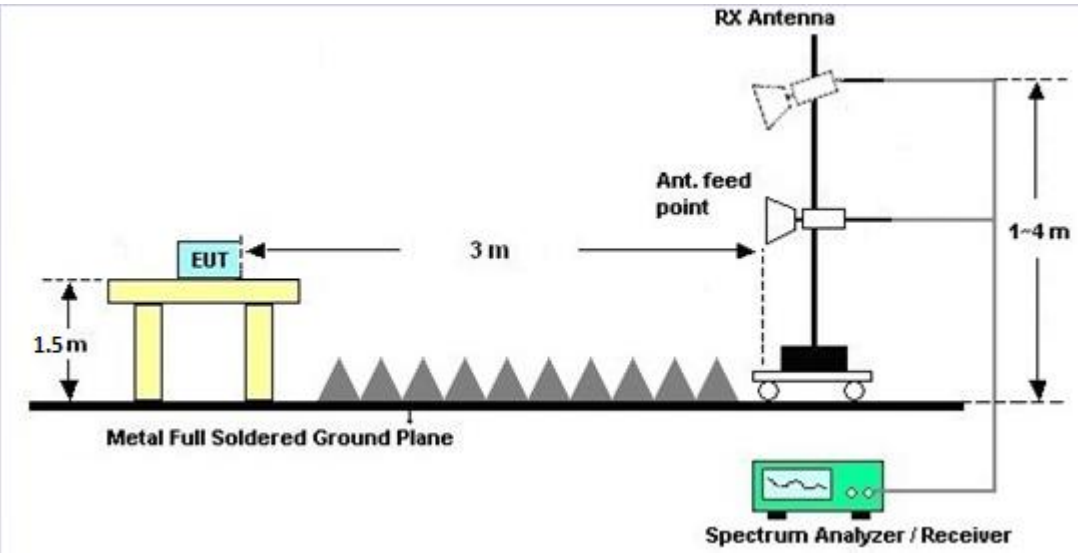
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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 semi-Anechoic chamber, and the result came out very similar.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.5.7 Duty Cycle

Please refer to Appendix E.

3.5.8 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.

3.6 AC Conducted Emission Measurement

3.6.1 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.

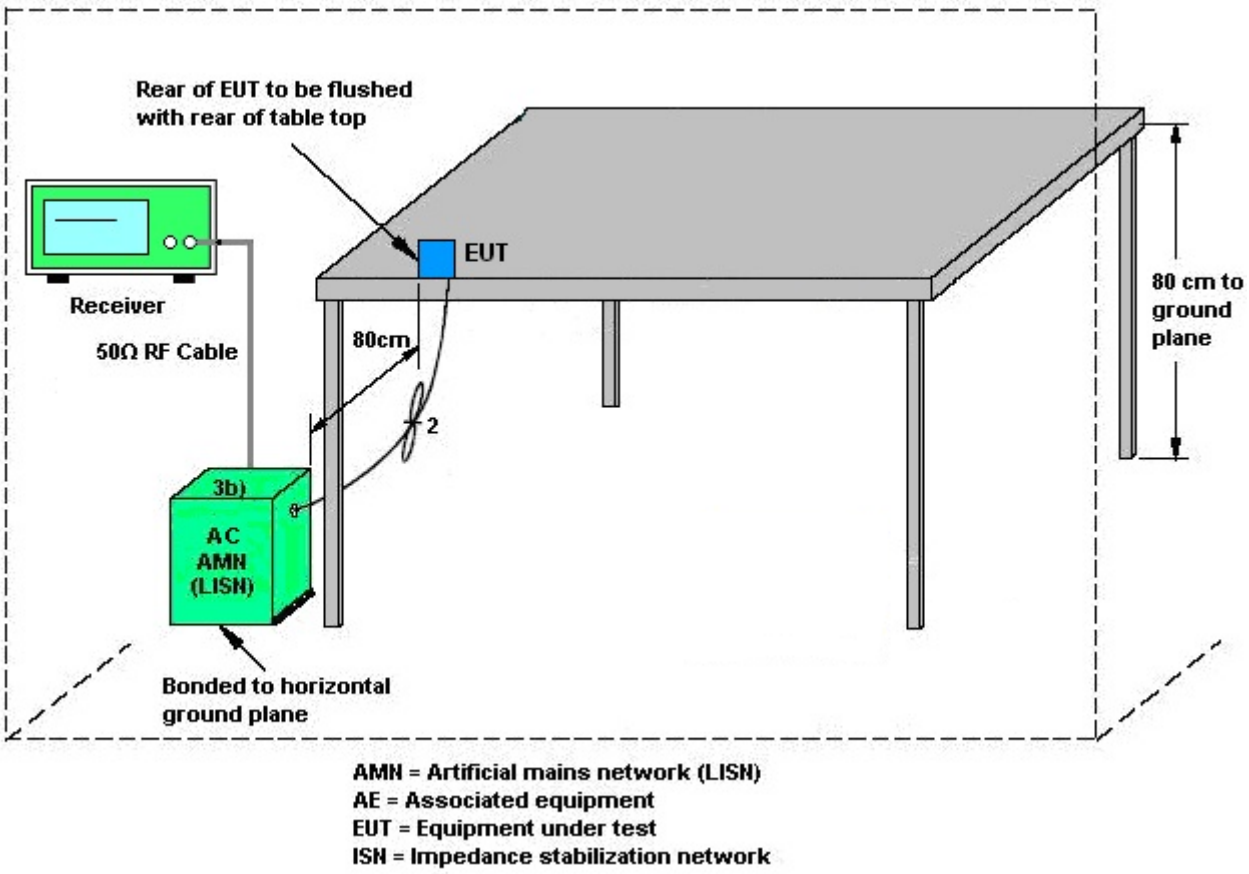
3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it 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 (IF bandwidth = 9kHz) with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached Antenna or of an Antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

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	Mar. 01, 2018~ May 22, 2018	Sep. 06, 2018	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1207349	300MHz~40GHz	Sep. 07, 2017	Mar. 01, 2018~ May 22, 2018	Sep. 06, 2018	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 20, 2017	Mar. 01, 2018~ May 22, 2018	Jun. 19, 2018	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1300484	N/A	Mar. 01, 2018	Mar. 01, 2018~ May 22, 2018	Feb. 28, 2019	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jan. 19, 2018	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Sep. 20, 2017	Jan. 19, 2018	Sep. 19, 2018	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 30, 2017	Jan. 19, 2018	Nov. 29, 2018	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 05, 2018	Jan. 19, 2018	Jan. 04, 2019	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 05, 2018	Jan. 19, 2018	Jan. 04, 2019	Conduction (CO05-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 18, 2017	Jan. 17, 2018 ~ Jan. 23, 2018	Jul. 17, 2018	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Jan. 16, 2018	Jan. 17, 2018 ~ Jan. 23, 2018	Jan. 15, 2019	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D&N-6-06	35414&AT-N0602	30MHz~1GHz	Oct. 14, 2017	Jan. 17, 2018 ~ Jan. 23, 2018	Oct. 13, 2018	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz ~ 18GHz	Oct. 16, 2017	Jan. 17, 2018 ~ Jan. 23, 2018	Oct. 15, 2018	Radiation (03CH11-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Nov. 23, 2017	Jan. 17, 2018 ~ Jan. 23, 2018	Nov. 22, 2019	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 10, 2017	Jan. 17, 2018 ~ Jan. 23, 2018	Nov. 09, 2018	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz ~ 44GHz	Oct. 19, 2017	Jan. 17, 2018 ~ Jan. 23, 2018	Oct. 18, 2018	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Jan. 17, 2018 ~ Jan. 23, 2018	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Jan. 17, 2018 ~ Jan. 23, 2018	N/A	Radiation (03CH11-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590074	1GHz~18GHz	May 22, 2017	Jan. 17, 2018 ~ Jan. 23, 2018	May 21, 2018	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 27, 2017	Jan. 17, 2018 ~ Jan. 23, 2018	Nov. 26, 2018	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY15539/4	30M-18G	Mar. 17, 2017	Jan. 17, 2018 ~ Jan. 23, 2018	Mar. 16, 2018	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY335041/4 MY9840/4 MY9838/4	9k~30MHz	Jan. 27, 2017	Jan. 17, 2018 ~ Jan. 23, 2018	Jan. 26, 2018	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY335041/4 MY9840/4 MY9838/4	1G~26GHz	Jan. 27, 2017	Jan. 17, 2018 ~ Jan. 23, 2018	Jan. 26, 2018	Radiation (03CH11-HY)
Filter	Wainwright	WLKS1200-12SS	SN2	1.2G Low Pass	Mar. 24, 2017	Jan. 17, 2018 ~ Jan. 23, 2018	Mar. 23, 2018	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60SS	SN3	2.7G High Pass	Sep. 18, 2017	Jan. 17, 2018 ~ Jan. 23, 2018	Sep. 17, 2018	Radiation (03CH11-HY)

5 Uncertainty of Evaluation

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

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

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.50**

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

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

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Lena Lo/Shiang Wang	Temperature:	21~25	°C
Test Date:	2018/3/1~2018/05/22	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band								
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
11b	1Mbps	1	1	2412	11.50	7.52	0.50	Pass
11b	1Mbps	1	6	2437	11.50	7.48	0.50	Pass
11b	1Mbps	1	11	2462	11.50	8.76	0.50	Pass
11g	6Mbps	1	1	2412	17.05	15.72	0.50	Pass
11g	6Mbps	1	6	2437	16.95	15.80	0.50	Pass
11g	6Mbps	1	11	2462	16.95	15.68	0.50	Pass
HT20	MCS0	1	1	2412	17.70	15.76	0.50	Pass
HT20	MCS0	1	6	2437	17.65	15.80	0.50	Pass
HT20	MCS0	1	11	2462	17.70	16.04	0.50	Pass
HT40	MCS0	1	3	2422	36.40	35.08	0.50	Pass
HT40	MCS0	1	6	2437	36.50	35.04	0.50	Pass
HT40	MCS0	1	9	2452	36.20	35.04	0.50	Pass

TEST RESULTS DATA
Peak Power Table

2.4GHz Band										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
11b	1Mbps	1	1	2412	15.95	30.00	2.50	18.45	36.00	Pass
11b	1Mbps	1	6	2437	14.68	30.00	2.50	17.18	36.00	Pass
11b	1Mbps	1	11	2462	14.25	30.00	2.50	16.75	36.00	Pass
11g	6Mbps	1	1	2412	20.70	30.00	2.50	23.20	36.00	Pass
11g	6Mbps	1	6	2437	20.02	30.00	2.50	22.52	36.00	Pass
11g	6Mbps	1	11	2462	19.77	30.00	2.50	22.27	36.00	Pass
HT20	MCS0	1	1	2412	20.38	30.00	2.50	22.88	36.00	Pass
HT20	MCS0	1	6	2437	20.35	30.00	2.50	22.85	36.00	Pass
HT20	MCS0	1	11	2462	19.48	30.00	2.50	21.98	36.00	Pass
HT40	MCS0	1	3	2422	20.10	30.00	2.50	22.60	36.00	Pass
HT40	MCS0	1	6	2437	20.32	30.00	2.50	22.82	36.00	Pass
HT40	MCS0	1	9	2452	16.00	30.00	2.50	18.50	36.00	Pass

TEST RESULTS DATA
Average Power Table
(Reporting Only)

2.4GHz Band						
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)
11b	1Mbps	1	1	2412	0.58	12.36
11b	1Mbps	1	6	2437	0.58	11.09
11b	1Mbps	1	11	2462	0.58	10.62
11g	6Mbps	1	1	2412	0.63	12.99
11g	6Mbps	1	6	2437	0.63	11.27
11g	6Mbps	1	11	2462	0.63	10.50
HT20	MCS0	1	1	2412	0.14	12.13
HT20	MCS0	1	6	2437	0.14	11.71
HT20	MCS0	1	11	2462	0.14	9.99
HT40	MCS0	1	3	2422	0.59	11.02
HT40	MCS0	1	6	2437	0.59	11.67
HT40	MCS0	1	9	2452	0.59	7.22

TEST RESULTS DATA
Peak Power Density

2.4GHz Band								
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
11b	1Mbps	1	1	2412	-11.44	2.50	8.00	Pass
11b	1Mbps	1	6	2437	-11.39	2.50	8.00	Pass
11b	1Mbps	1	11	2462	-11.83	2.50	8.00	Pass
11g	6Mbps	1	1	2412	-12.59	2.50	8.00	Pass
11g	6Mbps	1	6	2437	-13.30	2.50	8.00	Pass
11g	6Mbps	1	11	2462	-14.12	2.50	8.00	Pass
HT20	MCS0	1	1	2412	-12.64	2.50	8.00	Pass
HT20	MCS0	1	6	2437	-12.82	2.50	8.00	Pass
HT20	MCS0	1	11	2462	-12.49	2.50	8.00	Pass
HT40	MCS0	1	3	2422	-13.90	2.50	8.00	Pass
HT40	MCS0	1	6	2437	-14.66	2.50	8.00	Pass
HT40	MCS0	1	9	2452	-14.32	2.50	8.00	Pass

