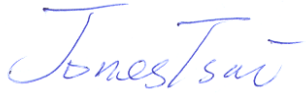
FCC RF Test Report

APPLICANT	:	ASUSTeK COMPUTER INC.
EQUIPMENT	:	ASUS Phone
BRAND NAME	:	ASUS
MODEL NAME	:	ASUS_Z016D
FCC ID	:	MSQZ016D
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	(DTS) Digital Transmission System

The product was received on Apr. 19, 2016 and testing was completed on Jul. 14, 2016. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager

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

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR641901C	Rev. 01	Initial issue of report	Aug. 16, 2016

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	6dB Bandwidth	≥ 0.5MHz	Pass	-
3.1	-	99% Bandwidth	-	Pass	-
3.2	15.247(b)	Power Output Measurement	≤ 30dBm	Pass	-
3.3	15.247(e)	Power Spectral Density	≤ 8dBm/3kHz	Pass	-
3.4	15.247(d)	Conducted Band Edges	≤ 20dBc	Pass	-
		Conducted Spurious Emission		Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 8.54 dB at 34.590 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 6.00 dB at 0.150 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

ASUSTeK COMPUTER INC.
4F, No. 150, LI-TE RD., PEITOU, TAIPEI, TAIWAN

1.2 Manufacturer

COTEK ELECTRONICS (SUZHOU) CO., LTD.
No.288, Mayun Road, Suzhou New District, Jiangsu, PRC

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	ASUS Phone
Brand Name	ASUS
Model Name	ASUS_Z016D
FCC ID	MSQZ016D
EUT supports Radios application	CDMA/EV-DO/GSM/EGPRS/WCDMA/HSPA/LTE/NFC WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth v4.2 BR/EDR/LE
HW Version	REV2.0
SW Version	4.0.20.270
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Channel Frequency Range	802.11b/g/n : 2412 MHz ~ 2462 MHz
Maximum (Peak) Output Power to Antenna	802.11b : 21.05 dBm (0.1274 W) 802.11g : 24.23 dBm (0.2649 W) 802.11n HT20 : 24.45 dBm (0.2786 W)
99% Occupied Bandwidth	802.11b : 11.55MHz 802.11g : 18.45MHz 802.11n HT20 : 19.15MHz
Antenna Type	802.11b/g/n : PIFA Antenna type with gain -1.70 dBi
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)

1.5 Modification of EUT

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

1.6 Testing Location

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

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	**Sporton Site No.**		
	TH02-HY	CO05-HY	03CH06-HY

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

1.7 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 v03r05
- ANSI C63.10-2013

Remark:

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

2 Test Configuration of Equipment Under Test

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: conducted emission (150 kHz to 30 MHz) and radiated 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 (Y plane) were recorded in this report.

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

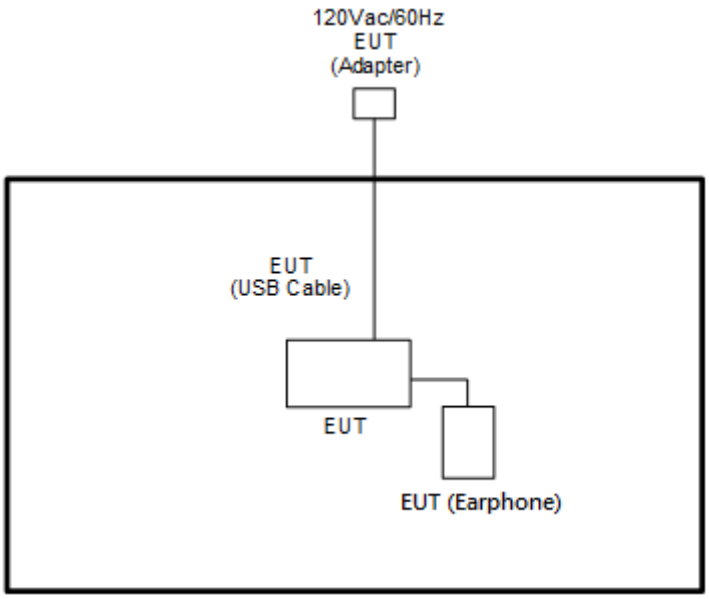
<2.4GHz>

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

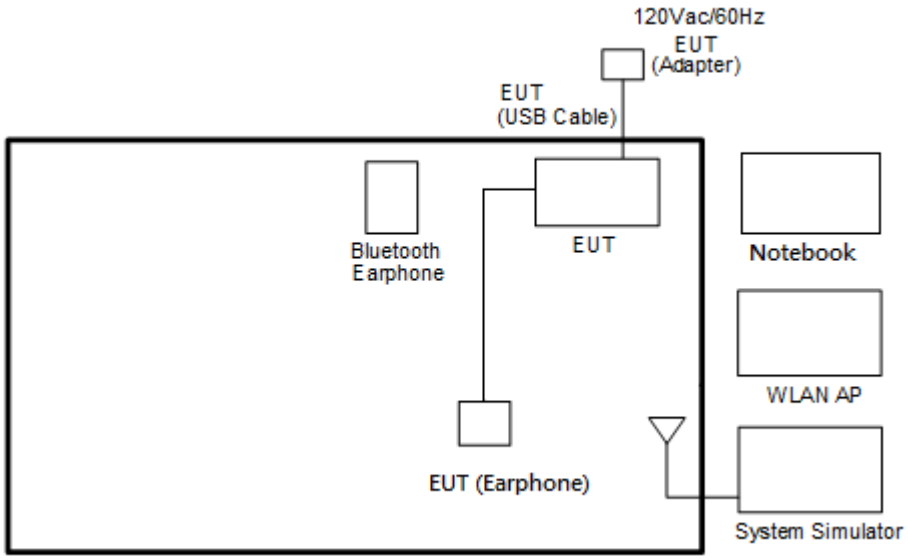
Test Cases		
AC Conducted Emission	Mode 1 :	LTE Band 30 Idle + Bluetooth Link + WLAN (2.4GHz) Link + Camera (Back) + MP3 + Earphone + USB Cable 5 (Charging from Adapter 2)
	Mode 2 :	LTE Band 30 Idle + Bluetooth Link + WLAN (2.4GHz) Link + NFC Link + MP3 + Earphone + USB Cable 5 (Charging from Adapter 2)
Remark: The worst case of conducted emission is mode 1; only the test data of it was reported.		

2.3 Connection Diagram of Test System

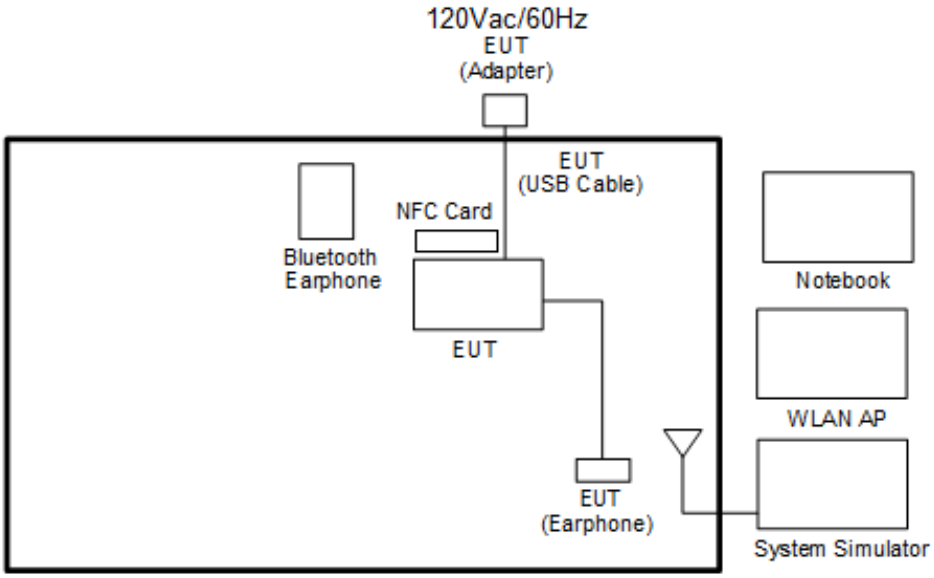
<WLAN Tx Mode>



<AC Conducted Emission Mode>



<EUT with NFC Link Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	ASUS	RT-AC66U	MSQ-ETAC66U	N/A	Unshielded, 1.8 m
3.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
4.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.5 EUT Operation Test Setup

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

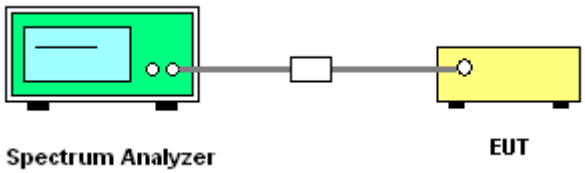
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

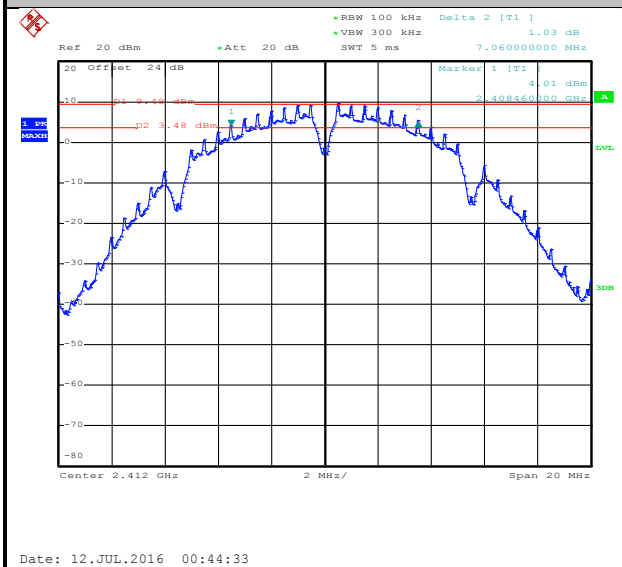
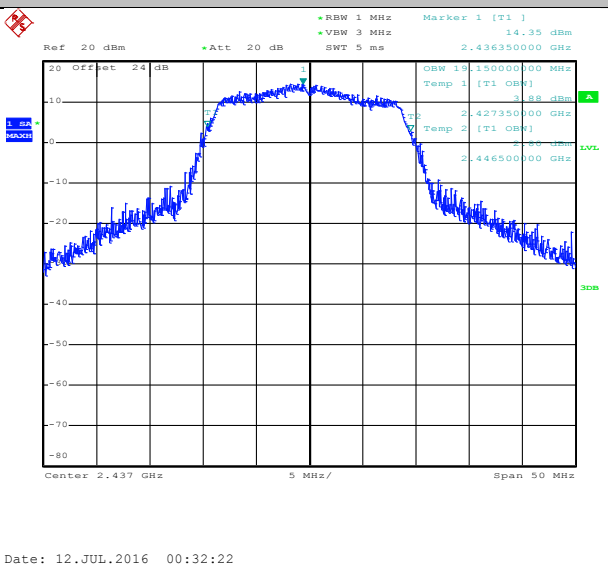
1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r05.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit 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 of this test report.

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 of directional gain greater than 6dBi are 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.

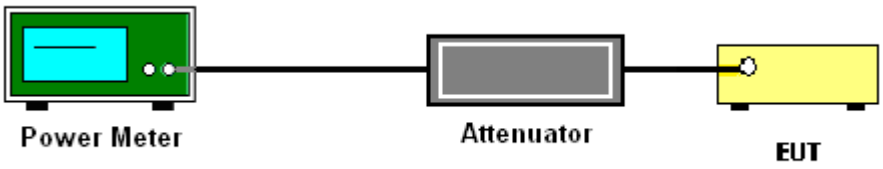
3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 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 v03r05 section 9.1.2 PKPM1 Peak power meter method.
2. 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.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. 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 of this test report.

3.2.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A of this test report.

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.

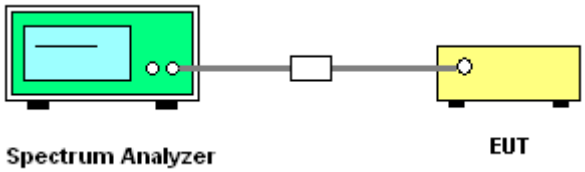
3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 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 v03r05
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.

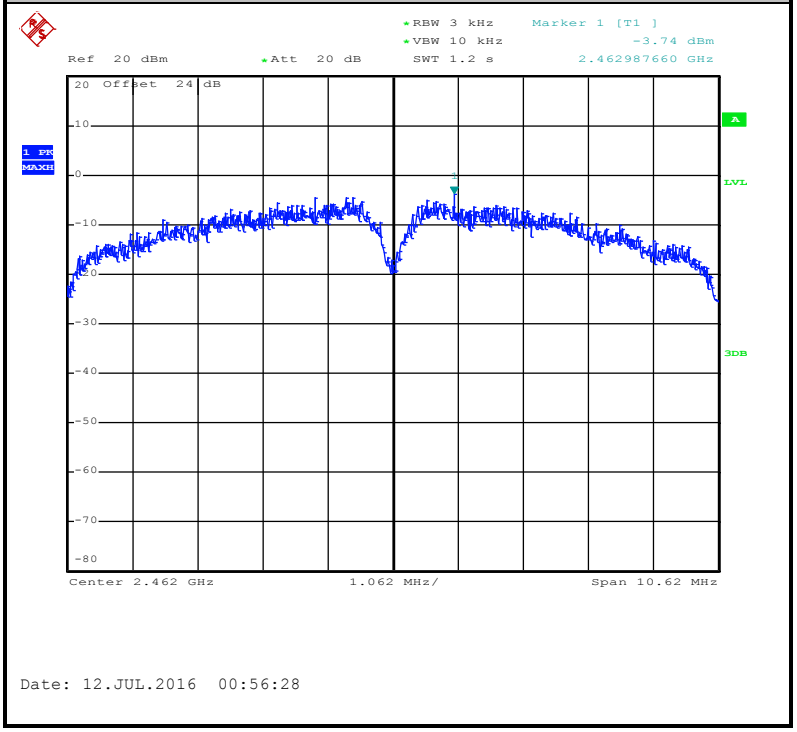
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A of this test report.

