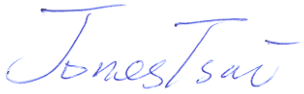
FCC RF Test Report

APPLICANT	:	FUJITSU LIMITED
EQUIPMENT	:	FUJITSU STYLISTIC Q series
BRAND NAME	:	FUJITSU
MODEL NAME	:	Q507
FCC ID	:	EJE-WB0103
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	(DTS) Digital Transmission System

This is a partial report. The product was received on Mar. 28, 2017 and testing was completed on Jun. 02, 2017. 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

Testing Laboratory 1190

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
FR732858C	Rev. 01	Initial issue of report	Jun. 01, 2017
FR732858C	Rev. 02	Adding AC Conducted Emission test data	Jun. 05, 2017

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 0.36 dB at 2483.560 MHz
3.2	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 14.30 dB at 0.150 MHz
3.3	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

FUJITSU LIMITED

1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki, 211-8588 Japan

1.2 Manufacturer

FUJITSU LIMITED

1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki, 211-8588 Japan

1.3 Product Feature of Equipment Under Test

Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac

Product Specification subjective to this standard	
Integrated WLAN Module	Brand Name: Intel Model Name: 7265D2W
Antenna Type	WLAN: PIFA Antenna Bluetooth: PIFA Antenna

1.4 Modification of EUT

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

1.5 Testing Location

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.**	
	TH05-HY	CO05-HY

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

Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.	
Test Site Location	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C. TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958	
Test Site No.	**Sporton Site No.**	**FCC Registration No.**
	03CH03-KS	306251

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

1.6 Applicable Standards

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

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

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

2 Test Configuration of Equipment Under Test

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

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

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
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 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test shown in the following tables.

<Ant. 1>

Channel	Frequency	2.4GHz 802.11b RF Peak Power (dBm)
		DSSS Data Rate
		1 Mbps
CH 01	2412MHz	**17.49**
CH 06	2437MHz	17.18
CH 11	2462MHz	17.40

Channel	Frequency	2.4GHz 802.11g RF Peak Power (dBm)
		OFDM Data Rate
		6 Mbps
CH 01	2412MHz	19.63
CH 06	2437MHz	19.56
CH 11	2462MHz	**19.80**

Channel	Frequency	2.4GHz 802.11n HT20 RF Peak Power (dBm)
		OFDM Data Rate
		MCS0
CH 01	2412MHz	19.80
CH 06	2437MHz	**20.03**
CH 11	2462MHz	19.93

Channel	Frequency	2.4GHz 802.11n HT40 RF Peak Power (dBm)
		OFDM Data Rate
		MCS0
CH 03	2422MHz	**18.12**
CH 06	2437MHz	15.43
CH 09	2452MHz	14.62

<Ant. 2>

Channel	Frequency	2.4GHz 802.11b RF Peak Power (dBm)
		DSSS Data Rate
		1 Mbps
CH 01	2412MHz	17.35
CH 06	2437MHz	17.29
CH 11	2462MHz	**17.63**

Channel	Frequency	2.4GHz 802.11g RF Peak Power (dBm)
		OFDM Data Rate
		6 Mbps
CH 01	2412MHz	**19.86**
CH 06	2437MHz	19.81
CH 11	2462MHz	19.70

Channel	Frequency	2.4GHz 802.11n HT20 RF Peak Power (dBm)
		OFDM Data Rate
		MCS0
CH 01	2412MHz	19.84
CH 06	2437MHz	**19.85**
CH 11	2462MHz	19.72

Channel	Frequency	2.4GHz 802.11n HT40 RF Peak Power (dBm)
		OFDM Data Rate
		MCS0
CH 03	2422MHz	19.39
CH 06	2437MHz	**19.63**
CH 09	2452MHz	19.60

MIMO <Ant. 1+2>

Channel	Frequency	2.4GHz 802.11n HT20 RF Peak Power (dBm)
		OFDM Data Rate
		MCS0
CH 01	2412MHz	19.70
CH 06	2437MHz	**19.84**
CH 11	2462MHz	19.64

Channel	Frequency	2.4GHz 802.11n HT40 RF Peak Power (dBm)
		OFDM Data Rate
		MCS0
CH 03	2422MHz	**19.04**
CH 06	2437MHz	18.85
CH 09	2452MHz	18.84

Note: MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.

2.3 Test Mode

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

Single Antenna

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

MIMO Antenna

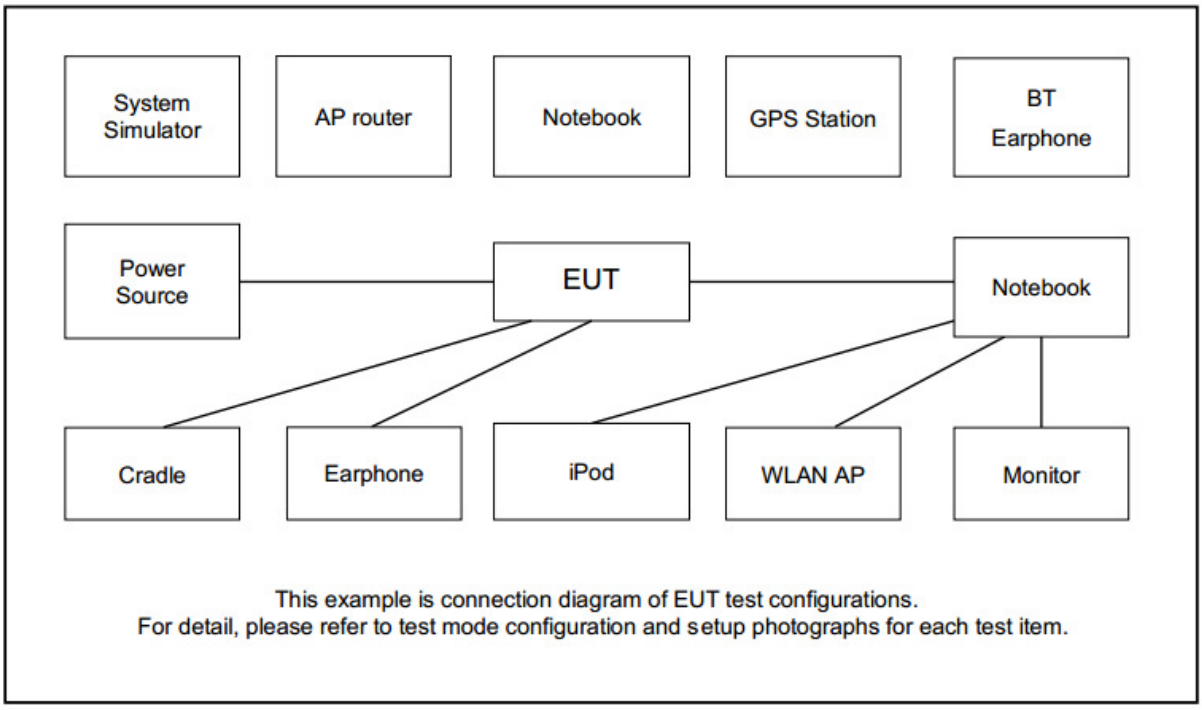
Modulation	Data Rate
802.11n HT20	MCS0
802.11n HT40	MCS0

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

Remark:

1. TC stands for Test Configuration, and consists of Adapter, USB (USB device), SD Card, earphone, and HDMI Cable.
2. TF stands for Test Function, and consists of H-Pattern, MPEG4 and Camera.

2.4 Connection Diagram of Test System



2.5 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-865L	KA2IR865LA1	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	P20G	FCC DoC/ Contains FCC ID: QDS-BRCM1051	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A
5.	LCD Monitor	DELL	U2410	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
6.	USB3.0 HD	Lenovo	F310S	FCC DoC	Shielded, 0.5 m	N/A
7.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.6 EUT Operation Test Setup

The RF test items, programmed RF utility, “DRTU” installed in the notebook make the EUT provide functions like channel selection and power level for continuous transmitting and receiving signals.

3 Test Result

3.1 Radiated Band Edges and Spurious Emission Measurement

3.1.1 Limit of Radiated band edge and Spurious Emission Measurement

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

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

3.1.2 Measuring Instruments

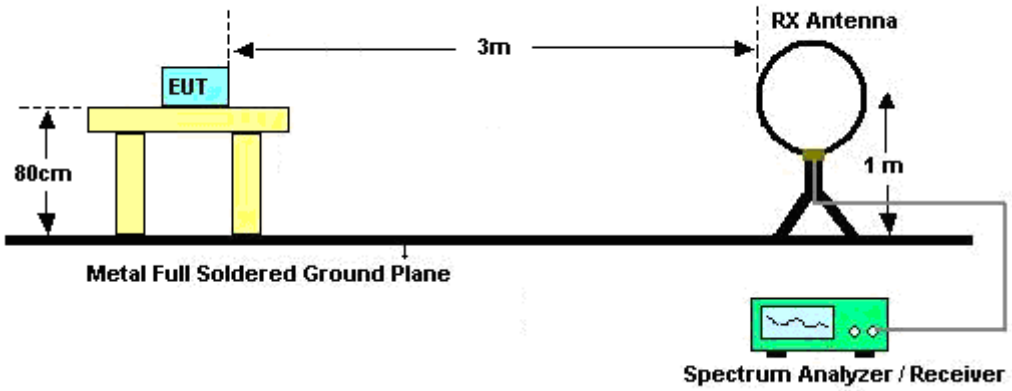
The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

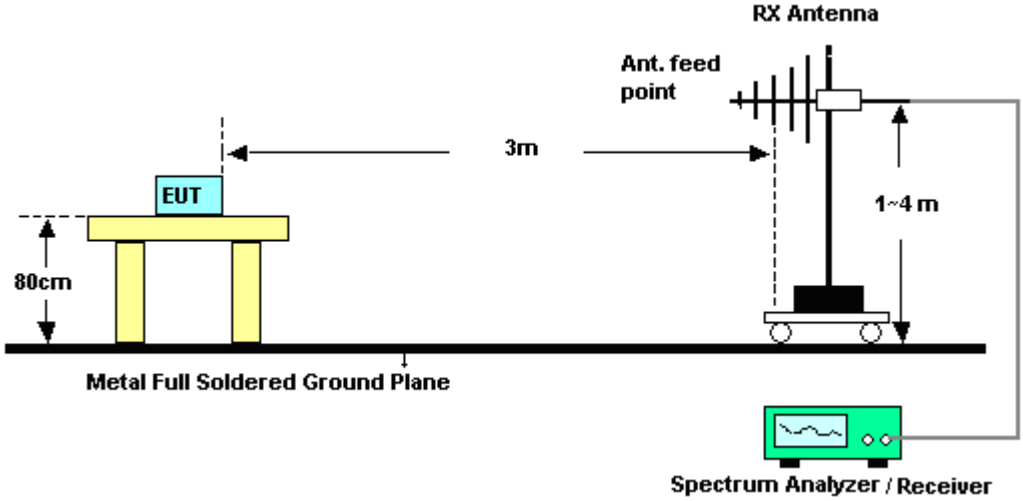
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For 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.

3.1.4 Test Setup

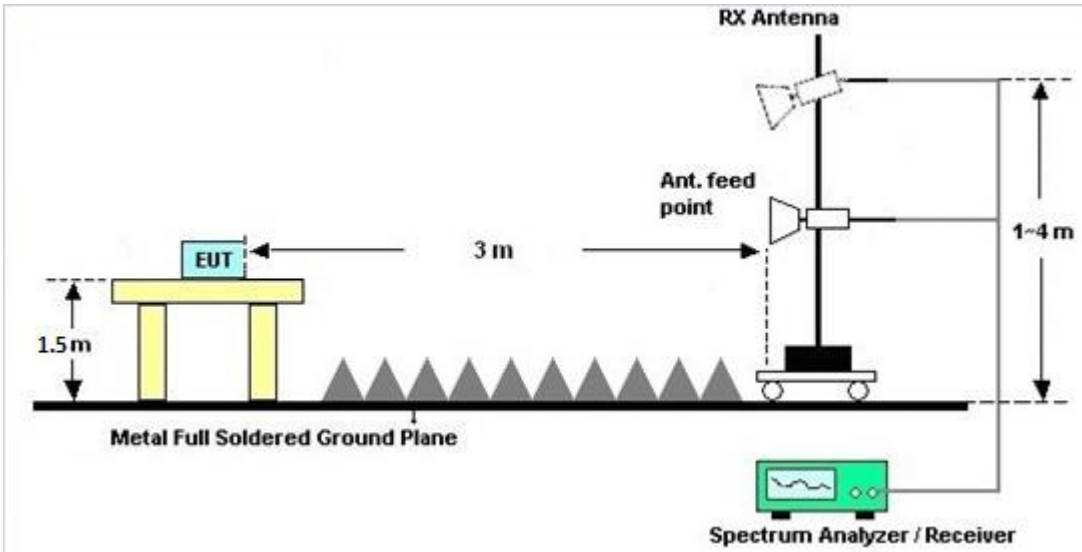
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

3.1.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B and C.

3.1.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix B and C.

3.2 AC Conducted Emission Measurement

3.2.1 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.

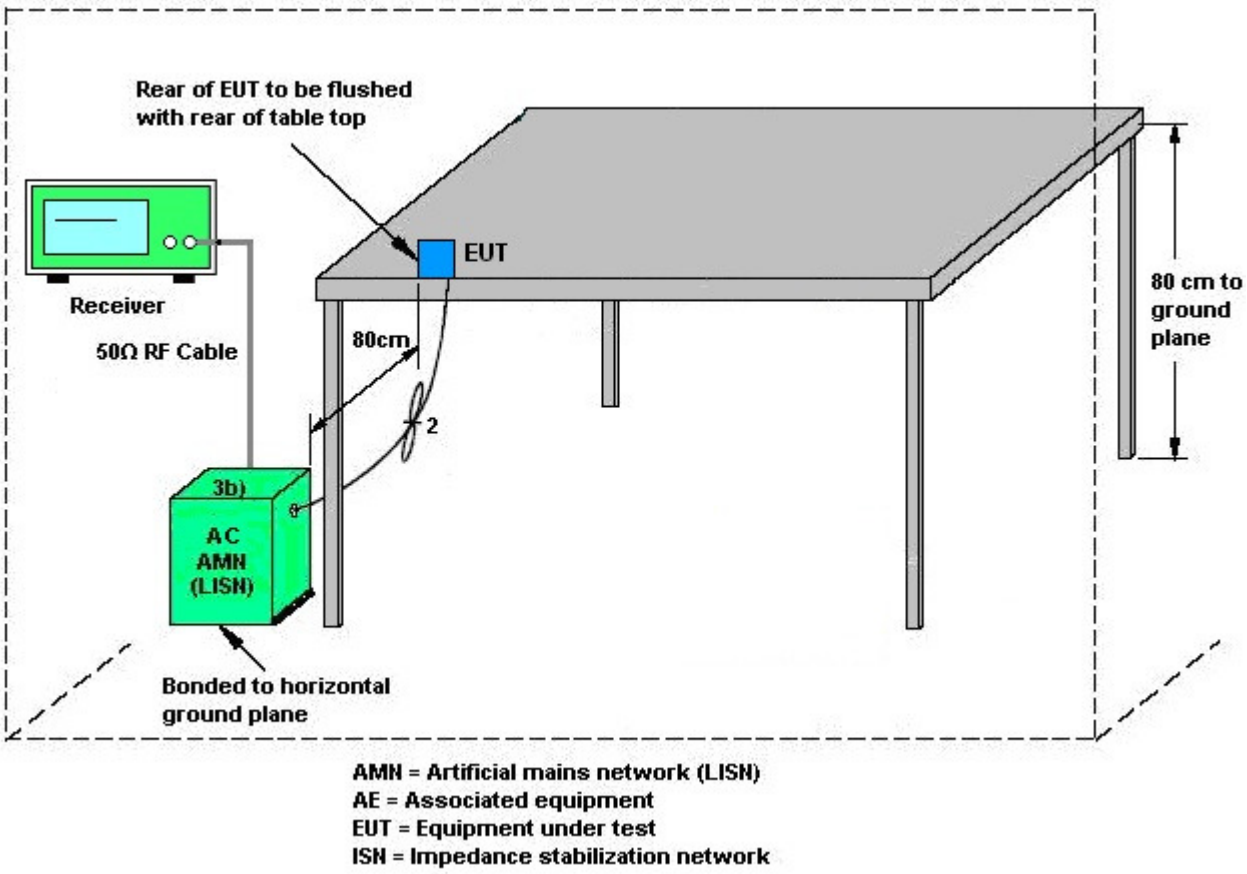
3.2.2 Measuring Instruments

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

3.2.3 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.

3.2.4 Test Setup



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

3.2.5 Test Result of AC Conducted Emission

Please refer to Appendix A.

3.3 Antenna Requirements

3.3.1 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 rule.

3.3.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.3.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain = 10 log(N_{ANT}/N_{SS}=1) dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

Directional gain may be calculated by using the formulas applicable to equal gain antennas with GANT set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain G_{ANT} is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain “DG” is calculated as following table.

	Ant. 1 (dBi)	Ant. 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
2.4 GHz	-0.63	-1.04	-0.63	2.18	0.00	0.00

Power Limit Reduction = DG(Power) – 6dBi, (min = 0)

PSD Limit Reduction = DG(PSD) – 6dBi, (min = 0)

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	0932001	300MHz~40GHz	Sep. 29, 2016	Apr. 29, 2017 ~ May 02 2017	Sep. 28, 2017	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	0846202	300MHz~40GHz	Sep. 29, 2016	Apr. 29, 2017 ~ May 02 2017	Sep. 28, 2017	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz-40GHz	Jul. 17, 2016	Apr. 29, 2017 ~ May 02 2017	Jul. 16, 2017	Conducted (TH05-HY)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;Max 30dBm	Oct..22.2016	May 27, 2017 ~ May 29, 2017	Oct..21.2017	Radiation (03CH03-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44GHz	Apr. 18, 2017	May 27, 2017 ~ May 29, 2017	Apr.17, 2018	Radiation (03CH03-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 23, 2016	May 27, 2017 ~ May 29, 2017	Nov.22, 2017	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	35406	25MHz-2GHz	Apr. 22, 2017	May 27, 2017 ~ May 29, 2017	Apr 21, 2018	Radiation (03CH03-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1356	1GHz~18GHz	Apr. 22, 2017	May 27, 2017 ~ May 29, 2017	Apr 21, 2018	Radiation (03CH03-KS)
SHF-EHF Horn	com-power	AH-840	101070	18GHz ~40GHz	Oct. 19, 2016	May 27, 2017 ~ May 29, 2017	Oct. 18, 2017	Radiation (03CH03-KS)
Amplifier	com-power	PA-103A	161069	1MHz ~1000MHz / 32 dB	Apr 18, 2017	May 27, 2017 ~ May 29, 2017	Apr 17, 2018	Radiation (03CH03-KS)
Amplifier	MITEQ	TTA1840-35-HG	1887435	18~40GHz	Oct. 13, 2016	May 27, 2017 ~ May 29, 2017	Oct. 12, 2017	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Oct. 13, 2016	May 27, 2017 ~ May 29, 2017	Oct. 12, 2017	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	May 27, 2017 ~ May 29, 2017	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	May 27, 2017 ~ May 29, 2017	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	May 27, 2017 ~ May 29, 2017	NCR	Radiation (03CH03-KS)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jun. 02, 2017	N/A	Conduction (CO05-HY)
DC- LISN	Rohde & Schwarz	ESH3-Z6	100485	0.1MHz-200MHz	Jun. 04, 2016	Jun. 02, 2017	Jun. 03, 2017	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 30, 2016	Jun. 02, 2017	Aug. 29, 2017	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 29, 2016	Jun. 02, 2017	Nov. 28, 2017	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Dec. 06, 2016	Jun. 02, 2017	Dec. 05, 2017	Conduction (CO05-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.7

