

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

For

Computer

Model: MIT-W101; MIT-W101XXXXXXXXXXXXXXXXXX
(where "X" may be any alphanumeric character , "-" or blank)

Trade Name : ADVANTECH

Issued for

Advantech Co. Ltd.

**No.1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan,
R.O.C.**

Issued by

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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	11/23/2015	Initial Issue	All Page 164	Michelle Chiu
01	12/03/2015	Added one adapter	P.5-7, P.144-145, All Page 166	Michelle Chiu
02	04/21/2016	Revised Power & PSD Limit	P.35-36, P.41-42	Gloria Chang

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1. TEST REPORT CERTIFICATION

Applicant : Advantech Co. Ltd.
Address : No.1, Alley 20, Lane 26, Rueiguang Road, Neihu District,
 Taipei 114, Taiwan, R.O.C.
Equipment Under Test : Computer
Model : MIT-W101; MIT-W101XXXXXXXXXXXXXXXXXXXX
 (where "X" may be any alphanumeric character, "-" or blank)
Trade Name : ADVANTECH
Tested Date : July 23 ~ November 09, 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	Computer
Model Number	MIT-W101; MIT-W101XXXXXXXXXXXXXXXXXX (where "X" may be any alphanumeric character, "-" or blank)
Identify Number	T150723L02
Received Date	July 23, 2015
Frequency Range	IEEE 802.11b/g, 802.11gn HT20: 2412MHz ~ 2462MHz IEEE 802.11gn HT40: 2422MHz ~ 2452MHz Bluetooth 4.0 : 2402MHz ~ 2480MHz
Transmit Power	IEEE 802.11b : 18.05 dBm (0.0638 W) IEEE 802.11g : 27.61 dBm (0.5768 W) IEEE 802.11gn HT20 : 27.63 dBm (0.5794 W) IEEE 802.11gn HT40 : 25.57 dBm (0.3606 W) Bluetooth 4.0 : 2.12 dBm (0.0016 W)
Channel Spacing	IEEE 802.11b/g, 802.11gn HT20/HT40 : 5MHz Bluetooth 4.0 : 2MHz
Channel Number	IEEE 802.11b/g, 802.11gn HT20 : 11 Channels IEEE 802.11gn HT40 : 7 Channels Bluetooth 4.0 : 40 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 130 Mbps IEEE 802.11gn HT20 mode (400ns GI): up to 144.4 Mbps IEEE 802.11gn HT40 mode (800ns GI): up to 270 Mbps IEEE 802.11gn HT40 mode (400ns GI): up to 300 Mbps Bluetooth 4.0 : 1Mbps
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) Bluetooth 4.0 : GFSK
Antenna Type	PIFA Antenna × 2, Antenna 1(Main) / Chain 0, Antenna Gain : 3.96 dBi Antenna 2(Aux) / Chain 1, Antenna Gain : 2.90 dBi
Power Rating	11.1Vdc, 2860mAh, 31.75WH (For Battery) 19Vdc (For Charging)
Test Voltage	120Vac, 60Hz
AC Power Cord Type	Non-shielded cable, 1.8m (Detachable) (For Power Adapter 1, 2)
DC Power Cable Type	Non-shielded cable, 1.5m (Non-detachable), with a ferrite core (For Power Adapter 1, 2)
I/O Port	Micro HDMI Port × 1, USB Port × 2, Audio Port × 1, Power Port × 1, Docking Connector × 1, Connected pin for expansion module × 1

The difference of the series model :

Model Number	Difference
MIT-W101	1. For marketing purpose only. 2. where "X" may be any alphanumeric character , “-” or blank
MIT-W101XXXXXXXXXXXXXXXXXXXX	

Power Adapter:

No.	Manufacturer	Model No.	Power Input	Power Output
1	FSP	FSP065-REBN2	100-240Vac, 1.5A, 50-60Hz	19Vdc, 3.42A
2	SINPRO	HPU63A-107	100-240Vac, 1.62-0.72A, 47-63Hz	18Vdc, 3.5A max

Remark:

1. The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.
2. For more details, please refer to the User's manual of the EUT.
3. The model MIT-W101 was considered the main model for testing.
4. This submittal(s) (test report) is intended for FCC ID: M82-MITW101 filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 15, Subpart C Rules.

3. DESCRIPTION OF TEST MODES

The EUT (MIT-W101) had been tested under operating condition.

For IEEE 802.11b/g, 802.11gn HT20/40 mode : 2TX / 2RX.

For Bluetooth 4.0 mode (1TX / 1RX) : Ant. 1(Main) / Chain 0 transmit/receive.

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 / Power Adapter 1
2	TX Mode / Power Adapter 2

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
	Conducted Emission	Mode 1

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.

Bluetooth 4.0 Mode

There are three channels have been tested as following :

Channel	Frequency (MHz)
Low	2402
Middle	2440
High	2480

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

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

SETUP DIAGRAM FOR TESTS

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

EUT OPERATING CONDITION

WiFi

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**

- IEEE 802.11b Channel Low (2412MHz) Chain 0/1 Power set 13
- IEEE 802.11b Channel Mid (2437MHz) Chain 0/1 Power set 13
- IEEE 802.11b Channel High (2462MHz) Chain 0/1 Power set 13
- IEEE 802.11g Channel Low (2412MHz) Chain 0/1 Power set 11.5
- IEEE 802.11g Channel Mid (2437MHz) Chain 0/1 Power set 18
- IEEE 802.11g Channel High (2462MHz) Chain 0/1 Power set 9.5
- IEEE 802.11gn HT20 Channel Low (2412MHz) Chain 0/1 Power set 10
- IEEE 802.11gn HT20 Channel Mid (2437MHz) Chain 0/1 Power set 16.5
- IEEE 802.11gn HT20 Channel High (2462MHz) Chain 0/1 Power set 9.5
- IEEE 802.11gn HT40 Channel Low (2422MHz) Chain 0/1 Power set 9
- IEEE 802.11gn HT40 Channel Mid (2437MHz) Chain 0/1 Power set 14
- IEEE 802.11gn HT40 Channel High (2452MHz) Chain 0/1 Power set 8.5

3. All of the functions are under run.

4. Start test.

Bluetooth 4.0

1. EUT & peripherals setup diagram is shown in appendix setup photos.
2. TX Mode:
 - ⇒ **Power control**
 - Channel Low (2402MHz) Power set default.
 - Channel Mid (2440MHz) Power set default.
 - Channel High (2480MHz) Power set default.
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

IEEE 802.11b mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (kHz)	Pass / Fail
		Chain 0	Chain 1		
Low	2412	10.0700	10.0500	500	PASS
Middle	2437	10.0800	9.7070	500	PASS
High	2462	10.0400	10.0100	500	PASS

IEEE 802.11g mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (kHz)	Pass / Fail
		Chain 0	Chain 1		
Low	2412	16.3500	16.3400	500	PASS
Middle	2437	16.3200	16.3400	500	PASS
High	2462	16.3600	16.3300	500	PASS

IEEE 802.11gn HT20 mode

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (kHz)	Pass / Fail
		Chain 0	Chain 1		
Low	2412	17.5600	17.5600	500	PASS
Middle	2437	17.2500	17.5300	500	PASS
High	2462	17.5900	17.2800	500	PASS

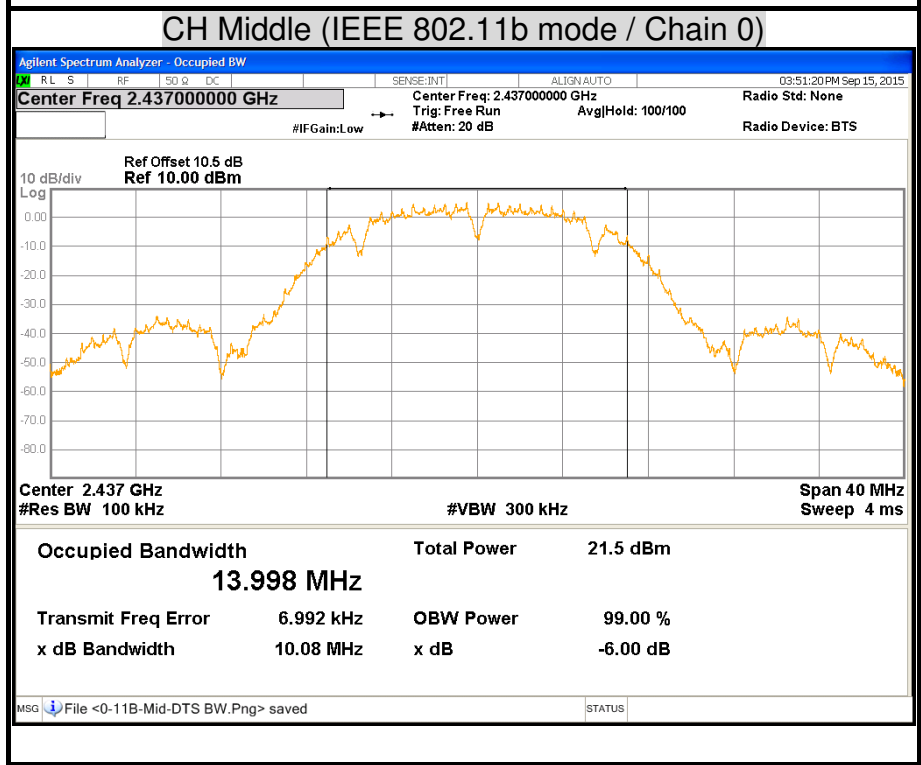
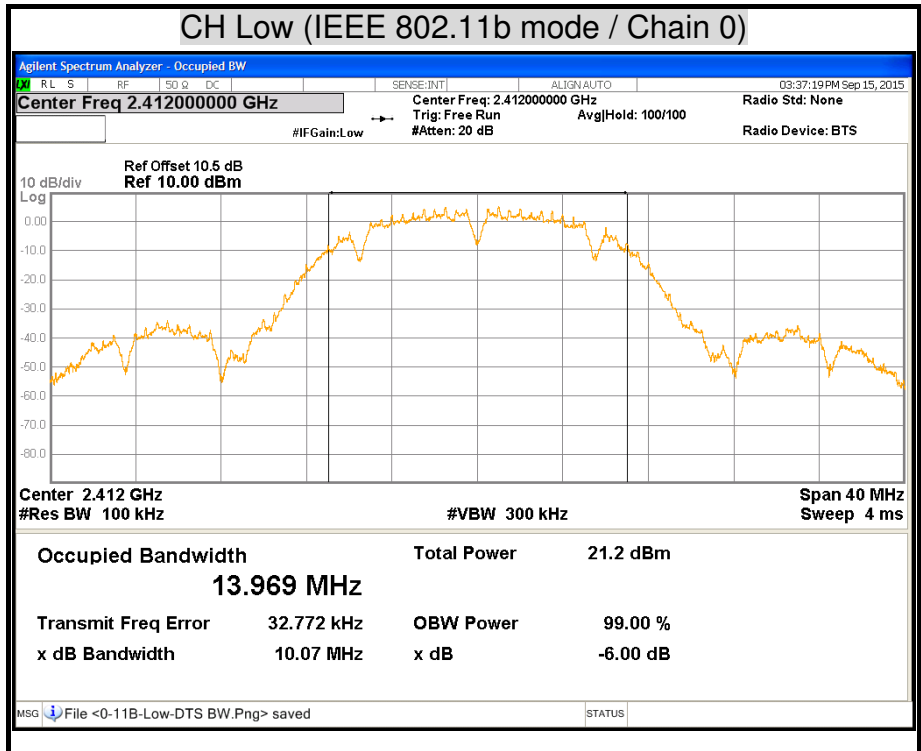
IEEE 802.11gn HT40 mode

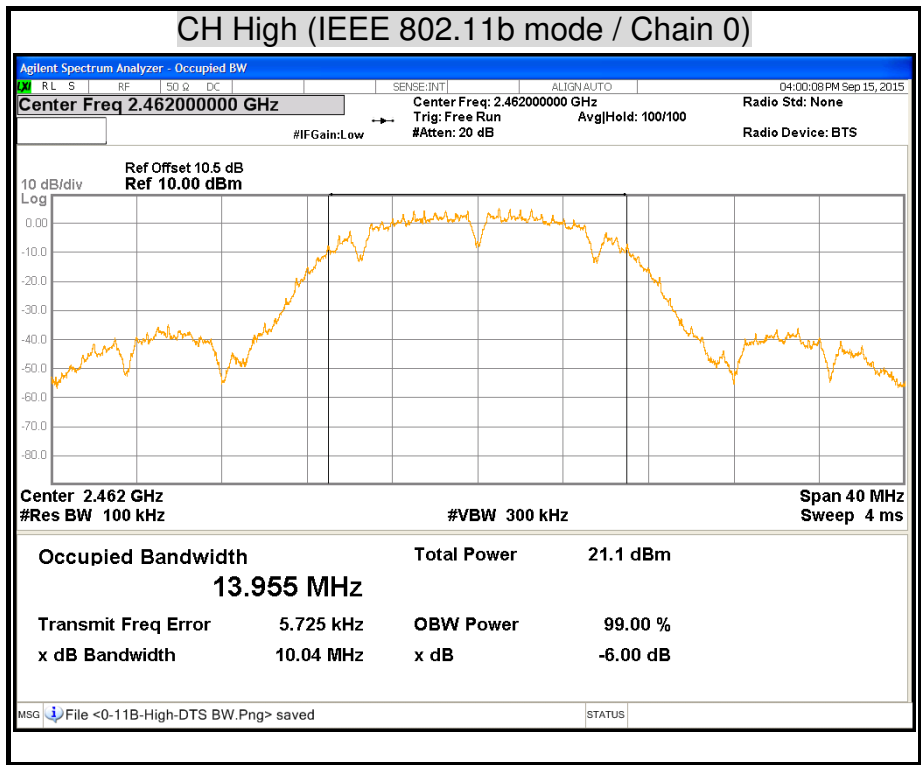
Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (kHz)	Pass / Fail
		Chain 0	Chain 1		
Low	2422	36.3300	36.3100	500	PASS
Middle	2437	36.3400	36.3300	500	PASS
High	2452	36.3200	36.3300	500	PASS

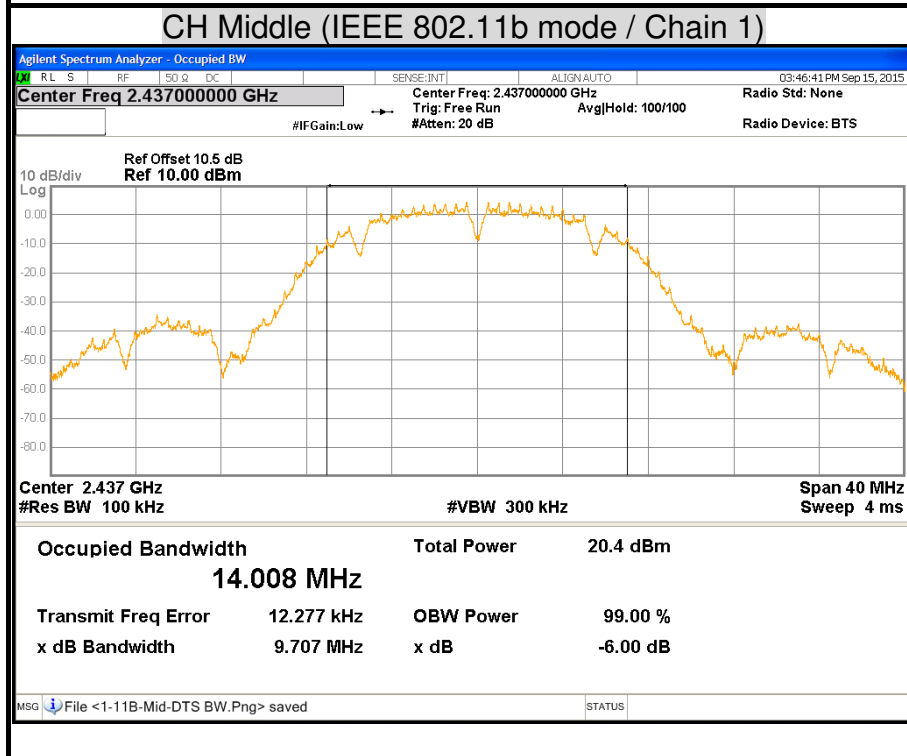
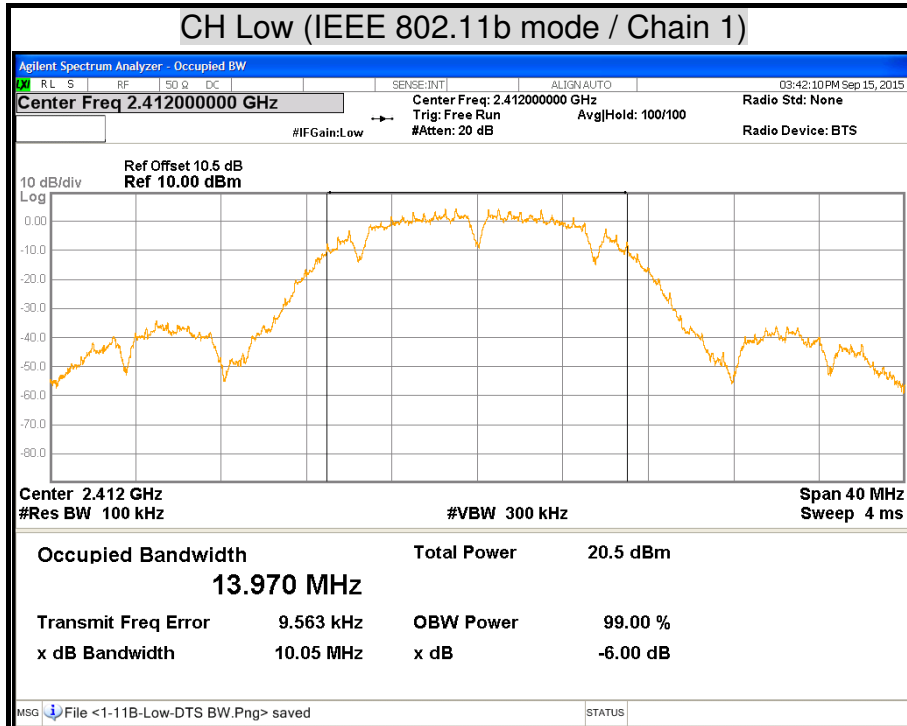
Bluetooth 4.0 mode

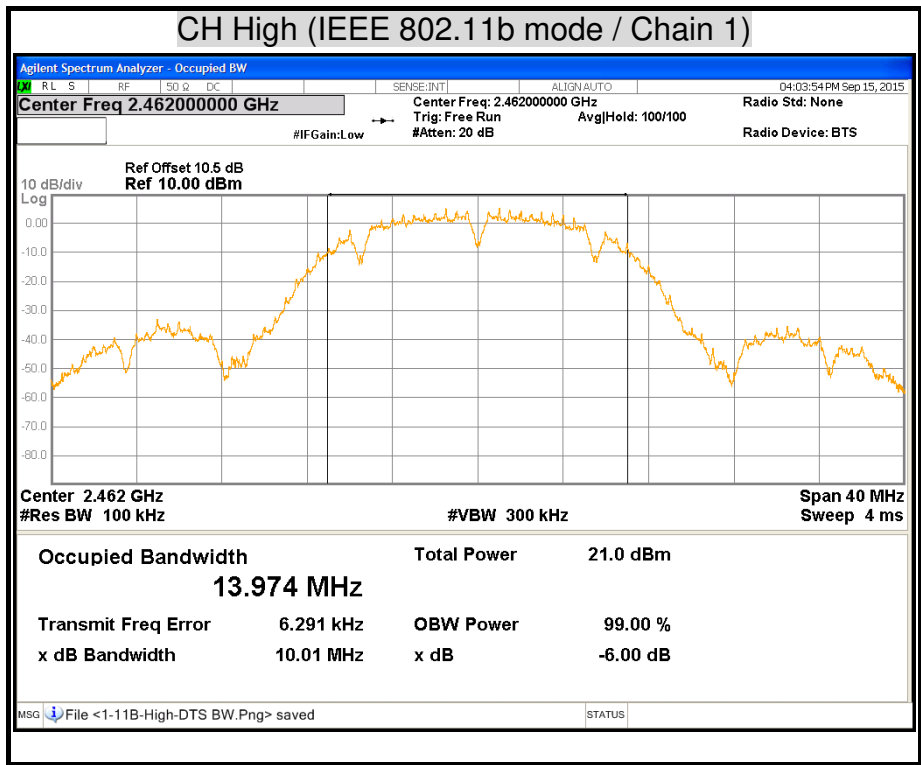
Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
		Chain 0		
Low	2402	0.6449	500	PASS
Middle	2440	0.6414	500	PASS
High	2480	0.6463	500	PASS

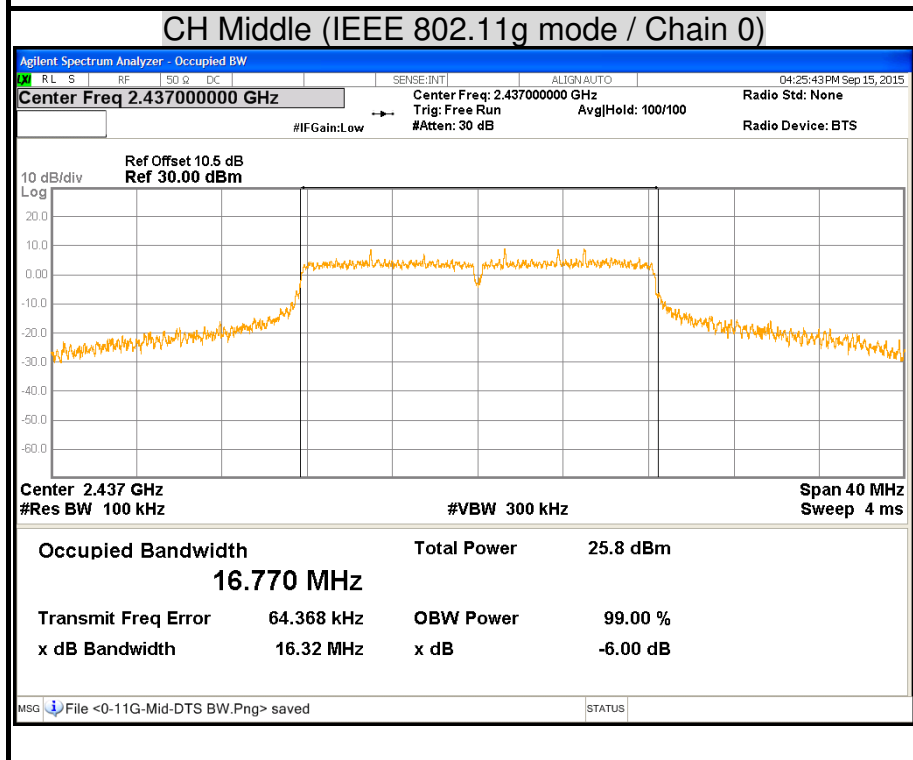
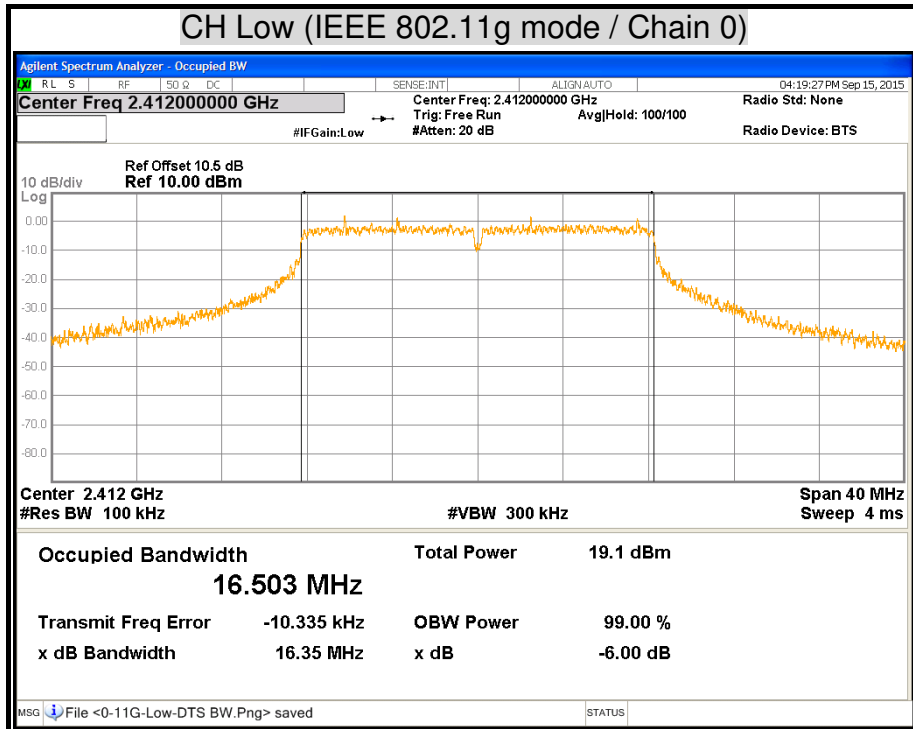
6dB BANDWIDTH

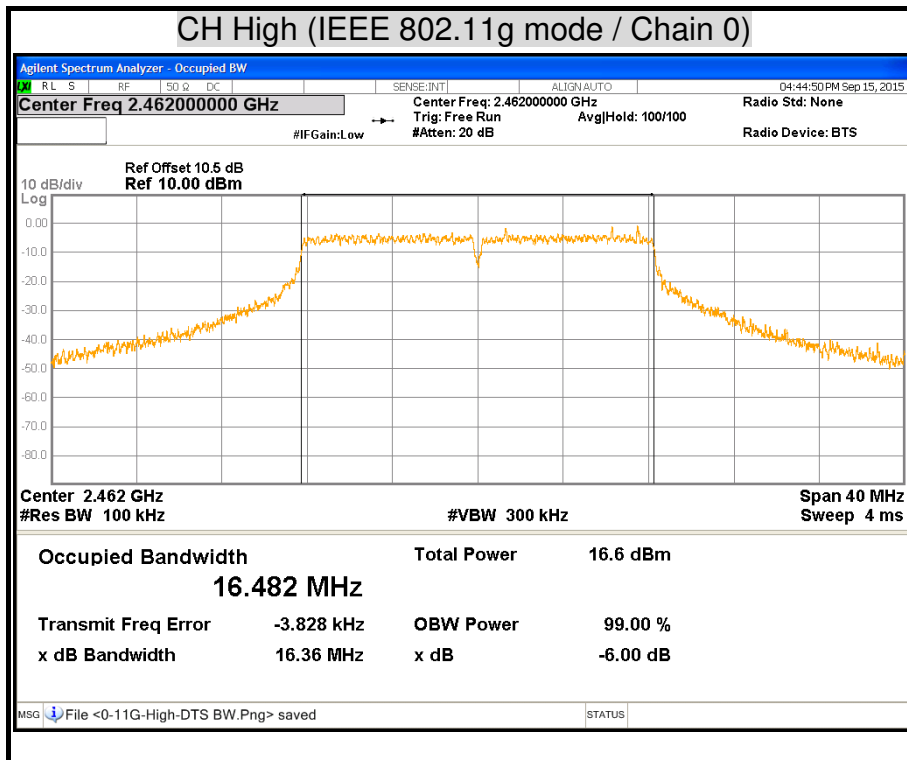


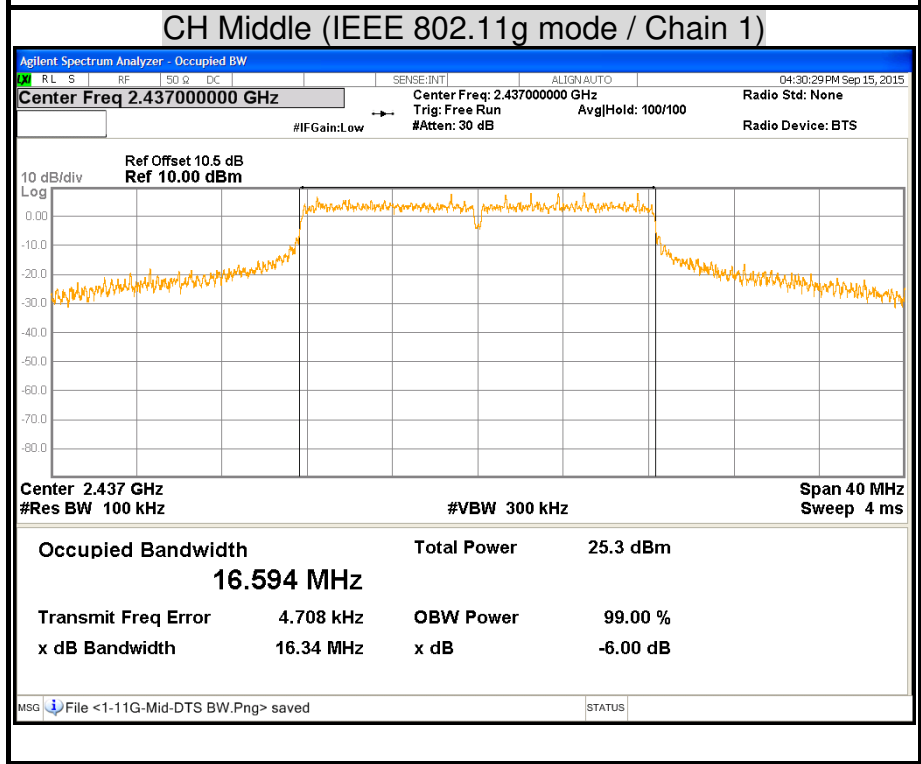
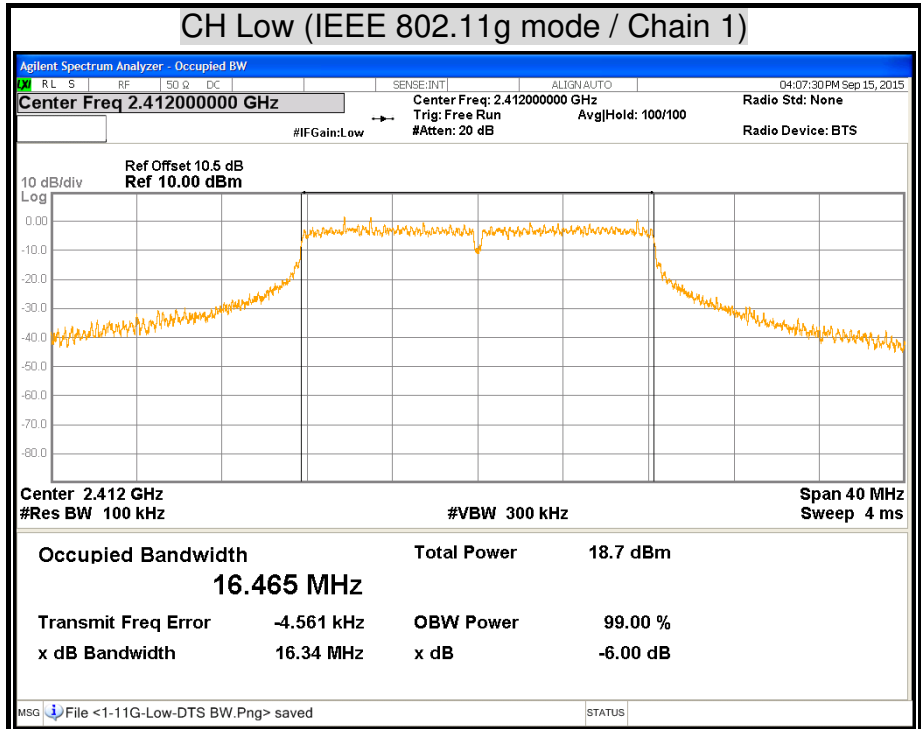


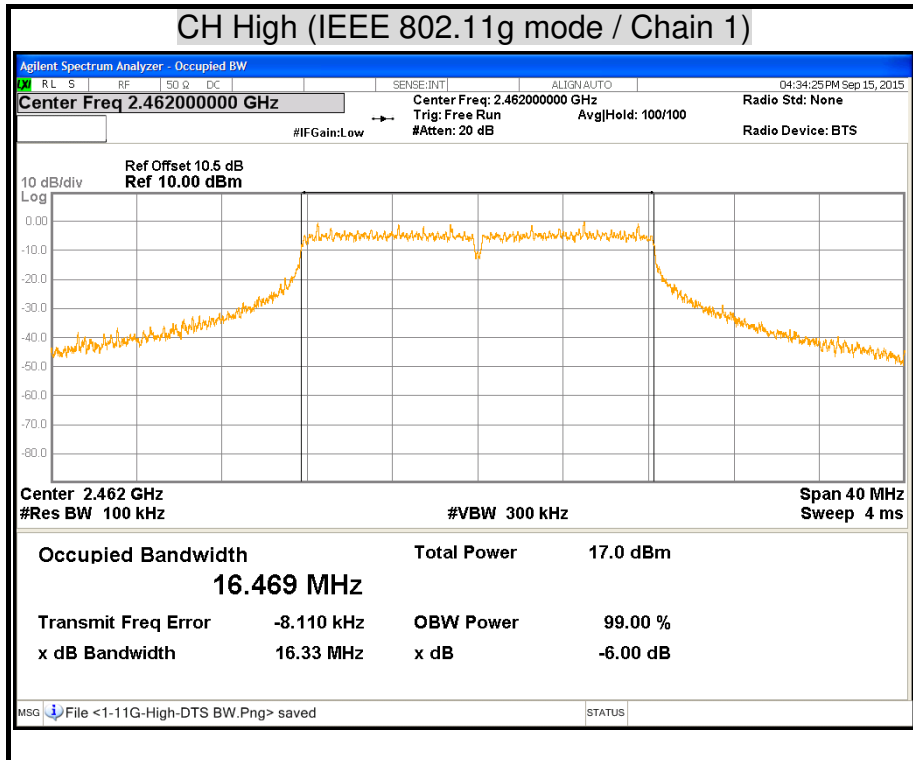


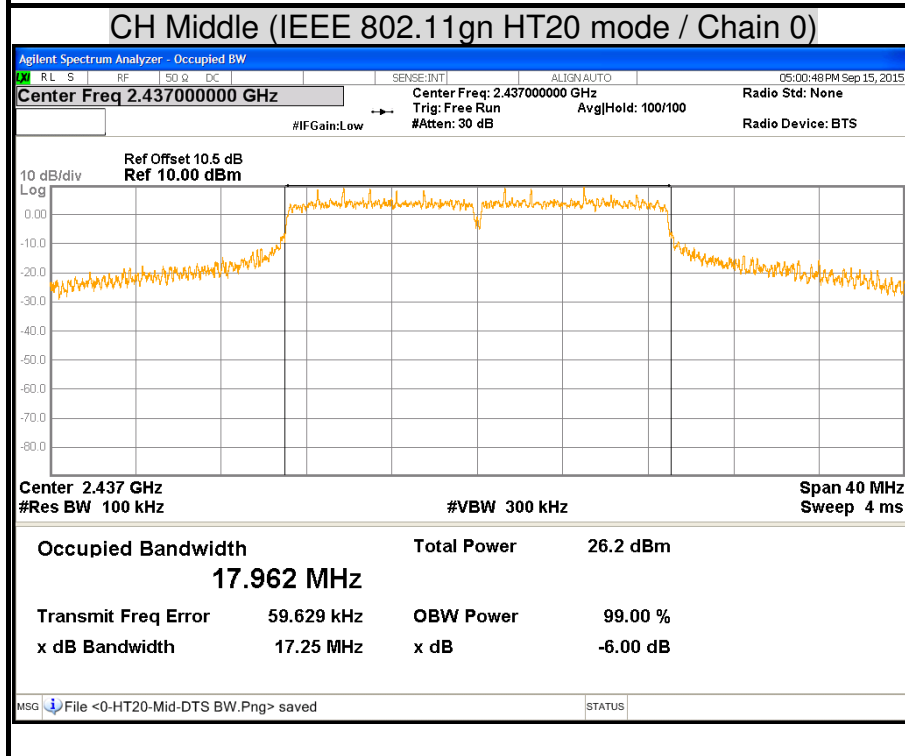
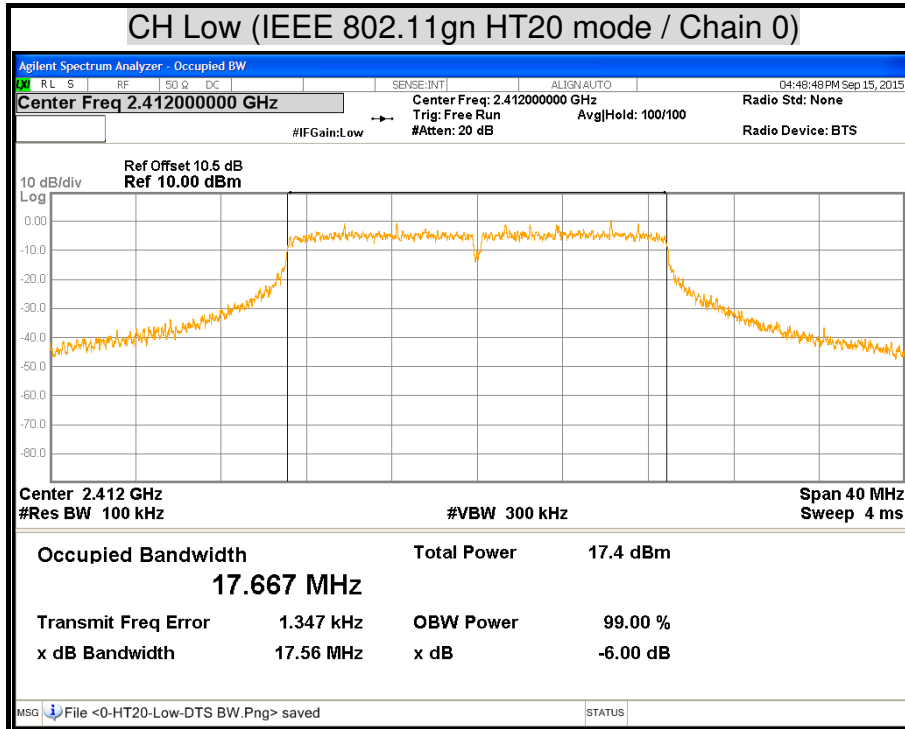


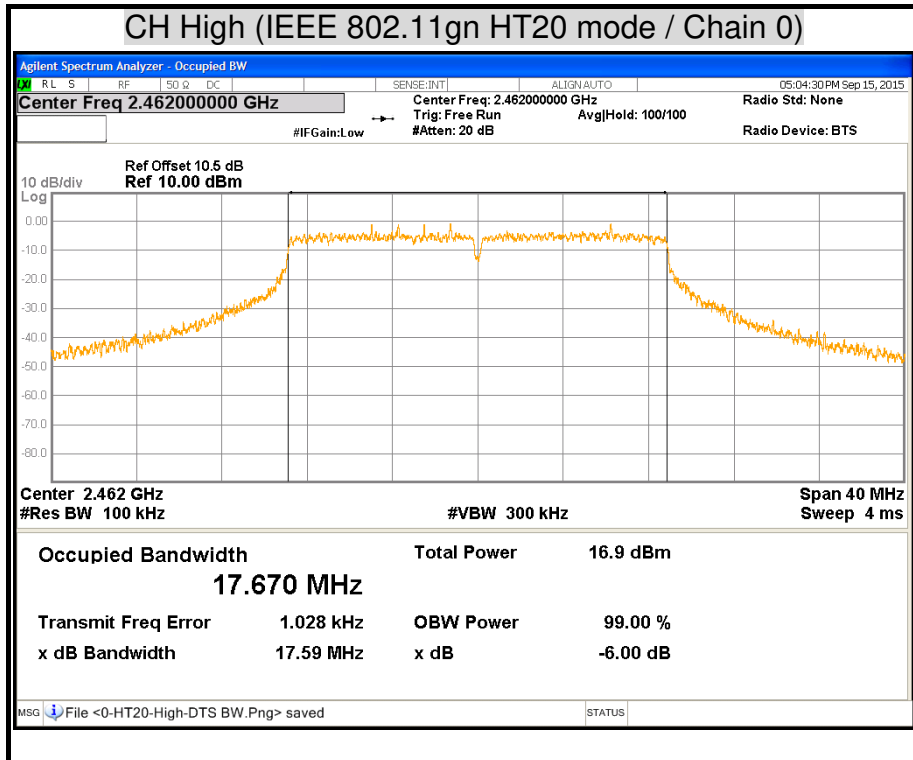


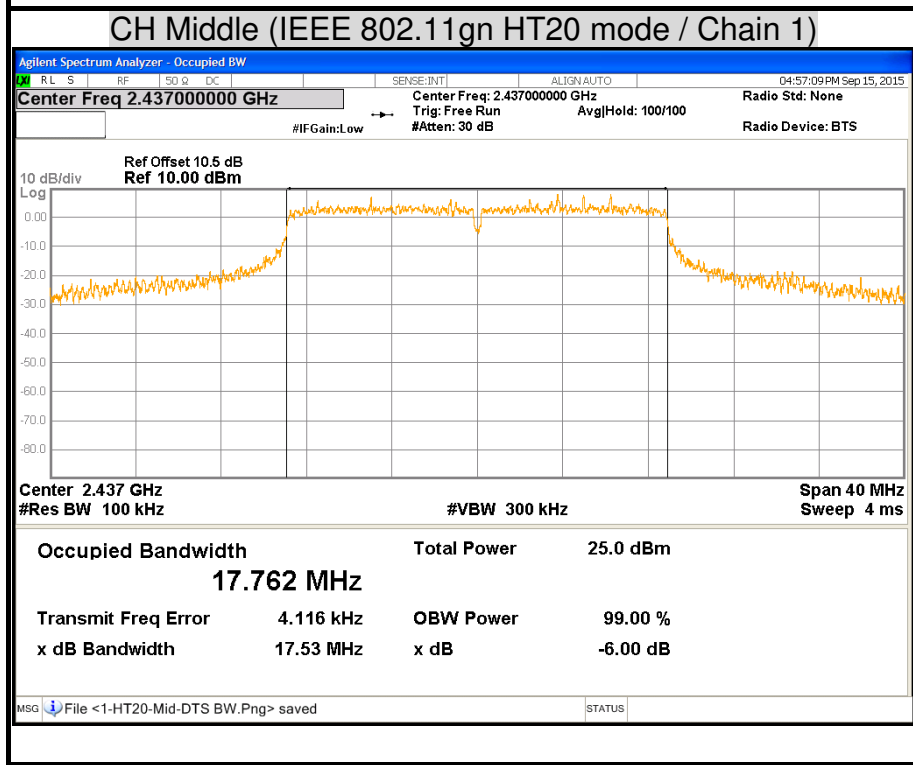
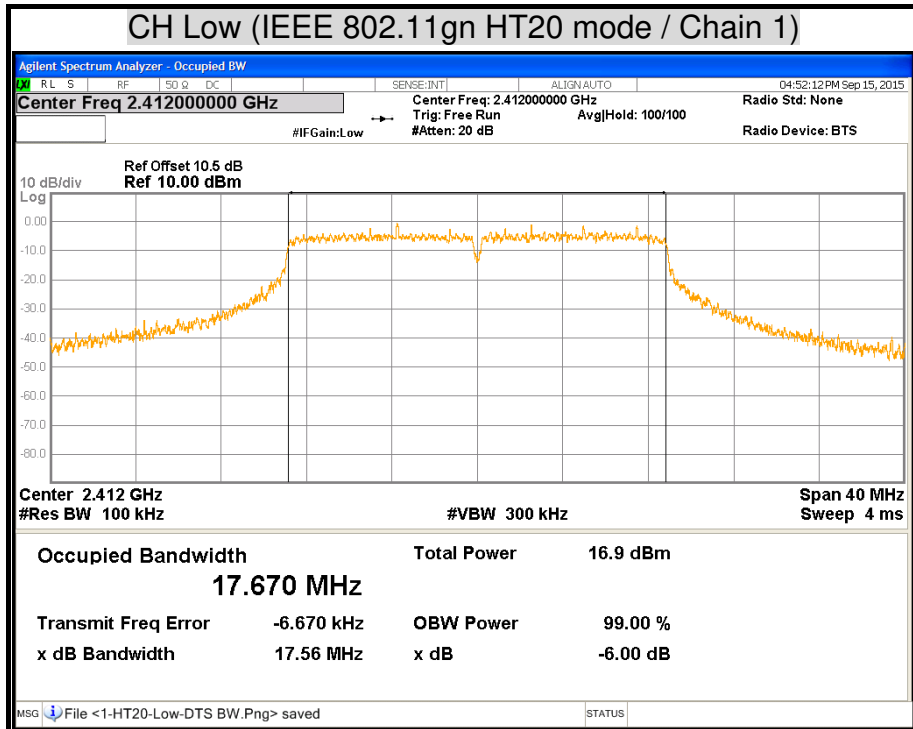