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 and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

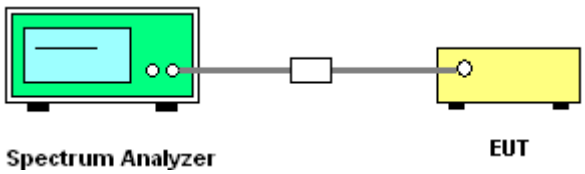
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.
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

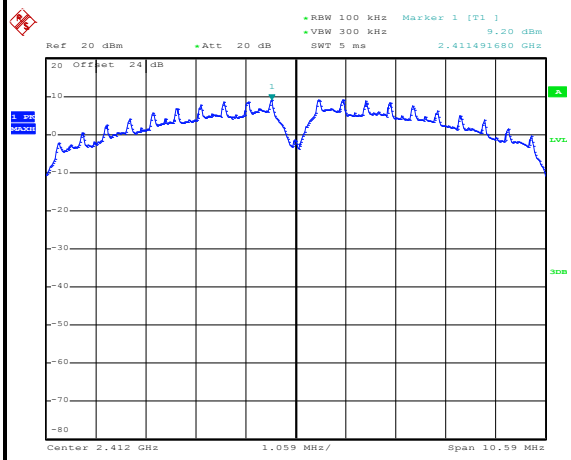


3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Mode :	802.11b	Temperature :	21~25℃
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Kai Laio

WLAN 802.11b Channel 01

100kHz PSD reference Level



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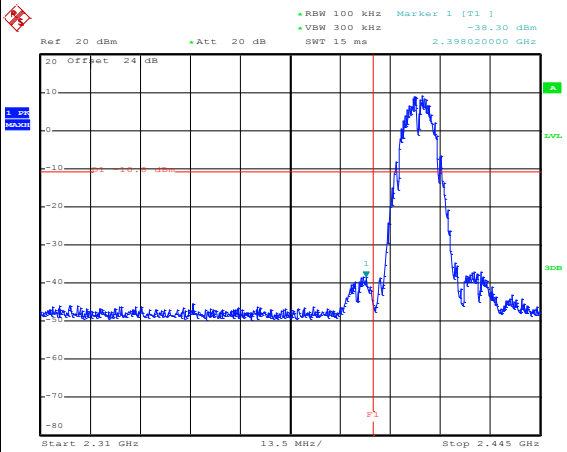
Low Channel Plot



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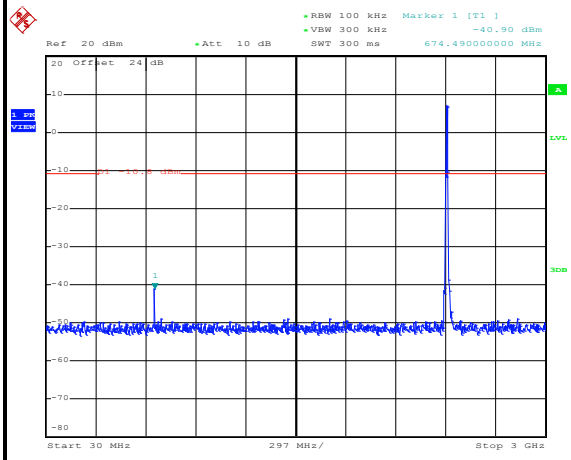
Spurious Emission 30MHz~3GHz



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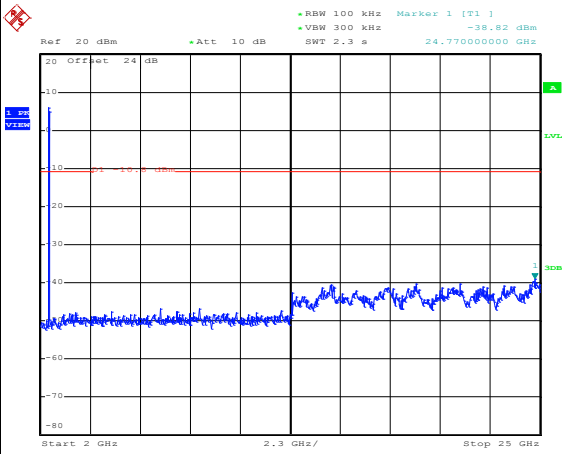
Spurious Emission 2GHz~25GHz



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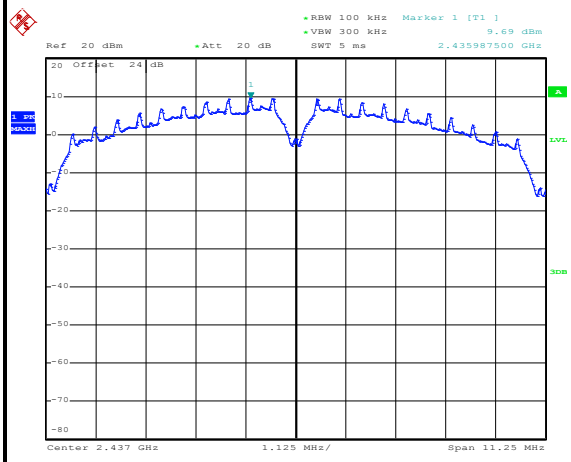
Test Mode :	802.11b	**Temperature :**	21~25℃
Test Band :	2.4GHz Mid	**Relative Humidity :**	51~54%
Test Channel :	06	**Test Engineer :**	Kai Laio

WLAN 802.11b Channel 06

100kHz PSD reference Level



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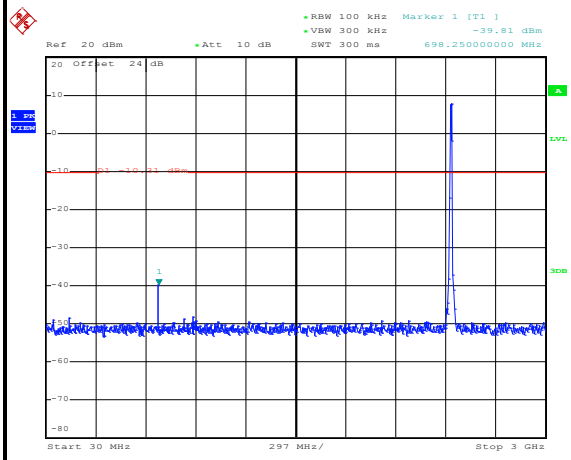
Mid Channel Plot

Spurious Emission 30MHz~3GHz



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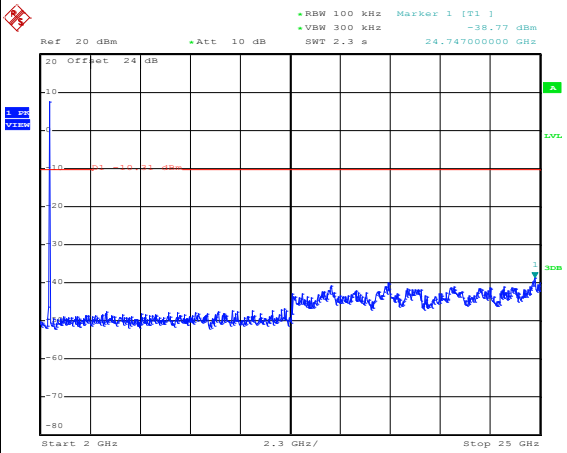
Spurious Emission 2GHz~25GHz



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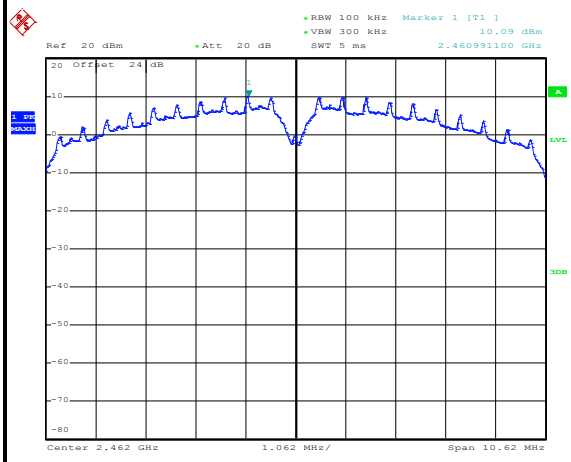
Test Mode :	802.11b	Temperature :	21~25℃
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Kai Laio

WLAN 802.11b Channel 11

100kHz PSD reference Level



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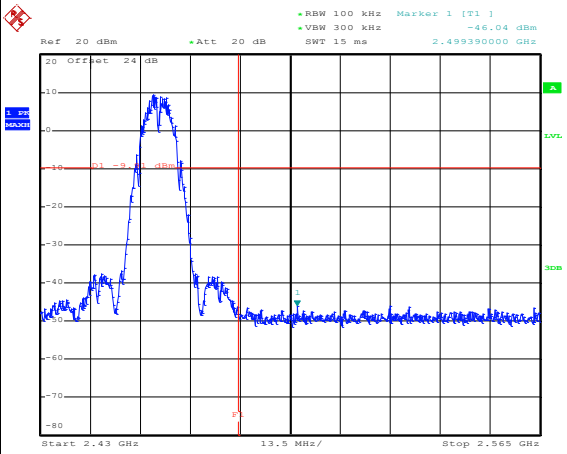
High Channel Plot



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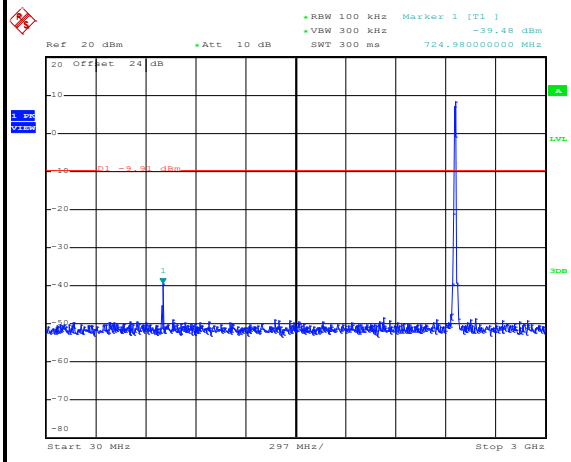
Spurious Emission 30MHz~3GHz



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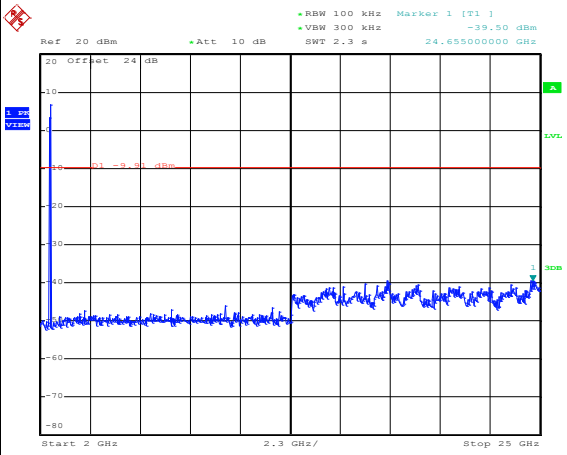
Spurious Emission 2GHz~25GHz



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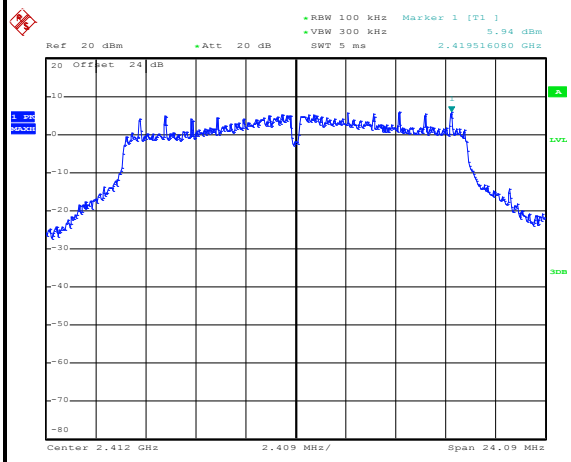
Test Mode :	802.11g	Temperature :	21~25℃
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Kai Laio

WLAN 802.11g Channel 01

100kHz PSD reference Level



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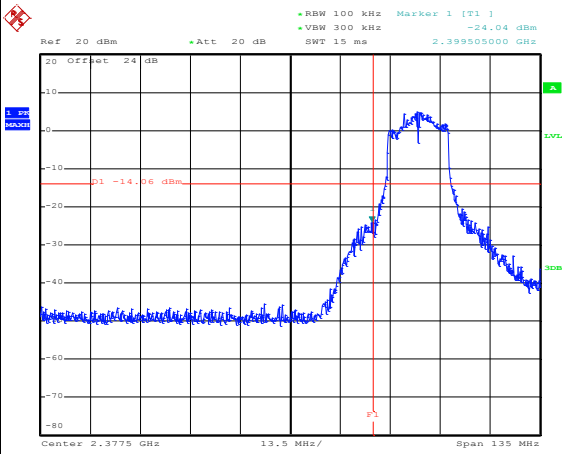
Low Channel Plot



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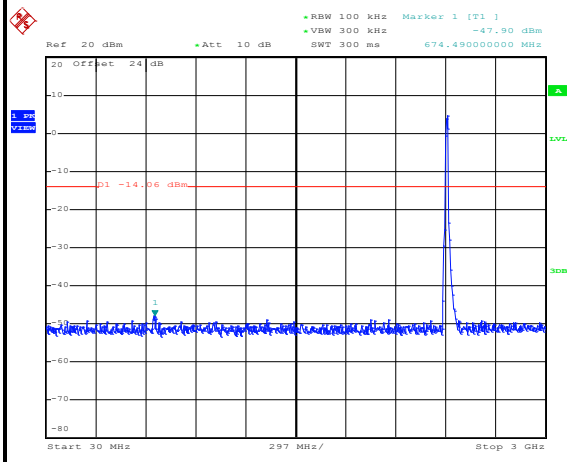
Spurious Emission 30MHz~3GHz



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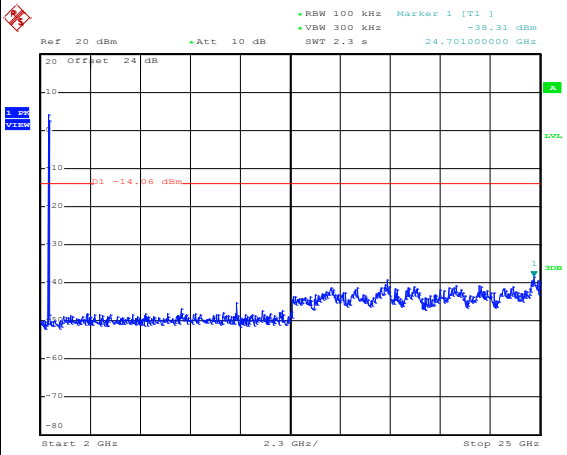
Spurious Emission 2GHz~25GHz



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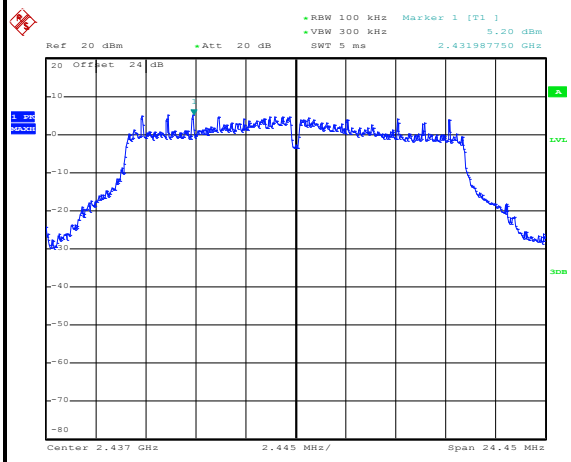
Test Mode :	802.11g	Temperature :	21~25℃
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Kai Laio

WLAN 802.11g Channel 06

100kHz PSD reference Level



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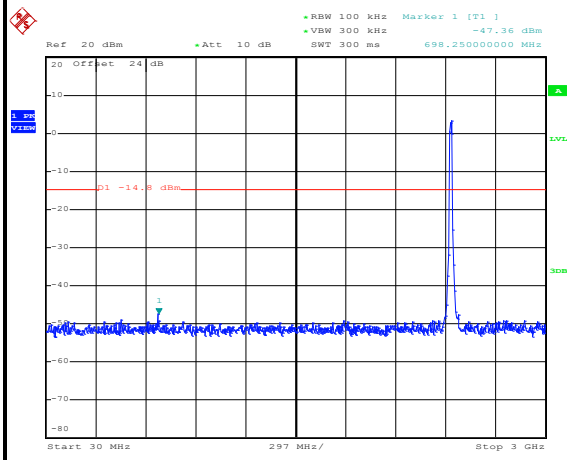
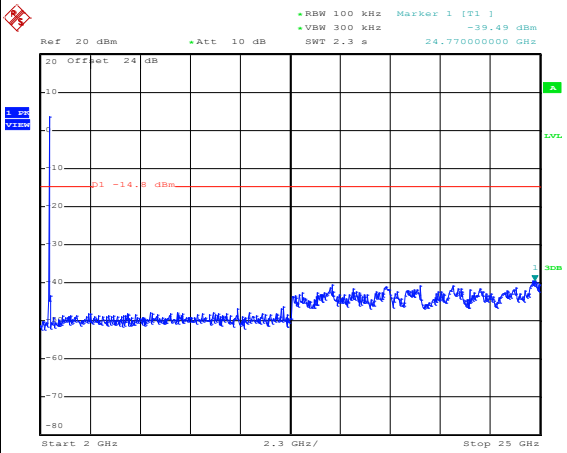
Mid Channel Plot

Spurious Emission 30MHz~3GHz



Date: 12.JUL.2016 00:12:29

Spurious Emission 2GHz~25GHz

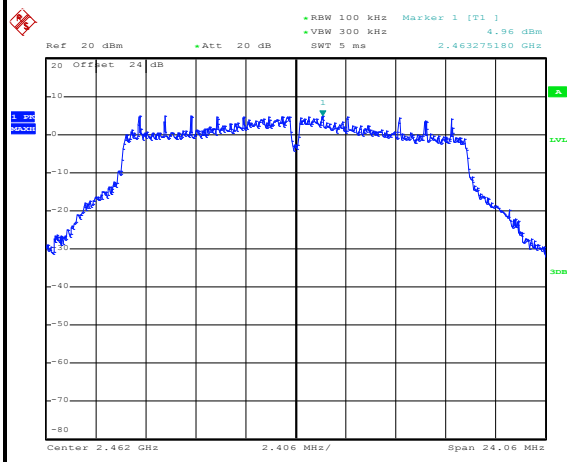


Date: 12.JUL.2016 00:12:38

Test Mode :	802.11g	**Temperature :**	21~25℃
Test Band :	2.4GHz High	**Relative Humidity :**	51~54%
Test Channel :	11	**Test Engineer :**	Kai Laio