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.6

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.5

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.5

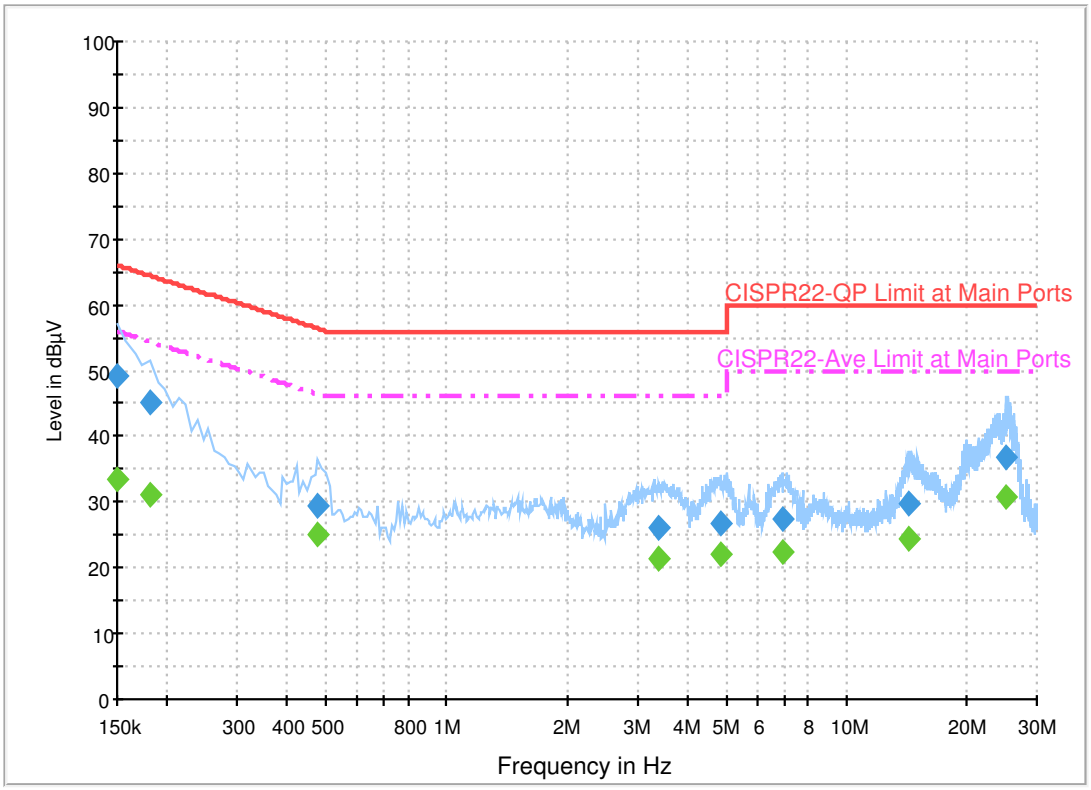
Appendix A. AC Conducted Emission Test Results

Test Engineer :	Marlowe Ho	**Temperature :**	24~25℃
		Relative Humidity :	58~60%

EUT Information

Report NO :	732858
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

ENV216 Auto Test FCC Power Bar - L



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	49.2	Off	L1	19.6	16.8	66.0
0.182000	45.1	Off	L1	19.6	19.3	64.4
0.478000	29.6	Off	L1	19.6	26.8	56.4
3.382000	26.1	Off	L1	19.6	29.9	56.0
4.846000	26.8	Off	L1	19.8	29.2	56.0
6.934000	27.4	Off	L1	19.9	32.6	60.0
14.350000	29.8	Off	L1	20.3	30.2	60.0
25.198000	36.8	Off	L1	20.8	23.2	60.0

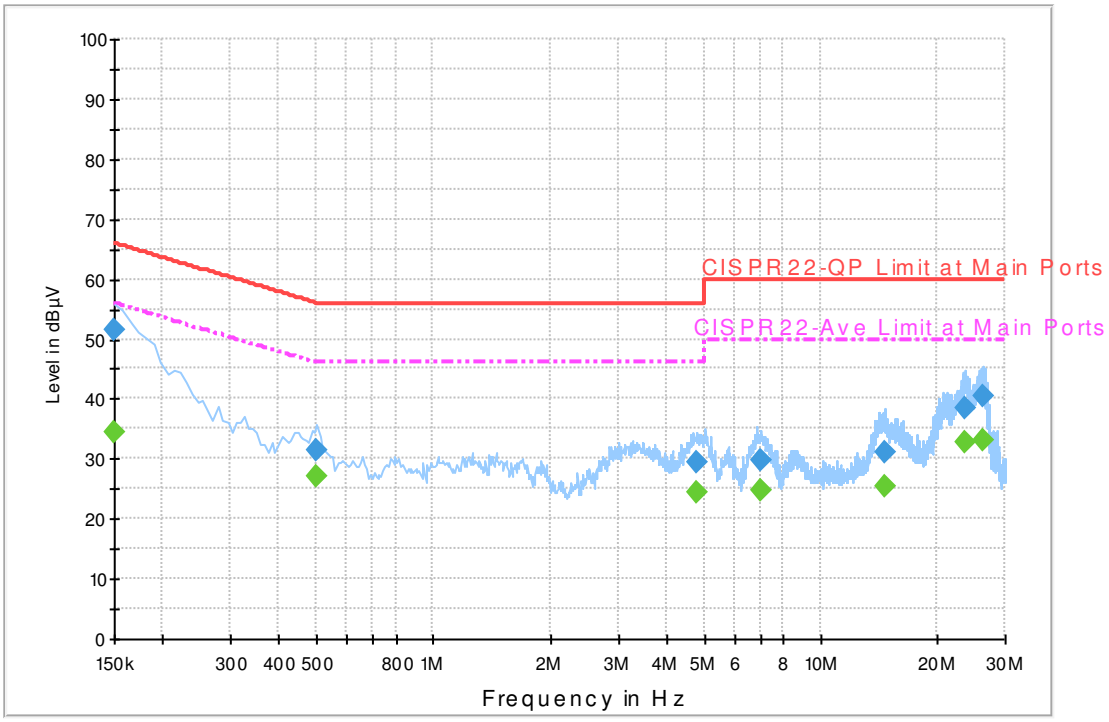
Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	33.5	Off	L1	19.6	22.5	56.0
0.182000	31.2	Off	L1	19.6	23.2	54.4
0.478000	25.0	Off	L1	19.6	21.4	46.4
3.382000	21.3	Off	L1	19.6	24.7	46.0
4.846000	21.9	Off	L1	19.8	24.1	46.0
6.934000	22.5	Off	L1	19.9	27.5	50.0
14.350000	24.5	Off	L1	20.3	25.5	50.0
25.198000	30.6	Off	L1	20.8	19.4	50.0

EUT Information

Report NO :	732858
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral

ENV216 Auto Test FCC Power Bar - N



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	51.7	Off	N	19.5	14.3	66.0
0.502000	31.5	Off	N	19.5	24.5	56.0
4.806000	29.3	Off	N	19.7	26.7	56.0
7.014000	29.9	Off	N	19.9	30.1	60.0
14.758000	31.2	Off	N	20.4	28.8	60.0
23.534000	38.5	Off	N	20.9	21.5	60.0
26.374000	40.4	Off	N	21.0	19.6	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	34.3	Off	N	19.5	21.7	56.0
0.502000	27.0	Off	N	19.5	19.0	46.0
4.806000	24.6	Off	N	19.7	21.4	46.0
7.014000	24.8	Off	N	19.9	25.2	50.0
14.758000	25.4	Off	N	20.4	24.6	50.0
23.534000	32.8	Off	N	20.9	17.2	50.0
26.374000	33.2	Off	N	21.0	16.8	50.0

Appendix B. Radiated Spurious Emission

Test Engineer :	Roch Sun	Temperature :	21~23°C
		Relative Humidity :	41~43%

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		2389.95	51.25	-22.75	74	56.4	25.8	5.47	36.42	366	321	P	H
		2387.09	41.73	-12.27	54	46.88	25.8	5.47	36.42	366	321	A	H
	*	2414	97.24	-	-	102.37	25.83	5.47	36.43	366	321	P	H
	*	2414	93.67	-	-	98.8	25.83	5.47	36.43	366	321	A	H
													H
													H
		2378.25	51.41	-22.59	74	56.75	25.67	5.45	36.46	333	38	P	V
		2387.22	42.08	-11.92	54	47.23	25.8	5.47	36.42	333	38	A	V
	*	2412	98.48	-	-	103.61	25.83	5.47	36.43	333	38	P	V
	*	2414	95.12	-	-	100.25	25.83	5.47	36.43	333	38	A	V
													V
													V
802.11b CH 06 2437MHz		2328.85	50.3	-23.7	74	56.22	25.29	5.39	36.6	359	324	P	H
		2388.26	40.48	-13.52	54	45.63	25.8	5.47	36.42	359	324	A	H
	*	2436	97.43	-	-	102.53	25.86	5.48	36.44	359	324	P	H
	*	2438	94.12	-	-	99.19	25.89	5.49	36.45	359	324	A	H
		2492.38	50.7	-23.3	74	55.69	25.97	5.52	36.48	359	324	P	H
		2493.04	40.21	-13.79	54	45.2	25.97	5.52	36.48	359	324	A	H
		2381.5	51.01	-22.99	74	56.35	25.67	5.45	36.46	321	37	P	V
		2388.39	40.6	-13.4	54	45.75	25.8	5.47	36.42	321	37	A	V
	*	2436	98.52	-	-	103.62	25.86	5.48	36.44	321	37	P	V
	*	2438	95.25	-	-	100.32	25.89	5.49	36.45	321	37	A	V
		2484.88	50.78	-23.22	74	55.8	25.94	5.51	36.47	321	37	P	V
		2492.38	40.58	-13.42	54	45.57	25.97	5.52	36.48	321	37	A	V

802.11b CH 11 2462MHz	*	2460	97.6	-	-	102.65	25.91	5.5	36.46	341	326	P	H
	*	2460	94.22	-	-	99.27	25.91	5.5	36.46	341	326	A	H
		2488.06	54.32	-19.68	74	59.31	25.97	5.52	36.48	341	326	P	H
	!	2487.7	48.04	-5.96	54	53.03	25.97	5.52	36.48	341	326	A	H
													H
													H
	*	2462	98.46	-	-	103.51	25.91	5.5	36.46	373	35	P	V
	*	2460	94.89	-	-	99.94	25.91	5.5	36.46	373	35	A	V
		2487.58	54.79	-19.21	74	59.78	25.97	5.52	36.48	373	35	P	V
	!	2483.5	49.6	-4.4	54	54.62	25.94	5.51	36.47	373	35	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	43.55	-30.45	74	41.66	30.68	7.72	36.51	100	360	P	H
													H
													H
													H
		4824	41.95	-32.05	74	40.06	30.68	7.72	36.51	300	360	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4875	42	-32	74	39.92	30.85	7.76	36.53	100	0	P	H
		7305	48.25	-25.75	74	39.93	34.81	9.76	36.25	100	0	P	H
													H
													H
		4875	41.98	-32.02	74	39.9	30.85	7.76	36.53	100	360	P	V
		7305	47.74	-26.26	74	39.42	34.81	9.76	36.25	100	360	P	V
													V
													V
802.11b CH 11 2462MHz		4920	41.99	-32.01	74	39.73	31.02	7.8	36.56	100	360	P	H
		7380	47.88	-26.12	74	39.32	34.99	9.84	36.27	100	360	P	H
													H
													H
		4920	41.73	-32.27	74	39.47	31.02	7.8	36.56	100	0	P	V
		7380	48.68	-25.32	74	40.12	34.99	9.84	36.27	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		2389.95	54.94	-19.06	74	60.09	25.8	5.47	36.42	327	329	P	H
		2389.95	43.33	-10.67	54	48.48	25.8	5.47	36.42	327	329	A	H
	*	2416	98.18	-	-	103.31	25.83	5.47	36.43	327	329	P	H
	*	2416	89.95	-	-	95.08	25.83	5.47	36.43	327	329	A	H
													H
													H
		2389.95	56.35	-17.65	74	61.5	25.8	5.47	36.42	369	30	P	V
		2389.95	44.16	-9.84	54	49.31	25.8	5.47	36.42	369	30	A	V
	*	2416	100.4	-	-	105.53	25.83	5.47	36.43	369	30	P	V
	*	2416	92.11	-	-	97.24	25.83	5.47	36.43	369	30	A	V
													V
													V
802.11g CH 06 2437MHz		2362	50.25	-23.75	74	55.78	25.55	5.43	36.51	355	326	P	H
		2389.56	39.19	-14.81	54	44.34	25.8	5.47	36.42	355	326	A	H
	*	2440	98.67	-	-	103.74	25.89	5.49	36.45	355	326	P	H
	*	2440	90.09	-	-	95.16	25.89	5.49	36.45	355	326	A	H
		2487.46	51.64	-22.36	74	56.66	25.94	5.51	36.47	355	326	P	H
		2484.46	40.01	-13.99	54	45.03	25.94	5.51	36.47	355	326	A	H
		2389.69	50.94	-23.06	74	56.09	25.8	5.47	36.42	344	34	P	V
		2389.43	39.62	-14.38	54	44.77	25.8	5.47	36.42	344	34	A	V
	*	2438	100.77	-	-	105.84	25.89	5.49	36.45	344	34	P	V
	*	2436	92.37	-	-	97.47	25.86	5.48	36.44	344	34	A	V
		2484.04	53.28	-20.72	74	58.3	25.94	5.51	36.47	344	34	P	V
		2483.68	40.47	-13.53	54	45.49	25.94	5.51	36.47	344	34	A	V

802.11g CH 11 2462MHz	*	2458	99.31	-	-	104.36	25.91	5.5	36.46	329	327	P	H
	*	2460	90.53	-	-	95.58	25.91	5.5	36.46	329	327	A	H
		2484.4	63.14	-10.86	74	68.16	25.94	5.51	36.47	329	327	P	H
	!	2483.5	50.4	-3.6	54	55.42	25.94	5.51	36.47	329	327	A	H
													H
													H
	*	2460	100.35	-	-	105.4	25.91	5.5	36.46	321	43	P	V
	*	2460	92.02	-	-	97.07	25.91	5.5	36.46	321	43	A	V
		2484.1	66.8	-7.2	74	71.82	25.94	5.51	36.47	321	0	P	V
	!	2483.5	52.95	-1.05	54	57.97	25.94	5.51	36.47	321	43	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 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		2389.56	57.34	-16.66	74	62.49	25.8	5.47	36.42	316	321	P	H
		2389.95	44.88	-9.12	54	50.03	25.8	5.47	36.42	316	321	A	H
	*	2412	99.3	-	-	104.43	25.83	5.47	36.43	316	321	P	H
	*	2416	91.03	-	-	96.16	25.83	5.47	36.43	316	321	A	H
802.11n													H
HT20													H
CH 01		2384.23	57.48	-16.52	74	62.82	25.67	5.45	36.46	382	33	P	V
2412MHz		2389.95	46.06	-7.94	54	51.21	25.8	5.47	36.42	382	33	A	V
	*	2410	100.67	-	-	105.8	25.83	5.47	36.43	382	33	P	V
	*	2416	92.66	-	-	97.79	25.83	5.47	36.43	382	33	A	V
													V
													V
		2389.43	51.48	-22.52	74	56.63	25.8	5.47	36.42	359	326	P	H
		2385.92	40.8	-13.2	54	45.95	25.8	5.47	36.42	359	326	A	H
	*	2438	99.93	-	-	105	25.89	5.49	36.45	359	326	P	H
	*	2436	92.04	-	-	97.14	25.86	5.48	36.44	359	326	A	H
802.11n		2489.74	51.84	-22.16	74	56.83	25.97	5.52	36.48	359	326	P	H
HT20		2485.6	41.47	-12.53	54	46.49	25.94	5.51	36.47	359	326	A	H
CH 06		2388.78	51.74	-22.26	74	56.89	25.8	5.47	36.42	326	38	P	V
2437MHz		2389.82	41.16	-12.84	54	46.31	25.8	5.47	36.42	326	38	A	V
	*	2438	100.73	-	-	105.8	25.89	5.49	36.45	326	38	P	V
	*	2436	93	-	-	98.1	25.86	5.48	36.44	326	38	A	V
		2485	54.69	-19.31	74	59.71	25.94	5.51	36.47	326	38	P	V
		2484.46	41.93	-12.07	54	46.95	25.94	5.51	36.47	326	38	A	V

	*	2466	99.19	-	-	104.24	25.91	5.5	36.46	302	329	P	H
	*	2460	91.09	-	-	96.14	25.91	5.5	36.46	302	329	A	H
		2484.58	64.16	-9.84	74	69.18	25.94	5.51	36.47	302	329	P	H
	!	2483.56	52.59	-1.41	54	57.61	25.94	5.51	36.47	302	329	A	H
802.11n													H
HT20													H
CH 11	*	2460	99.77	-	-	104.82	25.91	5.5	36.46	337	34	P	V
2462MHz	*	2460	91.94	-	-	96.99	25.91	5.5	36.46	337	34	A	V
		2483.92	65.79	-8.21	74	70.81	25.94	5.51	36.47	337	34	P	V
	!	2483.56	53.64	-0.36	54	58.66	25.94	5.51	36.47	337	34	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)
		4830	42.75	-31.25	74	40.86	30.68	7.72	36.51	100	0	P	H
													H
802.11n													H
HT20													H
CH 01		4830	42.11	-31.89	74	40.22	30.68	7.72	36.51	100	360	P	V
2412MHz													V
													V
													V
		4872	41.72	-32.28	74	39.64	30.85	7.76	36.53	100	360	P	H
		7308	47.31	-26.69	74	38.99	34.81	9.76	36.25	100	360	P	H
802.11n													H
HT20													H
CH 06		4872	42.67	-31.33	74	40.59	30.85	7.76	36.53	300	360	P	V
2437MHz		7308	48.22	-25.78	74	39.9	34.81	9.76	36.25	300	360	P	V
													V
													V
		4920	41.46	-32.54	74	39.2	31.02	7.8	36.56	100	0	P	H
		7380	46.92	-27.08	74	38.36	34.99	9.84	36.27	100	0	P	H
802.11n													H
HT20													H
CH 11		4920	41.71	-32.29	74	39.45	31.02	7.8	36.56	100	360	P	V
2462MHz		7380	48.23	-25.77	74	39.67	34.99	9.84	36.27	100	360	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)
		2388.52	57.79	-16.21	74	62.94	25.8	5.47	36.42	354	322	P	H
	!	2389.95	48.69	-5.31	54	53.84	25.8	5.47	36.42	354	322	A	H
	*	2420	96.69	-	-	101.79	25.86	5.48	36.44	354	322	P	H
	*	2432	88.93	-	-	94.03	25.86	5.48	36.44	354	322	A	H
802.11n		2485.66	54.17	-19.83	74	59.19	25.94	5.51	36.47	354	322	P	H
HT40		2483.92	44.11	-9.89	54	49.13	25.94	5.51	36.47	354	322	A	H
CH 03		2389.04	57.95	-16.05	74	63.1	25.8	5.47	36.42	341	35	P	V
2422MHz	!	2389.43	49.12	-4.88	54	54.27	25.8	5.47	36.42	341	35	A	V
	*	2426	97.01	-	-	102.11	25.86	5.48	36.44	341	35	P	V
	*	2426	89.06	-	-	94.16	25.86	5.48	36.44	341	35	A	V
		2486.86	54.86	-19.14	74	59.88	25.94	5.51	36.47	341	35	P	V
		2484.88	44.41	-9.59	54	49.43	25.94	5.51	36.47	341	35	A	V
		2389.82	54.62	-19.38	74	59.77	25.8	5.47	36.42	356	328	P	H
		2389.82	45.42	-8.58	54	50.57	25.8	5.47	36.42	356	328	A	H
	*	2440	96.78	-	-	101.85	25.89	5.49	36.45	356	328	P	H
	*	2444	88.71	-	-	93.78	25.89	5.49	36.45	356	328	A	H
802.11n		2483.56	59.42	-14.58	74	64.44	25.94	5.51	36.47	356	328	P	H
HT40	!	2483.51	50.09	-3.91	54	55.11	25.94	5.51	36.47	356	328	A	H
CH 06		2389.56	56.46	-17.54	74	61.61	25.8	5.47	36.42	362	21	P	V
2437MHz		2389.56	46.27	-7.73	54	51.42	25.8	5.47	36.42	362	21	A	V
	*	2448	98.16	-	-	103.23	25.89	5.49	36.45	362	21	P	V
	*	2448	89.72	-	-	94.79	25.89	5.49	36.45	362	21	A	V
		2483.5	61.41	-12.59	74	66.43	25.94	5.51	36.47	362	21	P	V
	!	2483.51	51.44	-2.56	54	56.46	25.94	5.51	36.47	362	21	A	V

