

FCC 47 CFR PART 15 SUBPART C AND ANSI C63.10:2013 TEST REPORT

For

802.11 b/g/n High Performance Embedded WiFi Module

Model: CJM210EC

Data Applies To: CJM210ECI

Issued for

Conjing Networks Inc.

4F., No.108, Zhenxing Rd., East Dist. Hsinchu City, Taiwan

Issued by

**Compliance Certification Services Inc.
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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	10/14/2015	Initial Issue	All Page 161	Vera Hsu

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1. TEST REPORT CERTIFICATION

Applicant : Conjing Networks Inc.
Address : 4F., No.108, Zhenxing Rd., East Dist. Hsinchu City,
Taiwan
Equipment Under Test : 802.11 b/g/n High Performance Embedded WiFi Module
Model : CJM210EC
Data Applies To : CJM210ECI
Tested Date : September 18 ~ October 14, 2015

APPLICABLE STANDARD	
Standard	Test Result
FCC Part 15 Subpart C AND ANSI C63.10:2013	PASS

WE HEREBY CERTIFY THAT: The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:



Sb. Lu
Sr. Engineer

Reviewed by:



Gundam Lin
Sr. Engineer

2. EUT DESCRIPTION

Product Name	802.11 b/g/n High Performance Embedded WiFi Module
Model Number	CJM210EC
Data Applies To	CJM210ECI
Identify Number	T150918S02
Received Date	September 18, 2015
Frequency Range	IEEE 802.11b/g, 802.11gn HT20: 2412MHz ~ 2462MHz IEEE 802.11gn HT40: 2422MHz ~ 2452MHz
Transmit Power	For Ant. 1 (Chip Antenna): IEEE 802.11b mode: 15.05 dBm (0.0320 W) IEEE 802.11g mode: 24.27 dBm (0.2673 W) IEEE 802.11gn HT20 mode: 23.91 dBm (0.2460 W) IEEE 802.11gn HT40 mode: 20.65 dBm (0.1161 W) For Ant. 2 (Dipole Antenna): IEEE 802.11b mode: 12.92 dBm (0.0196 W) IEEE 802.11g mode: 24.56 dBm (0.2858 W) IEEE 802.11gn HT20 mode: 24.87 dBm (0.3069 W) IEEE 802.11gn HT40 mode: 23.41 dBm (0.2193 W)
Channel Spacing	5MHz
Channel Number	IEEE 802.11b/g, 802.11gn HT20: 11 Channels IEEE 802.11gn HT40: 7 Channels
Transmit Data Rate	IEEE 802.11b mode: up to 11 Mbps IEEE 802.11g mode: up to 54 Mbps IEEE 802.11gn HT20 mode (800ns GI): up to 65.00 Mbps IEEE 802.11gn HT20 mode (400ns GI): up to 72.20 Mbps IEEE 802.11gn HT40 mode (800ns GI): up to 135.00 Mbps IEEE 802.11gn HT40 mode (400ns GI): up to 150.00 Mbps
Type of Modulation	IEEE 802.11b mode: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g mode: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11gn HT20/40 mode: OFDM (64QAM, 16QAM, QPSK, BPSK)
Antenna Type	Ant. 1: Chip Antenna × 1, Antenna Gain: 0dBi Ant. 2: Dipole Antenna × 1, Antenna Gain: 5dBi
Power Rating	3.3Vdc
Test Voltage	120Vac, 60Hz

The difference of the series models:

Model Number	Radio	Antenna Option	
		Dipole	Chip
CJM210EC	802.11 b/g/n 1T1R	1 MMCX port	No Connector
CJM210ECI	802.11 b/g/n 1T1R	1 IPEX port	No Connector

Remark:

1. The sample selected for test is production product and was provided by manufacturer.
2. For more details, please refer to the User's manual of the EUT.
3. This submittal(s) (test report) is intended for FCC ID: 2AFZ7-CJM210X filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 15, Subpart C Rules.
4. The model CJM210EC was considered the main model for testing.

3. DESCRIPTION OF TEST MODES

The EUT is a 802.11b/g/n transceiver in 802.11 b/g/n High Performance Embedded WiFi Module.

IEEE 802.11b/g, 802.11gn HT20/HT40 mode: 1TX / 1RX

Ant. 1 (Chip Antenna) transmit/receive.

Ant. 2 (Dipole Antenna) transmit/receive.

The EUT comes with two types for sales, the detail information please refer the table as below:

No.	Antenna Type	Gain (dBi)	Test Item		
			Conduction	Spurious	Conducted
1	Chip	0		V	V
2	Dipole	5	V	V	V

Conducted Emission / Radiated Emission Test (Below 1 GHz)

1. The following test modes were scanned during the preliminary test:

No.	Pre-Test mode
1	TX mode / Ant. 1 (Chip Antenna)
2	TX mode / Ant. 2 (Dipole Antenna)

2. After the preliminary scan, the following test mode was found to produce the highest emission level.

Final Test mode		
Emission	Radiated Emission	Mode 1 / Mode 2
	Conducted Emission	Mode 2

Remark: Then, the above highest emission mode of the configuration of the EUT and cable was chosen for all final test items.

Conducted / Radiated Emission Test (Above 1 GHz)

IEEE 802.11b/g, 802.11gn HT20 mode:

The EUT had been tested under operating condition.

There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2412
Middle	2437
High	2462

IEEE 802.11b mode: 1Mbps data rate (worst case) was chosen for full testing.

IEEE 802.11g mode: 6Mbps data rate (worst case) was chosen for full testing.

IEEE 802.11gn HT20 mode: 6.5Mbps data rate (worst case) was chosen for full testing.

IEEE 802.11gn HT40 mode:

The EUT had been tested under operating condition.

There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2422
Middle	2437
High	2452

IEEE 802.11gn HT40 mode: 13.5Mbps data rate (worst case) was chosen for full testing.

Remark: Ant. 1 (Chip Antenna): The field strength of spurious emission was measured in the following position: EUT stand-up position (X axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the worst case was recorded.

4. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10:2013 and FCC CFR 47, 15.207, 15.209 and 15.247.

5. FACILITIES AND ACCREDITATION

5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at
No.989-1, Wenshan Rd., Shangshan Village,
Qionglin Township, Hsinchu County 30741, Taiwan (R.O.C.)

The sites are constructed in conformance with the requirements of ANSI C63.10:2013 and CISPR 22. All receiving equipment conforms to CISPR 16-1-1, CISPR 16-1-2, CISPR 16-1-3, CISPR 16-1-4 and CISPR 16-1-5.

5.2 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Taiwan	TAF
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The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada	INDUSTRY CANADA
Japan	VCCI
Taiwan	BSMI
USA	FCC MRA

Copies of granted accreditation certificates are available for downloading from our web site, <http://www.ccsrf.com>

Remark: FCC Designation Number TW1027.

5.3 MEASUREMENT UNCERTAINTY

The following table is for the measurement uncertainty, which is calculated as per the document CISPR 16-4-2.

PARAMETER	UNCERTAINTY
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 30 to 1000 MHz	+/- 3.97
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 1 to 18GHz	+/- 3.58
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 18 to 26 GHz	+/- 3.59
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 26 to 40 GHz	+/- 3.81
Conducted Emission (Mains Terminals), 9kHz to 30MHz	+/- 2.48

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Consistent with industry standard (e.g. CISPR 22, clause 11, Measurement Uncertainty) determining compliance with the limits shall be base on the results of the compliance measurement. Consequently the measure emissions being less than the maximum allowed emission result in this be a compliant test or passing test.

The acceptable measurement uncertainty value without requiring revision of the compliance statement is base on conducted and radiated emissions being less than U_{CISPR} which is 3.6dB and 5.2dB respectively. CCS values (called U_{Lab} in CISPR 16-4-2) is less than U_{CISPR} as shown in the table above. Therefore, MU need not be considered for compliance.

6. SETUP OF EQUIPMENT UNDER TEST

SUPPORT EQUIPMENT

No.	Product	Manufacturer	Model No.	Serial No.
1	Notebook PC	HP	ProBook 4421s	CNF03242PJ

Power Adapter:

No.	Manufacturer	Model No.	Power Input	Power Output
1	I.T.E.	SWP00811050	100-120Vac, 50-60Hz, 0.2A	5Vdc, 1.6A

No.	Signal Cable Description
1	Non-shielded RJ-45 cable, 12m x 1

SETUP DIAGRAM FOR TESTS

EUT & peripherals setup diagram is shown in appendix setup photos.

EUT OPERATING CONDITION

1. EUT & peripherals setup diagram is shown in appendix setup photos.

2. TX mode:

- ⇒ **TX Data Rate:** 1Mbps Bandwidth 20 (IEEE 802.11b mode)
6Mbps Bandwidth 20 (IEEE 802.11g mode)
6.5Mbps Bandwidth 20 (IEEE 802.11gn HT20 mode)
13.5Mbps Bandwidth 40 (IEEE 802.11gn HT40 mode)

⇒ **Power control**

For Ant. 1 (Chip Antenna)

- IEEE 802.11b Channel Low (2412MHz) Power set 12.5
- IEEE 802.11b Channel Mid (2437MHz) Power set 11.5
- IEEE 802.11b Channel High (2462MHz) Power set 10.5
- IEEE 802.11g Channel Low (2412MHz) Power set 10.5
- IEEE 802.11g Channel Mid (2437MHz) Power set 18
- IEEE 802.11g Channel High (2462MHz) Power set 9
- IEEE 802.11gn HT20 Channel Low (2412MHz) Power set 10
- IEEE 802.11gn HT20 Channel Mid (2437MHz) Power set 17
- IEEE 802.11gn HT20 Channel High (2462MHz) Power set 7.5
- IEEE 802.11gn HT40 Channel Low (2422MHz) Power set 8.5
- IEEE 802.11gn HT40 Channel Mid (2437MHz) Power set 9
- IEEE 802.11gn HT40 Channel High (2452MHz) Power set 6.5

For Ant. 2 (Dipole Antenna)

IEEE 802.11b Channel Low (2412MHz) Power set 9.5
IEEE 802.11b Channel Mid (2437MHz) Power set 10
IEEE 802.11b Channel High (2462MHz) Power set 10.5
IEEE 802.11g Channel Low (2412MHz) Power set 12.5
IEEE 802.11g Channel Mid (2437MHz) Power set 20
IEEE 802.11g Channel High (2462MHz) Power set 13
IEEE 802.11gn HT20 Channel Low (2412MHz) Power set 11
IEEE 802.11gn HT20 Channel Mid (2437MHz) Power set 20
IEEE 802.11gn HT20 Channel High (2462MHz) Power set 12.5
IEEE 802.11gn HT40 Channel Low (2422MHz) Power set 8
IEEE 802.11gn HT40 Channel Mid (2437MHz) Power set 12
IEEE 802.11gn HT40 Channel High (2452MHz) Power set 9

3. All of the functions are under run.

4. Start test.

7. FCC PART 15.247 REQUIREMENTS

7.1 6dB BANDWIDTH

LIMITS

§ 15.247(a) (2) For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz.

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EXA Signal Analyzer	Agilent	N9010A	MY52220817	03/19/2016

Remark: Each piece of equipment is scheduled for calibration once a year.

TEST SETUP



TEST PROCEDURE

1. The transmitter output was connected to a spectrum analyzer.
2. Set RBW = 100 kHz.
3. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

TEST RESULTS

For Ant. 1 (Chip Antenna)

IEEE 802.11b mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	10.07	500	PASS
Middle	2437	10.09	500	PASS
High	2462	10.05	500	PASS

IEEE 802.11g mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	16.34	500	PASS
Middle	2437	16.32	500	PASS
High	2462	16.33	500	PASS

IEEE 802.11gn HT20 mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	17.57	500	PASS
Middle	2437	17.57	500	PASS
High	2462	17.56	500	PASS

IEEE 802.11gn HT40 mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	2422	36.34	500	PASS
Middle	2437	36.36	500	PASS
High	2452	36.34	500	PASS

For Ant. 2 (Dipole Antenna)

IEEE 802.11b mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	10.03	500	PASS
Middle	2437	10.08	500	PASS
High	2462	10.08	500	PASS

IEEE 802.11g mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	16.32	500	PASS
Middle	2437	16.32	500	PASS
High	2462	16.33	500	PASS

IEEE 802.11gn HT20 mode

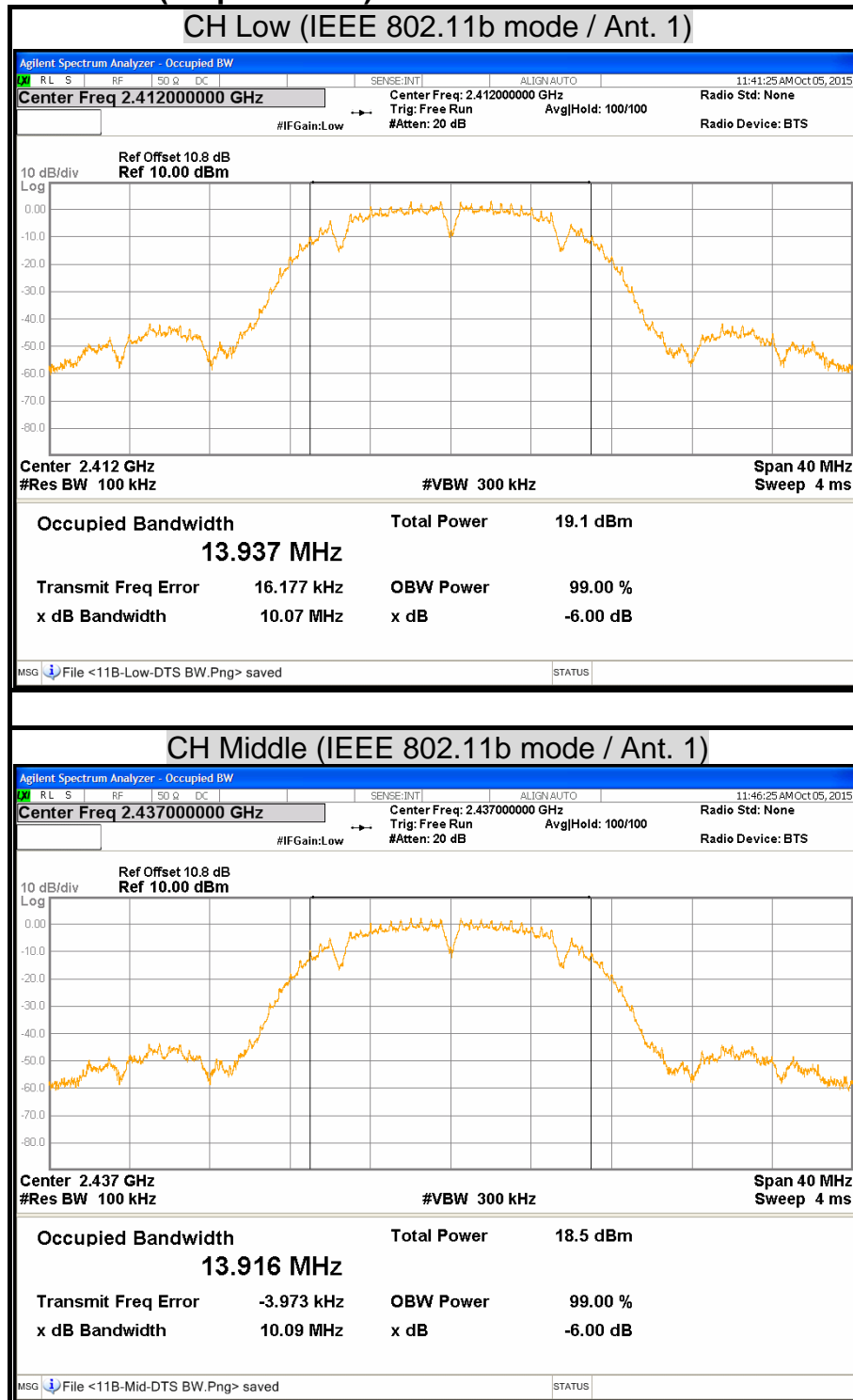
Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	17.55	500	PASS
Middle	2437	17.31	500	PASS
High	2462	17.21	500	PASS

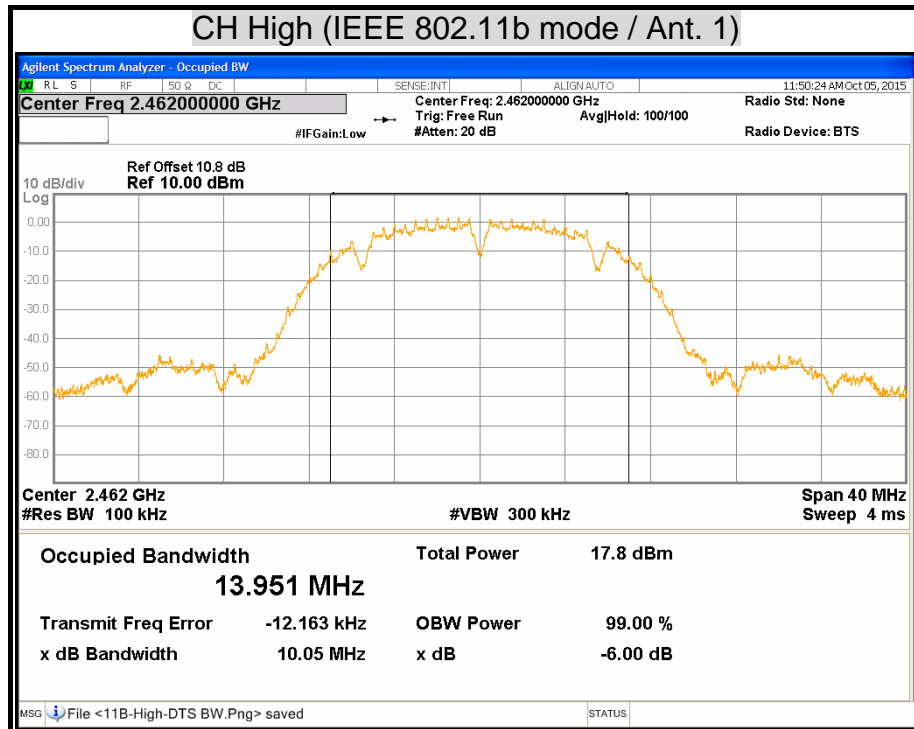
IEEE 802.11gn HT40 mode

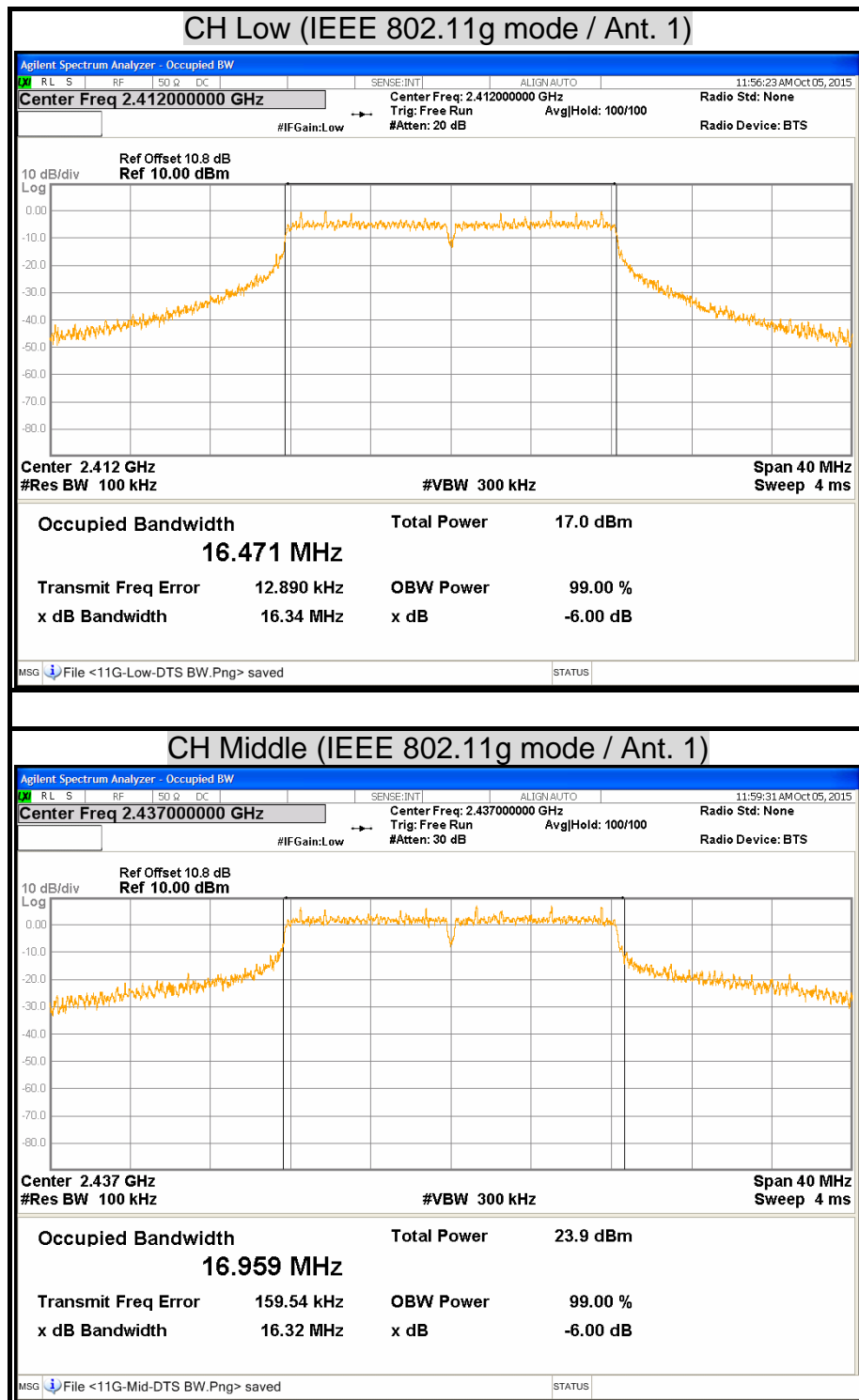
Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	2422	36.34	500	PASS
Middle	2437	36.33	500	PASS
High	2452	36.10	500	PASS

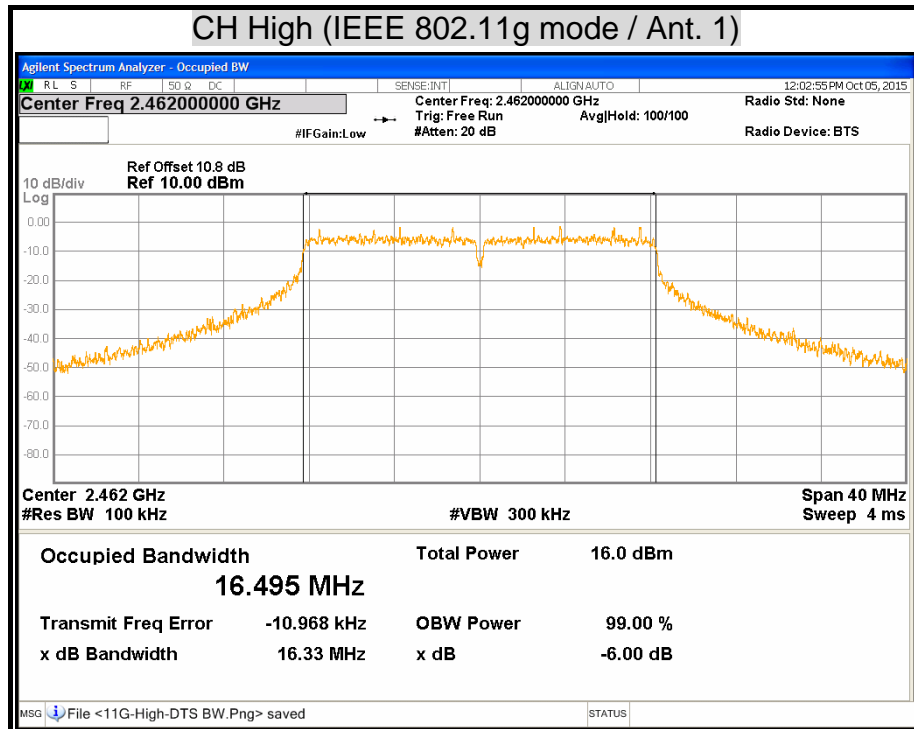
6dB BANDWIDTH

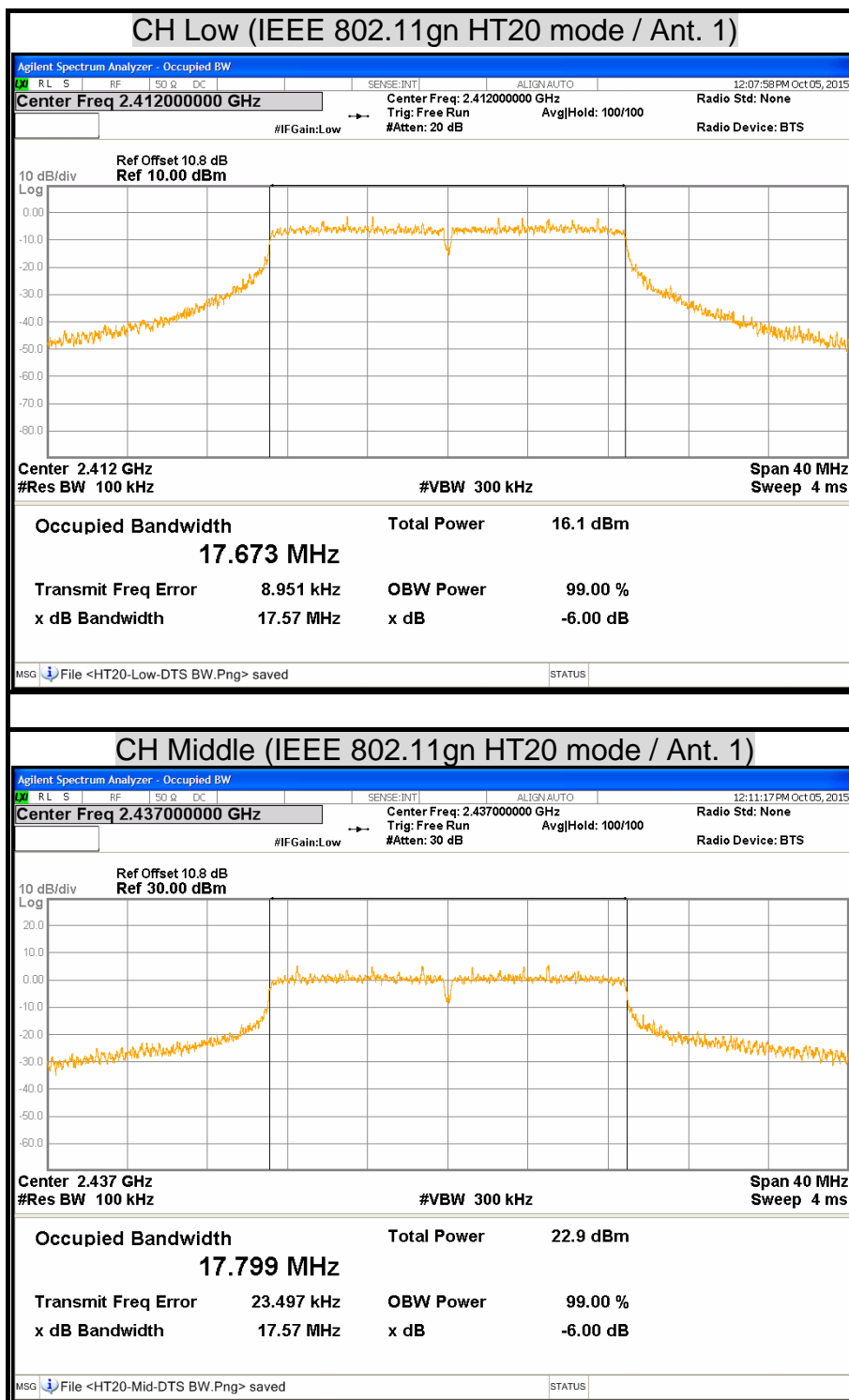
For Ant. 1 (Chip Antenna)

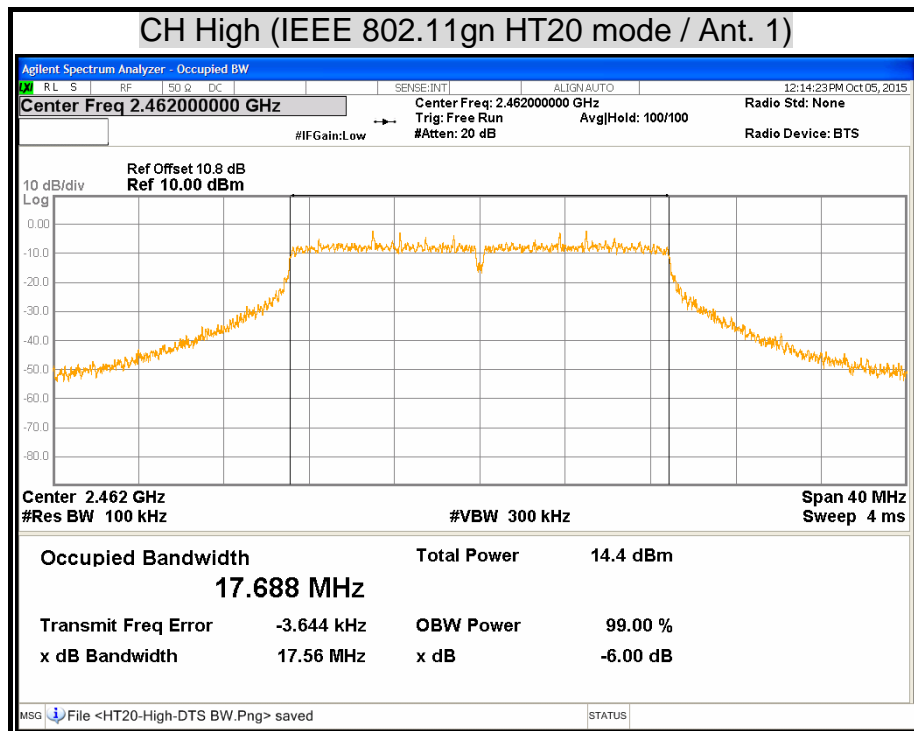


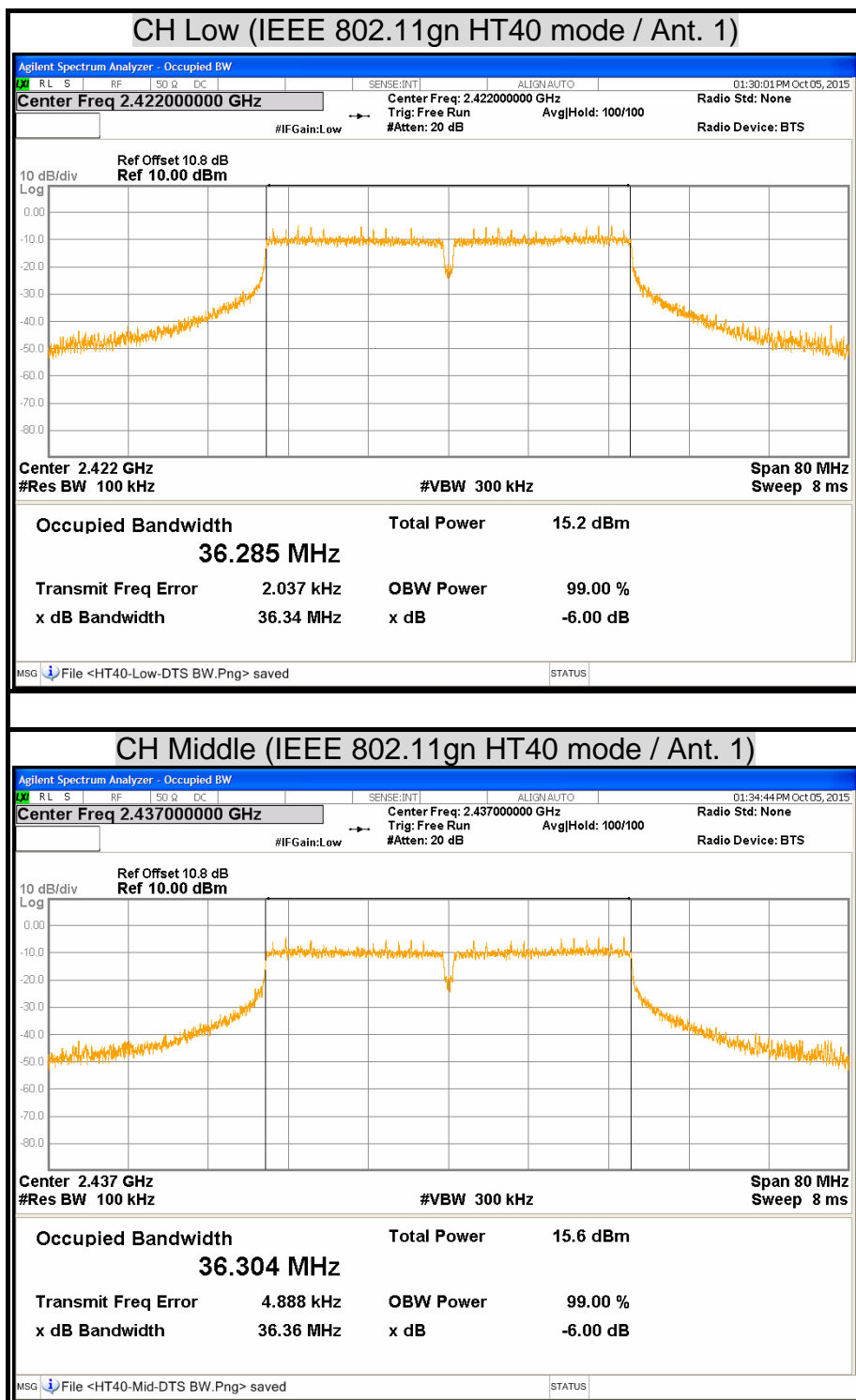


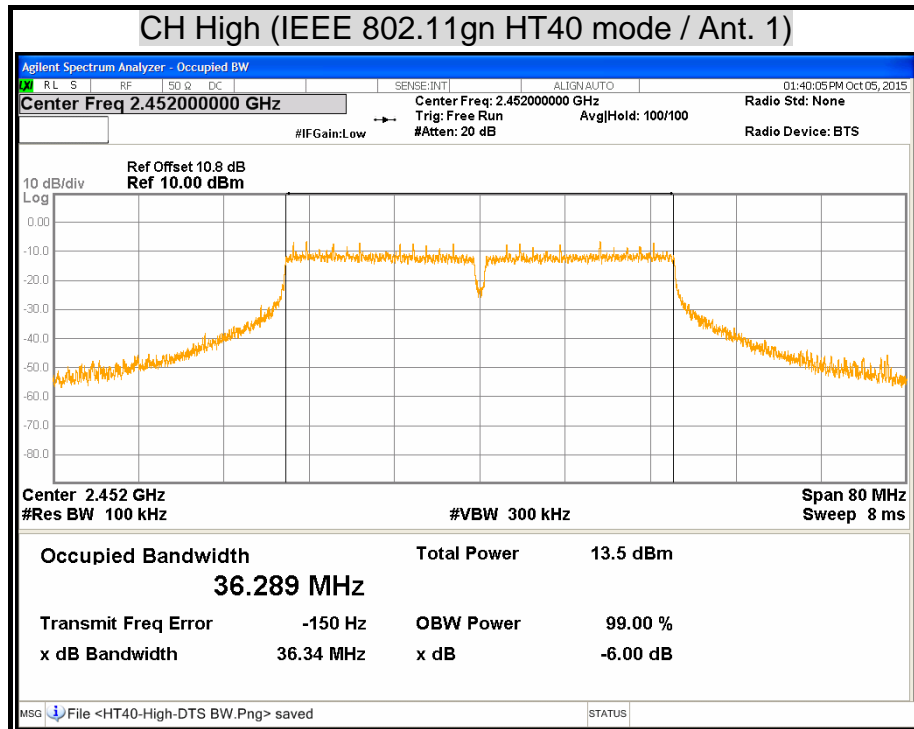




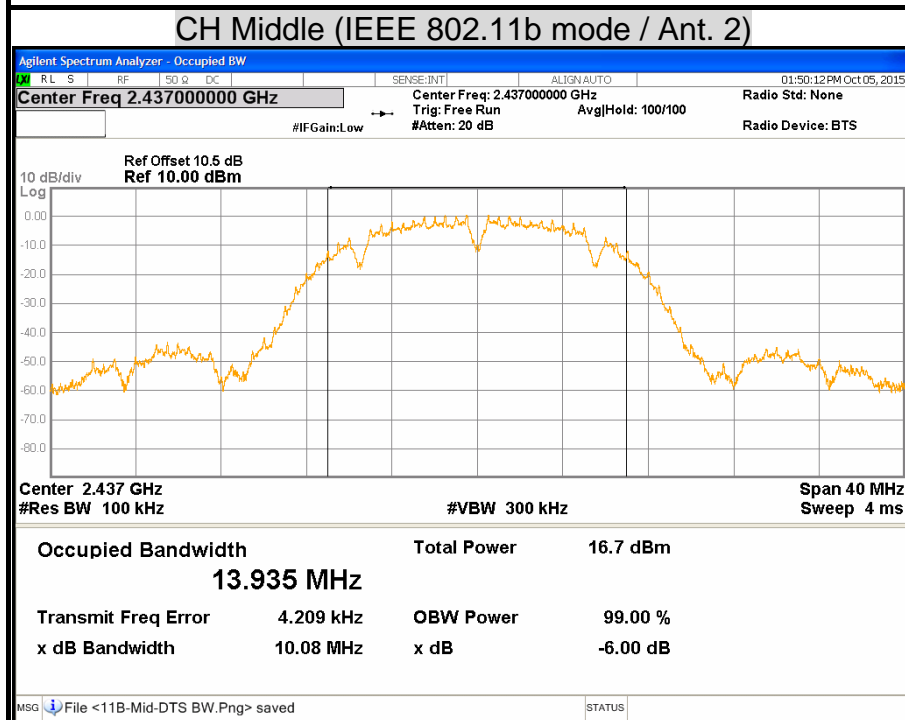
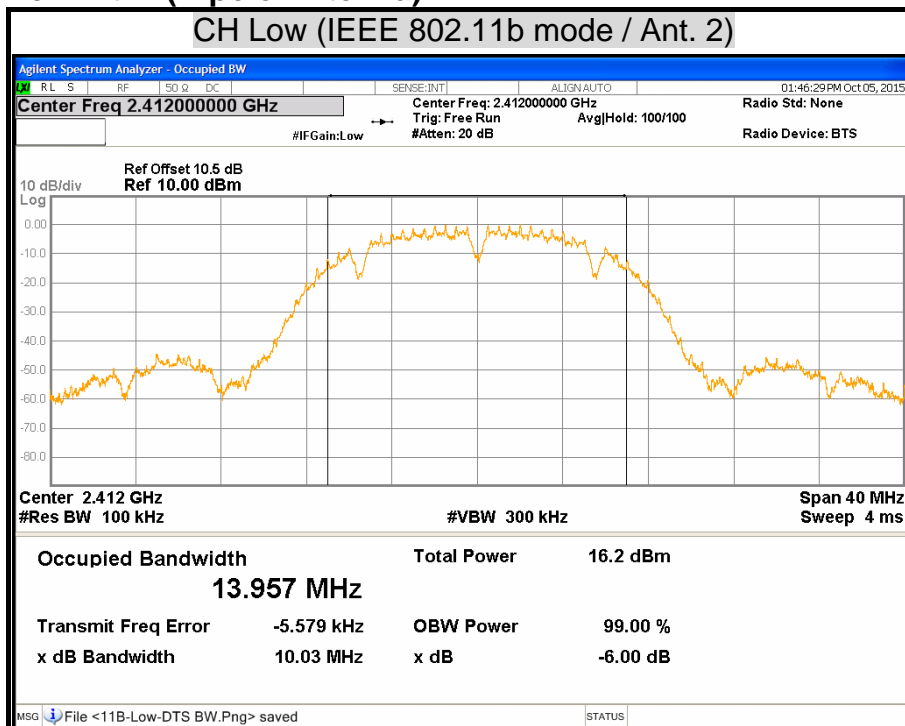