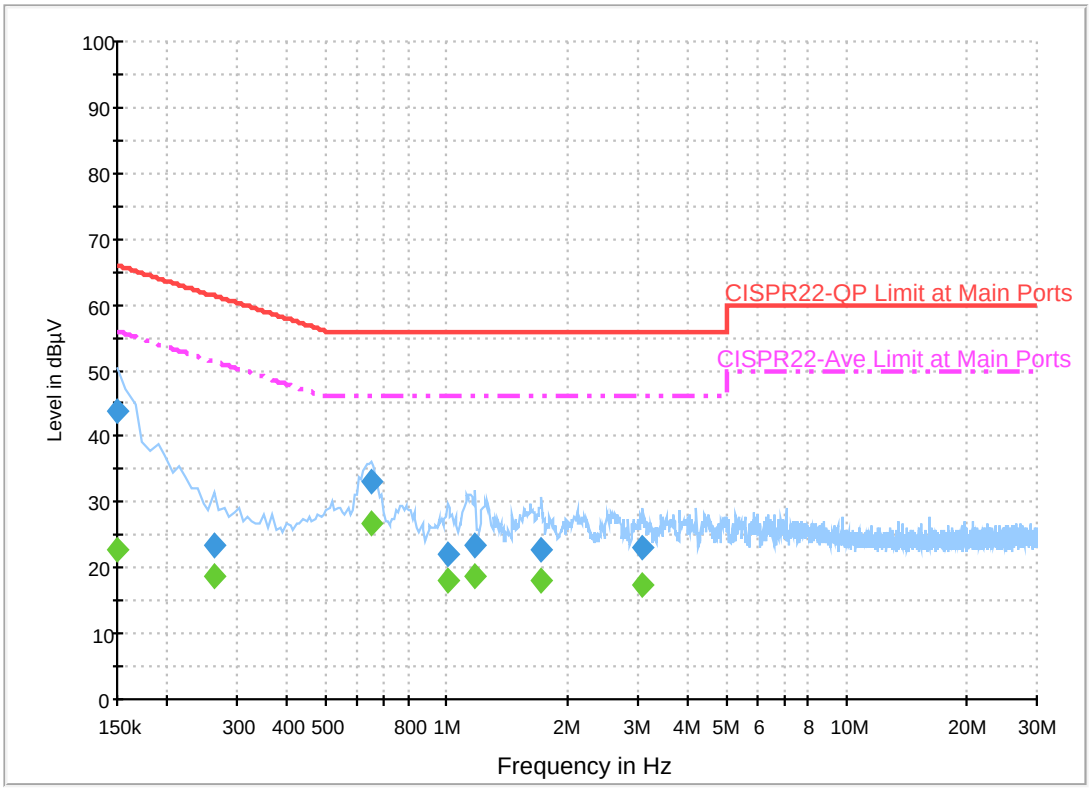
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Blue Lan	**Temperature :**	25~26℃
		Relative Humidity :	51~53%

EUT Information

Report NO :	6d2013-01
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

ENV216 Auto Test FCC Power Bar - L



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	43.7	Off	L1	19.5	22.3	66.0
0.262000	23.5	Off	L1	19.5	37.9	61.4
0.646000	32.9	Off	L1	19.5	23.1	56.0
1.006000	22.2	Off	L1	19.5	33.8	56.0
1.182000	23.4	Off	L1	19.6	32.6	56.0
1.726000	22.9	Off	L1	19.6	33.1	56.0
3.094000	23.0	Off	L1	19.6	33.0	56.0

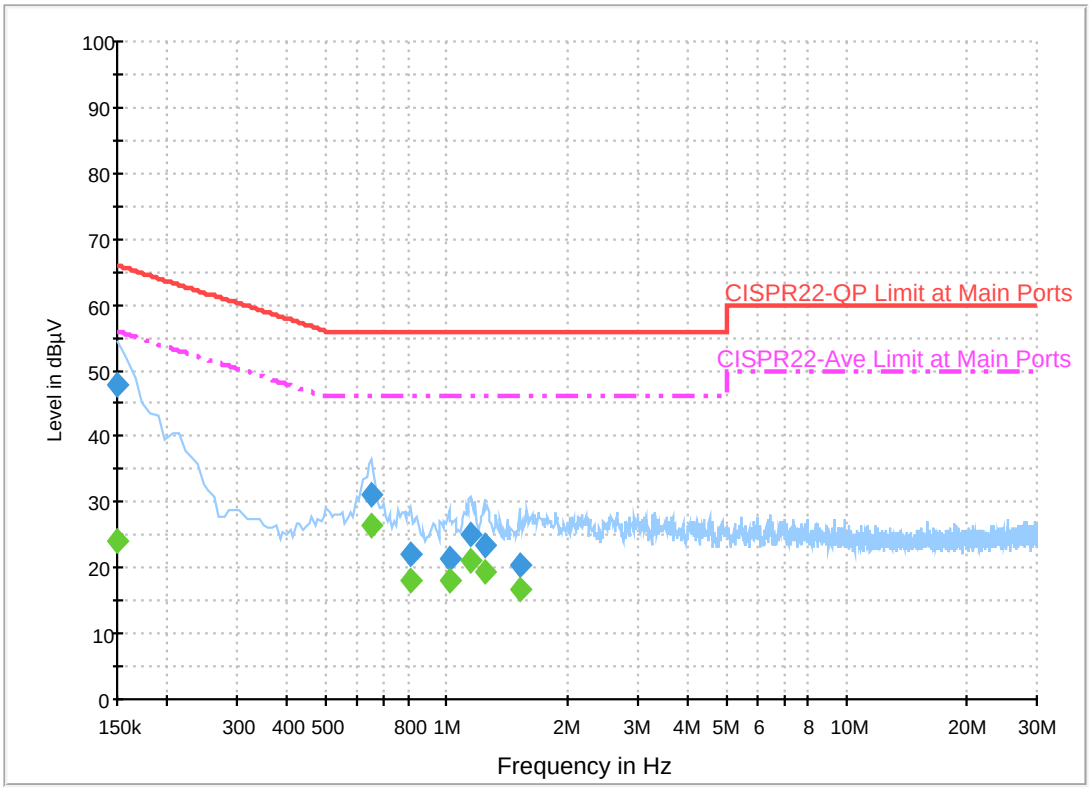
Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	22.9	Off	L1	19.5	33.1	56.0
0.262000	18.8	Off	L1	19.5	32.6	51.4
0.646000	26.7	Off	L1	19.5	19.3	46.0
1.006000	18.1	Off	L1	19.5	27.9	46.0
1.182000	18.6	Off	L1	19.6	27.4	46.0
1.726000	18.2	Off	L1	19.6	27.8	46.0
3.094000	17.5	Off	L1	19.6	28.5	46.0

EUT Information

Report NO :	6d2013-01
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral

ENV216 Auto Test FCC Power Bar - N



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	47.7	Off	N	19.5	18.3	66.0
0.646000	31.1	Off	N	19.5	24.9	56.0
0.814000	22.2	Off	N	19.5	33.8	56.0
1.014000	21.4	Off	N	19.5	34.6	56.0
1.150000	25.2	Off	N	19.5	30.8	56.0
1.246000	23.5	Off	N	19.5	32.5	56.0
1.526000	20.2	Off	N	19.6	35.8	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	24.2	Off	N	19.5	31.8	56.0
0.646000	26.4	Off	N	19.5	19.6	46.0
0.814000	18.2	Off	N	19.5	27.8	46.0
1.014000	18.0	Off	N	19.5	28.0	46.0
1.150000	21.0	Off	N	19.5	25.0	46.0
1.246000	19.4	Off	N	19.5	26.6	46.0
1.526000	16.9	Off	N	19.6	29.1	46.0

Appendix C. Radiated Spurious Emission

Test Engineer :	Hao Hsu, Jacky Hung, and Ken Wu	**Temperature :**	23~25°C
		Relative Humidity :	54~59%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2387.91	52.9	-21.1	74	43.08	27.13	6.36	33.6	332	70	P	H
		2379.72	43.5	-10.5	54	33.79	27.09	6.29	33.6	332	70	A	H
	*	2412	104.62	-	-	94.73	27.18	6.37	33.59	332	70	P	H
	*	2412	97.78	-	-	87.89	27.18	6.37	33.59	332	70	A	H
													H
													H
		2366.595	51.85	-22.15	74	42.19	27.04	6.29	33.6	290	129	P	V
		2384.235	43.06	-10.94	54	33.28	27.09	6.36	33.6	290	129	A	V
	*	2412	98.64	-	-	88.75	27.18	6.37	33.59	290	129	P	V
	*	2412	91.74	-	-	81.85	27.18	6.37	33.59	290	129	A	V
													V
													V
802.11b CH 06 2437MHz		2339.7	52.11	-21.89	74	42.56	27	6.22	33.6	322	73	P	H
		2389.05	43.18	-10.82	54	33.36	27.13	6.36	33.6	322	73	A	H
	*	2437	104.3	-	-	94.31	27.27	6.38	33.59	322	73	P	H
	*	2437	97.86	-	-	87.87	27.27	6.38	33.59	322	73	A	H
		2485.12	52.69	-21.31	74	42.59	27.36	6.39	33.58	322	73	P	H
		2489.12	43.69	-10.31	54	33.55	27.4	6.39	33.58	322	73	A	H
		2368.65	51.59	-22.41	74	41.88	27.09	6.29	33.6	400	121	P	V
		2345.1	43.04	-10.96	54	33.49	27	6.22	33.6	400	121	A	V
	*	2437	100.37	-	-	90.38	27.27	6.38	33.59	400	121	P	V
	*	2437	93.67	-	-	83.68	27.27	6.38	33.59	400	121	A	V
		2498.48	52.39	-21.61	74	42.24	27.4	6.39	33.57	400	121	P	V
		2488.96	43.4	-10.6	54	33.26	27.4	6.39	33.58	400	121	A	V

802.11b CH 11 2462MHz	*	2462	105.31	-	-	95.27	27.31	6.38	33.58	317	67	P	H
	*	2462	98.55	-	-	88.51	27.31	6.38	33.58	317	67	A	H
		2493.36	53.24	-20.76	74	43.09	27.4	6.39	33.57	317	67	P	H
		2484.76	43.89	-10.11	54	33.79	27.36	6.39	33.58	317	67	A	H
													H
													H
	*	2462	100.23	-	-	90.19	27.31	6.38	33.58	361	119	P	V
	*	2462	93.61	-	-	83.57	27.31	6.38	33.58	361	119	A	V
		2496.84	52.65	-21.35	74	42.5	27.4	6.39	33.57	361	119	P	V
		2484.6	43.43	-10.57	54	33.33	27.36	6.39	33.58	361	119	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11b (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	58.43	-15.57	74	74.36	31.29	9.59	57.24	258	47	P	H
		4824	50.9	-3.1	54	66.83	31.29	9.59	57.24	258	47	A	H
													H
													H
		4824	57.86	-16.14	74	73.79	31.29	9.59	57.24	280	105	P	V
		4824	50.66	-3.34	54	66.59	31.29	9.59	57.24	280	105	A	V
													V
													V
802.11b CH 06 2437MHz		4874	57.9	-16.1	74	73.7	31.38	9.56	57.17	253	47	P	H
		4874	50.62	-3.38	54	66.42	31.38	9.56	57.17	253	47	A	H
		7311	54.67	-19.33	74	63.89	36.28	11.31	57.27	100	145	P	H
		7311	46.17	-7.83	54	55.39	36.28	11.31	57.27	100	145	A	H
		4874	56.86	-17.14	74	72.66	31.38	9.56	57.17	302	106	P	V
		4874	49.47	-4.53	54	65.27	31.38	9.56	57.17	302	106	A	V
		7311	45.39	-28.61	74	54.61	36.28	11.31	57.27	100	0	P	V
													V
802.11b CH 11 2462MHz		4924	56.99	-17.01	74	72.62	31.48	9.55	57.1	263	47	P	H
		4924	49.66	-4.34	54	65.29	31.48	9.55	57.1	263	47	A	H
		7386	59.38	-14.62	74	68.61	36.47	11.3	57.38	100	143	P	H
		7386	50.87	-3.13	54	60.1	36.47	11.3	57.38	100	143	A	H
		4924	54.07	-19.93	74	69.7	31.48	9.55	57.1	255	105	P	V
		4924	47.93	-6.07	54	63.56	31.48	9.55	57.1	255	105	A	V
		7386	53.2	-20.8	74	62.43	36.47	11.3	57.38	100	331	P	V
		7386	44.52	-9.48	54	53.75	36.47	11.3	57.38	100	331	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11g (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2390	63.02	-10.98	74	53.19	27.13	6.36	33.59	327	66	P	H
		2390	50.25	-3.75	54	40.42	27.13	6.36	33.59	327	66	A	H
	*	2412	102.65	-	-	92.76	27.18	6.37	33.59	327	66	P	H
	*	2412	95.44	-	-	85.55	27.18	6.37	33.59	327	66	A	H
													H
													H
		2389.905	53.37	-20.63	74	43.54	27.13	6.36	33.59	400	122	P	V
		2389.485	44.06	-9.94	54	34.24	27.13	6.36	33.6	400	122	A	V
	*	2412	97.45	-	-	87.56	27.18	6.37	33.59	400	122	P	V
	*	2412	89.91	-	-	80.02	27.18	6.37	33.59	400	122	A	V
													V
													V
802.11g CH 06 2437MHz		2370.45	51.49	-22.51	74	41.78	27.09	6.29	33.6	321	72	P	H
		2368.2	42.94	-11.06	54	33.28	27.04	6.29	33.6	321	72	A	H
	*	2437	102.01	-	-	92.02	27.27	6.38	33.59	321	72	P	H
	*	2437	94.68	-	-	84.69	27.27	6.38	33.59	321	72	A	H
		2484.16	53.04	-20.96	74	42.95	27.36	6.38	33.58	321	72	P	H
		2486.96	43.78	-10.22	54	33.68	27.36	6.39	33.58	321	72	A	H
		2389.65	51.43	-22.57	74	41.61	27.13	6.36	33.6	400	123	P	V
		2382.6	43.08	-10.92	54	33.3	27.09	6.36	33.6	400	123	A	V
	*	2437	97.51	-	-	87.52	27.27	6.38	33.59	400	123	P	V
	*	2437	89.99	-	-	80	27.27	6.38	33.59	400	123	A	V
		2489.2	52.2	-21.8	74	42.06	27.4	6.39	33.58	400	123	P	V
		2493.28	43.28	-10.72	54	33.13	27.4	6.39	33.57	400	123	A	V