802.11n HT40 CH 09 2452MHz		2386.96	50.26	-23.74	74	55.41	25.8	5.47	36.42	306	328	P	H
		2389.69	40.5	-13.5	54	45.65	25.8	5.47	36.42	306	328	A	H
	*	2462	91.38	-	-	96.43	25.91	5.5	36.46	306	328	P	H
	*	2462	83.75	-	-	88.8	25.91	5.5	36.46	306	328	A	H
		2486.2	61.04	-12.96	74	66.06	25.94	5.51	36.47	306	328	P	H
	!	2483.5	51.01	-2.99	54	56.03	25.94	5.51	36.47	306	328	A	H
		2340.68	50.09	-23.91	74	55.81	25.42	5.41	36.55	322	39	P	V
		2386.31	40.73	-13.27	54	45.88	25.8	5.47	36.42	322	39	A	V
	*	2450	93.19	-	-	98.26	25.89	5.49	36.45	322	39	P	V
	*	2442	85.08	-	-	90.15	25.89	5.49	36.45	322	39	A	V
		2486.02	63.19	-10.81	74	68.21	25.94	5.51	36.47	322	39	P	V
	!	2483.5	53.37	-0.63	54	58.39	25.94	5.51	36.47	322	39	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

2.4GHz WIFI 802.11n HT20 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
	!	34.85	34.26	-5.74	40	39.2	25.7	0.71	31.35	100	37	P	H
		75.59	28.71	-11.29	40	44.16	15	1.06	31.51	-	-	P	H
		96.93	28.07	-15.43	43.5	39.75	18.58	1.19	31.45	-	-	P	H
		229.82	30.26	-15.74	46	42.88	17.12	1.73	31.47	-	-	P	H
		323.91	35.09	-10.91	46	43.57	20.61	2.21	31.3	-	-	P	H
		599.39	28.65	-17.35	46	33.09	24.21	3.07	31.72	-	-	P	H
													H
													H
													H
													H
2.4GHz													H
802.11n													H
HT20		35.82	28.13	-11.87	40	33.56	25.2	0.72	31.35	-	-	P	V
LF		199.75	32.33	-11.17	43.5	45.09	17	1.73	31.49	-	-	P	V
		220.12	33.19	-12.81	46	45.85	17.08	1.73	31.47	-	-	P	V
		345.25	36.29	-9.71	46	43.65	21.58	2.29	31.23	100	258	P	V
		399.57	28.85	-17.15	46	35.04	22.6	2.47	31.26	-	-	P	V
		444.19	32.12	-13.88	46	35.66	25.08	2.62	31.24	-	-	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.	
2		(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".

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
	*	2466	94.68	-	-	99.73	25.91	5.5	36.46	307	137	P	H
	*	2464	86.77	-	-	91.82	25.91	5.5	36.46	307	137	A	H
		2491.78	54.02	-19.98	74	59.01	25.97	5.52	36.48	307	137	P	H
		2483.62	42.23	-11.77	54	47.25	25.94	5.51	36.47	307	137	A	H
802.11n													H
HT20													H
CH 11	*	2458	97.21	-	-	102.26	25.91	5.5	36.46	400	201	P	V
2462MHz	*	2466	88.98	-	-	94.03	25.91	5.5	36.46	400	201	A	V
		2483.98	54.54	-19.46	74	59.56	25.94	5.51	36.47	400	201	P	V
		2483.5	43.9	-10.1	54	48.92	25.94	5.51	36.47	400	201	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. 2	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)
		4926	42.45	-31.55	74	40.19	31.02	7.8	36.56	100	360	P	H
		7386	47.54	-26.46	74	38.93	35.03	9.86	36.28	100	360	P	H
802.11n													H
HT20													H
CH 11		4926	42.88	-31.12	74	40.62	31.02	7.8	36.56	100	360	P	V
2462MHz		7386	46.64	-27.36	74	38.03	35.03	9.86	36.28	100	360	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

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.	
2		(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".

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		2389.69	50.94	-23.06	74	56.09	25.8	5.47	36.42	320	111	P	H
		2389.95	39.52	-14.48	54	44.67	25.8	5.47	36.42	320	111	A	H
	*	2416	93.69	-	-	98.82	25.83	5.47	36.43	320	111	P	H
	*	2414	83.98	-	-	89.11	25.83	5.47	36.43	320	111	A	H
802.11n													H
HT20													H
CH 01		2388.13	55.11	-18.89	74	60.26	25.8	5.47	36.42	348	217	P	V
2412MHz		2389.95	41.97	-12.03	54	47.12	25.8	5.47	36.42	348	217	A	V
	*	2416	100.18	-	-	105.31	25.83	5.47	36.43	348	217	P	V
	*	2414	90.19	-	-	95.32	25.83	5.47	36.43	348	217	A	V
													V
													V
		2341.98	50.49	-23.51	74	56.21	25.42	5.41	36.55	100	138	P	H
		2388.78	38.38	-15.62	54	43.53	25.8	5.47	36.42	100	138	A	H
	*	2436	92.73	-	-	97.83	25.86	5.48	36.44	100	138	P	H
	*	2442	83.98	-	-	89.05	25.89	5.49	36.45	100	138	A	H
802.11n		2493.22	49.9	-24.1	74	54.89	25.97	5.52	36.48	100	138	P	H
HT20		2486.32	38.68	-15.32	54	43.7	25.94	5.51	36.47	100	138	A	H
CH 06		2388.52	50.19	-23.81	74	55.34	25.8	5.47	36.42	342	225	P	V
2437MHz		2389.69	39.36	-14.64	54	44.51	25.8	5.47	36.42	342	225	A	V
	*	2440	101.2	-	-	106.27	25.89	5.49	36.45	342	225	P	V
	*	2436	90.82	-	-	95.92	25.86	5.48	36.44	342	225	A	V
		2490.46	51.06	-22.94	74	56.05	25.97	5.52	36.48	342	225	P	V
		2483.56	39.73	-14.27	54	44.75	25.94	5.51	36.47	342	225	A	V

	*	2466	94.56	-	-	99.61	25.91	5.5	36.46	100	205	P	H
	*	2466	85.6	-	-	90.65	25.91	5.5	36.46	100	205	A	H
		2484.04	56.43	-17.57	74	61.45	25.94	5.51	36.47	100	205	P	H
		2483.5	42.58	-11.42	54	47.6	25.94	5.51	36.47	100	205	A	H
802.11n													H
HT20													H
CH 11	*	2466	100.38	-	-	105.43	25.91	5.5	36.46	305	227	P	V
2462MHz	*	2466	90.84	-	-	95.89	25.91	5.5	36.46	305	227	A	V
		2484.22	61.71	-12.29	74	66.73	25.94	5.51	36.47	305	227	P	V
		2483.56	47.58	-6.42	54	52.6	25.94	5.51	36.47	305	227	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+2	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	41.66	-32.34	74	39.77	30.68	7.72	36.51	100	360	P	H
													H
802.11n													H
HT20													H
CH 01		4824	41.54	-32.46	74	39.65	30.68	7.72	36.51	100	360	P	V
2412MHz													V
													V
													V
		4872	40.66	-33.34	74	38.58	30.85	7.76	36.53	100	360	P	H
		7308	46.4	-27.6	74	38.08	34.81	9.76	36.25	100	360	P	H
802.11n													H
HT20													H
CH 06		4872	40.82	-33.18	74	38.74	30.85	7.76	36.53	100	360	P	V
2437MHz		7308	46.61	-27.39	74	38.29	34.81	9.76	36.25	100	360	P	V
													V
													V
		4926	41.56	-32.44	74	39.3	31.02	7.8	36.56	100	360	P	H
		7386	47.37	-26.63	74	38.76	35.03	9.86	36.28	100	360	P	H
802.11n													H
HT20													H
CH 11		4926	41.4	-32.6	74	39.14	31.02	7.8	36.56	100	360	P	V
2462MHz		7386	47.23	-26.77	74	38.62	35.03	9.86	36.28	100	360	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+2	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)
		2388.65	52.03	-21.97	74	57.18	25.8	5.47	36.42	100	329	P	H
		2389.56	43.11	-10.89	54	48.26	25.8	5.47	36.42	100	329	A	H
	*	2420	90.71	-	-	95.81	25.86	5.48	36.44	100	329	P	H
	*	2420	82.95	-	-	88.05	25.86	5.48	36.44	100	329	A	H
802.11n		2488.18	49.81	-24.19	74	54.8	25.97	5.52	36.48	100	329	P	H
HT40		2485.42	40.56	-13.44	54	45.58	25.94	5.51	36.47	100	329	A	H
CH 03		2389.3	56.05	-17.95	74	61.2	25.8	5.47	36.42	308	219	P	V
2422MHz		2389.95	46.42	-7.58	54	51.57	25.8	5.47	36.42	308	219	A	V
	*	2430	97.84	-	-	102.94	25.86	5.48	36.44	308	219	P	V
	*	2430	90.06	-	-	95.16	25.86	5.48	36.44	308	219	A	V
		2488.84	52.32	-21.68	74	57.31	25.97	5.52	36.48	308	219	P	V
		2488.78	42.29	-11.71	54	47.28	25.97	5.52	36.48	308	219	A	V
		2388.65	49.72	-24.28	74	54.87	25.8	5.47	36.42	301	0	P	H
		2389.82	40.16	-13.84	54	45.31	25.8	5.47	36.42	301	0	A	H
	*	2440	90.43	-	-	95.5	25.89	5.49	36.45	301	0	P	H
	*	2448	82.48	-	-	87.55	25.89	5.49	36.45	301	0	A	H
802.11n		2487.88	51.89	-22.11	74	56.88	25.97	5.52	36.48	301	0	P	H
HT40		2483.74	41.35	-12.65	54	46.37	25.94	5.51	36.47	301	0	A	H
CH 06		2388.26	52.09	-21.91	74	57.24	25.8	5.47	36.42	314	220	P	V
2437MHz		2389.56	42.22	-11.78	54	47.37	25.8	5.47	36.42	314	220	A	V
	*	2428	96.7	-	-	101.8	25.86	5.48	36.44	314	220	P	V
	*	2428	89.07	-	-	94.17	25.86	5.48	36.44	314	220	A	V
		2484.7	54.26	-19.74	74	59.28	25.94	5.51	36.47	314	220	P	V
		2483.74	44.29	-9.71	54	49.31	25.94	5.51	36.47	314	220	A	V

		2386.44	49.74	-24.26	74	54.89	25.8	5.47	36.42	294	0	P	H
		2389.3	40.32	-13.68	54	45.47	25.8	5.47	36.42	294	0	A	H
	*	2450	90.73	-	-	95.8	25.89	5.49	36.45	294	0	P	H
	*	2444	82.91	-	-	87.98	25.89	5.49	36.45	294	0	A	H
802.11n		2486.32	57.71	-16.29	74	62.73	25.94	5.51	36.47	294	0	P	H
HT40		2483.51	47.93	-6.07	54	52.95	25.94	5.51	36.47	294	0	A	H
CH 09		2385.27	50.44	-23.56	74	55.78	25.67	5.45	36.46	344	227	P	V
2452MHz		2388.13	41.07	-12.93	54	46.22	25.8	5.47	36.42	344	227	A	V
	*	2460	96.26	-	-	101.31	25.91	5.5	36.46	344	227	P	V
	*	2444	87.58	-	-	92.65	25.89	5.49	36.45	344	227	A	V
		2484.7	63.17	-10.83	74	68.19	25.94	5.51	36.47	344	227	P	V
	!	2483.68	53.34	-0.66	54	58.36	25.94	5.51	36.47	344	227	A	V

Remark

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

2.4GHz 2400~2483.5MHz

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+2		(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

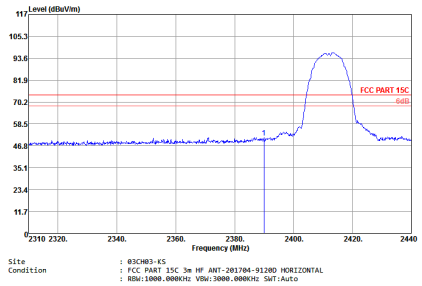
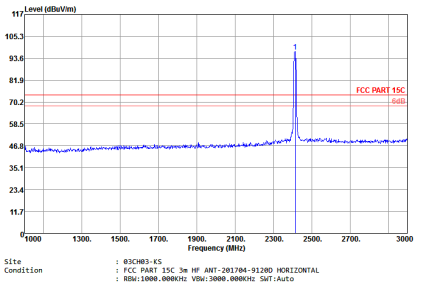
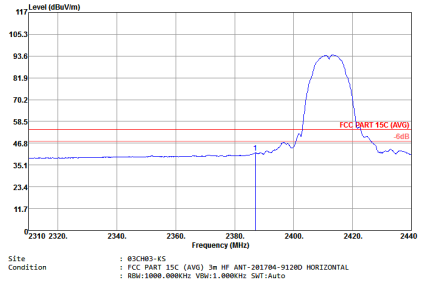
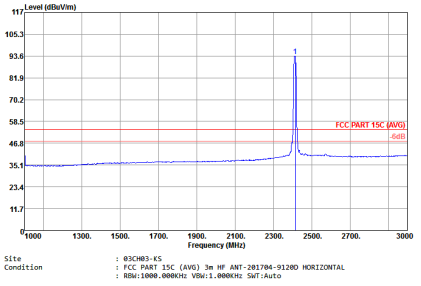
Test Engineer :	Roch Sun	**Temperature :**	21~23°C
		Relative Humidity :	41~43%

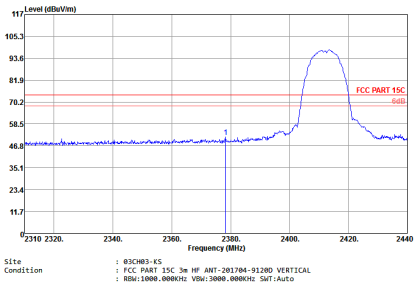
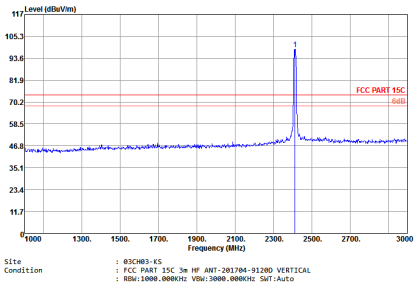
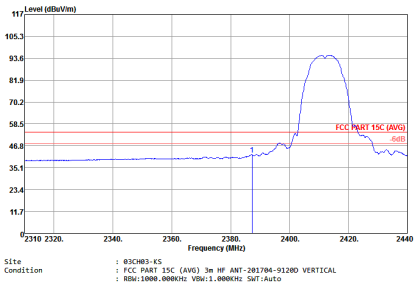
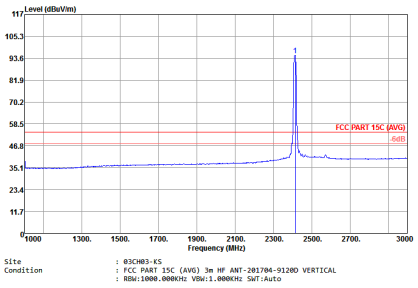
Note symbol

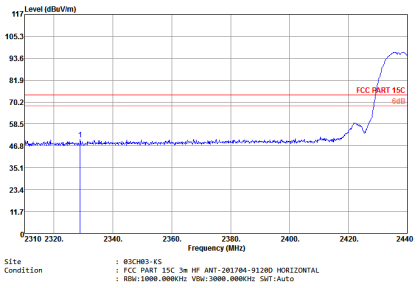
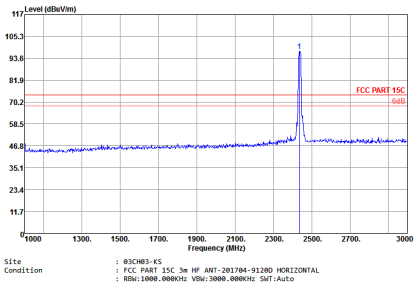
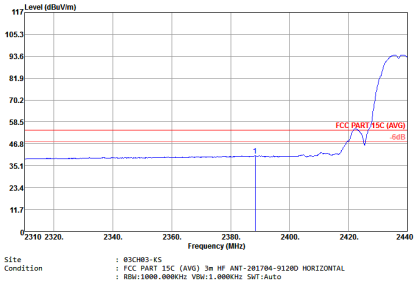
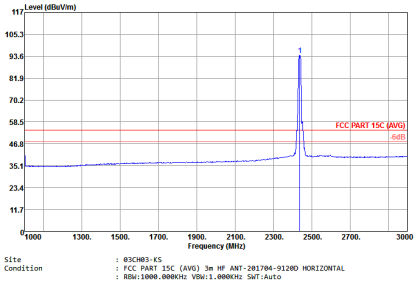
-L	**Low channel location**
-R	**High channel location**

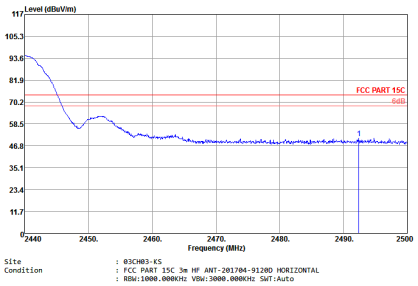
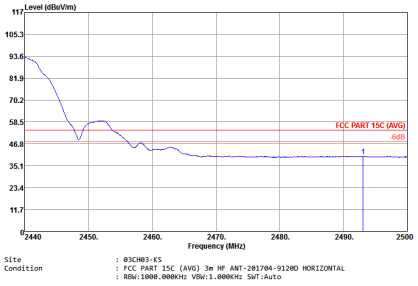
2.4GHz 2400~2483.5MHz

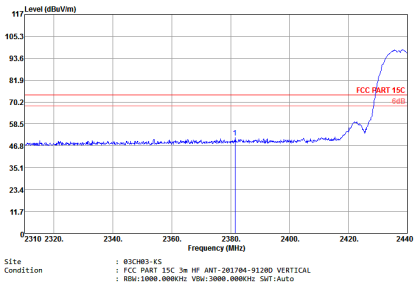
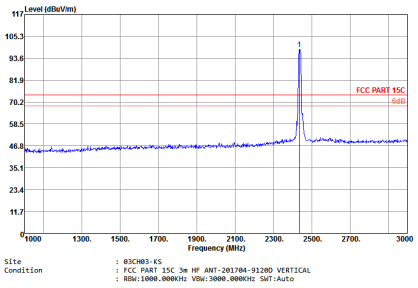
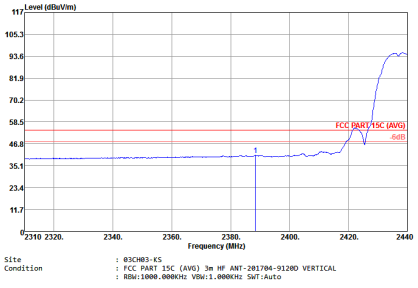
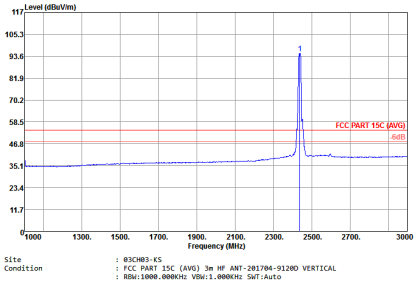
WIFI 802.11b (Band Edge @ 3m)

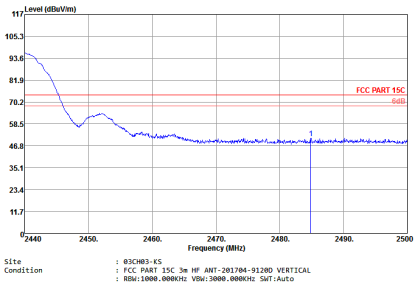
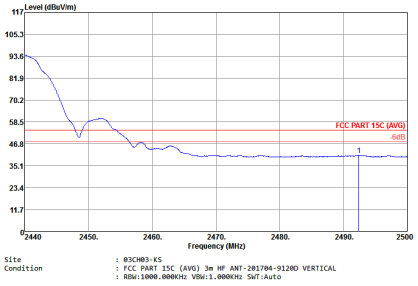
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

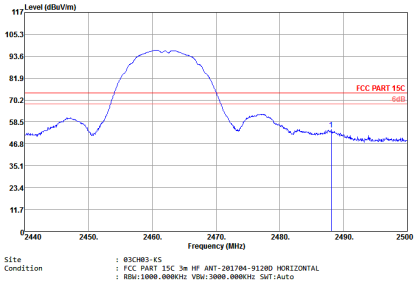
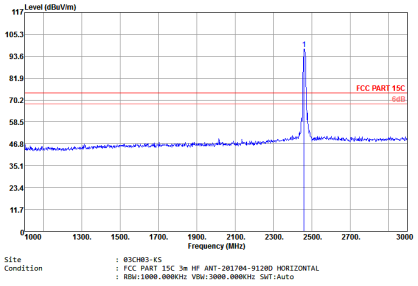
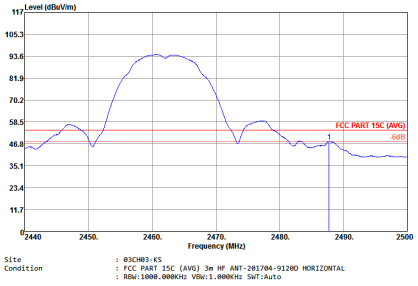
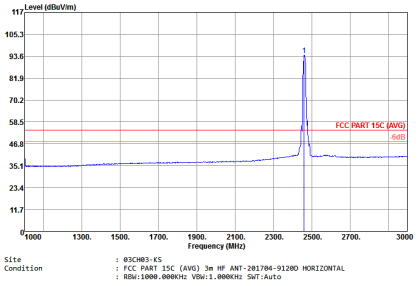
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak		
Avg.		