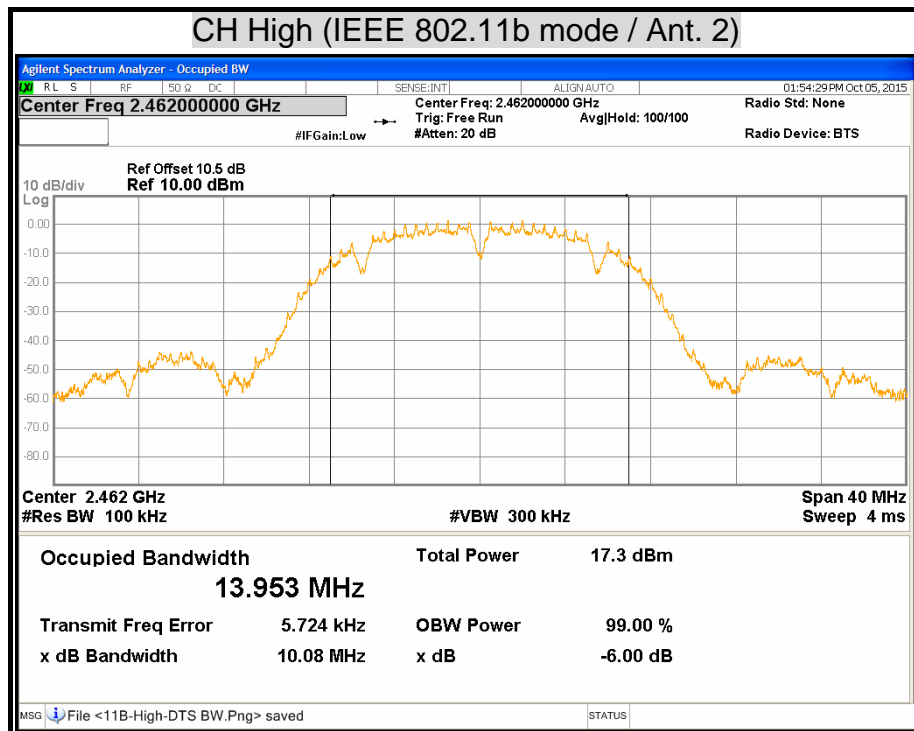


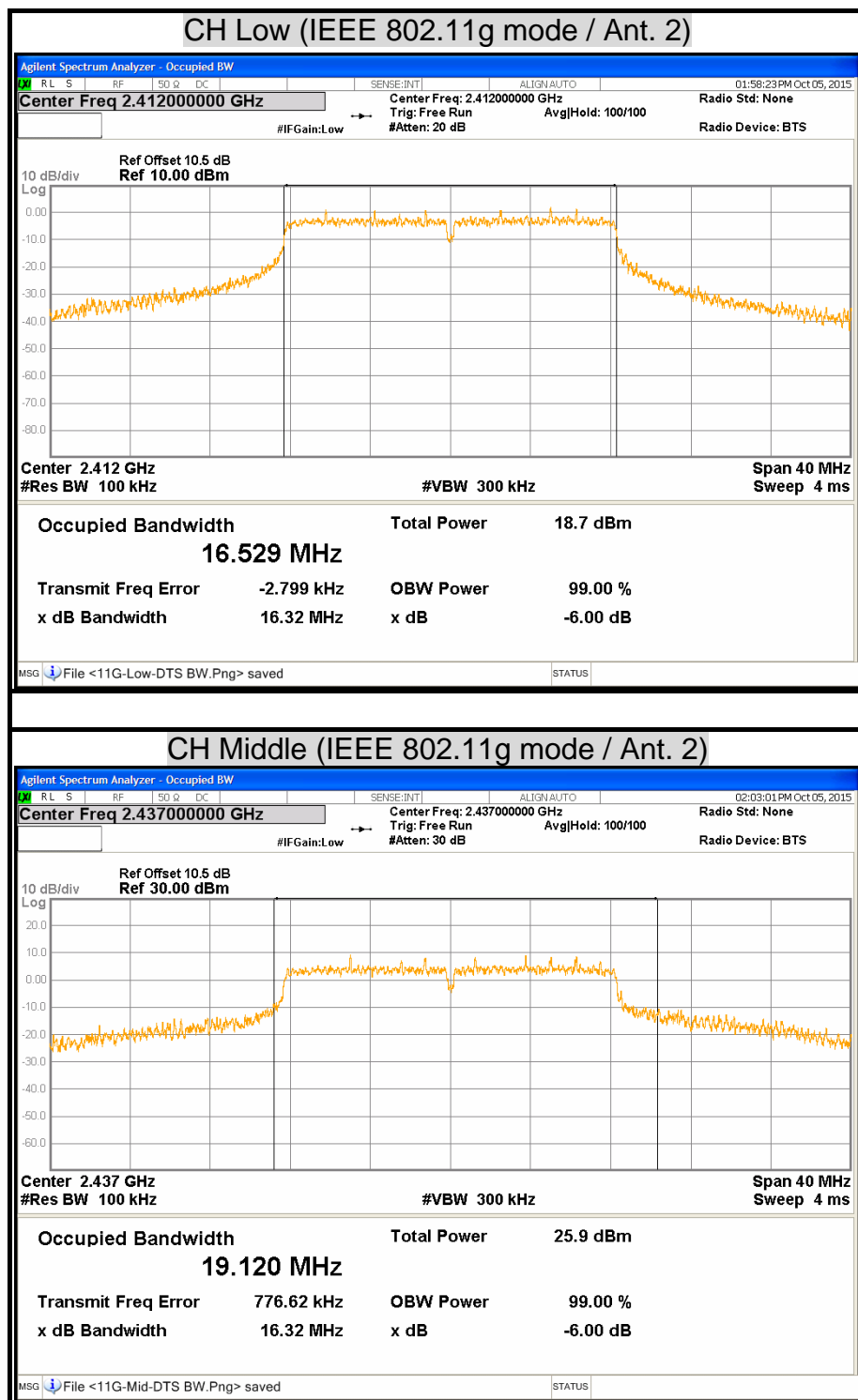


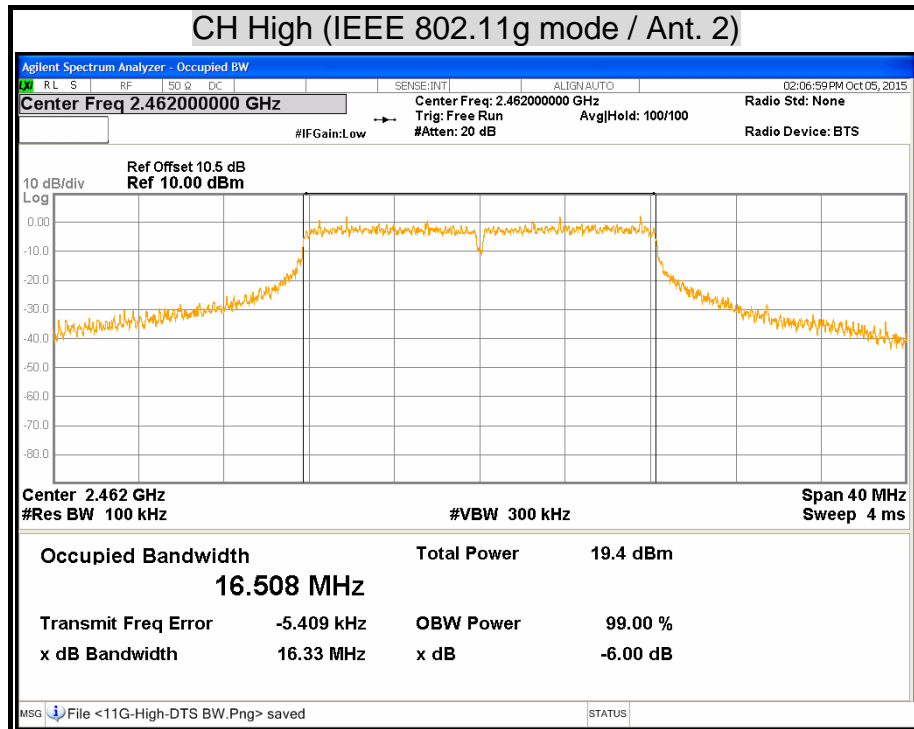


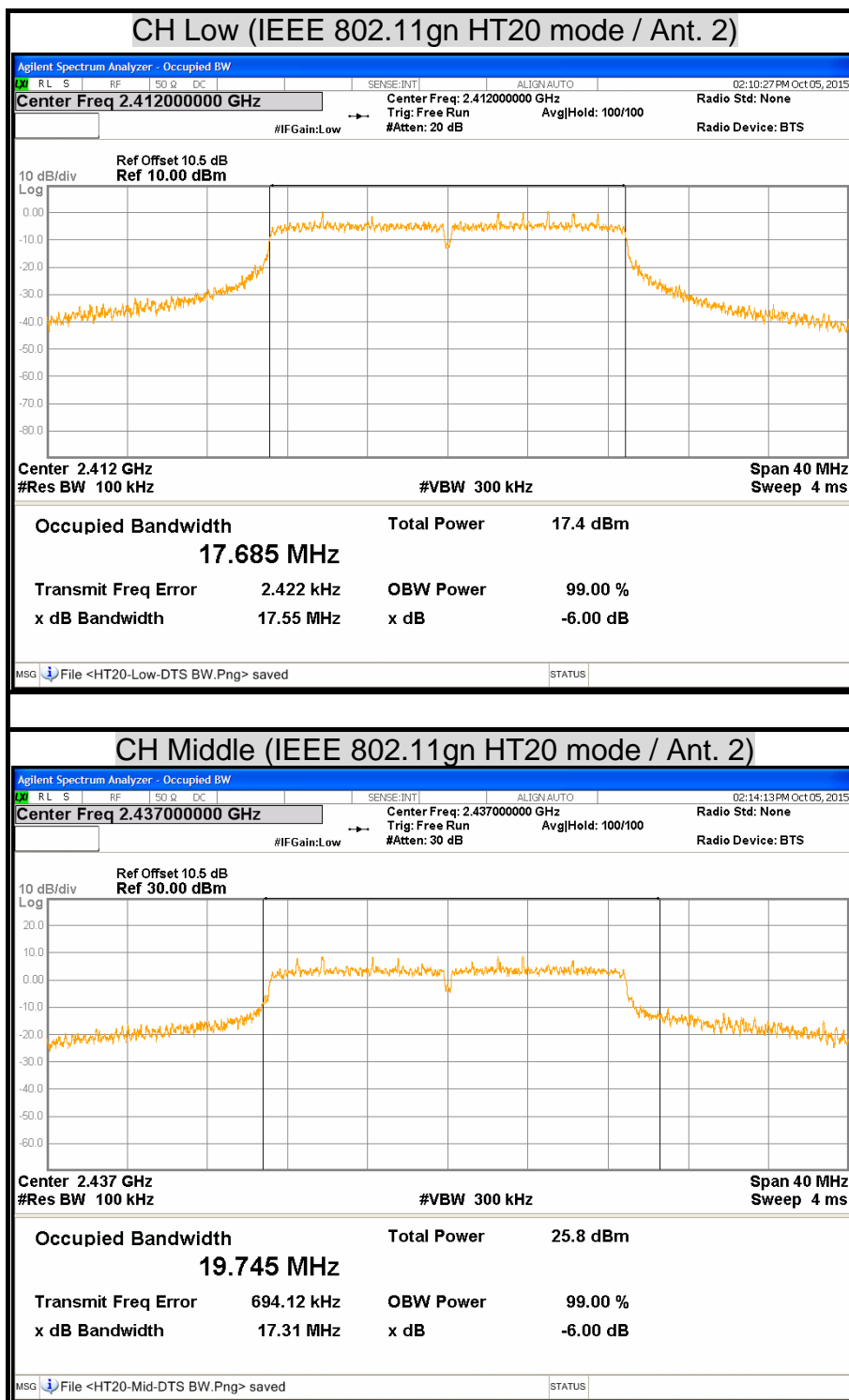
For Ant. 2 (Dipole Antenna)

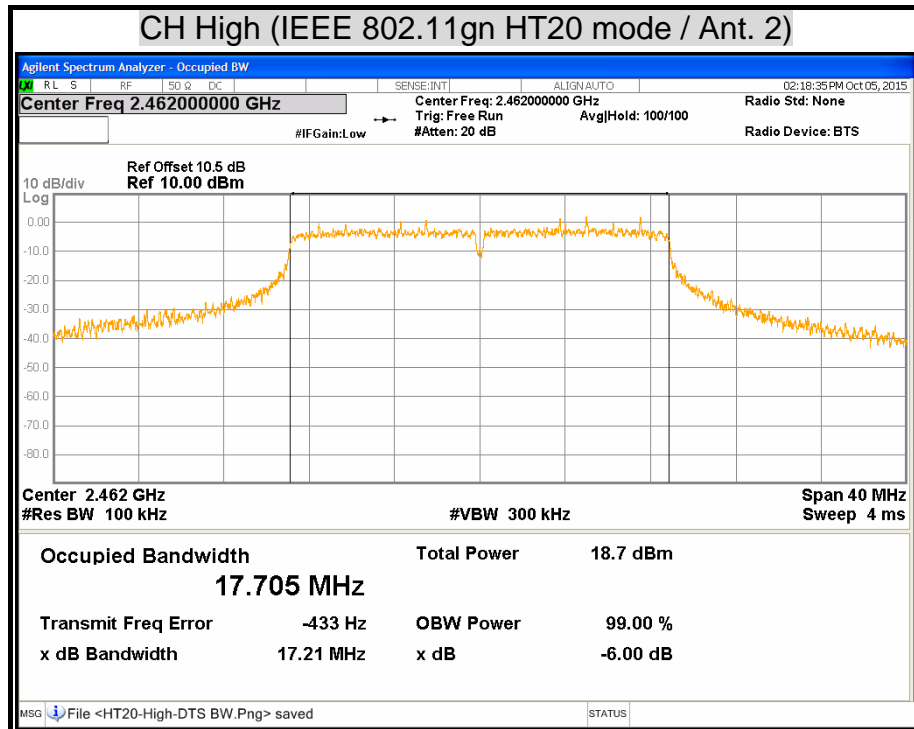


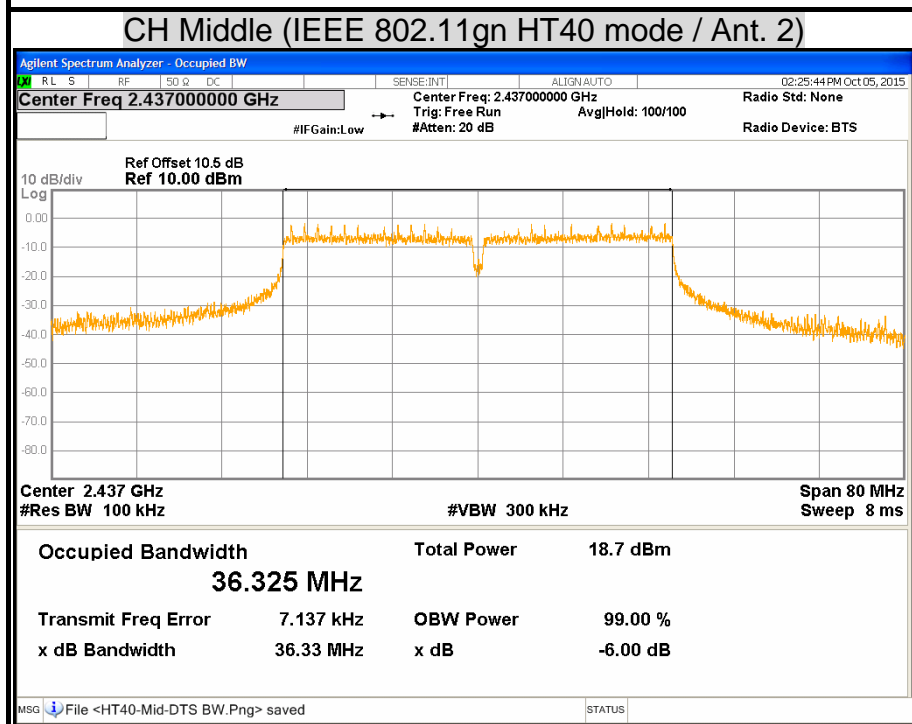
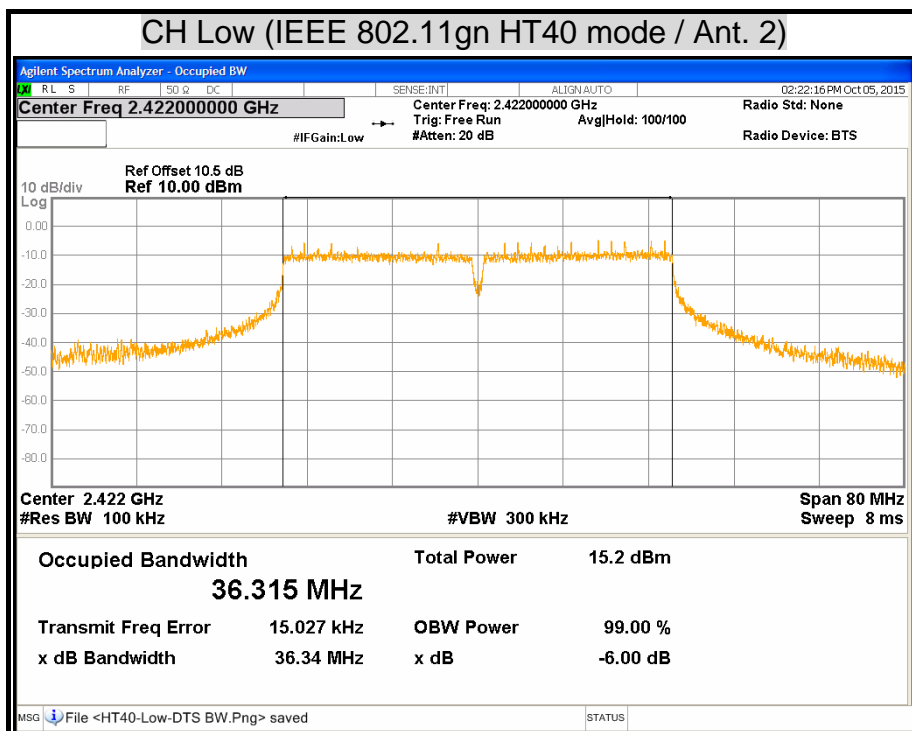


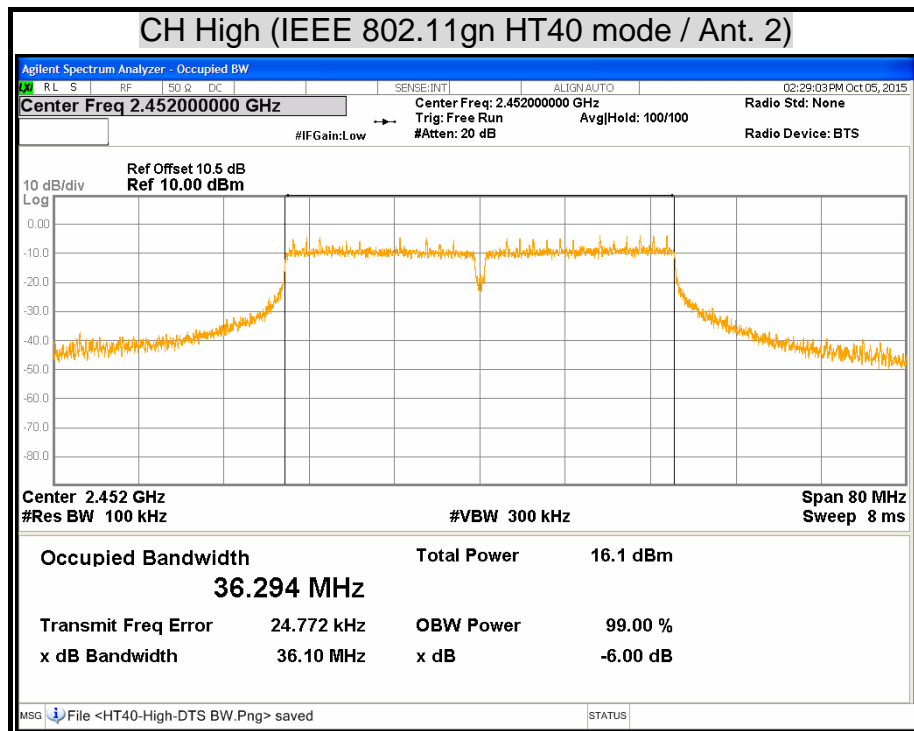












7.2 MAXIMUM PEAK OUTPUT POWER

LIMITS

§ 15.247(b) The maximum peak output power of the intentional radiator shall not exceed the following:

§ 15.247(b) (3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 watt.

§ 15.247(b) (4) Except as shown in paragraphs (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1) or (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

§ KDB 662911: For power measurements on IEEE 802.11 devices

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

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Power Meter	Anritsu	ML2495A	1149001	12/11/2015
Power Sensor	Anritsu	MA2411B	1126148	12/11/2015

Remark: Each piece of equipment is scheduled for calibration once a year.

TEST SETUP



TEST PROCEDURE

The transmitter output is connected to the power meter. The power meter is set to the peak power detection.

TEST RESULTS

For Ant. 1 (Chip Antenna)

IEEE 802.11b mode

Channel	Channel Frequency (MHz)	Peak Power		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	15.05	0.0320	30.00	1.0000	PASS
Middle	2437	14.55	0.0285	30.00	1.0000	PASS
High	2462	13.96	0.0249	30.00	1.0000	PASS

Remark:

1. At final test to get the worst-case emission at 1Mbps.
2. The cable assembly insertion loss of 10.8 dB (including 10 dB pad and 0.8 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

IEEE 802.11g mode

Channel	Channel Frequency (MHz)	Peak Power		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	20.36	0.1086	30.00	1.0000	PASS
Middle	2437	24.27	0.2673	30.00	1.0000	PASS
High	2462	19.14	0.0820	30.00	1.0000	PASS

Remark:

1. At final test to get the worst-case emission at 6Mbps.
2. The cable assembly insertion loss of 10.8 dB (including 10 dB pad and 0.8 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

IEEE 802.11gn HT20 mode

Channel	Channel Frequency (MHz)	Peak Power		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	19.54	0.0899	30.00	1.0000	PASS
Middle	2437	23.91	0.2460	30.00	1.0000	PASS
High	2462	17.43	0.0553	30.00	1.0000	PASS

Remark:

1. At final test to get the worst-case emission at 6.5Mbps.
2. The cable assembly insertion loss of 10.8 dB (including 10 dB pad and 0.8 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

IEEE 802.11gn HT40 mode

Channel	Channel Frequency (MHz)	Peak Power		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2422	19.15	0.0822	30.00	1.0000	PASS
Middle	2437	20.65	0.1161	30.00	1.0000	PASS
High	2452	18.52	0.0711	30.00	1.0000	PASS

Remark:

1. At final test to get the worst-case emission at 13.5Mbps.
2. The cable assembly insertion loss of 10.8 dB (including 10 dB pad and 0.8 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

For Ant. 2 (Dipole Antenna)

IEEE 802.11b mode

Channel	Channel Frequency (MHz)	Peak Power		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	12.43	0.0175	30.00	1.0000	PASS
Middle	2437	12.57	0.0181	30.00	1.0000	PASS
High	2462	12.92	0.0196	30.00	1.0000	PASS

Remark:

1. At final test to get the worst-case emission at 1Mbps.
2. The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

IEEE 802.11g mode

Channel	Channel Frequency (MHz)	Peak Power		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	21.23	0.1327	30.00	1.0000	PASS
Middle	2437	24.56	0.2858	30.00	1.0000	PASS
High	2462	21.69	0.1476	30.00	1.0000	PASS

Remark:

1. At final test to get the worst-case emission at 6Mbps.
2. The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

IEEE 802.11gn HT20 mode

Channel	Channel Frequency (MHz)	Peak Power		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	20.22	0.1052	30.00	1.0000	PASS
Middle	2437	24.87	0.3069	30.00	1.0000	PASS
High	2462	21.68	0.1472	30.00	1.0000	PASS

Remark:

1. At final test to get the worst-case emission at 6.5Mbps.
2. The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

IEEE 802.11gn HT40 mode

Channel	Channel Frequency (MHz)	Peak Power		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2422	20.67	0.1167	30.00	1.0000	PASS
Middle	2437	23.41	0.2193	30.00	1.0000	PASS
High	2452	21.06	0.1276	30.00	1.0000	PASS

Remark:

1. At final test to get the worst-case emission at 13.5Mbps.
2. The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

7.3 AVERAGE POWER

LIMITS

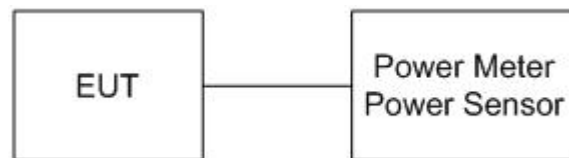
None: For reporting purposes only.

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Power Meter	Anritsu	ML2495A	1149001	12/11/2015
Power Sensor	Anritsu	MA2411B	1126148	12/11/2015

Remark: Each piece of equipment is scheduled for calibration once a year.

TEST SETUP



TEST PROCEDURE

The transmitter output is connected to the power meter. The power meter is set to the average power detection.

TEST RESULTS

For Ant. 1 (Chip Antenna)

IEEE 802.11b mode

Channel	Channel Frequency (MHz)	Average Power (dBm)
Low	2412	12.81
Middle	2437	12.31
High	2462	11.72

Remark:

1. At final test to get the worst-case emission at 6Mbps.
2. The cable assembly insertion loss of 10.8 dB (including 10 dB pad and 0.8 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11g mode

Channel	Channel Frequency (MHz)	Average Power (dBm)
Low	2412	11.04
Middle	2437	18.03
High	2462	10.11

Remark:

3. At final test to get the worst-case emission at 6Mbps.
4. The cable assembly insertion loss of 10.8 dB (including 10 dB pad and 0.8 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11gn HT20 mode

Channel	Channel Frequency (MHz)	Average Power (dBm)
Low	2412	10.63
Middle	2437	17.22
High	2462	8.58

Remark:

1. At final test to get the worst-case emission at 6.5Mbps.
2. The cable assembly insertion loss of 10.8 dB (including 10 dB pad and 0.8 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11gn HT40 mode

Channel	Channel Frequency (MHz)	Average Power (dBm)
Low	2422	9.17
Middle	2437	9.69
High	2452	7.31

Remark:

1. At final test to get the worst-case emission at 13.5Mbps.
2. The cable assembly insertion loss of 10.8 dB (including 10 dB pad and 0.8 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

For Ant. 2 (Dipole Antenna)

IEEE 802.11b mode

Channel	Channel Frequency (MHz)	Average Power (dBm)
Low	2412	10.04
Middle	2437	10.33
High	2462	10.75

Remark:

1. At final test to get the worst-case emission at 1Mbps.
2. The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11g mode

Channel	Channel Frequency (MHz)	Average Power (dBm)
Low	2412	12.92
Middle	2437	20.02
High	2462	13.33

Remark:

1. At final test to get the worst-case emission at 6Mbps.
2. The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11gn HT20 mode

Channel	Channel Frequency (MHz)	Average Power (dBm)
Low	2412	12.15
Middle	2437	20.06
High	2462	13.21

Remark:

1. At final test to get the worst-case emission at 6.5Mbps.
2. The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11gn HT40 mode

Channel	Channel Frequency (MHz)	Average Power (dBm)
Low	2422	9.03
Middle	2437	12.35
High	2452	9.76

Remark:

1. At final test to get the worst-case emission at 13.5Mbps.
2. The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

7.4 POWER SPECTRAL DENSITY

LIMITS

§ 15.247(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EXA Signal Analyzer	Agilent	N9010A	MY52220817	03/19/2016

Remark: Each piece of equipment is scheduled for calibration once a year.

TEST SETUP



TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set analyzer center frequency to DTS channel center frequency.
3. Set the span to 1.5 times the DTS channel bandwidth.
4. Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
5. Set the VBW $\geq 3 \times \text{RBW}$.
6. Detector = peak.
7. Sweep time = auto couple.
8. Trace mode = max hold.
9. Allow trace to fully stabilize.
10. Use the peak marker function to determine the maximum amplitude level within the RBW.
11. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

TEST RESULTS

For Ant. 1 (Chip Antenna)

IEEE 802.11b mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2412	-5.46	8	PASS
Middle	2437	-6.35	8	PASS
High	2462	-7.16	8	PASS

Remark:

1. At final test to get the worst-case emission at 1Mbps.
2. The cable assembly insertion loss of 10.8 dB (including 10 dB pad and 0.8 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11g mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2412	-8.95	8	PASS
Middle	2437	-2.54	8	PASS
High	2462	-8.18	8	PASS

Remark:

1. At final test to get the worst-case emission at 6Mbps.
2. The cable assembly insertion loss of 10.8 dB (including 10 dB pad and 0.8 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11gn HT20 mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2412	-9.29	8	PASS
Middle	2437	-3.42	8	PASS
High	2462	-11.49	8	PASS

Remark:

1. At final test to get the worst-case emission at 6.5Mbps.
2. The cable assembly insertion loss of 10.8 dB (including 10 dB pad and 0.8 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11gn HT40 mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2422	-12.63	8	PASS
Middle	2437	-13.36	8	PASS
High	2452	-15.73	8	PASS

Remark:

1. At final test to get the worst-case emission at 13.5Mbps.
2. The cable assembly insertion loss of 10.8 dB (including 10 dB pad and 0.8 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

For Ant. 2 (Dipole Antenna)

IEEE 802.11b mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2412	-8.22	8	PASS
Middle	2437	-7.41	8	PASS
High	2462	-6.80	8	PASS

Remark:

1. At final test to get the worst-case emission at 1Mbps.
2. The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11g mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2412	-6.62	8	PASS
Middle	2437	-0.19	8	PASS
High	2462	-5.14	8	PASS

Remark:

1. At final test to get the worst-case emission at 1Mbps.
2. The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11gn HT20 mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2412	-8.28	8	PASS
Middle	2437	0.10	8	PASS
High	2462	-5.75	8	PASS

Remark:

1. At final test to get the worst-case emission at 1Mbps.
2. The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

IEEE 802.11gn HT40 mode

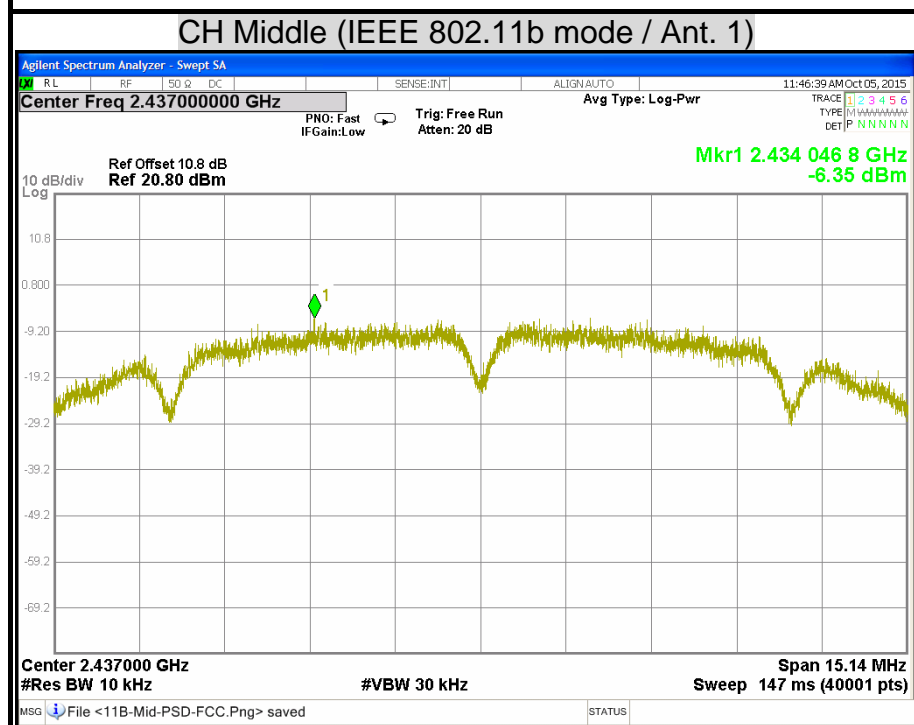
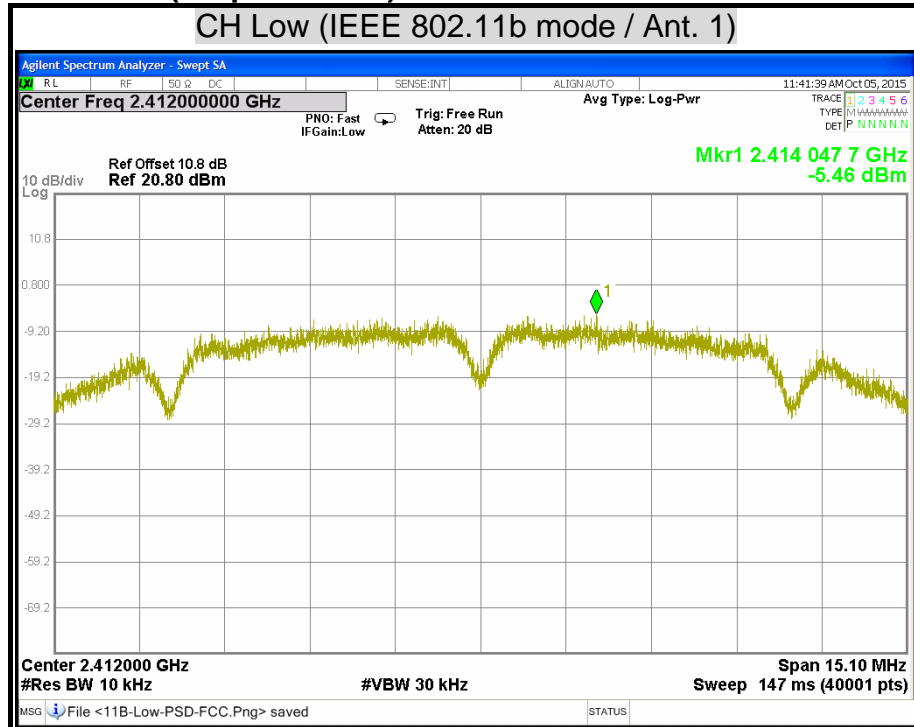
Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2422	-13.55	8	PASS
Middle	2437	-11.09	8	PASS
High	2452	-12.36	8	PASS

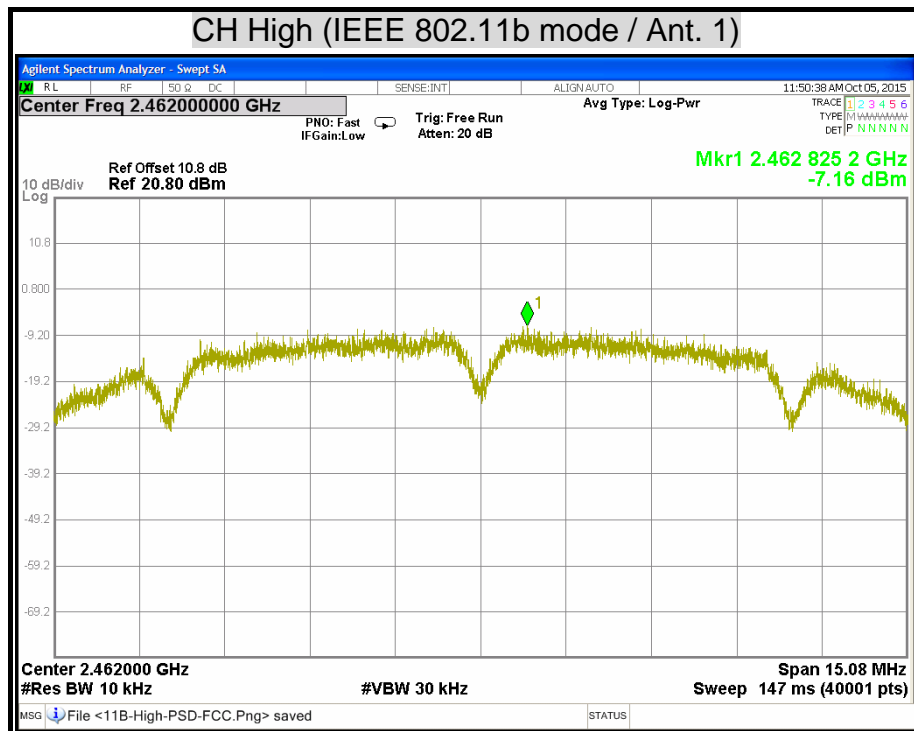
Remark:

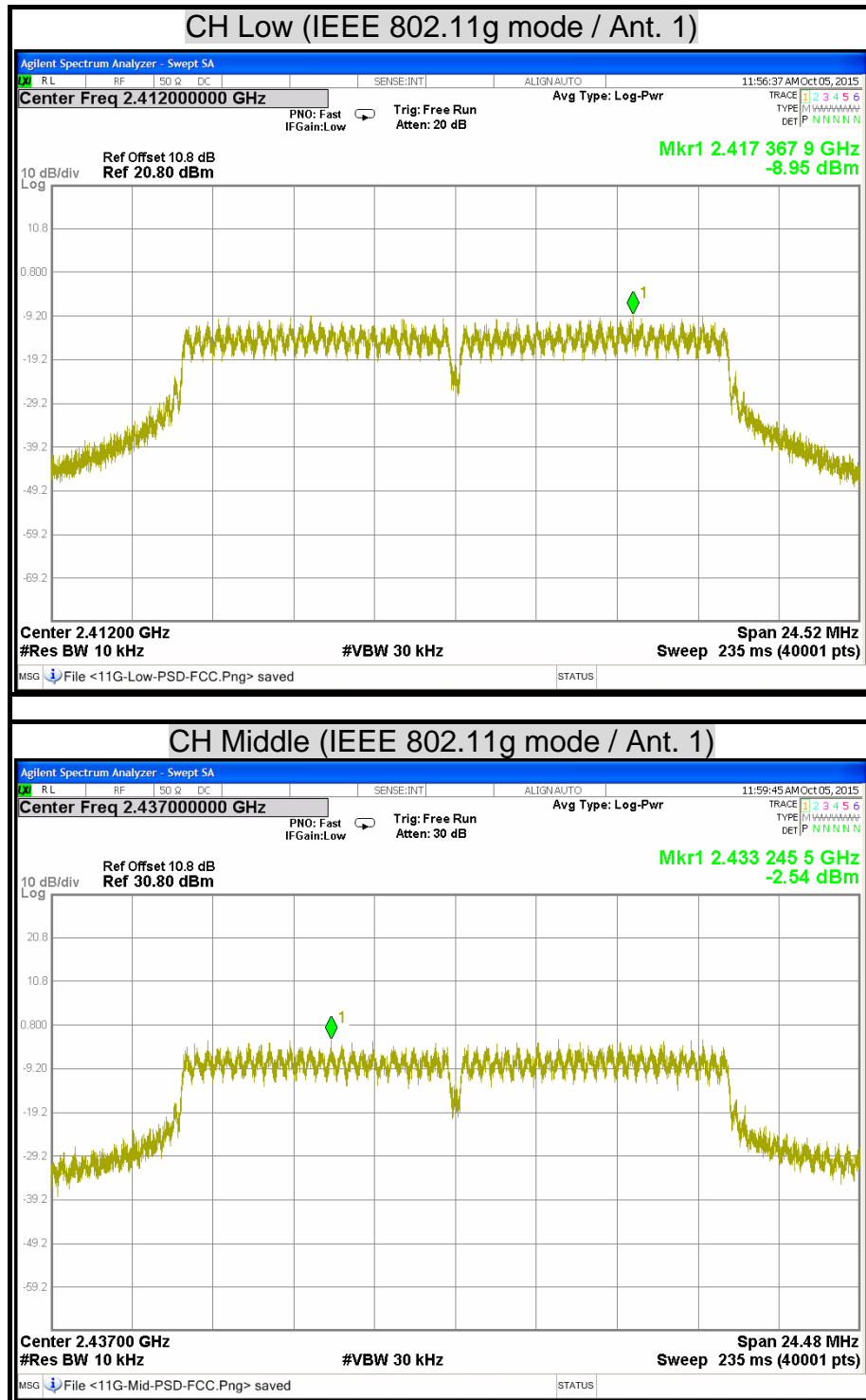
1. At final test to get the worst-case emission at 1Mbps.
2. The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

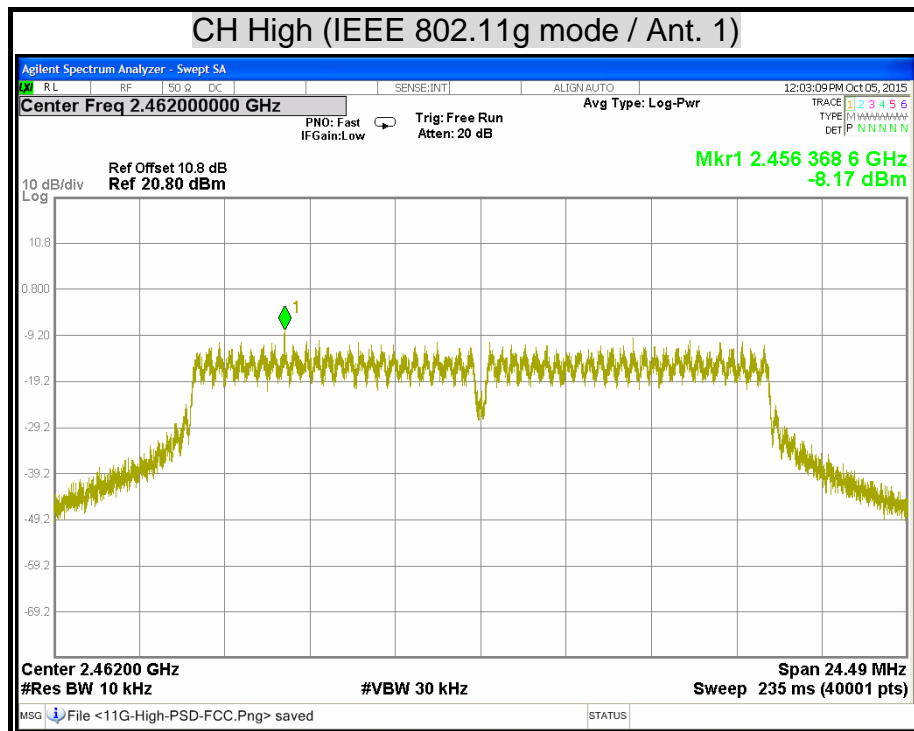
POWER SPECTRAL DENSITY

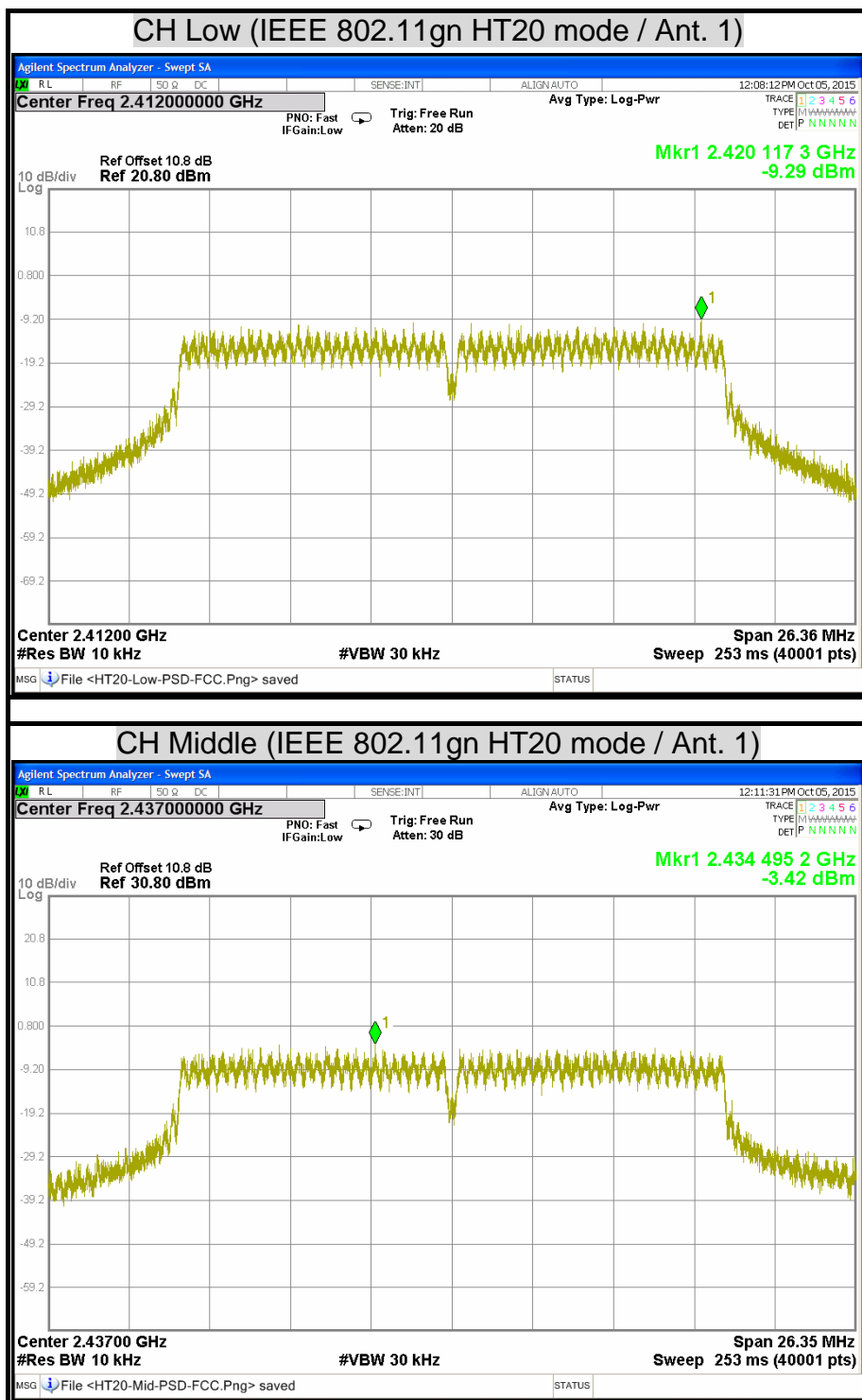
For Ant. 1 (Chip Antenna)