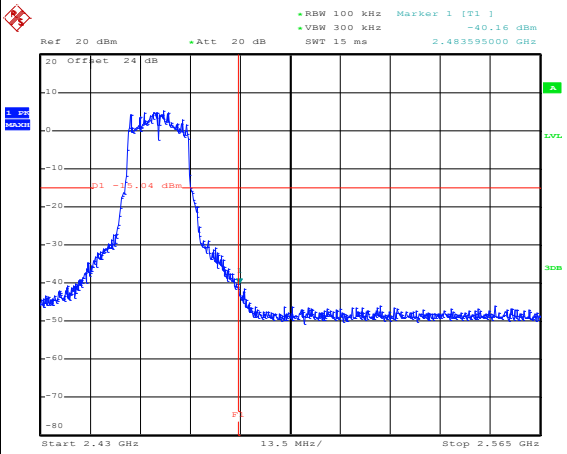
WLAN 802.11g Channel 11

100kHz PSD reference Level



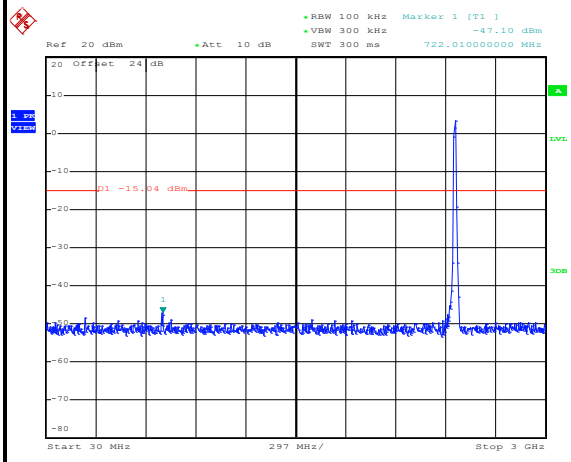
Date: 12.JUL.2016 00:17:35

High Channel Plot



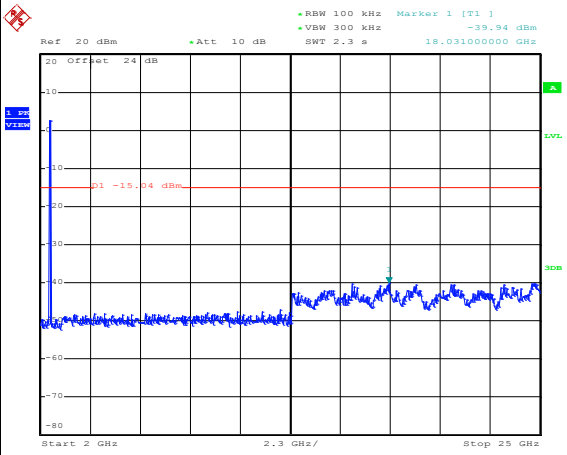
Date: 12.JUL.2016 00:20:27

Spurious Emission 30MHz~3GHz



Date: 12.JUL.2016 00:17:52

Spurious Emission 2GHz~25GHz

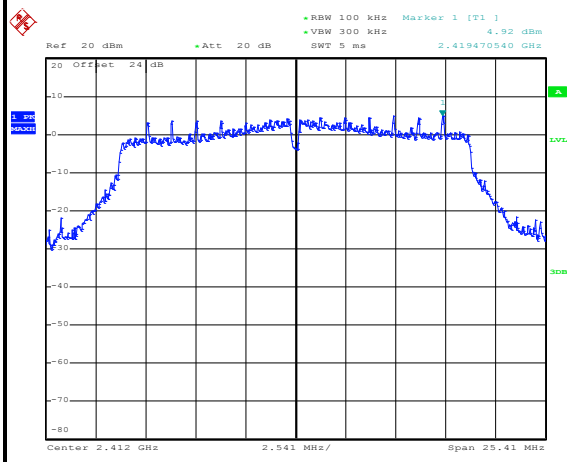


Date: 12.JUL.2016 00:18:00

Test Mode :	802.11n HT20	Temperature :	21~25℃
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Kai Laio

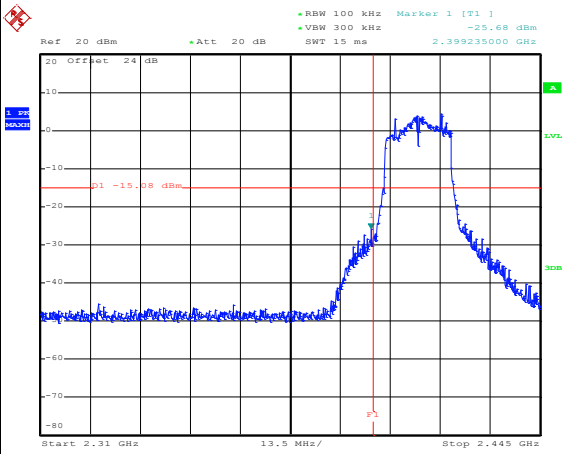
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



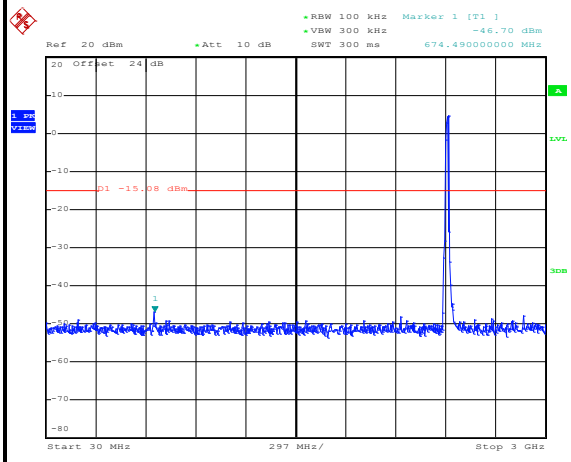
Date: 12.JUL.2016 00:26:48

Low Channel Plot



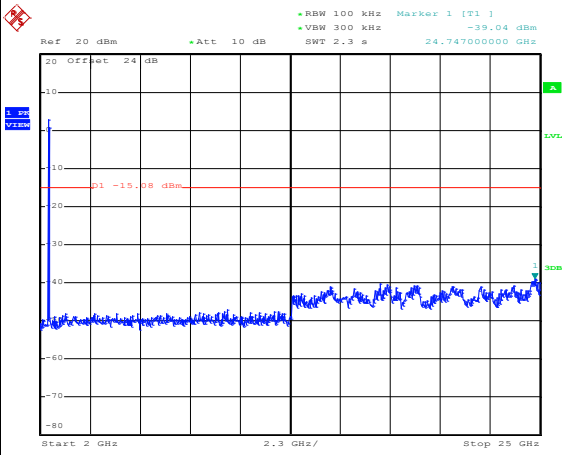
Date: 12.JUL.2016 00:27:14

Spurious Emission 30MHz~3GHz



Date: 12.JUL.2016 00:27:32

Spurious Emission 2GHz~25GHz

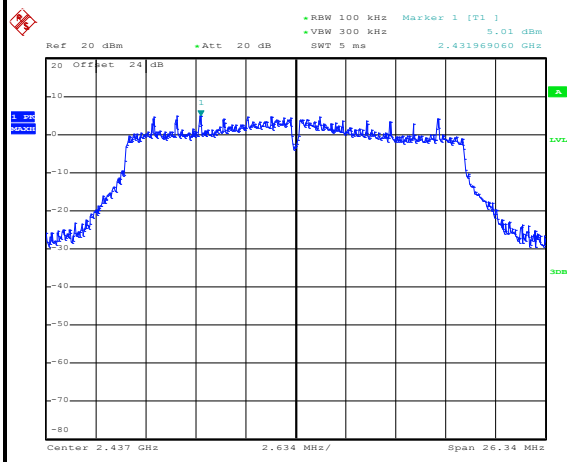


Date: 12.JUL.2016 00:27:40

Test Mode :	802.11n HT20	Temperature :	21~25℃
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Kai Laio

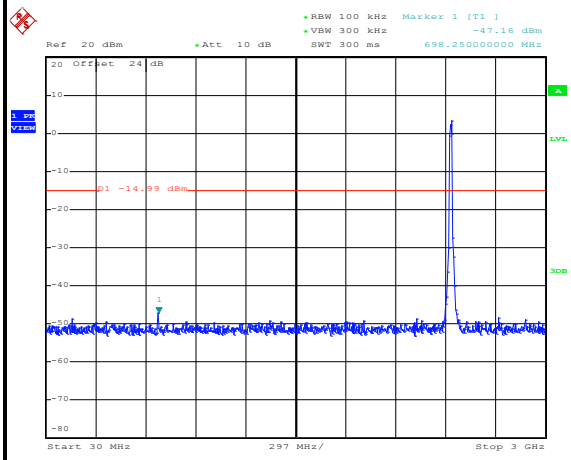
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level

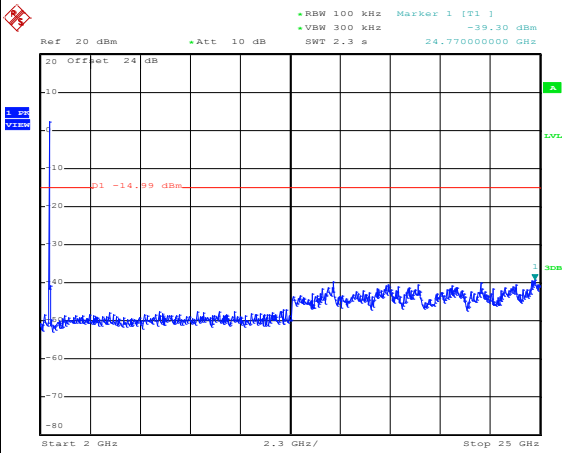


Mid Channel Plot

Spurious Emission 30MHz~3GHz



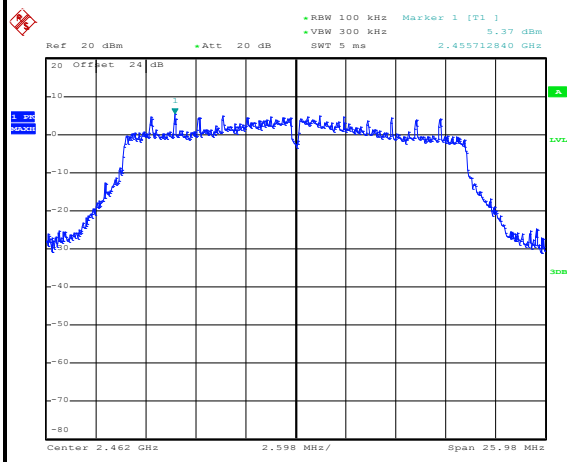
Spurious Emission 2GHz~25GHz



Test Mode :	802.11n HT20	Temperature :	21~25℃
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Kai Laio

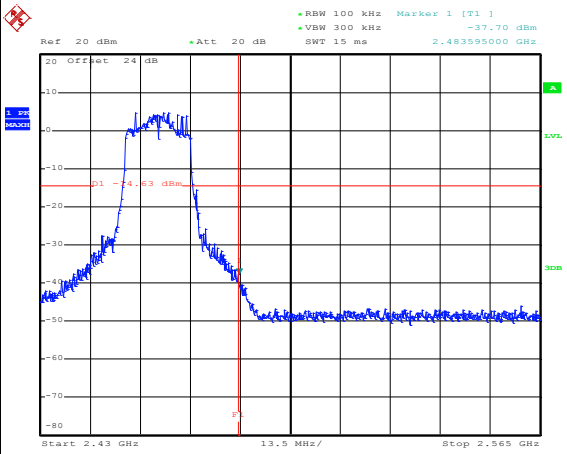
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



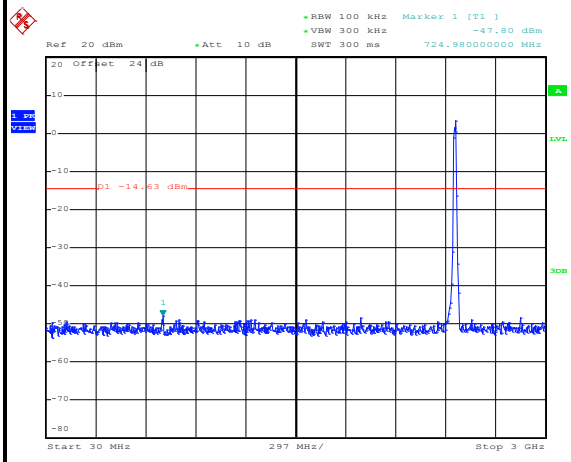
Date: 12.JUL.2016 00:36:02

High Channel Plot



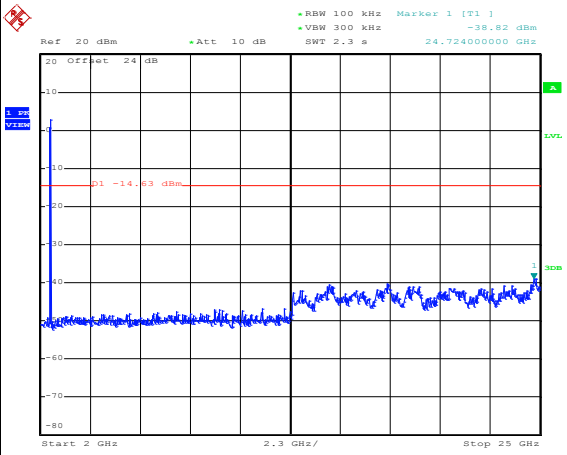
Date: 12.JUL.2016 00:36:47

Spurious Emission 30MHz~3GHz



Date: 12.JUL.2016 00:37:02

Spurious Emission 2GHz~25GHz



Date: 12.JUL.2016 00:37:10

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 FCC section 15.209 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

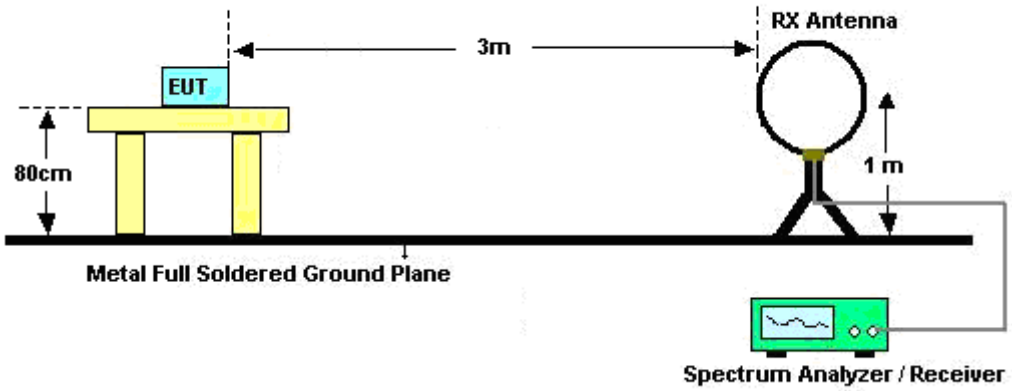
The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