802.11g CH 11 2462MHz	*	2462	103.68	-	-	93.64	27.31	6.38	33.58	312	65	P	H
	*	2462	96.18	-	-	86.14	27.31	6.38	33.58	312	65	A	H
		2483.6	63.41	-10.59	74	53.32	27.36	6.38	33.58	312	65	P	H
		2483.6	50.77	-3.23	54	40.68	27.36	6.38	33.58	312	65	P	H
													H
													H
	*	2462	98.37	-	-	88.33	27.31	6.38	33.58	394	117	P	V
	*	2462	90.97	-	-	80.93	27.31	6.38	33.58	394	117	A	V
		2484.04	57.48	-16.52	74	47.39	27.36	6.38	33.58	394	117	P	V
		2483.72	46.27	-7.73	54	36.18	27.36	6.38	33.58	394	117	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11g (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	59.34	-14.66	74	75.27	31.29	9.59	57.24	263	48	P	H
		4824	49.75	-4.25	54	65.68	31.29	9.59	57.24	263	48	A	H
													H
													H
		4824	59.08	-14.92	74	75.01	31.29	9.59	57.24	278	105	P	V
		4824	49.66	-4.34	54	65.59	31.29	9.59	57.24	278	105	A	V
													V
													V
802.11g CH 06 2437MHz		4874	58.86	-15.14	74	74.66	31.38	9.56	57.17	268	48	P	H
		4874	48.48	-5.52	54	64.28	31.38	9.56	57.17	268	48	A	H
		7311	62.43	-11.57	74	71.65	36.28	11.31	57.27	100	143	P	H
		7311	50.55	-3.45	54	59.77	36.28	11.31	57.27	100	143	A	H
		4874	58.26	-15.74	74	74.06	31.38	9.56	57.17	255	105	P	V
		4874	48.96	-5.04	54	64.76	31.38	9.56	57.17	255	105	A	V
		7311	57.46	-16.54	74	66.68	36.28	11.31	57.27	100	331	P	V
		7311	44.61	-9.39	54	53.83	36.28	11.31	57.27	100	331	A	V
802.11g CH 11 2462MHz		4924	57.66	-16.34	74	73.29	31.48	9.55	57.1	262	48	P	H
		4924	47.82	-6.18	54	63.45	31.48	9.55	57.1	262	48	A	H
		7386	61.03	-12.97	74	70.26	36.47	11.3	57.38	100	156	P	H
		7386	50.24	-3.76	54	59.47	36.47	11.3	57.38	100	156	A	H
		4924	55.02	-18.98	74	70.65	31.48	9.55	57.1	266	102	P	V
		4924	46.26	-7.74	54	61.89	31.48	9.55	57.1	266	102	A	V
		7386	54.05	-19.95	74	63.28	36.47	11.3	57.38	100	333	P	V
		7386	44.24	-9.76	54	53.47	36.47	11.3	57.38	100	333	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		2389.065	62.7	-11.3	74	52.88	27.13	6.36	33.6	288	68	P	H
		2390	50.97	-3.03	54	41.14	27.13	6.36	33.59	288	68	A	H
	*	2412	102.92	-	-	93.03	27.18	6.37	33.59	288	68	P	H
	*	2412	95.49	-	-	85.6	27.18	6.37	33.59	288	68	A	H
802.11n													H
HT20													H
CH 01		2388.96	56.24	-17.76	74	46.42	27.13	6.36	33.6	400	113	P	V
2412MHz		2390	44.38	-9.62	54	34.55	27.13	6.36	33.59	400	113	A	V
	*	2412	96.99	-	-	87.1	27.18	6.37	33.59	400	113	P	V
	*	2412	89.65	-	-	79.76	27.18	6.37	33.59	400	113	A	V
													V
													V
		2359.05	52.37	-21.63	74	42.71	27.04	6.29	33.6	322	67	P	H
		2370.6	42.96	-11.04	54	33.25	27.09	6.29	33.6	322	67	A	H
	*	2437	103.33	-	-	93.34	27.27	6.38	33.59	322	67	P	H
	*	2437	95.79	-	-	85.8	27.27	6.38	33.59	322	67	A	H
802.11n		2494.24	52.5	-21.5	74	42.35	27.4	6.39	33.57	322	67	P	H
HT20		2484.08	43.46	-10.54	54	33.37	27.36	6.38	33.58	322	67	A	H
CH 06		2383.05	52.18	-21.82	74	42.4	27.09	6.36	33.6	400	121	P	V
2437MHz		2357.7	43.09	-10.91	54	33.43	27.04	6.29	33.6	400	121	A	V
	*	2437	98.57	-	-	88.58	27.27	6.38	33.59	400	121	P	V
	*	2437	91.09	-	-	81.1	27.27	6.38	33.59	400	121	A	V
		2483.92	52.33	-21.67	74	42.24	27.36	6.38	33.58	400	121	P	V
		2484.88	43.25	-10.75	54	33.15	27.36	6.39	33.58	400	121	A	V

	*	2462	103.34	-	-	93.3	27.31	6.38	33.58	300	65	P	H
	*	2462	95.85	-	-	85.81	27.31	6.38	33.58	300	65	A	H
		2483.52	61.04	-12.96	74	50.95	27.36	6.38	33.58	300	65	P	H
		2483.52	50.9	-3.1	54	40.81	27.36	6.38	33.58	300	65	A	H
802.11n													H
HT20													H
CH 11	*	2462	97.95	-	-	87.91	27.31	6.38	33.58	393	115	P	V
2462MHz	*	2462	90.75	-	-	80.71	27.31	6.38	33.58	393	115	A	V
		2483.6	56.38	-17.62	74	46.29	27.36	6.38	33.58	393	115	P	V
		2483.52	46.8	-7.2	54	36.71	27.36	6.38	33.58	393	115	A	V
													V
													V

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

2.4GHz 2400~2483.5MHz

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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4824	58.45	-15.55	74	74.38	31.29	9.59	57.24	260	48	P	H
		4824	48.35	-5.65	54	64.28	31.29	9.59	57.24	260	48	A	H
802.11n													H
HT20													H
CH 01		4824	58.48	-15.52	74	74.41	31.29	9.59	57.24	248	102	P	V
2412MHz		4824	48.62	-5.38	54	64.55	31.29	9.59	57.24	248	102	A	V
													V
													V
		4874	59.26	-14.74	74	75.06	31.38	9.56	57.17	255	47	P	H
		4874	49.18	-4.82	54	64.98	31.38	9.56	57.17	255	47	A	H
802.11n		7311	64.72	-9.28	74	73.94	36.28	11.31	57.27	100	143	P	H
HT20		7311	50.78	-3.22	54	60	36.28	11.31	57.27	100	143	A	H
CH 06		4874	58.16	-15.84	74	73.96	31.38	9.56	57.17	258	101	P	V
2437MHz		4874	48.5	-5.5	54	64.3	31.38	9.56	57.17	258	101	A	V
		7311	59.19	-14.81	74	68.41	36.28	11.31	57.27	100	332	P	V
		7311	44.93	-9.07	54	54.15	36.28	11.31	57.27	100	332	A	V
		4924	56.57	-17.43	74	72.2	31.48	9.55	57.1	260	47	P	H
		4924	46.89	-7.11	54	62.52	31.48	9.55	57.1	260	47	A	H
802.11n		7386	60.95	-13.05	74	70.18	36.47	11.3	57.38	100	158	P	H
HT20		7386	49.53	-4.47	54	58.76	36.47	11.3	57.38	100	158	A	H
CH 11		4924	54.08	-19.92	74	69.71	31.48	9.55	57.1	263	106	P	V
2462MHz		4924	45.08	-8.92	54	60.71	31.48	9.55	57.1	263	106	A	V
		7386	54.23	-19.77	74	63.46	36.47	11.3	57.38	100	333	P	V
		7386	43.19	-10.81	54	52.42	36.47	11.3	57.38	100	333	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		2385.3	62.95	-11.05	74	53.17	27.09	6.36	33.6	329	64	P	H
		2389.35	50.95	-3.05	54	41.13	27.13	6.36	33.6	329	64	A	H
	*	2422	100	-	-	90.07	27.22	6.37	33.59	329	64	P	H
	*	2422	92.39	-	-	82.46	27.22	6.37	33.59	329	64	A	H
802.11n		2485.36	52.6	-21.4	74	42.5	27.36	6.39	33.58	329	64	P	H
HT40		2483.52	44.14	-9.86	54	34.05	27.36	6.38	33.58	329	64	A	H
CH 03		2385.3	57.43	-16.57	74	47.65	27.09	6.36	33.6	400	120	P	V
2422MHz		2388	44.99	-9.01	54	35.17	27.13	6.36	33.6	400	120	A	V
	*	2422	95.06	-	-	85.13	27.22	6.37	33.59	400	120	P	V
	*	2422	87.57	-	-	77.64	27.22	6.37	33.59	400	120	A	V
		2498.08	52.12	-21.88	74	41.97	27.4	6.39	33.57	400	120	P	V
		2486.4	42.93	-11.07	54	32.83	27.36	6.39	33.58	400	120	A	V
		2389.5	57.42	-16.58	74	47.6	27.13	6.36	33.6	321	66	P	H
		2389.95	47.8	-6.2	54	37.97	27.13	6.36	33.59	321	66	A	H
	*	2437	102.14	-	-	92.15	27.27	6.38	33.59	321	66	P	H
	*	2437	94.93	-	-	84.94	27.27	6.38	33.59	321	66	A	H
802.11n		2484.24	60.36	-13.64	74	50.26	27.36	6.39	33.58	321	66	P	H
HT40		2483.52	50.31	-3.69	54	40.22	27.36	6.38	33.58	321	66	A	H
CH 06		2389.95	55.09	-18.91	74	45.26	27.13	6.36	33.59	400	164	P	V
2437MHz		2389.8	44.73	-9.27	54	34.9	27.13	6.36	33.59	400	164	A	V
	*	2437	95.63	-	-	85.64	27.27	6.38	33.59	400	164	P	V
	*	2437	88.6	-	-	78.61	27.27	6.38	33.59	400	164	A	V
		2485.04	55.42	-18.58	74	45.32	27.36	6.39	33.58	400	164	P	V
		2483.76	46.45	-7.55	54	36.36	27.36	6.38	33.58	400	164	A	V

		2362.8	52.11	-21.89	74	42.45	27.04	6.29	33.6	321	67	P	H
		2381.4	42.71	-11.29	54	32.93	27.09	6.36	33.6	321	67	A	H
	*	2452	97.96	-	-	87.96	27.27	6.38	33.58	321	67	P	H
	*	2452	90.33	-	-	80.33	27.27	6.38	33.58	321	67	A	H
802.11n		2484.56	58.4	-15.6	74	48.3	27.36	6.39	33.58	321	67	P	H
HT40		2484.32	50.51	-3.49	54	40.41	27.36	6.39	33.58	321	67	A	H
CH 09		2357.25	51.96	-22.04	74	42.3	27.04	6.29	33.6	396	163	P	V
2452MHz		2372.55	42.55	-11.45	54	32.84	27.09	6.29	33.6	396	163	A	V
	*	2452	92.43	-	-	82.43	27.27	6.38	33.58	396	163	P	V
	*	2452	84.77	-	-	74.77	27.27	6.38	33.58	396	163	A	V
		2483.76	55.14	-18.86	74	45.05	27.36	6.38	33.58	396	163	P	V
		2484.24	46.41	-7.59	54	36.31	27.36	6.39	33.58	396	163	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4844	55.5	-18.5	74	71.39	31.32	9.58	57.22	255	47	P	H
		4844	45.2	-8.8	54	61.09	31.32	9.58	57.22	255	47	A	H
802.11n		7266	53.6	-20.4	74	62.8	36.21	11.32	57.23	100	146	P	H
HT40		7266	42.52	-11.48	54	51.72	36.21	11.32	57.23	100	146	A	H
CH 03		4844	54.65	-19.35	74	70.54	31.32	9.58	57.22	259	108	P	V
2422MHz		4844	44.87	-9.13	54	60.76	31.32	9.58	57.22	259	108	A	V
		7266	46.59	-27.41	74	55.79	36.21	11.32	57.23	100	0	P	V
													V
		4874	56.66	-17.34	74	72.46	31.38	9.56	57.17	267	49	P	H
		4874	46.97	-7.03	54	62.77	31.38	9.56	57.17	267	49	A	H
802.11n		7311	58.38	-15.62	74	67.6	36.28	11.31	57.27	100	145	P	H
HT40		7311	48.36	-5.64	54	57.58	36.28	11.31	57.27	100	145	A	H
CH 06		4874	56.6	-17.4	74	72.4	31.38	9.56	57.17	271	99	P	V
2437MHz		4874	46.3	-7.7	54	62.1	31.38	9.56	57.17	271	99	A	V
		7311	53.54	-20.46	74	62.76	36.28	11.31	57.27	100	332	P	V
		7311	43.16	-10.84	54	52.38	36.28	11.31	57.27	100	332	A	V
		4904	46.44	-27.56	74	62.13	31.44	9.56	57.12	100	0	P	H
		7356	47.82	-26.18	74	57.04	36.4	11.3	57.33	100	0	P	H
802.11n													H
HT40													H
CH 09		4904	47.68	-26.32	74	63.37	31.44	9.56	57.12	100	0	P	V
2452MHz		7356	43.52	-30.48	74	52.74	36.4	11.3	57.33	100	0	P	V
													V
													V