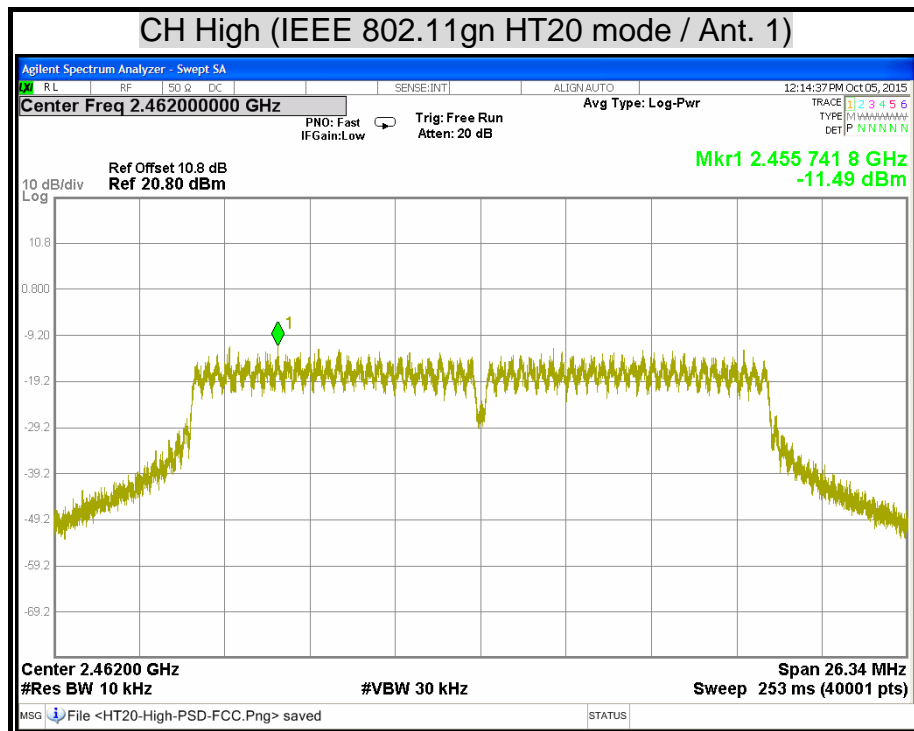


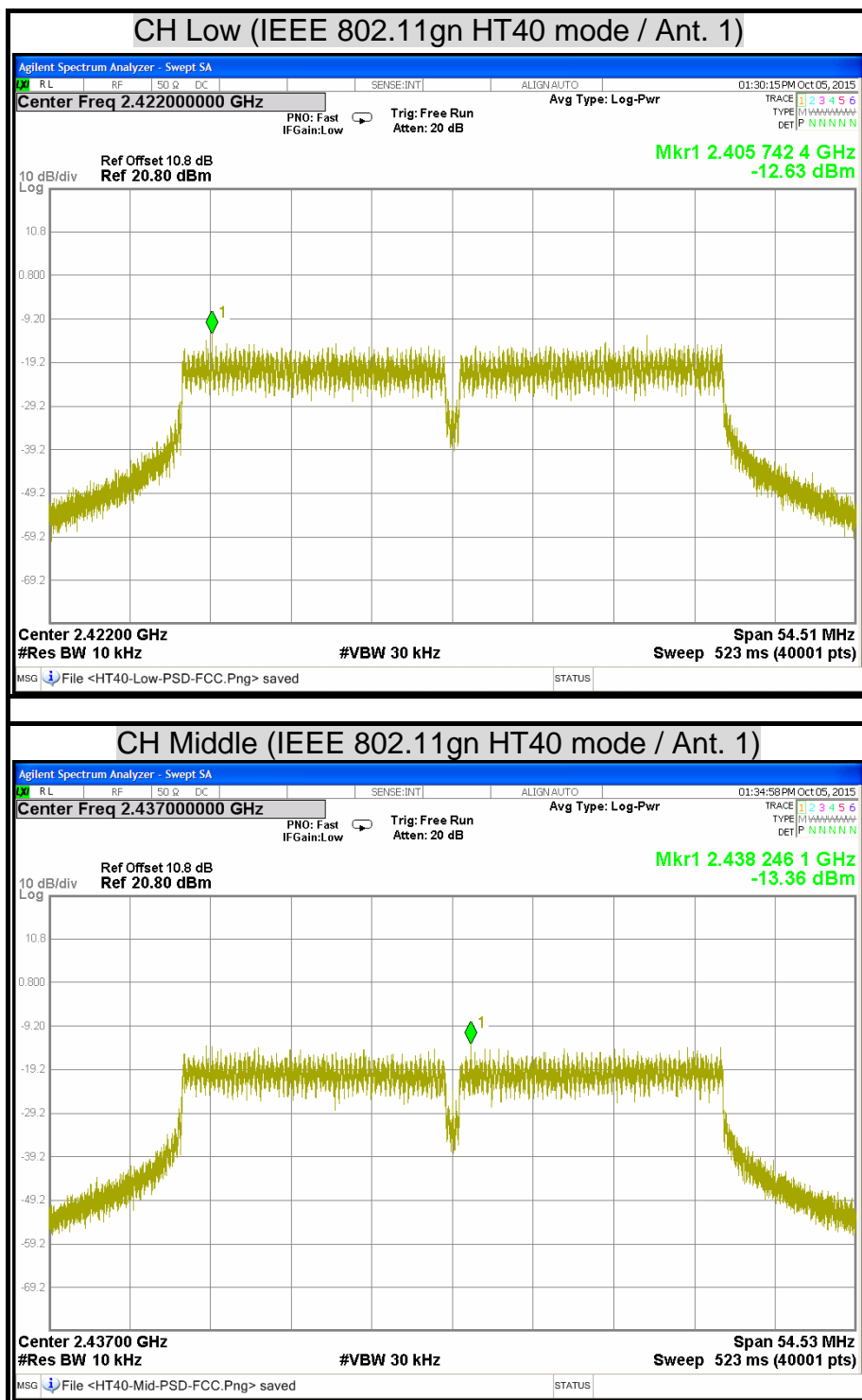


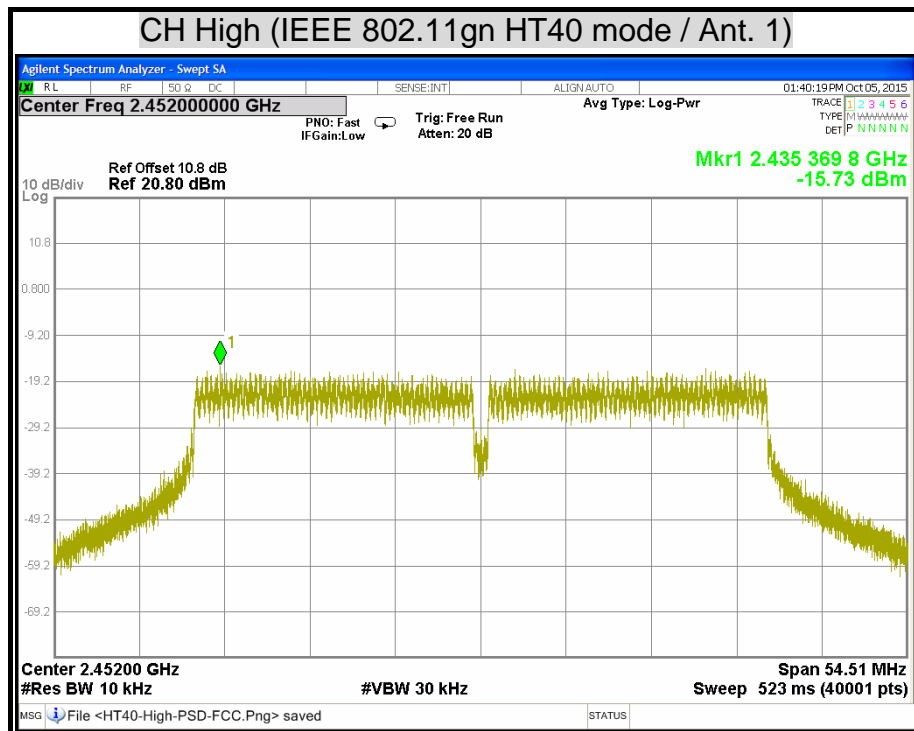




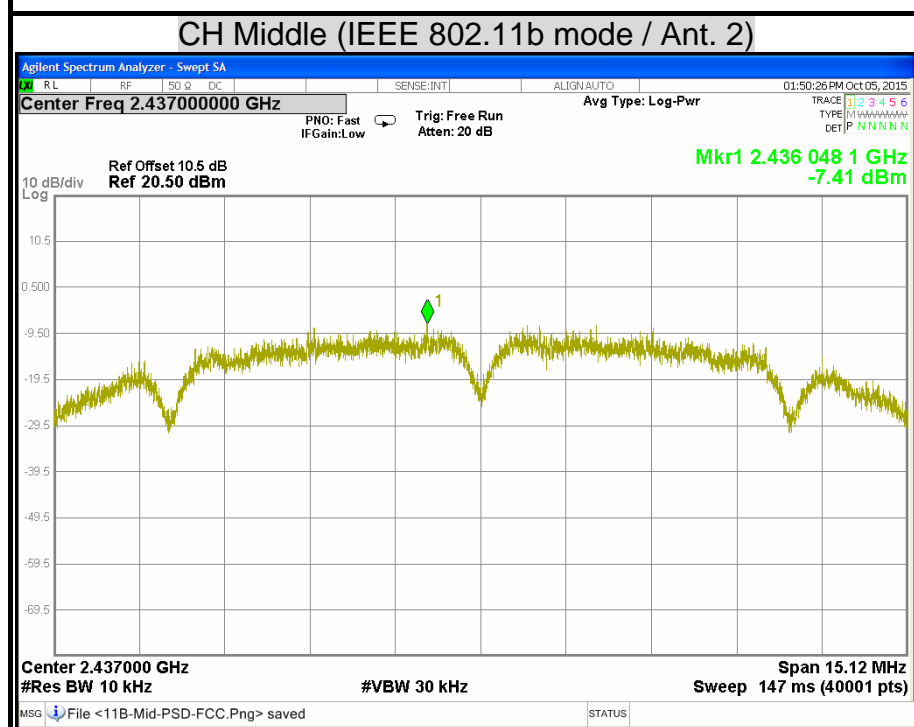
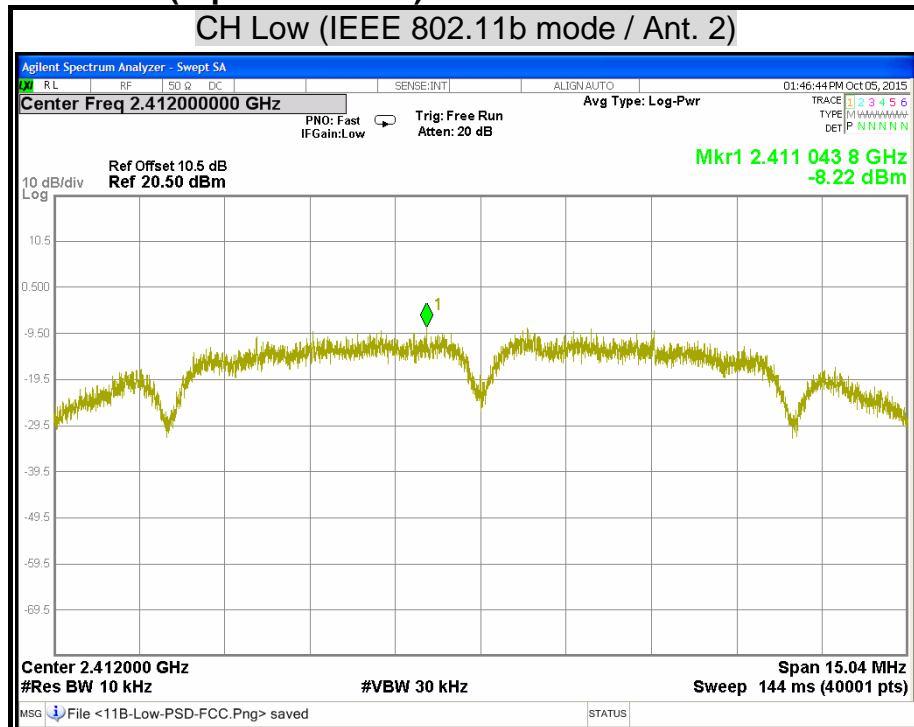


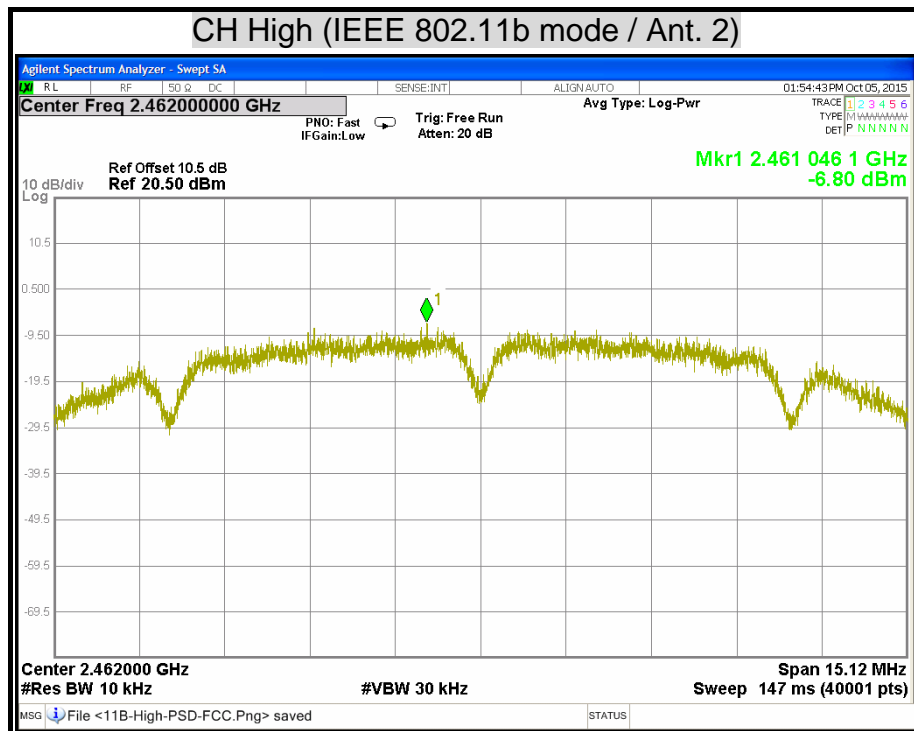


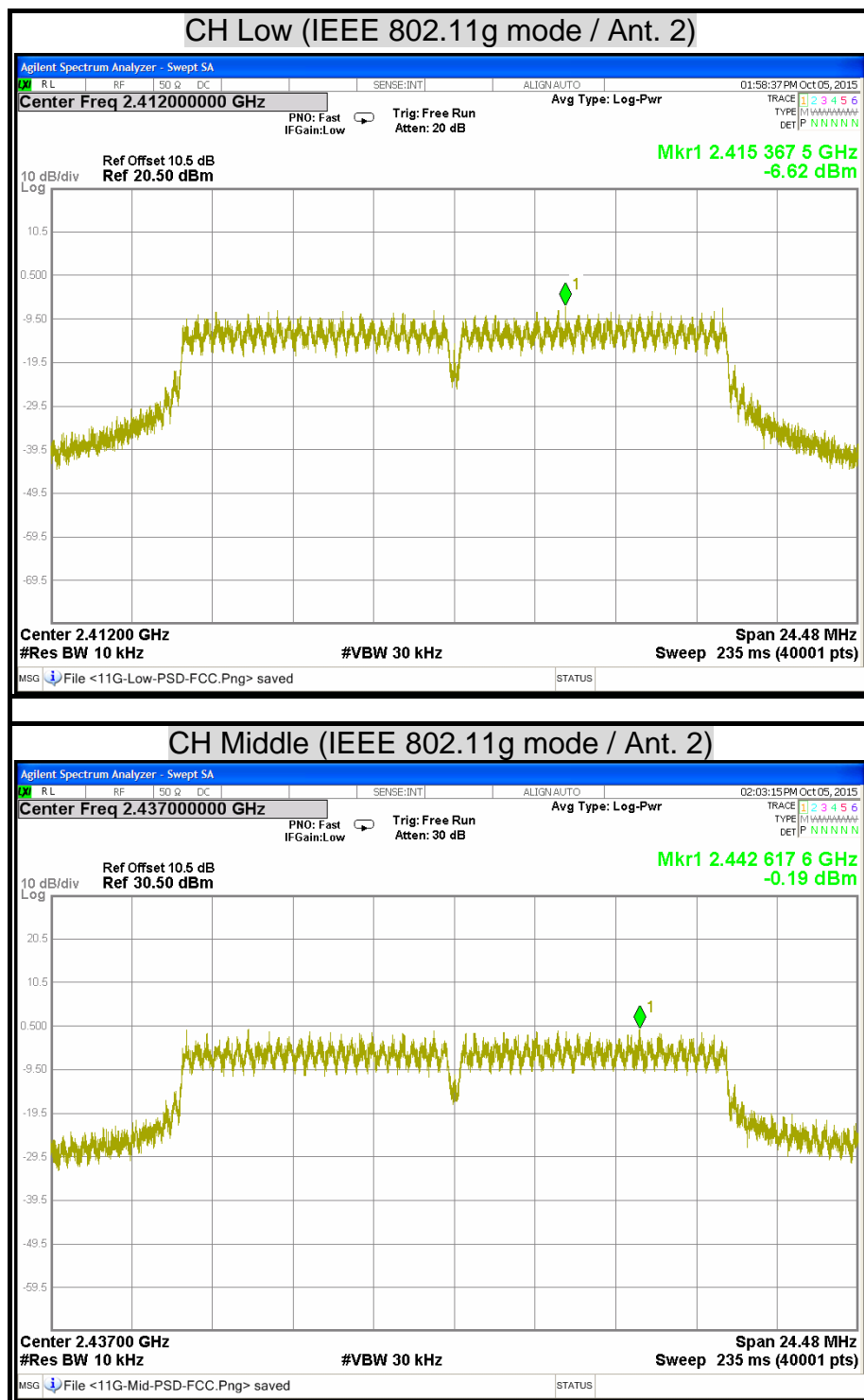


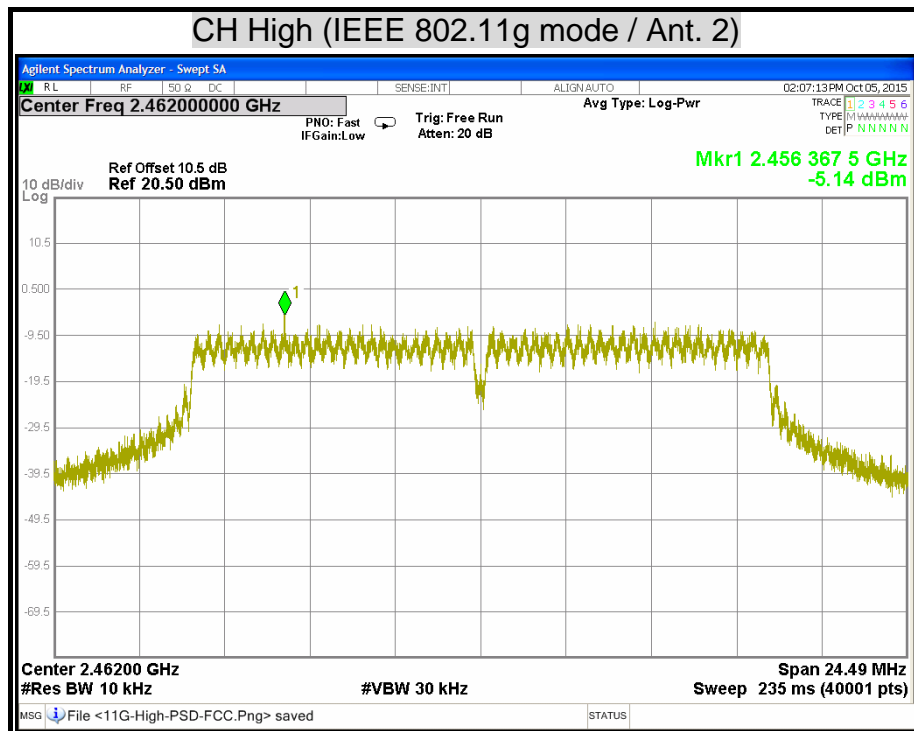


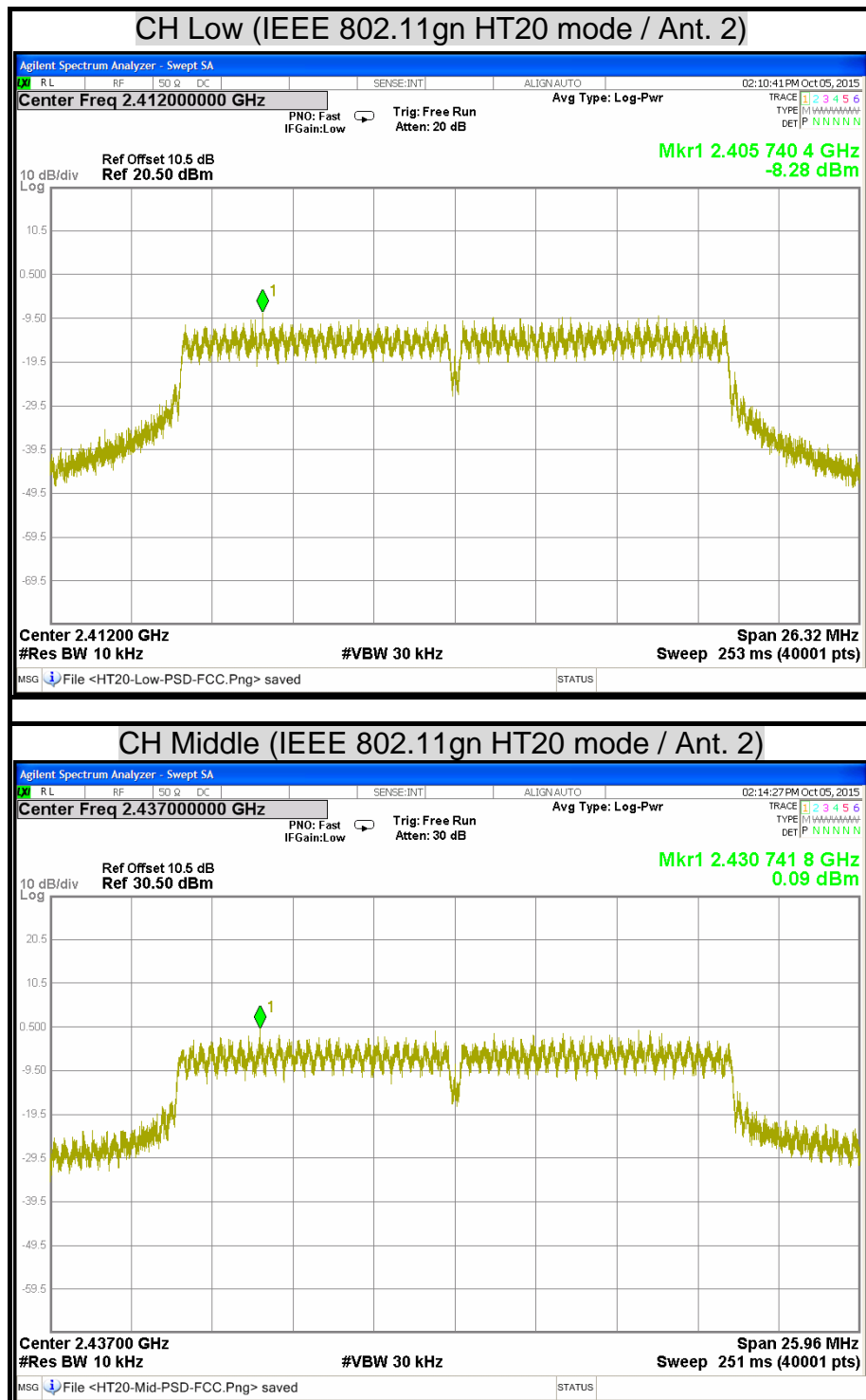
For Ant. 2 (Dipole Antenna)

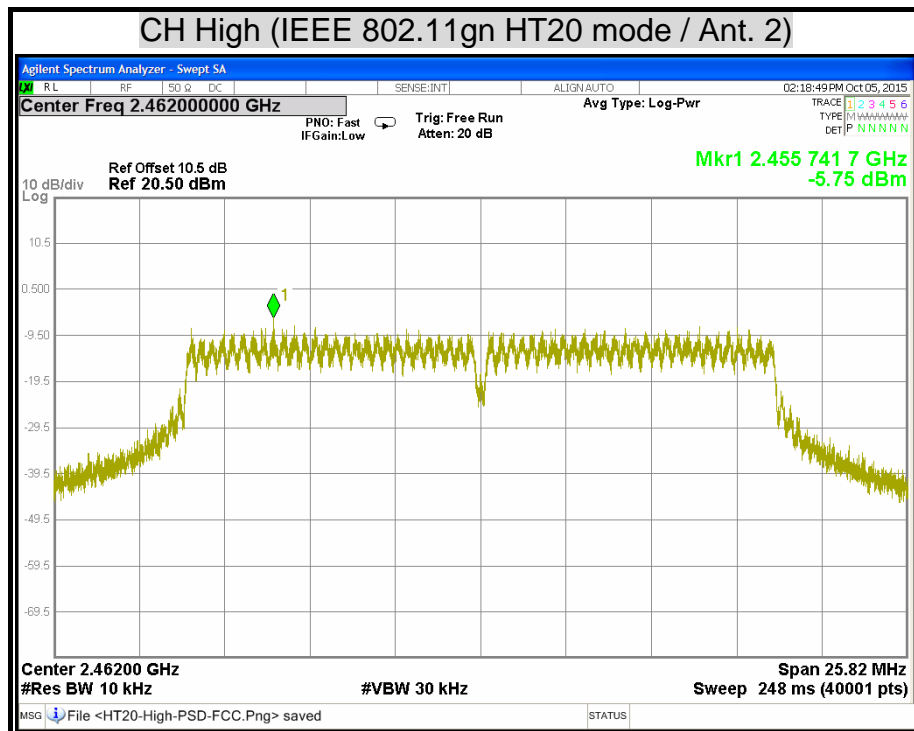


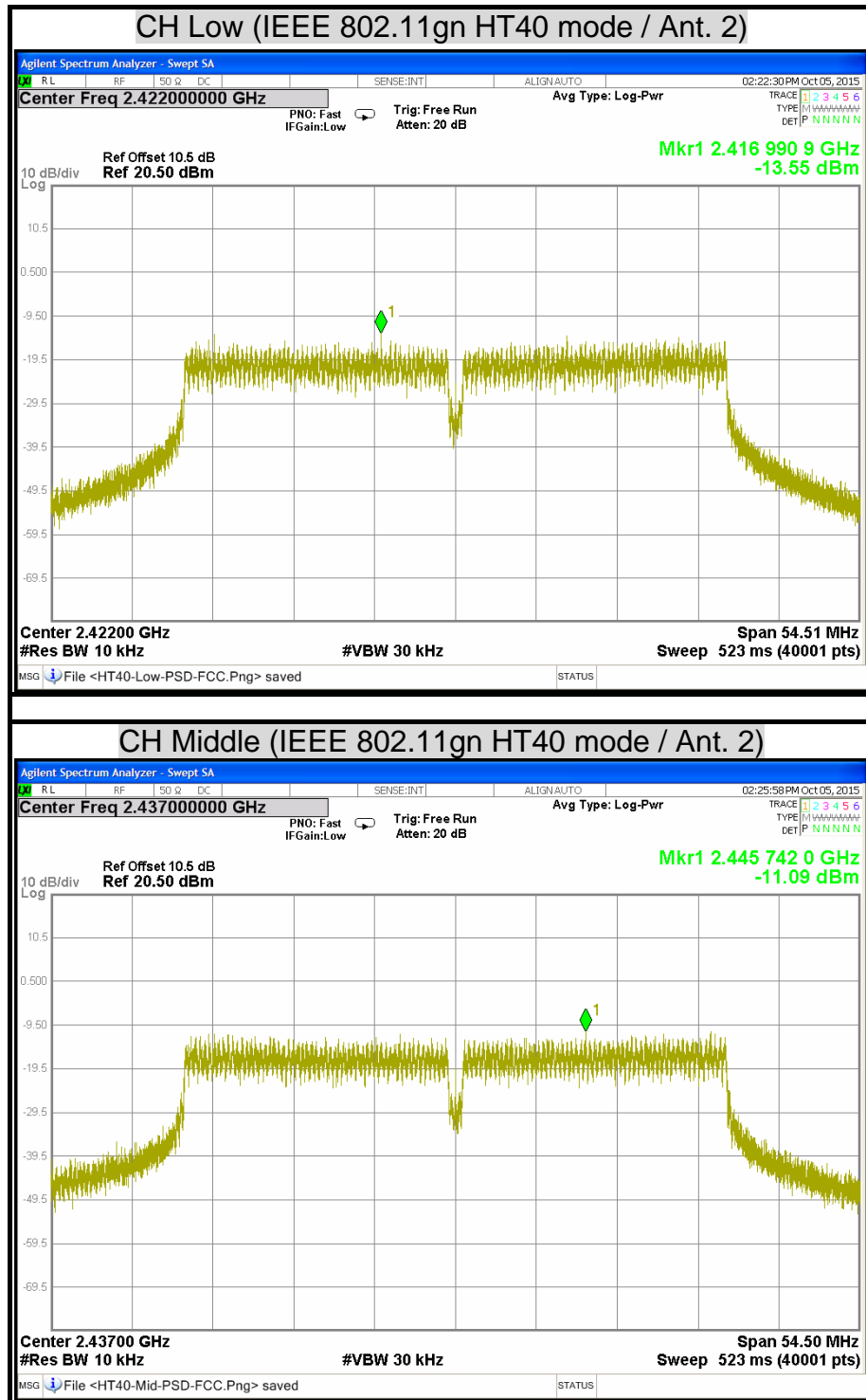


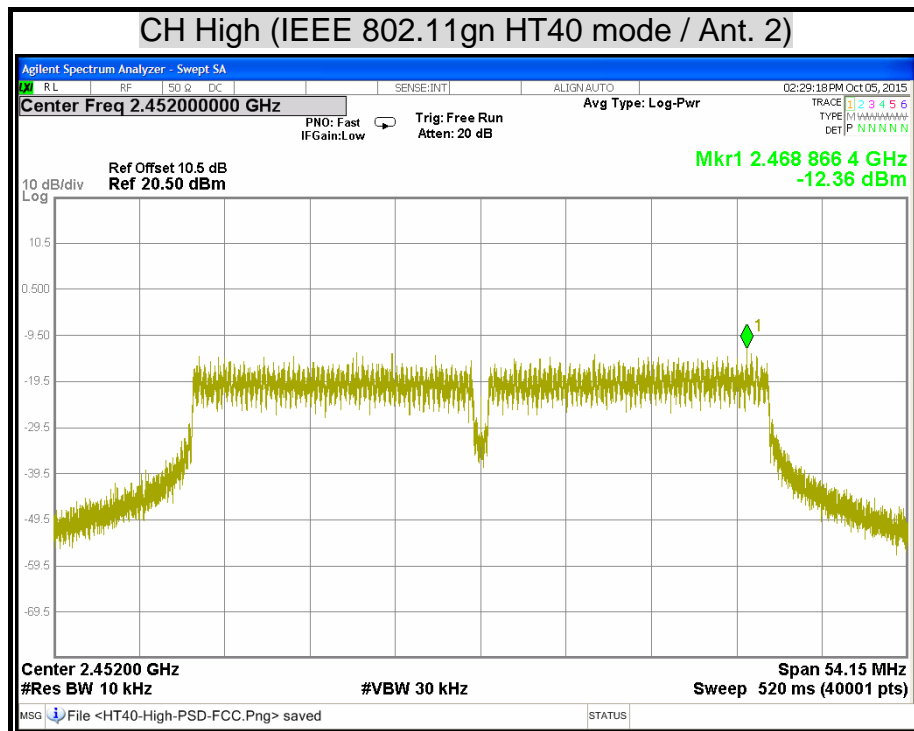












7.5 CONDUCTED SPURIOUS EMISSION

LIMITS

§ 15.247(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EXA Signal Analyzer	Agilent	N9010A	MY52220817	03/19/2016

Remark: Each piece of equipment is scheduled for calibration once a year.

TEST SETUP



TEST PROCEDURE

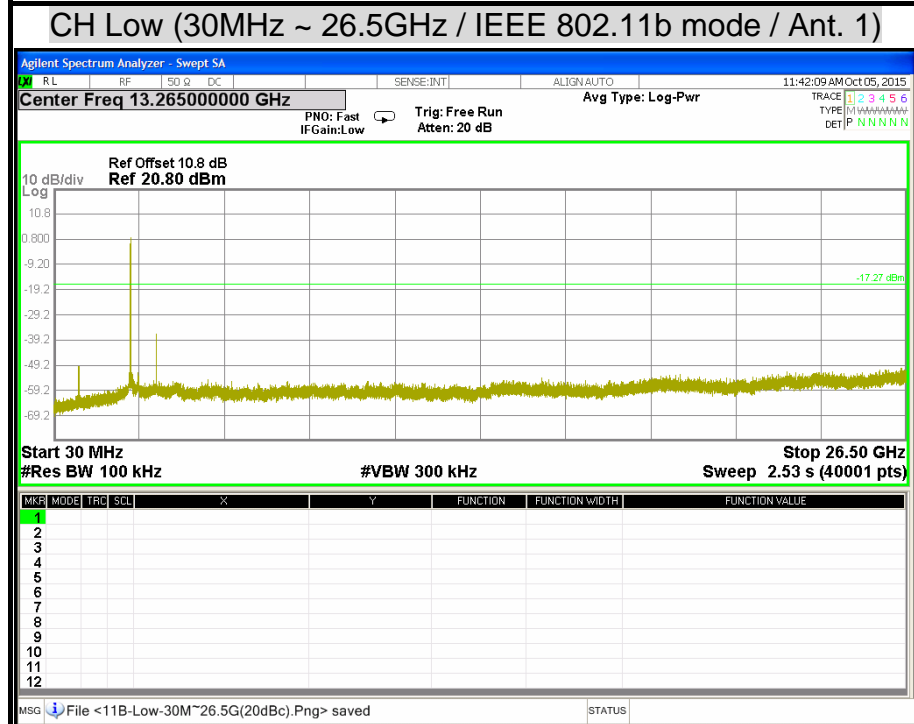
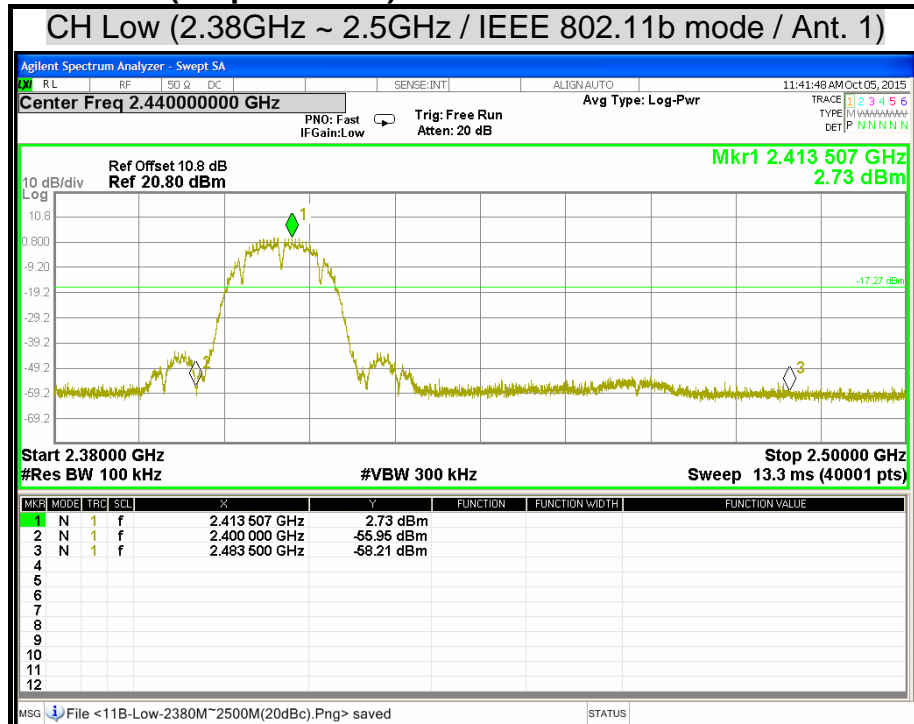
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

The spectrum from 30 MHz to 26.5 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

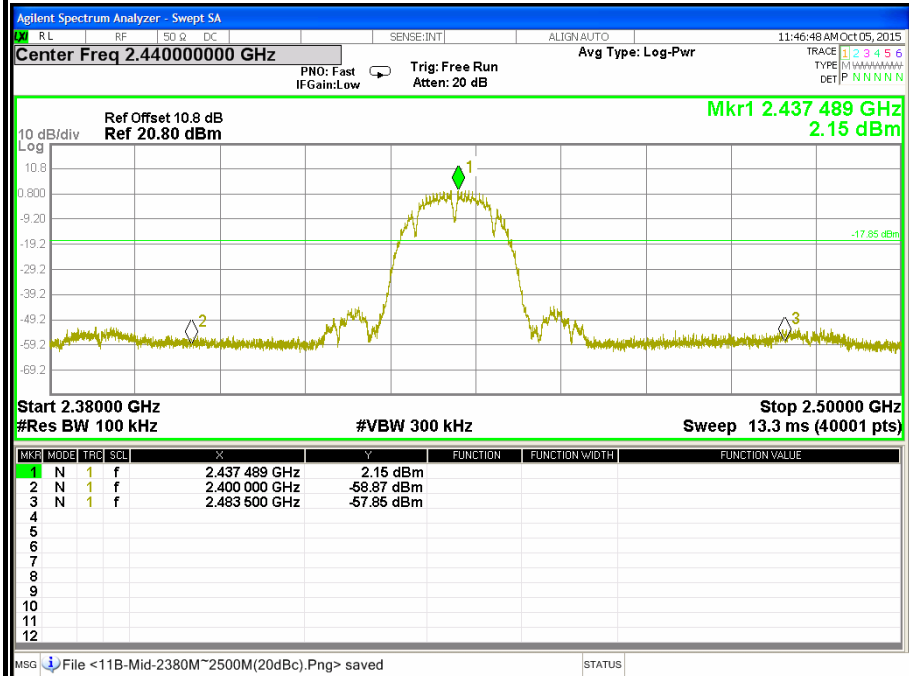
TEST RESULTS

OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

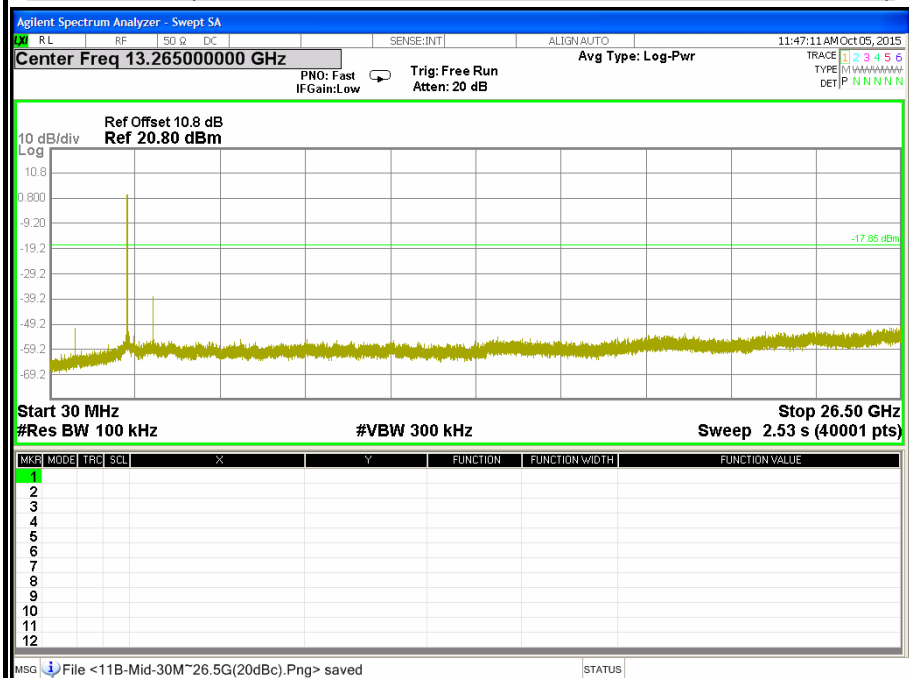
For Ant. 1 (Chip Antenna)

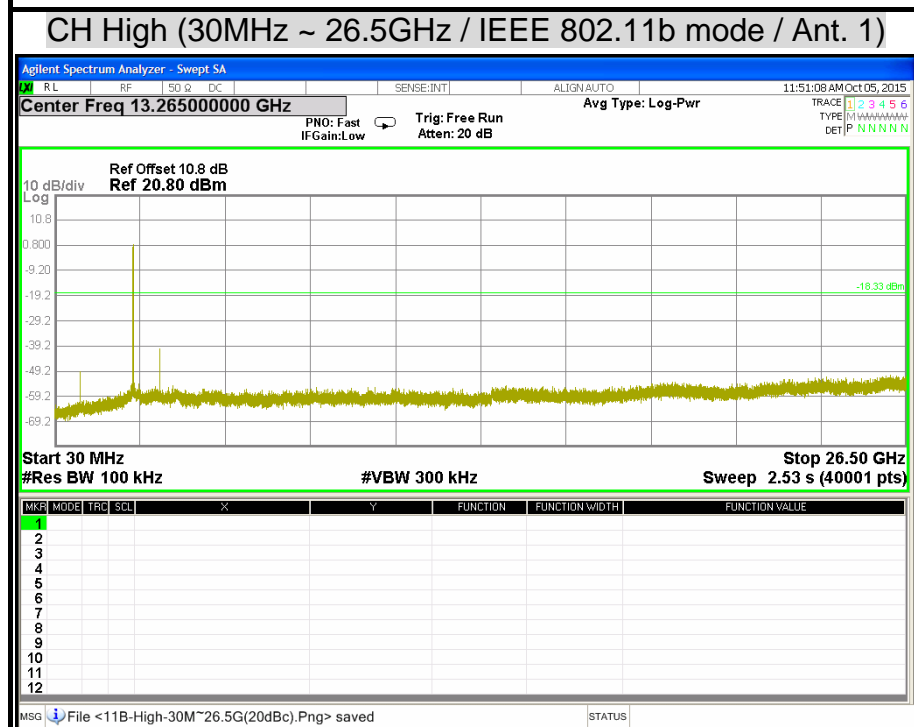
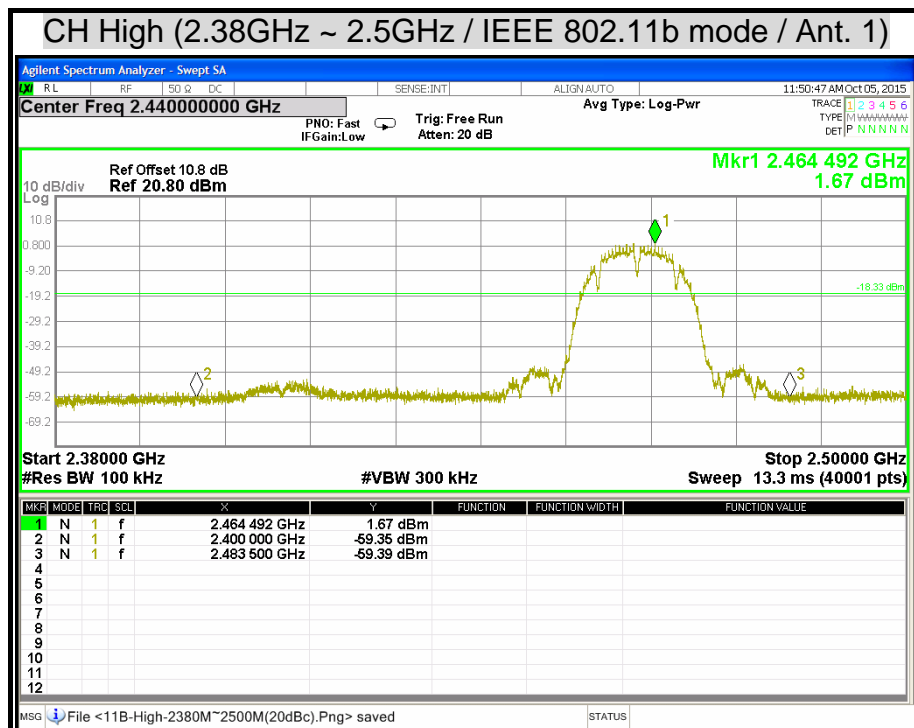


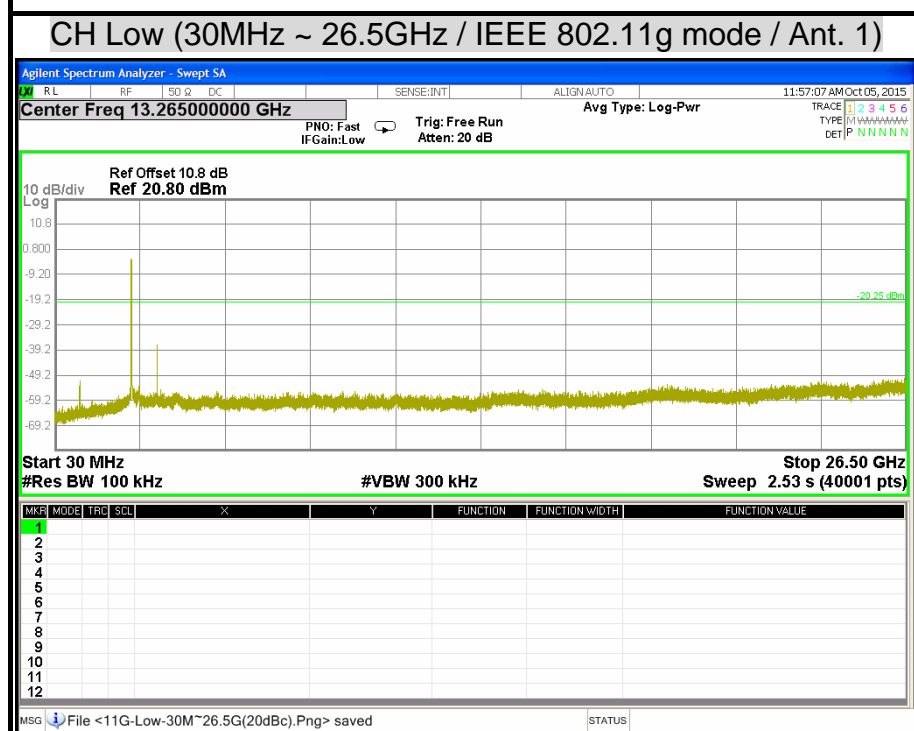
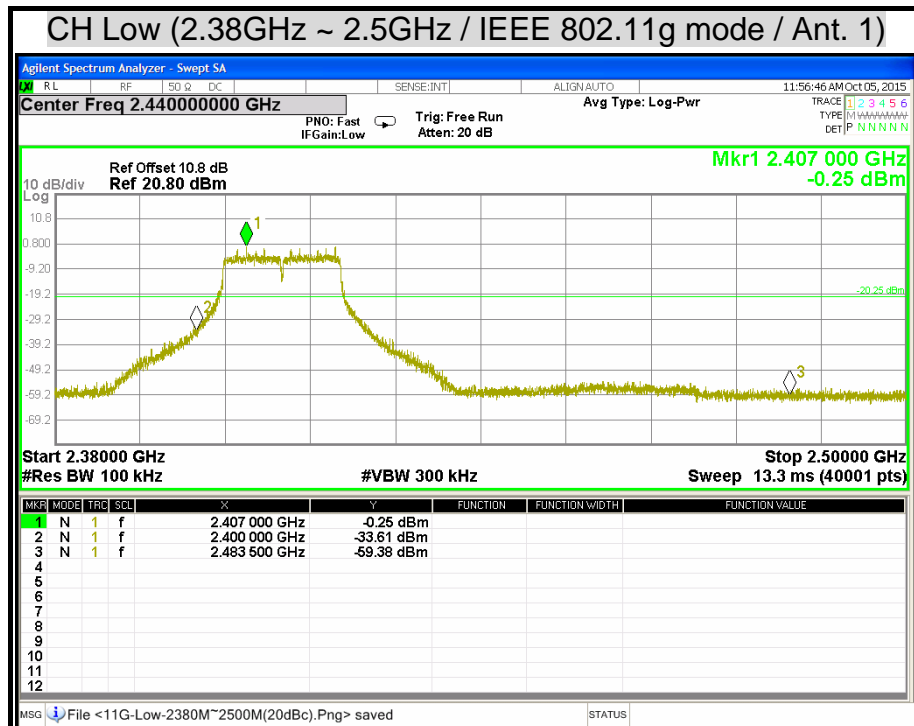
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11b mode / Ant. 1)