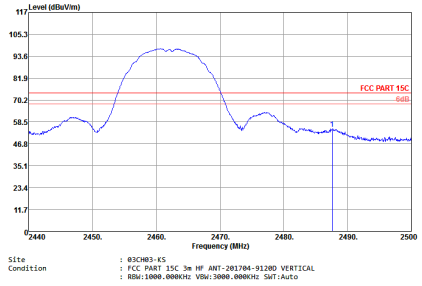
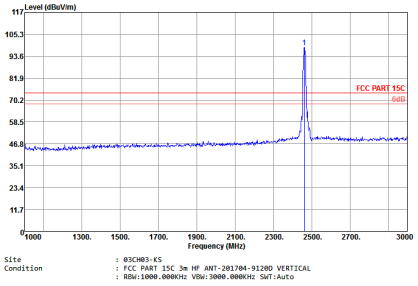
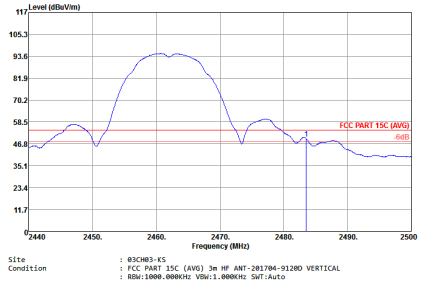
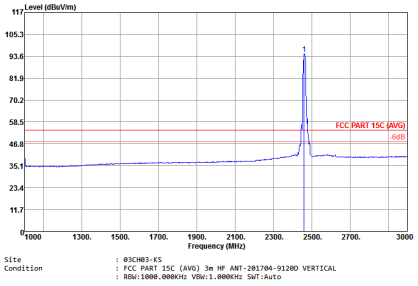
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

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.		

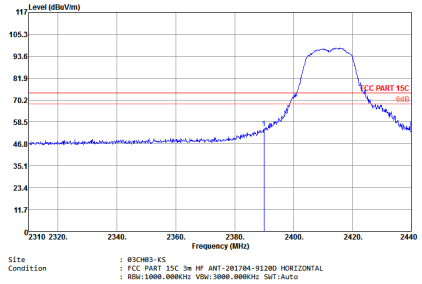
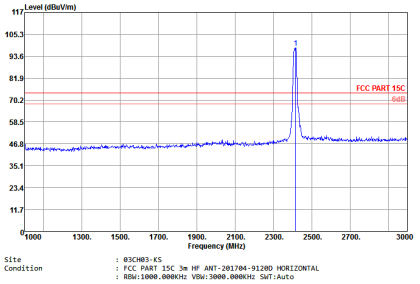
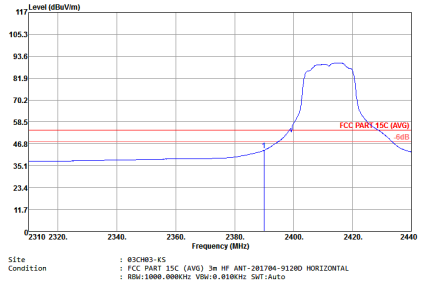
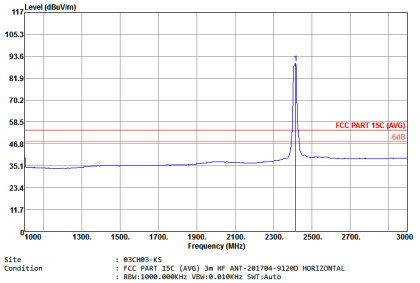
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

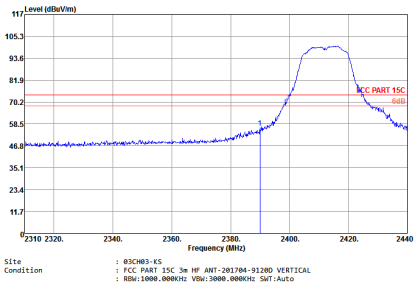
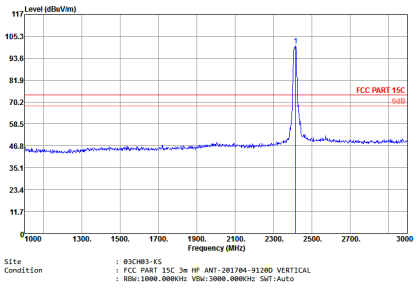
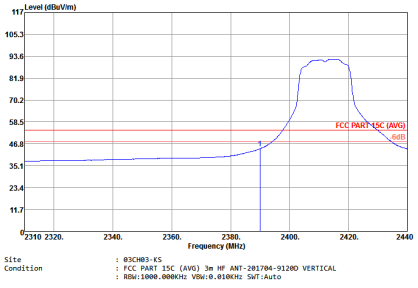
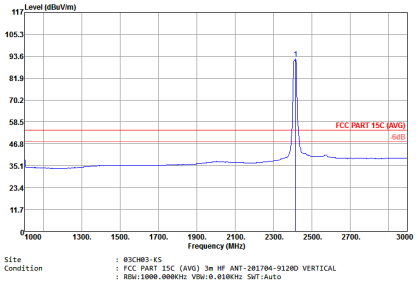
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

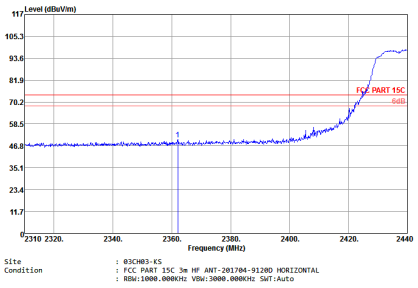
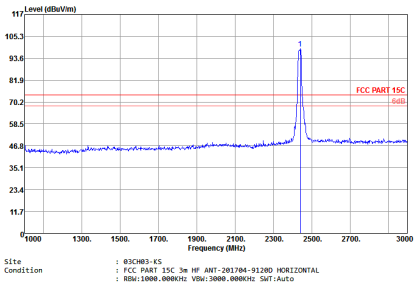
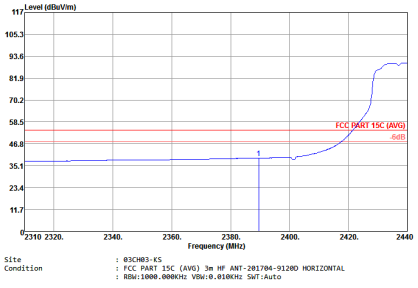
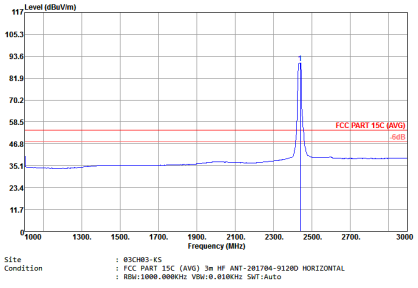
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Vertical	Fundamental
Peak		
Avg.		

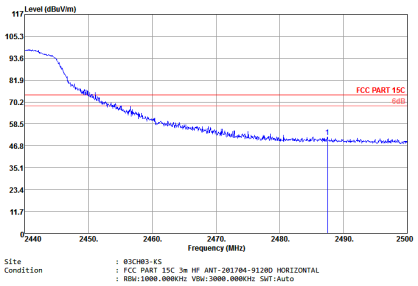
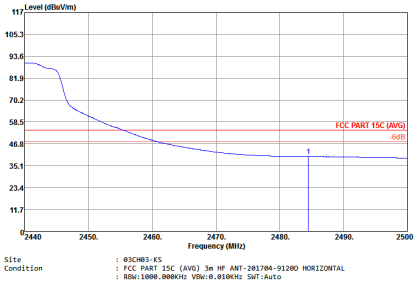
2.4GHz 2400~2483.5MHz

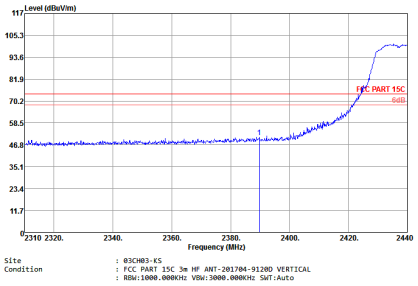
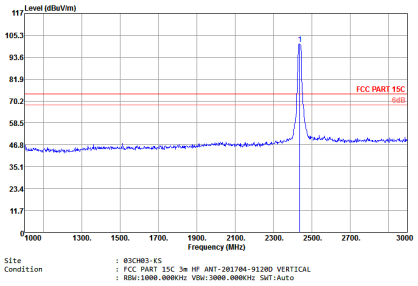
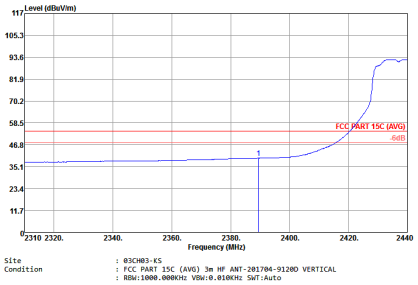
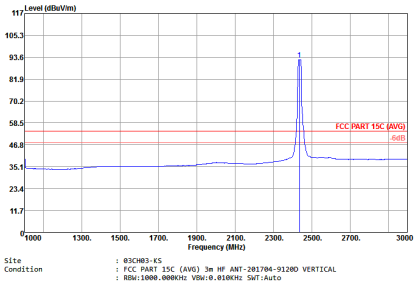
WIFI 802.11g (Band Edge @ 3m)

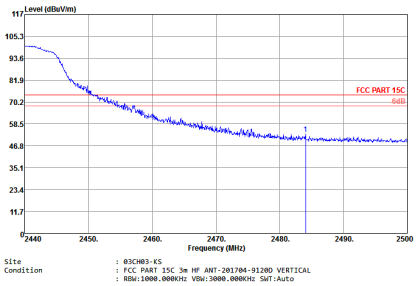
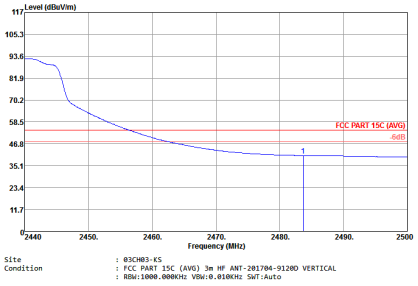
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

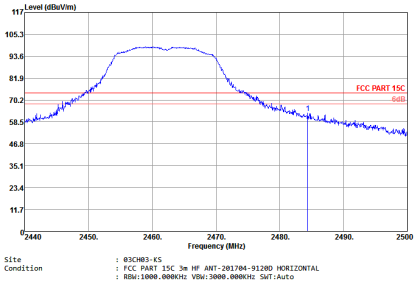
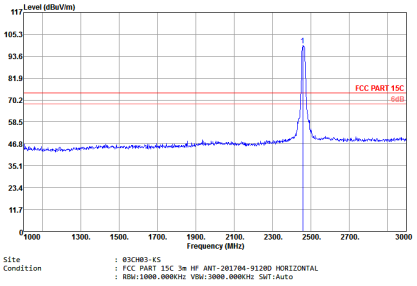
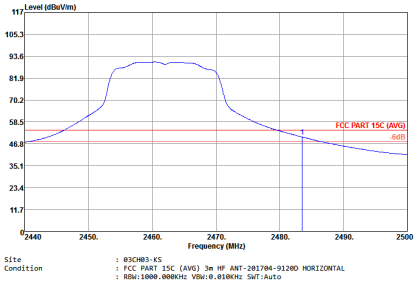
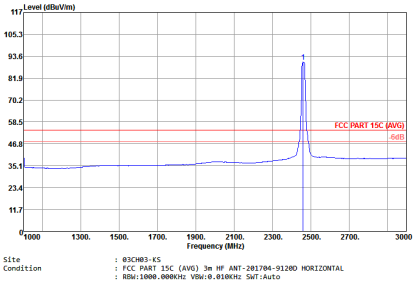
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Vertical	Fundamental
Peak		
Avg.		

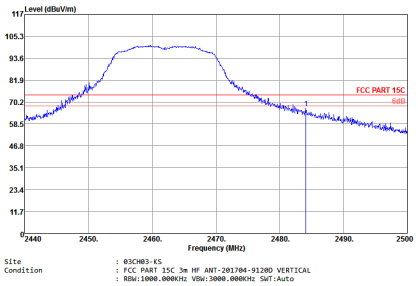
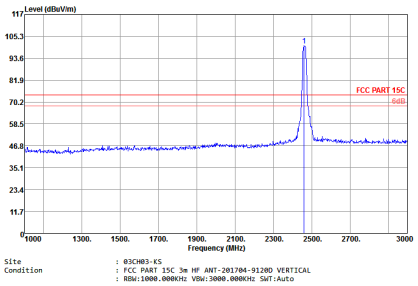
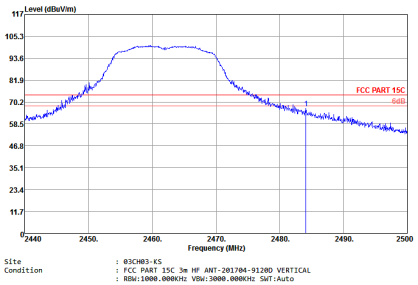
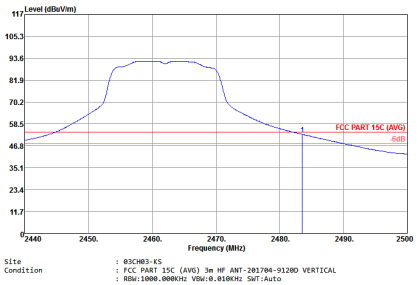
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

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

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

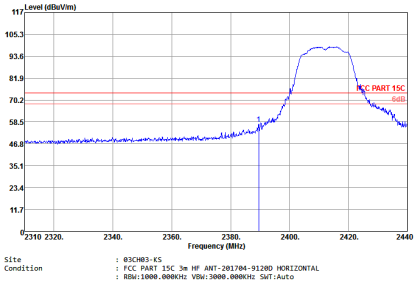
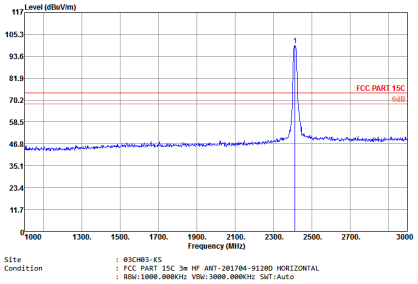
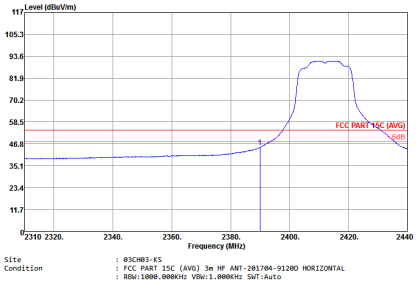
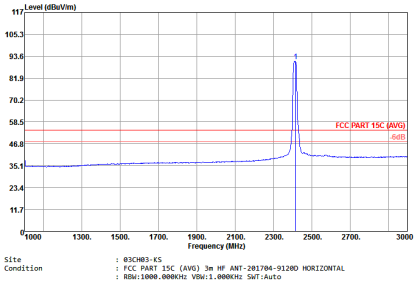
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

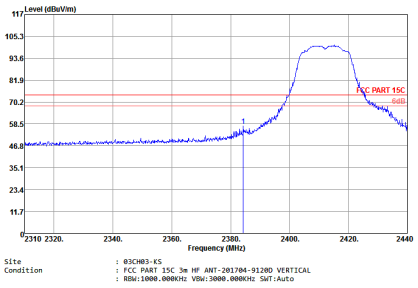
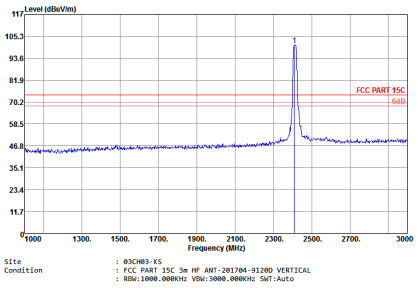
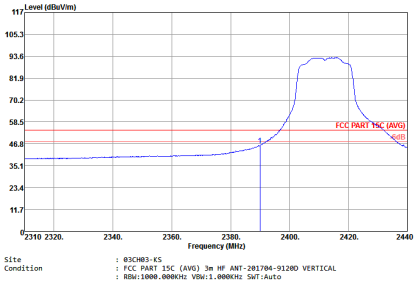
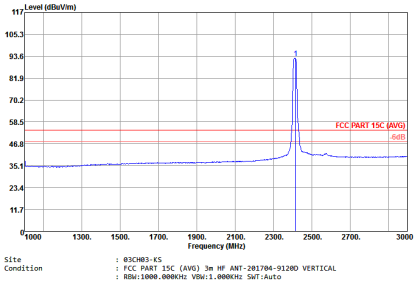
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

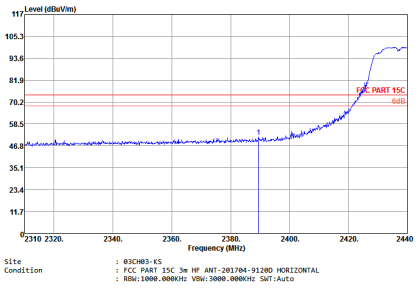
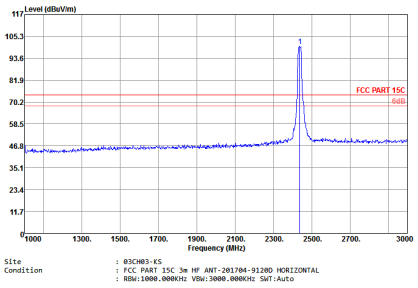
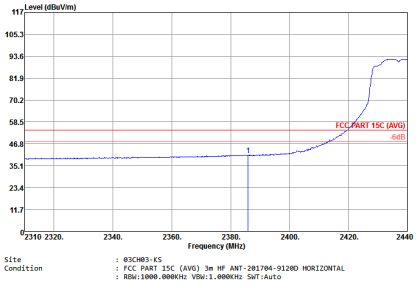
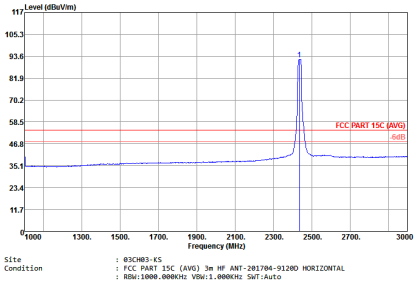
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Vertical	Fundamental
Peak		
Avg.		