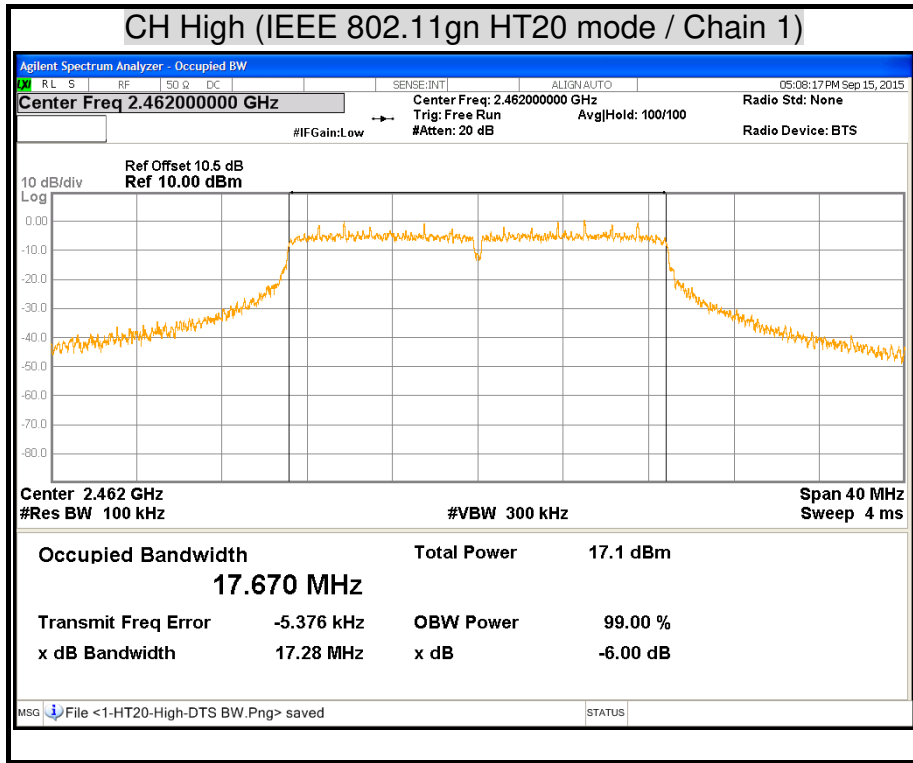


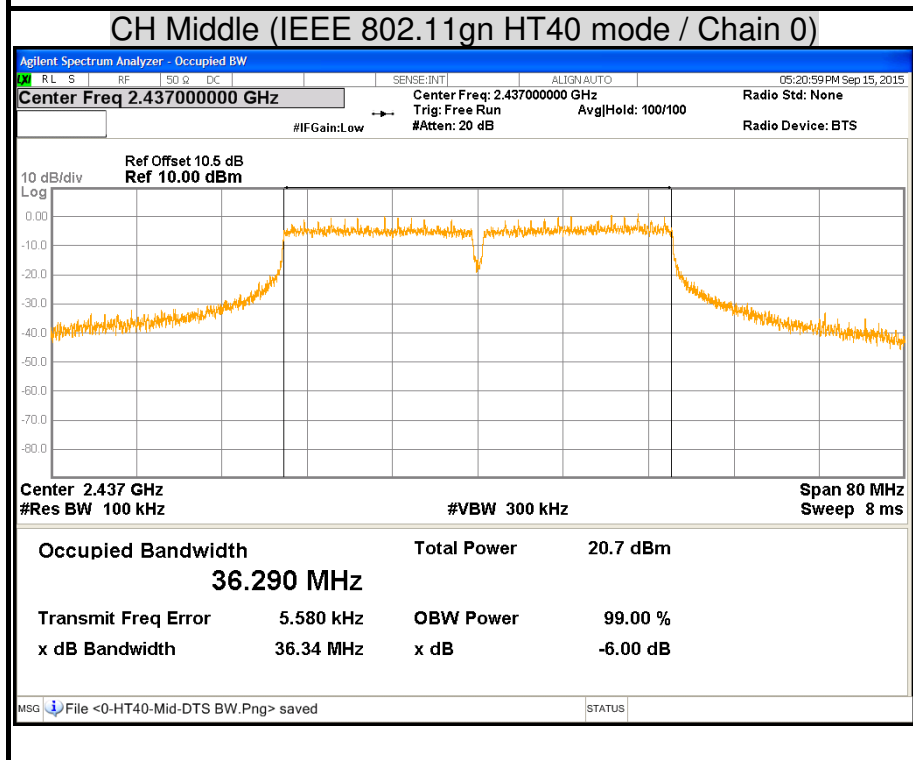
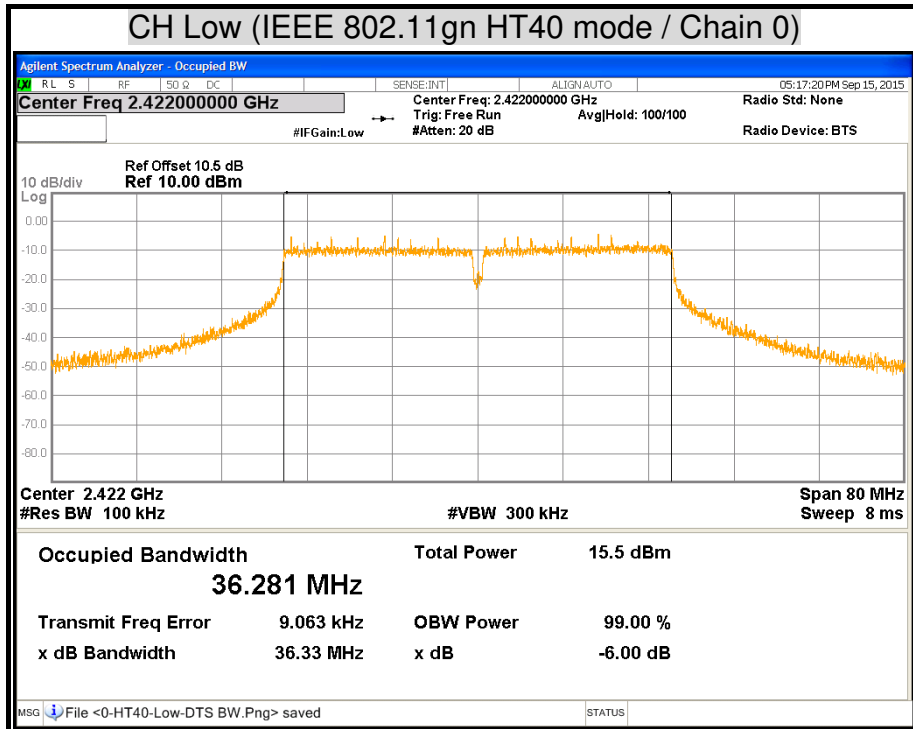


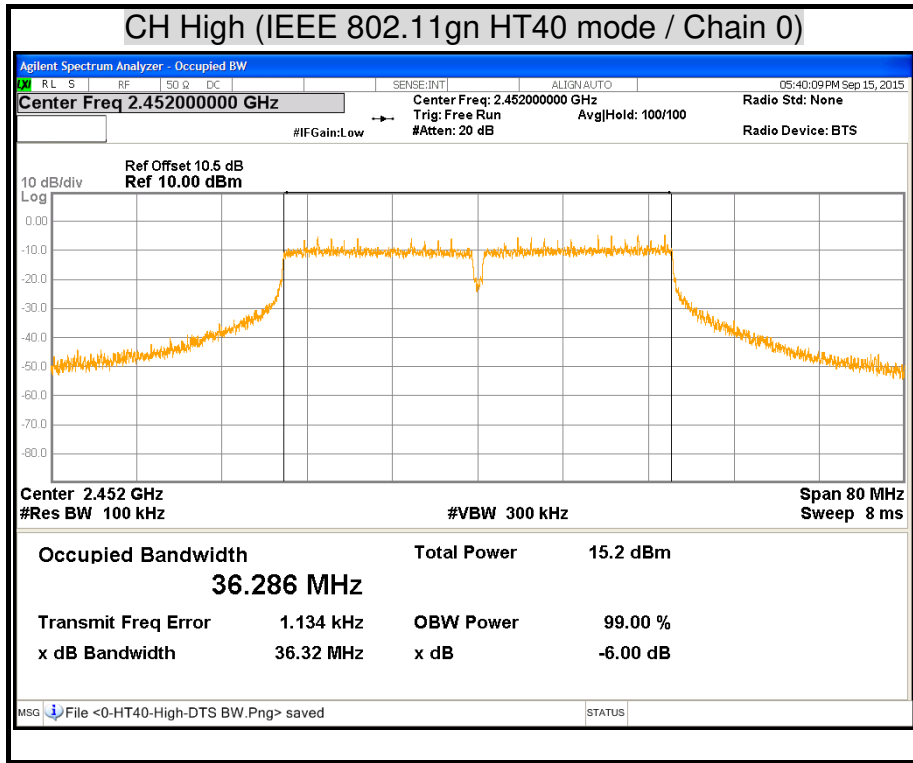


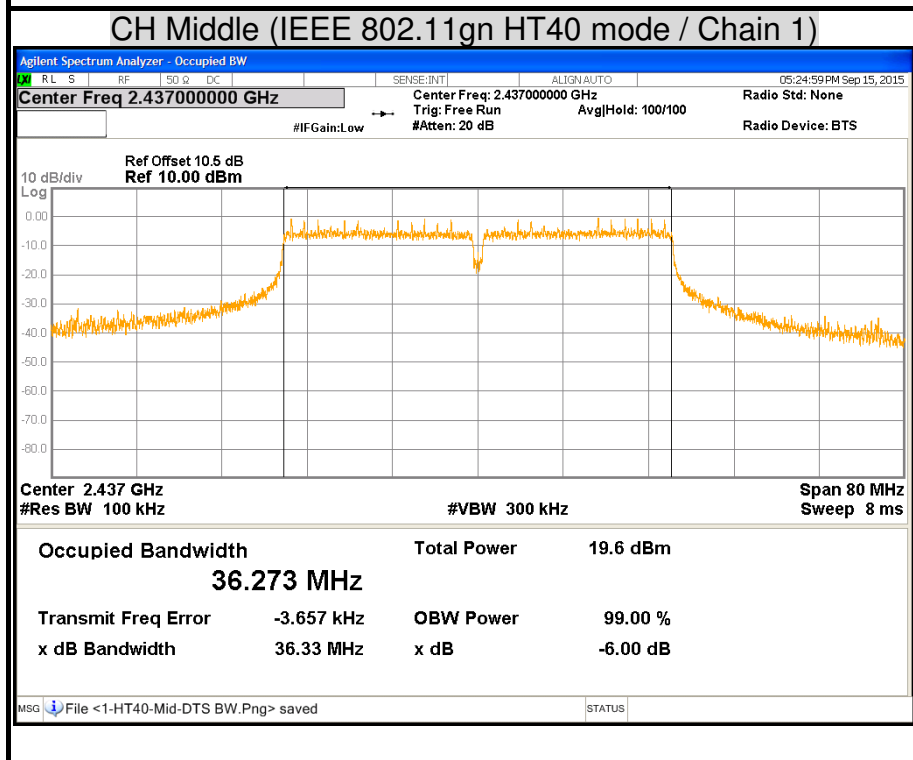
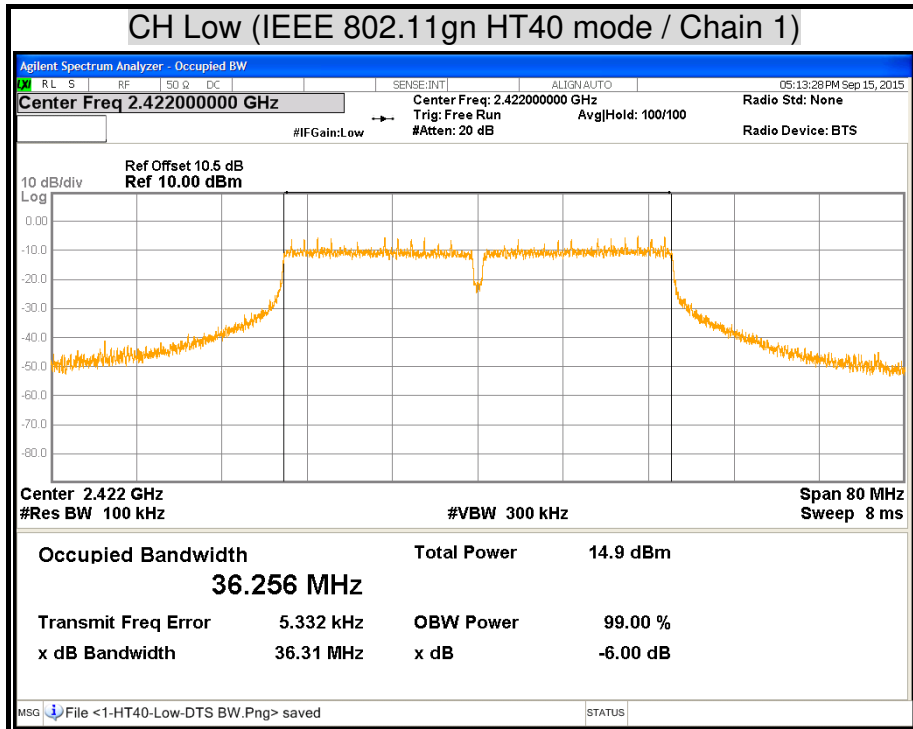


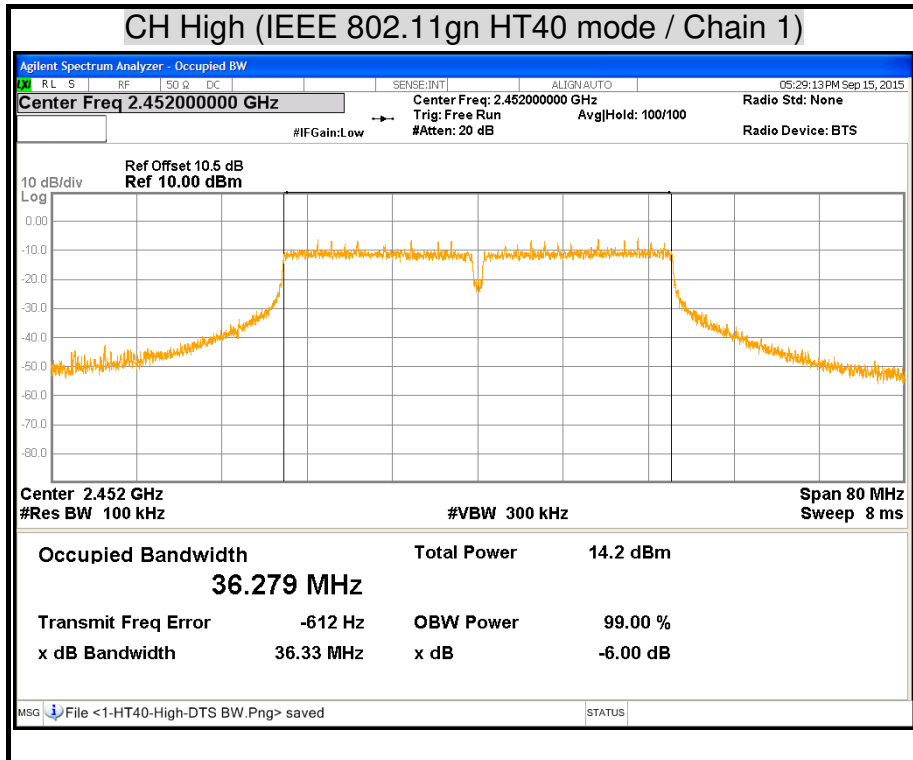


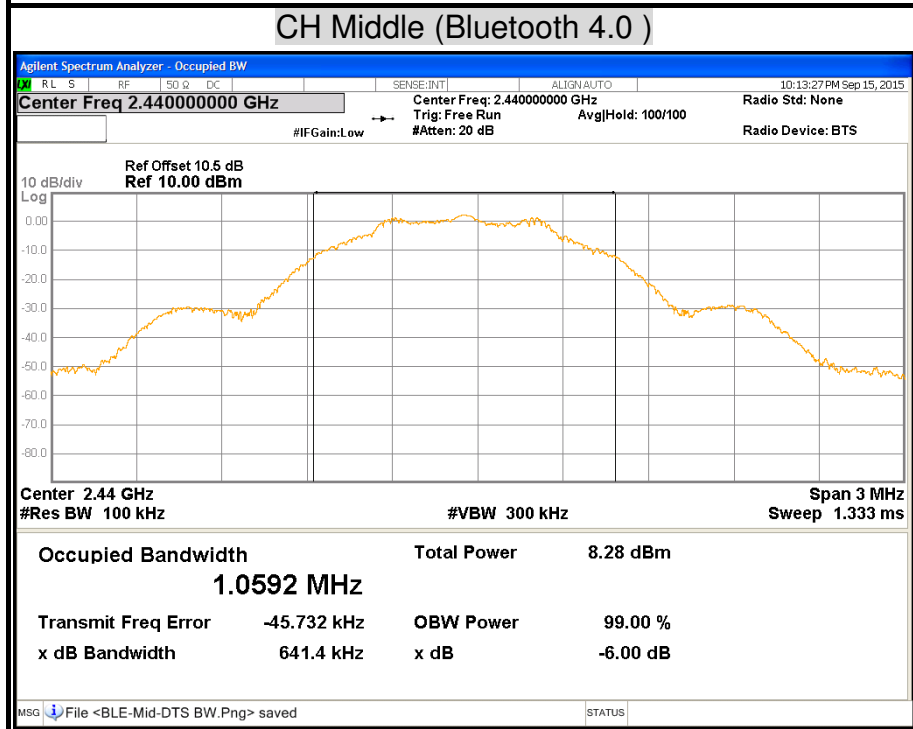
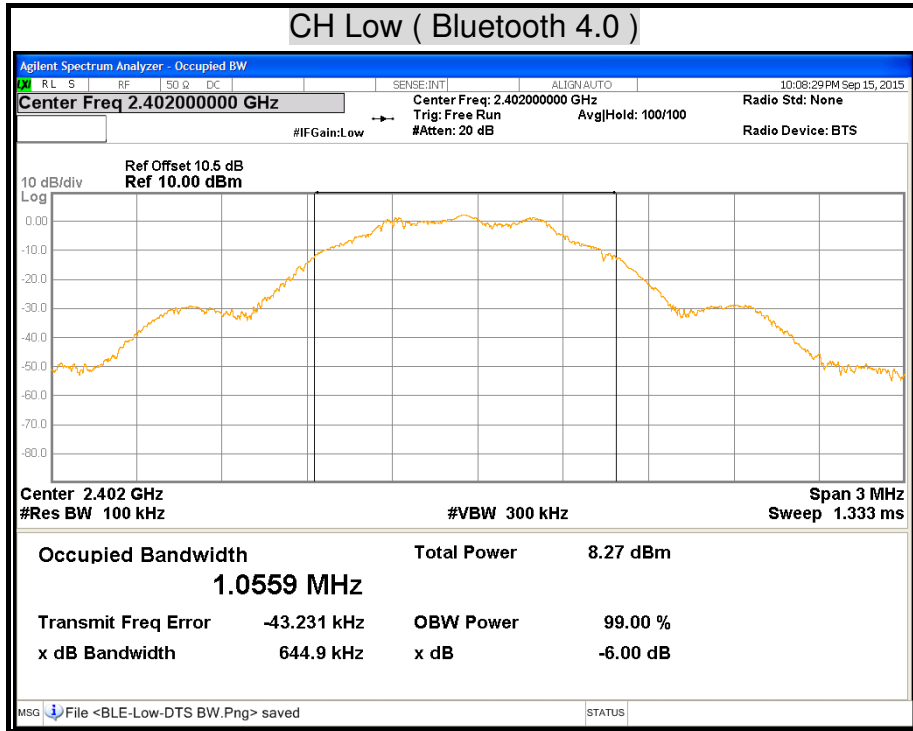


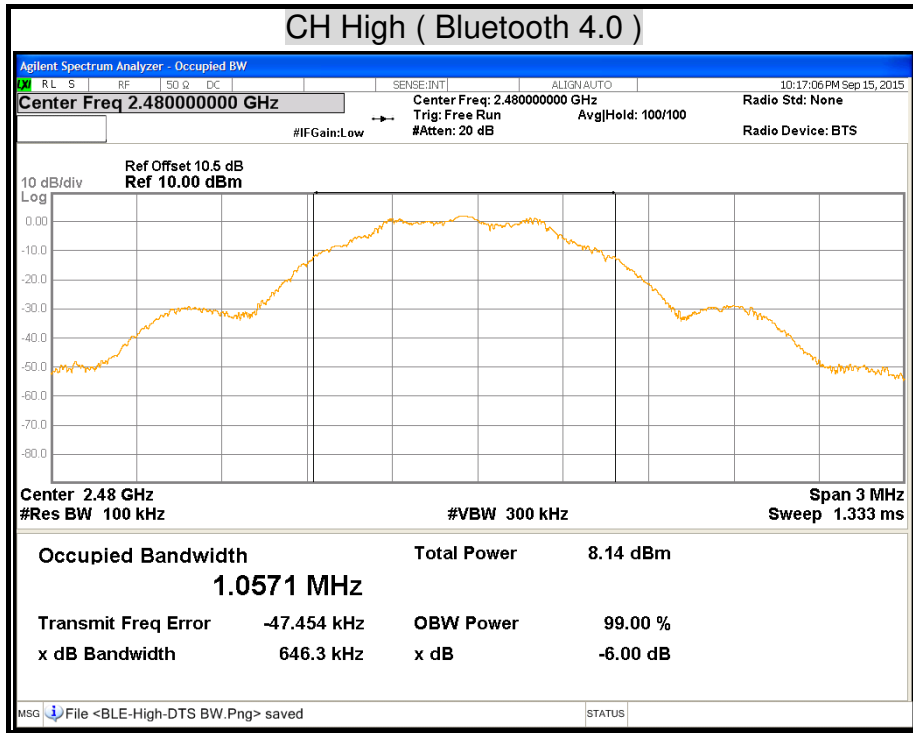












7.2 MAXIMUM PEAK OUTPUT POWER

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} ;

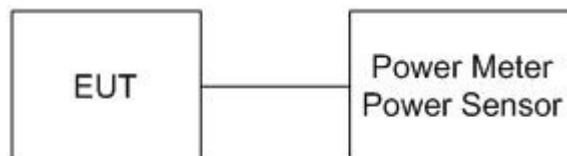
Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

IEEE 802.11b mode

Channel	Channel Frequency (MHz)	Peak Power (dBm)		Peak Power Total		Peak Power Limit		Pass / Fail
		Chain 0	Chain 1	(dBm)	(W)	(dBm)	(W)	
Low	2412	14.95	14.89	17.93	0.0621	29.53	0.8974	PASS
Middle	2437	15.12	14.62	17.89	0.0615	29.53	0.8974	PASS
High	2462	15.12	14.96	18.05	0.0638	29.53	0.8974	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 10.5 dB pad and 0.5 dB cable) was entered as an offset in the power meter to allow for direct reading of power.
3. Total peak power = Chain 0 + Chain 1.
4. The directional gain is 6.47 dBi which is more than 6dBi, the limit should be 29.53dBm.

IEEE 802.11g mode

Channel	Channel Frequency (MHz)	Peak Power (dBm)		Peak Power Total		Peak Power Limit		Pass / Fail
		Chain 0	Chain 1	(dBm)	(W)	(dBm)	(W)	
Low	2412	20.11	19.56	22.85	0.1928	29.53	0.8974	PASS
Middle	2437	24.59	24.61	27.61	0.5768	29.53	0.8974	PASS
High	2462	18.12	18.36	21.25	0.1334	29.53	0.8974	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 10.5 dB pad and 0.5 dB cable) was entered as an offset in the power meter to allow for direct reading of power.
3. Total peak power = Chain 0 + Chain 1.
4. The directional gain is 6.47 dBi which is more than 6dBi, the limit should be 29.53dBm.

IEEE 802.11gn HT20 mode

Channel	Channel Frequency (MHz)	Peak Power (dBm)		Peak Power Total		Peak Power Limit		Pass / Fail
		Chain 0	Chain 1	(dBm)	(W)	(dBm)	(W)	
Low	2412	18.71	18.01	21.38	0.1374	29.53	0.8974	PASS
Middle	2437	24.71	24.53	27.63	0.5794	29.53	0.8974	PASS
High	2462	17.22	17.96	20.62	0.1153	29.53	0.8974	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 10.5 dB pad and 0.5 dB cable) was entered as an offset in the power meter to allow for direct reading of power.
3. Total peak power = Chain 0 + Chain 1.
4. The directional gain is 6.47 dBi which is more than 6dBi, the limit should be 29.53dBm.

IEEE 802.11gn HT40 mode

Channel	Channel Frequency (MHz)	Peak Power (dBm)		Peak Power Total		Peak Power Limit		Pass / Fail
		Chain 0	Chain 1	(dBm)	(W)	(dBm)	(W)	
Low	2422	17.57	17.33	20.46	0.1112	29.53	0.8974	PASS
Middle	2437	22.84	22.25	25.57	0.3606	29.53	0.8974	PASS
High	2452	18.53	16.78	20.75	0.1189	29.53	0.8974	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 10.5 dB pad and 0.5 dB cable) was entered as an offset in the power meter to allow for direct reading of power.
3. Total peak power = Chain 0 + Chain 1.
4. The directional gain is 6.47 dBi which is more than 6dBi, the limit should be 29.53dBm.

Bluetooth 4.0 mode

Channel	Channel Frequency (MHz)	Peak Power		Peak Power Limit		Pass / Fail
		Chain 0		(dBm)	(W)	
		(dBm)	(W)			
Low	2402	2.00	0.0016	30	1	PASS
Middle	2440	2.12	0.0016	30	1	PASS
High	2480	2.08	0.0016	30	1	PASS

Remark: 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

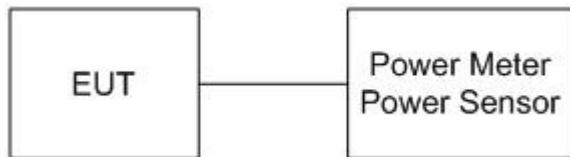
None; for reporting purposes only.

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

IEEE 802.11b Mode

Channel	Channel Frequency (MHz)	Average Power (dBm)	
		Chain 0	Chain 1
Low	2412	12.73	12.67
Middle	2437	12.89	12.37
High	2462	12.93	12.77

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)	Average Power (dBm)	
		Chain 0	Chain 1
Low	2412	11.82	11.21
Middle	2437	18.34	17.58
High	2462	9.46	9.26

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)	Average Power (dBm)	
		Chain 0	Chain 1
Low	2412	9.85	9.59
Middle	2437	16.97	16.18
High	2462	9.31	8.84

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)	Average Power (dBm)	
		Chain 0	Chain 1
Low	2422	9.22	8.53
Middle	2437	14.56	13.51
High	2452	9.28	8.37

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.

Bluetooth 4.0 Mode

Channel	Channel Frequency (MHz)	Average Power (dBm)
		Chain 0
Low	2402	1.77
Middle	2440	1.88
High	2480	1.85

Remark: 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.

7.4 POWER SPECTRAL DENSITY

LIMITS

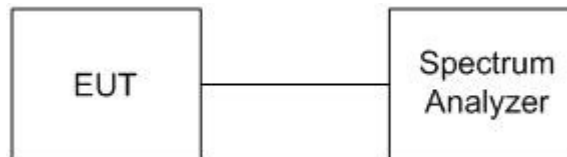
§ 15.247(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

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

IEEE 802.11b mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)		PSD Total (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
Low	2412	-3.54	-3.83	-0.67	7.53	PASS
Middle	2437	-3.48	-4.70	-1.04	7.53	PASS
High	2462	-3.24	-3.77	-0.49	7.53	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 10.5 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.
3. Total power spectral density = Chain 0 + Chain 1
4. The directional gain is 6.47 dBi which is more than 6dBi, the limit should be 7.53dBm.

IEEE 802.11g mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)		PSD Total (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
Low	2412	-6.04	-5.99	-3.00	7.53	PASS
Middle	2437	-0.12	-0.31	2.80	7.53	PASS
High	2462	-9.37	-8.14	-5.70	7.53	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 10.5 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.
3. Total power spectral density = Chain 0 + Chain 1
4. The directional gain is 6.47 dBi which is more than 6dBi, the limit should be 7.53dBm.

IEEE 802.11gn HT20 mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)		PSD Total (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
Low	2412	-7.57	-9.01	-5.22	7.53	PASS
Middle	2437	-0.15	-0.93	2.49	7.53	PASS
High	2462	-8.55	-8.78	-5.65	7.53	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 10.5 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.
3. Total power spectral density = Chain 0 + Chain 1
4. The directional gain is 6.47 dBi which is more than 6dBi, the limit should be 7.53dBm.

IEEE 802.11gn HT40 mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)		PSD Total (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
Low	2422	-12.39	-13.70	-9.99	7.53	PASS
Middle	2437	-8.69	-9.63	-6.12	7.53	PASS
High	2452	-14.67	-15.49	-12.05	7.53	PASS

Remark:

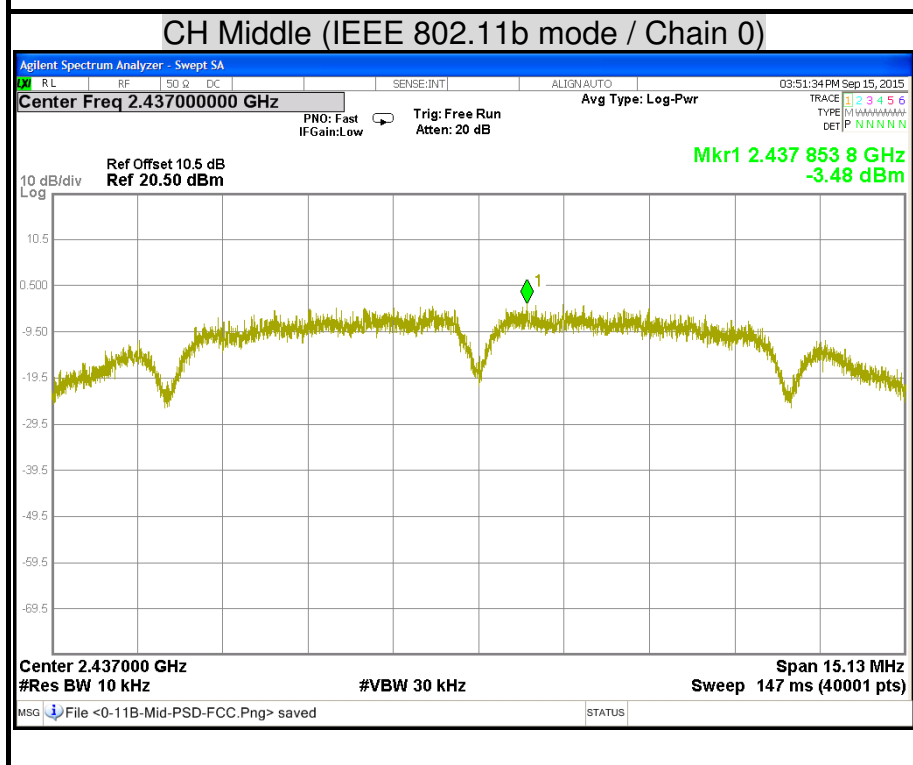
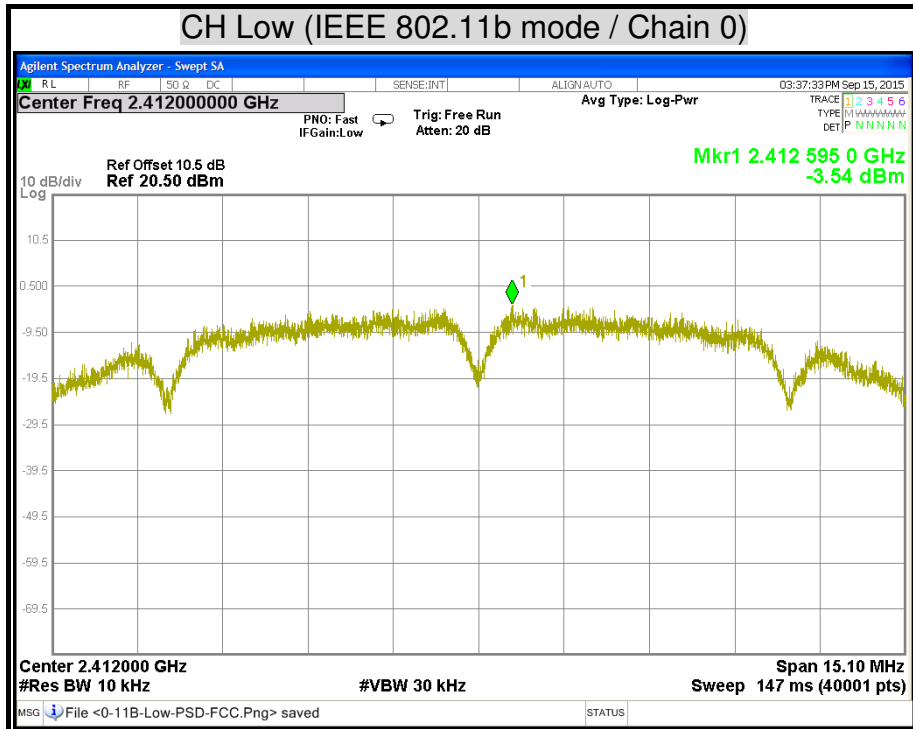
1. At final test to get the worst-case emission at 13.5Mbps.
2. The cable assembly insertion loss of 10.5 dB (including 10.5 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.
3. Total power spectral density = Chain 0 + Chain 1
4. The directional gain is 6.47 dBi which is more than 6dBi, the limit should be 7.53dBm.

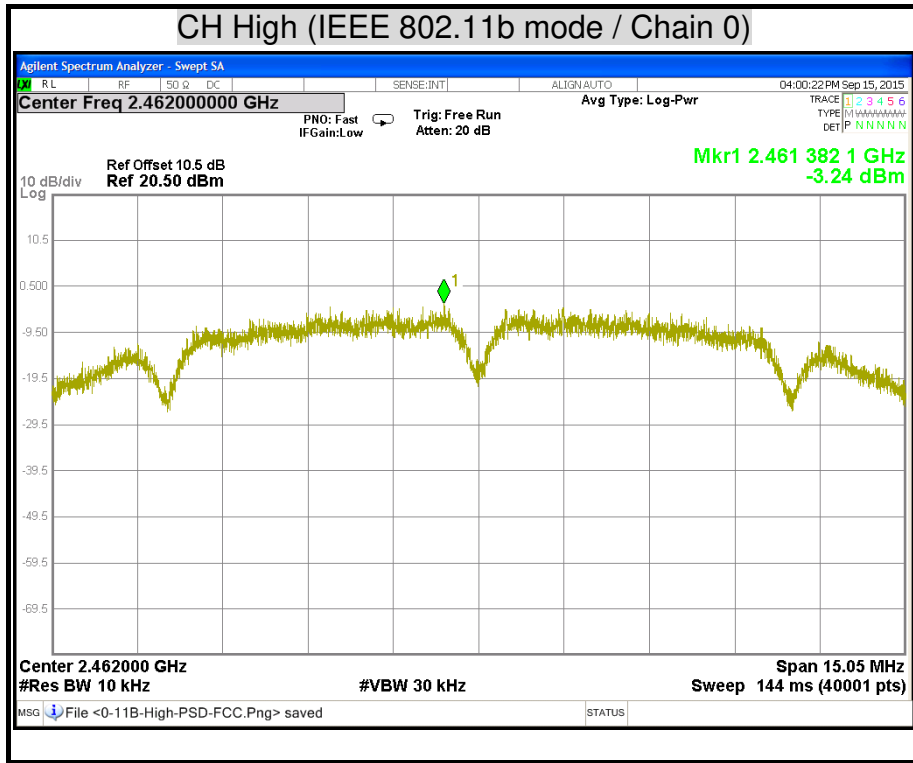
Bluetooth 4.0 mode

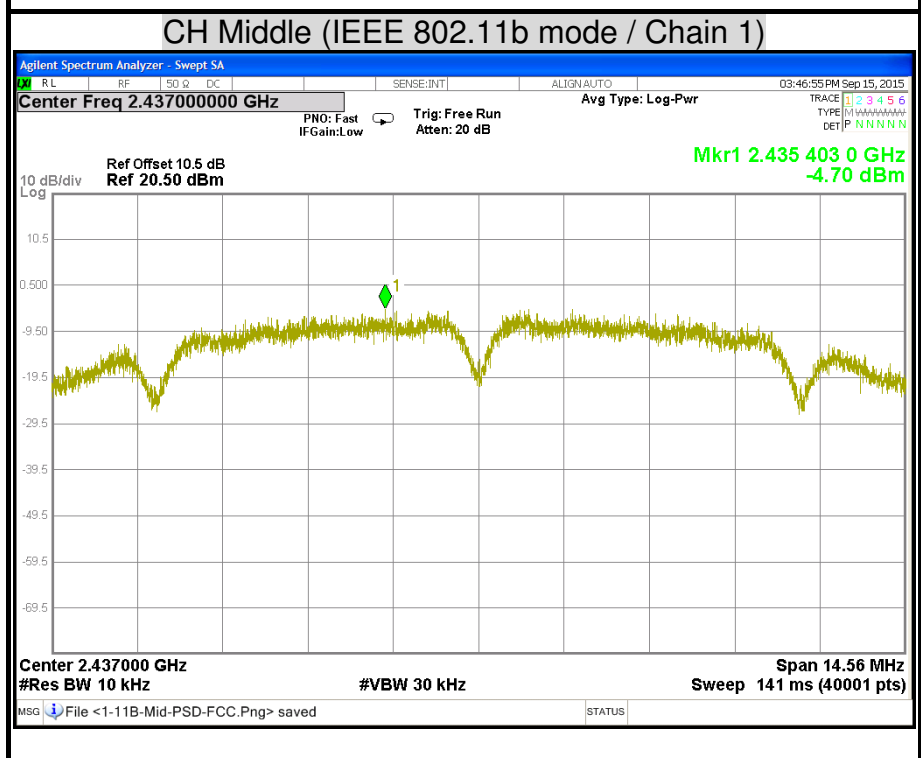
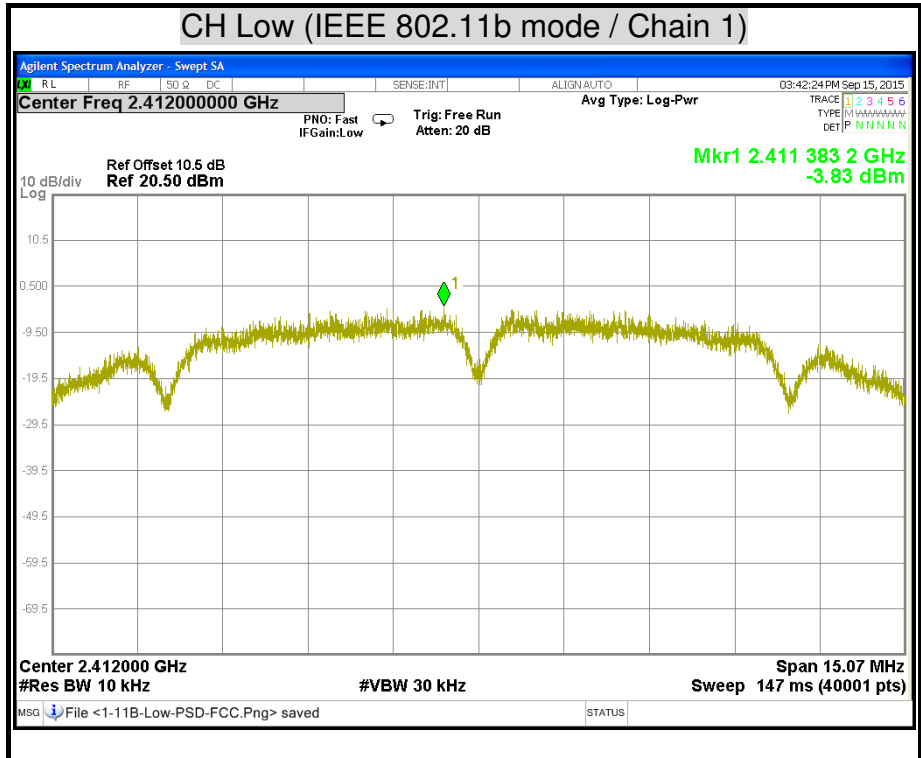
Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain 0		
Low	2402	0.10	8	PASS
Middle	2440	0.04	8	PASS
High	2480	-0.10	8	PASS

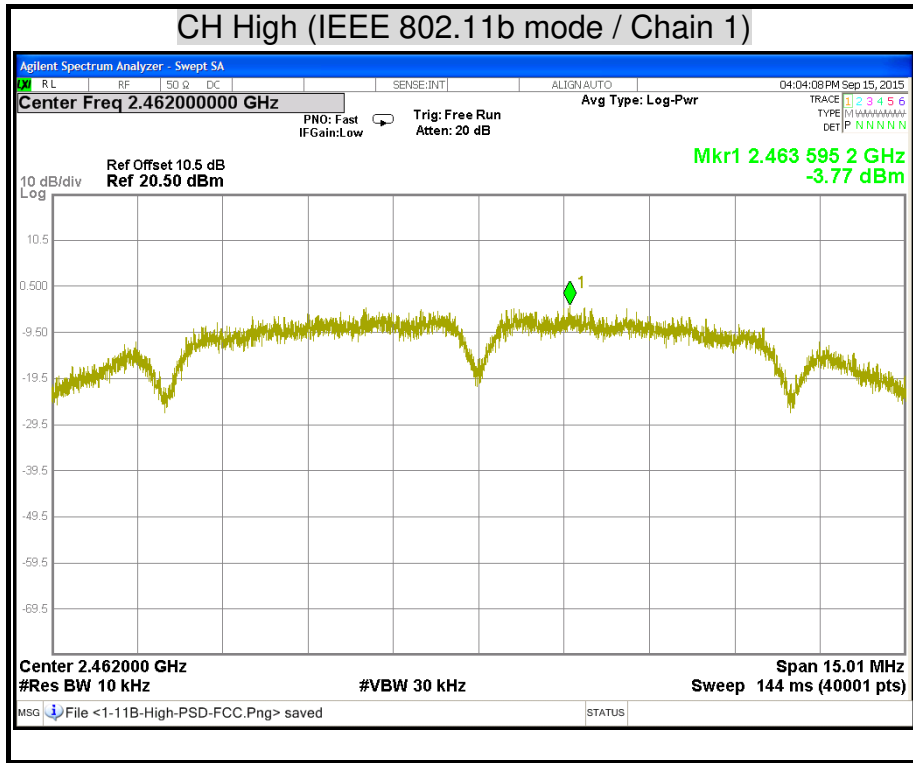
Remark: The cable assembly insertion loss of 10.5 dB (including 10.5 dB pad and 0.5 dB cable) was entered as an offset in the spectrum analyzer to allow for direct reading of power.