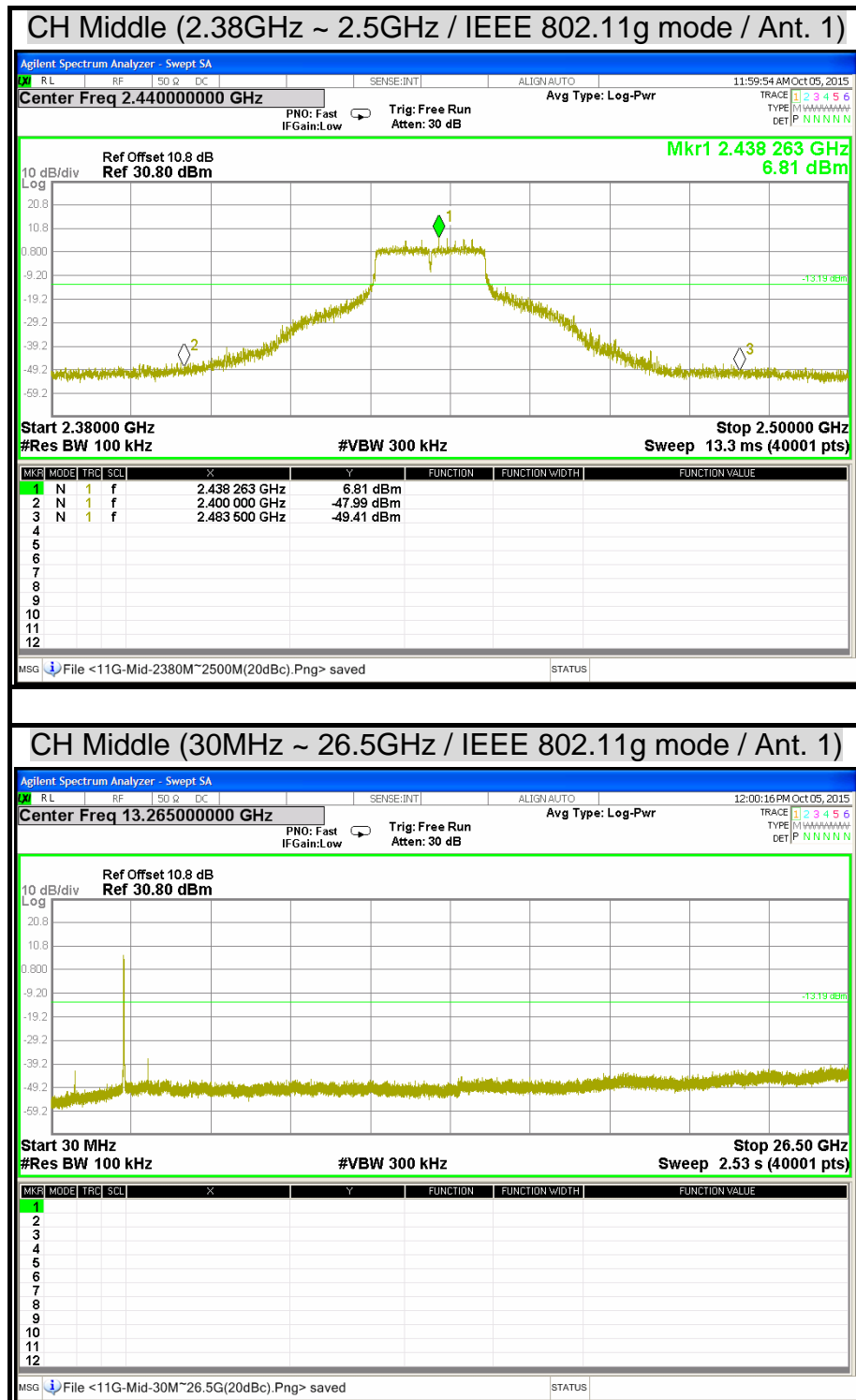


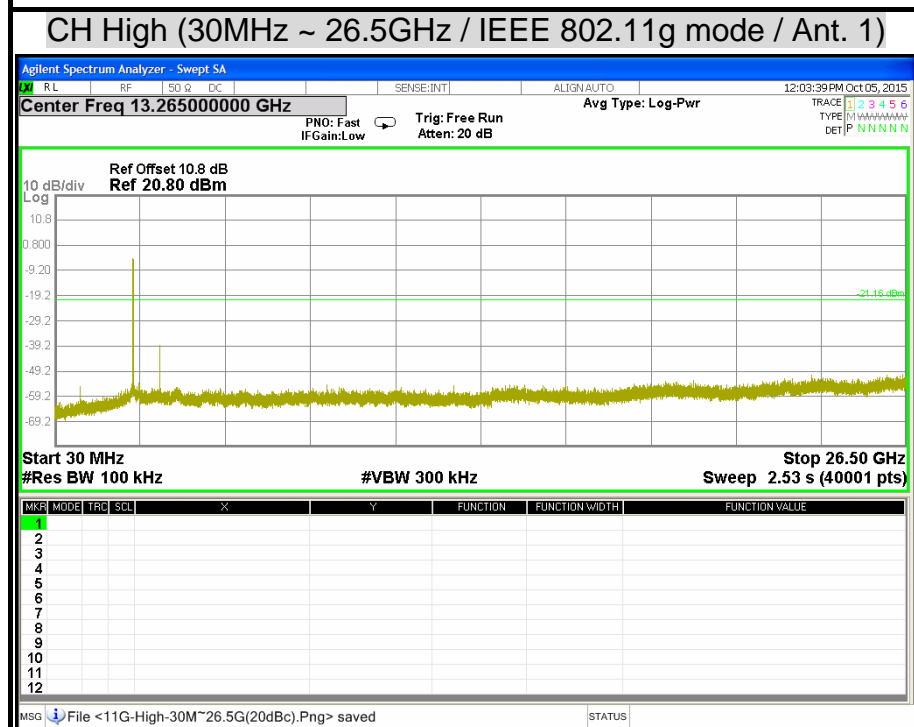
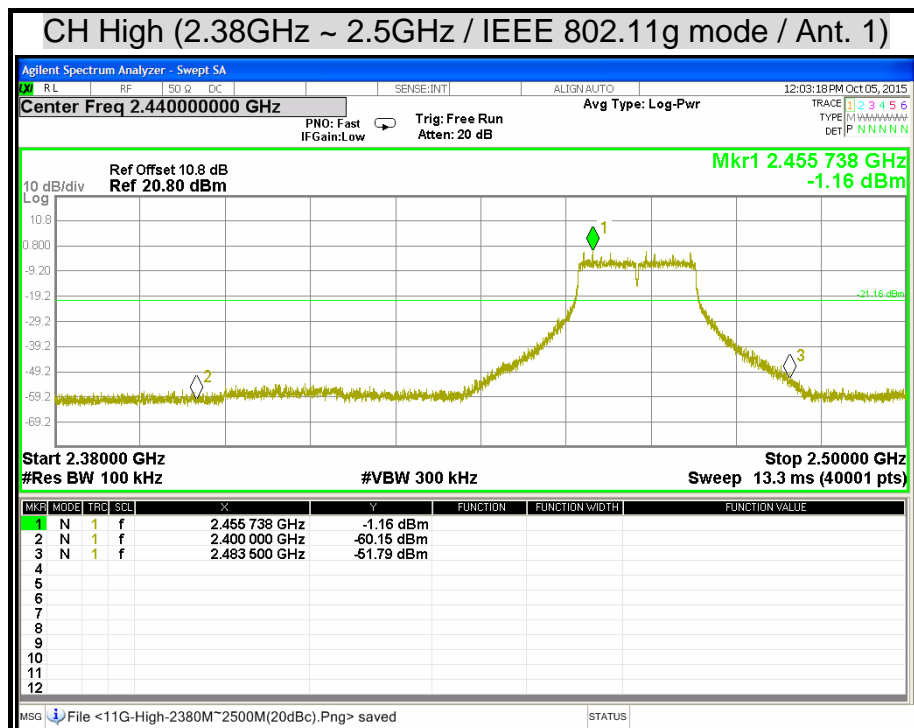
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11b mode / Ant. 1)

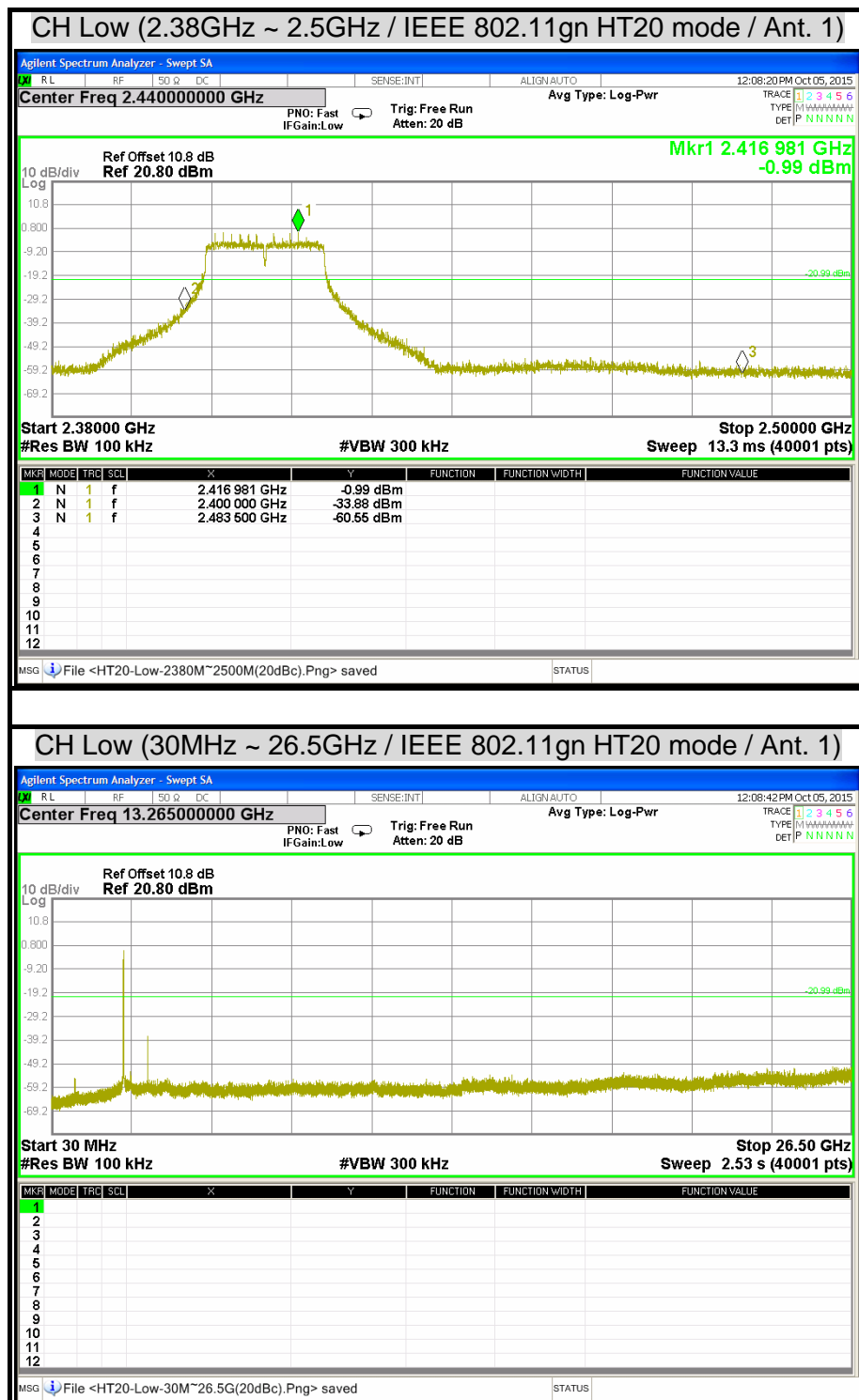




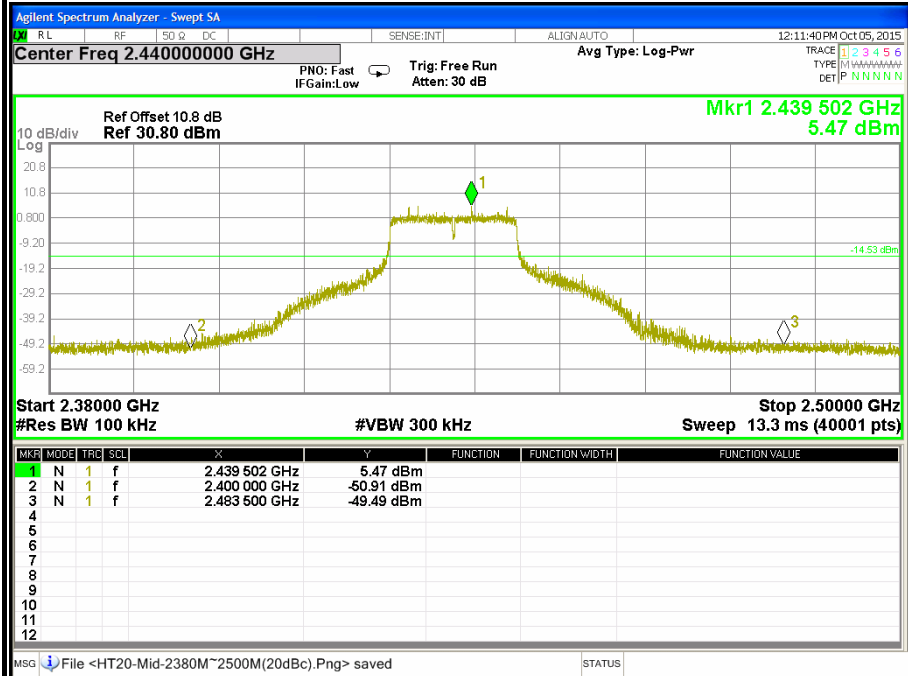




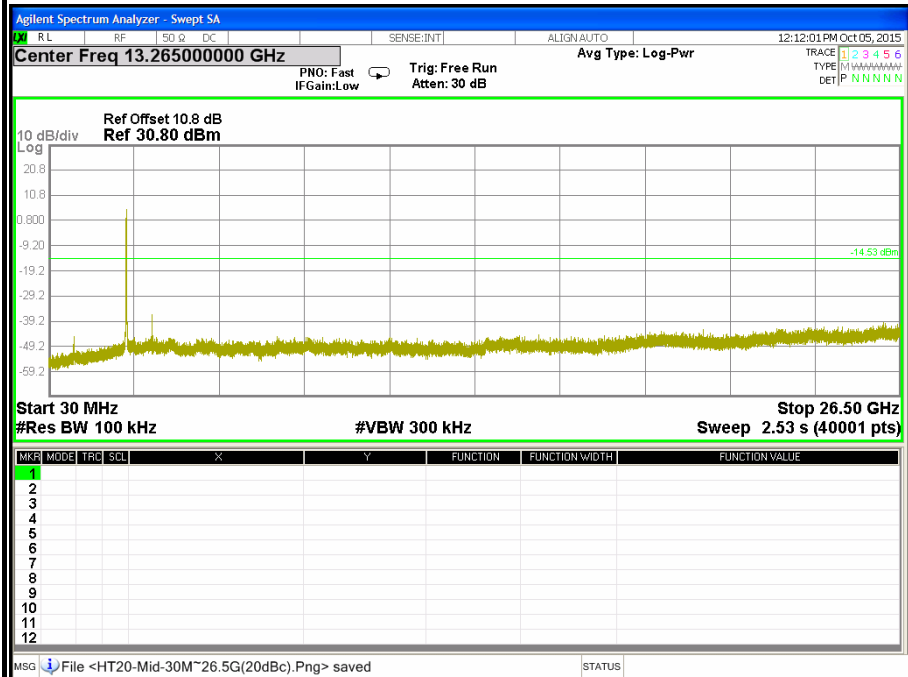




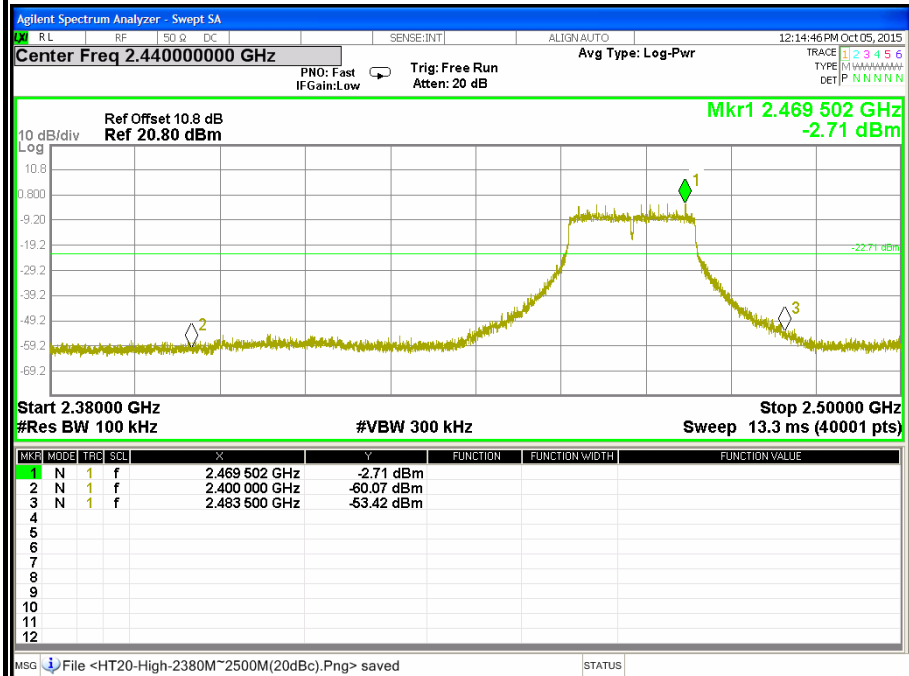
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 mode / Ant. 1)



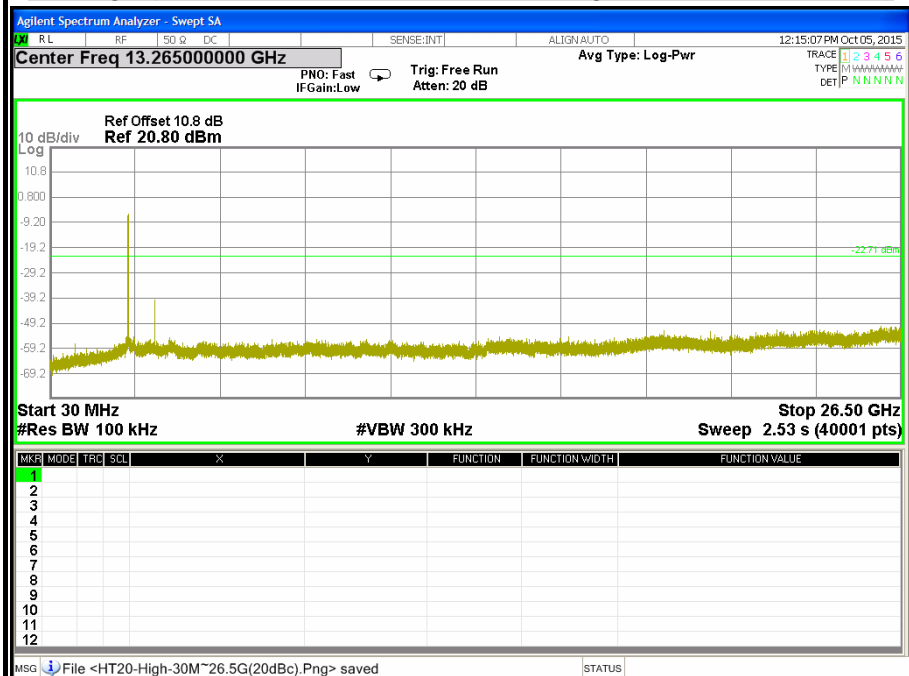
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 mode / Ant. 1)

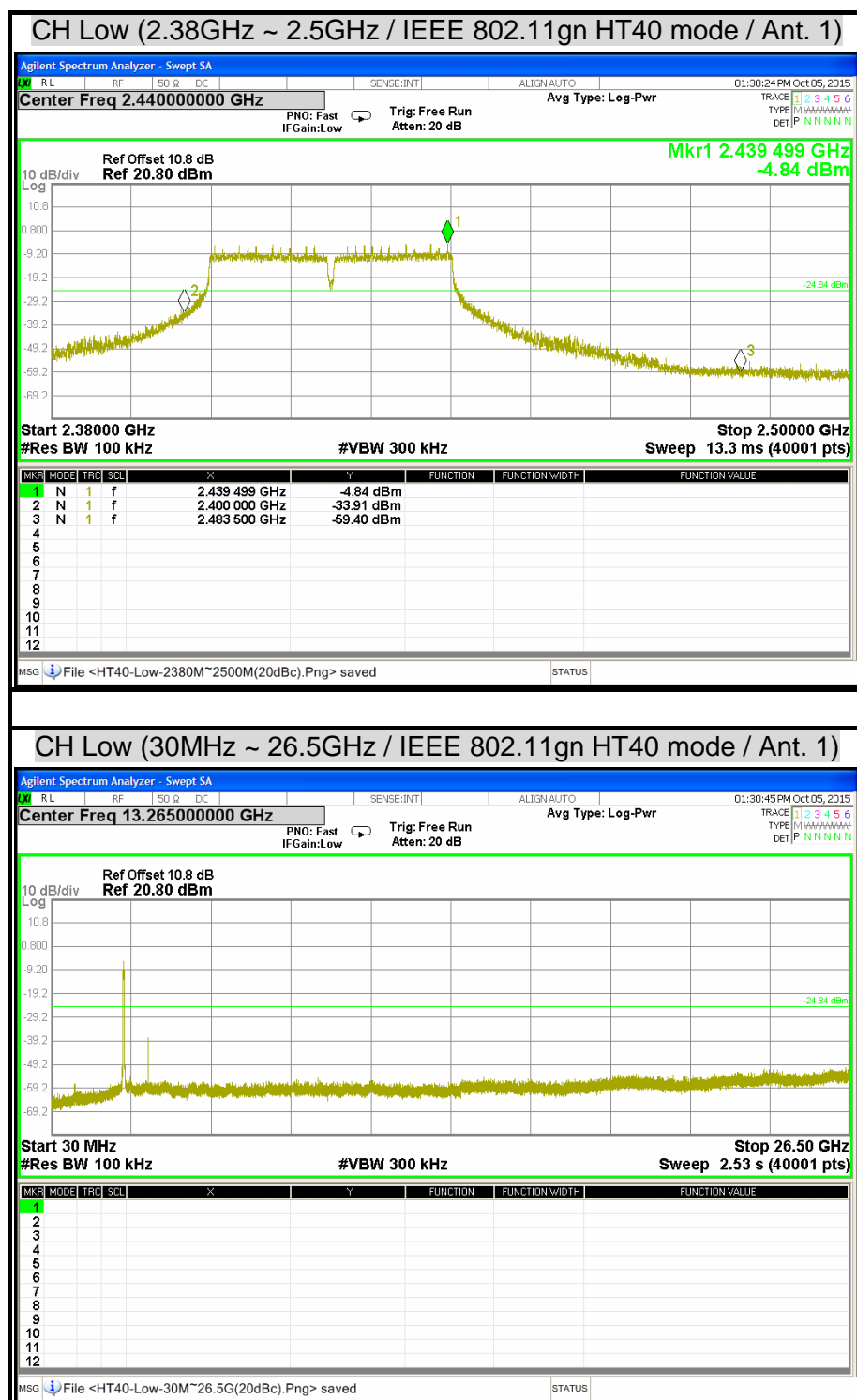


CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 mode / Ant. 1)

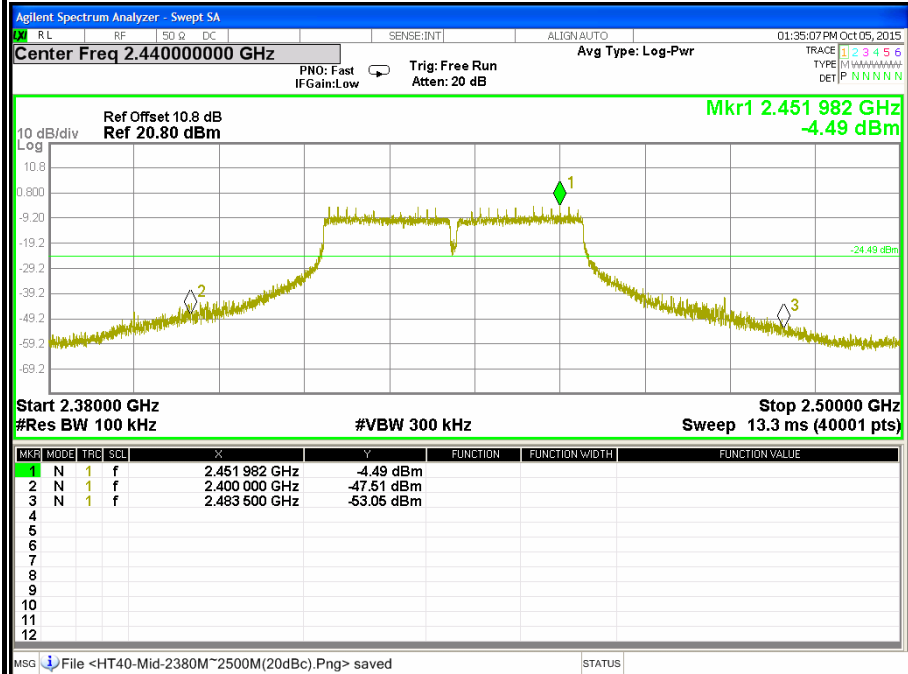


CH High (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 mode / Ant. 1)

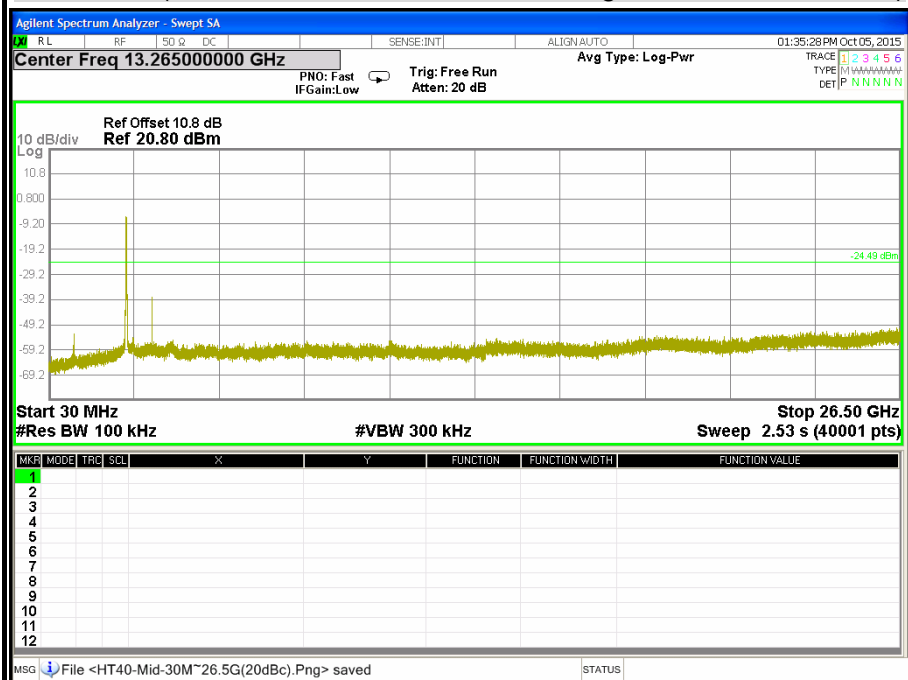




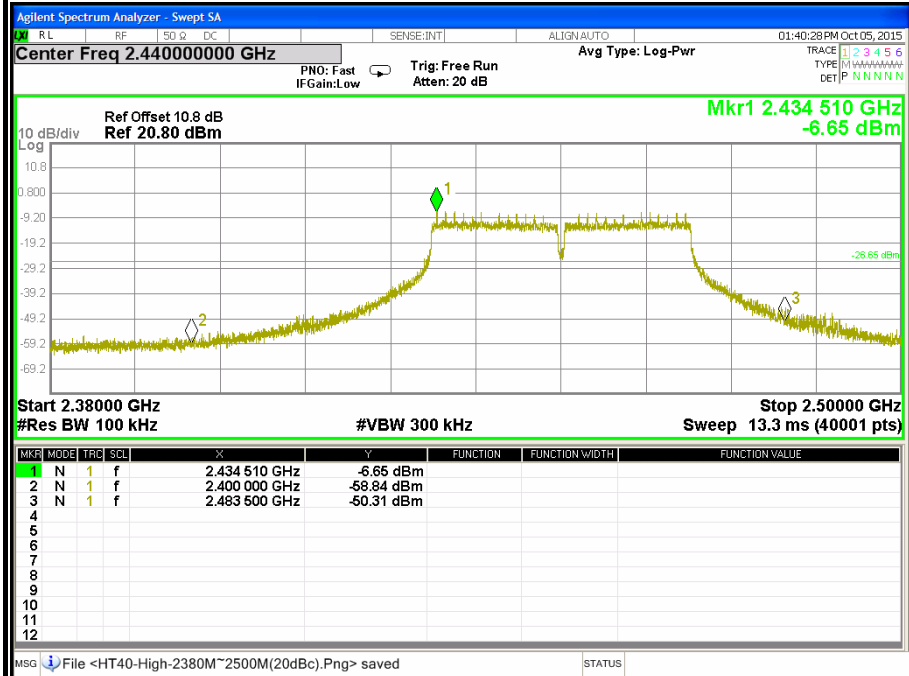
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 mode / Ant. 1)



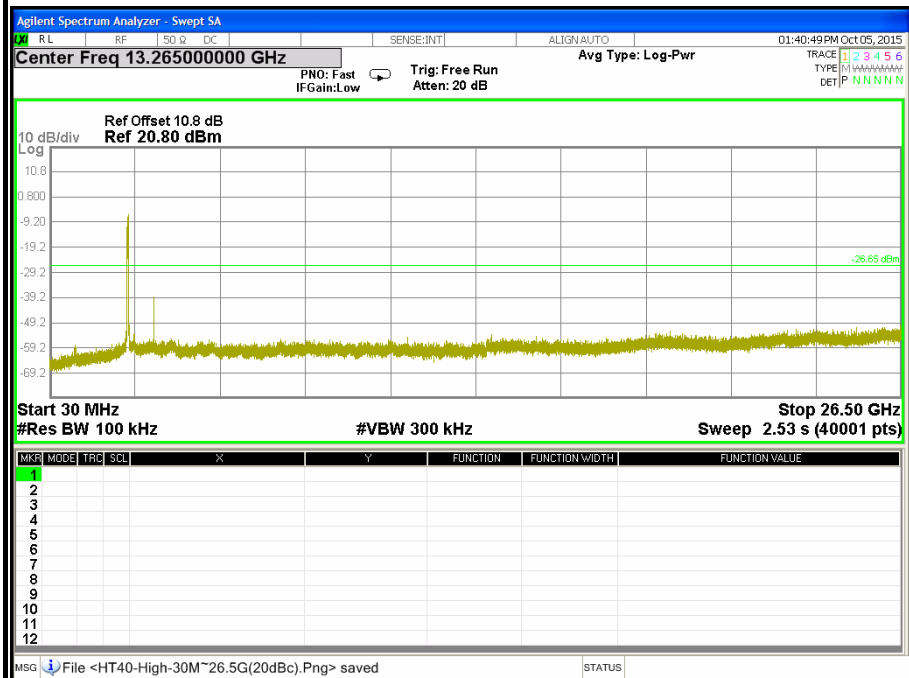
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 mode / Ant. 1)



CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 mode / Ant. 1)

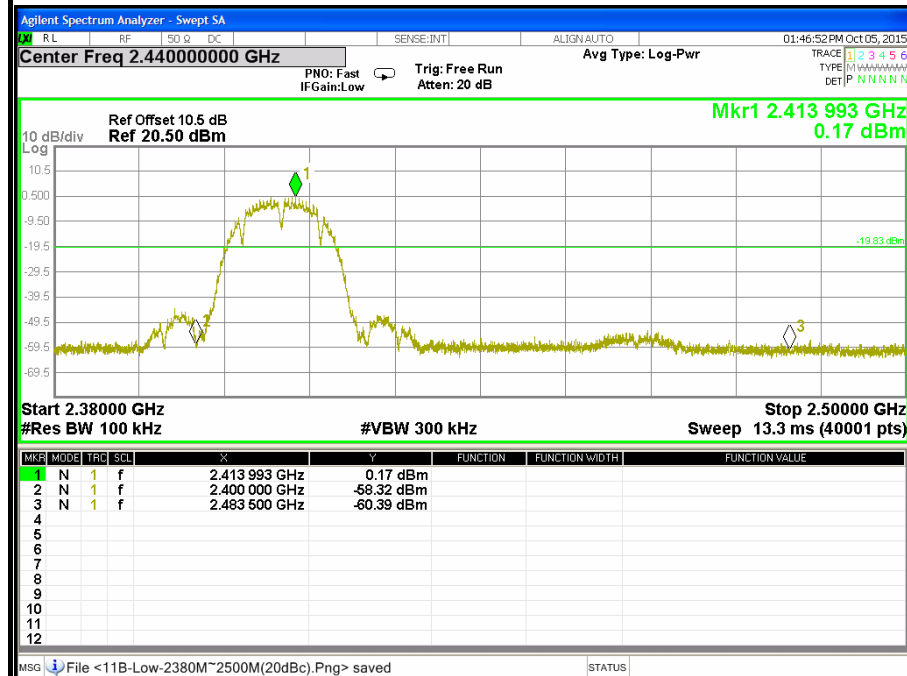


CH High (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 mode / Ant. 1)

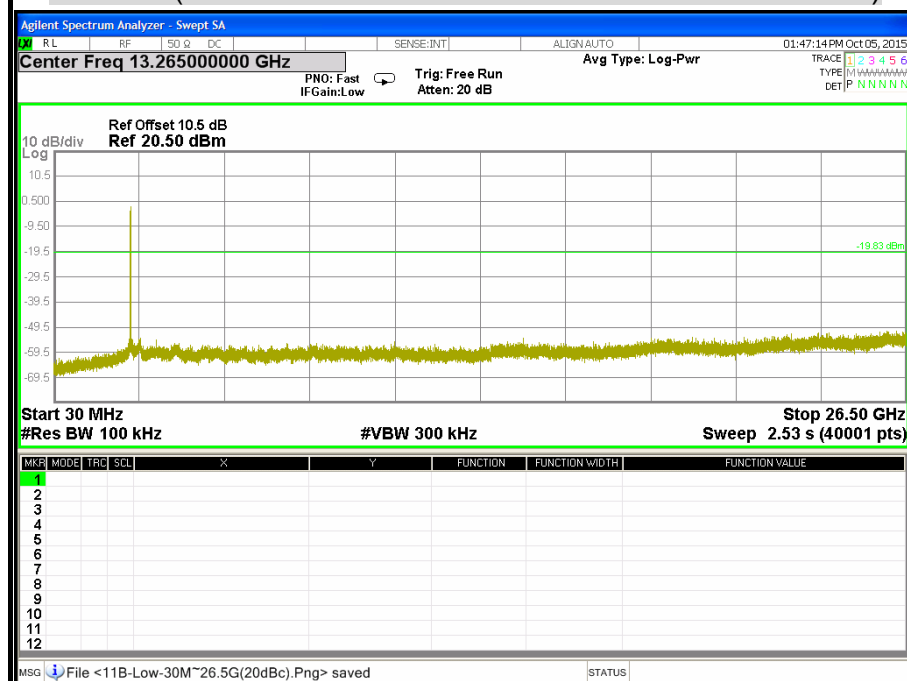


For Ant. 2 (Dipole Antenna)

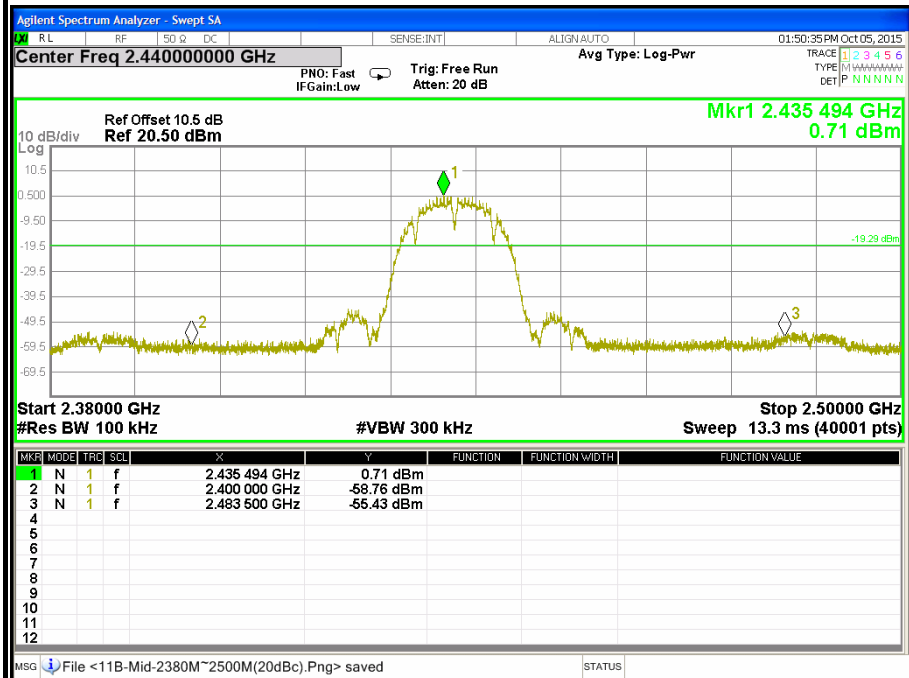
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11b mode / Ant. 2)



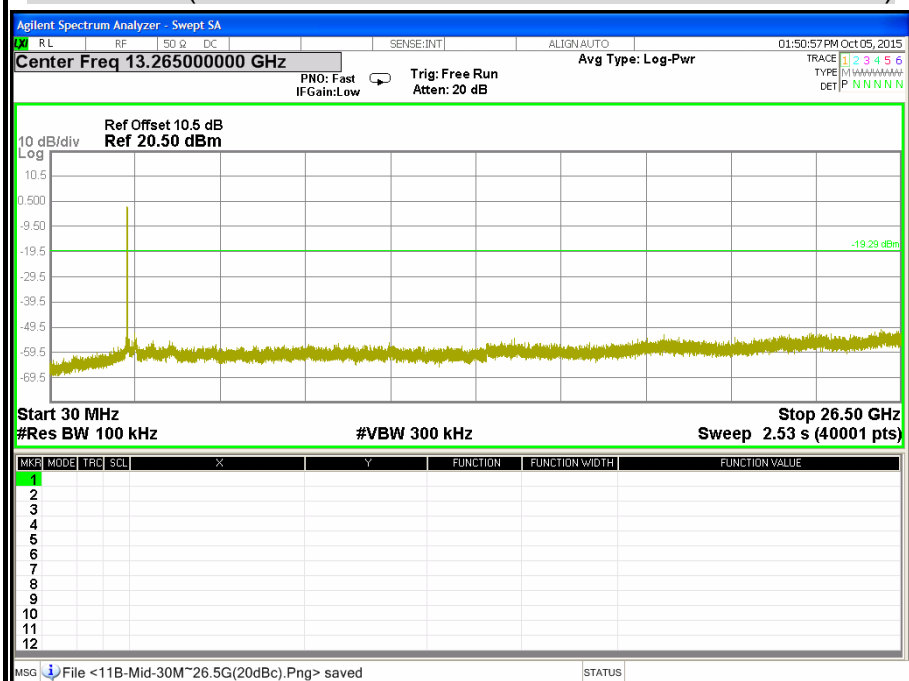
CH Low (30MHz ~ 26.5GHz / IEEE 802.11b mode / Ant. 2)



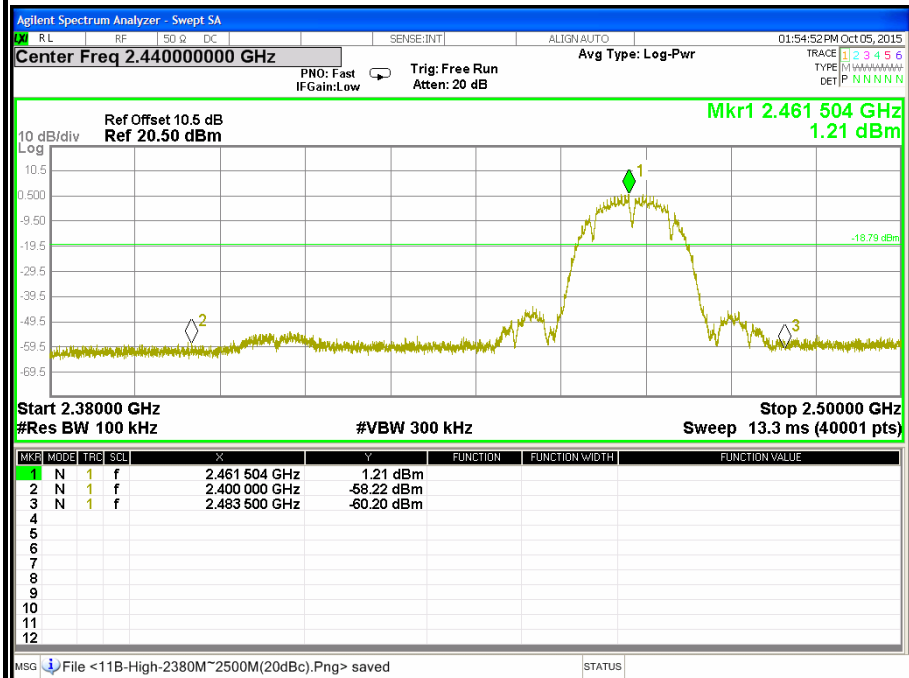
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11b mode / Ant. 2)



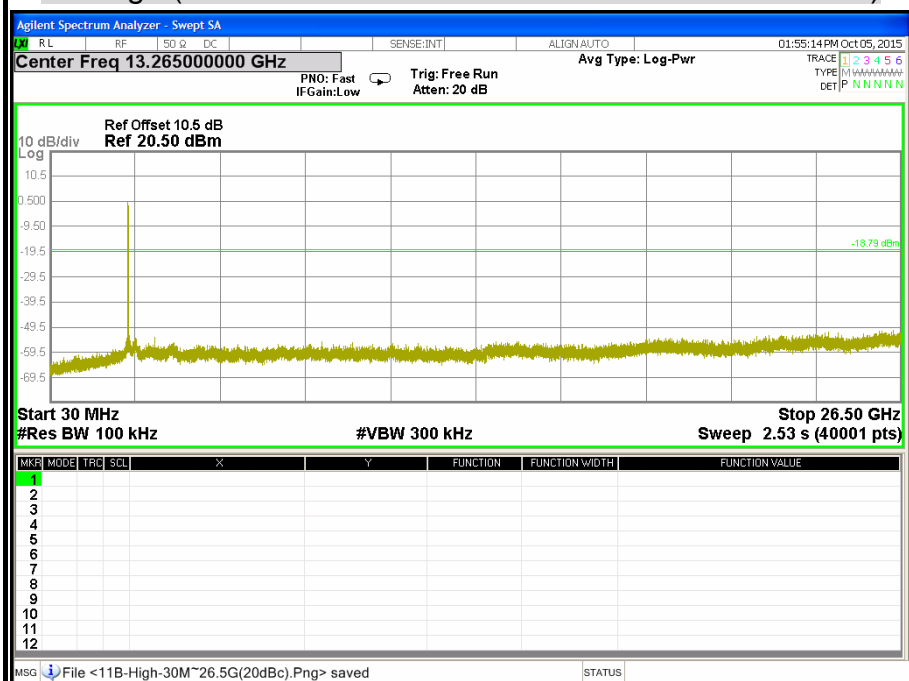
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11b mode / Ant. 2)