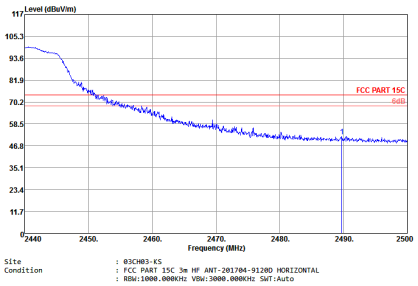
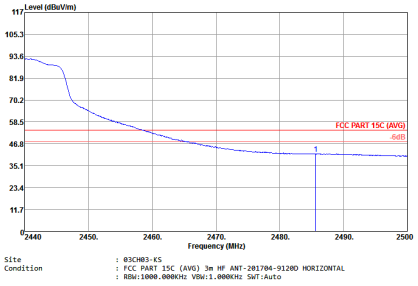
2.4GHz 2400~2483.5MHz

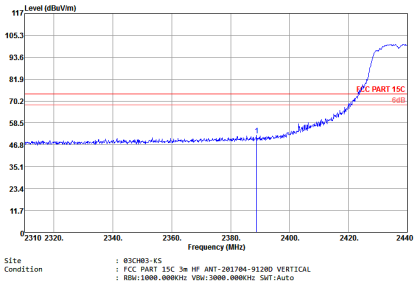
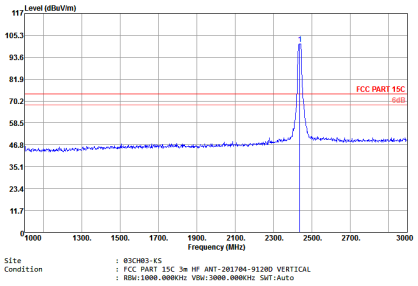
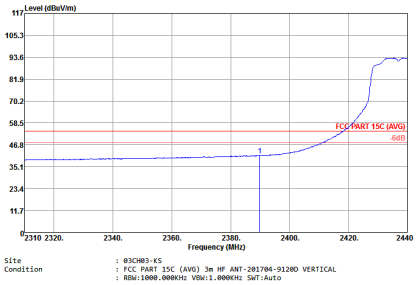
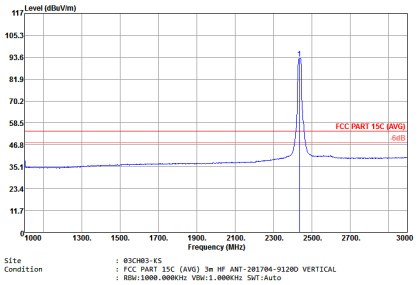
WIFI 802.11n HT20 (Band Edge @ 3m)

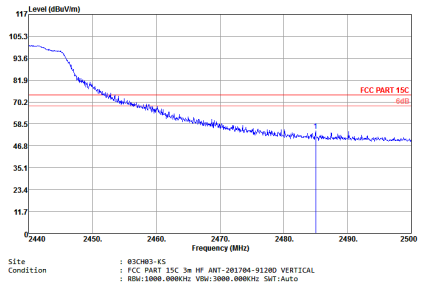
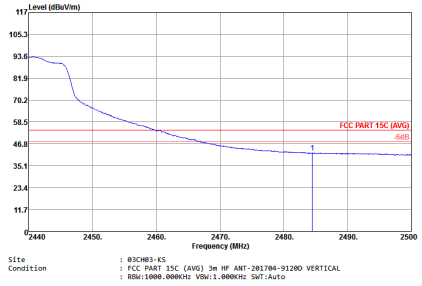
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

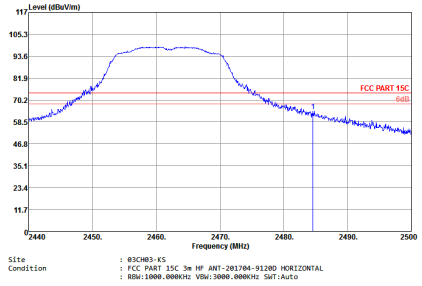
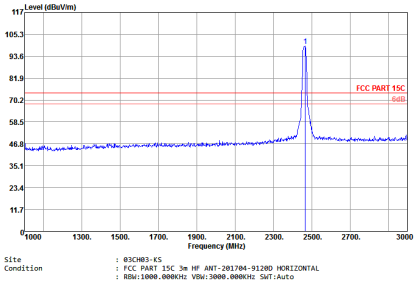
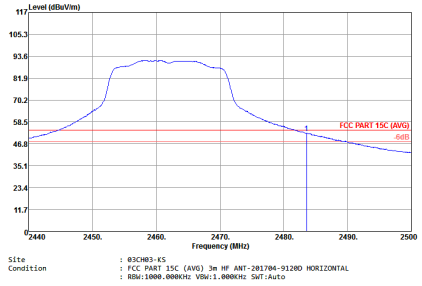
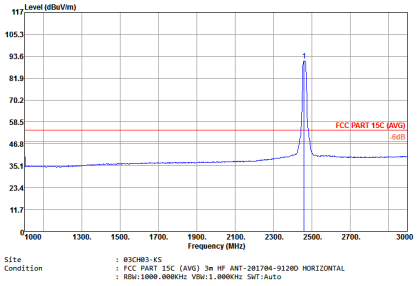
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Vertical	Fundamental
Peak		
Avg.		

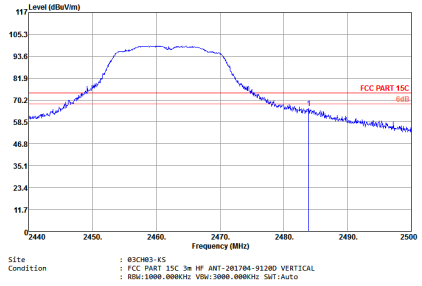
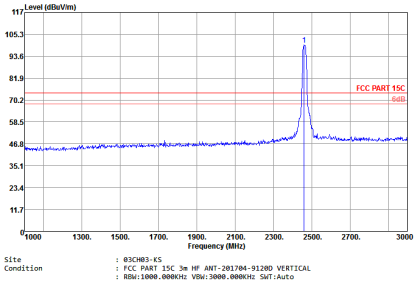
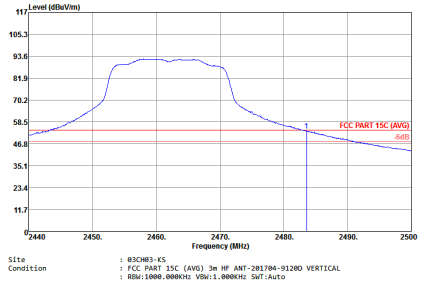
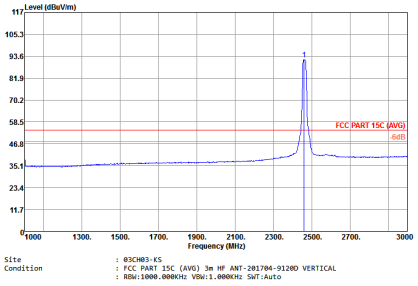
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

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

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

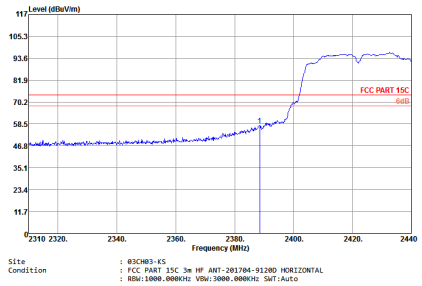
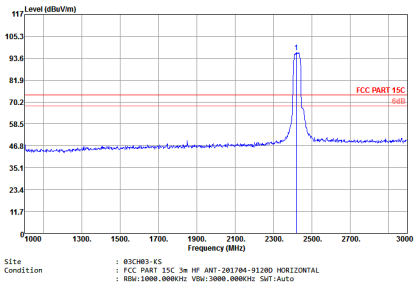
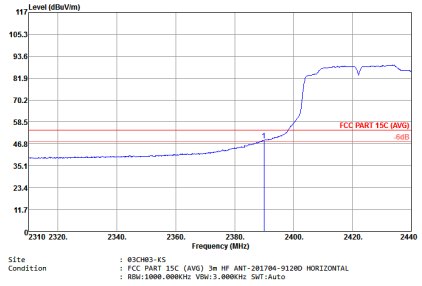
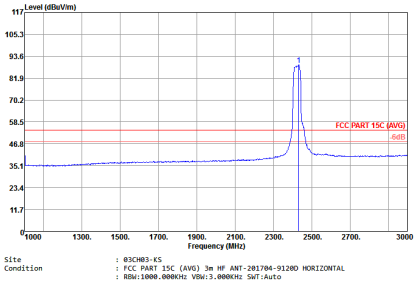
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

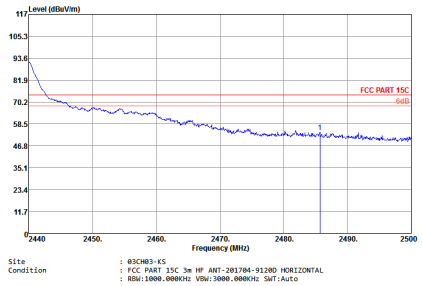
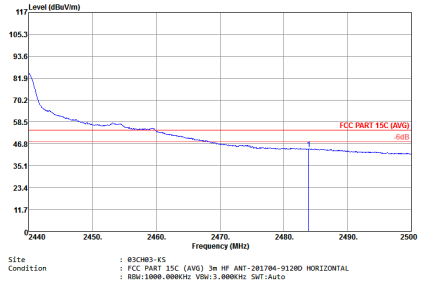
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

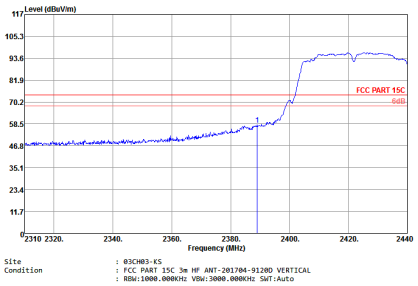
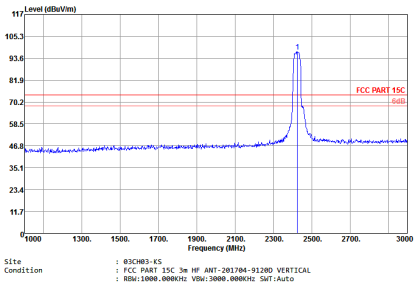
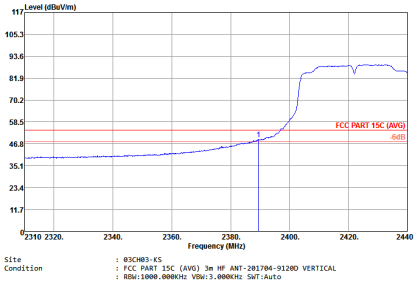
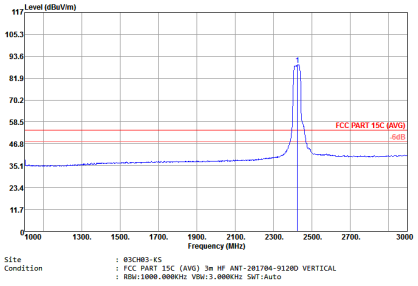
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Vertical	Fundamental
Peak		
Avg.		

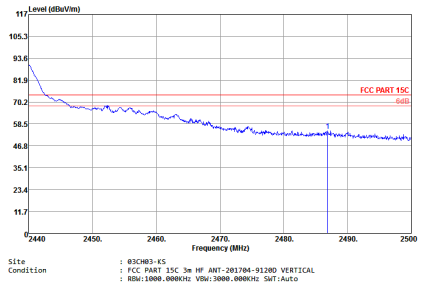
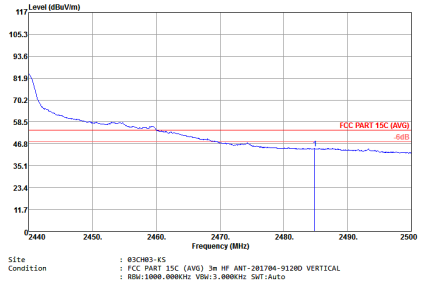
2.4GHz 2400~2483.5MHz

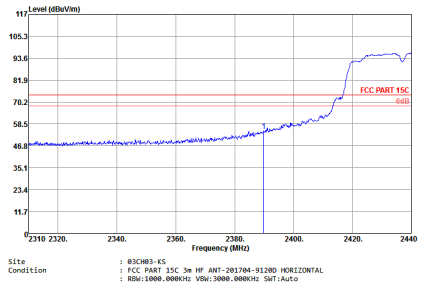
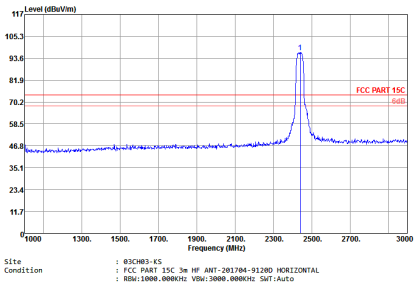
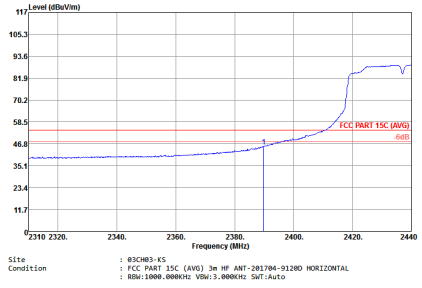
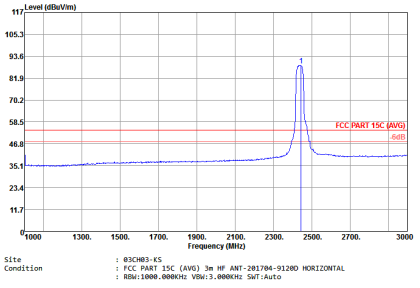
WIFI 802.11n HT40 (Band Edge @ 3m)

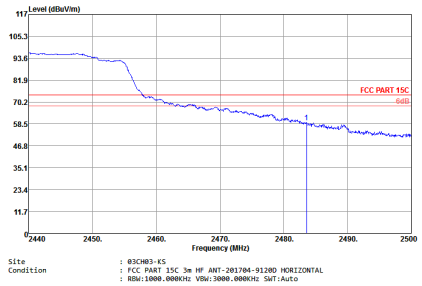
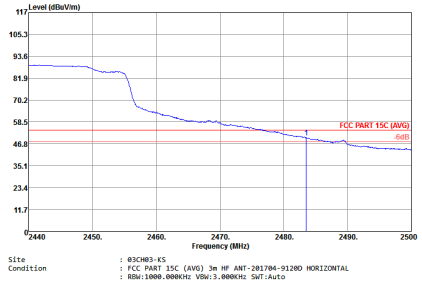
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

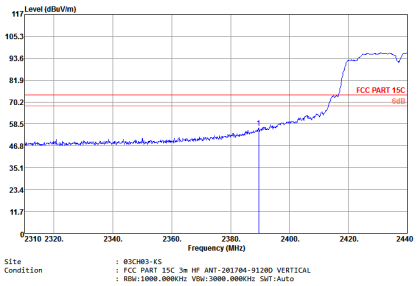
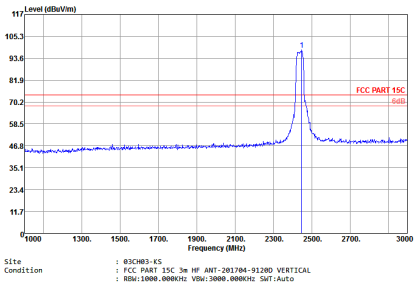
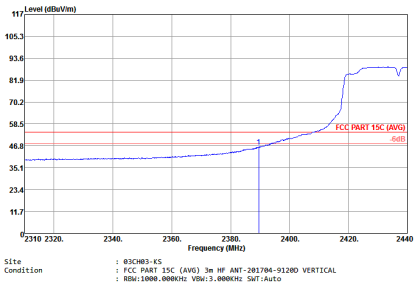
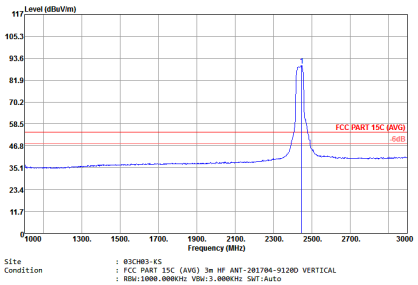
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Horizontal	Fundamental
Peak		Left Blank
Avg.		Left Blank

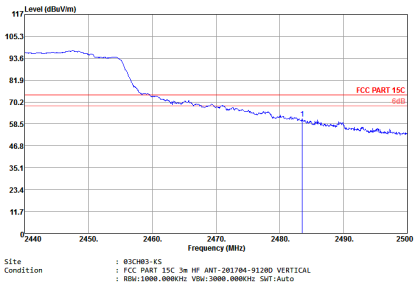
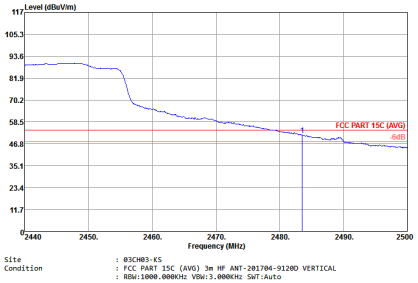
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

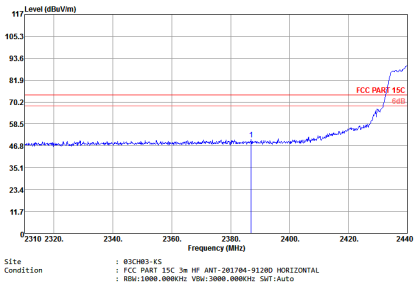
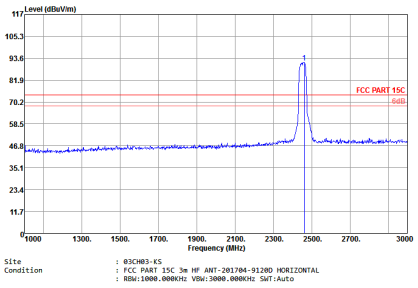
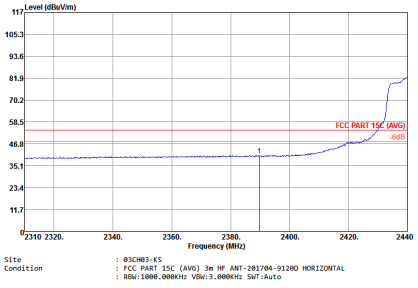
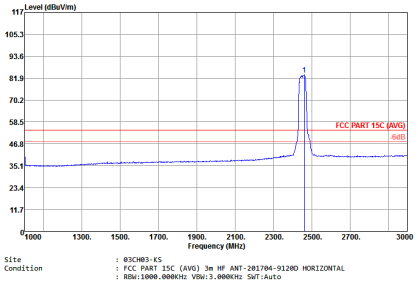
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

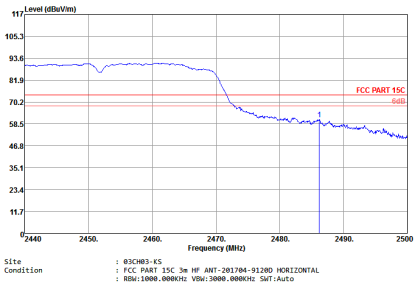
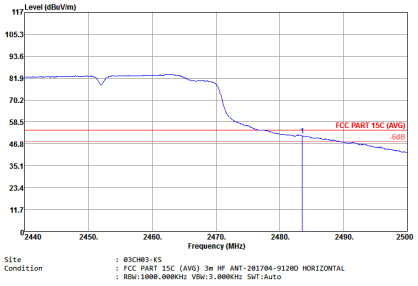
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

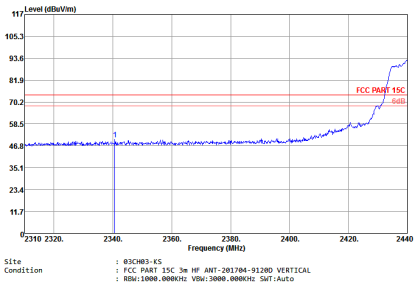
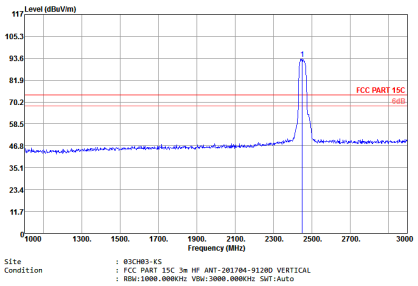
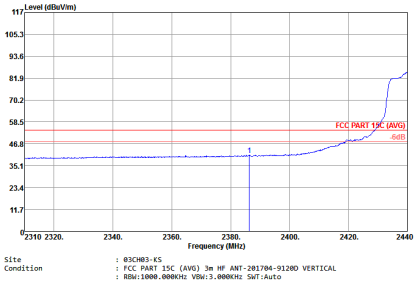
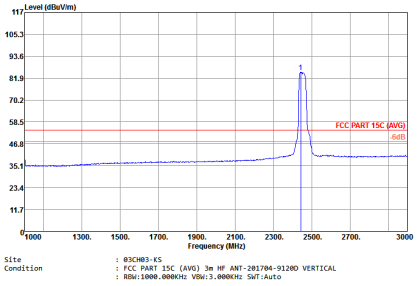
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

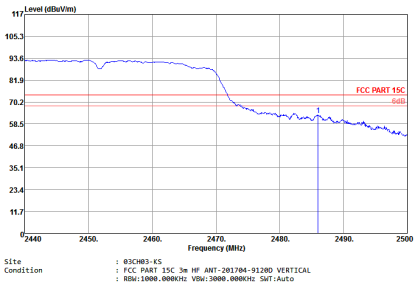
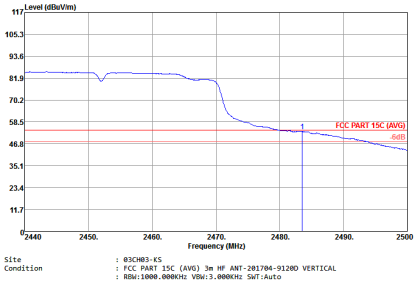
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

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		
Avg.		