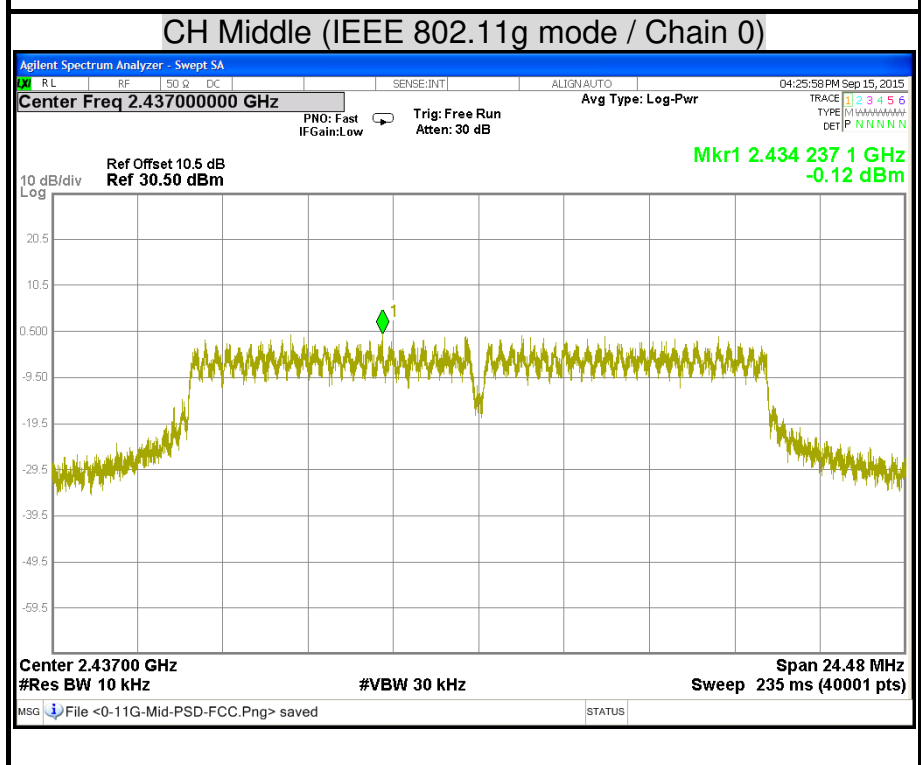
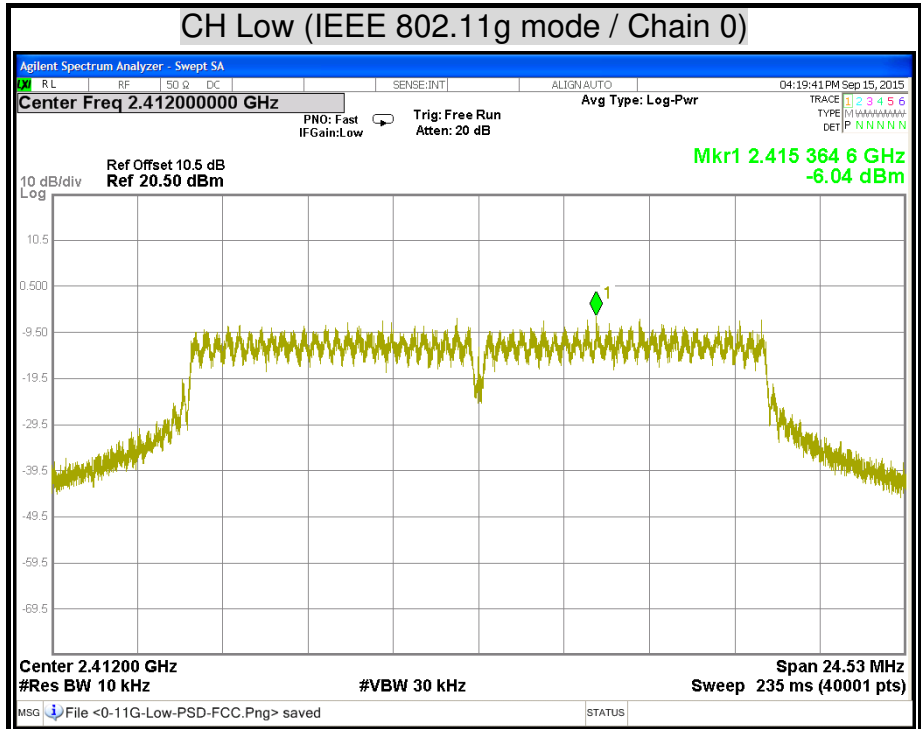
POWER SPECTRAL DENSITY

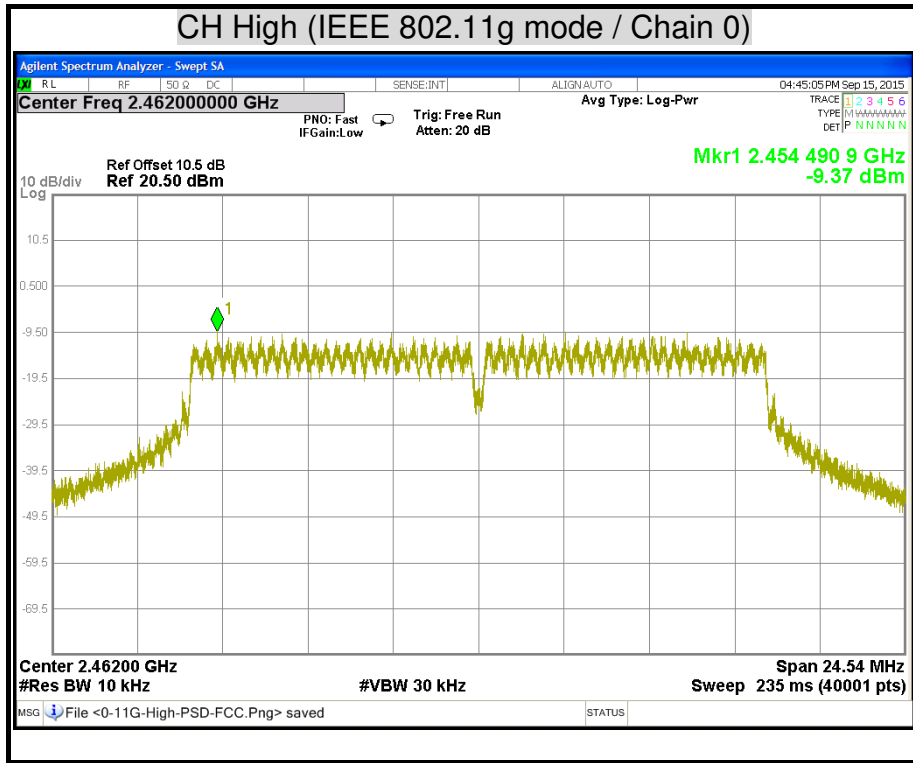


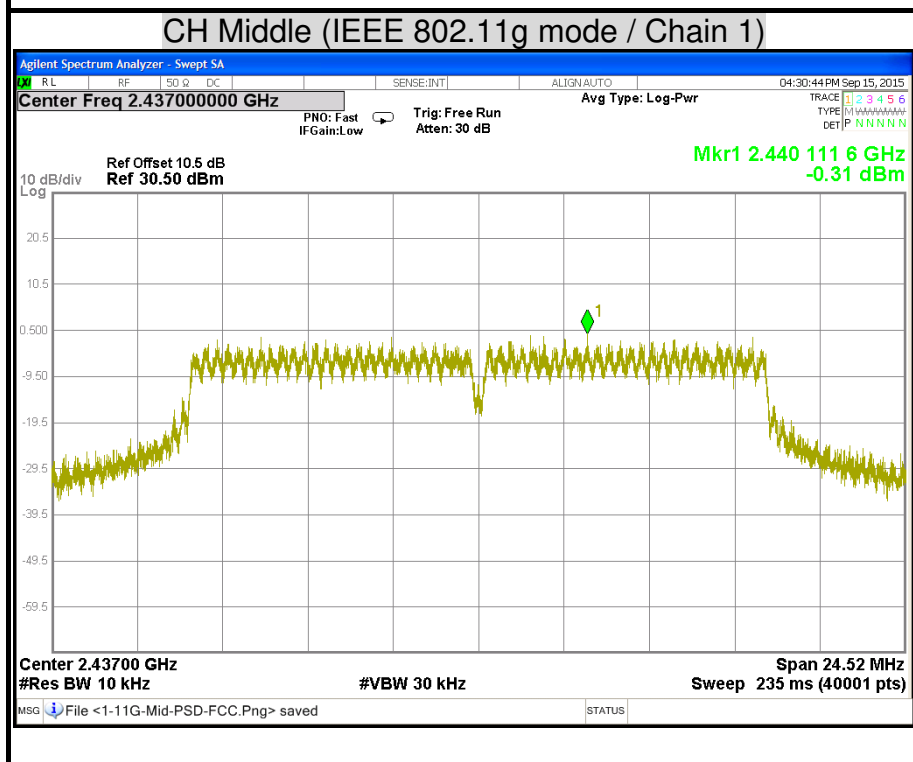
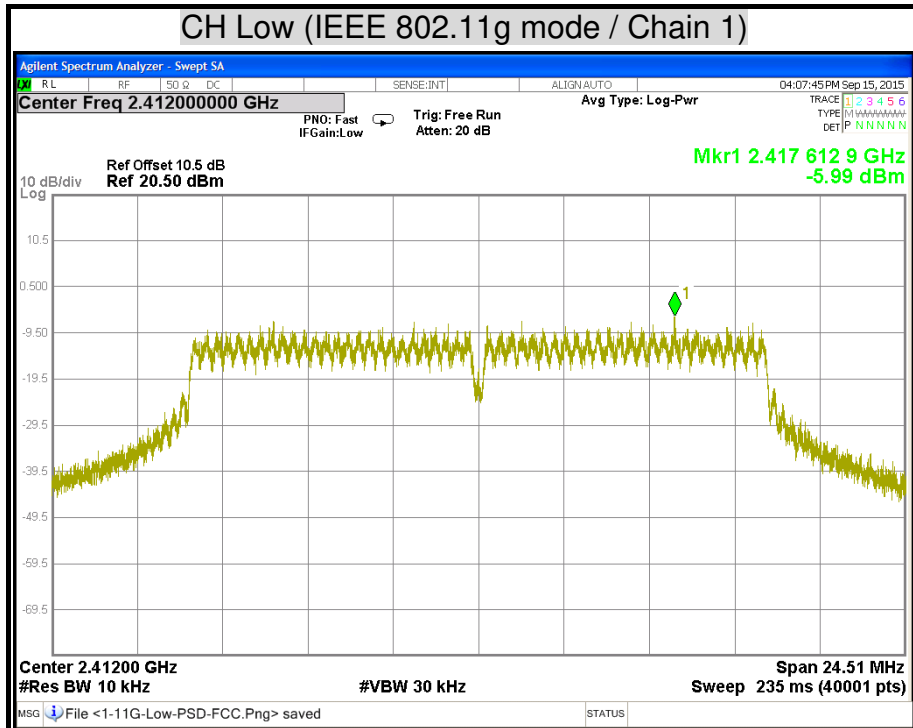


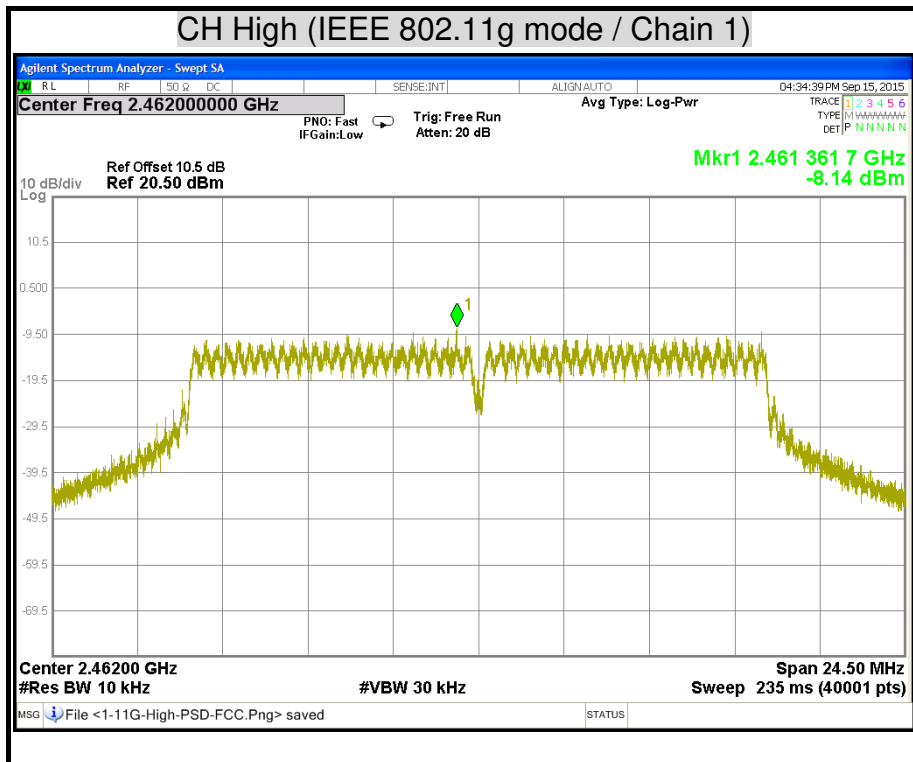


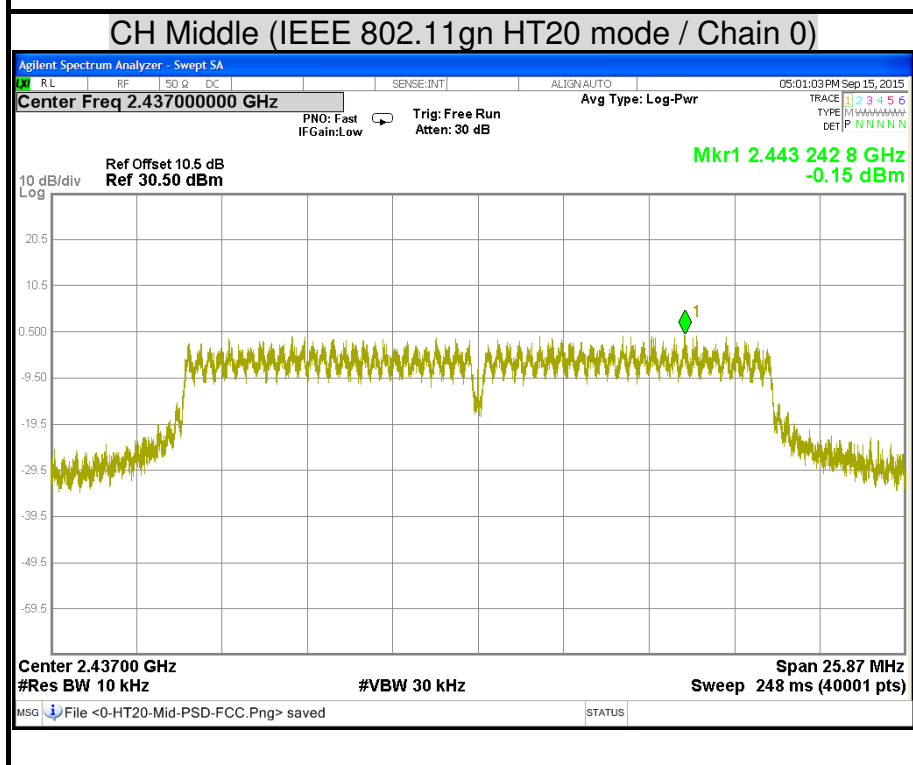
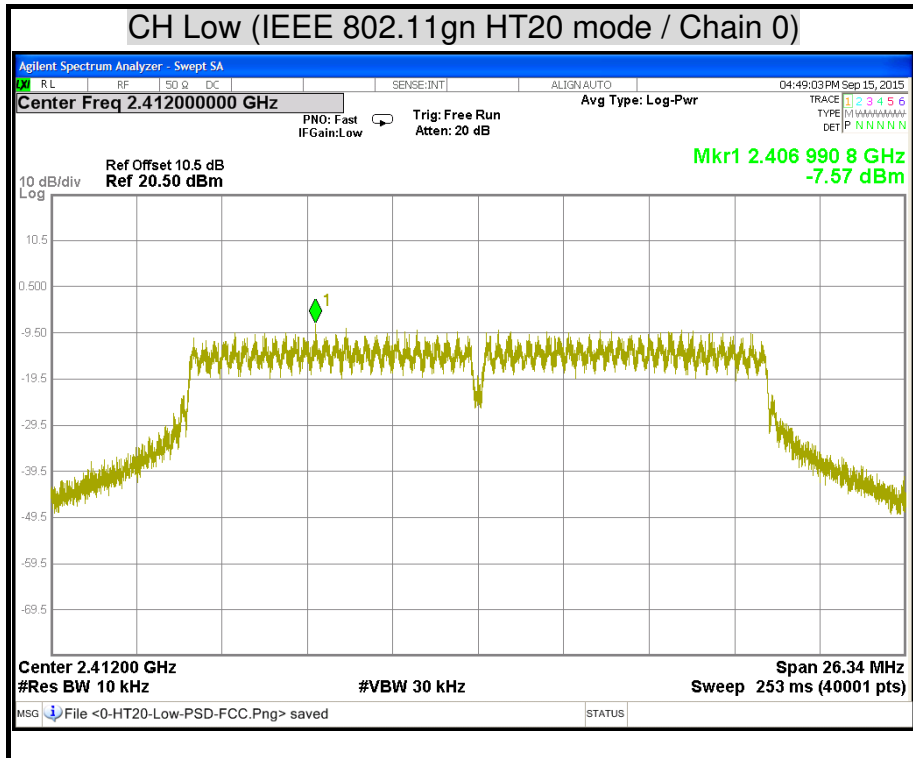


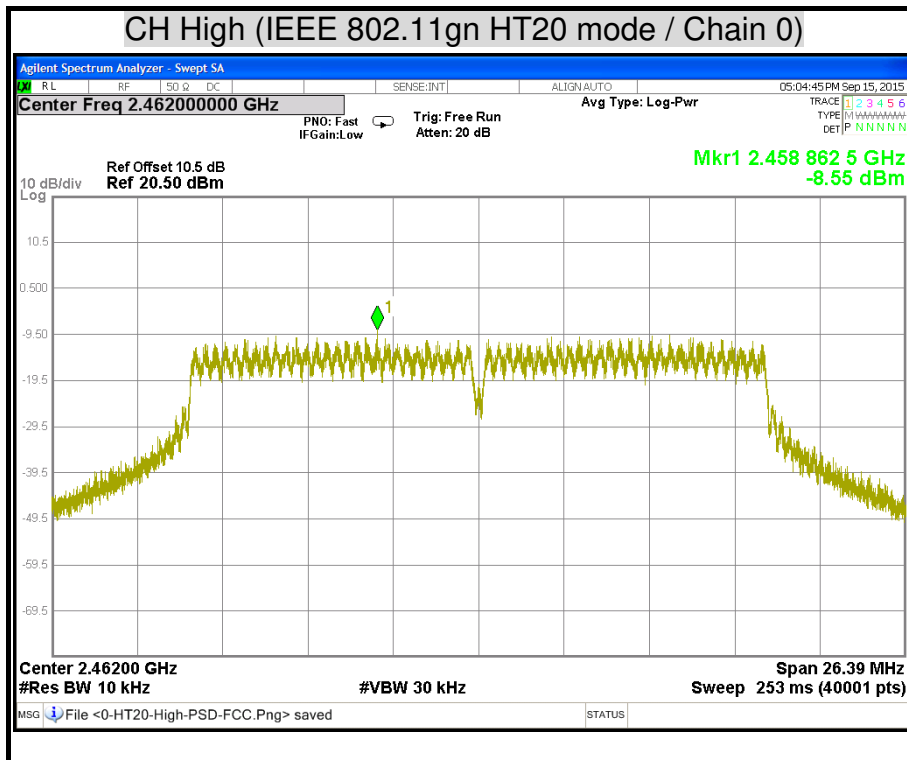


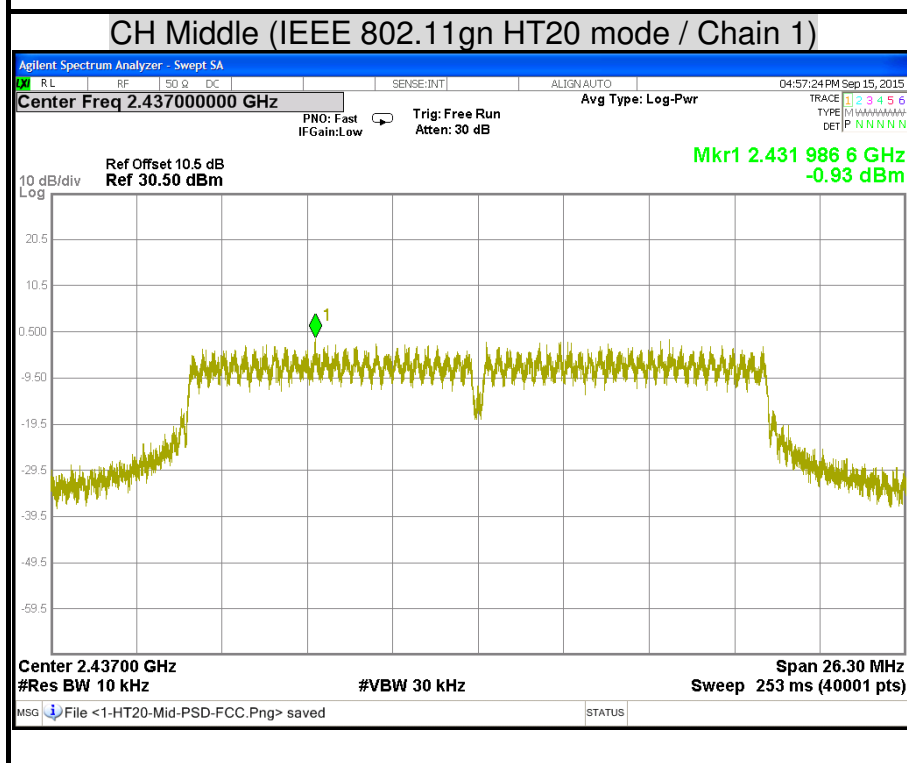
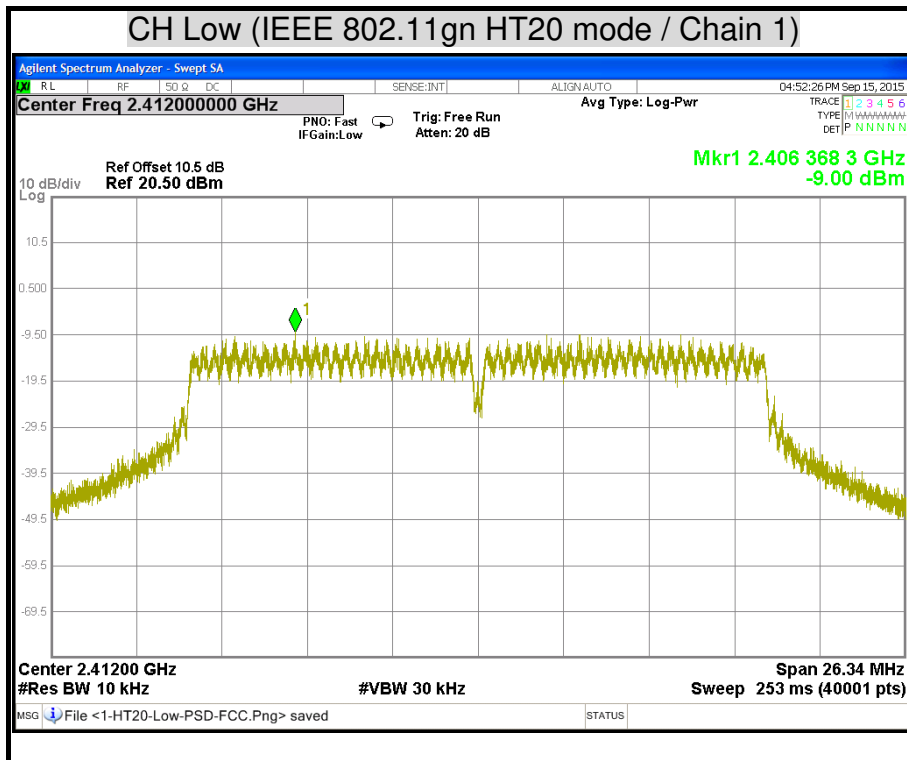


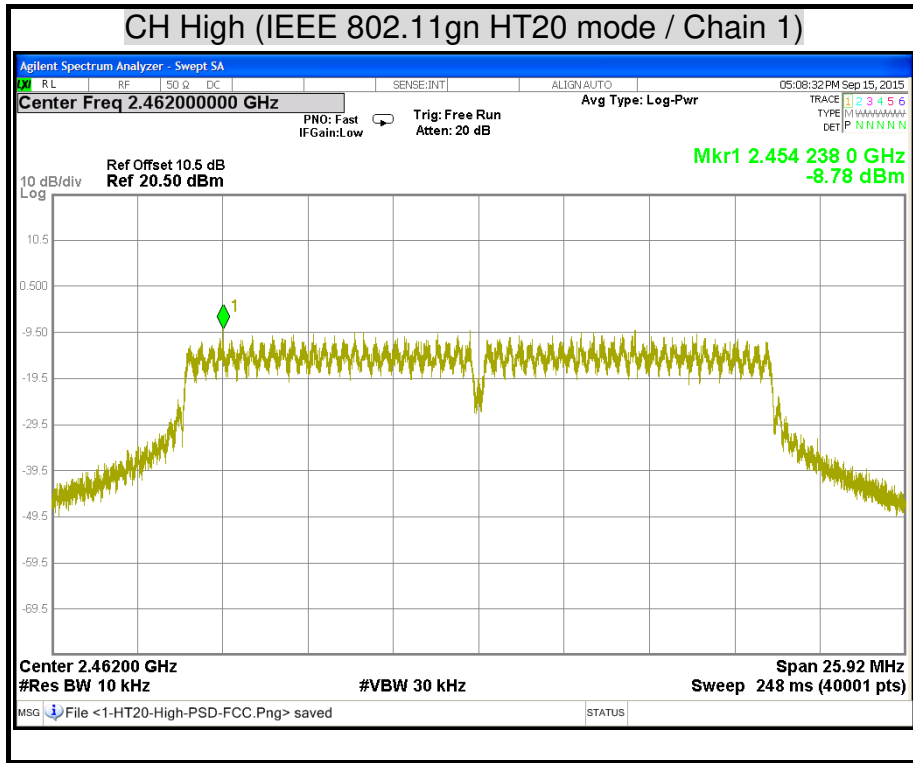


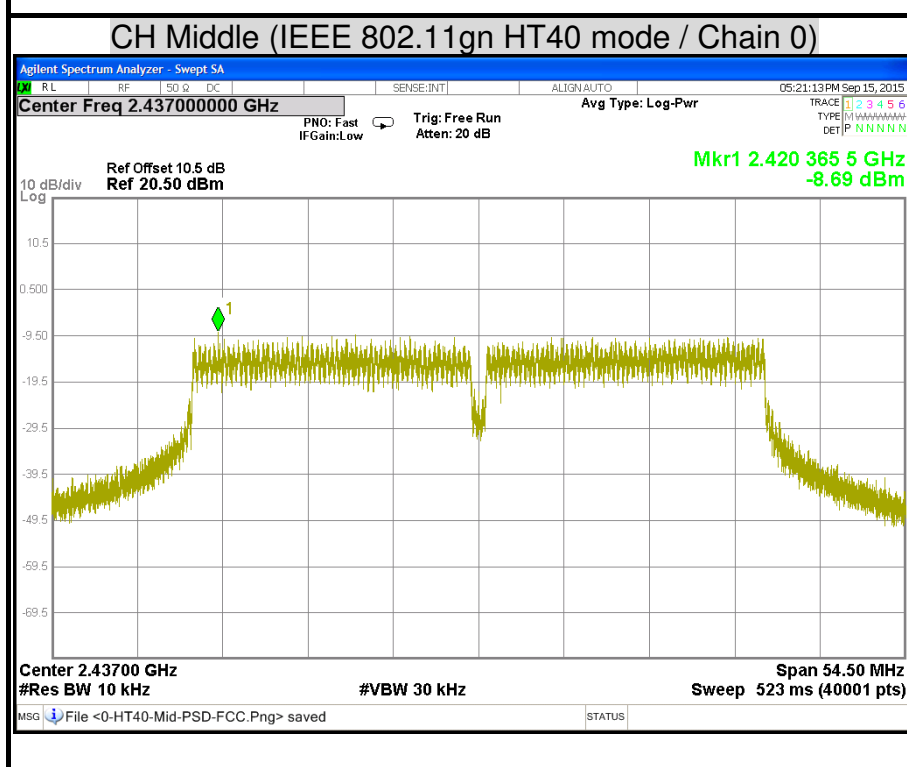
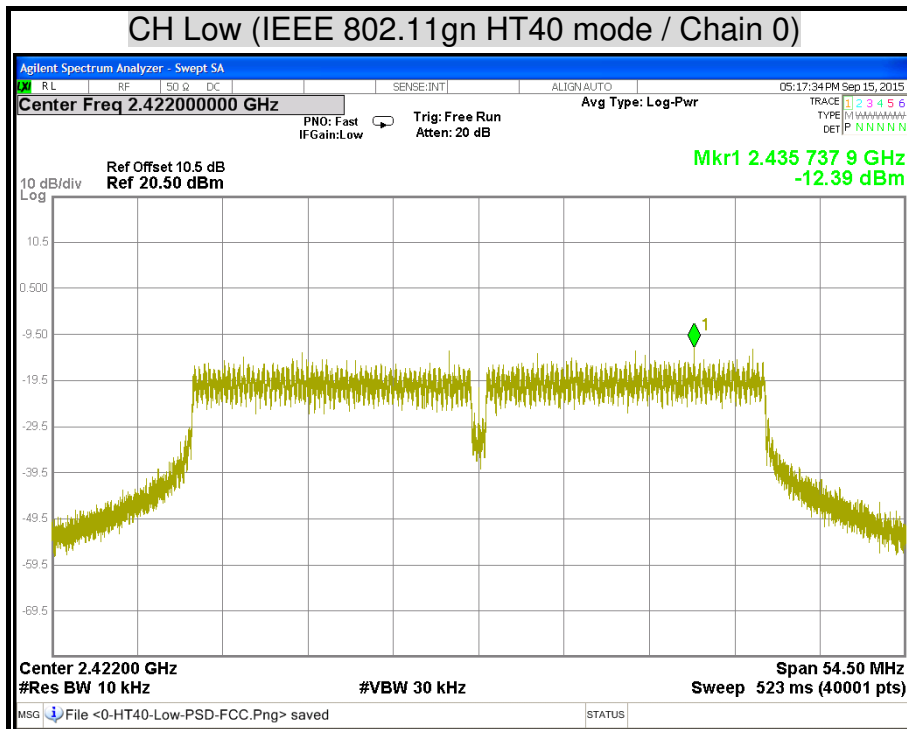


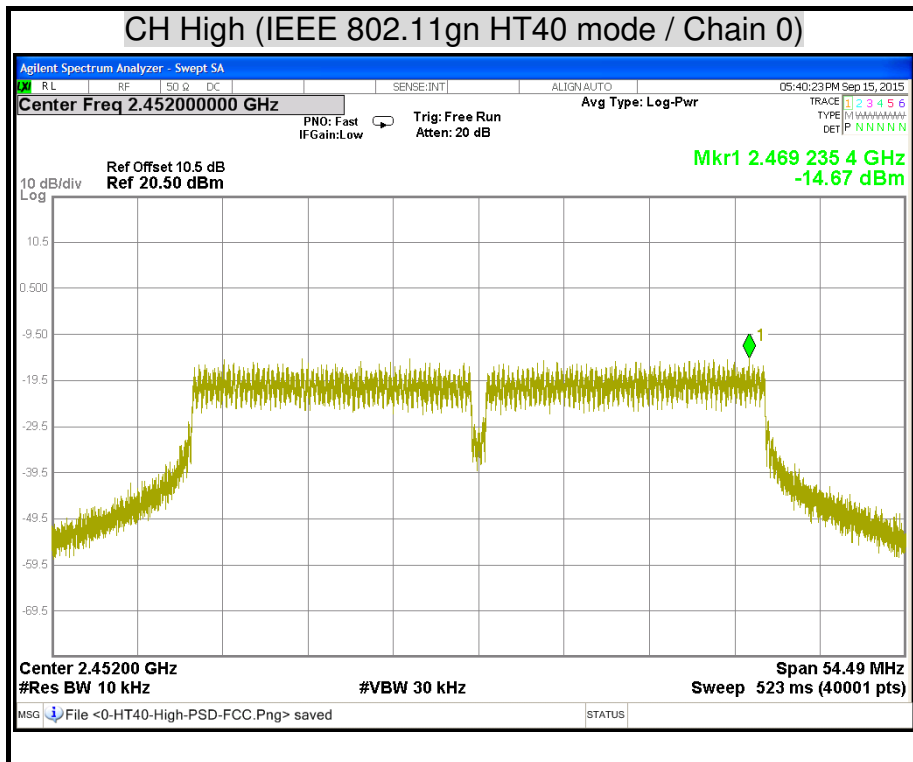


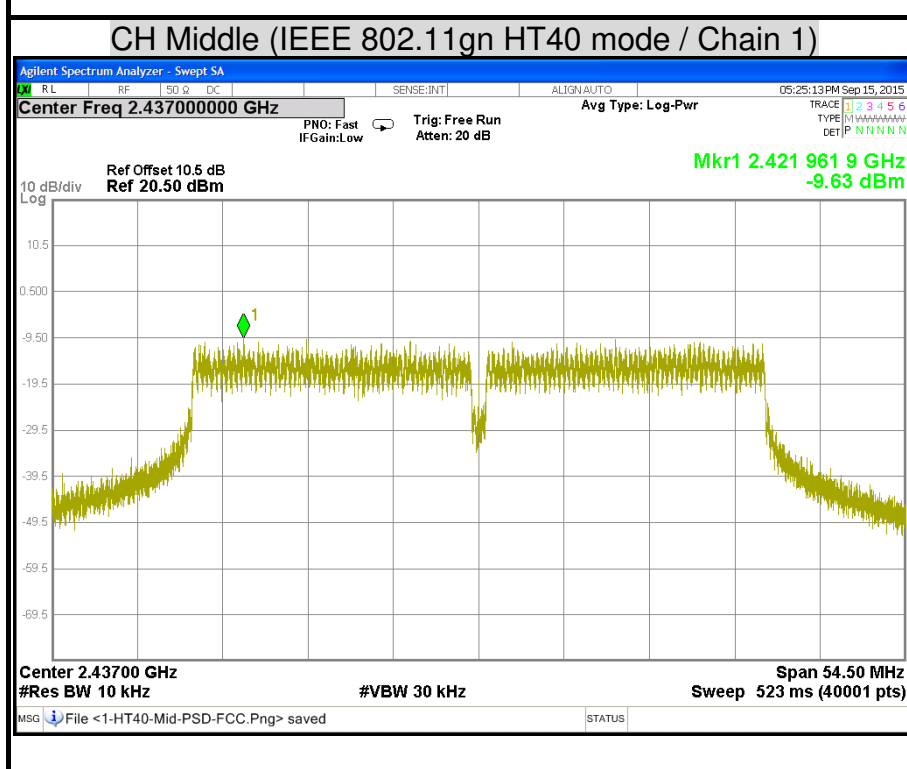
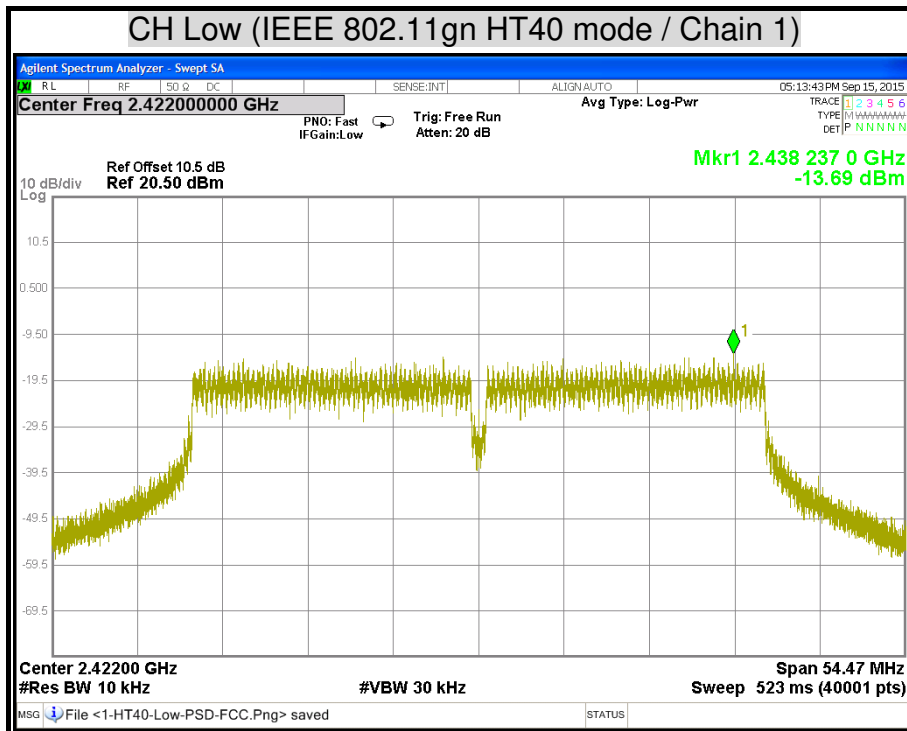


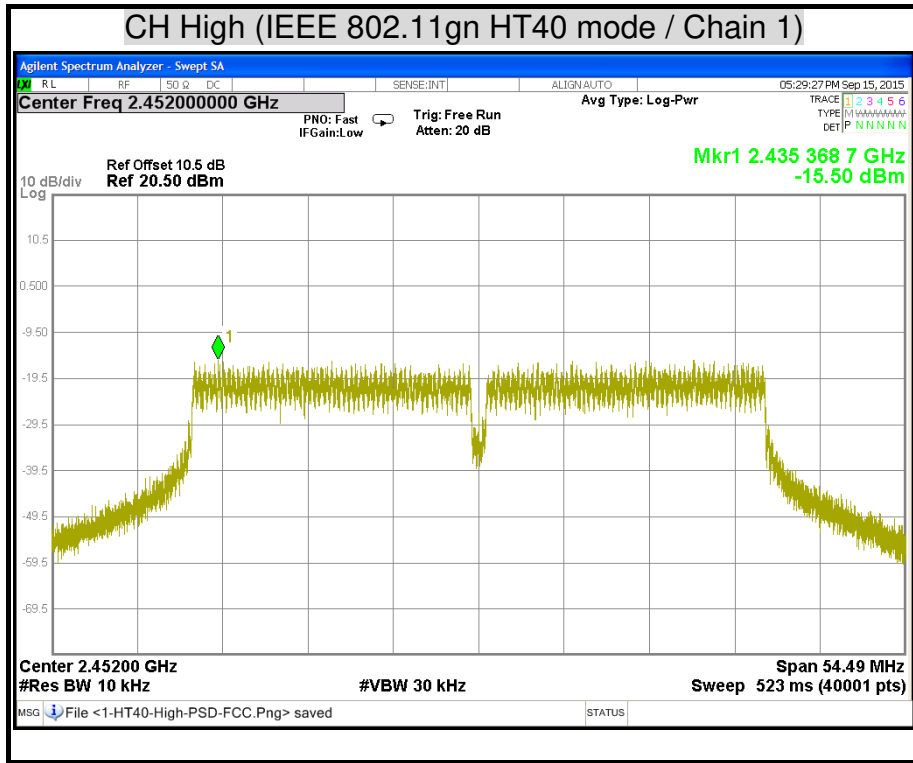


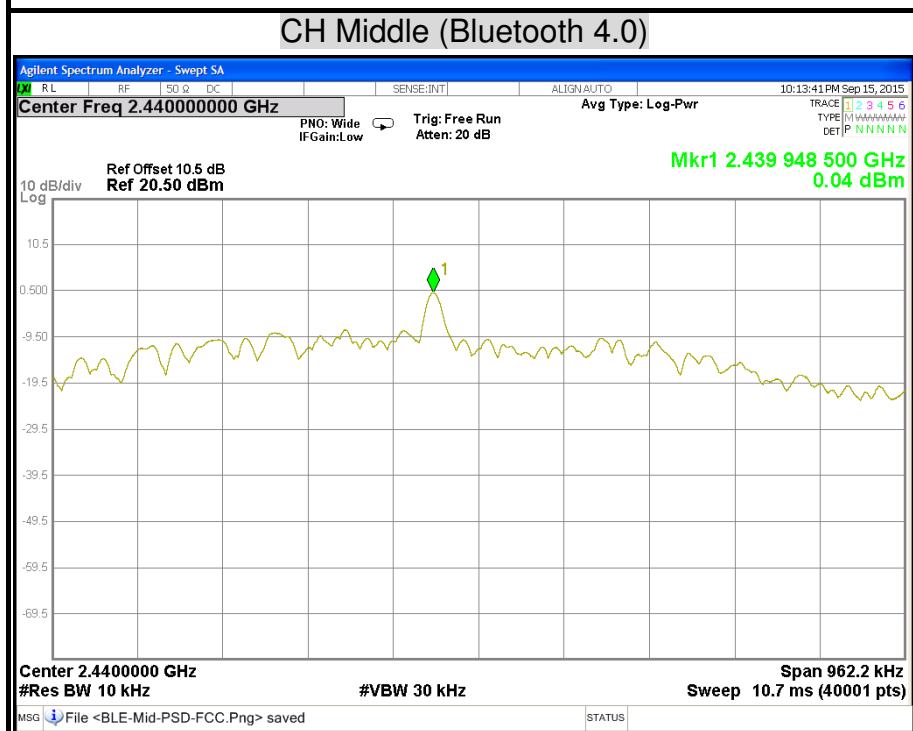
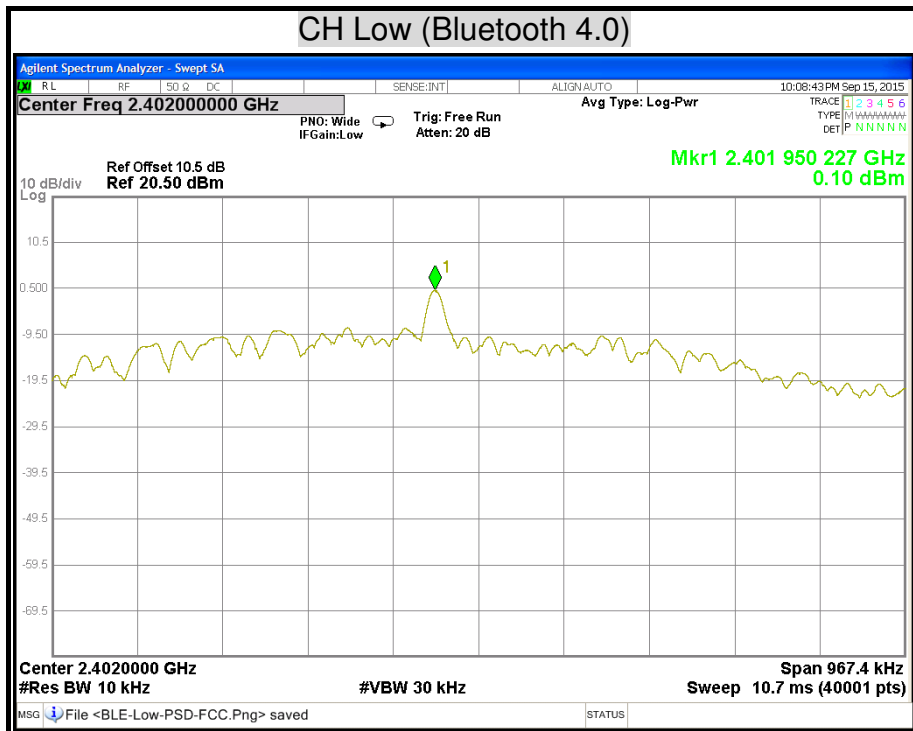


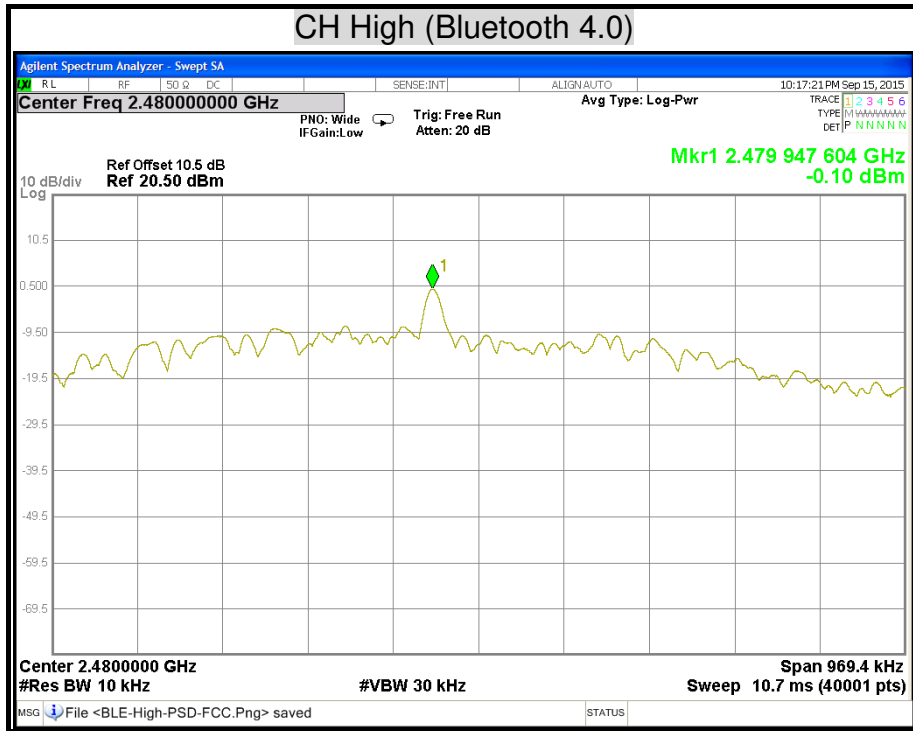












7.5 CONDUCTED SPURIOUS EMISSION

LIMITS

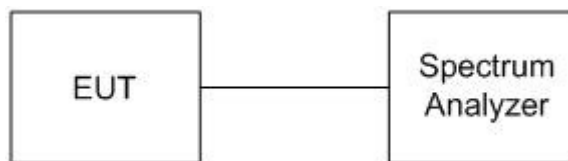
§ 15.247(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the and that contains the highest level 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



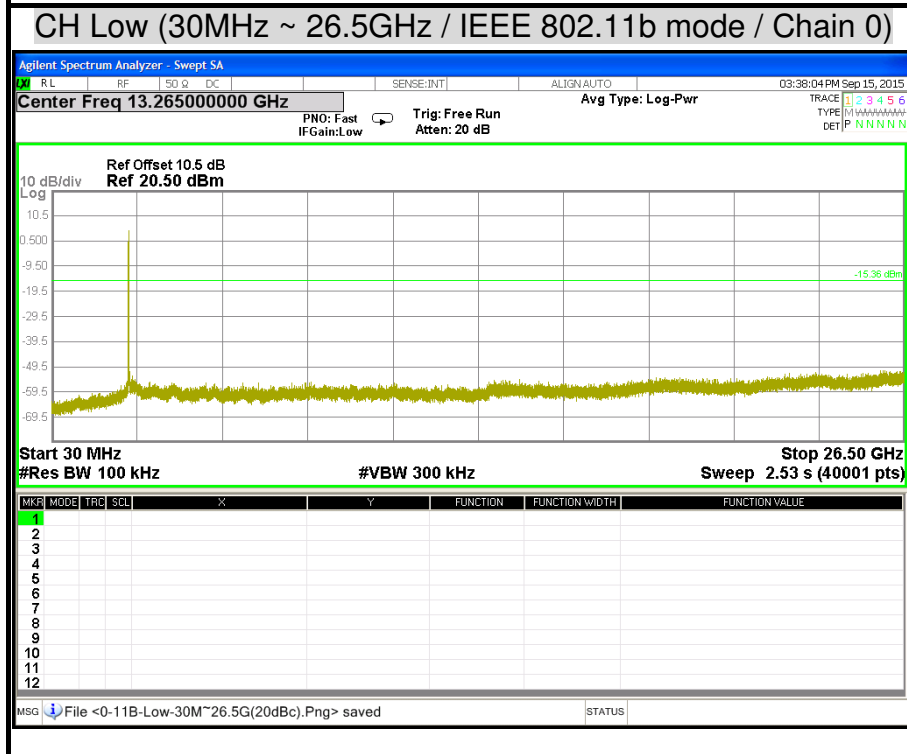
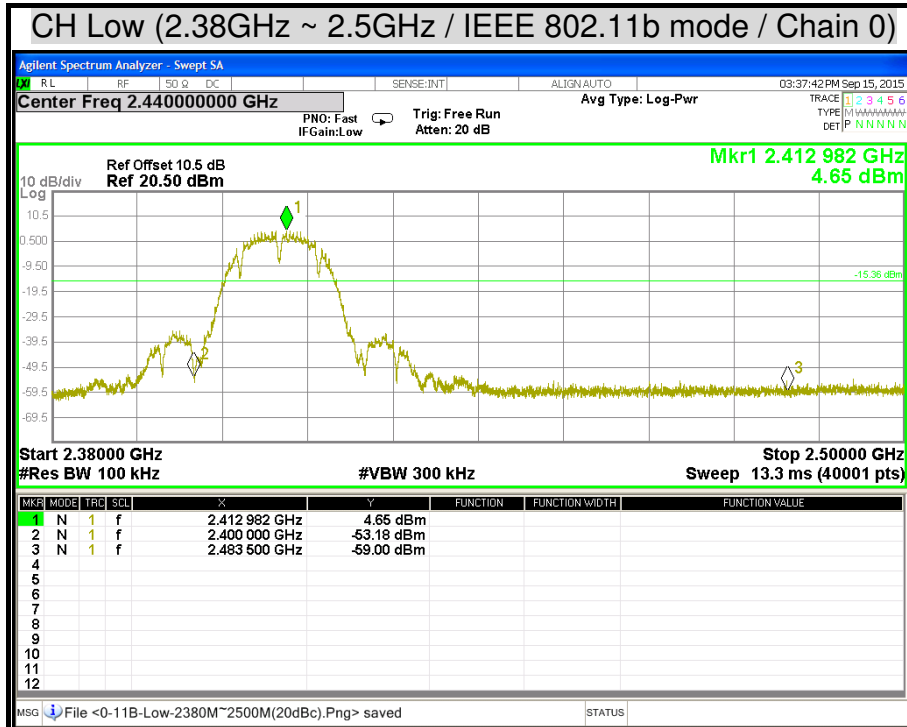
TEST PROCEDURE