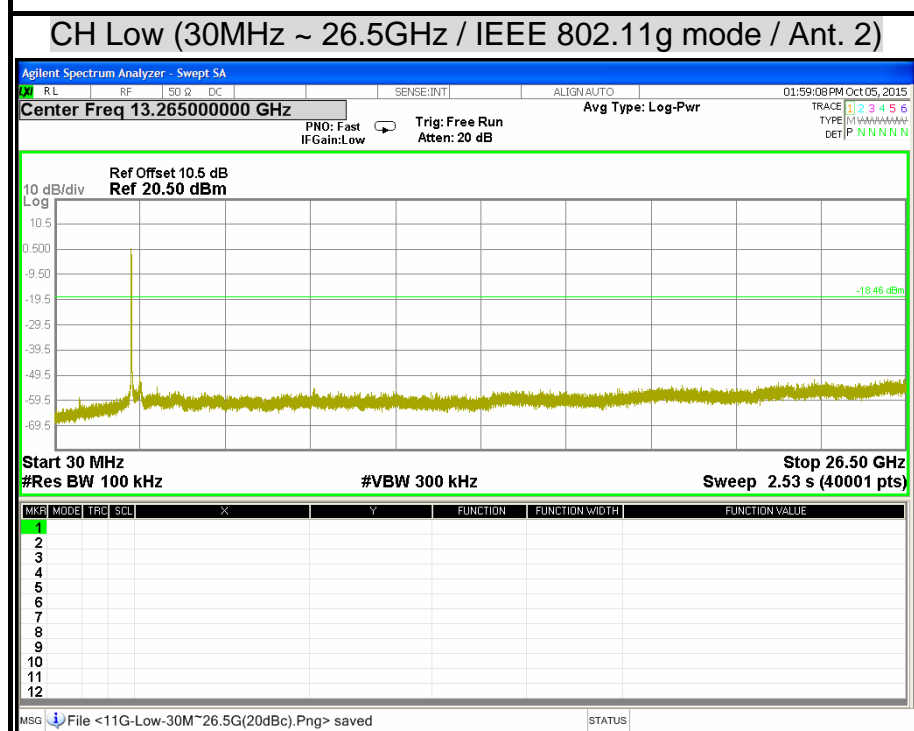
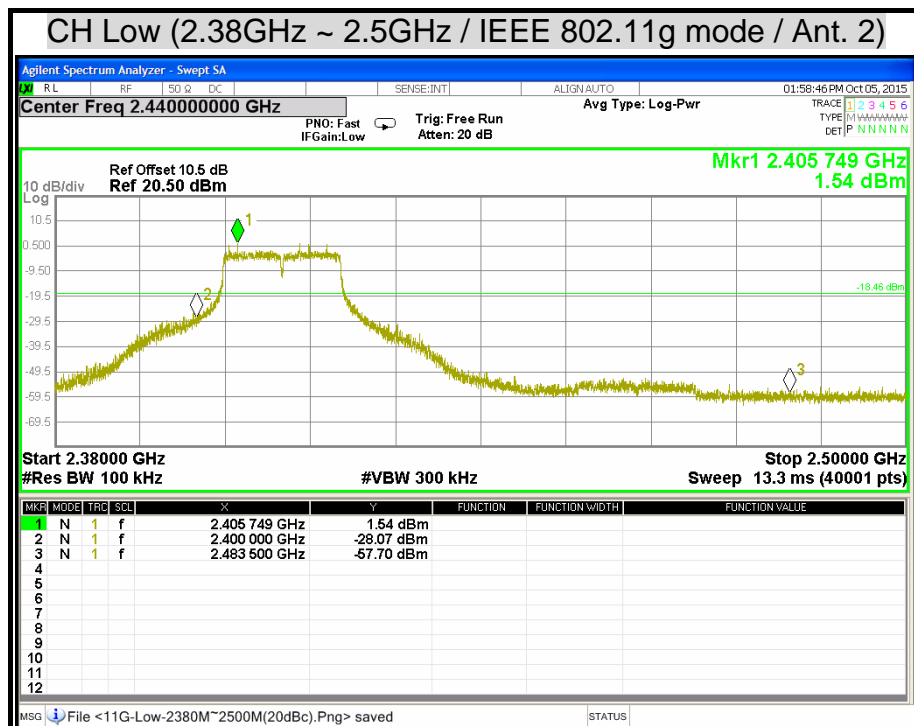


CH High (2.38GHz ~ 2.5GHz / IEEE 802.11b mode / Ant. 2)

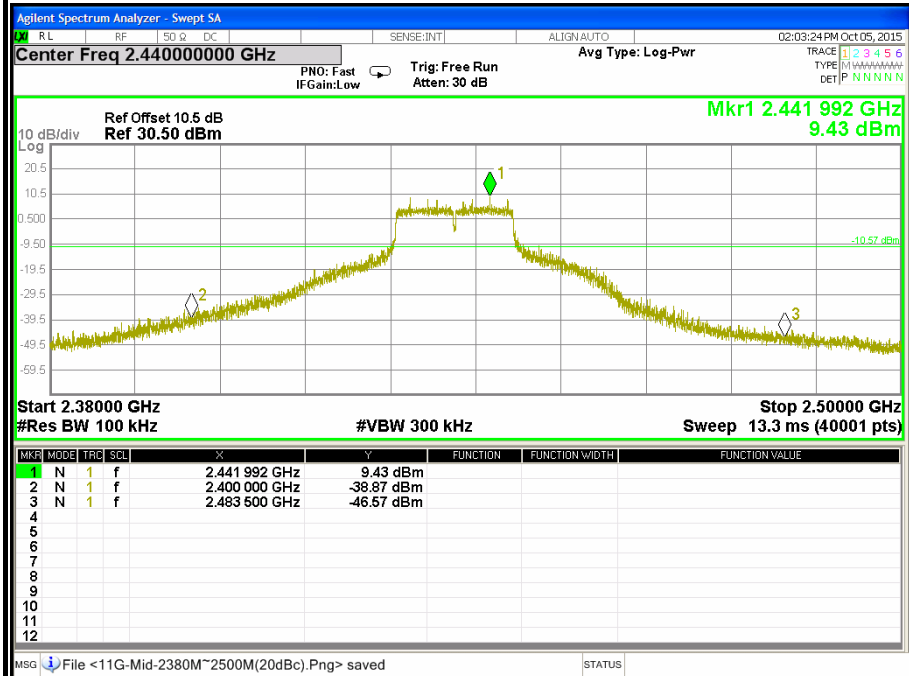


CH High (30MHz ~ 26.5GHz / IEEE 802.11b mode / Ant. 2)

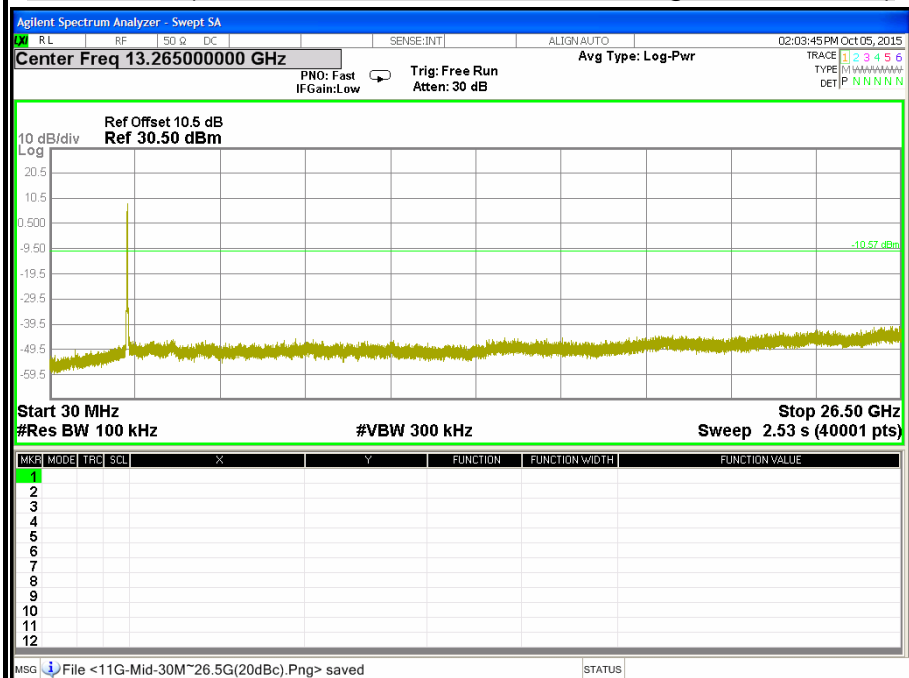


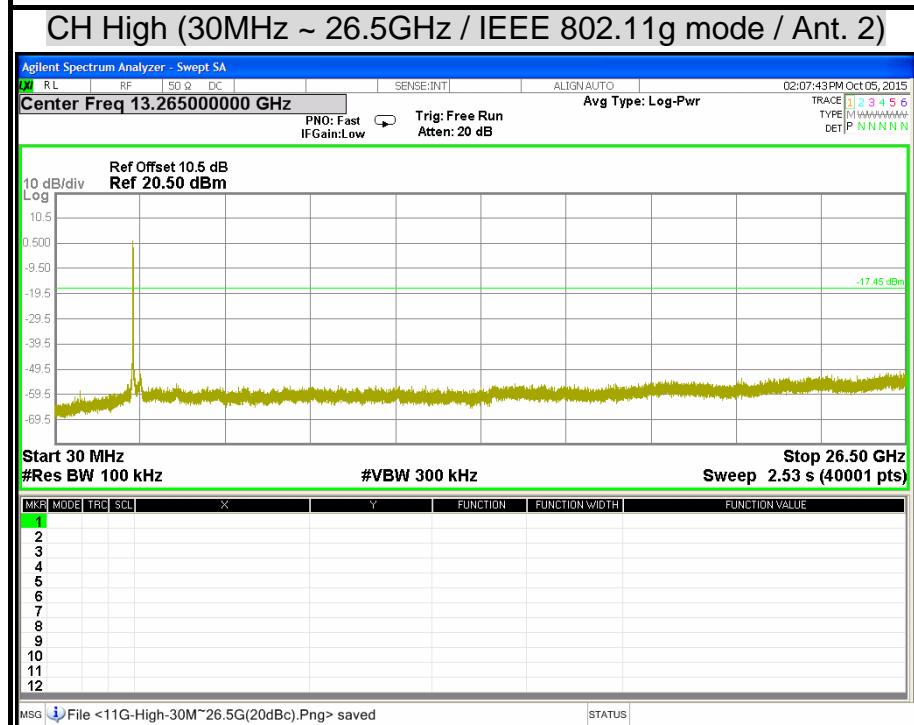
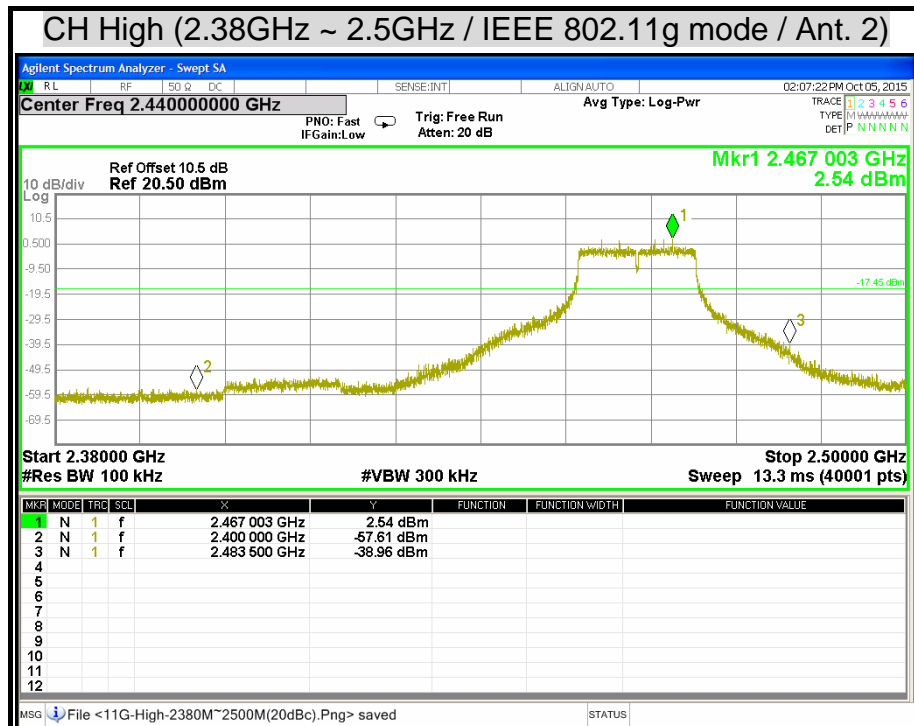


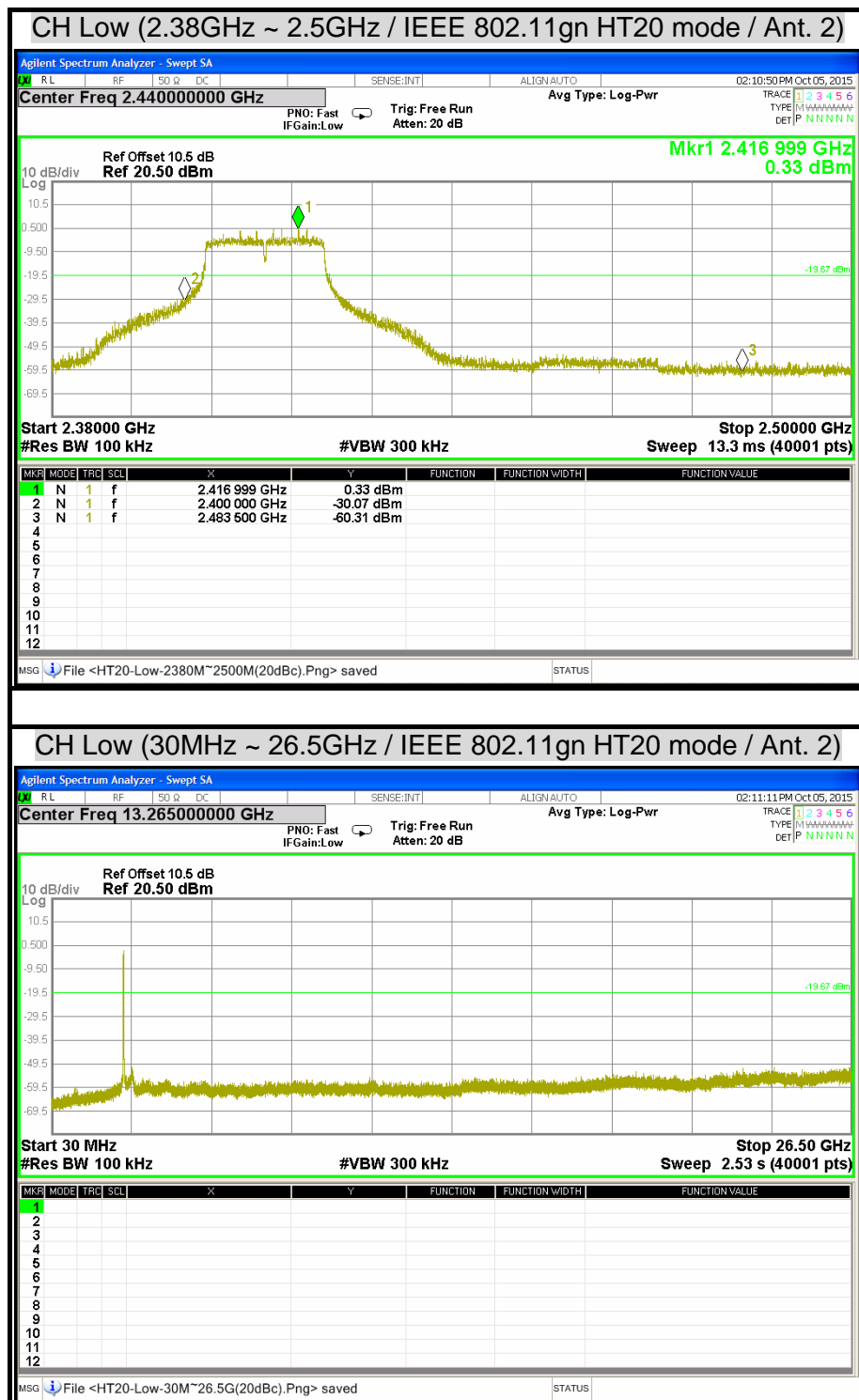
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11g mode / Ant. 2)



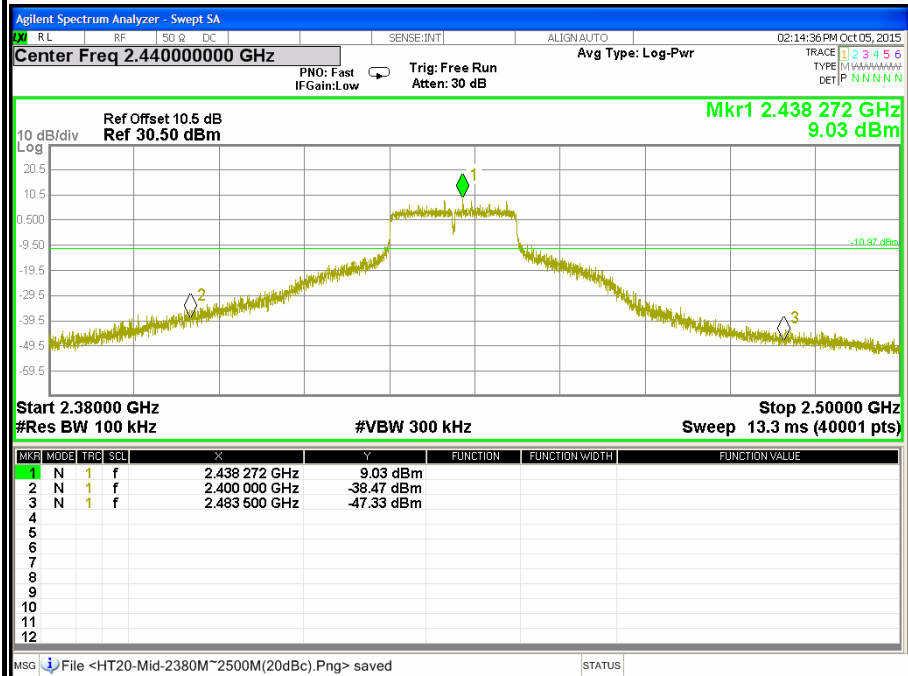
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11g mode / Ant. 2)



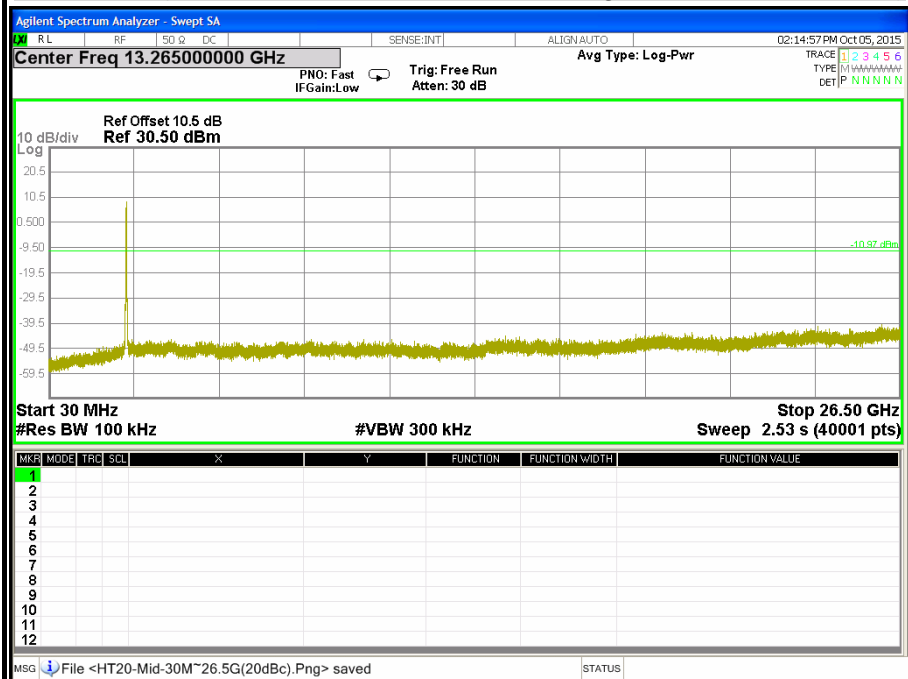




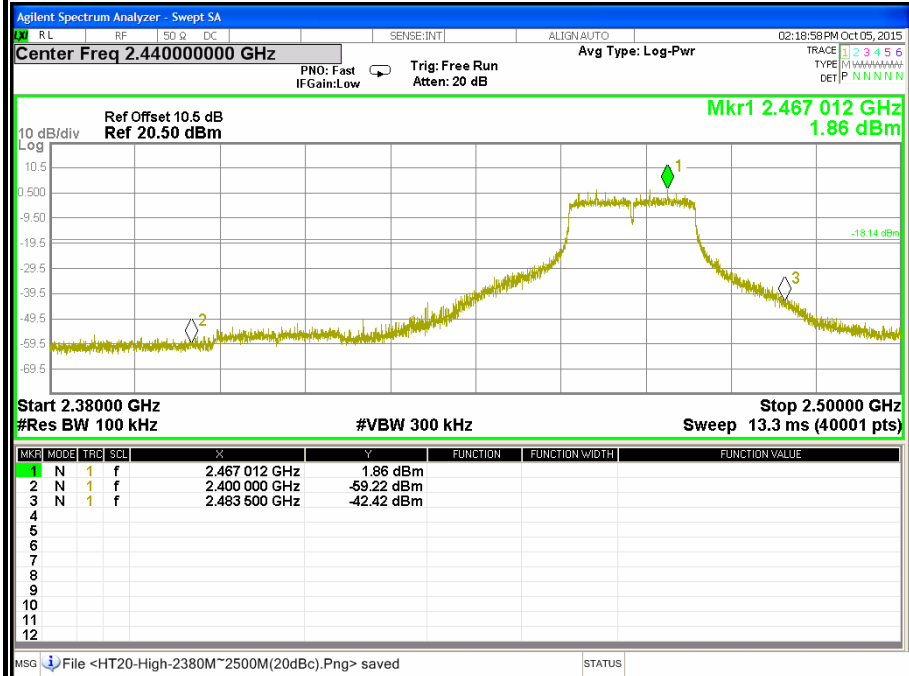
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 mode / Ant. 2)



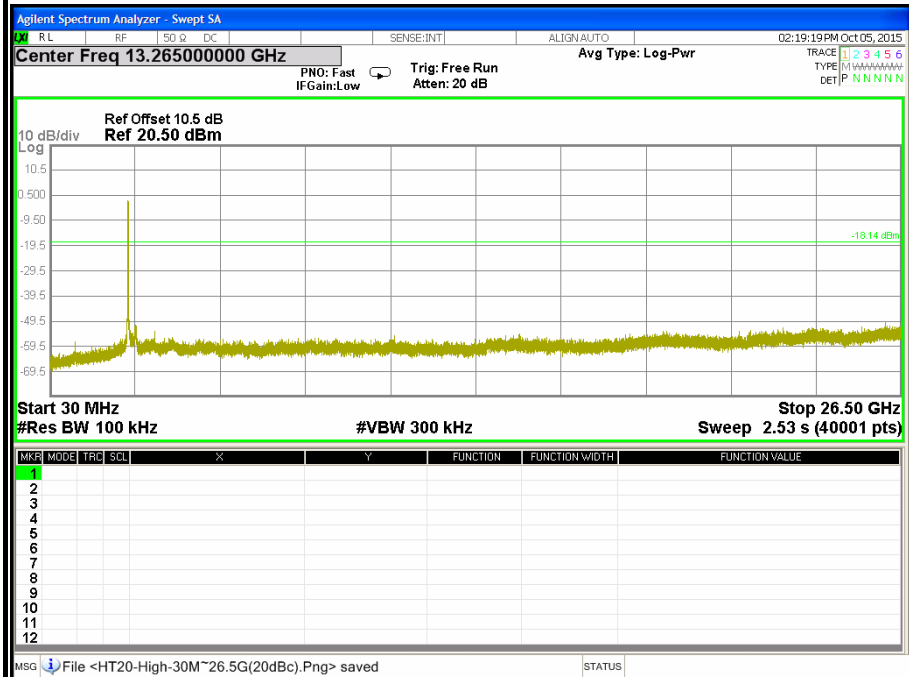
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 mode / Ant. 2)

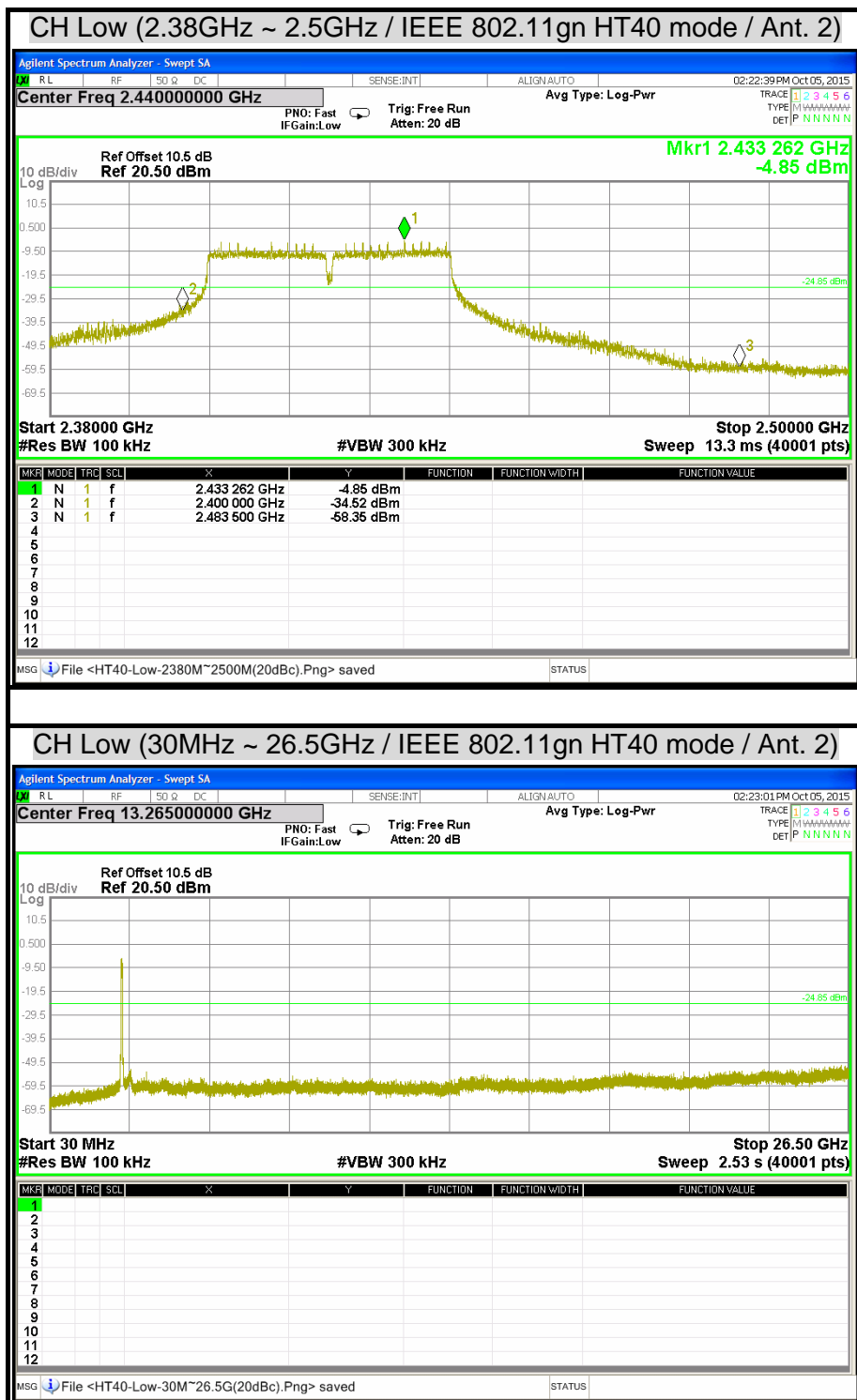


CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 mode / Ant. 2)

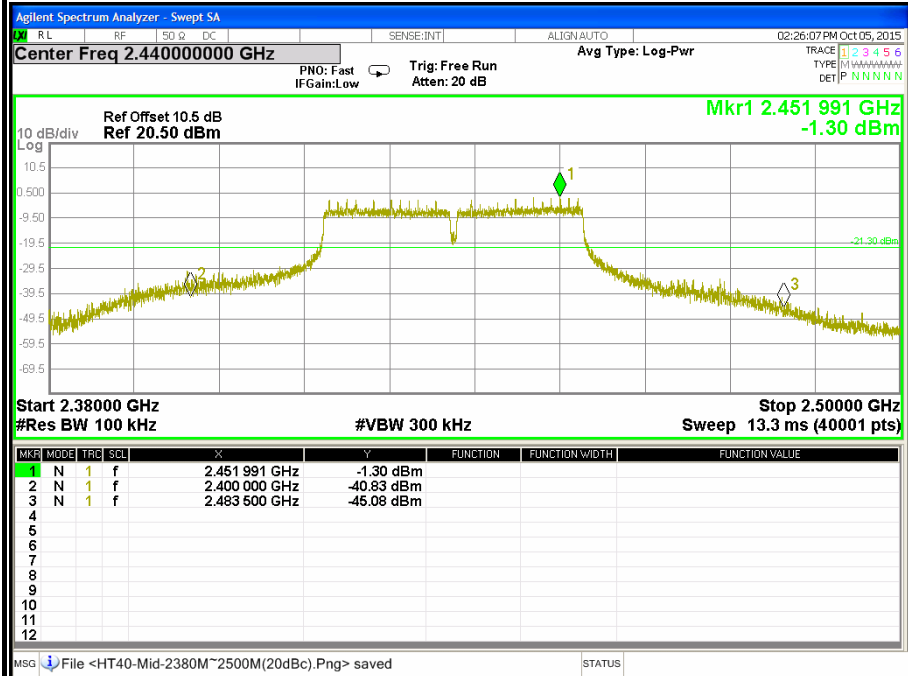


CH High (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 mode / Ant. 2)

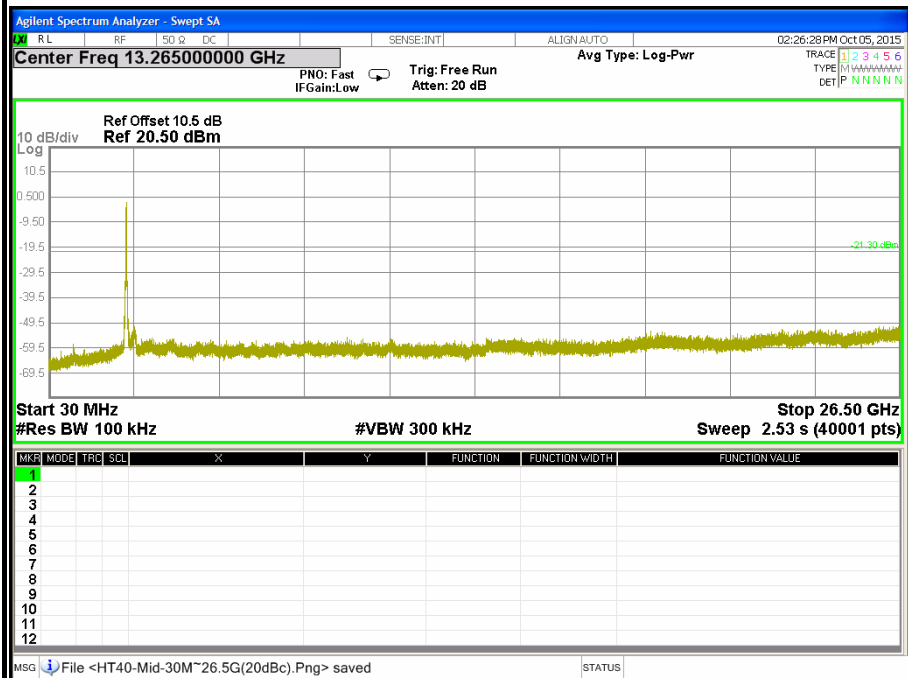




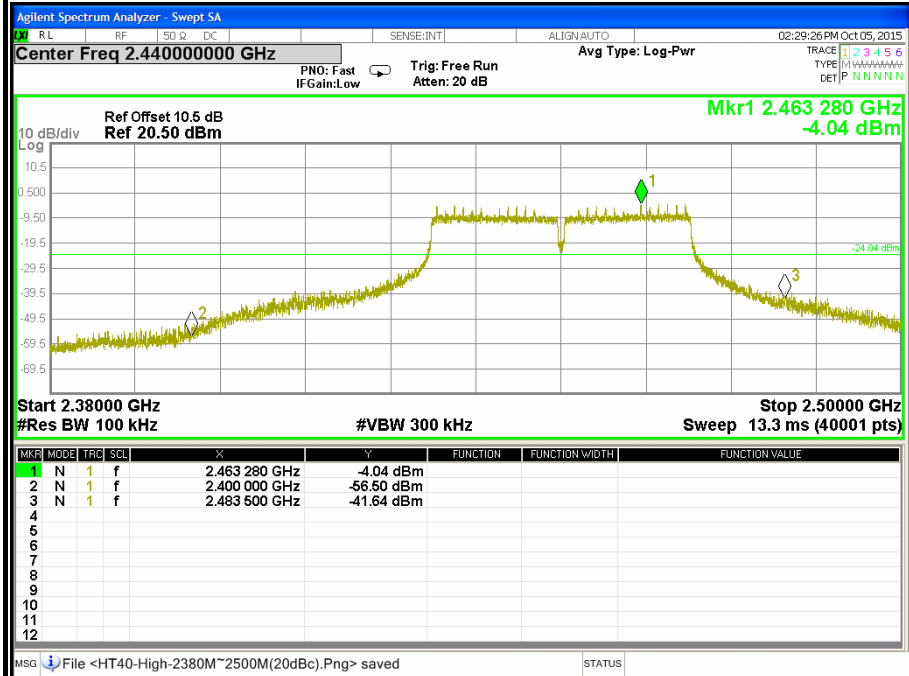
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 mode / Ant. 2)



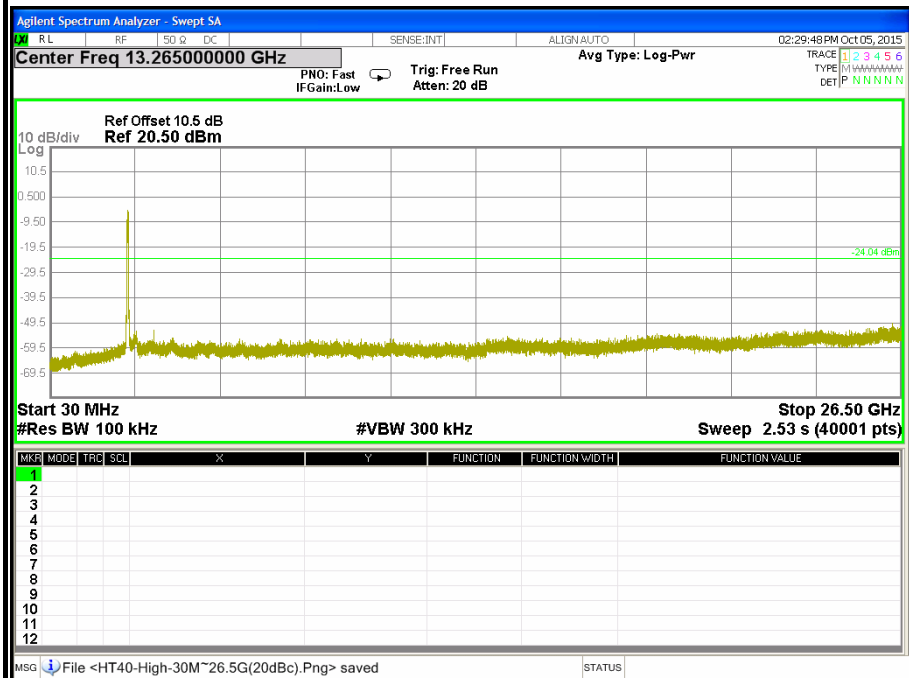
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 mode / Ant. 2)



CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 mode / Ant. 2)



CH High (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 mode / Ant. 2)



7.6 RADIATED EMISSION

LIMITS

- (1) According to § 15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3338	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			

Remark:

1. ¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
2. ² Above 38.6

- (2) According to § 15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

- (3) According to § 15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

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

Remark: **Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

- (4) According to § 15.209 (b) In the emission table above, the tighter limit applies at the band edges.

TEST EQUIPMENT

Radiated Emission / 966Chamber_B

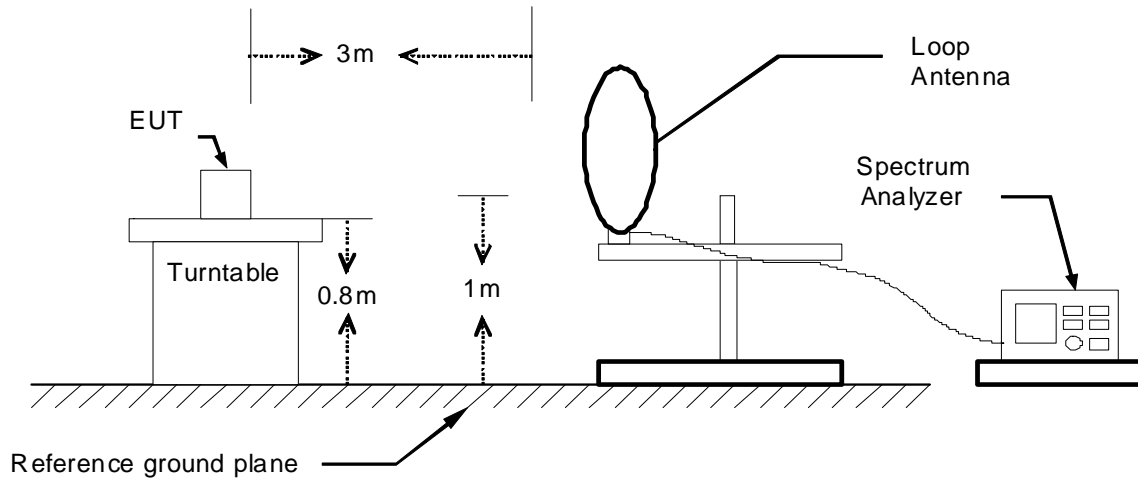
Name of Equipment	Manufacture	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY46180323	04/14/2016
EMI Test Receiver	Rohde & Schwarz	ESCI	100221	04/22/2016
Bi-log Antenna	TESEQ	CBL6112D	35403	08/04/2016
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-778	08/09/2016
Double-Ridged Waveguide Horn	ETS-LINDGREN	3117	00078733	12/02/2015
Horn Antenna	COM-POWER	AH-840	03077	12/17/2015
Pre-Amplifier	Agilent	8447D	2944A10052	07/14/2016
Pre-Amplifier	Agilent	8449B	3008A01916	07/14/2016
LOOP Antenna	COM-POWER	AL-130	121060	05/24/2016

Remark: Each piece of equipment is scheduled for calibration once a year.

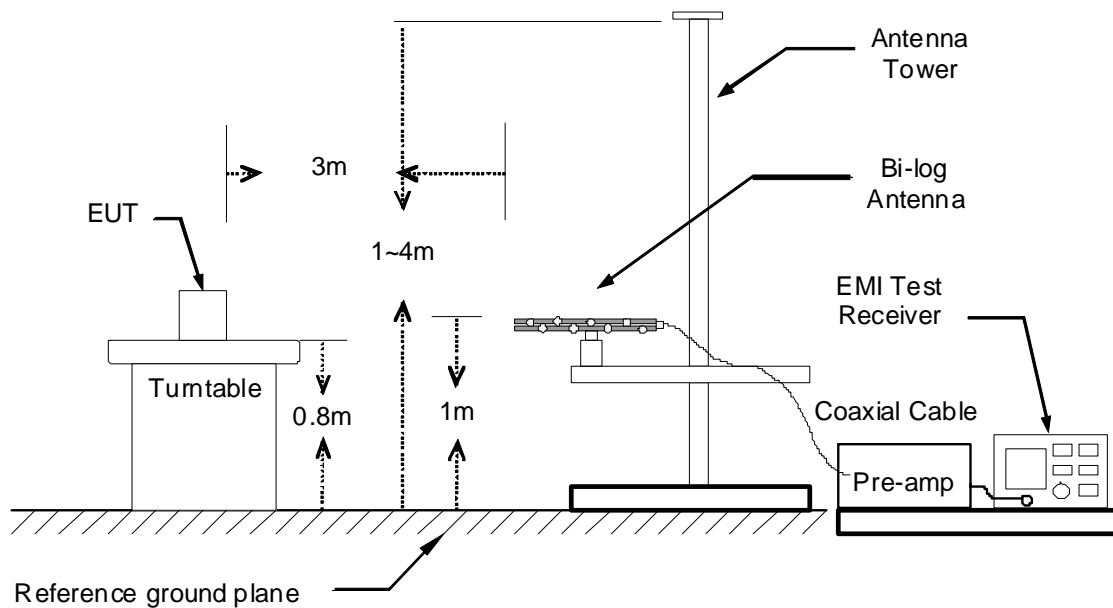
TEST SETUP

The diagram below shows the test setup that is utilized to make the measurements for emission below 1GHz.

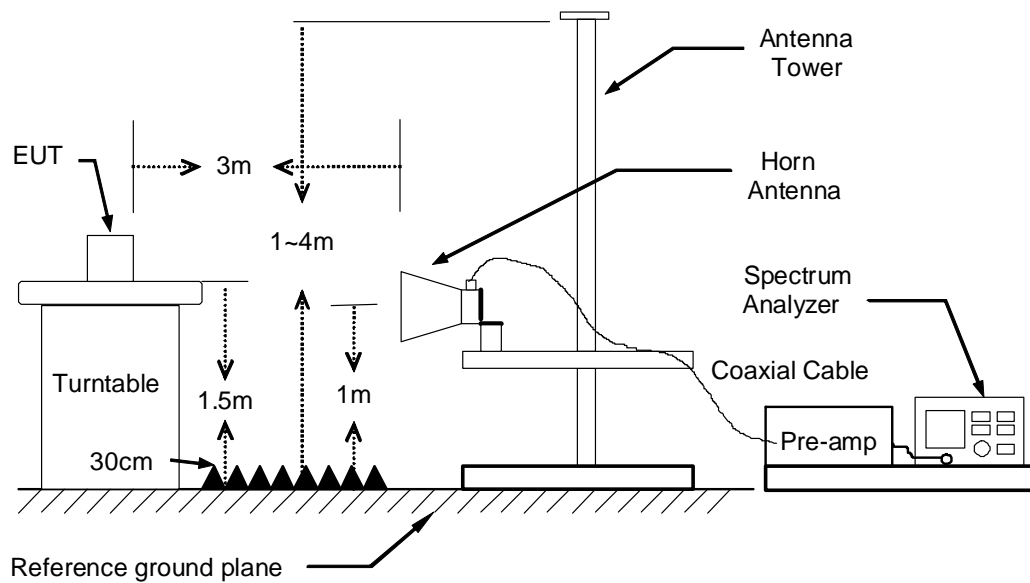
9kHz ~ 30MHz



30MHz ~ 1GHz



The diagram below shows the test setup that is utilized to make the measurements for emission above 1GHz.



TEST PROCEDURE

1. The EUT was placed on the top of a rotating table 0.8 and 1.5 meters above the ground. The table was rotated 360 degrees to determine the position of the highest radiation.
2. While measuring the radiated emission below 1GHz, the EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. While measuring the radiated emission above 1GHz, the EUT was set 3 meters away from the interference-receiving antenna.
3. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarization of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold mode.
6. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Remark :

1. *The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.*
2. *The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1GHz.*
3. *The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.*

TEST RESULTS

Below 1 GHz (9kHz ~ 30MHz)

No emission found between lowest internal used/generated frequency to 30MHz.

Below 1 GHz (30MHz ~ 1GHz)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternil Guan
Test Model	CJM210EC	Test Date	2015/10/03
Test mode	Mode 1	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
64.92	55.11	-20.80	34.31	40.00	-5.69	232	400	Peak
250.19	44.17	-12.67	31.50	46.00	-14.50	147	100	Peak
375.32	43.13	-9.66	33.47	46.00	-12.53	262	100	Peak
455.83	41.06	-8.64	32.42	46.00	-13.58	49	200	Peak
500.45	41.92	-8.13	33.79	46.00	-12.21	147	200	Peak
624.61	44.49	-6.45	38.04	46.00	-7.96	152	100	Peak
749.74	44.46	-4.99	39.47	46.00	-6.53	220	100	Peak
874.87	46.19	-3.20	42.99	46.00	-3.01	155	100	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
64.92	57.60	-20.80	36.80	40.00	-3.20	172	100	QP
106.63	50.64	-15.14	35.50	43.50	-8.00	228	100	Peak
291.90	45.61	-11.72	33.89	46.00	-12.11	111	100	Peak
375.32	43.95	-9.66	34.29	46.00	-11.71	231	100	Peak
500.45	43.01	-8.13	34.88	46.00	-11.12	118	100	Peak
624.61	41.33	-6.45	34.88	46.00	-11.12	187	100	Peak
749.74	42.37	-4.99	37.38	46.00	-8.62	311	100	Peak
874.87	37.69	-3.20	34.49	46.00	-11.51	290	100	Peak

Remark:

1. Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) – PreAmp.Gain (dB)
3. Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)
4. Margin (dB) = Remark result (dBuV/m) - Quasi-peak limit (dBuV/m).

