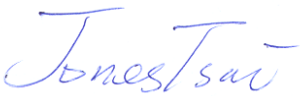
FCC RF Test Report

APPLICANT	:	**IEI Intagration Corp**
EQUIPMENT	:	**Tablet PC**
BRAND NAME	:	**iEi**
MODEL NAME	:	**TRN-3200T**
FCC ID	:	**RFH-TRN3200T**
STANDARD	:	**FCC Part 15 Subpart C §15.247**
CLASSIFICATION	:	**(DTS) Digital Transmission System**

The product was received on Sep. 02, 2016 and testing was completed on Sep. 26, 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
FR690221C	Rev. 01	Initial issue of report	Oct. 04, 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 7.24 dB at 2484.250 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 5.10 dB at 2.462 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

IEI Intagration Corp

No. 29, Zhongxing Rd., Xizhi Dist., New Taipei City 221. Taiwan (R.O.C)

1.2 Manufacturer

IEI Intagration Corp

No. 29, Zhongxing Rd., Xizhi Dist., New Taipei City 221. Taiwan (R.O.C)

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Tablet PC
Brand Name	iEi
Model Name	TRN-3200T
FCC ID	RFH-TRN3200T
EUT supports Radios application	WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE
HW Version	1.01
SW Version	1.00
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	2412 MHz ~ 2462 MHz
Maximum (Peak) Output Power to antenna	802.11b : 18.09 dBm (0.0644 W) 802.11g : 22.72 dBm (0.1871 W) 802.11n HT20 : 21.41 dBm (0.1384 W) 802.11n HT40 : 21.23 dBm (0.1327 W)
99% Occupied Bandwidth	802.11b : 15.30MHz 802.11g : 18.05MHz 802.11n HT20 : 18.70MHz 802.11n HT40 : 37.20MHz
Antenna Type / Gain	PCB Antenna type with gain 2.00 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	03CH07-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 (Z plane) were recorded in this report.

2.1 Carrier Frequency and Channel

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

2.2 Test Mode

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

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

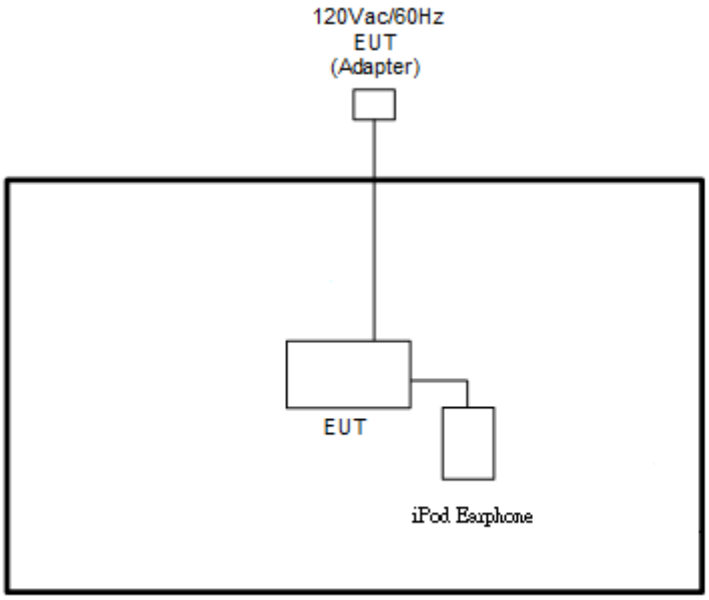
Test Cases	
AC Conducted Emission	Mode 1 : Bluetooth Link + WLAN (2.4GHz) Link + TC + TF

Remark:

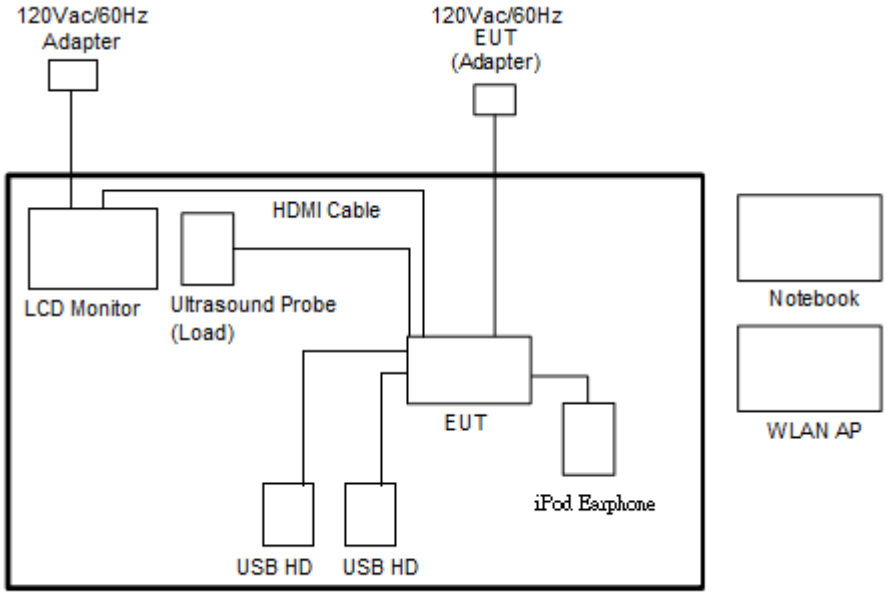
1. TF stands for Test Function, and consists of H-Pattern, MPEG4, and Camera.
2. TC stands for Test Configuration, and consists of SD Card, Earphone, LCD Monitor (Mini HDMI Out), USB HD, RJ-45 Link, Ultrasound Probe (Load), and Adapter.

2.3 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
2.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	LCD Monitor	DELL	U2410	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
5.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A
6.	Ultrasound Probe	Terason	5C2A	N/A	Shielded, 2.0 m	N/A
7.	USB HD	WD	WDBAAR3200A BK-PESN	FCC DoC	Unshielded, 0.5 m	N/A
8.	USB HD	lenovo	F310S	FCC DoC	Unshielded, 0.5 m	N/A
9.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.5 EUT Operation Test Setup

The programmed RF utility “TX Tool”, is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

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.

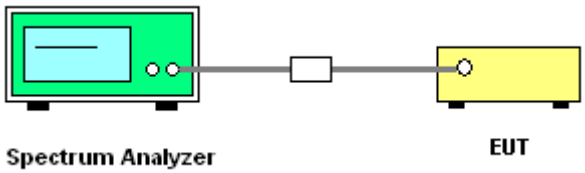
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

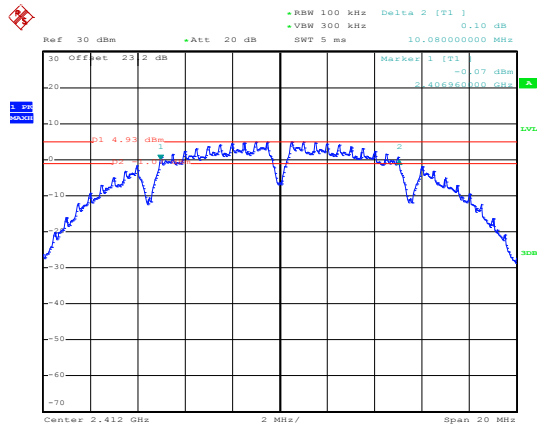
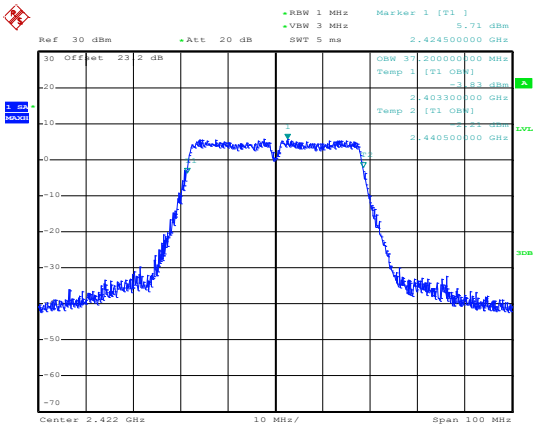
1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r05.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit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

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.

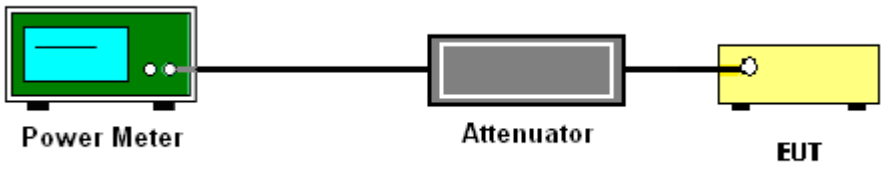
3.2.2 Measuring Instruments

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.

3.2.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

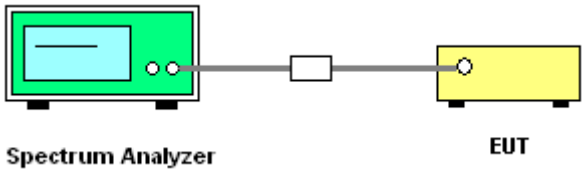
3.3.2 Measuring Instruments

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.

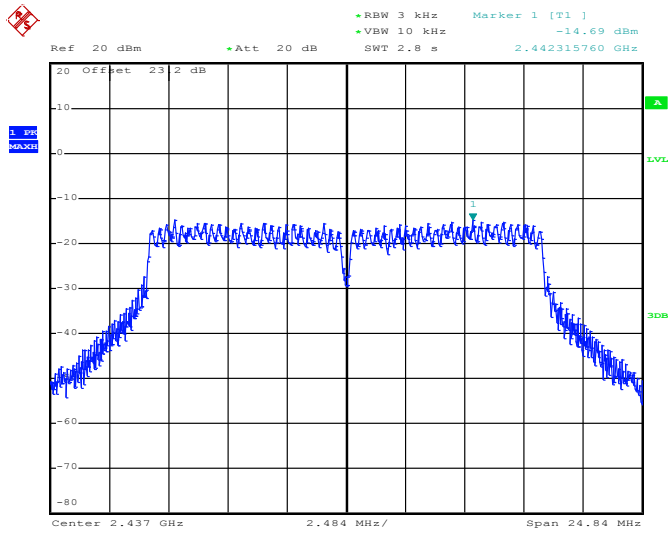
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/3kHz)



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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).

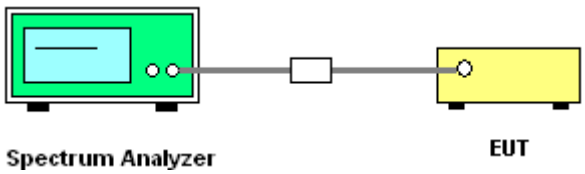
3.4.2 Measuring Instruments

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

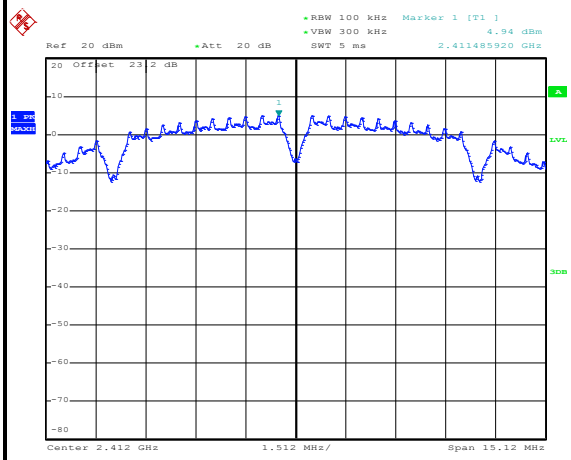


3.4.5 Test Result of Conducted Band Edges and Spurious Emission

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

WLAN 802.11b Channel 01

100kHz PSD reference Level



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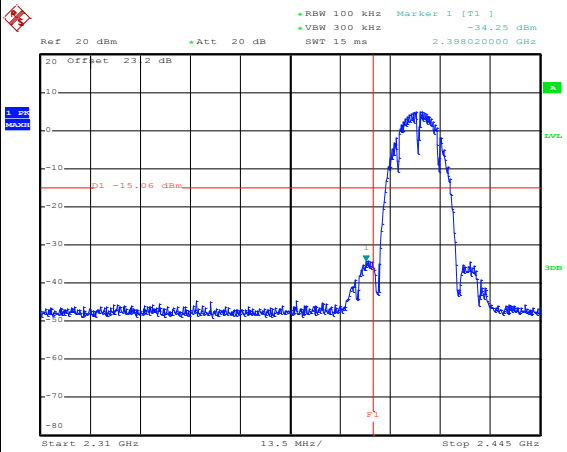
Low Channel Plot



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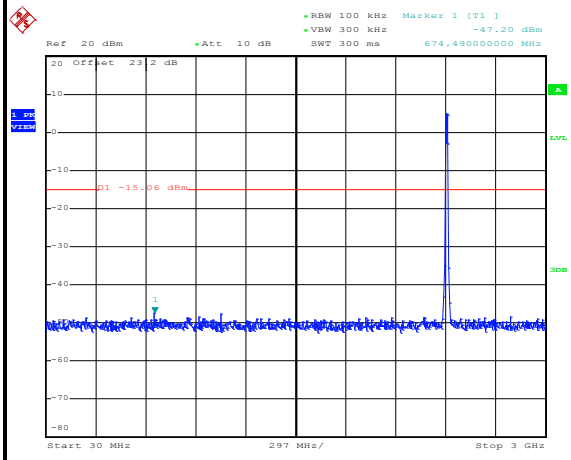
Spurious Emission 30MHz~3GHz



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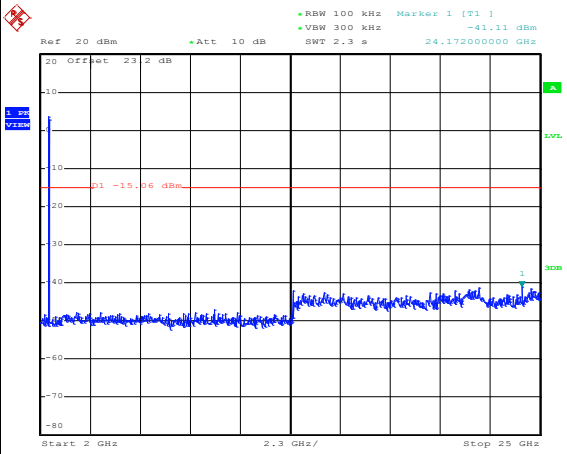
Spurious Emission 2GHz~25GHz



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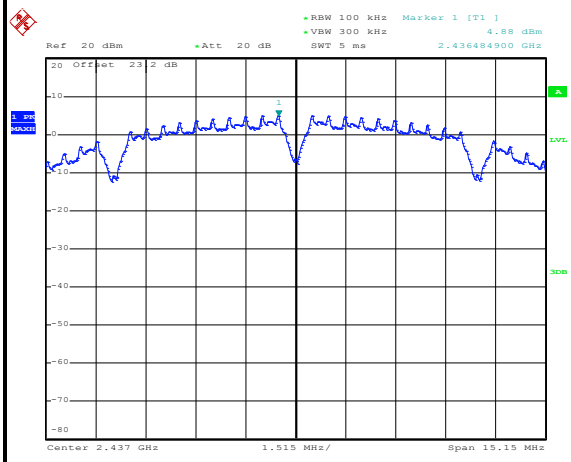
Test Mode :	802.11b	Temperature :	21~25℃
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Kai Liao

WLAN 802.11b Channel 06

100kHz PSD reference Level



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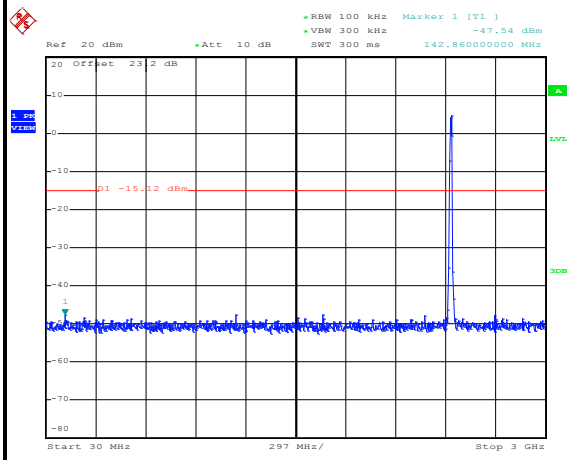
Spurious Emission 30MHz~3GHz



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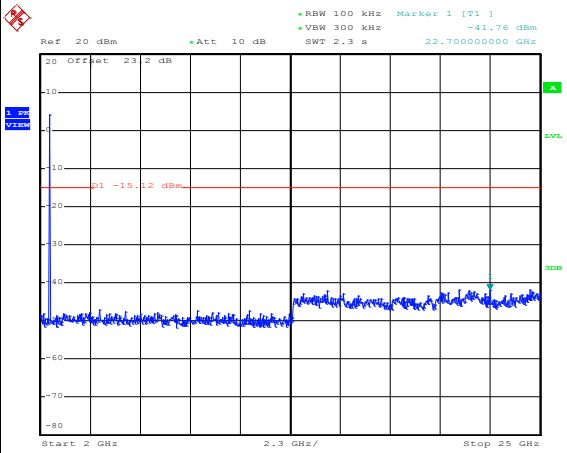
Spurious Emission 2GHz~25GHz

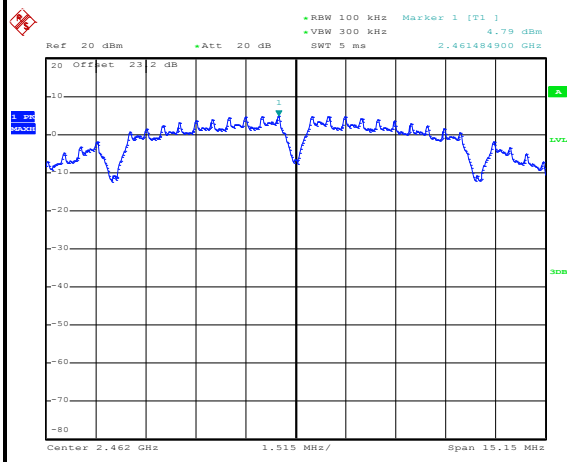


Date: 21.SEP.2016 23:03:10

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

WLAN 802.11b Channel 11

100kHz PSD reference Level



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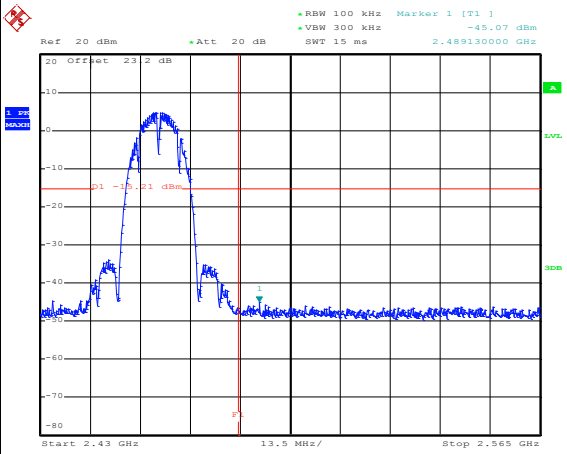
High Channel Plot



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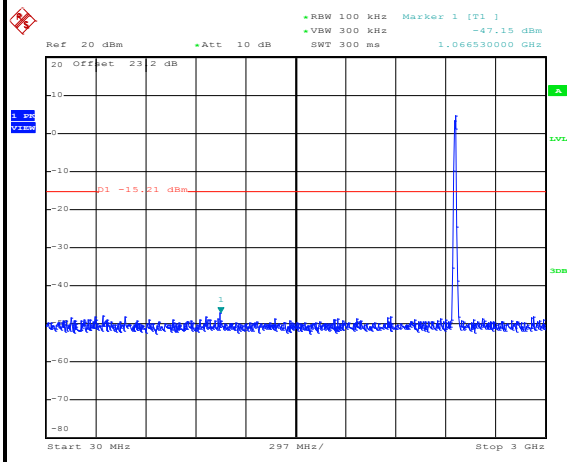
Spurious Emission 30MHz~3GHz



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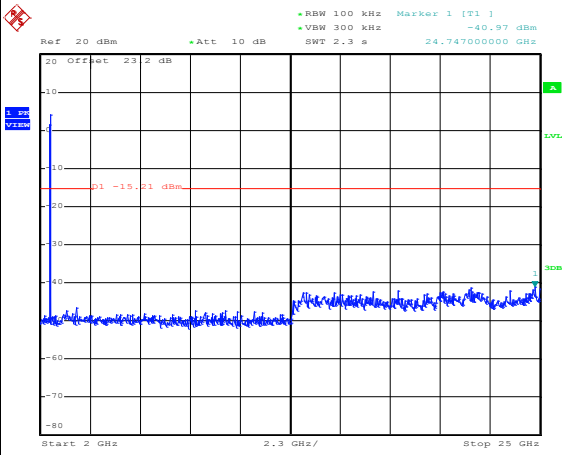
Spurious Emission 2GHz~25GHz



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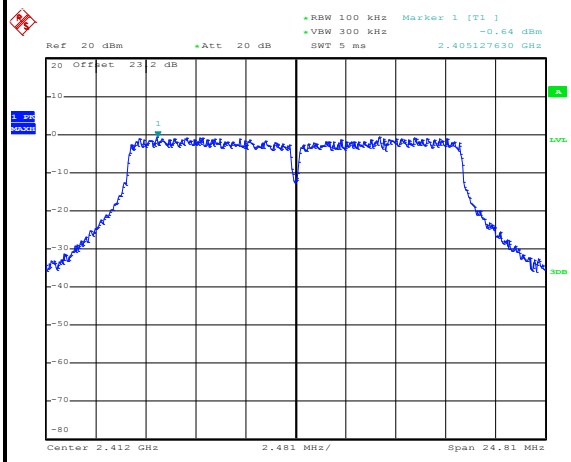
Test Mode :	802.11g	Temperature :	21~25℃
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Kai Liao