Remark

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

Emission below 1GHz

2.4GHz WIFI 802.11n HT20 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		32.7	22.31	-17.69	40	31.2	22.77	0.82	32.49	-	-	P	H
		159.87	38.74	-4.76	43.5	53.18	16.28	1.61	32.43	200	175	P	H
		169.86	22.78	-20.72	43.5	38.12	15.37	1.61	32.42	-	-	P	H
		479.9	39.9	-6.1	46	46	23.45	2.77	32.37	-	-	P	H
		640.2	40.96	-5.04	46	43.83	26.34	3.15	32.46	-	-	P	H
		799.8	39.83	-6.17	46	40.19	28.13	3.53	32.18	-	-	P	H
													H
													H
													H
													H
2.4GHz													H
802.11n													H
HT20		31.35	32.75	-7.25	40	40.7	23.7	0.82	32.49	-	-	P	V
LF		48.09	32.97	-7.03	40	49.53	14.9	1.02	32.49	100	196	P	V
		62.4	29.84	-10.16	40	49.7	11.59	1.02	32.49	-	-	P	V
		479.9	34.2	-11.8	46	40.3	23.45	2.77	32.37	-	-	P	V
		640.2	37.18	-8.82	46	40.05	26.34	3.15	32.46	-	-	P	V
		954.5	33.85	-12.15	46	30.13	30.81	3.9	31.16	-	-	P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

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

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

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

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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

Appendix D. Radiated Spurious Emission Plots

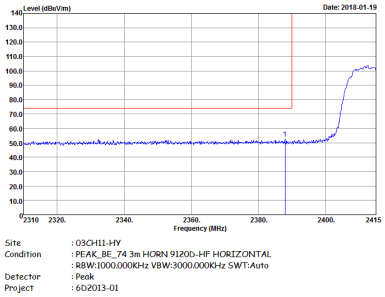
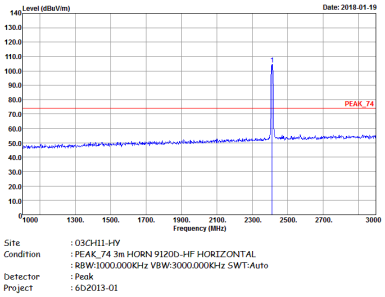
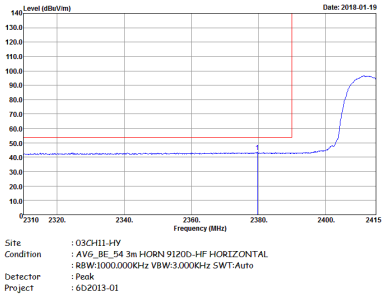
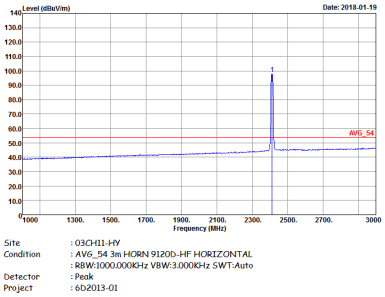
Test Engineer :	Hao Hsu, Jacky Hung, and Ken Wu	**Temperature :**	23~25°C
		Relative Humidity :	54~59%

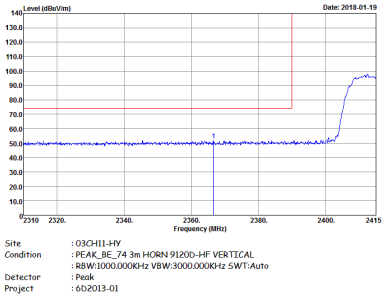
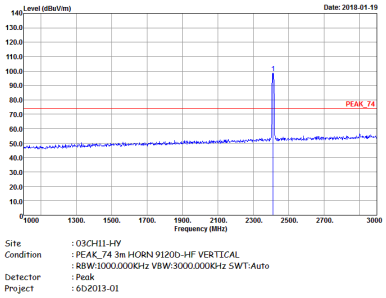
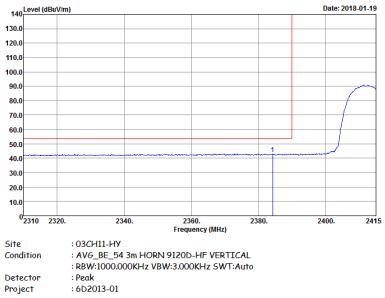
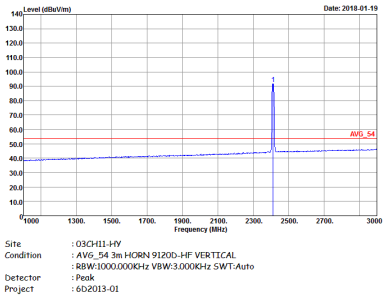
Note symbol

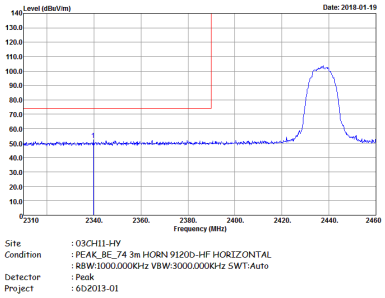
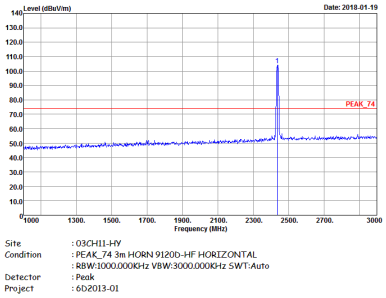
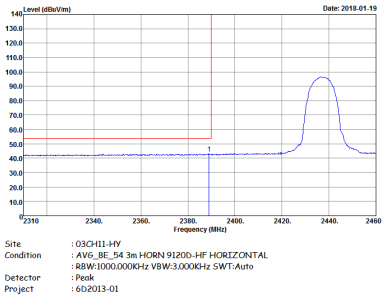
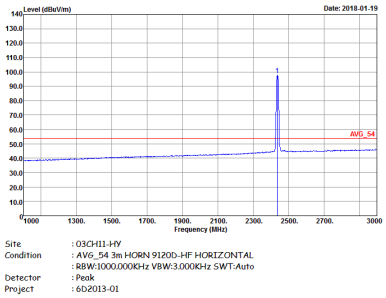
-L	**Low channel location**
-R	**High channel location**

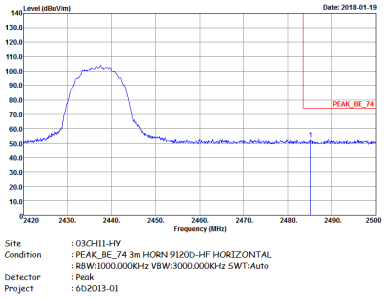
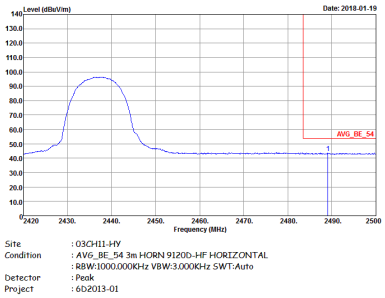
2.4GHz 2400~2483.5MHz

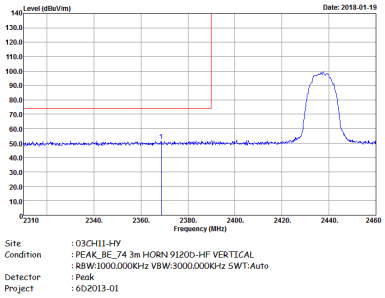
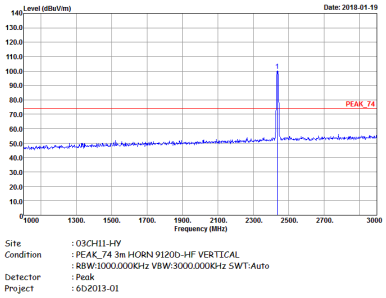
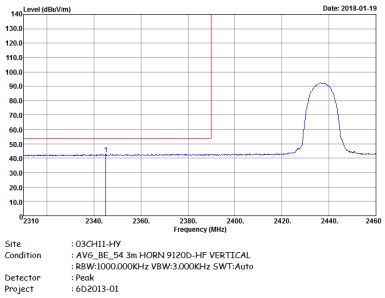
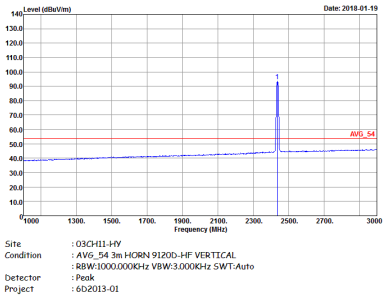
WIFI 802.11b (Band Edge @ 3m)

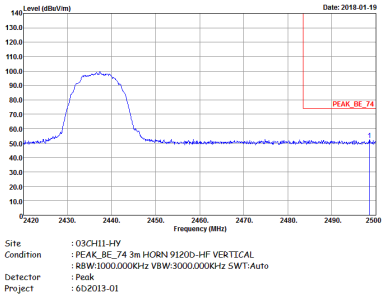
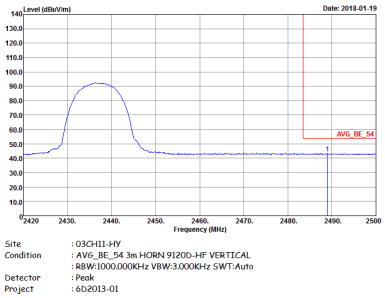
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

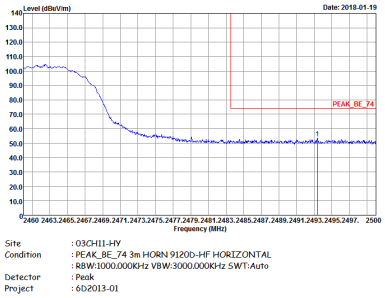
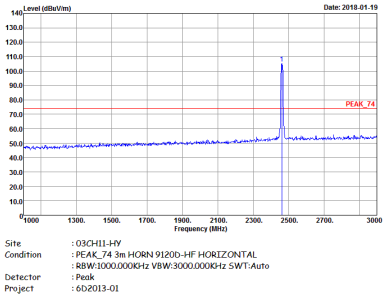
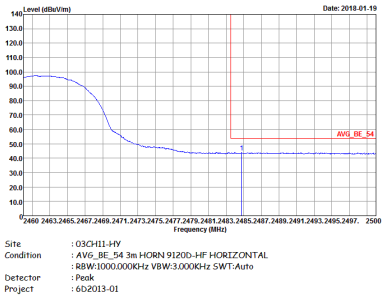
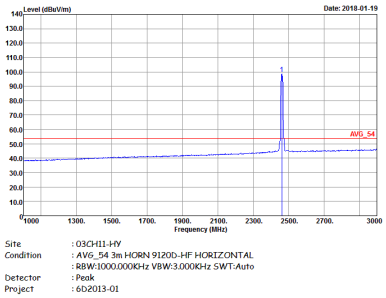
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak		
Avg.		