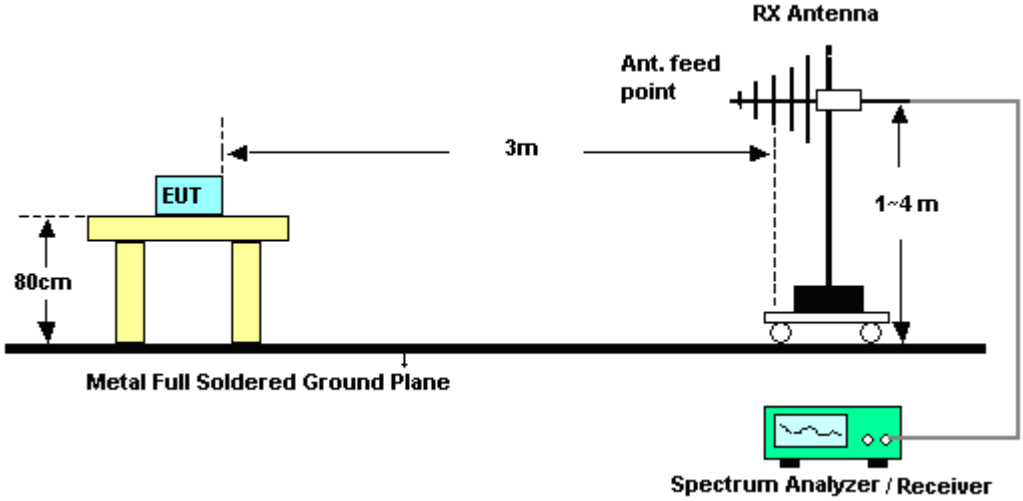
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the 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 measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. 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

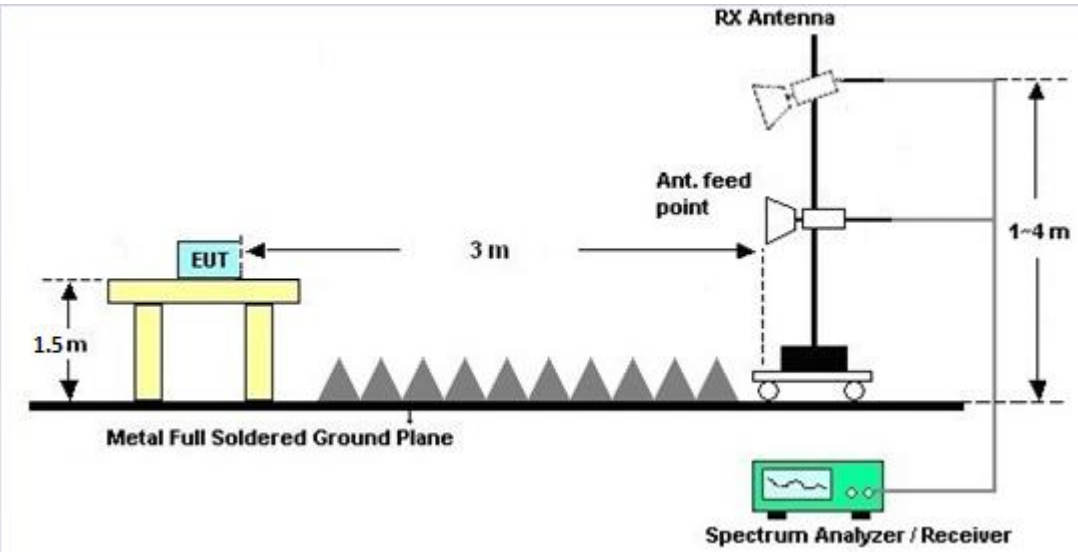
For radiated emissions below 30MHz



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 per 15.31(o) was not reported.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B and C.

3.5.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix B and C.

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.

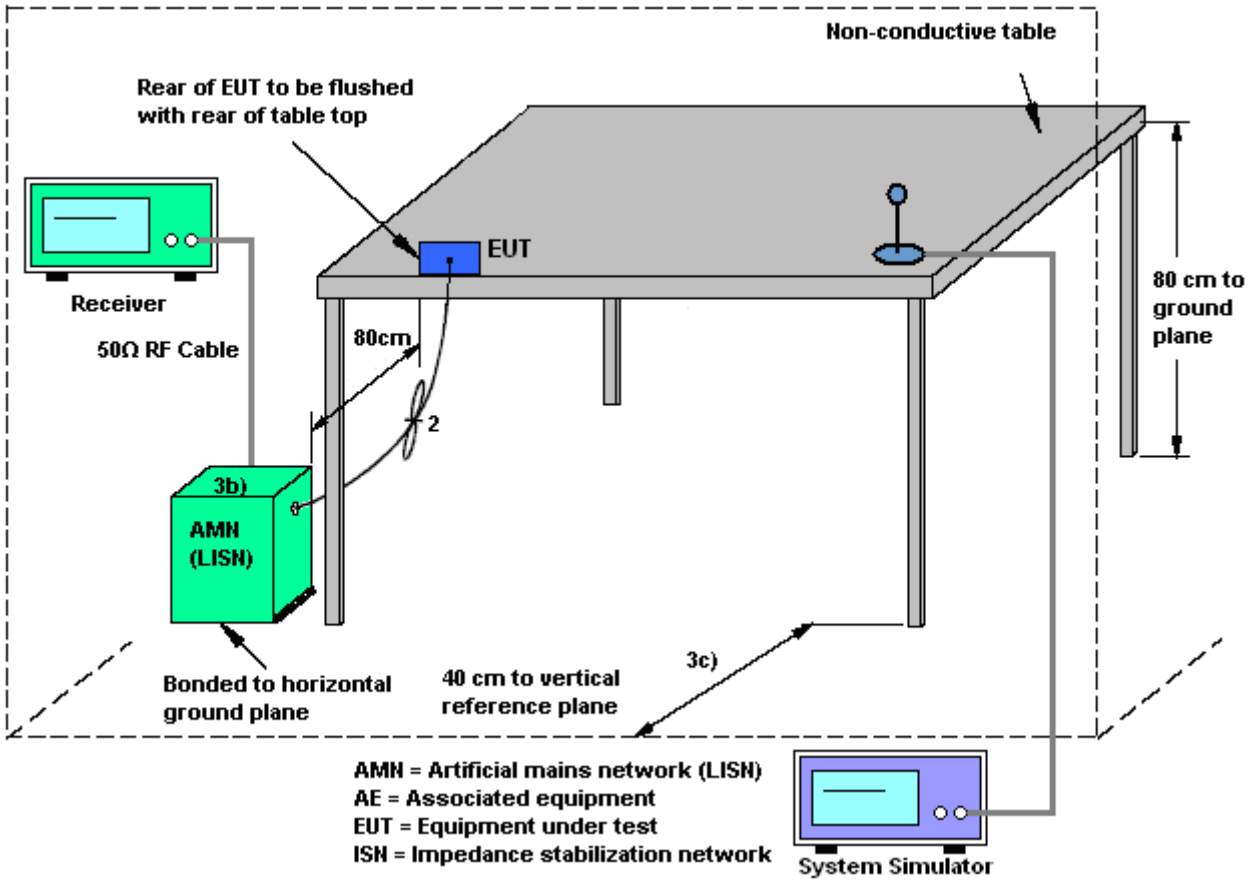
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

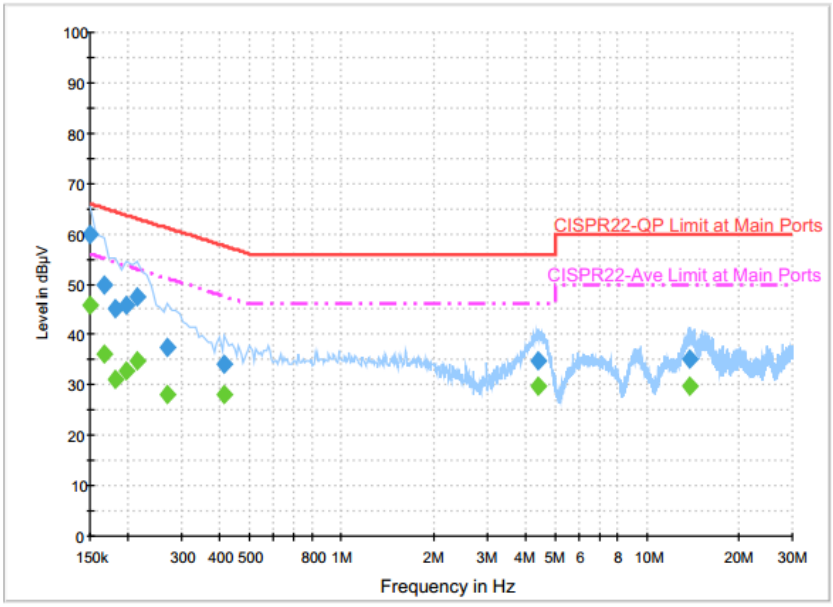
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other 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

Test Mode :	Mode 1	Temperature :	24~25℃
Test Engineer :	Kai-Chun Chu and Arthur Hsieh	Relative Humidity :	49~50%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	LTE Band 30 Idle + Bluetooth Link + WLAN (2.4GHz) Link + Camera (Back) + MP3 + Earphone + USB Cable 5 (Charging from Adapter 2)		



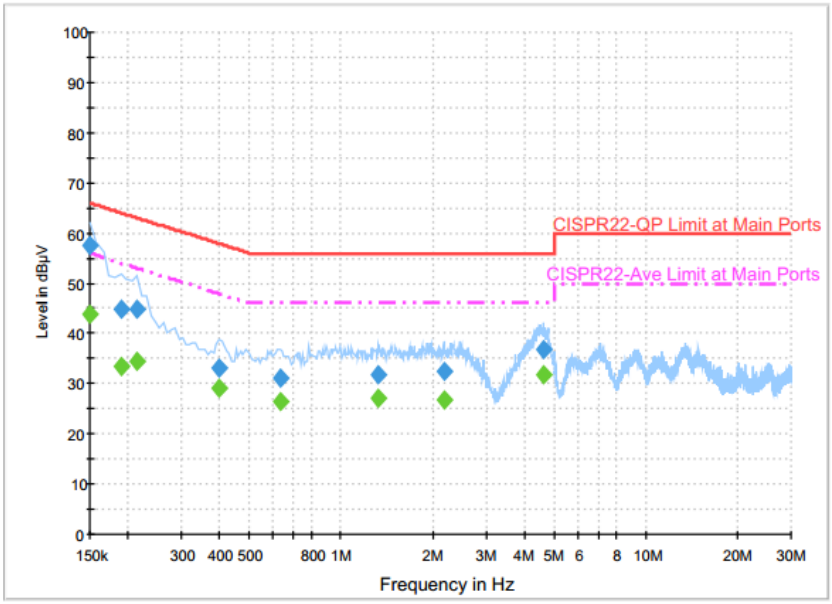
Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	60.0	Off	L1	19.6	6.0	66.0
0.166000	49.8	Off	L1	19.6	15.4	65.2
0.182000	45.0	Off	L1	19.6	19.4	64.4
0.198000	46.0	Off	L1	19.6	17.7	63.7
0.214000	47.5	Off	L1	19.6	15.5	63.0
0.270000	37.3	Off	L1	19.6	23.8	61.1
0.414000	34.1	Off	L1	19.6	23.5	57.6
4.398000	34.8	Off	L1	19.8	21.2	56.0
13.918000	35.0	Off	L1	20.3	25.0	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	46.0	Off	L1	19.6	10.0	56.0
0.166000	36.1	Off	L1	19.6	19.1	55.2
0.182000	31.2	Off	L1	19.6	23.2	54.4
0.198000	32.6	Off	L1	19.6	21.1	53.7
0.214000	34.8	Off	L1	19.6	18.2	53.0
0.270000	28.2	Off	L1	19.6	22.9	51.1
0.414000	28.0	Off	L1	19.6	19.6	47.6
4.398000	29.8	Off	L1	19.8	16.2	46.0
13.918000	29.8	Off	L1	20.3	20.2	50.0

Test Mode :	Mode 1	Temperature :	24~25℃
Test Engineer :	Kai-Chun Chu and Arthur Hsieh	Relative Humidity :	49~50%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	LTE Band 30 Idle + Bluetooth Link + WLAN (2.4GHz) Link + Camera (Back) + MP3 + Earphone + USB Cable 5 (Charging from Adapter 2)		



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	57.4	Off	N	19.6	8.6	66.0
0.190000	44.9	Off	N	19.6	19.1	64.0
0.214000	45.0	Off	N	19.6	18.0	63.0
0.398000	33.2	Off	N	19.6	24.7	57.9
0.630000	31.2	Off	N	19.6	24.8	56.0
1.326000	31.7	Off	N	19.6	24.3	56.0
2.182000	32.4	Off	N	19.6	23.6	56.0
4.630000	36.7	Off	N	19.8	19.3	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	43.9	Off	N	19.6	12.1	56.0
0.190000	33.5	Off	N	19.6	20.5	54.0
0.214000	34.4	Off	N	19.6	18.6	53.0
0.398000	29.0	Off	N	19.6	18.9	47.9
0.630000	26.5	Off	N	19.6	19.5	46.0
1.326000	27.1	Off	N	19.6	18.9	46.0
2.182000	26.9	Off	N	19.6	19.1	46.0
4.630000	31.6	Off	N	19.8	14.4	46.0

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. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. 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 FCC 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
DC Power Supply	TOPWARD	3303D	740889	N/A	May 20, 2016	May 30, 2016 ~ Jul. 14, 2016	May 19, 2017	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Jul. 29, 2015	May 30, 2016 ~ Jul. 14, 2016	Jul. 28, 2016	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Jul. 29, 2015	May 30, 2016 ~ Jul. 14, 2016	Jul. 28, 2016	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 23, 2015	May 30, 2016 ~ Jul. 14, 2016	Nov. 22, 2016	Conducted (TH02-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jun. 12, 2016	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 26, 2015	Jun. 12, 2016	Aug. 25, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2015	Jun. 12, 2016	Dec. 01, 2016	Conduction (CO05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Sep. 02, 2015	Jul. 02, 2016 ~ Jul. 04, 2016	Sep. 01, 2016	Radiation (03CH06-HY)
Bilog Antenna	Schaffner	CBL6111C	2725	30MHz~1GHz	Nov. 17, 2015	Jul. 02, 2016 ~ Jul. 04, 2016	Nov. 16, 2016	Radiation (03CH06-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100472	20Hz~26.5GHz	Jan. 07, 2016	Jul. 02, 2016 ~ Jul. 04, 2016	Jan. 06, 2017	Radiation (03CH06-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1156	1GHz~18GHz	Aug. 21, 2015	Jul. 02, 2016 ~ Jul. 04, 2016	Aug. 20, 2016	Radiation (03CH06-HY)
Preamplifier	Agilent	8449B	3008A01917	1GHz~26.5GHz	Apr. 18, 2016	Jul. 02, 2016 ~ Jul. 04, 2016	Apr. 17, 2017	Radiation (03CH06-HY)
Preamplifier	SONOMA	310N	186713	9kHz~1GHz	Apr. 19, 2016	Jul. 02, 2016 ~ Jul. 04, 2016	Apr. 18, 2017	Radiation (03CH06-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1850117	1GHz ~ 18GHz	Jun. 22, 2016	Jul. 02, 2016 ~ Jul. 04, 2016	Jun. 21, 2017	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF780208212	1m~4m	N/A	Jul. 02, 2016 ~ Jul. 04, 2016	N/A	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0-360 degree	N/A	Jul. 02, 2016 ~ Jul. 04, 2016	N/A	Radiation (03CH06-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.26**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.90**

Appendix A. Conducted Test Results

Report Number : FR641901C

A1 - DTS Part

Test Engineer:	Kai Laio	Temperature:	21~25	°C
Test Date:	2016/05/30~2016/07/14	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	11.45	7.06	0.50	Pass
11b	1Mbps	1	6	2437	11.55	7.50	0.50	Pass
11b	1Mbps	1	11	2462	11.45	7.08	0.50	Pass
11g	6Mbps	1	1	2412	18.45	16.06	0.50	Pass
11g	6Mbps	1	6	2437	18.35	16.30	0.50	Pass
11g	6Mbps	1	11	2462	18.10	16.04	0.50	Pass
HT20	MCS0	1	1	2412	19.10	16.94	0.50	Pass
HT20	MCS0	1	6	2437	19.15	17.56	0.50	Pass
HT20	MCS0	1	11	2462	18.95	17.32	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	20.57	30.00	-1.70	18.87	36.00	Pass
11b	1Mbps	1	6	2437	20.70	30.00	-1.70	19.00	36.00	Pass
11b	1Mbps	1	11	2462	21.05	30.00	-1.70	19.35	36.00	Pass
11g	6Mbps	1	1	2412	23.88	30.00	-1.70	22.18	36.00	Pass
11g	6Mbps	1	6	2437	23.87	30.00	-1.70	22.17	36.00	Pass
11g	6Mbps	1	11	2462	24.23	30.00	-1.70	22.53	36.00	Pass
HT20	MCS0	1	1	2412	23.71	30.00	-1.70	22.01	36.00	Pass
HT20	MCS0	1	6	2437	24.07	30.00	-1.70	22.37	36.00	Pass
HT20	MCS0	1	11	2462	24.45	30.00	-1.70	22.75	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	0.06	17.63
11b	1Mbps	1	6	2437	0.06	17.97
11b	1Mbps	1	11	2462	0.06	17.99
11g	6Mbps	1	1	2412	0.32	17.88
11g	6Mbps	1	6	2437	0.32	17.34
11g	6Mbps	1	11	2462	0.32	17.55
HT20	MCS0	1	1	2412	0.34	16.78
HT20	MCS0	1	6	2437	0.34	16.92
HT20	MCS0	1	11	2462	0.34	16.85