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternil Guan
Test Model	CJM210EC	Test Date	2015/10/03
Test mode	Mode 2	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
64.92	56.68	-20.80	35.88	40.00	-4.12	239	400	Peak
139.61	47.84	-14.80	33.04	43.50	-10.46	91	200	Peak
250.19	46.04	-12.67	33.37	46.00	-12.63	44	100	Peak
375.32	43.75	-9.66	34.09	46.00	-11.91	255	100	Peak
624.61	41.14	-6.45	34.69	46.00	-11.31	144	100	Peak
749.74	46.66	-4.99	41.67	46.00	-4.33	160	100	Peak
814.73	34.95	-4.00	30.95	46.00	-15.05	219	100	Peak
874.87	47.50	-3.20	44.30	46.00	-1.70	157	100	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
64.92	57.70	-20.80	36.90	40.00	-3.10	153	100	QP
106.63	51.02	-15.14	35.88	43.50	-7.62	163	100	Peak
375.32	44.19	-9.66	34.53	46.00	-11.47	224	100	Peak
500.45	42.40	-8.13	34.27	46.00	-11.73	102	100	Peak
624.61	40.99	-6.45	34.54	46.00	-11.46	196	100	Peak
749.74	38.32	-4.99	33.33	46.00	-12.67	280	100	Peak
811.82	37.52	-4.04	33.48	46.00	-12.52	247	100	Peak
874.87	37.03	-3.20	33.83	46.00	-12.17	311	100	Peak

Remark:

1. Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) – PreAmp.Gain (dB)
3. Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)
4. Margin (dB) = Remark result (dBuV/m) - Quasi-peak limit (dBuV/m).

Above 1 GHz

For Ant. 1 (Chip Antenna)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternil Guan
Test Model	CJM210EC	Test Date	2015/10/03
Test mode	IEEE 802.11b TX / CH Low / Ant. 1	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2092.00	30.82	1.97	32.79	54.00	-21.21	146	100	Average
2092.00	53.16	1.97	55.13	74.00	-18.87	146	100	Peak
2098.00	30.69	1.98	32.67	54.00	-21.33	2	200	Average
2098.00	50.69	1.98	52.67	74.00	-21.33	2	200	Peak
2118.00	30.15	2.04	32.19	54.00	-21.81	72	100	Average
2118.00	53.15	2.04	55.19	74.00	-18.81	72	100	Peak
4830.00	43.91	8.42	52.33	54.00	-1.67	123	103	Average
4830.00	46.15	8.42	54.57	74.00	-19.43	123	103	Peak
7230.00	37.13	12.31	49.44	74.00	-24.56	257	100	Peak
9645.00	36.94	14.94	51.88	74.00	-22.12	225	100	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
1802.00	43.48	-0.02	43.46	74.00	-30.54	31	100	Peak
1886.00	42.06	0.71	42.77	74.00	-31.23	285	200	Peak
2098.00	45.93	1.98	47.91	74.00	-26.09	82	200	Peak
4830.00	43.83	8.42	52.25	54.00	-1.75	196	125	Average
4830.00	46.75	8.42	55.17	74.00	-18.83	196	125	Peak
7830.00	36.80	12.83	49.63	74.00	-24.37	360	200	Peak
9645.00	37.06	14.94	52.00	74.00	-22.00	85	200	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternil Guan
Test Model	CJM210EC	Test Date	2015/10/03
Test mode	IEEE 802.11b TX / CH Middle / Ant. 1	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2082.00	30.23	1.94	32.17	54.00	-21.83	303	100	Average
2082.00	51.23	1.94	53.17	74.00	-20.83	303	100	Peak
2090.00	30.96	1.96	32.92	54.00	-21.08	41	200	Average
2090.00	54.97	1.96	56.93	74.00	-17.07	41	200	Peak
2120.00	30.48	2.05	32.53	54.00	-21.47	66	100	Average
2120.00	52.98	2.05	55.03	74.00	-18.97	66	100	Peak
4875.00	44.51	8.53	53.04	54.00	-0.96	114	100	Average
4875.00	47.21	8.53	55.74	74.00	-18.26	114	100	Peak
7200.00	37.78	12.30	50.08	74.00	-23.92	273	200	Peak
9750.00	36.71	15.09	51.80	74.00	-22.20	223	100	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
1354.00	43.46	-2.78	40.68	74.00	-33.32	240	200	Peak
1710.00	41.93	-0.82	41.11	74.00	-32.89	330	100	Peak
2094.00	46.97	1.97	48.94	74.00	-25.06	86	200	Peak
4875.00	44.51	8.53	53.04	54.00	-0.96	41	100	Average
4875.00	47.24	8.53	55.77	74.00	-18.23	41	100	Peak
8610.00	37.26	13.21	50.47	74.00	-23.53	66	200	Peak
9615.00	36.82	14.90	51.72	74.00	-22.28	44	100	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternal Guan
Test Model	CJM210EC	Test Date	2015/10/03
Test mode	IEEE 802.11b TX / CH High / Ant. 1	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2108.00	30.56	2.01	32.57	54.00	-21.43	310	100	Average
2108.00	51.57	2.01	53.58	74.00	-20.42	310	100	Peak
2118.00	30.38	2.04	32.42	54.00	-21.58	7	100	Average
2118.00	51.38	2.04	53.42	74.00	-20.58	7	100	Peak
2140.00	30.16	2.11	32.27	54.00	-21.73	135	100	Average
2140.00	50.06	2.11	52.17	74.00	-21.83	135	100	Peak
4920.00	42.50	8.63	51.13	54.00	-2.87	125	100	Average
4920.00	46.00	8.63	54.63	74.00	-19.37	125	100	Peak
7755.00	37.66	12.73	50.39	74.00	-23.61	295	200	Peak
9855.00	35.97	15.23	51.20	74.00	-22.80	231	200	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2106.00	46.26	2.01	48.27	74.00	-25.73	113	100	Peak
2126.00	47.91	2.07	49.98	74.00	-24.02	60	100	Peak
2352.00	42.26	2.72	44.98	74.00	-29.02	72	100	Peak
4920.00	44.47	8.63	53.10	54.00	-0.90	65	127	Average
4920.00	47.22	8.63	55.85	74.00	-18.15	65	127	Peak
7935.00	36.67	12.97	49.64	74.00	-24.36	27	100	Peak
9855.00	35.94	15.23	51.17	74.00	-22.83	87	200	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternal Guan
Test Model	CJM210EC	Test Date	2015/10/03
Test mode	IEEE 802.11g TX / CH Low / Ant. 1	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
1376.00	43.51	-2.76	40.75	74.00	-33.25	64	100	Peak
2084.00	30.78	1.94	32.72	54.00	-21.28	124	100	Average
2084.00	56.89	1.94	58.83	74.00	-15.17	124	100	Peak
2122.00	30.24	2.05	32.29	54.00	-21.71	196	200	Average
2122.00	52.01	2.05	54.06	74.00	-19.94	196	200	Peak
4830.00	41.11	8.42	49.53	74.00	-24.47	121	100	Peak
6270.00	38.14	11.34	49.48	74.00	-24.52	154	100	Peak
8850.00	36.13	13.23	49.36	74.00	-24.64	172	200	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
1908.00	41.95	0.90	42.85	74.00	-31.15	7	200	Peak
2082.00	49.78	1.94	51.72	74.00	-22.28	81	100	Peak
2112.00	48.73	2.02	50.75	74.00	-23.25	44	100	Peak
4830.00	40.13	8.42	48.55	74.00	-25.45	185	100	Peak
7020.00	37.38	12.26	49.64	74.00	-24.36	16	100	Peak
8160.00	36.75	13.10	49.85	74.00	-24.15	311	100	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result - Limit
Remark Peak = Result(PK) - Limit(PK)
Remark AVG = Result(AV) - Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternil Guan
Test Model	CJM210EC	Test Date	2015/10/03
Test mode	IEEE 802.11g TX / CH Middle / Ant. 1	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2114.00	31.58	2.03	33.61	54.00	-20.39	134	100	Average
2114.00	53.14	2.03	55.17	74.00	-18.83	134	100	Peak
2390.00	49.02	2.83	51.85	54.00	-2.15	136	100	Average
2390.00	65.87	2.83	68.70	74.00	-5.30	136	100	Peak
2483.50	49.53	3.10	52.63	54.00	-1.37	64	200	Average
2483.50	70.25	3.10	73.35	74.00	-0.65	64	200	Peak
4875.00	40.00	8.53	48.53	54.00	-5.47	52	176	Average
4875.00	51.84	8.53	60.37	74.00	-13.63	52	176	Peak
7305.00	39.33	12.33	51.66	74.00	-22.34	289	100	Peak
9660.00	36.75	14.96	51.71	74.00	-22.29	289	100	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2088.00	47.87	1.96	49.83	74.00	-24.17	110	200	Peak
2390.00	42.80	2.83	45.63	54.00	-8.37	97	100	Average
2390.00	61.72	2.83	64.55	74.00	-9.45	97	100	Peak
2483.50	45.36	3.10	48.46	54.00	-5.54	162	100	Average
2483.50	65.80	3.10	68.90	74.00	-5.10	162	100	Peak
4860.00	43.04	8.49	51.53	54.00	-2.47	122	100	Average
4860.00	53.08	8.49	61.57	74.00	-12.43	122	100	Peak
7305.00	39.11	12.33	51.44	74.00	-22.56	77	200	Peak
9750.00	36.69	15.09	51.78	74.00	-22.22	39	200	Peak

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- Average test would be performed if the peak result were greater than the average limit.
- Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternil Guan
Test Model	CJM210EC	Test Date	2015/10/03
Test mode	IEEE 802.11g TX / CH High / Ant. 1	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
1126.00	46.77	-3.01	43.76	74.00	-30.24	154	100	Peak
1250.00	44.93	-2.89	42.04	74.00	-31.96	233	100	Peak
2082.00	30.93	1.94	32.87	54.00	-21.13	50	100	Average
2082.00	56.82	1.94	58.76	74.00	-15.24	50	100	Peak
4920.00	40.39	8.63	49.02	74.00	-24.98	119	100	Peak
6465.00	37.64	11.68	49.32	74.00	-24.68	55	200	Peak
9120.00	36.22	13.61	49.83	74.00	-24.17	360	200	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
1780.00	42.57	-0.21	42.36	74.00	-31.64	15	200	Peak
2116.00	48.23	2.04	50.27	74.00	-23.73	48	100	Peak
2300.00	41.31	2.57	43.88	74.00	-30.12	358	100	Peak
4920.00	41.48	8.63	50.11	74.00	-23.89	61	200	Peak
7215.00	37.02	12.31	49.33	74.00	-24.67	118	100	Peak
8895.00	36.68	13.24	49.92	74.00	-24.08	283	200	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternal Guan
Test Model	CJM210EC	Test Date	2015/10/03
Test mode	IEEE 802.11gn HT20 TX / CH Low / Ant. 1	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
1126.00	48.08	-3.01	45.07	74.00	-28.93	156	100	Peak
2078.00	30.23	1.93	32.16	54.00	-21.84	48	100	Average
2078.00	55.23	1.93	57.16	74.00	-16.84	48	100	Peak
2504.00	42.41	3.16	45.57	74.00	-28.43	65	100	Peak
3210.00	42.22	4.34	46.56	74.00	-27.44	284	200	Peak
4815.00	39.28	8.39	47.67	74.00	-26.33	226	200	Peak
7725.00	37.51	12.69	50.20	74.00	-23.80	317	100	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
1878.00	42.92	0.64	43.56	74.00	-30.44	124	100	Peak
2094.00	49.78	1.97	51.75	74.00	-22.25	91	200	Peak
2118.00	47.23	2.04	49.27	74.00	-24.73	46	100	Peak
3675.00	41.56	5.25	46.81	74.00	-27.19	128	200	Peak
4830.00	41.50	8.42	49.92	74.00	-24.08	198	200	Peak
7800.00	37.97	12.79	50.76	74.00	-23.24	17	200	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternil Guan
Test Model	CJM210EC	Test Date	2015/10/03
Test mode	IEEE 802.11gn HT20 TX / CH Middle / Ant. 1	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2092.00	30.53	1.97	32.50	54.00	-21.50	64	200	Average
2092.00	53.53	1.97	55.50	74.00	-18.50	64	200	Peak
2390.00	46.60	2.83	49.43	54.00	-4.57	202	100	Average
2390.00	65.22	2.83	68.05	74.00	-5.95	202	100	Peak
2483.50	47.26	3.10	50.36	54.00	-3.64	299	200	Average
2483.50	68.55	3.10	71.65	74.00	-2.35	299	200	Peak
4875.00	40.52	8.53	49.05	54.00	-4.95	136	100	Average
4875.00	52.03	8.53	60.56	74.00	-13.44	136	100	Peak
7305.00	31.09	12.33	43.42	54.00	-10.58	62	100	Average
7305.00	42.04	12.33	54.37	74.00	-19.63	62	100	Peak
9750.00	29.10	15.09	44.19	54.00	-9.81	227	200	Average
9750.00	41.13	15.09	56.22	74.00	-17.78	227	200	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2086.00	47.31	1.95	49.26	74.00	-24.74	102	200	Peak
2390.00	43.61	2.83	46.44	54.00	-7.56	99	100	Average
2390.00	62.17	2.83	65.00	74.00	-9.00	99	100	Peak
2483.50	45.00	3.10	48.10	54.00	-5.90	155	100	Average
2483.50	64.38	3.10	67.48	74.00	-6.52	155	100	Peak
4875.00	43.43	8.53	51.96	54.00	-2.04	197	200	Average
4875.00	56.48	8.53	65.01	74.00	-8.99	197	200	Peak
7305.00	34.29	12.33	46.62	54.00	-7.38	80	100	Average
7305.00	46.42	12.33	58.75	74.00	-15.25	80	100	Peak
9750.00	30.60	15.09	45.69	54.00	-8.31	116	100	Average
9750.00	43.67	15.09	58.76	74.00	-15.24	116	100	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternal Guan
Test Model	CJM210EC	Test Date	2015/10/03
Test mode	IEEE 802.11gn HT20 TX / CH High / Ant. 1	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2086.00	30.98	1.95	32.93	54.00	-21.07	58	100	Average
2086.00	53.98	1.95	55.93	74.00	-18.07	58	100	Peak
2124.00	31.00	2.06	33.06	54.00	-20.94	53	100	Average
2124.00	55.17	2.06	57.23	74.00	-16.77	53	100	Peak
2136.00	30.22	2.09	32.31	54.00	-21.69	303	100	Average
2136.00	49.06	2.09	51.15	74.00	-22.85	303	100	Peak
4920.00	38.68	8.63	47.31	74.00	-26.69	128	100	Peak
5865.00	37.29	10.56	47.85	74.00	-26.15	316	200	Peak
7980.00	36.73	13.03	49.76	74.00	-24.24	328	200	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
1932.00	42.84	1.11	43.95	74.00	-30.05	277	200	Peak
2090.00	47.19	1.96	49.15	74.00	-24.85	73	100	Peak
2132.00	44.65	2.08	46.73	74.00	-27.27	22	200	Peak
4935.00	40.15	8.67	48.82	74.00	-25.18	55	200	Peak
5670.00	38.44	10.12	48.56	74.00	-25.44	359	200	Peak
7920.00	37.31	12.95	50.26	74.00	-23.74	0	200	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternil Guan
Test Model	CJM210EC	Test Date	2015/10/03
Test mode	IEEE 802.11gn HT40 TX / CH Low / Ant. 1	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2096.00	30.85	1.98	32.83	54.00	-21.17	71	100	Average
2096.00	54.59	1.98	56.57	74.00	-17.43	71	100	Peak
2130.00	30.42	2.08	32.50	54.00	-21.50	109	200	Average
2130.00	51.00	2.08	53.08	74.00	-20.92	109	200	Peak
2483.50	32.39	3.10	35.49	54.00	-18.51	229	200	Average
2483.50	58.93	3.10	62.03	74.00	-11.97	229	200	Peak
4845.00	38.35	8.46	46.81	74.00	-27.19	114	100	Peak
7395.00	37.53	12.35	49.88	74.00	-24.12	107	100	Peak
9585.00	36.78	14.86	51.64	74.00	-22.36	155	200	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
1858.00	42.32	0.47	42.79	74.00	-31.21	264	100	Peak
2134.00	48.26	2.09	50.35	74.00	-23.65	45	100	Peak
2484.00	48.26	3.10	51.36	74.00	-22.64	155	100	Peak
4845.00	38.99	8.46	47.45	74.00	-26.55	260	200	Peak
6420.00	37.57	11.60	49.17	74.00	-24.83	81	100	Peak
7485.00	37.56	12.38	49.94	74.00	-24.06	353	200	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternal Guan
Test Model	CJM210EC	Test Date	2015/10/03
Test mode	IEEE 802.11gn HT40 TX / CH Middle / Ant. 1	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2124.00	30.55	2.06	32.61	54.00	-21.39	54	100	Average
2124.00	54.57	2.06	56.63	74.00	-17.37	54	100	Peak
2390.00	43.18	2.83	46.01	54.00	-7.99	207	100	Average
2390.00	60.97	2.83	63.80	74.00	-10.20	207	100	Peak
2483.50	50.25	3.10	53.35	54.00	-0.65	66	100	Average
2483.50	68.79	3.10	71.89	74.00	-2.11	66	100	Peak
4875.00	40.67	8.53	49.20	54.00	-4.80	119	100	Average
4875.00	50.08	8.53	58.61	74.00	-15.39	119	100	Peak
7305.00	37.47	12.33	49.80	74.00	-24.20	52	100	Peak
9615.00	36.16	14.90	51.06	74.00	-22.94	333	100	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2096.00	48.99	1.98	50.97	74.00	-23.03	92	200	Peak
2390.00	36.54	2.83	39.37	54.00	-14.63	59	100	Average
2390.00	56.99	2.83	59.82	74.00	-14.18	59	100	Peak
2483.50	45.50	3.10	48.60	54.00	-5.40	158	100	Average
2483.50	62.50	3.10	65.60	74.00	-8.40	158	100	Peak
4875.00	42.19	8.53	50.72	54.00	-3.28	45	100	Average
4875.00	51.92	8.53	60.45	74.00	-13.55	45	100	Peak
7290.00	31.98	12.33	44.31	54.00	-9.69	298	100	Average
7290.00	42.39	12.33	54.72	74.00	-19.28	298	100	Peak
9720.00	30.06	15.04	45.10	54.00	-8.90	109	200	Average
9720.00	39.50	15.04	54.54	74.00	-19.46	109	200	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternil Guan
Test Model	CJM210EC	Test Date	2015/10/03
Test mode	IEEE 802.11gn HT40 TX / CH High / Ant. 1	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
1942.00	41.90	1.20	43.10	74.00	-30.90	115	200	Peak
2110.00	30.85	2.02	32.87	54.00	-21.13	54	100	Average
2110.00	55.12	2.02	57.14	74.00	-16.86	54	100	Peak
2390.00	42.23	2.83	45.06	74.00	-28.94	2	200	Peak
4920.00	38.05	8.63	46.68	74.00	-27.32	30	200	Peak
7200.00	36.94	12.30	49.24	74.00	-24.76	278	100	Peak
7740.00	36.88	12.71	49.59	74.00	-24.41	172	200	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
1786.00	43.52	-0.16	43.36	74.00	-30.64	167	100	Peak
2092.00	48.83	1.97	50.80	74.00	-23.20	65	100	Peak
2138.00	46.89	2.10	48.99	74.00	-25.01	114	200	Peak
4905.00	37.80	8.60	46.40	74.00	-27.60	286	200	Peak
6285.00	38.21	11.37	49.58	74.00	-24.42	250	200	Peak
7875.00	36.46	12.89	49.35	74.00	-24.65	277	100	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

For Ant. 2 (Dipole Antenna)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternil Guan
Test Model	CJM210EC	Test Date	2015/10/01
Test mode	IEEE 802.11b TX / CH Low / Ant. 2	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2080.00	30.66	1.93	32.59	54.00	-21.41	62	150	Average
2080.00	57.54	1.93	59.47	74.00	-14.53	62	150	Peak
2114.00	47.70	2.03	49.73	74.00	-24.27	296	100	Peak
2726.00	41.63	3.60	45.23	74.00	-28.77	188	150	Peak
4830.00	41.50	8.42	49.92	54.00	-4.08	135	100	Average
4830.00	45.11	8.42	53.53	74.00	-20.47	135	100	Peak
6225.00	37.38	11.26	48.64	74.00	-25.36	102	150	Peak
7380.00	37.40	12.35	49.75	74.00	-24.25	268	200	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2080.00	48.73	1.93	50.66	74.00	-23.34	21	200	Peak
2102.00	48.72	2.00	50.72	74.00	-23.28	250	100	Peak
2702.00	45.86	3.55	49.41	74.00	-24.59	224	100	Peak
3210.00	41.95	4.34	46.29	74.00	-27.71	81	150	Peak
4320.00	39.04	7.21	46.25	74.00	-27.75	247	100	Peak
4830.00	44.61	8.42	53.03	54.00	-0.97	72	169	Average
4830.00	47.14	8.42	55.56	74.00	-18.44	72	169	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternil Guan
Test Model	CJM210EC	Test Date	2015/10/01
Test mode	IEEE 802.11b TX / CH Middle / Ant. 2	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2088.00	48.05	1.96	50.01	74.00	-23.99	82	100	Peak
2114.00	47.77	2.03	49.80	74.00	-24.20	138	100	Peak
2140.00	47.25	2.11	49.36	74.00	-24.64	209	100	Peak
3180.00	41.43	4.31	45.74	74.00	-28.26	109	150	Peak
4875.00	42.59	8.53	51.12	74.00	-22.88	133	100	Peak
6315.00	37.33	11.42	48.75	74.00	-25.25	233	150	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2362.00	44.96	2.75	47.71	74.00	-26.29	59	100	Peak
2488.00	47.34	3.12	50.46	74.00	-23.54	109	100	Peak
2696.00	46.04	3.54	49.58	74.00	-24.42	161	100	Peak
4875.00	44.00	8.53	52.53	54.00	-1.47	86	158	Average
4875.00	46.97	8.53	55.50	74.00	-18.50	86	158	Peak
7035.00	37.35	12.26	49.61	74.00	-24.39	25	200	Peak
7920.00	37.25	12.95	50.20	74.00	-23.80	11	100	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternal Guan
Test Model	CJM210EC	Test Date	2015/10/01
Test mode	IEEE 802.11b TX / CH High / Ant. 2	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2072.00	49.42	1.91	51.33	74.00	-22.67	76	100	Peak
2080.00	49.27	1.93	51.20	74.00	-22.80	118	200	Peak
2124.00	48.43	2.06	50.49	74.00	-23.51	212	200	Peak
4920.00	43.20	8.63	51.83	54.00	-2.17	136	100	Average
4920.00	45.43	8.63	54.06	74.00	-19.94	136	100	Peak
6210.00	37.46	11.24	48.70	74.00	-25.30	188	150	Peak
7320.00	37.43	12.33	49.76	74.00	-24.24	252	100	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2092.00	47.98	1.97	49.95	74.00	-24.05	238	100	Peak
2386.00	45.58	2.82	48.40	74.00	-25.60	231	200	Peak
2718.00	46.46	3.58	50.04	74.00	-23.96	143	100	Peak
4920.00	44.10	8.63	52.73	54.00	-1.27	42	127	Average
4920.00	47.00	8.63	55.63	74.00	-18.37	42	127	Peak
6480.00	37.01	11.71	48.72	74.00	-25.28	93	100	Peak
6930.00	37.22	12.18	49.40	74.00	-24.60	30	100	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternal Guan
Test Model	CJM210EC	Test Date	2015/10/01
Test mode	IEEE 802.11g TX / CH Low / Ant. 2	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
1730.00	43.81	-0.64	43.17	74.00	-30.83	289	200	Peak
2082.00	30.00	1.94	31.94	54.00	-22.06	68	200	Average
2082.00	57.15	1.94	59.09	74.00	-14.91	68	200	Peak
2114.00	29.83	2.03	31.86	54.00	-22.14	70	200	Average
2114.00	53.39	2.03	55.42	74.00	-18.58	70	200	Peak
4200.00	39.19	6.91	46.10	74.00	-27.90	79	150	Peak
4830.00	35.41	8.42	43.83	54.00	-10.17	116	100	Average
4830.00	46.57	8.42	54.99	74.00	-19.01	116	100	Peak
5490.00	39.53	9.72	49.25	74.00	-24.75	111	200	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2078.00	48.15	1.93	50.08	74.00	-23.92	49	100	Peak
2596.00	48.46	3.34	51.80	74.00	-22.20	34	100	Peak
2718.00	47.89	3.58	51.47	74.00	-22.53	146	100	Peak
3675.00	40.37	5.25	45.62	74.00	-28.38	230	150	Peak
4830.00	37.88	8.42	46.30	54.00	-7.70	69	150	Average
4830.00	50.68	8.42	59.10	74.00	-14.90	69	150	Peak
6825.00	36.85	12.07	48.92	74.00	-25.08	295	150	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternil Guan
Test Model	CJM210EC	Test Date	2015/10/01
Test mode	IEEE 802.11g TX / CH Middle / Ant. 2	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2082.00	49.94	1.94	51.88	74.00	-22.12	117	200	Peak
2390.00	48.13	2.83	50.96	74.00	-23.04	34	200	Peak
2483.50	45.60	3.10	48.70	74.00	-25.30	52	100	Peak
3150.00	40.63	4.28	44.91	74.00	-29.09	80	150	Peak
4875.00	44.70	8.53	53.23	54.00	-0.77	129	100	Average
4875.00	59.14	8.53	67.67	74.00	-6.33	129	100	Peak
7305.00	30.70	12.33	43.03	54.00	-10.97	61	150	Average
7305.00	43.13	12.33	55.46	74.00	-18.54	61	150	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2082.00	48.71	1.94	50.65	74.00	-23.35	241	100	Peak
2390.00	44.52	2.83	47.35	54.00	-6.65	23	200	Average
2390.00	63.52	2.83	66.35	74.00	-7.65	23	200	Peak
2483.50	45.02	3.10	48.12	54.00	-5.88	351	100	Average
2483.50	59.36	3.10	62.46	74.00	-11.54	351	100	Peak
3240.00	41.36	4.37	45.73	74.00	-28.27	156	200	Peak
4875.00	44.80	8.53	53.33	54.00	-0.67	74	100	Average
4875.00	58.76	8.53	67.29	74.00	-6.71	74	100	Peak
7305.00	31.00	12.33	43.33	54.00	-10.67	50	100	Average
7305.00	45.23	12.33	57.56	74.00	-16.44	50	100	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternal Guan
Test Model	CJM210EC	Test Date	2015/10/01
Test mode	IEEE 802.11g TX / CH High / Ant. 2	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2078.00	49.78	1.93	51.71	74.00	-22.29	131	100	Peak
2122.00	49.95	2.05	52.00	74.00	-22.00	214	200	Peak
2714.00	42.51	3.57	46.08	74.00	-27.92	67	100	Peak
4470.00	39.20	7.58	46.78	74.00	-27.22	182	200	Peak
4920.00	35.55	8.63	44.18	54.00	-9.82	134	100	Average
4920.00	49.44	8.63	58.07	74.00	-15.93	134	100	Peak
6450.00	37.54	11.65	49.19	74.00	-24.81	279	150	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2092.00	46.41	1.97	48.38	74.00	-25.62	254	100	Peak
2584.00	47.73	3.32	51.05	74.00	-22.95	138	100	Peak
2702.00	47.69	3.55	51.24	74.00	-22.76	162	100	Peak
4920.00	36.16	8.63	44.79	54.00	-9.21	68	200	Average
4920.00	47.97	8.63	56.60	74.00	-17.40	68	200	Peak
6030.00	37.49	10.92	48.41	74.00	-25.59	0	100	Peak
7725.00	37.61	12.69	50.30	74.00	-23.70	38	150	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternil Guan
Test Model	CJM210EC	Test Date	2015/10/01
Test mode	IEEE 802.11gn HT20 TX / CH Low / Ant. 2	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2104.00	50.11	2.00	52.11	74.00	-21.89	358	200	Peak
2508.00	42.80	3.17	45.97	74.00	-28.03	178	100	Peak
2930.00	42.71	4.00	46.71	74.00	-27.29	2	200	Peak
4815.00	42.18	8.39	50.57	74.00	-23.43	191	150	Peak
5475.00	37.42	9.69	47.11	74.00	-26.89	31	100	Peak
6360.00	37.45	11.50	48.95	74.00	-25.05	103	100	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2096.00	48.37	1.98	50.35	74.00	-23.65	237	100	Peak
2188.00	43.91	2.25	46.16	74.00	-27.84	158	100	Peak
2708.00	48.51	3.56	52.07	74.00	-21.93	155	100	Peak
4815.00	33.55	8.39	41.94	54.00	-12.06	93	150	Average
4815.00	46.22	8.39	54.61	74.00	-19.39	93	150	Peak
5730.00	38.30	10.26	48.56	74.00	-25.44	73	100	Peak
6555.00	37.19	11.80	48.99	74.00	-25.01	1	150	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternal Guan
Test Model	CJM210EC	Test Date	2015/10/01
Test mode	IEEE 802.11gn HT20 TX / CH Middle / Ant. 2	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2114.00	49.98	2.03	52.01	74.00	-21.99	80	100	Peak
2390.00	48.44	2.83	51.27	74.00	-22.73	50	200	Peak
2483.50	44.66	3.10	47.76	74.00	-26.24	271	100	Peak
4875.00	44.68	8.53	53.21	54.00	-0.79	132	100	Average
4875.00	58.79	8.53	67.32	74.00	-6.68	132	100	Peak
7320.00	32.03	12.33	44.36	54.00	-9.64	53	100	Average
7320.00	44.55	12.33	56.88	74.00	-17.12	53	100	Peak
7980.00	36.89	13.03	49.92	74.00	-24.08	254	100	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2108.00	47.90	2.01	49.91	74.00	-24.09	42	200	Peak
2390.00	45.50	2.83	48.33	54.00	-5.67	97	200	Average
2390.00	64.96	2.83	67.79	74.00	-6.21	97	200	Peak
2483.50	47.66	3.10	50.76	54.00	-3.24	108	100	Average
2483.50	60.45	3.10	63.55	74.00	-10.45	108	100	Peak
4875.00	44.47	8.53	53.00	54.00	-1.00	74	150	Average
4875.00	59.36	8.53	67.89	74.00	-6.11	74	150	Peak
6315.00	37.71	11.42	49.13	74.00	-24.87	139	200	Peak
7305.00	32.53	12.33	44.86	54.00	-9.14	119	100	Average
7305.00	45.21	12.33	57.54	74.00	-16.46	119	100	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result - Limit
Remark Peak = Result(PK) - Limit(PK)
Remark AVG = Result(AV) - Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternal Guan
Test Model	CJM210EC	Test Date	2015/10/01
Test mode	IEEE 802.11gn HT20 TX / CH High / Ant. 2	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2086.00	50.31	1.95	52.26	74.00	-21.74	210	200	Peak
2870.00	41.57	3.88	45.45	74.00	-28.55	10	100	Peak
2982.00	41.88	4.10	45.98	74.00	-28.02	140	100	Peak
4920.00	35.80	8.63	44.43	54.00	-9.57	133	100	Average
4920.00	48.67	8.63	57.30	74.00	-16.70	133	100	Peak
6480.00	38.32	11.71	50.03	74.00	-23.97	300	150	Peak
8025.00	37.39	13.07	50.46	74.00	-23.54	45	200	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2074.00	47.46	1.91	49.37	74.00	-24.63	232	100	Peak
2542.00	47.37	3.23	50.60	74.00	-23.40	230	100	Peak
2712.00	46.51	3.57	50.08	74.00	-23.92	157	100	Peak
4920.00	34.98	8.63	43.61	54.00	-10.39	72	150	Average
4920.00	47.22	8.63	55.85	74.00	-18.15	72	150	Peak
6795.00	36.96	12.04	49.00	74.00	-25.00	138	100	Peak
7170.00	38.22	12.29	50.51	74.00	-23.49	156	200	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternal Guan
Test Model	CJM210EC	Test Date	2015/10/01
Test mode	IEEE 802.11gn HT40 TX / CH Low / Ant. 2	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2080.00	31.00	1.93	32.93	54.00	-21.07	75	200	Average
2080.00	54.36	1.93	56.29	74.00	-17.71	75	200	Peak
2596.00	42.61	3.34	45.95	74.00	-28.05	53	100	Peak
2840.00	41.72	3.82	45.54	74.00	-28.46	300	100	Peak
3975.00	40.13	6.33	46.46	74.00	-27.54	221	200	Peak
4845.00	39.20	8.46	47.66	74.00	-26.34	135	150	Peak
6180.00	38.11	11.18	49.29	74.00	-24.71	183	150	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2082.00	46.53	1.94	48.47	74.00	-25.53	90	100	Peak
2588.00	45.12	3.32	48.44	74.00	-25.56	164	100	Peak
2702.00	45.48	3.55	49.03	74.00	-24.97	346	100	Peak
4860.00	39.77	8.49	48.26	74.00	-25.74	253	150	Peak
6495.00	37.28	11.73	49.01	74.00	-24.99	19	150	Peak
7350.00	37.27	12.34	49.61	74.00	-24.39	292	100	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternal Guan
Test Model	CJM210EC	Test Date	2015/10/01
Test mode	IEEE 802.11gn HT40 TX / CH Middle / Ant. 2	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2104.00	47.33	2.00	49.33	74.00	-24.67	257	100	Peak
2390.00	50.29	2.83	53.12	54.00	-0.88	246	148	Average
2390.00	70.52	2.83	73.35	74.00	-0.65	246	148	Peak
2483.50	49.09	3.10	52.19	54.00	-1.81	108	100	Average
2483.50	63.21	3.10	66.31	74.00	-7.69	108	100	Peak
4875.00	43.09	8.53	51.62	54.00	-2.38	127	100	Average
4875.00	55.51	8.53	64.04	74.00	-9.96	127	100	Peak
7305.00	39.58	12.33	51.91	74.00	-22.09	17	100	Peak
7950.00	37.19	12.99	50.18	74.00	-23.82	173	150	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2090.00	31.00	1.96	32.96	54.00	-21.04	85	100	Average
2090.00	54.79	1.96	56.75	74.00	-17.25	85	100	Peak
2390.00	39.41	2.83	42.24	54.00	-11.76	31	200	Average
2390.00	55.07	2.83	57.90	74.00	-16.10	31	200	Peak
2483.50	38.82	3.10	41.92	54.00	-12.08	51	100	Average
2483.50	52.92	3.10	56.02	74.00	-17.98	51	100	Peak
4875.00	43.24	8.53	51.77	54.00	-2.23	93	200	Average
4875.00	55.20	8.53	63.73	74.00	-10.27	93	200	Peak
7755.00	38.10	12.73	50.83	74.00	-23.17	34	200	Peak
9465.00	38.06	14.64	52.70	74.00	-21.30	39	150	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Waternal Guan
Test Model	CJM210EC	Test Date	2015/10/01
Test mode	IEEE 802.11gn HT40 TX / CH High / Ant. 2	Temp. & Humidity	25°C, 50%

966Chamber_B at 3Meter / Horizontal

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2094.00	31.00	1.97	32.97	54.00	-21.03	80	100	Average
2094.00	55.15	1.97	57.12	74.00	-16.88	80	100	Peak
2390.00	39.78	2.83	42.61	74.00	-31.39	43	100	Peak
2656.00	42.12	3.46	45.58	74.00	-28.42	75	100	Peak
4500.00	39.54	7.65	47.19	74.00	-26.81	232	150	Peak
5640.00	37.54	10.06	47.60	74.00	-26.40	250	150	Peak
7050.00	37.15	12.26	49.41	74.00	-24.59	148	100	Peak

966Chamber_B at 3Meter / Vertical

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
=====								
2086.00	48.09	1.95	50.04	74.00	-23.96	27	200	Peak
2390.00	48.60	2.83	51.43	74.00	-22.57	101	100	Peak
2518.00	48.90	3.19	52.09	74.00	-21.91	312	100	Peak
4905.00	40.13	8.60	48.73	74.00	-25.27	138	150	Peak
6930.00	37.71	12.18	49.89	74.00	-24.11	293	150	Peak
7740.00	37.03	12.71	49.74	74.00	-24.26	171	100	Peak

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

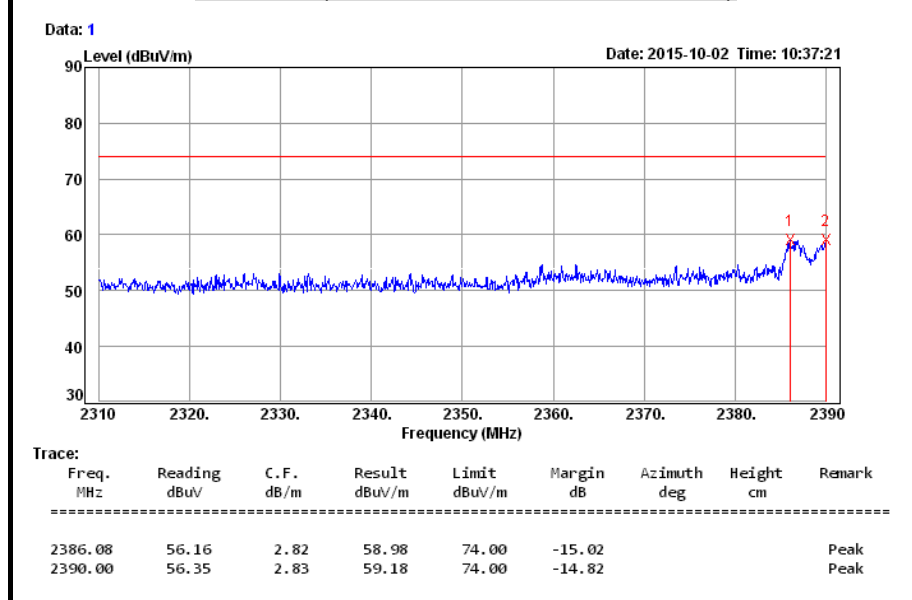
Restricted Band Edges

For Ant. 1 (Chip Antenna)

Detector mode: Peak

Polarity: Horizontal

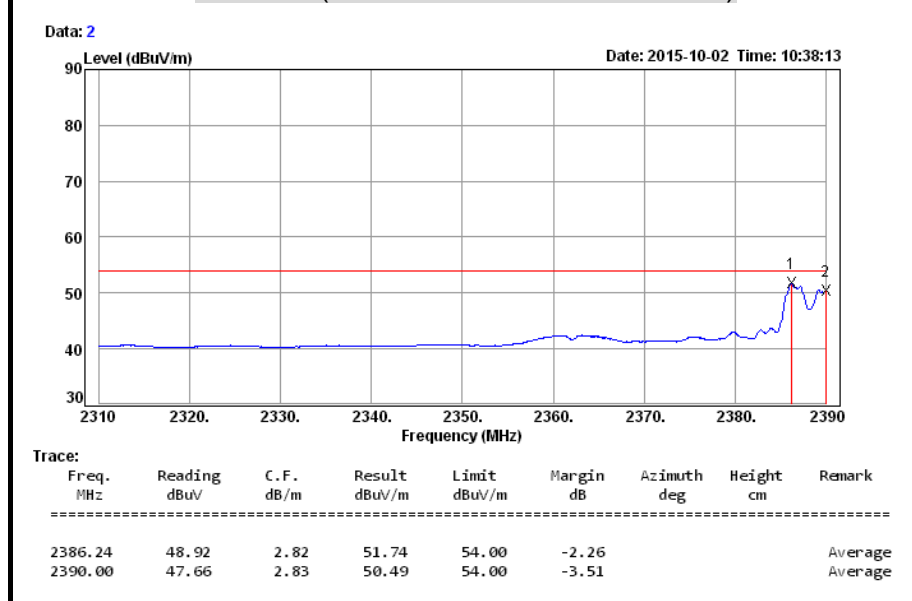
CH Low (IEEE 802.11b mode / Ant. 1)



Detector mode: Average

Polarity: Horizontal

CH Low (IEEE 802.11b mode / Ant. 1)

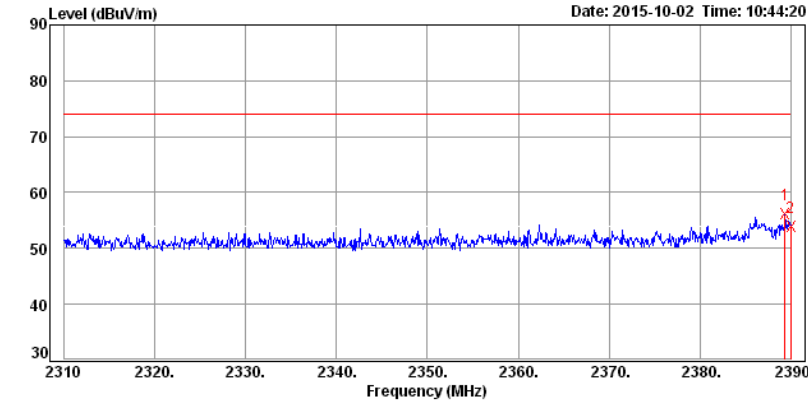


Detector mode: Peak

Polarity: Vertical

CH Low (IEEE 802.11b mode / Ant. 1)

Data: 4



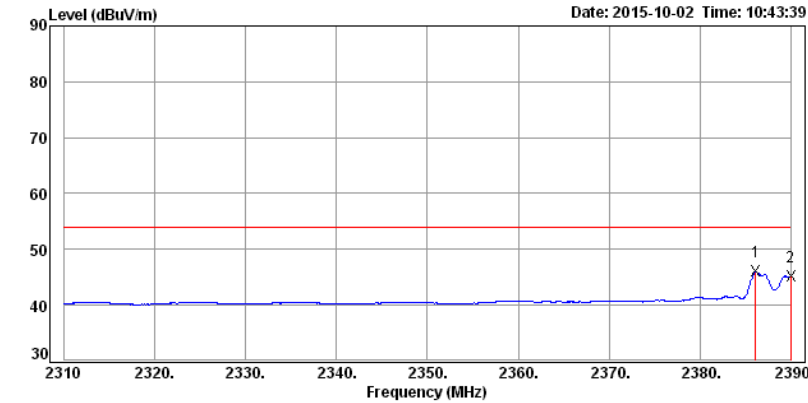
Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2389.36	53.20	2.83	56.03	74.00	-17.97			Peak	
2390.00	51.10	2.83	53.93	74.00	-20.07			Peak	

Detector mode: Average

Polarity: Vertical

CH Low (IEEE 802.11b mode / Ant. 1)

Data: 3

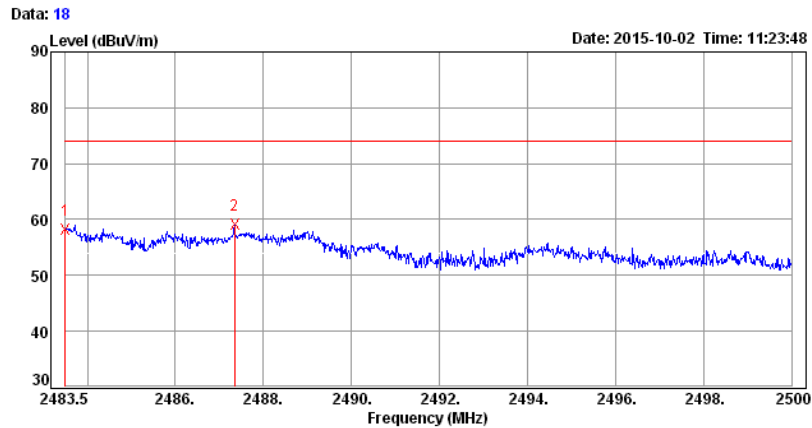


Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2386.16	43.23	2.82	46.05	54.00	-7.95			Average	
2390.00	42.37	2.83	45.20	54.00	-8.80			Average	

Detector mode: Peak

Polarity: Horizontal

CH High (IEEE 802.11b mode / Ant. 1)

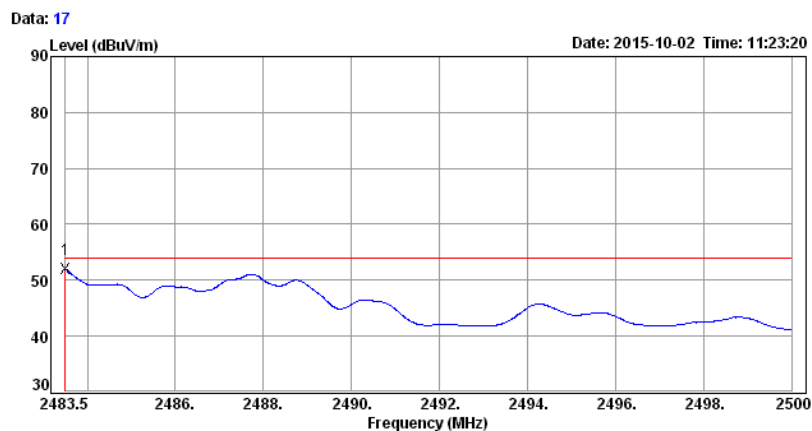


Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2483.50	55.10	3.10	58.20	74.00	-15.80			Peak	
2487.34	55.88	3.11	58.99	74.00	-15.01			Peak	

Detector mode: Average

Polarity: Horizontal

CH High (IEEE 802.11b mode / Ant. 1)