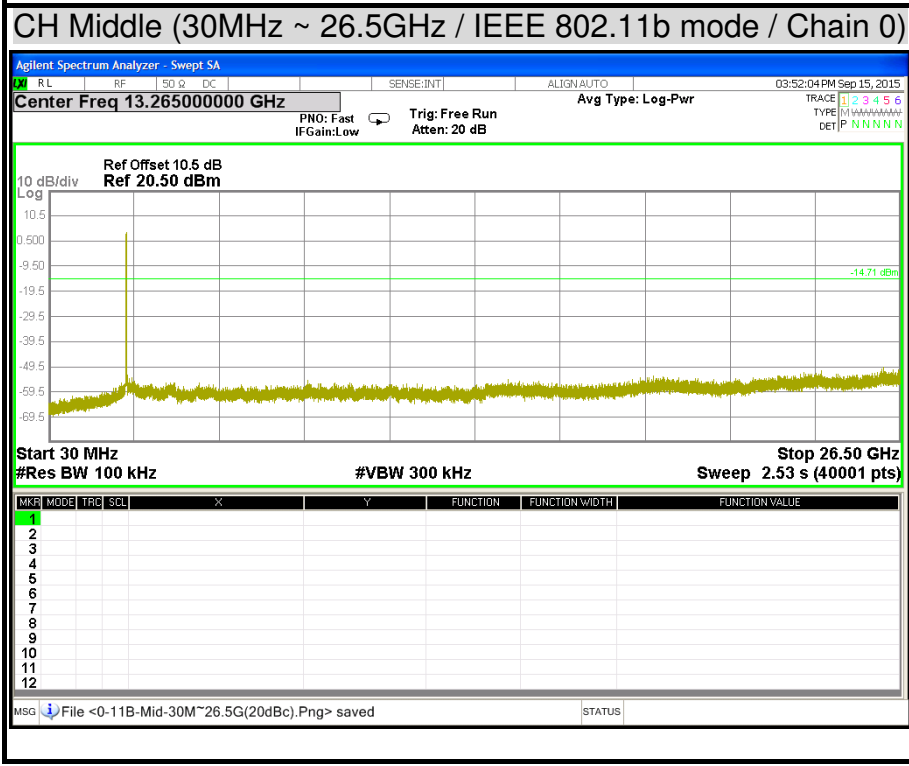
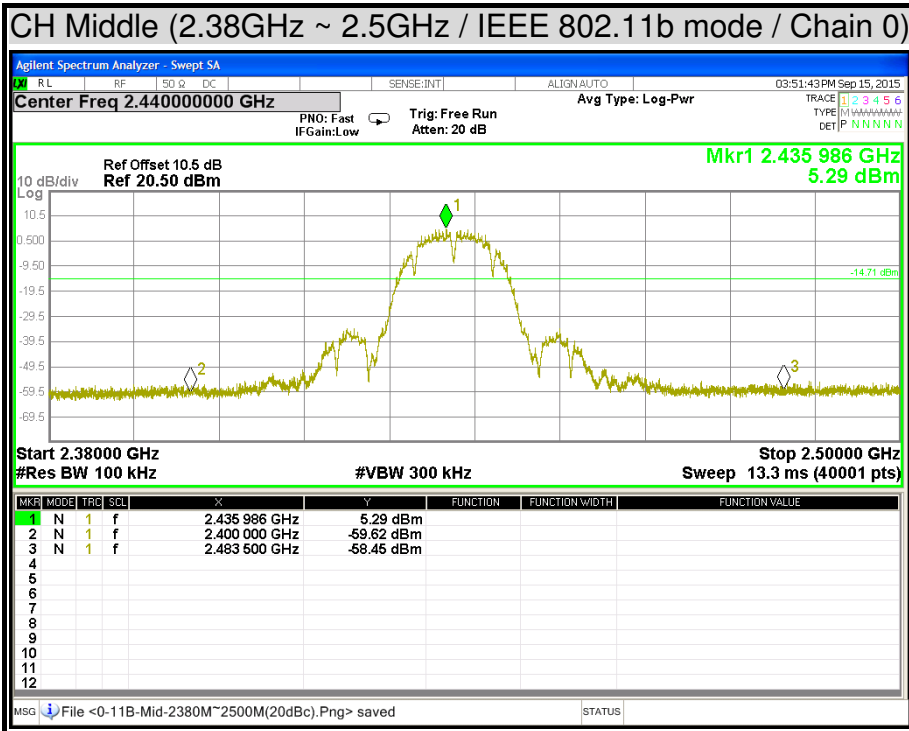
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

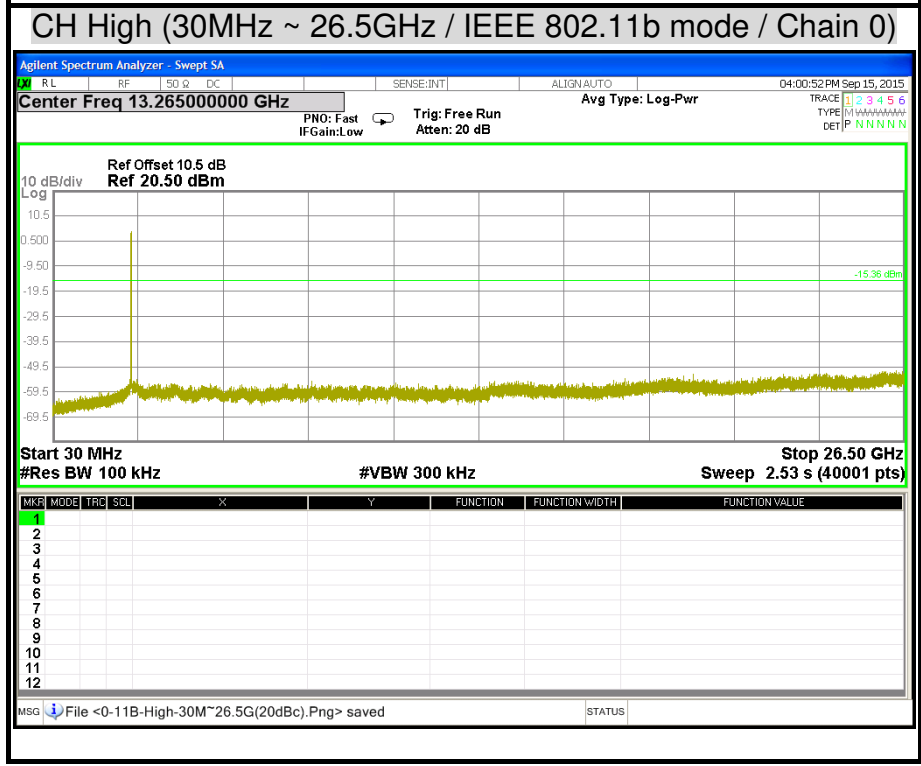
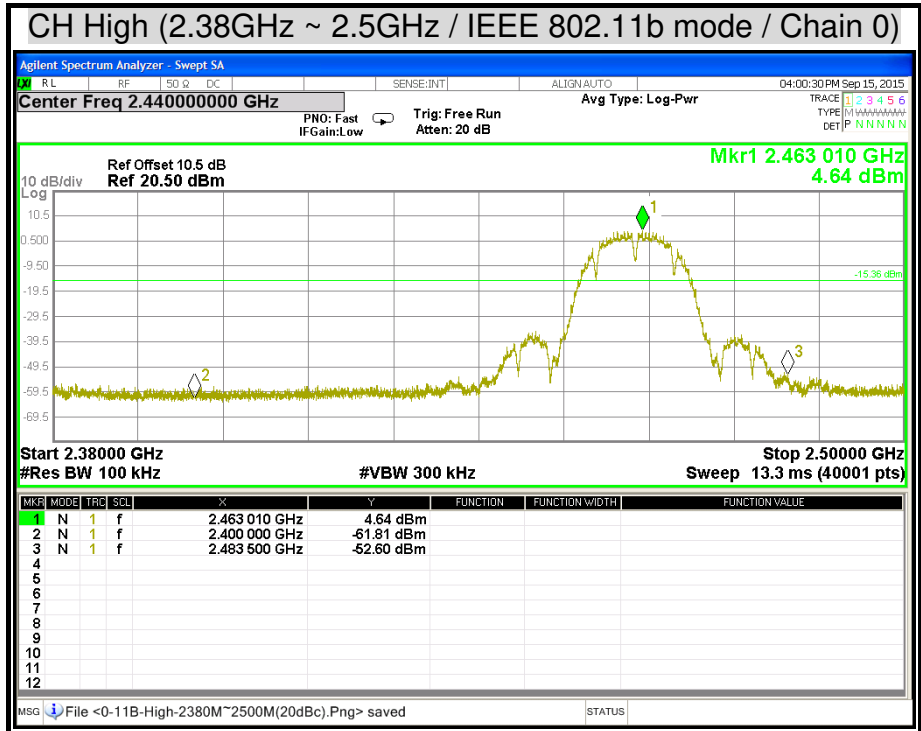
The spectrum from 30 MHz to 26.5 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

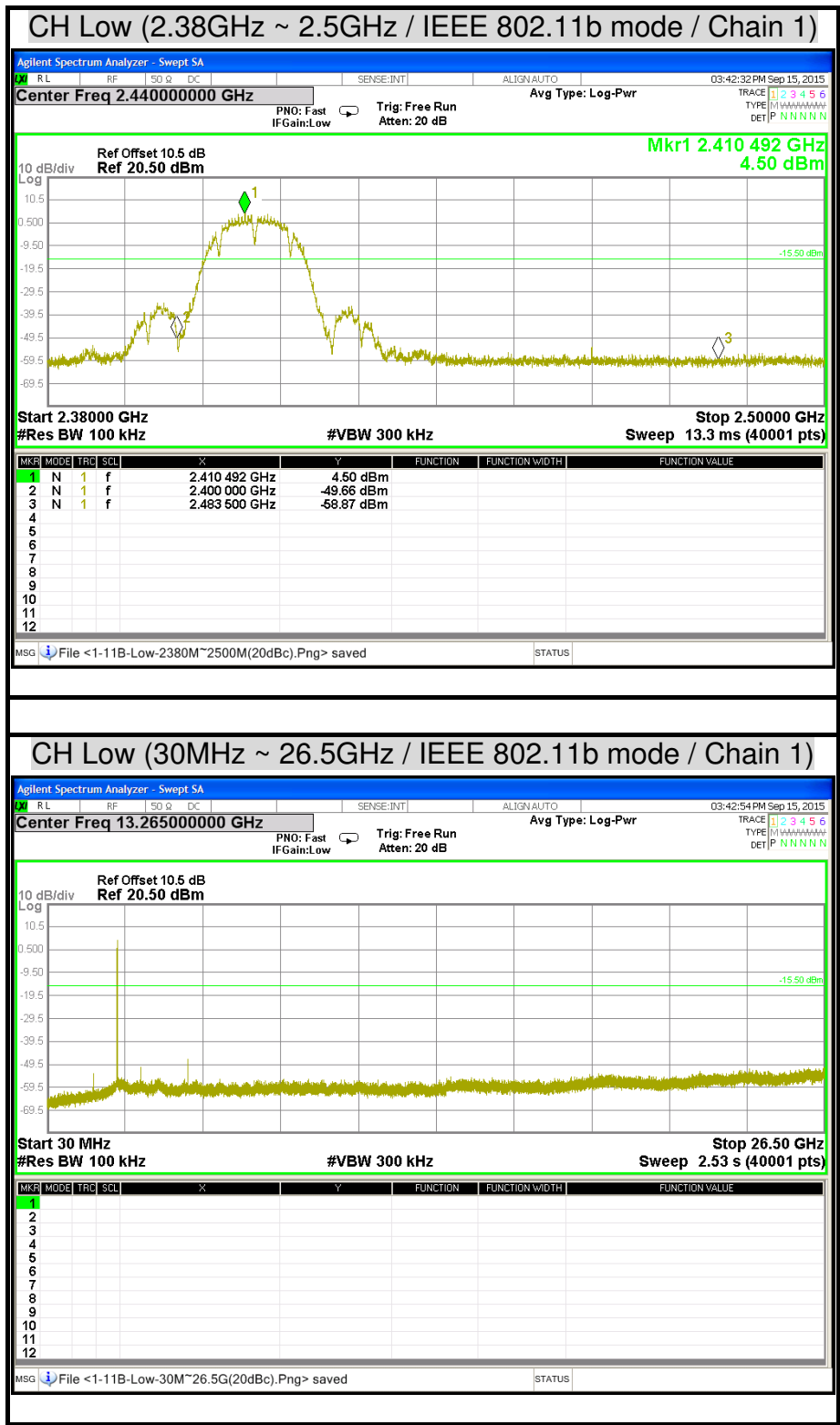
TEST RESULTS

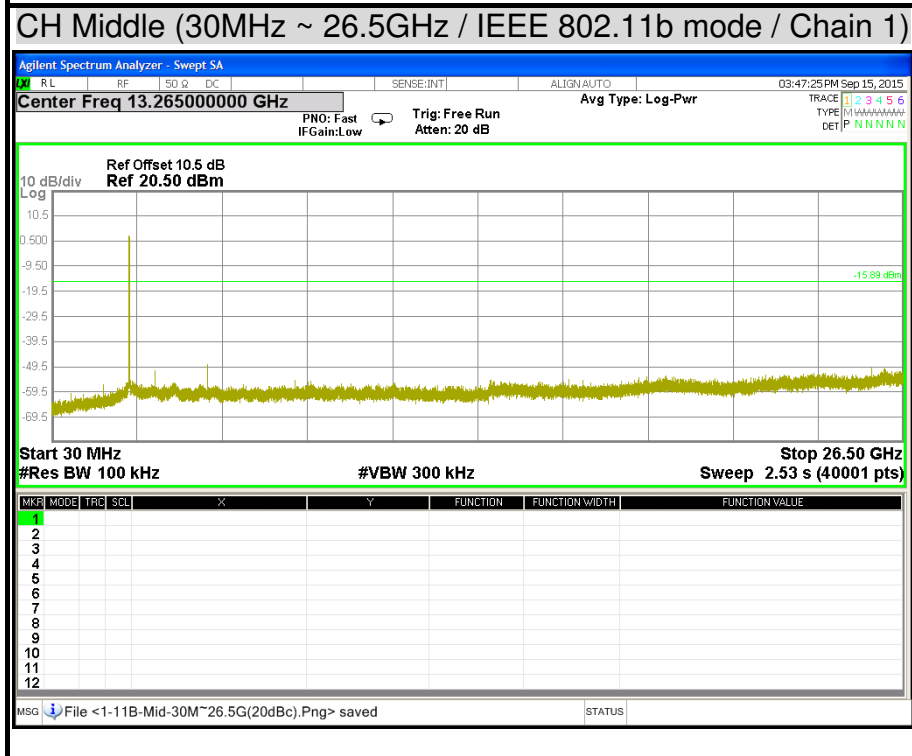
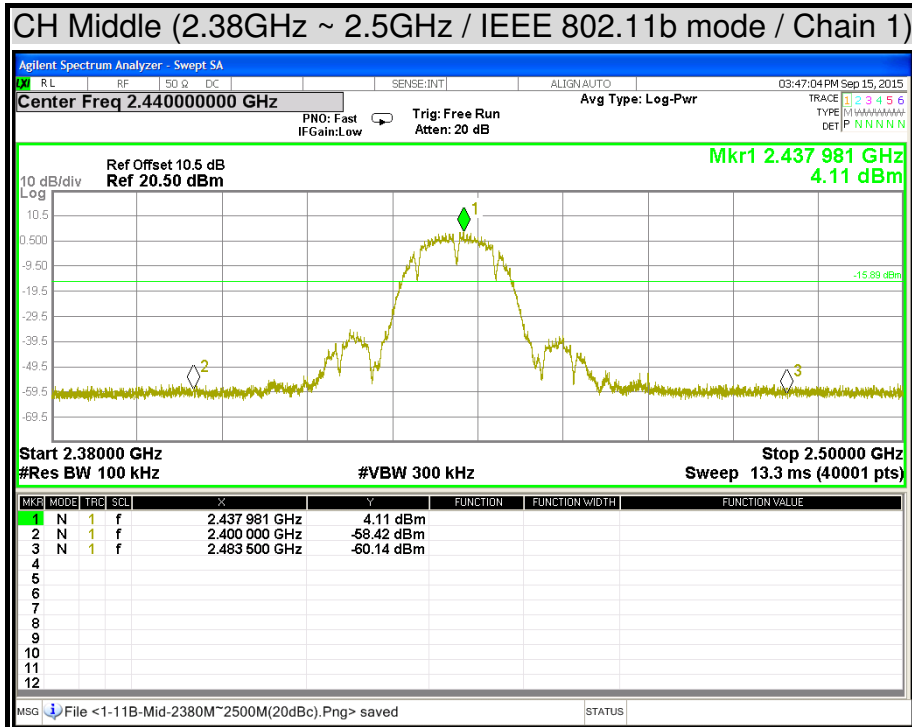
OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

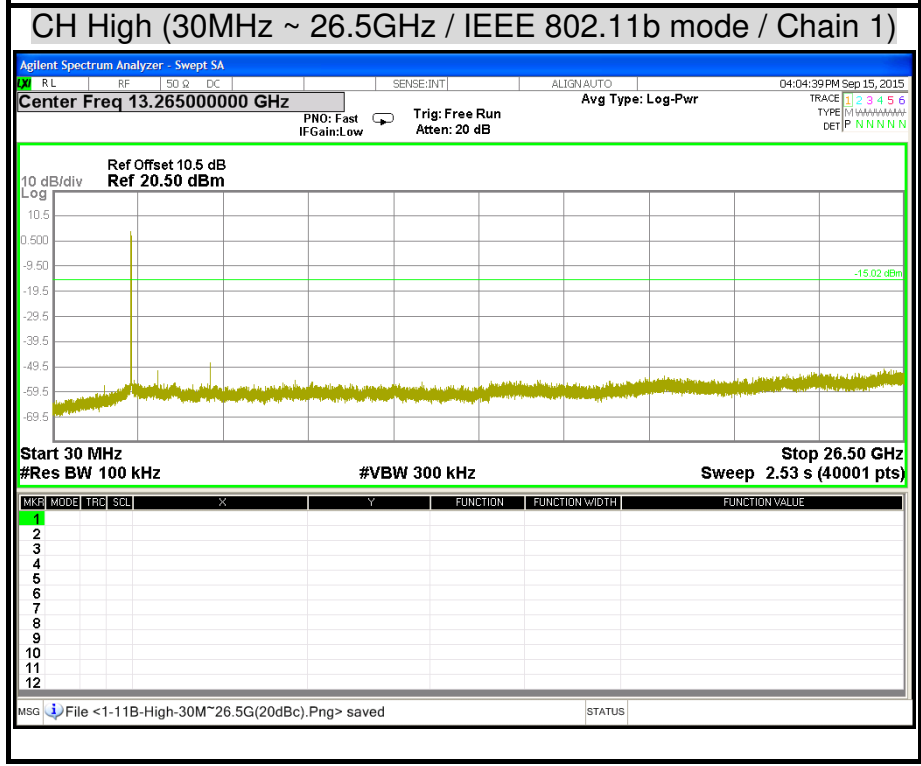
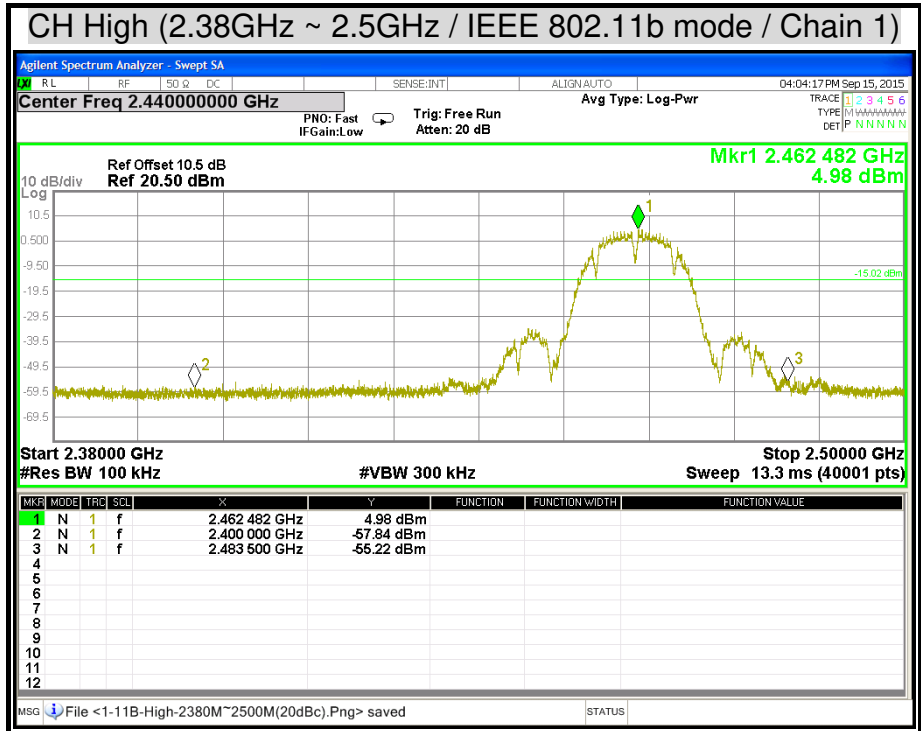


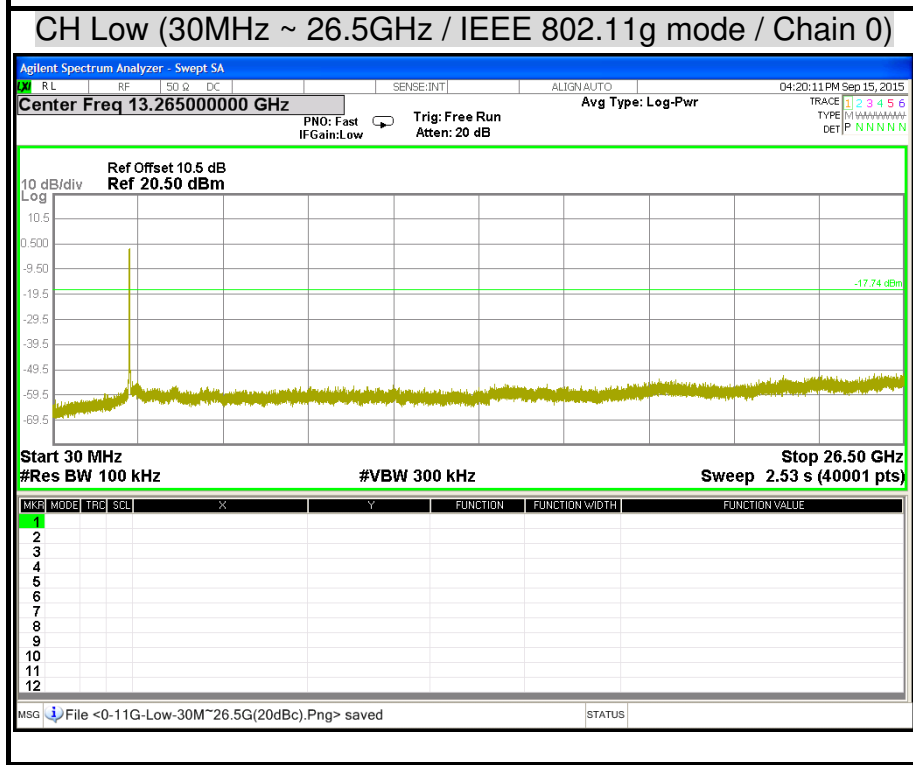
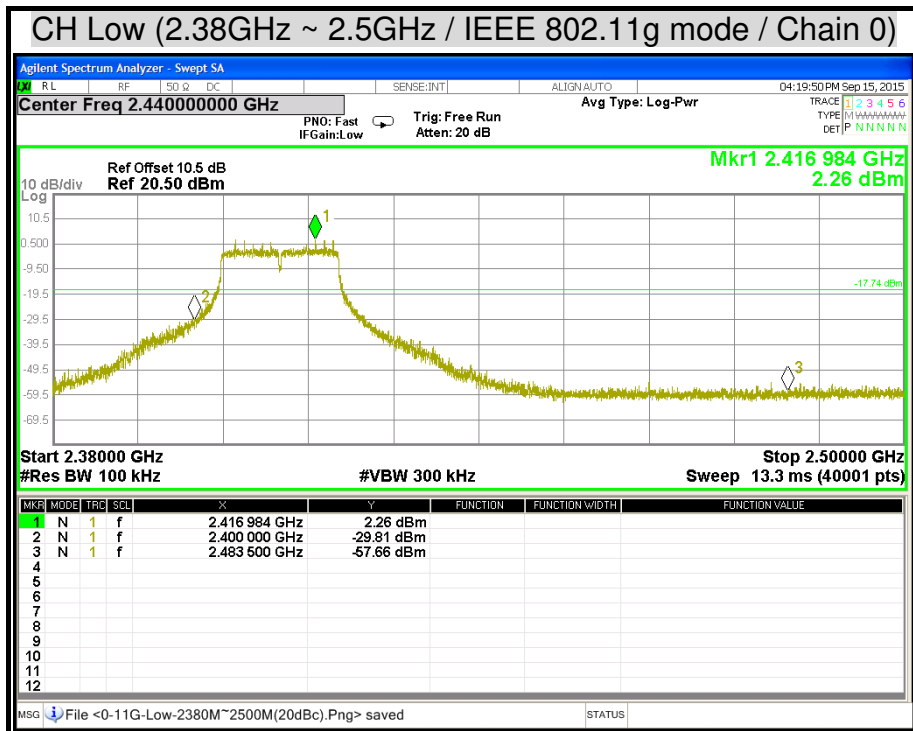


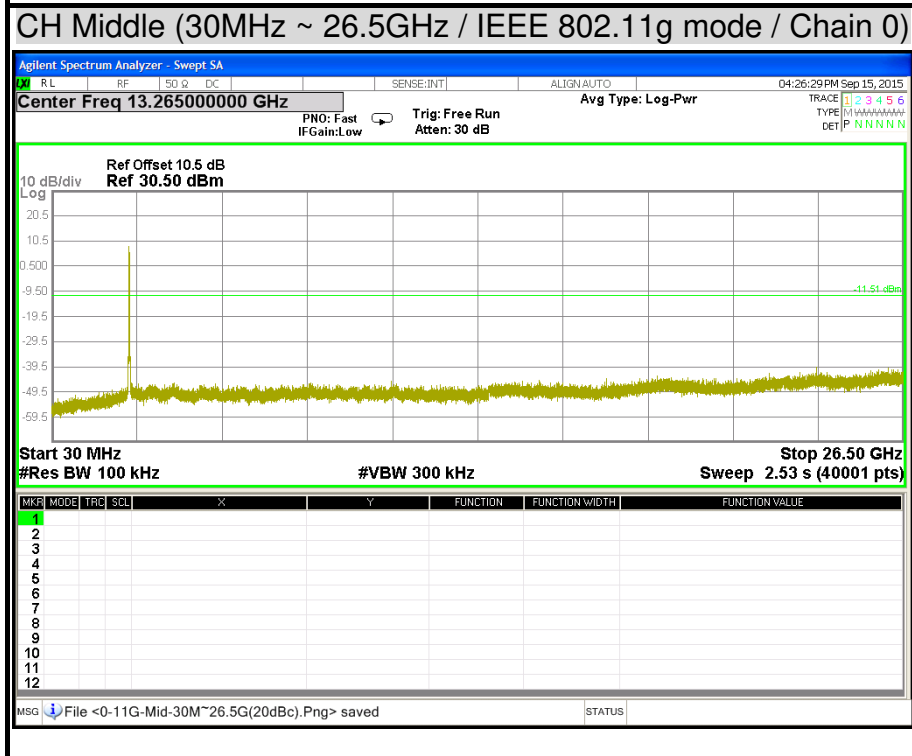
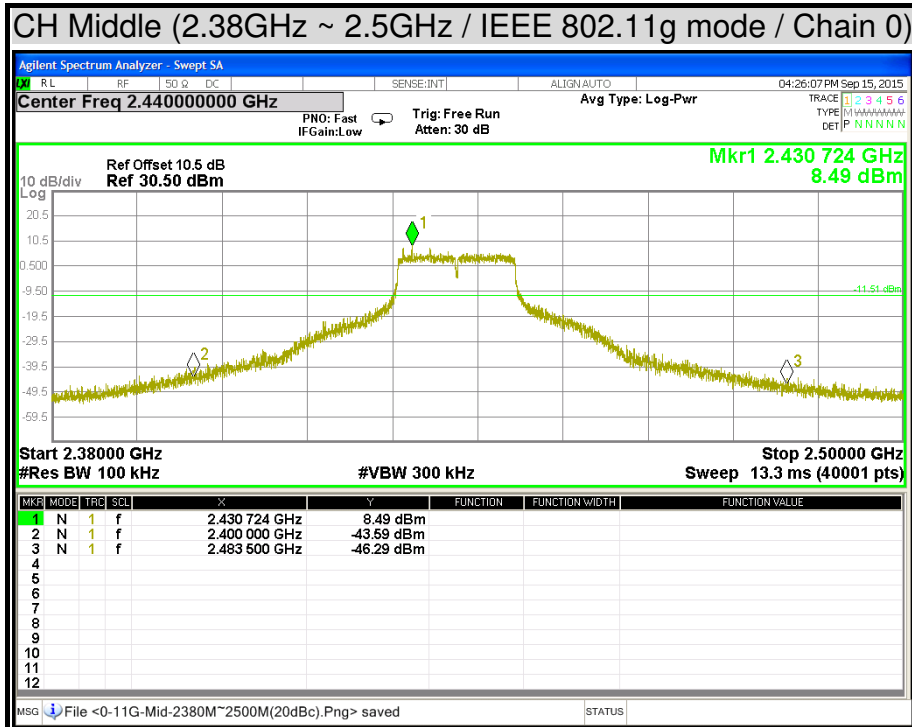


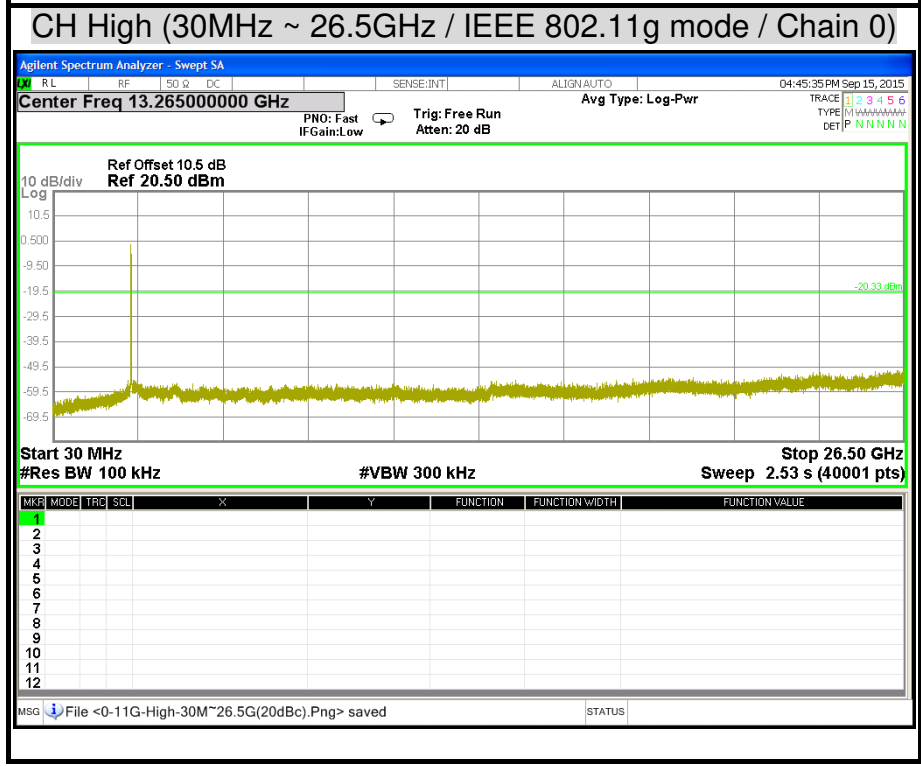
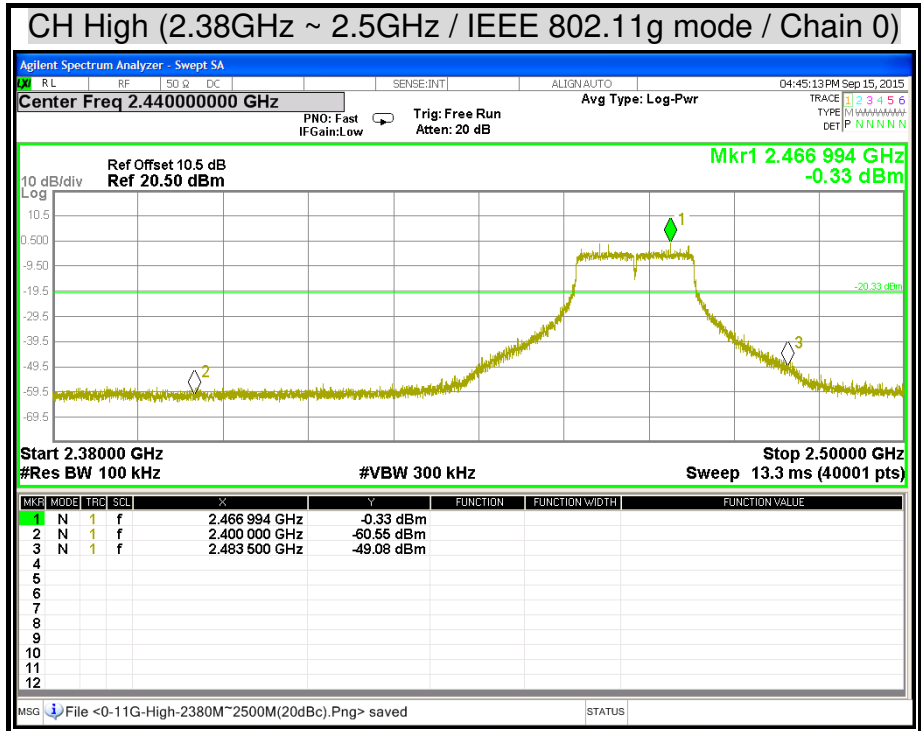


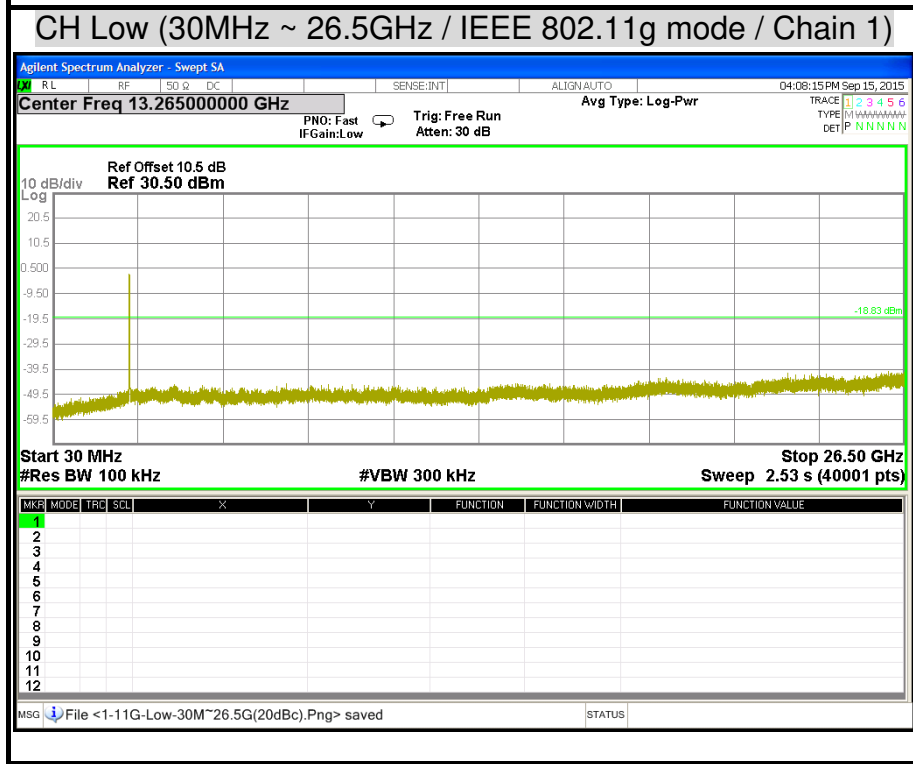
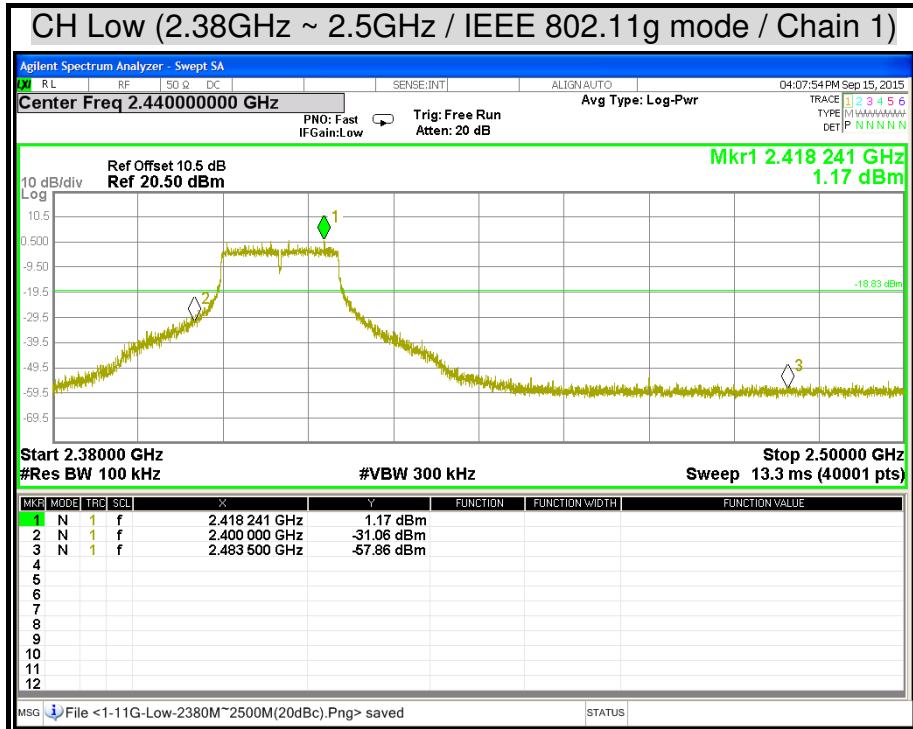


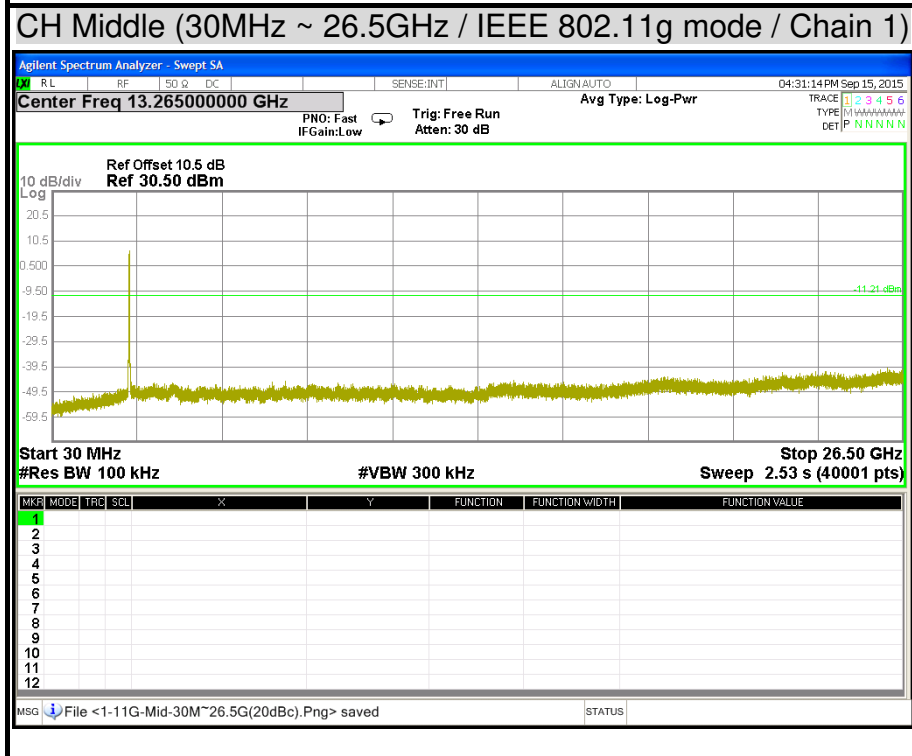
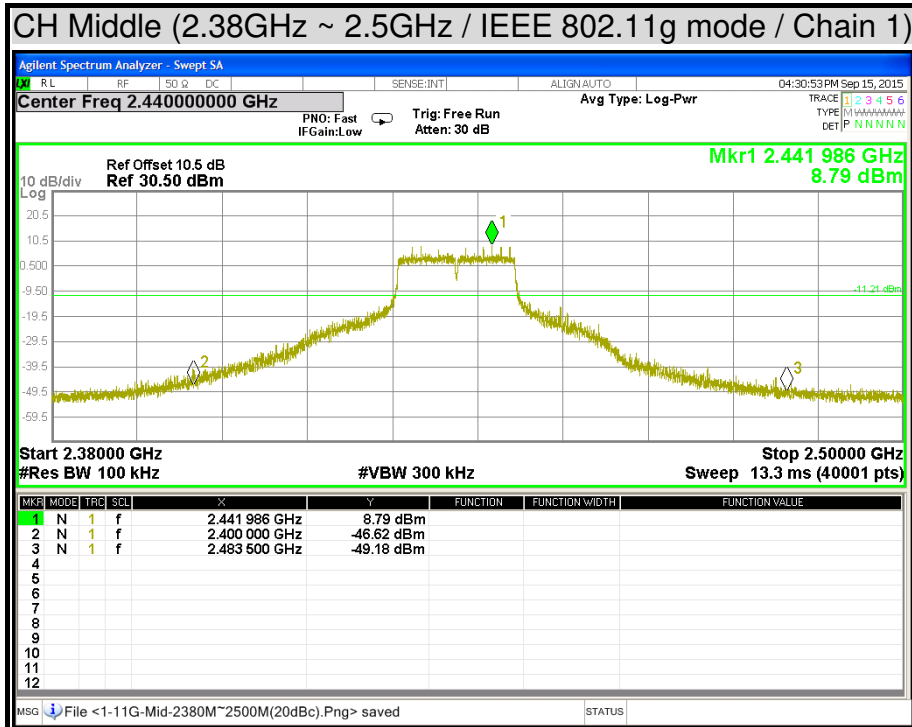