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	-4.48	-1.70	8.00	Pass
11b	1Mbps	1	6	2437	-3.92	-1.70	8.00	Pass
11b	1Mbps	1	11	2462	-3.74	-1.70	8.00	Pass
11g	6Mbps	1	1	2412	-5.73	-1.70	8.00	Pass
11g	6Mbps	1	6	2437	-6.36	-1.70	8.00	Pass
11g	6Mbps	1	11	2462	-6.08	-1.70	8.00	Pass
HT20	MCS0	1	1	2412	-8.07	-1.70	8.00	Pass
HT20	MCS0	1	6	2437	-7.09	-1.70	8.00	Pass
HT20	MCS0	1	11	2462	-7.24	-1.70	8.00	Pass

Appendix B. Radiated Spurious Emission

Test Engineer :	Donny Tang	Temperature :	23~24°C
		Relative Humidity :	47~49%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI	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		2355.99	46.94	-27.06	74	47.69	27.1	6.71	34.56	162	162	P	H
		2387.595	35.62	-18.38	54	36.26	27.17	6.75	34.56	162	162	A	H
	*	2414	103.36	-	-	103.96	27.21	6.75	34.56	162	162	P	H
	*	2414	99.01	-	-	99.61	27.21	6.75	34.56	162	162	A	H
													H
													H
		2324.175	47.63	-26.37	74	48.5	27.02	6.67	34.56	196	308	P	V
		2388.54	34.83	-19.17	54	35.47	27.17	6.75	34.56	196	308	A	V
	*	2414	97.31	-	-	97.91	27.21	6.75	34.56	196	308	P	V
	*	2412	93.02	-	-	93.62	27.21	6.75	34.56	196	308	A	V
													V
													V
802.11b CH 06 2437MHz		2353.68	47.51	-26.49	74	48.26	27.1	6.71	34.56	183	164	P	H
		2389.8	34.82	-19.18	54	35.46	27.17	6.75	34.56	183	164	A	H
	*	2436	104.94	-	-	105.4	27.25	6.84	34.55	183	164	P	H
	*	2436	100.85	-	-	101.31	27.25	6.84	34.55	183	164	A	H
		2484.74	47.85	-26.15	74	48.1	27.36	6.94	34.55	183	164	P	H
		2484.88	35.63	-18.37	54	35.88	27.36	6.94	34.55	183	164	A	H
		2366.42	47.25	-26.75	74	48	27.1	6.71	34.56	174	356	P	V
		2389.94	34.66	-19.34	54	35.3	27.17	6.75	34.56	174	356	A	V
	*	2436	98.08	-	-	98.54	27.25	6.84	34.55	174	356	P	V
	*	2436	93.84	-	-	94.3	27.25	6.84	34.55	174	356	A	V
		2486.21	47.3	-26.7	74	47.55	27.36	6.94	34.55	174	356	P	V
		2486.56	35.22	-18.78	54	35.47	27.36	6.94	34.55	174	356	A	V

802.11b CH 11 2462MHz	*	2462	105.15	-	-	105.54	27.32	6.84	34.55	157	165	P	H
	*	2462	101.08	-	-	101.47	27.32	6.84	34.55	157	165	A	H
		2485.96	50.49	-23.51	74	50.74	27.36	6.94	34.55	157	165	P	H
		2486.48	40.43	-13.57	54	40.68	27.36	6.94	34.55	157	165	A	H
													H
													H
	*	2462	99.25	-	-	99.64	27.32	6.84	34.55	151	355	P	V
	*	2462	95.18	-	-	95.57	27.32	6.84	34.55	151	355	A	V
		2486.88	48.92	-25.08	74	49.17	27.36	6.94	34.55	151	355	P	V
		2486.44	37.09	-16.91	54	37.34	27.36	6.94	34.55	151	355	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	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	44.89	-29.11	74	62.91	31.22	11.01	60.25	100	0	P	H
													H
													H
													H
		4824	39.08	-34.92	74	57.1	31.22	11.01	60.25	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4874	38.96	-35.04	74	56.68	31.31	11.06	60.09	100	0	P	H
		7311	43.63	-30.37	74	56.08	35.98	11.71	60.14	100	0	P	H
													H
													H
		4874	39.03	-34.97	74	56.75	31.31	11.06	60.09	100	0	P	V
		7311	45.03	-28.97	74	57.48	35.98	11.71	60.14	100	0	P	V
													V
													V
802.11b CH 11 2462MHz		4924	39.23	-34.77	74	56.59	31.39	11.17	59.92	100	0	P	H
		7386	43.1	-30.9	74	55.5	36.17	11.55	60.12	100	0	P	H
													H
													H
		4924	39.96	-34.04	74	57.32	31.39	11.17	59.92	100	0	P	V
		7386	45.68	-28.32	74	58.08	36.17	11.55	60.12	100	0	P	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 (Band Edge @ 3m)

WIFI	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	60.47	-13.53	74	61.11	27.17	6.75	34.56	173	163	P	H
		2389.905	45.27	-8.73	54	45.91	27.17	6.75	34.56	173	163	A	H
	*	2412	105.88	-	-	106.48	27.21	6.75	34.56	173	163	P	H
	*	2412	96.08	-	-	96.68	27.21	6.75	34.56	173	163	A	H
													H
													H
		2390	59.14	-14.86	74	59.78	27.17	6.75	34.56	162	320	P	V
		2389.905	38.18	-15.82	54	38.82	27.17	6.75	34.56	162	320	A	V
	*	2412	100.37	-	-	100.97	27.21	6.75	34.56	162	320	P	V
	*	2412	90.51	-	-	91.11	27.21	6.75	34.56	162	320	A	V
													V
													V
802.11g CH 06 2437MHz		2386.58	47.05	-26.95	74	47.69	27.17	6.75	34.56	185	165	P	H
		2389.38	35.9	-18.1	54	36.54	27.17	6.75	34.56	185	165	A	H
	*	2438	106.42	-	-	106.84	27.29	6.84	34.55	185	165	P	H
	*	2438	96.61	-	-	97.03	27.29	6.84	34.55	185	165	A	H
		2485.37	48.63	-25.37	74	48.88	27.36	6.94	34.55	185	165	P	H
		2486.35	37.18	-16.82	54	37.43	27.36	6.94	34.55	185	165	A	H
		2372.44	47.38	-26.62	74	48.1	27.13	6.71	34.56	179	356	P	V
		2368.94	35.5	-18.5	54	36.22	27.13	6.71	34.56	179	356	A	V
	*	2436	99.21	-	-	99.67	27.25	6.84	34.55	179	356	P	V
	*	2436	90.22	-	-	90.68	27.25	6.84	34.55	179	356	A	V
		2490.55	47.57	-26.43	74	47.78	27.4	6.94	34.55	179	356	P	V
		2483.55	36.17	-17.83	54	36.42	27.36	6.94	34.55	179	356	A	V

802.11g CH 11 2462MHz	*	2462	107.06	-	-	107.45	27.32	6.84	34.55	159	165	P	H
	*	2462	97.55	-	-	97.94	27.32	6.84	34.55	159	165	A	H
		2483.56	62.25	-11.75	74	62.5	27.36	6.94	34.55	159	165	P	H
		2483.56	43.87	-10.13	54	44.12	27.36	6.94	34.55	159	165	A	H
													H
													H
	*	2462	100.58	-	-	100.97	27.32	6.84	34.55	148	355	P	V
	*	2462	90.64	-	-	91.03	27.32	6.84	34.55	148	355	A	V
		2483.68	57.92	-16.08	74	58.17	27.36	6.94	34.55	148	355	P	V
		2483.6	39.9	-14.1	54	40.15	27.36	6.94	34.55	148	355	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	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	39.35	-34.65	74	57.37	31.22	11.01	60.25	100	0	P	H
													H
													H
													H
		4824	38.51	-35.49	74	56.53	31.22	11.01	60.25	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	38.91	-35.09	74	56.63	31.31	11.06	60.09	100	0	P	H
		7311	42.25	-31.75	74	54.7	35.98	11.71	60.14	100	0	P	H
													H
													H
		4874	39.58	-34.42	74	57.3	31.31	11.06	60.09	100	0	P	V
		7311	46.14	-27.86	74	58.59	35.98	11.71	60.14	100	0	P	V
													V
													V
802.11g CH 11 2462MHz		4924	39.76	-34.24	74	57.12	31.39	11.17	59.92	100	0	P	H
		7386	46.16	-27.84	74	58.56	36.17	11.55	60.12	100	0	P	H
													H
													H
		4924	40.34	-33.66	74	57.7	31.39	11.17	59.92	100	0	P	V
		7386	48.87	-25.13	74	61.27	36.17	11.55	60.12	100	0	P	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 (Band Edge @ 3m)

WIFI	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)
		2389.905	60.06	-13.94	74	60.7	27.17	6.75	34.56	174	162	P	H
		2389.905	41.94	-12.06	54	42.58	27.17	6.75	34.56	174	162	A	H
	*	2412	104.61	-	-	105.21	27.21	6.75	34.56	174	162	P	H
	*	2412	94.76	-	-	95.36	27.21	6.75	34.56	174	162	A	H
802.11n													H
HT20													H
CH 01		2389.38	52.14	-21.86	74	52.78	27.17	6.75	34.56	148	308	P	V
2412MHz		2389.905	37.13	-16.87	54	37.77	27.17	6.75	34.56	148	308	A	V
	*	2414	98.63	-	-	99.23	27.21	6.75	34.56	148	308	P	V
	*	2412	88.73	-	-	89.33	27.21	6.75	34.56	148	308	A	V
													V
													V
		2368.94	47.13	-26.87	74	47.85	27.13	6.71	34.56	166	163	P	H
		2389.94	36.06	-17.94	54	36.7	27.17	6.75	34.56	166	163	A	H
	*	2436	106.55	-	-	107.01	27.25	6.84	34.55	166	163	P	H
	*	2436	96.62	-	-	97.08	27.25	6.84	34.55	166	163	A	H
802.11n		2483.48	49.19	-24.81	74	49.44	27.36	6.94	34.55	166	163	P	H
HT20		2484.88	37.5	-16.5	54	37.75	27.36	6.94	34.55	166	163	A	H
CH 06		2339.68	46.98	-27.02	74	47.81	27.06	6.67	34.56	173	308	P	V
2437MHz		2389.94	35.64	-18.36	54	36.28	27.17	6.75	34.56	173	308	A	V
	*	2436	100	-	-	100.46	27.25	6.84	34.55	173	308	P	V
	*	2438	89.85	-	-	90.27	27.29	6.84	34.55	173	308	A	V
		2484.67	47.34	-26.66	74	47.59	27.36	6.94	34.55	173	308	P	V
		2484.25	36.39	-17.61	54	36.64	27.36	6.94	34.55	173	308	A	V

	*	2462	106.9	-	-	107.29	27.32	6.84	34.55	158	164	P	H
	*	2462	96.68	-	-	97.07	27.32	6.84	34.55	158	164	A	H
		2483.6	61.16	-12.84	74	61.41	27.36	6.94	34.55	158	164	P	H
		2483.76	43.77	-10.23	54	44.02	27.36	6.94	34.55	158	164	A	H
802.11n													H
HT20													H
CH 11	*	2462	100.75	-	-	101.14	27.32	6.84	34.55	152	355	P	V
2462MHz	*	2462	90.14	-	-	90.53	27.32	6.84	34.55	152	355	A	V
		2485.04	59.58	-14.42	74	59.83	27.36	6.94	34.55	152	355	P	V
		2483.88	39.39	-14.61	54	39.64	27.36	6.94	34.55	152	355	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	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	39.58	-34.42	74	57.6	31.22	11.01	60.25	100	0	P	H
													H
802.11n													H
HT20													H
CH 01		4824	38.36	-35.64	74	56.38	31.22	11.01	60.25	100	0	P	V
2412MHz													V
													V
													V
		4874	38.68	-35.32	74	56.4	31.31	11.06	60.09	100	0	P	H
		7311	43.13	-30.87	74	55.58	35.98	11.71	60.14	100	0	P	H
802.11n													H
HT20													H
CH 06		4874	38.74	-35.26	74	56.46	31.31	11.06	60.09	100	0	P	V
2437MHz		7311	45.1	-28.9	74	57.55	35.98	11.71	60.14	100	0	P	V
													V
													V
		4924	39.05	-34.95	74	56.41	31.39	11.17	59.92	100	0	P	H
		7386	44.52	-29.48	74	56.92	36.17	11.55	60.12	100	0	P	H
802.11n													H
HT20													H
CH 11		4924	39.65	-34.35	74	57.01	31.39	11.17	59.92	100	0	P	V
2462MHz		7386	45.55	-28.45	74	57.95	36.17	11.55	60.12	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 802.11g (LF)

WIFI	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)
2.4GHz 802.11g LF		30	24.25	-15.75	40	28.45	25.7	1.9	31.8	-	-	P	H
		111	22.66	-20.84	43.5	35.06	17.29	2.02	31.71	-	-	P	H
		215.22	24.69	-18.81	43.5	38.34	16.05	2.02	31.72	-	-	P	H
		895.7	30.2	-15.8	46	29	29.37	3.38	31.55	-	-	P	H
		917.4	30.77	-15.23	46	29.01	29.86	3.27	31.37	-	-	P	H
		946.1	31.39	-14.61	46	28.81	30.6	3.08	31.1	100	213	P	H
													H
													H
													H
													H
													H
													H
		34.59	31.46	-8.54	40	38.43	22.9	1.92	31.79	100	161	P	V
		38.64	29.5	-10.5	40	38.9	20.58	1.81	31.79	-	-	P	V
		111.27	26.46	-17.04	43.5	38.86	17.29	2.02	31.71	-	-	P	V
		854.4	29.74	-16.26	46	29	29.13	3.32	31.71	-	-	P	V
		899.9	30.7	-15.3	46	29.44	29.4	3.39	31.53	-	-	P	V
		937	31.34	-14.66	46	29.01	30.37	3.14	31.18	-	-	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	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
		(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 C. Radiated Spurious Emission Plots

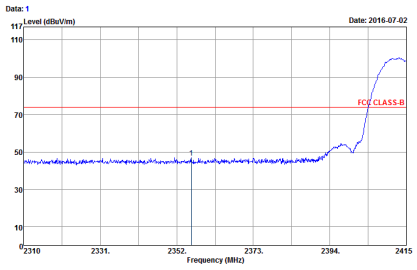
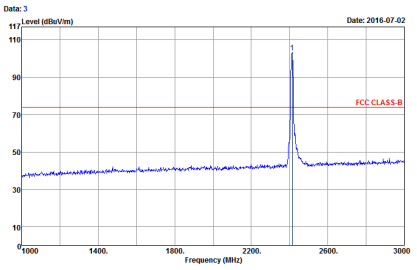
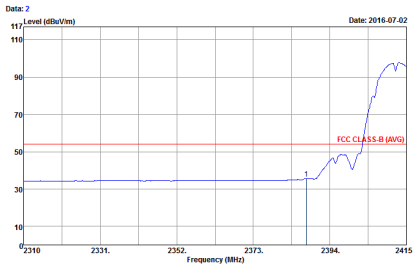
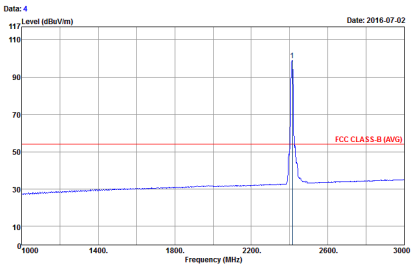
Test Engineer :	Donny Tang	**Temperature :**	23~24°C
		Relative Humidity :	47~49%