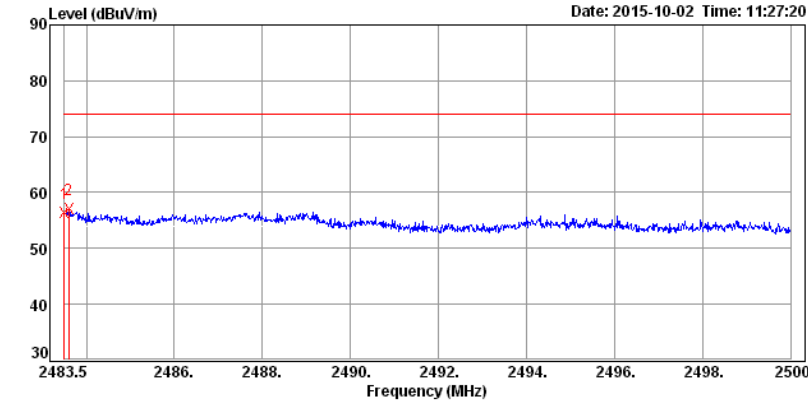
Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2483.50	48.91	3.10	52.01	54.00	-1.99			Average	

Detector mode: Peak

Polarity: Vertical

CH High (IEEE 802.11b mode / Ant. 1)

Data: 19



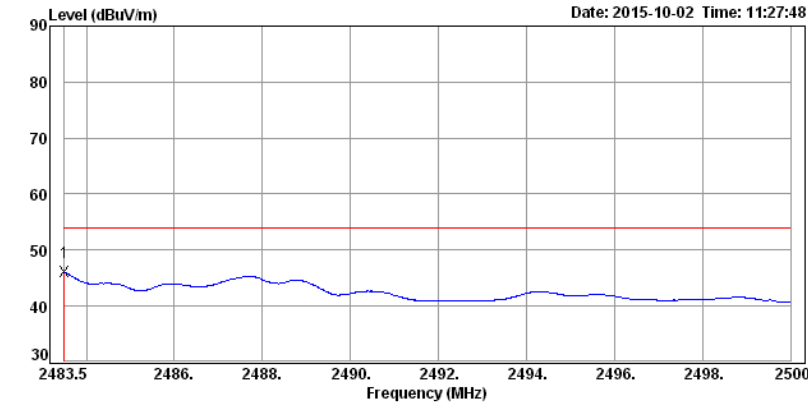
Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2483.50	53.26	3.10	56.36	74.00	-17.64			Peak	
2483.60	54.01	3.10	57.11	74.00	-16.89			Peak	

Detector mode: Average

Polarity: Vertical

CH High (IEEE 802.11b mode / Ant. 1)

Data: 20



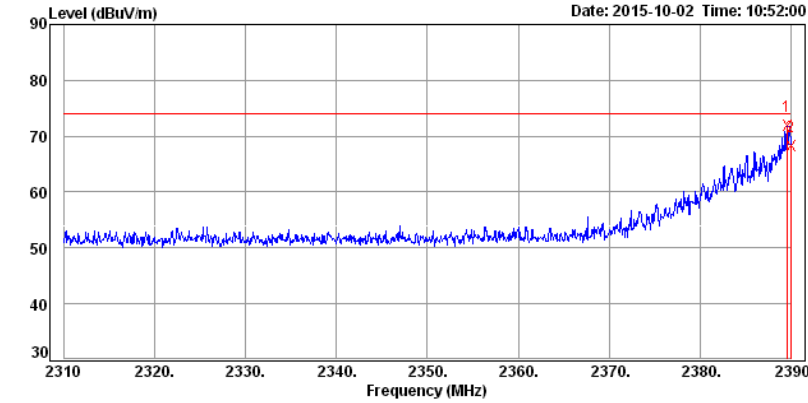
Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2483.50	42.98	3.10	46.08	54.00	-7.92			Average	

Detector mode: Peak

Polarity: Horizontal

CH Low (IEEE 802.11g mode / Ant. 1)

Data: 6



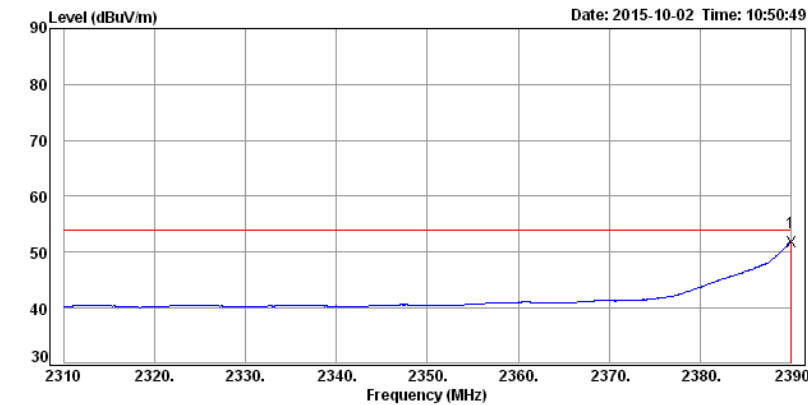
Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2389.60	69.03	2.83	71.86	74.00	-2.14			Peak	
2390.00	65.38	2.83	68.21	74.00	-5.79			Peak	

Detector mode: Average

Polarity: Horizontal

CH Low (IEEE 802.11g mode / Ant. 1)

Data: 5



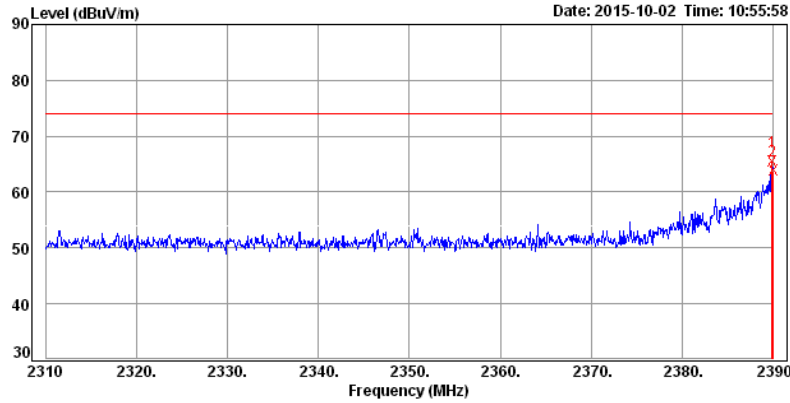
Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2390.00	48.99	2.83	51.82	54.00	-2.18			Average	

Detector mode: Peak

Polarity: Vertical

CH Low (IEEE 802.11g mode / Ant. 1)

Data: 7



Trace:

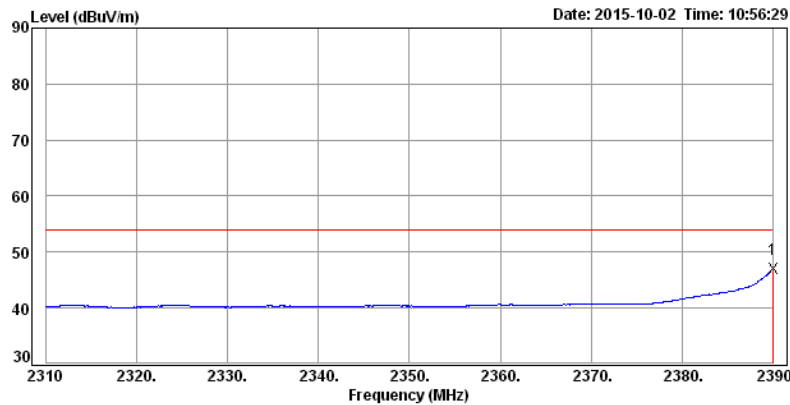
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2389.92	62.72	2.83	65.55	74.00	-8.45			Peak
2390.00	60.97	2.83	63.80	74.00	-10.20			Peak

Detector mode: Average

Polarity: Vertical

CH Low (IEEE 802.11g mode / Ant. 1)

Data: 8



Trace:

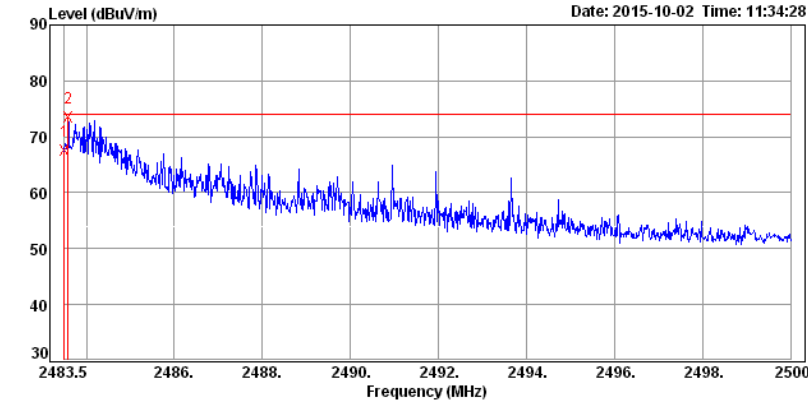
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	44.06	2.83	46.89	54.00	-7.11			Average

Detector mode: Peak

Polarity: Horizontal

CH High (IEEE 802.11g mode / Ant. 1)

Data: 22



Trace:

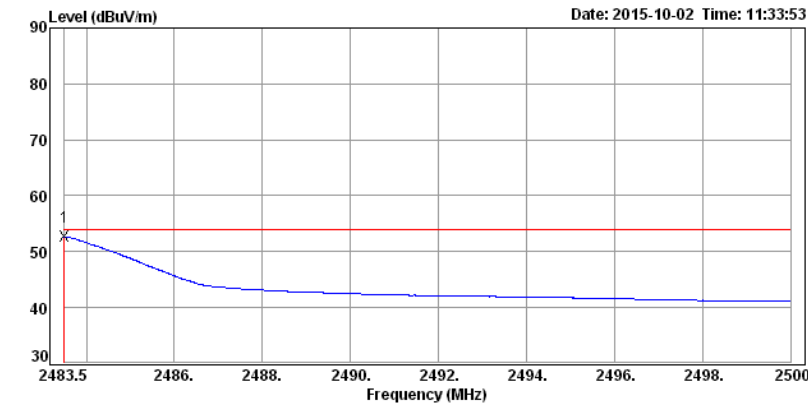
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	64.34	3.10	67.44	74.00	-6.56			Peak
2483.58	70.36	3.10	73.46	74.00	-0.54			Peak

Detector mode: Average

Polarity: Horizontal

CH High (IEEE 802.11g mode / Ant. 1)

Data: 21



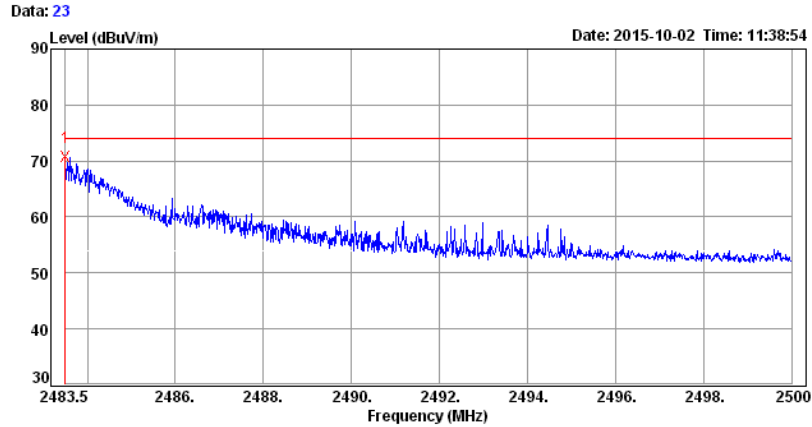
Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	49.53	3.10	52.63	54.00	-1.37			Average

Detector mode: Peak

Polarity: Vertical

CH High (IEEE 802.11g mode / Ant. 1)

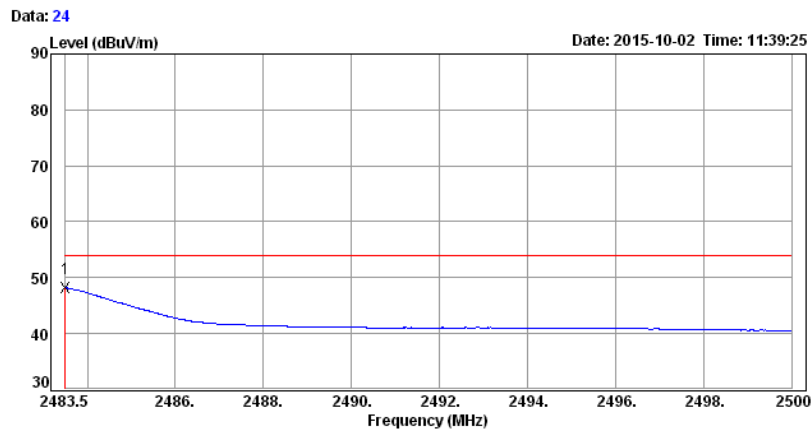


Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2483.50	67.64	3.10	70.74	74.00	-3.26			Peak	

Detector mode: Average

Polarity: Vertical

CH High (IEEE 802.11g mode / Ant. 1)



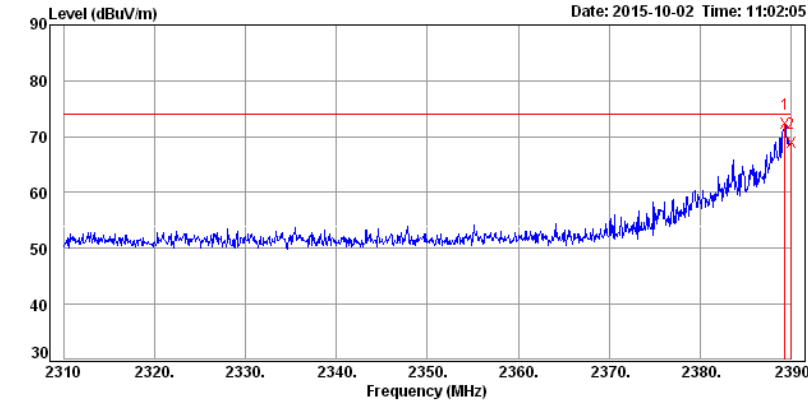
Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2483.50	45.07	3.10	48.17	54.00	-5.83			Average	

Detector mode: Peak

Polarity: Horizontal

CH Low (IEEE 802.11gn HT20 mode / Ant. 1)

Data: 10



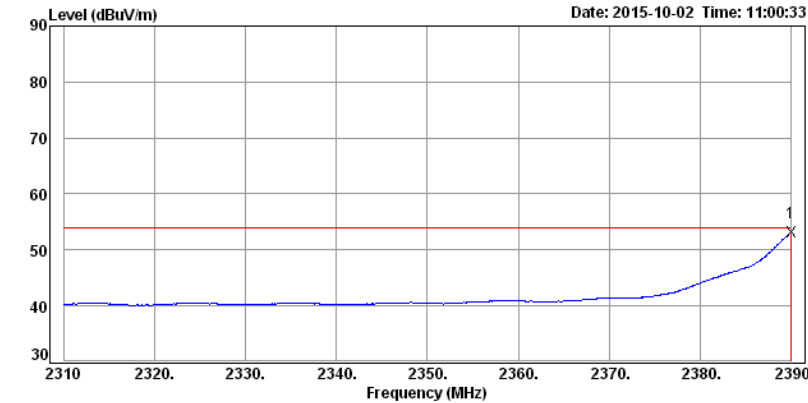
Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2389.36	69.49	2.83	72.32	74.00	-1.68			Peak	
2390.00	66.13	2.83	68.96	74.00	-5.04			Peak	

Detector mode: Average

Polarity: Horizontal

CH Low (IEEE 802.11gn HT20 mode / Ant. 1)

Data: 9



Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2390.00	50.24	2.83	53.07	54.00	-0.93			Average	

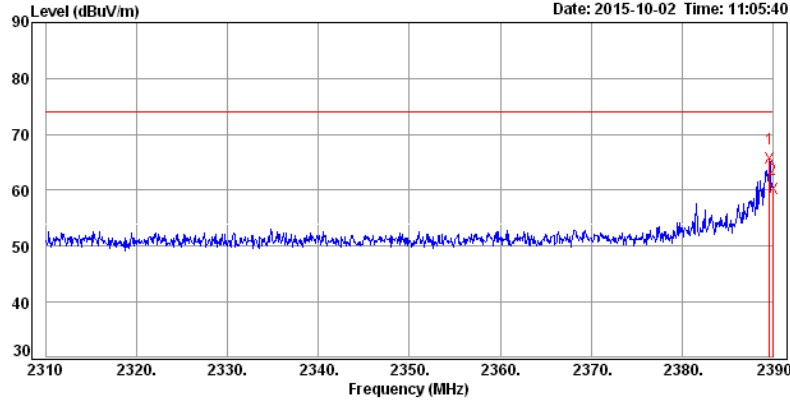
Detector mode: Peak

Polarity: Vertical

CH Low (IEEE 802.11gn HT20 mode / Ant. 1)

Data: 11

Date: 2015-10-02 Time: 11:05:40



Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2389.68	62.96	2.83	65.79	74.00	-8.21			Peak
2390.00	57.29	2.83	60.12	74.00	-13.88			Peak

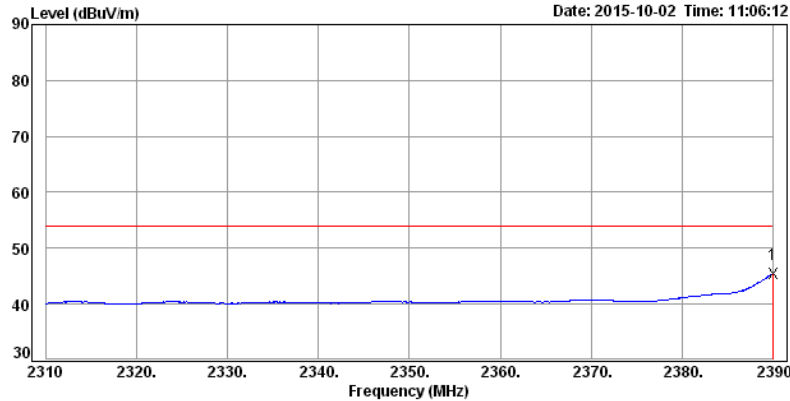
Detector mode: Average

Polarity: Vertical

CH Low (IEEE 802.11gn HT20 mode / Ant. 1)

Data: 12

Date: 2015-10-02 Time: 11:06:12



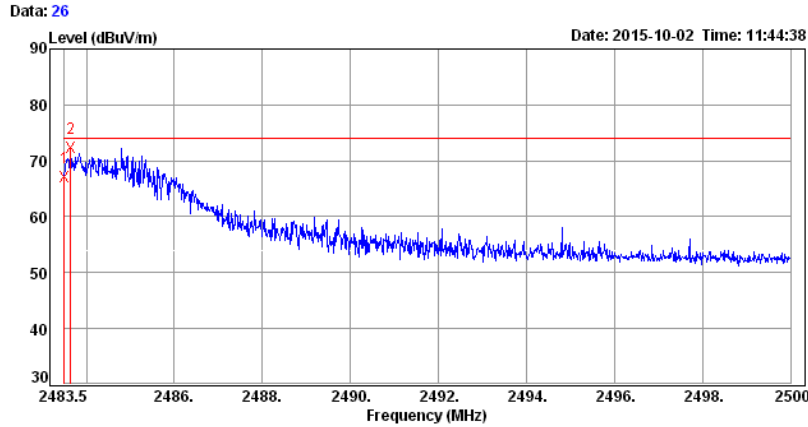
Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	42.60	2.83	45.43	54.00	-8.57			Average

Detector mode: Peak

Polarity: Horizontal

CH High (IEEE 802.11gn HT20 mode / Ant. 1)

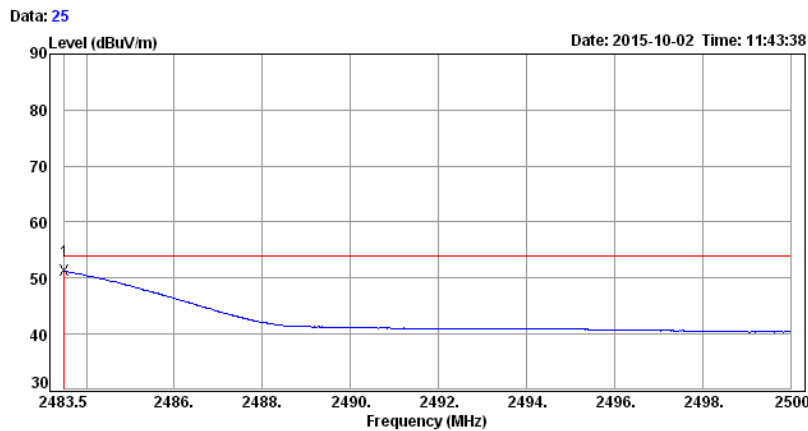


Trace:	Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
	2483.50	64.06	3.10	67.16	74.00	-6.84			Peak
	2483.65	69.31	3.10	72.41	74.00	-1.59			Peak

Detector mode: Average

Polarity: Horizontal

CH High (IEEE 802.11gn HT20 mode / Ant. 1)

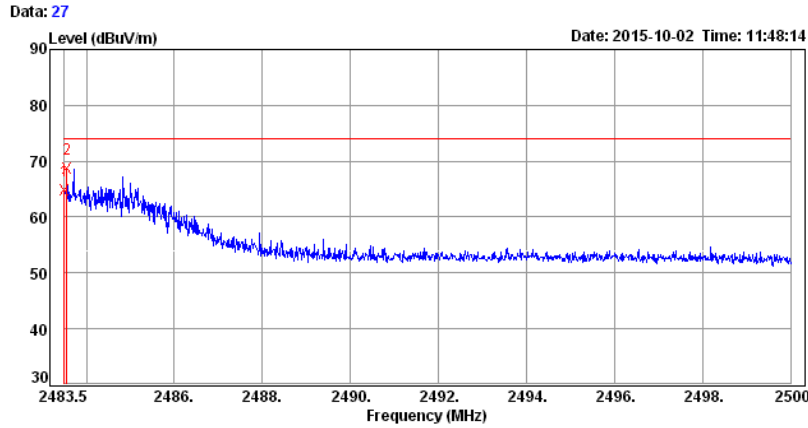


Trace:	Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
	2483.50	48.20	3.10	51.30	54.00	-2.70			Average

Detector mode: Peak

Polarity: Vertical

CH High (IEEE 802.11gn HT20 mode / Ant. 1)

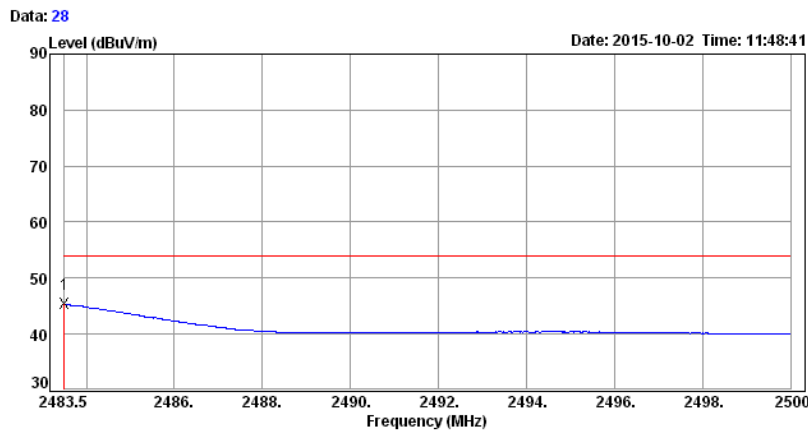


Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2483.50	61.69	3.10	64.79	74.00	-9.21			Peak	
2483.55	65.65	3.10	68.75	74.00	-5.25			Peak	

Detector mode: Average

Polarity: Vertical

CH High (IEEE 802.11gn HT20 mode / Ant. 1)



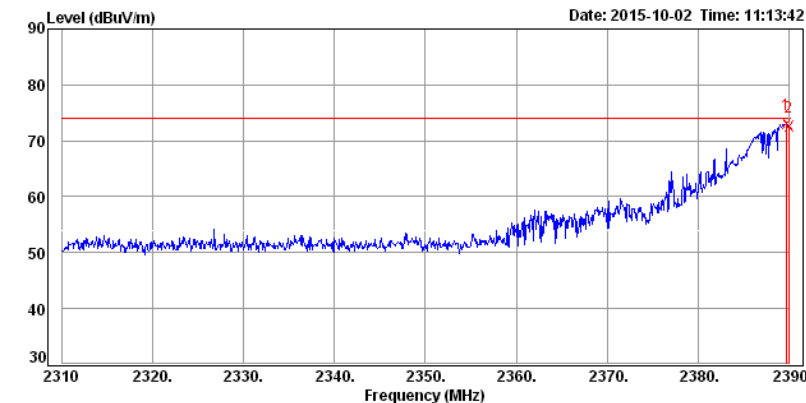
Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2483.50	42.31	3.10	45.41	54.00	-8.59			Average	

Detector mode: Peak

Polarity: Horizontal

CH Low (IEEE 802.11gn HT40 mode / Ant. 1)

Data: 14



Trace:

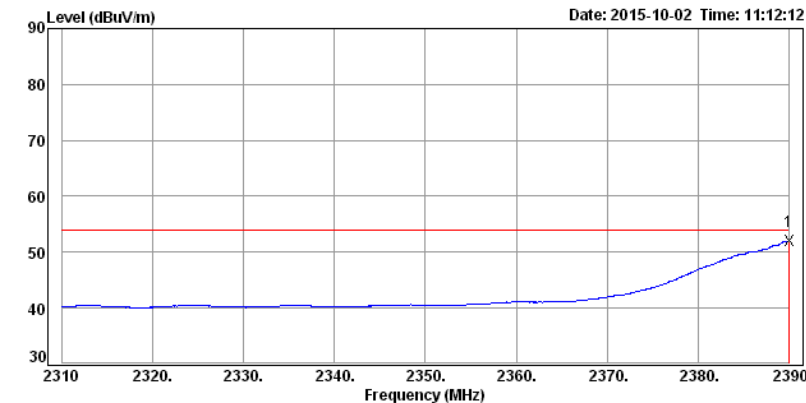
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2389.76	70.21	2.83	73.04	74.00	-0.96			Peak
2390.00	69.80	2.83	72.63	74.00	-1.37			Peak

Detector mode: Average

Polarity: Horizontal

CH Low (IEEE 802.11gn HT40 mode / Ant. 1)

Data: 13



Trace:

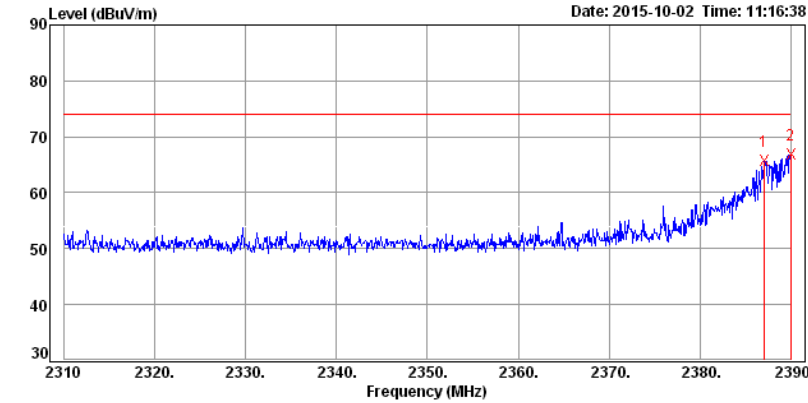
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	49.13	2.83	51.96	54.00	-2.04			Average

Detector mode: Peak

Polarity: Vertical

CH Low (IEEE 802.11gn HT40 mode / Ant. 1)

Data: 15



Trace:

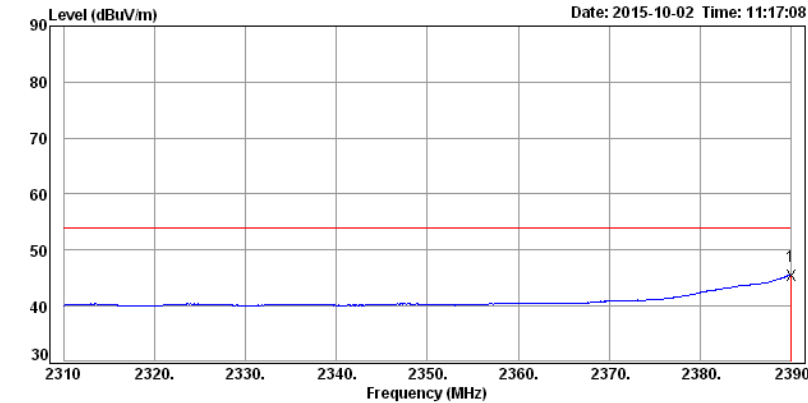
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2387.04	62.88	2.82	65.70	74.00	-8.30			Peak
2390.00	64.06	2.83	66.89	74.00	-7.11			Peak

Detector mode: Average

Polarity: Vertical

CH Low (IEEE 802.11gn HT40 mode / Ant. 1)

Data: 16



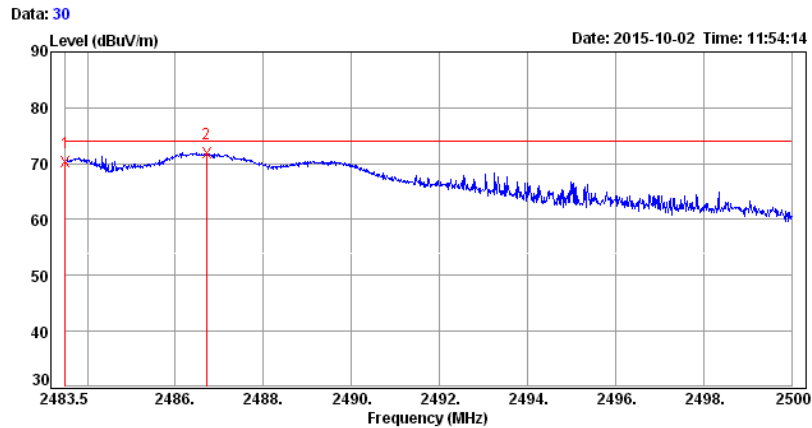
Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	42.65	2.83	45.48	54.00	-8.52			Average

Detector mode: Peak

Polarity: Horizontal

CH High (IEEE 802.11gn HT40 mode / Ant. 1)

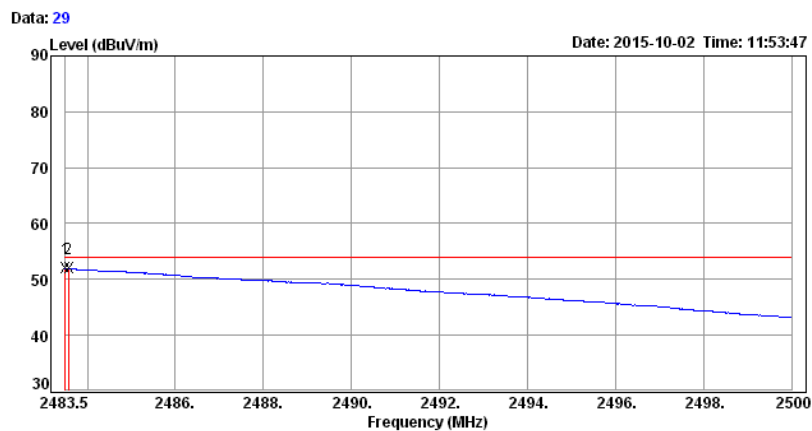


Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2483.50	67.17	3.10	70.27	74.00	-3.73			Peak	
2486.70	68.82	3.11	71.93	74.00	-2.07			Peak	

Detector mode: Average

Polarity: Horizontal

CH High (IEEE 802.11gn HT40 mode / Ant. 1)



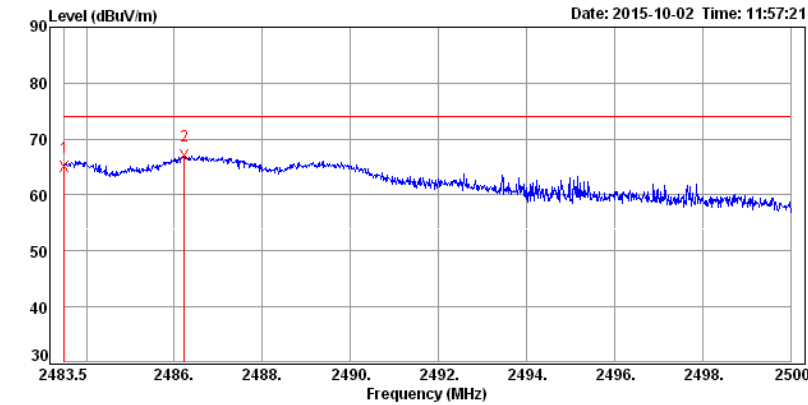
Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2483.50	48.83	3.10	51.93	54.00	-2.07			Average	
2483.57	48.86	3.10	51.96	54.00	-2.04			Average	

Detector mode: Peak

Polarity: Vertical

CH High (IEEE 802.11gn HT40 mode / Ant. 1)

Data: 31



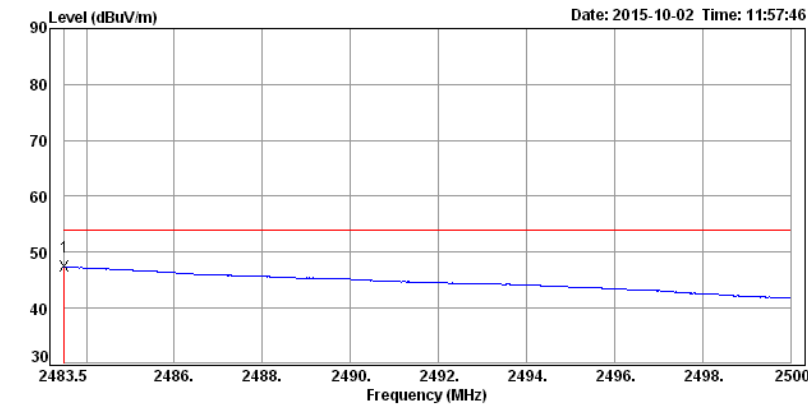
Trace:	Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
	2483.50	61.99	3.10	65.09	74.00	-8.91			Peak
	2486.22	64.00	3.11	67.11	74.00	-6.89			Peak

Detector mode: Average

Polarity: Vertical

CH High (IEEE 802.11gn HT40 mode / Ant. 1)

Data: 32



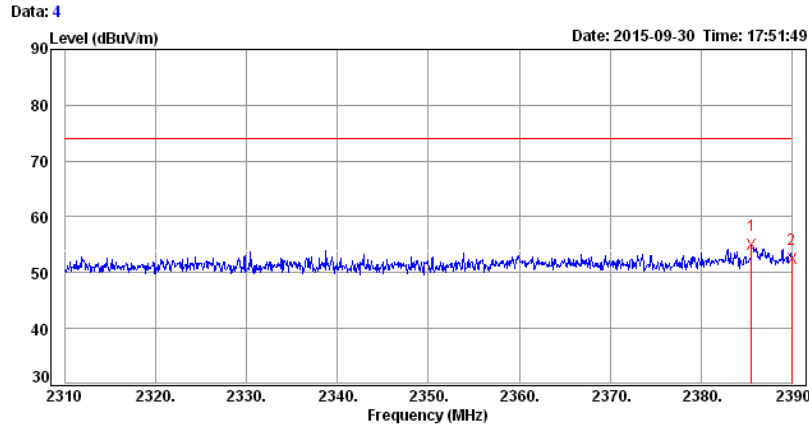
Trace:	Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
	2483.50	44.33	3.10	47.43	54.00	-6.57			Average

For Ant. 2 (Dipole Antenna)

Detector mode: Peak

Polarity: Horizontal

CH Low (IEEE 802.11b mode / Ant. 2)

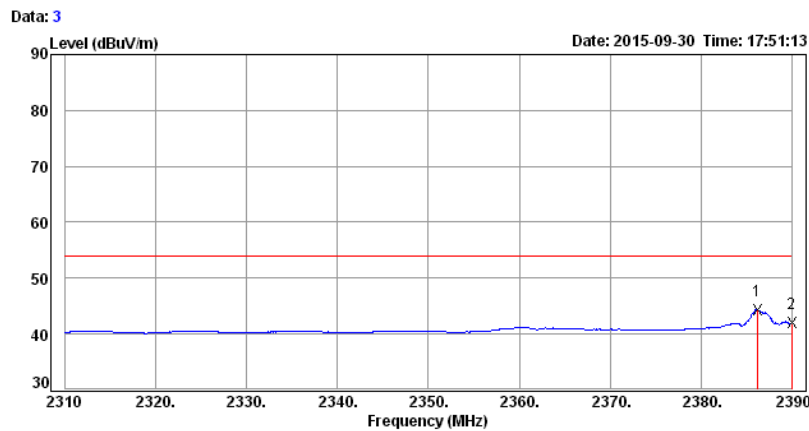


Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2385.60	52.10	2.82	54.92	74.00	-19.08			Peak	
2390.00	49.70	2.83	52.53	74.00	-21.47			Peak	

Detector mode: Average

Polarity: Horizontal

CH Low (IEEE 802.11b mode / Ant. 2)



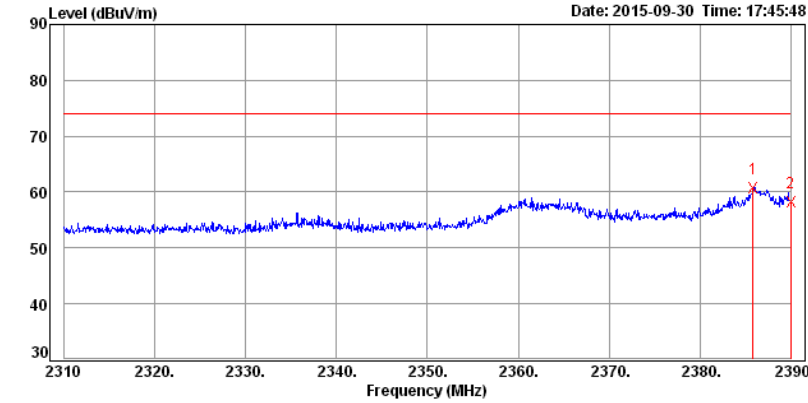
Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2386.24	41.54	2.82	44.36	54.00	-9.64			Average	
2390.00	39.12	2.83	41.95	54.00	-12.05			Average	

Detector mode: Peak

Polarity: Vertical

CH Low (IEEE 802.11b mode / Ant. 2)

Data: 1



Trace:

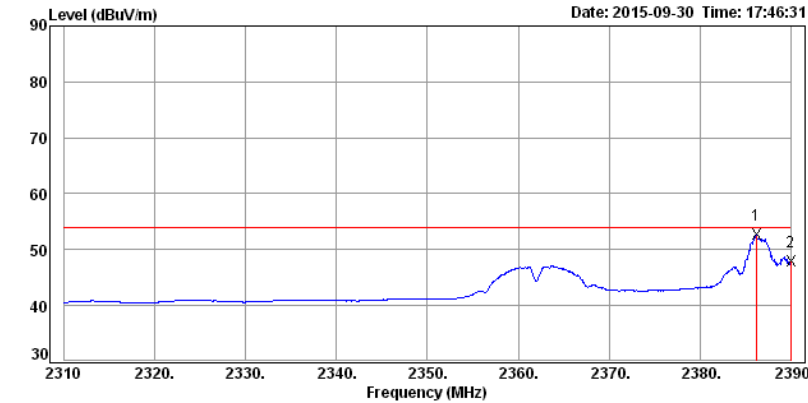
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2385.84	57.96	2.82	60.78	74.00	-13.22			Peak
2390.00	55.44	2.83	58.27	74.00	-15.73			Peak

Detector mode: Average

Polarity: Vertical

CH Low (IEEE 802.11b mode / Ant. 2)

Data: 2



Trace:

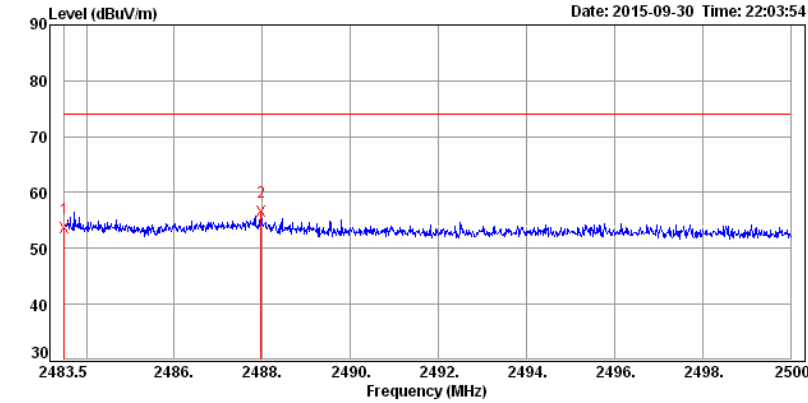
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2386.24	49.80	2.82	52.62	54.00	-1.38			Average
2390.00	45.11	2.83	47.94	54.00	-6.06			Average

Detector mode: Peak

Polarity: Horizontal

CH High (IEEE 802.11b mode / Ant. 2)

Data: 19



Trace:

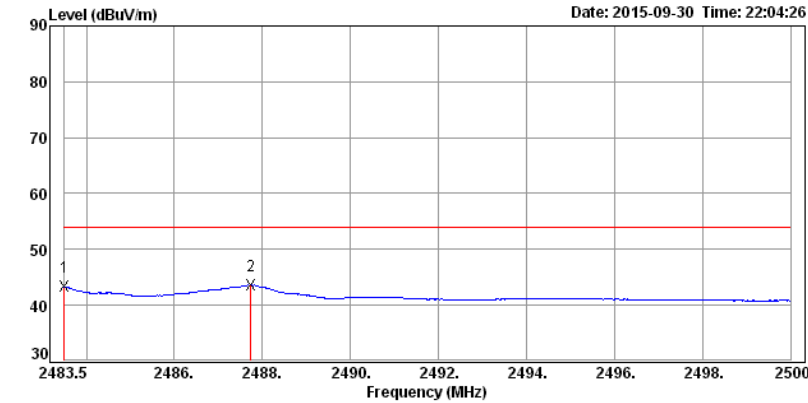
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	50.50	3.10	53.60	74.00	-20.40			Peak
2487.97	53.51	3.12	56.63	74.00	-17.37			Peak

Detector mode: Average

Polarity: Horizontal

CH High (IEEE 802.11b mode / Ant. 2)

Data: 20



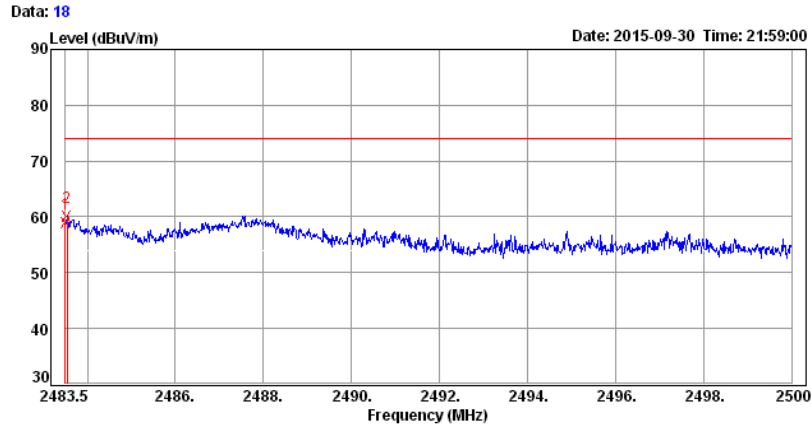
Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	40.22	3.10	43.32	54.00	-10.68			Average
2487.74	40.49	3.11	43.60	54.00	-10.40			Average

Detector mode: Peak

Polarity: Vertical

CH High (IEEE 802.11b mode / Ant. 2)

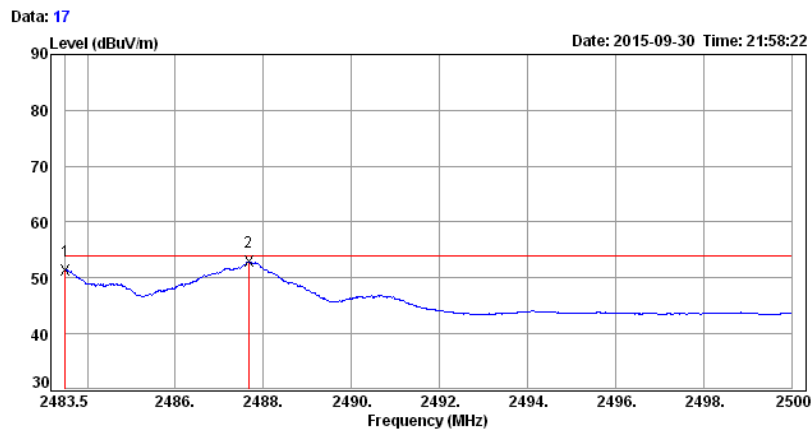


Trace:	Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
	2483.50	55.81	3.10	58.91	74.00	-15.09			Peak
	2483.53	57.01	3.10	60.11	74.00	-13.89			Peak

Detector mode: Average

Polarity: Vertical

CH High (IEEE 802.11b mode / Ant. 2)