WLAN 802.11g Channel 01

100kHz PSD reference Level



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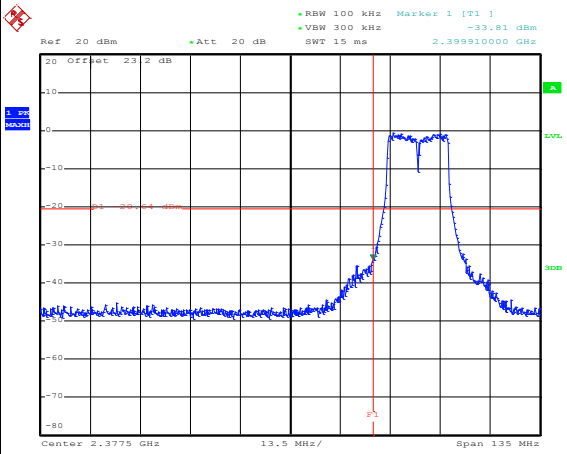
Low Channel Plot



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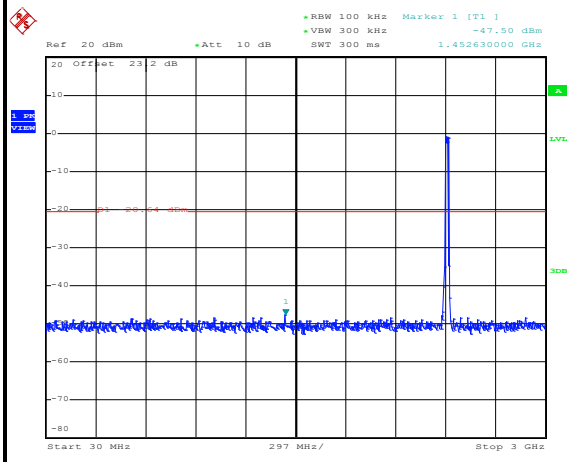
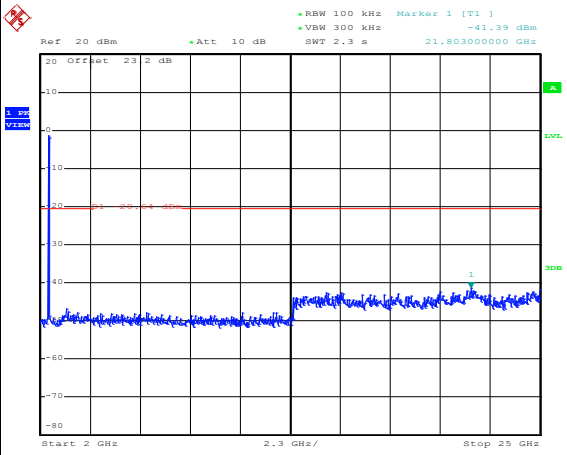
Spurious Emission 30MHz~3GHz



Date: 21.SEP.2016 23:17:24

Spurious Emission 2GHz~25GHz

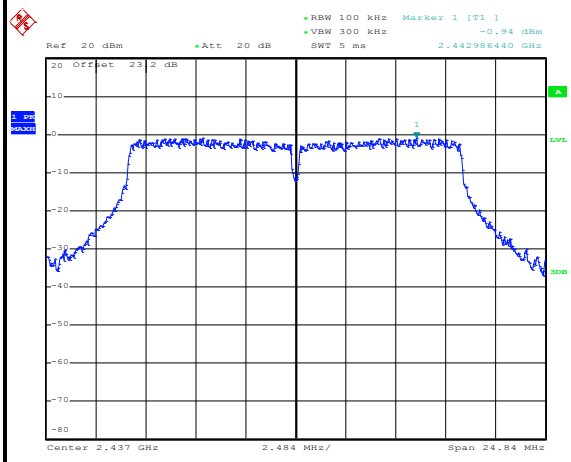


Date: 21.SEP.2016 23:17:33

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

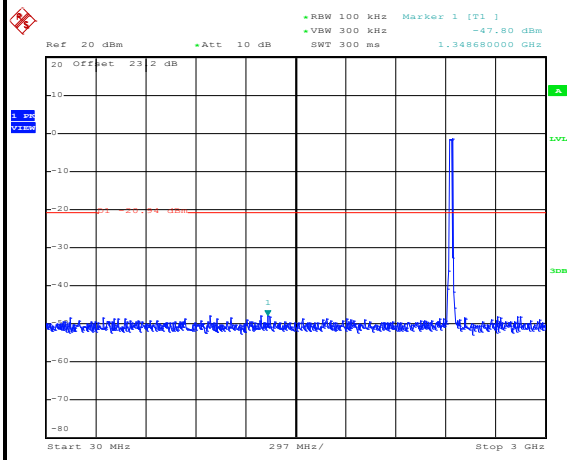
WLAN 802.11g Channel 06

100kHz PSD reference Level



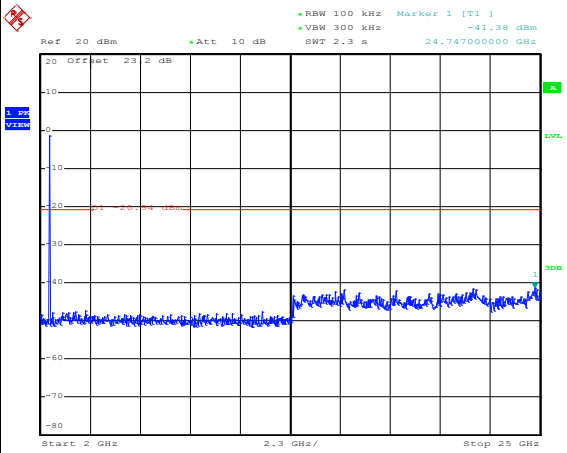
Date: 21.SEP.2016 23:14:16

Spurious Emission 30MHz~3GHz



Date: 21.SEP.2016 23:14:35

Spurious Emission 2GHz~25GHz

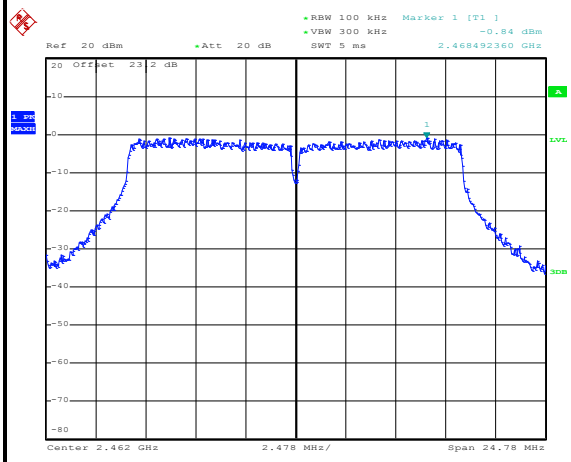


Date: 21.SEP.2016 23:14:43

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

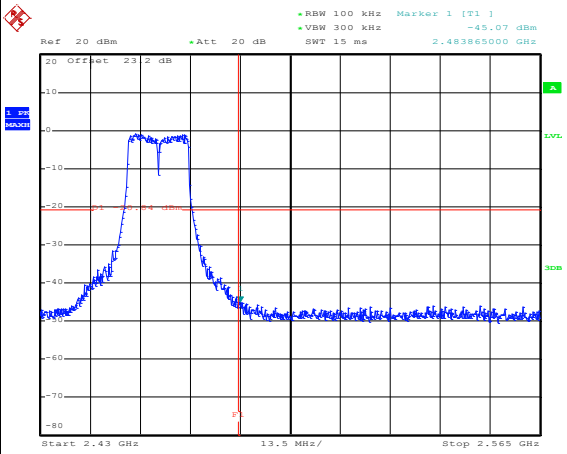
WLAN 802.11g Channel 11

100kHz PSD reference Level



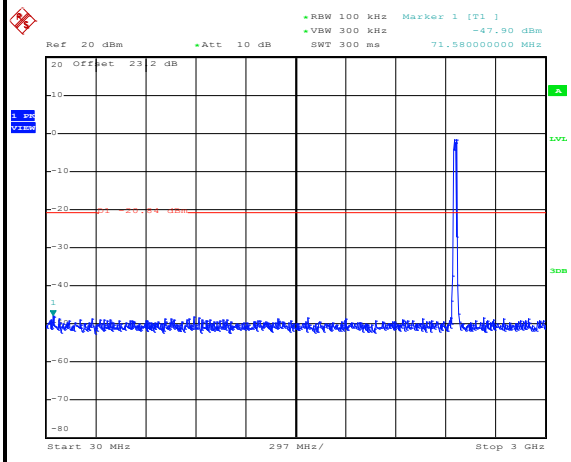
Date: 21.SEP.2016 23:10:44

High Channel Plot



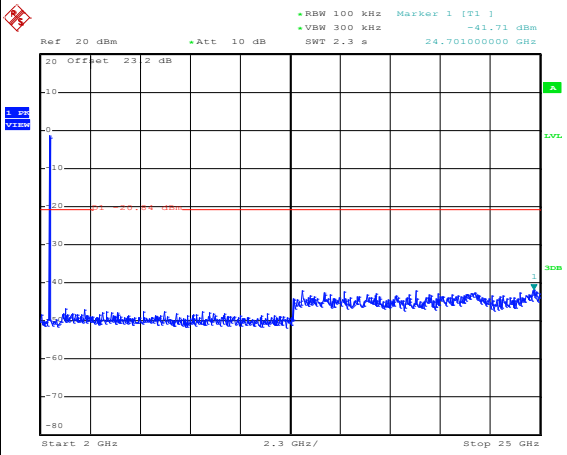
Date: 21.SEP.2016 23:10:59

Spurious Emission 30MHz~3GHz



Date: 21.SEP.2016 23:11:17

Spurious Emission 2GHz~25GHz

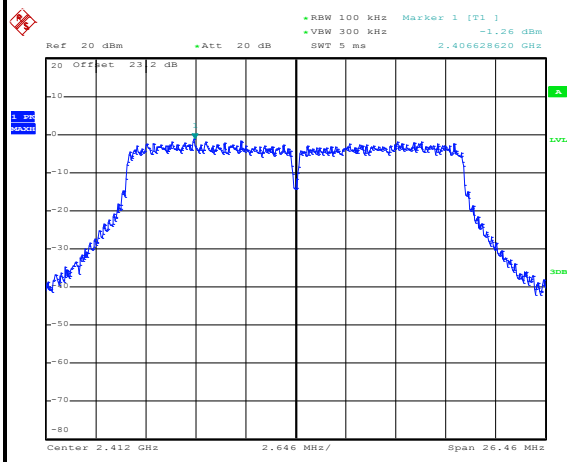


Date: 21.SEP.2016 23:11:26

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

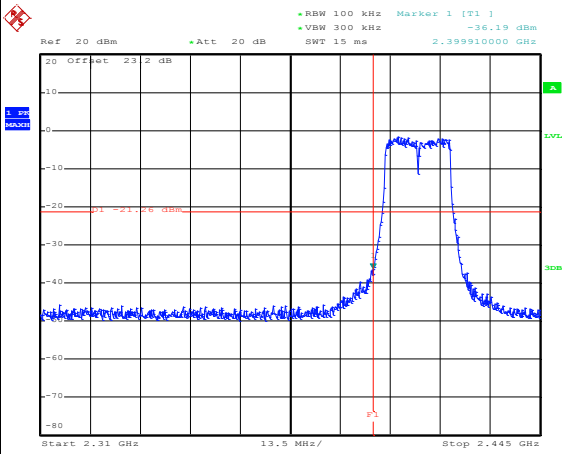
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



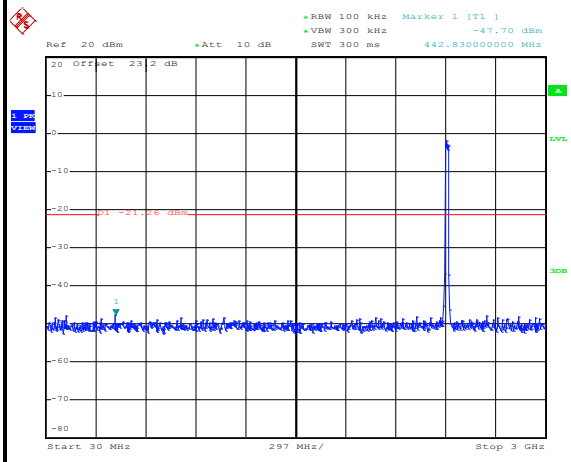
Date: 21.SEP.2016 23:24:41

Low Channel Plot



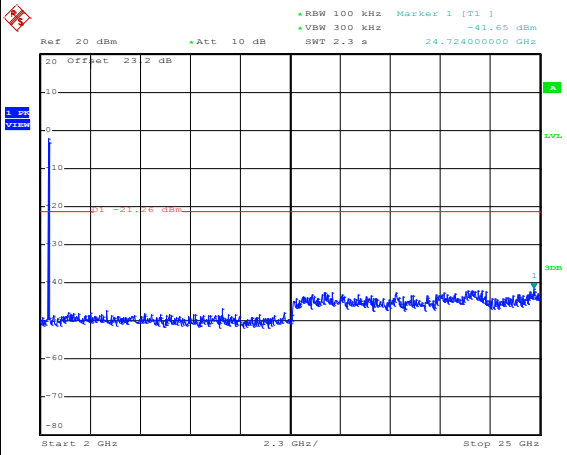
Date: 21.SEP.2016 23:25:01

Spurious Emission 30MHz~3GHz



Date: 21.SEP.2016 23:26:00

Spurious Emission 2GHz~25GHz

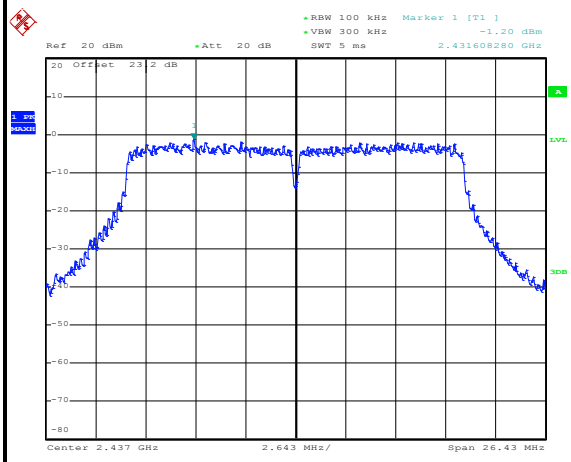


Date: 21.SEP.2016 23:26:08

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

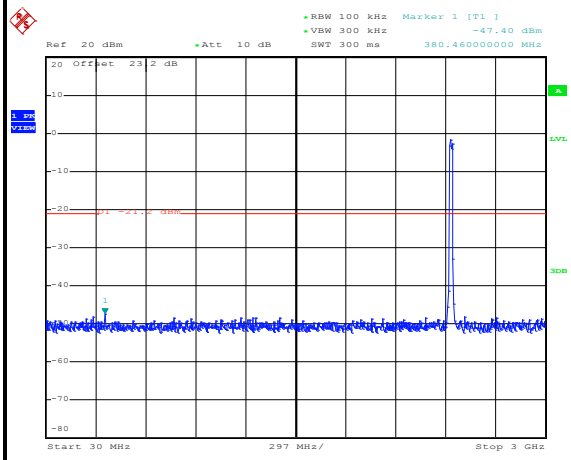
WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level



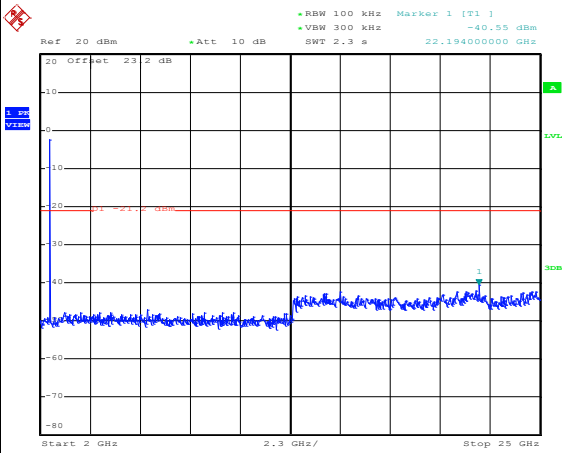
Date: 21.SEP.2016 23:28:10

Spurious Emission 30MHz~3GHz



Date: 21.SEP.2016 23:29:31

Spurious Emission 2GHz~25GHz

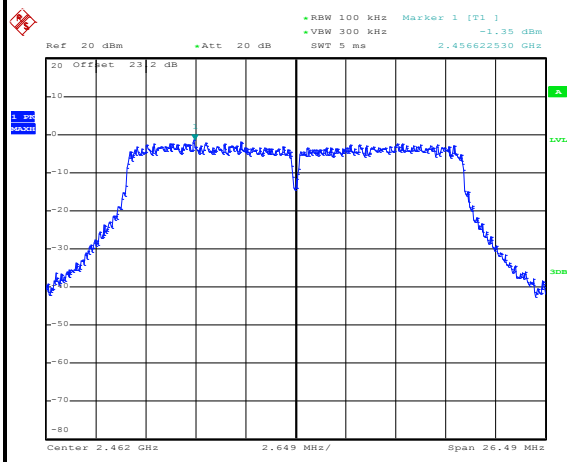


Date: 21.SEP.2016 23:29:39

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

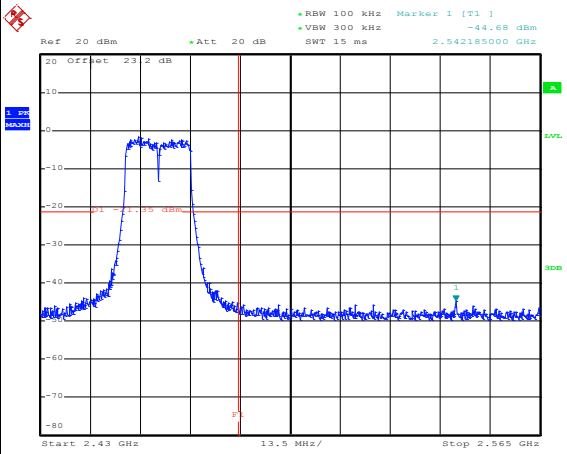
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



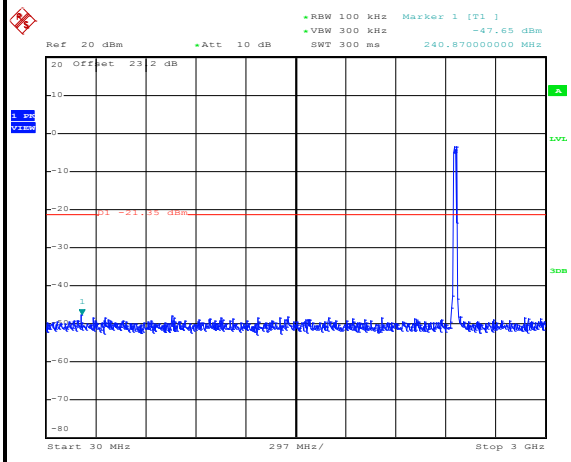
Date: 21.SEP.2016 23:32:25

High Channel Plot



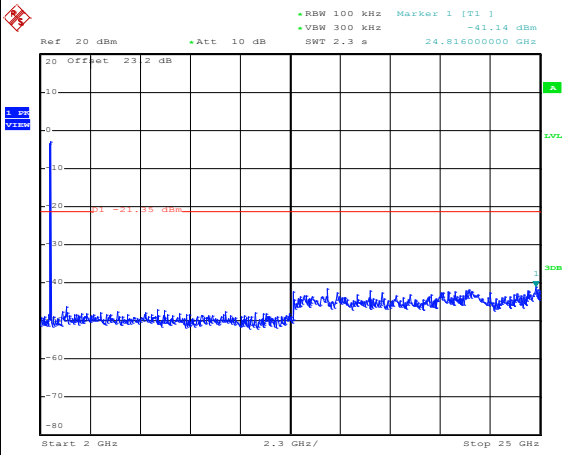
Date: 21.SEP.2016 23:32:42

Spurious Emission 30MHz~3GHz



Date: 21.SEP.2016 23:32:55

Spurious Emission 2GHz~25GHz

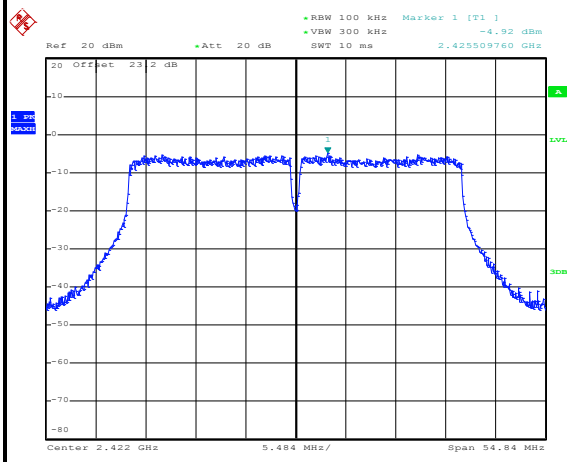


Date: 21.SEP.2016 23:33:04

Test Mode :	802.11n HT40	Temperature :	21~25℃
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	03	Test Engineer :	Kai Liao