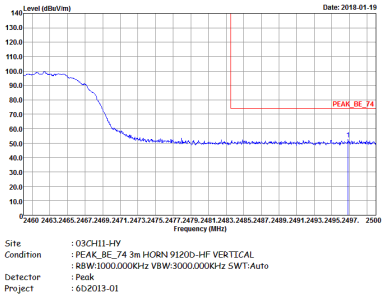
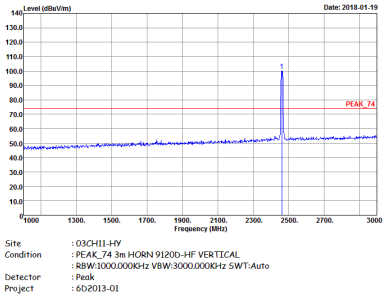
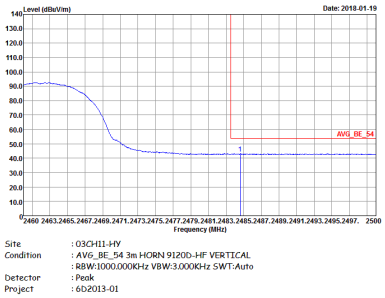
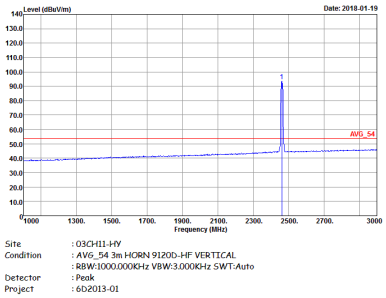
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

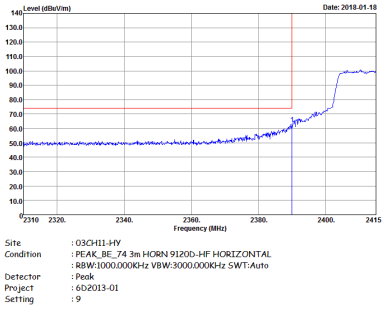
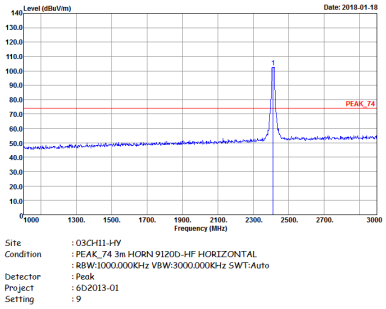
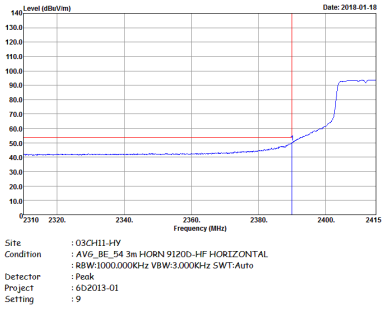
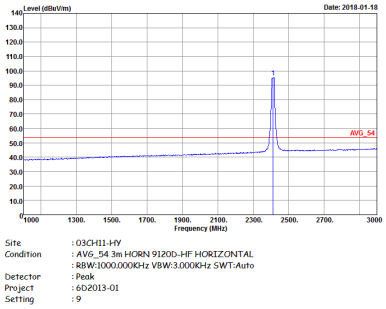
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

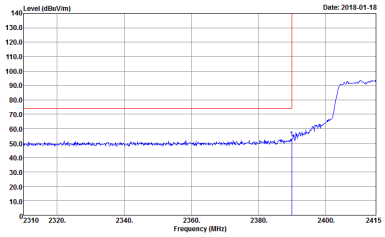
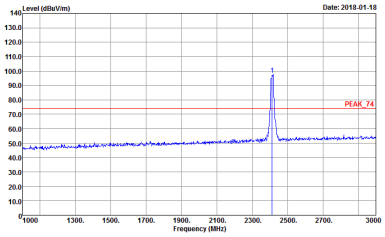
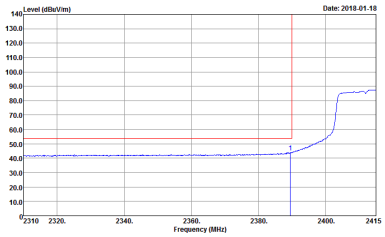
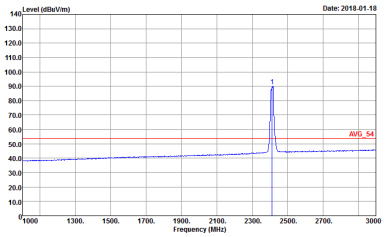
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01

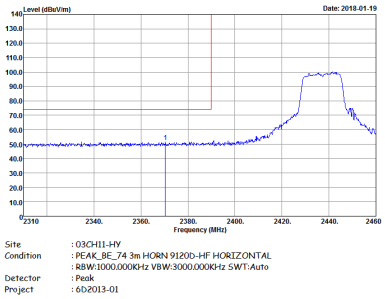
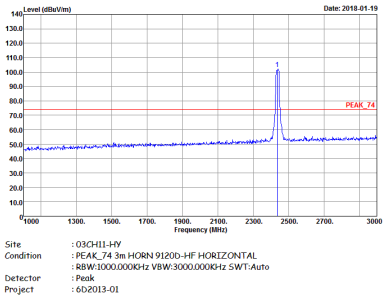
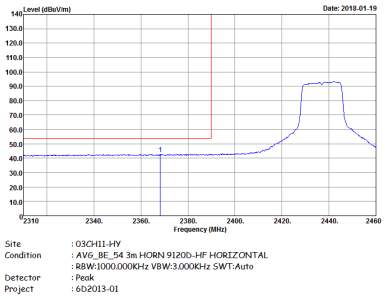
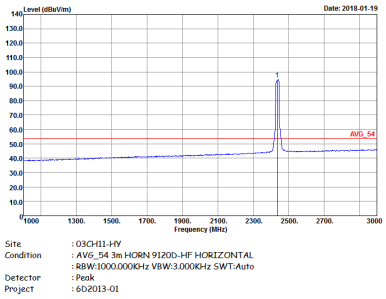
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01

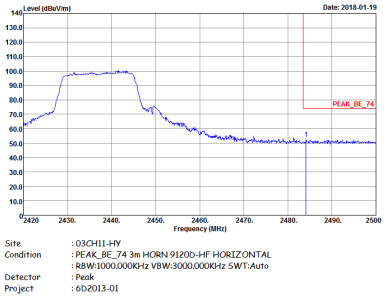
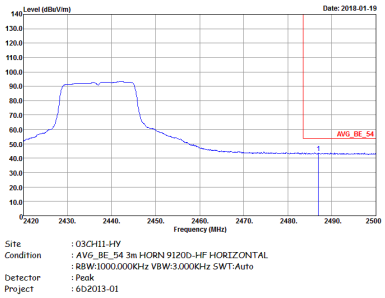
2.4GHz 2400~2483.5MHz

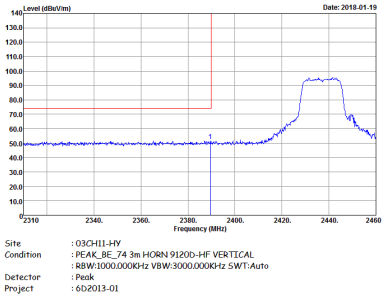
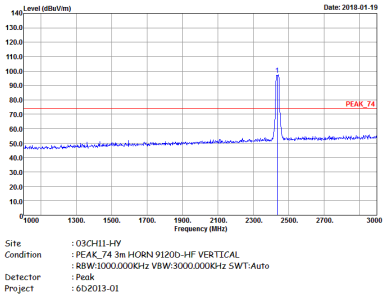
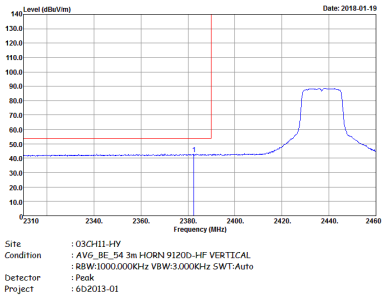
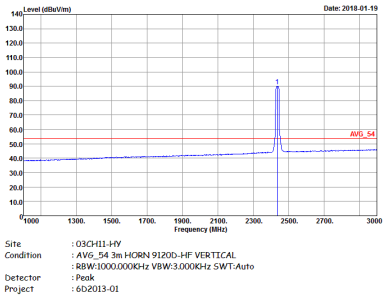
WIFI 802.11g (Band Edge @ 3m)

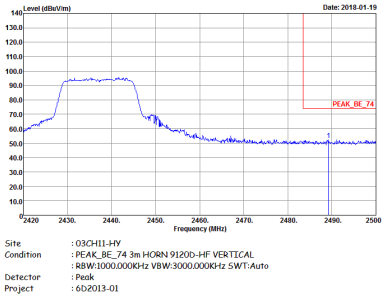
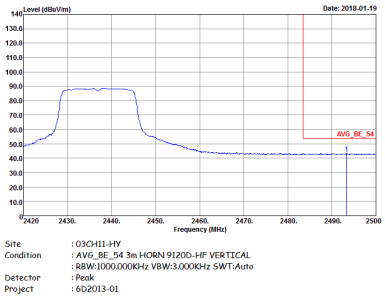
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

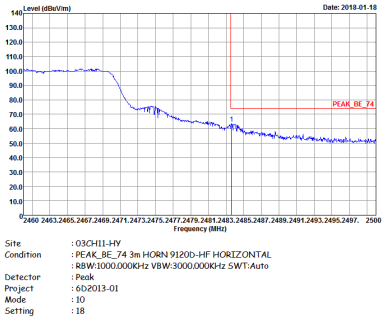
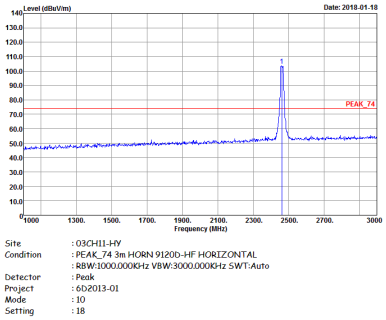
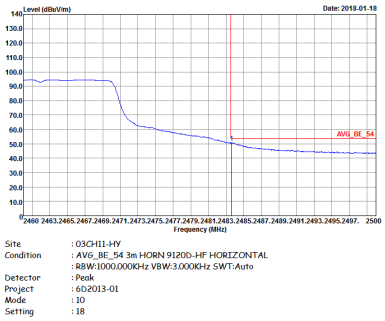
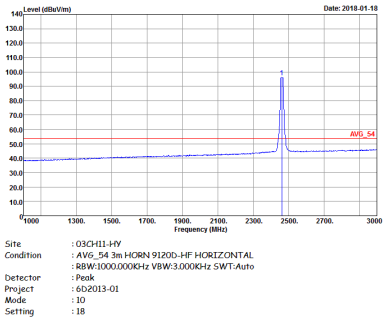
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 9	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 9
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 9	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 9

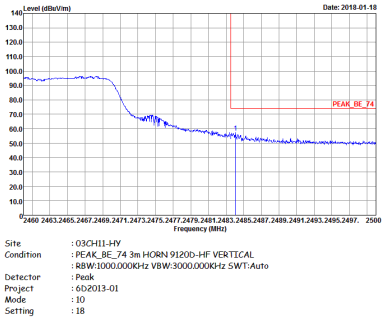
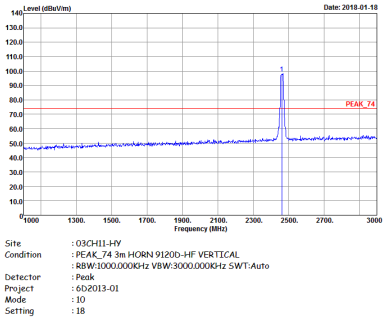
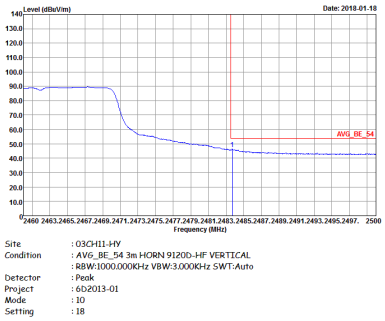
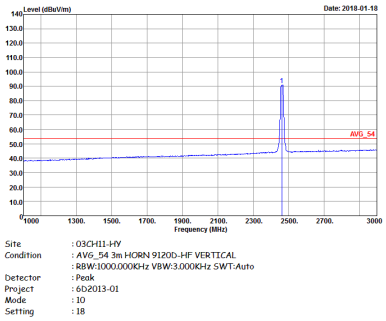
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

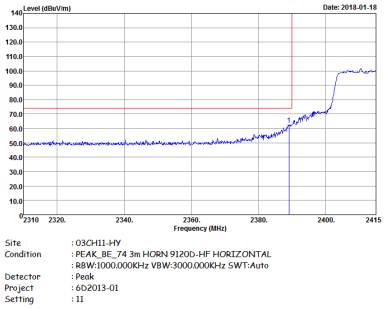
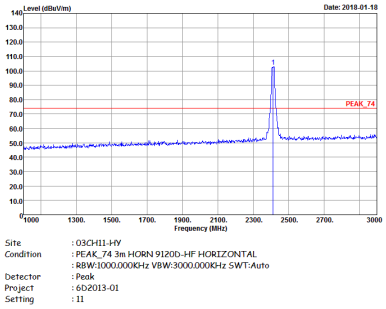
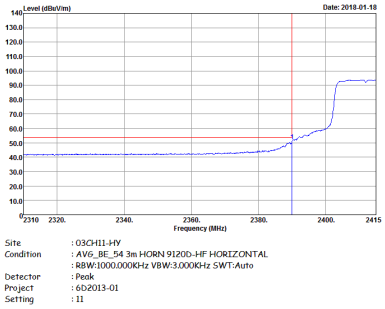
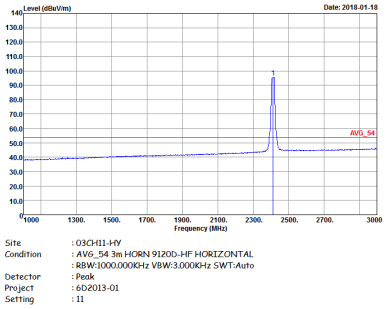
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