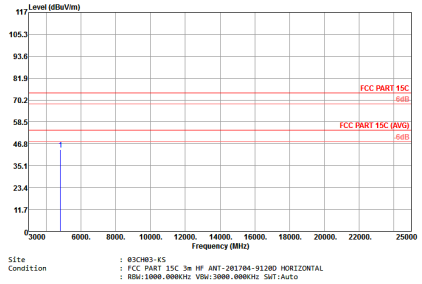
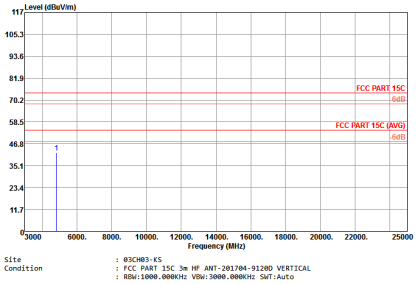
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

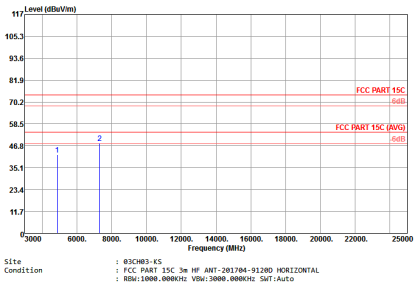
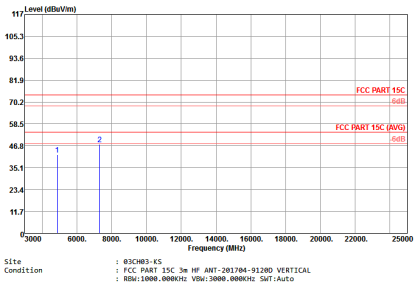
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

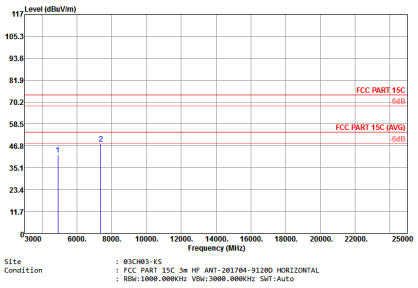
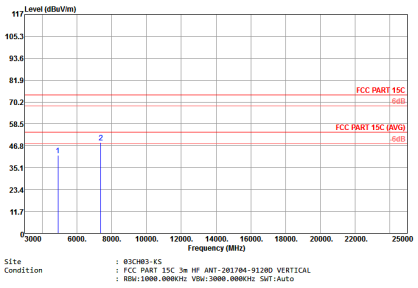
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

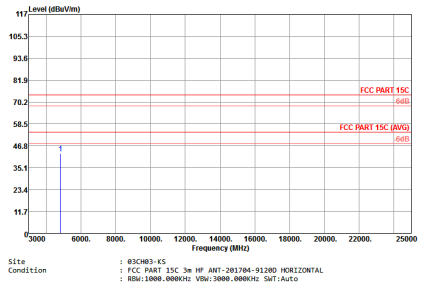
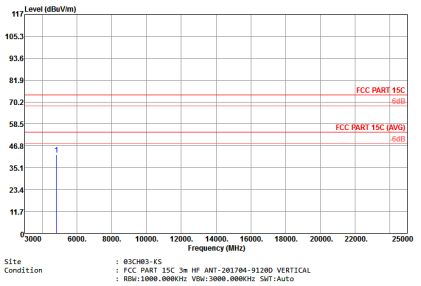
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.		

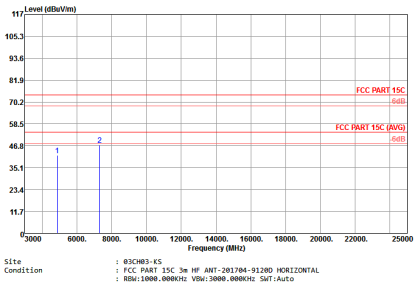
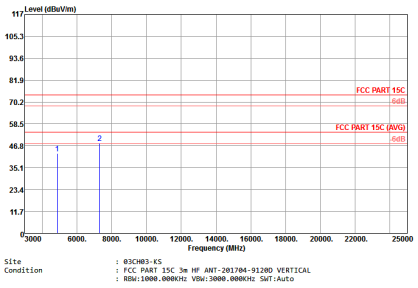
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.		

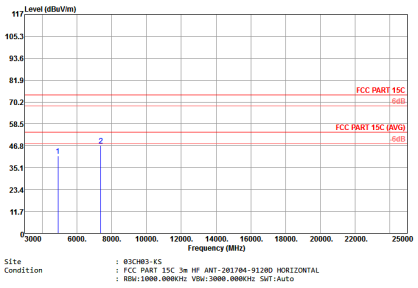
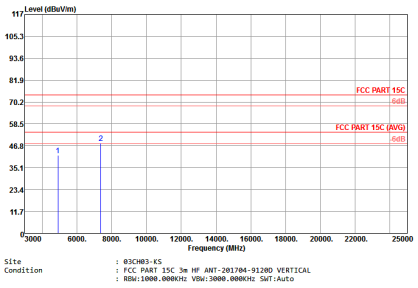
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

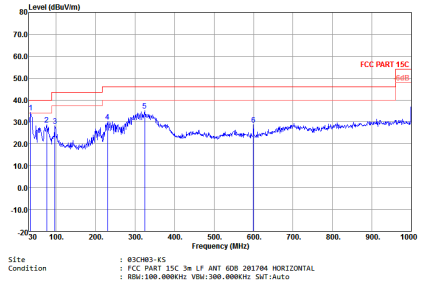
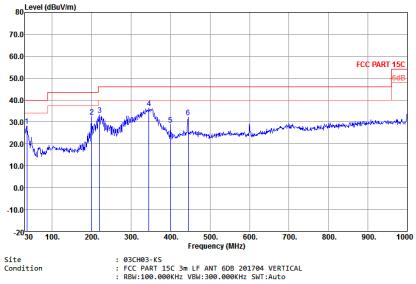
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.		

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.		

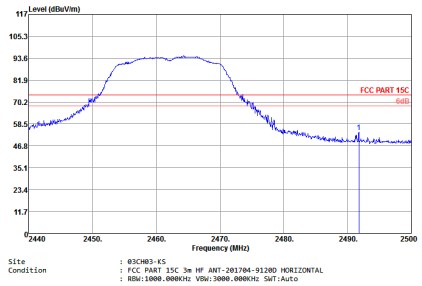
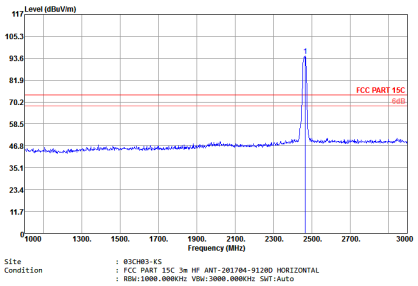
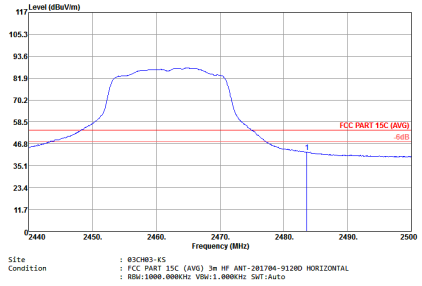
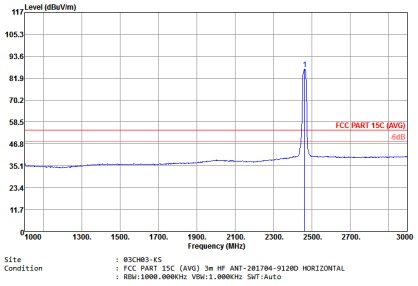
Emission below 1GHz

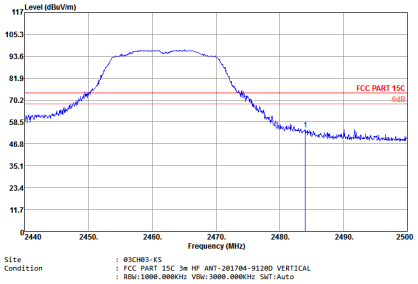
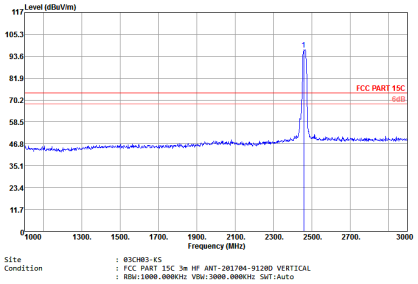
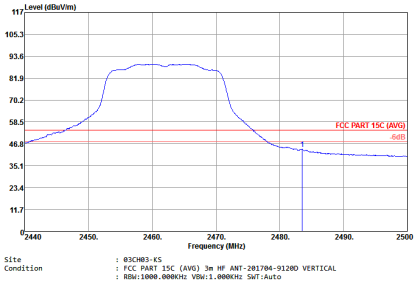
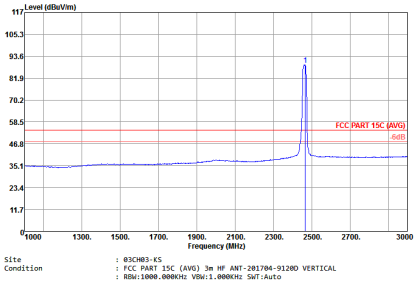
2.4GHz WIFI 802.11n HT20 (LF)

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

2.4GHz 2400~2483.5MHz

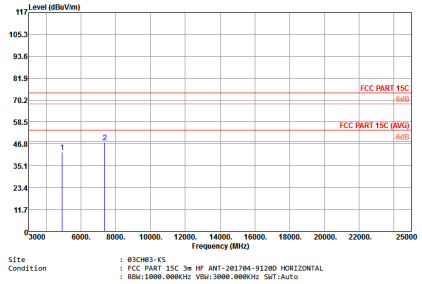
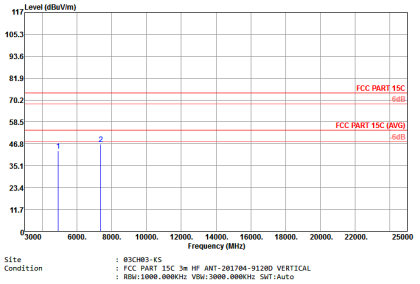
WIFI 802.11n HT20 (Band Edge @ 3m)

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

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

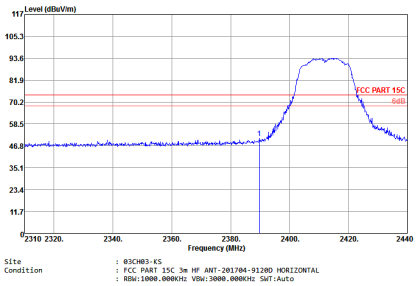
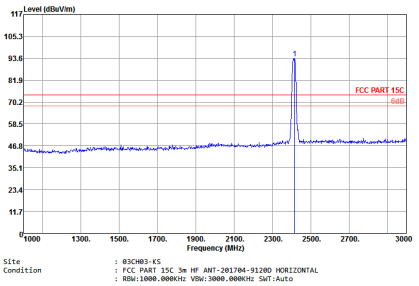
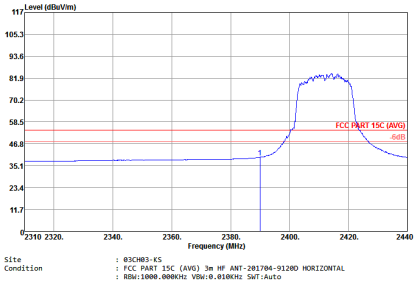
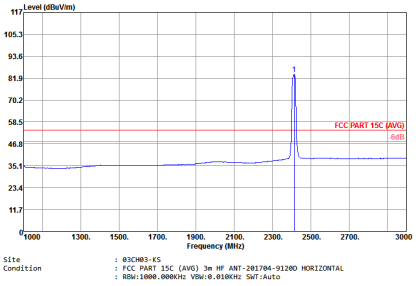
2.4GHz 2400~2483.5MHz

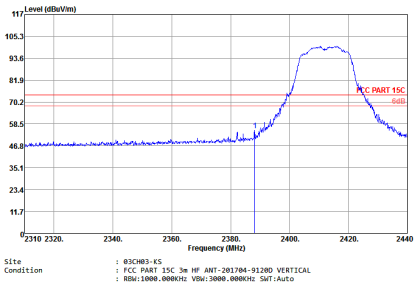
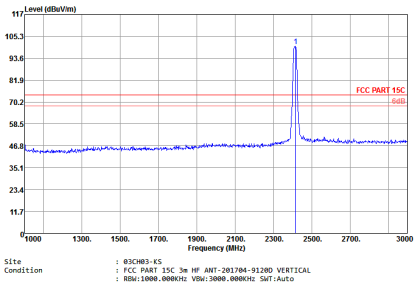
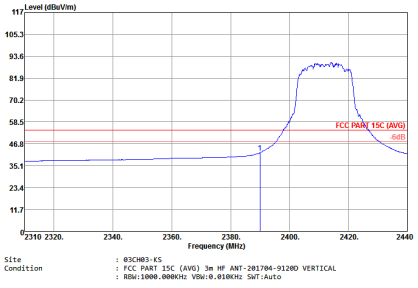
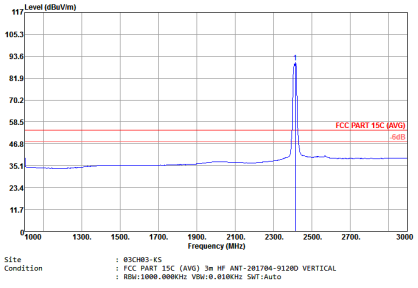
WIFI 802.11n HT20 (Harmonic @ 3m)

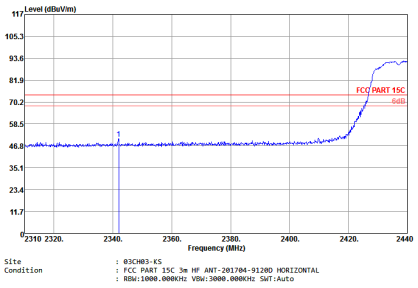
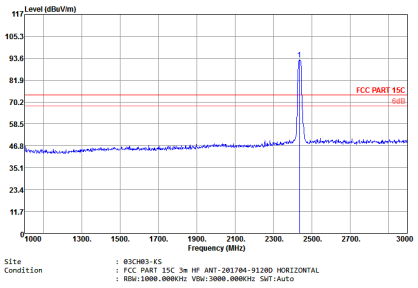
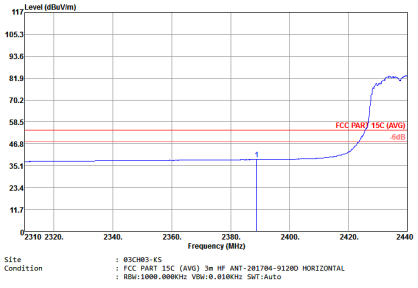
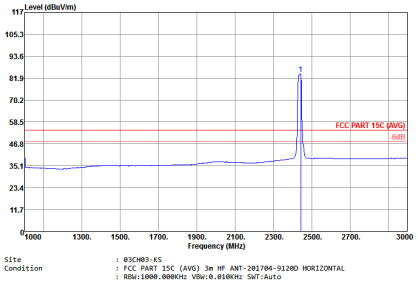
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
2	Horizontal	Vertical
Peak Avg.		

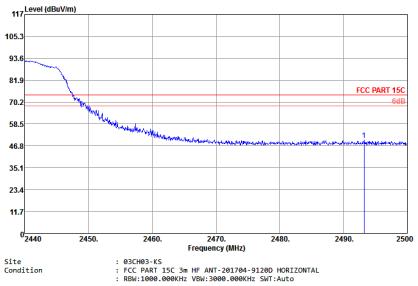
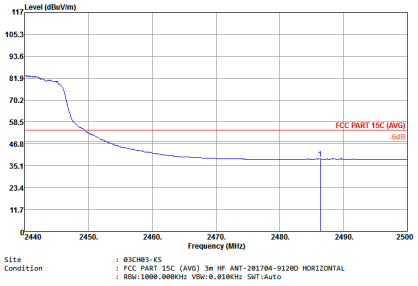
2.4GHz 2400~2483.5MHz

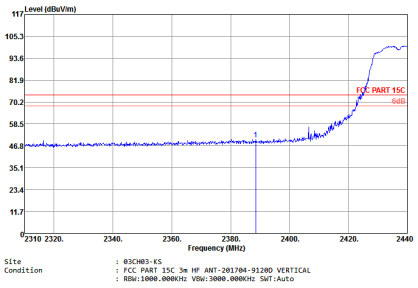
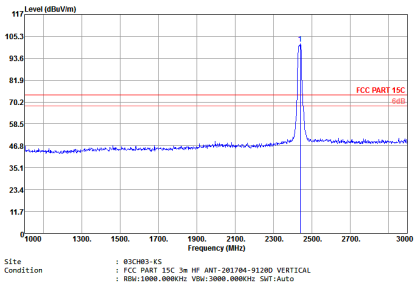
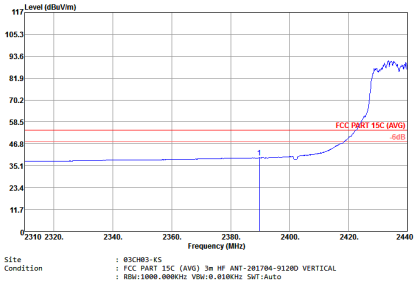
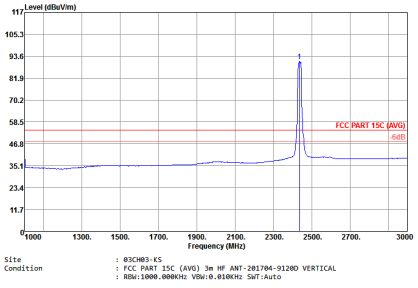
WIFI 802.11n HT20 (Band Edge @ 3m)

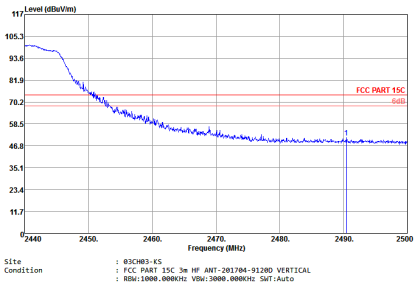
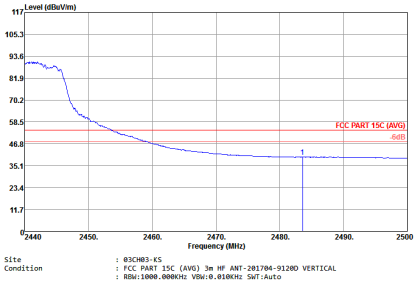
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak		
Avg.		