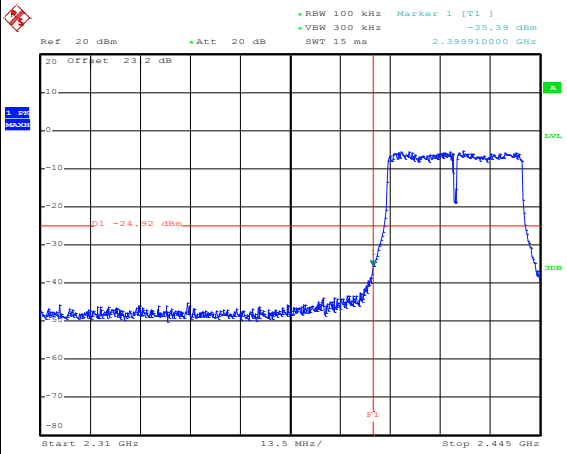
WLAN 802.11n HT40 Channel 03

100kHz PSD reference Level



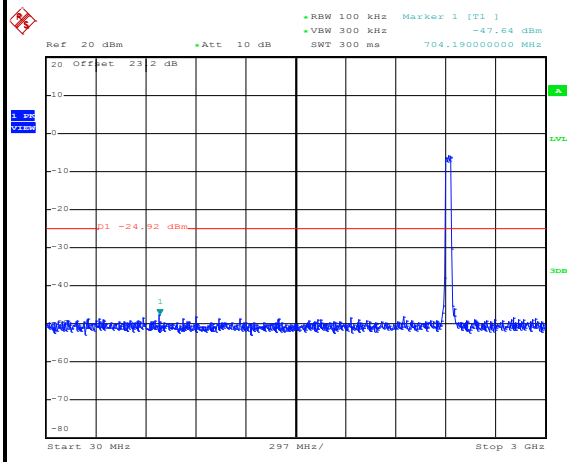
Date: 21.SEP.2016 23:38:00

Low Channel Plot



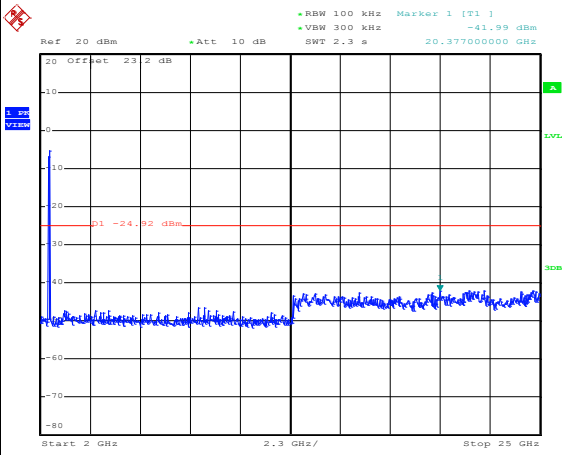
Date: 21.SEP.2016 23:38:37

Spurious Emission 30MHz~3GHz



Date: 21.SEP.2016 23:39:43

Spurious Emission 2GHz~25GHz

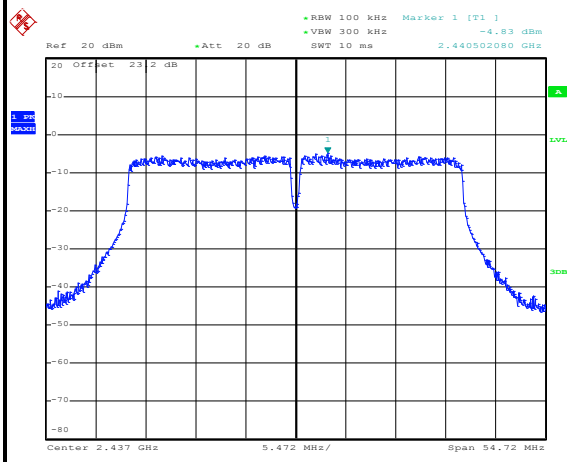


Date: 21.SEP.2016 23:39:52

Test Mode :	802.11n HT40	Temperature :	21~25℃
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Kai Liao

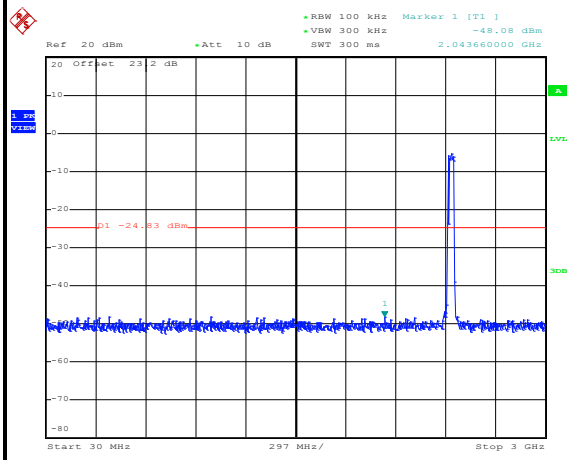
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



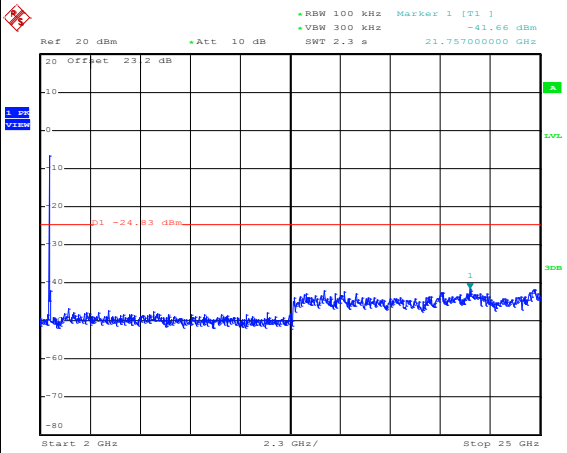
Date: 21.SEP.2016 23:42:02

Spurious Emission 30MHz~3GHz



Date: 21.SEP.2016 23:43:03

Spurious Emission 2GHz~25GHz

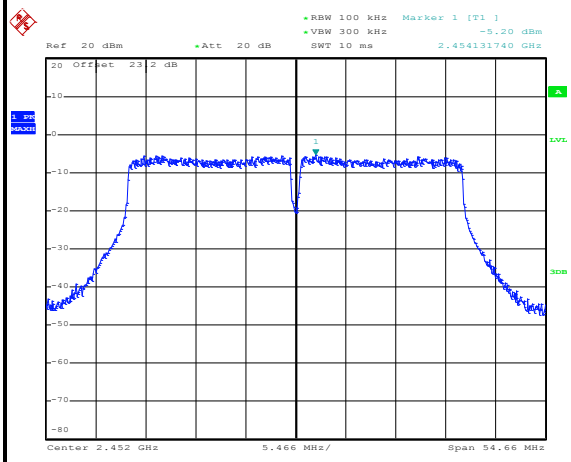


Date: 21.SEP.2016 23:43:12

Test Mode :	802.11n HT40	Temperature :	21~25℃
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	09	Test Engineer :	Kai Liao

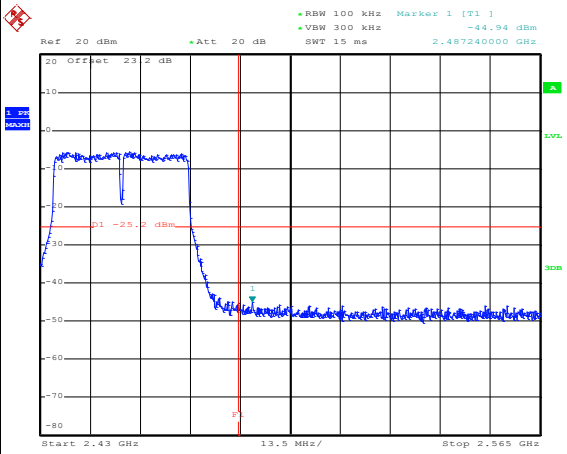
WLAN 802.11n HT40 Channel 09

100kHz PSD reference Level



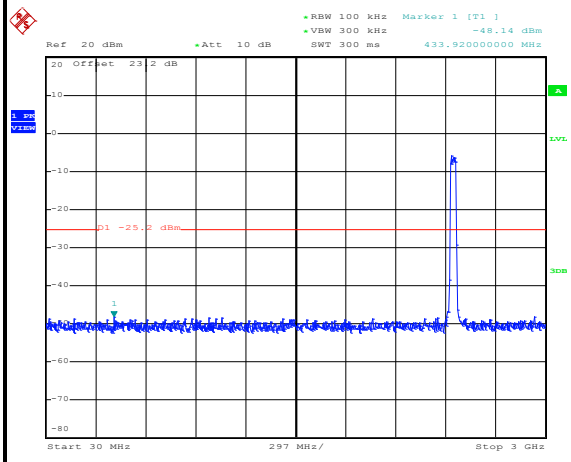
Date: 21.SEP.2016 23:45:30

High Channel Plot



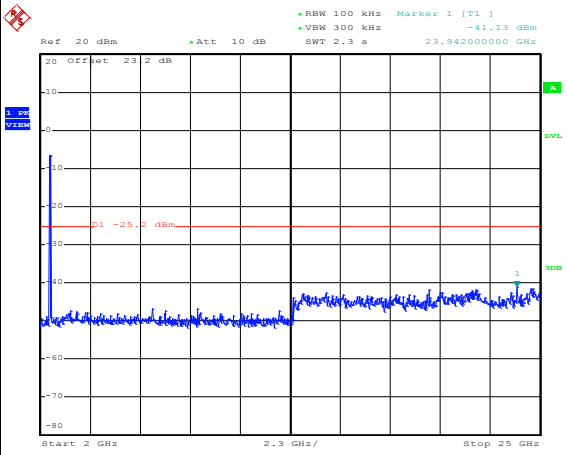
Date: 21.SEP.2016 23:45:48

Spurious Emission 30MHz~3GHz



Date: 21.SEP.2016 23:46:49

Spurious Emission 2GHz~25GHz



Date: 21.SEP.2016 23:46:57

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

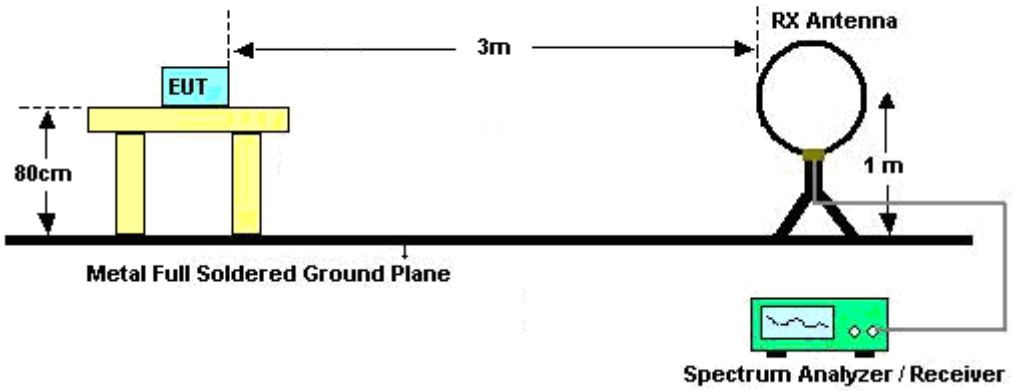
The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

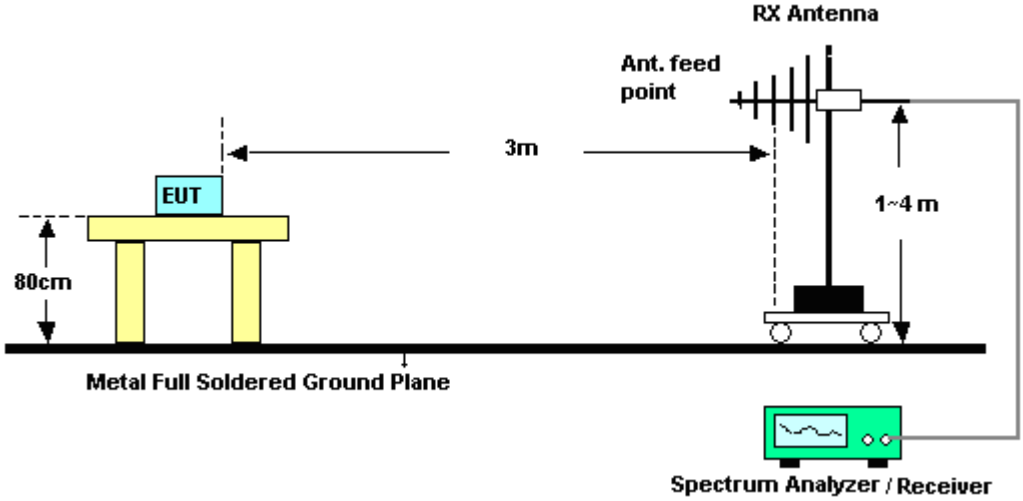
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the 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

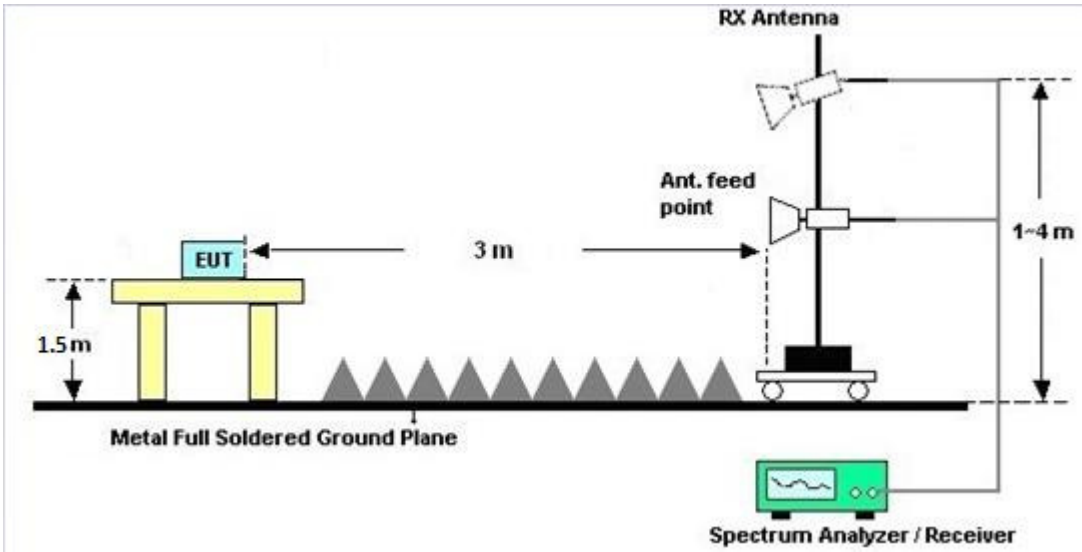
For radiated emissions below 30MHz



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.

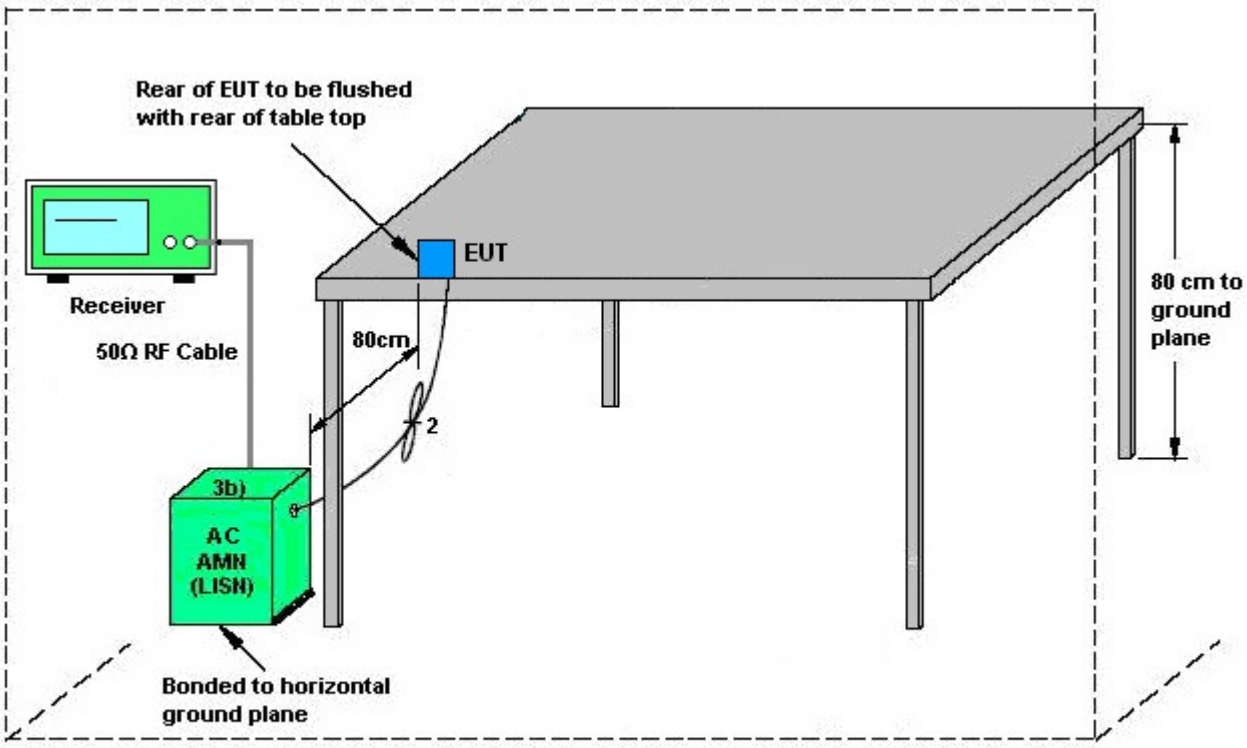
3.6.2 Measuring Instruments

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.

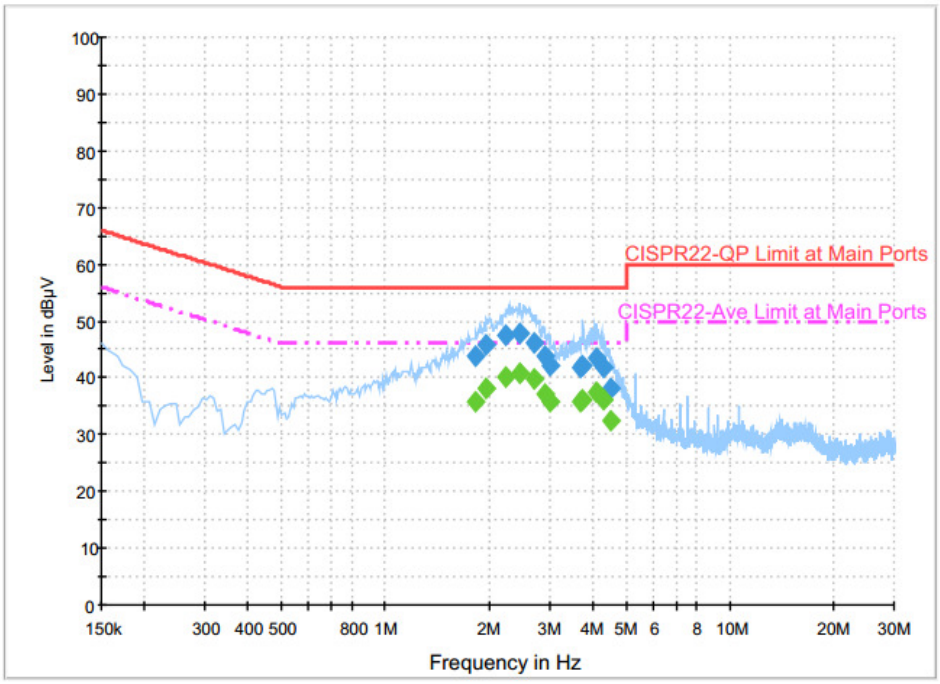
3.6.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.6.5 Test Result of AC Conducted Emission