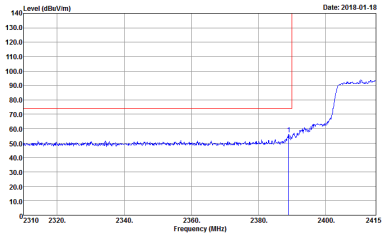
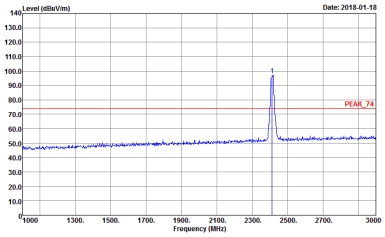
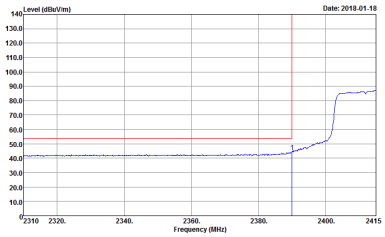
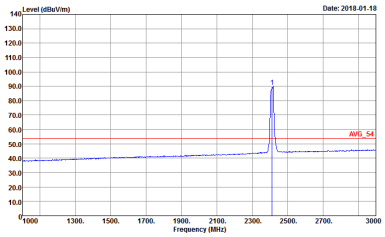
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Mode : 10 Setting : 18	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Mode : 10 Setting : 18
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Mode : 10 Setting : 18	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Mode : 10 Setting : 18

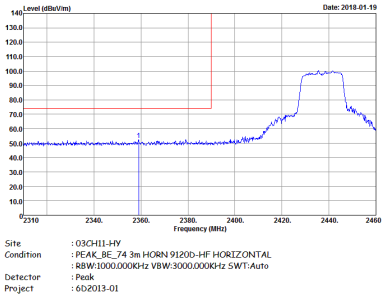
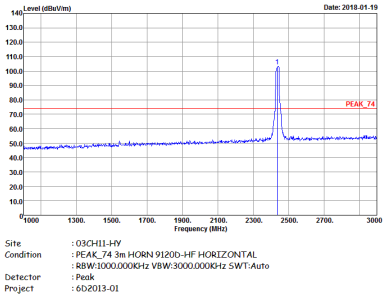
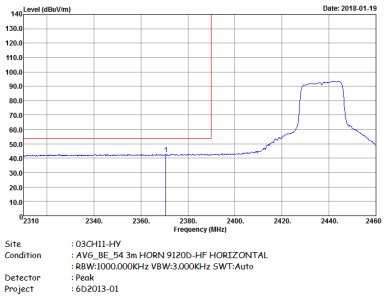
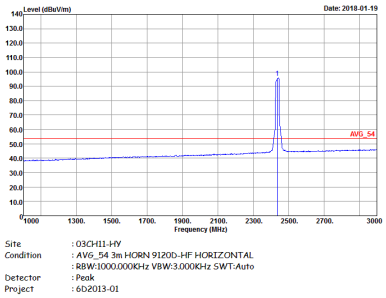
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Mode : 10 Setting : 18	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Mode : 10 Setting : 18
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Mode : 10 Setting : 18	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Mode : 10 Setting : 18

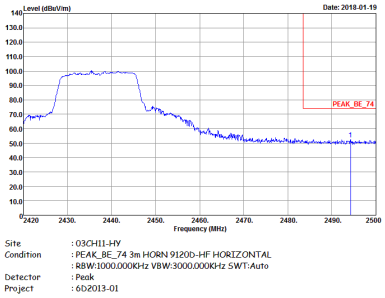
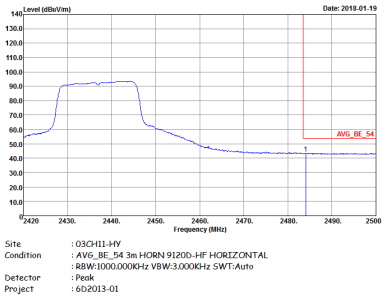
2.4GHz 2400~2483.5MHz

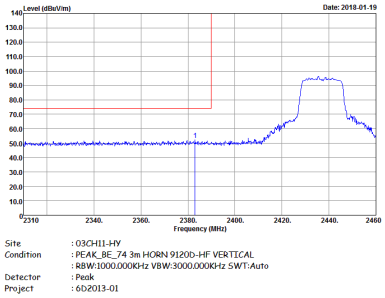
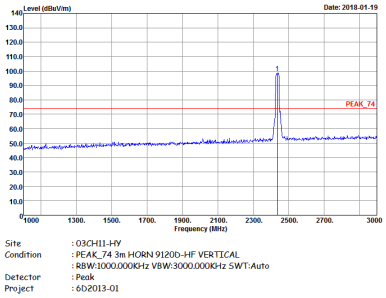
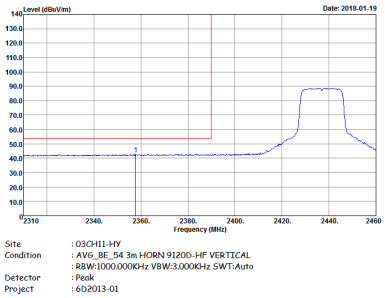
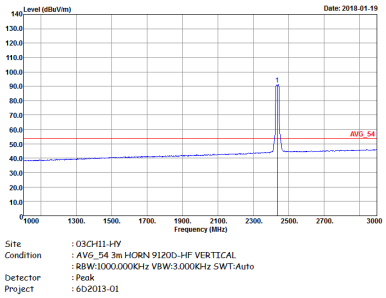
WIFI 802.11n HT20 (Band Edge @ 3m)

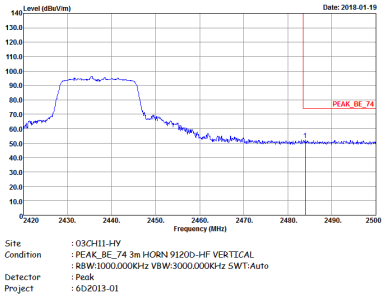
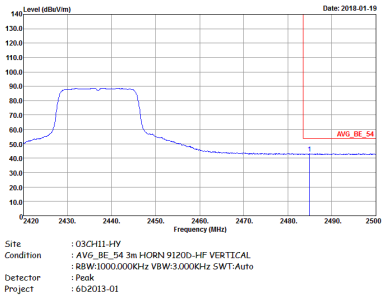
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

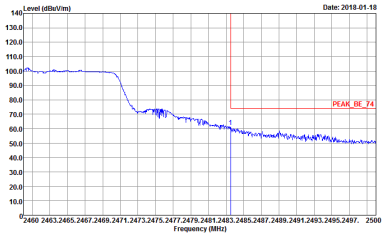
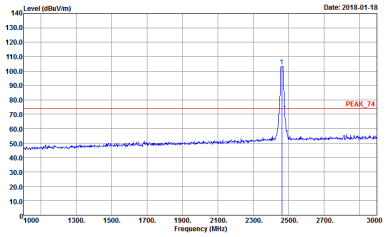
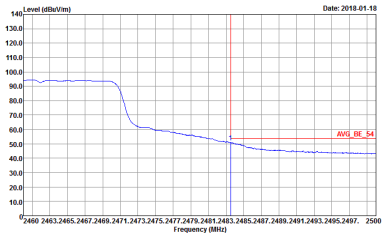
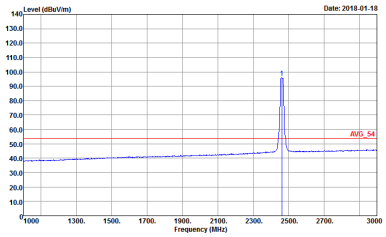
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 11	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 11
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 11	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 11

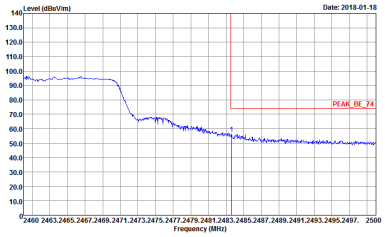
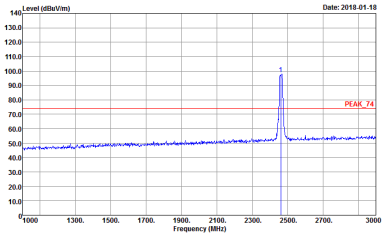
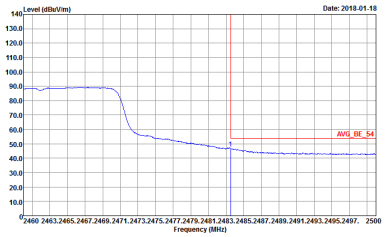
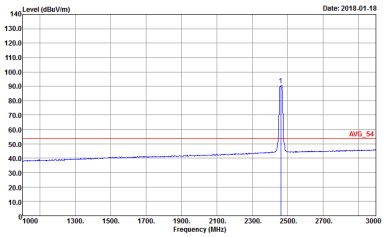
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

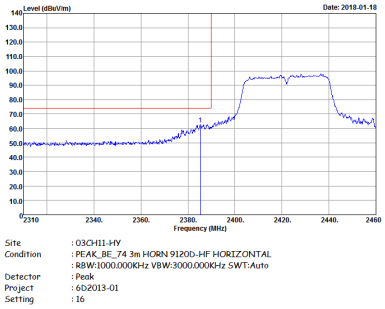
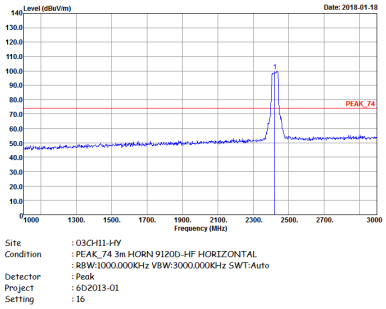
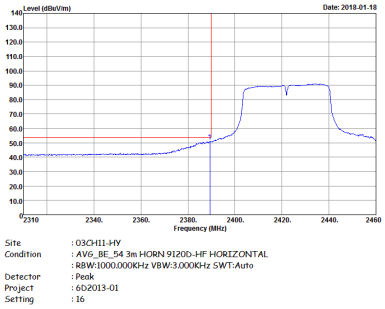
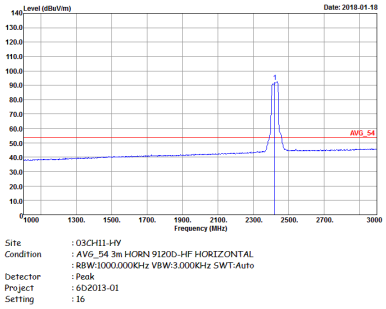
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

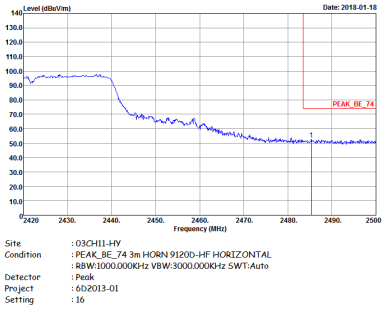
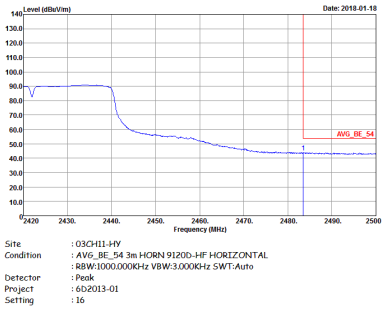
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 19	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 19
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 19	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 19

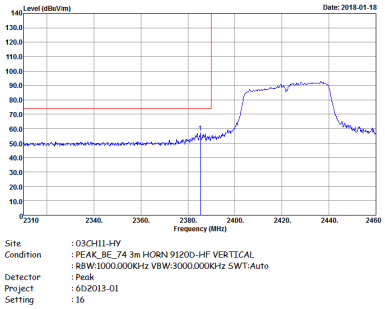
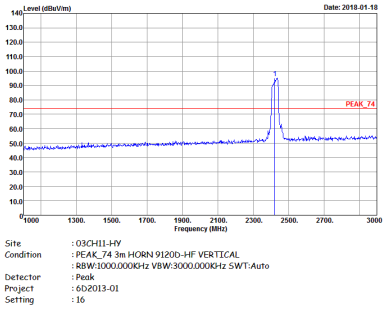
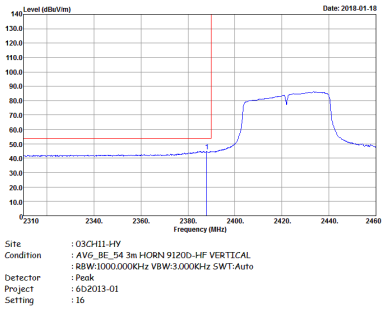
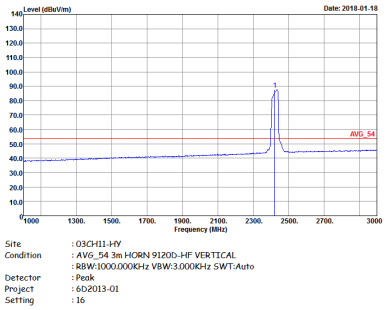
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 19	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 19
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 19	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 19

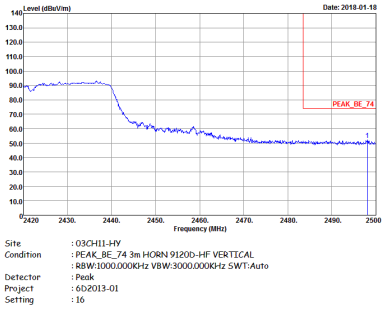
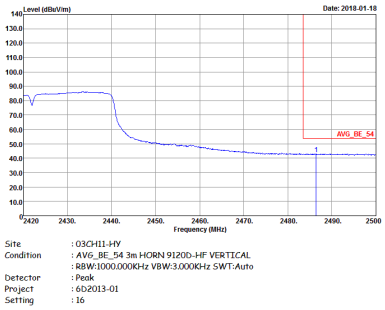
2.4GHz 2400~2483.5MHz