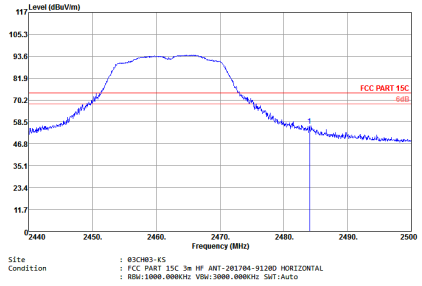
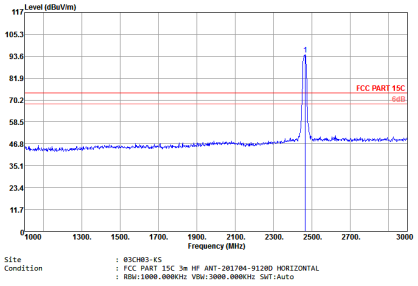
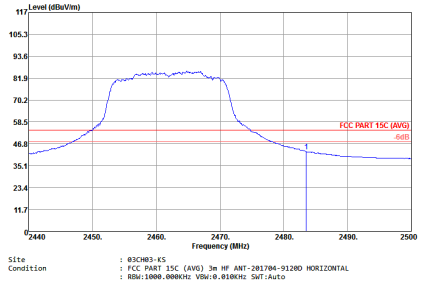
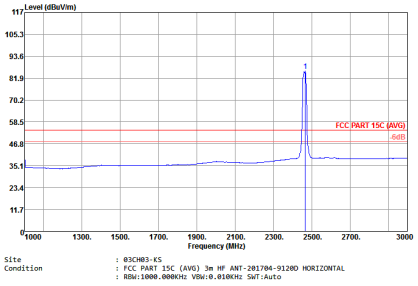
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		

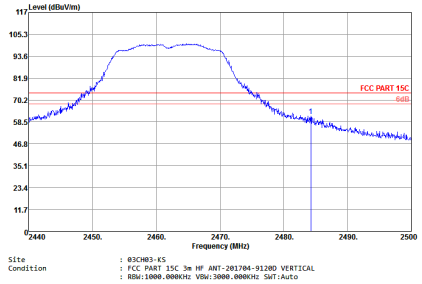
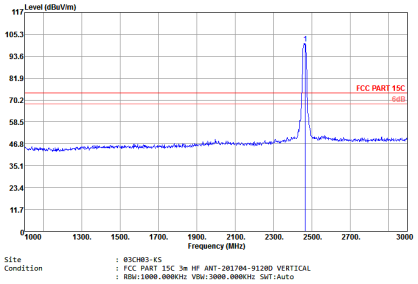
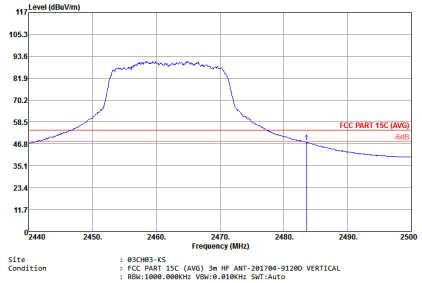
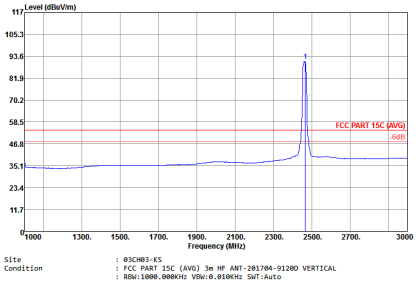
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1+2	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+2	Vertical	Fundamental
Peak		
Avg.		

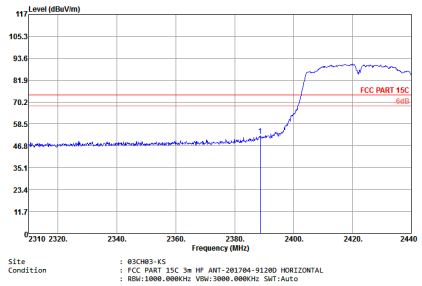
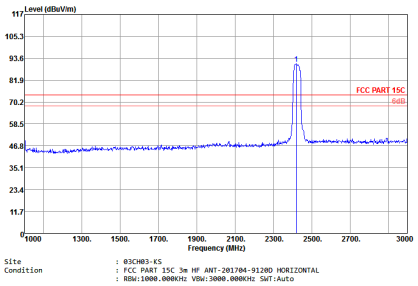
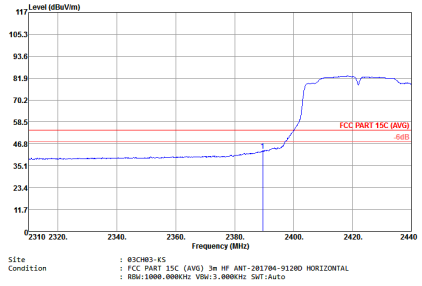
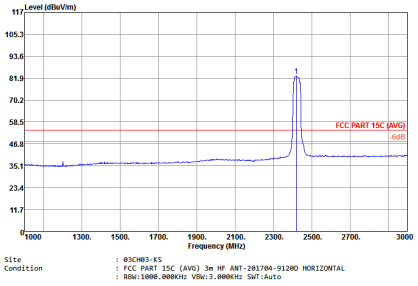
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

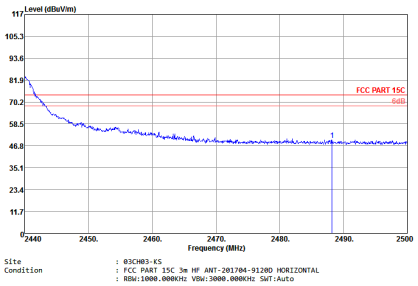
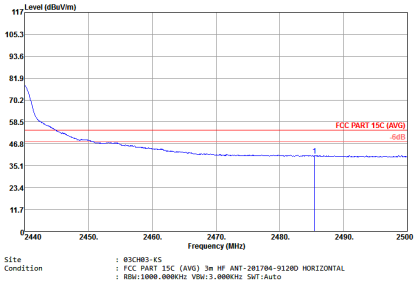
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1+2	Horizontal	Fundamental
Peak		
Avg.		

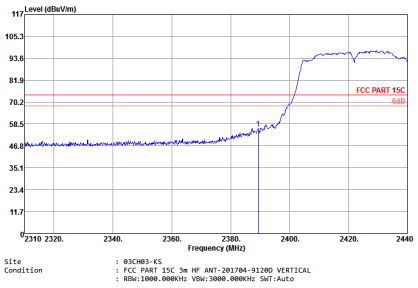
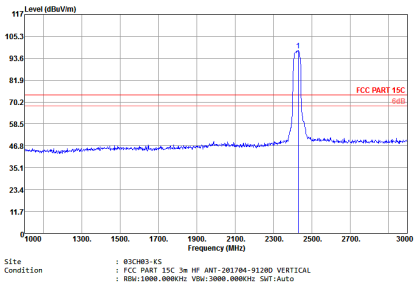
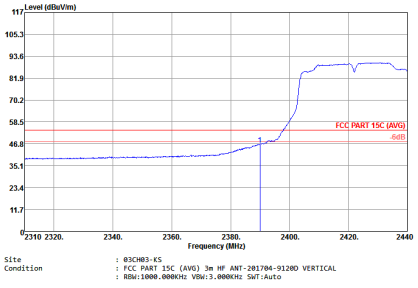
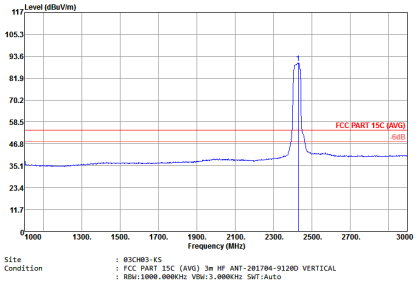
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		

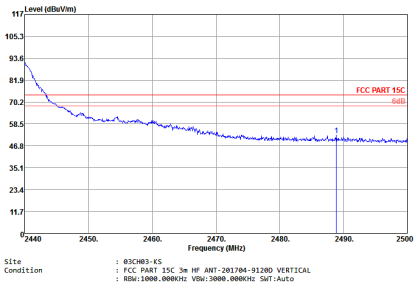
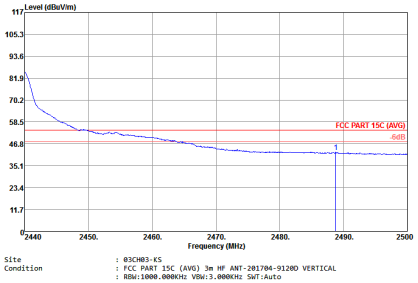
2.4GHz 2400~2483.5MHz

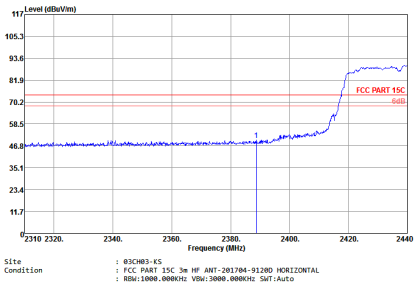
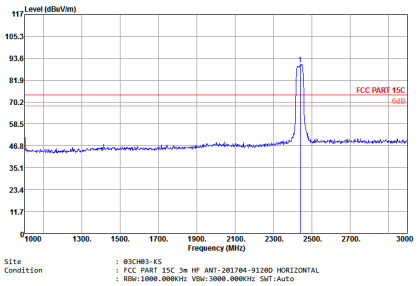
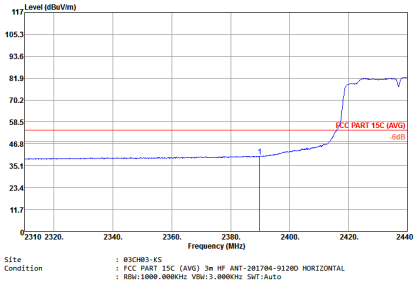
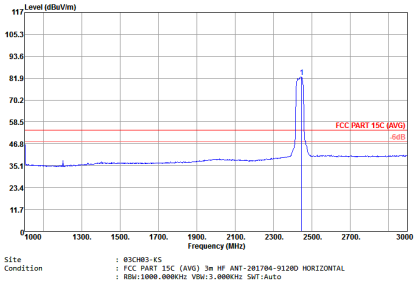
WIFI 802.11n HT40 (Band Edge @ 3m)

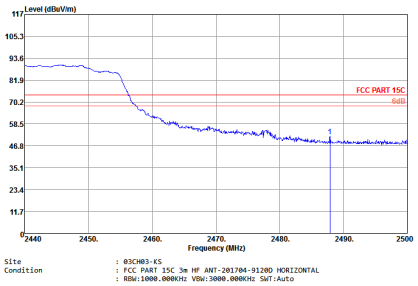
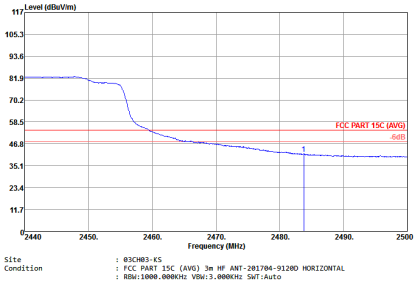
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		

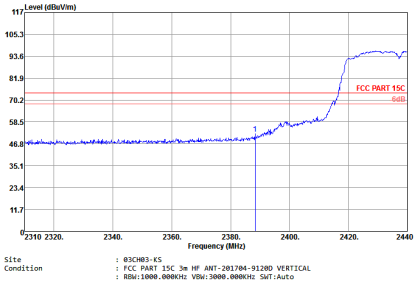
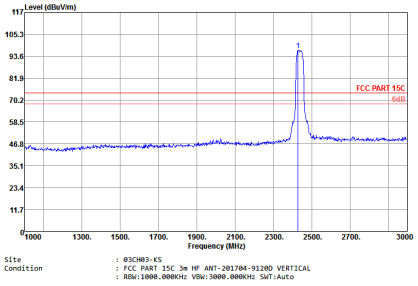
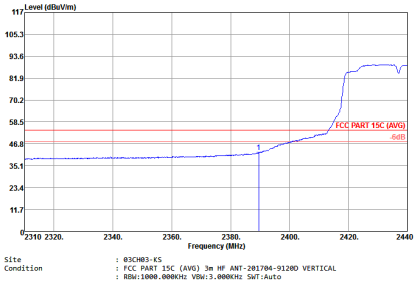
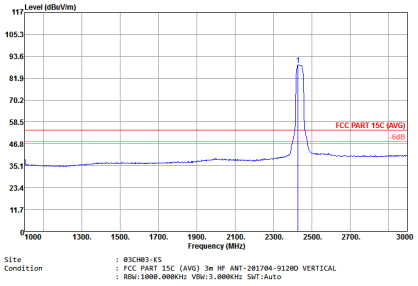
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1+2	Horizontal	Fundamental
Peak		Left Blank
Avg.		Left Blank

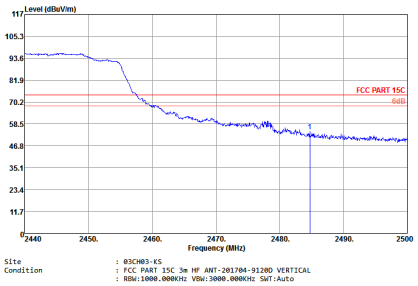
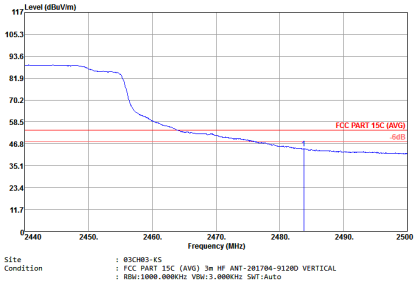
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		

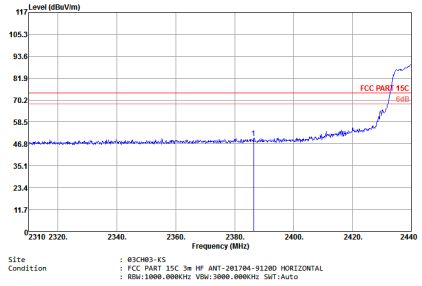
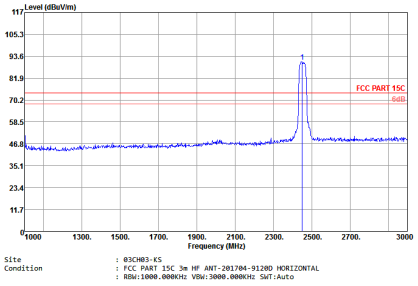
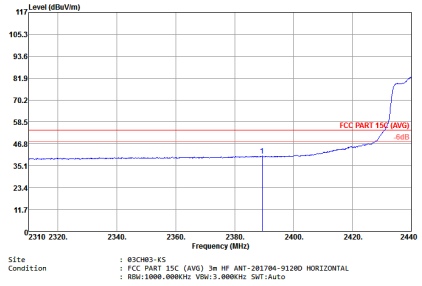
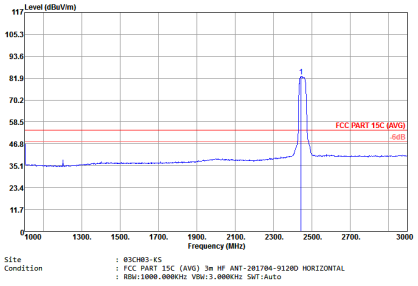
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

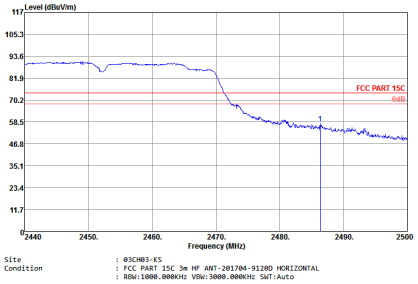
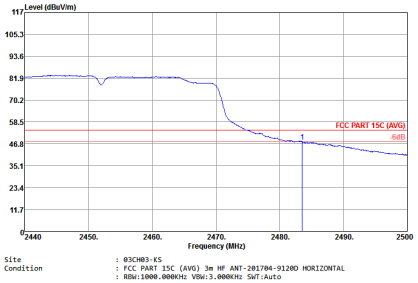
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		

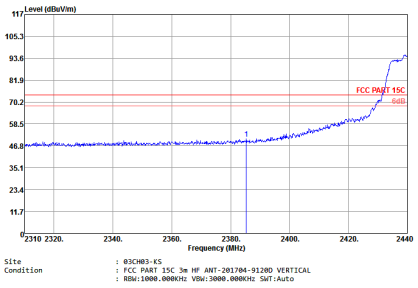
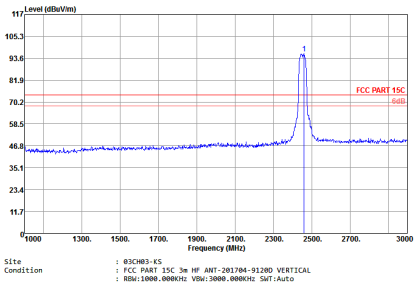
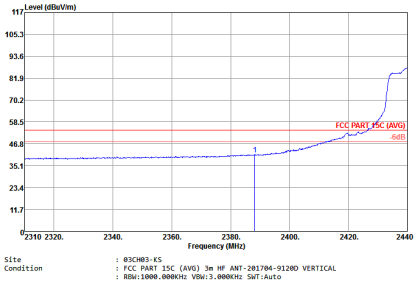
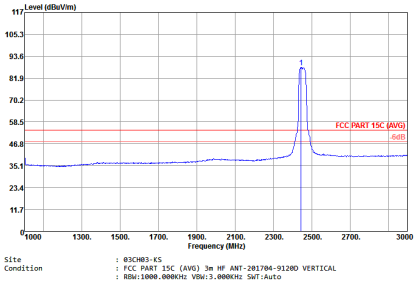
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

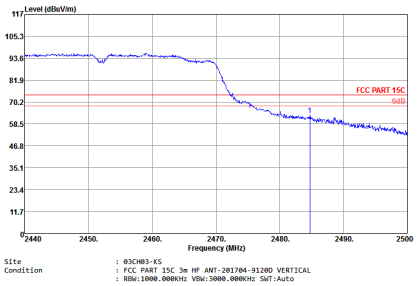
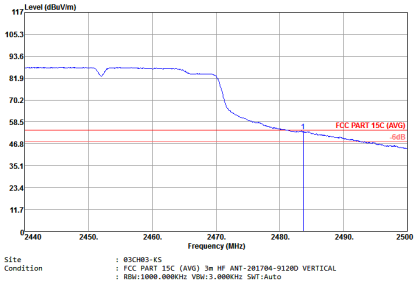
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
1+2	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+2	Horizontal	Fundamental
Peak		
Avg.		