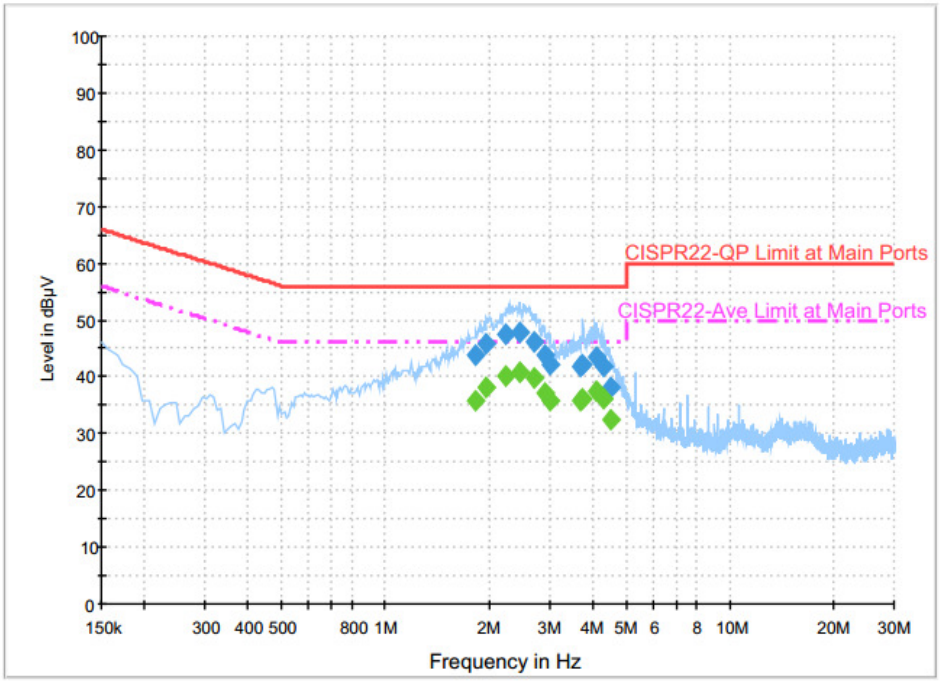
Test Mode :	Mode 1	**Temperature :**	23~25℃
Test Engineer :	Arthur Hsieh	**Relative Humidity :**	51~53%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	Bluetooth Link + WLAN (2.4GHz) Link + TC + TF		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.838000	43.8	Off	L1	19.6	12.2	56.0
1.974000	45.9	Off	L1	19.6	10.1	56.0
2.238000	47.5	Off	L1	18.3	8.5	56.0
2.462000	47.9	Off	L1	19.0	8.1	56.0
2.702000	46.0	Off	L1	19.3	10.0	56.0
2.894000	43.8	Off	L1	19.5	12.2	56.0
3.006000	42.1	Off	L1	19.5	13.9	56.0
3.686000	41.7	Off	L1	19.7	14.3	56.0
3.750000	42.0	Off	L1	19.7	14.0	56.0
4.110000	43.5	Off	L1	19.7	12.5	56.0
4.286000	41.6	Off	L1	19.7	14.4	56.0
4.534000	38.0	Off	L1	19.7	18.0	56.0

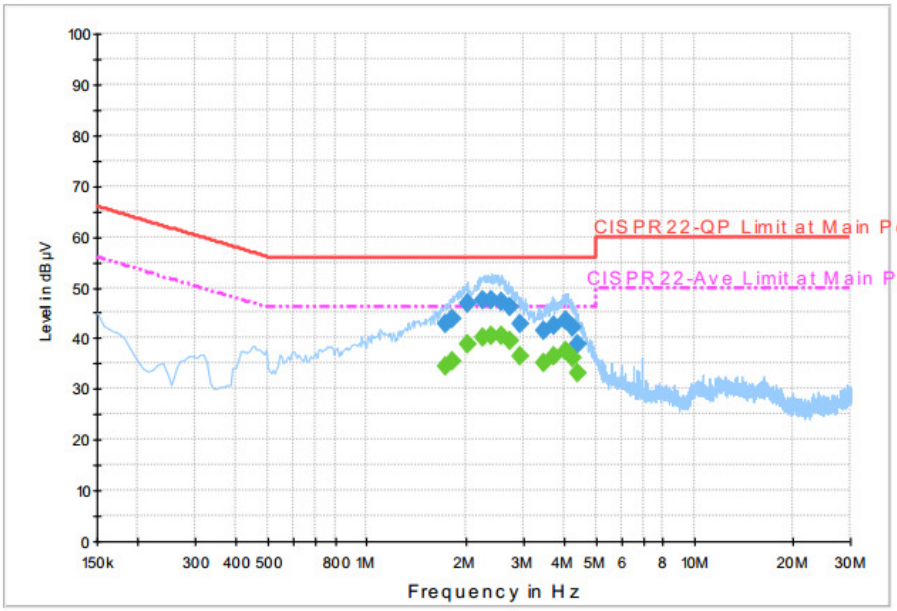
Test Mode :	Mode 1	Temperature :	23~25℃
Test Engineer :	Arthur Hsieh	Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	Bluetooth Link + WLAN (2.4GHz) Link + TC + TF		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.838000	35.8	Off	L1	19.6	10.2	46.0
1.974000	38.0	Off	L1	19.6	8.0	46.0
2.238000	40.3	Off	L1	18.3	5.7	46.0
2.462000	40.9	Off	L1	19.0	5.1	46.0
2.702000	39.7	Off	L1	19.3	6.3	46.0
2.894000	37.1	Off	L1	19.5	8.9	46.0
3.006000	35.7	Off	L1	19.5	10.3	46.0
3.686000	35.9	Off	L1	19.7	10.1	46.0
3.750000	36.1	Off	L1	19.7	9.9	46.0
4.110000	37.5	Off	L1	19.7	8.5	46.0
4.286000	36.0	Off	L1	19.7	10.0	46.0
4.534000	32.4	Off	L1	19.7	13.6	46.0

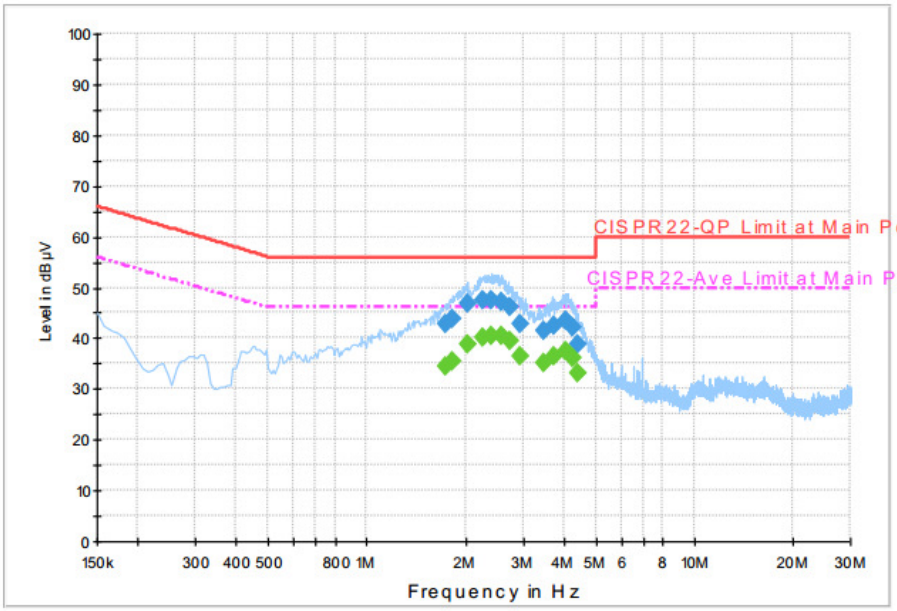
Test Mode :	Mode 1	Temperature :	23~25℃
Test Engineer :	Arthur Hsieh	Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Bluetooth Link + WLAN (2.4GHz) Link + TC + TF		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.734000	42.8	Off	N	19.6	13.2	56.0
1.838000	43.8	Off	N	19.6	12.2	56.0
2.030000	46.7	Off	N	19.5	9.3	56.0
2.254000	47.6	Off	N	18.4	8.4	56.0
2.414000	47.4	Off	N	18.9	8.6	56.0
2.590000	47.2	Off	N	19.2	8.8	56.0
2.734000	46.1	Off	N	19.3	9.9	56.0
2.958000	43.0	Off	N	19.5	13.0	56.0
3.486000	41.4	Off	N	19.6	14.6	56.0
3.750000	42.4	Off	N	19.6	13.6	56.0
4.070000	43.6	Off	N	19.6	12.4	56.0
4.238000	42.1	Off	N	19.7	13.9	56.0
4.430000	38.9	Off	N	19.7	17.1	56.0

Test Mode :	Mode 1	Temperature :	23~25℃
Test Engineer :	Arthur Hsieh	Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Bluetooth Link + WLAN (2.4GHz) Link + TC + TF		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.734000	34.3	Off	N	19.6	11.7	46.0
1.838000	35.6	Off	N	19.6	10.4	46.0
2.030000	38.8	Off	N	19.5	7.2	46.0
2.254000	40.1	Off	N	18.4	5.9	46.0
2.414000	40.4	Off	N	18.9	5.6	46.0
2.590000	40.6	Off	N	19.2	5.4	46.0
2.734000	39.4	Off	N	19.3	6.6	46.0
2.958000	36.6	Off	N	19.5	9.4	46.0
3.486000	35.0	Off	N	19.6	11.0	46.0
3.750000	36.3	Off	N	19.6	9.7	46.0
4.070000	37.5	Off	N	19.6	8.5	46.0
4.238000	36.3	Off	N	19.7	9.7	46.0
4.430000	33.2	Off	N	19.7	12.8	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
Power Meter	Agilent	E4416A	GB41292344	300MHz~40GHz	Jan. 08, 2016	Sep. 18, 2016 ~ Sep. 22, 2016	Jan. 07, 2017	Conducted (TH02-HY)
Power Sensor	Agilent	E9327A	US40441548	300MHz~40GHz	Jan. 07, 2016	Sep. 18, 2016 ~ Sep. 22, 2016	Jan. 06, 2017	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 17, 2016	Sep. 18, 2016 ~ Sep. 22, 2016	Jun. 16, 2017	Conducted (TH02-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Sep. 02, 2015	Sep. 19, 2016 ~ Sep. 23, 2016	Sep. 01, 2017	Radiation (03CH07-HY)
Bilog Antenna	TESEQ	CBL 6111D	35419	30MHz to 1GHz	Jan. 13, 2016	Sep. 19, 2016 ~ Sep. 23, 2016	Jan. 12, 2017	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 19, 2016	Sep. 19, 2016 ~ Sep. 23, 2016	Aug. 18, 2017	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 02, 2015	Sep. 19, 2016 ~ Sep. 23, 2016	Nov. 01, 2016	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz-1GHz	Mar. 18, 2016	Sep. 19, 2016 ~ Sep. 23, 2016	Mar. 17, 2017	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590075	1GHz ~ 18GHz	Apr. 15, 2016	Sep. 19, 2016 ~ Sep. 23, 2016	Apr. 14, 2017	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~ 26.5GHz	Oct. 19, 2015	Sep. 19, 2016 ~ Sep. 23, 2016	Oct. 18, 2016	Radiation (03CH07-HY)
Preamplifier	MITEQ	JS44-18004000-33-8P	1840917	18GHz ~ 40GHz	Jun. 14, 2016	Sep. 19, 2016 ~ Sep. 23, 2016	Jun. 13, 2017	Radiation (03CH07-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20Hz ~ 8.4GHz	Nov. 04, 2015	Sep. 19, 2016 ~ Sep. 23, 2016	Nov. 03, 2016	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Feb. 27, 2016	Sep. 19, 2016 ~ Sep. 23, 2016	Feb. 26, 2017	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Sep. 19, 2016 ~ Sep. 23, 2016	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Sep. 19, 2016 ~ Sep. 23, 2016	N/A	Radiation (03CH07-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Sep. 26, 2016	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 30, 2016	Sep. 26, 2016	Aug. 29, 2017	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2015	Sep. 26, 2016	Dec. 01, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Dec. 14, 2015	Sep. 26, 2016	Dec. 13, 2016	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 08, 2016	Sep. 26, 2016	Jan. 07, 2017	Conduction (CO05-HY)

5 Uncertainty of Evaluation

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.70**

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

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

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

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

Appendix A. Conducted Test Results

A1 - DTS Part

Test Engineer:	Kai Liao	Temperature:	21~25	°C
Test Date:	2016/09/18 ~ 2016/09/22	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band								
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
11b	1Mbps	1	1	2412	15.30	10.08	0.50	Pass
11b	1Mbps	1	6	2437	15.25	10.10	0.50	Pass
11b	1Mbps	1	11	2462	15.25	10.10	0.50	Pass
11g	6Mbps	1	1	2412	17.90	16.54	0.50	Pass
11g	6Mbps	1	6	2437	18.00	16.56	0.50	Pass
11g	6Mbps	1	11	2462	18.05	16.52	0.50	Pass
HT20	MCS0	1	1	2412	18.70	17.64	0.50	Pass
HT20	MCS0	1	6	2437	18.70	17.62	0.50	Pass
HT20	MCS0	1	11	2462	18.65	17.66	0.50	Pass
HT40	MCS0	1	3	2422	37.20	36.56	0.50	Pass
HT40	MCS0	1	6	2437	37.00	36.48	0.50	Pass
HT40	MCS0	1	9	2452	37.10	36.44	0.50	Pass

Report Number : FR690221C

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	18.09	30.00	2.00	20.09	36.00	Pass
11b	1Mbps	1	6	2437	18.08	30.00	2.00	20.08	36.00	Pass
11b	1Mbps	1	11	2462	17.99	30.00	2.00	19.99	36.00	Pass
11g	6Mbps	1	1	2412	22.72	30.00	2.00	24.72	36.00	Pass
11g	6Mbps	1	6	2437	22.56	30.00	2.00	24.56	36.00	Pass
11g	6Mbps	1	11	2462	22.09	30.00	2.00	24.09	36.00	Pass
HT20	MCS0	1	1	2412	21.41	30.00	2.00	23.41	36.00	Pass
HT20	MCS0	1	6	2437	21.25	30.00	2.00	23.25	36.00	Pass
HT20	MCS0	1	11	2462	20.99	30.00	2.00	22.99	36.00	Pass
HT40	MCS0	1	3	2422	21.09	30.00	2.00	23.09	36.00	Pass
HT40	MCS0	1	6	2437	21.23	30.00	2.00	23.23	36.00	Pass
HT40	MCS0	1	9	2452	21.05	30.00	2.00	23.05	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	0.00	15.83
11b	1Mbps	1	6	2437	0.00	15.78
11b	1Mbps	1	11	2462	0.00	15.69
11g	6Mbps	1	1	2412	0.00	13.91
11g	6Mbps	1	6	2437	0.00	13.86
11g	6Mbps	1	11	2462	0.00	13.75
HT20	MCS0	1	1	2412	0.00	12.89
HT20	MCS0	1	6	2437	0.00	12.88
HT20	MCS0	1	11	2462	0.00	12.76
HT40	MCS0	1	3	2422	0.00	12.65
HT40	MCS0	1	6	2437	0.00	12.69
HT40	MCS0	1	9	2452	0.00	12.56

Report Number : FR690221C

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	-15.15	2.00	8.00	Pass
11b	1Mbps	1	6	2437	-15.13	2.00	8.00	Pass
11b	1Mbps	1	11	2462	-15.26	2.00	8.00	Pass
11g	6Mbps	1	1	2412	-14.93	2.00	8.00	Pass
11g	6Mbps	1	6	2437	-14.69	2.00	8.00	Pass
11g	6Mbps	1	11	2462	-15.35	2.00	8.00	Pass
HT20	MCS0	1	1	2412	-14.99	2.00	8.00	Pass
HT20	MCS0	1	6	2437	-15.36	2.00	8.00	Pass
HT20	MCS0	1	11	2462	-15.83	2.00	8.00	Pass
HT40	MCS0	1	3	2422	-18.51	2.00	8.00	Pass
HT40	MCS0	1	6	2437	-18.92	2.00	8.00	Pass
HT40	MCS0	1	9	2452	-17.50	2.00	8.00	Pass

Appendix B. Radiated Spurious Emission

Test Engineer :	Jesse Wang, James Chiu, and Ken Wu	Temperature :	20~24°C
		Relative Humidity :	50~54%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		2389.17	56.26	-17.74	74	51.09	32.19	7.31	34.33	300	219	P	H
		2386.125	44.79	-9.21	54	39.63	32.19	7.31	34.34	300	219	A	H
	*	2412	99.87	-	-	94.62	32.24	7.31	34.3	300	219	P	H
	*	2412	96.52	-	-	91.27	32.24	7.31	34.3	300	219	A	H
													H
		2379.615	55.92	-18.08	74	50.89	32.14	7.24	34.35	276	246	P	V
		2386.125	44.82	-9.18	54	39.66	32.19	7.31	34.34	276	246	A	V
	*	2412	98.29	-	-	93.04	32.24	7.31	34.3	276	246	P	V
	*	2412	95.07	-	-	89.82	32.24	7.31	34.3	276	246	A	V
													V
802.11b CH 06 2437MHz		2344.16	54.94	-19.06	74	50.08	32.03	7.24	34.41	287	146	P	H
		2387.7	44.44	-9.56	54	39.28	32.19	7.31	34.34	287	146	A	H
	*	2437	100.58	-	-	95.13	32.34	7.36	34.25	287	146	P	H
	*	2437	97.2	-	-	91.75	32.34	7.36	34.25	287	146	A	H
		2498.88	56.58	-17.42	74	50.83	32.5	7.4	34.15	287	146	P	H
		2494.68	45.14	-8.86	54	39.4	32.5	7.4	34.16	287	146	A	H
		2382.94	54.75	-19.25	74	49.64	32.14	7.31	34.34	300	119	P	V
		2387	44.37	-9.63	54	39.21	32.19	7.31	34.34	300	119	A	V
	*	2437	95.77	-	-	90.32	32.34	7.36	34.25	300	119	P	V
	*	2437	92.65	-	-	87.2	32.34	7.36	34.25	300	119	A	V
		2494.4	56.57	-17.43	74	50.83	32.5	7.4	34.16	300	119	P	V
		2491.6	45.12	-8.88	54	39.38	32.5	7.4	34.16	300	119	A	V

802.11b CH 11 2462MHz	*	2462	101.61	-	-	96.02	32.4	7.4	34.21	334	252	P	H
	*	2462	98.22	-	-	92.63	32.4	7.4	34.21	334	252	A	H
		2485.88	56.05	-17.95	74	50.37	32.45	7.4	34.17	334	252	P	H
		2488.16	45.63	-8.37	54	39.9	32.5	7.4	34.17	334	252	A	H
													H
													H
	*	2462	98.26	-	-	92.67	32.4	7.4	34.21	376	9	P	V
	*	2462	94.88	-	-	89.29	32.4	7.4	34.21	376	9	A	V
		2487.6	55.45	-18.55	74	49.72	32.5	7.4	34.17	376	9	P	V
		2488.16	45.21	-8.79	54	39.48	32.5	7.4	34.17	376	9	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	40.6	-33.4	74	54.32	33.64	11.68	59.04	100	0	P	H
													H
													H
													H
		4824	39.37	-34.63	74	53.09	33.64	11.68	59.04	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4872	38.37	-35.63	74	52.24	33.54	11.53	58.94	100	0	P	H
		7308	39.45	-34.55	74	48.88	34.69	13.81	57.93	100	0	P	H
													H
													H
		4872	39.08	-34.92	74	52.95	33.54	11.53	58.94	100	0	P	V
		7308	40.31	-33.69	74	49.74	34.69	13.81	57.93	100	0	P	V
													V
													V
802.11b CH 11 2462MHz		4926	38.38	-35.62	74	52.41	33.44	11.37	58.84	100	0	P	H
		7386	39.11	-34.89	74	48.75	34.47	13.95	58.06	100	0	P	H
													H
													H
		4926	39.39	-34.61	74	53.42	33.44	11.37	58.84	100	0	P	V
		7386	39.53	-34.47	74	49.17	34.47	13.95	58.06	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 Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2343.915	55.33	-18.67	74	50.47	32.03	7.24	34.41	299	222	P	H
		2390	44.88	-9.12	54	39.71	32.19	7.31	34.33	299	222	A	H
	*	2412	99.99	-	-	94.74	32.24	7.31	34.3	299	222	P	H
	*	2412	92.3	-	-	87.05	32.24	7.31	34.3	299	222	A	H
													H
													H
		2355.675	55.68	-18.32	74	50.74	32.09	7.24	34.39	301	261	P	V
		2390	44.85	-9.15	54	39.68	32.19	7.31	34.33	301	261	A	V
	*	2412	98.25	-	-	93	32.24	7.31	34.3	301	261	P	V
	*	2412	90.64	-	-	85.39	32.24	7.31	34.3	301	261	A	V
													V
													V
802.11g CH 06 2437MHz		2377.2	54.53	-19.47	74	49.5	32.14	7.24	34.35	212	144	P	H
		2388.12	44.42	-9.58	54	39.26	32.19	7.31	34.34	212	144	A	H
	*	2437	102.24	-	-	96.79	32.34	7.36	34.25	212	144	P	H
	*	2437	94.6	-	-	89.15	32.34	7.36	34.25	212	144	A	H
		2496.36	55.69	-18.31	74	49.95	32.5	7.4	34.16	212	144	P	H
		2494.12	45.14	-8.86	54	39.4	32.5	7.4	34.16	212	144	A	H
		2380.42	54.92	-19.08	74	49.82	32.14	7.31	34.35	377	16	P	V
		2388.82	44.39	-9.61	54	39.22	32.19	7.31	34.33	377	16	A	V
	*	2437	97.32	-	-	91.87	32.34	7.36	34.25	377	16	P	V
	*	2437	89.87	-	-	84.42	32.34	7.36	34.25	377	16	A	V
		2487.26	56.08	-17.92	74	50.4	32.45	7.4	34.17	377	16	P	V
		2489.71	45.12	-8.88	54	39.39	32.5	7.4	34.17	377	16	A	V