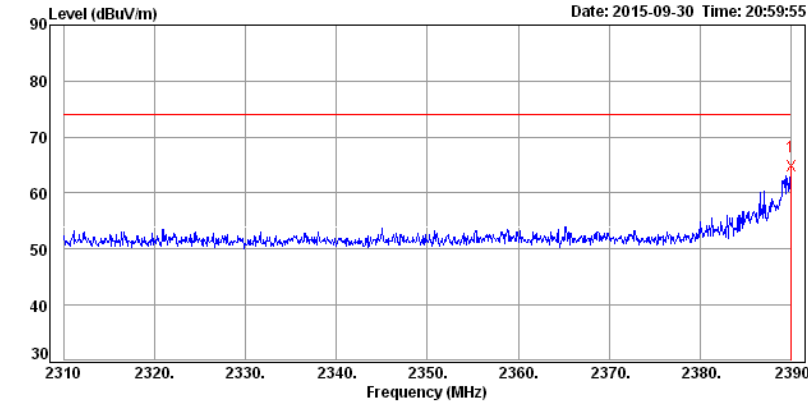
Trace:	Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
	2483.50	48.32	3.10	51.42	54.00	-2.58			Average
	2487.66	49.80	3.11	52.91	54.00	-1.09			Average

Detector mode: Peak

Polarity: Horizontal

CH Low (IEEE 802.11g mode / Ant. 2)

Data: 7



Trace:

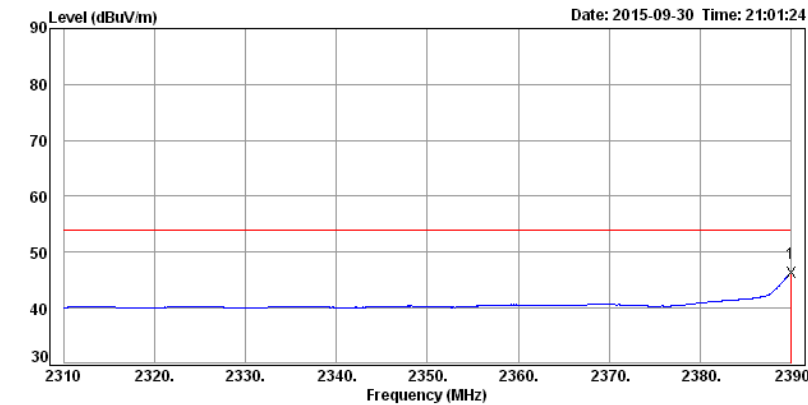
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	62.03	2.83	64.86	74.00	-9.14			Peak

Detector mode: Average

Polarity: Horizontal

CH Low (IEEE 802.11g mode / Ant. 2)

Data: 8



Trace:

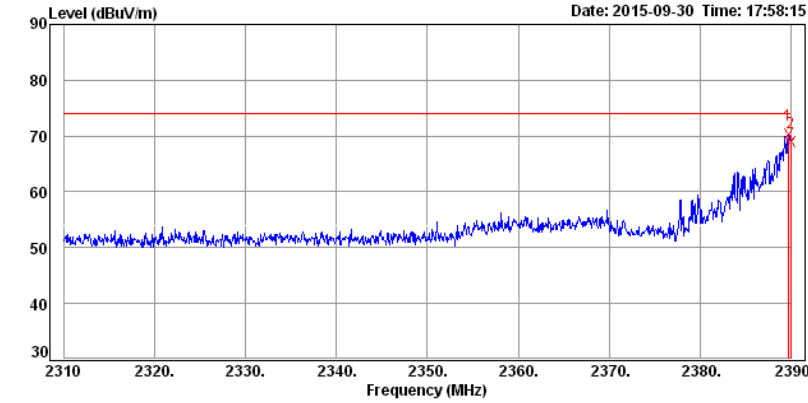
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	43.38	2.83	46.21	54.00	-7.79			Average

Detector mode: Peak

Polarity: Vertical

CH Low (IEEE 802.11g mode / Ant. 2)

Data: 6



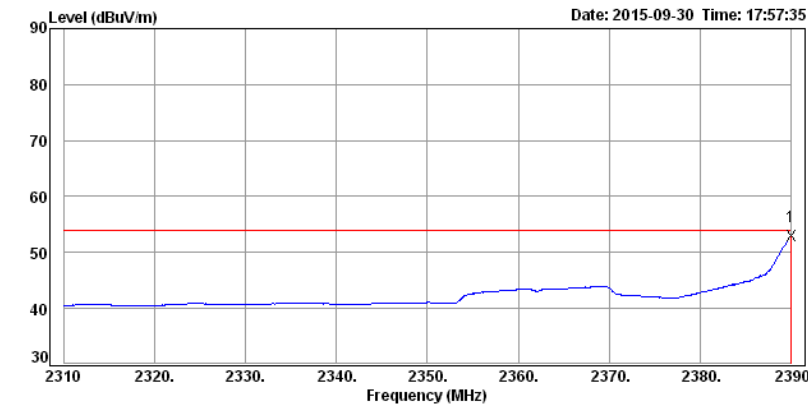
Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2389.76	67.43	2.83	70.26	74.00	-3.74			Peak	
2390.00	65.99	2.83	68.82	74.00	-5.18			Peak	

Detector mode: Average

Polarity: Vertical

CH Low (IEEE 802.11g mode / Ant. 2)

Data: 5



Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2390.00	50.20	2.83	53.03	54.00	-0.97			Average	

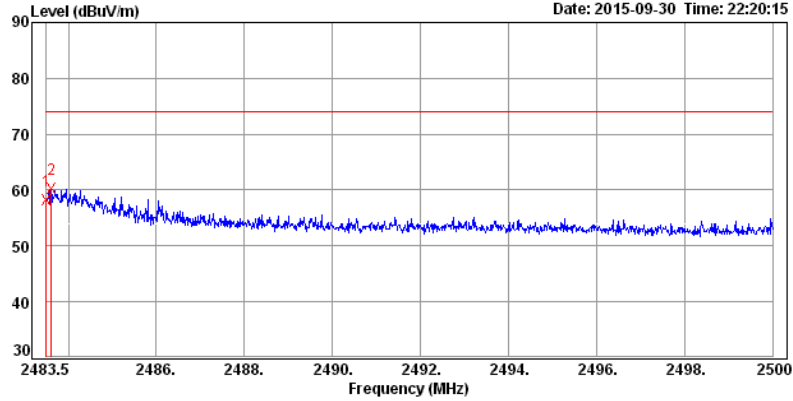
Detector mode: Peak

Polarity: Horizontal

CH High (IEEE 802.11g mode / Ant. 2)

Data: 23

Date: 2015-09-30 Time: 22:20:15



Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	55.10	3.10	58.20	74.00	-15.80			Peak
2483.62	57.14	3.10	60.24	74.00	-13.76			Peak

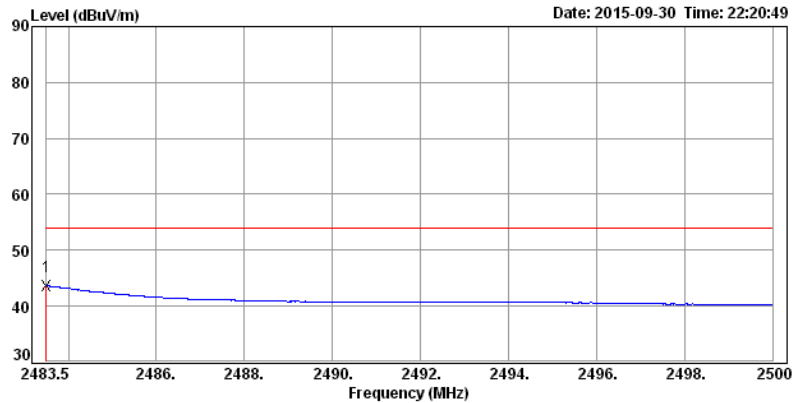
Detector mode: Average

Polarity: Horizontal

CH High (IEEE 802.11g mode / Ant. 2)

Data: 24

Date: 2015-09-30 Time: 22:20:49



Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	40.52	3.10	43.62	54.00	-10.38			Average

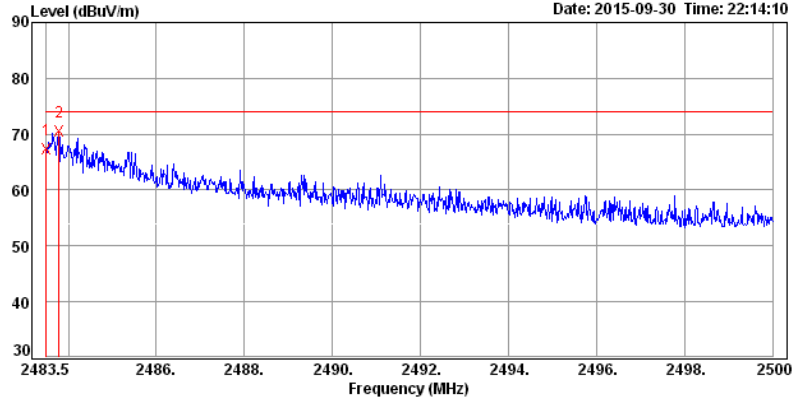
Detector mode: Peak

Polarity: Vertical

CH High (IEEE 802.11g mode / Ant. 2)

Data: 22

Date: 2015-09-30 Time: 22:14:10



Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	64.30	3.10	67.40	74.00	-6.60			Peak
2483.78	67.45	3.10	70.55	74.00	-3.45			Peak

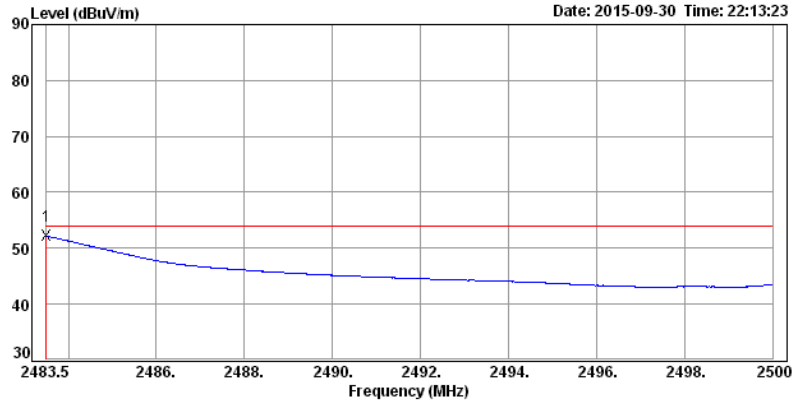
Detector mode: Average

Polarity: Vertical

CH High (IEEE 802.11g mode / Ant. 2)

Data: 21

Date: 2015-09-30 Time: 22:13:23



Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	49.05	3.10	52.15	54.00	-1.85			Average

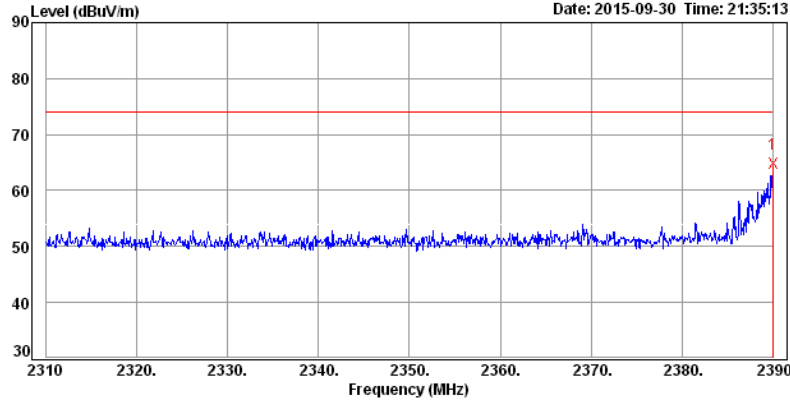
Detector mode: Peak

Polarity: Horizontal

CH Low (IEEE 802.11gn HT20 mode / Ant. 2)

Data: 11

Date: 2015-09-30 Time: 21:35:13



Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	61.87	2.83	64.70	74.00	-9.30			Peak

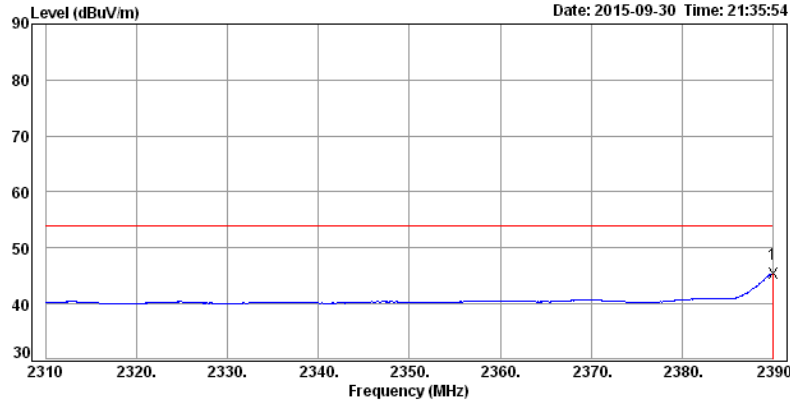
Detector mode: Average

Polarity: Horizontal

CH Low (IEEE 802.11gn HT20 mode / Ant. 2)

Data: 12

Date: 2015-09-30 Time: 21:35:54



Trace:

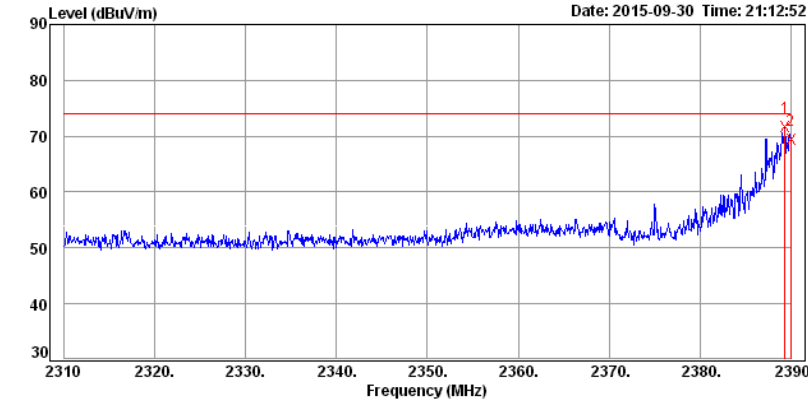
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	42.59	2.83	45.42	54.00	-8.58			Average

Detector mode: Peak

Polarity: Vertical

CH Low (IEEE 802.11gn HT20 mode / Ant. 2)

Data: 10



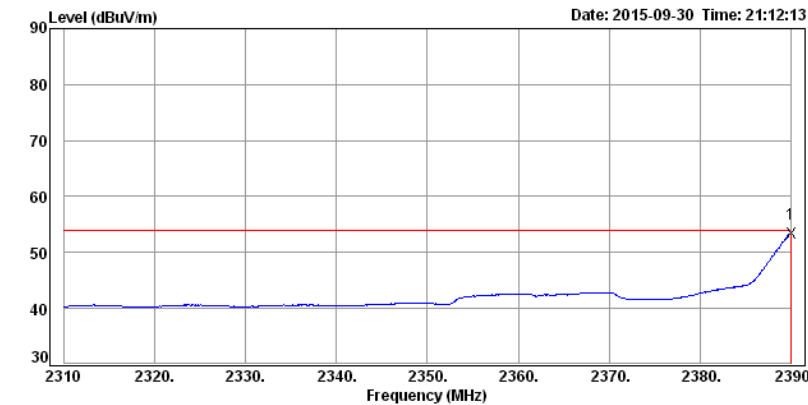
Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2389.36	68.73	2.83	71.56	74.00	-2.44			Peak	
2390.00	66.62	2.83	69.45	74.00	-4.55			Peak	

Detector mode: Average

Polarity: Vertical

CH Low (IEEE 802.11gn HT20 mode / Ant. 2)

Data: 9



Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2390.00	50.51	2.83	53.34	54.00	-0.66			Average	

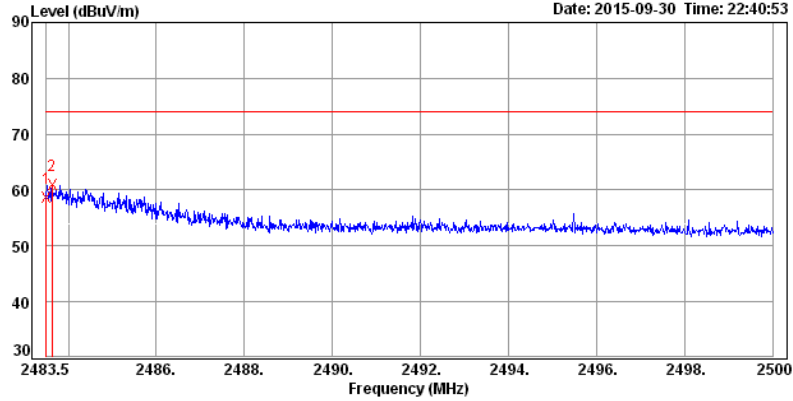
Detector mode: Peak

Polarity: Horizontal

CH High (IEEE 802.11gn HT20 mode / Ant. 2)

Data: 27

Date: 2015-09-30 Time: 22:40:53



Trace:

Freq. MHz	Reading dBUV	C.F. dB/m	Result dBUV/m	Limit dBUV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	55.50	3.10	58.60	74.00	-15.40			Peak
2483.63	57.85	3.10	60.95	74.00	-13.05			Peak

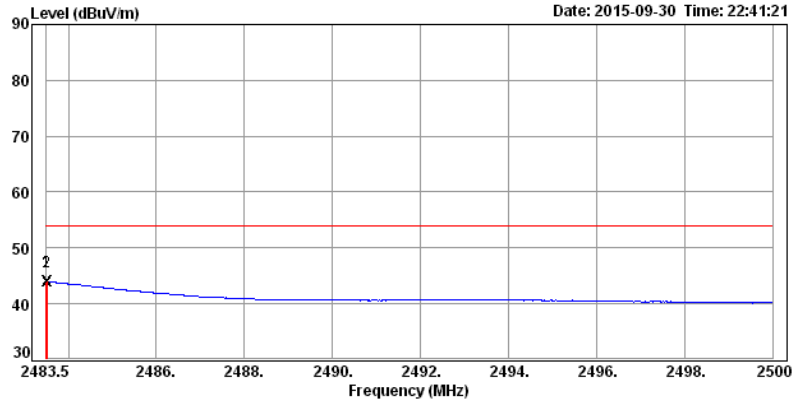
Detector mode: Average

Polarity: Horizontal

CH High (IEEE 802.11gn HT20 mode / Ant. 2)

Data: 28

Date: 2015-09-30 Time: 22:41:21



Trace:

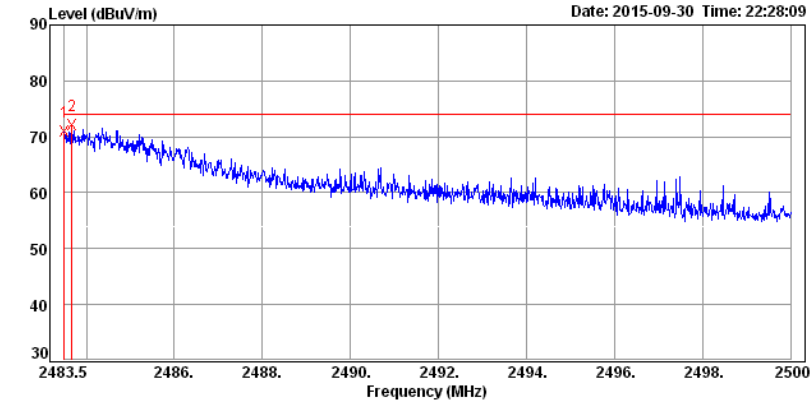
Freq. MHz	Reading dBUV	C.F. dB/m	Result dBUV/m	Limit dBUV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	40.92	3.10	44.02	54.00	-9.98			Average
2483.52	40.93	3.10	44.03	54.00	-9.97			Average

Detector mode: Peak

Polarity: Vertical

CH High (IEEE 802.11gn HT20 mode / Ant. 2)

Data: 26



Trace:

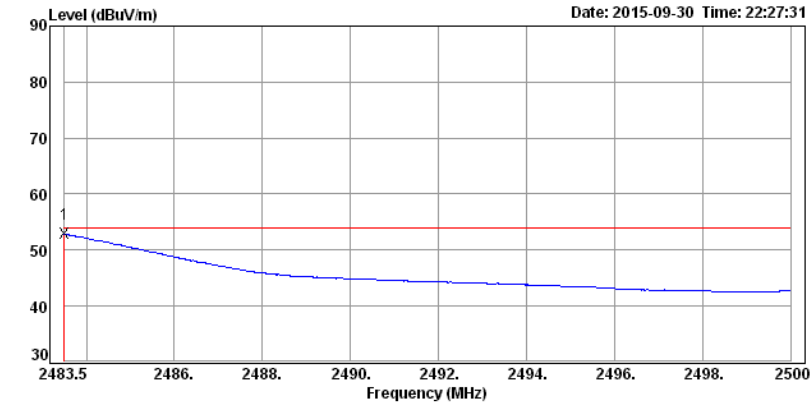
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	67.83	3.10	70.93	74.00	-3.07			Peak
2483.67	69.04	3.10	72.14	74.00	-1.86			Peak

Detector mode: Average

Polarity: Vertical

CH High (IEEE 802.11gn HT20 mode / Ant. 2)

Data: 25



Trace:

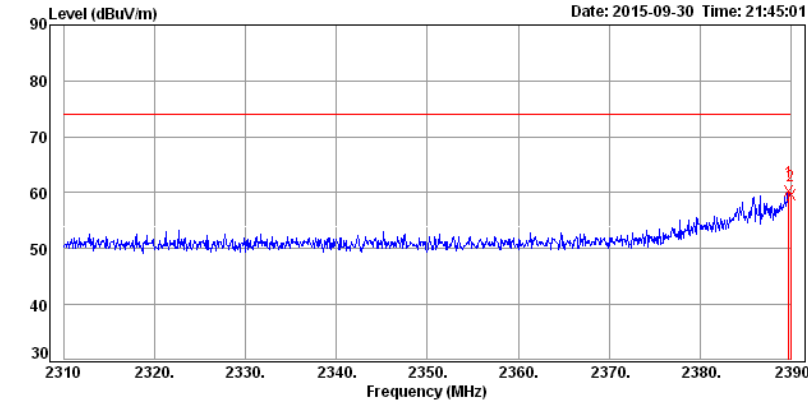
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	49.79	3.10	52.89	54.00	-1.11			Average

Detector mode: Peak

Polarity: Horizontal

CH Low (IEEE 802.11gn HT40 mode / Ant. 2)

Data: 15



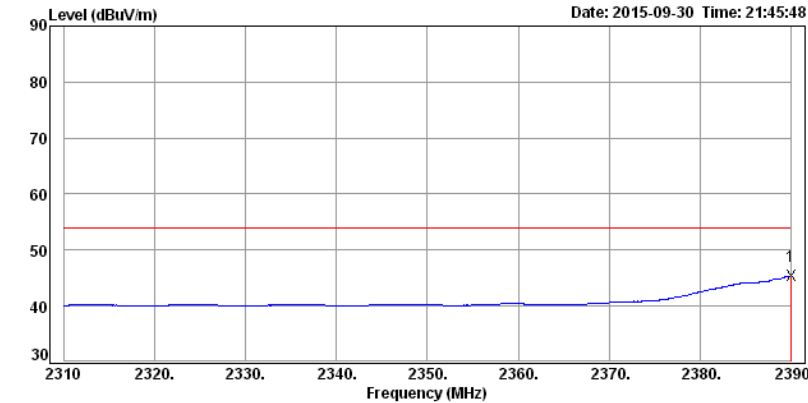
Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2389.84	57.34	2.83	60.17	74.00	-13.83			Peak	
2390.00	56.65	2.83	59.48	74.00	-14.52			Peak	

Detector mode: Average

Polarity: Horizontal

CH Low (IEEE 802.11gn HT40 mode / Ant. 2)

Data: 16



Trace:									
Freq.	Reading	C.F.	Result	Limit	Margin	Azimuth	Height	Remark	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	deg	cm		
2390.00	42.46	2.83	45.29	54.00	-8.71			Average	

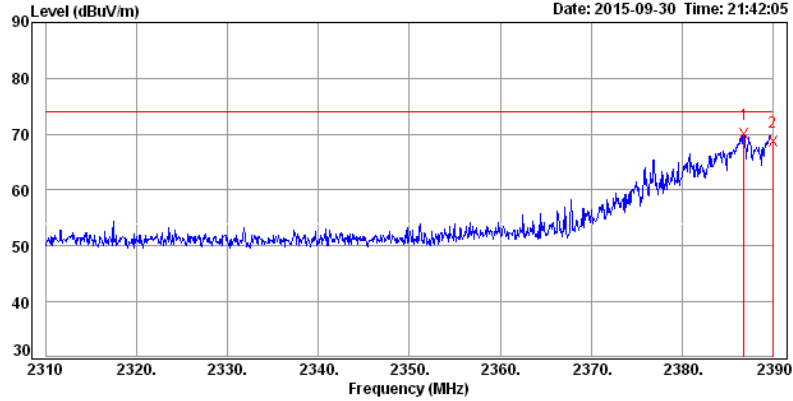
Detector mode: Peak

Polarity: Vertical

CH Low (IEEE 802.11gn HT40 mode / Ant. 2)

Data: 14

Date: 2015-09-30 Time: 21:42:05



Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2386.88	67.12	2.82	69.94	74.00	-4.06			Peak
2390.00	65.93	2.83	68.76	74.00	-5.24			Peak

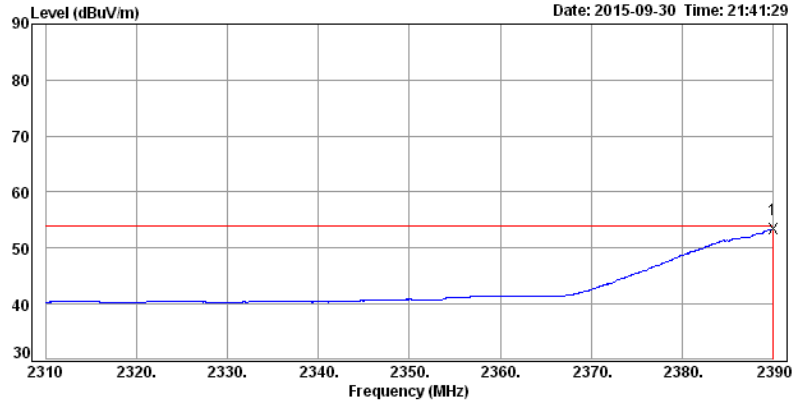
Detector mode: Average

Polarity: Vertical

CH Low (IEEE 802.11gn HT40 mode / Ant. 2)

Data: 13

Date: 2015-09-30 Time: 21:41:29



Trace:

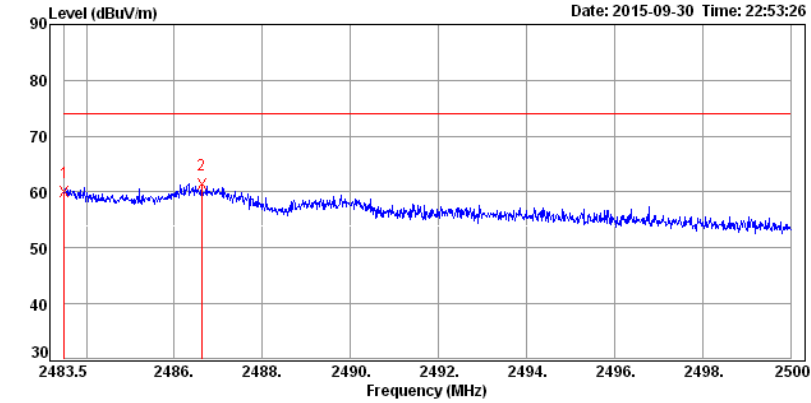
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2390.00	50.51	2.83	53.34	54.00	-0.66			Average

Detector mode: Peak

Polarity: Horizontal

CH High (IEEE 802.11gn HT40 mode / Ant. 2)

Data: 31



Trace:

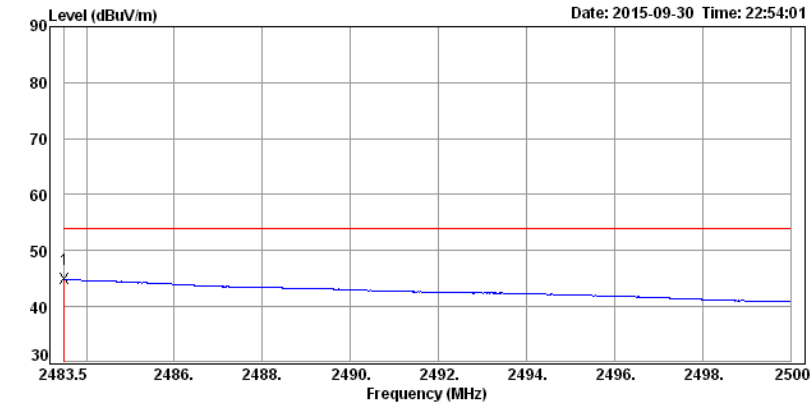
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	56.84	3.10	59.94	74.00	-14.06			Peak
2486.62	58.36	3.11	61.47	74.00	-12.53			Peak

Detector mode: Average

Polarity: Horizontal

CH High (IEEE 802.11gn HT40 mode / Ant. 2)

Data: 32



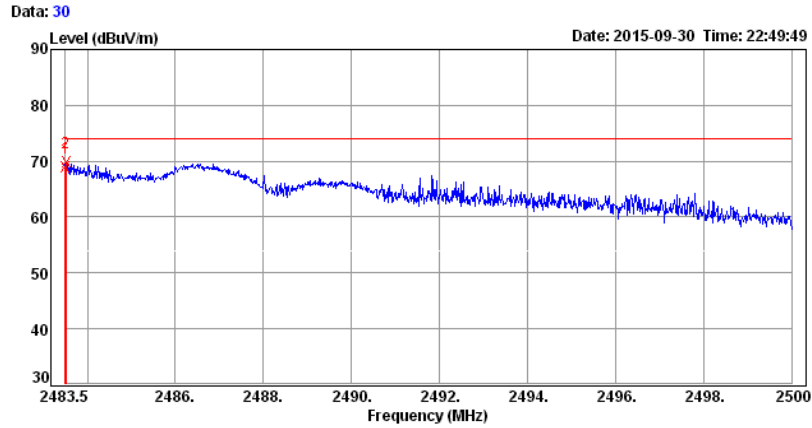
Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
2483.50	41.79	3.10	44.89	54.00	-9.11			Average

Detector mode: Peak

Polarity: Vertical

CH High (IEEE 802.11gn HT40 mode / Ant. 2)

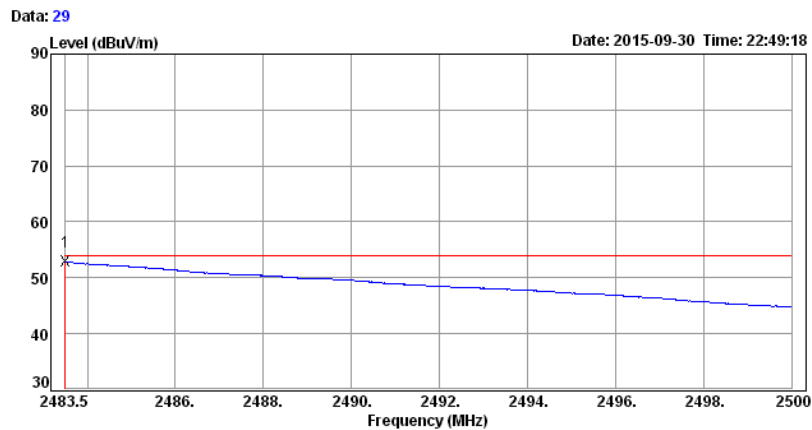


Trace:	Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
	2483.50	65.89	3.10	68.99	74.00	-5.01			Peak
	2483.52	66.79	3.10	69.89	74.00	-4.11			Peak

Detector mode: Average

Polarity: Vertical

CH High (IEEE 802.11gn HT40 mode / Ant. 2)



Trace:	Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
	2483.50	49.72	3.10	52.82	54.00	-1.18			Average

7.7 CONDUCTED EMISSION

LIMITS

§ 15.207 (a) Except as shown in paragraph (b) and (c) this section, for an intentional radiator 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, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

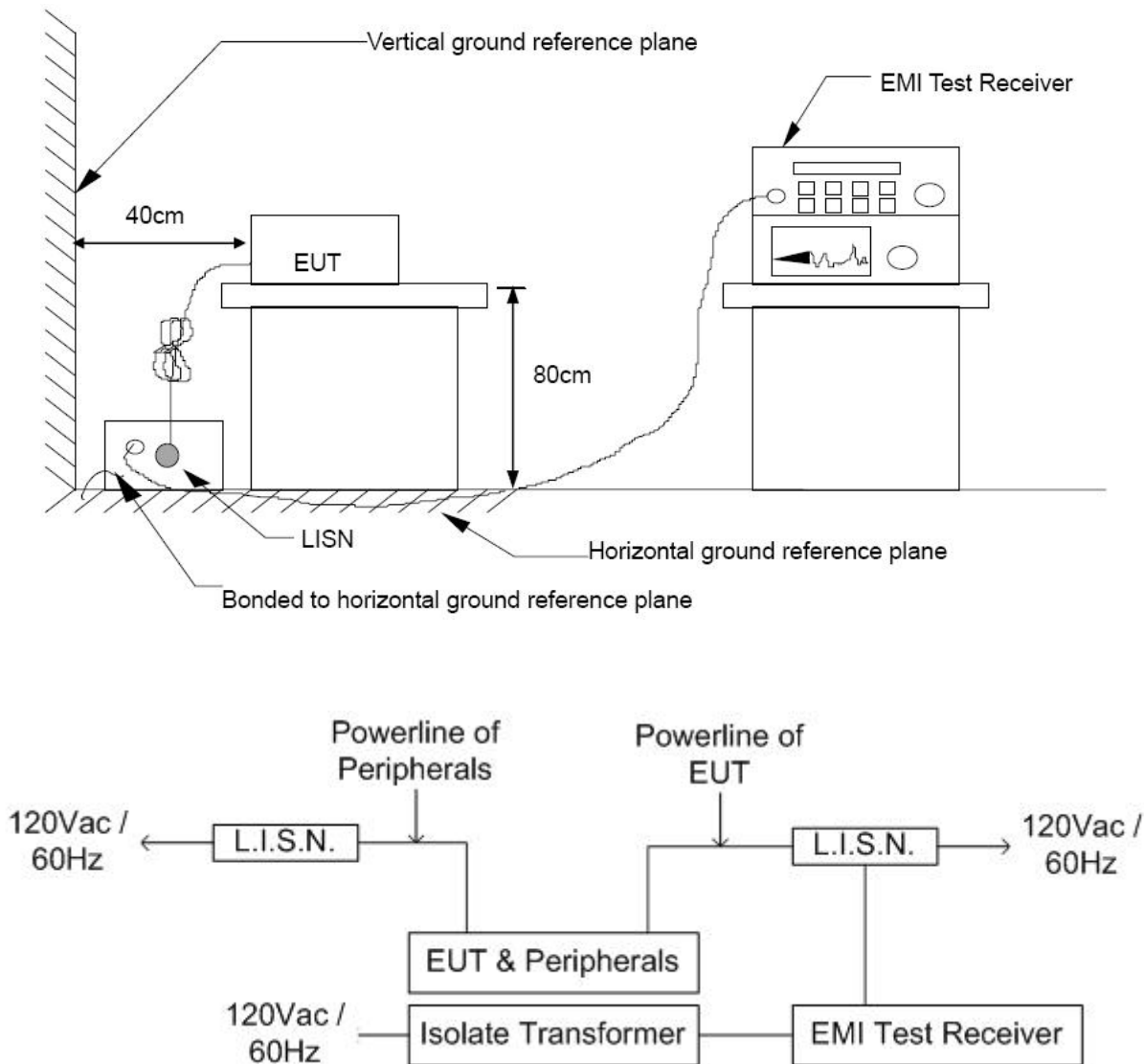
Frequency Range (MHz)	Conducted Limit (dB μ v)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5.00	56	46
5.00 - 30.0	60	50

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
L.I.S.N	Schwarzbeck	NSLK 8127	8127465	08/05/2016
L.I.S.N	Schwarzbeck	NSLK 8127	8127473	03/09/2016
EMI Test Receiver	Rohde & Schwarz	ESHS 30	838550/003	11/02/2015
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100111	06/28/2016

Remark: Each piece of equipment is scheduled for calibration once a year.

TEST SETUP



TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.10:2013.

The test procedure is performed in a 4m × 3m × 2.4m (L×W×H) shielded room.

The EUT along with its peripherals were placed on a 1.0m (W) × 1.5m (L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.

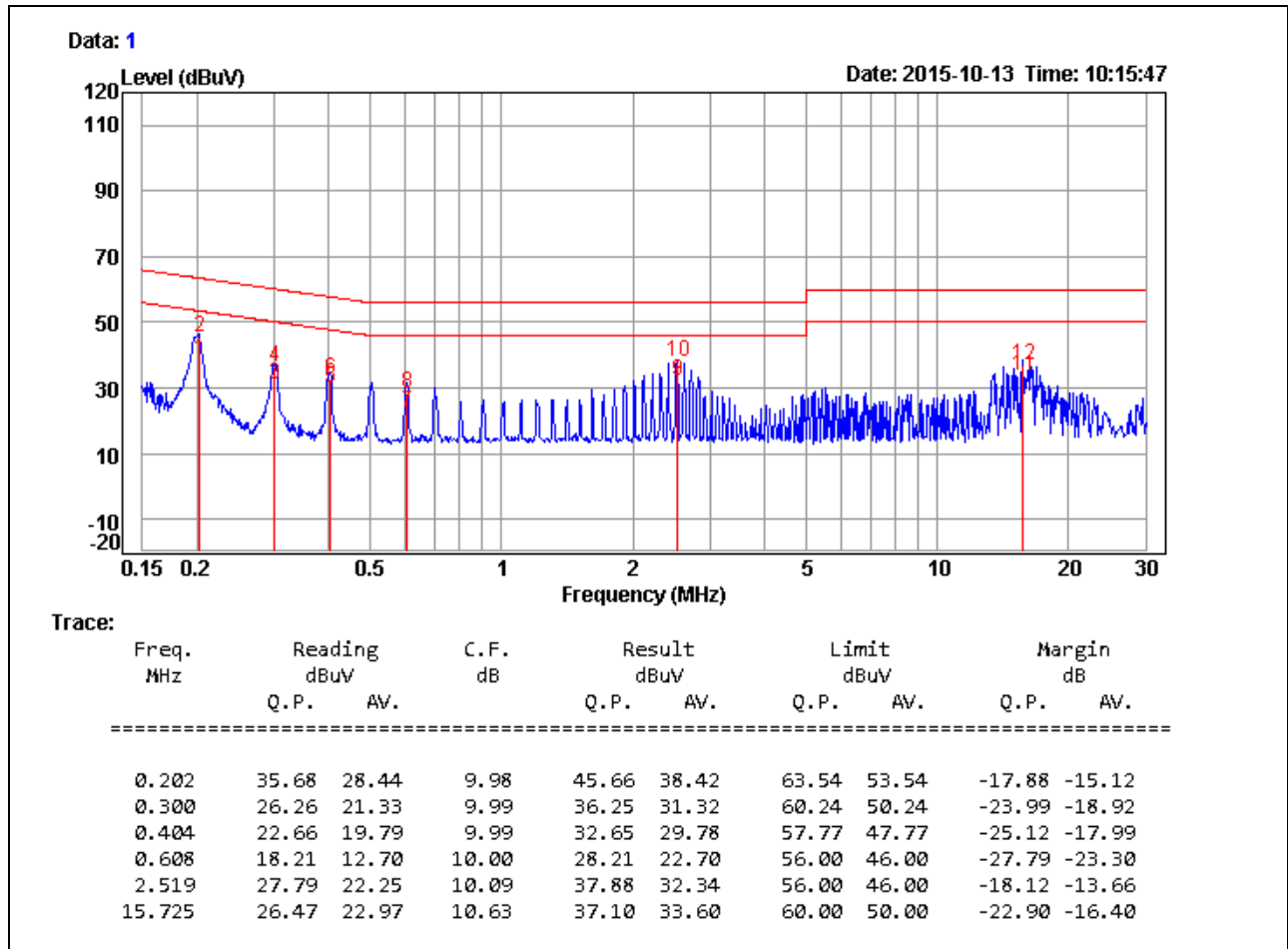
The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.

The EUT was located so that the distance between the boundary of the EUT and the closest surface of the LISN is 0.8 m. Where a mains flexible cord was provided by the manufacturer shall be 1 m long, or if in excess of 1 m, the excess cable was folded back and forth as far as possible so as to form a bundle not exceeding 0.4 m in length.

TEST RESULTS

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Jey Li
Test Model	CJM210EC	Test Date	2015/10/13
Test mode	Mode 2	Temp. & Humidity	25.8°C, 53%

LINE

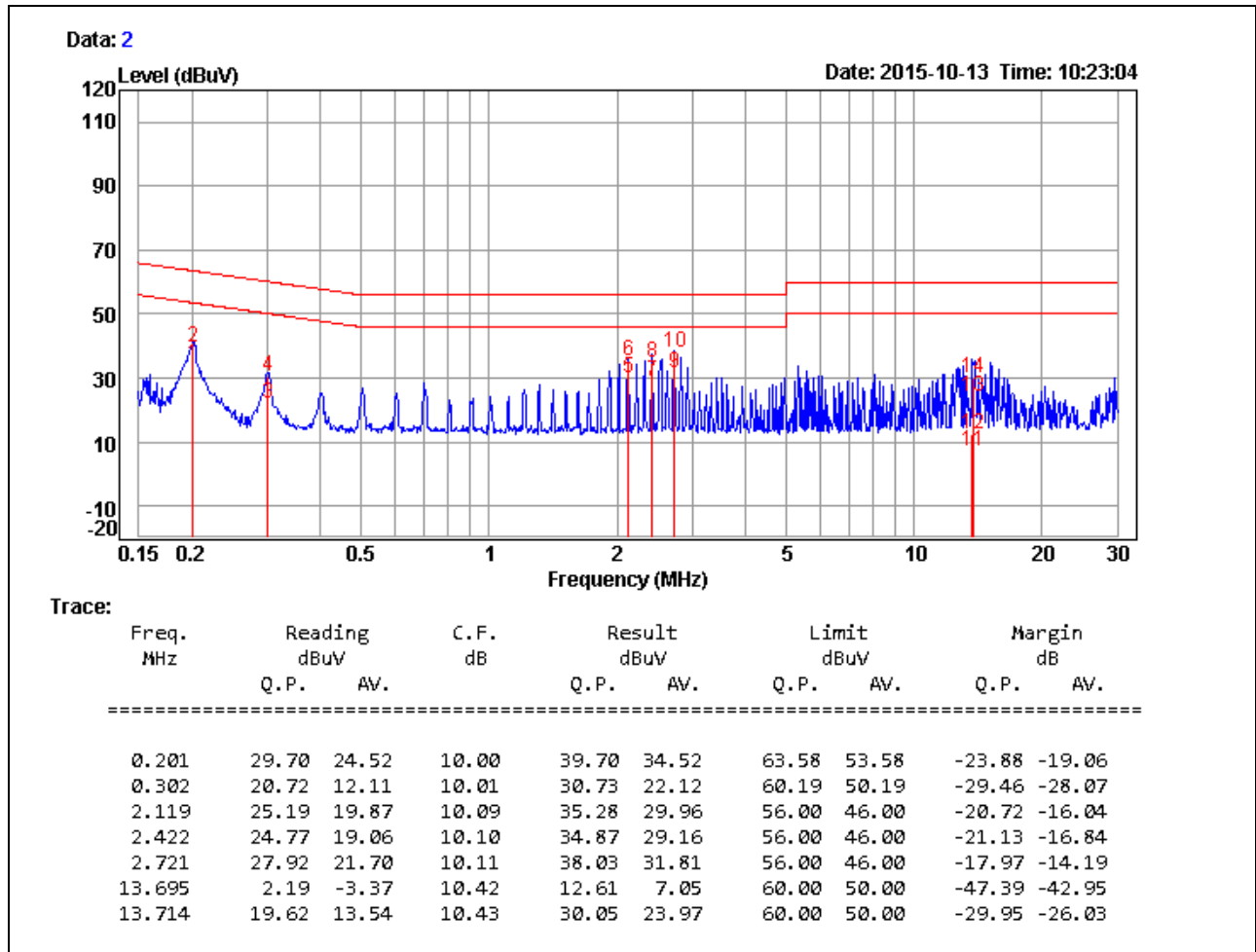


Remark:

1. Correction Factor = Insertion loss + Cable loss
2. Result level = Reading Value + Correction factor
3. Margin value = Result level – Limit value

Product Name	802.11 b/g/n High Performance Embedded WiFi Module	Test By	Jey Li
Test Model	CJM210EC	Test Date	2015/10/13
Test Mode	Mode 2	Temp. & Humidity	25.8°C, 53%

NEUTRAL



Remark:

1. Correction Factor = Insertion loss + Cable loss
2. Result level = Reading Value + Correction factor
3. Margin value = Result level – Limit value