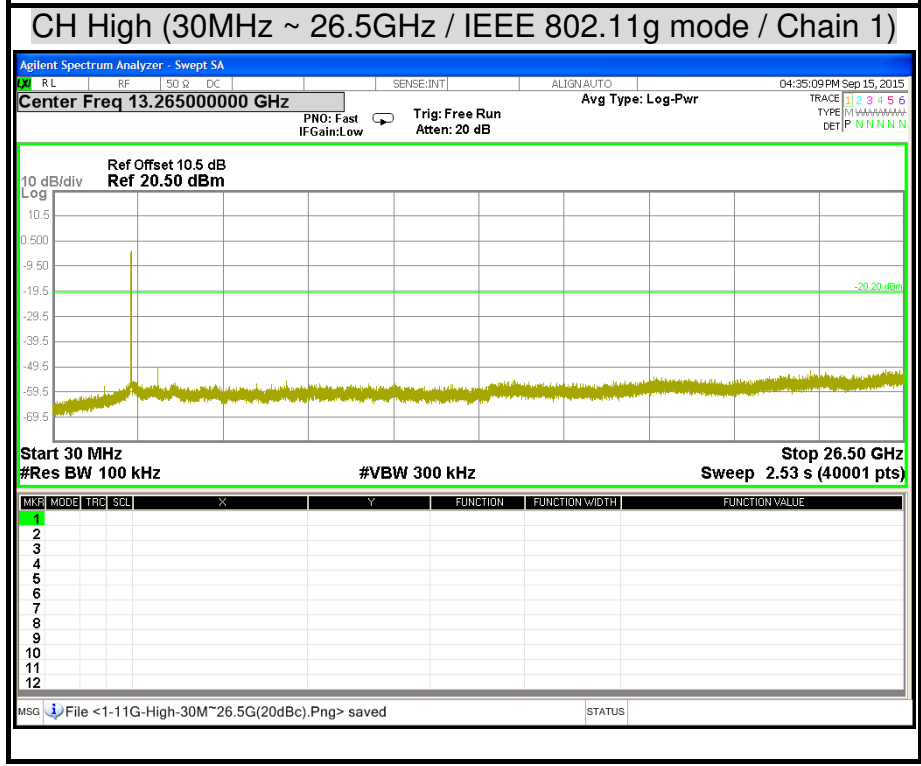
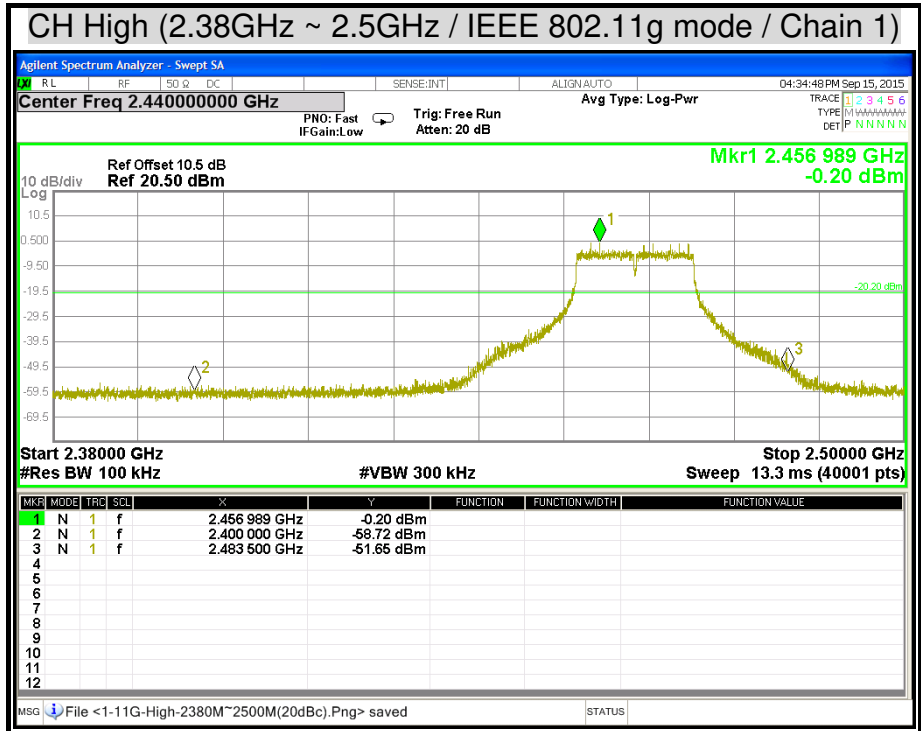


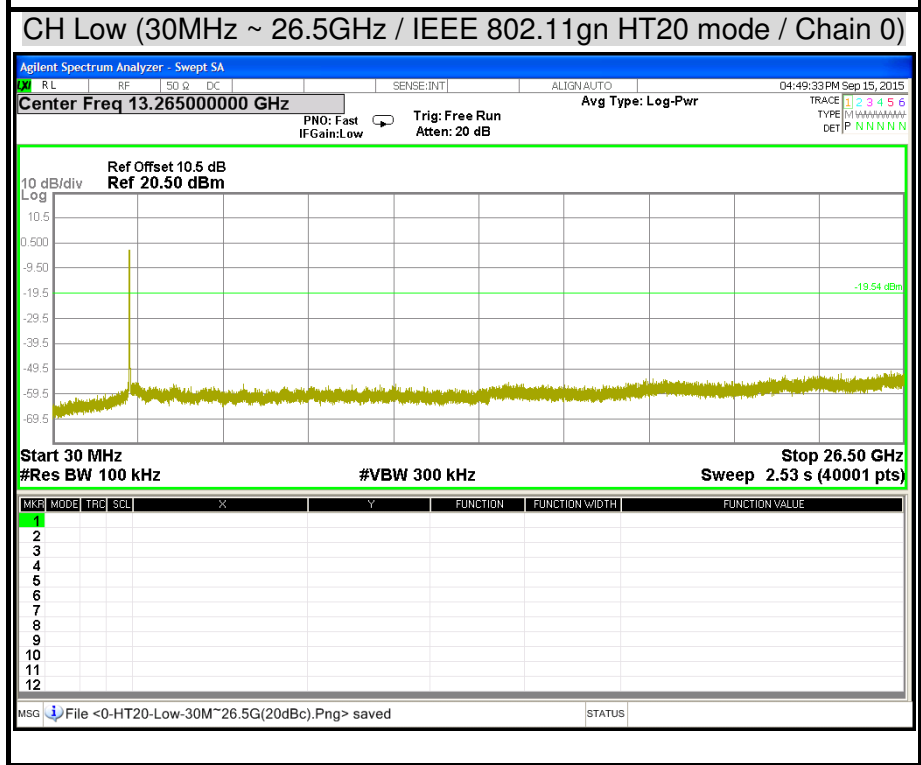
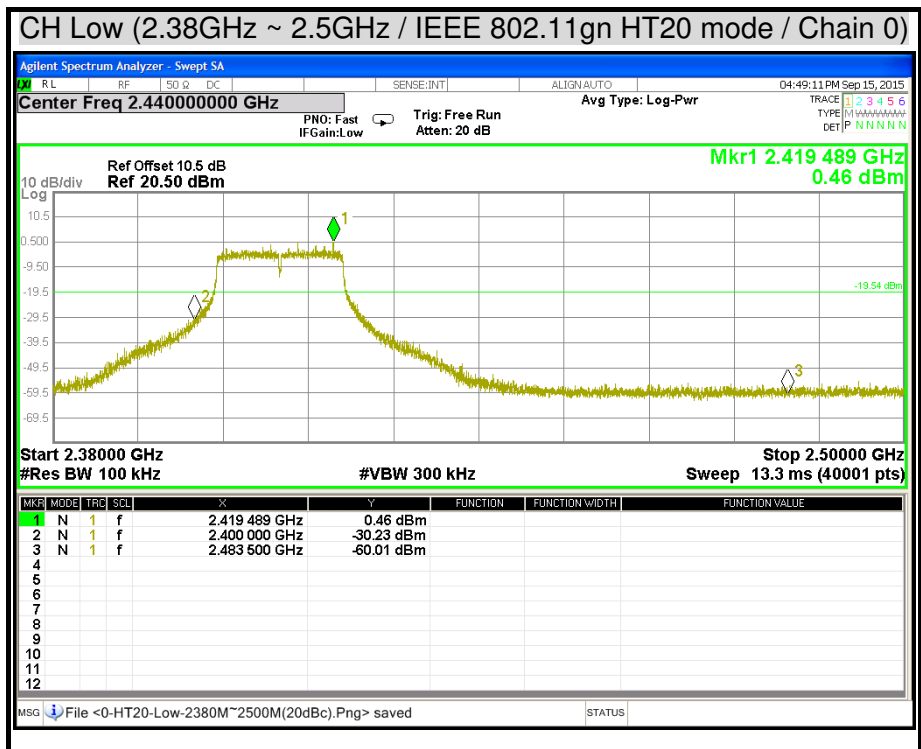


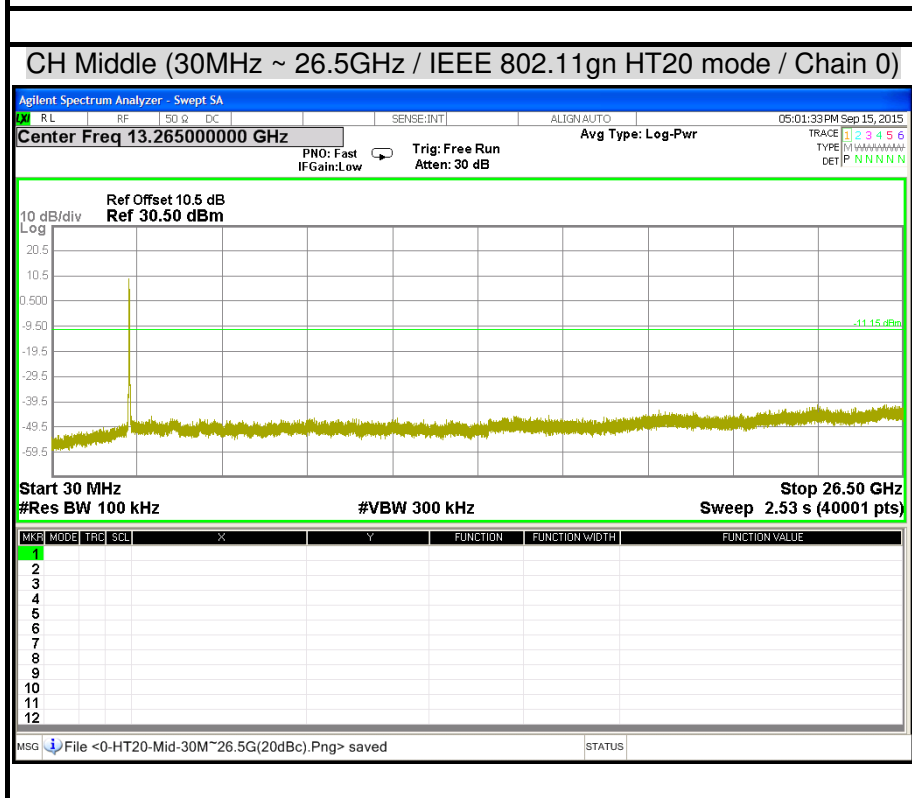
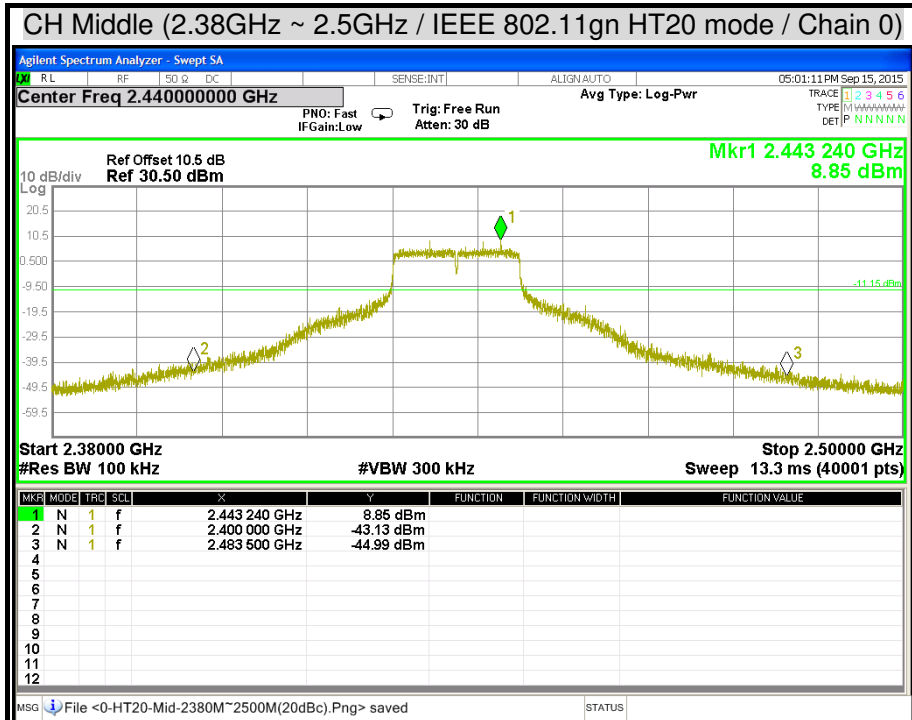


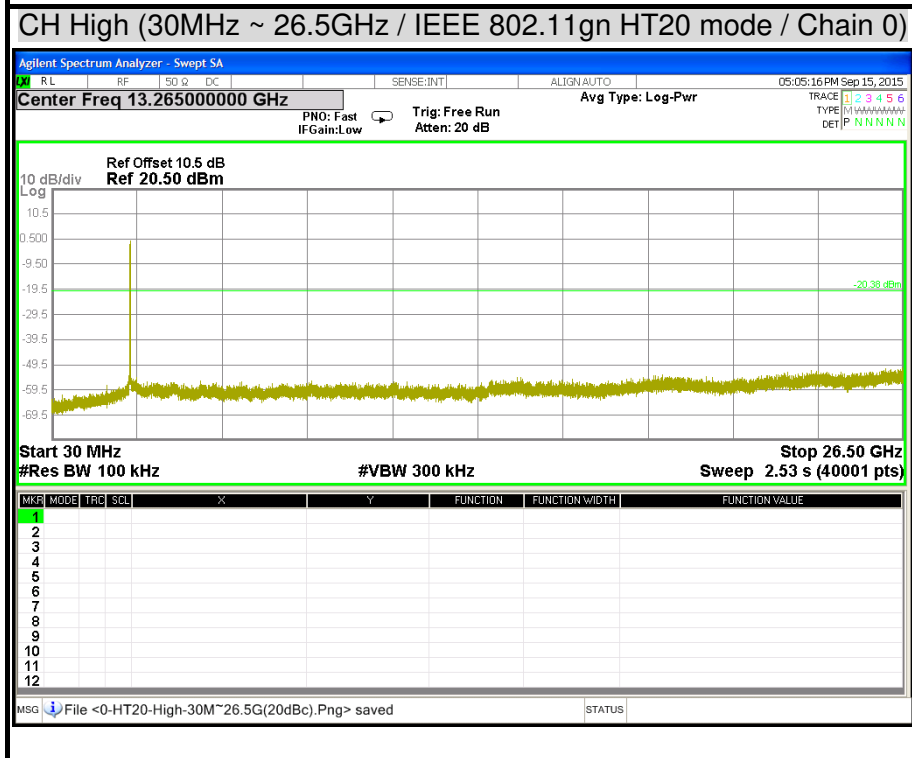
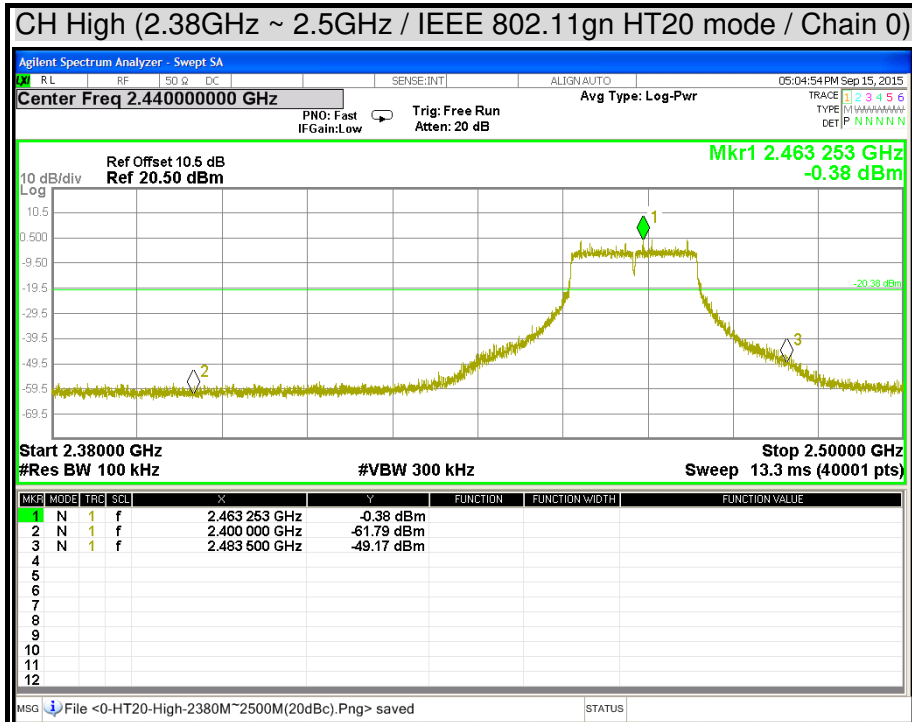


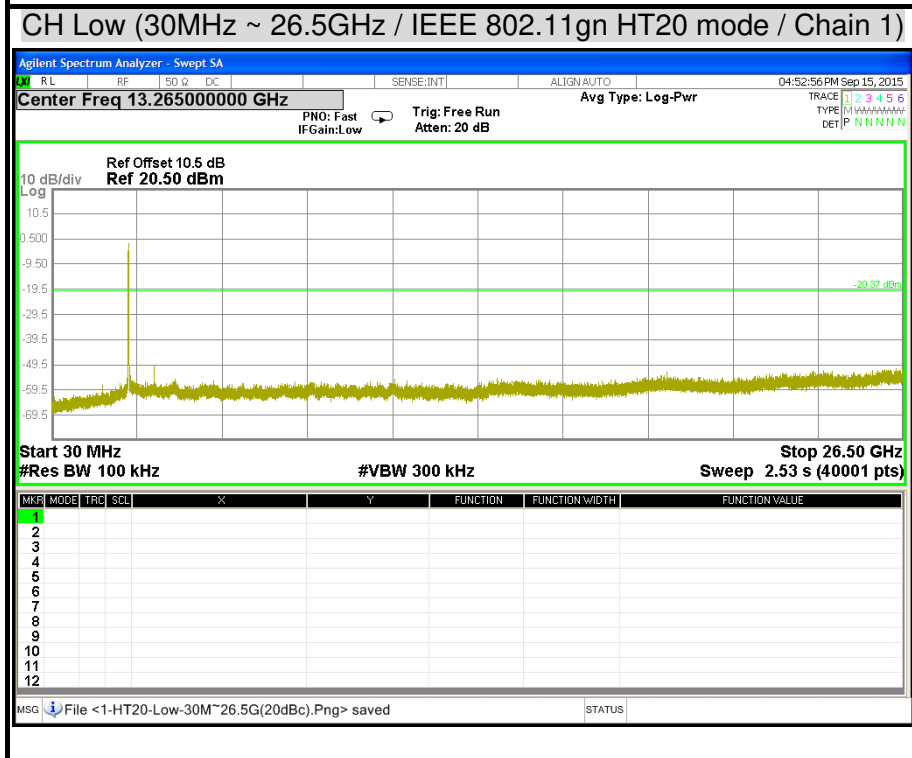
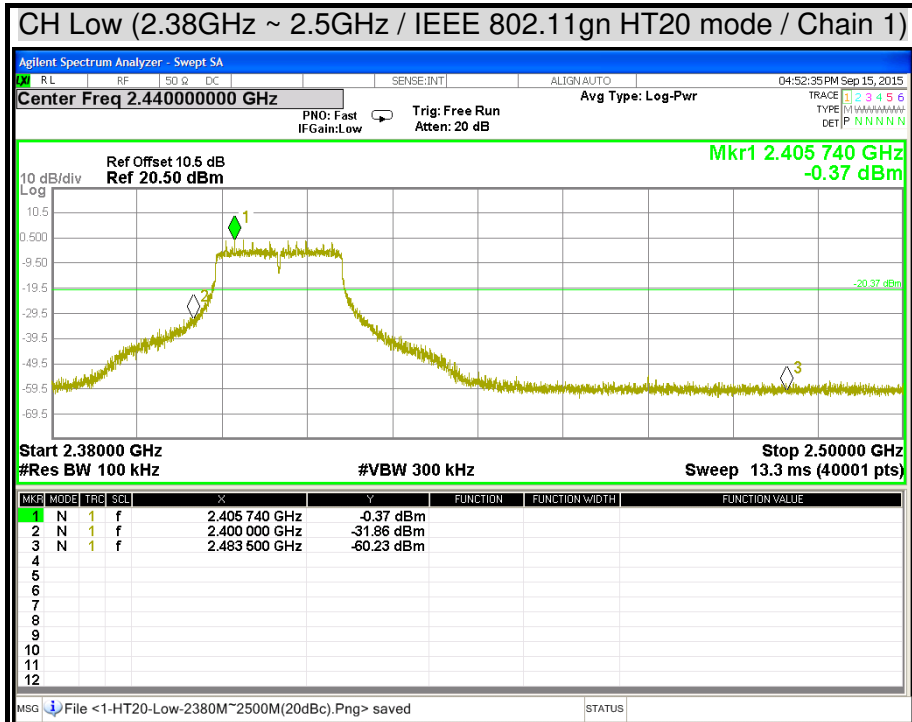


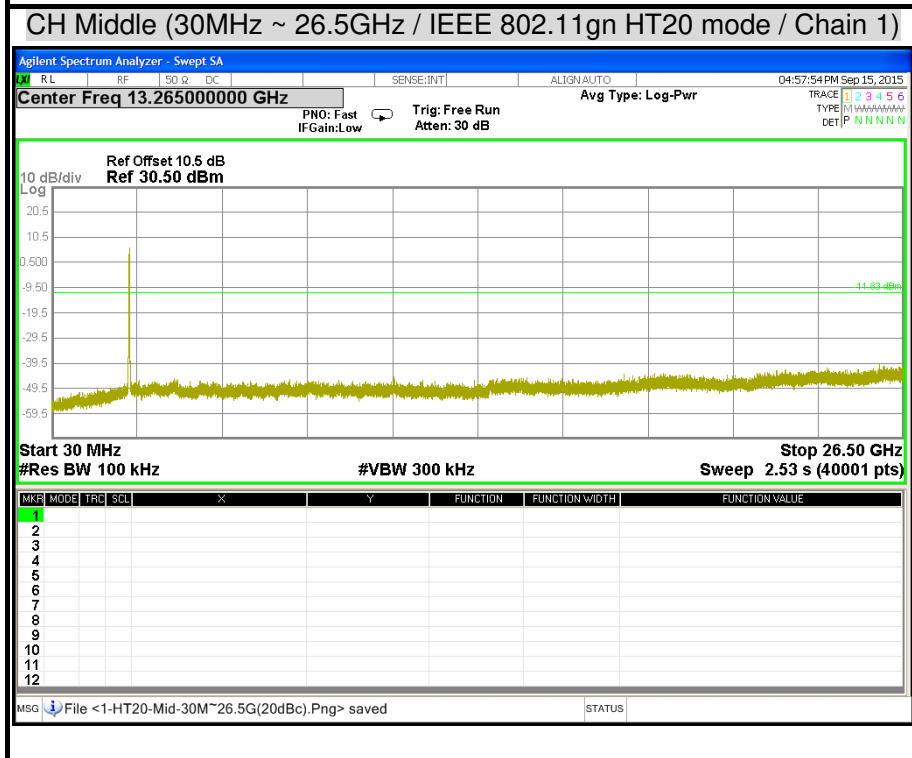
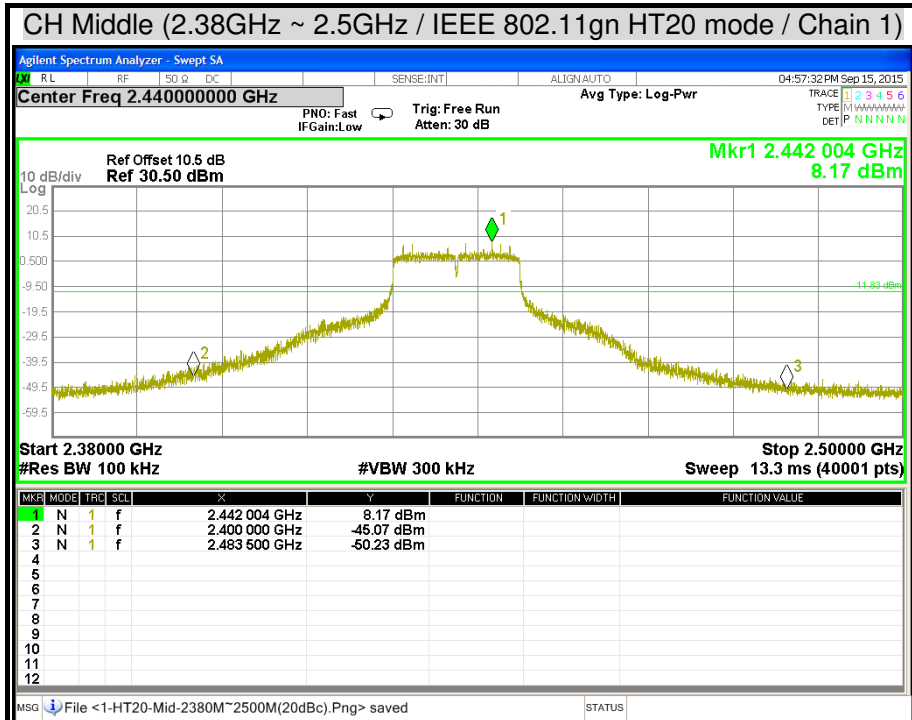


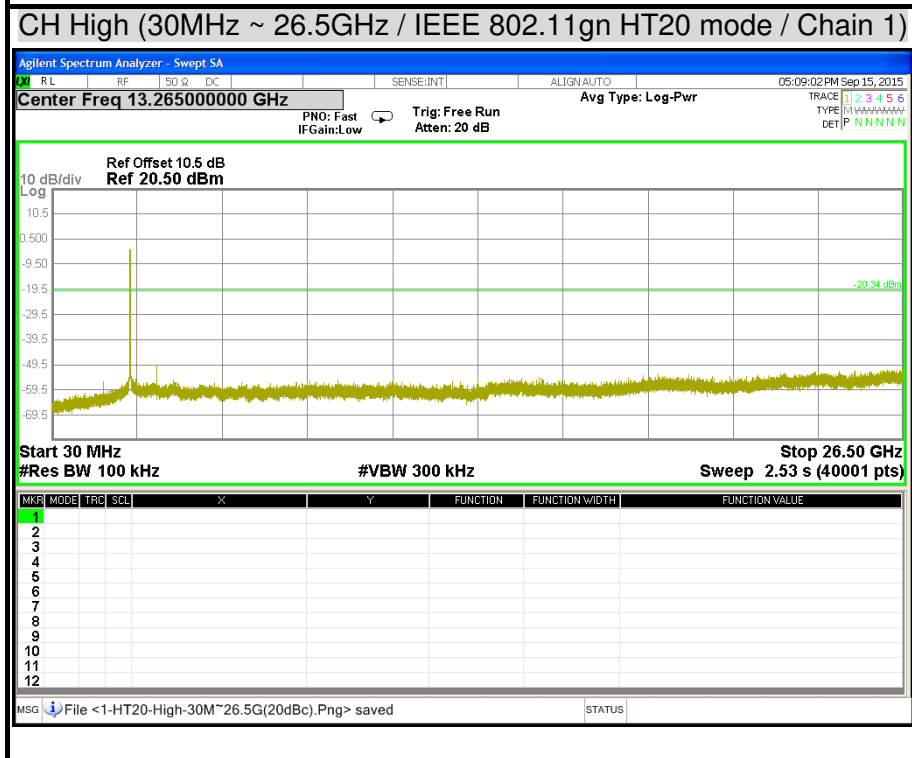
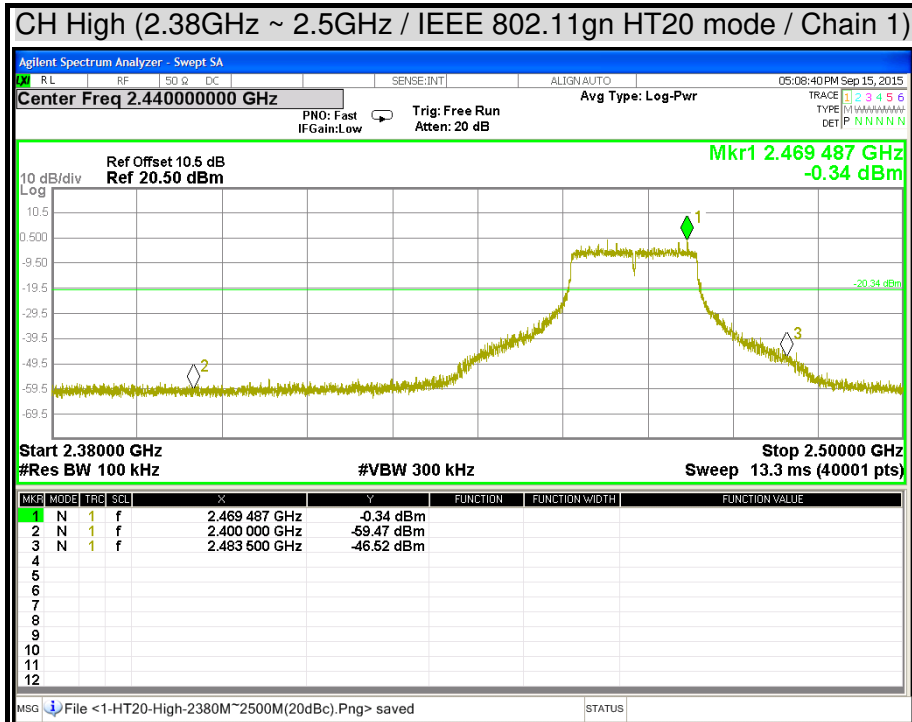


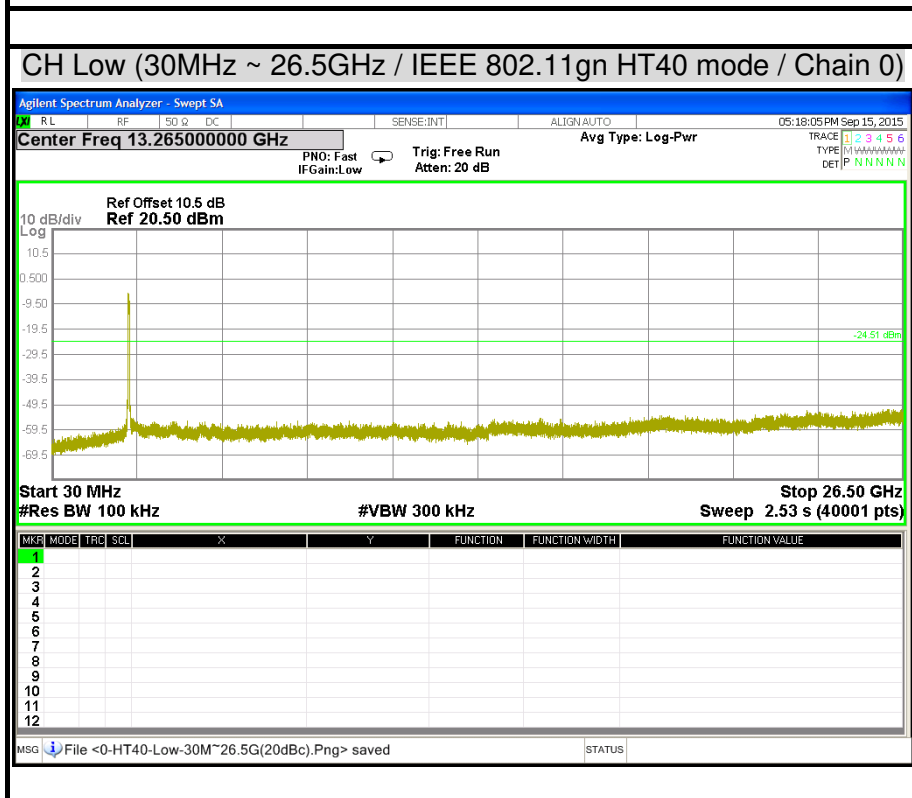
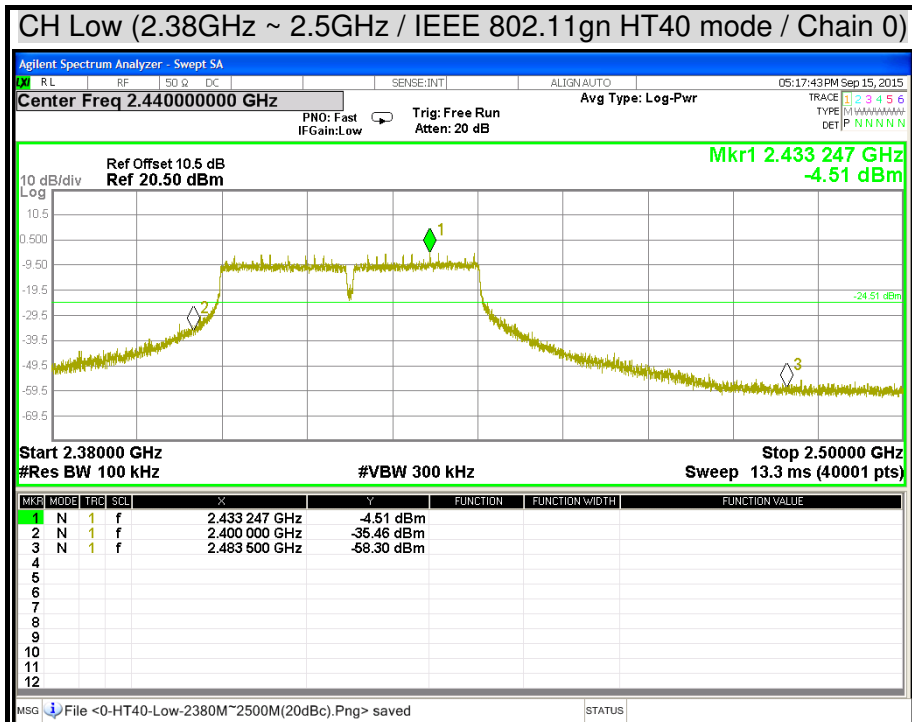


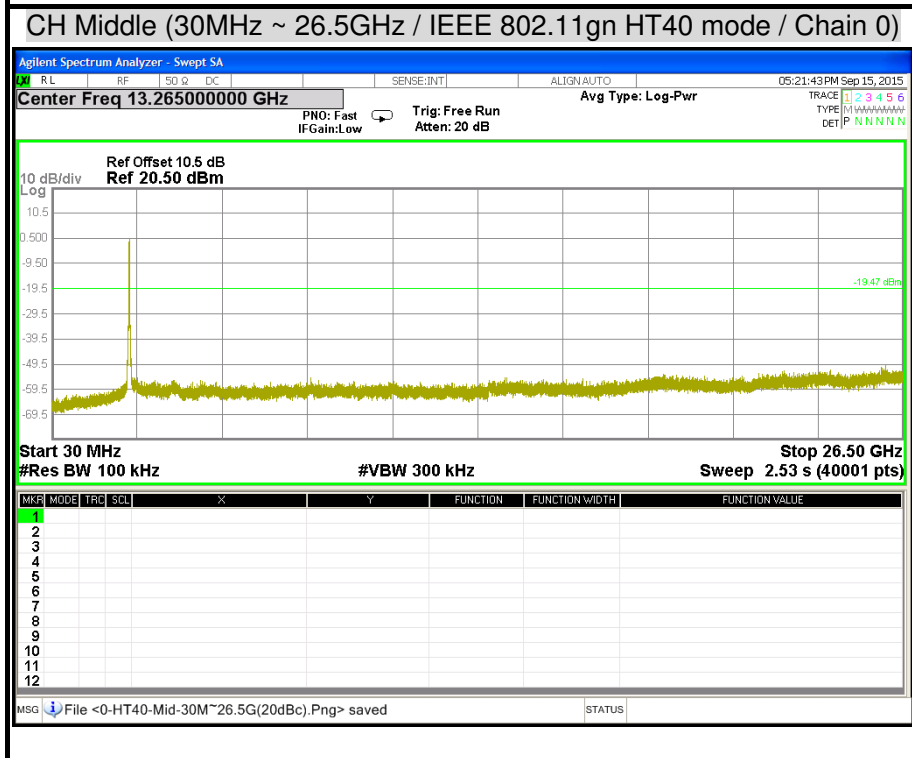
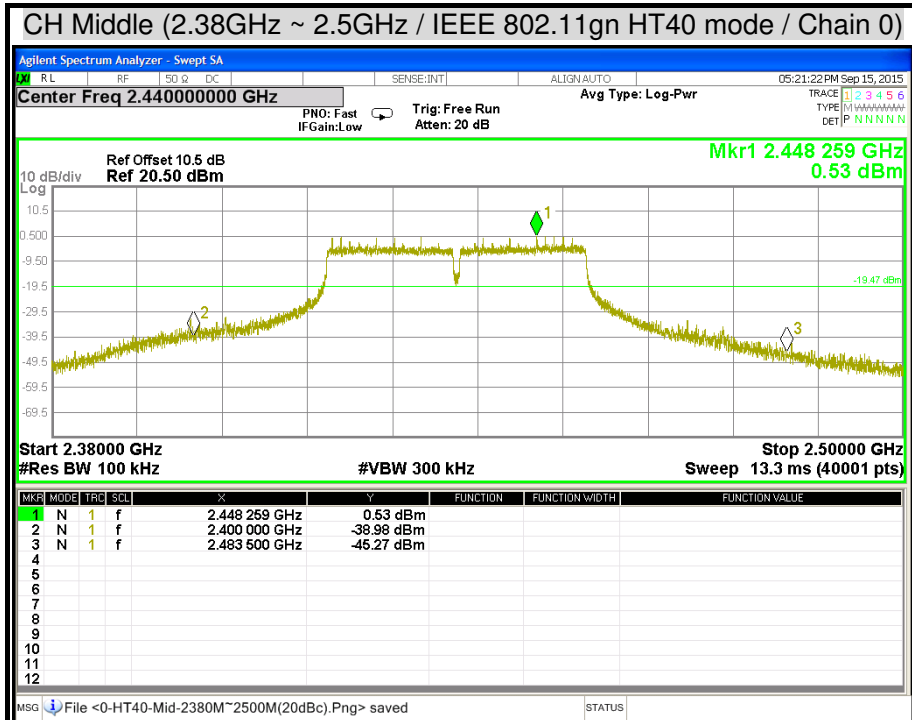


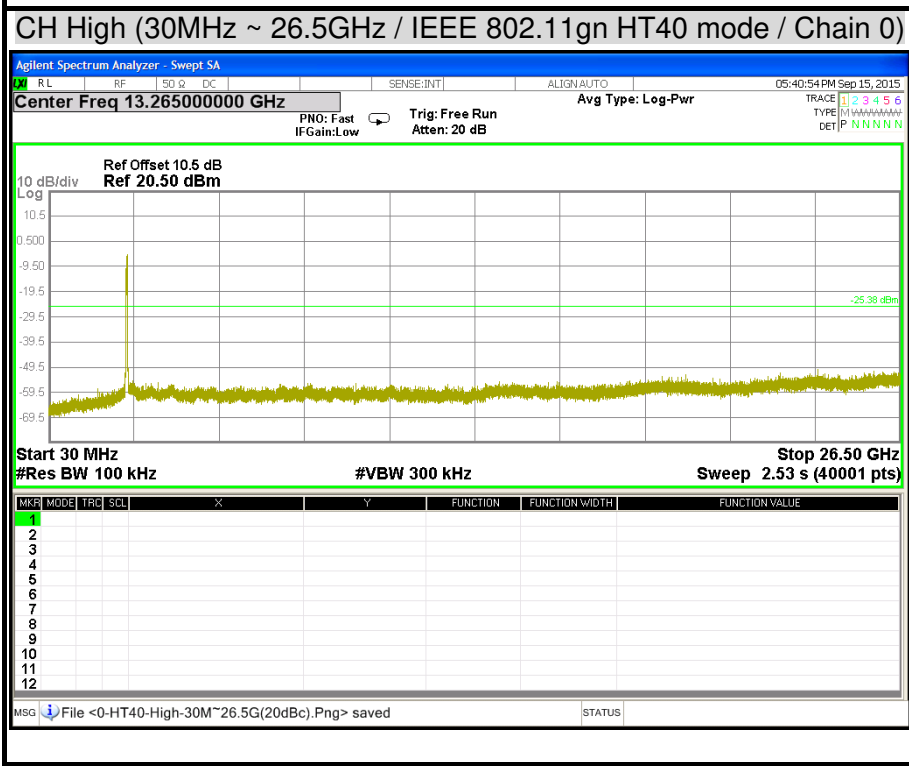
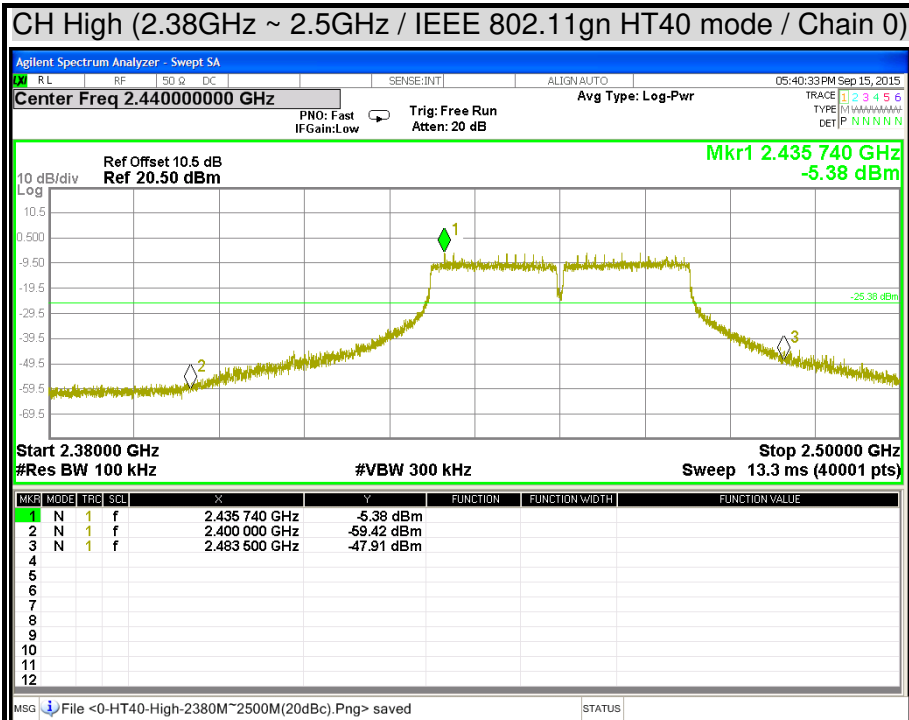


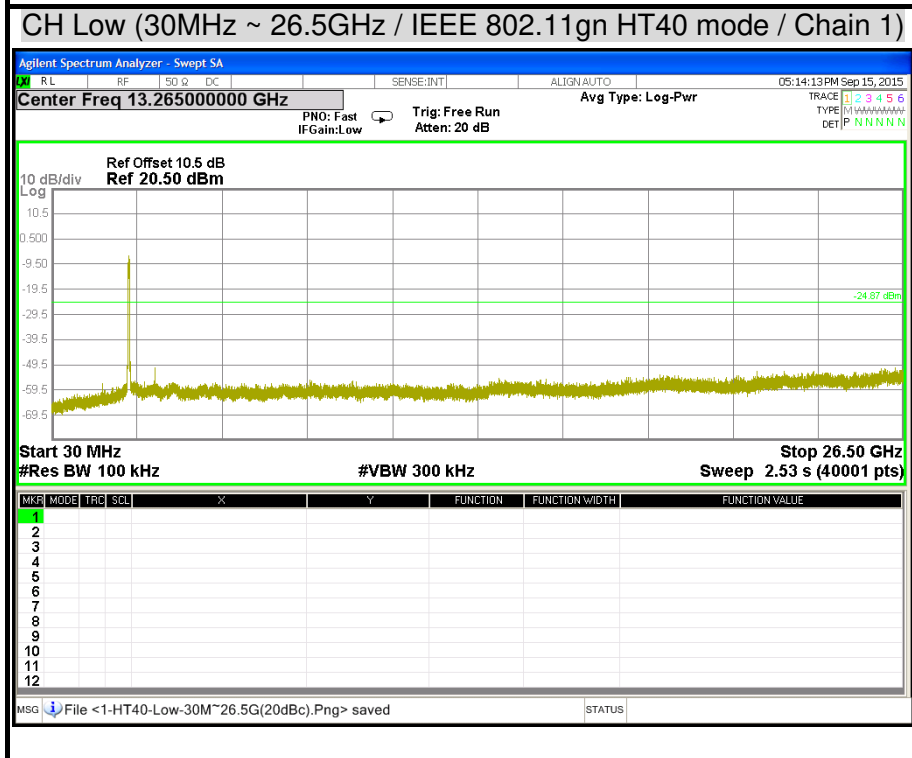
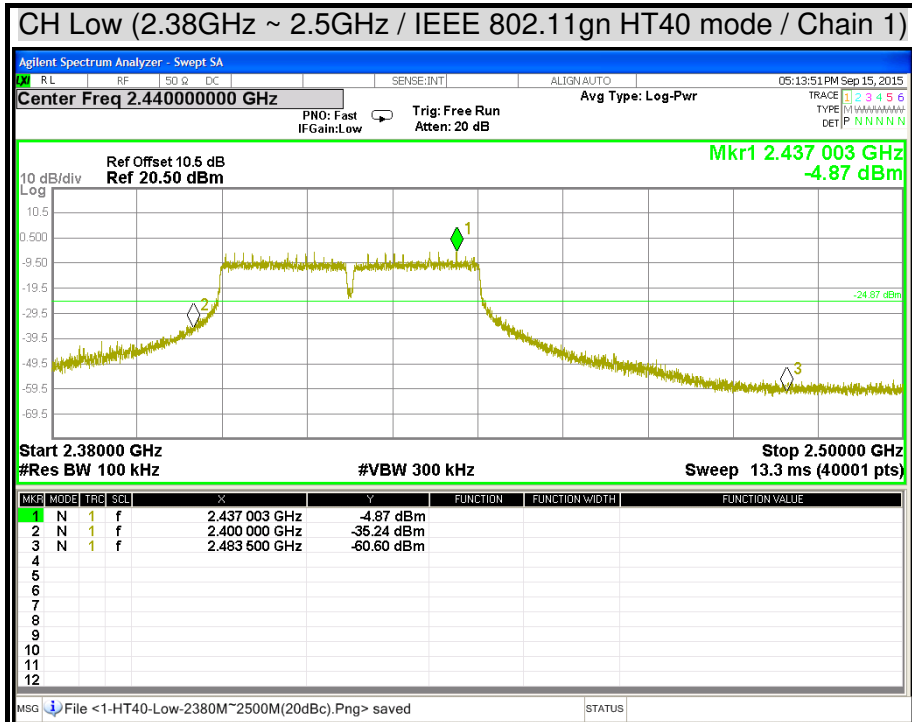