802.11g CH 11 2462MHz	*	2462	102.86	-	-	97.27	32.4	7.4	34.21	233	146	P	H
	*	2462	95.07	-	-	89.48	32.4	7.4	34.21	233	146	A	H
		2483.76	56.92	-17.08	74	51.25	32.45	7.4	34.18	233	146	P	H
		2483.52	46.09	-7.91	54	40.42	32.45	7.4	34.18	233	146	A	H
													H
													H
	*	2462	98.41	-	-	92.82	32.4	7.4	34.21	380	12	P	V
	*	2462	90.57	-	-	84.98	32.4	7.4	34.21	380	12	A	V
		2483.84	56.41	-17.59	74	50.74	32.45	7.4	34.18	380	12	P	V
		2483.52	45.23	-8.77	54	39.56	32.45	7.4	34.18	380	12	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	40.54	-33.46	74	54.26	33.64	11.68	59.04	100	0	P	H
													H
													H
													H
		4824	40.77	-33.23	74	54.49	33.64	11.68	59.04	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4872	38.7	-35.3	74	52.57	33.54	11.53	58.94	100	0	P	H
		7308	39.53	-34.47	74	48.96	34.69	13.81	57.93	100	0	P	H
													H
													H
		4872	38.88	-35.12	74	52.75	33.54	11.53	58.94	100	0	P	V
		7308	40.06	-33.94	74	49.49	34.69	13.81	57.93	100	0	P	V
													V
													V
802.11g CH 11 2462MHz		4926	38.48	-35.52	74	52.51	33.44	11.37	58.84	100	0	P	H
		7386	39.54	-34.46	74	49.18	34.47	13.95	58.06	100	0	P	H
													H
													H
		4926	39.15	-34.85	74	53.18	33.44	11.37	58.84	100	0	P	V
		7386	39.98	-34.02	74	49.62	34.47	13.95	58.06	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 Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		2387.805	55.12	-18.88	74	49.96	32.19	7.31	34.34	298	220	P	H
		2390	44.73	-9.27	54	39.56	32.19	7.31	34.33	298	220	A	H
	*	2412	99.02	-	-	93.77	32.24	7.31	34.3	298	220	P	H
	*	2412	91.28	-	-	86.03	32.24	7.31	34.3	298	220	A	H
802.11n													H
HT20													H
CH 01		2364.075	55.73	-18.27	74	50.78	32.09	7.24	34.38	275	249	P	V
2412MHz		2390	44.79	-9.21	54	39.62	32.19	7.31	34.33	275	249	A	V
	*	2412	97.91	-	-	92.66	32.24	7.31	34.3	275	249	P	V
	*	2412	90.16	-	-	84.91	32.24	7.31	34.3	275	249	A	V
													V
													V
		2342.06	54.96	-19.04	74	50.1	32.03	7.24	34.41	288	146	P	H
		2388.54	44.42	-9.58	54	39.26	32.19	7.31	34.34	288	146	A	H
	*	2437	99.77	-	-	94.32	32.34	7.36	34.25	288	146	P	H
	*	2437	92	-	-	86.55	32.34	7.36	34.25	288	146	A	H
802.11n		2490.55	56.05	-17.95	74	50.32	32.5	7.4	34.17	288	146	P	H
HT20		2495.66	45.15	-8.85	54	39.41	32.5	7.4	34.16	288	146	A	H
CH 06		2374.26	55.27	-18.73	74	50.25	32.14	7.24	34.36	276	246	P	V
2437MHz		2388.96	44.43	-9.57	54	39.26	32.19	7.31	34.33	276	246	A	V
	*	2437	97.11	-	-	91.66	32.34	7.36	34.25	276	246	P	V
	*	2437	89.32	-	-	83.87	32.34	7.36	34.25	276	246	A	V
		2500	55.82	-18.18	74	50.07	32.5	7.4	34.15	276	246	P	V
		2492.09	45.14	-8.86	54	39.4	32.5	7.4	34.16	276	246	A	V

	*	2462	99.67	-	-	94.08	32.4	7.4	34.21	279	170	P	H
	*	2462	92.03	-	-	86.44	32.4	7.4	34.21	279	170	A	H
		2484.48	57.54	-16.46	74	51.87	32.45	7.4	34.18	279	170	P	H
		2483.52	45.87	-8.13	54	40.2	32.45	7.4	34.18	279	170	A	H
802.11n													H
HT20													H
CH 11	*	2462	97.27	-	-	91.68	32.4	7.4	34.21	296	248	P	V
2462MHz	*	2462	89.54	-	-	83.95	32.4	7.4	34.21	296	248	A	V
		2492.4	55.72	-18.28	74	49.98	32.5	7.4	34.16	296	248	P	V
		2483.72	45.24	-8.76	54	39.57	32.45	7.4	34.18	296	248	A	V
													V
													V

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

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4824	39.96	-34.04	74	53.68	33.64	11.68	59.04	100	0	P	H
													H
802.11n													H
HT20													H
CH 01		4824	40.03	-33.97	74	53.75	33.64	11.68	59.04	100	0	P	V
2412MHz													V
													V
													V
		4874	39.58	-34.42	74	53.45	33.54	11.53	58.94	100	0	P	H
		7311	41.14	-32.86	74	50.57	34.69	13.81	57.93	100	0	P	H
802.11n													H
HT20													H
CH 06		4874	39.14	-34.86	74	53.01	33.54	11.53	58.94	100	0	P	V
2437MHz		7311	42.57	-31.43	74	52	34.69	13.81	57.93	100	0	P	V
													V
													V
		4926	40.72	-33.28	74	54.75	33.44	11.37	58.84	100	0	P	H
		7386	39.66	-34.34	74	49.3	34.47	13.95	58.06	100	0	P	H
802.11n													H
HT20													H
CH 11		4924	39.35	-34.65	74	53.38	33.44	11.37	58.84	100	0	P	V
2462MHz		7386	41.22	-32.78	74	50.86	34.47	13.95	58.06	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 HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		2317.42	55.56	-18.44	74	50.9	31.93	7.18	34.45	301	220	P	H
		2389.66	44.95	-9.05	54	39.78	32.19	7.31	34.33	301	220	A	H
	*	2422	95.94	-	-	90.57	32.29	7.36	34.28	301	220	P	H
	*	2422	88.29	-	-	82.92	32.29	7.36	34.28	301	220	A	H
802.11n		2493.49	56.52	-17.48	74	50.78	32.5	7.4	34.16	301	220	P	H
HT40		2489.92	45.15	-8.85	54	39.42	32.5	7.4	34.17	301	220	A	H
CH 03		2380.7	55.15	-18.85	74	50.05	32.14	7.31	34.35	278	250	P	V
2422MHz		2389.94	44.94	-9.06	54	39.77	32.19	7.31	34.33	278	250	A	V
	*	2422	94.58	-	-	89.21	32.29	7.36	34.28	278	250	P	V
	*	2422	86.95	-	-	81.58	32.29	7.36	34.28	278	250	A	V
		2493.7	55.4	-18.6	74	49.66	32.5	7.4	34.16	278	250	P	V
		2492.37	45.15	-8.85	54	39.41	32.5	7.4	34.16	278	250	A	V
		2387.7	55.03	-18.97	74	49.87	32.19	7.31	34.34	300	148	P	H
		2387.98	44.63	-9.37	54	39.47	32.19	7.31	34.34	300	148	A	H
	*	2437	96.77	-	-	91.32	32.34	7.36	34.25	300	148	P	H
	*	2437	89.08	-	-	83.63	32.34	7.36	34.25	300	148	A	H
802.11n		2485.72	56.58	-17.42	74	50.9	32.45	7.4	34.17	300	148	P	H
HT40		2483.5	45.61	-8.39	54	39.94	32.45	7.4	34.18	300	148	A	H
CH 06		2354.52	55.67	-18.33	74	50.73	32.09	7.24	34.39	270	249	P	V
2437MHz		2389.94	44.61	-9.39	54	39.44	32.19	7.31	34.33	270	249	A	V
	*	2437	94.54	-	-	89.09	32.34	7.36	34.25	270	249	P	V
	*	2437	86.97	-	-	81.52	32.34	7.36	34.25	270	249	A	V
		2485.72	56.15	-17.85	74	50.47	32.45	7.4	34.17	270	249	P	V
		2483.55	45.22	-8.78	54	39.55	32.45	7.4	34.18	270	249	A	V

		2389.8	55.08	-18.92	74	49.91	32.19	7.31	34.33	300	149	P	H
		2387.98	44.59	-9.41	54	39.43	32.19	7.31	34.34	300	149	A	H
	*	2452	97.06	-	-	91.59	32.34	7.36	34.23	300	149	P	H
	*	2452	89.43	-	-	83.96	32.34	7.36	34.23	300	149	A	H
802.11n		2487.82	59.01	-14.99	74	53.28	32.5	7.4	34.17	300	149	P	H
HT40		2484.25	46.76	-7.24	54	41.09	32.45	7.4	34.18	300	149	A	H
CH 09		2348.5	55.06	-18.94	74	50.19	32.03	7.24	34.4	296	245	P	V
2452MHz		2389.66	44.58	-9.42	54	39.41	32.19	7.31	34.33	296	245	A	V
	*	2452	94.53	-	-	89.06	32.34	7.36	34.23	296	245	P	V
	*	2452	86.82	-	-	81.35	32.34	7.36	34.23	296	245	A	V
		2484.18	55.84	-18.16	74	50.17	32.45	7.4	34.18	296	245	P	V
		2483.5	45.74	-8.26	54	40.07	32.45	7.4	34.18	296	245	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4844	40.3	-33.7	74	54.02	33.61	11.68	59.01	100	0	P	H
		7266	40.04	-33.96	74	49.4	34.78	13.75	57.89	100	0	P	H
802.11n													H
HT40													H
CH 03		4844	39.65	-34.35	74	53.37	33.61	11.68	59.01	100	0	P	V
2422MHz		7266	40.08	-33.92	74	49.44	34.78	13.75	57.89	100	0	P	V
													V
													V
		4874	39.57	-34.43	74	53.44	33.54	11.53	58.94	100	0	P	H
		7311	39.68	-34.32	74	49.11	34.69	13.81	57.93	100	0	P	H
802.11n													H
HT40													H
CH 06		4874	39.09	-34.91	74	52.96	33.54	11.53	58.94	100	0	P	V
2437MHz		7311	39.94	-34.06	74	49.37	34.69	13.81	57.93	100	0	P	V
													V
													V
		4904	38.87	-35.13	74	52.9	33.47	11.37	58.87	100	0	P	H
		7356	38.79	-35.21	74	48.36	34.56	13.88	58.01	100	0	P	H
802.11n													H
HT40													H
CH 09		4904	39.19	-34.81	74	53.22	33.47	11.37	58.87	100	0	P	V
2452MHz		7356	39.61	-34.39	74	49.18	34.56	13.88	58.01	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

2.4GHz WIFI 802.11n HT40 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		31.62	27.74	-12.26	40	33.13	24.92	1.07	31.38			P	H
		135.3	30.48	-13.02	43.5	42.32	18.12	1.55	31.51			P	H
		203.34	32.95	-10.55	43.5	46.44	16.11	1.87	31.47	185	52	P	H
		348.3	30.24	-15.76	46	37.81	21.15	2.5	31.22			P	H
		518.4	33.73	-12.27	46	37.22	24.35	3.14	30.98			P	H
		881	34.52	-11.48	46	32.02	28.88	4.17	30.55			P	H
													H
													H
													H
													H
2.4GHz													H
802.11n													H
HT40		32.43	30.89	-9.11	40	36.83	24.38	1.07	31.39	100	182	P	V
LF		74.82	28.12	-11.88	40	45.15	13.25	1.28	31.56			P	V
		116.67	28.79	-14.71	43.5	41.07	17.68	1.55	31.51			P	V
		518.4	31.49	-14.51	46	34.98	24.35	3.14	30.98			P	V
		841.8	32.46	-13.54	46	30.39	28.54	4.1	30.57			P	V
		913.9	33.76	-12.24	46	30.85	29.33	4.12	30.54			P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

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

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

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

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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

Appendix C. Radiated Spurious Emission Plots

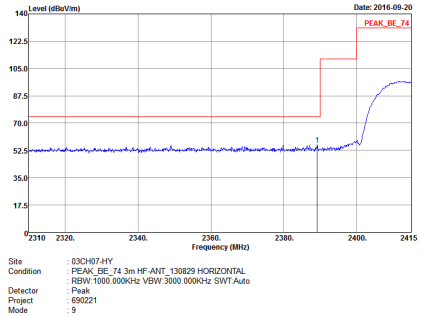
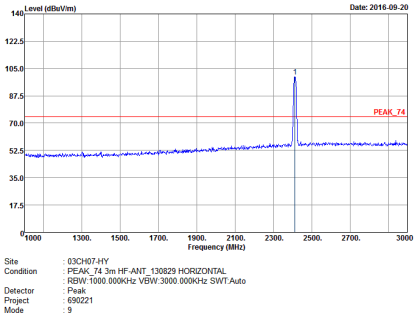
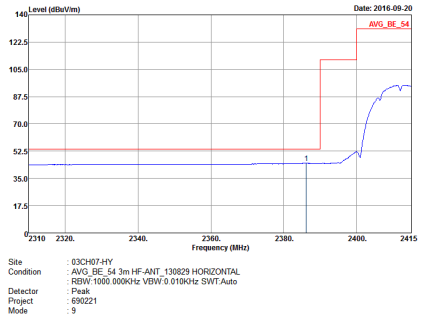
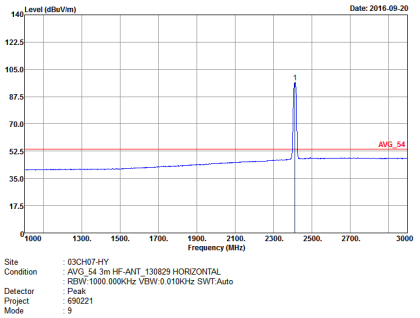
Test Engineer :	Jesse Wang, James Chiu, and Ken Wu	**Temperature :**	20~24°C
		Relative Humidity :	50~54%

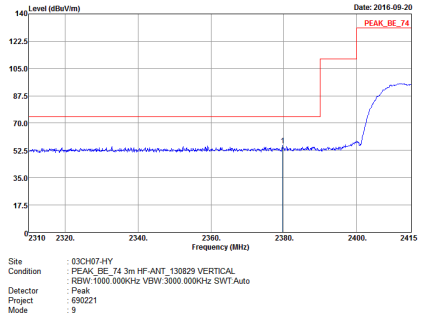
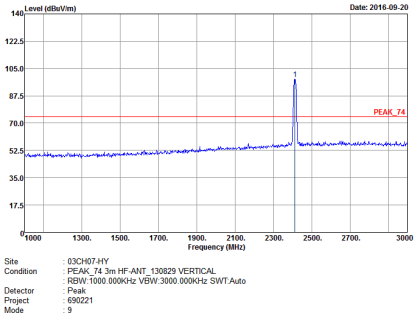
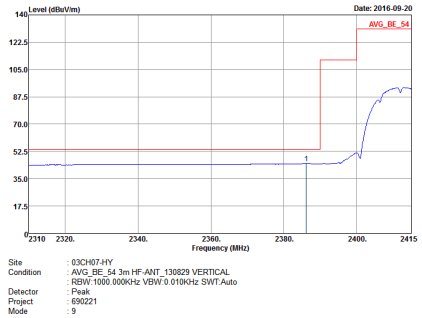
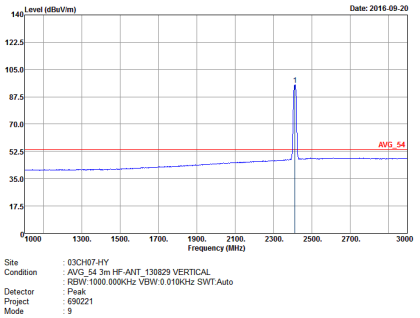
Note symbol

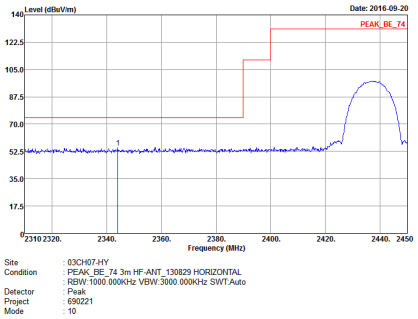
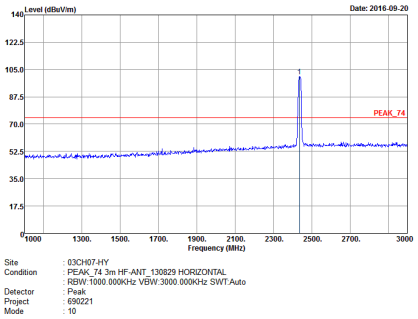
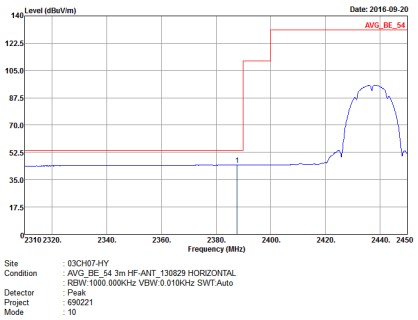
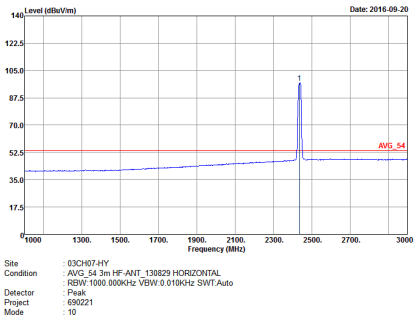
-L	**Low channel location**
-R	**High channel location**

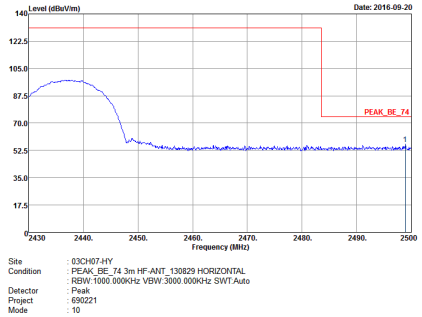
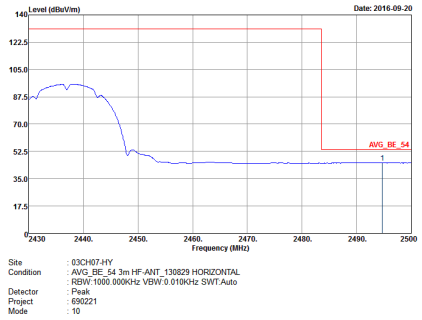
2.4GHz 2400~2483.5MHz

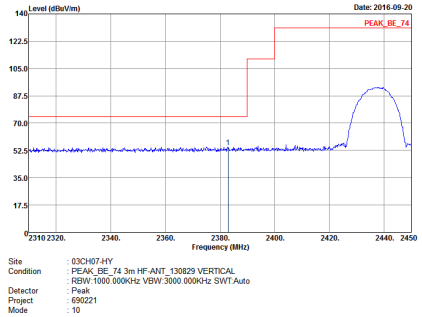
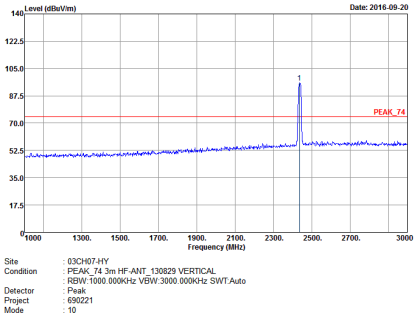
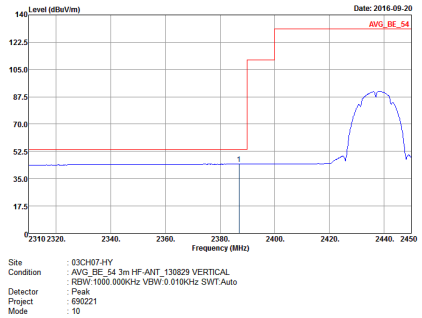
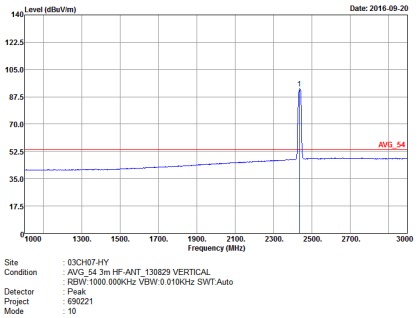
WIFI 802.11b (Band Edge @ 3m)

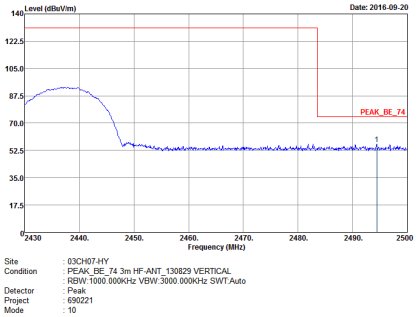
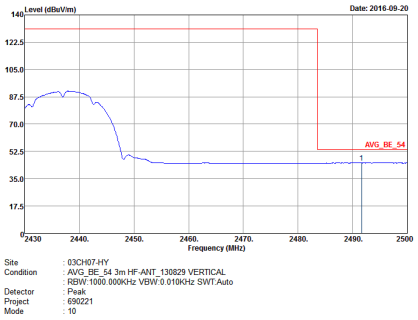
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

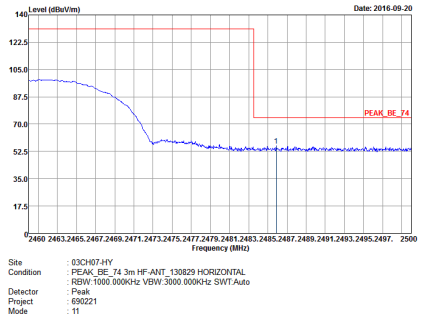
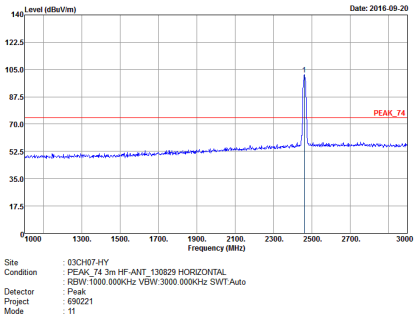
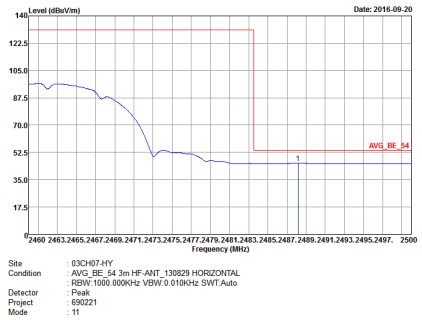
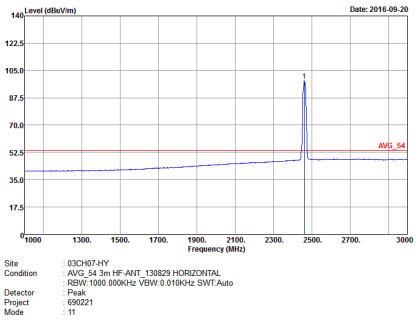
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak		
Avg.		