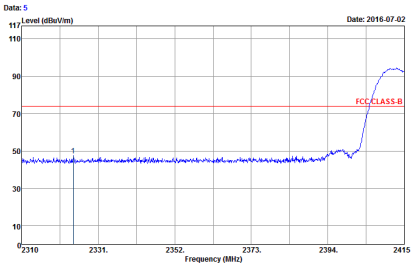
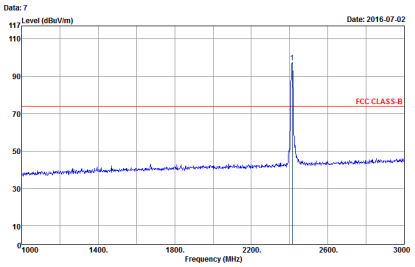
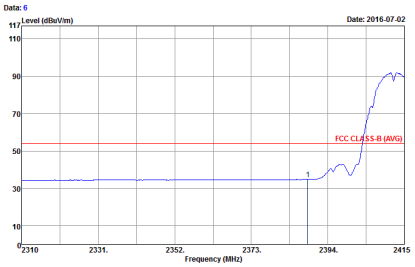
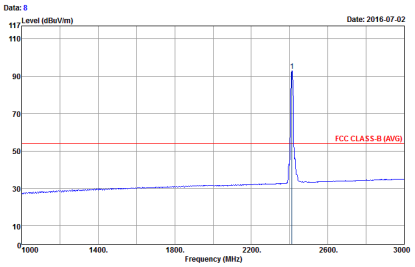
Note symbol

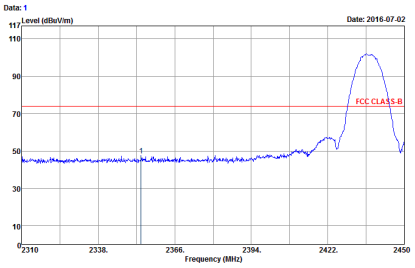
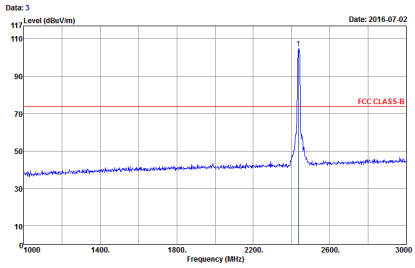
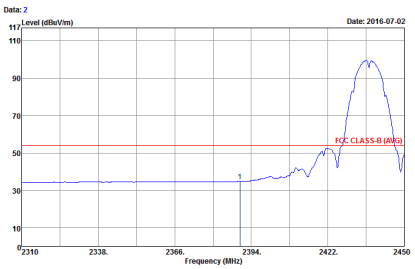
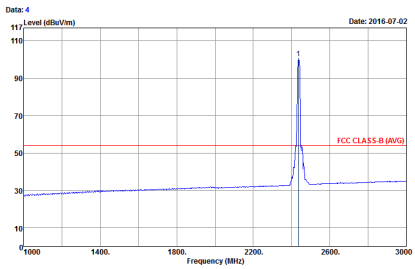
-L	**Low channel location**
-R	**High channel location**

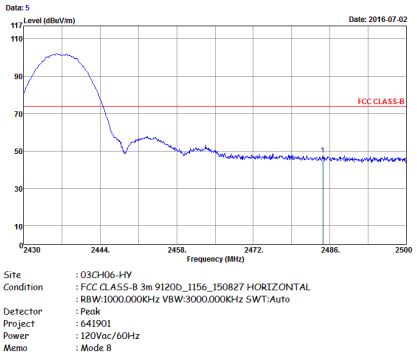
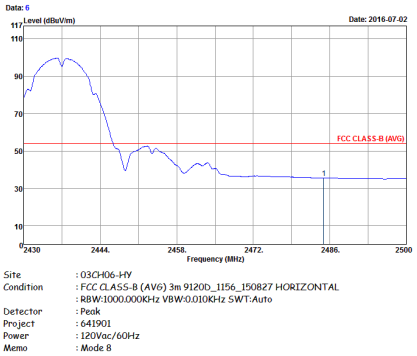
2.4GHz 2400~2483.5MHz

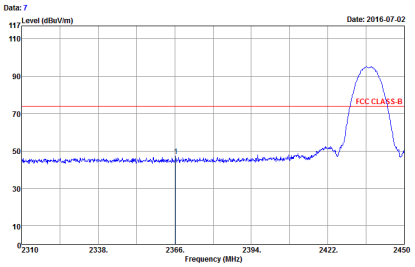
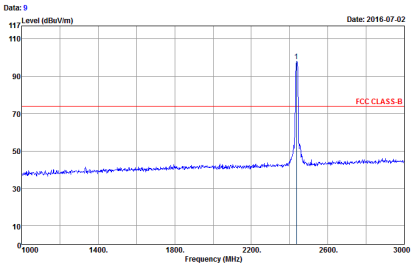
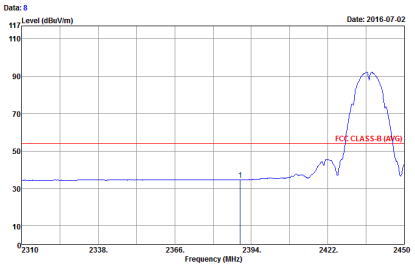
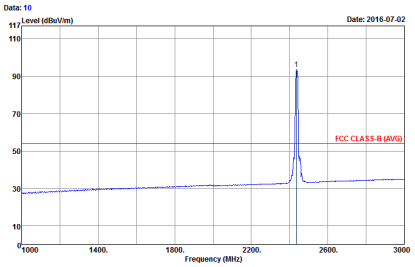
WIFI 802.11b (Band Edge @ 3m)

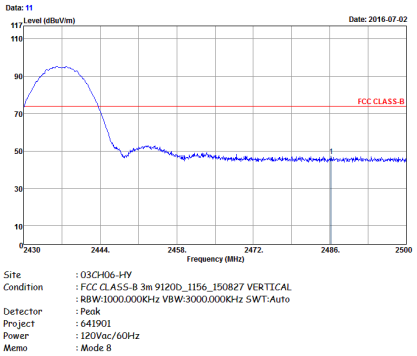
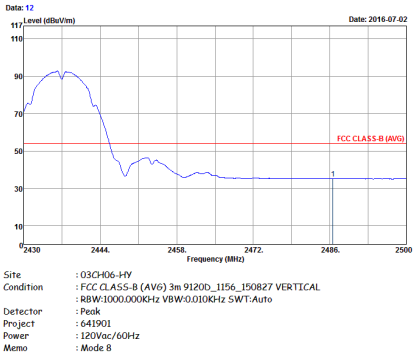
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11b CH01 2412MHz	
	Horizontal	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 7	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 7
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 7	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 7

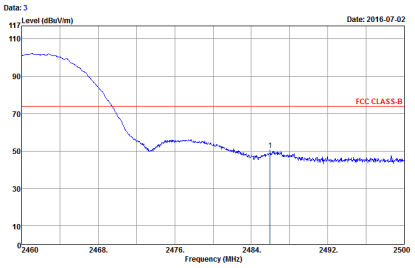
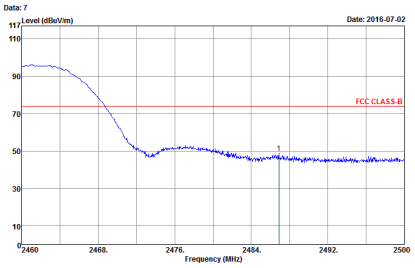
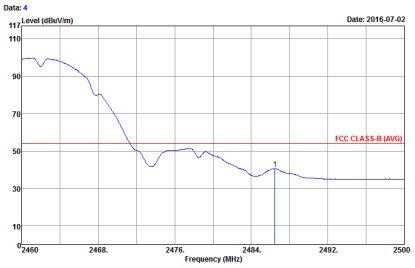
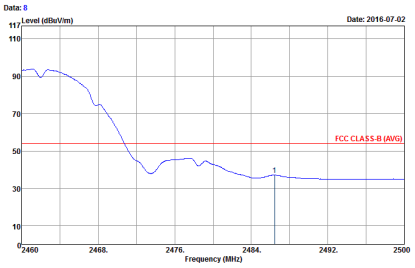
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11b CH01 2412MHz	
	Vertical	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 7	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 7
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 7	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 7

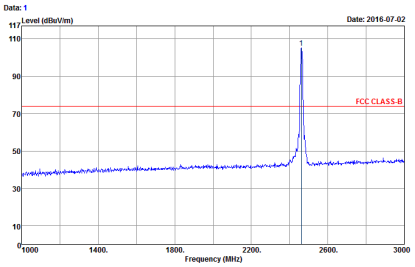
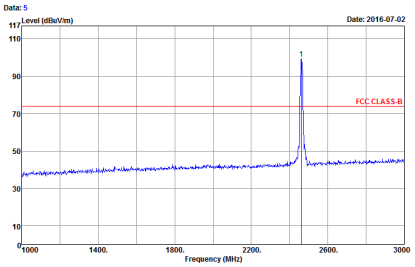
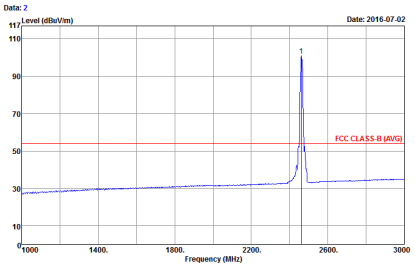
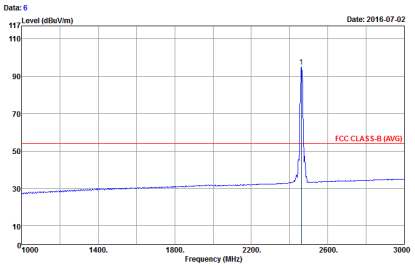
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11b CH06 2437MHz - L	
	Horizontal	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 8	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 8
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 8	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 8

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

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11b CH06 2437MHz - L	
	Vertical	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 8	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 8
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 8	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 8

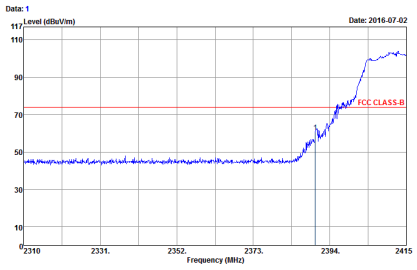
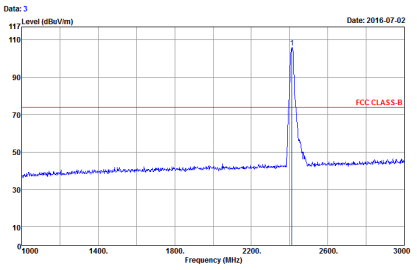
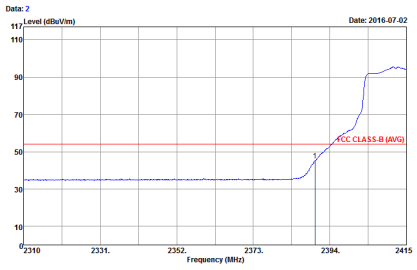
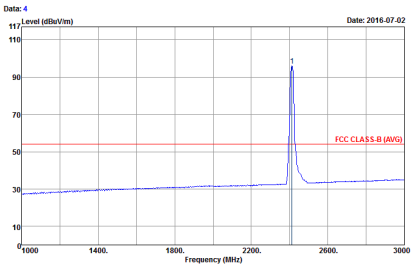
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11b CH06 2437MHz - R	
	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

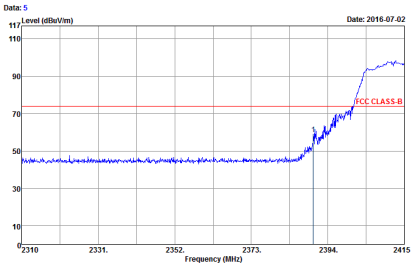
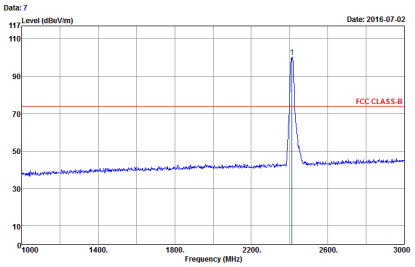
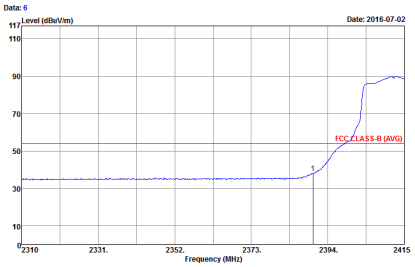
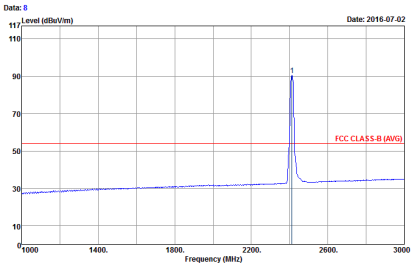
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11b CH11 2462MHz	
	Horizontal	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 9	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 9
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 9	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 9

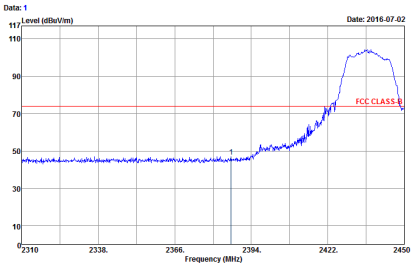
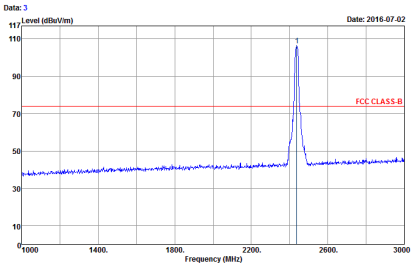
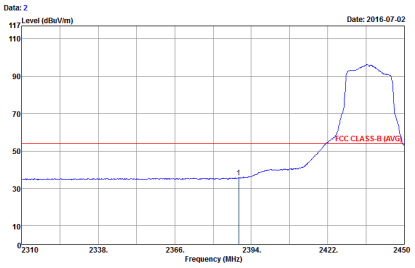
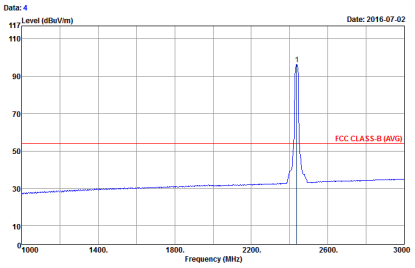
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11b CH11 2462MHz	
	Vertical	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 9	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 9
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 9	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 9

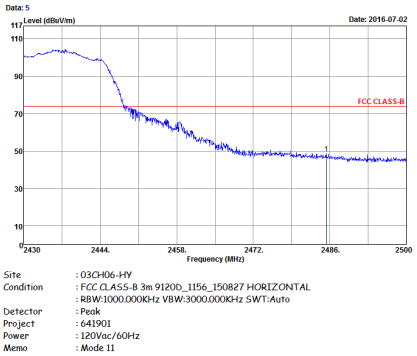
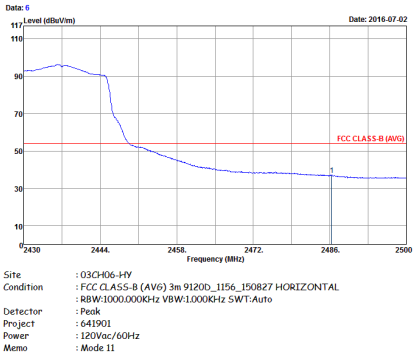
2.4GHz 2400~2483.5MHz