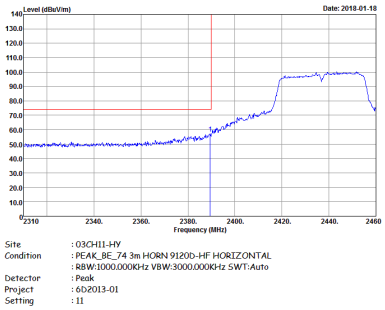
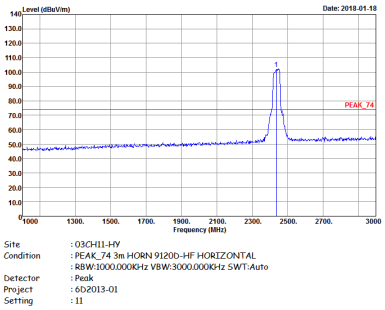
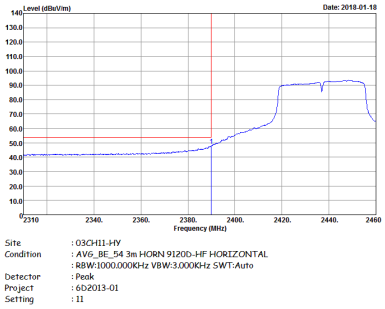
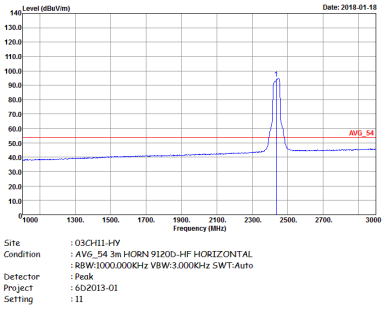
WIFI 802.11n HT40 (Band Edge @ 3m)

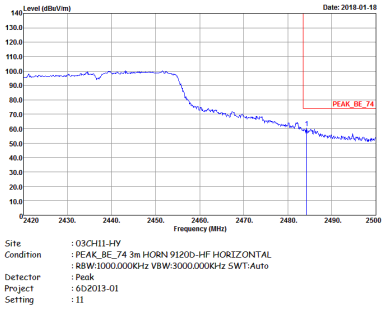
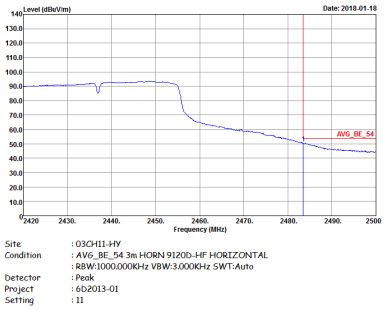
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

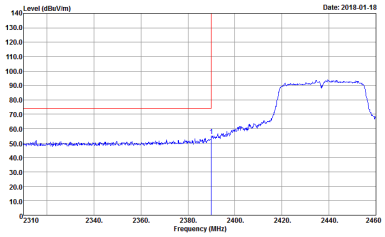
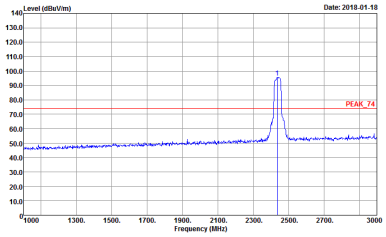
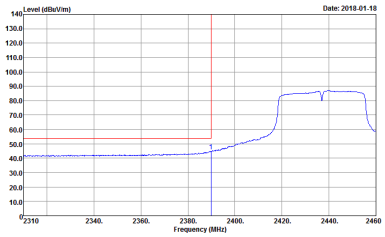
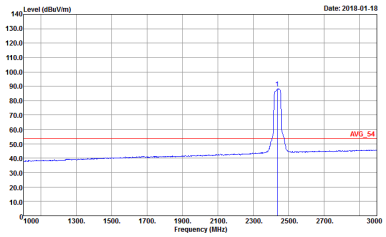
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Horizontal	Fundamental
Peak		Left Blank
Avg.		Left Blank

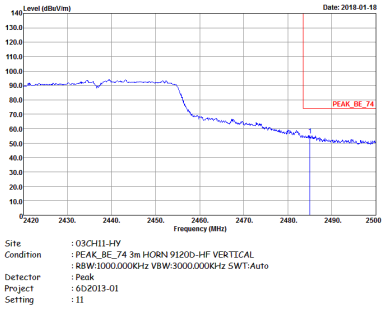
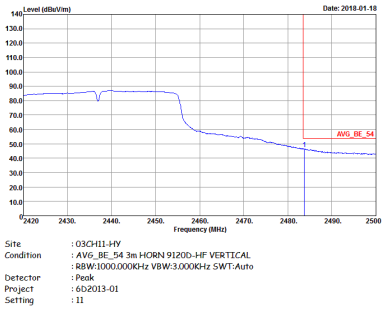
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

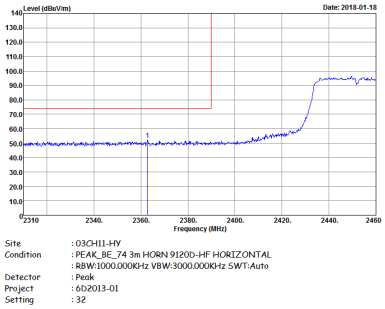
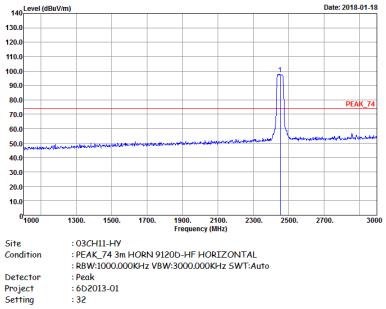
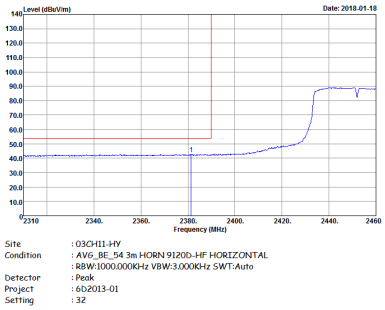
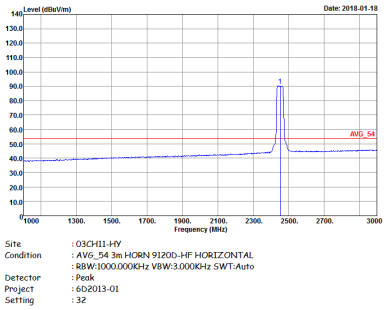
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

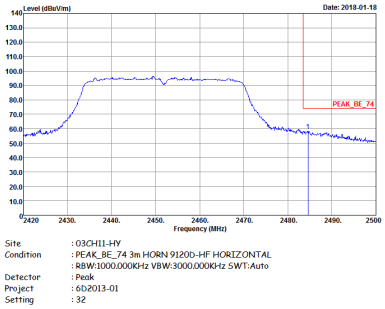
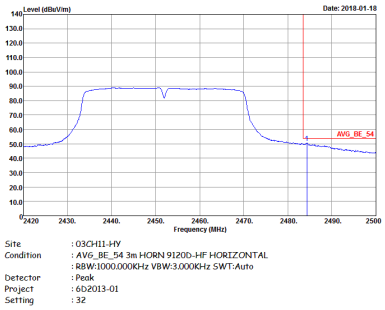
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

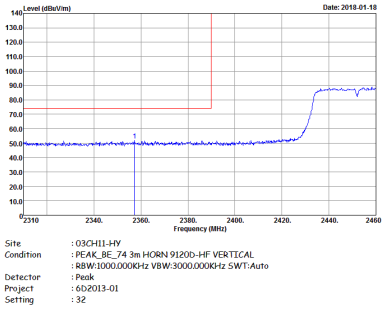
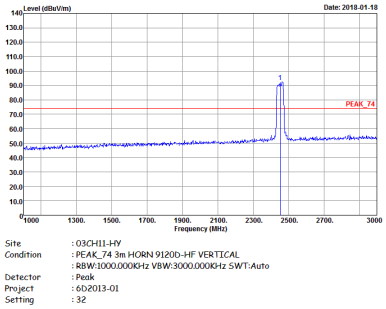
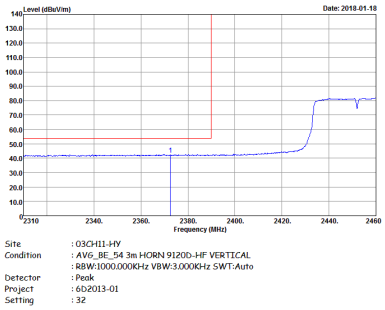
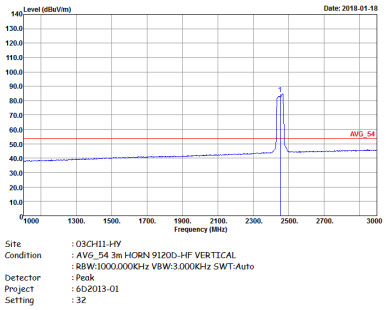
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

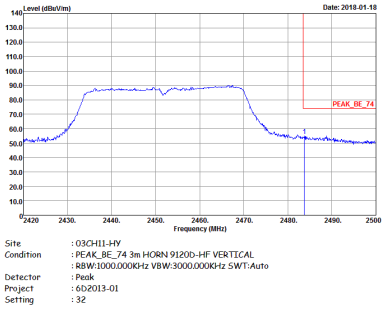
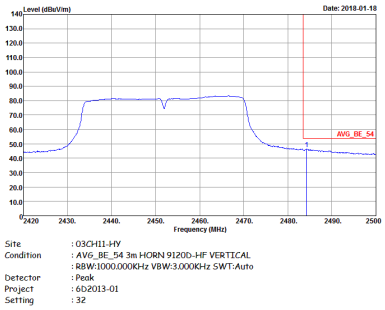
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 11	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 11
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 11	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 6D2013-01 Setting : 11

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

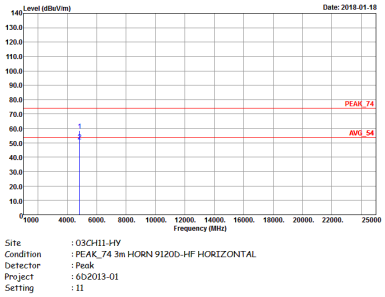
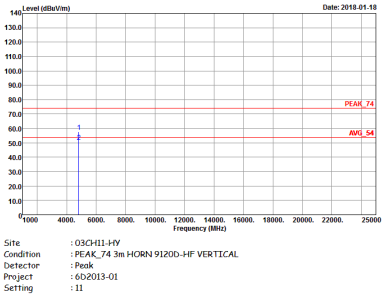
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

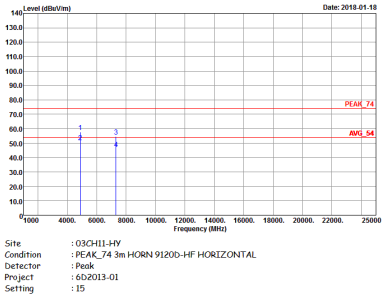
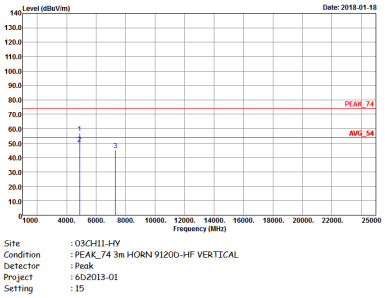
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

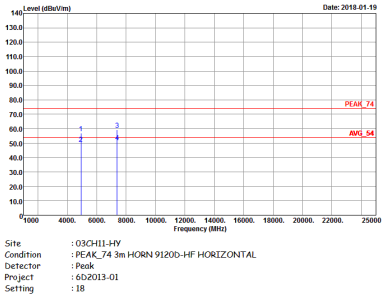
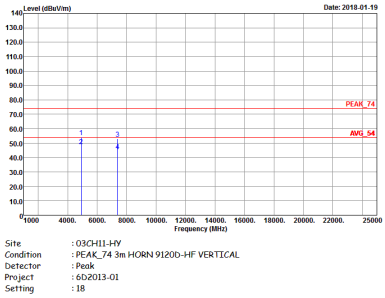
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

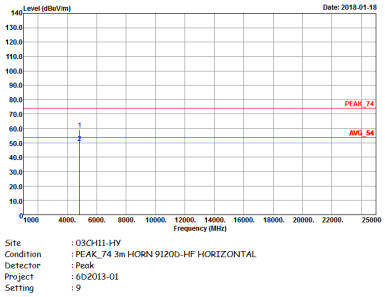
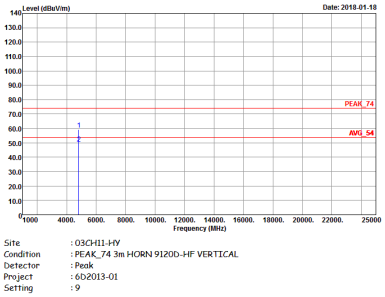
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.		