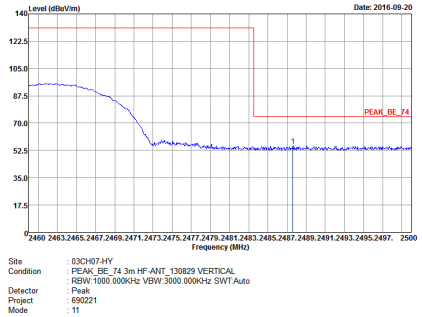
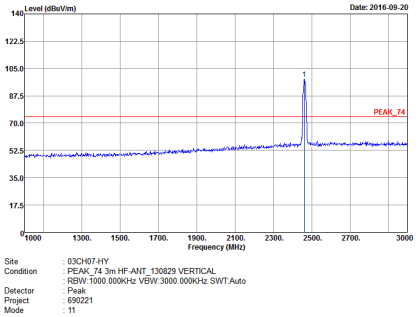
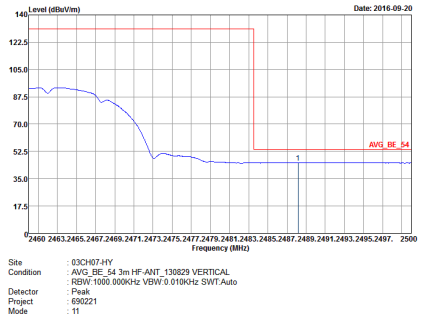
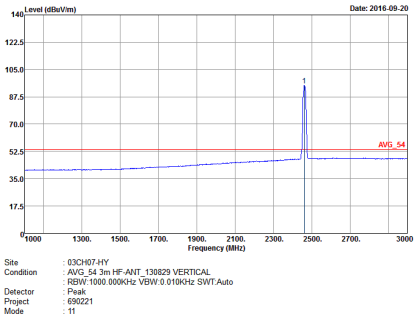
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

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

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

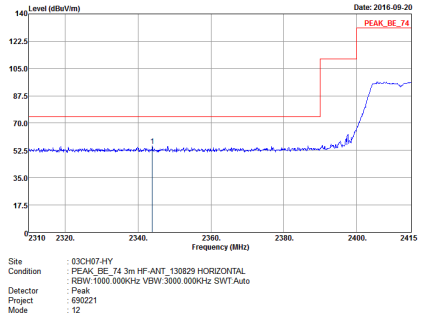
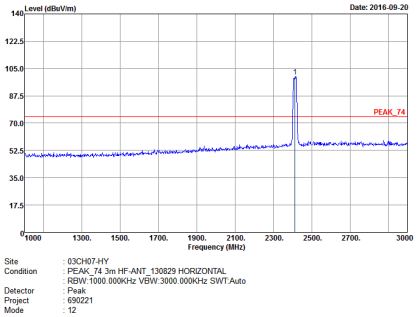
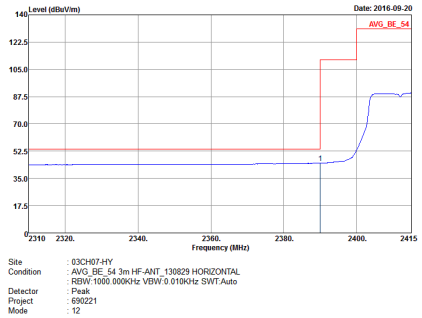
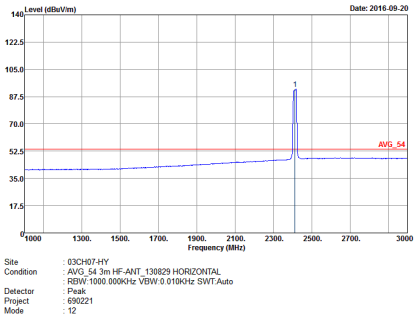
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

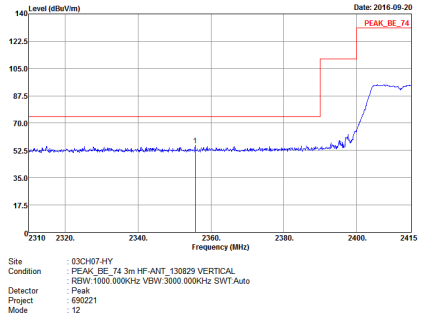
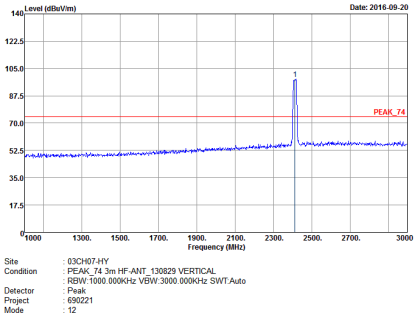
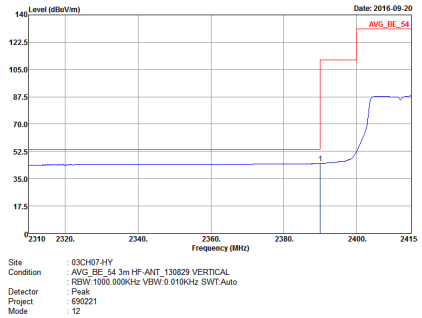
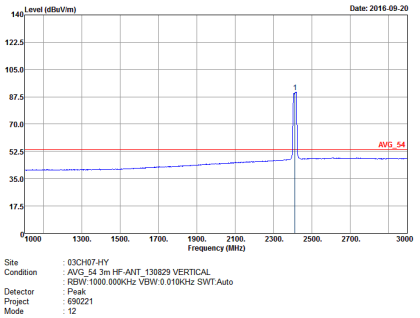
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

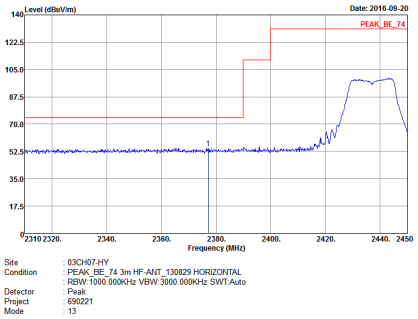
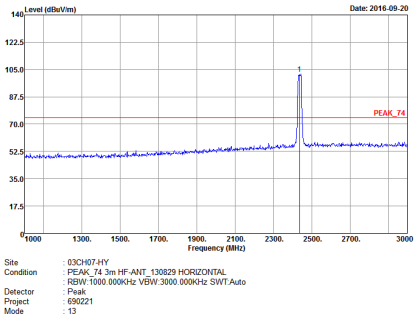
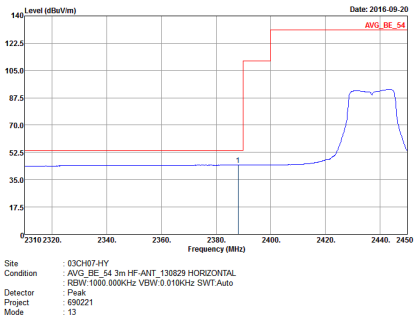
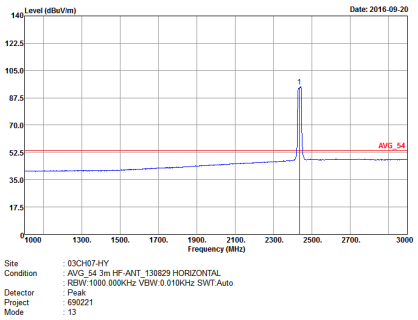
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Vertical	Fundamental
Peak		
Avg.		

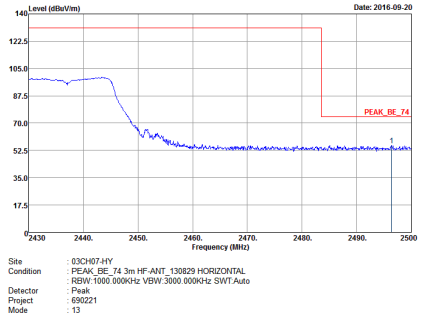
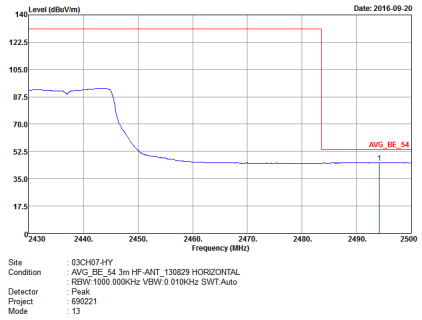
2.4GHz 2400~2483.5MHz

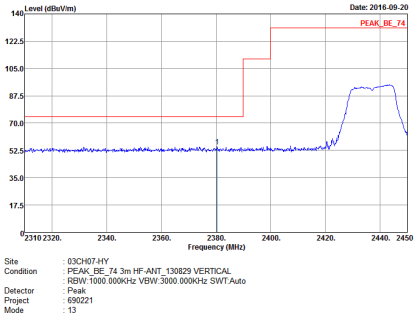
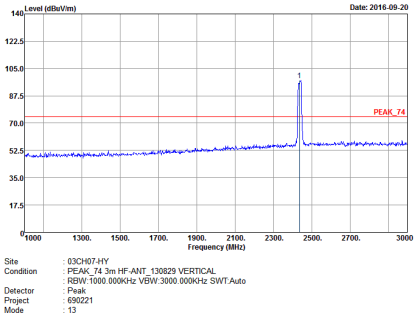
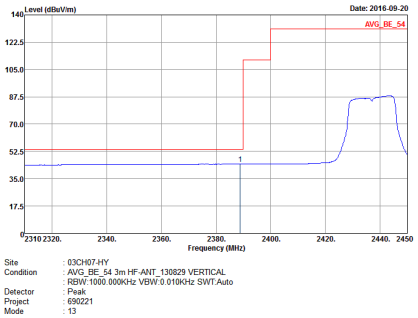
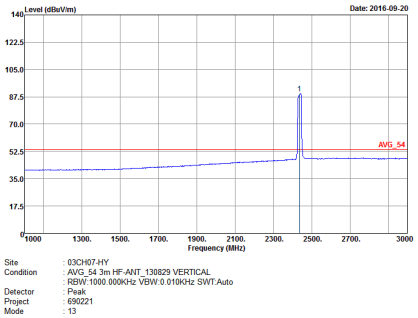
WIFI 802.11g (Band Edge @ 3m)

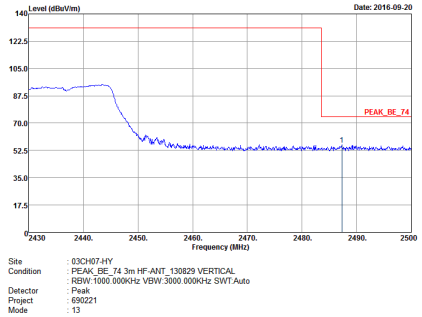
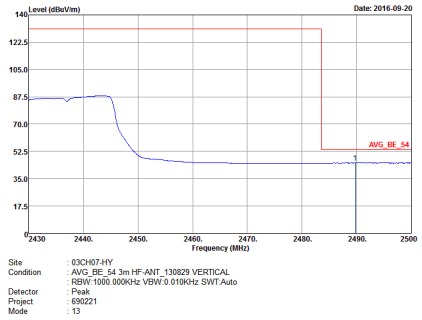
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

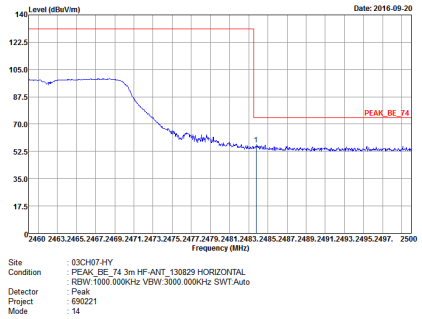
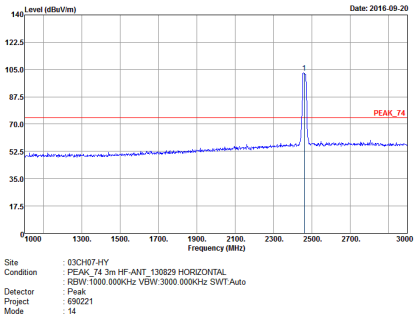
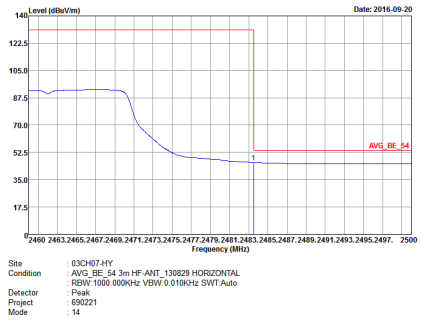
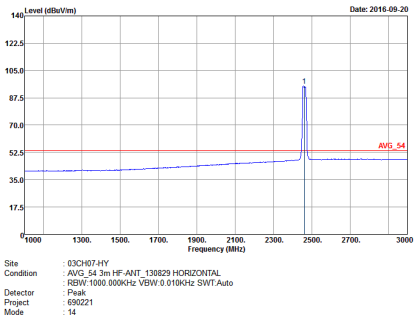
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Vertical	Fundamental
Peak		
Avg.		

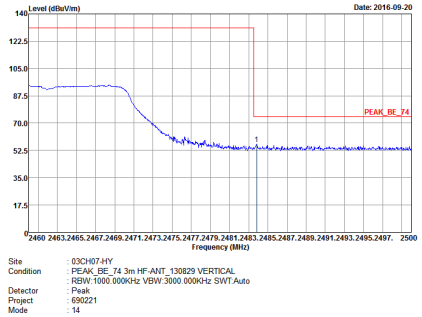
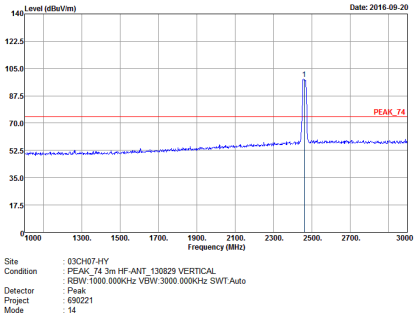
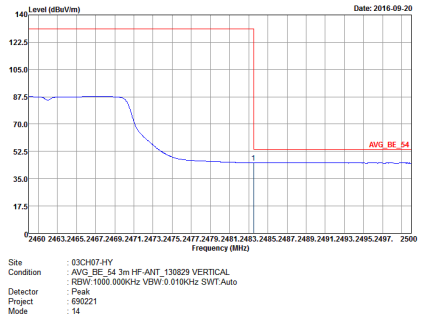
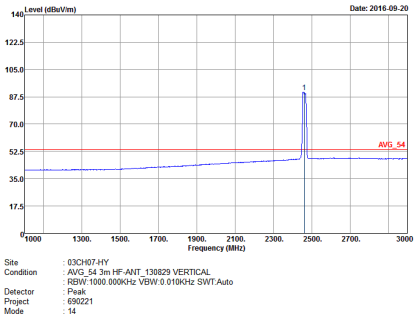
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 690221 Mode : 13	 Site : 03CH07-HY Condition : PEAK_74 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 690221 Mode : 13
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 690221 Mode : 13	 Site : 03CH07-HY Condition : AVG_54 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 690221 Mode : 13

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

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

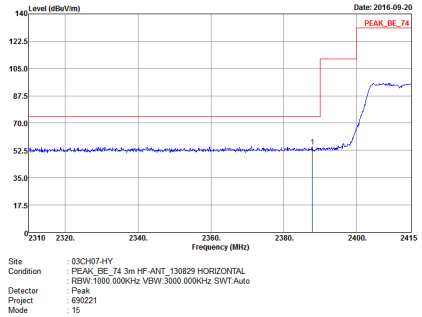
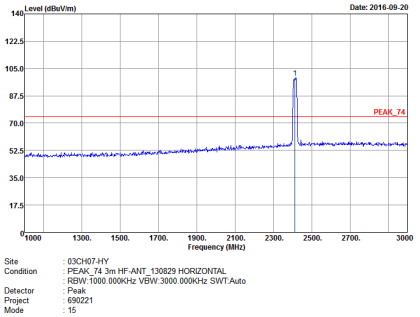
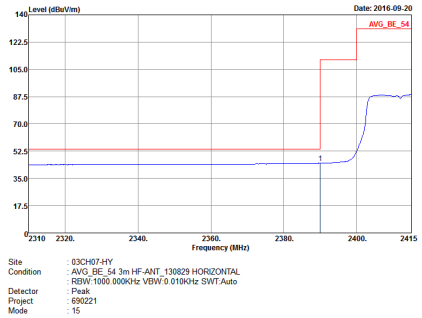
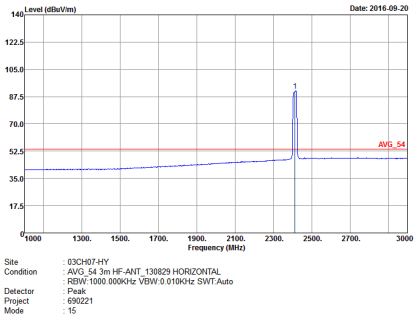
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

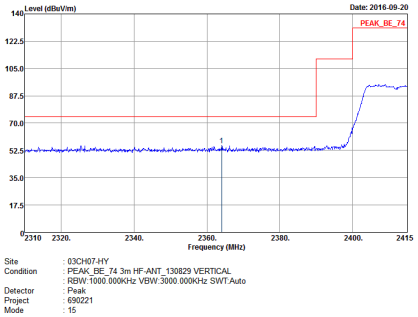
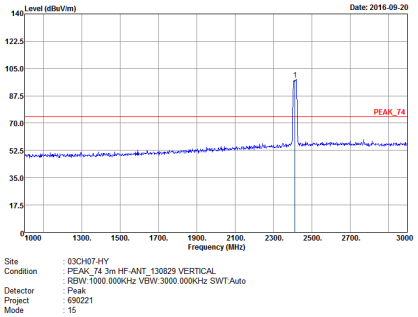
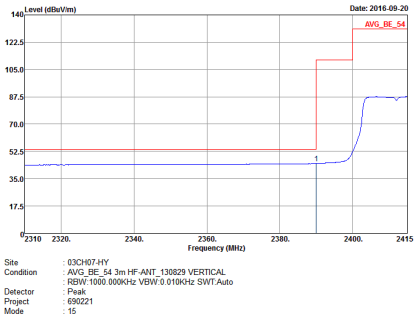
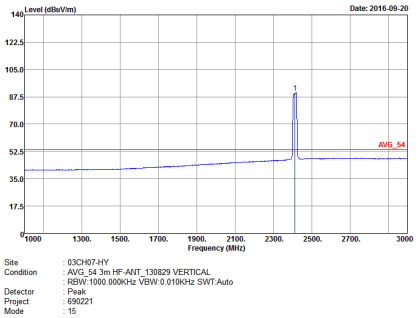
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

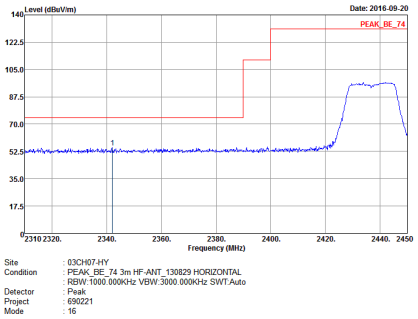
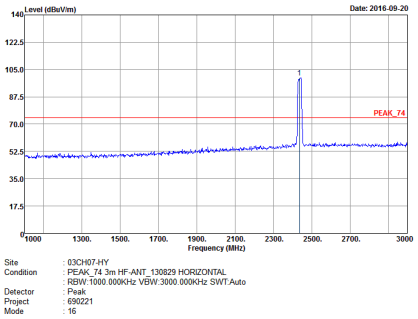
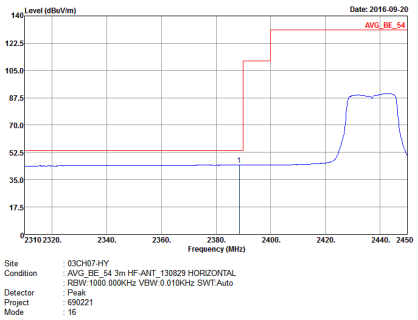
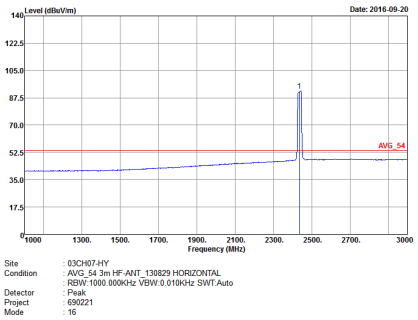
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Vertical	Fundamental
Peak		
Avg.		