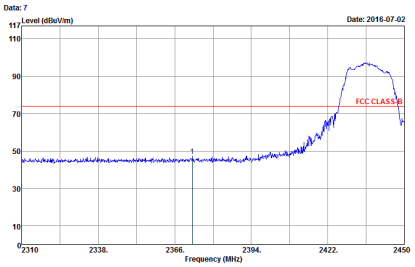
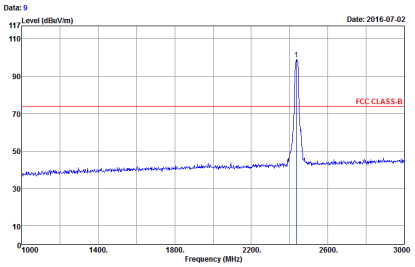
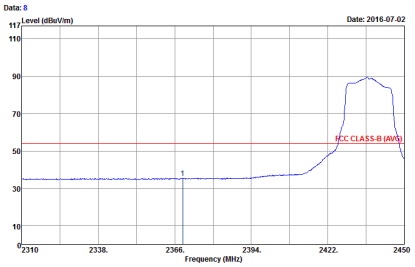
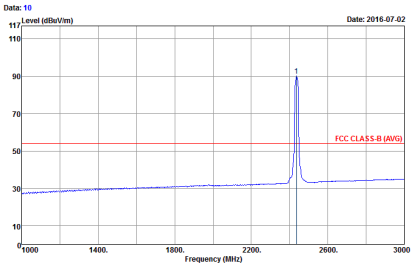
WIFI 802.11g (Band Edge @ 3m)

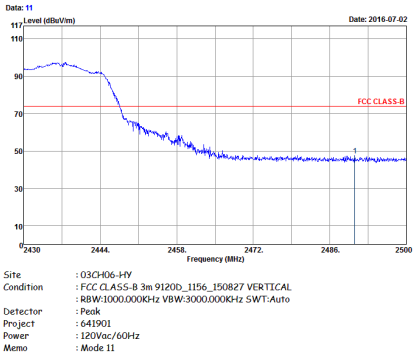
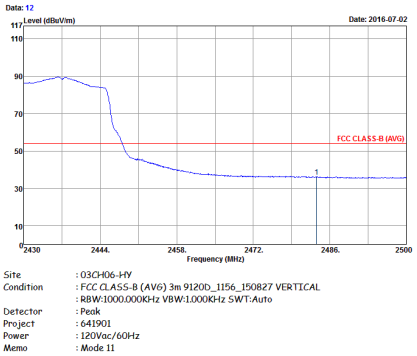
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11g CH01 2412MHz	
	Horizontal	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 10	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 10
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 10	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 10

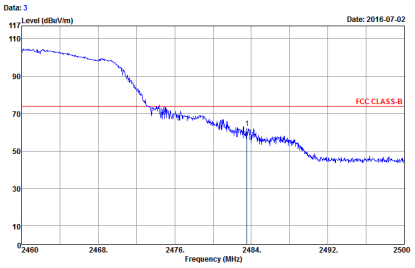
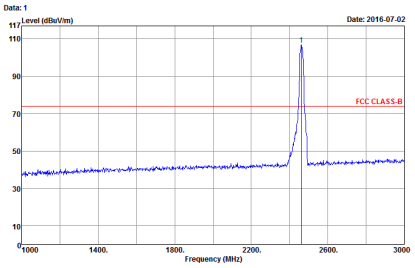
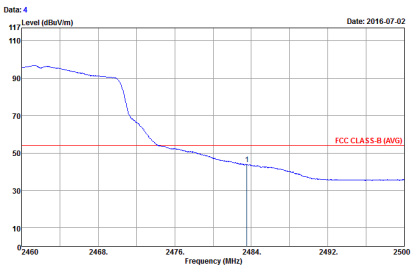
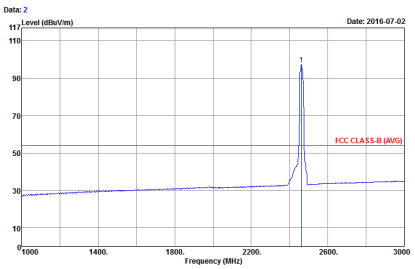
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11g CH01 2412MHz	
	Vertical	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 10	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 10
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 10	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 10

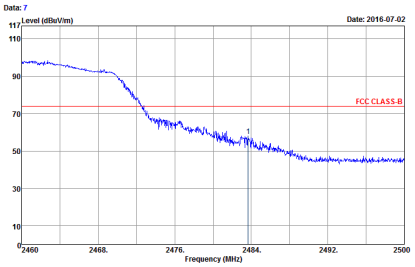
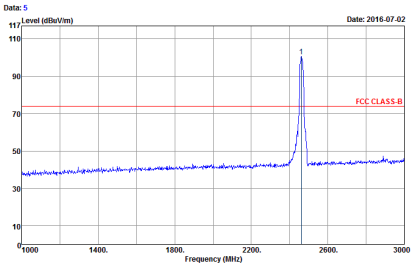
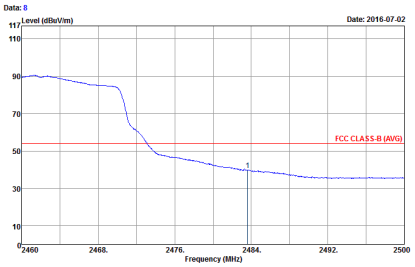
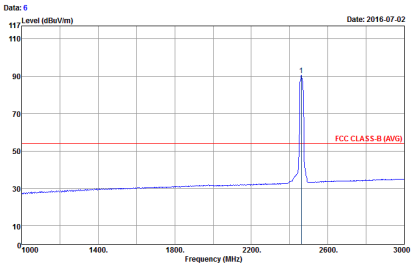
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11g CH06 2437MHz - L	
	Horizontal	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 11	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 11
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 11	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 11

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

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11g CH06 2437MHz - L	
	Vertical	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 11	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 11
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 11	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 11

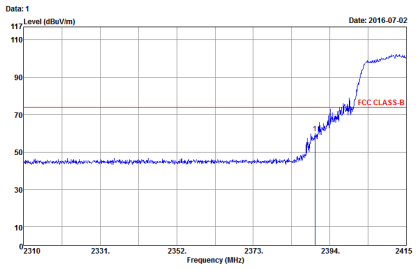
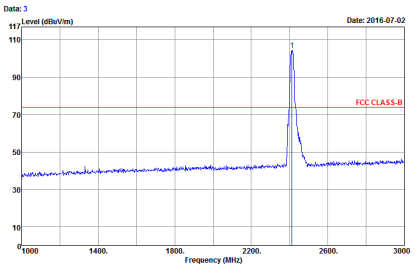
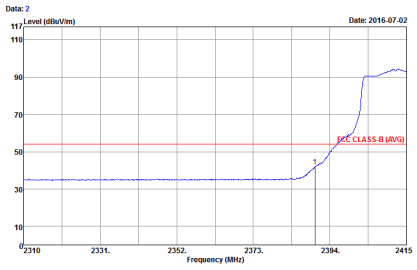
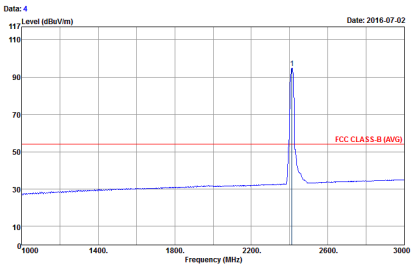
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11g CH06 2437MHz - R	
	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

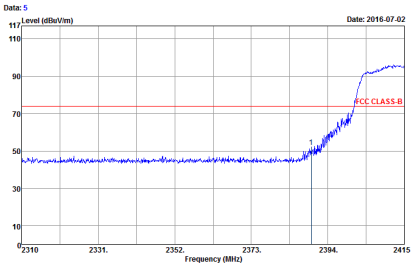
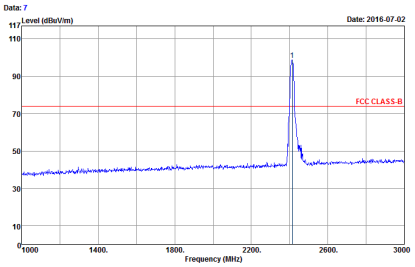
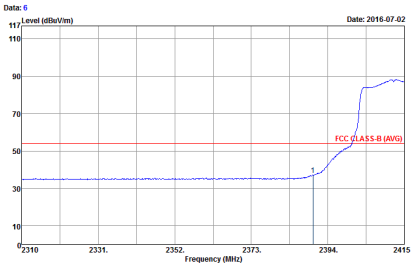
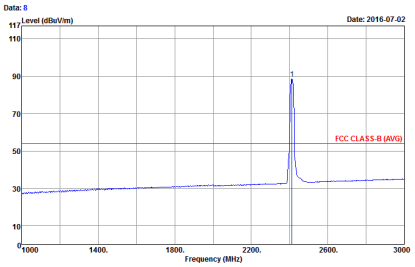
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11g CH11 2462MHz	
	Horizontal	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 12	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 12
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 12	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 12

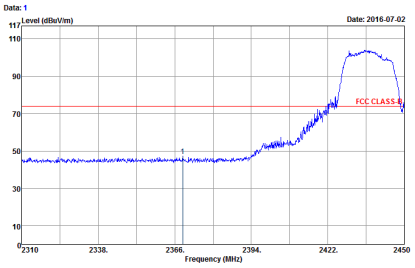
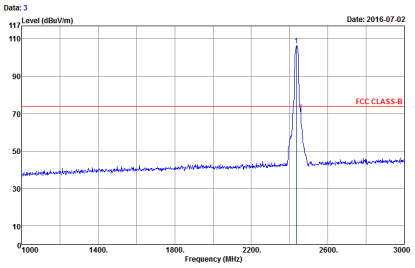
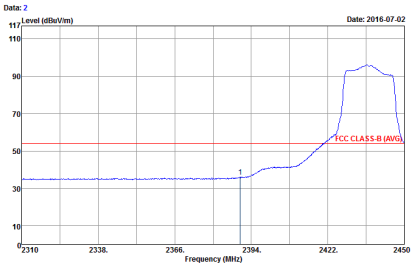
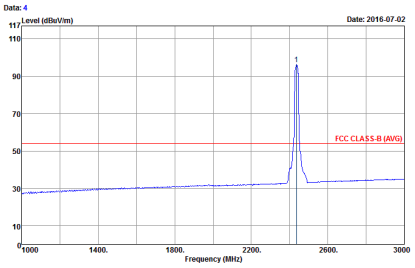
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11g CH11 2462MHz	
	Vertical	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 12	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 12
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 12	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 12

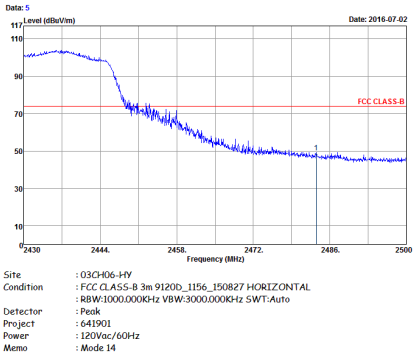
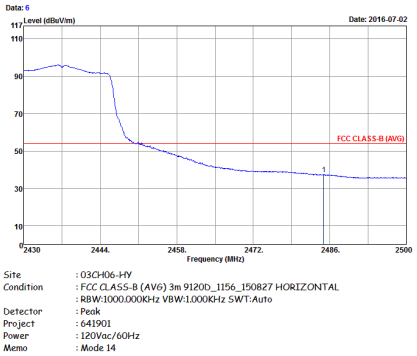
2.4GHz 2400~2483.5MHz

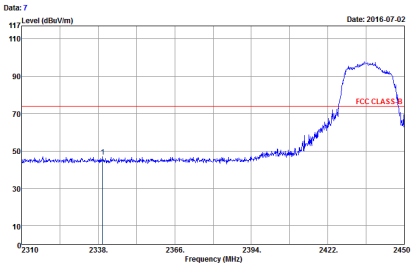
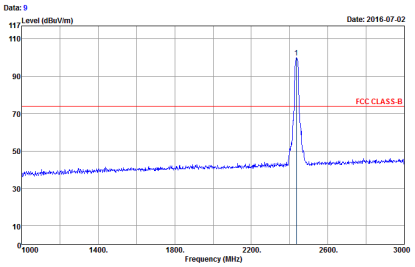
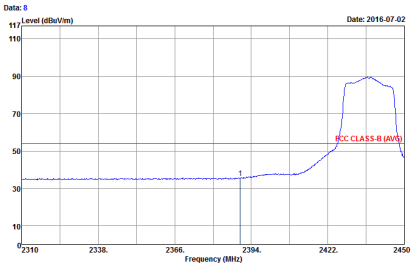
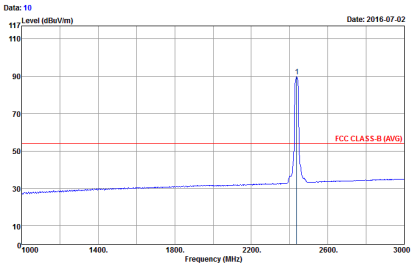
WIFI 802.11n HT20 (Band Edge @ 3m)

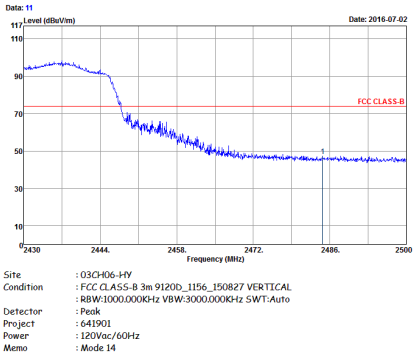
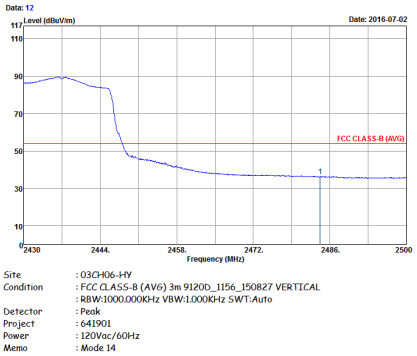
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11n HT20 CH01 2412MHz	
	Horizontal	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 13	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 13
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 13	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 13

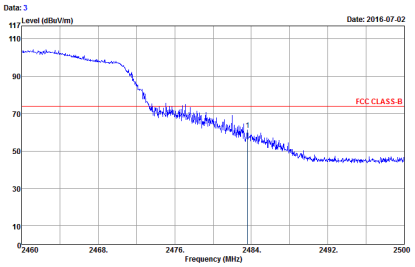
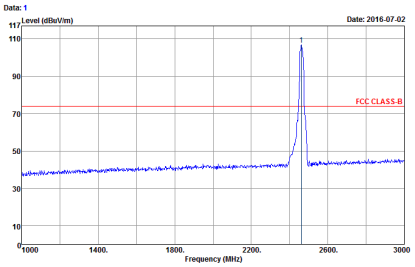
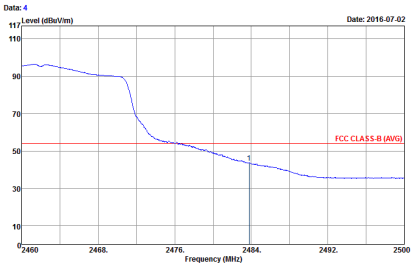
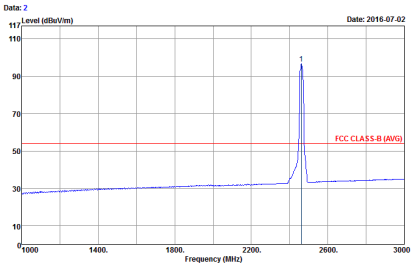
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11n HT20 CH01 2412MHz	
	Vertical	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 13	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 13
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 13	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 13

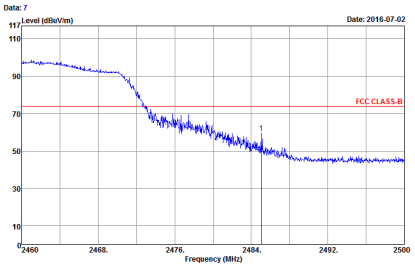
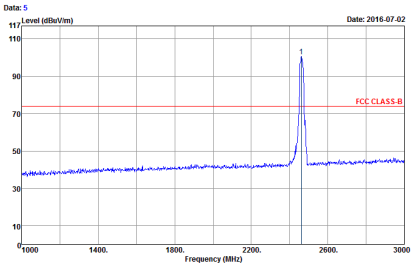
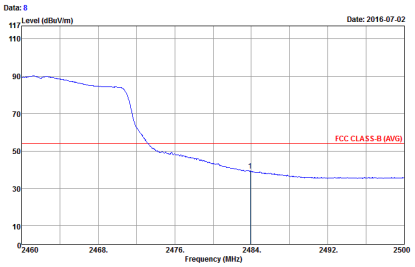
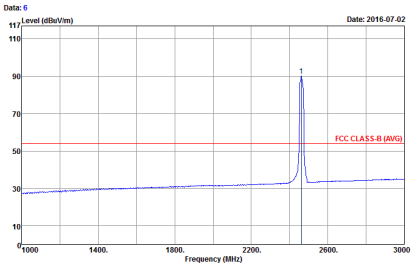
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11n HT20 CH06 2437MHz - L	
	Horizontal	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 14	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 14
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 14	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 14