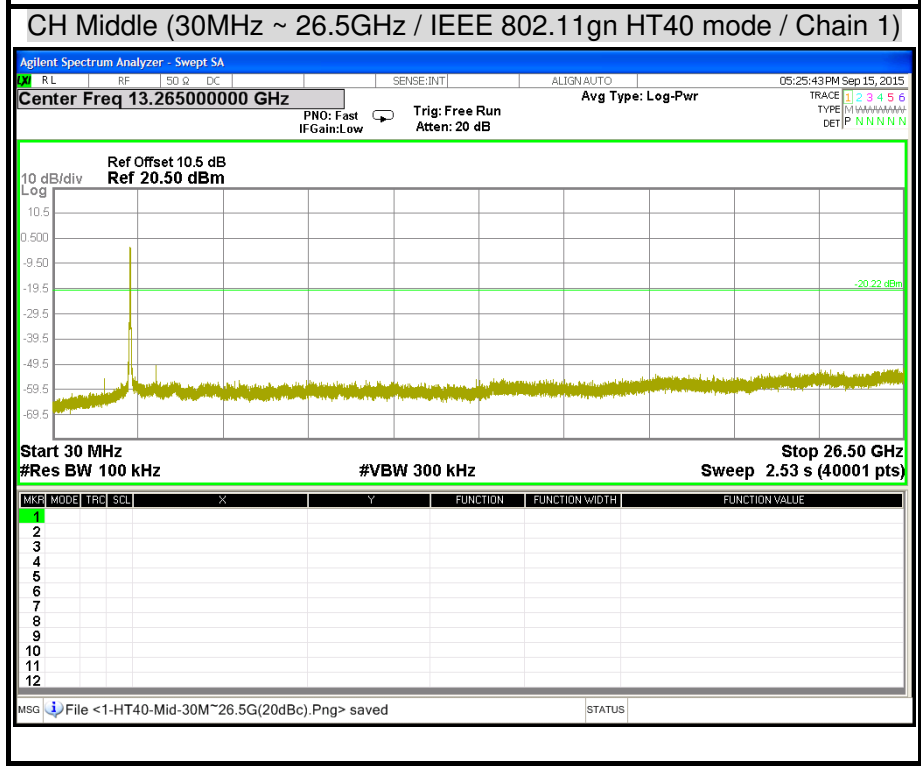
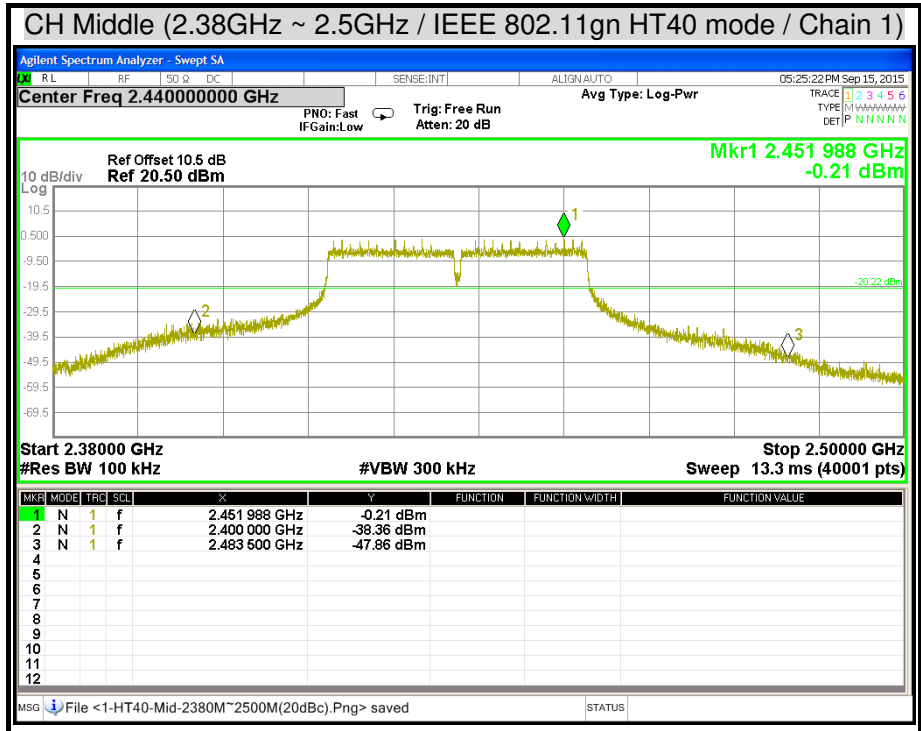


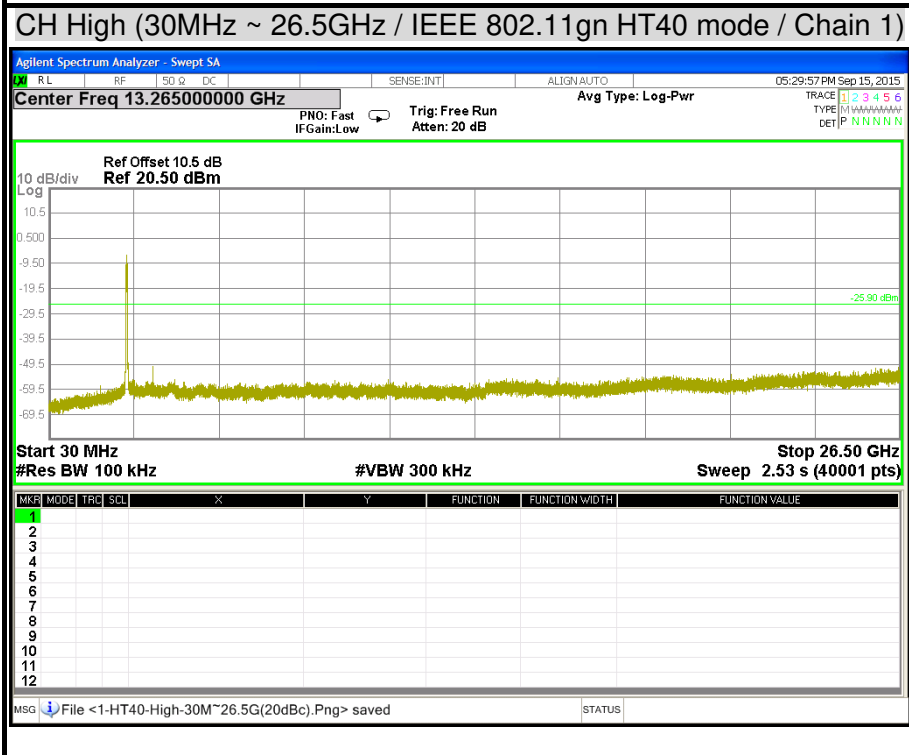
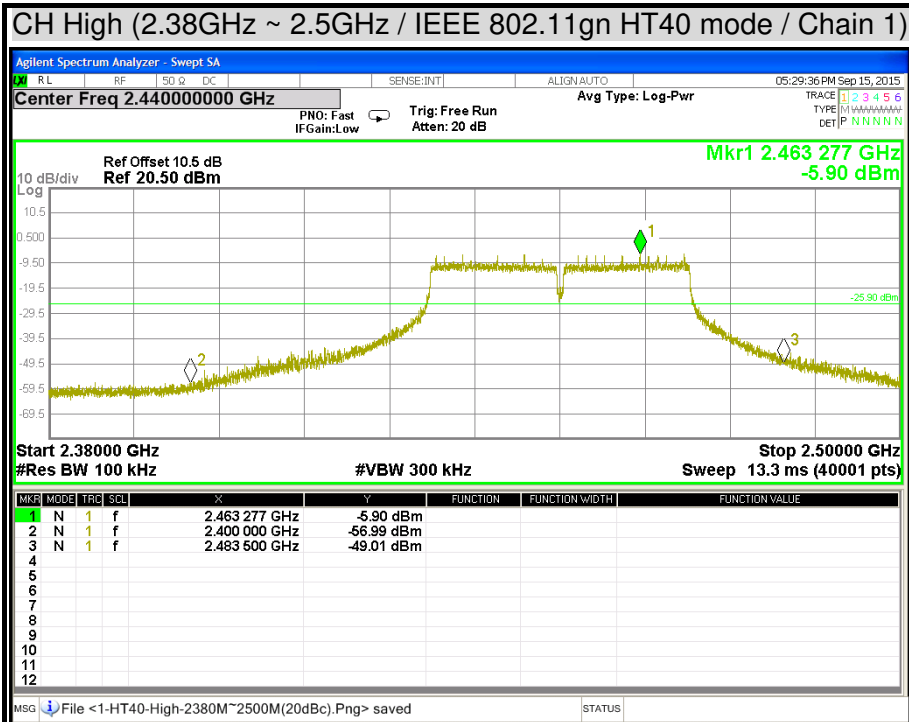


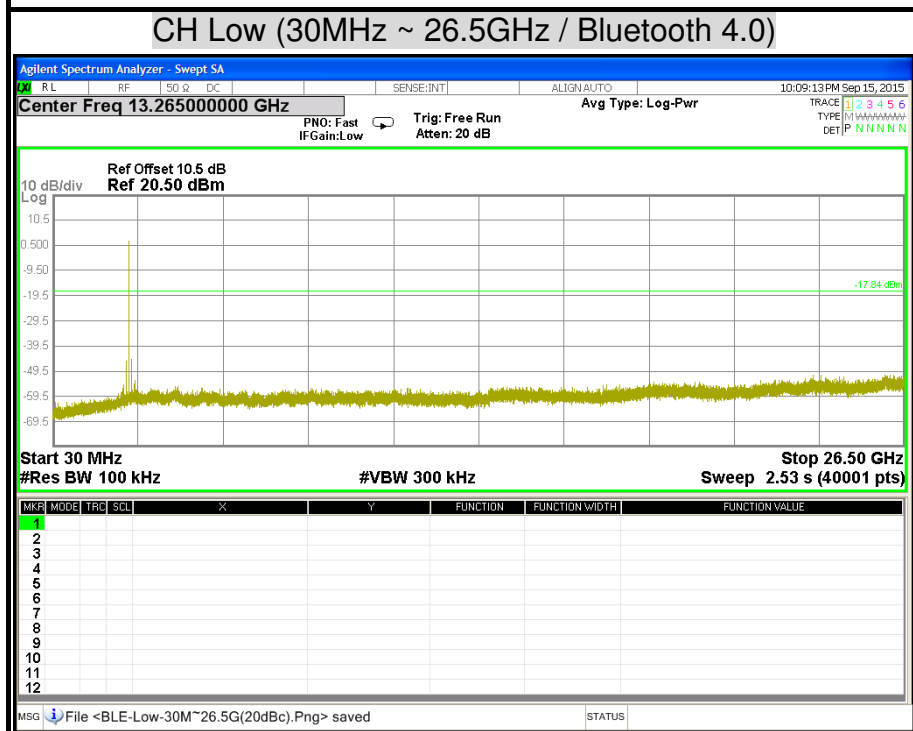
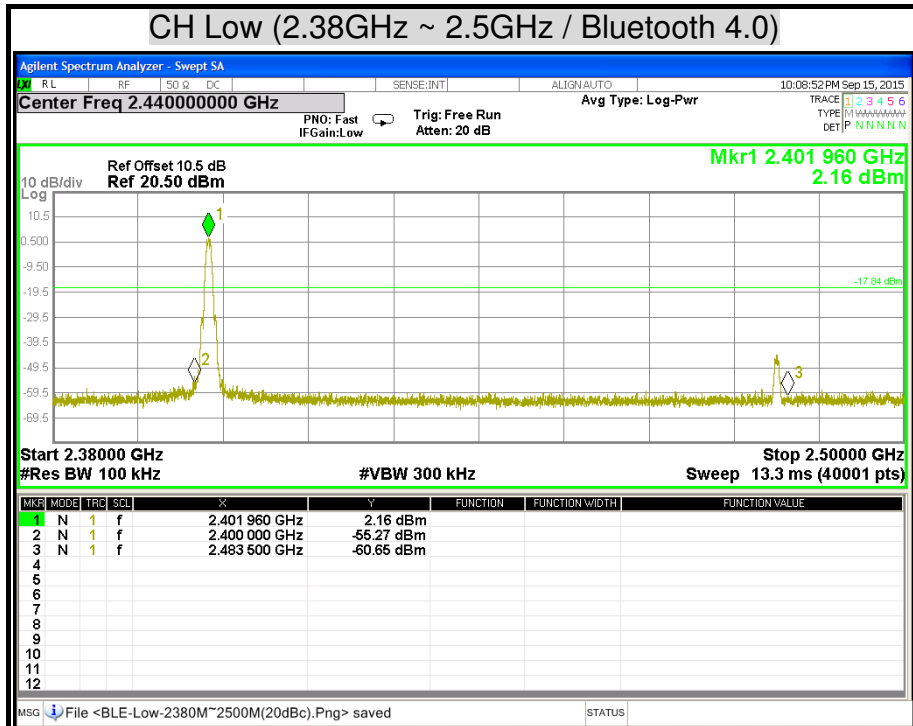


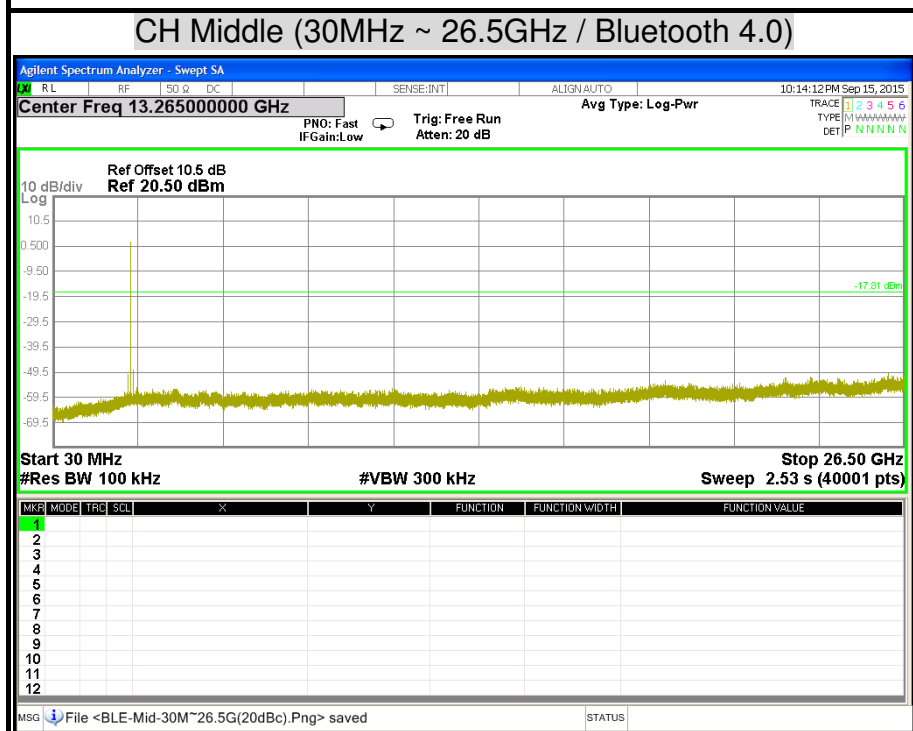
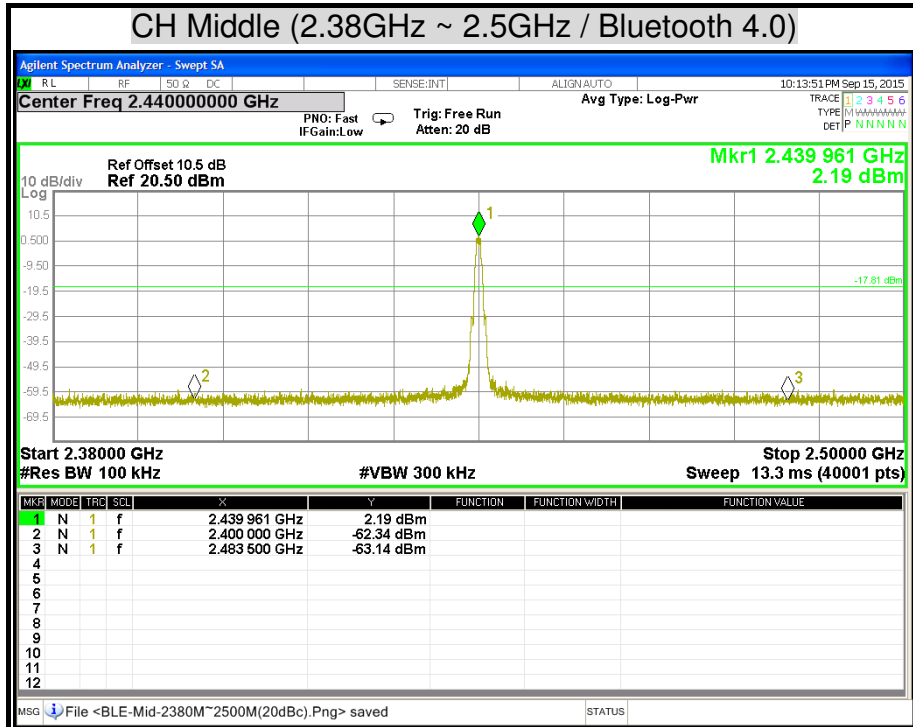


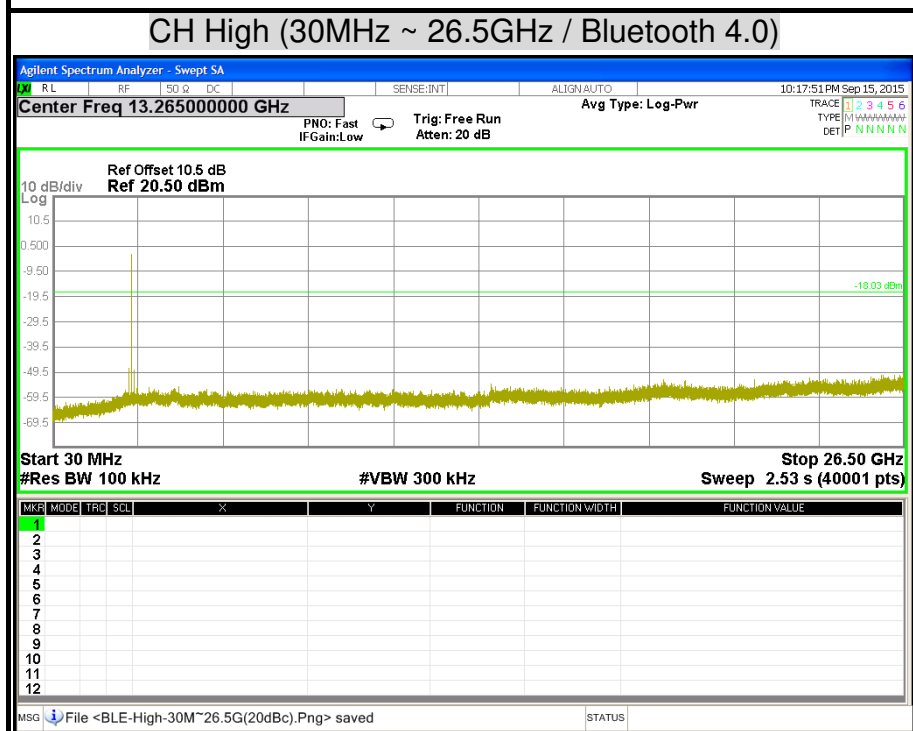
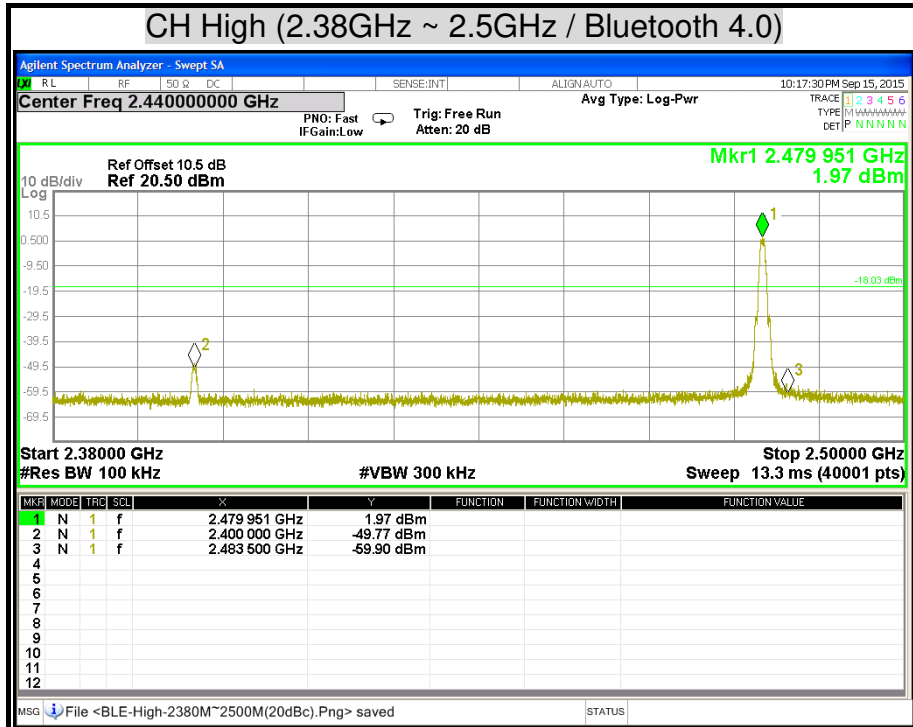












7.6 RADIATED EMISSION

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

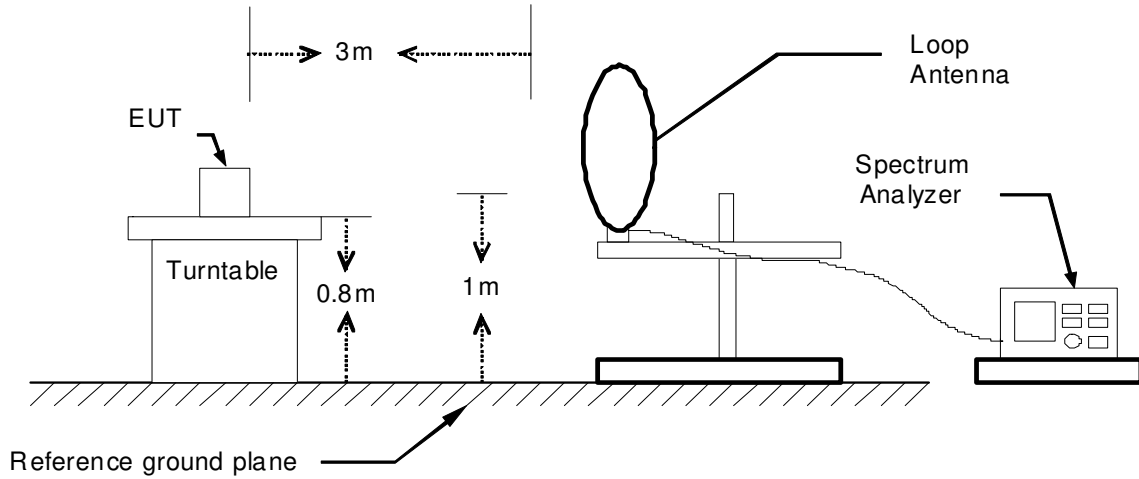
Name of Equipment	Manufacture	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY46180323	04/14/2016
EMI Test Receiver	Rohde & Schwarz	ESCI	100221	04/22/2016
Bi-log Antenna	TESEQ	CBL 6112D	35403	08/04/2016
Double-Ridged Waveguide Horn	ETS-LINDGREN	3117	00078733	12/02/2015
Horn Antenna	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.

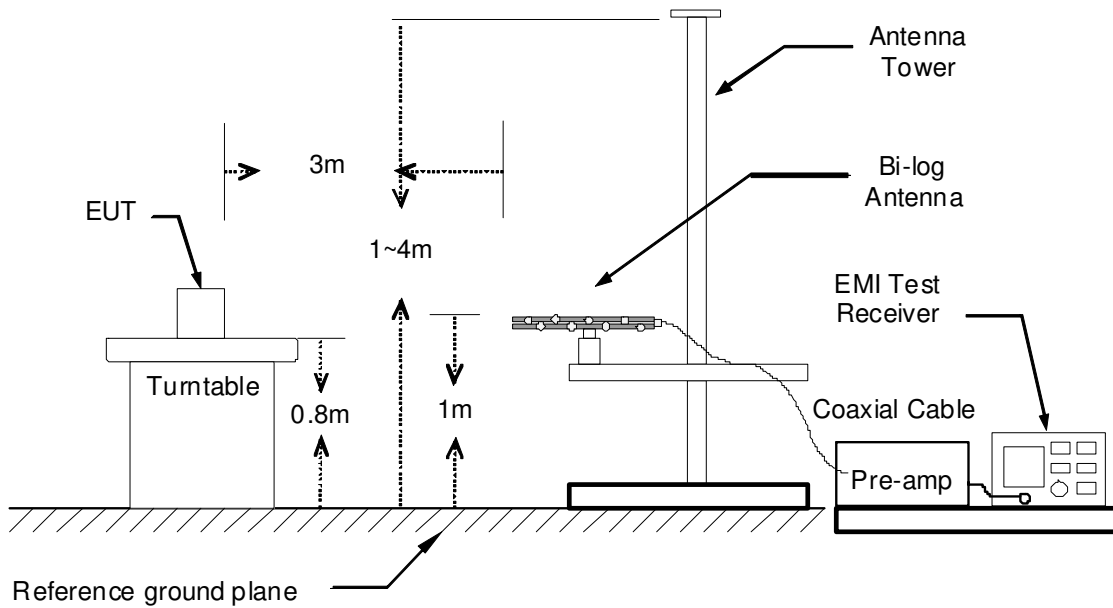
TEST SETUP

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

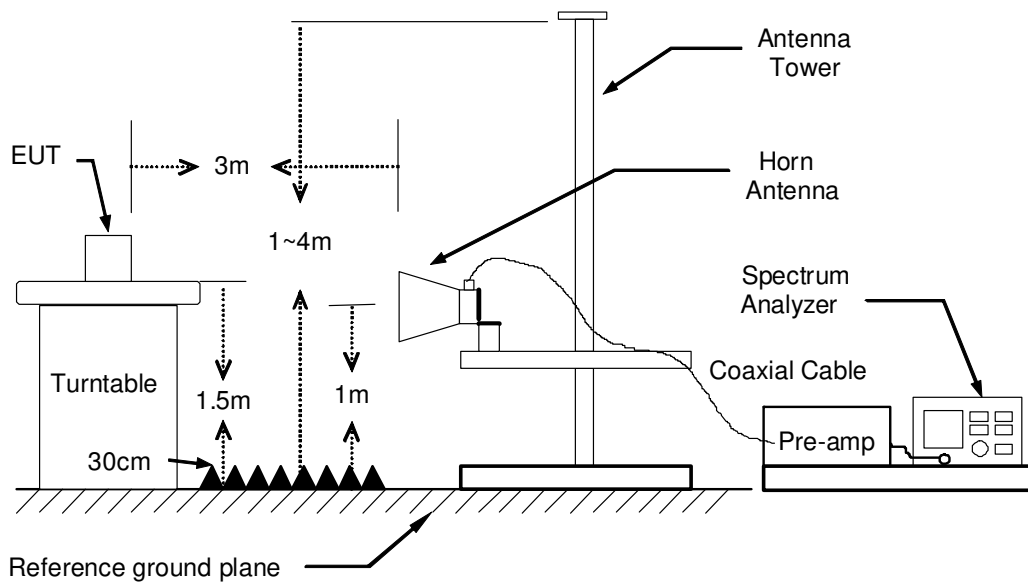
9kHz ~ 30MHz



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	Computer	Test By	Rex Chiu
Test Model	MIT-W101	Test Date	2015/09/03
Test mode	WiFi / 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
128.94	43.38	-14.47	28.91	43.50	-14.59	268	100	Peak
192.96	47.96	-16.19	31.77	43.50	-11.73	131	100	Peak
385.99	48.08	-9.42	38.66	46.00	-7.34	26	100	Peak
734.22	44.27	-5.23	39.04	46.00	-6.96	92	100	Peak
838.98	45.96	-3.66	42.30	46.00	-3.70	49	100	Peak
978.66	42.97	-2.06	40.91	54.00	-13.09	90	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
43.58	50.15	-16.22	33.93	40.00	-6.07	182	100	Peak
125.06	44.04	-14.35	29.69	43.50	-13.81	225	100	Peak
192.96	50.53	-16.19	34.34	43.50	-9.16	286	100	Peak
323.91	42.55	-10.90	31.65	46.00	-14.35	125	100	Peak
734.22	38.69	-5.23	33.46	46.00	-12.54	250	100	Peak
978.66	39.74	-2.06	37.68	54.00	-16.32	360	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	Computer	Test By	Rex Chiu
Test Model	MIT-W101	Test Date	2015/09/03
Test mode	Bluetooth 4.0 / 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
126.03	38.22	-14.38	23.84	43.50	-19.66	133	100	Peak
257.95	48.79	-11.95	36.84	46.00	-9.16	360	100	Peak
323.91	48.02	-10.90	37.12	46.00	-8.88	297	100	Peak
385.99	47.28	-9.42	37.86	46.00	-8.14	51	100	Peak
455.83	46.30	-8.64	37.66	46.00	-8.34	295	200	Peak
792.42	42.53	-4.32	38.21	46.00	-7.79	304	100	Peak
978.66	40.47	-2.06	38.41	54.00	-15.59	46	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
38.73	45.58	-13.09	32.49	40.00	-7.51	360	100	Peak
127.00	44.15	-14.41	29.74	43.50	-13.76	147	100	Peak
256.98	45.64	-12.04	33.60	46.00	-12.40	159	100	Peak
312.27	41.71	-11.20	30.51	46.00	-15.49	43	100	Peak
455.83	38.80	-8.64	30.16	46.00	-15.84	225	100	Peak
734.22	39.08	-5.23	33.85	46.00	-12.15	264	100	Peak
978.66	37.60	-2.06	35.54	54.00	-18.46	323	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

Product Name	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	IEEE 802.11b TX / CH Low	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
1712.00	44.29	-0.89	43.40	74.00	-30.60	150	100	Peak
2202.00	44.20	2.28	46.48	74.00	-27.52	281	100	Peak
2500.00	46.99	3.01	50.00	74.00	-24.00	47	200	Peak
3105.00	41.28	4.24	45.52	74.00	-28.48	353	200	Peak
3750.00	42.44	5.50	47.94	74.00	-26.06	47	100	Peak
4830.00	43.78	8.00	51.78	74.00	-22.22	300	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
1320.00	45.29	-3.05	42.24	74.00	-31.76	236	100	Peak
2202.00	42.30	2.28	44.58	74.00	-29.42	13	100	Peak
2500.00	48.19	3.01	51.20	74.00	-22.80	329	100	Peak
3180.00	43.10	4.39	47.49	74.00	-26.51	241	100	Peak
3675.00	41.47	5.36	46.83	74.00	-27.17	344	100	Peak
4830.00	41.39	8.00	49.39	74.00	-24.61	6	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	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	IEEE 802.11b TX / CH Middle	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
1584.00	45.46	-2.08	43.38	74.00	-30.62	261	200	Peak
1714.00	44.59	-0.87	43.72	74.00	-30.28	136	100	Peak
2500.00	47.66	3.01	50.67	74.00	-23.33	87	100	Peak
3300.00	41.65	4.63	46.28	74.00	-27.72	325	200	Peak
3750.00	41.23	5.50	46.73	74.00	-27.27	36	100	Peak
4875.00	43.59	8.04	51.63	74.00	-22.37	302	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
1714.00	44.30	-0.87	43.43	74.00	-30.57	212	100	Peak
2202.00	42.80	2.28	45.08	74.00	-28.92	206	100	Peak
2500.00	47.94	3.01	50.95	74.00	-23.05	199	100	Peak
3180.00	42.91	4.39	47.30	74.00	-26.70	65	100	Peak
4875.00	39.02	8.04	47.06	74.00	-26.94	166	200	Peak
5670.00	38.63	10.59	49.22	74.00	-24.78	85	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	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	IEEE 802.11b TX / CH High	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
1584.00	46.56	-2.08	44.48	74.00	-29.52	322	100	Peak
1714.00	45.42	-0.87	44.55	74.00	-29.45	334	100	Peak
2500.00	46.57	3.01	49.58	74.00	-24.42	73	100	Peak
3240.00	41.42	4.51	45.93	74.00	-28.07	336	200	Peak
3465.00	40.72	4.96	45.68	74.00	-28.32	13	100	Peak
4920.00	44.06	8.08	52.14	74.00	-21.86	313	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
1320.00	45.09	-3.05	42.04	74.00	-31.96	314	100	Peak
1714.00	43.88	-0.87	43.01	74.00	-30.99	196	100	Peak
2500.00	47.89	3.01	50.90	74.00	-23.10	338	100	Peak
3180.00	42.75	4.39	47.14	74.00	-26.86	113	100	Peak
4920.00	40.62	8.08	48.70	74.00	-25.30	360	100	Peak
5790.00	39.06	10.94	50.00	74.00	-24.00	343	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	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	IEEE 802.11g TX / CH Low	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
1320.00	47.34	-3.05	44.29	74.00	-29.71	290	100	Peak
1712.00	45.25	-0.89	44.36	74.00	-29.64	138	100	Peak
2500.00	47.73	3.01	50.74	74.00	-23.26	1	200	Peak
3180.00	40.59	4.39	44.98	74.00	-29.02	290	200	Peak
3750.00	41.71	5.50	47.21	74.00	-26.79	48	100	Peak
4815.00	43.60	7.99	51.59	74.00	-22.41	304	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
1320.00	45.76	-3.05	42.71	74.00	-31.29	275	100	Peak
1986.00	41.95	1.65	43.60	74.00	-30.40	111	100	Peak
2500.00	46.54	3.01	49.55	74.00	-24.45	350	100	Peak
3180.00	42.40	4.39	46.79	74.00	-27.21	50	100	Peak
3750.00	41.94	5.50	47.44	74.00	-26.56	280	100	Peak
4815.00	38.85	7.99	46.84	74.00	-27.16	2	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	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	IEEE 802.11g TX / CH Middle	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
1320.00	48.27	-3.05	45.22	74.00	-28.78	280	200	Peak
2390.00	44.64	2.74	47.38	54.00	-6.62	275	100	Average
2390.00	62.20	2.74	64.94	74.00	-9.06	275	100	Peak
2483.50	45.79	2.97	48.76	54.00	-5.24	0	200	Average
2483.50	63.62	2.97	66.59	74.00	-7.41	0	200	Peak
4875.00	42.04	8.04	50.08	54.00	-3.92	309	100	Average
4875.00	53.19	8.04	61.23	74.00	-12.77	309	100	Peak
7305.00	38.55	11.61	50.16	54.00	-3.84	178	100	Average
7305.00	48.07	11.61	59.68	74.00	-14.32	178	100	Peak
9750.00	33.60	14.29	47.89	54.00	-6.11	305	100	Average
9750.00	47.09	14.29	61.38	74.00	-12.62	305	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
2202.00	44.05	2.28	46.33	74.00	-27.67	211	100	Peak
2390.00	42.94	2.74	45.68	54.00	-8.32	190	200	Average
2390.00	58.95	2.74	61.69	74.00	-12.31	190	200	Peak
2483.50	43.08	2.97	46.05	54.00	-7.95	93	200	Average
2483.50	62.72	2.97	65.69	74.00	-8.31	93	200	Peak
4875.00	38.83	8.04	46.87	54.00	-7.13	62	100	Average
4875.00	49.25	8.04	57.29	74.00	-16.71	62	100	Peak
7305.00	38.80	11.61	50.41	54.00	-3.59	51	100	Average
7305.00	50.32	11.61	61.93	74.00	-12.07	51	100	Peak
9735.00	34.06	14.27	48.33	54.00	-5.67	173	100	Average
9735.00	46.82	14.27	61.09	74.00	-12.91	173	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	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	IEEE 802.11g TX / CH High	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
1584.00	46.57	-2.08	44.49	74.00	-29.51	325	100	Peak
1714.00	45.80	-0.87	44.93	74.00	-29.07	309	100	Peak
2500.00	47.97	3.01	50.98	74.00	-23.02	86	100	Peak
3180.00	40.71	4.39	45.10	74.00	-28.90	148	100	Peak
3750.00	41.05	5.50	46.55	74.00	-27.45	31	100	Peak
4920.00	38.00	8.08	46.08	74.00	-27.92	302	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
1320.00	44.58	-3.05	41.53	74.00	-32.47	192	200	Peak
1988.00	41.94	1.67	43.61	74.00	-30.39	315	100	Peak
2500.00	48.64	3.01	51.65	74.00	-22.35	338	100	Peak
3180.00	43.08	4.39	47.47	74.00	-26.53	319	100	Peak
3750.00	41.50	5.50	47.00	74.00	-27.00	147	100	Peak
4920.00	36.97	8.08	45.05	74.00	-28.95	22	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	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	IEEE 802.11gn HT20 TX / CH Low	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
1320.00	47.15	-3.05	44.10	74.00	-29.90	312	200	Peak
1714.00	46.53	-0.87	45.66	74.00	-28.34	329	100	Peak
2500.00	48.47	3.01	51.48	74.00	-22.52	92	200	Peak
3330.00	40.69	4.69	45.38	74.00	-28.62	276	100	Peak
4530.00	38.23	7.76	45.99	74.00	-28.01	122	200	Peak
4830.00	40.13	8.00	48.13	74.00	-25.87	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
1320.00	44.35	-3.05	41.30	74.00	-32.70	127	100	Peak
1712.00	45.07	-0.89	44.18	74.00	-29.82	196	100	Peak
2500.00	47.93	3.01	50.94	74.00	-23.06	338	100	Peak
3135.00	41.74	4.30	46.04	74.00	-27.96	229	100	Peak
4515.00	38.54	7.75	46.29	74.00	-27.71	1	200	Peak
4800.00	38.03	7.98	46.01	74.00	-27.99	310	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	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	IEEE 802.11gn HT20 TX / CH Middle	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
1714.00	44.56	-0.87	43.69	74.00	-30.31	334	100	Peak
2390.00	48.60	2.74	51.34	54.00	-2.66	117	100	Average
2390.00	65.69	2.74	68.43	74.00	-5.57	117	100	Peak
2483.50	46.09	2.97	49.06	54.00	-4.94	177	100	Average
2483.50	67.79	2.97	70.76	74.00	-3.24	177	100	Peak
4860.00	40.47	8.03	48.50	54.00	-5.50	310	100	Average
4860.00	53.30	8.03	61.33	74.00	-12.67	310	100	Peak
7305.00	36.54	11.61	48.15	54.00	-5.85	359	100	Average
7305.00	51.20	11.61	62.81	74.00	-11.19	359	100	Peak
9750.00	32.40	14.29	46.69	54.00	-7.31	113	200	Average
9750.00	45.54	14.29	59.83	74.00	-14.17	113	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
2202.00	43.75	2.28	46.03	74.00	-27.97	231	100	Peak
2390.00	45.50	2.74	48.24	54.00	-5.76	99	200	Average
2390.00	62.78	2.74	65.52	74.00	-8.48	99	200	Peak
2483.50	45.16	2.97	48.13	54.00	-5.87	198	200	Average
2483.50	62.86	2.97	65.83	74.00	-8.17	198	200	Peak
4860.00	37.25	8.03	45.28	54.00	-8.72	314	100	Average
4860.00	50.16	8.03	58.19	74.00	-15.81	314	100	Peak
7320.00	36.49	11.57	48.06	54.00	-5.94	128	100	Average
7320.00	51.18	11.57	62.75	74.00	-11.25	128	100	Peak
9750.00	32.42	14.29	46.71	54.00	-7.29	33	200	Average
9750.00	46.60	14.29	60.89	74.00	-13.11	33	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	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	IEEE 802.11gn HT20 TX / CH High	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
1320.00	47.01	-3.05	43.96	74.00	-30.04	70	100	Peak
1714.00	44.87	-0.87	44.00	74.00	-30.00	327	100	Peak
2500.00	49.78	3.01	52.79	74.00	-21.21	3	200	Peak
3180.00	42.79	4.39	47.18	74.00	-26.82	142	100	Peak
4140.00	39.32	6.47	45.79	74.00	-28.21	76	200	Peak
4920.00	38.56	8.08	46.64	74.00	-27.36	303	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
1714.00	47.56	-0.87	46.69	74.00	-27.31	220	100	Peak
2204.00	44.03	2.28	46.31	74.00	-27.69	227	100	Peak
2500.00	47.68	3.01	50.69	74.00	-23.31	338	100	Peak
3675.00	40.52	5.36	45.88	74.00	-28.12	176	100	Peak
4920.00	38.28	8.08	46.36	74.00	-27.64	30	100	Peak
5610.00	38.48	10.41	48.89	74.00	-25.11	282	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	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	IEEE 802.11gn HT40 TX / CH Low	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
1320.00	47.01	-3.05	43.96	74.00	-30.04	315	200	Peak
1714.00	46.16	-0.87	45.29	74.00	-28.71	296	100	Peak
2500.00	47.95	3.01	50.96	74.00	-23.04	284	100	Peak
3180.00	41.86	4.39	46.25	74.00	-27.75	158	100	Peak
4785.00	38.76	7.97	46.73	74.00	-27.27	129	200	Peak
4845.00	37.92	8.02	45.94	74.00	-28.06	95	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
1320.00	44.51	-3.05	41.46	74.00	-32.54	101	100	Peak
1804.00	42.91	-0.04	42.87	74.00	-31.13	92	200	Peak
2500.00	47.02	3.01	50.03	74.00	-23.97	336	100	Peak
3180.00	43.86	4.39	48.25	74.00	-25.75	36	100	Peak
3675.00	43.02	5.36	48.38	74.00	-25.62	165	100	Peak
4815.00	38.21	7.99	46.20	74.00	-27.80	290	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	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	IEEE 802.11gn HT40 TX / CH Middle	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
1584.00	45.39	-2.08	43.31	74.00	-30.69	259	200	Peak
2390.00	50.18	2.74	52.92	54.00	-1.08	229	100	Average
2390.00	67.21	2.74	69.95	74.00	-4.05	229	100	Peak
2483.50	50.00	2.97	52.97	54.00	-1.03	158	100	Average
2483.50	70.05	2.97	73.02	74.00	-0.98	158	100	Peak
4875.00	39.15	8.04	47.19	54.00	-6.81	307	100	Average
4875.00	50.36	8.04	58.40	74.00	-15.60	307	100	Peak
7305.00	34.48	11.61	46.09	54.00	-7.91	0	100	Average
7305.00	46.45	11.61	58.06	74.00	-15.94	0	100	Peak
9750.00	38.18	14.29	52.47	74.00	-21.53	305	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
1038.00	46.52	-3.35	43.17	74.00	-30.83	288	100	Peak
2390.00	48.02	2.74	50.76	54.00	-3.24	87	200	Average
2390.00	63.43	2.74	66.17	74.00	-7.83	87	200	Peak
2483.50	48.03	2.97	51.00	54.00	-3.00	78	200	Average
2483.50	63.04	2.97	66.01	74.00	-7.99	78	200	Peak
4875.00	42.26	8.04	50.30	74.00	-23.70	312	100	Peak
7335.00	34.76	11.54	46.30	54.00	-7.70	72	100	Average
7335.00	46.10	11.54	57.64	74.00	-16.36	72	100	Peak
9750.00	38.35	14.29	52.64	74.00	-21.36	44	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	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	IEEE 802.11gn HT40 TX / CH High	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
1320.00	46.91	-3.05	43.86	74.00	-30.14	62	100	Peak
1584.00	45.75	-2.08	43.67	74.00	-30.33	324	100	Peak
1714.00	47.78	-0.87	46.91	74.00	-27.09	138	100	Peak
3120.00	42.98	4.27	47.25	74.00	-26.75	179	100	Peak
4935.00	38.25	8.09	46.34	74.00	-27.66	80	200	Peak
5595.00	38.10	10.37	48.47	74.00	-25.53	67	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
1732.00	43.80	-0.71	43.09	74.00	-30.91	219	200	Peak
2692.00	43.53	3.40	46.93	74.00	-27.07	269	100	Peak
2902.00	42.63	3.83	46.46	74.00	-27.54	198	100	Peak
3180.00	42.37	4.39	46.76	74.00	-27.24	291	200	Peak
4890.00	39.75	8.05	47.80	74.00	-26.20	253	200	Peak
6030.00	38.08	11.56	49.64	74.00	-24.36	146	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	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	Bluetooth 4.0 / TX mode / CH Low	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
2322.00	47.60	2.57	50.17	74.00	-23.83	106	100	Peak
2482.00	48.09	2.97	51.06	74.00	-22.94	142	100	Peak
2500.00	44.16	3.01	47.17	74.00	-26.83	56	100	Peak
3180.00	42.32	4.39	46.71	74.00	-27.29	105	100	Peak
5640.00	37.59	10.50	48.09	74.00	-25.91	252	100	Peak
7305.00	37.17	11.61	48.78	74.00	-25.22	262	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
2322.00	44.58	2.57	47.15	74.00	-26.85	134	100	Peak
2482.00	44.23	2.97	47.20	74.00	-26.80	78	200	Peak
2500.00	47.17	3.01	50.18	74.00	-23.82	342	100	Peak
3690.00	40.21	5.39	45.60	74.00	-28.40	113	200	Peak
5595.00	37.86	10.37	48.23	74.00	-25.77	111	100	Peak
7380.00	38.41	11.44	49.85	74.00	-24.15	5	200	Peak

Remark:

5. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
6. Average test would be performed if the peak result were greater than the average limit.
7. 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.
8. Result = Reading + Correction Factor
 Margin = Result – Limit
 Remark Peak = Result(PK) – Limit(PK)
 Remark AVG = Result(AV) – Limit(AV)

Product Name	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	Bluetooth 4.0 / TX mode / CH Middle	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
2360.00	46.40	2.67	49.07	74.00	-24.93	145	100	Peak
2500.00	45.90	3.01	48.91	74.00	-25.09	83	100	Peak
2520.00	44.85	3.05	47.90	74.00	-26.10	118	100	Peak
3180.00	41.05	4.39	45.44	74.00	-28.56	272	100	Peak
4845.00	38.32	8.02	46.34	74.00	-27.66	8	200	Peak
5640.00	38.52	10.50	49.02	74.00	-24.98	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
1002.00	49.11	-3.39	45.72	74.00	-28.28	206	100	Peak
2202.00	42.87	2.28	45.15	74.00	-28.85	222	100	Peak
2500.00	46.28	3.01	49.29	74.00	-24.71	333	100	Peak
3180.00	43.34	4.39	47.73	74.00	-26.27	229	100	Peak
4530.00	38.61	7.76	46.37	74.00	-27.63	4	200	Peak
4845.00	37.53	8.02	45.55	74.00	-28.45	210	200	Peak

Remark:

5. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
6. Average test would be performed if the peak result were greater than the average limit.
7. 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.
8. Result = Reading + Correction Factor
 Margin = Result – Limit
 Remark Peak = Result(PK) – Limit(PK)
 Remark AVG = Result(AV) – Limit(AV)

Product Name	Computer	Test By	Waternil Guan
Test Model	MIT-W101	Test Date	2015/08/28
Test mode	Bluetooth 4.0 / TX mode / CH High	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
2400.00	45.37	2.76	48.13	74.00	-25.87	148	200	Peak
2500.00	45.84	3.01	48.85	74.00	-25.15	37	100	Peak
2560.00	44.67	3.13	47.80	74.00	-26.20	117	100	Peak
3390.00	40.35	4.81	45.16	74.00	-28.84	90	100	Peak
3660.00	40.19	5.33	45.52	74.00	-28.48	169	200	Peak
4950.00	38.24	8.10	46.34	74.00	-27.66	86	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
2202.00	42.60	2.28	44.88	74.00	-29.12	10	100	Peak
2500.00	47.63	3.01	50.64	74.00	-23.36	338	100	Peak
2560.00	43.71	3.13	46.84	74.00	-27.16	103	100	Peak
3180.00	42.10	4.39	46.49	74.00	-27.51	231	100	Peak
4260.00	39.62	6.89	46.51	74.00	-27.49	312	200	Peak
4905.00	38.37	8.06	46.43	74.00	-27.57	64	100	Peak

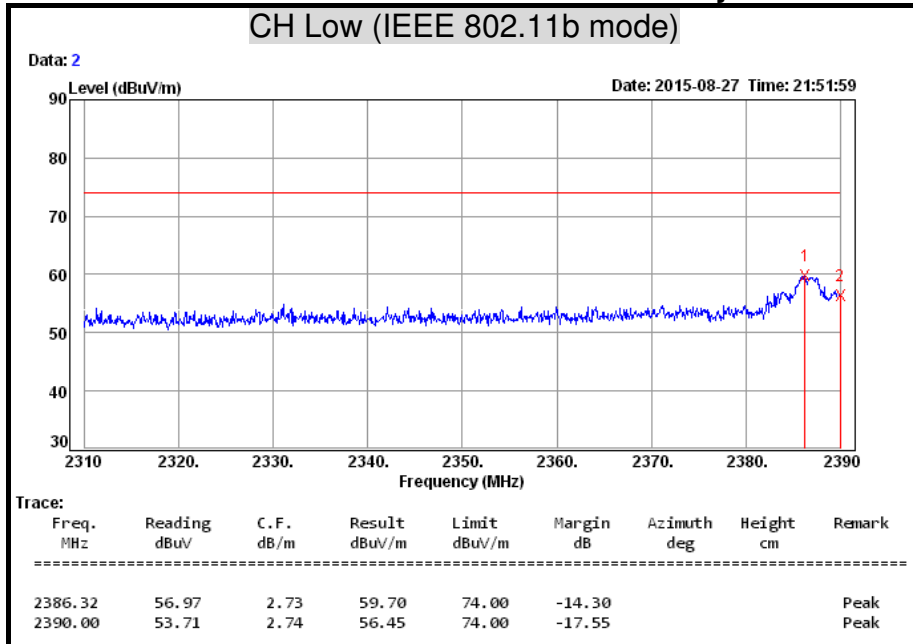
Remark:

5. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
6. Average test would be performed if the peak result were greater than the average limit.
7. 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.
8. Result = Reading + Correction Factor
 Margin = Result – Limit
 Remark Peak = Result(PK) – Limit(PK)
 Remark AVG = Result(AV) – Limit(AV)

Restricted Band Edges

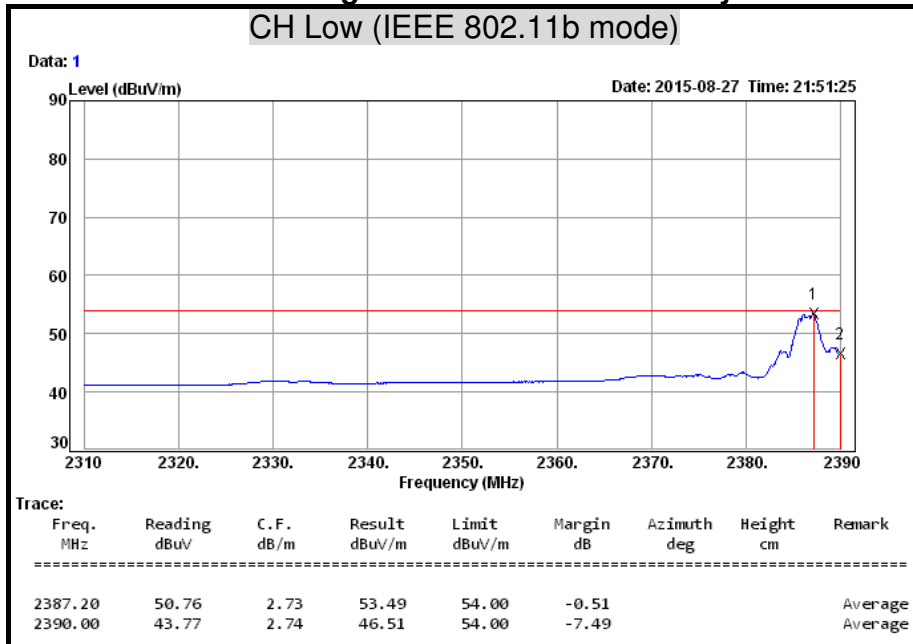
Detector mode: Peak

Polarity: Horizontal

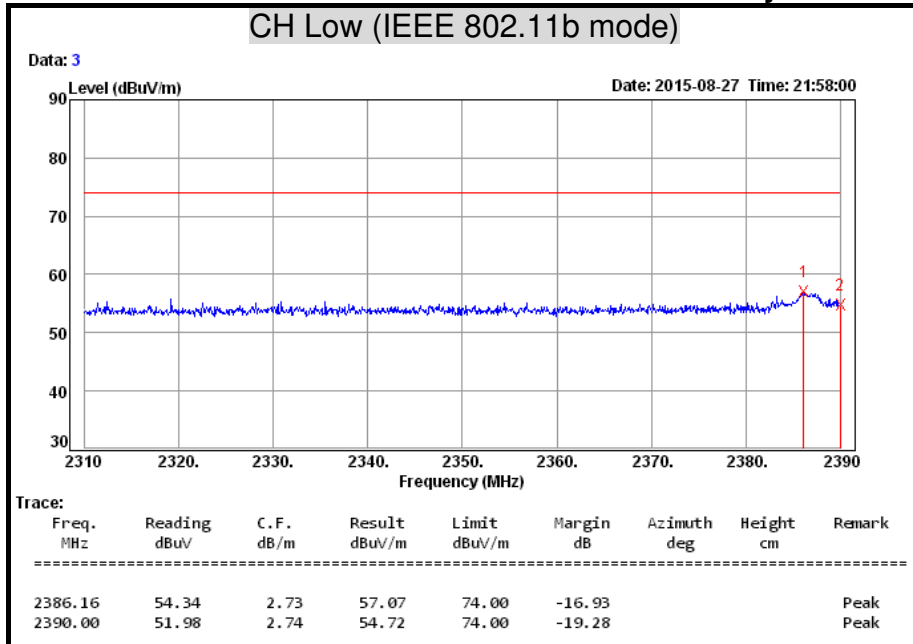


Detector mode: Average

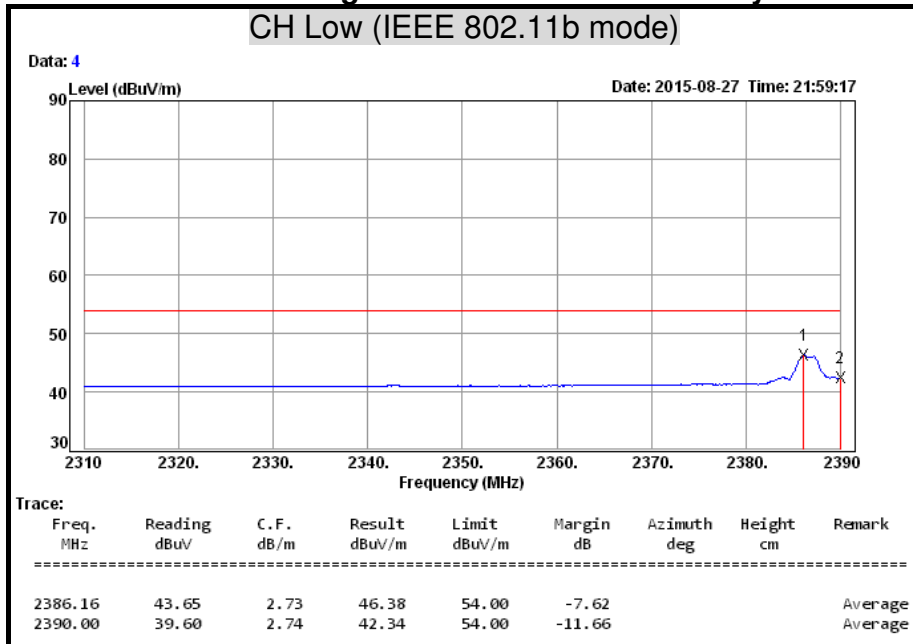
Polarity: Horizontal



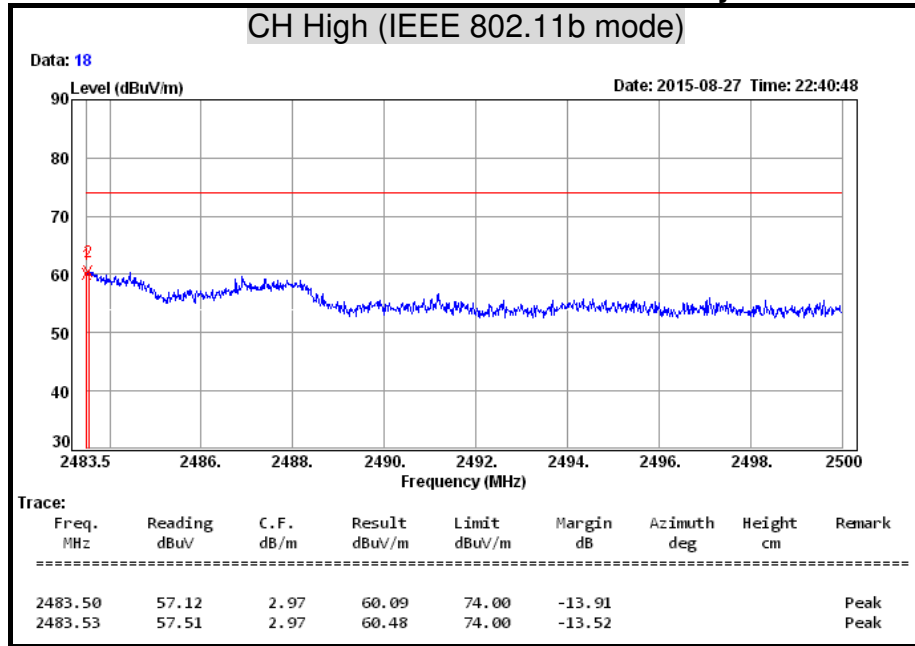
Detector mode: Peak Polarity: Vertical



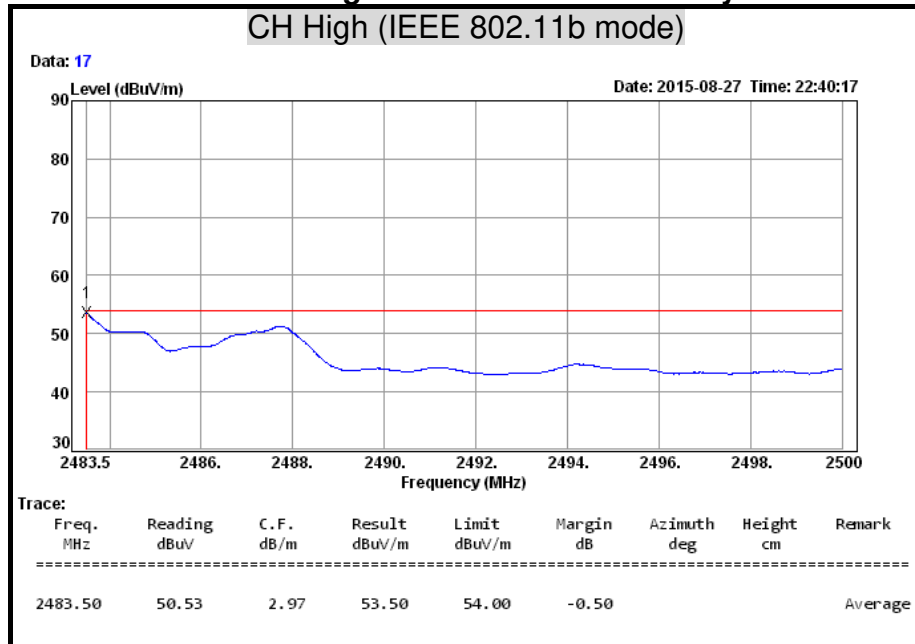
Detector mode: Average Polarity: Vertical



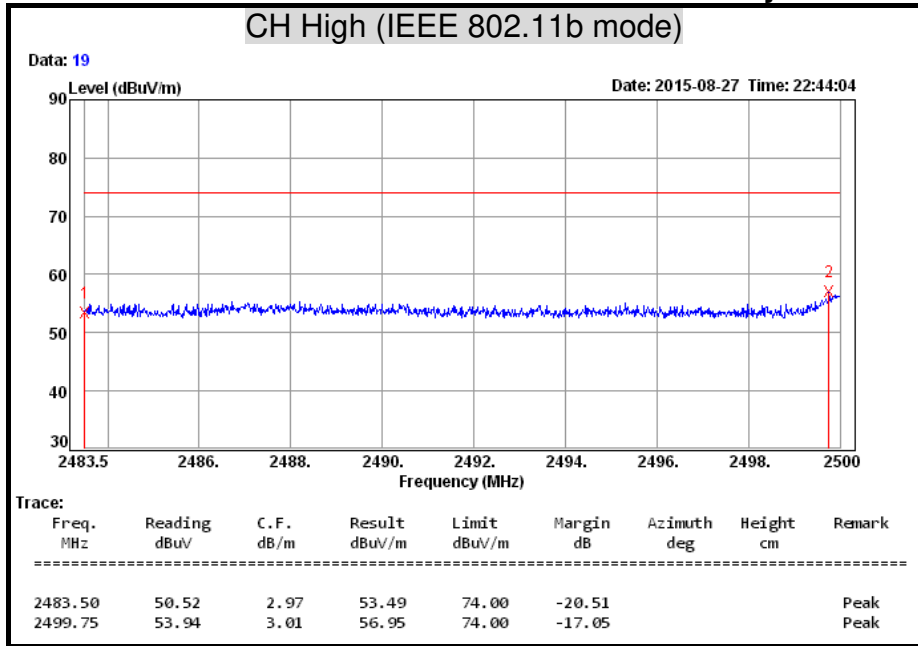
Detector mode: Peak Polarity: Horizontal



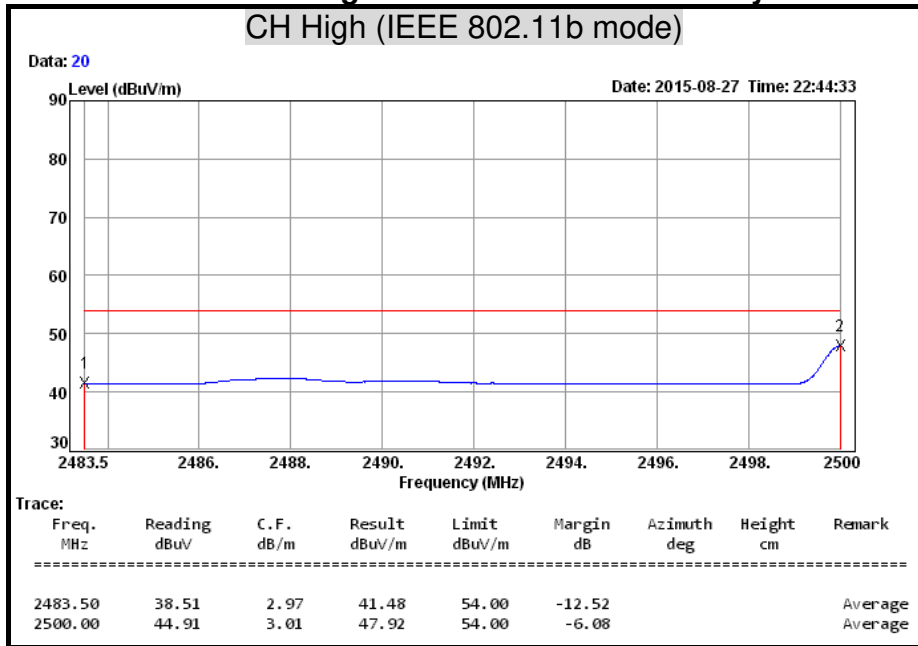
Detector mode: Average Polarity: Horizontal



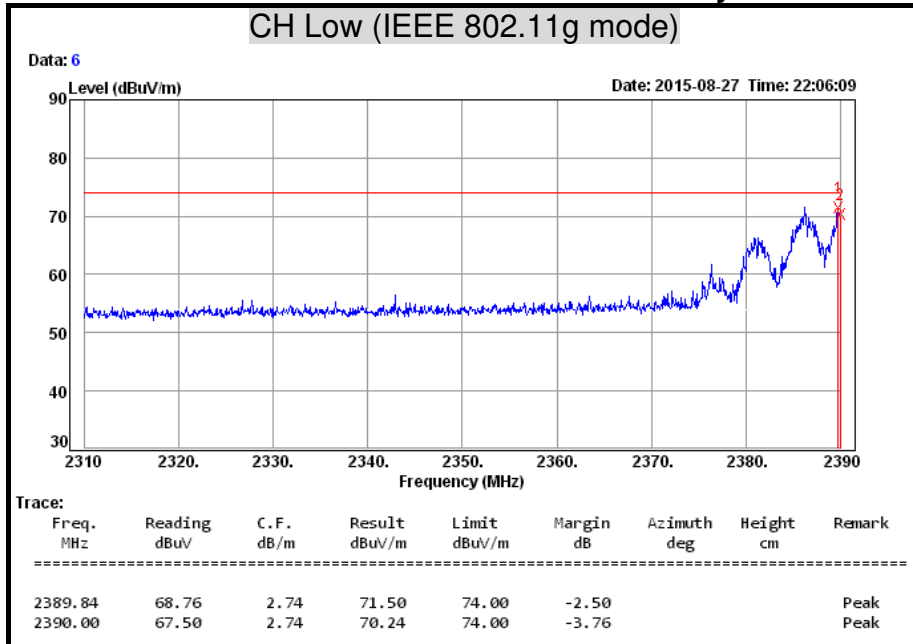
Detector mode: Peak **Polarity: Vertical**



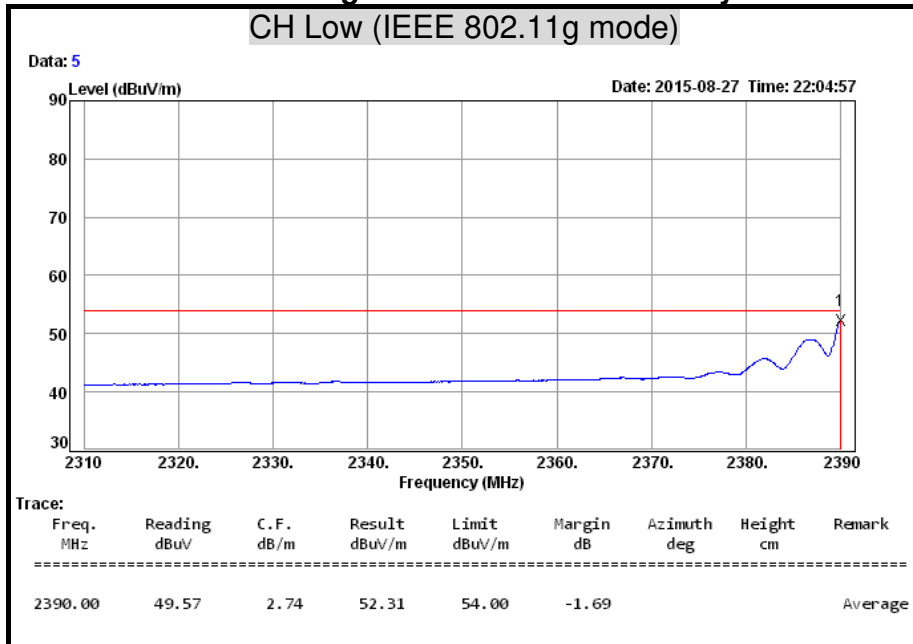
Detector mode: Average **Polarity: Vertical**



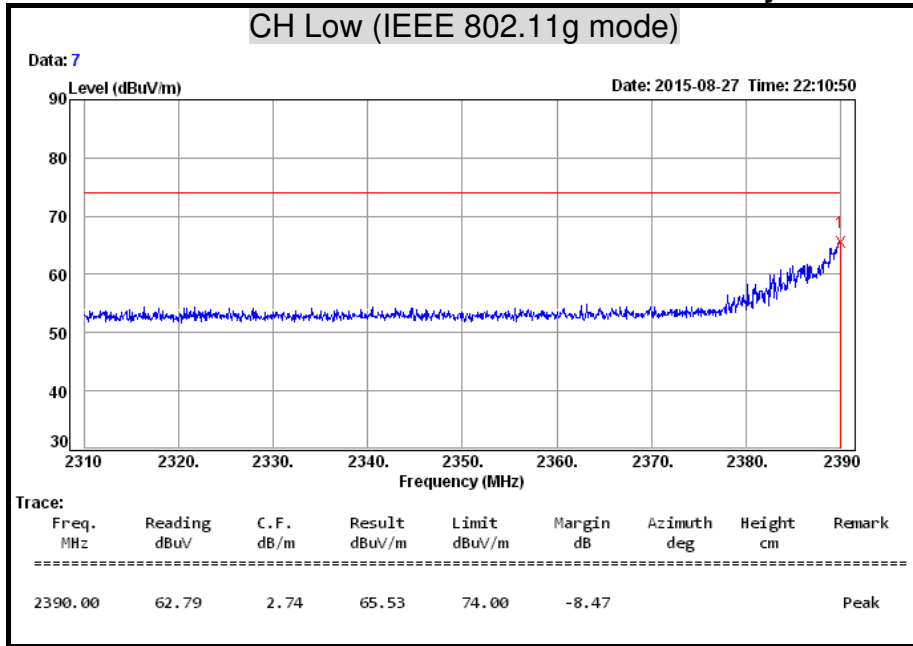
Detector mode: Peak Polarity: Horizontal



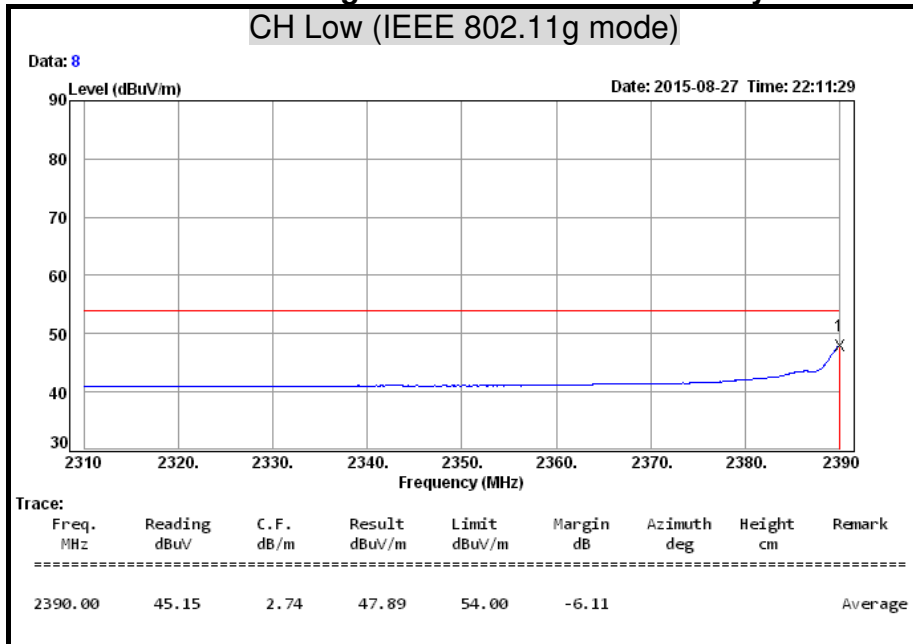
Detector mode: Average Polarity: Horizontal



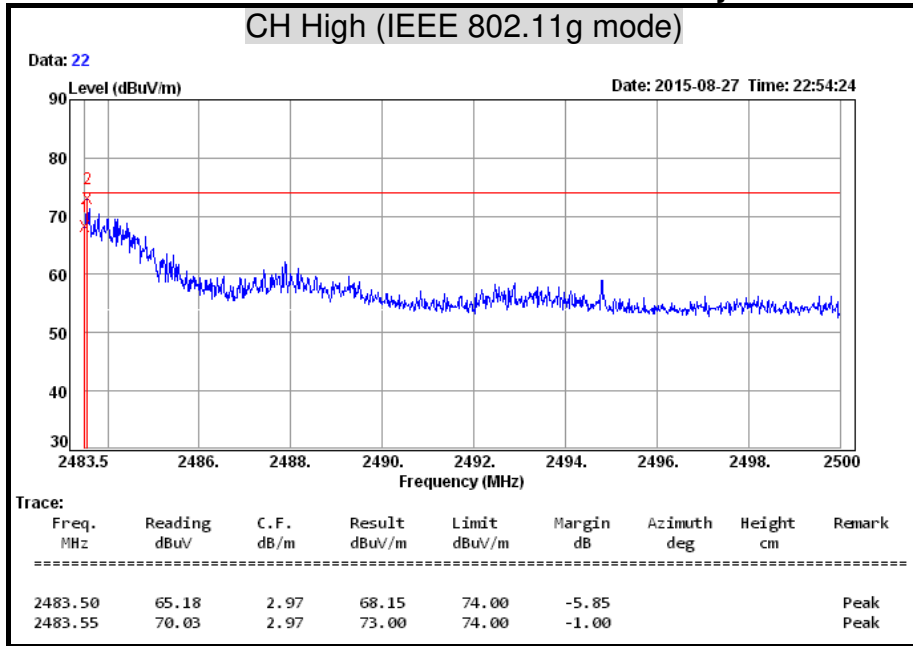
Detector mode: Peak **Polarity: Vertical**



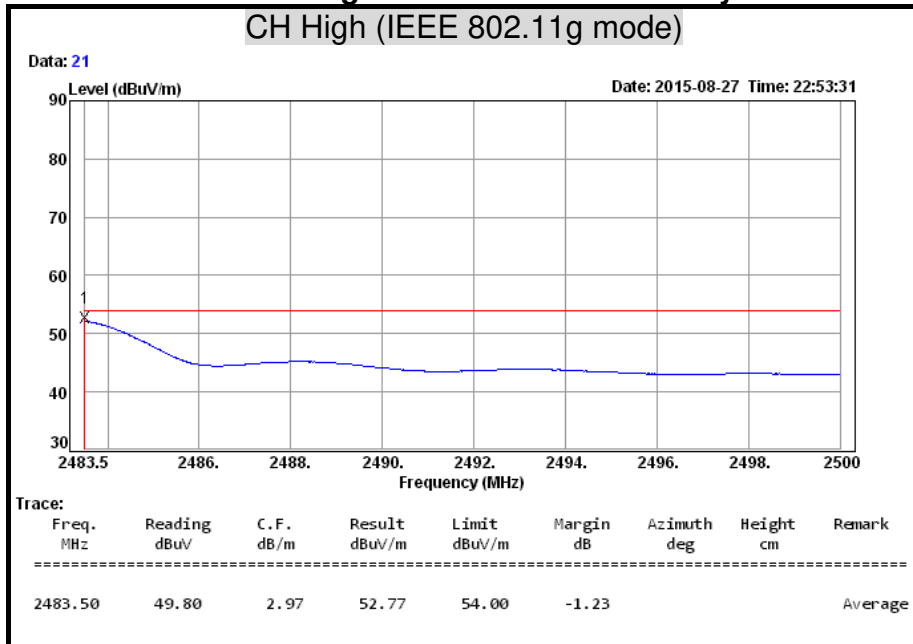
Detector mode: Average **Polarity: Vertical**



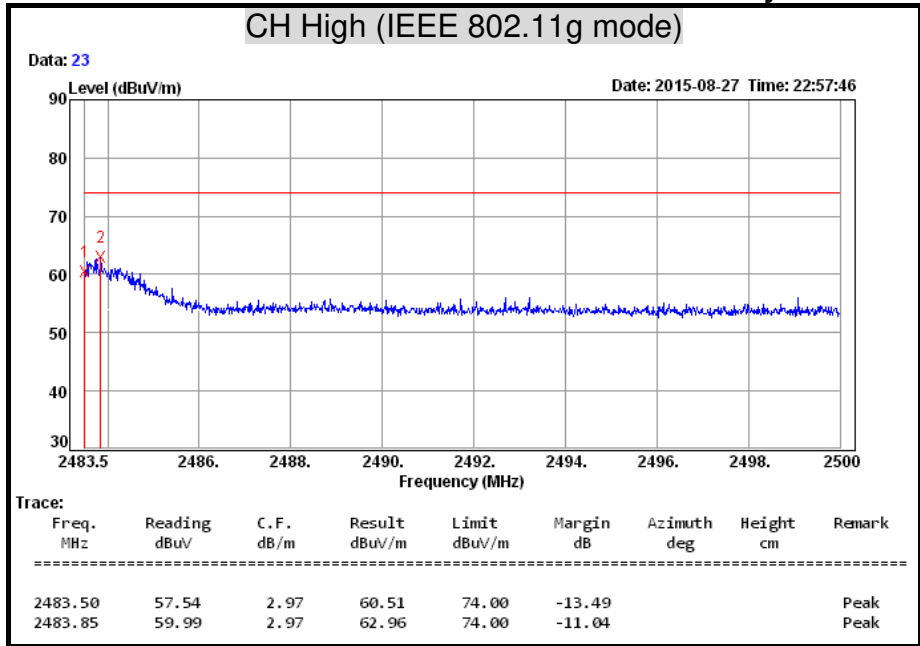
Detector mode: Peak Polarity: Horizontal



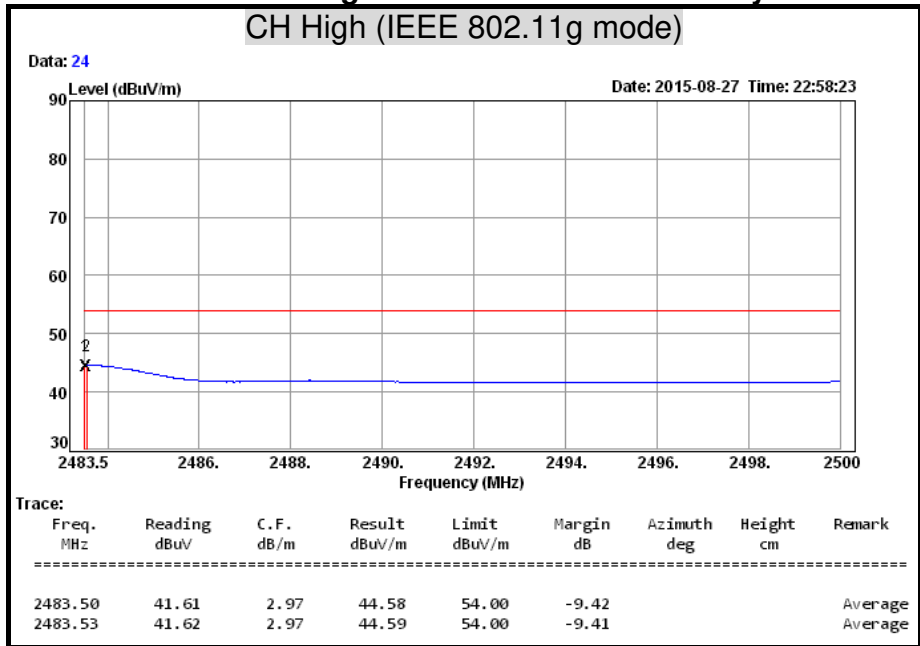
Detector mode: Average Polarity: Horizontal



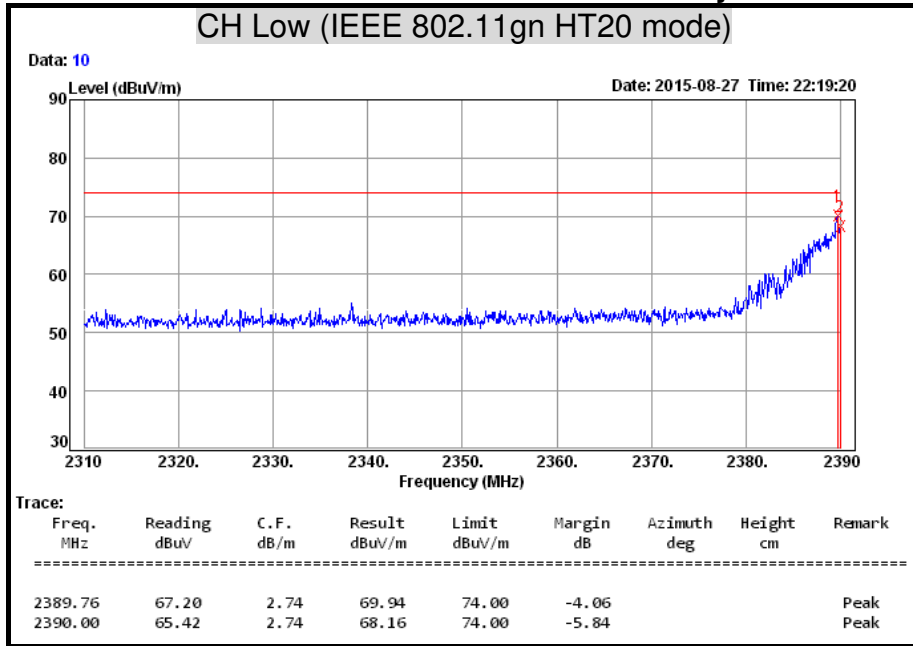
Detector mode: Peak Polarity: Vertical



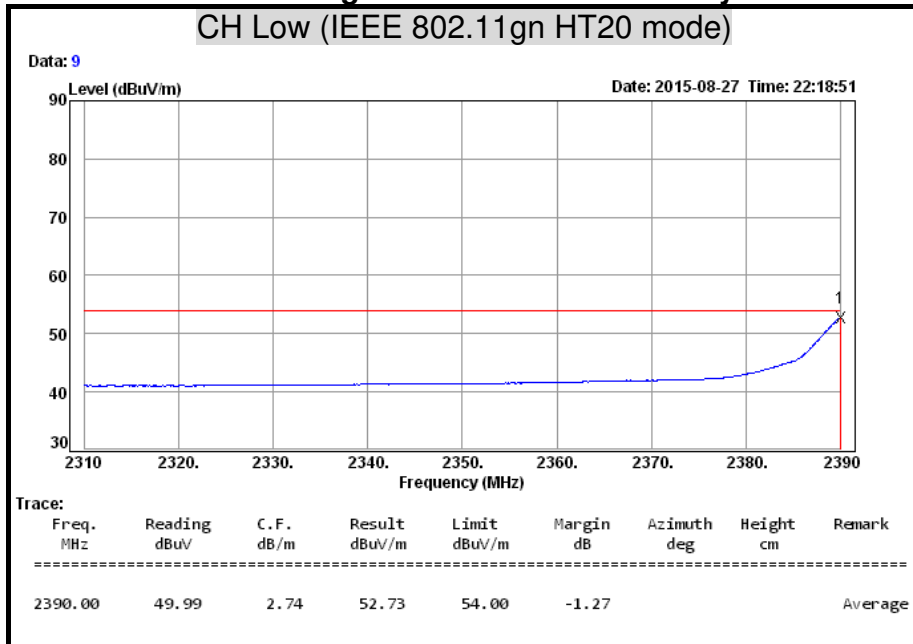
Detector mode: Average Polarity: Vertical



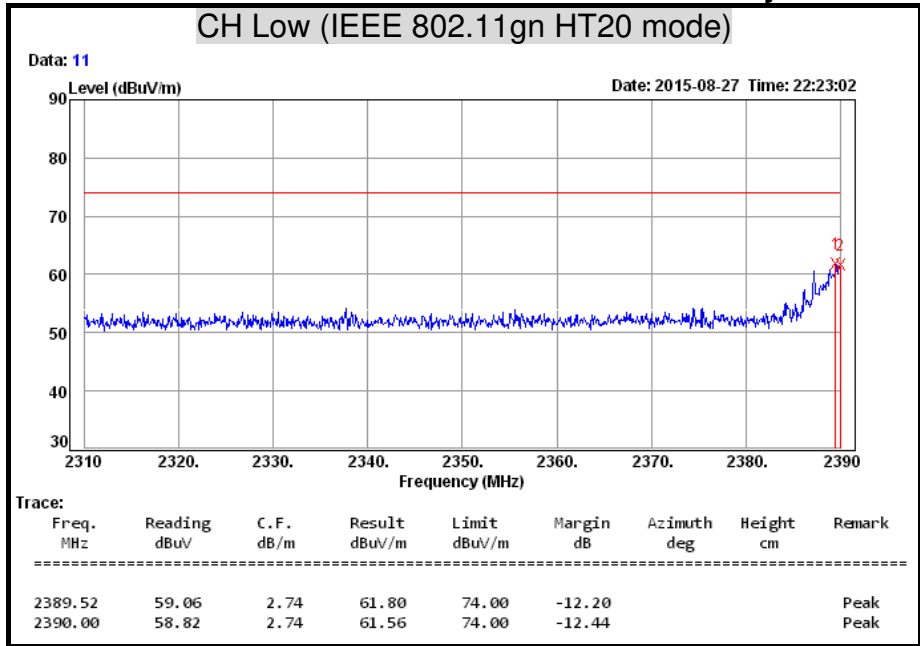
Detector mode: Peak Polarity: Horizontal



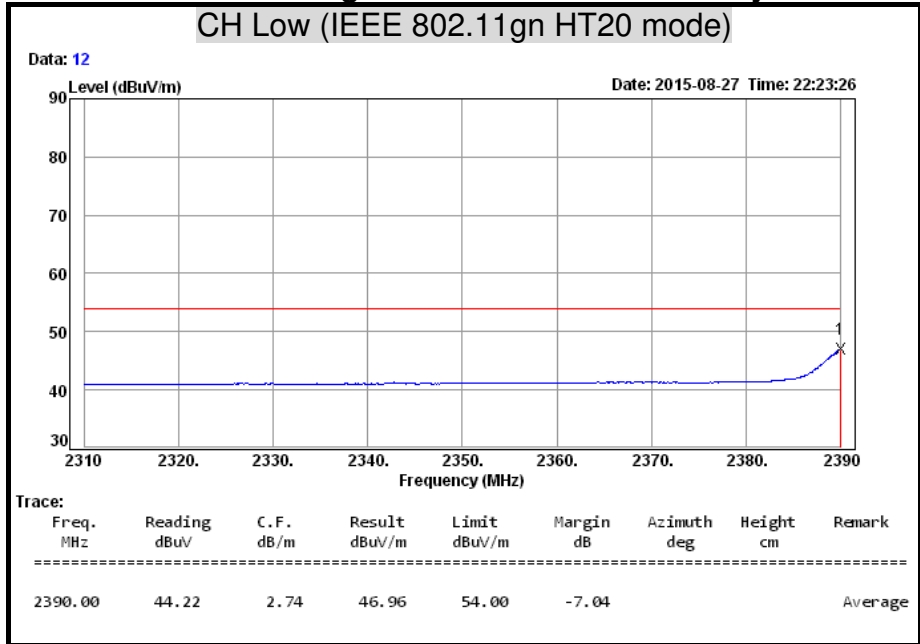
Detector mode: Average Polarity: Horizontal



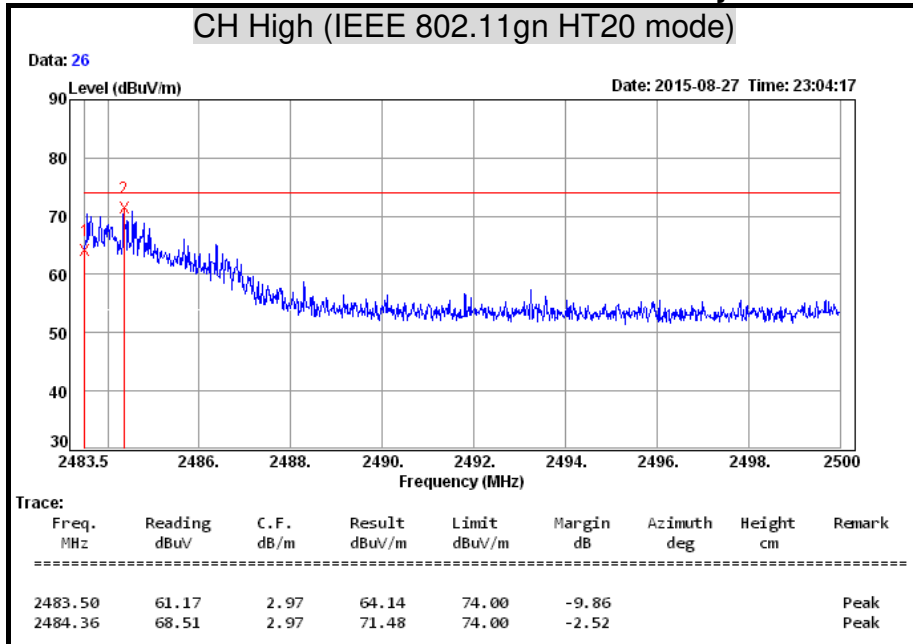
Detector mode: Peak **Polarity: Vertical**



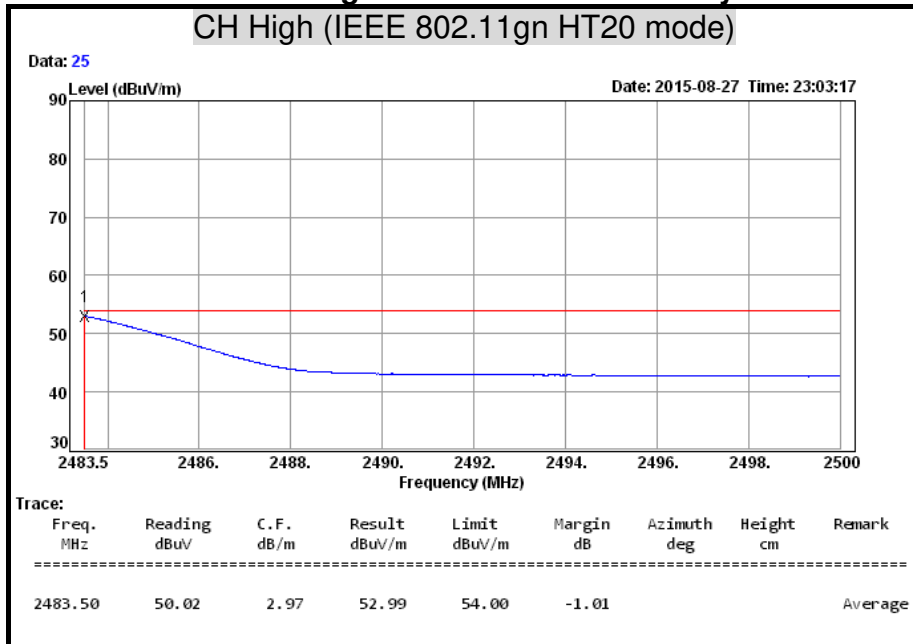
Detector mode: Average **Polarity: Vertical**