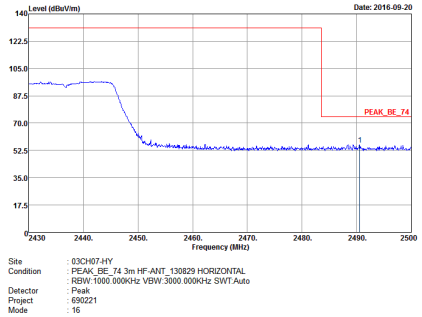
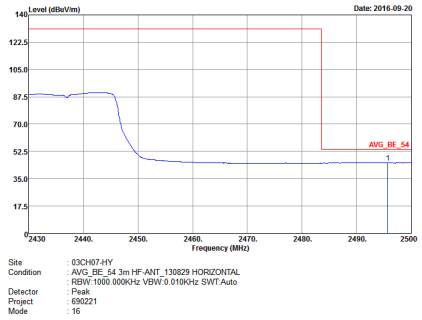
2.4GHz 2400~2483.5MHz

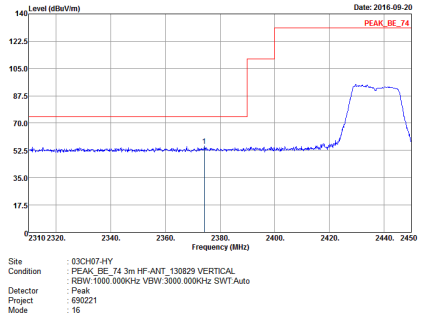
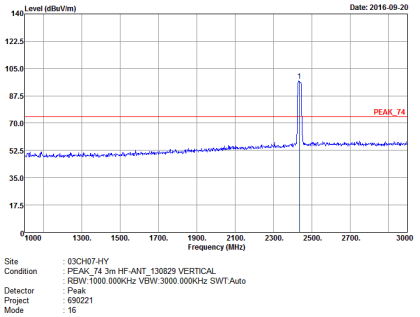
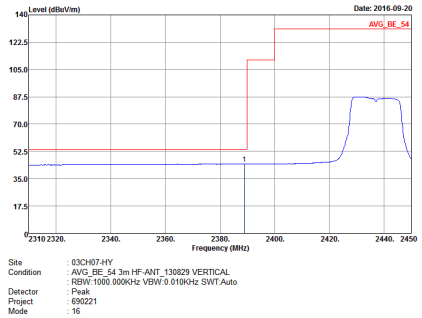
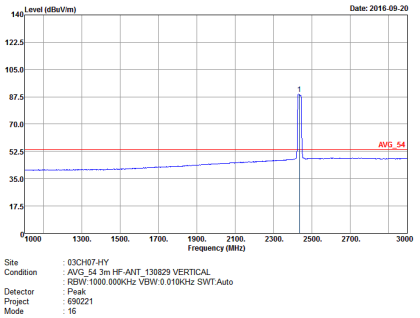
WIFI 802.11n HT20 (Band Edge @ 3m)

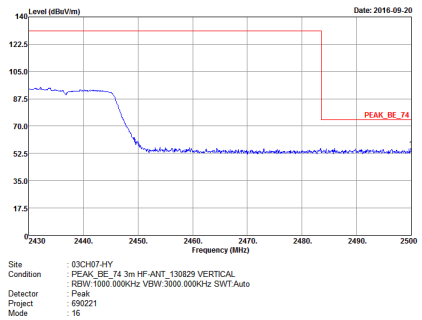
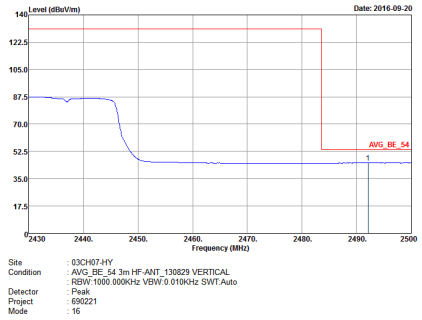
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

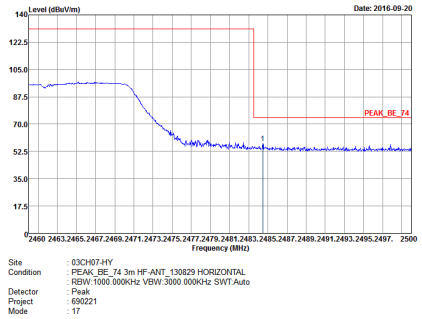
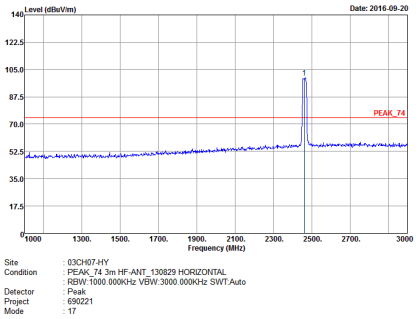
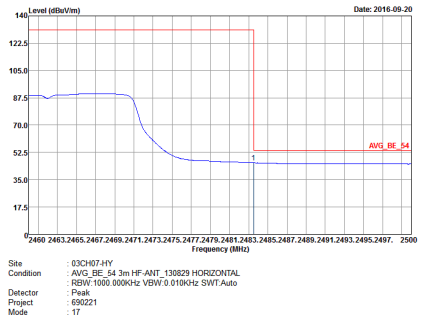
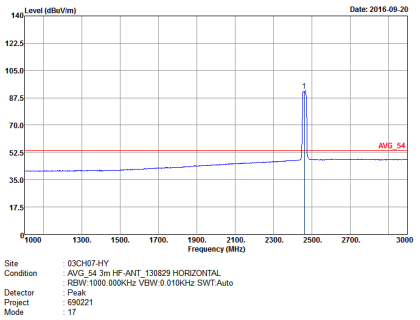
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Vertical	Fundamental
Peak		
Avg.		

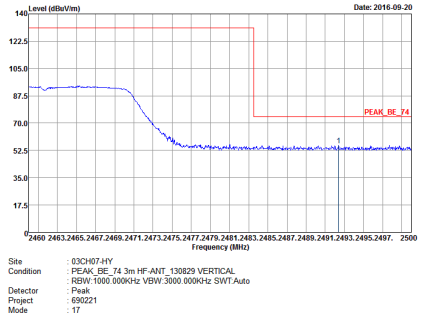
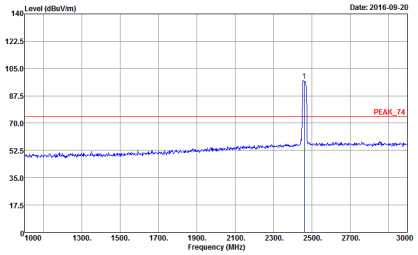
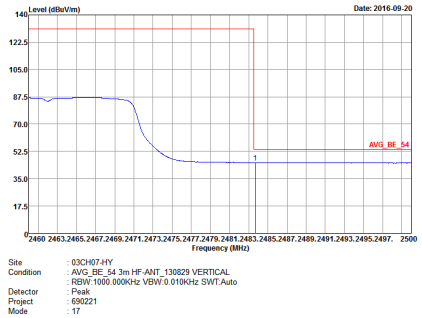
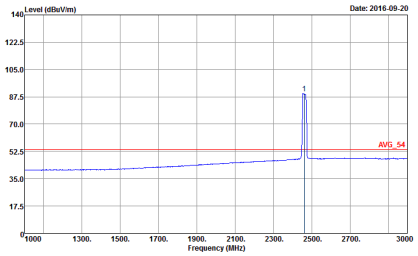
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 690221 Mode : 16	 Site : 03CH07-HY Condition : PEAK_74 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 690221 Mode : 16
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 690221 Mode : 16	 Site : 03CH07-HY Condition : AVG_54 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 690221 Mode : 16

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

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

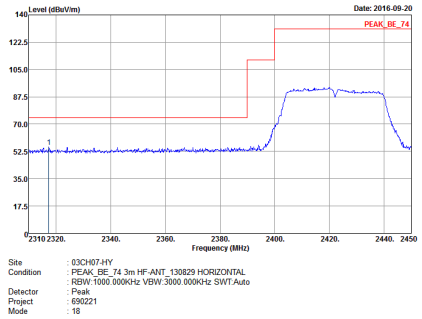
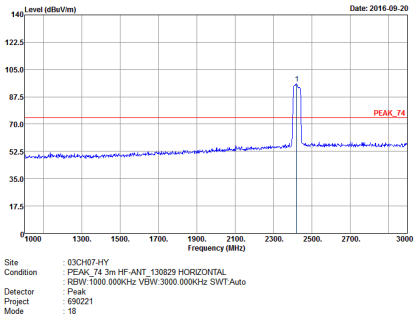
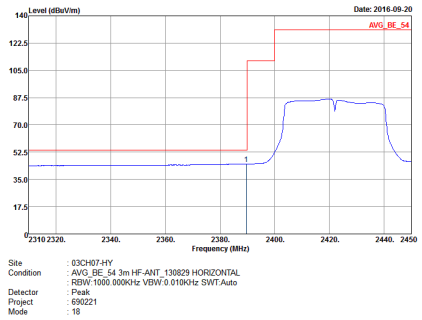
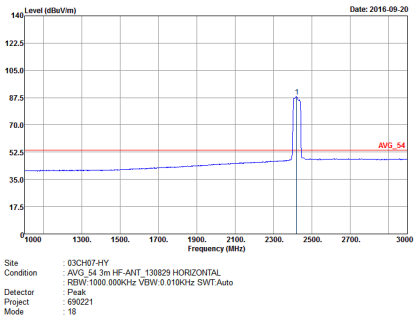
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

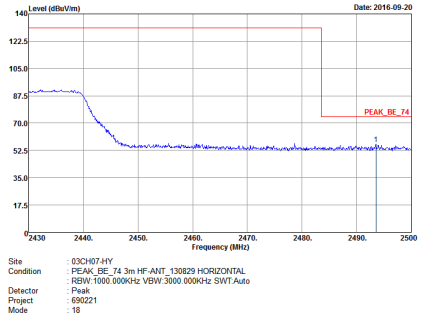
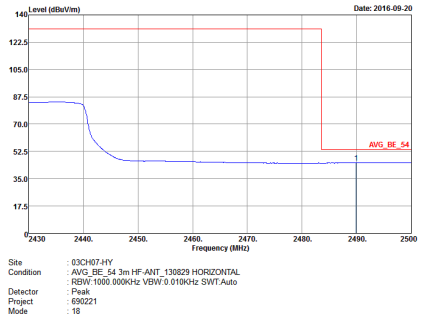
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

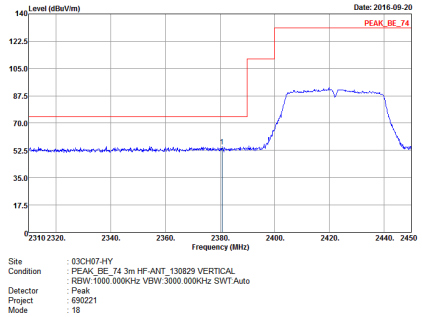
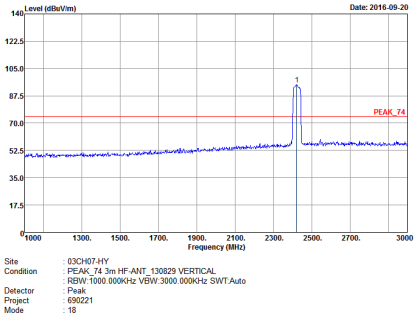
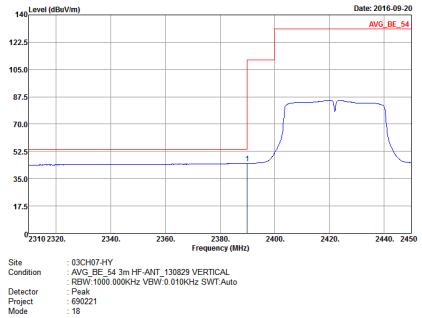
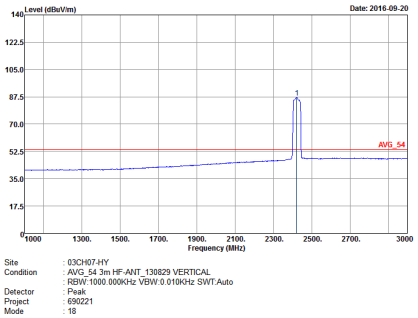
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 690221 Mode : 17	 Site : 03CH07-HY Condition : PEAK_74 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 690221 Mode : 17
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 690221 Mode : 17	 Site : 03CH07-HY Condition : AVG_54 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 690221 Mode : 17

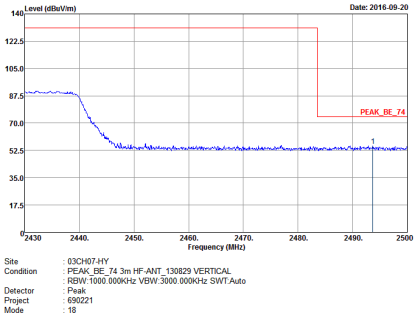
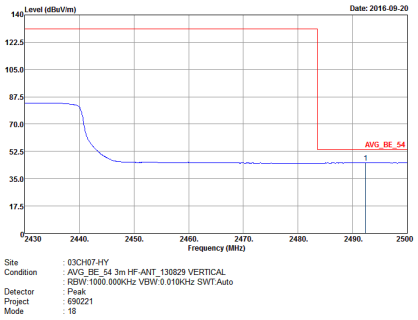
2.4GHz 2400~2483.5MHz

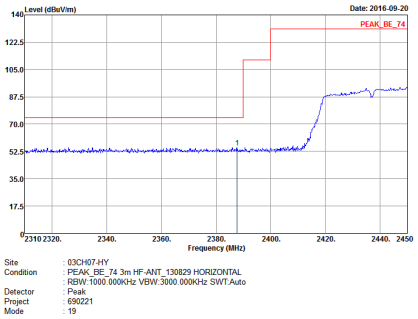
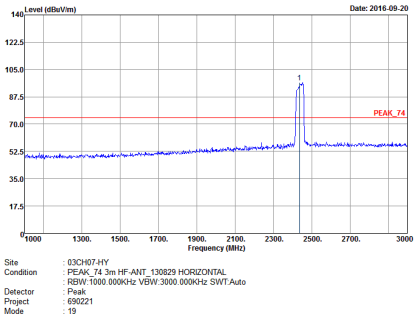
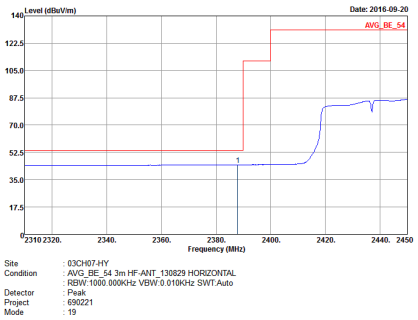
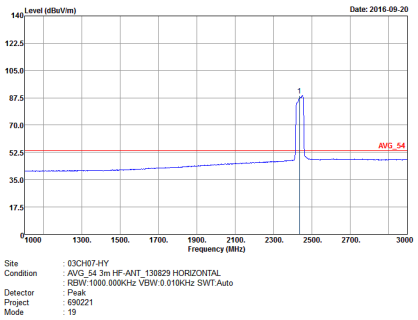
WIFI 802.11n HT40 (Band Edge @ 3m)

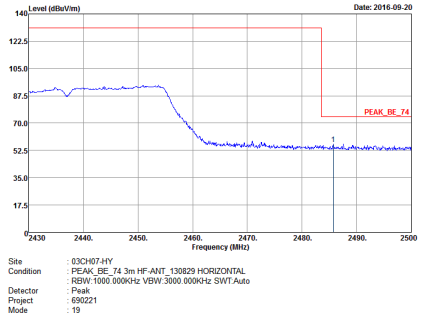
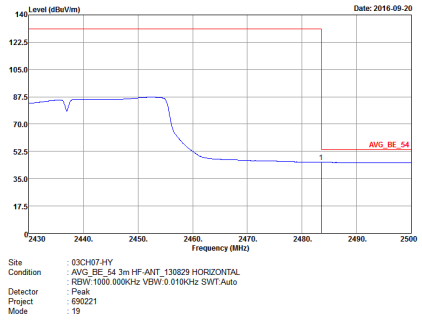
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

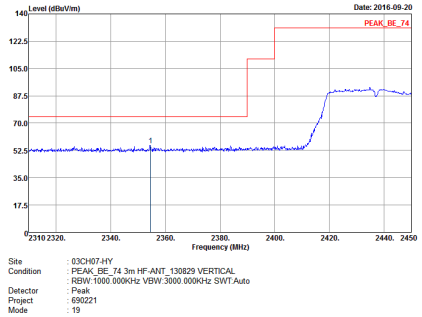
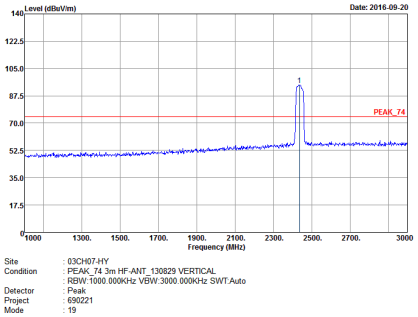
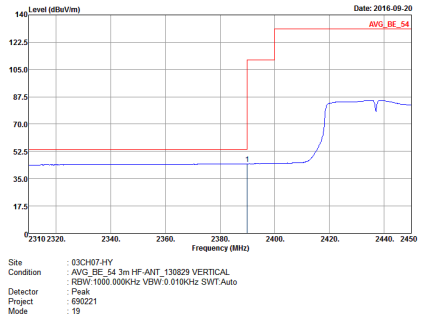
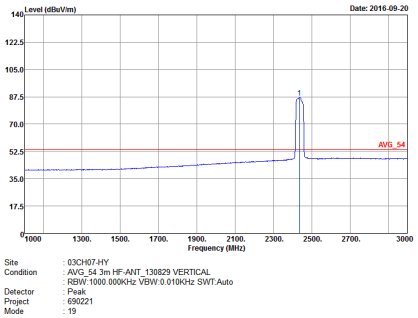
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Horizontal	Fundamental
Peak		Left Blank
Avg.		Left Blank

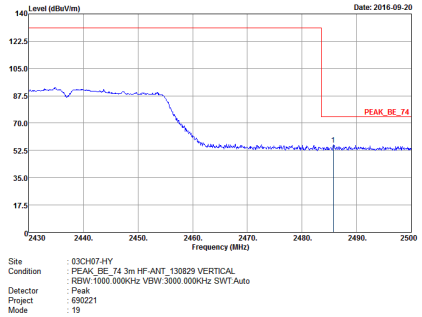
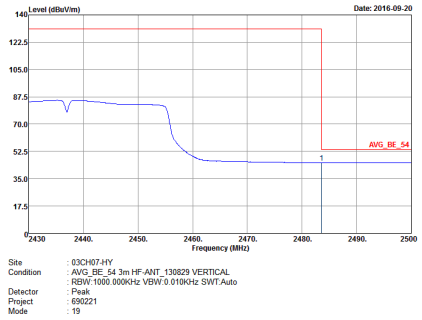
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 690221 Mode : 18	 Site : 03CH07-HY Condition : PEAK_74 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 690221 Mode : 18
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 690221 Mode : 18	 Site : 03CH07-HY Condition : AVG_54 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 690221 Mode : 18

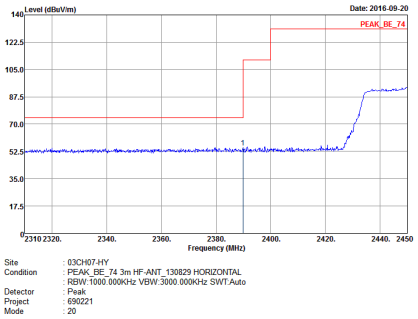
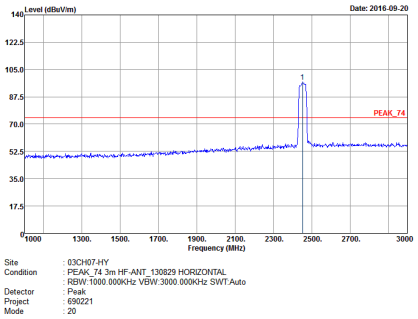
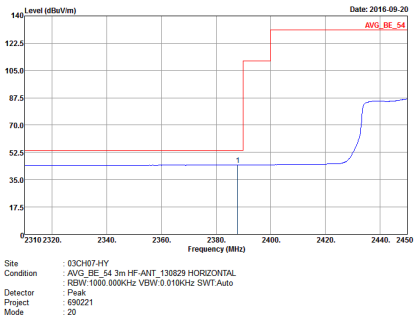
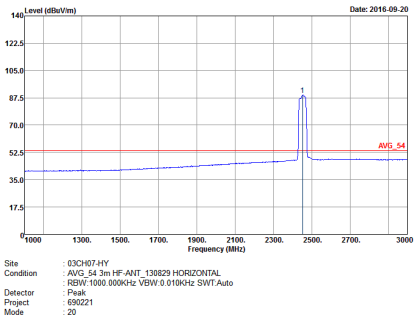
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