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

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11n HT20 CH06 2437MHz - L	
	Vertical	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 14	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 14
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 14	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 14

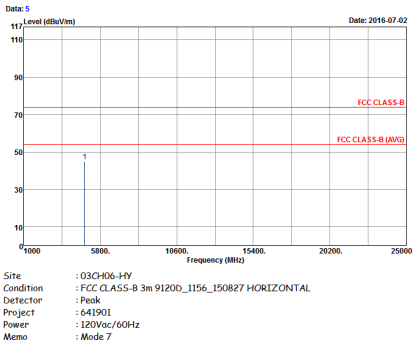
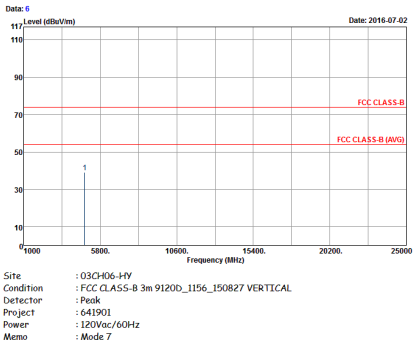
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11n HT20 CH06 2437MHz - R	
	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

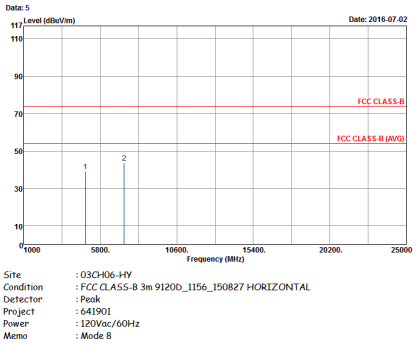
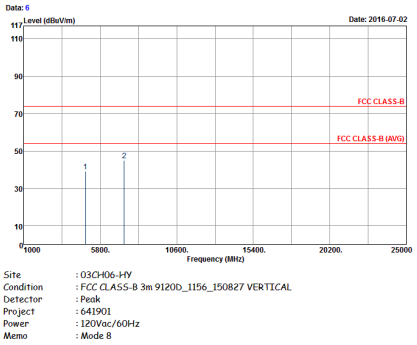
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11n HT20 CH11 2462MHz	
	Horizontal	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 15	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 15
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 15	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 15

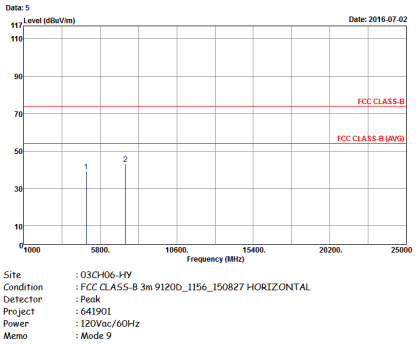
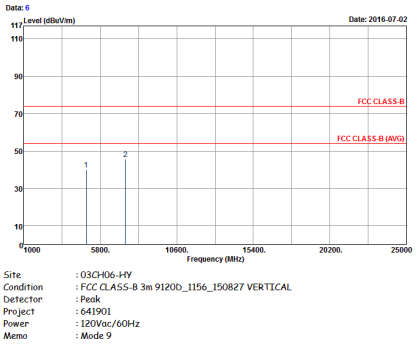
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
	802.11n HT20 CH11 2462MHz	
	Vertical	Fundamental
Peak	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 15	 Site : 03CH06-HY Condition : FCC CLASS-B 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 15
Avg.	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 15	 Site : 03CH06-HY Condition : FCC CLASS-B (AVG) 3m 9120D_1156_150827 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 641901 Power : 120Vac/60Hz Memo : Mode 15

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

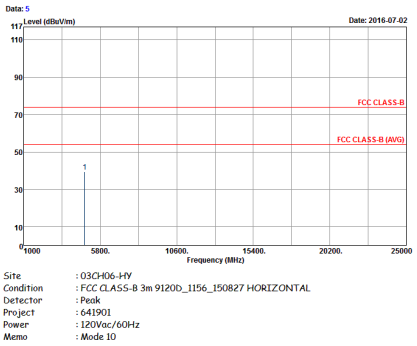
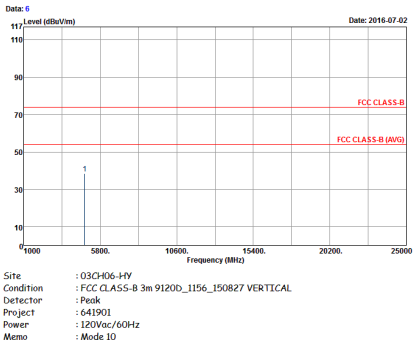
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	802.11b CH01 2412MHz	
	Horizontal	Vertical
Peak Avg.		

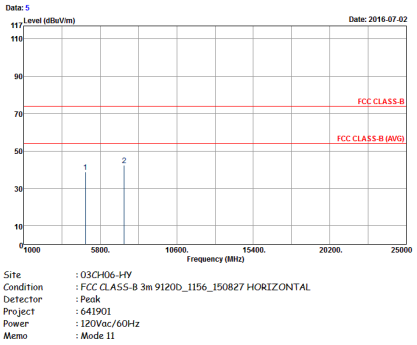
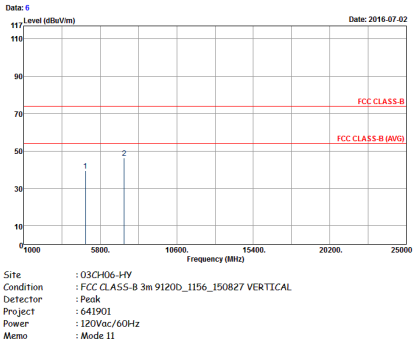
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	802.11b CH06 2437MHz	
	Horizontal	Vertical
Peak Avg.		

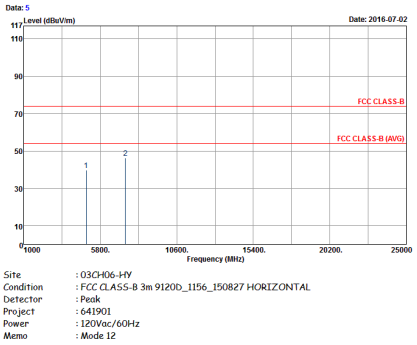
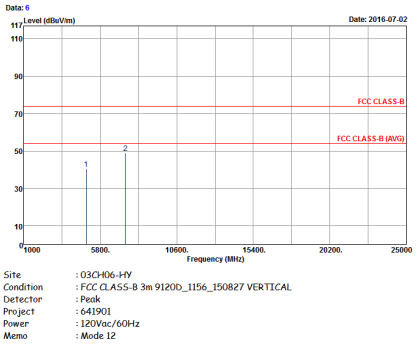
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	802.11b CH11 2462MHz	
	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

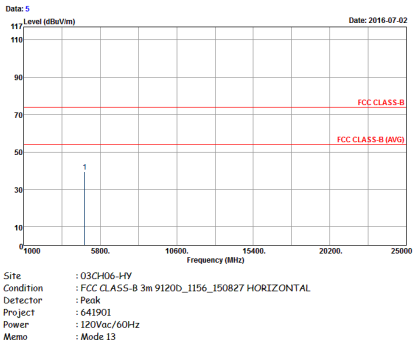
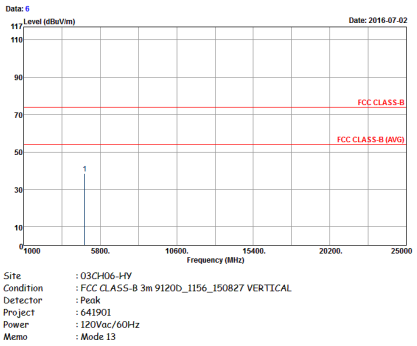
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	802.11g CH01 2412MHz	
	Horizontal	Vertical
Peak Avg.		

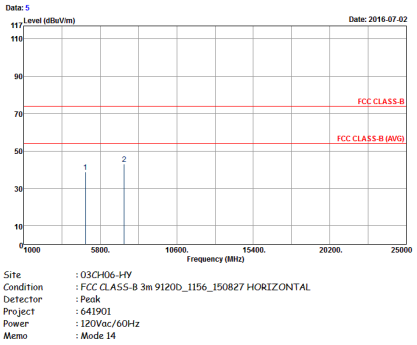
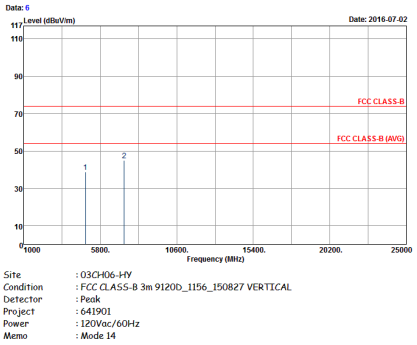
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	802.11g CH06 2437MHz	
	Horizontal	Vertical
Peak Avg.		

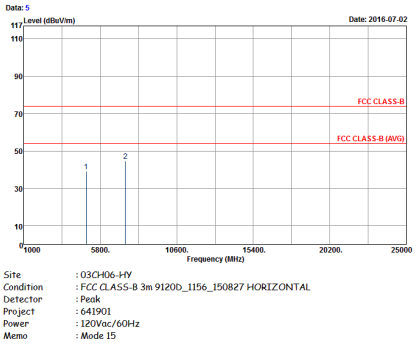
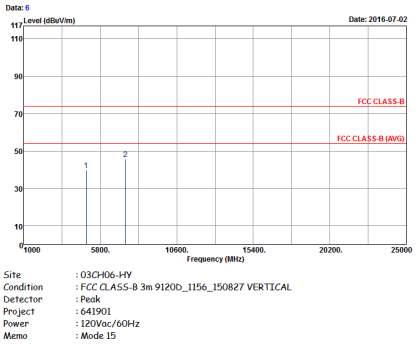
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	802.11g CH11 2462MHz	
	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

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

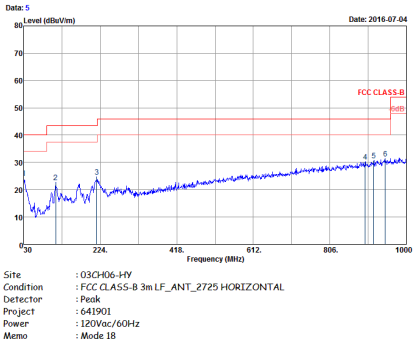
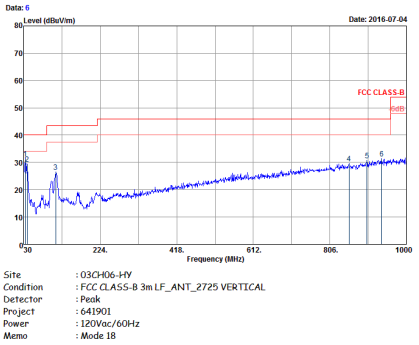
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	802.11n HT20 CH06 2437MHz	
	Horizontal	Vertical
Peak Avg.		

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

2.4GHz 2400~2483.5MHz

Emission below 1GHz

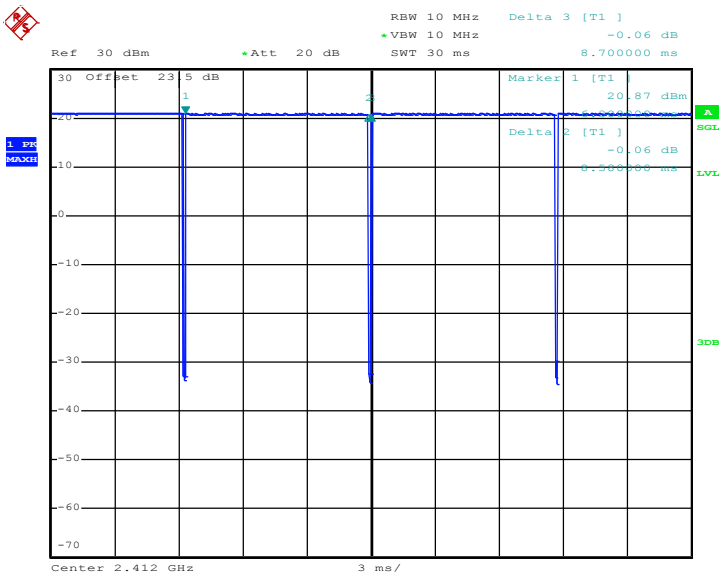
2.4GHz WIFI 802.11g (LF)

WIFI	2.4GHz 2400~2483.5MHz	
	802.11g LF	
	Horizontal	Vertical
QP / Peak		

Appendix D. Duty Cycle Plots

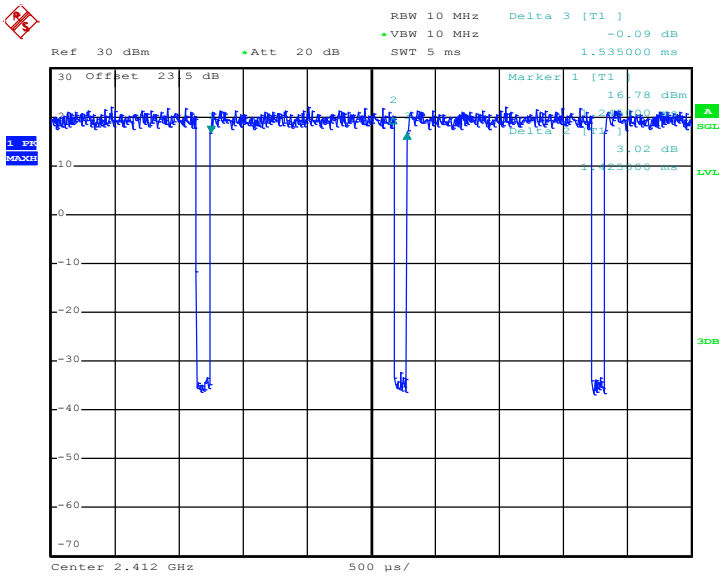
Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
802.11b	98.62	-	-	10Hz
802.11g	92.83	1425	0.70	1kHz
2.4GHz 802.11n HT20	92.41	1340	0.75	1kHz

802.11b



Date: 30.MAY.2016 21:06:59

802.11g



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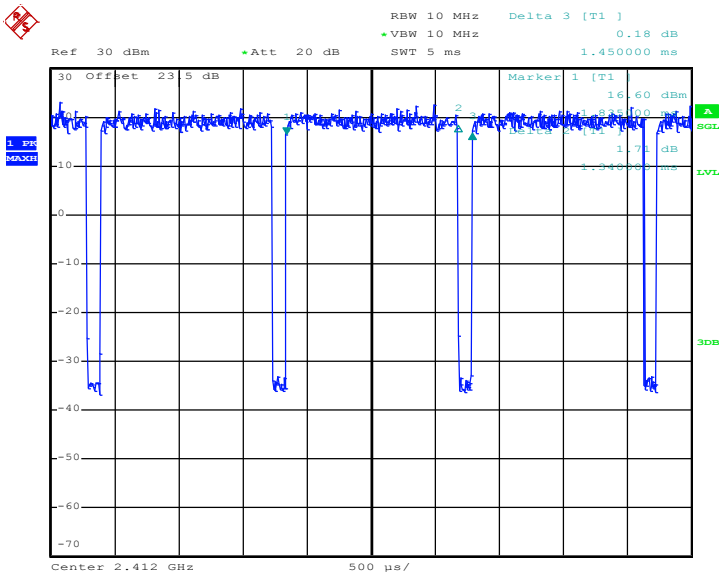
802.11n HT20



Date: 30.MAY.2016 21:20:49