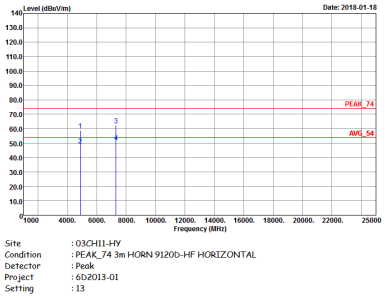
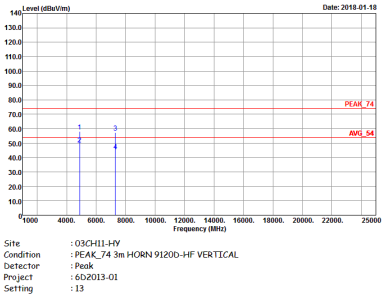
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HV Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 6D2013-01 Setting : 15	 Site : 03CH11-HV Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 6D2013-01 Setting : 15

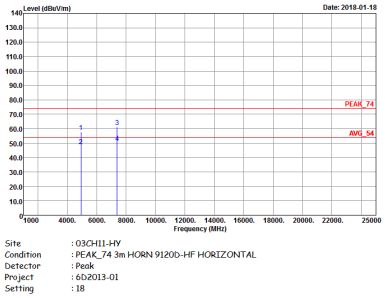
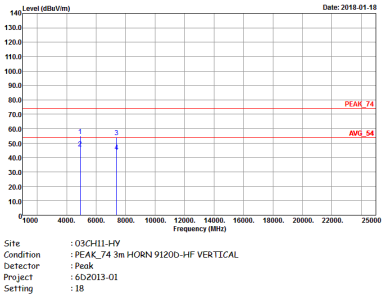
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

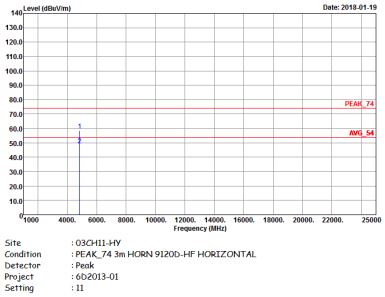
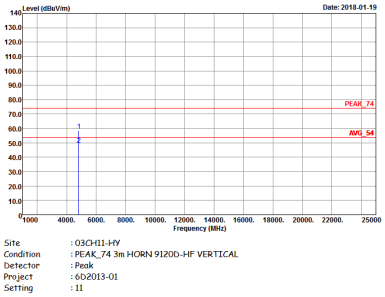
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.		

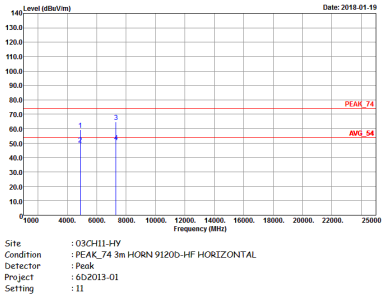
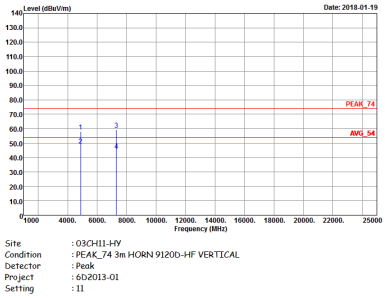
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 6D2013-01 Setting : 13	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 6D2013-01 Setting : 13

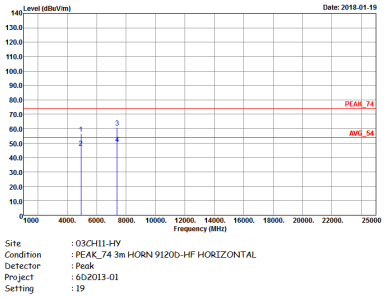
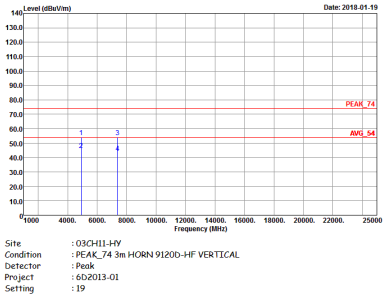
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

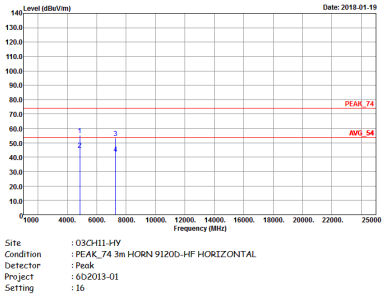
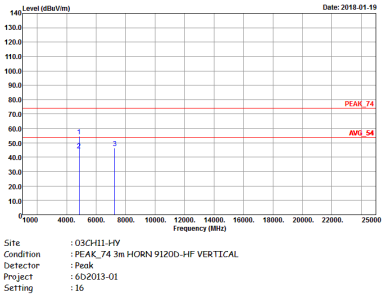
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.		

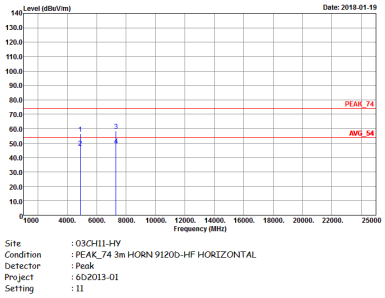
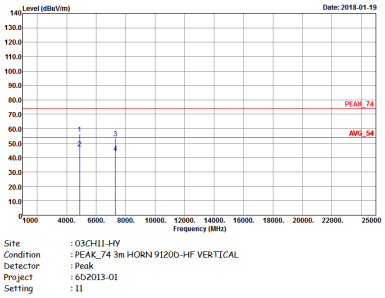
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.		

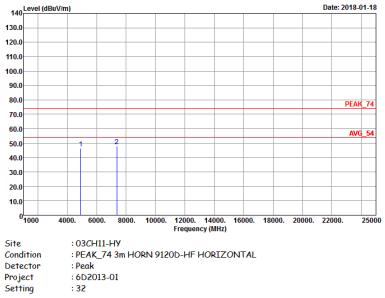
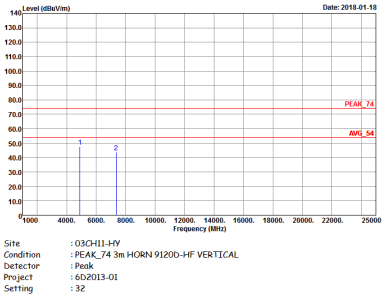
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH03 2422MHz	
1	Horizontal	Vertical
Peak Avg.		

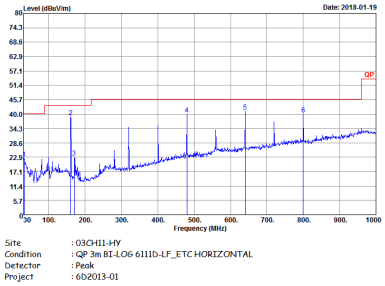
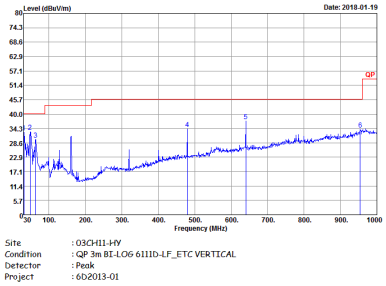
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 6D2013-01 Setting : 11	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 6D2013-01 Setting : 11

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH09 2452MHz	
1	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

Emission below 1GHz

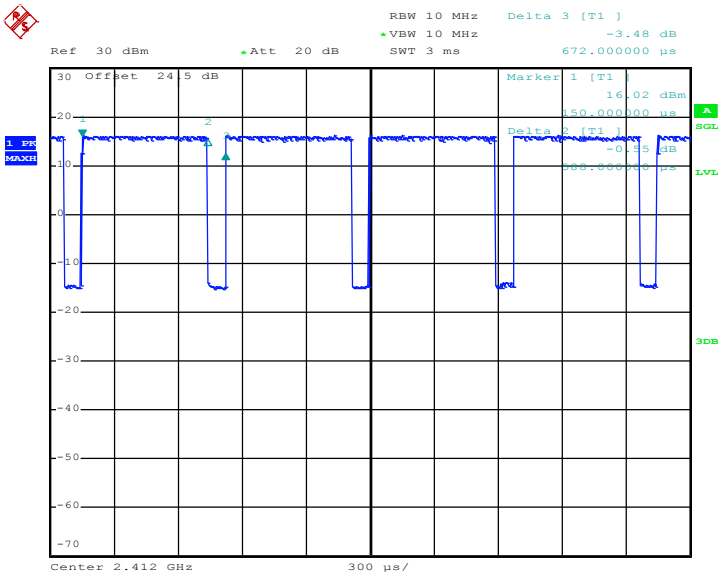
2.4GHz WIFI 802.11n HT20 (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT20 LF	
1	Horizontal	Vertical
QP / Peak		

Appendix E. Duty Cycle Plots

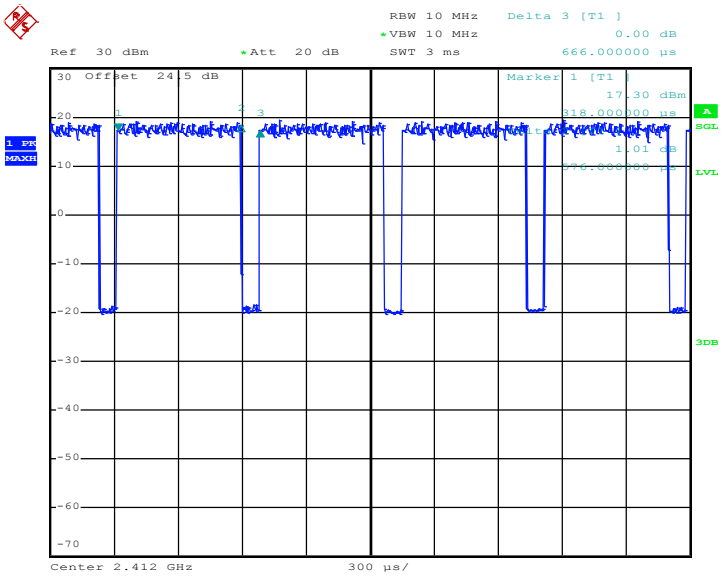
Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
802.11b	87.5	588	1.700680272	3kHz	0.58
802.11g	86.486	576	1.736111111	3kHz	0.63
2.4GHz 802.11n HT20	86.916	558	1.792114695	3kHz	0.14
2.4GHz 802.11n HT40	87.387	582	1.718213058	3kHz	0.59

802.11b



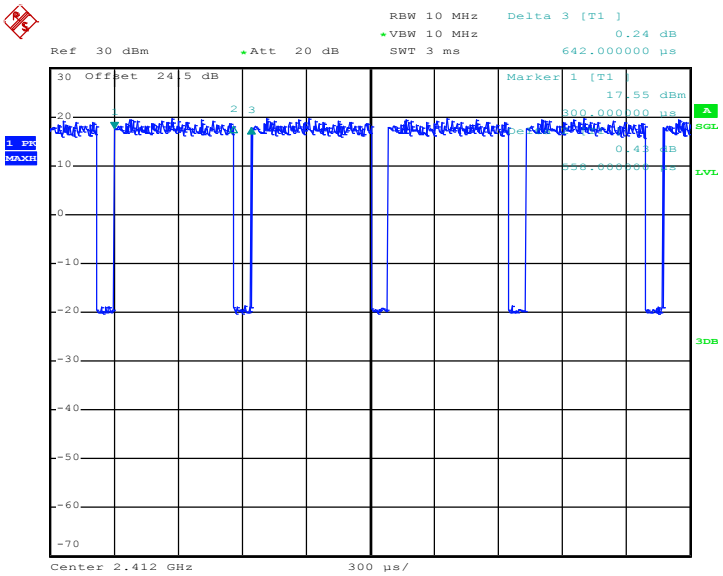
Date: 1.MAR.2018 15:42:20

802.11g



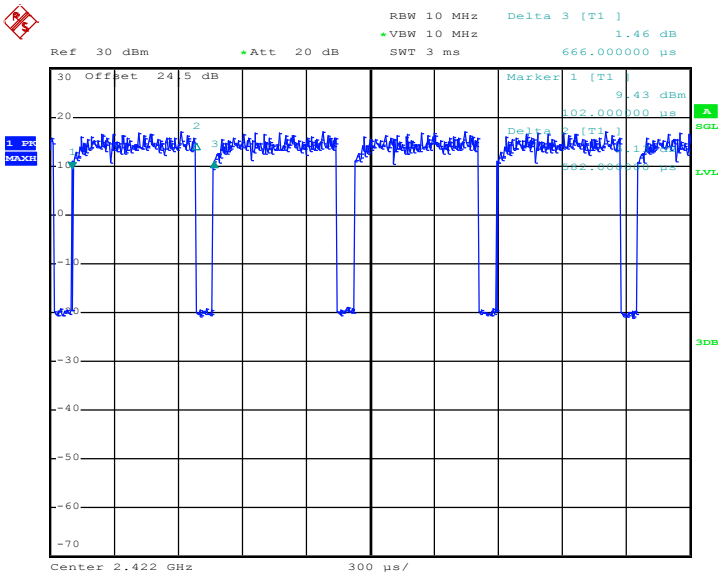
Date: 1.MAR.2018 16:17:58

802.11n HT20



Date: 1.MAR.2018 16:28:06

802.11n HT40



Date: 1.MAR.2018 16:39:22