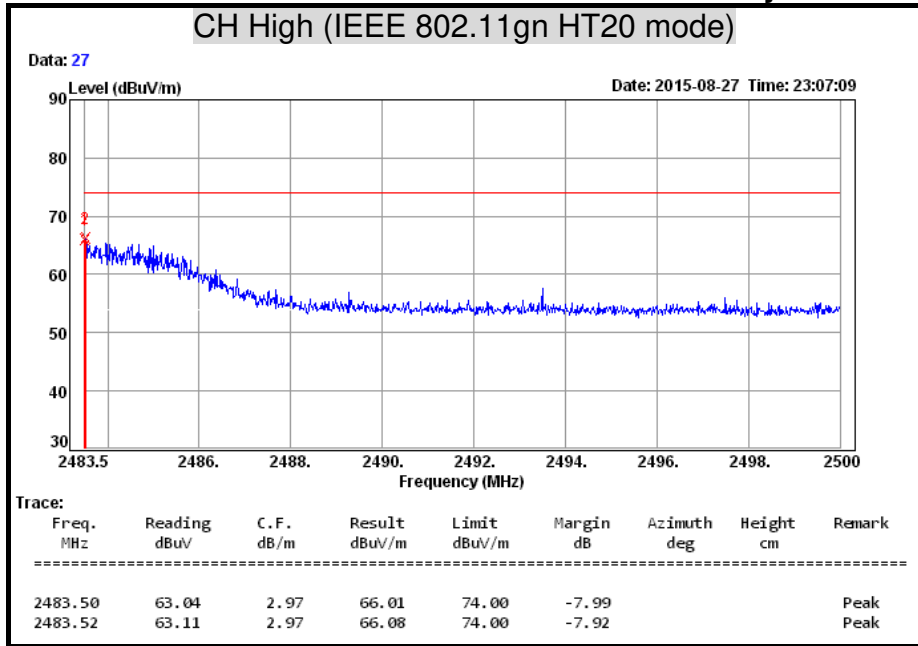
Detector mode: Peak **Polarity: Horizontal**



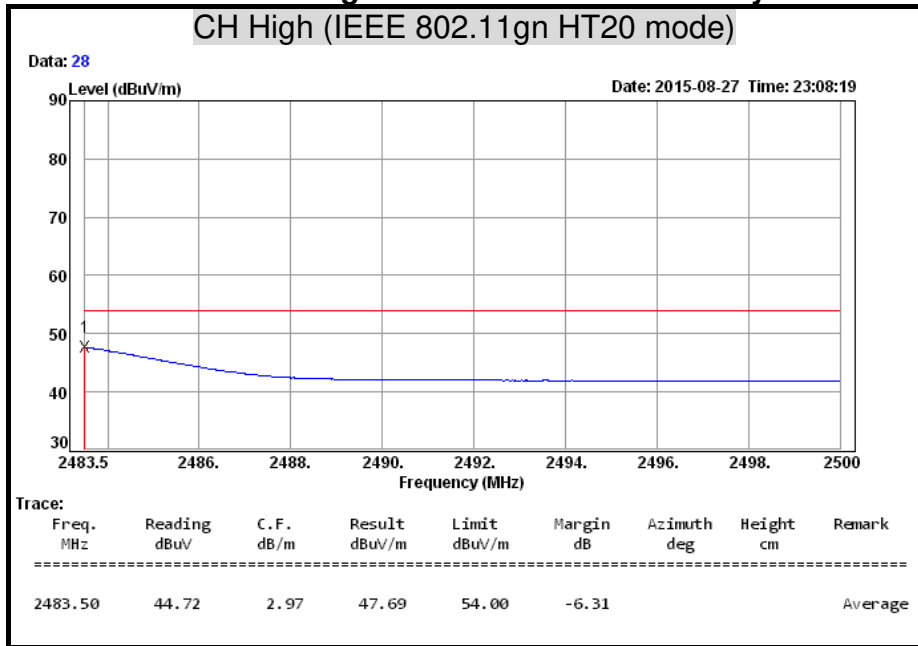
Detector mode: Average **Polarity: Horizontal**



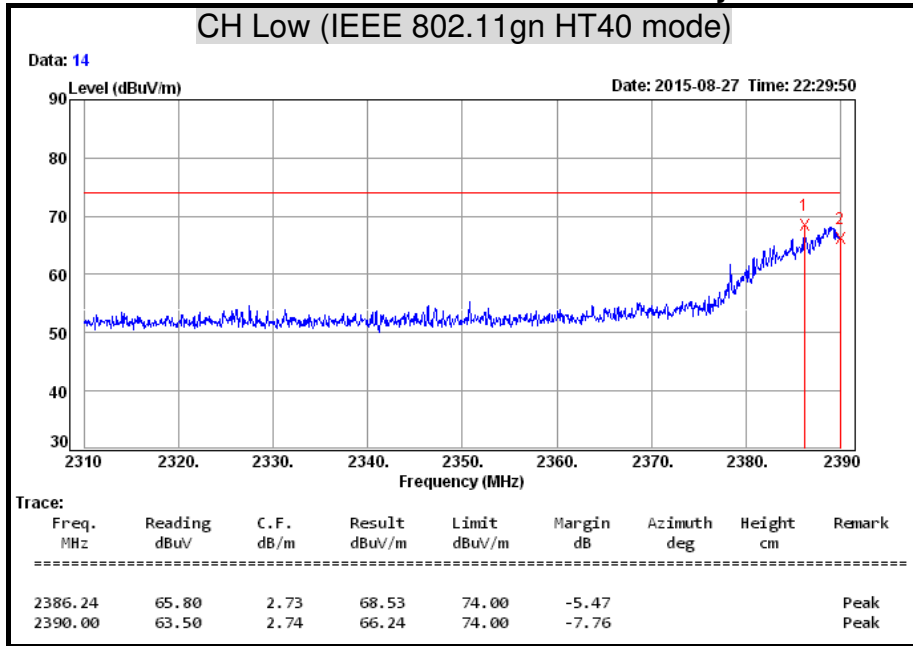
Detector mode: Peak **Polarity: Vertical**



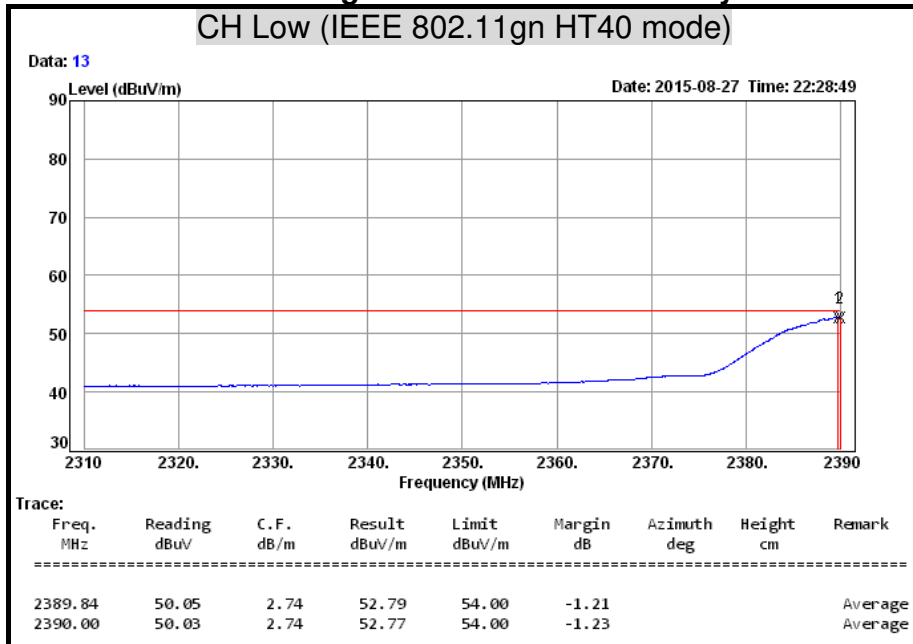
Detector mode: Average **Polarity: Vertical**



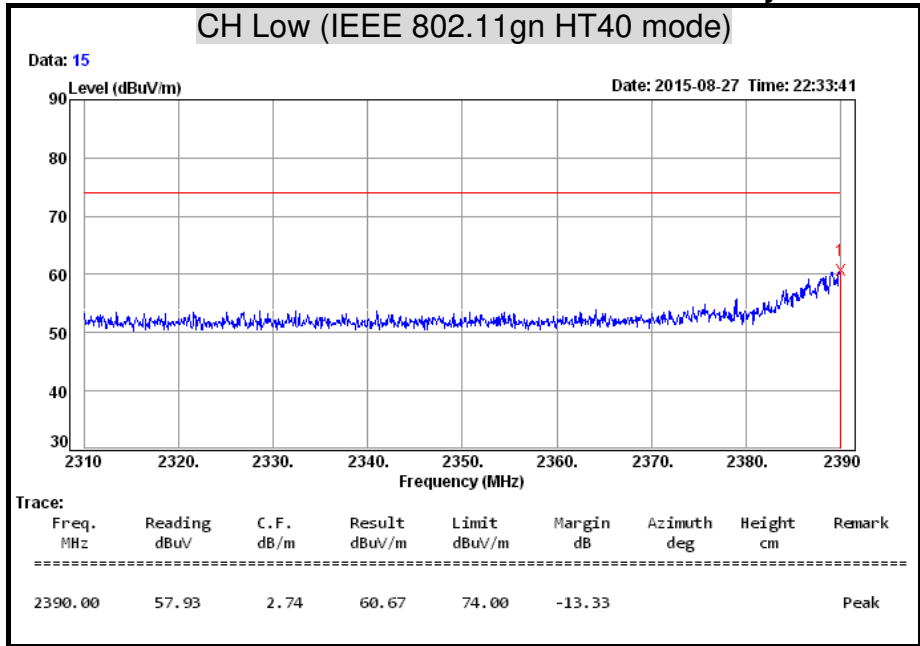
Detector mode: Peak Polarity: Horizontal



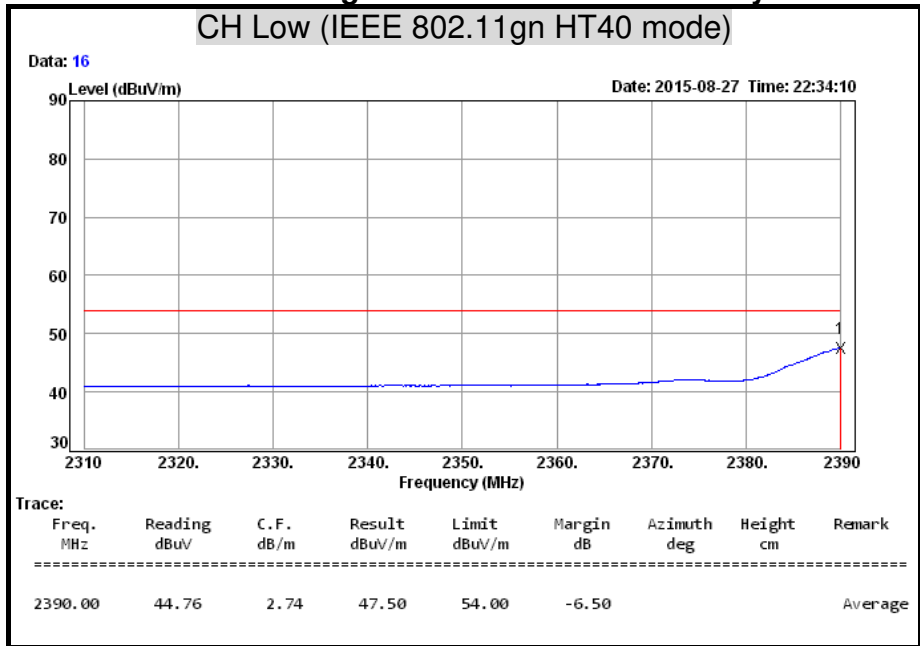
Detector mode: Average Polarity: Horizontal



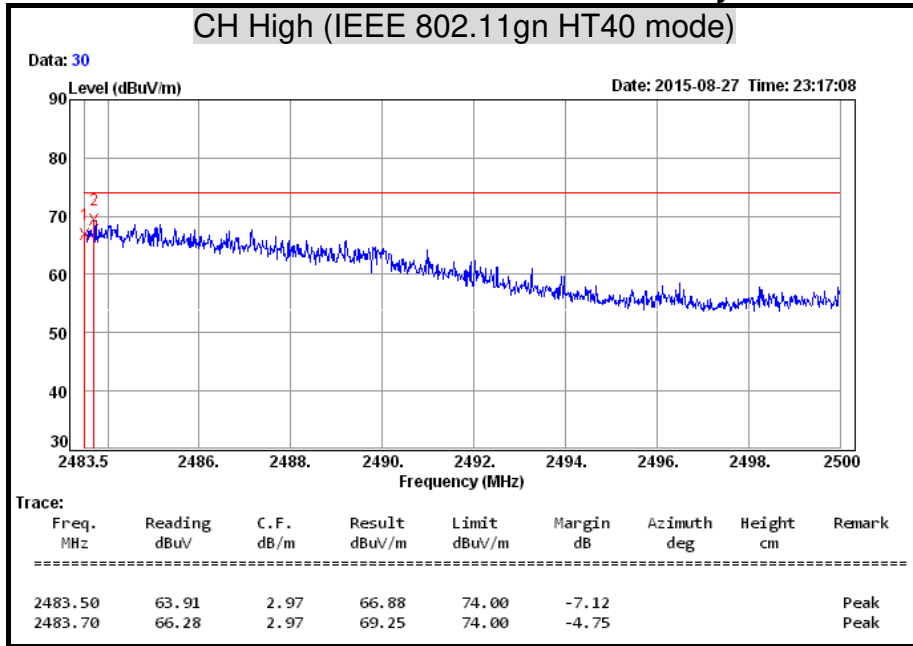
Detector mode: Peak **Polarity: Vertical**



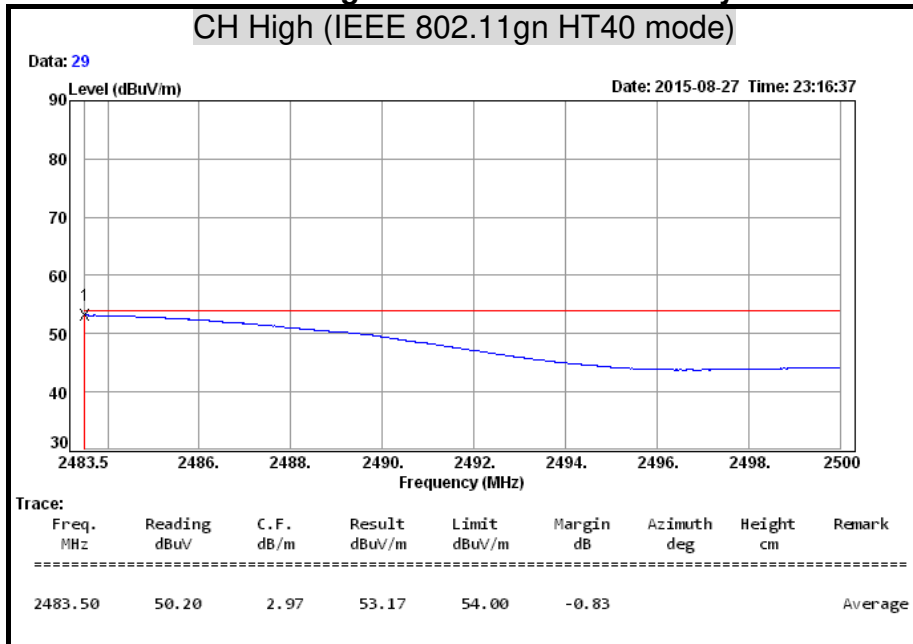
Detector mode: Average **Polarity: Vertical**



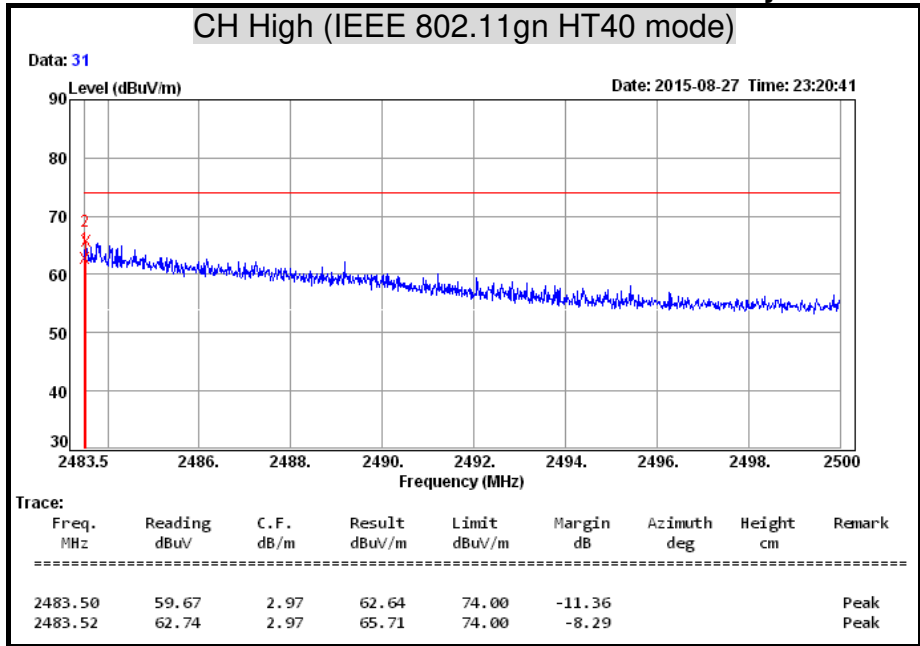
Detector mode: Peak Polarity: Horizontal



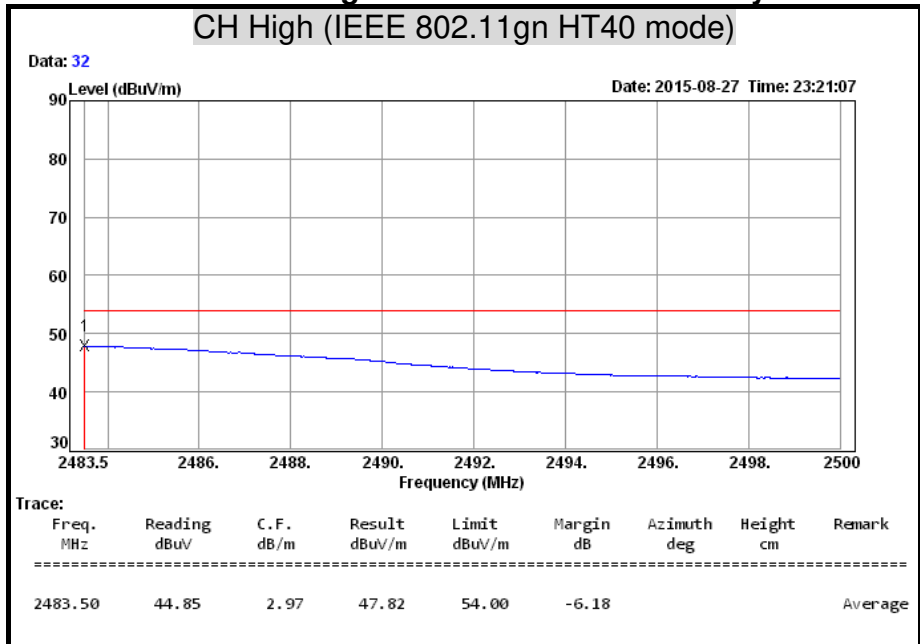
Detector mode: Average Polarity: Horizontal



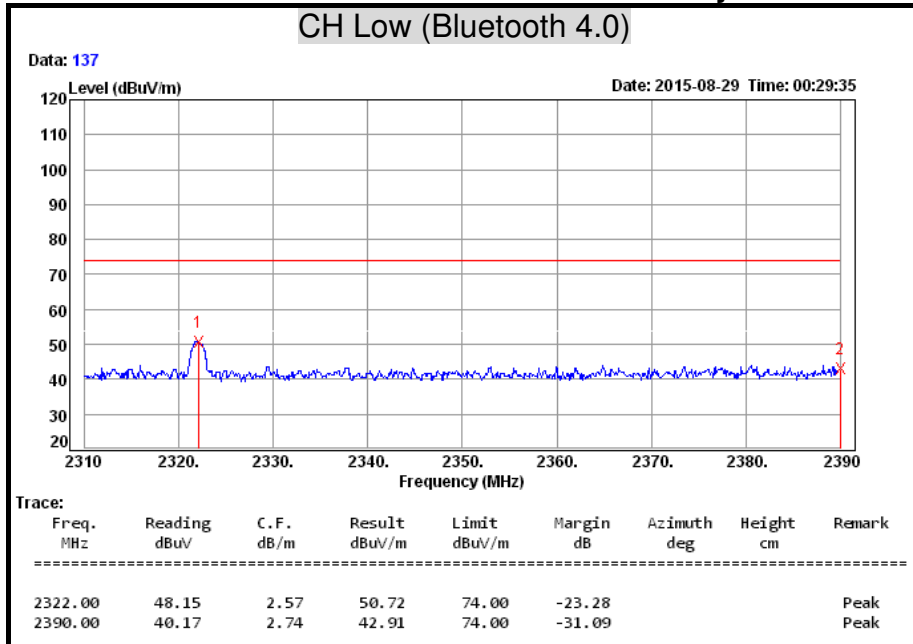
Detector mode: Peak **Polarity: Vertical**



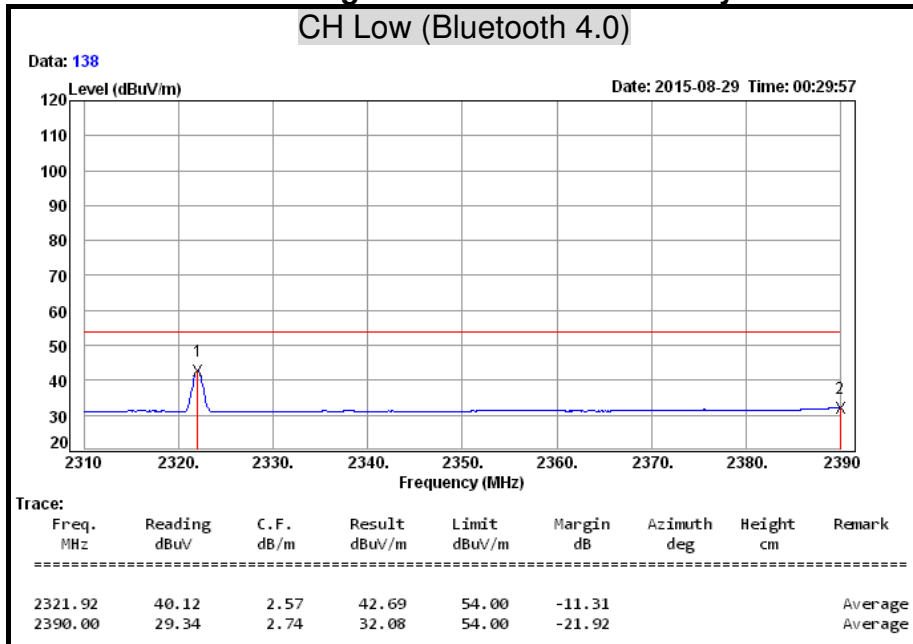
Detector mode: Average **Polarity: Vertical**



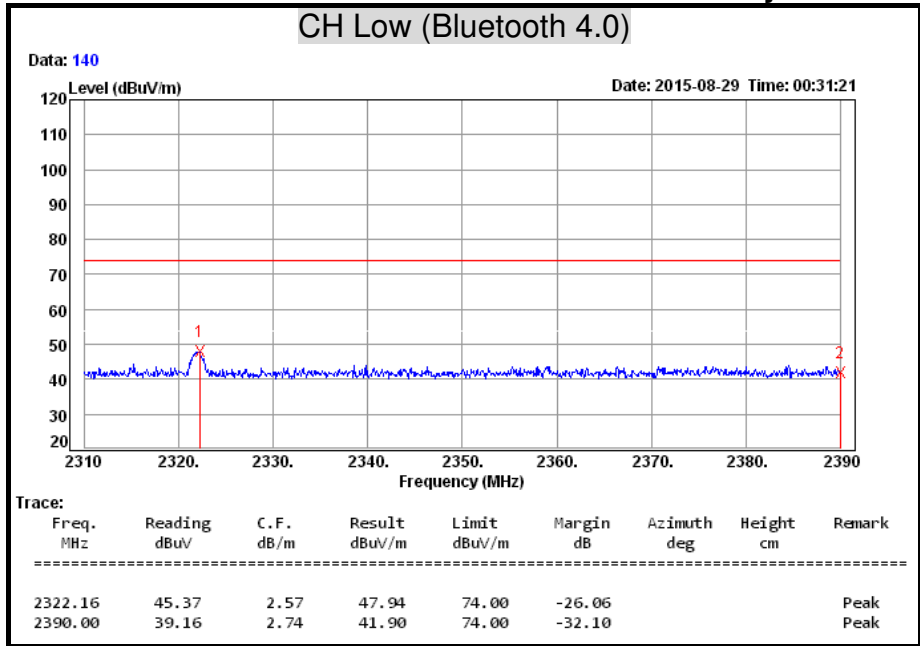
Detector mode: Peak Polarity: Horizontal



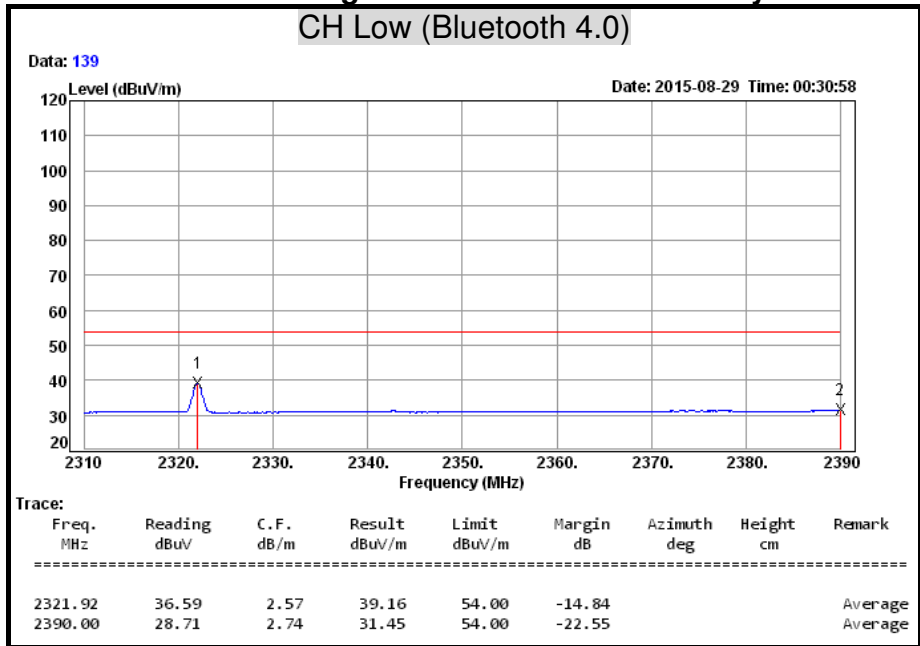
Detector mode: Average Polarity: Horizontal



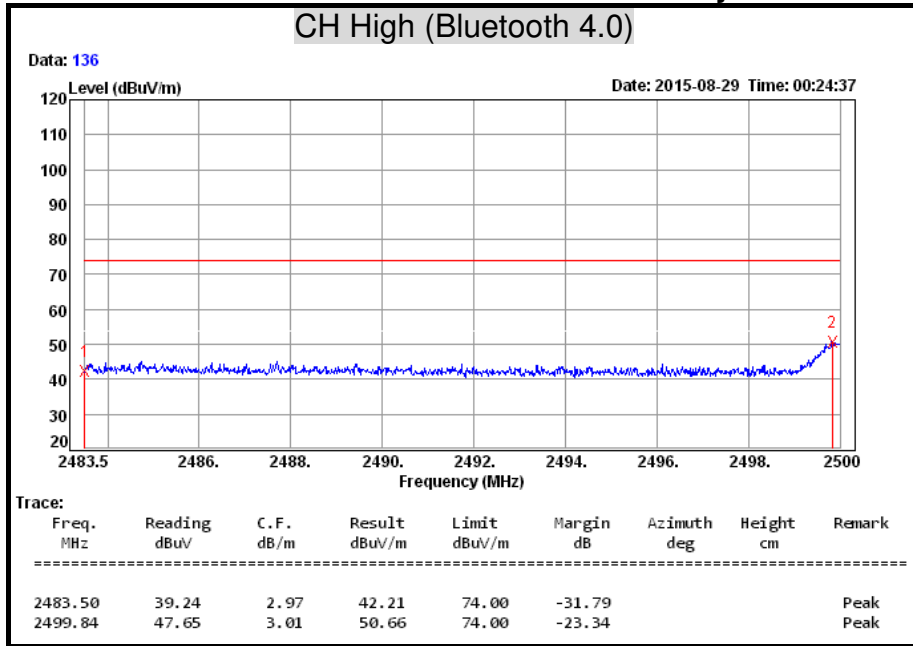
Detector mode: Peak Polarity: Vertical



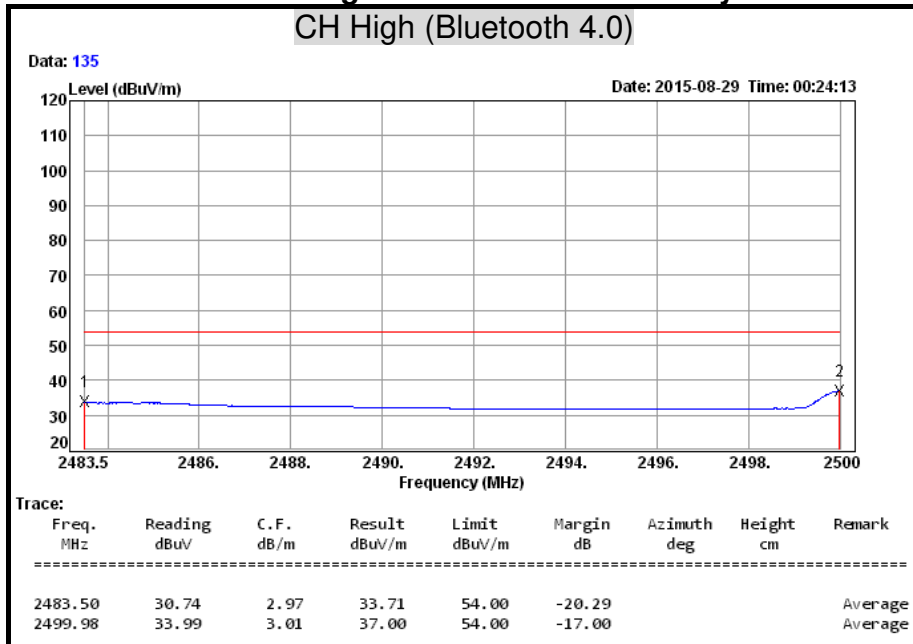
Detector mode: Average Polarity: Vertical



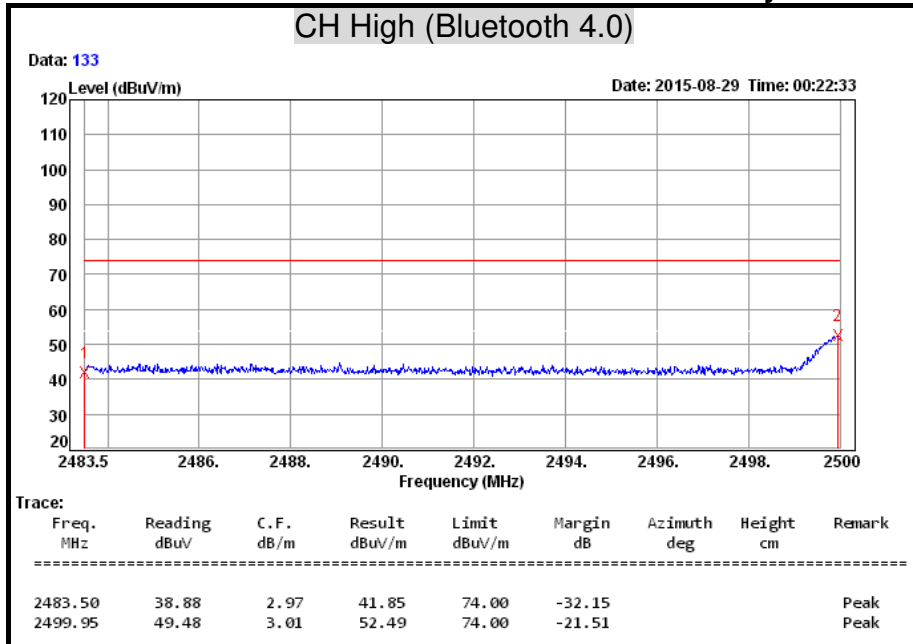
Detector mode: Peak Polarity: Horizontal



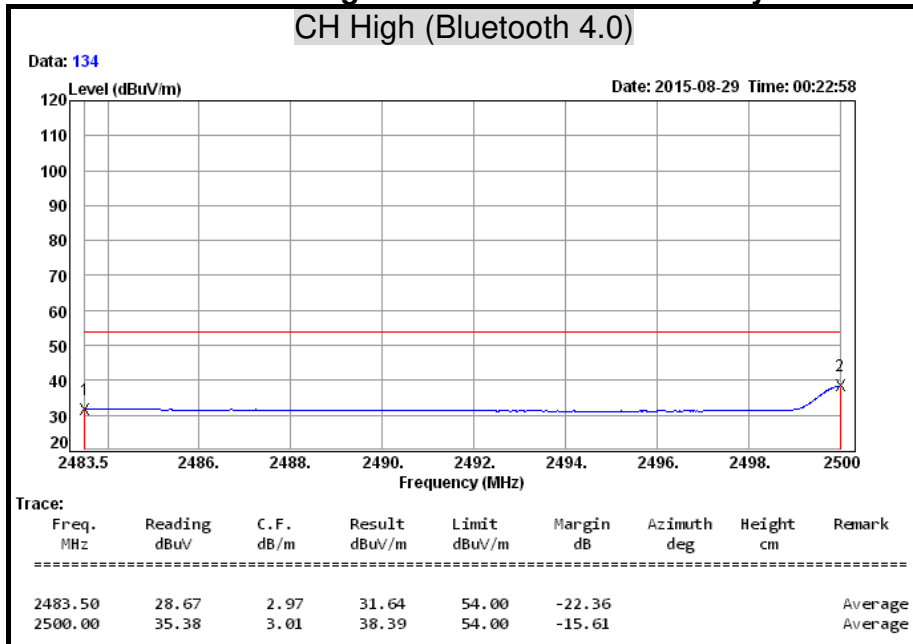
Detector mode: Average Polarity: Horizontal



Detector mode: Peak **Polarity: Vertical**



Detector mode: Average **Polarity: Vertical**



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.

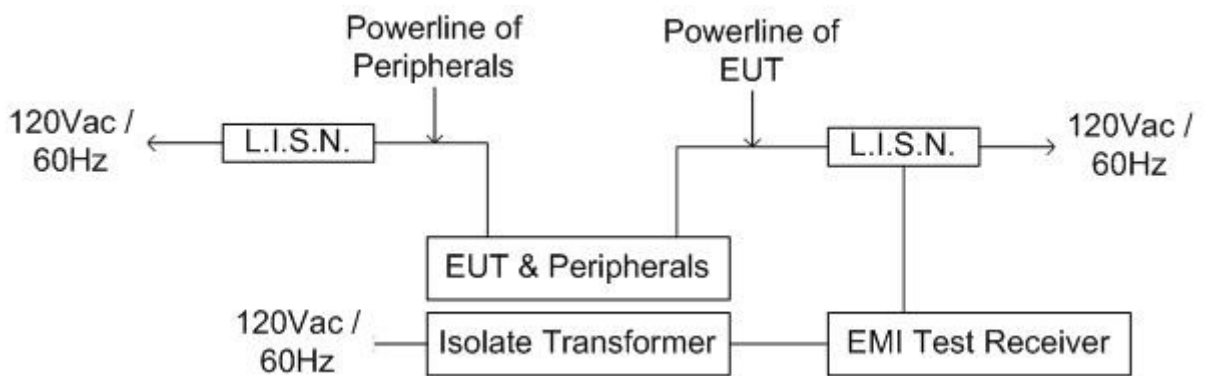
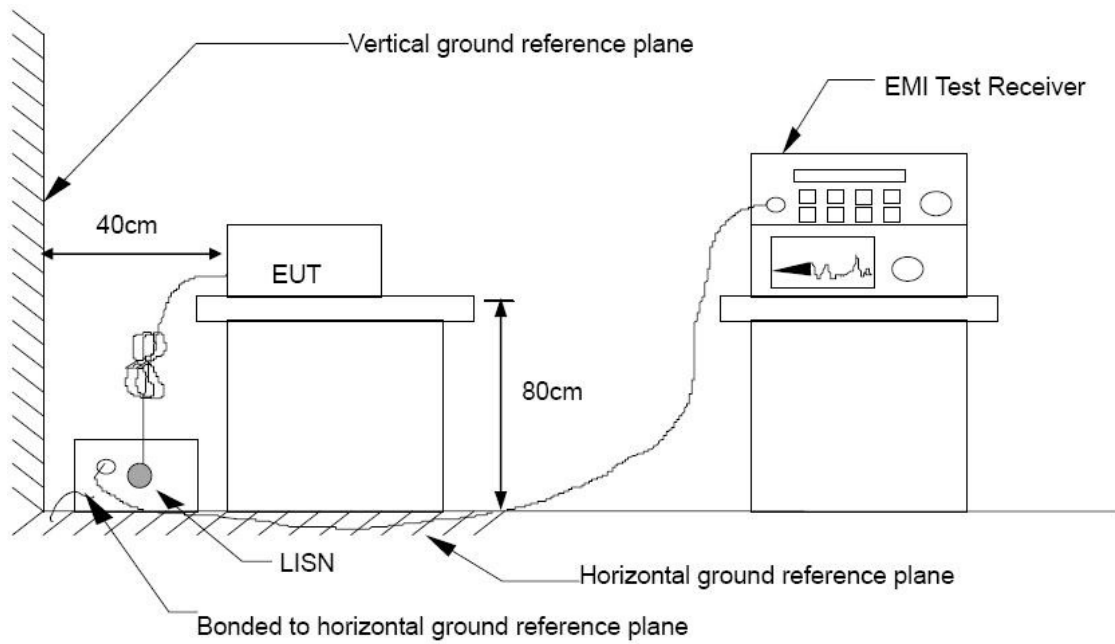
Frequency Range (MHz)	Conducted Limit (dB μ v)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5.00	56	46
5.00 - 30.0	60	50

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	10/31/2016
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.

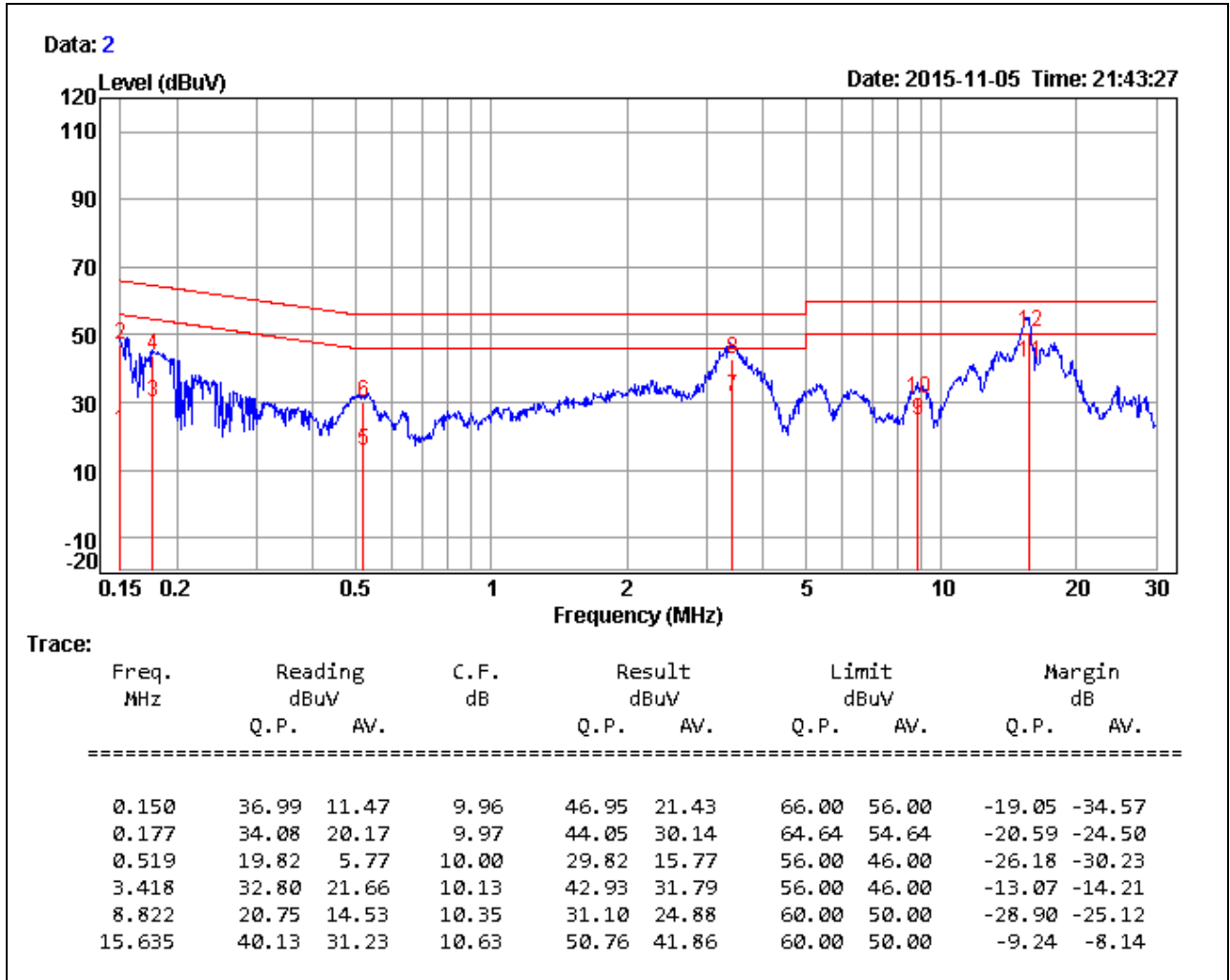
The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. All peripherals were connected to the second LISN and the chassis 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	Computer	Test By	Crystal Wu
Test Model	MIT-W101	Test Date	2015/11/05
Test mode	Mode 1	Temp. & Humidity	28.9°C, 41%

LINE

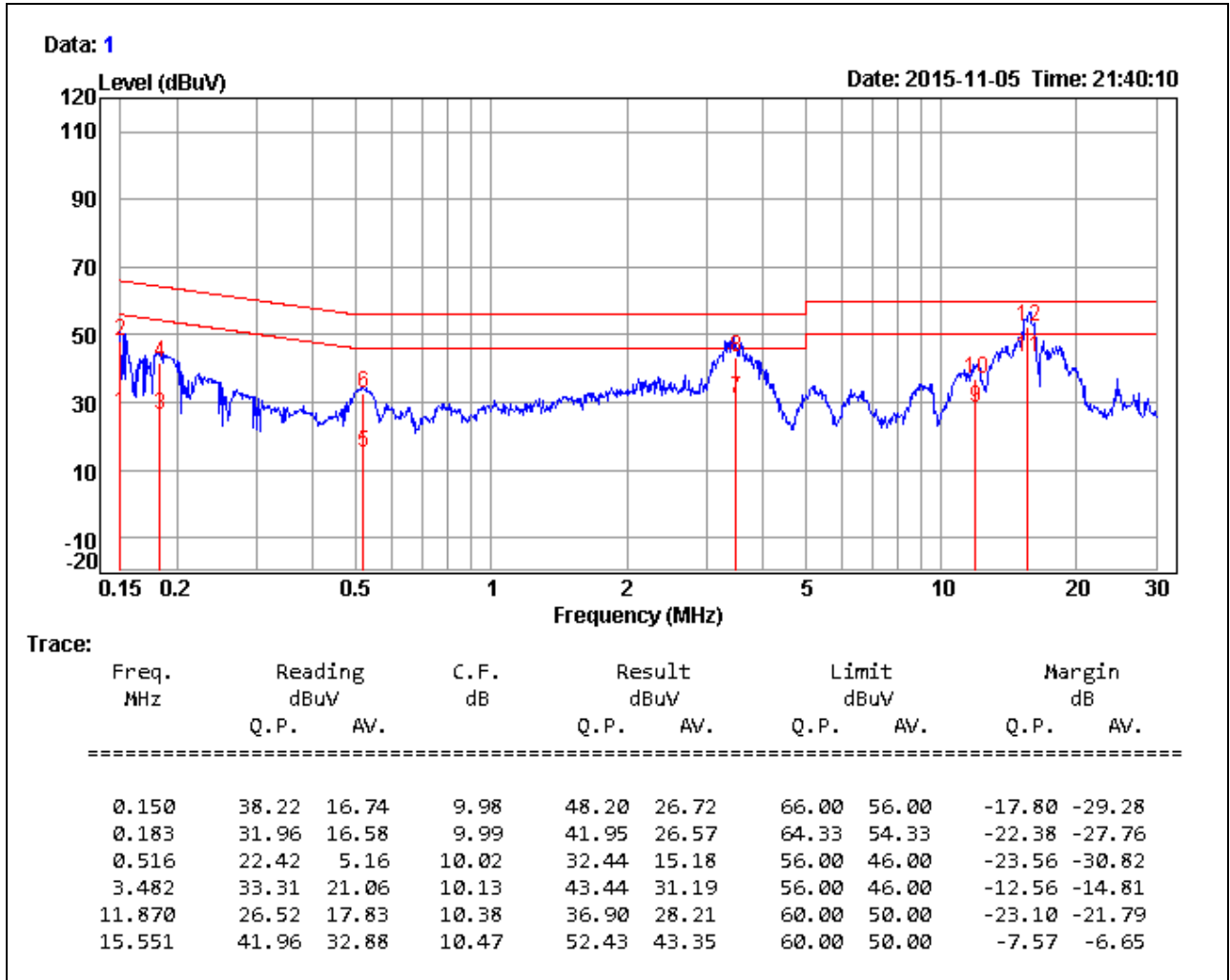


Remark:

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

Product Name	Computer	Test By	Crystal Wu
Test Model	MIT-W101	Test Date	2015/11/05
Test Mode	Mode 1	Temp. & Humidity	28.9°C, 41%

NEUTRAL



Remark:

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