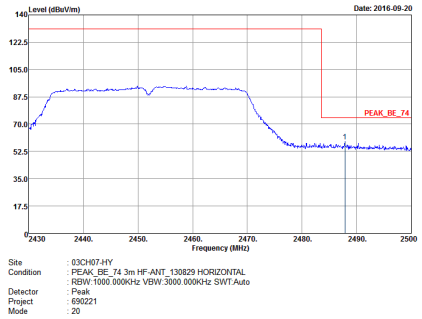
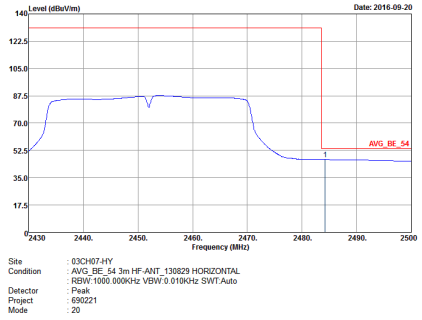
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 690221 Mode : 19	 Site : 03CH07-HY Condition : PEAK_74 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 690221 Mode : 19
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 690221 Mode : 19	 Site : 03CH07-HY Condition : AVG_54 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 690221 Mode : 19

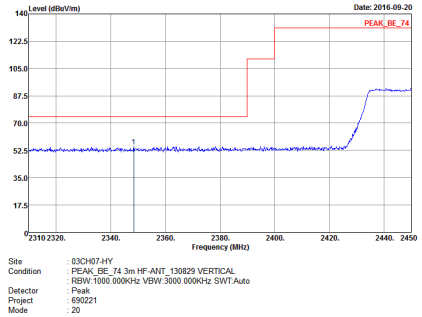
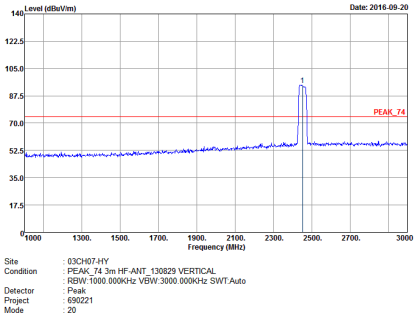
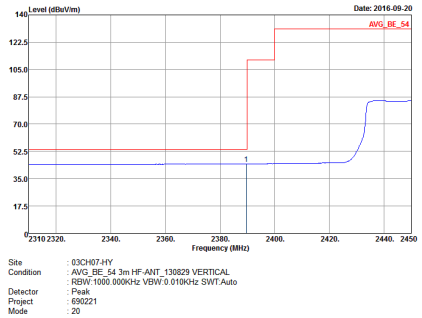
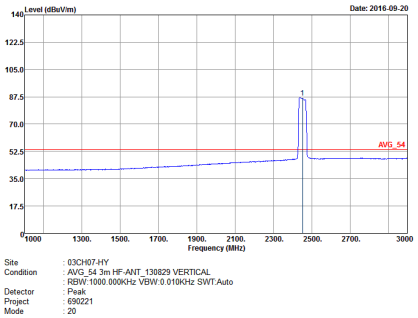
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

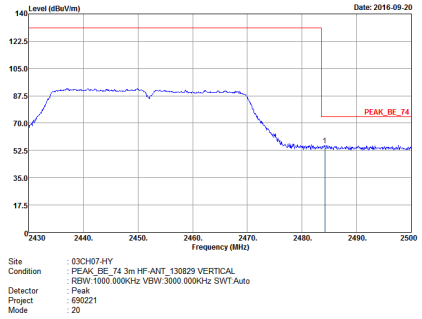
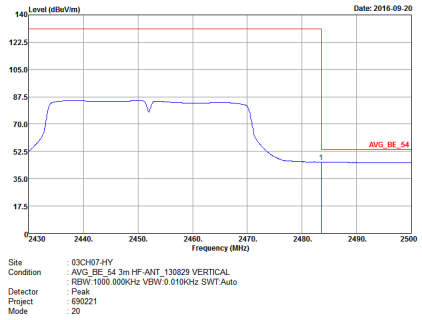
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

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

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 690221 Mode : 20	 Site : 03CH07-HY Condition : PEAK_74 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 690221 Mode : 20
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 690221 Mode : 20	 Site : 03CH07-HY Condition : AVG_54 3m HF-ANT_130829 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 690221 Mode : 20

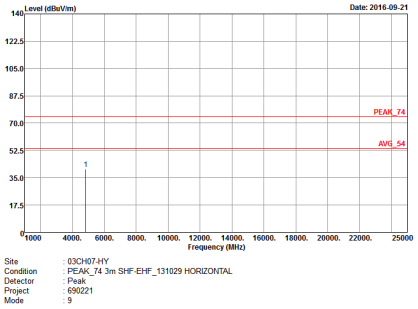
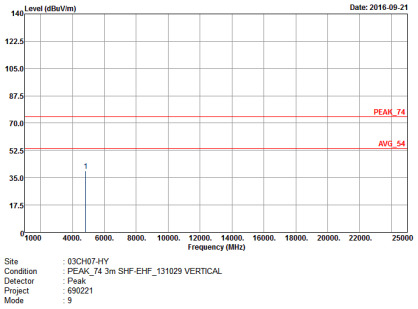
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

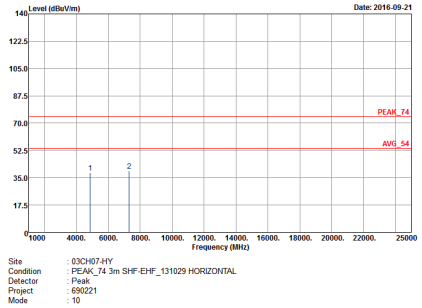
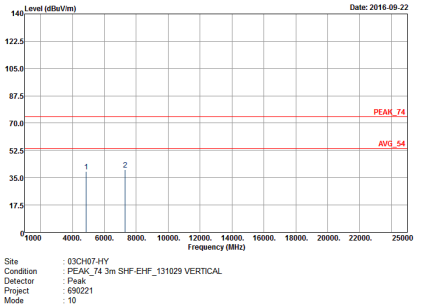
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

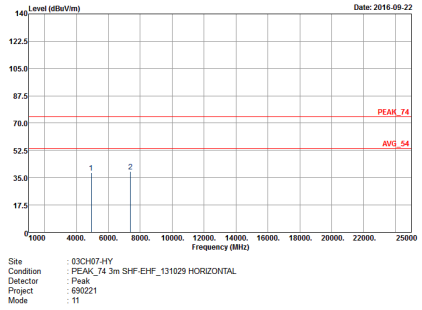
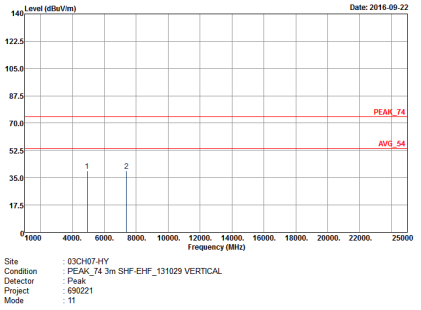
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

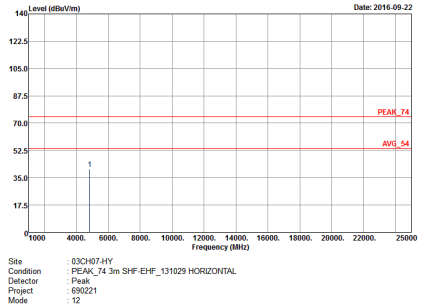
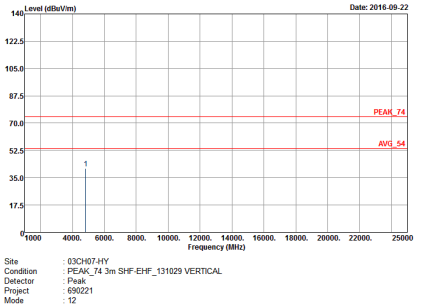
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.		

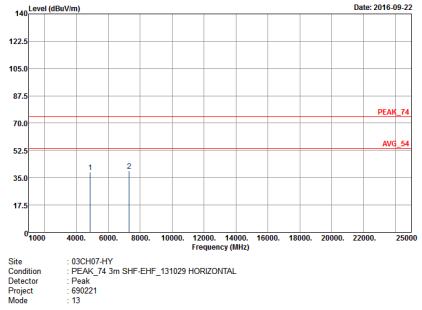
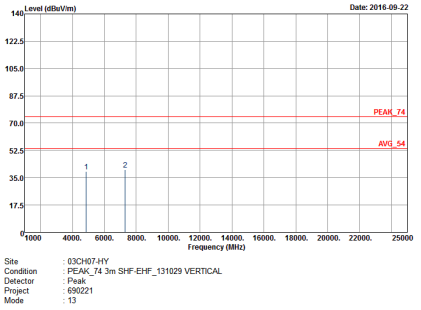
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.		

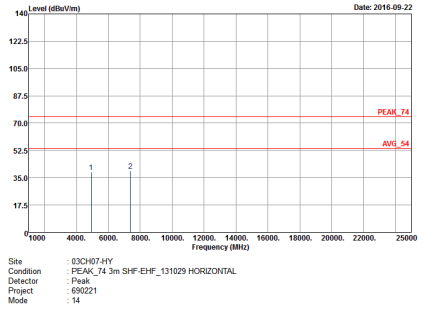
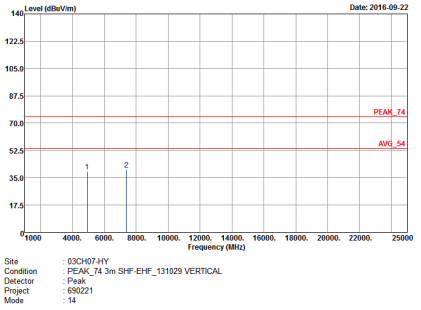
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

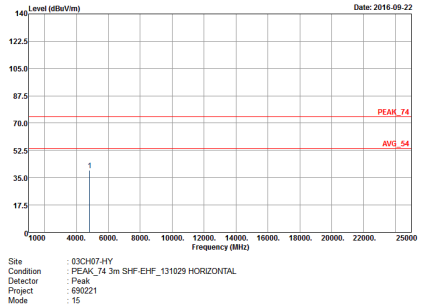
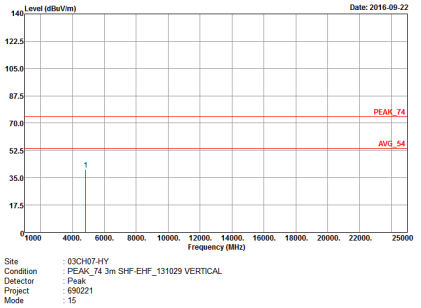
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.		

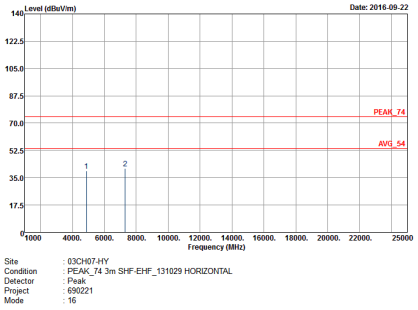
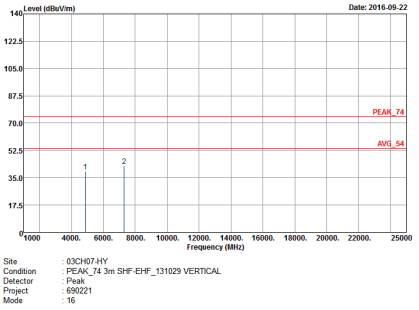
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.		

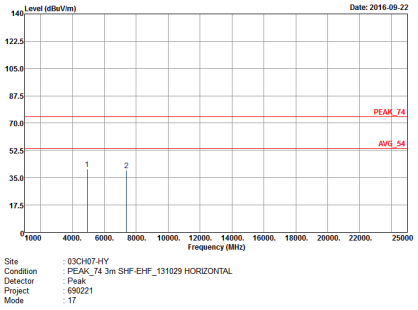
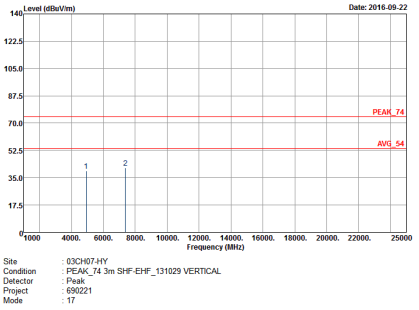
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

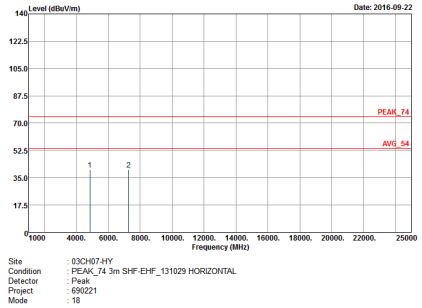
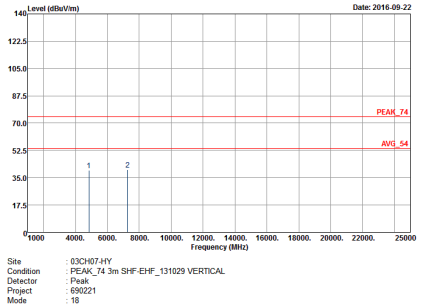
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.		

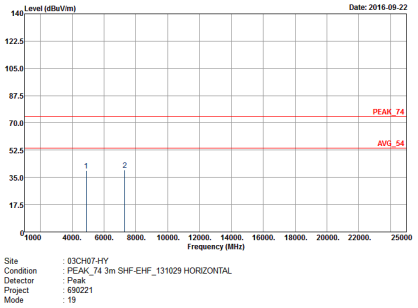
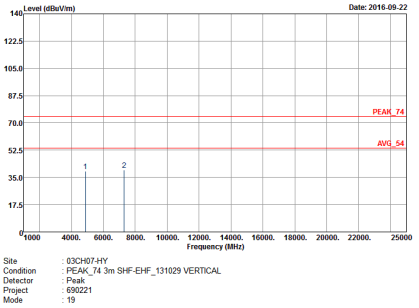
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.		

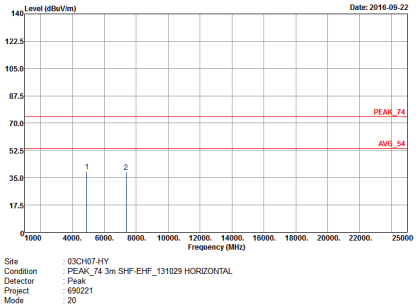
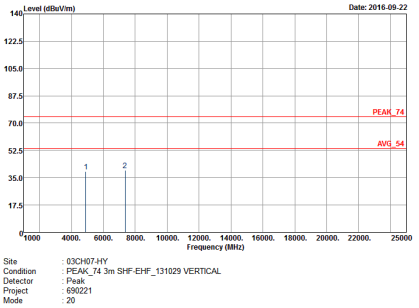
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

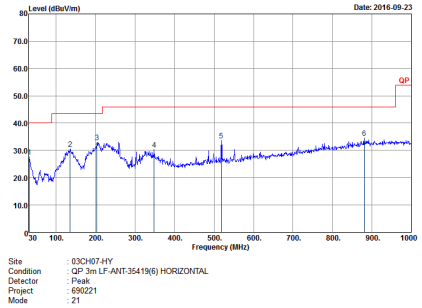
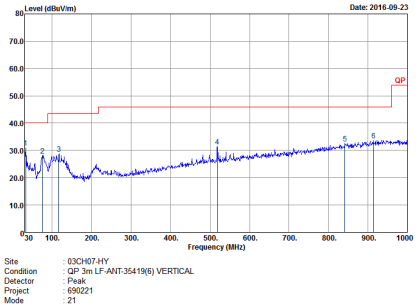
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH03 2422MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.		

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

Emission below 1GHz

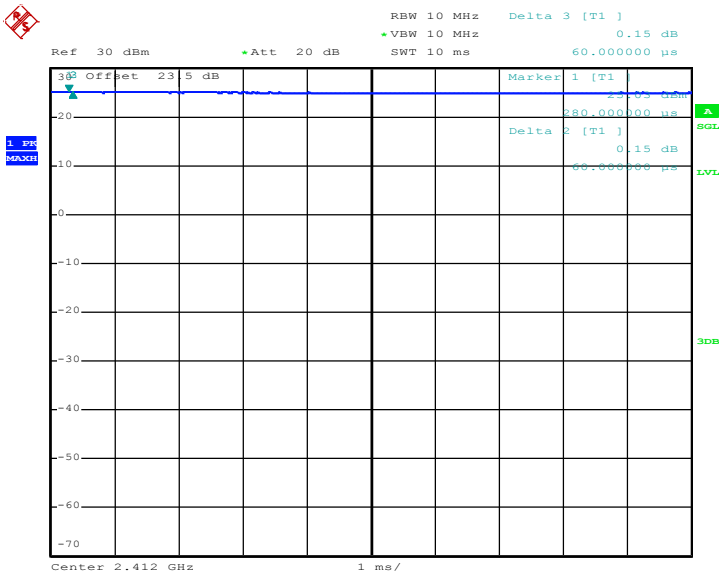
2.4GHz WIFI 802.11n HT40 (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT40 LF	
1	Horizontal	Vertical
QP / Peak		

Appendix C. Duty Cycle Plots

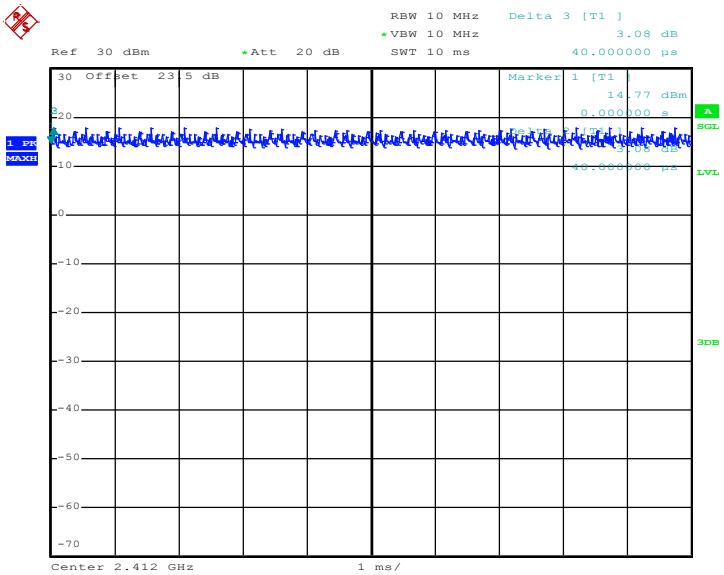
Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
802.11b	100	-	-	10Hz
802.11b	100	-	-	
2.4GHz 802.11n HT20	100	-	-	
2.4GHz 802.11n HT40	100	-	-	

802.11b



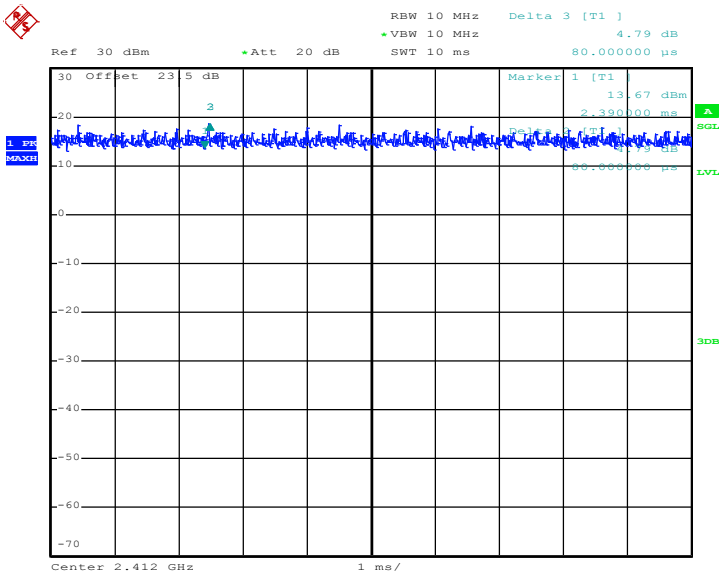
Date: 18.SEP.2016 07:57:08

802.11g



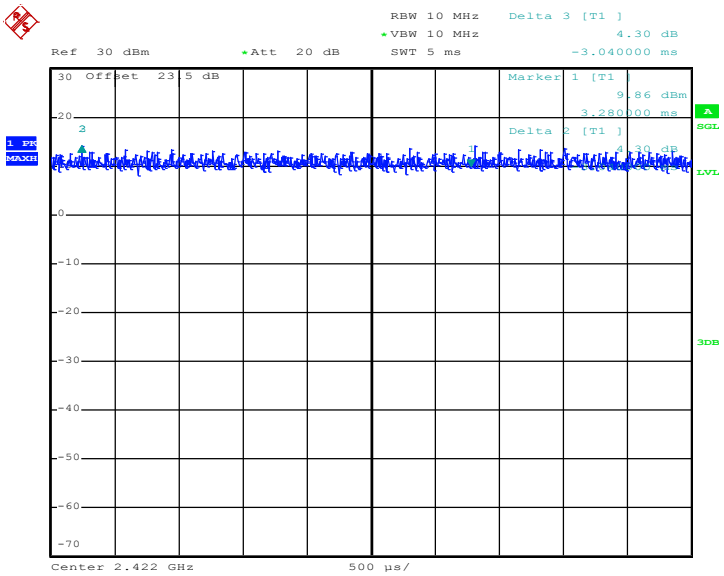
Date: 18.SEP.2016 07:57:35

802.11n HT20



Date: 18.SEP.2016 07:58:11

802.11n HT40



Date: 18.SEP.2016 07:58:33