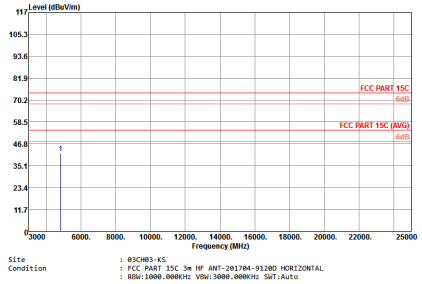
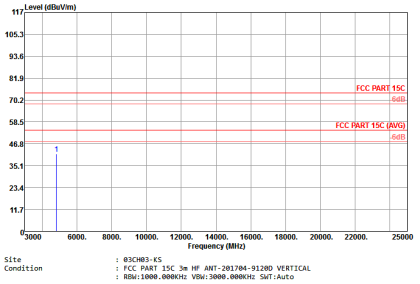
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

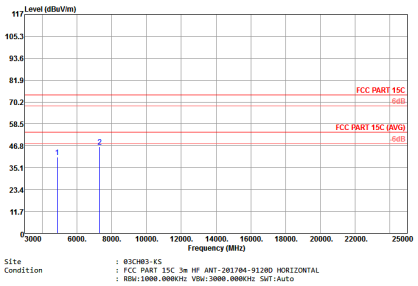
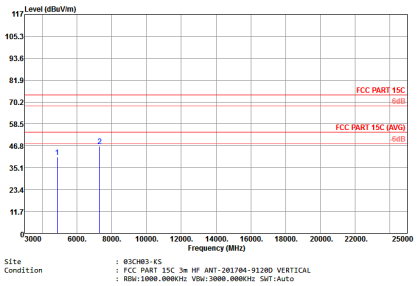
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		

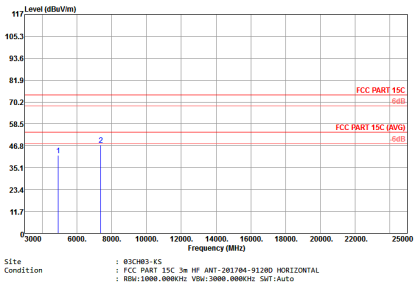
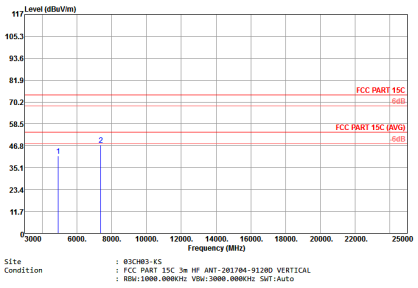
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

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+2	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.		

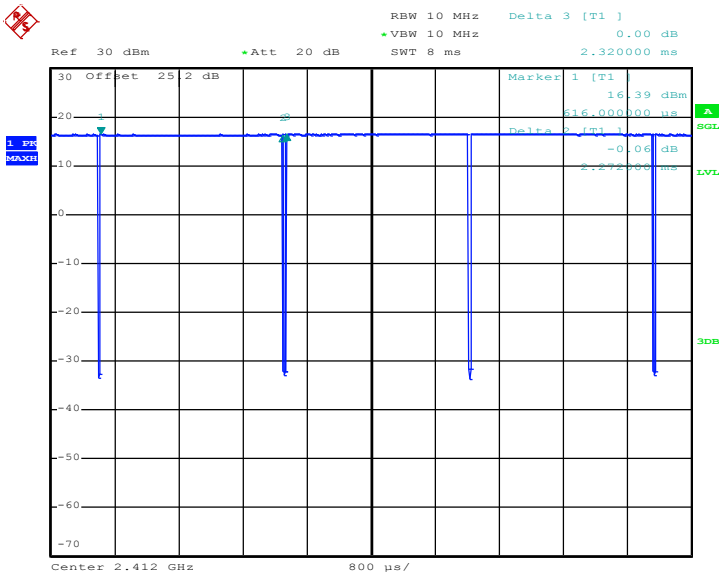
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.		

Appendix D. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
1	802.11b	97.93	2272	0.44	1kHz
1	802.11g	98.1	-	-	10Hz
1	2.4GHz 802.11n HT20	97.56	1920	0.52	1kHz
1	2.4GHz 802.11n HT40	96.69	936	1.07	3kHz
2	802.11b	98.61	-	-	10Hz
2	802.11g	98.47	-	-	10Hz
2	2.4GHz 802.11n HT20	97.56	1920	0.52	1kHz
2	2.4GHz 802.11n HT40	96.69	936	1.07	3kHz
1+2	2.4GHz 802.11n HT20 for Ant. 1	98.36	-	-	10Hz
1+2	2.4GHz 802.11n HT20 for Ant. 2	97.56	1920	0.52	1kHz
1+2	2.4GHz 802.11n HT40 for Ant. 1	95.08	976	1.02	3kHz
1+2	2.4GHz 802.11n HT40 for Ant. 2	96.69	936	1.07	3kHz

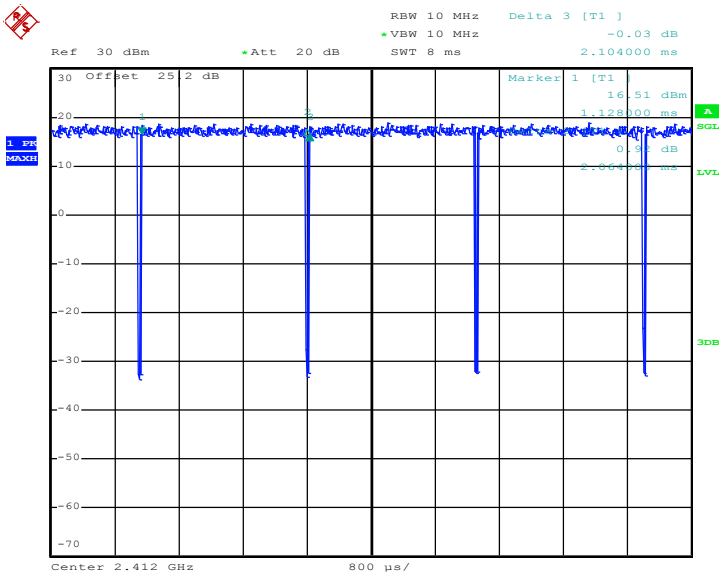
<Ant. 1>

802.11b



Date: 29.APR.2017 10:44:55

802.11g



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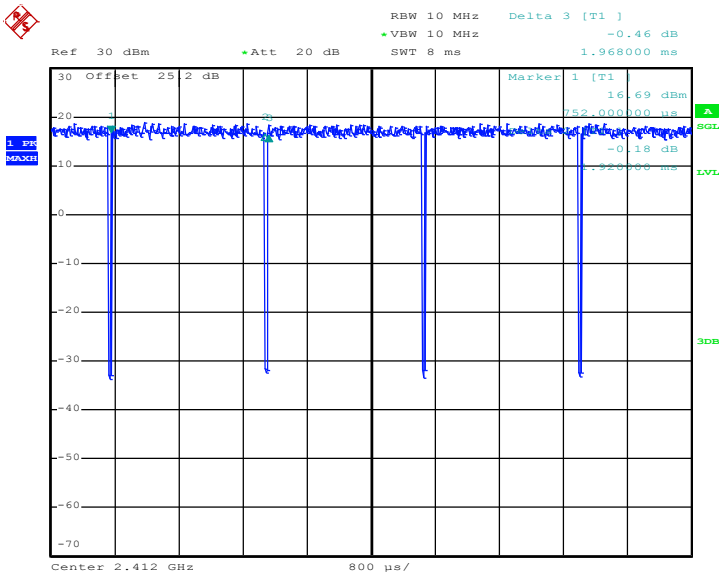
802.11n HT20



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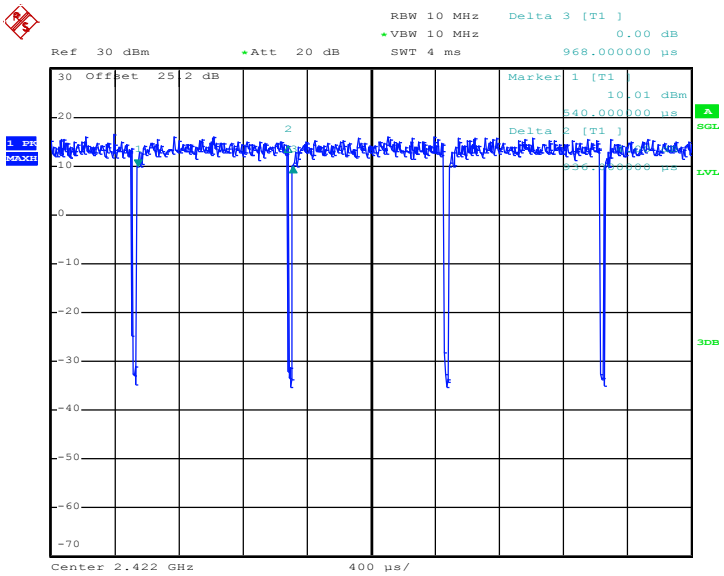
802.11n HT40



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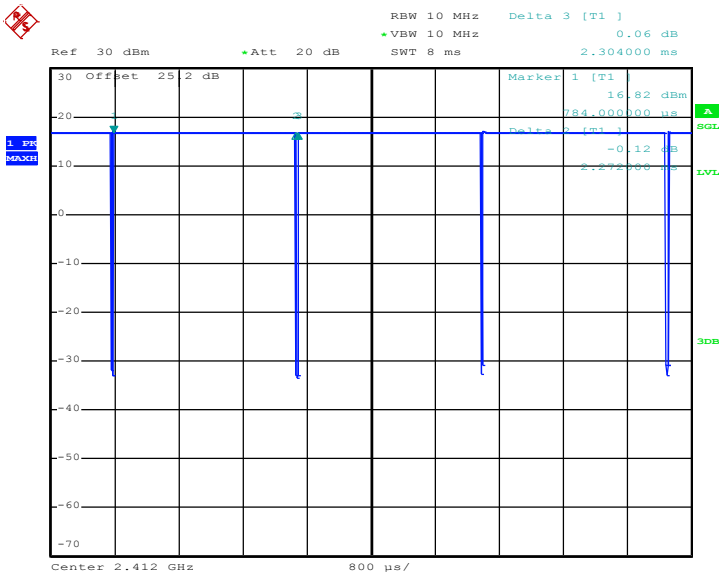
<Ant. 2>

802.11b



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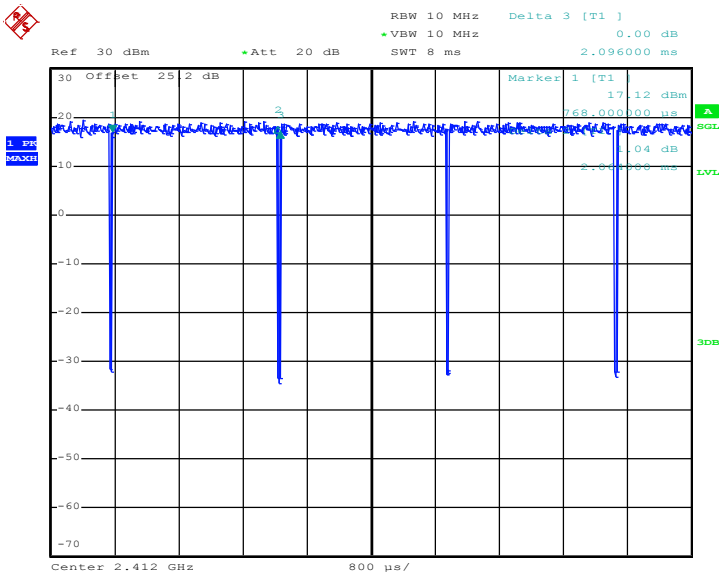
802.11g



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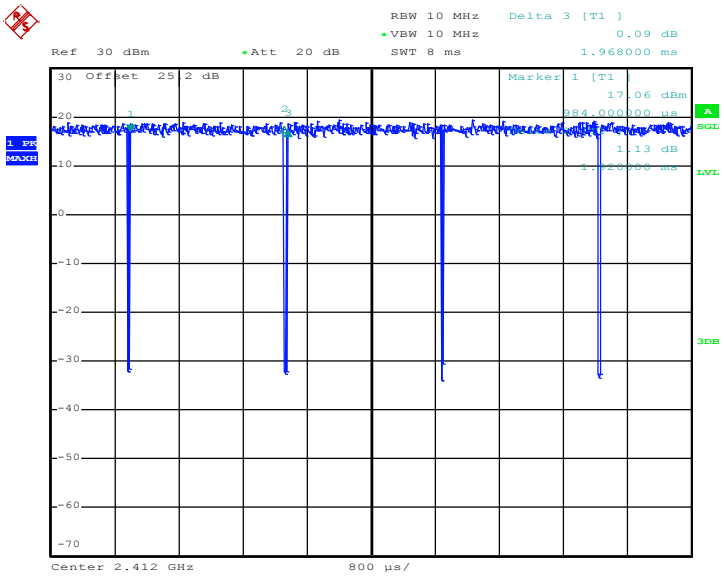
802.11n HT20



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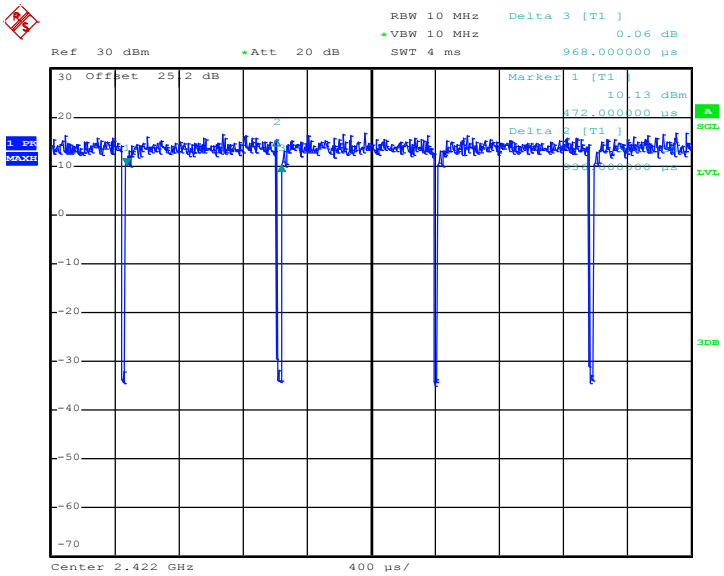
802.11n HT40



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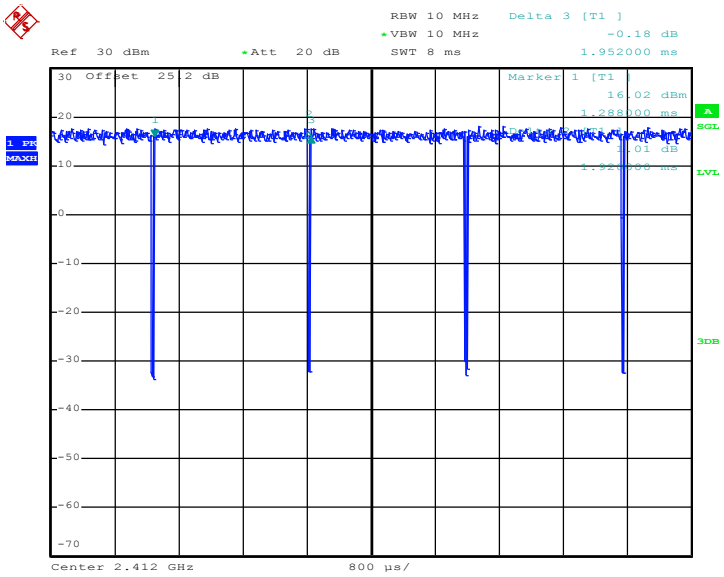
802.11n HT20



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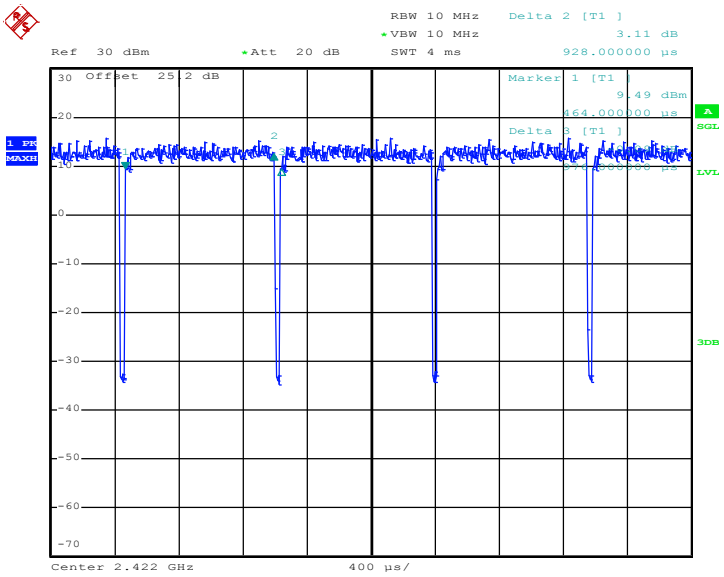
802.11n HT40



Date: 29.APR.2017 10:55:33

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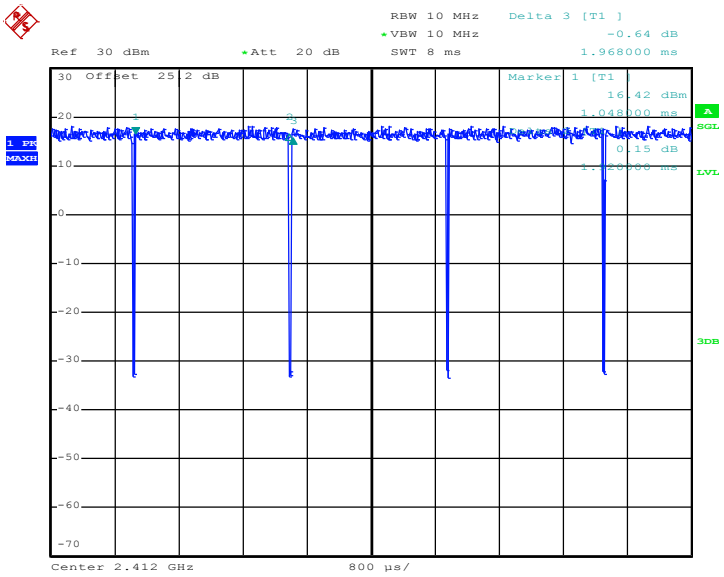
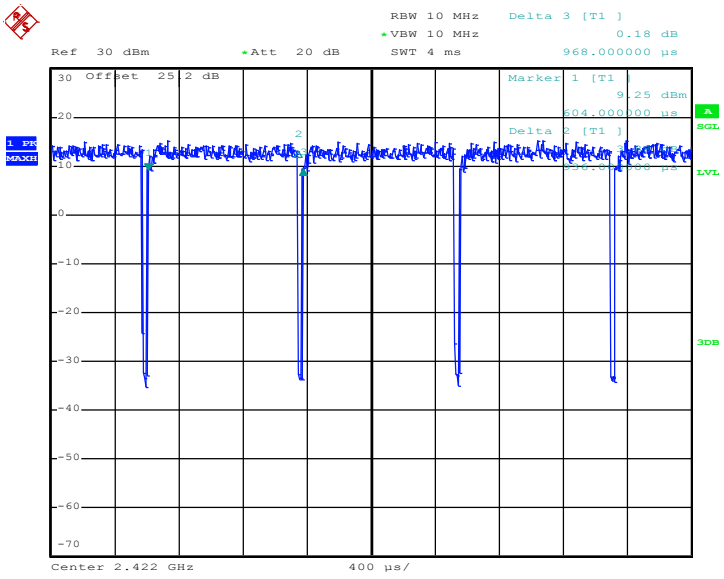
802.11n HT20



Date: 29.APR.2017 10:52:27

802.11n HT40



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